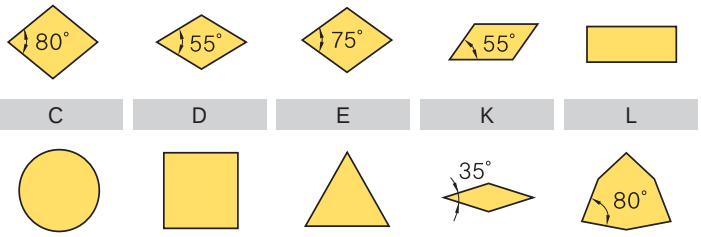
C N M G 12

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

1 Insert Shape

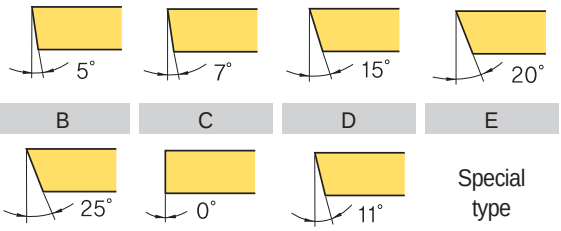
C N M G 12 04 08 - MP



C	D	E	K	L
R	S	T	V	W

2 Relief Angle

C N M G 12 04 08 - MP



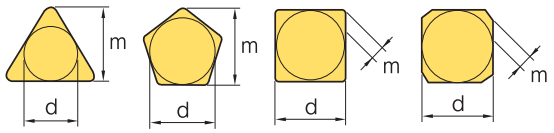
B	C	D	E
F	N	P	O

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, H, R, T, W Insert Shape (Exceptional case)

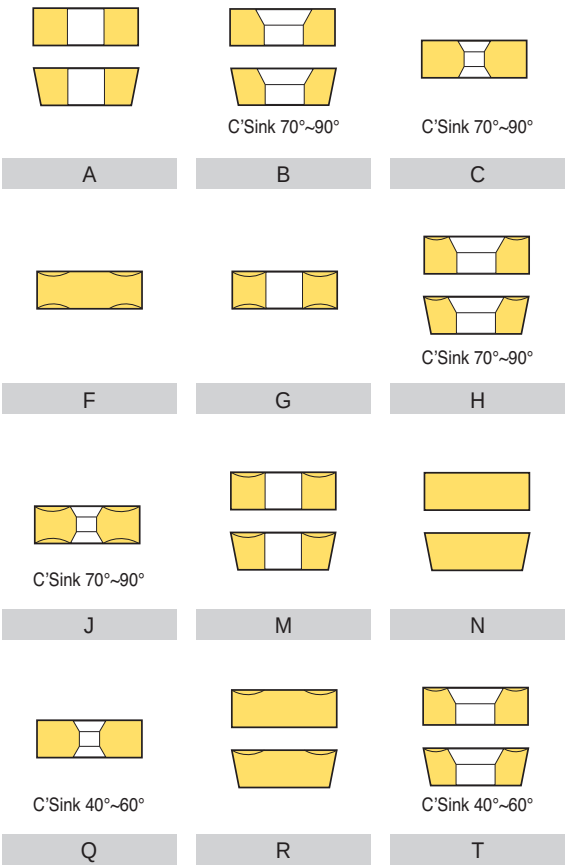
d	Tolerance on d		Tolerance on m	
	J, K, L, M, N	U	M, N	U
6.35	±0.05	±0.08	±0.08	±0.13
9.525	±0.05	±0.08	±0.08	±0.13
12.7	±0.08	±0.13	±0.13	±0.20
15.875	±0.10	±0.18	±0.15	±0.27
19.05	±0.10	±0.18	±0.15	±0.27
25.4	±0.13	±0.25	±0.18	±0.38

Tolerance on D Insert Shape (Exceptional case)

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

4 Cross Section Type

C N M G 12 04 08 - MP



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

Special and asymmetric types

04 08 - MP

6 Height of Cutting Edge | 7 Nose "r" | 8 Chip Breaker for Turning

5 Cutting Edge Length, Diameter of Inscribed Circle

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

Symbol							Inch	IC
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

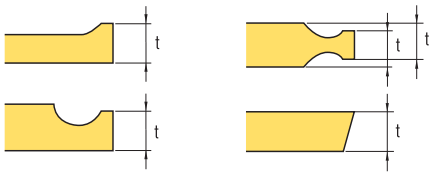
7 Nose "r"

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

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

6 Height of Cutting Edge

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



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

( ) Symbol for small size insert

8 Chip Breaker for Turning

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

Negative Insert Chip Breaker

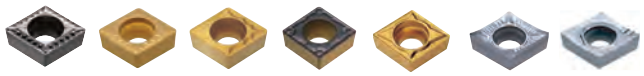
VL VF VB VC VQ VW LW

VM VR GH VH VT SR B25

HA HM GR VP1 VP2 VP3 VP4

LP MP MM RM MK RK CP

Positive Insert Chip Breaker

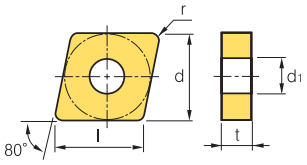


FP VL HMP MP C25 AK AR

FS MS VP1

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

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	CN2500	CC1500	CC2500	NC3215P	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
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	VL	CNMG	120404-VL	●	●										●												0.05~0.25	0.10~1.00
			120408-VL	●	●					●	●				●												0.10~0.35	0.20~1.50
			120412-VL							●																	0.10~0.35	0.20~1.50
Medium to finishing	LP new	CNMG	090304-LP																								0.07~0.30	0.30~1.50
			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	CP new	CNMG	090304-CP																								0.08~0.30	0.40~3.00
			090308-CP																								0.10~0.30	0.40~3.00
			090404-CP																								0.08~0.30	0.40~3.00
			090408-CP																								0.10~0.30	0.40~3.00
			120404-CP					●	●																		0.10~0.35	0.50~3.50
			120408-CP					●	●																		0.12~0.35	0.50~3.50
			120412-CP					●	●																		0.13~0.35	0.80~3.50
			160608-CP					●	●																		0.15~0.40	0.80~4.50
			160612-CP					●	●																		0.18~0.40	1.00~4.50
Medium to finishing	VC	CNMG	120404-VC							●	●				●												0.10~0.35	0.30~2.00
			120408-VC							●	●				●												0.15~0.40	0.50~3.00
			120412-VC							●	●																0.15~0.45	0.50~3.00

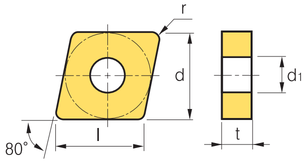
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

CN○○

Rhombic 80° Negative

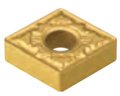


Size	d	t	d₁
Dimensions (mm)			
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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 CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Medium cutting HM	CNMG **090304-HM**																								0.12~0.40	0.50~3.80
	090308-HM																								0.15~0.40	0.80~3.80
	120404-HM						●	●	●													●			0.05~0.30	0.90~5.00
	120408-HM						●	●	●								●					●			0.10~0.50	1.00~5.00
	120412-HM					●																●			0.18~0.50	1.00~5.00
	190612-HM							●																	0.13~0.60	1.30~7.00
Medium cutting MP (new)	CNMG **090304-MP**					●	●				●				●										0.10~0.40	0.40~3.80
	090308-MP					●	●				●				●										0.15~0.40	0.50~4.00
	090312-MP																								0.15~0.50	0.80~4.20
	090404-MP																								0.10~0.40	0.40~3.80
	090408-MP																								0.15~0.40	0.50~4.00
	090412-MP																								0.15~0.50	0.80~4.20
	120404-MP					●	●				●	●		●	●	●			●	●	●				0.10~0.40	0.40~4.00
	120408-MP					●	●		●		●	●		●	●	●			●	●	●				0.15~0.45	0.50~4.50
	120412-MP					●	●				●			●	●	●			●	●					0.15~0.50	0.80~5.00
	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
Medium cutting 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



Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

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

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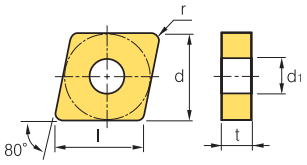
Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

Workpiece			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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing	B25	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
Medium to finishing	VQ [Cermet]	CNMG	090304-VQ																								0.05~0.30	0.50~3.50
			090308-VQ																								0.08~0.30	0.80~4.00
			090408-VQ										●														0.05~0.30	0.50~3.50
			090412-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 cutting	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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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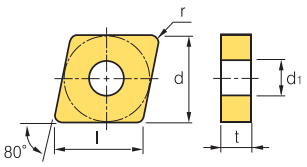
Rhombic 80° Negative

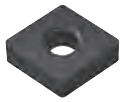


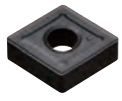
Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	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
Roughing	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	CNMG 120404-VR																								0.20~0.50	1.00~6.50
	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
	120508-VR																								0.25~0.55	1.20~7.00
	120512-VR																								0.30~0.60	1.50~7.00
	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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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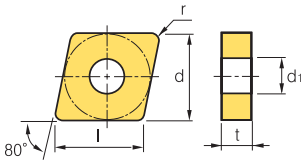
Rhombic 80° Negative



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		
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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	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
			090404-MM																								0.08~0.35	0.50~5.00
			090408-MM																								0.10~0.40	0.50~5.00
			090412-MM																								0.12~0.45	0.50~5.00
			120404-MM														●	●	●			●	●	●			0.10~0.40	0.50~5.50
			120408-MM													●	●	●	●			●	●	●			0.12~0.45	0.50~5.50
			120412-MM													●	●	●	●			●	●	●			0.15~0.60	0.50~5.50
			120416-MM														●	●	●				●				0.20~0.65	0.50~5.50
			160608-MM														●	●	●				●				0.12~0.45	0.50~7.00
			160612-MM														●	●	●				●	●			0.15~0.60	0.50~7.00
			160616-MM														●	●	●				●	●			0.18~0.65	0.50~7.00
			190608-MM														●	●	●				●				0.12~0.45	0.50~8.50
			190612-MM														●	●	●			●	●	●			0.15~0.60	0.50~8.50
			190616-MM														●	●	●				●	●			0.18~0.65	0.50~8.50
Roughing	RM	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	4.00~14.00
Finishing	VP1	CNMG	120404-VP1																		●	●			●		0.05~0.15	0.10~1.50
			120408-VP1																		●	●			●		0.07~0.20	0.10~1.50
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

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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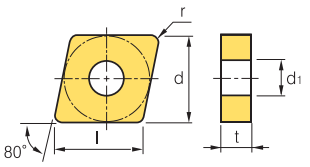
Rhombic 80° Negative



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

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01	H05	fn (mm/rev)	ap (mm)
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
		160608-VP2																								0.12~0.45	0.80~5.00
		190608-VP2																								0.12~0.50	1.00~5.20
		190612-VP2																								0.15~0.50	1.20~5.50
		190616-VP2																								0.18~0.50	1.50~5.50
Medium cutting	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
		120416-VP3																								0.25~0.45	1.00~4.00
		160608-VP3																								0.15~0.35	0.80~6.00
		160612-VP3																								0.20~0.40	1.00~6.00
		160616-VP3																								0.20~0.40	1.00~6.00
		190608-VP3																								0.20~0.50	1.00~7.00
		190612-VP3																								0.25~0.55	1.00~8.00
		190616-VP3																								0.30~0.60	1.00~8.00
Medium cutting	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	VP4 new	CNMG 120408-VP4																			●	●				0.15~0.35	1.00~4.00
		120412-VP4																			●	●				0.20~0.40	1.00~4.00
		160608-VP4																								0.20~0.45	1.00~6.50
		160612-VP4																								0.25~0.50	1.50~6.50
		190608-VP4																			●	●				0.15~0.45	1.00~8.00
		190612-VP4																			●	●				0.20~0.50	1.20~8.50
Medium to finishing	HA	CNMG 120404-HA																					●	●		0.05~0.20	0.80~3.50
		120408-HA																		●			●	●		0.10~0.40	0.80~3.50
		120412-HA																					●			0.13~0.55	0.80~3.50
Finishing	VW [Wiper]	CNMG 120404-VW																								0.10~0.30	0.50~3.00
		120408-VW					●																			0.15~0.50	0.50~4.00
		120412-VW																								0.20~0.55	1.00~4.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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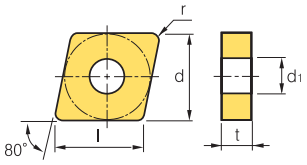
Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d_1
12	12.7	4.76	5.16
16	15.875	4.76~6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

Workpiece			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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	LW	CNMG	120408-LW					●	●				●				●										0.15~0.60	1.00~5.00
	[Wiper]		120412-LW					●	●								●										0.20~0.70	1.00~6.00
Medium cutting	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
Heavy	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	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
	[High feed cutting]		250924-VT					●																			0.75~16.0	7.00~17.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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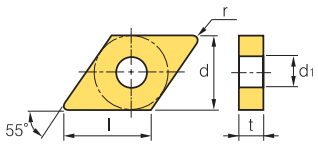
Rhombic 55° Negative



