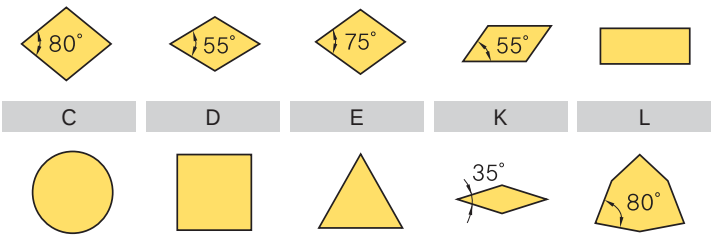
C N M G 12

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

1 Insert Shape

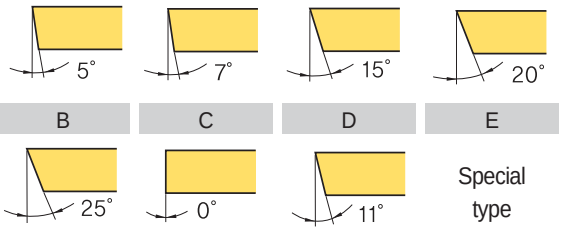
C N M G 12 04 08 - MP



C	D	E	K	L
R	S	T	V	W

2 Relief Angle

C N M G 12 04 08 - MP



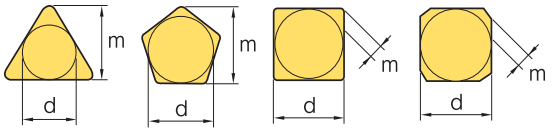
B	C	D	E
F	N	P	O

Special type

3 Tolerance

C N M G 12 04 08 - MP

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



(mm)

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

* Sides are based on unground insert

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

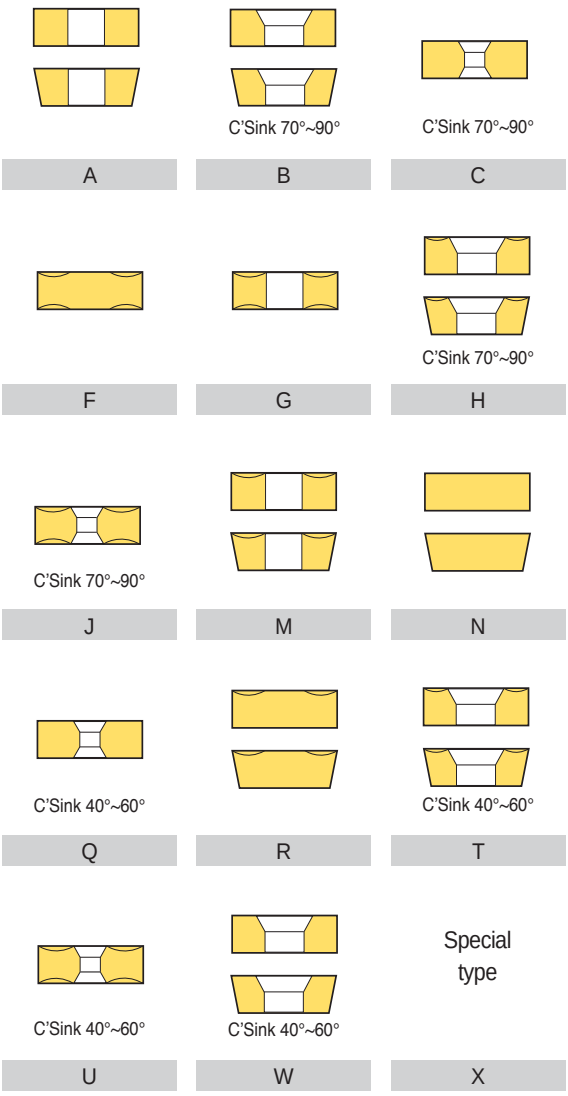
d	Tolerance on d		Tolerance on m	
	J, K, L, M, N	U	M, N	U
6.35	± 0.05	± 0.08	± 0.08	± 0.13
9.525	± 0.05	± 0.08	± 0.08	± 0.13
12.7	± 0.08	± 0.13	± 0.13	± 0.20
15.875	± 0.10	± 0.18	± 0.15	± 0.27
19.05	± 0.10	± 0.18	± 0.15	± 0.27
25.4	± 0.13	± 0.25	± 0.18	± 0.38

Tolerance on D Insert Shape (Exceptional case)

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

4 Cross Section Type

C N M G 12 04 08 - MP



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

Special type

04 08 - MP

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

5 Cutting Edge Length, Diameter of Inscribed Circle

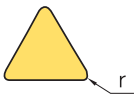
C N M G **12** 04 08 - MP

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

( ) Symbol for small size insert

7 Nose Radius (Nose R)

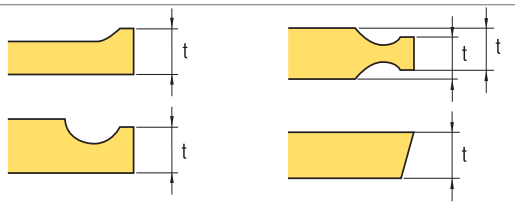
C N M G 12 04 **08** - MP



Symbol		Corner Radius	
Metric	Inch	Metric	Inch
01	0	0.1	0.004
02	0.5	0.2	0.008
04	1	0.4	1/64
08	2	0.8	1/32
12	3	1.2	3/64
16	4	1.6	1/16
20	5	2.0	5/64
24	6	2.4	3/32
28	7	2.8	7/64
32	8	3.2	1/8
00	-	Round insert (Inch)	
M0	-	Round insert (Metric)	

6 Height of Cutting Edge

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



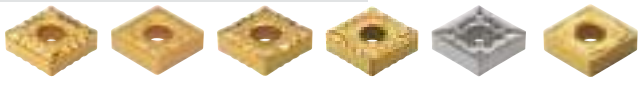
Symbol		Height of Cutting Edge (t)	
Metric	Inch	mm	Inch
01	1(2)	1.59	1/16
T0	1.125	1.79	9/128
T1	1.2	1.98	5/64
02	1.5(3)	2.38	3/32
T2	1.75	2.78	7/64
03	2	3.18	1/8
T3	2.5	3.97	5/32
04	3	4.76	3/16
05	3.5	5.56	7/32
06	4	6.35	1/4
07	5	7.94	5/16
09	6	9.52	3/8
11	7	11.11	7/16
12	8	12.70	1/2

( ) Symbol for small size insert

8 Chip Breaker for Turning

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

Negative Insert Chip Breaker



VL VF VB VC VQ VW

VM VR VH VT VP1 VP2

VP3 VP4 HA GR GH B25

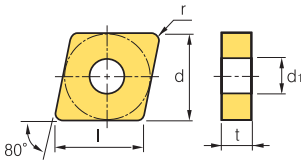
LP MP MM RM MK RK

Positive Insert Chip Breaker

VL HMP C25 MP AK AR

CN○○

Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VP1	CNGG	120402-VP1																						0.01~0.10	0.10~1.00
			120404-VP1																						0.05~0.15	0.10~1.50
			120408-VP1																						0.07~0.20	0.10~1.50
Medium	VP3	CNGG	120404-VP3																	●	●	●		●		0.05~0.30	0.10~3.00
			120408-VP3																	●	●	●		●		0.10~0.40	0.50~4.50
			120412-VP3																	●	●	●		●		0.12~0.50	0.50~5.00
Roughing		CNMA	090308																							0.10~0.30	0.50~3.00
			120404											●										●		0.15~0.60	1.00~5.00
			120408											●										●		0.15~0.60	1.00~6.00
			120412											●												0.15~0.70	1.50~6.00
			120416											●												0.20~0.80	2.00~6.00
			160608																							0.15~0.70	2.00~6.00
			160612											●												0.15~0.70	2.00~6.00
			160616											●												0.15~0.70	2.00~6.00
			190608											●												0.15~0.70	2.00~10.00
			190612											●												0.15~0.70	2.00~10.00
			190616											●												0.20~1.00	3.00~10.00
Finishing	VB	CNMG	120404-VB	●		●	●	●	●		●		●													0.15~0.35	0.30~2.00
			120408-VB	●		●	●	●	●		●		●													0.15~0.45	0.50~2.00
			120412-VB						●		●		●													0.20~0.50	0.50~2.00
Finishing	VF	CNMG	090304-VF							●	●															0.07~0.30	0.50~1.50
			090308-VF																							0.10~0.30	0.50~1.50
			120404-VF							●			●													0.07~0.30	0.50~1.50
			120408-VF										●													0.10~0.40	0.50~1.50
			120412-VF																							0.10~0.50	0.60~1.50
Finishing	VP1	CNMG	120404-VP1																	●	●			●		0.05~0.15	0.10~1.50
			120408-VP1																	●	●			●		0.07~0.20	0.10~1.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

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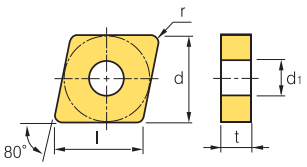
Rhombic 80° Negative



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

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (Mild steel)	VL	CNMG 120404-VL	●		●							●													0.05~0.25	0.10~1.00
		CNMG 120408-VL	●		●					●		●													0.10~0.35	0.20~1.50
		CNMG 120412-VL						●																	0.10~0.35	0.20~1.50
Finishing (wiper)	VW	CNMG 120404-VW																							0.10~0.30	0.50~3.00
		CNMG 120408-VW																							0.15~0.50	0.50~4.00
Medium to finishing	HA	CNMG 120404-HA																					●		0.05~0.20	0.80~3.50
		CNMG 120408-HA																					●		0.10~0.40	0.80~3.50
		CNMG 120412-HA																							0.13~0.55	0.80~3.50
Medium to finishing	LP new	CNMG 090308-LP																							0.10~0.30	0.30~1.50
		CNMG 120404-LP						●		●		●													0.10~0.35	0.30~2.00
		CNMG 120408-LP						●		●		●													0.10~0.40	0.50~2.50
		CNMG 120412-LP						●		●		●													0.13~0.45	0.80~3.00
Medium to finishing	VC	CNMG 120404-VC						●		●		●													0.10~0.35	0.30~2.00
		CNMG 120408-VC						●		●		●													0.15~0.40	0.50~3.00
		CNMG 120412-VC						●		●															0.15~0.45	0.50~3.00

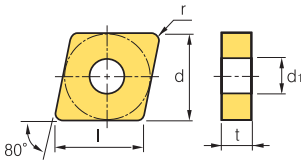
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

CN○○

Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬌	✱	●	⬌	●	⬌	⬌	✱	✱	●	⬌		✱								
	Stainless steel	M									⬌	⬌		●	⬌	✱	⬌	✱		●	⬌	⬌		
	Cast iron	K	●	⬌	✱	●	⬌	⬌				⬌	⬌										●	⬌
	Non-ferrous metal	N																					●	⬌
	Heat resistant alloy, Titanium alloy	S										●			●	⬌	⬌	✱	●	●	⬌		●	⬌
	Hardened steel	H																		⬌	✱		●	⬌

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VP2	CNMG	120404-VP2														●	●	●	●	●		●		0.05~0.30	0.10~3.00
			120408-VP2														●	●	●	●	●		●		0.10~0.40	0.50~4.50
Medium to finishing	VQ	CNMG	090304-VQ																						0.05~0.30	0.50~3.50
			090308-VQ																						0.08~0.30	0.80~4.00
			120404-VQ	●	●	●	●	●																	0.05~0.30	0.80~4.00
			120408-VQ	●	●	●	●	●																	0.08~0.40	0.80~4.00
			120412-VQ																						0.10~0.40	0.80~4.00
Medium	MK (new)	CNMG	120404-MK											●											0.05~0.30	0.90~4.00
			120408-MK											●											0.10~0.50	1.00~5.00
			120412-MK											●											0.13~0.60	1.30~5.00
			120416-MK																						0.15~0.60	1.30~5.00
			160608-MK																						0.28~0.70	1.80~7.00
			160612-MK																						0.28~0.72	2.00~8.00
			160616-MK																						0.28~0.74	2.00~8.00
			190608-MK																						0.33~0.78	2.50~9.00
			190612-MK											●											0.35~0.78	2.60~9.50
			190616-MK																						0.35~0.80	2.60~10.00

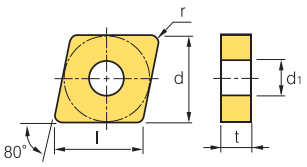
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

CN○○

Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93

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

Machining types
● Continuous cutting
⬌ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	MM	CNMG	090304-MM																				●			0.08~0.35	0.50~5.00
			090308-MM																				●			0.10~0.40	0.50~5.00
			090312-MM																							0.12~0.45	0.50~5.00
			120404-MM													●	●	●				●	●			0.10~0.40	0.50~5.50
			120408-MM												●	●	●	●				●	●			0.12~0.45	0.50~5.50
			120412-MM												●	●	●	●				●	●			0.15~0.60	0.50~5.50
			120416-MM													●	●	●				●				0.20~0.65	0.50~5.50
			160608-MM													●	●	●				●				0.12~0.45	0.50~7.00
			160612-MM													●	●	●				●	●			0.15~0.60	0.50~7.00
			160616-MM													●	●	●				●	●			0.18~0.65	0.50~7.00
			190608-MM													●	●	●				●				0.12~0.45	0.50~8.50
			190612-MM													●	●	●				●	●			0.15~0.60	0.50~8.50
			190616-MM													●	●	●				●	●			0.18~0.65	0.50~8.50
Medium	MP	CNMG	090304-MP						●		●		●													0.10~0.40	0.40~3.80
			090308-MP						●		●		●													0.15~0.40	0.50~4.00
			090312-MP																							0.15~0.50	0.80~4.20
			120404-MP						●		●		●		●	●	●			●	●	●				0.10~0.40	0.40~4.00
			120408-MP						●		●		●		●	●	●			●	●	●				0.15~0.45	0.50~4.50
			120412-MP						●		●		●		●	●	●			●	●					0.15~0.50	0.80~5.00
			120416-MP						●		●		●		●	●	●									0.28~0.55	1.00~5.00
			160608-MP						●		●		●		●	●	●									0.15~0.50	0.50~7.00
			160612-MP						●		●		●		●	●	●									0.18~0.60	0.80~7.00
			160616-MP						●		●		●													0.15~0.60	1.00~7.00
			190608-MP																							0.15~0.60	0.50~8.50
			190612-MP																							0.10~0.40	0.40~3.80
			190616-MP												●	●	●									0.15~0.40	0.50~4.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

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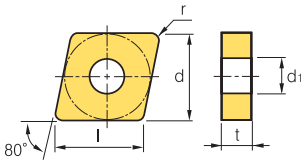
Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	VM	CNMG	090304-VM																						0.05~0.30	0.90~3.50
			090308-VM							●		●													0.10~0.45	1.00~3.50
			120404-VM	●	●	●				●		●	●					●	●				●		0.05~0.30	0.90~5.00
			120408-VM	●	●	●				●		●	●					●	●				●		0.10~0.50	1.00~5.00
			120412-VM							●		●	●					●	●						0.13~0.60	1.30~5.00
			120416-VM										●												0.20~0.60	1.50~5.50
			160608-VM										●												0.10~0.50	1.00~6.70
			160612-VM																						0.13~0.60	1.30~6.70
			190608-VM									●													0.13~0.65	1.30~7.00
			190612-VM										●												0.15~0.70	1.50~7.00
			190616-VM																						0.18~0.75	1.80~7.00
Medium	VP3	CNMG	120404-VP3															●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
			120408-VP3															●	●	●	●	●		●	●	0.10~0.40	0.50~4.50
			120412-VP3															●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
Medium (wiper)	LW	CNMG	120408-LW										●													0.15~0.60	1.00~5.00
			120412-LW																							0.20~0.70	1.00~6.00
Medium to roughing	B25	CNMG	120404-B25	●	●	●			●		●	●	●					●								0.17~0.45	1.00~5.00
			120408-B25	●	●	●			●	●	●	●	●					●	●		●		●			0.23~0.60	1.50~5.00
			120412-B25			●			●		●	●	●													0.25~0.60	2.00~5.00
			160608-B25						●		●	●	●													0.25~0.60	2.00~6.50
			160612-B25						●		●		●													0.27~0.60	2.00~6.50
			160616-B25						●		●		●													0.27~0.60	2.00~6.50
			190604-B25									●	●													0.20~0.45	3.00~8.00
			190608-B25						●	●	●	●	●													0.25~0.60	3.00~8.00
			190612-B25						●	●	●	●	●					●	●		●					0.30~0.60	3.00~8.00
			190616-B25						●		●															0.23~0.70	3.00~8.00
Roughing	GR	CNMG	120408-GR							●		●	●													0.20~0.50	1.00~7.00
			120412-GR							●		●	●													0.25~0.50	1.30~7.00
			120416-GR																							0.25~0.60	1.80~6.00
			160608-GR									●														0.20~0.70	1.00~8.00
			160612-GR							●		●	●													0.25~0.70	1.30~8.00
			160616-GR									●														0.25~0.75	1.80~8.00
			190608-GR							●		●	●													0.20~0.70	1.70~10.00
			190612-GR							●		●	●													0.30~0.75	1.70~10.00
			190616-GR							●		●	●													0.30~0.80	1.80~10.00
			190624-GR																							0.35~0.85	2.00~12.00
			250724-GR																							0.40~1.00	2.30~15.00
			250924-GR									●	●													0.40~1.00	2.30~15.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

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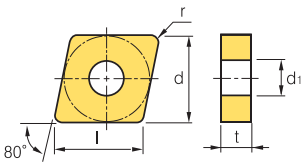
Rhombic 80° Negative



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

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	RK new	CNMG 120404-RK																						0.20~0.47	1.30~6.00
		120408-RK											●											0.20~0.50	1.50~6.00
		120412-RK											●											0.28~0.53	1.80~6.00
		120416-RK											●											0.28~0.63	2.00~6.00
		160608-RK											●											0.28~0.70	1.80~7.00
		160612-RK											●											0.28~0.72	2.00~8.00
		160616-RK											●											0.28~0.74	2.00~8.00
		190612-RK											●											0.35~0.78	2.60~9.50
		190616-RK											●											0.35~0.80	2.60~10.00
Roughing	RM new	CNMG 120404-RM													●	●	●				●	●		0.10~0.50	2.00~6.00
		120408-RM												●	●	●	●				●	●		0.15~0.55	2.00~6.00
		120412-RM												●	●	●	●				●	●		0.20~0.60	2.00~6.00
		120416-RM													●	●	●				●			0.25~0.70	2.00~6.00
		160608-RM													●	●	●				●			0.15~0.55	2.00~8.00
		160612-RM													●	●	●				●			0.20~0.60	2.00~8.00
		160616-RM													●	●	●				●			0.25~0.70	2.00~8.00
		190608-RM													●	●	●				●			0.15~0.55	2.00~10.00
		190612-RM													●	●	●				●			0.20~0.60	2.00~10.00
		190616-RM													●	●	●				●			0.25~0.70	2.00~10.00
		250924-RM																						0.40~1.20	0.40~14.00
Roughing	VP4 new	CNMG 120408-VP4																			●			0.15~0.35	1.00~4.00
		120412-VP4																			●			0.20~0.40	1.00~4.00
		190608-VP4																			●			0.15~0.45	1.00~8.00
		190612-VP4																			●			0.20~0.50	1.20~8.50
Roughing	VR	CNMG 120408-VR																						0.25~0.55	1.20~7.00
		120412-VR																						0.30~0.60	1.50~7.00
		120416-VR																						0.35~0.65	1.70~7.00
		160612-VR																						0.35~0.70	2.00~8.00
		160616-VR																						0.35~0.75	2.20~8.00
		190612-VR																						0.35~0.70	2.00~10.00
		190616-VR																						0.35~0.75	2.20~10.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

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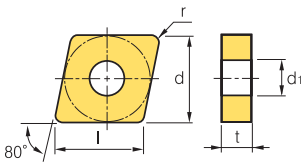
Rhombic 80° Negative



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

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

Inserts		Designation	Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	HA	CNMM 120408-HA																						0.10~0.40	0.80~3.50
Roughing	GR	CNMM 120408-GR																						0.20~0.50	1.00~7.00
		120412-GR																						0.25~0.50	1.30~7.00
		190612-GR									●													0.30~0.75	1.70~10.00
		190616-GR																						0.30~0.80	1.80~10.00
Heavy	GH	CNMM 120408-GH									●	●												0.30~0.60	2.50~8.00
		120412-GH							●		●													0.30~0.70	2.50~8.00
		160412-GH																						0.30~0.70	2.50~8.00
		160424-GH																						0.30~1.20	2.50~8.00
		160612-GH									●													0.30~0.90	2.50~8.00
		160616-GH																						0.30~1.20	2.50~8.00
		160624-GH																						0.30~1.50	2.50~8.00
		190608-GH										●												0.30~0.60	2.50~8.00
		190612-GH						●	●		●	●												0.30~0.70	3.00~8.00
		190616-GH						●	●		●	●												0.45~0.90	3.00~8.00
		190624-GH						●	●			●												0.55~1.20	4.00~9.00
		250716-GH																						0.50~1.00	4.50~10.00
		250724-GH						●	●															0.55~1.20	5.00~12.00
		250924-GH						●	●		●	●												0.55~1.20	5.00~12.00
		250950-GH																						0.65~1.30	6.00~12.00
Heavy (General)	VH	CNMM 190612-VH						●																0.50~0.90	5.00~10.00
		190616-VH						●																0.50~1.10	5.00~10.00
		190624-VH						●																0.60~1.20	6.00~12.00
		250724-VH						●																0.70~1.40	6.00~15.00
		250924-VH						●																0.70~1.40	6.00~15.00
Heavy (High feed cutting)	VT	CNMM 190612-VT						●			●	●												0.60~1.00	6.00~13.00
		190616-VT						●																0.60~1.10	5.00~10.00
		190624-VT						●																0.60~1.60	7.00~13.00
		250724-VT						●																0.75~16.0	7.00~17.00
		250924-VT						●																0.75~16.0	7.00~17.00

