Turning Indexable Inserts

B1~B115

Turning Indexable Inserts Identification System		B2
Insert Color		B3
Chipbreaker Selection		B4~B14
Chipbreaker shape of Negative Inserts		B4
Chipbreaker shape of Positive Inserts		B12
How to read pages of "Turning Inserts"		B15
Cermet / Coated Carbide / Carbide Lineup		B16~B104
Turning Negative Inserts	CN□□ 80° Rhombic	B16
	DN□□ 55° Rhombic	B23
	KN□□ 55° Parallelogram	B31
	RN□□ Round	B31
	SN□□ 90° Square	B32
	TN□□ 60° Triangle	B36
	VN□□ 35° Rhombic	B44
	WN□□ 80° Trigon	B46
	Small Double Sided Tools	B50
Turning Positive Inserts	CC□□, CP□□ 80° Rhombic	B53
	DC□□, DP□□ 55° Rhombic	B62
	JC□□ 70° Rhombic	B73
	RC□□ Round	B74
	SC□□, SP□□ 90° Square	B75
	TB□□, TC□□, TP□□ 60° Triangle	B76
	VB□□, VC□□, VP□□ 35° Rhombic	B89
	WB□□, WP□□ 80° Trigon	B97
Inserts for Back Turning	TKFB	B100
	ABS15 / ABW15 / ABW23	B102
Bearing Machining	R□MT-BB / SNMF	B103
Solid Tip-Bars		B104
Ceramic Inserts Identification System		B105
Ceramic Lineup		B106~B115
Turning Negative Inserts	CN□□ 80° Rhombic	B106
	DN□□ 55° Rhombic	B107
	EN□□ 75° Rhombic	B107
	RN□□ Round	B108
	SN□□ 90° Square	B109
	TN□□ 60° Triangle	B111
	VN□□ 35° Rhombic	B112
Turning Positive Inserts	RP□□ Round	B113
	SP□□ 90° Square	B113
	TB□□, TC□□, TP□□ 60° Triangle	B113
Inserts for Hardened Roll Materials	RBG / RCGX / RPGX	B114
Grooving Inserts	GH	B115

Turning Indexable Inserts Identification System

Symbol	Shape
H	Hexagon
O	Octagon
P	Pentagon
S	Square
T	Triangle
C	80° Rhombic
D	55° Rhombic
E	75° Rhombic
F	50° Rhombic
M	86° Rhombic
V	35° Rhombic
W	80° Trigon
L	Rectangle
A	85° Parallelogram
B	82° Parallelogram
K	55° Parallelogram
R	Round

Shown angle stands for acute angle for rhombic and parallelogram inserts.

(1) Shape

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

(2) Relief Angle

Symbol (Class)	Tolerance (mm)		
	Corner Height	Thickness	I.C. Size
A	±0.005	±0.025	±0.025
F			±0.013
C	±0.013		±0.025
H			±0.013
E	±0.025		±0.025
G		±0.13	
J	±0.005	±0.025	±0.05~±0.15
K*	±0.013		
L*	±0.025		
M*	±0.08~±0.18	±0.13	
N*		±0.025	
U*	±0.13~±0.38	±0.13	±0.08~±0.25

* Insert's periphery is as fired.
Tolerance difference is depending on insert size.

(3) Tolerance

Symbol	Hole	Hole Shape	Chipbreaker	Shape
N	No	-	No	
R			Single-sided	
F			Double-sided	
A	Yes	With Hole	No	
M			Single-sided	
G			Double-sided	
W		With Hole and One Countersink 40°~60°	No	
T			Single-sided	
Q		With Hole and Two Countersink 40°~60°	No	
U			Double-sided	
B		With Hole and One Countersink 70°~90°	No	
H			Single-sided	
C		With Hole and Two Countersink 70°~90°	No	
J			Double-sided	
X	-	-	-	-

(4) Hole / Chipbreaker

ISO (metric)

C	N	M	G	12	04	08	PG
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

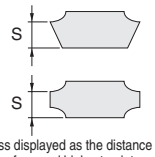
ANSI (inch)

C	N	M	G	4	3	2	PG
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(5) Edge Length (ISO)							I.C. Size (mm)	(5) I.C. Size (ANSI)	
C	D	R	S	T	V	W		IC Size (inch)	Symbol
03	04		03	06			3.97	5/32	12
04	05		04	08	08		4.76	3/16	15
		05					5		
05	06		05	09		03	5.56	7/32	18
		06					6		
06	07		06	11	11	04	6.35	1/4	2
08	09		07	13		05	7.94	5/16	25
		08					8		
09	11	09	09	16	16	06	9.525	3/8	3
	12	10					10		
		12					12		
12	15	12	12	22	22	08	12.7	1/2	4
16	19	15	15	27	27	10	15.875	5/8	5
		16					16		
19	23	19	19	33	33	13	19.05	3/4	6
		20					20		
22	27		22	38			22.225	7/8	7
		25					25		
25	31	25	25	44	44	17	25.4	1	8
32	38	31	31	54	54	21	31.75	1-1/4	10
		32					32		

· Expressed as edge length for ISO.
· ANSI expresses the inscribed circle diameter in inches.

(6) Thickness			
ISO		ANSI	
Thickness (mm)	Symbol	Thickness (inch)	Symbol
1.59	01	1/16	1
1.98	T1	5/64	12
2.38	02	3/32	15
2.78	T2	–	–
3.18	03	1/8	2
3.97	T3	5/32	25
4.76	04	3/16	3
5.56	05	7/32	35
6.35	06	1/4	4
7.94	07	5/16	5
9.525	09	3/8	6



Thickness displayed as the distance between bottom surface and highest point on cutting edge.

(7) Corner-R(RE)			
ISO		ANSI	
Corner-R (RE) (mm)	Symbol	Corner-R (RE) (inch)	Symbol
Sharp Corner	00	.000	00
0.03	003	.001	01
0.05	005	.002	013
0.1	01	.004	02
0.2	02	.008	05
0.4	04	1/64	1
0.8	08	1/32	2
1.2	12	3/64	3
1.6	16	1/16	4
2.0	20	5/64	5
2.4	24	3/32	6
2.8	28	7/64	7
3.2	32	1/8	8
Round insert	00 (inch) or M0 (metric)	Round insert	0

(8) Manufacturer's Option
Hand Symbol Chipbreaker Symbol, etc.

Positive Inserts Identification System

CCGT060201M F P - SK

- Minus tolerance on Corner-R(RE)
- Sharp edge
- Polished
- Chipbreakers

CCET060201M F R - U SF

- Minus tolerance on Corner-R(RE)
- Sharp edge
- Insert Hand
- Chipbreakers
- Super Fine (High Quality Ground Insert)

When a minus tolerance is specified for the corner-R(RE)

If a minus tolerance is specified for the corner-R(RE) as shown in the Fig. 1, using an insert with corner-R(RE)=0.2 mm may result in larger radius than specified.
Use an insert the corner of which R(RE) has a minus tolerance.

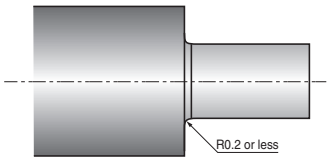


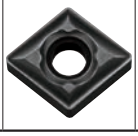
Fig. 1 Example of a specified corner-R in the drawing

Insert Color

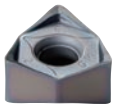
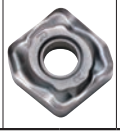
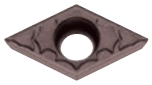
Cermet, CVD Coated Cermet, MEGACOAT NANO Cermet, MEGACOAT Cermet and PVD Coated Cermet

Grades	Cermet									CVD Coated Cermet	MEGACOAT NANO Cermet				MEGACOAT Cermet		PVD Coated Cermet
	TN610	TN620	TN620M	TN6020	TN60	TN90	TN100M	TC40N	TC60M	NEW CCX	PV710	PV720	NEW PV730	NEW PV60M	PV7005	PV7040	PV90
Insert Color																	

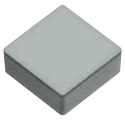
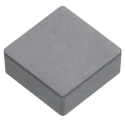
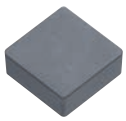
CVD Coated Carbide

Grades	CVD Coated Carbide														
	CA310	CA315	CA320	CA415D	CA520D	CA420M	CA45 series	CA510	CA515	CA025P	CA525	CA530	CA55 series	CA65 series	CR9025
Insert Color															

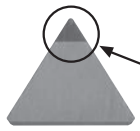
PVD Coated Carbide

Grades	MEGACOAT NANO					MEGACOAT NANO PLUS		MEGACOAT HARD		MEGACOAT				PVD Coated Carbide				
	PR1510	PR1515	PR1525	PR1535	NEW PR1625	NEW PR1705	NEW PR1725	NEW PR005S	NEW PR015S	PR1210	PR1215	PR1225	PR1230	PR905	PR915	PR930	PR1025	PR1115
Insert Color																		

Ceramic

Grades	Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Honeycomb structure Ceramic
	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
Insert Color											

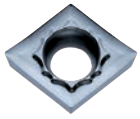
CBN and PCD

Grades	CBN				PCD			MEGACOAT CBN	PVD Coated CBN
	KBN475	KBN510	KBN525	KBN570	KPD001	KPD010	KPD230	KBN..M	KBN900
Insert Color	 CBN and PCD								

DLC Coated Carbide

Grades	DLC Coated Carbide
	PDL010 PDL025
Insert Color	

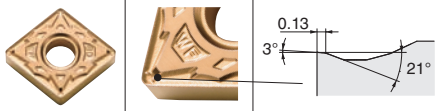
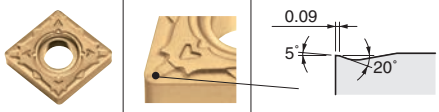
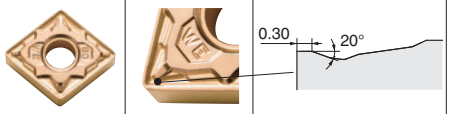
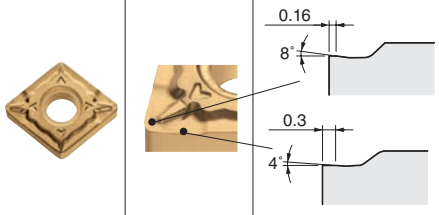
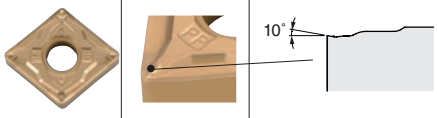
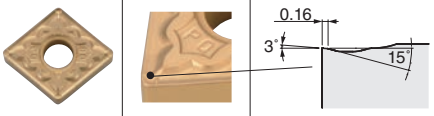
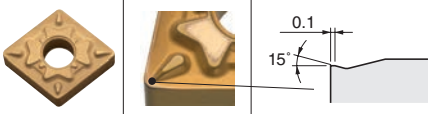
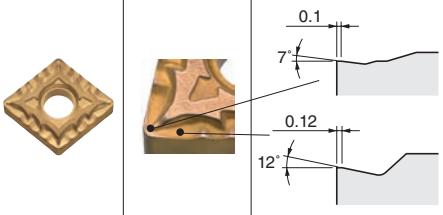
Carbide

Grades	Carbide				
	GW05	GW15	GW25	KW10	SW05
Insert Color					

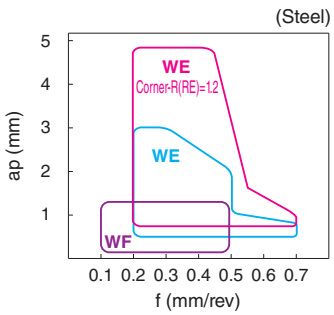
Chipbreaker Selection (Negative Inserts)

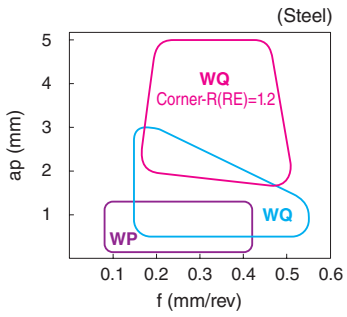
Steel

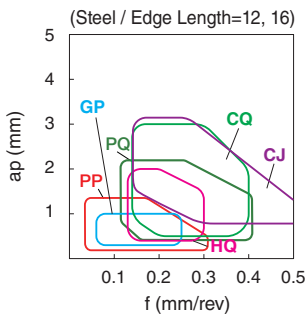
1 Molded Chipbreaker

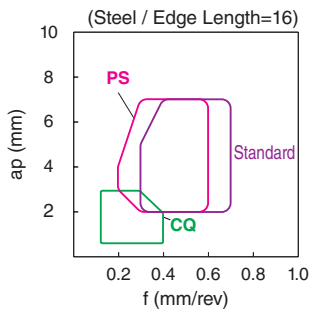
Cutting Range	Name	Design	Advantages
Finishing (With Wiper Edge)	WF		·Wiper insert ·Good chip control in finishing operations ·Excellent surface roughness by controlling adhesion ·Less cutting force due to sharp cutting edge
Finishing (With Wiper Edge)	WP		·Wiper insert ·Good chip control at small machining
Finishing - Medium (With Wiper Edge)	WE		·Wiper insert ·Good surface finish at high feed machining ·High productivity with smooth chip control in a wide range of applications
Finishing - Medium (With Wiper Edge)	WQ		·Wiper insert ·Double feed rate possible while maintaining a smooth finish ·High efficiency and good chip control
Finishing	PP		·3-step dot structure realizes stable chip control at a wide range of feed rate ·Less cutting force due to sharp cutting edge and smooth rake face
Finishing - Medium	PQ		·Stable chip control in a wide feed rate range by breaking chips effectively ·The well-balanced edge sharpness and toughness
Finishing	GP		·Finishing to light machining ·Good chip control
Finishing - Medium	HQ		·Sharp cutting performance with 3-D rake angle and double projection design
Finishing - Medium	CQ		·Good chip control for varied ap such as copying ·Applicable to up facing

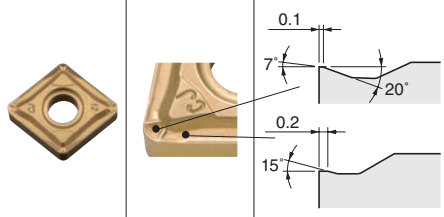
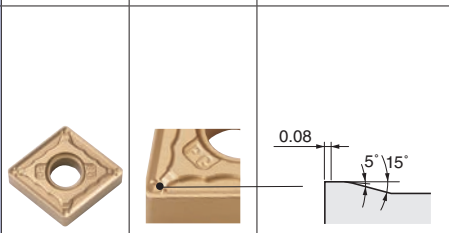
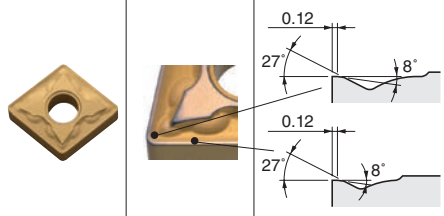
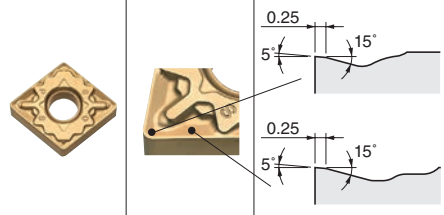
Applicable Chipbreaker Range (ap indicates radius)

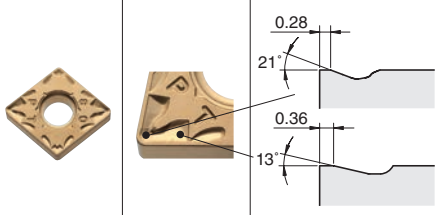
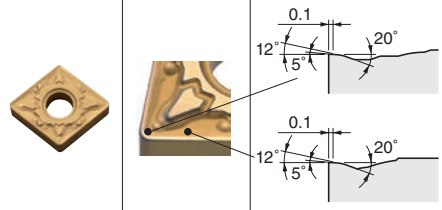
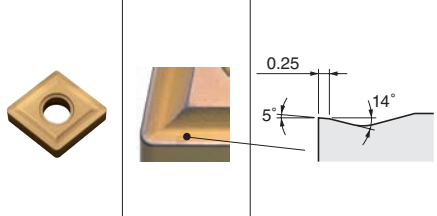




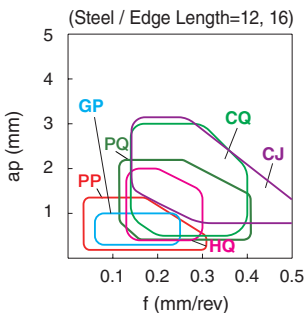


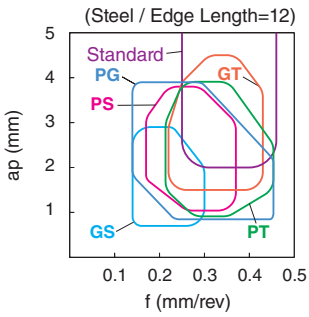


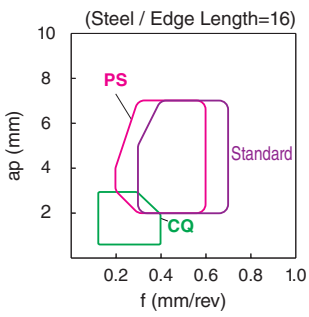
Cutting Range	Name	Design	Advantages
Finishing - Medium (Up Facing)	**CJ**		·Improved chip curing at small machining and high feed rate machining ·Improved chip evacuation at copying and up facing
Medium - Roughing	**PG**		·Stable machining with good balance of edge sharpness and strength ·Prevent chip clogging at high feed rate ·Good chip control at low feed rate ·Stable machining with wide chip control range
Medium - Roughing	**GS**		·Strong edge chipbreaker ·Stable for continuous machining and light interrupted machining
Medium - Roughing	**PS**		·General purpose chipbreaker ·More stable due to large contact surface

Cutting Range	Name	Design	Advantages
Medium - Roughing / High Feed Rate	**PT**		·Low cutting force at high feed machining ·Land support structure
Medium - Roughing / High Feed Rate	**GT**		·Strong edge chipbreaker ·Wide land design and smooth chip control even at high feed rate machining
Roughing	**Standard (Without Indication)**		·Low cutting force and applicable to large ap roughing

Applicable Chipbreaker Range (ap indicates radius)

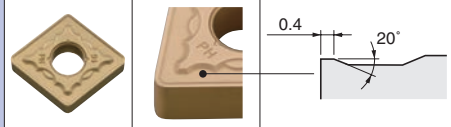


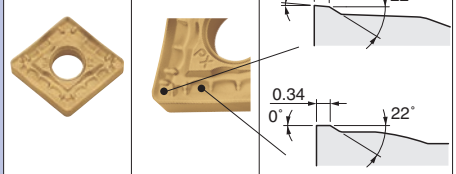




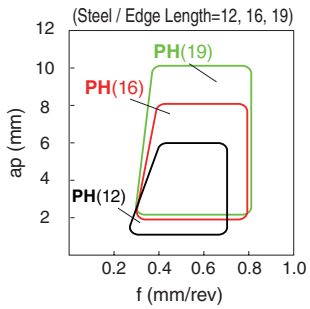
Steel

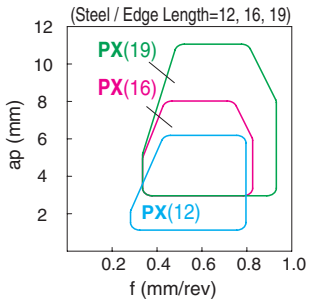
1 Molded Chipbreaker

Cutting Range	Name	Design	Advantages
Roughing	PH		·For roughing of steel ·Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge