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

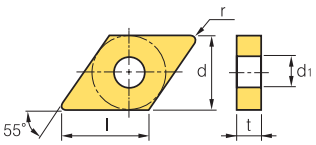
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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

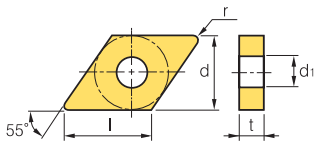
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

DN○○

Rhombic 55° Negative



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

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

Machining types
● Continuous cutting
◗ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet		Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	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 to roughing	B25	DNMG	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
			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
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
Medium to finishing	VQ [Cermet]	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
			110508-VQ										●													0.08~0.40	0.80~4.00
			110512-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

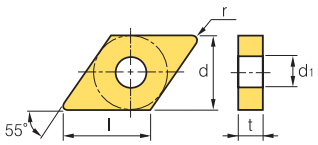
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

DN○○

Rhombic 55° Negative



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

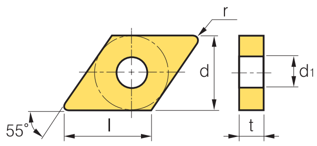
Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	MK new	DNMG	150404-MK												●											0.05~0.30	0.90~5.00
			150408-MK												●											0.10~0.50	1.00~5.00
			150412-MK																							0.13~0.60	1.30~5.00
			150604-MK											●	●											0.05~0.30	0.90~5.00
			150608-MK											●	●											0.10~0.50	1.00~5.00
			150612-MK												●											0.13~0.60	1.30~5.00
Roughing		DNMA	110408																							0.17~0.45	0.80~3.00
			150404																							0.17~0.55	0.40~4.00
			150408																							0.25~0.55	0.80~4.00
			150412												●											0.25~0.65	0.50~4.00
			150604																							0.17~0.55	0.40~4.00
			150608												●											0.25~0.55	0.80~4.00
			150612												●											0.25~0.65	1.20~4.00
			190608																							0.30~0.80	2.50~13.00
Roughing	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
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 cutting	MM new	DNMG	110404-MM																					●		0.08~0.35	0.50~5.00
			110408-MM														●	●						●		0.10~0.40	0.50~5.00
			110412-MM																							0.12~0.45	0.50~5.00
			110504-MM																							0.08~0.35	0.50~5.00
			110508-MM																							0.10~0.40	0.50~5.00
			110512-MM																							0.12~0.45	0.50~5.00
			150404-MM														●	●	●				●	●		0.10~0.40	0.50~6.40
			150408-MM													●	●	●	●			●	●	●		0.12~0.45	0.50~6.40
			150412-MM													●	●	●	●							0.15~0.60	0.50~6.40
			150416-MM																							0.15~0.60	0.50~6.00
			150604-MM														●	●	●				●	●		0.10~0.40	0.50~6.40
			150608-MM													●	●	●	●			●	●	●		0.12~0.45	0.50~6.40
			150612-MM													●	●	●	●				●	●		0.15~0.60	0.50~6.40
			150616-MM																							0.18~0.65	0.50~8.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

DN○○

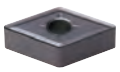
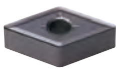
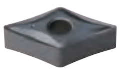
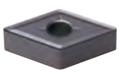


Dimensions (mm)			
Size	d	t	d1
15	12.7	4.76~6.35	5.16

Rhombic 55° Negative

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

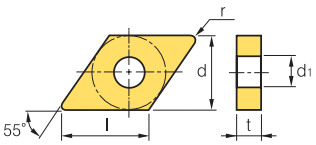
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

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

DN○○

Rhombic 55° Negative



Dimensions (mm)			
Size	d	t	d_1
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

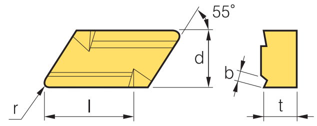
Inserts		Designation		Cermet		Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	VP4 new	DNMG	150408-VP4																						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
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
Finishing	VW [Wiper]	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 cutting	LW [Wiper]	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
Medium to finishing	SR new [Shaft]	DNMX	150404R-SR																								0.10~0.40	0.70~4.50
			150408R-SR																								0.12~0.45	1.00~4.50
			150604R-SR																								0.10~0.40	0.70~4.50
			150608R-SR																								0.12~0.45	1.00~4.50
			150404L-SR																								0.10~0.40	0.70~4.50
			150408L-SR																								0.12~0.45	1.00~4.50
			150604L-SR																								0.10~0.40	0.70~4.50
			150608L-SR																								0.12~0.45	1.00~4.50
Medium cutting	SH [Wiper]	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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

KN○○



Dimensions (mm)		
Size	d	t
16	9.525	4.76

Parallelogram 55° Negative

Workpiece			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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																		●	◆	◆		●	◆

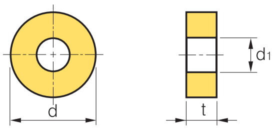
Machining types
- ● Continuous cutting
- ◆ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet		Coated		Coated																	Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	11 	KNUX	160405R-11					●	●	●	●		●		●									●			0.20~0.35	1.00~6.00
			160410R-11					●	●		●		●														0.30~0.60	1.50~6.00
			160405L-11					●	●	●	●		●														0.20~0.35	1.00~6.00
			160410L-11					●	●		●		●														0.30~0.60	1.50~6.00
Roughing	12 	KNUX	160405R-12					●	●		●		●														0.25~0.35	1.50~6.00
			160410R-12					●	●		●		●														0.40~0.70	1.50~6.00
			160405L-12																								0.25~0.35	1.50~6.00
			160410L-12								●																0.40~0.70	1.50~6.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35** ●: Stock item

Available tool holders			
Designation	Page	Designation	Page
CKJNR/L	B181	CKUNR/L	B212
CKNNR/L	B181		

RN○○



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	6.35~9.52	9.12
31	31.75	9.52	12.7

Round Negative

Workpiece			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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																		●	◆	◆		●	◆

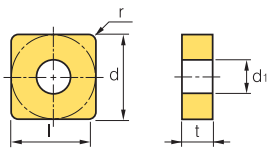
Machining types
- ● Continuous cutting
- ◆ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet		Coated		Coated																	Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
General	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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35** ●: Stock item

SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.18	3.81
12	12.7	4.76	5.16

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

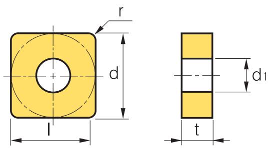
Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215P	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VB	SNMG	120404-VB	●		●	●			●	●																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	VL	SNMG	120408-VL																			●					0.10~0.35	0.20~1.50
Medium to finishing	LP	SNMG	090308-LP																								0.10~0.30	0.30~1.50
			090408-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	CP	SNMG	090304-CP																								0.08~0.30	0.40~3.00
			090308-CP																								0.10~0.30	0.40~3.00
			090404-CP																								0.08~0.30	0.40~3.00
			090408-CP																								0.10~0.30	0.40~3.00
			120404-CP					●	●																		0.10~0.35	0.50~3.50
			120408-CP					●	●																		0.12~0.35	0.50~3.50
			120412-CP					●	●																		0.13~0.35	0.80~3.50
Medium to finishing	VC	SNMG	120408-VC								●				●												0.15~0.40	0.50~3.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

SN○○



Size	d	t	d_1
Dimensions (mm)			
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

Square 90° Negative

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

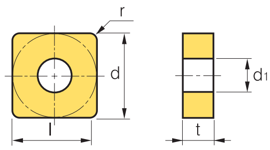
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

Available tool holders

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

SN○○



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	6.35	7.93
25	25.4	7.94~9.52	9.12

Square **90° Negative**

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Medium to roughing – B25	SNMG 090308-B25																								0.17~0.45	0.80~3.50
	120404-B25	●	●			●	●		●		●														0.17~0.45	1.00~3.50
	120408-B25	●	●			●	●		●		●						●	●				●			0.23~0.60	1.50~5.00
	120412-B25		●			●	●		●		●														0.25~0.60	2.00~5.00
	120416-B25					●	●		●		●														0.35~0.70	2.50~5.00
	120420-B25																								0.40~0.70	3.00~5.00
	150608-B25								●																0.25~0.60	1.50~6.00
	150612-B25																								0.25~0.60	2.00~6.00
	150616-B25						●																		0.35~0.70	2.00~6.00
	190608-B25					●	●		●																0.25~0.60	3.00~8.00
	190612-B25					●	●		●		●														0.30~0.60	3.00~8.00
	190616-B25					●	●		●											●					0.35~0.70	3.00~8.00
	250716-B25																								0.35~0.70	4.00~12.00
	250724-B25					●					●														0.50 ~1.00	5.00~12.00
	250924-B25					●																			0.50~1.00	5.00~12.00
Roughing – GR	SNMG 120404-GR																								0.15~0.45	0.08~6.00
	120408-GR								●		●	●	●												0.20~0.50	1.00~7.00
	120412-GR								●				●												0.20~0.50	1.00~7.00
	150608-GR								●																0.25~0.60	1.00~7.00
	150612-GR					●	●	●	●																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
	190624-GR																								0.35~0.82	2.00~12.50
	250724-GR								●																0.45~1.20	2.60~14.00
	250924-GR							●	●																0.50~1.20	2.60~14.00
Medium to finishing – VQ [Cermet]	SNMG 090304-VQ																								0.05~0.30	0.50~3.50
	090408-VQ										●														0.08~0.30	0.80~4.00
	090412-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

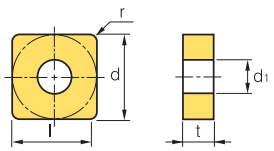
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

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

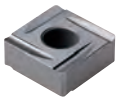
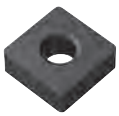
SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.18	3.81
12	12.7	3.18~4.76	5.16
15	15.875	4.76~6.35	6.35
19	19.05	4.76~6.35	7.93
25	25.4	6.35~9.52	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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting		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 cutting	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
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
			120420																							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

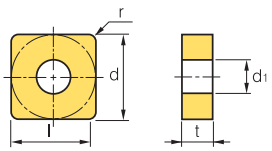
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

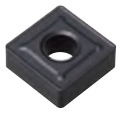
SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.18	3.81
12	12.7	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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing		SNGA	090304																								0.17~0.50	0.50~4.50
			090308																								0.17~0.50	0.50~4.50
			120404																								0.15~0.60	1.50~8.00
			120408																								0.15~0.60	1.50~8.00
			120412																								0.20~0.80	1.50~8.00
			150608																								0.20~0.80	2.00~10.00
			150616																								0.20~0.90	2.00~10.00
			190608																								0.15~0.60	3.00~12.00
			190612																								0.20~0.80	3.00~12.00
Roughing	RK new 	SNMG	120404-RK																								0.15~0.50	1.20~6.00
			120408-RK											●	●												0.23~0.53	1.50~6.00
			120412-RK											●	●												0.28~0.53	1.80~6.00
			120416-RK												●												0.28~0.53	2.00~6.00
			150612-RK																								0.20~0.70	1.80~7.00
			150616-RK																								0.23~0.70	2.00~7.50
			190612-RK																								0.33~0.78	2.50~10.00
			190616-RK																								0.35~0.78	2.70~10.00
Roughing	VR 	SNMG	120408-VR																								0.25~0.55	1.20~7.00
			120412-VR																								0.30~0.60	1.50~7.00
			120416-VR																								0.35~0.60	2.00~7.00
			190612-VR					●	●																		0.35~0.70	2.00~10.00
			190616-VR					●	●																		0.35~0.75	2.20~10.00
Medium cutting	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
			090404-MM																								0.08~0.35	0.50~5.00
			090408-MM																								0.10~0.40	0.50~5.00
			120404-MM													●	●	●	●				●	●			0.10~0.40	0.50~6.40
			120408-MM													●	●	●	●			●	●	●			0.12~0.45	0.50~6.40
			120412-MM														●	●	●				●	●			0.15~0.60	0.50~6.40
			120416-MM																								0.18~0.65	0.50~6.40
			150608-MM																								0.12~0.45	0.50~8.00
			150612-MM														●	●	●				●	●			0.15~0.60	0.50~8.00
			150616-MM														●	●									0.18~0.65	0.50~8.00
			190608-MM														●	●	●				●				0.12~0.45	0.50~9.50
			190612-MM														●	●	●				●	●			0.15~0.60	0.50~9.50
			190616-MM														●	●						●			0.18~0.65	0.50~9.50
			250924-MM															●									0.20~0.80	1.00~10.00