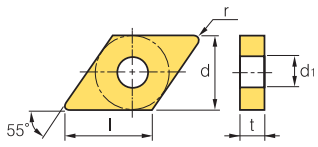
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B165	MCRNR/L	B166
MCLNR/L	B165	PCBNR/L	B153
MCMNN	B165	PCLNR/L	B154

DN○○

Rhombic 55° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VP1	DNGG	150404-VP1																						0.05~0.15	0.10~1.50
			150408-VP1																						0.07~0.20	0.10~1.50
			150604-VP1																						0.05~0.15	0.10~1.50
			150608-VP1																						0.07~0.20	0.10~1.50
Medium	VP3	DNGG	150404-VP3																	●	●	●		●		0.05~0.30	0.10~3.00
			150408-VP3																	●	●	●		●		0.10~0.45	0.50~5.00
			150412-VP3																	●	●	●		●		0.12~0.50	0.50~5.00
			150604-VP3																	●	●	●		●		0.05~0.30	0.10~3.00
			150608-VP3																	●	●	●		●		0.10~0.45	0.50~5.00
			150612-VP3																	●	●	●		●		0.12~0.50	0.50~5.00
Roughing		DNMA	110408																							0.17~0.45	0.80~3.00
			150404																							0.17~0.55	0.40~4.00
			150408																							0.25~0.55	0.80~4.00
			150412											●												0.25~0.65	0.50~4.00
			150604																							0.17~0.55	0.40~4.00
			150608											●												0.25~0.55	0.80~4.00
			150612											●												0.25~0.65	1.20~4.00
			190608																							0.30~0.80	2.50~13.00
Finishing	VB	DNMG	150404-VB	●		●	●	●			●															0.10~0.35	0.30~2.00
			150408-VB	●		●	●	●	●		●		●													0.15~0.45	0.50~2.00
			150412-VB						●		●		●													0.15~0.45	0.50~2.00
			150604-VB	●		●	●	●	●		●		●													0.10~0.35	0.30~2.00
			150608-VB	●		●	●	●	●		●		●													0.15~0.45	0.50~2.00
			150612-VB						●		●		●													0.20~0.50	0.50~2.50

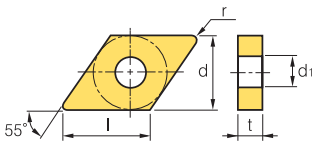
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	PDJNR/L	B154, 212
MDNNN	B166	PDNNR/L	B155
MDQNR/L	B167	PDSNR/L	B187
MDUNR/L	B192	PDUNR/L	B188

DN○○

Rhombic 55° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VF	DNMG	110402-VF																						0.05~0.20	0.20~1.00
			110404-VF										●												0.07~0.30	0.50~1.50
			110408-VF																						0.10~0.40	0.50~1.50
			150404-VF																						0.07~0.30	0.50~1.50
			150408-VF																						0.10~0.40	0.50~1.50
			150412-VF																						0.15~0.50	0.60~1.50
			150604-VF							●			●												0.13~0.30	0.50~1.50
			150608-VF							●			●												0.10~0.40	0.50~1.50
			150612-VF																						0.15~0.50	0.60~1.50
Finishing (Mild steel)	VL	DNMG	110408-VL																						0.05~0.20	0.10~1.00
			150404-VL								●		●												0.05~0.25	0.10~1.50
			150408-VL								●		●												0.05~0.30	0.20~1.50
			150412-VL																						0.10~0.30	0.25~1.50
			150604-VL	●																					0.05~0.25	0.10~1.50
			150608-VL	●									●												0.05~0.30	0.20~1.50
			150612-VL																						0.10~0.30	0.25~1.50
Finishing	VP1	DNMG	150404-VP1																	●	●	●		●	0.05~0.15	0.10~1.50
			150408-VP1																	●	●	●		●	0.07~0.20	0.10~1.50
			150604-VP1																	●	●	●		●	0.05~0.15	0.10~1.50
			150608-VP1																	●	●	●		●	0.07~0.20	0.10~1.50
Finishing (wiper)	VW	DNMG	150404-VW																						0.10~0.35	0.30~3.00
			150408-VW																						0.10~0.40	0.30~3.00
			150604-VW																						0.10~0.35	0.30~3.00
			150608-VW																						0.10~0.40	0.30~3.00
Medium to finishing	HA	DNMG	150404-HA																					●	0.05~0.30	0.80~3.50
			150408-HA																					●	0.10~0.40	0.80~3.50
			150604-HA																					●	0.05~0.30	0.80~3.50
			150608-HA																					●	0.10~0.40	0.80~3.50

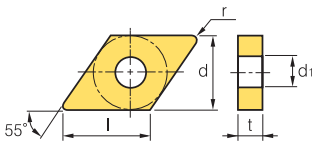
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	PDJNR/L	B154, 212
MDNNN	B166	PDNNR/L	B155
MDQNR/L	B167	PDSNR/L	B187
MDUNR/L	B192	PDUNR/L	B188

DN○○

Rhombic 55° Negative



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

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Mdium to finishing	LP new	DNMG 110404-LP																						0.07~0.30	0.30~1.50
		110408-LP																						0.10~0.40	0.30~1.50
		150404-LP						●		●		●												0.10~0.35	0.30~2.00
		150408-LP						●		●		●												0.10~0.40	0.50~2.50
		150412-LP						●		●		●												0.13~0.45	0.80~3.00
		150604-LP						●		●		●												0.10~0.35	0.30~2.00
		150608-LP						●		●		●												0.10~0.40	0.50~2.50
		150612-LP						●		●		●												0.13~0.45	0.80~3.00
Mdium to finishing	VC	DNMG 150404-VC																						0.10~0.35	0.30~2.00
		150408-VC						●		●		●												0.15~0.40	0.50~3.00
		150412-VC																						0.15~0.45	0.50~3.00
		150604-VC						●		●														0.10~0.35	0.30~2.00
		150608-VC						●		●		●												0.15~0.40	0.50~3.00
		150612-VC																						0.15~0.45	0.50~3.00
Mdium to finishing	VP2	DNMG 150404-VP2															●	●	●	●	●		●		0.05~0.30	0.10~3.00
		150408-VP2															●	●	●	●	●		●		0.10~0.40	0.50~4.50
		150604-VP2															●	●	●	●	●		●		0.05~0.30	0.10~3.00
		150608-VP2															●	●	●	●	●		●		0.10~0.40	0.50~4.50
Mdium to finishing	VQ	DNMG 110404-VQ	●																						0.05~0.30	0.50~3.50
		110408-VQ																							0.08~0.40	0.80~4.00
		110412-VQ																							0.10~0.40	1.00~4.00
		150404-VQ	●	●	●	●	●																		0.05~0.30	0.80~3.50
		150408-VQ	●		●	●	●																		0.08~0.40	0.80~4.00
		150412-VQ																							0.10~0.40	0.50~4.20
		150604-VQ	●	●	●	●	●																		0.05~0.30	0.80~4.00
		150608-VQ	●	●	●	●	●																		0.08~0.40	0.80~4.00
		150612-VQ																							0.10~0.40	0.50~4.20

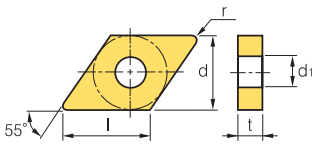
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	**PDJNR/L**	B154, 212
MDNNN	B166	**PDNNR/L**	B155
MDQNR/L	B167	**PDSNR/L**	B187
MDUNR/L	B192	**PDUNR/L**	B188

DN○○

Rhombic 55° Negative



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

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

Machining types
● Continuous cutting
● General cutting
✱ Interrupted cutting

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	MK new	DNMG 150404-MK											●												0.05~0.30	0.90~5.00
		DNMG 150408-MK											●												0.10~0.50	1.00~5.00
		DNMG 150412-MK																							0.13~0.60	1.30~5.00
		DNMG 150604-MK											●												0.05~0.30	0.90~5.00
		DNMG 150608-MK											●												0.10~0.50	1.00~5.00
		DNMG 150612-MK											●												0.13~0.60	1.30~5.00
Medium	MM new	DNMG 110404-MM																			●				0.08~0.35	0.50~5.00
		DNMG 110408-MM																			●				0.10~0.40	0.50~5.00
		DNMG 110412-MM																							0.12~0.45	0.50~5.00
		DNMG 150404-MM													●	●	●				●	●			0.10~0.40	0.50~6.40
		DNMG 150408-MM												●	●	●	●				●	●			0.12~0.45	0.50~6.40
		DNMG 150412-MM												●	●	●	●				●				0.15~0.60	0.50~6.40
		DNMG 150604-MM													●	●	●				●	●			0.10~0.40	0.50~6.40
		DNMG 150608-MM												●	●	●	●				●	●			0.12~0.45	0.50~6.40
		DNMG 150612-MM												●	●	●	●				●	●			0.15~0.60	0.50~6.40
Medium	MP new	DNMG 110404-MP						●		●		●													0.10~0.40	0.40~3.80
		DNMG 110408-MP						●		●		●													0.15~0.40	0.50~4.00
		DNMG 110412-MP																							0.15~0.50	0.80~4.20
		DNMG 150404-MP						●		●		●		●	●	●				●					0.10~0.40	0.40~4.00
		DNMG 150408-MP						●		●		●		●	●	●			●	●					0.15~0.45	0.50~4.50
		DNMG 150412-MP						●		●		●		●	●	●			●	●					0.15~0.50	0.80~5.00
		DNMG 150604-MP						●		●		●		●	●	●			●	●					0.10~0.40	0.40~4.00
		DNMG 150608-MP						●		●		●		●	●	●			●	●					0.15~0.45	0.50~4.50
		DNMG 150612-MP						●		●		●		●	●	●			●	●					0.15~0.50	0.80~5.00

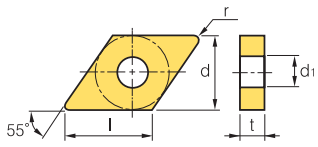
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	PDJNR/L	B154, 212
MDNNN	B166	PDNNR/L	B155
MDQNR/L	B167	PDSNR/L	B187
MDUNR/L	B192	PDUNR/L	B188

DN○○

Rhombic 55° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated												Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	VM	DNMG	110404-VM																							0.05~0.30	0.90~4.00
			110408-VM							●			●													0.10~0.50	1.00~4.00
			110412-VM																							0.13~0.50	1.30~4.00
			150404-VM	●									●					●	●							0.05~0.30	0.90~5.00
			150408-VM	●		●						●	●					●	●							0.10~0.50	1.00~5.00
			150412-VM										●					●	●							0.13~0.60	1.30~5.00
			150604-VM	●		●				●		●	●					●	●				●			0.05~0.30	0.90~5.00
			150608-VM	●						●		●	●					●	●				●			0.10~0.50	1.00~5.00
			150612-VM										●					●	●							0.13~0.60	1.30~5.00
Medium	VP3	DNMG	150404-VP3															●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
			150408-VP3															●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
			150412-VP3															●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
			150604-VP3															●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
			150608-VP3															●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
			150612-VP3															●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
Medium (wiper)	LW	DNMG	150408-LW																							0.15~0.50	0.70~4.50
			150412-LW																							0.20~0.60	1.00~5.00
			150608-LW																							0.15~0.50	0.70~4.50
			150612-LW																							0.20~0.60	1.00~5.00

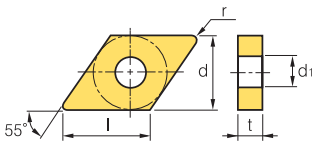
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	**PDJNR/L**	B154, 212
MDNNN	B166	**PDNNR/L**	B155
MDQNR/L	B167	**PDSNR/L**	B187
MDUNR/L	B192	**PDUNR/L**	B188

DN○○

Rhombic 55° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing	B25	DNMG	150402-B25																						0.15~0.40	0.50~3.50
			150404-B25			●			●		●		●												0.17~0.45	1.00~4.00
			150408-B25			●			●		●		●												0.17~0.55	1.50~4.00
			150412-B25						●		●		●												0.25~0.55	1.50~4.00
			150425-B25																						0.35~0.65	2.50~5.50
			150602-B25																						0.15~0.40	0.50~3.50
			150604-B25	●					●		●	●	●												0.17~0.55	1.50~4.00
			150608-B25	●					●		●	●	●										●		0.17~0.55	1.50~4.00
			150612-B25						●		●		●												0.25~0.55	1.50~4.00
			150625-B25																						0.35~0.65	2.50~5.50
Roughing	GR	DNMG	150408-GR									●													0.20~0.50	1.00~7.00
			150412-GR																						0.25~0.90	1.30~7.00
			150416-GR																						0.30~0.75	1.80~7.00
			150608-GR									●	●												0.20~0.50	1.00~7.00
			150612-GR									●													0.25~0.70	1.30~7.00
			150616-GR										●												0.20~0.75	1.80~7.00
Roughing	RK new	DNMG	150408-RK																						0.15~0.50	1.50~5.00
			150412-RK											●											0.20~0.60	1.80~5.00
			150608-RK											●											0.15~0.50	1.50~5.00
			150612-RK											●											0.20~0.60	1.80~5.00

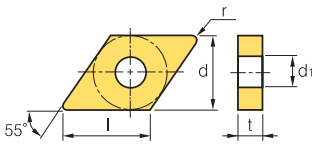
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	PDJNR/L	B154, 212
MDNNN	B166	PDNNR/L	B155
MDQNR/L	B167	PDSNR/L	B187
MDUNR/L	B192	PDUNR/L	B188

DN○○

Rhombic 55° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated												Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	RM new	DNMG	150404-RM													●	●	●				●				0.10~0.50	2.00~6.00
			150408-RM												●	●	●	●				●				0.15~0.55	2.00~6.00
			150412-RM												●	●	●	●				●				0.20~0.60	2.00~6.00
			150604-RM													●	●	●				●	●			0.10~0.50	2.00~6.00
			150608-RM												●	●	●						●			0.15~0.55	2.00~6.00
			150612-RM												●	●	●									0.20~0.60	2.00~6.00
Roughing	VP4 new	DNMG	150408-VP4																							0.15~0.35	1.00~4.00
			150412-VP4																							0.20~0.40	1.00~4.00
			150608-VP4																			●				0.15~0.35	1.00~4.00
			150612-VP4																			●				0.20~0.40	1.00~4.00
Roughing	VR	DNMG	150408-VR																							0.25~0.55	1.20~7.00
			150412-VR																							0.30~0.60	1.50~7.00
			150608-VR																							0.25~0.55	1.20~7.00
			150612-VR																							0.30~0.60	1.50~7.00
Medium (Shaft)	SH	DNMX	150404R-SH																							0.15~0.30	1.00~4.00
			150408R-SH																							0.15~0.50	1.50~5.00
			150604R-SH						●		●															0.15~0.30	1.00~4.00
			150608R-SH						●		●															0.15~0.50	1.50~5.00
			150404L-SH																							0.15~0.30	1.00~4.00
			150408L-SH																							0.15~0.50	1.50~5.00
			150604L-SH						●		●															0.15~0.30	1.00~4.00
			150608L-SH						●		●															0.15~0.50	1.50~5.00

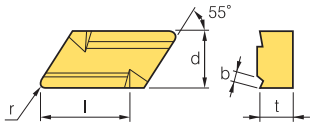
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B166	**PDJNR/L**	B154, 212
MDNNN	B166	**PDNNR/L**	B155
MDQNR/L	B167	**PDSNR/L**	B187
MDUNR/L	B192	**PDUNR/L**	B188

KN○○

Parallelogram 55° Negative



Dimensions (mm)		
Size	d	t
16	9.525	4.76

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
	Steel	P	●	⬌	✱	●	⬌	●	⬌	⬌	✱	✱	●	⬌		✱								
	Stainless steel	M									⬌	⬌		●	⬌	✱	⬌	✱		●	⬌	⬌		
	Cast iron	K	●	⬌	✱	●	⬌	⬌				⬌	⬌										●	⬌
	Non-ferrous metal	N																					●	⬌
	Heat resistant alloy, Titanium alloy	S									●				●	●	⬌	✱	●	●	⬌		●	⬌
	Hardened steel	H																		⬌	✱		●	⬌

Machining types
● Continuous cutting
⬌ General cutting
✱ Interrupted cutting

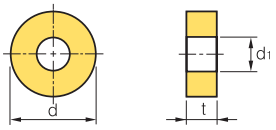
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	11	KNUX	160405R11						●	●	●	●	●										●			0.20~0.35	1.00~6.00
			160410R11						●		●	●	●													0.30~0.60	1.50~6.00
			160405L11						●	●	●	●	●													0.20~0.35	1.00~6.00
			160410L11						●		●	●	●													0.30~0.60	1.50~6.00
Roughing	12	KNUX	160405R12						●		●	●	●													0.25~0.35	1.50~6.00
			160410R12						●		●	●	●													0.40~0.70	1.50~6.00
			160405L12																							0.25~0.35	1.50~6.00
			160410L12									●														0.40~0.70	1.50~6.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ●: Stock item

Available tool holders			
Designation	Page	Designation	Page
CKJNR/L	B163	**CKUNR/L**	B192
CKNNR/L	B163		

RN○○

Round Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	6.35~9.52	9.12
31	31.75	9.52	12.7

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
	Steel	P	●	⬌	✱	●	⬌	●	⬌	⬌	✱	✱	●	⬌		✱								
	Stainless steel	M									⬌	⬌		●	⬌	✱	⬌	✱		●	⬌	⬌		
	Cast iron	K	●	⬌	✱	●	⬌	⬌				⬌	⬌										●	⬌
	Non-ferrous metal	N																					●	⬌
	Heat resistant alloy, Titanium alloy	S									●				●	●	⬌	✱	●	●	⬌		●	⬌
	Hardened steel	H																		⬌	✱		●	⬌

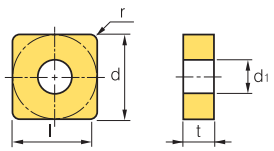
Machining types
● Continuous cutting
⬌ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing	B25	RNMG	090300-B25																							0.90~4.50	0.09~0.90
			120400-B25									●														1.20~4.80	0.12~1.20
			150600-B25									●														1.15~1.50	1.50~7.50
			190600-B25																							1.90~7.60	0.19~1.90
			250600-B25																							2.50~10.0	0.25~2.50
			250900-B25									●														2.50~10.0	0.25~2.50
			310900-B25																							3.50~13.0	0.30~2.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ●: Stock item

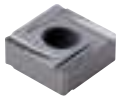
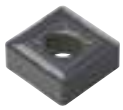
SN○○

○ Square 90° Negative



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

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

Inserts	Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing		SNGA 090304																						0.17~0.50	0.50~4.50
		090308																						0.17~0.50	0.50~4.50
		120404																						0.15~0.60	1.50~8.00
		120408																						0.15~0.60	1.50~8.00
		120412																						0.20~0.80	1.50~8.00
		150608																						0.20~0.80	2.00~10.00
		150616																						0.20~0.90	2.00~10.00
		190608																						0.15~0.60	3.00~12.00
		190612																						0.20~0.80	3.00~12.00
Medium		SNGG 090304R																						0.12~0.35	1.00~3.00
		090308R																						0.15~0.35	1.00~3.00
		120404R		●																				0.15~0.35	1.00~4.00
		120408R																						0.15~0.35	1.00~4.00
		120412R																						0.15~0.35	1.00~4.00
		090304L																						0.12~0.35	1.00~3.00
		090308L																						0.15~0.35	1.00~3.00
		120404L																						0.15~0.35	1.00~4.00
		120408L																						0.15~0.35	1.00~4.00
		120412L																						0.15~0.35	1.00~4.00
Medium	VP3 	SNGG 120404-VP3																	●	●	●		●		0.05~0.30	0.10~3.00
		120408-VP3																	●	●	●		●		0.10~0.45	1.00~5.00
		120412-VP3																	●	●	●		●		0.12~0.50	1.00~5.00

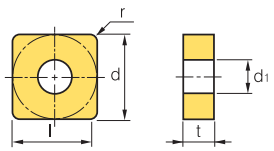
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