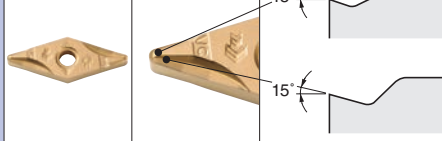
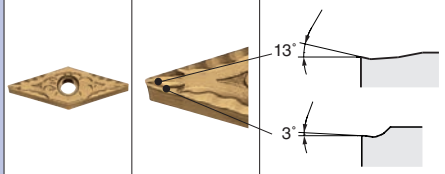
Cutting Range	Name	Design	Advantages
Single-sided Roughing (High Feed Rate)	PX		·Roughing and high feed rate operation ·Low cutting force chipbreaker

● Applicable Chipbreaker Range (ap indicates radius)

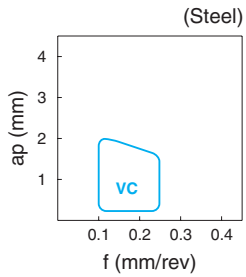


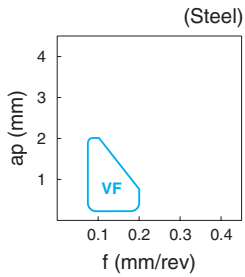


Steel (Copying / Undercutting , Varied ap)

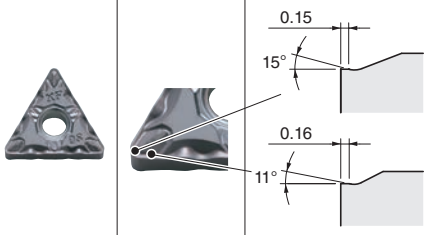
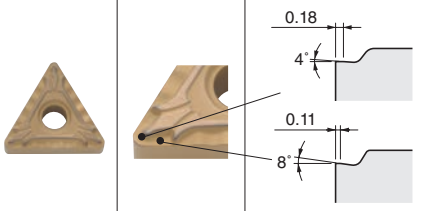
Cutting Range	Name	Design	Advantages
Finishing - Medium	VC		·Handed chipbreaker for copying ·Good chip control at varied ap because of the large space on the main cutting edge side
Finishing - Medium	VF		·Good chip control at varied ap such as copying and undercutting

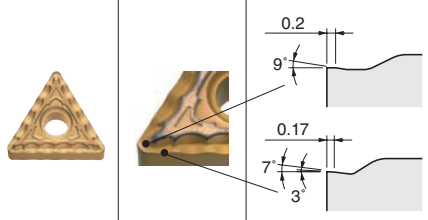
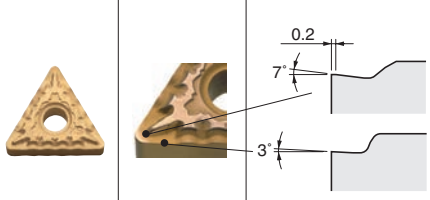
● Applicable Chipbreaker Range (ap indicates radius)





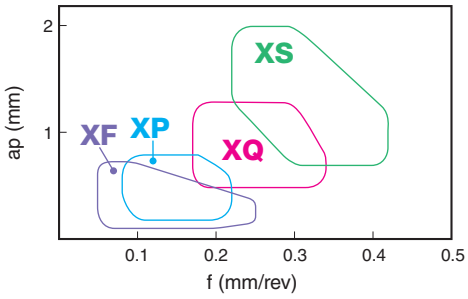
Low Carbon Steel (Pipe / Rolled Plate / Rolled Steel)

Cutting Range	Name	Design	Advantages
Finishing	XF		·Excellent chip control at high speed and small ap machining of low carbon steel
Finishing	XP		·Short chips when finishing due to sharp cutting and special design

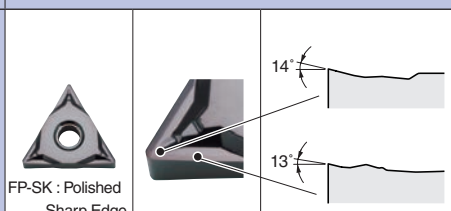
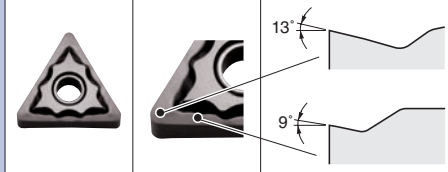
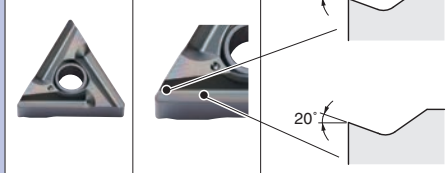
Cutting Range	Name	Design	Advantages
Medium	XQ		·Consistent chip breaking at medium machining due to moderate rake face and special design
Roughing	XS		·Consistent chip breaking when roughing due to special rake face and rake angle design

Applicable Chipbreaker Range (ap indicates radius)

(Low Carbon Steel)

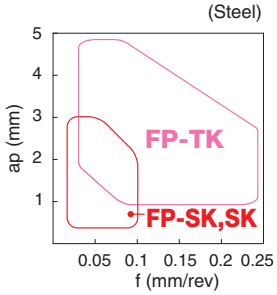


Steel / Stainless Steel (for automatic lathe)

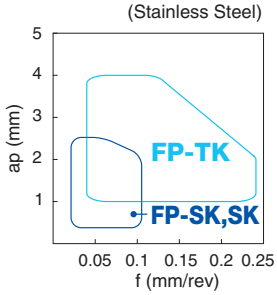
Cutting Range	Name	Design	Advantages
Finishing - Medium	SK	 FP-SK : Polished Sharp Edge -SK : Honed	·For finishing to medium machining in automatic lathes ·Sharp cutting performance equivalent to positive inserts ·2-step dot design provides reliable chip control at various ap
Medium - Roughing	FP-TK		·For medium to large ap in automatic lathes (When machining workpieces of medium to large dia.) ·Superior cutting performance achieved by sharp edge and polished surface ·Smooth chipbreaker geometry improves chip flow with less adhesion ·Large curled chips
Large D.O.C.	LD		·Available for greater depths of cut than many conventional chipbreakers ·Achieves high-precision machining in a single pass ·Chipbreaker shape optimized for various depths of cut ·Stable chip control in a wide range of machining applications

Applicable Chipbreaker Range (ap indicates radius)

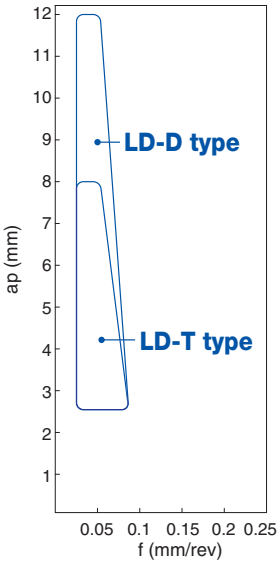
(Steel)



(Stainless Steel)

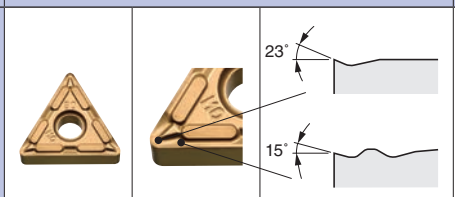
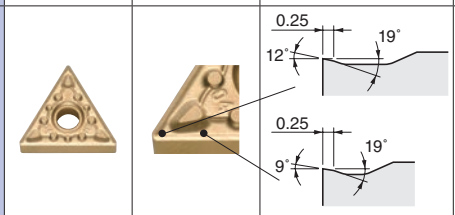
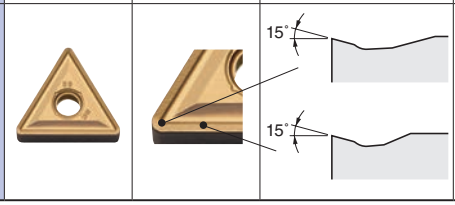


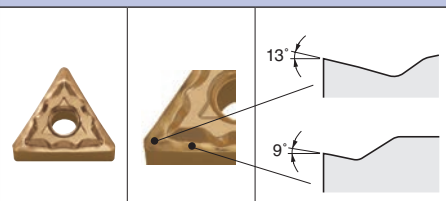
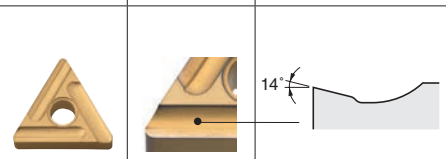
(Steel)



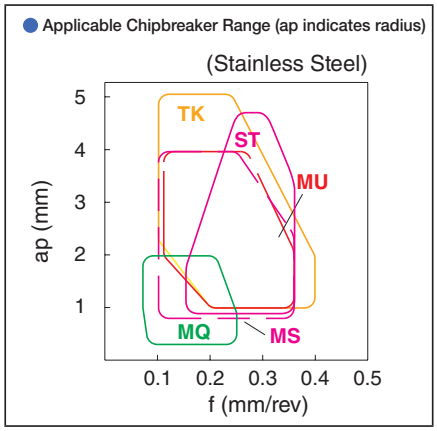
Chipbreaker Selection (Negative Inserts)

Stainless Steel / Heat-Resistant Alloys / Titanium Alloy

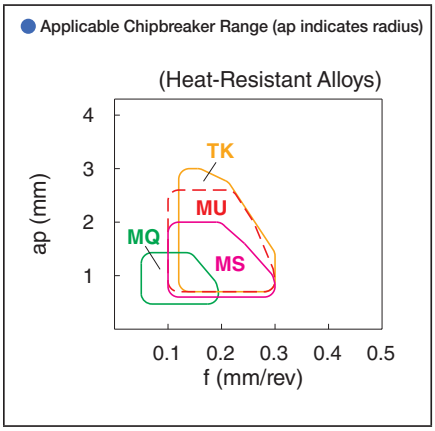
Cutting Range	Name	Design	Advantages
Finishing	MQ		·Large rake angle ·Low cutting force and good chip control
Medium - Roughing	MS		·Superior cutting edge sharpness and strength achieved by a positive land ·Extra strength of cutting edge inhibits damage from wall shouldering
Medium - Roughing	MU		·Large rake angle reduces cutting force ·Less burring achieved by diminishing damage from notching

Cutting Range	Name	Design	Advantages
Medium - Roughing	TK		·Smooth chipbreaker geometry improves chip flow with less adhesion ·Large curled chips
Medium - Roughing	ST		·Less cutting force due to large rake angle ·Less notching by special design

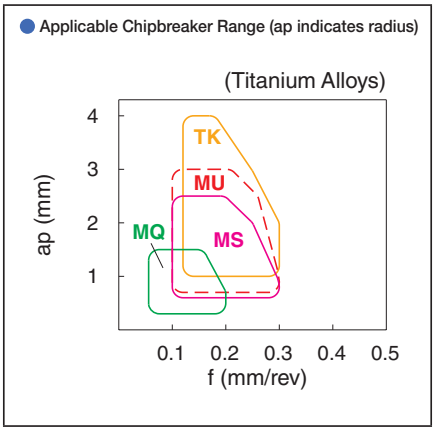
Stainless Steel



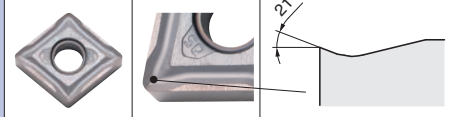
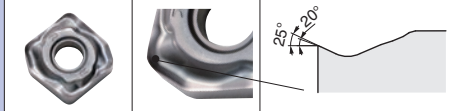
Heat-Resistant Alloys

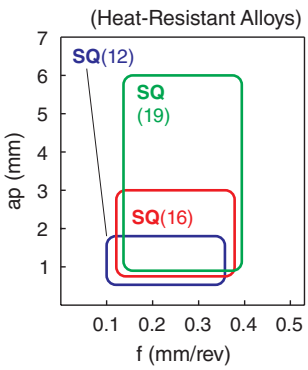


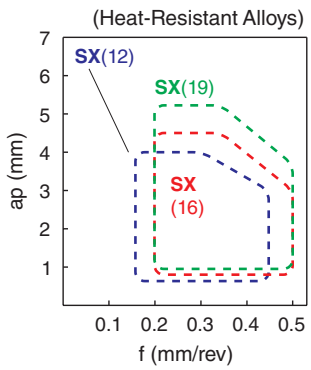
Titanium Alloys

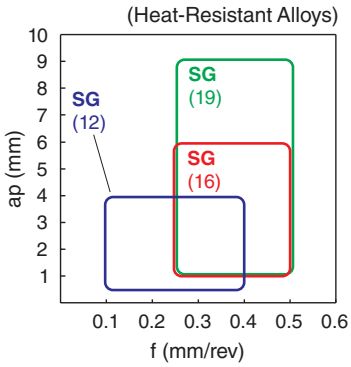


Heat-Resistant Alloys

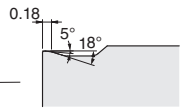
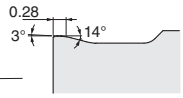
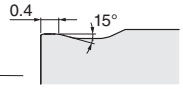
Cutting Range	Name	Design	Advantages
Finishing - Medium	SQ		·Effective for burr suppression and reducing notching by slant cutting edge (inclined in (-) direction)
Roughing	SG		·Provides well-balanced edge strength and cutting force reduction to maintain stable machining at high-load cutting ·Shallow and gently curved breaker controls chips smoothly
Roughing	SX		·Slant cutting edge reduces cutting force ·Less burring achieved by unique cutting edge design



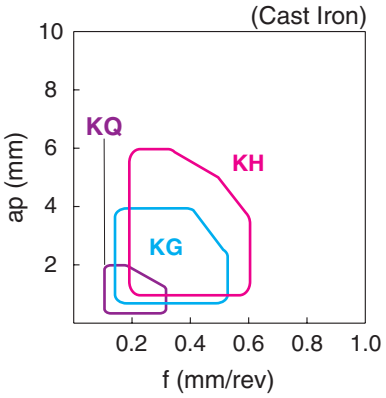




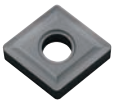
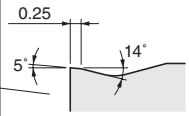
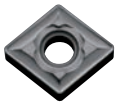
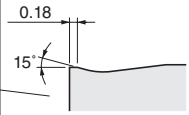
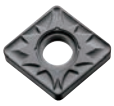
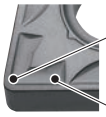
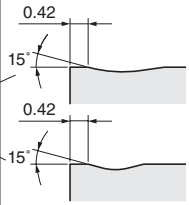
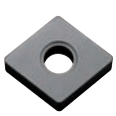
Cast Iron (K series)

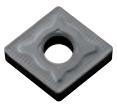
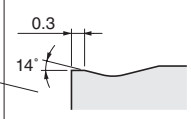
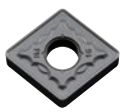
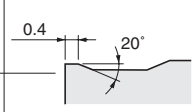
Cutting Range	Name	Design			Advantages
Sharp Cutting Oriented	KQ				·Sharp cutting chipbreaker ·Edge geometry is suitable for workpieces that require sharpness such as thin-walled
Roughing	KG				·Excellent balance of sharpness and strength ·Realized stability at continuous machining
Roughing	KH				·Good for heavily interrupted machining ·Strong edge chipbreaker ·Improved locating / seating in the toolholder pocket, high reliability achieved

● Applicable Chipbreaker Range (ap indicates radius)

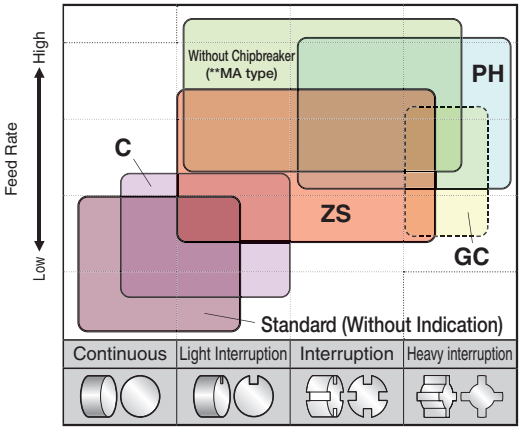


Cast Iron

Cutting Range	Name	Design			Advantages
Sharp Cutting Oriented	Standard (Without Indication)				·Standard chipbreaker for continuous to light interrupted machining of cast iron (Low cutting force)
	C				·High feed rate chipbreaker for continuous to light interrupted machining of cast iron
	ZS				·Standard chipbreaker for light interrupted to interrupted machining of cast iron (Stability oriented)
	Without Chipbreaker				·High feed rate chipbreaker for light interrupted to interrupted machining of cast iron

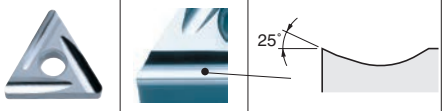
Cutting Range	Name	Design			Advantages
Stability Oriented	GC				·Chipbreaker for heavy interrupted machining of cast iron (Tough edge chipbreaker)
	PH				·Chipbreaker for roughing of cast iron ·Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge

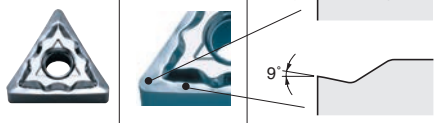
Chipbreaker Selection (Negative Inserts)



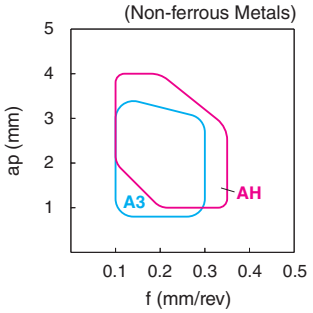
Chipbreaker Selection (Negative Inserts)

Non-ferrous Metals

Cutting Range	Name	Design	Advantages
Finishing - Medium	A3		·Large rake angle and smooth surface ·Good chip control and less adhesion

Cutting Range	Name	Design	Advantages
Medium - Roughing	AH	 G Class : Sharp Edge M Class : Horned Edge Prep.	·Polished chipbreaker ·Smooth chip control and less adhesion

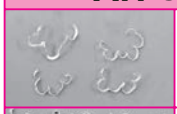
Applicable Chipbreaker Range (ap indicates radius)



A3 Chipbreaker

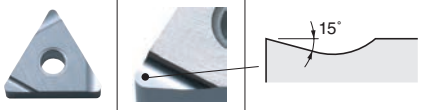
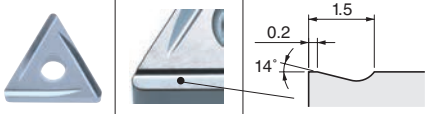
	ap=2mm f=0.2mm/rev
	ap=2mm f=0.3mm/rev

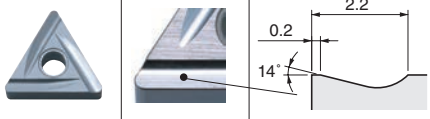
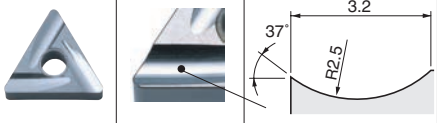
AH Chipbreaker

	ap=2mm f=0.2mm/rev
	ap=2mm f=0.3mm/rev

Steel

2 Ground Chipbreaker

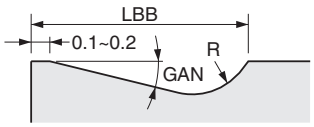
Cutting Range	Name	Design	Advantages
Finishing	S		·Sharp edge and less cutting force ·Good chip control and smooth chip evacuation
Finishing - Medium	B		·Suitable for general purpose machining at feed rate 0.15 to 0.25mm/rev