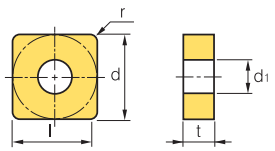
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d_1
12	12.7	4.76	5.16
15	15.875	6.35	6.35
16	9.525	3.18~4.76	3.81
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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Roughing	RM	SNMG 120404-RM												●	●	●	●				●					0.10~0.50	2.00~6.00
		SNMG 120408-RM												●	●	●	●			●	●		●			0.15~0.55	2.00~6.00
		SNMG 120412-RM													●	●	●				●					0.20~0.60	2.00~6.00
		SNMG 120416-RM																								0.25~0.70	2.00~6.00
		SNMG 150608-RM																								0.20~0.60	0.20~6.00
		SNMG 150612-RM													●	●	●				●					0.20~0.60	2.00~8.00
		SNMG 150616-RM																								0.25~0.70	2.00~8.00
		SNMG 190608-RM													●	●	●				●					0.20~0.60	2.00~10.00
		SNMG 190612-RM													●	●	●				●					0.20~0.60	2.00~10.00
		SNMG 190616-RM													●	●										0.27~0.70	2.00~10.00
		SNMG 190624-RM																								0.30~0.75	3.00~10.00
		SNMG 250924-RM																								0.40~1.20	4.00~14.00
Medium to finishing	VP2	SNMG 120404-VP2															●	●	●	●	●			●		0.05~0.35	0.10~3.00
		SNMG 120408-VP2						●									●	●	●	●	●			●		0.10~0.45	0.50~4.50
		SNMG 120412-VP2															●	●	●	●	●			●		0.10~0.50	0.50~5.00
Medium cutting	VP3	SNMG 120404-VP3															●	●	●	●	●			●	●	0.05~0.30	0.10~3.00
		SNMG 120408-VP3															●	●	●	●	●			●	●	0.10~0.45	1.00~5.00
		SNMG 120412-VP3															●	●	●	●	●				●	0.12~0.50	1.00~5.00
		SNMG 120416-VP3																								0.25~0.45	0.50~4.00
		SNMG 160608-VP3																								0.15~0.35	0.80~6.00
		SNMG 160612-VP3																								0.20~0.40	1.00~6.00
		SNMG 160616-VP3																								0.20~0.40	1.00~6.00
		SNMG 190608-VP3																								0.15~0.35	0.80~7.00
		SNMG 190612-VP3																								0.20~0.40	1.00~7.00
		SNMG 190616-VP3																								0.25~0.45	1.00~7.00
Medium cutting	VP3	SNGG 120404-VP3																	●	●				●		0.05~0.30	0.10~3.00
		SNGG 120408-VP3																	●	●	●			●		0.10~0.45	1.00~5.00
		SNGG 120412-VP3																	●	●	●					0.12~0.50	1.00~5.00
Roughing	VP4	SNMG 120408-VP4																			●	●				0.15~0.35	1.00~4.00
		SNMG 120412-VP4																			●	●				0.20~0.40	1.00~4.00
		SNMG 150612-VP4																			●	●				0.20~0.45	1.00~5.00
		SNMG 190608-VP4																			●					0.20~0.50	1.00~9.00
		SNMG 190612-VP4																			●	●				0.23~0.55	1.00~9.00
		SNMG 190616-VP4																				●				0.27~0.60	1.00~9.00

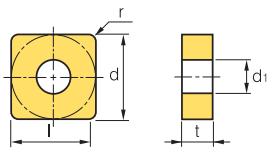
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

SN○○

○ Square 90° Negative



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

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

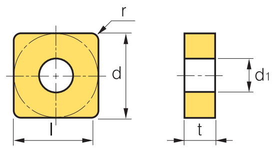
Inserts	Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	HA	SNMG 120404-HA																					●	●		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
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 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
Medium cutting		SNMX 120408R																								0.15~0.35	1.00~4.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

SN○○

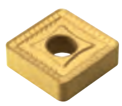


Dimensions (mm)			
Size	d	t	d1
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

Square **90° Negative**

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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 CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	H05	Cutting Condition fn (mm/rev)	ap (mm)
Medium cutting		SNGX	120408R																								0.15~0.35	1.00~4.00
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
Heavy	VH  [General]	SNMM	190612-VH					●																			0.50~0.90	5.00~10.00
			190616-VH					●																			0.50~1.10	5.00~10.00
			190624-VH					●																			0.60~1.20	6.00~12.00
			250716-VH																								0.70~1.50	6.00~14.00
			250724-VH					●			●																0.70~1.40	6.00~15.00
			250920-VH																								0.70~1.40	6.00~15.00
			250924-VH					●																			0.70~1.40	6.00~15.00
Heavy	VT  [High feed cutting]	SNMM	190612-VT					●					●														0.60~1.00	6.00~13.00
			190616-VT					●			●																0.60~1.10	6.00~13.00
			190624-VT					●																			0.60~1.60	7.00~13.00
			250716-VT																								0.75~1.60	7.00~15.00
			250724-VT					●			●																0.75~1.60	7.00~15.00
			250920-VT																								0.75~1.60	7.00~15.00
			250924-VT					●			●																0.75~1.60	7.00~17.00

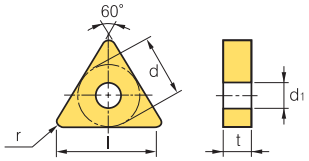
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

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

TN○○

Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d_1
11	6.35	3.18	2.40
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16

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	● ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌

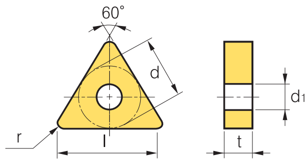
Inserts		Designation		Cermet		Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215P	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VB	TNMG	160404-VB	●	●	●	●			●	●																0.10~0.35	0.30~1.50
			160408-VB	●	●	●	●			●	●				●												0.15~0.45	0.50~7.00
			160412-VB							●	●																0.18~0.45	0.80~3.00
			220408-VB								●				●												0.15~0.45	0.50~2.50
			220412-VB																								0.20~0.50	0.70~2.50
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
Medium to finishing	LP new	TNMG	110304-LP																								0.07~0.30	0.30~1.50
			110308-LP																								0.10~0.30	0.30~1.50
			160404-LP							●	●				●												0.10~0.35	0.30~2.00
			160408-LP							●	●				●												0.10~0.40	0.50~2.50
			160412-LP							●	●																0.13~0.45	0.80~3.00
Medium to finishing	CP new	TNMG	110304-CP																								0.08~0.26	0.40~2.50
			110308-CP																								0.10~0.26	0.40~2.50
			160404-CP					●	●																		0.10~0.30	0.50~3.00
			160408-CP					●	●																		0.12~0.30	0.50~3.00
			160412-CP					●	●																		0.13~0.30	0.80~3.00
			220408-CP					●	●																		0.15~0.35	0.80~4.00
			220412-CP					●	●																		0.18~0.35	1.00~4.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TN○○



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

Triangular 60° Negative

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing – 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 cutting – HM 	TNMG 110308-HM							●																	0.17~0.40	1.50~3.00
	160404-HM						●	●	●								●					●			0.05~0.30	0.90~4.00
	160408-HM					●	●	●	●													●			0.10~0.50	1.00~4.00
	160412-HM																					●			0.13~0.60	1.30~4.00
	220404-HM						●																		0.15~0.45	0.60~5.00
	220408-HM						●	●	●																0.18~0.48	0.80~5.80
Medium cutting – MP (new) 	TNMG 110308-MP					●	●																		0.15~0.42	0.50~3.50
	160404-MP					●	●				●	●		●	●	●			●	●					0.10~0.40	0.40~3.50
	160408-MP					●	●				●			●	●	●			●	●					0.15~0.45	0.50~4.00
	160412-MP					●	●				●			●	●	●			●	●					0.15~0.50	0.80~4.50
	160416-MP																								0.18~0.50	1.00~4.50
	220404-MP					●	●				●			●	●	●									0.10~0.35	0.40~5.00
	220408-MP					●	●				●			●	●	●									0.15~0.45	0.50~5.50
	220412-MP					●	●				●			●	●	●									0.15~0.50	0.80~6.00
	220416-MP					●	●				●														0.20~0.55	1.00~6.00
	270612-MP																								0.28~0.60	1.20~8.00
Medium cutting – 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

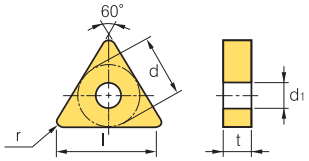
Cutting edge geometry A52~A61 Recommended chip breaker B04~B14 Code system B34~B35

● : Stock item

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

TN○○

△ Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d_1
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	9.52	7.93

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing	B25	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
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
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 to finishing	VQ [Cermet]	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

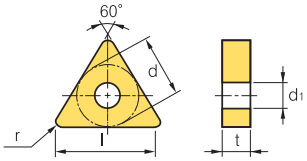
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TN○○

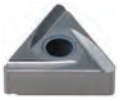
Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d_1
11	6.35	3.18	2.40
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	9.52	7.93

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

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

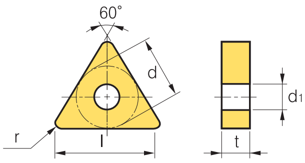
Inserts		Designation		Cermet		Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting		TNGG	110304R																						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 cutting	MK new 	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
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

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TN○○

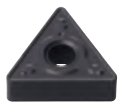


Dimensions (mm)			
Size	d	t	d1
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

Triangular **60° Negative**

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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

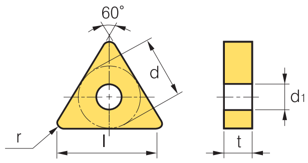
Inserts	Designation	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Roughing 	TNGA **110302**																								0.05~0.30	0.20~3.00
	110304																								0.05~0.30	0.40~3.00
	160304																								0.10~0.35	0.40~4.00
	160402																								0.10~0.30	0.20~4.00
	160404																								0.10~0.35	0.40~5.00
	160408																								0.12~0.40	0.50~5.00
	220304																								0.10~0.35	0.50~5.00
	220402																								0.05~0.30	0.20~3.00
	220404																								0.10~0.35	0.40~5.00
	220408																								0.10~0.40	0.50~5.00
	220412																								0.12~0.45	1.00~5.50
	270612																								0.12~0.45	1.00~7.00
	270624																								0.20~0.55	2.00~7.00
Roughing 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 VR 	TNMG **160404-VR**																								0.20~0.50	0.80~7.00
	160408-VR																								0.25~0.55	1.20~7.00
	160412-VR																								0.35~0.65	1.70~7.00
	160416-VR																								0.35~0.70	2.00~10.0
	220408-VR																								0.35~0.70	2.00~10.0
	220412-VR																								0.35~0.70	2.00~10.0
	220416-VR																								0.35~0.75	2.20~10.0
Medium cutting MM new 	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
	220416-MM																								0.18~0.65	0.50~6.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TN○○



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

Triangular **60° Negative**

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01	H05
Steel	P	●	✱	●	◒	●	◒	◒	✱	✱	✱	●	◒		✱									
Stainless steel	M								◒	◒	◒		●	◒	✱	◒	✱	●	◒	◒	◒	✱		
Cast iron	K	●	✱	●	◒	◒					◒	◒											●	◒
Non-ferrous metal	N																						●	◒
Heat resistant alloy, Titanium alloy	S										●			●	●	◒	✱	●	◒	◒	◒		●	◒
Hardened steel	H																	●	◒	◒			●	◒

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

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

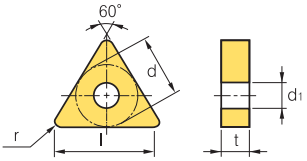
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

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

TN○○

Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d_1
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

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 CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Finishing	VW [Wiper]	TNMG	160404-VW																								0.10~0.35	0.30~3.00
			160408-VW																								0.10~0.40	0.30~3.00
Medium cutting	LW [Wiper]	TNMG	160408-LW																								0.15~0.50	0.70~4.50
			160412-LW																								0.20~0.60	1.00~5.00
Medium cutting		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
Medium to finishing	SR [Shaft]	TNMX	160404R-SR																								0.10~0.35	0.70~3.50
			160408R-SR																								0.12~0.40	1.00~3.50
			160404L-SR																								0.10~0.35	0.70~3.50
			160408L-SR																								0.12~0.40	1.00~3.50
Medium cutting	SH [Shaft]	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

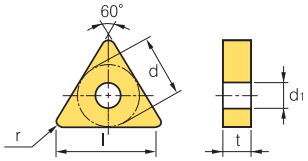
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TN○○

Triangular 60° Negative



Dimensions (mm)			
Size	d	t	d_1
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	

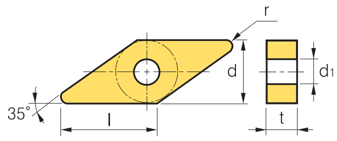
Inserts		Designation		Cermet		Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing		TNMX	160402R		●																					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
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

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

VN○○



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

Rhombic 35° Negative

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

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215P	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	✱	●	◆	●	◆	●	◆	◆	✱	✱	✱	●	●	◆		✱						
Stainless steel	M										◆	◆	◆			●	◆	✱	●	◆	◆	✱		
Cast iron	K	●	✱	●	◆	◆		◆					◆	◆	◆								●	◆
Non-ferrous metal	N																						●	◆
Heat resistant alloy, Titanium alloy	S												●				●	●	●	◆	◆		●	◆
Hardened steel	H																		●	◆	◆		●	◆