SN○○

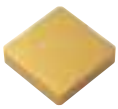
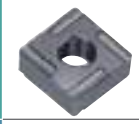
○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	3.18~4.76	5.16
15	15.875	4.76~6.35	6.35
19	19.05	4.76~6.35	7.93
25	25.4	6.35~9.52	9.12

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

Machining types
● Continuous cutting
⬬ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing		SNGN	090302																						0.05~0.30	0.50~4.00
			090304																						0.10~0.35	0.50~4.00
			090308																						0.10~0.40	1.00~4.00
			120304																						0.13~0.50	1.30~5.00
			120308																						0.15~0.60	1.50~6.00
			120312																						0.17~0.60	1.70~6.00
			120402																						0.10~0.45	1.00~5.00
			120404																						0.13~0.50	1.30~5.00
			120408																						0.15~0.60	1.50~6.00
			120412																						0.17~0.60	1.70~6.00
			120424																						0.20~0.65	2.00~6.00
			150402																						0.10~0.50	0.50~6.00
			150408																						0.15~0.60	1.50~8.00
			150412																						0.17~0.60	2.00~8.00
			150416																						0.20~0.65	2.50~8.50
			190402																						0.10~0.60	2.00~8.50
			190412																						0.17~0.70	2.50~10.00
			190416																						0.20~0.75	2.50~10.00
			250604																						0.30~0.80	3.00~12.00
			250616																						0.35~1.00	4.00~12.00
Medium		SNGX	120408R																						0.15~0.35	1.00~4.00
Roughing		SNMA	090304																						0.10~0.45	0.50~4.50
			090308																						0.15~0.50	0.50~4.50
			090312																						0.20~0.50	0.50~4.50
			120402																						0.10~0.50	1.00~4.50
			120404																						0.15~0.60	1.00~5.00
			120408											●											0.15~0.70	1.00~6.00
			120412											●											0.20~0.80	1.50~6.00
			120416											●											0.30~1.00	2.00~6.00
			120430																						0.30~0.70	2.50~5.00
			150612																						0.20~0.80	2.00~8.00
			150616											●											0.25~0.85	2.50~10.00
			190608																						0.20~0.80	2.00~10.00
			190612											●											0.20~0.80	2.00~10.00
			190616											●											0.25~0.85	2.50~10.00
			190624																						0.35~0.90	3.00~10.00
			250724																						0.40~1.00	3.00~13.00
			250924																						0.40~1.00	3.00~13.00

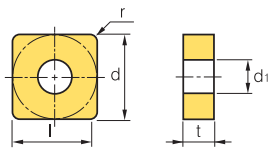
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

SN○○

○ Square 90° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VB	SNMG	120404-VB	●			●	●																		0.15~0.35	0.30~2.00
			120408-VB	●		●	●	●																		0.15~0.40	0.50~2.00
Finishing	VF	SNMG	090304-VF																							0.07~0.30	0.50~1.50
			090308-VF																							0.07~0.30	0.50~1.50
			120404-VF																							0.07~0.30	0.50~1.50
			120408-VF										●													0.10~0.40	0.50~1.50
			120412-VF																							0.20~0.50	0.50~1.50
Finishing (Mild steel)	VL	SNMG	120408-VL																							0.10~0.35	0.20~1.50
Medium to finishing	HA	SNMG	120404-HA																					●		0.10~0.35	0.80~3.50
			120408-HA																					●		0.10~0.40	0.80~3.50
			120412-HA																							0.13~0.55	0.80~3.50
Medium to finishing	LP new	SNMG	090308-LP																							0.10~0.30	0.30~1.50
			120404-LP						●		●		●													0.10~0.35	0.30~2.00
			120408-LP						●		●		●													0.10~0.40	0.50~2.50
			120412-LP																							0.13~0.45	0.80~3.00
Medium to finishing	VC	SNMG	120408-VC								●		●													0.15~0.40	0.50~3.50
Medium to finishing	VP2	SNMG	120404-VP2															●	●	●	●	●		●		0.05~0.35	0.10~3.00
			120408-VP2															●	●	●	●	●		●		0.10~0.45	0.50~4.50
			120412-VP2															●	●	●	●	●		●		0.10~0.50	0.50~5.00

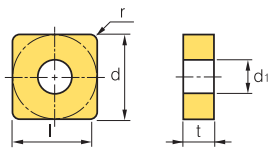
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

SN○○

○ Square 90° Negative



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

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VQ	SNMG 090304-VQ																							0.05~0.30	0.50~3.50
		090308-VQ																							0.08~0.30	0.80~4.00
		090312-VQ																							0.10~0.30	1.00~4.00
		120404-VQ	●		●																				0.05~0.30	0.80~4.00
		120408-VQ	●		●																				0.08~0.40	0.80~4.00
Medium	MK	SNMG 090308-MK																							0.17~0.45	0.80~3.50
		120404-MK																							0.08~0.45	0.80~4.00
		120408-MK											●												0.10~0.50	1.00~5.00
		120412-MK											●												0.13~0.60	1.30~5.00
		120416-MK																							0.15~0.63	1.50~6.00
		150608-MK																							0.25~0.60	1.80~6.00
		150612-MK																							0.20~0.70	1.80~7.00
		150616-MK																							0.23~0.70	2.00~7.50
		190608-MK																							0.31~0.75	2.30~9.50
		190612-MK																							0.33~0.78	2.50~10.00
		190616-MK																							0.35~0.78	2.70~10.00
Medium	MM new	SNMG 090304-MM																				●			0.08~0.35	0.50~5.00
		090308-MM																							0.10~0.40	0.50~5.00
		090312-MM																							0.12~0.45	0.50~5.00
		120404-MM												●	●	●	●				●	●			0.10~0.40	0.50~6.40
		120408-MM												●	●	●	●				●	●			0.12~0.45	0.50~6.40
		120412-MM													●	●	●				●	●			0.15~0.60	0.50~6.40
		120416-MM																							0.18~0.65	0.50~6.40
		150608-MM																							0.12~0.45	0.50~8.00
		150612-MM													●	●	●				●	●			0.15~0.60	0.50~8.00
		150616-MM																							0.18~0.65	0.50~8.00
		190608-MM													●	●	●				●				0.12~0.45	0.50~9.50
		190612-MM													●	●	●				●	●			0.15~0.60	0.50~9.50
		190616-MM																				●			0.18~0.65	0.50~9.50

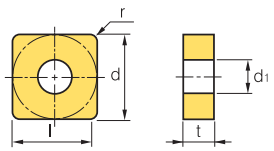
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

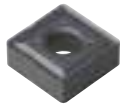
SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94	9.12

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	MP 	SNMG 090304-MP						●		●		●													0.10~0.40	0.40~3.80
		090308-MP						●		●		●													0.15~0.40	0.50~4.00
		120404-MP						●		●		●		●	●	●			●	●					0.10~0.40	0.40~4.00
		120408-MP						●		●		●		●	●	●			●	●					0.15~0.45	0.50~4.50
		120412-MP						●		●		●		●	●	●									0.15~0.50	0.80~5.00
		120416-MP						●		●		●													0.18~0.60	0.80~7.00
Medium	VM 	SNMG 090304-VM																							0.05~0.30	0.90~3.50
		090308-VM																							0.10~5.00	1.00~3.50
		120404-VM	●									●					●	●							0.05~0.30	0.90~5.00
		120408-VM	●						●		●	●					●	●		●		●			0.10~0.50	1.00~5.00
		120412-VM										●					●	●							0.13~0.60	1.30~5.00
		190612-VM																							0.25~0.60	2.50~7.50
		190616-VM																							0.25~0.60	2.50~7.50
Medium	VP3 	SNMG 120404-VP3															●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
		120408-VP3															●	●	●	●	●		●	●	0.10~0.45	1.00~5.00
		120412-VP3															●	●	●	●	●			●	0.12~0.50	1.00~5.00
Medium to roughing	B25 	SNMG 090308-B25																							0.17~0.45	0.80~3.50
		120404-B25	●		●			●		●	●	●													0.17~0.45	1.00~3.50
		120408-B25	●		●			●		●	●	●					●	●				●			0.23~0.60	1.50~5.00
		120412-B25			●			●		●	●	●													0.25~0.60	2.00~5.00
		120416-B25						●		●	●	●													0.35~0.70	2.50~5.00
		120420-B25																							0.40~0.70	3.00~5.00
		150608-B25									●														0.25~0.60	1.50~6.00
		150612-B25																							0.25~0.60	2.00~6.00
		150616-B25																							0.35~0.70	2.00~6.00
		190608-B25						●		●	●														0.25~0.60	3.00~8.00
		190612-B25						●		●	●	●													0.30~0.60	3.00~8.00
		190616-B25						●		●	●									●					0.35~0.70	3.00~8.00
		250716-B25																							0.35~0.70	4.00~12.00
		250724-B25						●				●													0.50 ~1.00	5.00~12.00
		250924-B25						●																	0.50~1.00	5.00~12.00

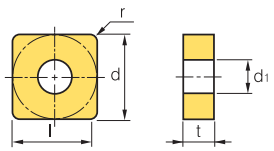
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	MSRNR/L	B168	PSDNN	B157
MSDNN	B167	MSSNR/L	B169	PSKNR/L	B158, 189
MSKNR/L	B168	PSBNR/L	B157	PSSNR/L	B158

SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d1
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94	9.12

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

Machining types
● Continuous cutting
⬬ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	GR	SNMG	120404-GR																						0.15~0.45	0.08~6.00
			120408-GR									●	●												0.20~0.50	1.00~7.00
			120412-GR									●													0.20~0.50	1.00~7.00
			150608-GR									●													0.25~0.60	1.00~7.00
			150612-GR							●		●													0.29~0.75	1.40~7.00
			190608-GR									●													0.30~0.80	1.70~9.00
			190612-GR							●		●	●												0.30~0.80	1.70~9.00
			190616-GR							●		●	●												0.31~0.82	1.90~12.30
			250724-GR									●													0.45~1.20	2.60~14.00
			250924-GR							●		●													0.50~1.20	2.60~14.00
Roughing	RK new	SNMG	120408-RK											●											0.23~0.53	1.50~6.00
			120412-RK											●											0.28~0.53	1.80~6.00
			120416-RK											●											0.28~0.53	2.00~6.00
			150612-RK																						0.20~0.70	1.80~7.00
			150616-RK																						0.23~0.70	2.00~7.50
			190612-RK																						0.33~0.78	2.50~10.00
			190616-RK																						0.35~0.78	2.70~10.00
Roughing	RM new	SNMG	120404-RM												●	●	●	●				●			0.10~0.50	2.00~6.00
			120408-RM												●	●	●	●				●	●		0.15~0.55	2.00~6.00
			120412-RM													●	●	●				●			0.20~0.60	2.00~6.00
			120416-RM																						0.25~0.70	2.00~6.00
			150612-RM													●	●	●				●			0.20~0.60	2.00~8.00
			150616-RM																						0.25~0.70	2.00~8.00
			190608-RM													●	●	●				●			0.20~0.60	2.00~10.00
			190612-RM													●	●	●				●			0.20~0.60	2.00~10.00
			190616-RM																						0.27~0.70	2.00~10.00
			250924-RM																						0.40~1.20	4.00~14.00
Roughing	VP4 new	SNMG	120408-VP4																			●			0.15~0.35	1.00~4.00
			120412-VP4																			●			0.20~0.40	1.00~4.00
			150612-VP4																			●			0.20~0.45	1.00~5.00
			190608-VP4																			●			0.20~0.50	1.00~9.00
			190612-VP4																			●			0.23~0.55	1.00~9.00
			190616-VP4																			●			0.27~0.60	1.00~9.00

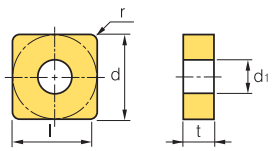
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d1
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	VR	SNMG	120408-VR																						0.25~0.55	1.20~7.00
			120412-VR																						0.30~0.60	1.50~7.00
			190612-VR																						0.35~0.70	2.00~10.00
			190616-VR																						0.35~0.75	2.20~10.00
Roughing	GR	SNMM	120408-GR																						0.20~0.50	1.00~7.00
			120412-GR									●													0.25~0.65	1.30~7.00
			190612-GR									●													0.25~0.65	1.30~11.50
			190616-GR																						0.32~0.85	1.80~11.50
Heavy	GH	SNMM	120408-GH									●	●												0.30~0.60	2.50~8.00
			120412-GH									●													0.30~0.70	2.50~8.00
			150612-GH									●													0.30~0.70	2.50~8.00
			190612-GH						●	●		●	●												0.30~0.70	3.00~8.00
			190616-GH						●	●		●	●												0.45~1.00	4.00~9.00
			190624-GH						●	●		●	●												0.55~1.20	4.00~9.00
			250724-GH						●	●		●	●												0.55~1.20	5.00~12.00
			250924-GH						●	●		●	●												0.55~1.20	5.00~12.00
			250932-GH																						0.55~1.20	5.00~12.00
Heavy (General)	VH	SNMM	190612-VH						●																0.50~0.90	5.00~10.00
			190616-VH						●																0.50~1.10	5.00~10.00
			190624-VH						●																0.60~1.20	6.00~12.00
			250724-VH						●			●													0.70~1.40	6.00~15.00
			250920-VH																						0.70~1.40	6.00~15.00
			250924-VH						●																0.70~1.40	6.00~15.00
			250716-VH																						0.70~1.50	6.00~14.00
Heavy (High feed cutting)	VT	SNMM	190612-VT						●				●												0.60~1.00	6.00~13.00
			190616-VT						●			●													0.60~1.10	6.00~13.00
			190624-VT						●																0.60~1.60	7.00~13.00
			250724-VT						●			●													0.75~1.60	7.00~15.00
			250920-VT																						0.75~1.60	7.00~15.00
			250924-VT						●			●													0.75~1.60	7.00~17.00
			250716-VT																						0.75~1.60	7.00~15.00

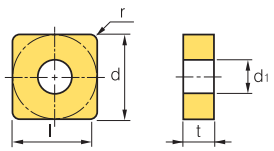
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

SN○○

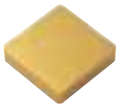
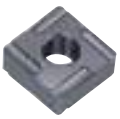
○ Square 90° Negative



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

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬬	✱	●	⬬	●	⬬	⬬	✱	✱	●	⬬		✱								
	Stainless steel	M									⬬	⬬		●	⬬	✱	⬬	✱		●	⬬	⬬		
	Cast iron	K	●	⬬	✱	●	⬬	⬬				⬬	⬬										●	⬬
	Non-ferrous metal	N																					●	⬬
	Heat resistant alloy, Titanium alloy	S										●			●	●	⬬	✱	●	●	⬬		●	⬬
	Hardened steel	H																		⬬	✱		●	⬬

Machining types
● Continuous cutting
⬬ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing		SNMN	120304																							0.17~0.45	1.00~3.50
			120308																							0.23~0.60	1.50~6.00
			120312																							0.25~0.60	2.00~5.00
			120404																							0.17~0.45	1.00~3.50
			120408																							0.23~0.60	1.50~5.00
			120412																							0.25~0.60	2.00~5.00
			150404																							0.20~0.50	1.50~6.00
			150408																							0.25~0.60	1.50~6.00
			150412																							0.25~0.60	2.00~6.00
			190416																							0.35~0.70	2.00~6.00
Medium		SNMX	120408R																							0.15~0.35	1.00~4.00
Medium to roughing		SNUN	120408																							0.23~0.60	1.50~5.00
			120412																							0.25~0.60	2.00~5.00
			190412																							0.30~1.00	3.00~10.00
			120412TN																							0.25~0.60	2.00~5.00
			250724TN																							0.30~1.20	3.00~12.00

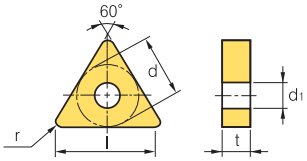
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B167	**MSRNR/L**	B168	**PSDNN**	B157
MSDNN	B167	**MSSNR/L**	B169	**PSKNR/L**	B158, 189
MSKNR/L	B168	**PSBNR/L**	B157	**PSSNR/L**	B158

TN○○

Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d1
11	6.35	3.18	2.40
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

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

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing		TNGA	110302																					0.05~0.30	0.20~3.00
			110304																					0.05~0.30	0.40~3.00
			160304																					0.10~0.35	0.40~4.00
			160402																					0.10~0.30	0.20~4.00
			160404																					0.10~0.35	0.40~5.00
			160408																					0.12~0.40	0.50~5.00
			220304																					0.10~0.35	0.50~5.00
			220402																					0.05~0.30	0.20~3.00
			220404																					0.10~0.35	0.40~5.00
			220408																					0.10~0.40	0.50~5.00
			220412																					0.12~0.45	1.00~5.50
			270612																					0.12~0.45	1.00~7.00
			270624																					0.20~0.55	2.00~7.00
Finishing	SC 	TNGG	160402R-SC		●																			0.03~0.20	0.10~1.50
			160404R-SC		●																			0.05~0.25	0.30~2.00
			160402L-SC																					0.03~0.20	0.10~1.50
			160404L-SC																					0.05~0.25	0.30~2.00
Medium		TNGG	110304R																					0.05~0.30	0.50~2.50
			160402R		●																			0.08~0.30	0.50~3.50
			160404R	●	●																			0.12~0.30	1.00~3.50
			160408R		●																			0.15~0.35	1.30~3.50
			220404R		●																			0.12~0.30	1.00~5.00
			220408R		●																			0.15~0.35	1.30~5.00
			220412R																					0.17~0.40	1.50~5.00
			110304L																					0.05~0.30	0.50~2.50
			160402L																					0.08~0.30	0.50~3.50
			160404L	●	●																			0.12~0.30	1.00~3.50
			160408L		●																			0.15~0.35	1.30~3.50
			220404L																					0.12~0.30	1.00~5.00
			220408L																					0.15~0.35	1.30~5.00
			220412L																					0.17~0.40	1.50~5.00
Medium	VP3 	TNGG	160404-VP3																	●	●	●	●	0.05~0.30	0.10~3.00
			160408-VP3																	●	●	●	●	0.10~0.45	0.50~5.00

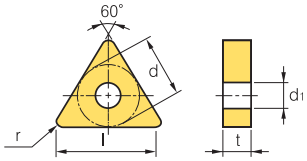
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	PTFNR/L	B159, 189	WTJNR/L	B161
MTFNR/L	B169	PTGNR/L	B159	WTXNR/L	B161
MTGNR/L	B170	PTTNR/L	B160		
MTJNR/L	B170	WTENN	B161		

TN○○

Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d1
11	6.35	3.18	2.40
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	9.52	7.93

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
	Steel	P	●	◒	✱	●	◒	●	◒	◒	✱	✱	●	◒		✱								●	◒
	Stainless steel	M									◒	◒		●	◒	✱	◒	✱		●	◒	◒			
	Cast iron	K	●	◒	✱	●	◒	◒				◒	◒											●	◒
	Non-ferrous metal	N																						●	◒
	Heat resistant alloy, Titanium alloy	S										●			●	●	◒	✱	●	●	◒			●	◒
	Hardened steel	H																		◒	✱			●	◒

Machining types
● Continuous cutting
◒ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium		TNGN	110302																							0.05~0.25	0.20~2.50
			110304																							0.10~0.30	0.50~2.50
			110308																							0.10~0.30	0.80~2.50
			160302																							0.05~0.30	0.20~3.00
			160304																							0.10~0.30	0.50~4.00
			160308																							0.10~0.40	0.80~4.00
			160404																							0.10~0.40	0.50~4.00
			160408																							0.10~0.40	1.00~4.00
			160412																							0.10~0.50	1.50~4.50
			220404																							0.10~0.35	1.00~4.00
			220408																							0.15~0.40	1.50~5.00
			220412																							0.20~0.50	1.50~5.00
			220416																							0.25~0.55	1.50~5.00
			220424																							0.30~0.65	2.00~5.00
			270630																							0.35~0.70	2.00~5.00
Roughing		TNMA	110308																							0.05~0.30	0.50~3.00
			160404											●												0.10~0.30	1.00~4.00
			160408											●												0.10~0.40	1.00~4.00
			160412											●												0.10~0.50	1.50~4.50
			160416											●												0.15~0.55	1.50~4.50
			220404																							0.10~0.35	1.00~4.00
			220408											●												0.15~0.40	1.50~5.00
			220412											●												0.20~0.50	1.50~5.00
			220416											●												0.25~0.55	1.50~5.00
			220420																							0.30~0.65	2.00~5.00
			220432																							0.35~0.70	2.00~5.00
			270608																							0.20~0.45	2.00~7.00
			270612																							0.25~0.55	3.00~7.00
			270616																							0.30~0.65	3.00~7.00
			330924																							0.35~0.75	3.00~9.00
Finishing	VB 	TNMG	160404-VB	●		●	●	●																		0.10~0.35	0.30~1.50
			160408-VB	●		●	●	●	●		●		●													0.15~0.45	0.50~7.00
			220408-VB								●		●													0.15~0.45	0.50~2.50
			220412-VB																							0.20~0.50	0.70~2.50