Cutting Range	Name	Design	Advantages
Medium - Roughing	C		·Suitable for general purpose machining at feed rate 0.20 to 0.35mm/rev
Medium - Roughing / Low Cutting Force	25R		·Applicable to sticky material such as low carbon steel ·Large rake angle and suitable for stainless steel

Effectiveness of ground chipbreaker

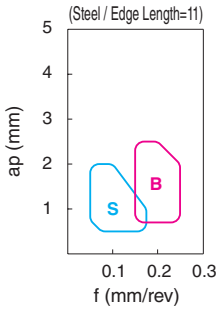
(1) Lower cutting force and improve edge
(2) Improved adhesion resistance
(3) Improved dimension accuracy and finishing surface accuracy
(4) Controlled chip evacuation direction

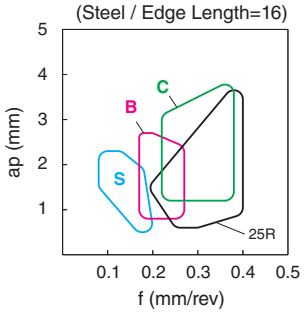
Specification of B, C and parallel ground chipbreaker

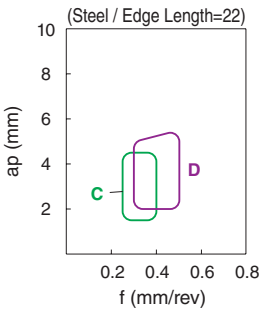


Insert Type	Size	Chipbreaker Name	LBB	GAN	R
CNGG	09,12	Without Indication (Similar to C)	2.2	14°	1.0
WNGG	06	Without Indication (Similar to C)	2.2	14°	1.0
TNGG	11,16	B	1.5	14°	0.5
	16,22	C	2.2	14°	1.0
DNGG	11,15	Without Indication (Similar to C)	2.5	14°	2.0
VNGG	16	Without Indication (Similar to B)	1.5	14°	0.5
SNGG	09,12	B	1.5	14°	0.5
	12	C	2.2	14°	1.0

Applicable Chipbreaker Range (ap indicates radius)



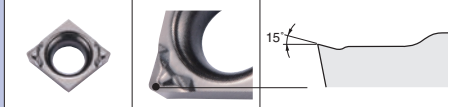
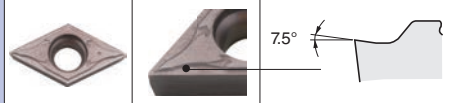
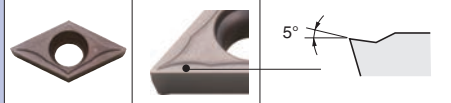
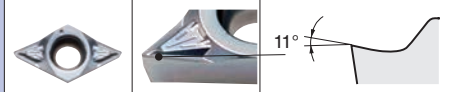
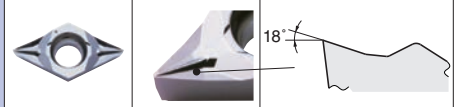
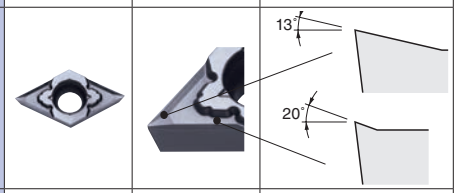
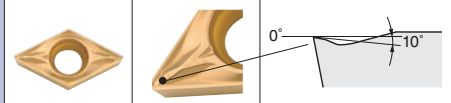


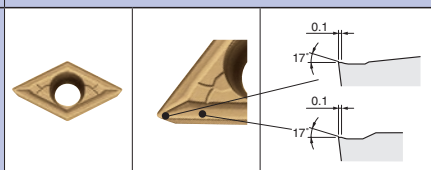
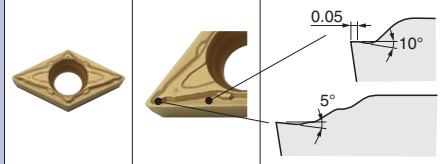
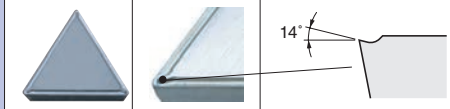
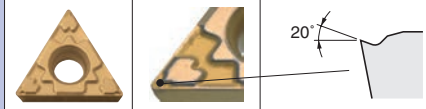
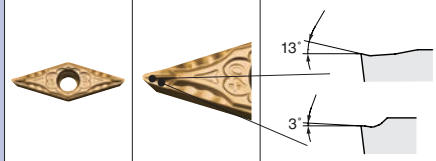
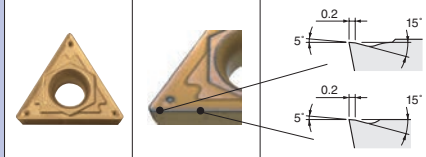
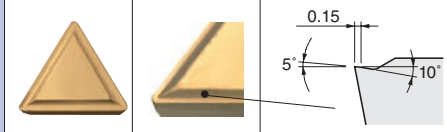
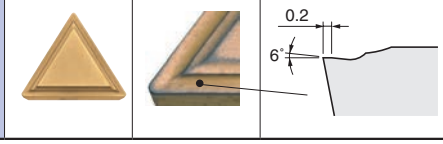


Chipbreaker Selection (Positive Inserts)

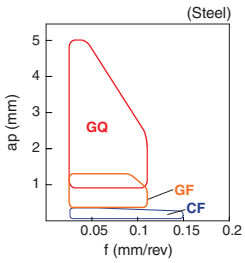
Steel

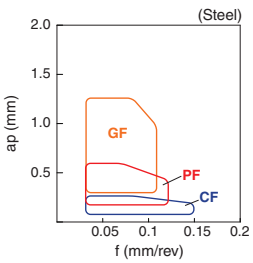
1 Molded Chipbreaker

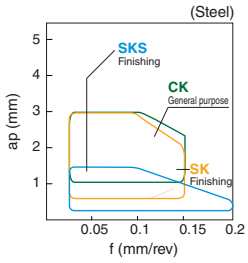
Cutting Range	Name	Design	Advantages
Minute ap	CF		·Available for minute ap (0.02 to 0.2mm) finishing
Finishing	PF		·Chipbreaker for finishing boring available from ap 0.15~0.6mm
Finishing	GF		·Chips fragmented in small pieces in machining of small ap
Finishing - Medium	GQ		·Enables machining over a wide range of conditions by using the optimum chipbreaker width according to the cutting depth
Finishing	SKS		·Chipbreaker for finishing available from 0.2~1.5mm ·Rake face, bottom face and chipbreaker face provide stable chip control.
Finishing	SK		·Sharp cutting performance due to large rake angle ·Large dot to the corner edge improved chip control in a wide feed rate range
Finishing	CK		·Good cutting performance ·Applicable without hand for two direction machining on automatic lathe
Finishing	WP		·Wiper insert ·Good surface finish and good chip control at high feed machining ·Reduces surface finish galling

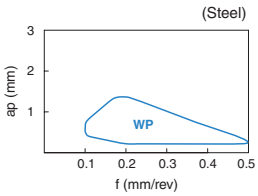
Cutting Range	Name	Design	Advantages
Finishing - Medium	GK		·Good chip evacuation at wide range by breaker dot and wide chip pocket
Finishing	PP		1st Recommendation at steel finishing ·Stable chip control in a wide feed rate range ·Stable tool life due to special edge design with sharpness and improved strength
Finishing	DP		·Consistent chip breaking performance for finishing
Finishing	GP		·Good chip control
Finishing	VF		·Good chip control for varied ap such as copying and undercutting
Finishing - Medium	HQ		·General purpose chipbreaker for medium machining
Medium	G		·Chipbreaker for short chips at medium machining
Medium	Standard (Without Indication)		·Strong edge chipbreaker for medium machining range

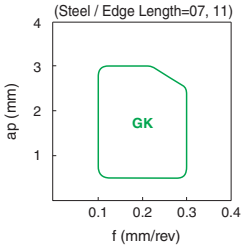
Applicable Chipbreaker Range (ap indicates radius)

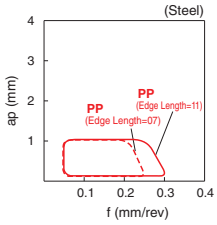


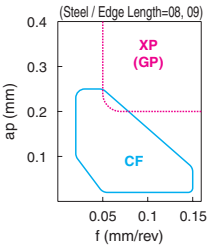


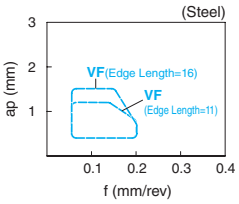


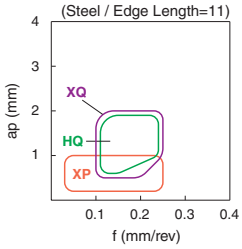


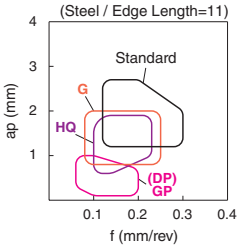






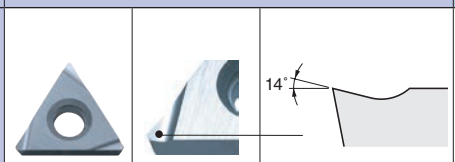
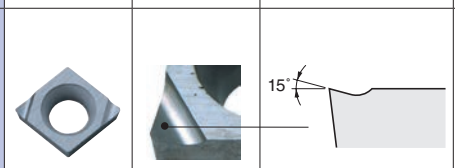
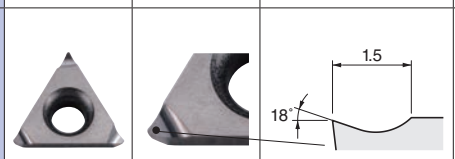
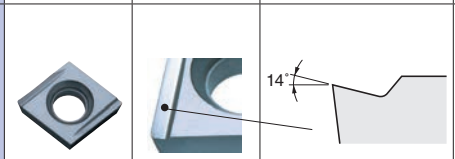
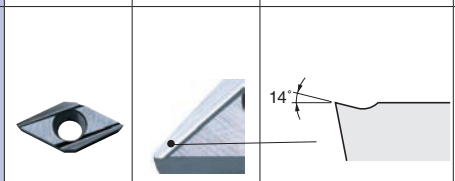
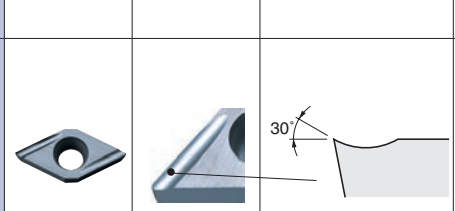


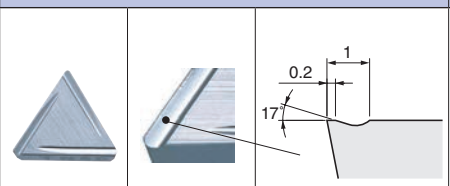
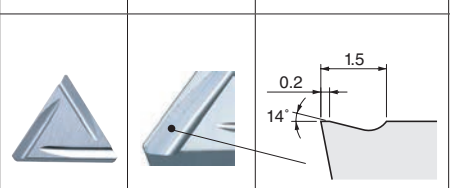
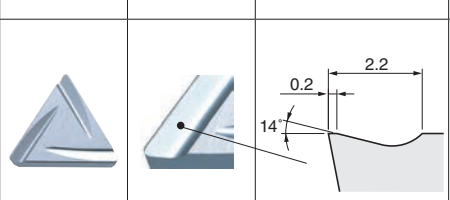
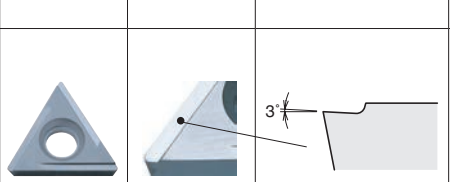




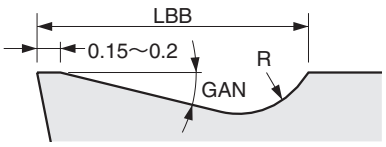
Steel

2 Ground Chipbreaker

Cutting Range	Name	Design	Advantages
Finishing	Lead (Without Indication)		·Good chip control at finishing to light machining with low cutting force
Finishing	F		·Good chip control at finishing to light machining with low cutting force
Finishing	P		·Flows chips towards the inlet of hole ·Sharp edge
Medium	Y		·Sharp cutting performance and good surface finish
Low Feed	J		·Slant chipbreaker width and chip control at various ap ·Applicable to automatic lathes
Low Feed	U		·Good chip control at low feed rate and varied ap with low cutting force

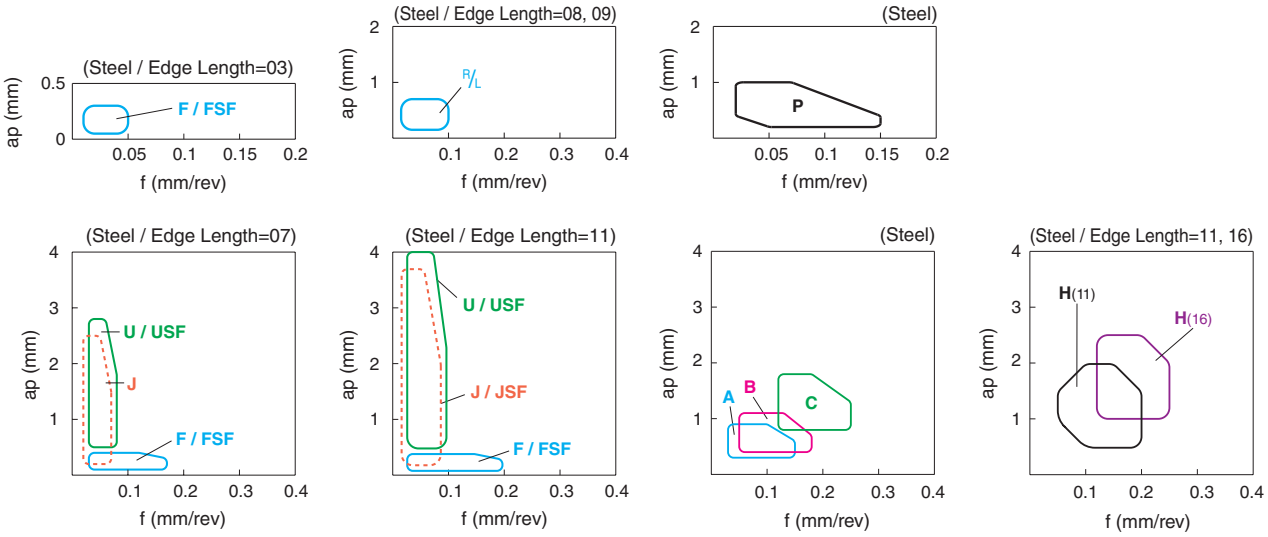
Cutting Range	Name	Design	Advantages
Finishing	A		·Large rake angle and low cutting force ·Narrow chipbreaker width and consistent chip control
Finishing - Medium	B		·General purpose chipbreaker for medium machining ·Good balance between chip control and sharp cutting
Medium	C		·Applicable to high load machining ·Good chip flow and less resistance
Medium	H		·Sharp cutting performance and small curled chips

Specification of A, B, C and parallel ground chipbreaker



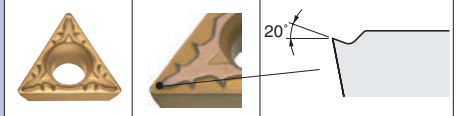
Insert Type	Size	Chipbreaker Name	LBB	GAN	R
TPGR	11	A	1.0	17°	0.5
	11,16	B	1.5	14°	0.5
	16	C	2.2	14°	1.0
SPGR	09	Without Indication (Similar to B)	1.5	14°	0.5
	12	Without Indication (Similar to C)	2.2	14°	1.0

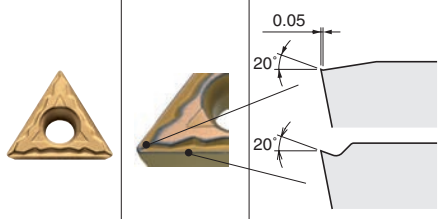
Applicable Chipbreaker Range (ap indicates radius)



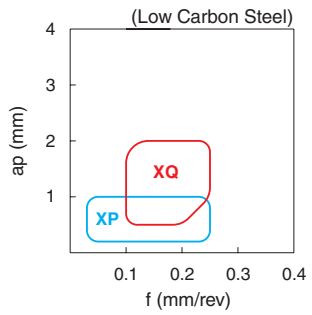
Chipbreaker Selection (Positive Inserts)

Low Carbon Steel (Pipe / Rolled Plate / Rolled Steel)

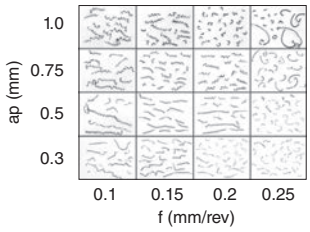
Cutting Range	Name	Design	Advantages
Finishing	XP		·Consistent chip breaking performance even for low carbon steel and sticky material

Cutting Range	Name	Design	Advantages
Finishing - Medium	XQ		·Wide chip control range and sharp cutting performance ·Suitable for low carbon steel and sticky material

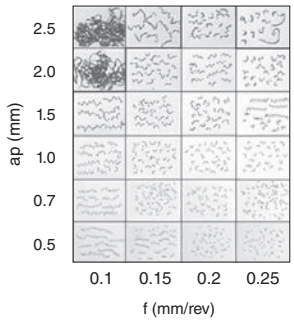
Applicable Chipbreaker Range (ap indicates radius)



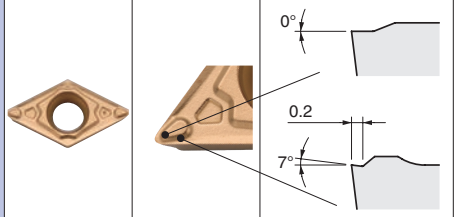
XP Chipbreaker



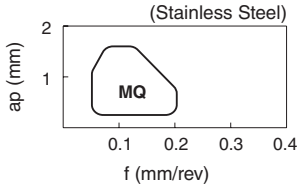
XQ Chipbreaker



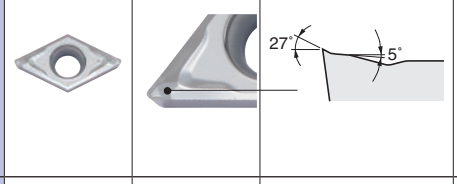
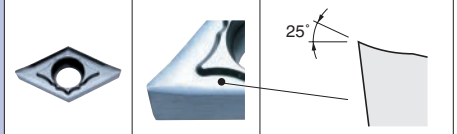
Stainless Steel

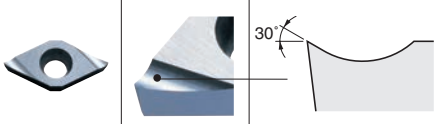
Cutting Range	Name	Design	Advantages
Finishing	MQ		·Good chip evacuation at internal turning ·Small curled chips ·Prevents chip entanglement with toolholder and stabilizes surface roughness

Applicable Chipbreaker Range (ap indicates radius)

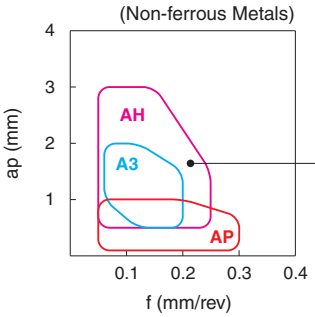


Non-ferrous Metals

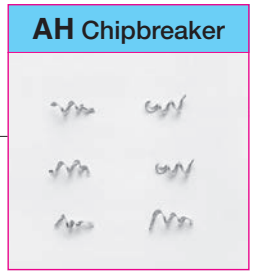
Cutting Range	Name	Design	Advantages
Finishing	AP		·Curved edge and shape of chipbreaker lead good chip control for finishing ·Sharp cutting edge provides excellent surface finish ·Polished chipbreaker
Finishing - Medium	AH		·Positive chip groove and good chip control with low cutting force ·Polished surface reduces adhesion

Cutting Range	Name	Design	Advantages
Finishing - Medium	A3		·Large rake angle, smooth chip flow and less adhesion ·Superior cutting performance achieved by sharp edge

Applicable Chipbreaker Range (ap indicates radius)



AH Chipbreaker



How to read pages of “Turning Inserts”

- Ref. to below for page contents of “Turning Inserts”
- Some contents are same in Chapter C

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕:Light Interruption / 1st Choice
◔:Light Interruption / 2nd Choice
●:Continuous / 1st Choice
○:Continuous / 2nd Choice
(In case hardness is 45HRC or under)

Recommended grades for each applications are shown here.