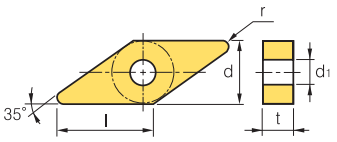
Inserts	Designation	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215P (Coated)	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Finishing VB 	VNMG 160404-VB	●	●	●	●			●	●				●												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 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 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 CP new 	VNMG 160404-CP					●	●																		0.10~0.35	0.5~3.0
	160408-CP					●	●																		0.12~0.30	0.5~3.0
	160412-CP					●	●																		0.13~0.30	0.8~3.0
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
Medium cutting HM 	VNMG 160404-HM									●	●											●			0.13~0.40	0.80~3.80
	160408-HM								●	●	●											●			0.20~0.45	0.80~4.50
	160412-HM								●																0.10~0.60	1.00~4.00
Medium cutting 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
	160416-MP																								0.18~0.50	1.00~4.50

Cutting edge geometry A52~A61 Recommended chip breaker B04~B14 Code system B34~B35 ●: Stock item

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

VN○○

Rhombic 35° Negative



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

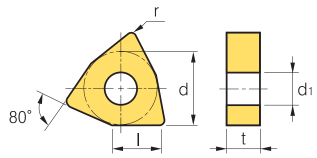
Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	VM	VNMG	160404-VM	●							●		●						●	●							0.08~0.45	0.50~3.50
			160408-VM	●					●	●	●		●						●	●		●		●			0.10~0.50	1.00~4.00
			160412-VM																								0.20~0.50	1.50~4.00
			220404-VM																								0.08~0.45	1.00~5.00
			220408-VM																								0.10~0.50	1.50~5.00
Medium to finishing	VQ [Cermet]	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 cutting	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 cutting	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 cutting	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 cutting	VP3	VNMG	160404-VP3																●	●	●	●	●			●	0.05~0.30	0.10~3.00
			160408-VP3																●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
			160412-VP3																								0.20~0.40	0.50~3.50
Medium cutting	VP3	VNGG	160404-VP3																		●	●	●		●		0.05~0.30	0.10~3.00
			160408-VP3																								0.10~0.45	0.50~5.00
Medium to finishing	HA	VNGG	160408-HA																			●					0.10~0.40	0.80~3.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

WN○○



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

Trigon 80° Negative

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215P	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	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

Application	Inserts	Designation	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215P (Coated)	NC3225P (Coated)	NC3215 (Coated)	NC3225 (Coated)	NC3120 (Coated)	NC3030 (Coated)	NC3235 (Coated)	NC5330 (Coated)	NC6310 (Coated)	NC6315 (Coated)	NC9115 (Coated)	NC9125 (Coated)	NC9135 (Coated)	PC8105 (Coated)	PC8110 (Coated)	PC8115 (Coated)	PC9030 (Coated)	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
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	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
Medium to finishing	LP new 	WNMG 06T308-LP																								0.07~0.30	0.30~1.50
		060404-LP																								0.07~0.30	0.30~1.50
		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	CP new 	WNMG 060404-CP																								0.08~0.30	0.40~3.00
		060408-CP																								0.10~0.30	0.40~3.00
		080404-CP					●	●																		0.10~0.35	0.50~3.50
		080408-CP					●	●																		0.12~0.35	0.50~3.50
		080412-CP					●	●																		0.13~0.35	0.80~3.50
		080416-CP					●	●																		0.14~0.35	0.80~3.50
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

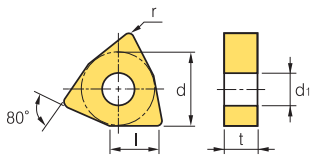
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B189	**WWLNR/L**	B180
PWLNR/L	B211		

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

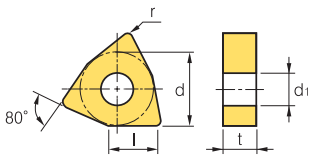
Inserts	Designation	Cermet CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	Coated NC3225	Coated NC3120	Coated NC3030	Coated NC3235	Coated NC5330	Coated NC6310	Coated NC6315	Coated NC9115	Coated NC9125	Coated NC9135	Coated PC5300	Coated PC5400	Coated PC8105	Coated PC8110	Coated PC8115	Coated PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Medium cutting	HM																									
	WNMG 060404-HM												●												0.15~0.43	0.42~3.00
	060408-HM							●	●													●			0.10~0.50	1.00~4.00
	080404-HM							●	●													●			0.15~0.42	0.50~4.20
	080408-HM					●	●	●	●		●											●			0.10~0.50	1.00~5.00
	080412-HM																					●			0.10~0.50	1.00~5.00
Medium cutting	MP																									
	WNMG 06T304-MP																								0.10~0.40	0.40~2.80
	06T308-MP																								0.15~0.45	0.50~3.00
	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 cutting	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 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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B189	WWLNR/L	B180
PWLNR/L	B211		

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VQ [Cermet]	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 cutting	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
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
Roughing	RK new	WNMG 060408-RK																								0.10~0.40	1.00~3.50
		060412-RK																								0.23~0.40	1.50~5.00
		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	VR	WNMG 060408-VR																								0.20~0.40	1.00~6.00
		080404-VR																								0.20~0.50	0.80~7.00
		080408-VR																								0.25~0.55	1.20~7.00
		080412-VR																								0.30~0.60	1.50~7.00
		080416-VR																								0.40~0.60	1.50~4.00

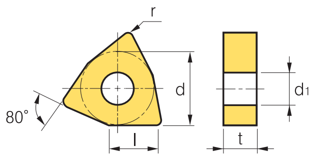
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B189	WWLNR/L	B180
PWLNR/L	B211		

WN○○

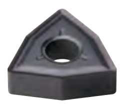
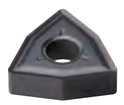
Trigon 80° Negative



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

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01	H05
Steel	P	●	✱	●	◆	●	◆	◆	✱	✱	✱	●	◆		✱									
Stainless steel	M								◆	◆	◆		●	◆	✱	◆	✱	●	◆	◆	◆	✱		
Cast iron	K	●	✱	●	◆	◆					◆	◆											●	◆
Non-ferrous metal	N																						●	◆
Heat resistant alloy, Titanium alloy	S										●			●	●	◆	✱	●	◆	◆	◆		●	◆
Hardened steel	H																	●	◆	◆			●	◆

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

Inserts	Designation	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Medium cutting – MM new 	WNMG **06T304-MM**																								0.08~0.35	0.50~4.00
	06T308-MM																								0.10~0.40	0.50~4.00
	06T312-MM																								0.12~0.45	0.50~4.00
	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
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
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 cutting – VP3 	WNMG **060408-VP3**																								0.06~0.38	0.40~3.50
	060412-VP3																								0.06~0.38	0.40~3.50
	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
	130612-VP3																								0.20~0.40	1.00~5.00
Medium cutting – VP3 	WNGG **080404-VP3**																								0.10~0.45	0.50~5.00
Roughing – VP4 new 	WNMG **080408-VP4**																			●	●				0.15~0.35	1.00~4.00
	080412-VP4																			●	●				0.20~0.40	1.00~4.00

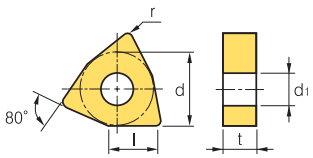
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B189	**WWLNR/L**	B180
PWLNR/L	B211		

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			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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	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
Finishing	VW [Wiper]	WNMG	060404-VW																								0.05~0.30	0.40~3.00
			060408-VW																								0.08~0.30	0.40~3.50
			080404-VW																								0.10~0.30	0.50~3.00
			080408-VW																								0.15~0.50	0.50~4.00
			080412-VW																								0.18~0.50	1.00~4.00
Medium cutting	LW [Wiper]	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 finishing	SR [Shaft] new	WNMX	080404R-SR																								0.10~0.35	0.70~3.00
			080408R-SR																								0.12~0.40	1.00~3.00
			080404L-SR																								0.10~0.35	0.70~3.00
			080408L-SR																								0.12~0.40	1.00~3.00
Medium cutting	SH [Shaft]	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
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

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B189	WWLNR/L	B180
PWLNR/L	B211		

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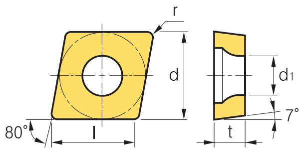


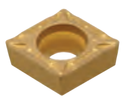
Dimensions (mm)			
Size	d	t	d_1
06	6.35	2.38	2.8
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Rhombic **80° Positive**

Relief Angle: 7°

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing(Mild steel)	FP new  [Mild steel]	CCMT 060202-FP		●			●																			0.01 - 0.10	0.05 - 0.08
		060204-FP	●	●	●	●	●	●								●					●					0.01 - 0.10	0.10 - 0.90
		09T302-FP		●			●																			0.01 - 0.10	0.05 - 1.00
		09T304-FP	●	●	●	●	●	●								●					●					0.01 - 0.10	0.10 - 1.00
		09T308-FP	●	●	●	●	●	●								●					●					0.04 - 0.12	0.10 - 1.00
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 060202-VL																								0.04~0.18	0.20~1.40
		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
		120404-VL																								0.06~0.12	0.30~1.50
		120408-VL																								0.08~0.15	0.30~1.50
		120412-VL																								0.08~0.15	0.30~1.50
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
Medium to finishing	MP new 	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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 190	**SCLCR/L**	B123, 190, 215, 225

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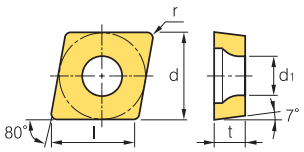
Rhombic 80° Positive
Relief Angle: 7°



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

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

Inserts		Designation		Cermet		Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	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
			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
Finishing	VP1	CCMT	060204-VP1																								0.06~0.12	0.10~1.50
			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
Finishing	FS new [High precision]	CCGT	060201-FS																●			●					0.01~0.18	0.03~1.60
			060202-FS																●			●					0.02~0.20	0.04~1.70
			060204-FS																●			●					0.04~0.21	0.06~1.80
			09T301-FS																●			●					0.01~0.20	0.04~1.80
			09T302-FS																●			●					0.02~0.23	0.05~2.00
			09T304-FS																●			●					0.04~0.23	0.08~2.00
			09T308-FS																●			●					0.06~0.25	0.10~2.20
Finishing	FS new [Utra high precision]	CCGT	060201MFN-FS																								0.01~0.18	0.03~1.60
			060202MFN-FS																								0.02~0.20	0.04~1.70
			060204MFN-FS																								0.04~0.21	0.06~1.80
			09T301MFN-FS																								0.01~0.20	0.04~1.80
			09T302MFN-FS																								0.02~0.23	0.05~2.00
			09T304MFN-FS																								0.04~0.23	0.08~2.00
			09T308MFN-FS																								0.06~0.25	0.10~2.20
Medium cutting	MS new [High precision]	CCGT	09T301-MS																●			●					0.02~0.23	0.05~2.00
			09T302-MS																●			●					0.03~0.25	0.07~2.50
			09T304-MS																●			●					0.05~0.25	0.09~2.50
Medium cutting	MS new [Utra high precision]	CCGT	09T301MFN-MS																●			●					0.02~0.23	0.05~2.00
			09T302MFN-MS																●			●					0.03~0.25	0.07~2.50
			09T304MFN-MS																●			●					0.05~0.25	0.09~2.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 190	SCLCR/L	B123, 190, 215, 225

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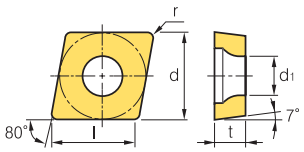
Rhombic 80° Positive
Relief Angle: 7°



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

*: The d and t are special dimensions.

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 CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	Coated NC3225	Coated NC3120	Coated NC3030	Coated NC3235	Coated NC5330	Coated NC6310	Coated NC6315	Coated NC9115	Coated NC9125	Coated NC9135	Coated PC5300	Coated PC5400	Coated PC8105	Coated PC8110	Coated PC8115	Coated PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Finishing	VP1 [High precision]	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	VP1 [Utra high precision]	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
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

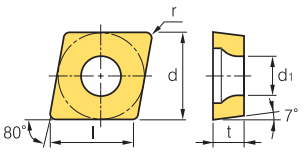
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 190	**SCLCR/L**	B123, 190, 215, 225

CC○○

Rhombic 80° Positive
Relief Angle: 7°



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

*: The d and t are special dimensions.