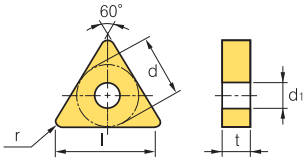
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	**PTFNR/L**	B159, 189	**WTJNR/L**	B161
MTFNR/L	B169	**PTGNR/L**	B159	**WTXNR/L**	B161
MTGNR/L	B170	**PTTNR/L**	B160		
MTJNR/L	B170	**WTENN**	B161		

TN○○

Triangular 60° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VL	TNMG	160404-VL	●																					0.05~0.25	0.10~1.00
			160408-VL	●									●												0.10~0.35	0.20~1.50
			160412-VL																						0.15~0.40	0.20~1.50
			220408-VL																						0.10~0.35	0.20~1.50
			220412-VL																						0.10~0.35	0.50~2.00
Finishing	VF	TNMG	110304-VF	●	●								●												0.05~0.20	0.20~1.00
			160404-VF	●						●			●												0.07~0.30	0.50~1.50
			160408-VF						●	●			●												0.10~0.40	0.50~1.50
			160412-VF																						0.15~0.50	0.50~1.50
			220404-VF										●												0.10~0.40	0.50~1.50
			220408-VF																						0.10~0.40	0.50~1.50
Finishing (wiper)	VW	TNMG	160404-VW																						0.10~0.35	0.30~3.00
			160408-VW																						0.10~0.40	0.30~3.00
Medium to finishing	HA	TNMG	160404-HA																					●	0.05~0.30	0.80~3.50
			160408-HA																					●	0.10~0.40	0.80~3.50
			160412-HA																						0.13~0.55	0.80~3.50
			220408-HA																						0.10~0.40	0.80~5.30
Medium to finishing	LP	TNMG	160404-LP						●		●		●												0.10~0.35	0.30~2.00
			160408-LP						●		●		●												0.10~0.40	0.50~2.50
			160412-LP																						0.13~0.45	0.80~3.00

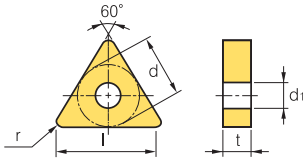
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	PTFNR/L	B159, 189	WTJNR/L	B161
MTFNR/L	B169	PTGNR/L	B159	WTXNR/L	B161
MTGNR/L	B170	PTTNR/L	B160		
MTJNR/L	B170	WTENN	B161		

TN○○

△ Triangular 60° Negative



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

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

Inserts	Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VC	TNMG 160404-VC								●		●													0.10~0.35	0.30~2.00
		160408-VC						●		●		●													0.15~4.00	0.50~3.00
		160412-VC								●		●													0.15~4.50	0.50~3.00
		220408-VC								●															0.15~0.40	0.50~3.00
		220412-VC																							0.15~0.45	0.50~3.00
Medium to finishing	VP2	TNMG 160404-VP2															●	●	●	●	●		●		0.05~0.30	0.10~3.00
		160408-VP2															●	●	●	●	●		●		0.10~0.45	0.50~5.00
		160412-VP2																●	●	●	●		●		0.13~0.55	0.80~3.30
		220404-VP2															●	●		●					0.05~0.30	0.80~5.00
		220408-VP2															●	●		●					0.10~0.40	0.80~5.00
Medium to finishing	VQ	TNMG 110304-VQ																							0.05~0.30	0.50~3.00
		160404-VQ	●	●	●	●	●																		0.05~0.30	0.80~3.50
		160408-VQ	●		●	●	●																		0.08~0.40	0.80~3.50
		160412-VQ																							0.10~0.40	0.80~3.50
		220404-VQ																							0.05~0.35	0.80~4.00
Medium	MK	TNMG 160404-MK											●												0.05~0.30	0.90~3.50
		160408-MK											●												0.10~0.50	1.00~4.00
		160412-MK											●												0.12~0.60	1.20~4.50
		160416-MK																							0.13~0.60	1.20~4.50
		220404-MK																							0.17~0.45	1.50~5.00
		220408-MK																							0.21~0.50	1.30~5.50
		220412-MK																							0.23~0.52	1.40~5.50
		220416-MK																							0.25~0.53	1.60~6.00
		270612-MK																							0.25~0.55	3.00~7.00
Medium	MM	TNMG 160404-MM												●	●	●	●				●	●			0.10~0.40	0.50~4.80
		160408-MM												●	●	●	●				●	●			0.12~0.45	0.50~4.80
		160412-MM																				●			0.18~0.65	0.50~4.80
		160416-MM																							0.18~0.65	0.50~4.80
		220404-MM																							0.10~0.40	0.50~6.50
		220408-MM													●	●	●				●	●			0.12~0.45	0.50~6.50
		220412-MM													●	●	●				●	●			0.15~0.60	0.50~6.50

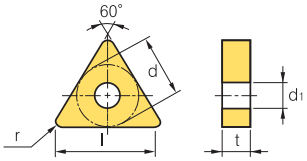
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	PTFNR/L	B159, 189	WTJNR/L	B161
MTFNR/L	B169	PTGNR/L	B159	WTXNR/L	B161
MTGNR/L	B170	PTTNR/L	B160		
MTJNR/L	B170	WTENN	B161		

TN○○

Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d1
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	7.94~9.52	7.93

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	MP	TNMG	160404-MP						●		●		●		●	●	●			●	●				0.10~0.40	0.40~3.50
			160408-MP						●		●		●		●	●	●			●	●				0.15~0.45	0.50~4.00
			160412-MP						●		●		●		●	●	●			●	●				0.15~0.50	0.80~4.50
			220404-MP						●		●		●		●	●	●								0.10~0.35	0.40~5.00
			220408-MP						●		●		●		●	●	●								0.15~0.45	0.50~5.50
			220412-MP						●		●		●		●	●	●								0.15~0.50	0.80~6.00
			220416-MP						●		●		●												0.20~0.55	1.00~6.00
Medium	VM	TNMG	110308-VM																						0.05~0.30	0.80~4.00
			160404-VM	●						●		●	●					●	●						0.05~0.30	0.90~5.00
			160408-VM	●		●			●	●		●	●					●	●				●			0.10~0.50	1.00~5.00
			160412-VM	●					●	●								●	●							0.13~0.60	1.30~5.00
			220404-VM															●	●							0.05~0.30	0.90~6.60
			220408-VM							●			●					●	●		●					0.10~0.50	1.00~6.60
			220412-VM																							0.13~0.60	1.30~6.60
Medium	VP3	TNMG	160404-VP3															●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
			160408-VP3															●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
Medium (wiper)	LW	TNMG	160408-LW																							0.15~0.50	0.70~4.50
			160412-LW																							0.20~0.60	1.00~5.00
Medium to roughing	B25	TNMG	110308-B25																							0.17~0.40	1.50~3.00
			160404-B25	●		●			●		●	●	●													0.17~0.45	2.00~3.50
			160408-B25	●		●			●		●	●	●										●			0.17~0.55	2.00~3.50
			160412-B25			●			●		●		●													0.25~0.55	2.00~3.50
			160416-B25																							0.30~0.60	2.50~3.00
			220404-B25						●		●	●	●													0.17~0.45	1.50~5.00
			220408-B25						●		●	●	●													0.17~0.55	2.00~5.00
			220412-B25						●		●	●	●													0.25~0.55	2.00~5.00
			220416-B25						●		●		●													0.30~0.60	2.00~5.00
			220424-B25																							0.35~0.70	3.00~7.00
			220432-B25																							0.40~0.75	3.50~7.00
			270608-B25									●														0.17~0.55	2.00~5.00
			270612-B25								●	●	●													0.25~0.55	3.00~7.00
			270616-B25																							0.30~0.60	3.00~7.00
			330716-B25						●		●															0.35~0.70	3.00~9.00
			330924-B25																							0.40~0.80	3.00~9.00

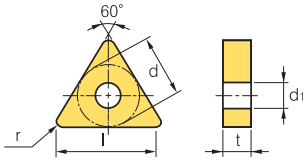
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	PTFNR/L	B159, 189	WTJNR/L	B161
MTFNR/L	B169	PTGNR/L	B159	WTXNR/L	B161
MTGNR/L	B170	PTTNR/L	B160		
MTJNR/L	B170	WTENN	B161		

TN○○

Triangular 60° Negative



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	GR	TNMG	160408-GR									●														0.20~0.50	1.00~7.00
			160412-GR																							0.23~0.54	1.20~8.00
			220408-GR									●	●													0.22~0.61	1.10~7.80
			220412-GR							●		●														0.28~0.78	1.20~7.80
			220416-GR									●														0.31~0.75	1.50~7.80
			270608-GR									●														0.31~0.75	1.50~7.80
			270612-GR									●														0.31~0.75	1.50~7.80
			270616-GR									●														0.36~1.00	1.60~7.80
			330924-GR									●														0.40~1.00	2.00~9.00
Roughing	RK new	TNMG	160408-RK											●												0.23~0.53	1.50~5.00
			160412-RK											●												0.28~0.53	1.80~5.00
			160416-RK											●												0.28~0.53	1.80~5.00
			220408-RK											●												0.23~0.53	1.50~6.00
			220412-RK											●												0.28~0.53	1.80~6.00
			220416-RK											●												0.28~0.63	2.00~6.00
Roughing	RM new	TNMG	160404-RM												●	●	●	●				●	●			0.10~0.50	2.00~5.50
			160408-RM												●	●	●	●				●	●			0.15~0.55	2.00~5.50
			160412-RM																							0.20~0.60	2.00~5.50
			220408-RM													●	●	●				●				0.10~0.50	2.00~7.50
			220412-RM													●	●	●				●				0.15~0.55	2.00~7.50
Roughing	VP4 new	TNMG	160408-VP4																			●				0.15~0.35	1.00~4.00
			160412-VP4																			●				0.20~0.40	1.00~4.00
Roughing	VR	TNMG	160408-VR																							0.25~0.55	1.20~7.00
			160412-VR																							0.35~0.65	1.70~7.00
			160416-VR																							0.35~0.70	2.00~10.0
			220408-VR																							0.35~0.70	2.00~10.0
			220412-VR																							0.35~0.70	2.00~10.0
			220416-VR																							0.35~0.75	2.20~10.0

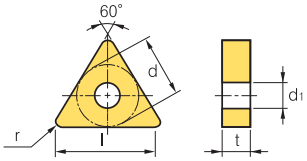
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	**PTFNR/L**	B159, 189	**WTJNR/L**	B161
MTFNR/L	B169	**PTGNR/L**	B159	**WTXNR/L**	B161
MTGNR/L	B170	**PTTNR/L**	B160		
MTJNR/L	B170	**WTENN**	B161		

TN○○

Triangular 60° Negative



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

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

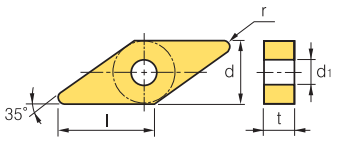
Inserts	Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	GR	TNMM 220408-GR																						0.22~0.61	1.10~7.80
		220412-GR																						0.28~0.78	1.20~7.80
		220416-GR																						0.31~0.75	1.50~7.80
Heavy	GH	TNMM 160408-GH																						0.20~0.50	1.00~7.00
		220408-GH																						0.25~0.60	1.30~7.00
		220412-GH																						0.20~0.50	1.00~8.00
		220416-GH																						0.25~0.60	1.30~8.00
		270616-GH																						0.32~0.70	1.80~8.00
		270624-GH																						0.35~0.50	1.80~13.00
		330924-GH																						0.35~0.70	2.30~13.00
Medium to roughing		TNMN 160408																						0.10~0.30	1.00~4.00
		220408																						0.15~0.40	1.50~5.00
		220412																						0.20~0.50	1.50~5.00
Medium (Shaft)	SH	TNMX 160404R-SH						●		●														0.15~0.30	0.50~4.00
		160408R-SH						●		●														0.15~0.45	1.00~4.00
		160404L-SH						●		●														0.15~0.30	0.50~4.00
		160408L-SH						●		●														0.15~0.45	1.00~4.00
Medium to roughing		TNMX 160402R		●	●																			0.10~0.30	0.50~3.00
		160404R		●					●		●	●												0.12~0.30	1.00~3.50
		160408R									●													0.15~0.35	1.30~3.40
		220404R																						0.12~0.30	1.00~5.00
		220408R																						0.15~0.35	1.30~5.00
		160404L							●		●													0.12~0.30	1.00~3.50
		160408L							●		●													0.15~0.35	1.30~3.40

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B169	PTFNR/L	B159, 189	WTJNR/L	B161
MTFNR/L	B169	PTGNR/L	B159	WTXNR/L	B161
MTGNR/L	B170	PTTNR/L	B160		
MTJNR/L	B170	WTENN	B161		

VN○○



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

Rhombic 35° Negative

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

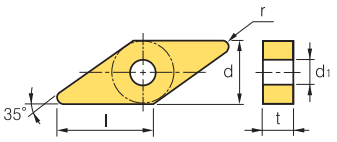
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	HA	VNGG	160408-HA																						0.10~0.40	0.80~3.50
Medium	VP3	VNGG	160404-VP3																	●	●	●		●		0.05~0.30	0.10~3.00
			160408-VP3																							0.10~0.45	0.50~5.00
Finishing	VB	VNMG	160404-VB	●		●	●	●	●		●		●													0.10~0.35	0.30~1.50
			160408-VB	●		●	●	●	●		●		●													0.15~0.45	0.50~2.00
			160412-VB																							0.20~0.45	0.80~2.50
Finishing	VF	VNMG	160402-VF		●					●																0.06~0.20	0.30~1.00
			160404-VF	●	●					●			●													0.08~0.30	0.50~1.50
			160408-VF	●						●	●		●													0.10~0.40	0.50~1.50
			160412-VF																							0.15~0.50	0.50~1.50
Finishing (Mild steel)	VL	VNMG	160404-VL	●		●							●													0.05~0.20	0.10~1.00
			160408-VL	●		●					●		●													0.10~0.25	0.20~1.50
			160412-VL																							0.15~0.30	0.50~2.00
Medium to finishing	HA	VNMG	160404-HA																					●		0.08~0.35	0.50~3.00
			160408-HA																							0.10~0.40	0.80~3.50
Medium to finishing	LP new	VNMG	160404-LP																							0.10~0.35	0.30~1.50
			160408-LP																							0.10~0.40	0.50~2.00
			160412-LP																							0.10~0.45	0.80~2.50
Medium to finishing	VC	VNMG	160404-VC	●			●				●															0.10~0.35	0.30~2.00
			160408-VC	●							●															0.15~4.00	0.50~3.00
			160412-VC																							0.15~0.40	0.80~3.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MVJNR/L	B170	MVVNN	B171
MVQNR/L	B171	MVUNR/L	B193

VN○○



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

Rhombic 35° Negative

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

Inserts		Designation		Cermet			Coated		Coated												Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing (Cermet)	VQ	VNMG	160404-VQ	●	●	●	●	●																		0.10~0.40	0.50~3.50
			160408-VQ	●	●	●	●	●																		0.12~0.45	0.50~3.50
			160412-VQ																							0.15~0.45	0.80~3.50
Medium	MK new	VNMG	160404-MK											●												0.08~0.45	0.50~3.00
			160408-MK											●												0.10~0.50	1.00~3.50
			160412-MK											●												0.20~0.50	1.50~4.00
Medium	MM new	VNMG	160404-MM													●	●					●	●			0.10~0.40	0.50~4.80
			160408-MM													●	●					●	●			0.12~0.45	0.50~4.80
			160412-MM																							0.15~0.60	0.50~4.00
Medium	MP new	VNMG	160404-MP						●		●		●		●	●	●			●	●					0.10~0.40	0.40~3.50
			160408-MP						●		●		●		●	●	●			●	●					0.15~0.45	0.50~4.00
			160412-MP						●				●													0.15~0.50	0.80~4.50
Medium	RM new	VNMG	160404-RM																							0.10~0.50	2.00~5.00
			160408-RM																							0.15~0.55	2.00~5.00
			160412-RM																							0.20~0.60	2.00~5.00
Medium	VM	VNMG	160404-VM	●								●	●					●	●							0.08~0.45	0.50~3.50
			160408-VM	●						●	●	●	●					●	●		●		●			0.10~0.50	1.00~4.00
			160412-VM																							0.20~0.50	1.50~4.00
			220404-VM																							0.08~0.45	1.00~5.00
			220408-VM																							0.10~0.50	1.50~5.00
Medium	VP3	VNMG	160404-VP3															●	●	●	●	●			●	0.05~0.30	0.10~3.00
			160408-VP3															●	●	●	●	●		●	●	0.10~0.45	0.50~5.00

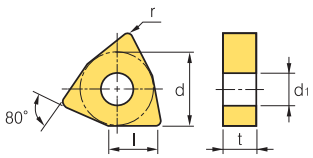
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MVJNR/L	B170	MVVNN	B171
MVQNR/L	B171	MVUNR/L	B193

WN○○

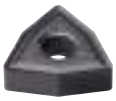
Trigon 80° Negative



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

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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	VP3 	WNGG	080404-VP3																	●	●	●		●		0.10~0.45	0.50~5.00
Roughing		WNMA	060404																							0.10~0.30	0.50~3.00
			060408											●												0.10~0.30	0.50~3.00
			060412																							0.10~0.40	1.00~3.00
			080404											●												0.15~0.60	1.00~5.00
			080408											●												0.15~0.60	1.00~6.00
			080412											●												0.15~0.70	1.50~6.00
			080416																							0.15~0.70	1.50~6.00
Finishing	VB 	WNMG	080404-VB						●		●		●													0.10~0.35	0.30~1.50
			080408-VB						●		●		●													0.15~0.45	0.50~2.00
			080412-VB																							0.18~0.45	0.80~2.50
Finishing	VF 	WNMG	060404-VF		●								●													0.07~0.30	0.50~1.50
			060408-VF																							0.10~0.40	0.50~1.50
			080404-VF							●			●													0.07~0.30	0.50~1.50
			080408-VF										●													0.10~0.40	0.50~1.50
			080412-VF																							0.20~0.50	0.50~1.50
Finishing (Mild steel)	VL 	WNMG	060404-VL																							0.05~0.25	0.20~1.50
			080404-VL																							0.05~0.25	0.10~1.00
			080408-VL						●		●		●													0.10~0.35	0.20~1.50
Finishing (wiper)	VW 	WNMG	080404-VW																							0.10~0.30	0.50~3.00
			080408-VW																							0.15~0.50	0.50~4.00
Medium to finishing	HA 	WNMG	060404-HA																					●		0.05~0.30	0.10~3.00
			060408-HA																					●		0.10~0.40	0.80~3.50
			080404-HA																					●		0.05~0.30	0.80~3.50
			080408-HA																					●		0.10~0.40	0.80~3.50
			080412-HA																							0.13~0.55	0.80~3.50

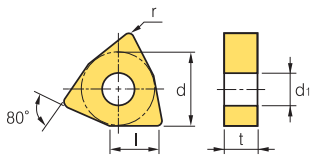
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B171	WWLNR/L	B162
PWLNR/L	B190		

WN○○

Trigon 80° Negative



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

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

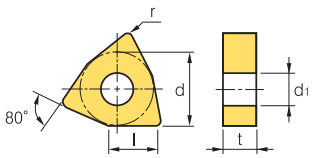
Inserts		Designation	Cermet			Coated		Coated												Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	LP new	WNMG 060408-LP																						0.10~0.30	0.30~1.50
		080404-LP						●		●		●												0.10~0.35	0.30~2.00
		080408-LP						●		●		●												0.10~0.40	0.50~2.50
		080412-LP						●		●		●												0.13~0.45	0.80~3.00
Medium to finishing	VC	WNMG 080404-VC																						0.15~0.40	0.15~4.00
		080408-VC						●		●														0.15~0.45	0.15~4.50
		080412-VC						●		●		●												0.15~0.45	0.15~4.50
Medium to finishing	VP2	WNMG 080404-VP2															●	●		●					0.10~0.45	0.50~5.00
		080408-VP2															●	●	●	●	●		●		0.12~0.50	0.50~5.00
		080412-VP2															●	●	●	●	●		●		0.05~0.30	0.10~3.00
Medium to finishing (Cermet)	VQ	WNMG 060404-VQ																							0.05~0.30	0.50~4.00
		060408-VQ																							0.08~0.30	0.80~4.00
		060412-VQ																							0.10~0.30	1.00~4.00
		080404-VQ	●		●	●	●																		0.05~0.30	0.50~4.00
		080408-VQ	●		●	●	●																		0.08~0.40	0.80~4.00
		080412-VQ																							0.10~0.35	0.80~3.50
Medium	MK new	WNMG 060408-MK											●												0.08~0.30	0.80~2.50
		080404-MK											●												0.10~0.45	1.00~3.00
		080408-MK											●												0.10~0.50	1.00~3.50
		080412-MK											●												0.10~0.50	1.00~4.00
		080416-MK																							0.13~0.50	1.20~4.20
Medium	MM new	WNMG 060404-MM																				●			0.08~0.35	0.50~4.00
		060408-MM																				●			0.10~0.40	0.50~4.00
		060412-MM																				●			0.12~0.45	0.50~4.00
		080404-MM													●	●	●				●	●			0.10~0.40	0.50~4.00
		080408-MM												●	●	●	●				●	●			0.12~0.45	0.50~4.00
		080412-MM												●	●	●	●				●	●			0.15~0.60	0.50~4.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B171	WWLNR/L	B162
PWLNR/L	B190		