Insert's ISO Classification of usage (Workpiece materials are written on the right side)

Insert Dimensions

Insert Grades (Red characters mean new)

Insert Corner-R(RE)

Insert Shape

Insert descriptions

Explanation for inserts

Example

Handed Insert shows Right-hand	Handed Insert shows Left-hand

Application / Recommended workpiece material

Insert Appearance Image See Page **B3** for insert color

Applicable chipbreaker range map No.

Purchase unit

Stock

Applicable Toolholder

Applicable chipbreaker range map No.

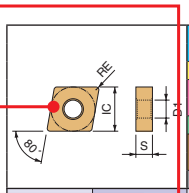
Turning Indexable Inserts

How to read pages of “Turning Inserts” See Page **B15**

80° Rhombic / Negative with Hole

Description	IC	S	D1	Description	IC	S	D1
CN_0904_	9.525	4.76	3.81	CN_1606_	15.875	6.35	6.35
CN_1204_	12.70	4.76	5.16	CN_1906_	19.05	6.35	7.94

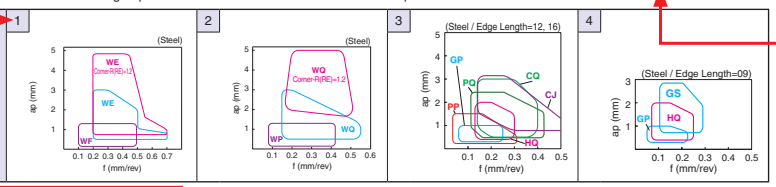
(mm)



Insert	Description	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDJ010	PDJ025	KW10	SW05	Applicable Chipbreaker Range
		Dimension (mm)	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide															PVD Coated Carbide							DLC		Carbide		
Finishing (With Wiper Edge)	CNMG 120404WF	0.4	●	●			●	●				●	●	●	●	●																						1
	120408WF	0.8	●	●			●	●				●	●	●	●	●																						
Finishing (With Wiper Edge)	CNMG 120404WP	0.4	●	●			●	●				●	●	●	●	●	●	●	●																			2
	120408WP	0.8	●	●			●	●				●	●	●	●	●	●	●	●																			
Finishing - Medium (With Wiper Edge)	CNMG 120404WE	0.4	●	●			●	●				●	●	●	●	●																					D8 D9 F65 F69 F70	1
	120408WE	0.8	●	●			●	●				●	●	●	●	●																						
	120412WE	1.2	●	●			●	●				●	●	●	●	●																						
Finishing - Medium (With Wiper Edge)	CNMG 120404WQ	0.4	●	●			●	●				●	●	●	●	●	●	●	●				●	●	●	●	●											2
	120408WQ	0.8	●	●			●	●			▲	●	●	●	●	●	●	●	●				●	●	●	●	●											
	120412WQ	1.2		●				●					●	●	●	●		●	●																			
Finishing	CNMG 120402PP	0.2	●	●		●	●	●	●			●	●	●	●	●			●																			3
	120404PP	0.4	●	●		●	●	●	●			●	●	●	●	●			●																			
	120408PP	0.8	●	●		●	●	●	●			●	●	●	●	●		●																				
	120412PP	1.2	●	●		●	●	●	●				●	●	●	●																						
Finishing	CNMG 090404GP	0.4		●	●		●	●	●	▲																											D9 F70	4
	090408GP	0.8		●			●	●	●	▲																												
Finishing	CNMG 120402GP	0.2	●	●	●		●	●	●				●	●	●			●	●																			3
	120404GP	0.4	●	●	●		●	●	●	▲			●	●	●	●		●	●																		D8 D9 F65 F69 F70	
	120408GP	0.8	●	●	●		●	●	●	▲		●	●	●	●	●		●	●																			
Finishing - Medium	CNMG 120404PQ	0.4	●	●		●	●	●	●			●	●	●	●	●		●	●																			
	120408PQ	0.8	●	●		●	●	●	●			●	●	●	●	●		●	●																			
	120412PQ	1.2	●	●		●	●	●	●			●	●	●	●	●		●	●																			
Finishing - Medium	CNMG 090404HQ	0.4		●	●		●	●					●	●	●	●		●	●																		D9 F70	4
	090408HQ	0.8		●	●		●	●					●	●	●	●		●	●																			
Finishing - Medium	CNMG 120404HQ	0.4	●	●	●		●	●	●	▲		●	●	●	●	●	●	●	●	●	●	●											●				D8 D9 F65 F69 F70	3
	120408HQ	0.8	●	●	●		●	●	●	▲		●	●	●	●	●	●	●	●	●	●	●											●					
	120412HQ	1.2		●	●		●	●	●				●	●	●	●		●	●														●					
	CNGG 120408HQ	0.8																●	●																			
	120412HQ	1.2																●	●																			

See "Precautions when Using Wiper Inserts" in the **R34** and **R35** for WF/WE chipbreakers.

Applicable Chipbreaker Range
ap indicates radius



Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page **B15**

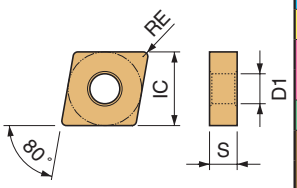
80° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



| | | |

How to read pages of "Turning Inserts" ➡ See Page B15

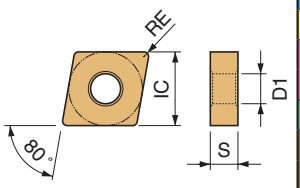
80° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



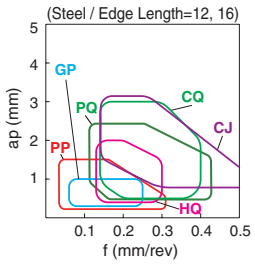
	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◐			●	◐	◔			○	●	◐	◔	✠			◔	✠																		
M																			●	◐												◐				
K															✠																					
															◔																					
N																																				
S																			○	◔												◐				
																																◐				
H																																				

Insert	Description	Dimension (mm) RE	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing - Medium / Up Facing	CNMG 120404CQ	0.4	D8 D9 F65 F69 F70	1
	CNMG 120408CQ	0.8		
	CNMG 120412CQ	1.2		
	CNMG 160608CQ	0.8	D9	
	CNMG 160612CQ	1.2		
Finishing - Medium / Up Facing	CNMG 120408CJ	0.8	D8 D9 F65 F69 F70	
	CNMG 120412CJ	1.2		
	CNMG 160612CJ	1.2	D9	
	CNMG 160616CJ	1.6		
Medium	CNMG 120404TN-V	0.4	D8 D9 F65 F69 F70	2
	CNMG 120408TN-V	0.8		
Medium - Roughing	CNMG 090404GS	0.4	D9 F70	B16 4
	CNMG 090408GS	0.8		
	CNMG 120404GS	0.4		
	CNMG 120408GS	0.8		
	CNMG 120412GS	1.2		
Medium - Roughing	CNMG 120404PG	0.4	D8 D9 F65 F69 F70	3
	CNMG 120408PG	0.8		
	CNMG 120412PG	1.2		
	CNMG 120416PG	1.6		
Medium - Roughing	CNMG 120404PS	0.4		
	CNMG 120408PS	0.8		
	CNMG 120412PS	1.2		
	CNMG 120416PS	1.6		
	CNMG 160612PS	1.2	D9	
	CNMG 160616PS	1.6		

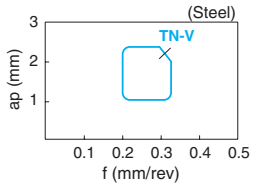
Applicable Chipbreaker Range

ap indicates radius

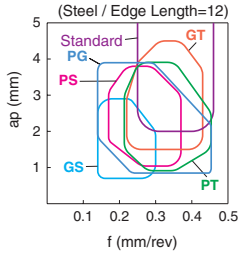
1

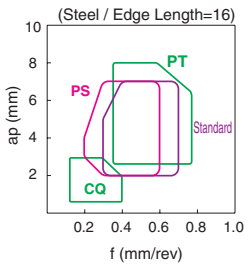


2



3





● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page B15

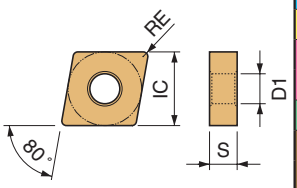
80° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



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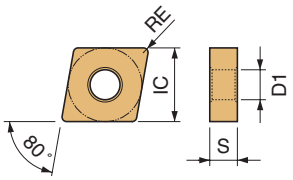
How to read pages of "Turning Inserts" ➡ See Page **B15**

80° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
Insert / Description / Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◐		●	●	◐	◔			○	●	◐	◔	✱		◔	✱										◐		◔							
M																			●	◐							◔		◔			◐				
K																																				
N																																				
S																			○	◔												◐				
H																																				
Single-sided / Roughing / High Feed Rate — CNMM 120408PX 0.8; 120412PX 1.2; 120416PX 1.6										●	●	●	●	●		●	●	●																	
CNMM 160608PX 0.8; 160612PX 1.2; 160616PX 1.6											●	●	●	●			●	●																	
CNMM 190608PX 0.8; 190612PX 1.2; 190616PX 1.6; 190624PX 2.4											●	●	●	●		●	●	●																	
Low Carbon Steel — Finishing / Small ap — CNMG 120404XF 0.4; 120408XF 0.8	●	●		●	●	●	●																												
Low Carbon Steel — Finishing — CNMG 120404XP 0.4; 120408XP 0.8	●	●	●	●	●	●	●	▲			●	●	●			●	●																		
Low Carbon Steel — Medium — CNMG 120404XQ 0.4; 120408XQ 0.8	●	●	●	●	●	●	●	▲		●	●	●	●	●		●	●																		
Low Carbon Steel — Roughing — CNMG 120408XS 0.8	●	●	●		●	●	●	▲		●	●	●	●	●		●	●																		
Finishing - Medium — Sharp Edge / Polished — CNGG 120402MFP-SK <0.2; 120404MFP-SK <0.4							●																				●		●			●				
Medium - Roughing — Sharp Edge / Polished — CNGG 120404FP-TK 0.4; 120408FP-TK 0.8																											●		●			●				
Stainless Steel / Heat-Resistant Alloys — Medium - Roughing / Sharp Edge — CNGG 120404TK 0.4; 120408TK 0.8																																			●	●
Stainless Steel / Heat-Resistant Alloys — Medium - Roughing — CNMG 120404TK 0.4; 120408TK 0.8																			●	●												●				
Applicable Chipbreaker Range																																				

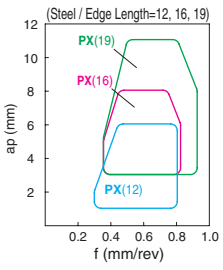
Insert	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Single-sided / Roughing / High Feed Rate	D8 D9 F65 F69 F70	1
Low Carbon Steel — Finishing / Small ap	D8 D9 F65 F69 F70	2
Low Carbon Steel — Finishing	D8 D9 F65 F69 F70	2
Low Carbon Steel — Medium	D8 D9 F65 F69 F70	2
Low Carbon Steel — Roughing	D8 D9 F65 F69 F70	2
Finishing - Medium — Sharp Edge / Polished	D8 D9 E48 F65 F69 F70	3
Medium - Roughing — Sharp Edge / Polished	D8 D9 E48 F65 F69 F70	3
Stainless Steel / Heat-Resistant Alloys — Medium - Roughing / Sharp Edge	D8 D9 F65 F69 F70	B20
Stainless Steel / Heat-Resistant Alloys — Medium - Roughing	D8 D9 F65 F69 F70	1

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g.**<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1



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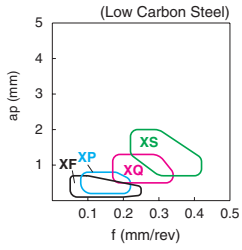

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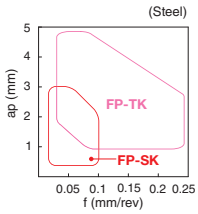
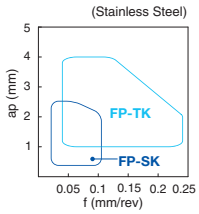




● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page B15

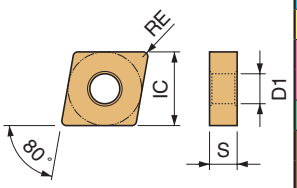
80° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



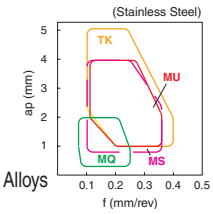
	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P									
M			● ◕						
K									
N									
S			○ ◔			● ◕ ◕		◕	◔
H									

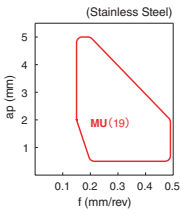
Insert		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL010	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Stainless Steel / Heat-Resistant Alloys	Finishing - Medium	CNMG 120404MQ	0.4																			●	●									●	●	●				●	D8 D9	1
		120408MQ	0.8																			●	●									●	●	●				●		
Heat-resistant Alloys	Finishing - Medium	CNMG 120404SQ	0.4																													●	●						F65 F69 F70	
		120408SQ	0.8																													●	●							
		120412SQ	1.2																													●	●							
		CNMG 160612SQ	1.2																													●	●						D9	2
		160616SQ	1.6																													●	●							
		CNMG 190612SQ	1.2																													●	●							
		190616SQ	1.6																													●	●							
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	CNMG 120404MS	0.4																			●	●									●	●	●				●	D8 D9 F65 F69 F70	
		120408MS	0.8																			●	●									●	●	●				●		
		120412MS	1.2																			●	●									●	●	●				●		
		120416MS	1.6																				●									●	●	●						
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	CNMG 120404MU	0.4																			●	●									●	●	●				●		1
		120408MU	0.8																			●	●									●	●	●				●		
		120412MU	1.2																			●	●									●	●	●						
		CNMG 160608MU	0.8																			●	●									●	●	●					D9	
		160612MU	1.2																			●	●									●	●	●						
		160616MU	1.6																				●									●	●	●						
		CNMG 190612MU	1.2																													●	●	●						
		190616MU	1.6																													●	●	●						
Heat-resistant Alloys	Roughing	CNMG 120408SG	0.8																													●	●	●				●	D8 D9 F65 F69 F70	
		120412SG	1.2																													●	●	●				●		
		CNMG 160612SG	1.2																													●	●	●				●	D9	3
		160616SG	1.6																													●	●	●				●		
		CNMG 190612SG	1.2																													●	●	●				●		
		190616SG	1.6																													●	●	●				●		

Applicable Chipbreaker Range

ap indicates radius

1

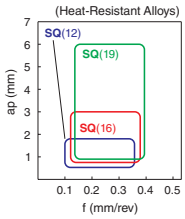




Heat-Resistant Alloys
Titanium Alloys

➡ See Page B8

2



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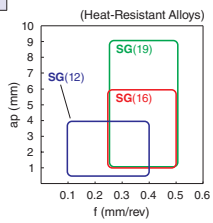


Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page B15

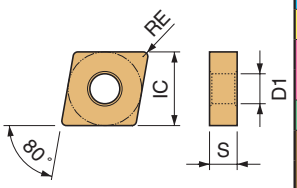
80° Rhombic / Negative with Hole

* S Dimension : ( ) indicates SX Chipbreaker (mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76(4.42)	5.16

(mm)

Description	IC	S	D1
CN_1606_	15.875	6.35(5.96)	6.35
CN_1906_	19.05	6.35(5.93)	7.94



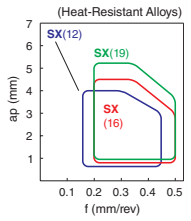
	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide													PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P																																			
M																																			
K				●					●						✠						●	◕	✠											✠	
K				○					○						◔						○	◕	✖												
N																																			
S																													●	◕					
S																																			
H																																			

		Insert (Handed Insert shows Right-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Single-sided / Heat-Resistant Alloys	Roughing		CNMM 1204XR-SX	-																														●	●							D8 D9	1
			1204XL-SX	-																														●	●								
			CNMM 1606XR-SX	-																														●	●								
			1606XL-SX	-																														●	●								
			CNMM 1906XR-SX	-																														●	●								
			1906XL-SX	-																														●	●								
Cast Iron	Sharp Cutting Oriented		CNMG 120404KQ	0.4																				●	●	●															D8 D9 F65 F69 F70	2
			120408KQ	0.8																				●	●	●																	
			120412KQ	1.2																				●	●	●																	
Cast Iron	Roughing		CNMG 120404KG	0.4																				●	●	●																	
			120408KG	0.8																				●	●	●																	
			120412KG	1.2																				●	●	●																	
Cast Iron	Roughing		CNMG 120408KH	0.8																				●	●	●																	
			120412KH	1.2																				●	●	●																	
			120416KH	1.6																				●	●	●																	
Cast Iron	Roughing		CNMG 120404C	0.4																				●	●	●	●	●														
			120408C	0.8																				●	●	●	●	●															
			120412C	1.2											●									●	●	●		●															
			120416C	1.6											●									●	●	●		●															
			CNMG 160612C	1.2																				●	●	●		●													D9	3
Cast Iron	Roughing		CNMG 120408ZS	0.8											●									●	●	●	●	●													D8 D9 F65 F69 F70	
			120412ZS	1.2											●									●	●	●	●	●															
Cast Iron	Roughing		CNMG 120408GC	0.8											●									●	●	●	●	●															
			120412GC	1.2																				●	●	●	●	●															
Cast Iron	Without Chipbreaker		CNGA 120404	0.4									●																									●				
			120408	0.8									●																									●				
			CNMA 120404	0.4				●					●						●						●	●	●	●	●										●				-
			120408	0.8				●					●						●						●	●	●	●	●										●				
			120412	1.2															●						●	●	●	●	●														
			120416	1.6																					●	●	●		●														