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 CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Finishing	KF [High precision]	*CCGT 0301003R-KF																●			●					0.01~0.05	0.10~0.30
		030101R-KF																●			●					0.01~0.05	0.10~0.30
		030102R-KF																●			●					0.01~0.05	0.10~0.30
		030104R-KF																●			●					0.01~0.05	0.10~0.30
		0401003R-KF																●			●					0.01~0.10	0.10~0.50
		040101R-KF																●			●					0.01~0.10	0.10~0.50
		040102R-KF																●			●					0.01~0.10	0.10~0.50
		040104R-KF																●			●					0.01~0.10	0.10~0.50
		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
		0301003L-KF																●			●					0.01~0.05	0.10~0.30
		030101L-KF																●			●					0.01~0.05	0.10~0.30
		030102L-KF																●			●					0.01~0.05	0.10~0.30
		030104L-KF																●			●					0.01~0.05	0.10~0.30
		0401003L-KF																●			●					0.01~0.10	0.10~0.50
		040101L-KF																●			●					0.01~0.10	0.10~0.50
		040102L-KF																●			●					0.01~0.10	0.10~0.50
		040104L-KF																●			●					0.01~0.10	0.10~0.50
		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	KF [Utra high precision]	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

Cutting edge geometry A52~A61 Recommended chip breaker B04~B14 Code system B34~B35

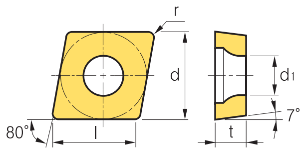
●: Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 190	SCLCR/L	B123, 190, 215, 225

CC○○

Rhombic 80° Positive

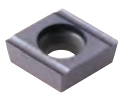
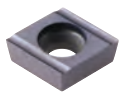
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d_1
06	6.35	2.38	2.8
09	9.525	3.97	4.4

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Medium to finishing	CCGT 0602003R-KM																●			●					0.01~0.06	0.04~1.30
KM	060201R-KM																●			●					0.02~0.08	0.05~1.50
	060202R-KM																●			●		●			0.03~0.11	0.06~1.70
[High precision]	060204R-KM																●			●					0.04~0.13	0.04~1.70
	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
	09T304R-KM																●			●					0.05~0.16	0.10~2.00
	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
	060204L-KM																●			●					0.04~0.13	0.04~1.70
	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
	09T304L-KM																●			●					0.05~0.16	0.10~2.00
Medium to finishing	CCET 0602005MFR-KM																●			●					0.01~0.06	0.04~1.30
KM	060201MFR-KM																●			●					0.02~0.08	0.05~1.50
	060202MFR-KM																●			●					0.03~0.11	0.06~1.70
[Utra high precision]	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 **A52~A61**   Recommended chip breaker **B04~B14**   Code system **B34~B35**

●: Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 190	SCLCR/L	B123, 190, 215, 225

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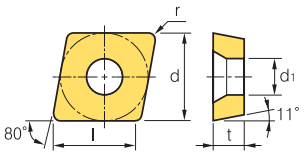
Rhombic 80° Positive
Relief Angle: 11°



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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	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 to finishing	HMP	CPGT	090308-HMP																								0.05~0.20	0.70~2.00
Medium cutting	C25	CPMT	060204-C25																								0.05~0.15	0.60~2.30
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

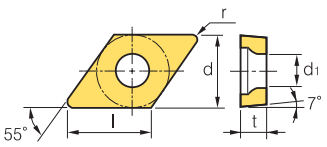
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders	
Designation	Page
SCLPR/L	B216

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		

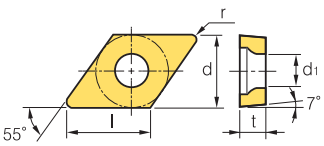
Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	FP new [Mild steel]	DCMT	070202-FP		●			●																			0.01~0.10	0.05~0.08
			070204-FP	●	●	●	●	●	●								●					●					0.01~0.10	0.10~0.90
			070208-FP																								0.01~0.10	0.10~1.00
			11T302-FP		●			●																			0.01~0.10	0.05~1.00
			11T304-FP	●	●	●	●	●	●								●					●					0.01~0.10	0.10~1.00
			11T308-FP	●	●	●	●	●	●								●					●					0.04~0.12	0.10~1.00
Finishing	VF	DCMT	070202-VF		●				●													●					0.03~0.10	0.06~1.00
			070204-VF		●				●										●			●					0.05~0.20	0.30~1.20
			11T302-VF	●					●																		0.04~0.15	0.08~1.50
			11T304-VF	●	●				●									●				●					0.05~0.20	0.30~1.50
			11T308-VF	●	●														●			●					0.10~0.25	0.30~1.50
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
			11T312-VL																								0.08~0.15	0.30~1.50
Medium to finishing	HMP	DCMT	070202-HMP								●													●			0.03~0.12	0.10~1.50
			070204-HMP							●	●		●						●			●		●			0.06~0.17	0.20~2.30
			070208-HMP							●	●											●		●			0.08~0.23	0.40~2.30
			11T302-HMP								●								●			●		●			0.04~0.22	0.10~2.00
			11T304-HMP		●				●	●	●		●						●			●		●			0.08~0.23	0.30~3.00
			11T308-HMP							●	●		●						●			●		●			0.10~0.30	0.50~3.00
Medium to finishing	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
			11T312-MP														●	●									0.25~0.35	0.80~3.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	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
Finishing	VP1	DCMT	070204-VP1																								0.05~0.12	0.10~1.50
			11T304-VP1																								0.06~0.20	0.10~1.50
			11T308-VP1																								0.08~0.23	0.10~1.50
Finishing	FS new [High precision]	DCGT	070201-FS																●			●					0.01~0.18	0.03~1.60
			070202-FS																●			●					0.02~0.20	0.04~1.70
			11T301-FS																●			●					0.01~0.20	0.04~1.80
			11T302-FS																●			●					0.02~0.23	0.05~2.00
			11T304-FS																●			●					0.04~0.23	0.08~2.00
			11T308-FS																●			●					0.06~0.25	0.10~2.20
Finishing	FS new [Utra high precision]	DCGT	070201MFN-FS																								0.01~0.18	0.03~1.60
			070202MFN-FS																								0.02~0.20	0.04~1.70
			11T301MFN-FS																								0.01~0.20	0.04~1.80
			11T302MFN-FS																								0.02~0.23	0.05~2.00
			11T304MFN-FS																								0.04~0.23	0.08~2.00
			11T308MFN-FS																								0.06~0.25	0.10~2.20
Medium cutting	MS new [High precision]	DCGT	11T301-MS																●			●					0.02~0.23	0.05~2.00
			11T302-MS																●			●					0.03~0.25	0.07~2.50
			11T304-MS																●			●					0.05~0.25	0.09~2.50
Medium cutting	MS new [Utra high precision]	DCGT	11T301MFN-MS																●			●					0.02~0.23	0.05~2.00
			11T302MFN-MS																●			●					0.03~0.25	0.07~2.50
			11T304MFN-MS																●			●					0.05~0.25	0.09~2.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

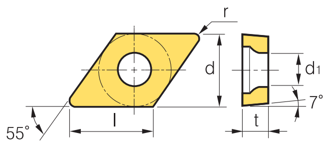
● : Stock item

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

DC○○

Rhombic 55° Positive

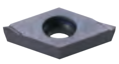
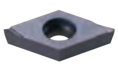
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d_1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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		CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Finishing – VP1 [High precision] 	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 – VP1 [Ultra high precision] 	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
Finishing – KF [High precision] 	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
		070204R-KF																●			●					0.04~0.13	0.04~1.70
		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
		11T304R-KF																●			●					0.05~0.16	0.10~2.00
		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
		070204L-KF																●			●					0.04~0.13	0.04~1.70
		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
		11T304L-KF																●			●					0.05~0.16	0.10~2.00
Finishing – KF [Ultra high precision] 	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

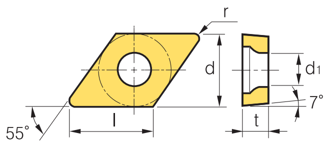
Cutting edge geometry A52~A61 | Recommended chip breaker B04~B14 | Code system B34~B35

●: Stock item

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

DC○○

Rhombic 55° Positive
Relief Angle: 7°

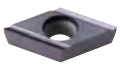


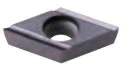
Dimensions (mm)			
Size	d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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 CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	ap (mm)
Medium to finishing, KM [High precision]	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
	070204R-KM																●								0.04~0.13	0.04~1.70
	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
	11T304R-KM																●			●					0.05~0.16	0.10~2.00
	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
	070204L-KM																●								0.04~0.13	0.04~1.70
	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
	11T304L-KM																●								0.05~0.16	0.10~2.00
Medium to finishing, KM [Utra high precision]	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



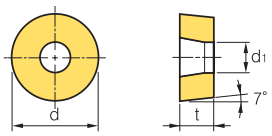


Cutting edge geometry **A52~A61**   Recommended chip breaker **B04~B14**   Code system **B34~B35**   ● : Stock item

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

RC○○

Round R° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d_1
08	8.0	3.18	3.35
10	10.0	3.97	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			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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting	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 cutting		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

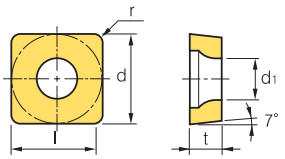
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
PRDCN	B174	**PRGCR/L**	B175

SC○○

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



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.97	4.4
12	12.0	4.76	4.2

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	FP new [Mild steel]	SCMT	09T304-FP		●			●																			0.01~0.10	0.10~1.00
			09T308-FP	●	●	●	●	●	●								●					●					0.04~0.12	0.10~1.00
Finishing	VF	SCMT	09T304-VF						●										●									0.05~0.20	0.30~1.50
Finishing	VL	SCMT	09T304-VL	●	●	●	●	●	●				●			●	●	●	●	●	●	●	●					0.05~0.10	0.10~1.00
			09T308-VL	●	●	●	●	●	●				●			●	●		●	●	●	●	●					0.08~0.15	0.10~1.00
Medium to finishing	HMP	SCMT	09T304-HMP							●	●								●					●					0.08~0.23	0.30~3.00
			09T308-HMP							●	●								●					●					0.10~0.30	0.50~3.00
			120404-HMP																									0.09~0.27	0.30~3.60
			120408-HMP								●								●					●					0.12~0.36	0.60~3.60
Medium to finishing	MP new	SCMT	09T304-MP					●	●				●		●	●	●	●	●		●	●							0.05~0.25	0.30~2.80
			09T308-MP					●	●				●		●	●	●	●	●		●	●							0.10~0.30	0.50~2.80
			120404-MP					●	●							●	●	●	●										0.10~0.30	0.50~2.80
			120408-MP					●	●						●	●	●	●	●		●	●							0.15~0.35	0.80~3.50
			120412-MP																									0.25~0.40	1.00~3.50
Medium to finishing	C25	SCMT	060204-C25								●																	0.08~0.25	0.40~2.50
			09T304-C25	●	●	●	●	●	●		●		●		●				●	●		●							0.08~0.25	0.60~3.00
			09T308-C25	●	●	●	●	●	●	●	●		●	●	●				●	●		●							0.10~0.30	1.00~3.00
			120404-C25	●	●	●	●	●	●				●		●				●	●		●		●					0.10~0.30	0.80~3.80
			120408-C25	●	●	●		●	●	●	●		●	●	●				●	●		●		●					0.12~0.38	1.20~3.80

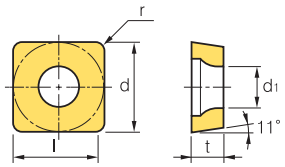
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B192	SSKCR/L	B193, 219
SSDCN	B192	SSSCR/L	B193, 245

SP○○

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



Dimensions (mm)			
Size	d	t	d1
09	9.525	3.18	3.4
12	12.7	4.76	-
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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VL	SPMT	09T304-VL																						0.04~0.18	0.20~1.40
			09T308-VL																						0.08~0.22	0.20~1.40
Finishing	VF	SPMT	090304-VF																						0.05~0.20	0.30~1.50
			090308-VF																						0.10~0.25	0.30~1.50
Finishing	F	SPMR	090304-F																						0.05~0.20	0.30~2.00
			120304-F						●		●														0.10~0.25	0.50~2.00
Finishing	F	SPGR	090304-F																						0.05~0.20	0.30~2.00
			120304-F																						0.10~0.25	0.50~2.00
Medium cutting	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 cutting	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		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

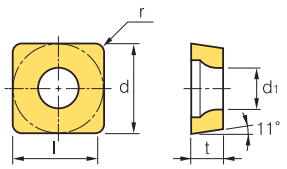
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CSDPN	B181	**SSKPR/L**	B219
CSKPR/L	B182		

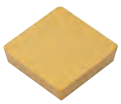
SP○○

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



Dimensions (mm)			
Size	d	t	d_1
06	6.35	2.38	2.8
07	6.35	2.38	2.8
09	9.525	3.18	3.4~4.4
12	12.7	3.18	-
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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		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
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
			* Note: 08T: corner C0,8 08T-Z: corner R0,8																								
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