WN○○



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

Trigon 80° Negative

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	MP	WNMG	060404-MP						●		●		●												0.10~0.40	0.40~2.80
			060408-MP						●		●		●												0.15~0.45	0.50~3.00
			060412-MP																						0.15~0.50	0.80~3.20
			080404-MP						●		●		●		●	●	●			●	●	●			0.10~0.40	0.40~4.00
			080408-MP						●		●		●		●	●	●			●	●	●			0.15~0.45	0.50~4.50
			080412-MP						●		●		●		●	●	●			●	●				0.15~0.50	0.80~5.00
			080416-MP																						0.18~0.55	0.10~5.00
Medium	VM	WNMG	060404-VM										●					●	●						0.10~0.45	1.00~3.50
			060408-VM							●	●		●					●	●						0.10~0.50	1.00~4.00
			060412-VM																						0.13~0.60	1.30~4.00
			080404-VM							●			●					●	●						0.05~0.30	0.90~5.00
			080408-VM							●		●	●					●	●		●		●		0.10~0.50	1.00~5.00
			080412-VM							●			●					●	●						0.10~0.50	1.00~5.00
			080416-VM																						0.10~0.50	1.20~5.00
Medium	VP3	WNMG	080404-VP3															●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
			080408-VP3															●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
			080412-VP3															●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
Medium (wiper)	LW	WNMG	060408-LW																						0.15~0.60	0.50~3.50
			060412-LW																						0.20~0.70	0.80~3.50
			080408-LW										●												0.15~0.60	1.00~5.00
			080412-LW																						0.20~0.70	1.00~6.00
Medium to roughing	B25	WNMG	080404-B25						●		●		●												0.17~0.45	1.00~5.00
			080408-B25						●		●	●	●												0.23~0.60	1.50~5.00
			080412-B25						●		●		●												0.25~0.60	2.00~5.00
Roughing	GR	WNMG	080404-GR																						0.15~0.50	0.08~6.00
			080408-GR							●		●	●												0.20~0.50	1.00~7.00
			080412-GR							●		●	●												0.25~0.50	1.30~7.00
			080416-GR																						0.25~0.60	1.80~6.00

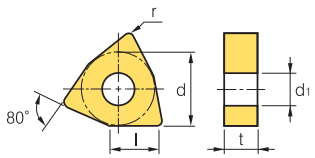
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B171	WWLNR/L	B162
PWLNR/L	B190		

WN○○

Trigon 80° Negative



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

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬌	✱	●	⬌	●	⬌	⬌	✱	✱	●	⬌		✱								
	Stainless steel	M									⬌	⬌		●	⬌	✱	⬌	✱		●	⬌	⬌		
	Cast iron	K	●	⬌	✱	●	⬌	⬌				⬌	⬌										●	⬌
	Non-ferrous metal	N																					●	⬌
	Heat resistant alloy, Titanium alloy	S										●			●	●	⬌	✱	●	●	⬌		●	⬌
	Hardened steel	H																		⬌	✱		●	⬌

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

Inserts		Designation	Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	RK new	WNMG 080404-RK											●												0.23~0.50	1.50~6.00
		080408-RK											●												0.23~0.53	1.50~6.00
		080412-RK											●												0.28~0.53	1.80~6.00
		080416-RK											●												0.25~0.60	2.00~6.00
Roughing	RM new	WNMG 060404-RM																							0.10~0.50	1.50~3.00
		060408-RM																							0.15~0.55	1.50~3.00
		060412-RM																							0.20~0.60	1.50~3.00
		080404-RM													●	●	●				●	●			0.10~0.50	2.00~4.00
		080408-RM												●	●	●	●				●	●			0.15~0.55	2.00~4.00
		080412-RM												●	●	●	●				●				0.20~0.60	2.00~4.00
Roughing	VP4 new	WNMG 080408-VP4																			●				0.15~0.35	1.00~4.00
		080412-VP4																			●				0.20~0.40	1.00~4.00
Roughing	VR	WNMG 080408-VR																							0.25~0.55	1.20~7.00
		080412-VR																							0.30~0.60	1.50~7.00
Medium to roughing	B25	WNMM 100608-B25									●														0.30~0.80	3.00~8.00
		130612-B25																							0.40~0.90	4.00~10.00
Medium (Shaft)	SH	WNMX 080404R-SH																							0.15~0.30	1.00~4.00
		080408R-SH																							0.15~0.50	1.50~5.00
		080404L-SH																							0.15~0.30	1.00~4.00
		080408L-SH																							0.15~0.50	1.50~5.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B171	WWLNR/L	B162
PWLNR/L	B190		

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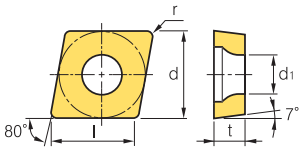
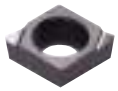
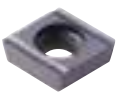
Rhombic 80° Positive
Relief Angle: 7°



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing		CCET	0301005R																							0.01~0.05	0.10~0.30
			030101R																							0.01~0.05	0.10~0.30
			030102R																							0.01~0.05	0.10~0.30
			030104R																							0.01~0.05	0.10~0.30
			0401005R																							0.01~0.10	0.10~0.50
			040101R																							0.01~0.10	0.10~0.50
			040102R																							0.01~0.10	0.10~0.50
			040104R																							0.01~0.10	0.10~0.50
			0301005L																							0.01~0.05	0.10~0.30
			030101L																							0.01~0.05	0.10~0.30
			030102L		●																		●	●		0.01~0.05	0.10~0.30
			030104L																							0.01~0.05	0.10~0.30
			0401005L																							0.01~0.10	0.10~0.50
			040101L																							0.01~0.10	0.10~0.50
			040102L		●																		●	●		0.01~0.10	0.10~0.50
			040104L																							0.01~0.10	0.10~0.50
Finishing (High precision)	KF 	CCET	0602005MFR-KF																							0.01~0.06	0.04~1.30
			060201MFR-KF																		●					0.02~0.08	0.05~1.50
			060202MFR-KF																		●					0.03~0.11	0.06~1.70
			09T3005MFR-KF																							0.02~0.08	0.05~1.50
			09T301MFR-KF																		●					0.03~0.11	0.06~1.70
			09T302MFR-KF																		●					0.04~0.15	0.08~2.00
			0602005MFL-KF																							0.01~0.06	0.04~1.30
			060201MFL-KF																							0.02~0.08	0.05~1.50
			060202MFL-KF																							0.03~0.11	0.06~1.70
			09T3005MFL-KF																							0.02~0.08	0.05~1.50
			09T301MFL-KF																							0.03~0.11	0.06~1.70
			09T302MFL-KF																							0.04~0.15	0.08~2.00
Medium to finishing (High precision)	KM 	CCET	0602005MFR-KM																							0.01~0.06	0.04~1.30
			060201MFR-KM																		●					0.02~0.08	0.05~1.50
			060202MFR-KM																		●					0.03~0.11	0.06~1.70
			09T3005MFR-KM																							0.02~0.08	0.05~1.50
			09T301MFR-KM																		●					0.03~0.11	0.06~1.70
			09T302MFR-KM																		●					0.04~0.15	0.08~2.00
			0602005MFL-KM																							0.01~0.06	0.04~1.30
			060201MFL-KM																							0.02~0.08	0.05~1.50
			060202MFL-KM																							0.03~0.11	0.06~1.70
			09T3005MFL-KM																							0.02~0.08	0.05~1.50
			09T301MFL-KM																							0.03~0.11	0.06~1.70
			09T302MFL-KM																							0.04~0.15	0.08~2.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B109, 172	**SCLCR/L**	B109, 172, 194, 204

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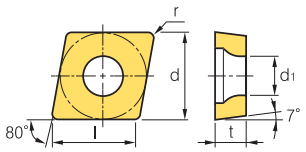
Rhombic 80° Positive
Relief Angle: 7°



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

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	KF	CCGT	0602003R-KF																						0.01~0.06	0.04~1.30
			060201R-KF																						0.02~0.08	0.05~1.50
			060202R-KF																						0.03~0.11	0.06~1.70
			09T3003R-KF																						0.02~0.08	0.05~1.50
			09T301R-KF																						0.03~0.11	0.06~1.70
			09T302R-KF																						0.04~0.15	0.08~2.00
			0602003L-KF																						0.01~0.06	0.04~1.30
			060201L-KF																						0.02~0.08	0.05~1.50
			060202L-KF																						0.03~0.11	0.06~1.70
			09T3003L-KF																						0.02~0.08	0.05~1.50
			09T301L-KF																						0.03~0.11	0.06~1.70
			09T302L-KF																						0.04~0.15	0.08~2.00
Finishing	VP1	CCGT	060201-VP1															●		●	●	●		●		0.05~0.06	0.06~1.00
			060202-VP1															●		●	●	●		●		0.03~0.10	0.08~1.50
			060204-VP1															●		●	●	●		●		0.05~0.12	0.10~1.50
			09T301-VP1															●		●	●	●		●		0.03~0.13	0.06~1.00
			09T302-VP1															●		●	●	●		●		0.04~0.15	0.08~1.50
			09T304-VP1															●		●	●	●		●		0.06~0.20	0.10~1.50
Finishing (High precision)	VP1	CCGT	060201MFN-VP1																		●					0.03~0.06	0.06~1.00
			060202MFN-VP1																		●					0.03~0.10	0.08~1.50
			060204MFN-VP1																		●					0.05~0.12	0.10~1.50
			09T301MFN-VP1																		●					0.03~0.13	0.06~1.00
			09T302MFN-VP1																		●					0.04~0.15	0.08~1.50
			09T304MFN-VP1																		●					0.06~0.20	0.10~1.50
Medium to finishing	KM	CCGT	0602003R-KM																							0.01~0.06	0.04~1.30
			060201R-KM																							0.02~0.08	0.05~1.50
			060202R-KM																				●			0.03~0.11	0.06~1.70
			09T3003R-KM																							0.02~0.08	0.06~1.50
			09T301R-KM																							0.03~0.11	0.06~1.70
			09T302R-KM																							0.04~0.15	0.08~2.00
			0602003L-KM																							0.01~0.06	0.04~1.30
			060201L-KM																							0.02~0.08	0.05~1.50
			060202L-KM																							0.03~0.11	0.06~1.70
			09T3003L-KM																							0.02~0.08	0.06~1.50
			09T301L-KM																							0.03~0.11	0.06~1.70
			09T302L-KM																							0.04~0.15	0.08~2.00

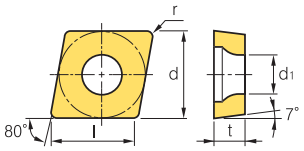
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B109, 172	**SCLCR/L**	B109, 172, 194, 204

CC○○

Rhombic 80° Positive
Relief Angle: 7°



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VF	CCMT	060202-VF								●							●								0.05~0.20	0.30~1.00
			060204-VF	●		●					●							●								0.10~0.25	0.30~1.00
			09T302-VF								●															0.04~0.16	0.80~1.50
			09T304-VF	●	●	●					●							●								0.05~0.20	0.30~1.50
			09T308-VF			●					●		●					●								0.10~0.25	0.30~1.50
			120404-VF								●															0.07~0.22	0.10~2.00
Finishing	VL	CCMT	060204-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.04~0.10	0.08~0.90
			060208-VL						●		●		●													0.06~0.12	0.10~1.00
			09T304-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●		●	●	0.05~0.10	0.10~1.00
			09T308-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●		●	●	0.08~0.15	0.10~1.00
Finishing	VP1	CCMT	09T304-VP1																							0.06~0.20	0.10~1.50
			09T308-VP1																							0.08~0.20	0.50~2.00
			120404-VP1																							0.08~0.22	0.20~2.00
			120408-VP1																							0.10~0.25	0.50~2.00
			120412-VP1																							0.10~0.30	0.80~2.50
Medium to finishing	HMP	CCMT	060202-HMP																							0.03~0.12	0.10~1.50
			060204-HMP																							0.06~0.17	0.20~2.40
			060208-HMP																							0.08~0.23	0.40~2.40
			09T302-HMP																							0.07~0.22	0.10~2.00
			09T304-HMP																							0.08~0.23	0.30~3.00
			09T308-HMP																							0.10~0.30	0.50~3.00
			120404-HMP																							0.09~0.27	0.30~3.60
			120408-HMP																							0.24~0.36	1.00~3.60
			120412-HMP																							0.14~0.43	0.70~3.60

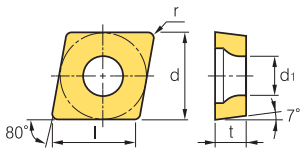
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B109, 172	SCLCR/L	B109, 172, 194, 204

CC○○

Rhombic 80° Positive
Relief Angle: 7°



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

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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	C25 	CCMT	060202-C25	●	●	●	●	●	●		●	●	●					●	●		●					0.03~0.12	0.40~2.00
			060204-C25	●	●	●	●	●	●	●	●	●	●	●				●	●		●		●			0.05~0.15	0.60~2.30
			060208-C25	●		●	●	●	●		●	●	●	●				●	●		●					0.07~0.20	0.80~2.30
			080308-C25																							0.08~0.25	0.80~2.30
			09T302-C25																							0.05~0.20	0.50~2.50
			09T304-C25	●	●	●	●	●	●	●	●	●	●	●				●	●		●		●			0.08~0.25	0.80~3.00
			09T308-C25	●	●	●	●	●	●	●	●	●	●	●				●	●		●		●			0.10~0.30	1.00~3.00
			120404-C25						●		●	●	●	●				●	●		●					0.10~0.32	0.80~3.00
			120408-C25	●		●	●	●	●	●	●	●	●	●				●	●		●					0.12~0.36	1.20~3.50
			120412-C25						●		●		●	●												0.15~0.40	1.40~3.50
Medium	MP 	CCMT	060202-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.04~0.12	0.20~1.50
			060204-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.05~0.15	0.30~1.50
			060208-MP											●												0.07~0.15	0.50~2.00
			09T302-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.07~0.15	0.30~2.00
			09T304-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.08~0.25	0.50~2.50
			09T308-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.10~0.30	0.50~2.50
			120404-MP											●												0.10~0.30	0.50~3.50
			120408-MP											●												0.15~0.35	0.80~3.50
			120412-MP																							0.25~0.40	1.00~3.50

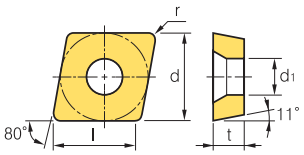
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B109, 172	**SCLCR/L**	B109, 172, 194, 204

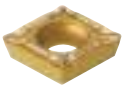
CP○○

Rhombic 80° Positive
Relief Angle: 11°



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

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing		CPGT 080202																						0.06~0.20	0.10~2.00
		080204	●	●																				0.08~0.20	0.30~2.00
		080208																						0.10~0.25	0.50~2.00
		090302																						0.04~0.20	0.30~1.50
		090304	●	●																				0.06~0.25	0.50~2.00
		090308																						0.08~0.30	0.70~2.50
Medium to finishing	HMP 	CPGT 090308-HMP																						0.05~0.20	0.70~2.00
Finishing	VF 	CPMT 080204-VF																						0.05~0.20	0.30~1.20
		080208-VF																						0.10~0.25	0.30~1.20
		090304-VF										●												0.05~0.20	0.30~1.50
		090308-VF										●												0.10~0.25	0.30~1.50
Finishing	VL 	CPMT 080204-VL																						0.03~0.08	0.08~1.00
		080208-VL																						0.04~0.12	0.10~1.00
		090304-VL																						0.05~0.10	0.10~1.00
		090308-VL																						0.08~0.15	0.10~1.00
Medium	C25 	CPMT 060204-C25																						0.05~0.15	0.60~2.30

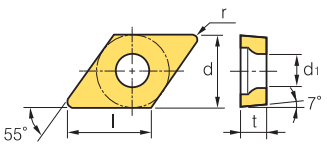
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCLPR/L	B195		

DC○○

Rhombic 55° Positive
Relief Angle: 7°



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

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

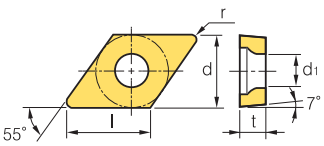
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	KF	DCET	0702005MFR-KF																						0.01~0.06	0.04~1.30
			070201MFR-KF																		●				0.02~0.08	0.05~1.50
			070202MFR-KF																		●				0.03~0.11	0.06~1.70
			11T3005MFR-KF																						0.02~0.08	0.05~1.50
			11T301MFR-KF																		●				0.03~0.11	0.06~1.70
			11T302MFR-KF																		●				0.04~0.15	0.08~2.00
			0702005MFL-KF																						0.01~0.06	0.04~1.30
			070201MFL-KF																		●				0.02~0.08	0.05~1.50
			070202MFL-KF																						0.03~0.11	0.06~1.70
			11T3005MFL-KF																						0.02~0.08	0.05~1.50
			11T301MFL-KF																						0.03~0.11	0.06~1.70
			11T302MFL-KF																						0.04~0.15	0.08~2.00
Medium to finishing (High precision)	KM	DCET	0702005MFR-KM																						0.01~0.06	0.04~1.30
			070201MFR-KM																		●				0.02~0.08	0.05~1.50
			070202MFR-KM																		●				0.03~0.11	0.06~1.70
			11T3005MFR-KM																						0.02~0.08	0.05~1.50
			11T301MFR-KM																		●				0.03~0.11	0.06~1.70
			11T302MFR-KM																		●				0.04~0.15	0.08~2.00
			0702005MFL-KM																						0.01~0.06	0.04~1.30
			070201MFL-KM																						0.02~0.08	0.05~1.50
			070202MFL-KM																						0.03~0.11	0.06~1.70
			11T3005MFL-KM																						0.02~0.08	0.05~1.50
			11T301MFL-KM																						0.03~0.11	0.06~1.70
			11T302MFL-KM																						0.04~0.15	0.08~2.00
Finishing	KF	DCGT	0702003R-KF																						0.01~0.06	0.04~1.30
			070201R-KF																						0.02~0.08	0.05~1.50
			070202R-KF																						0.03~0.11	0.06~1.50
			11T3003R-KF																						0.02~0.08	0.05~1.50
			11T301R-KF																						0.03~0.11	0.06~1.70
			11T302R-KF																				●		0.04~0.15	0.08~2.00
			0702003L-KF																						0.01~0.06	0.04~1.30
			070201L-KF																						0.02~0.08	0.05~1.50
			070202L-KF																						0.03~0.11	0.06~1.50
			11T3003L-KF																						0.02~0.08	0.05~1.50
			11T301L-KF																						0.03~0.11	0.06~1.70
			11T302L-KF																						0.04~0.15	0.08~2.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B172	**SDQCR/L**	B196
SDJCR/L	B109, 173	**SDUCR/L**	B197
SDNCN	B110, 173	**SDZCR/L**	B198

DC○○



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

Rhombic 55° Positive
Relief Angle: 7°

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

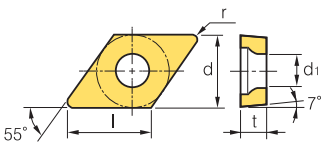
Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VP1	DCGT	070201-VP1															●		●	●	●		●		0.03~0.06	0.06~1.00
			070202-VP1															●		●	●	●		●		0.03~0.10	0.08~1.50
			070204-VP1															●		●	●	●		●		0.05~0.12	0.10~1.50
			11T301-VP1															●			●					0.03~0.13	0.06~1.00
			11T302-VP1															●		●	●	●		●		0.04~0.15	0.08~1.50
			11T304-VP1															●		●	●	●		●		0.06~0.20	0.10~1.50
Finishing (High precision)	VP1	DCGT	070201MFN-VP1																		●					0.03~0.06	0.06~1.00
			070202MFN-VP1																		●					0.03~0.10	0.08~1.50
			070204MFN-VP1																		●					0.05~0.12	0.10~1.50
			11T301MFN-VP1																		●					0.03~0.13	0.06~1.00
			11T302MFN-VP1																		●					0.04~0.15	0.08~1.50
			11T304MFN-VP1																		●					0.06~0.20	0.10~1.50
Medium to finishing	KM	DCGT	0702003R-KM																							0.01~0.06	0.04~1.30
			070201R-KM																							0.02~0.08	0.05~1.50
			070202R-KM																							0.03~0.11	0.06~1.50
			11T3003R-KM																							0.02~0.08	0.05~1.50
			11T301R-KM																							0.03~0.11	0.06~1.70
			11T302R-KM																							0.04~0.15	0.08~2.00
			0702003L-KM																							0.01~0.06	0.04~1.30
			070201L-KM																							0.02~0.08	0.05~1.50
			070202L-KM																							0.03~0.11	0.06~1.50
			11T3003L-KM																							0.02~0.08	0.05~1.50
			11T301L-KM																							0.03~0.11	0.06~1.70
			11T302L-KM																							0.04~0.15	0.08~2.00
Finishing	VF	DCMT	070202-VF			●					●															0.03~0.10	0.06~1.00
			070204-VF		●	●					●							●								0.05~0.20	0.30~1.20
			11T302-VF	●							●															0.04~0.15	0.08~1.50
			11T304-VF	●	●	●					●							●								0.05~0.20	0.30~1.50
			11T308-VF	●		●												●								0.10~0.25	0.30~1.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B172	SDQCR/L	B196
SDJCR/L	B109, 173	SDUCR/L	B197
SDNCN	B110, 173	SDZCR/L	B198