Applicable Chipbreaker Range

ap indicates radius

1



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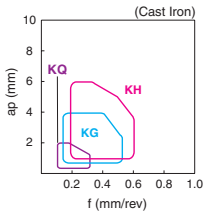

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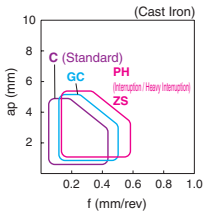


● : Std. Item

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page B15

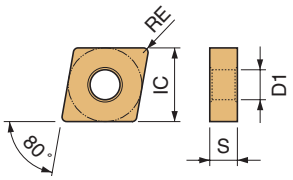
80° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

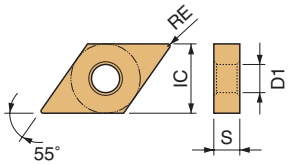
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



| | | |

How to read pages of "Turning Inserts" ➡ See Page B15

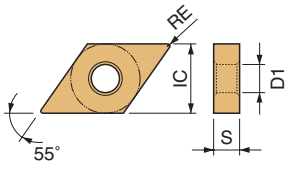
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



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How to read pages of "Turning Inserts" ➡ See Page B15

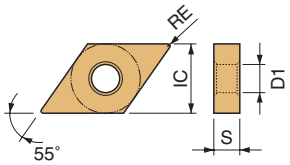
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



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How to read pages of "Turning Inserts" ➡ See Page **B15**

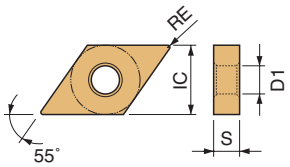
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



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How to read pages of "Turning Inserts" ➡ See Page **B15**

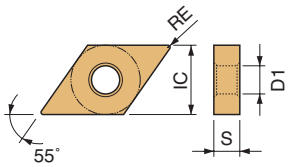
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide													PVD Coated Carbide							DLC		Carbide			
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P Free-cutting steel																																			
P Carbon Steel / Alloy Steel							◐																				◐		◔						
M Stainless Steel																			●	◐							◔		◔			◐			
K Gray Cast Iron																																			
K Nodular Cast Iron																																			
N Non-ferrous Metals																																			
S Heat-resistant Alloys																			○	◔										●	◐	◐				
S Titanium Alloys																																◐			◔	
H Hard Materials																																			

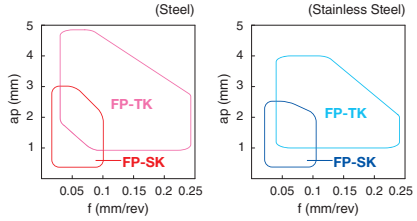
Insert (Handed Insert shows Right-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing - Medium; Sharp Edge / Polished	DNGG 150402MFP-SK	<0.2							●																				●		●			●						1
	150404MFP-SK	<0.4							●																				●		●			●						
Large D.O.C.; Sharp Edge / Polished	DNMG 150402R-LD	0.2																											●					●					D12 D13 F66 F72 F73	2
	150404R-LD	0.4																											●					●						
Medium - Roughing; Sharp Edge / Polished	DNGG 150404FP-TK	0.4																											●		●			●						1
	150408FP-TK	0.8																											●		●			●						
Stainless Steel / Heat-Resistant Alloys; Medium - Roughing / Sharp Edge	DNGG 150404TK	0.4																																			●		Cut-off	
	150408TK	0.8																																			●			
	DNGG 150604TK	0.4																																			●		D12 D13 F66	
	150608TK	0.8																																			●			
Stainless Steel / Heat-Resistant Alloys; Medium - Roughing	DNMG 150404TK	0.4																			●	●												●					D12 D13 F66 F72 F73	3
	150408TK	0.8																			●	●												●						
	DNMG 150604TK	0.4																			●	●												●					D12 D13 F66	
	150608TK	0.8																			●	●												●						
Stainless Steel / Heat-Resistant Alloys; Finishing - Medium	DNMG 150404MQ	0.4																			●	●										●	●	●				●	D12 D13 F66 F72 F73	
	150408MQ	0.8																			●	●										●	●	●				●		
	DNMG 150604MQ	0.4																			●	●										●	●	●				●	D12 D13 F66	
	150608MQ	0.8																			●	●										●	●	●				●		

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1



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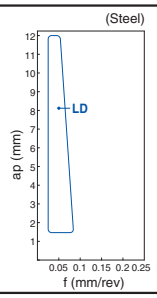

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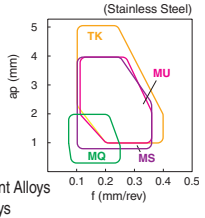


Heat-Resistant Alloys
Titanium Alloys

➡ See Page **B8**

● : Std. Item

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page **B15**

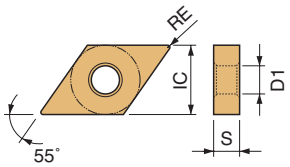
55° Rhombic / Negative with Hole

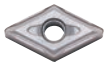
(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



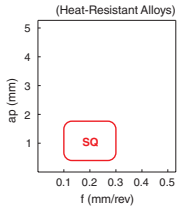
	Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Heat-resistant Alloys	 Finishing - Medium	DNMG 150404SQ	0.4																														●	●						D12 D13 F66 F72 F73	1
		DNMG 150408SQ	0.8																														●	●							
		DNMG 150412SQ	1.2																														●	●							
		DNMG 150604SQ	0.4																														●	●						D12 D13 F66	
		DNMG 150608SQ	0.8																														●	●							
		DNMG 150612SQ	1.2																														●	●							
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	DNMG 150404MS	0.4																			●	●										●	●	●				●	D12 D13 F66 F72 F73	2
		DNMG 150408MS	0.8																			●	●										●	●	●				●		
		DNMG 150412MS	1.2																			●	●										●	●	●				●		
		DNMG 150604MS	0.4																			●	●										●	●	●					D12 D13 F66	
		DNMG 150608MS	0.8																			●	●										●	●	●						
		DNMG 150612MS	1.2																			●	●										●	●	●						
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	DNMG 150404MU	0.4																			●	●										●	●	●				●	D12 D13 F66 F72 F73	
		DNMG 150408MU	0.8																			●	●										●	●	●				●		
		DNMG 150604MU	0.4																			●	●										●	●	●				●	D12 D13 F66	
		DNMG 150608MU	0.8																			●	●										●	●	●				●		
Heat-resistant Alloys	Roughing	DNMG 150408SG	0.8																														●	●	●				●	D12 D13 F66 F72 F73	3
		DNMG 150412SG	1.2																														●	●	●				●		
		DNMG 150608SG	0.8																														●	●	●				●	D12 D13 F66	
		DNMG 150612SG	1.2																														●	●	●				●		

	P	M	K	N	S	H
Free-cutting steel	●					
Carbon Steel / Alloy Steel	●					
Stainless Steel		● ◕				
Gray Cast Iron			●			
Nodular Cast Iron			●			
Non-ferrous Metals				●		
Heat-resistant Alloys					○ ◕	
Titanium Alloys					◕	
Hard Materials						●

Applicable Chipbreaker Range

ap indicates radius

1



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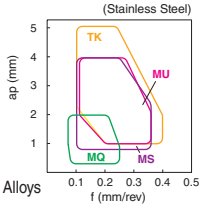
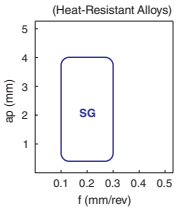


Heat-Resistant Alloys
Titanium Alloys

➡ See Page **B8**

3



Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

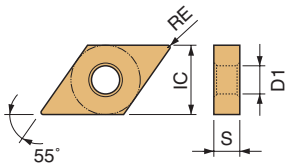
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



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How to read pages of "Turning Inserts" ➡ See Page **B15**

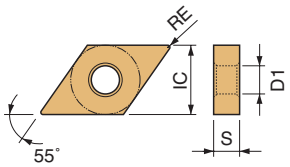
55° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
DN_1506_	12.70	6.35	5.16



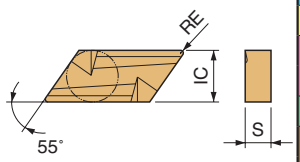
| | | |

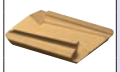
How to read pages of "Turning Inserts" ➡ See Page **B15**

55° Parallelogram / Negative without Hole

(mm)

Description	IC	S	D1
KNMX1604_	9.525	4.76	-



Insert (Handed Insert shows Right-hand)	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium - Roughing 	KNMX 160405R-1	0.5																●	●																				-	1
	160405L-1	0.5																●	●																					
	160410R-1	1.0																●	●																					
	160410L-1	1.0																●	●																					

Applicable Chipbreaker Range: 1

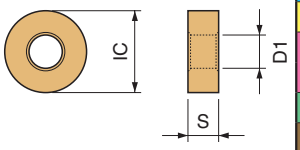
Round / Negative with Hole

(mm)

Description	IC	S	D1
RN_0903_	9.525	3.18	3.81
RN_1204_	12.70	4.76	5.16

(mm)

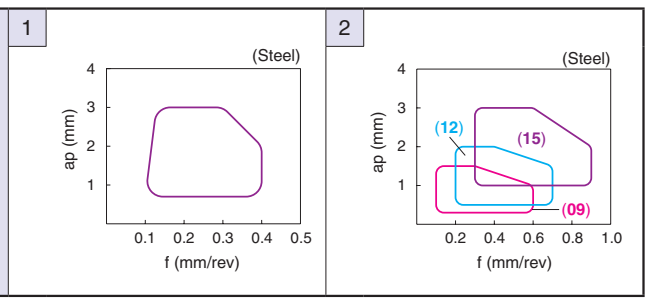
Description	IC	S	D1
RN_1506_	15.875	6.35	6.35



Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium - Roughing	RNMG 090300	-		●	●			●					●	●	●				●																				D23	2
	RNMG 120400	-		●	●			●			●		●	●	●	●		●	●				●	●	●															
	RNMG 150600	-												●	●				●				●	●	●														-	

Applicable Chipbreaker Range: 2

Applicable Chipbreaker Range
ap indicates radius



● : Std. Item

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page **B15**

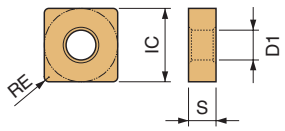
90° Square / Negative with Hole

(mm)

Description	IC	S	D1
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

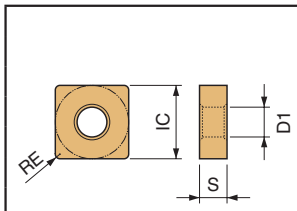
90° Square / Negative with Hole

(mm)

Description	IC	S	D1
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

(mm)

Description	IC	S	D1
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94



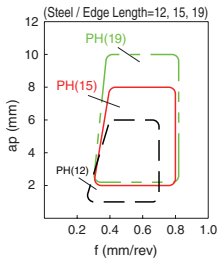
	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P	●	◕							
M									
K				●	◕				
N									
S									
H									

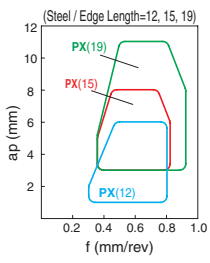
Insert		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Roughing		SNMG 120408PH	0.8											●	●	●	●		●	●	●			●	●	●		●												D14	
		120412PH	1.2										●	●	●	●	●		●	●	●			●	●	●		●												D15	
		120416PH	1.6											●	●	●	●			●	●			●	●	●	●													F75	
		SNMG 150612PH	1.2											●	●	●	●			●				●	●	●		●												-	
		150616PH	1.6											●	●		●							●	●	●															
		SNMG 190612PH	1.2													●	●	●			●	●																			
		190616PH	1.6													●	●	●		●	●																				
Single-sided / Roughing / High Feed Rate		SNMM 120408PX	0.8											●	●	●	●		●																					D14	1
		120412PX	1.2											●	●	●	●		●																					D15	
		120416PX	1.6												●																									F75	
		SNMM 150612PX	1.2												●	●	●																							-	
		150616PX	1.6												●																										
		SNMM 190612PX	1.2												●	●	●					●																		-	
		190616PX	1.6											●	●	●	●			●	●																				
		190624PX	2.4												●	●	●			●																					
Low Carbon Steel	Finishing	SNMG 120408XP	0.8	●	●		●	●	●	●				●	●	●			●	●																				D14	
Low Carbon Steel	Medium	SNMG 120408XQ	0.8	●	●	●	●	●	●	●	▲			●	●	●			●	●																				D15	2
Low Carbon Steel	Roughing	SNMG 120408XS	0.8	●	●		●	●	●	●				●	●	●	●			●																				F75	

Applicable Chipbreaker Range

ap indicates radius

1





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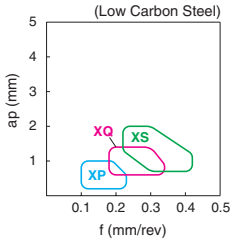


● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page B15

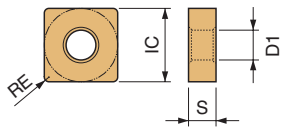
90° Square / Negative with Hole

(mm)

Description	IC	S	D1
SN_1204_	12.70	4.76	5.16
SN_1506_	15.875	6.35	6.35

(mm)

Description	IC	S	D1
SN_1906_	19.05	6.35	7.94
SNMN1204_	12.70	4.76	-



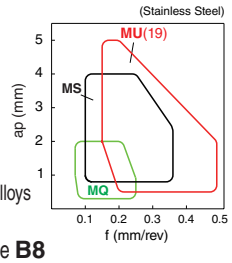
	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P									
M			● ◐					◐	
K				● ◐ ✣	◐ ○ ◐ ✖				
N									
S			○ ◔				● ◐ ◐	◐	◔
H									

Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Stainless Steel / Heat-Resistant Alloys Finishing - Medium	SNMG 120404MQ	0.4																			●	●										●	●	●				●	D14 D15 F75	1
	SNMG 120408MQ	0.8																			●	●										●	●	●				●		
Medium - Roughing	SNMG 120404MS	0.4																			●	●										●	●	●				●		
	SNMG 120408MS	0.8																			●	●										●	●	●				●		
	SNMG 120412MS	1.2																			●	●										●	●	●				●		
	SNMG 120416MS	1.6																			●	●										●	●	●						
Medium - Roughing	SNMG 190612MU	1.2																														●	●	●					-	
	SNMG 190616MU	1.6																														●	●	●						
Heat-resistant Alloys Roughing	SNMG 120408SG	0.8																														●	●	●				●	D14 D15 F75	2
	SNMG 120412SG	1.2																														●	●	●				●		
	SNMG 190612SG	1.2																														●	●	●				●	-	
	SNMG 190616SG	1.6																														●	●	●				●		
Cast Iron Roughing	SNMG 120408KG	0.8																					●	●	●														D14 D15 F75	3
	SNMG 120412KG	1.2																					●	●	●															
Cast Iron Roughing	SNMG 120408KH	0.8																					●	●	●															
	SNMG 120412KH	1.2																					●	●	●															
	SNMG 120416KH	1.6																					●	●	●															
Cast Iron Roughing	SNMG 120408C	0.8																					●	●	●		●													
	SNMG 120412C	1.2																					●	●	●		●													
Cast Iron Roughing	SNMG 120408ZS	0.8															●						●	●	●	●	●													4
	SNMG 120412ZS	1.2																					●	●	●		●													
Cast Iron Roughing	SNMG 120408GC	0.8																					●	●	●		●													
	SNMG 120412GC	1.2															●						●	●	●		●													

Applicable Chipbreaker Range

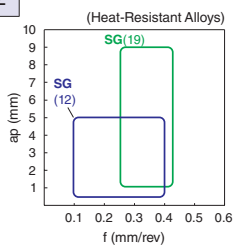
ap indicates radius

1



Heat-Resistant Alloys
Titanium Alloys
➡ See Page B8

2



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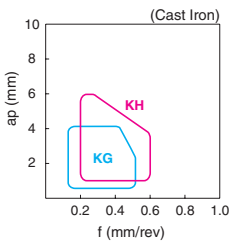

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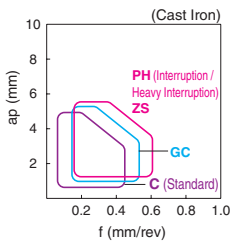


Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

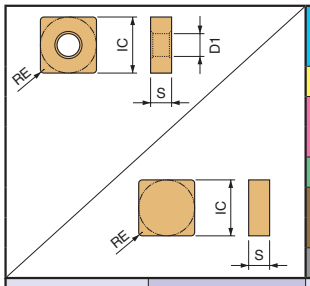
90° Square / Negative with Hole
90° Square / Negative without Hole

(mm)

Description	IC	S	D1
SN_0903_	9.525	3.18	3.81

(mm)

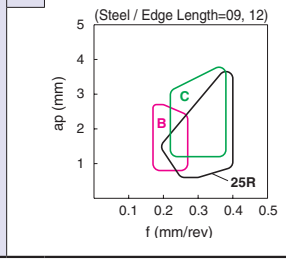
Description	IC	S	D1
SN_1204_	12.70	4.76	5.16
SNMN1204_	12.70	4.76	-



	Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Cast Iron	Without Chipbreaker	SNGA 120404	0.4																																			●	●		
		SNGA 120408	0.8									●																										●	●		
		SNMA 120404	0.4																					●	●	●		●												D14 D15 F75	-
		SNMA 120408	0.8															●						●	●	●	●	●													
		SNMA 120412	1.2															●						●	●	●	●	●													
		SNMA 120416	1.6															●						●	●	●		●													
		SNMA 120420	2.0																					●	●	●		●													
Cast Iron	Without Chipbreaker	SNMN 120408	0.8																					●	●	●														D29 D34 D35 F81	
		SNMN 120412	1.2																					●	●	●															
Finishing - Medium / Medium - Roughing	-B : Finishing - Medium -C : Medium-Roughing	SNGG 090304R-B	0.4	●	●	●		●	●			●																												D14 D15	1
		SNGG 090304L-B	0.4	●	●	●		●	●			●																													
		SNGG 090308R-B	0.8	●	●	●		●	●																																
		SNGG 090308L-B	0.8	●	●	●		●	●																																
		SNGG 120404R-C	0.4	●	●	●		●	●																													●		D14 D15 F75	
		SNGG 120404L-C	0.4	●	●	●		●	●																													●			
		SNGG 120408R-C	0.8	●	●	●		●	●			●																										●			
		SNGG 120408L-C	0.8	●	●	●		●	●																													●			
		SNMG 120404R-C	0.4	●	●	●		●	●																																
		SNMG 120404L-C	0.4	●	●	●		●	●																																
		SNMG 120408R-C	0.8	●	●	●		●	●																																
		SNMG 120408L-C	0.8	●	●	●		●	●																																
Medium - Roughing	Low cutting force	SNGG 120404R-25R	0.4	●	●	●		●	●																																
		SNGG 120404L-25R	0.4	●	●	●		●	●																																
		SNGG 120408R-25R	0.8	●	●	●		●	●																																
		SNGG 120408L-25R	0.8	●	●	●		●	●																																

Applicable Chipbreaker Range

ap indicates radius



● : Std. Item

Inserts are sold in 10 piece boxes

Turning Indexable Inserts

How to read pages of "Turning Inserts" ➡ See Page **B15**

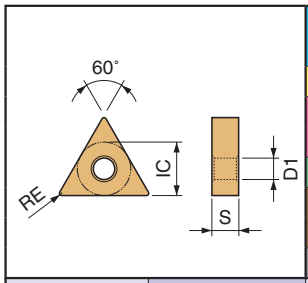
60° Triangle / Negative with Hole

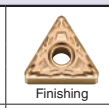
(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