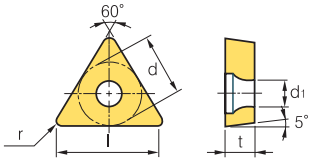
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CSDPN	B181	**SSKPR/L**	B219
CSKPR/L	B182		

TB○○

Triangular **60° Positive**
Relief Angle: 5°



Dimensions (mm)			
Size	d	t	d_1
06	3.97	1.59	2.16

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

Inserts		Designation	Cermet		Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VL	TBMT 060102-VL																								0.03~0.06	0.05~0.60
Finishing		TBGT 060102L																					●	●		0.05~0.20	0.10~1.30
		060104L																								0.08~0.20	0.10~1.30

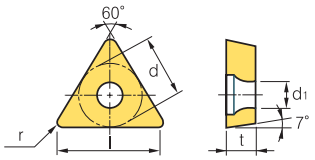
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

적용홀더	
Designation	Page
STUBR/L	B225

TC ○○

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



Dimensions (mm)			
Size	d	t	d1
06	6.35	2.38	2.8
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.523	3.97	4.4
22	12.7	4.76	-

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

Machining types
● Continuous cutting
⬌ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	Coated NC3225	Coated NC3120	Coated NC3030	Coated NC3235	Coated NC5330	Coated NC6310	Coated NC6315	Coated NC9115	Coated NC9125	Coated NC9135	Coated PC5300	Coated PC5400	Coated PC8105	Coated PC8110	Coated PC8115	Coated PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Finishing	FP new [Mild steel]	TCMT	060201-FP					●																			0.00~0.08	0.05~0.07
			110202-FP		●			●																			0.01~0.10	0.05~0.08
			110204-FP		●			●																			0.01~0.10	0.10~0.90
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	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
Medium to finishing	HMP	TCMT	090204-HMP							●														●			0.06~0.17	0.20~2.30
			090208-HMP																								0.08~0.23	0.40~2.30
			110202-HMP																								0.03~0.15	0.10~1.50
			110204-HMP		●				●	●	●		●						●			●		●			0.06~0.19	0.20~2.50
			110208-HMP								●								●					●			0.09~0.26	0.40~2.50
			16T304-HMP		●					●	●								●			●		●			0.08~0.23	0.30~3.00
			16T308-HMP							●	●		●						●					●			0.10~0.30	0.50~3.00
Medium to finishing	MP new	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	0.20~1.50
			110208-MP					●	●				●			●	●	●	●		●	●					0.10~0.28	0.25~2.00
			16T302-MP																								0.08~0.25	0.20~1.50
			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
			220408-MP																								0.20~0.40	0.50~3.50

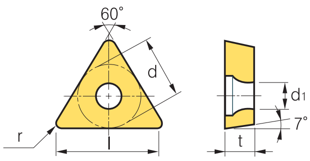
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B124, 193	STTCR/L	B194, 246
STFCR/L	B194, 245	STWCR/L	B246
STGCR/L	B194		

TC ◯◯

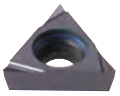
Triangular 60° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d₁
08	8.0	3.18	3.35
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.97	4.4

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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	CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
				Cermet		Coated		Coated																	Uncoated		Cutting Condition	
Medium cutting	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
Finishing	VP1 	TCMT	16T304-VP1																								0.06~0.20	0.10~1.50
			16T308-VP1																								0.08~0.23	0.10~1.50
Finishing	FS new  [High precision]	TCGT	110201-FS																●			●					0.01~0.16	0.03~1.40
			110202-FS																●			●					0.02~0.18	0.04~1.50
			110204-FS																●			●					0.04~0.19	0.06~1.60
Finishing	FS new  [Utra high precision]	TCGT	110201MFN-FS																								0.01~0.16	0.03~1.40
			110202MFN-FS																								0.02~0.18	0.04~1.50
			110204MFN-FS																								0.04~0.19	0.06~1.60
Finishing	VP1 	TCGT	090204-VP1																								0.04~0.18	0.10~1.00
			16T304-VP1																								0.06~0.20	0.10~1.50
			16T308-VP1																								0.08~0.23	0.10~1.50
Finishing	KF  [High precision]	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

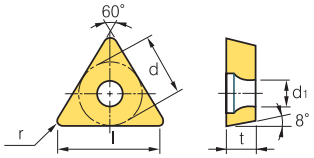
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

●: Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B124, 193	**STTCR/L**	B194, 246
STFCR/L	B194, 245	**STWCR/L**	B246
STGCR/L	B194		

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			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	● ● ●	

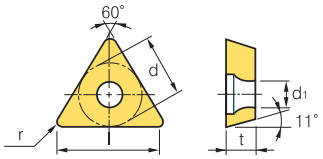
Inserts	Designation	Cermet		Coated		Coated																Uncoated		Cutting Condition	
		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	TOEH 060102L																								0.05~0.17	0.10~1.50
	TOEH 090204L																								0.05~0.20	0.30~2.50
	TOEH 140304L																								0.05~0.25	0.30~2.50

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35** ●: Stock item

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

TP○○

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



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

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

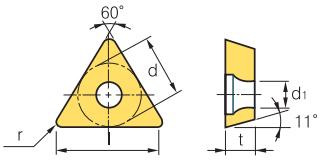
Inserts	Designation	Cermet		Coated		Coated																Uncoated		Cutting Condition	
		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	TPMT 090202-FP	●	●	●	●	●	●								●					●					0.01~0.09	0.05~0.07
	TPMT 090204-FP	●	●	●	●	●	●								●					●					0.01~0.09	0.10~0.08
	TPMT 110302-FP	●	●	●	●	●	●								●					●					0.01~0.10	0.05~0.08
	TPMT 110304-FP	●	●	●	●	●	●								●					●					0.01~0.10	0.10~0.90
	TPMT 110308-FP	●	●	●	●	●	●								●					●					0.04~0.10	0.10~1.00
	TPMT 160404-FP		●			●																			0.01~0.10	0.10~1.00
	TPMT 160408-FP		●			●																			0.04~0.12	0.10~1.00

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35** ●: Stock item

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

TP ○○

Triangular 60° Positive
Relief Angle: 11°



Dimensions (mm)			
Size	d	t	d_1
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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	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	090202-MP																								0.03~0.15	0.10~1.00
			090204-MP																								0.05~0.18	0.10~1.00
			110302-MP																								0.03~0.12	0.20~1.50
			110304-MP	●	●	●	●	●	●								●	●	●	●							0.05~0.20	0.20~1.50
			110308-MP					●	●								●	●									0.10~0.28	0.30~2.00
			160402-MP																								0.06~0.20	0.30~2.50
			160404-MP					●	●																		0.08~0.20	0.30~2.50
			160408-MP					●	●																		0.10~0.30	0.50~2.50
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
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 cutting	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

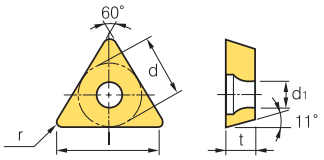
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TP ○○

Triangular 60° Positive
Relief Angle: 11°



Dimensions (mm)			
Size	d	t	d1
09	5.56	2.38	-
11	6.35	2.38~3.18	3.4
16	9.525	3.18~4.76	4.4
22	12.7	4.76	-
27	15.875	4.76~6.35	-
33	19.05	7.94~9.52	7.93

Workpiece			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	PC9030	H05
	Steel	P	●	✱	●	◆	●	◆	◆	✱	✱	✱	●	●	◆		✱							●	◆
	Stainless steel	M								◆	◆	◆			●	◆	✱	◆	✱	●	◆	✱			
	Cast iron	K	●	✱	●	◆	◆				◆	◆	◆	◆										●	◆
	Non-ferrous metal	N																						●	◆
	Heat resistant alloy, Titanium alloy	S										●				●	●	◆	✱	●	◆	◆		●	◆
	Hardened steel	H																		●	◆	◆		●	◆

Machining types
● Continuous cutting
◆ General cutting
✱ Interrupted cutting

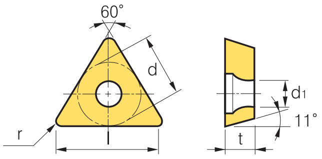
Inserts		Designation		Cermet CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated PC9030	H05	Cutting Condition fn (mm/rev)	ap (mm)
Medium cutting	M	TPGR	110308-M																								0.13~0.30	1.00~3.00
			160308-M																								0.13~0.30	1.00~5.00
Medium to finishing		TPUN	090308																								0.10~0.30	0.50~2.00
			110208																								0.15~0.40	1.00~3.00
			110304																								0.10~0.30	1.00~3.00
			110308																								0.15~0.40	1.00~3.00
			160304								●																0.10~0.30	1.00~5.00
			160308								●							●									0.15~0.40	1.00~5.00
			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
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

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TP ○○

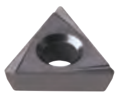
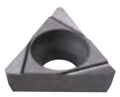


Dimensions (mm)			
Size	d	t	d1
08	4.76	2.38	2.3
09	5.56	2.38	3.0
11	6.35	3.18	3.4
16	9.525	3.18~4.76	4.4

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

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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

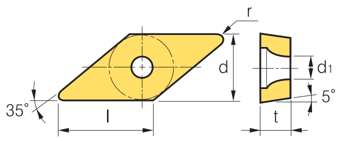
Inserts	Designation		Cermet CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	H05	Cutting Condition fn (mm/rev)	ap (mm)
Finishing 	TPGH	080202L																								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 	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

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

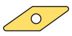
●: Stock item

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

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		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225 (Coated)	NC3120 (Coated)	NC3030 (Coated)	NC3235 (Coated)	NC5330 (Coated)	NC6310 (Coated)	NC6315 (Coated)	NC9115 (Coated)	NC9125 (Coated)	NC9135 (Coated)	PC5300 (Coated)	PC5400 (Coated)	PC8105 (Coated)	PC8110 (Coated)	PC8115 (Coated)	PC9030 (Coated)	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Finishing FP new  [Mild steel]	VBMT **110302-FP**					●																			0.01~0.10	0.05~0.08
	110304-FP		●			●																			0.01~0.10	0.10~0.90
	110308-FP		●			●																			0.01~0.10	0.10~1.00
	160404-FP	●	●	●	●	●	●								●					●					0.01~0.10	0.10~1.00
	160408-FP	●	●	●	●	●	●								●					●					0.04~0.12	0.10~1.00
Finishing VB 	VBMT **110302-VB**																								0.05~0.15	0.20~1.20
	110304-VB																								0.06~0.18	0.20~1.20
	110308-VB																								0.08~0.20	0.60~1.20
	160402-VB																								0.06~0.20	0.05~1.00
	160404-VB	●	●				●																		0.08~0.20	0.20~1.50
	160408-VB	●	●				●																		0.10~0.23	0.50~1.50
	160412-VB																								0.12~0.25	0.80~1.50
Finishing VF 	VBMT **160404-VF**	●	●				●				●						●			●					0.05~0.20	0.30~1.00
	160408-VF	●	●														●								0.10~0.25	0.30~1.00
Finishing VL 	VBMT **110302-VL**																								0.03~0.20	0.20~1.20
	110304-VL																								0.04~0.20	0.20~1.20
	110308-VL																								0.08~0.20	0.20~1.20
	160402-VL																								0.03~0.20	0.30~1.50
	160404-VL	●	●	●	●	●	●				●			●	●	●	●	●	●	●	●				0.05~0.20	0.30~1.50
	160408-VL	●	●	●	●	●	●				●			●	●	●	●	●	●	●	●				0.10~0.20	0.30~1.50
	160412-VL													●	●	●			●	●	●				0.10~0.25	0.30~1.50
Medium to finishing 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 to finishing MP new 	VBMT **110302-MP**																								0.04~0.14	0.20~1.50
	110304-MP					●	●								●	●									0.05~0.15	0.20~1.50
	110308-MP					●	●																		0.10~0.28	0.30~2.00
	160402-MP																								0.06~0.16	0.25~2.00
	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

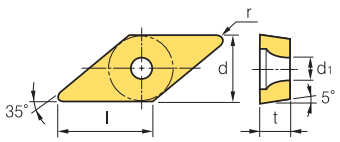
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

VB○○

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



Dimensions (mm)			
Size	d	t	d_1
11	6.35	2.38~3.18	2.8~3.4
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	⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ⬌ ● ⬌ ⬌ ⬌ ● ⬌	