DC○○

Rhombic 55° Positive
Relief Angle: 7°



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VL	DCMT	070202-VL																						0.02~0.10	0.06~0.80
			070204-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●		●	●	0.04~0.10	0.08~0.90
			070208-VL						●		●		●					●								0.06~0.12	0.10~1.00
			11T302-VL																							0.03~0.10	0.07~0.80
			11T304-VL	●		●	●	●	●		●		●		●	●	●	●	●		●				●	0.05~0.10	0.10~1.00
			11T308-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●		●	●	0.08~0.15	0.10~1.00
Finishing	VP1	DCMT	11T304-VP1																							0.06~0.20	0.10~1.50
			11T308-VP1																							0.08~0.23	0.10~1.50
Medium to finishing	HMP	DCMT	070202-HMP																							0.03~0.12	0.10~1.50
			070204-HMP																							0.06~0.17	0.20~2.30
			070208-HMP																							0.08~0.23	0.40~2.30
			11T302-HMP																							0.04~0.22	0.10~2.00
			11T304-HMP																							0.08~0.23	0.30~3.00
			11T308-HMP																							0.10~0.30	0.50~3.00
Medium	C25	DCMT	070202-C25	●	●	●	●	●	●		●		●					●	●		●					0.03~0.15	0.30~2.00
			070204-C25	●	●	●	●	●	●		●	●	●	●				●	●		●		●			0.05~0.20	0.50~2.50
			070208-C25	●		●	●	●	●		●	●		●				●	●		●					0.06~0.25	0.80~2.50
			11T302-C25	●	●	●	●	●	●		●		●					●	●		●					0.04~0.25	0.50~2.50
			11T304-C25	●	●	●	●	●	●		●	●	●	●				●	●		●				●	0.08~0.30	0.80~3.00
			11T308-C25	●		●	●	●	●	●	●	●		●				●	●		●		●			0.10~0.30	1.00~3.00
Medium	MP new	DCMT	070202-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.04~0.12	0.12~1.80
			070204-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.05~0.15	0.30~1.80
			070208-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.08~0.22	0.30~1.80
			11T302-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.04~0.15	0.30~2.00
			11T304-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.08~0.20	0.50~2.30
			11T308-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.10~0.30	0.50~2.30

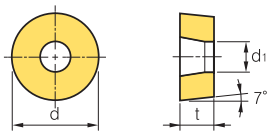
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B172	SDQCR/L	B196
SDJCR/L	B109, 173	SDUCR/L	B197
SDNCN	B110, 173	SDZCR/L	B198

RC○○

Round R° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d1
08	8.0	3.18	3.35
10	10.0	3.18	3.6
12	12.0	4.76	4.2
16	16.0	6.35	5.2
20	20.0	6.35	6.5
25	25.0	7.94	7.25
32	32.0	9.52	9.55

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬬	✱	●	⬬	●	⬬	⬬	✱	✱	●	⬬		✱								
	Stainless steel	M									⬬	⬬		●	⬬	✱	⬬	✱		●	⬬	⬬		
	Cast iron	K	●	⬬	✱	●	⬬	⬬				⬬	⬬										●	⬬
	Non-ferrous metal	N																					●	⬬
	Heat resistant alloy, Titanium alloy	S									●			●	●	⬬	✱	●	●	⬬			●	⬬
	Hardened steel	H																		⬬	✱		●	⬬

Machining types
● Continuous cutting
⬬ General cutting
✱ Interrupted cutting

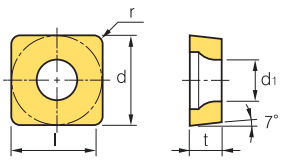
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	VM	RCMT	0803M0-VM																						0.05~0.30	0.80~2.50
			10T3M0-VM																						0.05~0.35	0.90~3.00
			1204M0-VM																						0.10~0.50	1.00~3.50
			1606M0-VM																						0.13~0.60	1.30~6.50
Medium		RCMX	1003M0									●	●	●											0.25~0.50	1.50~4.00
			1204M0							●		●	●	●											0.30~0.60	2.50~5.00
			1606M0									●	●	●											0.40~0.70	3.00~7.00
			2006M0									●		●											0.48~0.90	3.50~9.00
			2507M0									●		●											0.55~1.20	4.00~12.00
			3209M0									●		●											0.65~1.50	5.00~15.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
PRDCN	B156	**PRGCR/L**	B156

SC○○

Square 90° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.97	4.4

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬬	✱	●	⬬	●	⬬	⬬	✱	✱	●	⬬		✱								
	Stainless steel	M									⬬	⬬		●	⬬	✱	⬬	✱		●	⬬	⬬		
	Cast iron	K	●	⬬	✱	●	⬬	⬬				⬬	⬬										●	⬬
	Non-ferrous metal	N																					●	⬬
	Heat resistant alloy, Titanium alloy	S									●			●	●	⬬	✱	●	●	⬬			●	⬬
	Hardened steel	H																		⬬	✱		●	⬬

Machining types
● Continuous cutting
⬬ General cutting
✱ Interrupted cutting

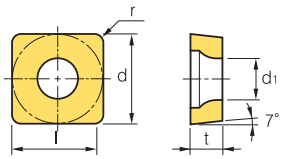
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VF	SCMT	09T304-VF								●						●								0.05~0.20	0.30~1.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B174	**SSKCR/L**	B175, 198
SSDCN	B174	**SSSCR/L**	B175, 224

SC○○

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



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

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

Inserts	Designation	Cermet			Coated		Coated														Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VL																							
	SCMT 09T304-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.05~0.10	0.10~1.00
	SCMT 09T308-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.08~0.15	0.10~1.00
Medium to finishing	HMP																							
	SCMT 09T304-HMP																							0.08~0.23	0.30~3.00
	SCMT 09T308-HMP																							0.10~0.30	0.50~3.00
	SCMT 120404-HMP																							0.09~0.27	0.30~3.60
	SCMT 120408-HMP																							0.12~0.36	0.60~3.60
Medium	C25																							
	SCMT 060204-C25									●														0.08~0.25	0.40~2.50
	SCMT 09T304-C25	●	●	●	●	●	●		●	●	●	●				●	●		●					0.08~0.25	0.60~3.00
	SCMT 09T308-C25	●		●	●	●	●	●	●	●	●	●				●	●		●					0.10~0.30	1.00~3.00
	SCMT 120404-C25	●		●	●	●	●		●		●	●				●	●		●		●			0.10~0.30	0.80~3.80
	SCMT 120408-C25	●		●	●	●	●	●	●	●	●	●				●	●		●		●			0.12~0.38	1.20~3.80
Medium	MP new																							
	SCMT 09T304-MP						●		●			●	●	●	●			●	●					0.05~0.25	0.30~2.80
	SCMT 09T308-MP						●		●		●	●	●	●	●			●	●					0.10~0.30	0.50~2.80
	SCMT 120404-MP																							0.10~0.30	0.50~2.80
	SCMT 120408-MP											●	●	●	●			●	●					0.15~0.35	0.80~3.50

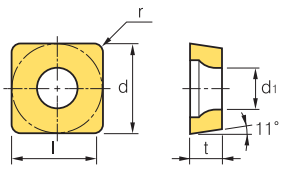
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B174	**SSKCR/L**	B175, 198
SSDCN	B174	**SSSCR/L**	B175, 224

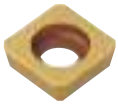
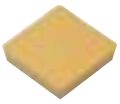
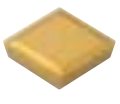
SP○○

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



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		SPGA	060204																						0.50~0.25	0.50~2.00
			090308T	●	●																				0.10~0.25	0.70~3.00
			090308T-Z		●																				0.10~0.25	0.70~3.00
			(Z = Special Nega land)																							
Medium to finishing		SPGN	070202																						0.03~0.10	0.50~2.00
			070208																						0.10~0.25	0.70~3.00
			090302																						0.03~0.10	0.50~3.00
			090304																						0.08~0.20	0.70~3.50
			090308																						0.10~0.25	0.70~3.50
			120302																						0.03~0.20	0.50~3.00
			120304																						0.08~0.20	1.00~5.00
			120308									●													0.10~0.25	1.00~5.00
			120312																						0.15~0.30	1.00~5.00
			120316																						0.18~0.33	1.00~5.00
			120402																						0.03~0.20	0.50~3.00
			120404																						0.08~0.20	1.00~5.00
			120408																						0.10~0.25	1.00~5.00
			120412																						0.15~0.30	1.00~5.00
			120416																						0.18~0.33	1.00~5.00
			120430																						0.20~0.60	2.00~5.00
			120440																						0.25~0.70	3.00~5.00
			150404																						0.08~0.20	1.50~7.00
			150408																						0.10~0.25	1.50~7.00
			150412																						0.15~0.30	1.50~7.00
			150416																						0.18~0.33	1.50~7.00
			150420																						0.20~0.45	1.50~7.00
			190404																						0.08~0.20	1.50~9.00
			190408																						0.10~0.25	1.50~9.00
			190412																						0.15~0.45	1.50~9.00
			190416																						0.18~0.60	1.50~9.00
			190424																						0.25~0.70	2.50~9.00
Finishing	F 	SPGR	090304-F																						0.05~0.20	0.30~2.00
			120304-F																						0.10~0.25	0.50~2.00

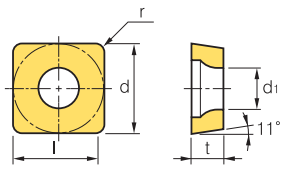
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CSDPN	B163	**SSKPR/L**	B198
CSKPR/L	B164		

SP○○

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



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

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

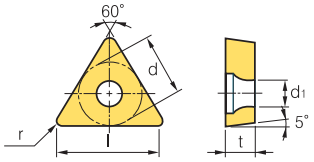
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	M	SPGR	090308-M																						0.10~0.40	1.00~3.50
			120308-M																						0.20~0.40	1.50~4.00
Medium to finishing		SPGT	090304R																						0.08~0.23	0.30~3.00
			090308R																						0.10~0.30	0.50~3.00
			090304L		●																				0.08~0.23	0.30~3.00
			090308L																						0.10~0.30	0.50~3.00
Finishing	F	SPMR	090304-F																						0.05~0.20	0.30~2.00
			120304-F									●													0.10~0.25	0.50~2.00
Finishing	VF	SPMT	090304-VF																						0.05~0.20	0.30~1.50
			090308-VF																						0.10~0.25	0.30~1.50
Medium	M	SPMR	090308-M									●													0.10~0.40	1.00~3.50
			120308-M									●													0.10~0.40	1.50~4.00
			120312-M									●													0.20~0.40	1.50~4.00
Medium to finishing		SPUN	120304																						0.10~0.30	1.00~5.00
			120308																						0.15~0.40	1.00~5.00
			120308SN																						0.15~0.40	1.00~5.00
			150412																						0.20~0.50	1.00~5.00
			190412																						0.20~0.50	1.50~7.00
			190416																						0.25~0.60	2.00~7.00
			250620																						0.30~0.80	3.00~10.0

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CSDPN	B163	**SSKPR/L**	B198
CSKPR/L	B164		

TB○○



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

Triangular **60° 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	⬬ ✱ ● ⬬

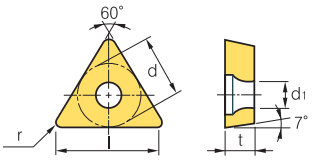
Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing		TBGT 060102L		●																		●	●		0.05~0.20	0.10~1.30
		060104L		●																					0.08~0.20	0.10~1.30
Finishing	VL 	TBMT 060102-VL																							0.03~0.06	0.05~0.60

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ●: Stock item

Available tool holders			
Designation	Page	Designation	Page
STUBR/L	B204		

TC○○

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



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

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

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	KF	TCGT	0802003R-KF																						0.01~0.06	0.04~1.30
			080201R-KF																						0.02~0.08	0.05~1.50
			080202R-KF																						0.03~0.11	0.06~1.70
			0802003L-KF																						0.01~0.06	0.04~1.30
			080201L-KF																						0.02~0.08	0.05~1.50
			080202L-KF																						0.03~0.11	0.06~1.70
Finishing	VP1	TCGT	16T304-VP1																						0.06~0.20	0.10~1.50
			16T308-VP1																						0.08~0.23	0.10~1.50
Finishing	VF	TCMT	110202-VF																						0.03~0.13	0.06~0.70
			110204-VF		●													●							0.05~0.20	0.30~1.20
			110208-VF															●							0.10~0.25	0.30~1.20
			16T302-VF																						0.05~0.15	0.10~1.30
			16T304-VF								●		●					●							0.05~0.20	0.30~1.50
Finishing (Mild steel)	VL	TCMT	090208-VL																						0.08~0.20	0.10~1.20
			110204-VL																						0.05~0.15	0.10~1.30
			110208-VL																						0.08~0.20	0.10~1.30
			16T304-VL	●		●	●	●	●		●				●	●	●	●	●	●	●	●			0.05~0.20	0.30~1.50
			16T308-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●			0.05~0.20	0.30~1.50
Finishing	VP1	TCMT	16T304-VP1																						0.06~0.20	0.10~1.50
			16T308-VP1																						0.08~0.23	0.10~1.50
Medium to finishing	HMP	TCMT	090204-HMP																						0.06~0.17	0.20~2.30
			090208-HMP																						0.08~0.23	0.40~2.30
			110202-HMP																						0.03~0.15	0.10~1.50
			110204-HMP																						0.06~0.19	0.20~2.50
			110208-HMP																						0.09~0.26	0.40~2.50
			16T304-HMP																						0.08~0.23	0.30~3.00
			16T308-HMP																						0.10~0.30	0.50~3.00

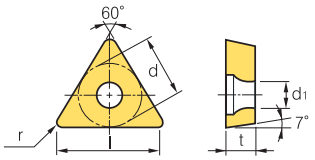
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B110, 175	**STTCR/L**	B176, 225
STFCR/L	B176, 224	**STWCR/L**	B225
STGCR/L	B176		

TC○○

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



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

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬣	✱	●	⬣	●	⬣	⬣	✱	✱	●	⬣		✱								
	Stainless steel	M									⬣	⬣		●	⬣	✱	⬣	✱		●	⬣	⬣		
	Cast iron	K	●	⬣	✱	●	⬣	⬣				⬣	⬣										●	⬣
	Non-ferrous metal	N																					●	⬣
	Heat resistant alloy, Titanium alloy	S										●			●	●	⬣	✱	●	●	⬣		●	⬣
	Hardened steel	H																		⬣	✱		●	⬣

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

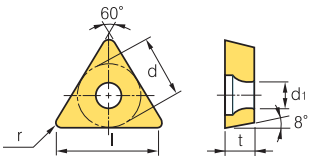
Inserts		Designation	Cermet			Coated		Coated															Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	C25 	TCMT 090204-C25	●		●	●	●	●		●	●	●	●				●	●		●					0.06~0.18	0.40~2.50
		090208-C25	●		●	●	●	●		●		●	●				●	●		●					0.08~0.25	0.80~2.50
		110202-C25	●		●	●	●	●		●		●					●	●		●					0.04~0.12	0.40~2.00
		110204-C25	●	●	●	●	●	●		●	●	●	●				●	●		●					0.06~0.20	0.60~2.50
		110208-C25	●		●	●	●	●		●	●	●	●				●	●		●		●			0.08~0.25	0.80~2.50
		16T304-C25	●		●	●	●	●	●	●	●	●	●				●	●		●		●			0.08~0.28	0.80~3.00
		16T308-C25	●		●	●	●	●	●	●	●	●	●				●	●		●		●			0.10~0.30	1.00~3.00
Medium	MP 	TCMT 090204-MP												●	●	●									0.05~0.18	0.10~1.00
		090208-MP												●	●	●									0.08~0.20	0.10~1.20
		110202-MP						●		●		●		●	●	●			●	●					0.03~0.12	0.20~1.50
		110204-MP						●		●		●		●	●	●			●	●					0.05~0.15	0.20~15.0
		110208-MP						●		●		●		●	●	●			●	●					0.10~0.28	0.25~2.00
		16T304-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.08~0.20	0.30~2.50
		16T308-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.10~0.30	0.50~2.50
		16T312-MP						●		●		●		●	●	●			●	●	●				0.20~0.40	0.50~2.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

TO○○

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



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

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	⬣	✱	●	⬣	●	⬣	⬣	✱	✱	●	⬣		✱								
	Stainless steel	M									⬣	⬣		●	⬣	✱	⬣	✱		●	⬣	⬣		
	Cast iron	K	●	⬣	✱	●	⬣	⬣				⬣	⬣										●	⬣
	Non-ferrous metal	N																					●	⬣
	Heat resistant alloy, Titanium alloy	S										●			●	●	⬣	✱	●	●	⬣		●	⬣
	Hardened steel	H																		⬣	✱		●	⬣

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

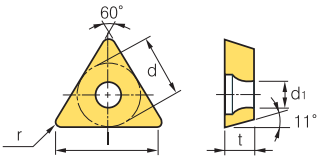
Inserts		Designation	Cermet			Coated		Coated															Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		TOEH 060102L																							0.05~0.17	0.10~1.50
		090204L																							0.05~0.20	0.30~2.50
		140304L		●																					0.05~0.25	0.30~2.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

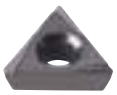
TP ○○

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



Dimensions (mm)			
Size	d	t	d1
08	4.76	2.38	2.3
09	5.56	2.38	-
11	6.35	2.38~3.18	3.4
16	9.525	3.18~4.76	4.4
22	12.7	4.76	-
27	15.875	4.76~6.35	-

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

Inserts	Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing		TPGH 080202L		●																				0.01~0.12	0.06~1.70
		080204L	●	●																				0.01~0.15	0.08~1.70
		110202L																						0.01~0.12	0.06~2.00
		110204L																						0.01~0.15	0.08~2.00
Medium to finishing		TPGN 090204																						0.07~0.20	0.70~2.00
		110302																						0.05~0.15	0.50~2.00
		110304									●												●	0.07~0.20	0.70~3.00
		110308									●												●	0.10~0.25	1.00~3.00
		160302																						0.05~0.18	1.00~5.00
		160304									●												●	0.07~0.20	1.00~5.00
		160308									●												●	0.10~0.25	1.00~5.00
		160310																						0.10~0.25	1.00~5.00
		160312																						0.15~0.30	1.00~5.00
		160316																						0.15~0.30	1.00~5.00
		160404																						0.07~0.20	1.00~5.00
		220404									●													0.07~0.20	1.50~7.00
		220408																						0.10~0.25	1.50~7.00
		220412									●													0.15~0.30	1.50~7.00
		220430																						0.30~0.45	1.50~7.00
		220440																						0.30~0.50	1.50~7.00
		270408																						0.15~0.25	3.00~8.00
		270608																						0.15~0.25	3.00~8.00
Finishing	F 	TPGR 110302-F																						0.05~0.15	0.10~1.50
		110304-F																						0.05~0.20	0.30~1.50
		160304-F																						0.08~0.25	0.50~2.00
Medium	M 	TPGR 110308-M																						0.13~0.30	1.00~3.00
		160308-M																						0.13~0.30	1.00~5.00

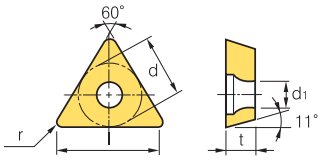
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B200	**STUPR/L**	B205
CTFPR/L	B164	**CTGPR/L**	B164

TP ○○

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



Dimensions (mm)			
Size	d	t	d1
08	4.76	2.38	2.3
09	5.56	2.38	3.0
11	6.35	3.18	3.4
16	9.525	3.18~4.76	4.4
22	12.7	4.76	-