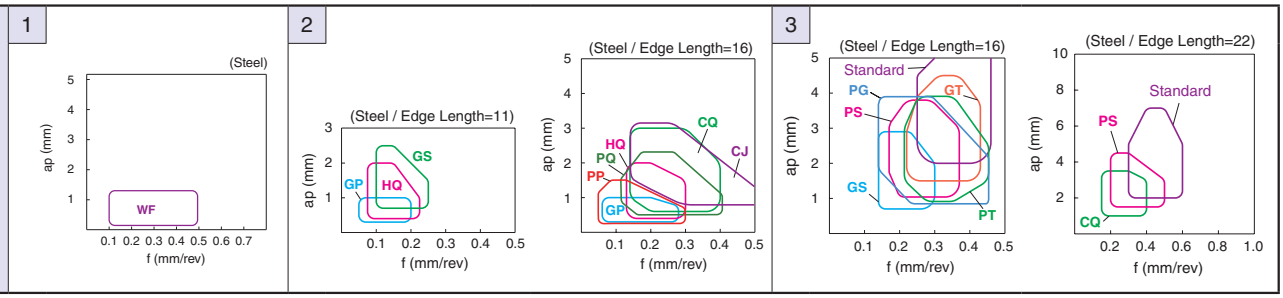


	Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
With Wiper Edge	 Finishing	TNMX 160404WF	0.4	●	●			●	●				●	●	●	●	●																							D16	1
		160408WF	0.8	●	●			●	●				●	●	●	●	●																							D17	
		160412WF	1.2	●	●			●	●				●	●	●	●	●																							F76	
Finishing		TNMG 160402PP	0.2	●	●		●	●	●	●			●	●	●	●	●			●																				D16	2
		160404PP	0.4	●	●		●	●	●	●			●	●	●	●	●			●																				D17	
		160408PP	0.8	●	●		●	●	●	●			●	●	●	●	●																							D18	
		160412PP	1.2	●	●		●	●	●	●				●	●	●	●																							F66	
																																								F76	
																																								F77	
Finishing		TNMG 110404GP	0.4		●	●			●	●																													D17	
		110408GP	0.8		●	●			●	●																													F77	
		TNMG 160402GP	0.2	●	●	●		●	●	●	▲		●	●	●	●	●	●	●	●																				D16	
		160404GP	0.4	●	●	●		●	●	●	▲		●	●	●	●	●	●	●	●																				D17	
		160408GP	0.8	●	●	●		●	●	●	▲		●	●	●	●	●		●	●																				D18	
Finishing - Medium		TNMG 160404PQ	0.4	●	●		●	●	●	●			●	●	●	●	●			●																				F66	
		160408PQ	0.8	●	●		●	●	●	●			●	●	●	●	●		●	●																				F76	
		160412PQ	1.2	●	●		●	●	●	●				●	●	●				●																				F77	
Finishing - Medium		TNMG 110404HQ	0.4		●	●	●		●	●	▲			●	●	●			●	●																				D17	
		110408HQ	0.8		●	●	●		●	●	▲		●	●	●	●	●		●	●																				F77	
		TNMG 160404HQ	0.4	●	●	●	●	●	●	●	▲		●	●	●	●	●	●	●	●	●	●	●												●					D16	
		160408HQ	0.8	●	●	●	●	●	●	●	▲		●	●	●	●	●	●	●	●	●	●	●												●					D17	
		160412HQ	1.2		●	●	●		●	●			●	●	●	●	●		●	●																				D18	
Finishing - Medium / Up Facing		TNMG 160404CQ	0.4	●	●	●		●	●	●	▲		●	●	●	●	●		●	●	●																			F66	
		160408CQ	0.8	●	●	●		●	●	●	▲		●	●	●	●	●	●	●	●	●																			F76	
		160412CQ	1.2		●	●			●	●	▲		●	●	●	●	●		●	●	●																			F77	
		TNMG 220408CQ	0.8										●	●	●	●	●		●	●																				D17	
		220412CQ	1.2											●	●	●				●																				F76	
Medium - Roughing		TNMG 110404GS	0.4		●	●			●	●					●	●				●																				D17	3
		110408GS	0.8												●	●				●																				F77	
		TNMG 160404GS	0.4		●				●	●	▲		●	●	●	●	●		●	●																				D16	
		160408GS	0.8		●				●	●	▲		●	●	●	●	●		●	●																				D17	
																																								D18	
Medium - Roughing		TNMG 160404PG	0.4	●	●			●	●	●			●	●	●	●	●																		●					F66	
		160408PG	0.8	●	●			●	●	●			●	●	●	●	●																		●					F76	
		160412PG	1.2		●				●	●			●	●	●	●	●																		●					F77	

See "Precautions when Using Wiper Inserts" in the **R34** and **R35** for WF chipbreaker.

Applicable Chipbreaker Range

ap indicates radius



Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page **B15**

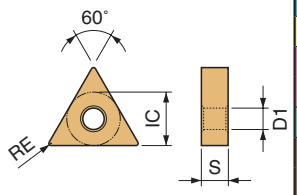
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

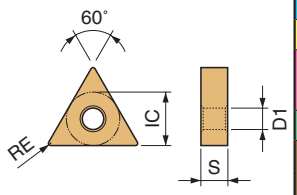
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓		●	●	◓	↻			○	●	◓	↻	✖			↻										◓		↻							
M																											↻		↻			◓				
K															✥																					
															↻																					
N																																				
S																																◓				
																																◓				
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

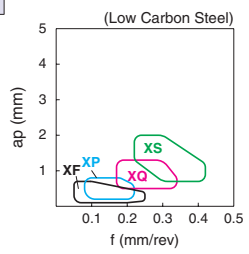
Insert (Handed Insert shows Right-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Single-sided / Roughing / High Feed Rate	TNMM 160408PX	0.8												●	●				●																				D16 D17 D18 F66 F76 F77	B37
	TNMM 160412PX	1.2												●	●				●																					
	TNMM 220408PX	0.8												●	●				●																				D17 F76	3
	TNMM 220412PX	1.2												●	●				●																					
	TNMM 220416PX	1.6												●	●	●																								
Low Carbon Steel Finishing / Small ap	TNMG 160404XF	0.4	●	●		●	●	●	●																														D16 D17 D18 F66 F76 F77	1
	TNMG 160408XF	0.8	●	●		●	●	●	●																															
Low Carbon Steel Finishing	TNMG 160404XP	0.4	●	●	●	●	●	●	●	▲			●	●	●			●	●																					
	TNMG 160408XP	0.8	●	●		●	●	●	●	▲		●	●	●	●	●	●	●	●																					
Low Carbon Steel Medium	TNMG 160404XQ	0.4	●	●	●	●	●	●	●	▲			●	●	●	●		●	●																					
	TNMG 160408XQ	0.8	●	●	●	●	●	●	●	▲		●	●	●	●	●		●	●																					
Low Carbon Steel Roughing	TNMG 160408XS	0.8		●	●			●	●	▲			●	●	●	●		●	●																					
Finishing - Medium Sharp Edge / Polished	TNGG 160401MFP-SK	<0.1							●																			●		●			●						D16 D17 D18 E49 F66 F76 F77	2
	TNGG 160402MFP-SK	<0.2							●																			●		●			●							
	TNGG 160404MFP-SK	<0.4							●																			●		●			●							
Finishing - Medium	TNGG 160402M-SK	<0.2						●	●																															
	TNGG 160404M-SK	<0.4						●	●																															
Large D.O.C.	TNMG 160402R-LD	0.2																										●					●							3
	TNMG 160404R-LD	0.4																										●					●							

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1



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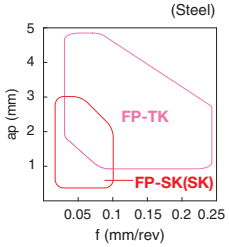
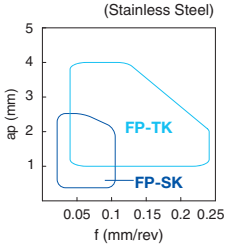
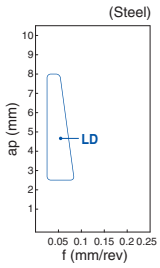




3



Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page **B15**

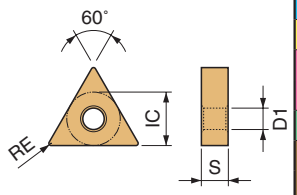
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

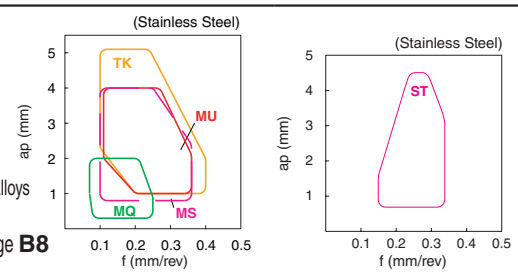


		TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
		Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide																PVD Coated Carbide							DLC		Carbide	
P	Free-cutting steel																																				
P	Carbon Steel / Alloy Steel	●	◒			●	◒				○	●	◒	◔	✖			◔										◒		◔							
M	Stainless Steel																			●	◒							◔		◔			◒				
K	Gray Cast Iron																																				
K	Nodular Cast Iron																																				
N	Non-ferrous Metals																																				
S	Heat-resistant Alloys																			○	◔										●	◒	◒				
S	Titanium Alloys																																◒			◔	
H	Hard Materials																																				

Insert (Handed Insert shows Right-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium - Roughing, Sharp Edge / Polished	TNGG 160404FP-TK	0.4																											●		●			●					D16 D17 D18 E49 F66 F76 F77	
	TNGG 160408FP-TK	0.8																											●		●			●						
Medium - Roughing / Sharp Edge	TNGG 160404TK	0.4																																			●			
	TNGG 160408TK	0.8																																			●			
Medium - Roughing	TNMG 160404TK	0.4																			●	●												●						
	TNMG 160408TK	0.8																			●	●												●						
Finishing - Medium	TNMG 160404MQ	0.4																			●	●										●	●	●				●		1
	TNMG 160408MQ	0.8																			●	●										●	●	●				●		
Medium - Roughing	TNMG 160404MS	0.4																			●	●										●	●	●				●	D16 D17 D18 F66 F76 F77	
	TNMG 160408MS	0.8																			●	●										●	●	●				●		
	TNMG 160412MS	1.2																			●	●										●	●	●				●		
Medium - Roughing	TNMG 160404MU	0.4																			●	●										●	●	●				●		
	TNMG 160408MU	0.8																			●	●										●	●	●				●		
Stainless Steel, Medium - Roughing	TNMG 160404R-ST	0.4	●	●	●		●	●				●	●	●	●	●		●	●		●	●												●					
	TNMG 160404L-ST	0.4	●	●	●		●	●					●	●	●	●		●	●		●	●												●					
	TNMG 160408R-ST	0.8		●	●			●				●	●	●	●	●		●	●		●	●												●					
	TNMG 160408L-ST	0.8		●	●			●				●	●	●	●	●		●	●		●	●												●					
Heat-resistant Alloys, Roughing	TNMG 160408SG	0.8																													●	●	●				●		
	TNMG 160412SG	1.2																													●	●	●				●		2
	TNMG 220408SG	0.8																													●	●	●				●	D17 F76	
	TNMG 220412SG	1.2																													●	●	●				●		

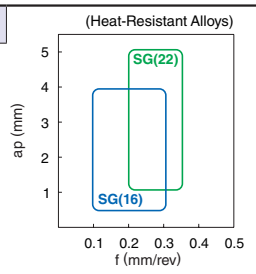
Applicable Chipbreaker Range
ap indicates radius

1



Heat-Resistant Alloys
Titanium Alloys
➡ See Page **B8**

2



● : Std. Item

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page B15

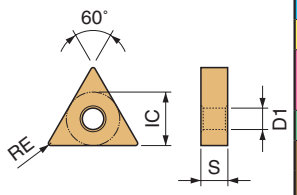
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

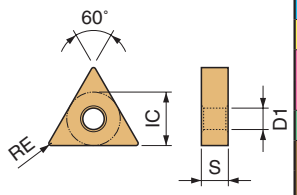
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



| | | |

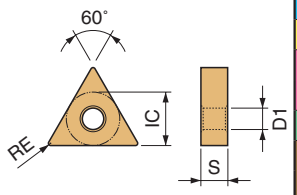
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



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How to read pages of "Turning Inserts" ➡ See Page **B15**

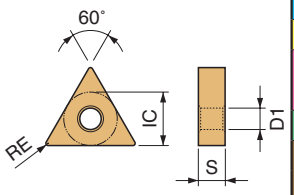
60° Triangle / Negative with Hole

(mm)

Description	IC	S	D1
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	IC	S	D1
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

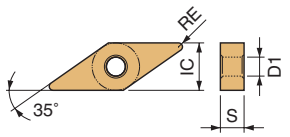


| | | |

35° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
VN_1604_	9.525	4.76	3.81



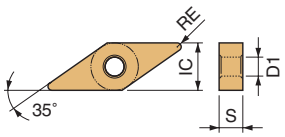
| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

35° Rhombic / Negative with Hole

(mm)

Description	IC	S	D1
VN_1604_	9.525	4.76	3.81



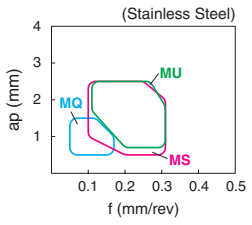
	P	M	K	N	S	H
Free-cutting steel						
Carbon Steel / Alloy Steel	● ◓					
Stainless Steel					◓	
Gray Cast Iron			●	◓ ✠		
Nodular Cast Iron			○	◓ ✠		
Non-ferrous Metals				✠		
Heat-resistant Alloys		● ◓			● ◓ ◓	
Titanium Alloys				✠	◓ ◓	
Hard Materials						

Insert (Handed Insert shows Right-hand)		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Stainless Steel / Heat-Resistant Alloys	Finishing - Medium	VNMG 160404MQ	0.4																			●	●										●	●	●				●	D19 D20 D21 D22	
		160408MQ	0.8																			●	●										●	●	●				●		
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	VNMG 160404MS	0.4																			●	●										●	●	●				●		1
		160408MS	0.8																			●	●										●	●	●				●		
		160412MS	1.2																			●	●										●	●	●						
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	VNMG 160404MU	0.4																			●	●										●	●	●				●		
		160408MU	0.8																			●	●										●	●	●				●		
Heat-resistant Alloys	Roughing	VNMG 160404SG	0.4																														●	●	●				●		2
		160408SG	0.8																														●	●	●				●		
Cast Iron	Roughing	VNMG 160408KG	0.8																					●	●	●															
		160412KG	1.2																					●	●	●															
Cast Iron	Roughing	VNMG 160408KH	0.8																					●	●	●															3
		160412KH	1.2																					●	●	●															
Cast Iron	Without Chipbreaker	VNGA 160404	0.4									●																										●			-
		160408	0.8									●																										●			
Finishing	Surface Roughness Oriented / Sharp Edge	VNGG 160402R-S	0.2		●				●	●																									●						
		160402L-S	0.2		●				●	●																									●						
		160404R-S	0.4		●				●	●																									●						
		160404L-S	0.4		●				●	●																									●						
Medium		VNGG 160402R	0.2	●	●	●		●	●	●	▲																			●										4
		160402L	0.2	●	●	●		●	●	●																				●										
		160404R	0.4	●	●	●		●	●	●																				●							●			
		160404L	0.4	●	●	●		●	●	●																				●							●			
		160408R	0.8	●	●	●		●	●	●																				●							●			
		160408L	0.8	●	●	●		●	●	●																											●			

Applicable Chipbreaker Range

ap indicates radius

1



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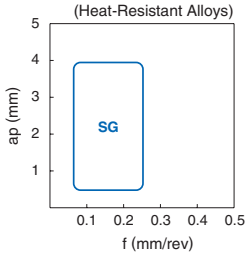

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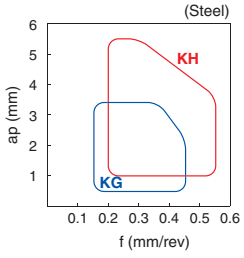

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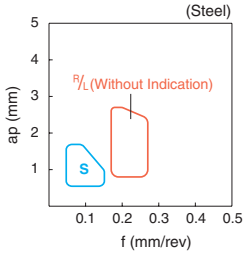


● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

Turning Indexable Inserts

How to read pages of "Turning Inserts" ➔ See Page **B15**

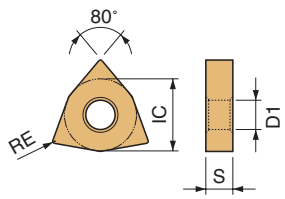
80° Trigon / Negative with Hole

(mm)

Description	IC	S	D1
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	IC	S	D1
WN_0804_	12.70	4.76	5.16



	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P	●	◓							
M			●	◓				◓	
K				✥	◔				
N									
S			○	◔			◓	◓	
H									

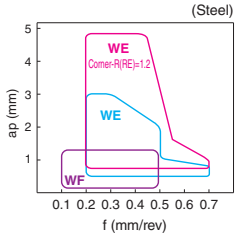
Insert		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
With Wiper Edge	Finishing	WNMG 080404WF	0.4	●	●			●	●				●	●	●	●	●																									1
		080408WF	0.8	●	●			●	●				●	●	●	●	●																									
With Wiper Edge	Finishing	WNMG 080404WP	0.4	●	●			●	●				●	●	●	●		●	●	●																						2
		080408WP	0.8	●	●			●	●				●	●	●	●	●	●	●	●																						
With Wiper Edge	Finishing - Medium	WNMG 080404WE	0.4	●	●			●	●				●	●	●	●	●																							D24 D25 F79 F80	1
		080408WE	0.8	●	●			●	●				●	●	●	●	●																									
		080412WE	1.2	●	●			●	●				●	●	●	●	●																									
With Wiper Edge	Finishing - Medium	WNMG 080404WQ	0.4	●	●			●	●		▲			●	●	●	●		●	●																					2
		080408WQ	0.8	●	●			●	●				●	●	●	●	●	●	●	●																						
		080412WQ	1.2		●				●				●	●	●	●	●	●	●	●																						
Finishing		WNMG 080402PP	0.2	●	●		●	●	●	●			●	●	●	●	●																									
		080404PP	0.4	●	●		●	●	●	●			●	●	●	●	●																									
		080408PP	0.8	●	●		●	●	●	●			●	●	●	●	●																									
		080412PP	1.2	●	●		●	●	●	●				●	●	●	●																									
Finishing		WNMG 060404GP	0.4		●	●			●	●	▲																												D25 F78	
		060408GP	0.8		●	●			●	●	▲																														
Finishing		WNMG 080404GP	0.4	●	●	●		●	●	●																													D24 D25 F79 F80	
		080408GP	0.8	●	●	●		●	●	●	▲																														
Finishing - Medium		WNMG 080404PQ	0.4	●	●		●	●	●	●			●	●	●	●	●			●																					3
		080408PQ	0.8	●	●		●	●	●	●			●	●	●	●	●		●	●																						
		080412PQ	1.2										●	●	●	●	●			●																						
Finishing - Medium		WNMG 06T304HQ	0.4		●	●			●	●					●	●	●			●																				-	
		06T308HQ	0.8			●									●	●				●																						
		WNMG 060404HQ	0.4		●	●	●		●	●	▲		●	●	●	●	●		●	●																				D25 F78	
		060408HQ	0.8		●	●	●		●	●	▲		●	●	●	●	●		●	●																						
		WNMG 080404HQ	0.4	●	●	●	●	●	●	●	▲		●	●	●	●	●	●	●	●	●	●	●											●					D24 D25 F79 F80	
		080408HQ	0.8	●	●	●	●	●	●	●	▲		●	●	●	●	●	●	●	●	●	●	●											●						
		080412HQ	1.2	●	●	●	●	●	●	●			●	●	●	●	●		●	●																					

See "Precautions when Using Wiper Inserts" in the **R34** and **R35** for WF/WE chipbreakers.