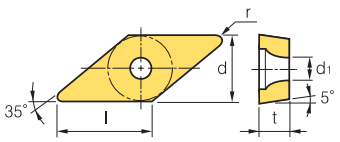
Inserts	Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		VBMT 160404							●	●			●										●			0.07~0.20	0.50~1.50
		160408						●	●	●				●									●			0.15~0.25	0.70~2.00
Medium to finishing		VBGT 160404																								0.07~0.20	0.50~1.50
		160408																								0.15~0.25	0.70~2.00
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
Finishing	FS new [High precision]	VBGT 110301-FS																●			●					0.01~0.16	0.03~1.40
		110302-FS																●			●					0.02~0.18	0.04~1.50
		110304-FS																●			●					0.04~0.19	0.06~1.60
		160401-FS																●			●					0.01~0.16	0.04~1.80
		160402-FS																●			●					0.02~0.18	0.05~2.00
		160404-FS																●			●					0.04~0.19	0.08~2.00
Finishing	FS new [Utra high precision]	VBGT 110301MFN-FS																								0.01~0.16	0.03~1.40
		110302MFN-FS																								0.02~0.18	0.04~1.50
		110304MFN-FS																								0.04~0.19	0.06~1.60
		160401MFN-FS																								0.01~0.16	0.04~1.80
		160402MFN-FS																								0.02~0.18	0.05~2.00
		160404MFN-FS																								0.04~0.19	0.08~2.00
Finishing	VP1	VBGT 110302-VP1																								0.03~0.10	0.08~1.50
		160402-VP1																								0.04~0.20	0.16~1.50
		160404-VP1																								0.05~0.20	0.18~1.80

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

VB○○



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

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

Workpiece			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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

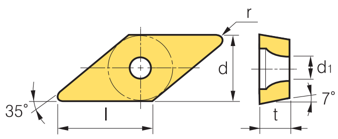
Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	KF [High precision]	VBGT	1103003R-KF																●			●					0.01~0.06	0.04~1.30
			110301R-KF																●			●					0.02~0.08	0.05~1.50
			110302R-KF																●			●		●			0.03~0.13	0.06~1.70
			1103003L-KF																●			●					0.01~0.06	0.04~1.30
			110301L-KF																●			●					0.02~0.08	0.05~1.50
			110302L-KF																●			●					0.03~0.13	0.06~1.70
Medium to finishing	KM [High precision]	VBGT	1103003R-KM																								0.01~0.06	0.04~1.30
			110301R-KM																								0.02~0.08	0.05~1.50
			110302R-KM																								0.03~0.13	0.06~1.70
			1103003L-KM																								0.01~0.06	0.04~1.30
			110301L-KM																								0.02~0.08	0.05~1.50
			110302L-KM																								0.03~0.13	0.06~1.70

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

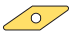
● : Stock item

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

VC ○○



Dimensions (mm)			
Size	d	t	d_1
08	4.76	2.38	2.3
11	6.35	3.18	2.8~3.4
16	9.525	4.76	4.4

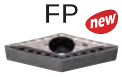
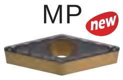


Rhombic **35° Positive**

Relief Angle: 5°

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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																		●	◒	◒		●	◒

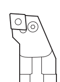
Machining types
- ● Continuous cutting
- ◒ General cutting
- ✱ Interrupted cutting

	Inserts	Designation	CN1500 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3215 (Coated)	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Finishing	FP new  [Mild steel]	VCMT 080202-FP					●																			0.01~0.10	0.05~0.08
		080204-FP				●	●																			0.01~0.10	0.10~0.90
		080408-FP				●	●																			0.04~1.00	0.10~1.00
		160404-FP																								0.01~0.10	0.10~1.00
		160408-FP	●	●		●	●	●								●					●					0.04~0.12	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	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
Medium to finishing	HMP 	VCMT 160404-HMP							●	●								●			●		●			0.10~0.25	0.30~2.60
		160408-HMP							●	●								●			●		●			0.13~0.33	0.60~2.60
Medium to finishing	MP new 	VCMT 080202-MP					●	●																		0.03~0.15	0.10~1.00
		080204-MP					●	●																		0.05~0.18	0.10~1.00
		110302-MP																								0.06~0.18	0.20~1.80
		110304-MP																								0.06~0.18	0.20~1.80
		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
Finishing	VP1 	VCMT 160404-VP1																								0.05~0.20	0.18~1.80
		160408-VP1																								0.06~0.20	0.20~1.80

Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

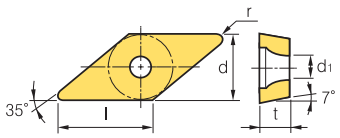
● : Stock item

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



VC○○

Rhombic 35° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d1
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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	FS new [High precision]	VCGT	110301-FS																●			●					0.01~0.16	0.03~1.40
			110302-FS																●			●					0.02~0.18	0.04~1.50
			110304-FS																●			●					0.04~0.19	0.06~1.60
			160401-FS																●			●					0.01~0.16	0.04~1.80
			160402-FS																●			●					0.02~0.18	0.05~2.00
			160404-FS																●			●					0.04~0.19	0.08~2.00
Finishing	FS new [Utra high precision]	VCGT	110301MFN-FS																								0.01~0.16	0.03~1.40
			110302MFN-FS																								0.02~0.18	0.04~1.50
			110304MFN-FS																								0.04~0.19	0.06~1.60
			160401MFN-FS																								0.01~0.16	0.04~1.80
			160402MFN-FS																								0.02~0.18	0.05~2.00
			160404MFN-FS																								0.04~0.19	0.08~2.00
Medium cutting	MS new [High precision]	VCGT	110301-MS																●			●					0.02~0.23	0.05~2.00
			110302-MS																●			●					0.03~0.25	0.07~2.50
			110304-MS																●			●					0.05~0.25	0.09~2.50
Medium cutting	MS new [Utra high precision]	VCGT	110301MFN-MS																●			●					0.02~0.23	0.05~2.00
			110302MFN-MS																●			●					0.03~0.25	0.07~2.50
			110304MFN-MS																●			●					0.05~0.25	0.09~2.50
Medium cutting	MS new [Utra high precision]	VCGT	1203008FN-MS																●			●					0.02~0.20	0.04~1.80
			120301FN-MS																●			●					0.03~0.26	0.06~2.20
			120302FN-MS																●			●					0.05~0.28	0.08~2.80
			120304FN-MS																●			●					0.06~0.30	0.10~2.80
Finishing	VP1 [High precision]	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

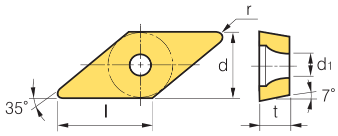
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

VC○○

Dimensions (mm)			
Size	d	t	d1
11	6.35	3.18	2.8~3.4
12	7.5	3.18	2.8



Rhombic 35° Positive
Relief Angle: 7°

Workpiece		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	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

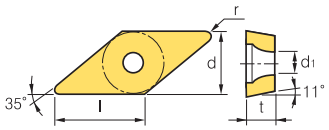
	Inserts	Designation	Cermet CN1500	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated H01	H05	Cutting Condition fn (mm/rev)	ap (mm)
Finishing	VP1 [Utra high precision]	VCGT 110301MFN-VP1																●			●					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
		1203008FN-VP1																								0.03~0.12	0.06~1.20
		120301FN-VP1																								0.04~0.13	0.08~1.20
		120302FN-VP1																								0.04~0.15	0.08~1.20
		120304FN-VP1																								0.06~0.20	0.10~1.50
Finishing	VP1 [Utra high precision]	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
		120304MFR-VP1																●			●					0.03~0.20	0.12~1.20
		120308MFR-VP1																●			●					0.05~0.20	0.15~1.20
Finishing	KF [High precision]	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	KF [Utra high precision]	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
Finishing	KM [High precision]	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
Medium to finishing	KM [Utra high precision]	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

Cutting edge geometry **A52~A61**   Recommended chip breaker **B04~B14**   Code system **B34~B35**

●: Stock item

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

VP○○



Dimensions (mm)			
Size	d	t	d_1
08	6.35	2.38	2.3
11	6.35	3.18	2.8

Rhombic **35° Positive**
Relief Angle: 11°

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

Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VP1 [High precision]	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	VP1 [Utra high precision]	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
Finishing	KF [Utra high precision]	VPET	0802005MFR-KF																●			●					0.01~0.12	0.05~0.50
			080201MFR-KF																●			●					0.02~0.15	0.05~0.50
			080202MFR-KF																●			●					0.02~0.18	0.10~1.00
			0802005MFL-KF																●			●					0.01~0.12	0.05~0.50
			080201MFL-KF																●			●					0.02~0.15	0.05~0.50
			080202MFL-KF																●			●					0.02~0.18	0.10~1.00
Medium to finishing	KM [Utra high precision]	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

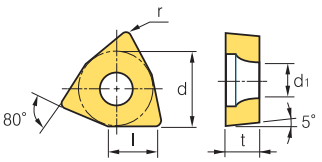
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

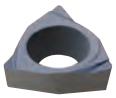
WB○○

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	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

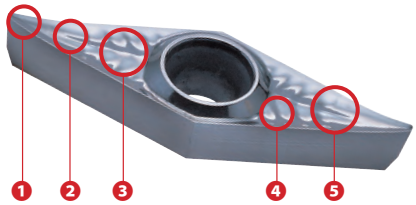
● : Stock item

Available tool holders	
Designation	Page
SWUBR/L	B227

Technical Information for Aluminum

AK special chip breaker for aluminum

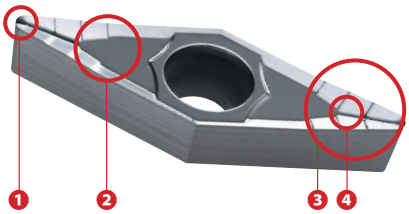
- Unique and 3-dimensional rake angle controls chip breaking and chip flow ensuring longer tool life and reducing cutting load
- High rake angle at cutting edge part reduces cutting load to increase tool life
- Buffed finish on top face controls chip flow reducing built-up edge



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

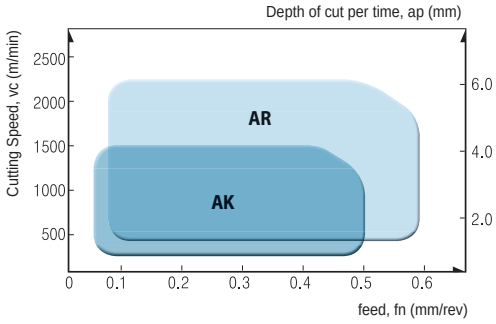
AR special chip breaker for aluminum

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

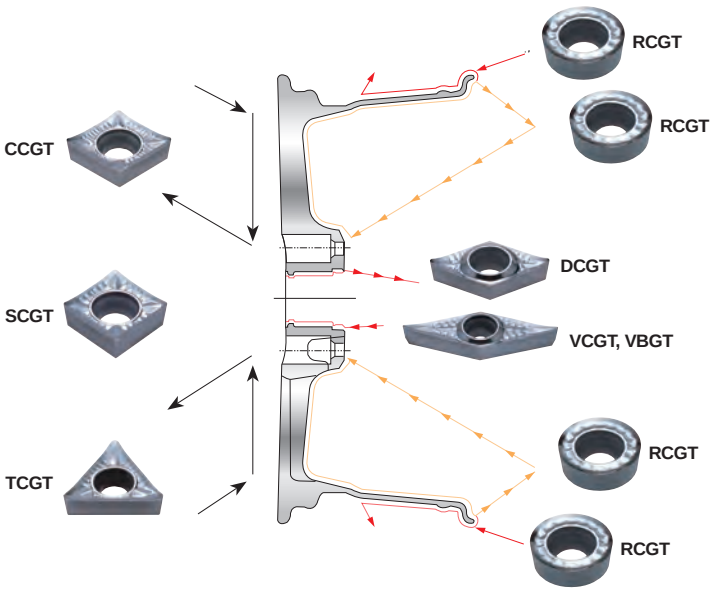


1. Flat corner cutting edge improved productivity at high feed machining and ensures good surface roughness and reliability owing to strong cutting edge
2. Specially buffed on top face controls chip flow reducing built-up edge
3. KORLOY's own technology applied for cutting edge and corner shape controlling 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) PD1000 (DLC 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)



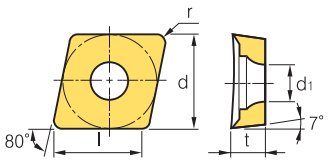
Features of H01 and cutting conditions

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

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

CC ○○

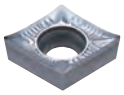
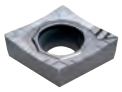
Rhombic 80° Positive
Relief Angle: 7°



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	PD1005	PD1010	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

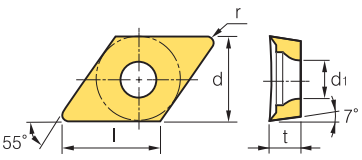
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

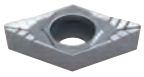
DC ○○

Rhombic 55° Positive
Relief Angle: 7°



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

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PD1005	PD1010	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

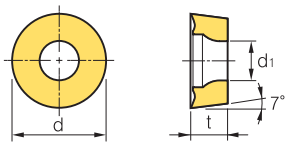
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

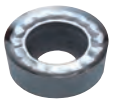
RC ○○

Round **Positive**
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d_1
06	6.0	2.38	2.8
08	8.0	3.18	3.35
10	10.0	3.18~3.97	4.4
12	12.0	4.76	4.4