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		TPGT	080202R																					0.05~0.20	0.30~1.50
			110302R																					0.05~0.20	0.30~1.50
			110304R		●																			0.05~0.20	0.50~2.00
			110308R																					0.07~0.25	0.50~2.00
			160404R		●																			0.05~0.20	0.70~3.00
			160408R																					0.05~0.20	0.70~3.00
			080202L		●																	●	●	0.05~0.20	0.30~1.50
			110302L																					0.05~0.20	0.30~1.50
			110304L	●	●																			0.05~0.20	0.50~2.00
			110308L																					0.07~0.25	0.50~2.00
			160404L		●																			0.05~0.20	0.70~3.00
			160408L																					0.05~0.20	0.70~3.00
Medium to finishing		TPGX	090202L																					0.10~0.20	0.30~1.00
			090204L			●																		0.10~0.25	0.50~1.00
			090208L																					0.10~0.30	1.00~1.00
			110304L																					0.10~0.25	0.50~1.20
Finishing	F 	TPMR	090202-F																					0.05~0.15	0.10~1.00
			090204-F																					0.05~0.15	0.10~1.00
			110302-F																					0.05~0.15	0.10~1.50
			110304-F							●		●		●									●	0.05~0.20	0.30~1.50
			110308-F																					0.05~0.25	0.30~1.50
			160304-F							●		●	●								●		●	0.08~0.25	0.50~2.00
			160308-F																					0.08~0.25	0.50~3.00
Medium	M 	TPMR	110304-M																					0.10~0.25	0.70~3.00
			110308-M									●		●										0.13~0.30	1.00~3.00
			160304-M									●		●										0.10~0.25	1.00~5.00
			160308-M							●		●		●										0.13~0.30	1.00~5.00
			160312-M									●												0.15~0.35	1.00~5.00
			220408-M																					0.13~0.30	1.50~7.00

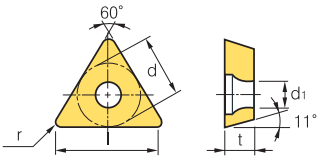
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B200	STUPR/L	B205
CTFPR/L	B164	CTGPR/L	B164

TP ○○

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



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

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

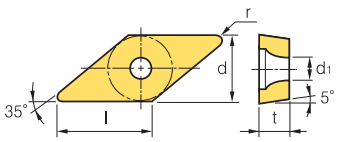
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VF	TPMT	110304-VF		●						●		●					●								0.05~0.20	0.30~1.50
			110308-VF								●		●													0.10~0.25	0.30~1.50
			160404-VF																							0.05~0.20	0.30~2.00
			160408-VF																							0.10~0.25	0.30~2.00
Finishing	VL	TPMT	090204-VL																							0.04~0.10	0.10~0.90
			090208-VL																							0.06~0.12	0.10~1.00
			110304-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.05~0.15	0.10~1.30
			110308-VL																							0.08~0.20	0.10~1.30
			160404-VL																							0.05~0.20	0.30~1.50
			160408-VL																							0.05~0.20	0.30~1.50
Medium to finishing	MP new	TPMT	110304-MP	●		●	●	●											●	●						0.05~0.20	0.20~1.50
			110308-MP																							0.10~0.28	0.30~2.00
			160404-MP																							0.08~0.20	0.30~2.50
			160408-MP																							0.10~0.30	0.50~2.50
Medium to finishing		TPUN	090308																							0.10~0.30	0.50~2.00
			110208																							0.15~0.40	1.00~3.00
			110304																							0.10~0.30	1.00~3.00
			110308																							0.15~0.40	1.00~3.00
			160304																							0.10~0.30	1.00~5.00
			160308									●														0.15~0.40	1.00~5.00
			160308TN																							0.15~0.40	1.00~5.00
			160312																							0.20~0.50	1.50~5.00
			160312TN																							0.20~0.50	1.50~5.00
			220404																							0.10~0.30	1.50~7.00
			220408									●														0.15~0.40	1.50~7.00
			220412																							0.20~0.50	1.50~7.00
			220412TN																							0.20~0.50	1.50~7.00
			330620																							0.30~0.70	3.00~10.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B200	**STUPR/L**	B205
CTFPR/L	B164	**CTGPR/L**	B164

VB○○



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

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	⬬ ✱ ● ⬬

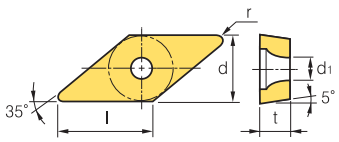
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	KF	VBGT	1103003R-KF																						0.01~0.06	0.04~1.30
			110301R-KF																						0.02~0.08	0.05~1.50
			110302R-KF																			●			0.03~0.13	0.06~1.70
			1103003L-KF																						0.01~0.06	0.04~1.30
			110301L-KF																						0.02~0.08	0.05~1.50
			110302L-KF																						0.03~0.13	0.06~1.70
Finishing	VP1	VBGT	160402-VP1																						0.04~0.20	0.16~1.50
			160404-VP1																						0.05~0.20	0.18~1.80
Medium to finishing		VBGT	160404																						0.07~0.20	0.50~1.50
			160408																						0.15~0.25	0.70~2.00
Medium to finishing	KM	VBGT	1103003R-KM																						0.01~0.06	0.04~1.30
			110301R-KM																						0.02~0.08	0.05~1.50
			110302R-KM																						0.03~0.13	0.06~1.70
			160404R-KM																						0.05~0.15	0.50~2.00
			1103003L-KM																						0.01~0.06	0.04~1.30
			110301L-KM																						0.02~0.08	0.05~1.50
			110302L-KM																						0.03~0.13	0.06~1.70
			160404L-KM																						0.05~0.15	0.50~2.00
Finishing	VB	VBMT	160404-VB	●		●					●														0.08~0.20	0.20~1.50
			160408-VB	●		●					●														0.10~0.23	0.50~1.50
Finishing	VF	VBMT	160404-VF	●	●	●					●		●					●			●				0.05~0.20	0.30~1.00
			160408-VF	●	●	●												●							0.10~0.25	0.30~1.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B177	**SVVBN**	B178
SVHBR/L	B177	**SVQBR/L**	B202
SVJBR/L	B111, 177	**SVUBR/L**	B202

VB○○

Rhombic 35° Positive
Relief Angle: 5°



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

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

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

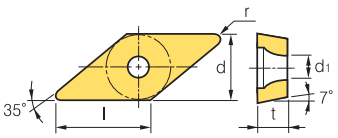
Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (Mild steel)	VL	VBMT	160404-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.05~0.20	0.30~1.50
			160408-VL	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.10~0.20	0.30~1.50
			160412-VL												●	●	●		●	●	●					0.10~0.25	0.30~1.50
Finishing	VP1	VBMT	160402-VP1																							0.04~0.20	0.16~1.50
			160404-VP1																							0.05~0.20	0.18~1.80
			160408-VP1																							0.06~0.20	0.20~1.80
Medium to finishing		VBMT	160404		●					●		●											●			0.07~0.20	0.50~1.50
			160408							●		●											●			0.15~0.25	0.70~2.00
Medium to finishing	HMP	VBMT	110304-HMP																							0.03~0.20	0.15~2.70
			110308-HMP																							0.05~0.25	0.40~2.70
			160404-HMP																							0.07~0.20	0.20~2.70
			160408-HMP																							0.09~0.27	0.50~2.70
			160412-HMP																							0.11~0.32	0.50~2.70
Medium	MP new	VBMT	110304-MP																							0.05~0.15	0.20~1.50
			110308-MP																							0.10~0.28	0.30~2.00
			160404-MP	●		●	●	●	●		●		●		●	●	●	●	●	●	●	●				0.08~0.20	0.30~2.00
			160408-MP	●		●	●	●	●		●		●	●	●	●	●	●	●	●	●	●				0.10~0.25	0.50~2.30
			160412-MP	●		●			●		●		●		●	●	●	●	●	●	●	●				0.10~0.35	0.50~2.30

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B177	SVVBN	B178
SVHBR/L	B177	SVQBR/L	B202
SVJBR/L	B111, 177	SVUBR/L	B202

VC○○



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

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		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	KF	VCET	1103005MFR-KF																						0.01~0.06	0.04~1.30
			110301MFR-KF																		●				0.02~0.08	0.05~1.50
			110302MFR-KF																		●				0.03~0.11	0.06~1.70
			1103005MFL-KF																						0.01~0.06	0.04~1.30
			110301MFL-KF																						0.02~0.08	0.05~1.50
			110302MFL-KF																						0.03~0.11	0.06~1.70
Medium to finishing (High precision)	KM	VCET	1103005MFR-KM																						0.02~0.08	0.05~1.50
			110301MFR-KM																		●				0.03~0.11	0.06~1.70
			110302MFR-KM																		●				0.04~0.15	0.08~2.00
			1103005MFL-KM																						0.02~0.08	0.05~1.50
			110301MFL-KM																						0.03~0.11	0.06~1.70
			110302MFL-KM																						0.04~0.15	0.08~2.00
Finishing	KF	VCGT	1103003R-KF																						0.01~0.06	0.04~1.30
			110301R-KF																						0.02~0.08	0.05~1.50
			110302R-KF																				●		0.03~0.13	0.06~1.70
			1103003L-KF																						0.01~0.06	0.04~1.30
			110301L-KF																						0.02~0.08	0.05~1.50
			110302L-KF																						0.03~0.13	0.06~1.70
Finishing	KM	VCGT	1103003R-KM																						0.01~0.06	0.04~1.30
			110301R-KM																						0.02~0.08	0.05~1.50
			110302R-KM																				●		0.03~0.13	0.06~1.70
			1103003L-KM																						0.01~0.06	0.04~1.30
			110301L-KM																						0.02~0.08	0.05~1.50
			110302L-KM																						0.03 ~0.13	0.06~1.70
Finishing	VP1	VCGT	110301-VP1															●		●	●	●		●		0.02~0.15	0.05~0.50
			110302-VP1															●		●	●	●		●		0.02~0.18	0.10~1.00
			110304-VP1															●		●	●	●		●		0.03~0.18	0.15~1.20
			160404-VP1																							0.05~0.20	0.18~1.80
			160408-VP1																							0.06~0.20	0.20~1.80

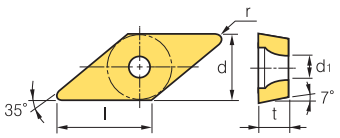
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B111, 178, 201	**SVQCR/L**	B202
SVVCN	B178	**SVUCR/L**	B202

VC○○

Rhombic 35° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d1
08	4.76	2.38	2.3
11	6.35	3.18	2.8~3.4
12	7.5	3.18	2.8
16	9.525	4.76	4.4

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

Inserts		Designation		Cermet			Coated		Coated												Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	VP1	VCGT	110301MFN-VP1																		●					0.02~0.15	0.05~0.50
			110302MFN-VP1																		●					0.02~0.18	0.10~1.00
			110304MFN-VP1																		●					0.03~0.18	0.15~1.20
Finishing (High precision)	VP1	VCGX	120300MFR-VP1																							0.02~0.10	0.05~0.50
			120301MFR-VP1																							0.02~0.15	0.05~0.50
			120302MFR-VP1																							0.02~0.18	0.10~1.00
Finishing	VF	VCMT	080202-VF																							0.05~0.20	0.30~1.00
			080204-VF										●													0.10~0.25	0.30~1.00
			110304-VF								●															0.03~0.18	0.15~1.20
			160404-VF								●		●													0.04~0.20	0.15~1.50
Finishing (Mild steel)	VL	VCMT	080202-VL						●		●		●					●								0.03~0.08	0.10~0.80
			080204-VL						●		●		●					●								0.04~0.10	0.10~0.90
			160404-VL						●		●				●	●	●			●	●					0.05~0.20	0.30~1.50
			160408-VL						●		●				●	●	●			●	●					0.05~0.20	0.30~1.50
			160412-VL																							0.10~0.25	0.30~1.50
Finishing	VP1	VCMT	160404-VP1																							0.05~0.20	0.18~1.80
			160408-VP1																							0.06~0.20	0.20~1.80
Medium to finishing	HMP	VCMT	160404-HMP																							0.10~0.25	0.30~2.60
			160408-HMP																							0.13~0.33	0.60~2.60
Medium	MP new	VCMT	080202-MP																							0.03~0.15	0.10~1.00
			080204-MP																							0.05~0.18	0.10~1.00
			160404-MP						●		●			●	●	●	●			●	●					0.08~0.18	0.30~2.00
			160408-MP						●		●			●	●	●	●			●	●					0.10~0.23	0.50~2.30
			160412-MP											●	●	●	●			●	●					0.10~0.33	0.50~2.30

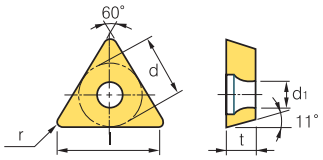
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B111, 178, 201	SVQCR/L	B202
SVVCN	B178	SVUCR/L	B202

VP○○

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



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

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

Inserts		Designation	Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	KF	VPET 0802005MFR-KF																						0.01~0.12	0.05~0.50
		080201MFR-KF																		●				0.02~0.15	0.05~0.50
		080202MFR-KF																		●				0.02~0.18	0.10~1.00
		0802005MFL-KF																						0.01~0.12	0.05~0.50
		080201MFL-KF																						0.02~0.15	0.05~0.50
		080202MFL-KF																						0.02~0.18	0.10~1.00
		080201MFN-KF																						0.02~0.15	0.05~0.50
		080202MFN-KF																						0.02~0.18	0.10~1.00
Medium to finishing (High precision)	KM	VPET 0802005MFR-KM																						0.01~0.12	0.05~0.50
		080201MFR-KM																		●				0.02~0.15	0.05~0.50
		080202MFR-KM																		●				0.02~0.18	0.10~1.00
		0802005MFL-KM																						0.01~0.12	0.05~0.50
		080201MFL-KM																						0.02~0.15	0.05~0.50
		080202MFL-KM																						0.02~0.18	0.10~1.00
Finishing	VP1	VPGT **110301-VP1**															●		●	●	●		●		0.02~0.15	0.05~0.50
		110302-VP1															●		●	●	●		●		0.02~0.18	0.10~1.00
		110304-VP1															●		●	●	●		●		0.03~0.18	0.15~1.20
Finishing (High precision)	VP1	VPGT 110301MFN-VP1																		●					0.02~0.15	0.05~0.50
		110302MFN-VP1																		●					0.02~0.18	0.10~1.00
		110304MFN-VP1																		●					0.03~0.18	0.15~1.20

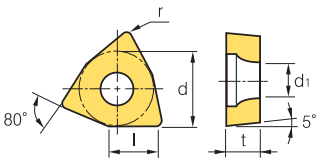
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B177	**SVVBN**	B178
SVJBR/L	B111, 177		

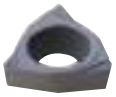
WB○○

Trigon 80° Positive
Relief Angle: 5°



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

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

Inserts	Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3215	NC3120	NC3225	NC3030	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		WBGT 020102R																						0.01~0.05	0.10~0.30
		S30204R																						0.01~0.10	0.10~0.50
		020102L		●																		●	●	0.01~0.08	0.10~0.40
		S30202L																						0.01~0.08	0.10~0.40
		S30204L																						0.01~0.10	0.10~0.50

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

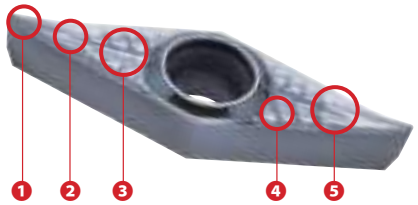
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SWUBR/L	B206		

Technical Information for Aluminum

AK special chip breaker for aluminum

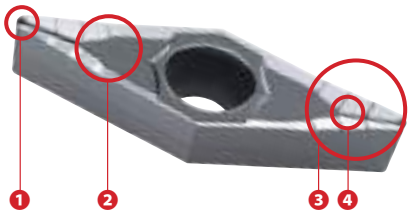
- Unique and 3-dimensional rake angle controls chip breaking and chip flow ensuring longer tool life and reducing cutting load
- High rake angle at cutting edge part reduces cutting load to increase tool life
- Buffed finish on top face controls chip flow reducing built-up edge



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

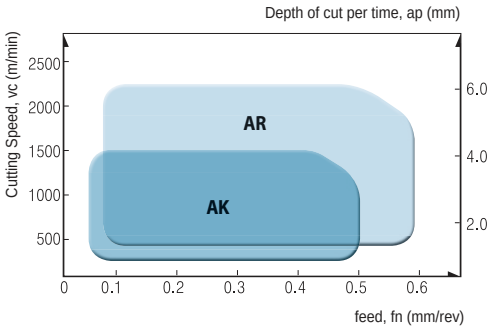
AR special chip breaker for aluminum

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

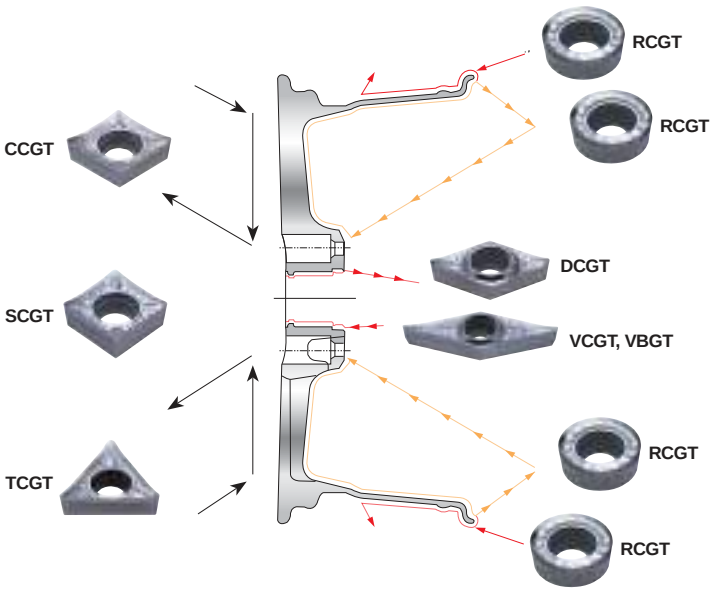


1. Flat corner cutting edge improved productivity at high feed machining and ensures good surface roughness and reliability owing to strong cutting edge
2. Specially buffed on top face controls chip flow reducing built-up edge
3. KORLOY's own technology applied for cutting edge and corner shape controlling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

AK and AR chip breaker specially developed for aluminum



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



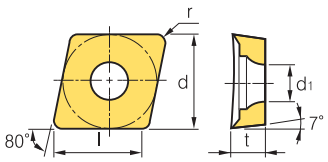
Features of H01 and cutting conditions

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

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

CC ○○

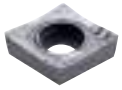
Rhombic 80° Positive
Relief Angle: 7°



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

Workpiece						
Steel	P					
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		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	CCGT	060202-AK	●		●		0.01~0.12	0.05~3.00
		060204-AK	●		●		0.02~0.15	0.10~3.00
		060208-AK			●		0.02~0.20	0.10~4.00
		09T302-AK	●		●		0.02~0.20	0.05~3.00
		09T304-AK	●		●		0.02~0.30	0.10~5.00
		09T308-AK	●		●		0.03~0.50	0.10~5.00
		120402-AK			●		0.02~0.30	0.05~4.00
		120404-AK	●		●		0.03~0.50	0.10~5.00
		120408-AK			●		0.04~0.80	0.10~5.50
AR 	CCGT	060202-AR			●		0.02~0.30	0.30~4.00
		060204-AR					0.03~0.35	0.50~4.50
		060208-AR					0.04~0.50	0.50~4.50
		09T302-AR			●		0.03~0.45	0.30~4.00
		09T304-AR			●		0.04~0.50	0.50~4.50
		09T308-AR			●		0.05~0.60	0.50~6.00
		120402-AR					0.04~0.50	0.30~5.00
		120404-AR			●		0.05~0.60	0.50~6.00
		120408-AR			●		0.06~0.65	0.50~6.00
		120412-AR					0.08~0.70	0.50~6.50

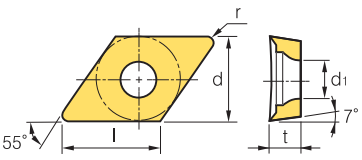
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B109, 172	SCLCR/L	B109, 172, 194

DC ○○

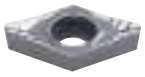
Rhombic 55° Positive
Relief Angle: 7°



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

Workpiece						
Steel	P					
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		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	DCGT	070202-AK	●		●		0.01~0.20	0.05~3.00
		070204-AK	●		●		0.02~0.30	0.10~4.00
		070208-AK	●		●		0.03~0.40	0.10~4.00
		11T302-AK	●		●		0.02~0.30	0.05~4.00
		11T304-AK	●	●	●		0.03~0.50	0.10~5.00
		11T308-AK	●		●		0.03~0.50	0.10~5.00
		11T312-AK			●		0.04~0.60	0.15~5.00
AR 	DCGT	070202-AR			●		0.02~0.30	0.30~4.00
		070204-AR			●		0.03~0.40	0.50~5.00
		070208-AR			●		0.04~0.50	0.50~5.00
		11T302-AR					0.03~0.45	0.30~6.00
		11T304-AR			●		0.04~0.50	0.50~6.00
		11T308-AR			●		0.05~0.60	0.50~6.00
		11T312-AR			●		0.08~0.65	0.50~6.50