Applicable Chipbreaker Range

ap indicates radius

1



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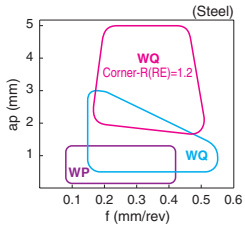

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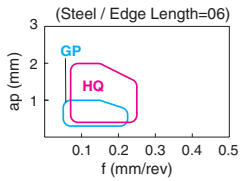
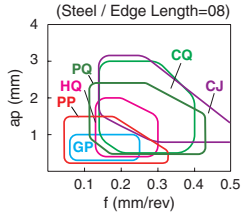




Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page **B15**

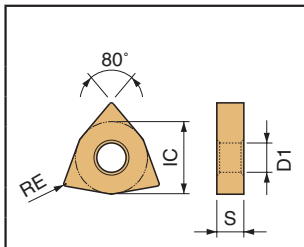
80° Trigon / Negative with Hole

(mm)

Description	IC	S	D1
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	IC	S	D1
WN_0804_	12.70	4.76	5.16

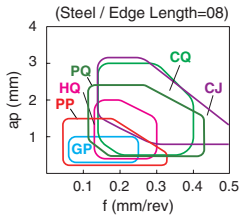


	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide			
Insert / Description / Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
P Free-cutting steel	●	◓		●	●	◓	◔			○	●	◓	◔	✱			◔	✱																				
P Carbon Steel / Alloy Steel																																						
M Stainless Steel																			●	◓												◓						
K Gray Cast Iron				●					●						✱						●	◓	✱															
K Nodular Cast Iron				○					○						◔						○	◓	✱															
N Non-ferrous Metals																																						
S Heat-resistant Alloys																			○	◔												◓						
S Titanium Alloys																																◓						
H Hard Materials																																						
Finishing - Medium / Up Facing — WNMG 080404CQ 0.4	●	●			●	●	●			●	●	●	●			●	●																				D24 D25 F79 F80	1
080408CQ 0.8	●	●	●		●	●	●	▲		●	●	●	●	●	●	●	●	●																				
080412CQ 1.2		●	●			●	●			●	●	●	●	●		●	●	●																				
Finishing - Medium / Up Facing — WNMG 080408CJ 0.8											●	●	●	●		●	●																					
080412CJ 1.2										●	●	●	●			●	●																					
Medium - Roughing — WNMG 060404GS 0.4		●	●			●	●				●	●	●	●		●	●																				D25 F78	
060408GS 0.8		●	●			●	●			●	●	●	●	●		●	●																					
Medium - Roughing — WNMG 080404GS 0.4		●				●	●				●	●	●			●	●																					
080408GS 0.8		●				●	●			●	●	●	●	●		●	●																					
080412GS 1.2											●	●	●	●		●	●																					
Medium - Roughing — WNMG 080404PG 0.4	●	●			●	●	●			●	●	●	●	●																	●						
080408PG 0.8	●	●			●	●	●			●	●	●	●	●																	●						
080412PG 1.2										●	●	●	●	●																	●						
080416PG 1.6										●	●	●	●	●																								
Medium - Roughing — WNMG 080404PS 0.4		●				●	●			●	●	●	●	●		●	●	●	●	●																	D24 D25 F79 F80	2
080408PS 0.8		●				●	●			●	●	●	●	●		●	●	●	●	●																		
080412PS 1.2										●	●	●	●	●	●	●	●	●		●																		
080416PS 1.6										●	●	●	●				●																					
Medium - Roughing / High Feed Rate — WNMG 080408PT 0.8										●	●	●	●	●	●	●	●	●	●	●																		
080412PT 1.2										●	●	●	●	●		●	●	●	●																			
Medium - Roughing / High Feed Rate — WNMG 080408GT 0.8								▲		●	●	●	●	●		●	●																					
080412GT 1.2										●	●	●	●	●		●	●																					
Roughing — WNMG 080404 0.4	●	●	●		●	●	●				●	●	●			●	●			●	●	●	●	●	●							●						
080408 0.8	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●							●						
080412 1.2											●	●	●	●		●	●	●	●	●	●	●	●	●	●							●						

Applicable Chipbreaker Range

ap indicates radius

1



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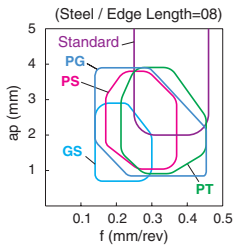

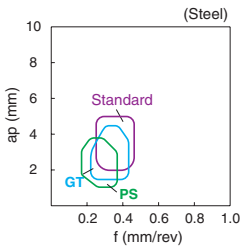

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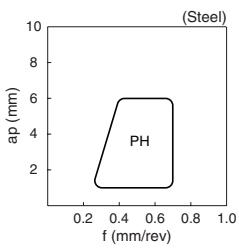


● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➔ See Page B15

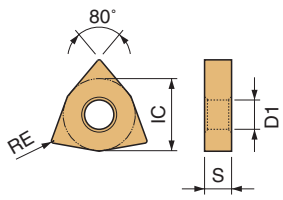
80° Trigon / Negative with Hole

(mm)

Description	IC	S	D1
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	IC	S	D1
WN_0804_	12.70	4.76	5.16

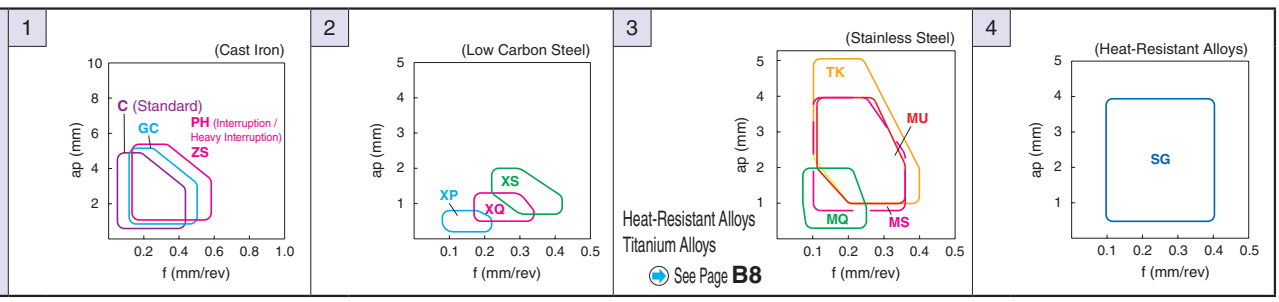


	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P Free-cutting steel	●	◓		●	●	◓	◔			○	●	◓	◔	✖			◔																			
P Carbon Steel / Alloy Steel																																			
M Stainless Steel																			●	◓												◓				
K Gray Cast Iron																					●	◓	✥													
K Nodular Cast Iron																					○	◓	✖													
N Non-ferrous Metals																																				
S Heat-resistant Alloys																			○	◔										●	●	◓				
S Titanium Alloys																																◓				◔
H Hard Materials																																				

Insert		Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Roughing		WNMG 080408PH	0.8										●	●	●	●	●							●	●	●	●	●														B47
		080412PH	1.2										●	●	●	●	●							●	●	●		●														3
																																									1
Low Carbon Steel	Finishing	WNMG 080404XP	0.4	●	●	●	●	●	●	●			●	●	●	●			●	●																					
		080408XP	0.8	●	●		●	●	●	●	▲		●	●	●	●			●	●																					
Low Carbon Steel	Medium	WNMG 080404XQ	0.4	●	●		●	●	●	●				●	●	●	●		●	●																					2
		080408XQ	0.8	●	●	●	●	●	●	●				●	●	●	●		●	●																					
Low Carbon Steel	Roughing	WNMG 080408XS	0.8		●				●	●	▲			●	●	●	●		●	●																					
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing / Sharp Edge	WNGG 080404TK	0.4																																			●	D24 D25 F79 F80	
		080408TK	0.8																																			●		
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	WNMG 080404TK	0.4																		●	●													●					
		080408TK	0.8																		●	●													●					
Stainless Steel / Heat-Resistant Alloys	Finishing - Medium	WNMG 080404MQ	0.4																		●	●											●	●	●				●		3
		080408MQ	0.8																		●	●											●	●	●				●		
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	WNMG 080404MS	0.4																		●	●											●	●	●				●		
		080408MS	0.8																		●	●											●	●	●				●		
		080412MS	1.2																		●	●											●	●	●				●		
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	WNMG 080404MU	0.4																		●	●											●	●	●				●		
		080408MU	0.8																		●	●											●	●	●				●		
Heat-resistant Alloys	Roughing	WNMG 080408SG	0.8																														●	●	●				●		4
		080412SG	1.2																														●	●	●				●		

Applicable Chipbreaker Range

ap indicates radius



Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page B15

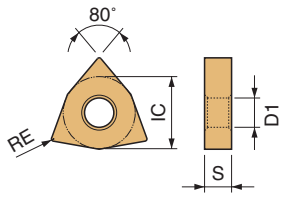
80° Trigon / Negative with Hole

(mm)

Description	IC	S	D1
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	IC	S	D1
WN_0804_	12.70	4.76	5.16

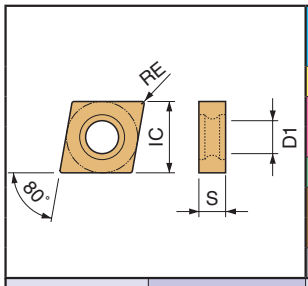


| | | |

Small Double Sided Tools / 80° Rhombic

(mm)

Description	IC	S	D1
CN_U0703_	7.5	3.18	3.6



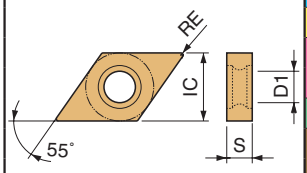
| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

Small Double Sided Tools / 55° Rhombic

(mm)

Description	IC	S	D1
DN_U0803_	7.0	3.18	3.6

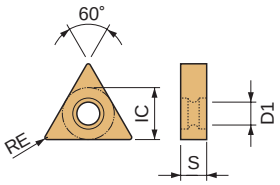


| | | |

Small Double Sided Tools / 60° Triangle

(mm)

Description	IC	S	D1
TN_U0903_	5.56	3.18	3.0



| | | |

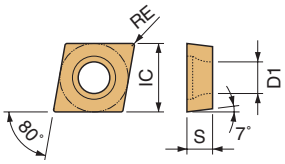
How to read pages of "Turning Inserts" ➡ See Page **B15** (mm)

80° Rhombic / Positive with Hole

*Thickness of CC_0301_ and CC_0401_ are different (mm)

Description	IC	S	D1
*CC_0301_	3.5	1.4	1.9
*CC_0401_	4.3	1.8	2.3

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide													PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P							●																			●										
P																											●		◐							
M																											◐		◐			●				
K																																				
K																																				
N																																	●	●		
S																																●				
S																																●				
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

Insert		Description	Dimension (mm) RE	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Minute ap	Sharp Edge / Polished	*CCGT 030101MP-CF	<0.1	F23 F41	1
		030102MP-CF	<0.2		
		*CCGT 040101MP-CF	<0.1		
		040102MP-CF	<0.2		
Finishing	Sharp Edge / Polished	*CCGT 030101MFP-PF	<0.1		
		030102MFP-PF	<0.2		
		*CCGT 040101MFP-PF	<0.1		
		040102MFP-PF	<0.2		
		CCGT 060201MFP-PF	<0.1	Ref. to the table below	
		060202MFP-PF	<0.2		
		060204MFP-PF	<0.4		
Finishing	Sharp Edge / Polished	CCGT 060201MFP-GF	<0.1		
		060202MFP-GF	<0.2		
		060204MFP-GF	<0.4		
		CCGT 09T301MFP-GF	<0.1		
		09T302MFP-GF	<0.2		
		09T304MFP-GF	<0.4		
Finishing	NEW Sharp Edge / Polished	CCGT 0602005MFP-SKS	<0.05		
		060201MFP-SKS	<0.1		
		060202MFP-SKS	<0.2		
		CCGT 09T3005MFP-SKS	<0.05		
		09T301MFP-SKS	<0.1		
		09T302MFP-SKS	<0.2		
		09T304MFP-SKS	<0.4		
Finishing	Sharp Edge / Polished	CCGT 060201MFP-SK	<0.1		
		060202MFP-SK	<0.2		
		060204MFP-SK	<0.4		
		CCGT 09T301MFP-SK	<0.1		
		09T302MFP-SK	<0.2		
		09T304MFP-SK	<0.4		
Finishing	Sharp Edge / Polished	CCGT 060201MP-CK	<0.1		
		060202MP-CK	<0.2		
		CCGT 09T301MP-CK	<0.1		
		09T302MP-CK	<0.2		
Finishing - Medium	Sharp Edge / Polished	CCGT 060201MFP-GQ	<0.1		
		060202MFP-GQ	<0.2		
		060204MFP-GQ	<0.4		
		CCGT 09T301MFP-GQ	<0.1		
		09T302MFP-GQ	<0.2		
		09T304MFP-GQ	<0.4		

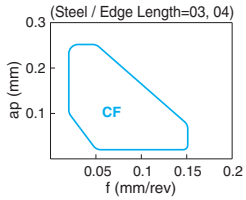
· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

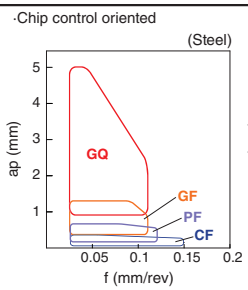
Insert Description	See Page for Applicable Toolholders	Insert Description	See Page for Applicable Toolholders
CC..0602 type	**E26,E27,E43,F23,F41**	CC..09T3 type	**E26,E27,E43,F41,F67**

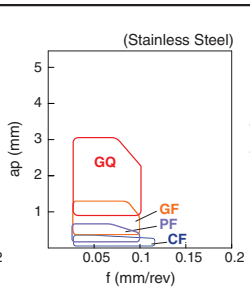
Applicable Chipbreaker Range

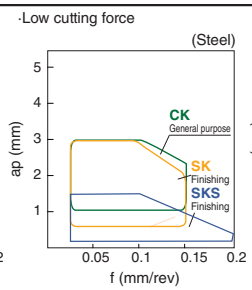
ap indicates radius

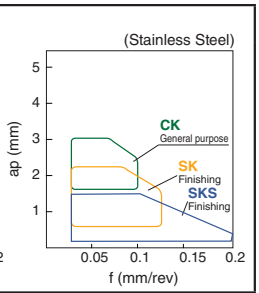
1











● : Std. Item

Inserts are sold in 10 piece boxes

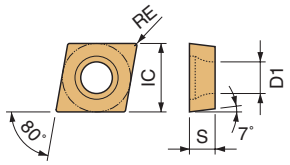
Turning Indexable Inserts

How to read pages of "Turning Inserts" ➔ See Page **B15**

80° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓			●	◓	◔			○	●	◓	◔	✱			◔	✱									◓	◔	◔							
M																			●	◓							◔	◔	◔			◓				
K									●						✱						●	◓	✱													
									○						◔						○	◓	✱													
N																																				
S																			○	◔												◓				
																																◓				
H																																				

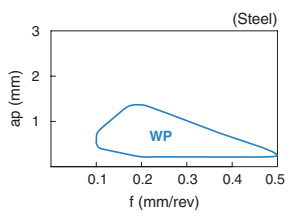
Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

Insert	Description	RE	See Page for Applicable Toolholders	Applicable Chipbreaker Range
With Wiper Edge (Finishing)	CCMT 060202WP	0.2	Ref. to the table below **B53**	1
	060204WP	0.4		
	060208WP	0.8		
	CCMT 09T302WP	0.2		
	09T304WP	0.4		
	09T308WP	0.8		
Finishing	CCMT 060202PP	0.2		
	060204PP	0.4		
	CCMT 09T302PP	0.2		
	09T304PP	0.4		
	09T308PP	0.8		
Finishing - Medium	CCMT 060202GK	0.2		
	060204GK	0.4		
	CCMT 09T302GK	0.2		
	09T304GK	0.4		
	CCMT 120404GK	0.4	E27	
	120408GK	0.8		
	120412GK	1.2		
Finishing - Medium	CCMT 060202HQ	0.2	Ref. to the table below **B53**	2
	060204HQ	0.4		
	CCMT 09T302HQ	0.2		
	09T304HQ	0.4		
	09T308HQ	0.8		
Medium	CCGT 060201	0.1		
	060202	0.2		
	060204	0.4		
	CCGT 09T301	0.1		
	09T302	0.2		
	09T304	0.4		
	CCMT 09T308	0.8		

·See "Precautions when Using Wiper Inserts" in the **R36** and **R37** for WP chipbreaker.