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PD1005	PD1010	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
		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

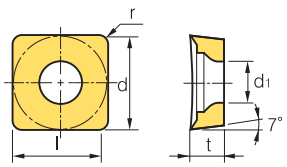
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

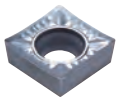
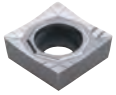
SC ○○

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



Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.97	4.4
12	12.7	4.76	5.5

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PD1005	PD1010	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

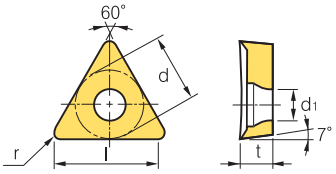
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

TC ○○

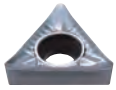
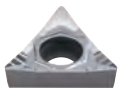
Triangular **60° Positive**
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d_1
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.97	4.4

Workpiece							
Steel	P						
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	PD1005	PD1010	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

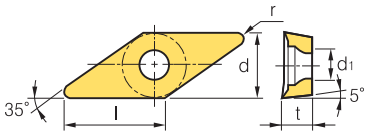
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

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

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

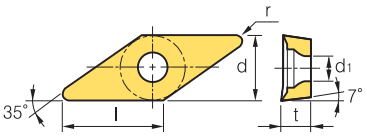
Cutting edge geometry **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

● : Stock item

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

VC ○○

Rhombic 35° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d_1
11	6.35	3.18	2.8
13	7.94	3.18	3.4
16	9.525	4.76	4.4
22	12.7	5.56	5.6

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PD1005	PD1010	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 **A52~A61** Recommended chip breaker **B04~B14** Code system **B34~B35**

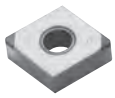
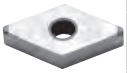
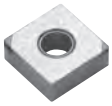
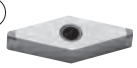
● : Stock item

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

cBN

Multi-Corner Type (Negative)

Dimensions (mm)			
Size	d	t	d_1
12	12.7	4.76	5.16
15	12.7	4.76~6.358	3.4
16	9.525	4.76	3.81

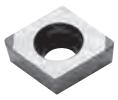
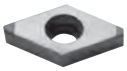
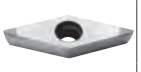
Inserts	Designation		Coated					Uncoated						Available tool holders			
			DNC100	DNC250	DNC300	DNC350	DNC400	DB1000	DB2000	DBN250	DBN350	DBN700A	DBNX20	Designation		Page	
CN○○ 80° Nega 	2NU-CNGA	120404	●	●	●	●		●				●		DCBNR/L		B167	
		120404F		●		●								DCLNR/L		B167/B208	
		120404T		●		●		●						MCKNR/L		B183	
		120404W		●										MCLNR/L		B183/B213	
		120404WF		●										MCMNN		B183	
		120408	●	●	●	●		●	●			●		PCBNR/L		B172	
		120408F		●		●								PCLNR/L		B173/B210	
		120408T		●		●		●									
		120408W		●		●		●				●					
		120408WF							●								
		120412	●	●	●	●											
		120412F		●		●											
		120412T		●		●											
		120412W		●				●				●					
		120412WT						●									
	T-2NU-CNGA	120404		●													
		120408		●		●											
	4NU-CNGA	120404		●													
		120408		●		●											
		120412		●													
	4NS-CNGA	120408					●										
		120412					●										
DN○○ 55° Nega 	2NU-DNGA	150404		●	●	●			●	●				DDJNR/L		B168	
		150404F		●		●								MDJNR/L		B184	
		150404T		●		●								MDNNN		B184	
		150408		●	●	●		●	●	●				MDQNR/L		B185	
		150408F		●		●								MDUNR/L		B213	
		150408T		●		●		●	●					PDJNR/L		B173	
		150412		●		●								PDNNR/L		B174	
		150412F		●		●								PDSNR/L		B210	
		150412T		●		●								PDUNR/L		B211	
		150604	●	●		●											
		150608	●	●		●											
	4NU-DNGA	150404		●		●											
		150408		●		●											
		150412		●		●											
		150608		●													
	4NS-DNGA	150608					●										
		150612					●										
SN○○ 90° Nega 	4NU-SNGA	120404		●								●		DSBNR/L	MSBNR/L	B168	B185
		120408		●								●		MSDNN	MSKNR/L	B185	B186/B213
														MSRNR/L	MSSNR/L	B186	B187
														PSBNR/L	PSDNN	B175	B176
														PSKNR/L		B176/B211	
TN○○ 60° Nega 	3NU-TNGA	160404		●		●		●	●	●		●		MTENN	MTFNR/L	B187	B187/B214
		160404T		●										MTGNR/L	MTJNR/L	B188	B188
		160408		●		●						●		PTFNR/L	PTGNR/L	B177/B211	B178
		160408F		●										PTTNR/L	WTENN	B178	B179
		160408T		●										WTJNR/L	WTXNR/L	B179	B179
		160412				●											
VN○○ 35° Nega 	2NU-VNGA	160404	●	●	●	●				●		●		MVJNR/L		B188	
		160404F		●		●								MVQNR/L		B189	
		160404T		●		●								MVUNR/L		B214	
		160408	●	●	●	●		●	●	●		●		MVVNN		B189	
		160408F		●		●											
		160408T		●		●			●								
	T-2NU-VNGA	160408		●				●									

● : Stock item

cBN

Multi-Corner Type (Positive)

Dimensions (mm)			
Size	d	t	d_1
06	6.35	2.38	2.8
07	6.35	2.38	2.8
09	9.525	3.97	4.4
11	9.525	3.97	4.4
16	9.525	4.76	3.81

Inserts	Designation		Coated					Uncoated						Available tool holders	
			DNC100	DNC250	DNC300	DNC350	DNC400	DB1000	DB2000	DBN250	DBN350	DBN700A	DBNX20	Designation	Page
CC○○ 80° Posi 	2NU-CCGW	060202		●										SCACR/L	B190
		060202T		●										SCLCR/L	B190/B215/B225
		060204		●					●						
		060204F		●											
		060204T		●											
		060208						●							
		09T302		●											
		09T304	●	●		●		●		●		●			
		09T304T		●											
		09T308	●	●		●			●	●		●			
		09T308T		●											
		09T308W		●											
DC○○ 55° Posi 	2NU-DCGW	070204		●				●						SDACR/L	B190
		070208		●										SDJCR/L	B191
		070208T						●						SDNCN	B191
		11T302		●										SDQCR/L	B217
		11T304	●	●		●		●		●				SDUCR/L	B218
		11T304F		●										SDZCR/L	B219
		11T304T		●											
		11T308	●	●		●				●		●			
		11T308T		●											
	T-2NU-DCGW	11T304		●											
		11T308		●		●									
TC○○ 60° Posi 	3NU-TCGW	090204		●										STACR/L	B193
		090204F		●										STFCR/L	B194/B220
		090204T		●										STGCR/L	B194
														STTCR/L	B194
TP○○ 60° Posi 	3NU-TPGW	110304		●		●		●	●			●			
		110304F		●											
		110304T		●											
		110308		●		●		●	●			●			
		110308F		●											
		110308T		●											
	3NU-TPGN	110308						●	●					CTFPR/L	B182/B212
		160304		●										CTGPR/L	B182
		160308		●											
	3NU-TPGB	110304		●						●				CTFPR/L	B182/B212
		110304T		●										CTGPR/L	B182
		110308		●						●					
		110308F		●											
		110308T		●											
VB○○ 35° Posi 	2NU-VBGW	160402		●										SVABR/L	B195
		160404	●	●		●		●		●		●		SVHBR/L	B195
		160404F		●										SVJBR/L	B195
		160404T		●										SVQBR/L	B222
		160408	●	●		●			●	●				SVUBR/L	B223
		160408F		●											
		160408T		●											
	T-2NU-VBGW	160408				●									
VC○○ 35° Posi 	2NU-VCGW	160404		●		●									
		160404F		●											
		160404T		●											
		160408		●											
		160408F		●											
		160408T		●				●	●						
	T-2NU-VCGW	160404		●											
		160408		●											

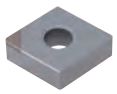
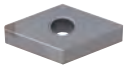
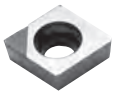
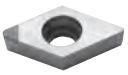
●: Stock item

cBN

Regrinding Type (Negative/Positive)

Dimensions (mm)			
Size	d	t	d_1
09	9.525	3.97	4.4
11	6.35~9.525	3.8~3.97	3.4~4.4
12	12.7	4.76	5.16

Dimensions (mm)			
Size	d	t	d_1
15	12.7	4.76	5.16
16	9.525	4.76	3.81~4.4

Inserts	Designation		Coated					Uncoated						Available tool holders			
			DNC100	DNC250	DNC300	DNC350	DNC400	DB1000	DB2000	DBN250	DBN350	DBN700A	DBNX20	Designation		Page	
CN○○ 80° Nega 	CNMA	120404								●				DCBNR/L	MCKNR/L	B167	B183
		120408								●			●	DCLNR/L	MCLNR/L	B167/B208	B183/B213
	T-CNMA	120408								●				PCBNR/L	MCMNN	B172	B183
														PCLNR/L		B173/B210	
DN○○ 55° Nega 	DNMA	150404								●				DDJNR/L	MDJNR/L	B168	B184
		150408								●	●			MDNNN	MDQNR/L	B184	B185
														MDUNR/L	PDJNR/L	B213	B173
														PDNNR/L	PDSNR/L	B174	B210
														PDUNR/L		B210	
TN○○ 60° Nega 	TNMA	160404								●				MTENN	MTFNR/L	B187	B187/B214
		160408								●				MTGNR/L	MTJNR/L	B188	B188
														PTFNR/L	PTGNR/L	B177/B211	B178
														PTTNR/L	WTENN	B178	B179
														WTJNR/L	WTXNR/L	B179	B179
VN○○ 35° Nega 	T-VNMA	160404								●				MVJNR/L		B188	
	VNMA	160404								●				MVQNR/L		B189	
		160408								●				MVUNR/L		B214	
														MVVNN		B189	
CC○○ 80° Posi 	CCMW	09T304								●				SCACR/L		B190	
														SCLCR/L		B190/B215/B225	
DC○○ 50° Posi 	DCGW	11T308								●				SDACR/L		B190	
	T-DCGW	11T308								●				SDJCR/L		B191	
														SDNCN		B191	
VB○○ 35° Posi 	VBMW	160404								●				SVABR/L		B195	
		160408								●				SVHBR/L		B195	
														SVJBR/L		B195	
														SVQBR/L		B222	
														SVUBR/L		B223	
TP○○ 60° Posi 	T-TPGB	110304									●			CTFPR/L		B182/B212	
	TPGB	110304								●	●			CTGPR/L		B182	
		110308								●							

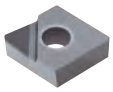
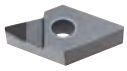
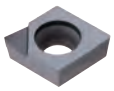
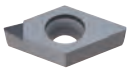
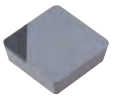
●: Stock item

PCD

Insert (Negative/Positive)

Dimensions (mm)			
Size	d	t	d_1
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	d_1
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 	CNMM	120404		●		DCBNR/L	DCLNR/L	B167	B167
		120408		●		MCKNR/L	MCLNR/L	B183	B183
						MCMNN	PCBNR/L	B183	B172
						PCLNR/L		B173	
DN○○ 55° Nega 	DNMM	150404		●		DDJNR/L	MDJNR/L	B168	B184
		150408		●		MDNNN	MDQNR/L	B184	B185
						MDUNR/L	PDJNR/L	B213	B173
						PDNNR/L	PDSNR/L	B174	B210
						PDUNR/L		B210	
CC○○ 80° Posi 	CCMW	120404		●		SCACR/L		B190	
	CCMT	060202		●		SCLCR/L		B190/B215/B225	
		060204		●					
		09T304		●					
		09T308		●					
DC○○ 55° Posi 	DCMT	070202		●		SDACR/L		B195	
		070204		●		SDJCR/L		B191	
		11T302		●		SDNCN		B191	
		11T304		●		SDQCR/L		B217	
		11T308		●		SDUCR/L		B218	
	DCGT	11T304		●		SDZCR/L		B219	
TP○○ 60° Posi 	TPGW	080204		●					
		090204		●					
		090208		●					
		110304		●					
		110308		●					
VB○○ VC○○ 35° Posi 	VBGW	160404		●					
	VBMT	110304		●		SVHBR/L		B195	
		110308		●		SVJBR/L		B195	
		160404		●		SVUBR/L		B223	
		160408		●					
	VCMT	110304		●		SVVCN		B196	
		110308		●					
		160404		●					
		160408		●					
TP○○ 60° Posi 	TPGN	110304		●					
		110308		●					
SP○○ 90° Posi 	SPGN	090304		●		CSDPN		B181	
						CSKPR/L		B182/B212	

●: Stock item