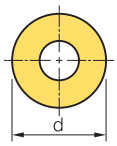
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

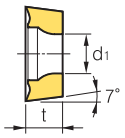
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B172	SDQCR/L	B196
SDJCR/L	B109, 173	SDUCR/L	B197
SDNCN	B110, 173	SDZCR/L	B198

RC ○○

Round **Positive**
Relief Angle: 7°





Dimensions (mm)			
Size	d	t	d1
06	6.0	2.38	2.8
08	8.0	3.18	3.35
10	10.0	3.18~3.97	4.4
12	12.0	4.76	4.4

Workpiece						
Steel	P					
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		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	RCGT	**0602M0-AK**			●		0.05~0.20	0.50~2.00
		0803M0-AK			●		0.05~0.25	0.50~2.50
		1003M0-AK			●		0.10~0.30	1.00~3.00
		10T3M0-AK					0.10~0.30	1.00~3.00
		1204M0-AK			●		0.10~0.35	1.00~3.50
AR 	RCGT	**0602M0-AR**					0.05~0.20	0.50~2.00
		0803M0-AR					0.05~0.25	0.50~2.50
		1003M0-AR			●		0.10~0.30	1.00~3.00
		10T3M0-AR					0.10~0.30	1.00~3.00
		1204M0-AR					0.10~0.35	1.00~3.50

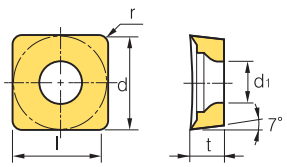
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SRDCN	B173	**SRGCR/L**	B174

SC ○○

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



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

Workpiece						
Steel	P					
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		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	SCGT	**09T302-AK**	●				0.02~0.30	0.10~4.00
		09T304-AK	●		●		0.04~0.40	0.10~5.00
		09T308-AK			●		0.03~0.40	0.10~5.00
		120404-AK			●		0.03~0.50	0.10~5.00
		120408-AK			●		0.04~0.60	0.15~5.50
		120416-AK					0.04~0.60	0.15~5.50
AR 	SCGT	**09T302-AR**					0.03~0.40	0.50~5.00
		09T304-AR			●		0.04~0.50	0.50~6.00
		09T308-AR					0.04~0.50	0.50~6.50
		120404-AR			●		0.05~0.60	0.50~6.50
		120408-AR					0.05~0.60	0.50~7.00
		120416-AR					0.05~0.60	0.50~7.00

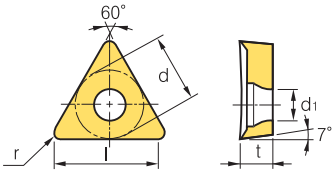
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	**Page**	**Designation**	**Page**
SSBCR/L	B174	**SSKCR/L**	B175
SSDCN	B174	**SSSCR/L**	B175

TC ○○

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



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

Workpiece						
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		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	TCGT	**090202-AK**			●		0.01~0.12	0.05~3.00
		090204-AK			●		0.02~0.15	0.10~4.00
		110202-AK	●		●		0.02~0.20	0.05~4.00
		110204-AK	●		●		0.03~0.30	0.10~4.00
		110208-AK			●		0.03~0.40	0.10~5.00
		16T302-AK			●		0.02~0.30	0.05~5.00
		16T304-AK			●		0.03~0.40	0.10~5.50
		16T308-AK			●		0.03~0.50	0.10~5.50
		16T312-AK			●		0.04~0.60	0.15~5.50
		16T316-AK			●		0.05~0.80	0.15~5.50
		16T325-AK					0.06~0.90	0.20~7.00
AR 	TCGT	**090202-AR**					0.02~0.18	0.30~3.00
		090204-AR			●		0.02~0.25	0.30~5.00
		110202-AR					0.02~0.30	0.30~4.00
		110204-AR			●		0.03~0.40	0.30~5.00
		110208-AR					0.04~0.45	0.50~6.00
		16T302-AR			●		0.03~0.45	0.30~5.00
		16T304-AR			●		0.04~0.50	0.50~6.00
		16T308-AR			●		0.05~0.60	0.50~6.00
		16T312-AR					0.06~0.65	0.50~6.00
		16T316-AR					0.08~0.70	0.50~6.50
		16T325-AR					0.10~0.10	0.80~7.00

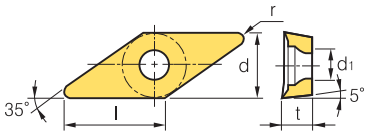
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	**Page**	**Designation**	**Page**
STACR/L	B110	**STTCR/L**	B176, 225
STFCR/L	B176, 224	**STWCR/L**	B225
STGCR/L	B176		

VB ○○

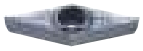
Rhombic **35° Positive**
Relief Angle: 5°



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

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

Machining types
● Continuous cutting
⬌ General cutting
✱ Interrupted cutting

Inserts	Designation		Coated		Uncoated		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	VBGT	**110302-AK**			●		0.02~0.15	0.05~3.00
		110304-AK			●		0.02~0.15	0.10~4.00
		110308-AK					0.03~0.18	0.10~5.00
		160402-AK					0.03~0.30	0.05~4.00
		160404-AK			●		0.03~0.40	0.10~5.00
		160408-AK			●		0.03~0.50	0.10~5.00
		160412-AK					0.05~0.60	0.10~5.50
AR 	VBGT	**110302-AR**					0.02~0.35	0.30~3.00
		110304-AR					0.03~0.45	0.30~4.00
		110308-AR					0.03~0.50	0.50~6.00
		160402-AR					0.04~0.45	0.30~5.00
		160404-AR			●		0.04~0.50	0.50~6.00
		160408-AR			●		0.05~0.60	0.50~6.00
		160412-AR					0.05~0.70	0.50~6.50

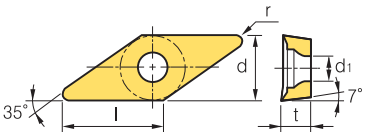
Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B177	**SVVBN**	B178
SVHBR/L	B177	**SVQBR/L**	B201
SVJBR/L	B111, 177	**SVUBR/L**	B202

VC ○○

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



Dimensions (mm)			
Size	d	t	d1
11	6.35	3.18	2.8
13	7.94	3.18	3.4
16	9.525	4.76	4.4
22	12.7	5.56	5.6

Workpiece						
Steel	P					
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		Cutting Condition	
			PC5040	PD1000	H01	H05	fn (mm/rev)	ap (mm)
AK 	VCGT	**110301-AK**					0.02~0.15	0.05~3.00
		110302-AK	●		●		0.02~0.20	0.05~3.00
		110304-AK	●		●		0.02~0.25	0.10~4.00
		110308-AK			●		0.03~0.30	0.10~5.00
		130302-AK	●		●		0.02~0.35	0.10~5.00
		130304-AK	●		●		0.03~0.35	0.10~5.00
		130308-AK					0.04~0.40	0.10~5.00
		160402-AK			●		0.02~0.30	0.05~5.00
		160404-AK		●	●		0.03~0.40	0.10~5.00
		160408-AK			●		0.03~0.50	0.10~5.00
		160412-AK			●		0.03~0.50	0.10~5.00
		220516-AK			●		0.03~0.60	0.10~7.00
		220525-AK					0.05~0.70	0.10~7.00
		220530-AK			●		0.08~1.00	0.10~7.00
AR 	VCGT	**110301-AR**					0.02~0.20	0.10~3.00
		110302-AR			●		0.02~0.25	0.30~3.00
		110304-AR			●		0.03~0.35	0.30~4.00
		110308-AR					0.04~0.45	0.50~6.00
		130302-AR					0.02~0.40	0.50~3.00
		130304-AR			●		0.03~0.45	0.50~4.00
		130308-AR					0.04~0.50	0.50~5.00
		160402-AR			●		0.03~0.40	0.30~5.00
		160404-AR			●		0.04~0.50	0.50~6.00
		160408-AR			●		0.05~0.60	0.50~6.00
		160412-AR					0.06~0.65	0.50~6.50
		220516-AR					0.10~0.65	0.80~6.50
		220525-AR					0.10~0.70	0.80~7.00
		220530-AR			●		0.12~0.75	1.00~7.00

Cutting edge geometry **A48~A55** Recommended chip breaker **B04~B11** Code system **B24~B25**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B111, 178, 201	**SVQCR/L**	B202
SVVCN	B178	**SVUCR/L**	B202

cBN

Multi-Corner Type (Negative)

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

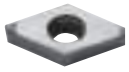
Inserts	Designation		Uncoated										Available tool holders			
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation		Page	
CN○○ 80° Nega	2NU-CNGA	120404	●	●		●	●				●		DCBNR/L	DCLNR/L	B148	B148
		120404F	●				●						MCKNR/	MCLNR/L	B165	B165
		120404T	●			●	●						MCMNN	PCBNR/L	B165	B153
		120404W	●										PCLNR/L		B153	
		120404WF	●													
		120408	●	●		●	●				●					
		120408F	●				●									
		120408T	●			●	●									
		120408W	●	●		●	●				●					
		120408WF	●				●									
		120408WT				●	●									
		120412	●	●												
		120412F	●													
		120412T	●													
		120412W	●			●	●				●					
		120412WF	●				●									
		120412WT				●	●									
	T-2NU-CNGA	120408	●													
	2NU-CNMA	120404							●							
		120408							●							
	2NS-CNGA	120408			●			●								
DN○○ 55° Nega	2NU-DNGA	150404	●	●		●	●		●		●		DDJNR/L	MDJNR/L	B149	B166
		150404F	●				●						MDNNN	MDQNR/L	B166	B167
		150404T	●			●	●						MDUNR/L	PDJNR/L	B192	B154
		150408	●	●		●	●		●		●		PDNNR/L	PDSNR/L	B155	B187
		150408F	●				●						PDUNR/L		B188	
		150408T	●			●	●									
		150412	●	●												
		150412F	●													
		150412T	●													
		150608										●				
	T-2NU-DNGA	150412	●													
	2NS-DNGA	150408			●			●								
SN○○ 90° Nega	4NU-SNGA	120404	●			●	●				●		DSBNR/L	MSBNR/L	B149	B167
		120404F					●						MSDNN	MSKNR/L	B167	B168
		120404T				●	●						MSRNR/L	MSSNR/L	B168	B169
		120408	●			●	●				●		PSBNR/L	PSDNN	B157	B157
		120408F					●						PSKNR/L		B158	
		120408T				●	●									
		120412									●					
	2NS-SNGA	120408			●			●								
TN○○ 60° Nega	3NU-TNGA	160404	●	●		●	●		●		●		MTENN	MTFNR/L	B169	B169
		160404F	●				●						MTGNR/	MTJNR/L	B170	B170
		160404T	●			●	●						PTFNR/L	PTGNR/L	B159	B159
		160408	●	●		●	●				●		PTTNR/L	WTENN	B160	B161
		160408F	●				●						WTJNR/L	WTXNR/L	B161	B161
		160408T	●			●	●									
		160412		●												
	2NS-TNGA	160408			●			●								
VN○○ 35° Nega	2NU-VNGA	160404	●	●		●	●		●		●		MVJNR/L		B170	
		160404F	●				●						MVQNR/L		B171	
		160404T	●			●	●						MVUNR/L		B193	
		160408	●	●		●	●		●		●		MVVNN		B171	
		160408F	●				●									
		160408T	●			●	●									
	2NS-VNGA	160408			●			●								

● : Stock item

cBN

Multi-Corner Type (Positive)

Dimensions (mm)			
Size	d	t	d1
06	6.35	2.38	2.8
07	6.35	2.38	2.8
09	9.525	3.97	4.4
11	9.525	3.97	4.4

Inserts	Designation		Uncoated										Available tool holders	
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation	Page
CC○○ 80° Posi 	2NU-CCGW	060202	●										SCACR/L	B172
		060202F	●										SCLCR/L	B172
		060202T	●											
		060204	●			●	●							
		060204F	●				●							
		060204T	●			●	●							
		060208				●	●							
		060208F					●							
		060208T				●	●							
		09T304	●	●		●	●		●		●			
		09T304F	●				●							
		09T304T	●			●	●							
		09T308	●	●		●	●		●		●			
		09T308F	●				●							
		09T308T	●			●	●							
		09T308W	●											
		09T308WF	●											
DC○○ 55° Posi 	2NU-DCGW	070204				●	●						SDACR/L	B172
		070204F					●						SDJCR/L	B173
		070204T				●	●						SDNCN	B173
		070208				●	●						SDQCR/L	B196
		070208F					●						SDUCR/L	B197
		070208T				●	●						SDZCR/L	B198
		11T304	●	●		●	●		●		●			
		11T304F	●				●							
		11T304T	●			●	●							
		11T308	●	●		●	●		●		●			
		11T308F	●				●							
		11T308T	●			●	●							
	T-2NU-DCGW	11T304	●											
TC○○ 60° Posi 	3NU-TCGW	090204	●										STACR/L	B175
		090204F	●										STFCR/L	B176
		090204T	●										STGCR/L	B176
													STTCR/L	B176

● : Stock item

cBN

Multi-Corner Type (Positive)

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

Inserts	Designation		Uncoated									Available tool holders	
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation	Page
TP◯◯ 60° Posi	3NU-TPGB	110304	●						●				CTFPR/L	B164
		110304F	●										CTGPR/L	B164
		110304T	●											
		110308	●						●					
		110308F	●											
		110308T	●											
	3NU-TPGN	110304				●	●						CTFPR/L	B164 B191
		110304F					●						CTGPR/L	B164
		110304T				●	●							
		110308				●	●							
		110308F					●							
		110308T				●	●							
		160304	●	●										
		160308	●	●										
	3NU-TPGW	110304	●	●		●	●				●			
		110304F	●				●							
		110304T	●			●	●							
		110308	●	●		●	●				●			
		110308F	●				●							
		110308T	●			●	●							
VB◯◯ 35° Posi	2NU-VBGW	160404	●	●		●	●		●		●		SVABR/L	B177
		160404F	●				●						SVHBR/L	B177
		160404T	●			●	●						SVJBR/L	B177
		160408	●	●		●	●		●		●		SVQBR/L	B201
		160408F	●				●						SVUBR/L	B202
		160408T	●			●	●							
VC◯◯ 35° Posi	2NU-VCGW	160404	●	●		●	●				●			
		160404F	●				●							
		160404T	●			●	●							
		160408	●	●		●	●				●			
		160408F	●				●							
		160408T	●			●	●							

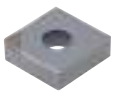
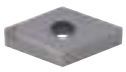
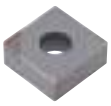
● : Stock item

cBN

Regrinding Type (Negative/Positive)

Dimensions (mm)			
Size	d	t	d1
09	9.525	3.97	4.4
11	6.35~9.525	3.8~3.97	3.4~4.4
12	12.7	4.76	5.16

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

Inserts	Designation		Uncoated									Available tool holders			
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation		Page	
CN○○ 80° Nega 	CNMA	**120404**							●				DCBNR/L	MCKNR/L	B148	B165
		120408							●			●	DCLNR/L	MCLNR/L	B148	B165
	T-CNMA	**120408**							●				PCBNR/L	MCMNN	B153	B165
													PCLNR/L		B153	
DN○○ 55° Nega 	DNMA	**150404**							●				DDJNR/L	MDJNR/L	B149	B166
		150408							●	●			MDNNN	MDQNR/L	B166	B167
													MDUNR/L	PDJNR/L	B192	B154
													PDNNR/L	PDSNR/L	B155	B187
													PDUNR/L		B188	
SN○○ 90° Nega 	SNMA	**120404**							●				DSBNR/L	MSBNR/L	B149	B167
		120408							●				MSDNN	MSKNR/L	B167	B168
													MSRNR/L	MSSNR/L	B168	B169
													PSBNR/L	PSDNN	B157	B157
													PSKNR/L		B158	
TN○○ 60° Nega 	TNMA	**160404**							●				MTENNS	MTFNR/L	B169	B169
		160408							●				MTGNR/L	MTJNR/L	B170	B170
													PTFNR/L	PTGNR/L	B159	B159
													PTTNR/L	WTENN	B160	B161
													WTJNR/L	WTXNR/L	B161	B161
VN○○ 35° Nega 	VNMA	**160404**							●				MVJNR/L		B170	
		160408							●				MVQNR/L		B171	
	T-VNMA	**160404**							●				MVUNR/L		B193	
													MVVNN		B171	
CC○○ CP○○ 80° Posi  (CCMW)	CCMW	**09T304**							●				SCACR/L		B172	
													SCLCR/L		B172	
DC○○ 50° Posi 	DCGW	**11T308**							●				SDACR/L		B172	
	T-DCGW	**11T308**							●				SDJCR/L		B173	
													SDNCN/L		B173	
TP○○ 60° Posi 	TPGB	**110304**							●	●			CTFPR/L		B164	B191
		110308							●				CTGPR/L		B164	
VB○○ 35° Posi 	VBMW	**160404**							●				SVABR/L		B177	
		160408							●				SVHBR/L		B177	
													SVJBR/L		B177	
													SVQBR/L		B201	
													SVUBR/L		B202	

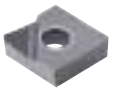
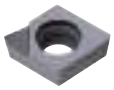
● : Stock item

PCD

Insert (Negative/Positive)

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

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

Inserts	Designation		PCD			Available tool holders			
			DP90	DP150	DP200	Designation		Page	
CN○○ 80° Nega  (CNMX)	CNMM	120404		●		DCBNR/L	DCLNR/L	B148	B148
		120408		●		MCKNR/L	MCLNR/L	B165	B165
		120412				MCMNN	PCBNR/L	B165	B153
	CNMX	120404				PCLNR/L		B153	
		120408							
		120412							
DN○○ 55° Nega  (DNMX)	DNMM	150404		●		DDJNR/L	MDJNR/L	B149	B166
		150408		●		MDNNN	MDQNR/L	B166	B167
		150412				MDUNR/L	PDJNR/L	B192	B154
	DNMX	150404				PDNNR/L	PDSNR/L	B155	B187
		150408				PDUNR/L		B188	
		150412							
TN○○ 60° Nega 	TNMX	160404				MTENNS	MTFNR/L	B169	B169
		160408				MTGNR/L	MTJNR/L	B170	B170
		160412				PTFNR/L	PTGNR/L	B159	B159
						PTTNR/L	WTENN	B160	B161
						WTJNR/L	WTXNR/L	B161	B161
VN○○ 35° Nega 	VNMX	160404				MVJNR/L		B170	
		160408				MVQNR/L		B171	
		160412				MVUNR/L		B193	
						MVVNN		B171	
CC○○ CP○○ 80° Posi 	CCMT	060202		●		SCACR/L		B172	
		060204		●		SCLCR/L		B172	
		060208							
		09T304		●					
		09T308		●					
		09T312							
	CPMT	080204							
		080208							
		080212							
		090304							
		090308							
		090312							
DC○○ 55° Posi 	DCMT	070202		●		SDACR/L		B172	
		070204		●		SDJCR/L		B173	
		070208				SDNCN		B173	
		11T302				SDQCR/L		B196	
		11T304		●		SDUCR/L		B197	
		11T308		●		SDZCR/L		B198	
SC○○ SP○○ 90° Posi  (SCMT)	SCMT	09T304				SSBCR/L		B174	
		09T308				SSDCN		B174	
		09T312				SSKCR/L		B175	
	SPGW	090302				SSSCR/L		B175	
		090304							
		090308							

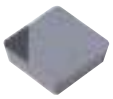
● : Stock item

PCD

Insert (Positive)

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

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

Inserts	Designation		PCD			Available tool holders	
			DP90	DP150	DP200	Designation	Page
TB○○ TC○○ TP○○ 60° Posi  (TBGN)	TBGW	060102				STUBR/L	B204
		060104					
	TCMT	090201				STACR/L	B175
		090202				STFCR/L	B176
		090204				STFPR/L	B200
		110201				STGCR/L	B176
		110202				STTCR/L	B176
		110204					
	TPGB	080204					
		080208					
		090204		●			
		090208		●			
		110304					
		110308					
	TPGW	080202					
		080204					
		090204					
		090208					
		110302					
		110304		●			
		110308		●			
		160404					
		160408					
	TPGT	110302				STFPR/L	B200
		110304				STUPR/L	B205
VB○○ VC○○ 35° Posi 	VBMT	110302				SVABR/L	B177
		110304		●		SVHBR/L	B177
		110308		●		SVJBR/L	B177
		160402				SVQBR/L	B201
		160404		●		SVUBR/L	B202
		160408		●			
		160412		●			
	VCMT	110302				SVJCR	B178
		110304		●		SVVCN	B178
		110308		●			
		160404		●			
		160408		●			
		160412					
TP○○ 60° Posi 	TPGN	090204				CTFPR/L	B164
		090208				CTGPR/L	B164
		110302					
		110304		●			
		110308		●			
		160302					
		160304					
		160308					
SP○○ 90° Posi 	SPGN	090304		●		CSDPN	B163
		090308				CSKPR/L	B164
		120304					
		120308					

● : Stock item