Applicable Chipbreaker Range
ap indicates radius

1



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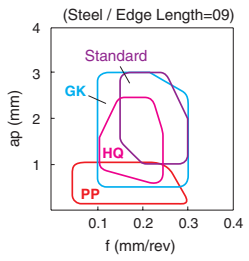


Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

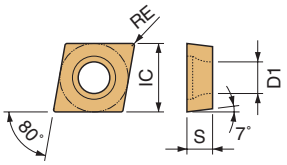
How to read pages of "Turning Inserts" ➡ See Page B15 (mm)

80° Rhombic / Positive with Hole

*Thickness of CC_0301_ and CC_0401_ are different (mm)

Description	IC	S	D1
*CC_0301_	3.5	1.4	1.9
*CC_0401_	4.3	1.8	2.3

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide													PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P																										◓										
P																											◓	◔	◔							
M																			●	◓							◔	◔	◔			◓				
K																																				
K																																				
N																																				
S																			○	◔										●	◓	◓				
S																																◓			◓	
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

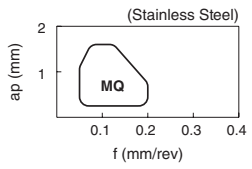
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium, Sharp Edge	CCGT 0602005MF	<0.05	Ref. to the table below B53	B54 2
	060201MF	<0.1		
	060202MF	<0.2		
	060204MF	<0.4		
	CCGT 09T3005MF	<0.05		
	09T301MF	<0.1		
	09T302MF	<0.2		
	09T304MF	<0.4		
Stainless Steel / Heat-Resistant Alloys, Finishing - Medium	CCMT 09T304MQ	0.4		1
	09T308MQ	0.8		
Finishing, Super Fine	*CCET 0301003R-FSF	0.03	F23 F41	2
	0301003L-FSF	0.03		
	030101R-FSF	0.1		
	030101L-FSF	0.1		
	030102R-FSF	0.2		
	030102L-FSF	0.2		
	030104R-FSF	0.4		
	030104L-FSF	0.4		
	*CCET 0401003L-FSF	0.03		
	040101R-FSF	0.1		
	040101L-FSF	0.1		
	040102R-FSF	0.2		
	040102L-FSF	0.2		
	040104R-FSF	0.4		
	040104L-FSF	0.4		
	*CCET 0301005MR-FSF	<0.05		
	0301005ML-FSF	<0.05		
	030101MR-FSF	<0.1		
	030101ML-FSF	<0.1		
	030102MR-FSF	<0.2		
	030102ML-FSF	<0.2		
	030104MR-FSF	<0.4		
	030104ML-FSF	<0.4		
	*CCET 0401005ML-FSF	<0.05		
	040101MR-FSF	<0.1		
	040101ML-FSF	<0.1		
	040102MR-FSF	<0.2		
	040102ML-FSF	<0.2		
	040104MR-FSF	<0.4		
Sharp Edge / Precision	040104ML-FSF	<0.4		

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1



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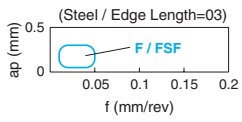
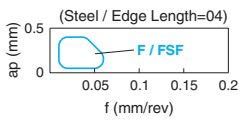




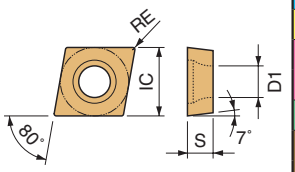
● : Std. Item

Inserts are sold in 10 piece boxes

80° Rhombic / Positive with Hole

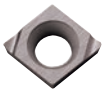
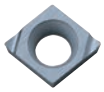
*Thickness of CC_0301_ and CC_0401_ are different (mm)

Description	IC	S	D1
*CC_0301_	3.5	1.4	1.9
*CC_0401_	4.3	1.8	2.3



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide															PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓			●	◓	◔																				◓									
																												◓	◔	◔						
M																											◔	◔	◓			◓				
K																																				
N																																	●	◓	◔	
S																																◓				
																																◓			◔	
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

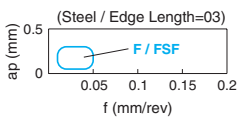
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing  Sharp Edge	*CCET 0301005MR-F	<0.05																										●					●						
	0301005ML-F	<0.05																										●					●		●				
	030101MR-F	<0.1	●				●																					●					●						
	030101ML-F	<0.1	●	●			●	●	●																			●					●	●	●				
	030102MR-F	<0.2	●				●																					●					●						
	030102ML-F	<0.2	●	●			●	●	●																		●	●					●	●	●				
	030104MR-F	<0.4	●				●																					●					●						
	030104ML-F	<0.4	●	●			●	●	●																		●	●					●	●	●				
	*CCET 040101MR-F	<0.1	●				●																					●					●						
	040101ML-F	<0.1	●	●			●	●	●																			●					●	●	●				
	040102MR-F	<0.2	●				●																				●	●					●						
	040102ML-F	<0.2	●	●			●	●	●																		●	●					●	●	●				
	040104MR-F	<0.4	●				●																					●					●						
	040104ML-F	<0.4	●	●			●	●	●																		●	●					●	●	●				
Finishing  Sharp Edge	*CCGT 0301003R-F	0.03																											●										
	0301003L-F	0.03																											●										
	030101R-F	0.1			●																								●							●			
	030101L-F	0.1			●																								●							●			
	030102R-F	0.2			●																								●							●			
	030102L-F	0.2			●					▲																			●							●			
	030104R-F	0.4			●																								●							●			
	030104L-F	0.4			●																								●							●		F23	
	*CCGT 0401003L-F	0.03																											●									F41	1
	040101R-F	0.1																											●							●			
	040101L-F	0.1			●																								●							●			
	040102R-F	0.2			●																								●							●			
	040102L-F	0.2			●																								●							●			
	040104R-F	0.4			●																								●							●			
	040104L-F	0.4			●																								●							●			
	*CCGT 0301005MR-F	<0.05																												●									
	0301005ML-F	<0.05																												●									
	030101MR-F	<0.1																												●									
	030101ML-F	<0.1																												●									
	030102MR-F	<0.2																												●									
	030102ML-F	<0.2																												●									
	030104MR-F	<0.4																												●									
	030104ML-F	<0.4																												●									
	*CCGT 0401005ML-F	<0.05																												●									
	040101MR-F	<0.1																												●									
	040101ML-F	<0.1																												●									
	040102MR-F	<0.2																												●									
	040102ML-F	<0.2																												●									
	040104MR-F	<0.4																												●									
	040104ML-F	<0.4																												●									

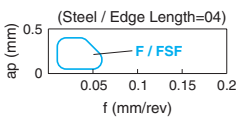
· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1





Inserts are sold in 10 piece boxes

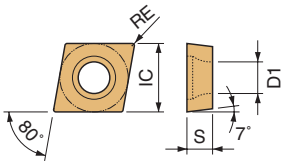
● : Std. Item ▲ :To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page **B15**

80° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5



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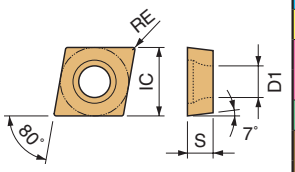
How to read pages of "Turning Inserts" ➔ See Page B15

80° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5



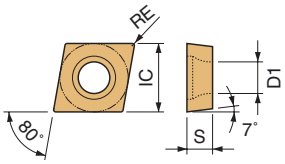
| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

(mm)

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5

80° Rhombic / Positive with Hole



| | | |

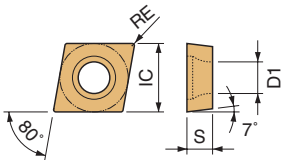
Turning Indexable Inserts

How to read pages of "Turning Inserts" ➔ See Page **B15**

(mm)

Description	IC	S	D1
CC_0602_	6.35	2.38	2.8
CC_09T3_	9.525	3.97	4.4
CC_1204_	12.7	4.76	5.5

80° Rhombic / Positive with Hole



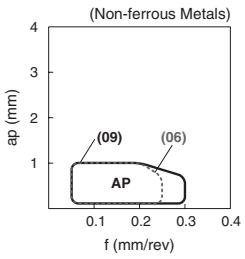
P	Free-cutting steel / Carbon Steel / Alloy Steel
M	Stainless Steel
K	Gray Cast Iron / Nodular Cast Iron
N	Non-ferrous Metals
S	Heat-resistant Alloys / Titanium Alloys
H	Hard Materials

Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Non-ferrous Metals	Finishing / Sharp Edge	CCGT 060202AP	0.2																																	●		●		Ref. to the table below B53	1
		CCGT 060204AP	0.4																																	●		●			
		CCGT 09T302AP	0.2																																	●		●			
		CCGT 09T304AP	0.4																																	●		●			
		CCGT 09T308AP	0.8																																	●		●			
Non-ferrous Metals	Finishing - Medium / Sharp Edge	CCGT 09T302R-A3	0.2																																	●	●	●			
		CCGT 09T302L-A3	0.2																																	●	●	●			
		09T304R-A3	0.4																																	●	●	●			
		09T304L-A3	0.4																																	●	●	●			
		09T308R-A3	0.8																																	●	●	●			
		09T308L-A3	0.8																																	●	●	●			
		CCGT 120402R-A3	0.2																																		●	●			2
		CCGT 120402L-A3	0.2																																		●	●			
		120404R-A3	0.4																																		●	●		E27	
		120404L-A3	0.4																																		●	●			
		120408R-A3	0.8																																		●	●			
		120408L-A3	0.8																																		●				
Non-ferrous Metals	Finishing - Medium / Sharp Edge	CCGT 09T304AH	0.4																																	●	●	●		Ref. to the table below B53	
		09T308AH	0.8																																	●	●	●			
Cast Iron	Without Chipbreaker	CCGW 060201	0.1																																			●			-
		CCGW 060202	0.2																																			●			
		CCGW 09T300	0.0																																			●			
		CCGW 09T301	0.1																																			●			
		CCGW 09T302	0.2																																			●			
		CCGW 09T304	0.4																																			●			

Applicable Chipbreaker Range

ap indicates radius

1



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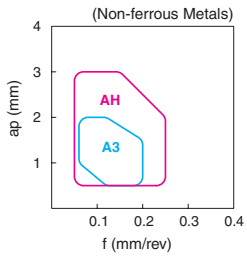


Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

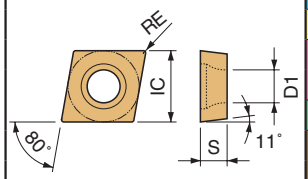
80° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
CPMT0802_	7.94	2.38	3.3
CPMT0903_	9.525	3.18	4.4

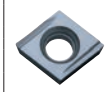
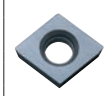
(mm)

Description	IC	S	D1
CP_0802_	7.94	2.38	3.5
CP_0903_	9.525	3.18	4.5



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓			●	◓	◔			○	●	◓	◔	✱			◔	✱									◓	◔	◔						
M																			●	◓							◔	◔	◔			◓				
K									●						✱						●	◓	✱												✱	
									○						◔						○	◓	✱													
N																																			◓	
S																			○	◔												◓				
																																◓			◔	
H																																				

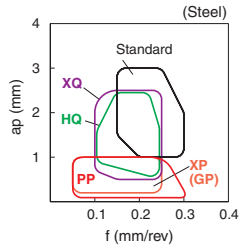
Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

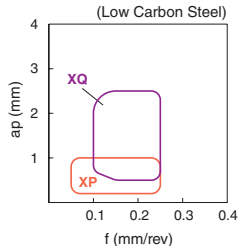
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	CPMT 080202PP	0.2	●	●		●	●	●	●				●	●	●														●		●			●						
	080204PP	0.4	●	●		●	●	●	●				●	●	●	●													●		●			●						
	CPMT 090302PP	0.2	●	●		●	●	●	●				●	●	●														●		●			●						
	090304PP	0.4	●	●		●	●	●	●				●	●	●														●		●			●						
	090308PP	0.8	●	●		●	●	●	●				●	●	●														●					●						
Finishing	CPMT 080204GP	0.4	●	●	●		●	●	●				●	●	●			●	●										●	●				●						
	CPMT 090304GP	0.4	●	●	●		●	●	●	▲			●	●	●			●	●										●	●				●						
	090308GP	0.8	●	●	●		●	●	●	▲			●	●	●	●		●	●										●	●				●						
Finishing - Medium	CPMH 080204HQ	0.4	●	●	●	●	●	●	●	▲			●	●	●	●		●	●	●	●	●							●	●				●						
	080208HQ	0.8	●	●	●	●	●	●	●	▲		●	●	●	●	●		●	●	●	●	●							●	●				●						
	CPMH 090304HQ	0.4	●	●	●	●	●	●	●	▲		●	●	●	●	●		●	●	●	●	●							●	●				●						1
	090308HQ	0.8	●	●	●	●	●	●	●	▲		●	●	●	●	●		●	●	●	●	●							●	●				●						
Medium	CPMH 080204	0.4	●	●	●	●	●	●	●				●	●	●	●		●	●		●	●	●	●	●		●		●	●				●						
	080208	0.8	●	●	●	●	●	●	●		●		●	●	●	●		●	●		●	●	●	●	●		●		●	●				●						
	CPMH 090304	0.4	●	●	●	●	●	●	●	▲	●		●	●	●	●		●	●		●	●	●	●	●	●	●		●	●				●						
	090308	0.8	●	●	●	●	●	●	●	▲	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●		●	●				●						
Low Carbon Steel Finishing	CPMT 080204XP	0.4	●	●		●	●	●	●				●	●	●	●			●										●	●				●				F43		
	CPMT 090304XP	0.4	●	●		●	●	●	●				●	●	●			●	●										●	●				●						
	090308XP	0.8	●	●		●	●	●	●	▲		●	●	●	●	●		●	●										●	●				●						
Low Carbon Steel Finishing - Medium	CPMT 090304XQ	0.4	●	●		●	●	●	●	▲		●	●	●	●	●		●	●																				
	090308XQ	0.8	●	●		●	●	●	●	▲		●	●	●	●	●		●	●																				
Finishing - Medium 	CPMH 080204R-Y	0.4	●	●	●		●	●	●																				●	●							●			
	080204L-Y	0.4	●	●	●		●	●	●																				●	●							●			
	080208L-Y	0.8																																			●			
	CPMH 090304R-Y	0.4	●	●	●		●	●	●	▲																			●	●							●		2	
	090304L-Y	0.4	●	●	●		●	●	●	▲																			●	●							●			
	090308R-Y	0.8																																			●			
	090308L-Y	0.8			●																									●							●			
Cast Iron Without Chipbreaker 	CPMB 080202	0.2																																			●			
	080204	0.4																																			●			
	080208	0.8																																			●			
	CPMB 090302	0.2																																			●			
	090304	0.4																																			●			
	090308	0.8																																			●			

Applicable Chipbreaker Range

ap indicates radius

1





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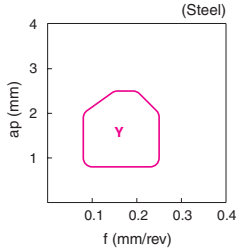


● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

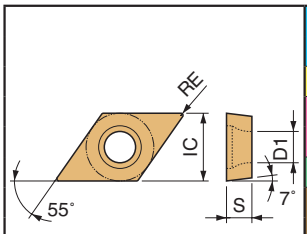
How to read pages of "Turning Inserts" ➔ See Page **B15**

55° Rhombic / Positive with Hole

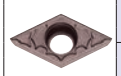
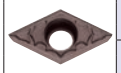
Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P	●	●	◐						
M		◐	●						
K									
N						●		◐	
S			●					◐	
H									

Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Minute ap  Sharp Edge / Polished	DCGT 070201MP-CF	<0.1																											●		●			●	●	●			Ref. to the table above	1
	070202MP-CF	<0.2																										●	●		●			●	●	●				
	DCGT 11T301MP-CF	<0.1																										●	●		●			●	●	●				
	11T302MP-CF	<0.2																										●	●		●			●	●	●				
Minute ap  Sharp Edge	DCGT 070202CF	0.2																												●									
	DCGT 11T302CF	0.2																												●									
Finishing Sharp Edge / Polished	DCGT 070201MFP-GF	<0.1																										●	●		●			●						
	070202MFP-GF	<0.2																										●	●		●			●						
	070204MFP-GF	<0.4																										●	●		●			●						
	DCGT 11T301MFP-GF	<0.1																										●	●		●			●						
	11T302MFP-GF	<0.2																										●	●		●			●						
	11T304MFP-GF	<0.4																										●	●		●			●						
Finishing NEW Sharp Edge / Polished	DCGT 0702005MFP-SKS	<0.05							●																			●	●					●					1	
	070201MFP-SKS	<0.1							●																			●	●					●						
	070202MFP-SKS	<0.2							●																			●	●					●						
	DCGT 11T3005MFP-SKS	<0.05							●																			●	●					●						
	11T301MFP-SKS	<0.1							●																			●	●					●						
	11T302MFP-SKS	<0.2							●																			●	●					●						
	11T304MFP-SKS	<0.4							●																			●	●					●						
Finishing Sharp Edge / Polished	DCGT 070201MFP-SK	<0.1							●																			●	●		●			●	●	●				
	070202MFP-SK	<0.2							●																			●	●		●			●	●	●				
	070204MFP-SK	<0.4							●																			●	●		●			●	●	●				
	DCGT 11T301MFP-SK	<0.1							●																			●	●		●			●	●	●				
	11T302MFP-SK	<0.2							●																			●	●		●			●	●	●				
	11T304MFP-SK	<0.4							●																			●	●		●			●	●	●				
Finishing Sharp Edge / Polished	DCGT 070201MP-CK	<0.1																										●	●		●			●	●	●				
	070202MP-CK	<0.2																										●	●		●			●	●	●				
	DCGT 11T301MP-CK	<0.1																										●	●		●			●	●	●	●			
	11T302MP-CK	<0.2																										●	●		●			●	●	●	●			
Finishing	DCGT 070201CK	0.1																												●									
	070202CK	0.2																												●									
	DCGT 11T301CK	0.1																												●									
	11T302CK	0.2																												●									

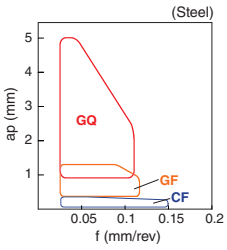
· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

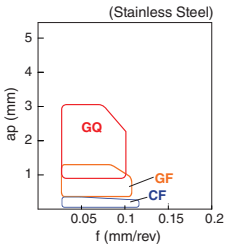
Applicable Chipbreaker Range

ap indicates radius

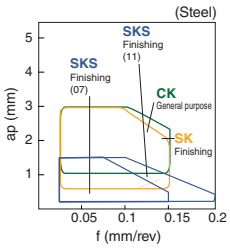
1

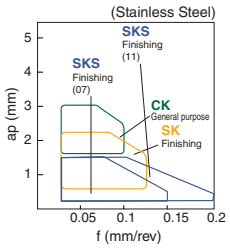
· Chip control oriented





· Low cutting force





Inserts are sold in 10 piece boxes

● : Std. Item

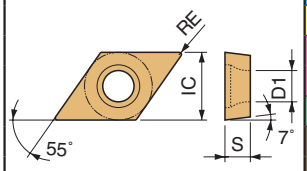
How to read pages of "Turning Inserts" ➡ See Page **B15**

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓			●	◓	◔			○	●	◓	◔	✖			◔									◓										
P																											◓	◔	◔							
M																											◔	◔	◔			◓				
K																																				
K																																				
N																																				
S																																◓				
S																																◓				
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

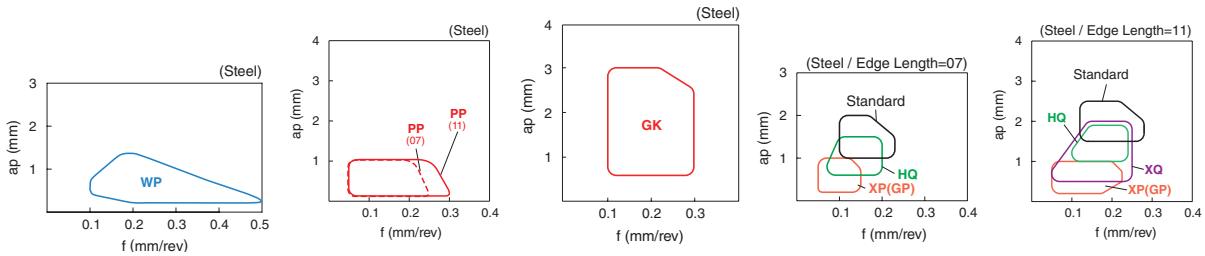
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing - Medium, Sharp Edge / Polished	DCGT 070201MFP-GQ	<0.1	Ref. to the table above	B62 1
	DCGT 070202MFP-GQ	<0.2		
	DCGT 070204MFP-GQ	<0.4		
	DCGT 11T301MFP-GQ	<0.1		
	DCGT 11T302MFP-GQ	<0.2		
	DCGT 11T304MFP-GQ	<0.4		
With Wiper Edge, Finishing	DCMX 070202WP	0.2		1
	DCMX 070204WP	0.4		
	DCMX 070208WP	0.8		
	DCMX 11T302WP	0.2		
	DCMX 11T304WP	0.4		
	DCMX 11T308WP	0.8		
With Wiper Edge, Finishing	DCMX 070204R-WP	0.4		
	DCMX 070204L-WP	0.4		
	DCMX 11T304R-WP	0.4		
	DCMX 11T304L-WP	0.4		
Finishing	DCMT 070202PP	0.2		
	DCMT 070204PP	0.4		
	DCMT 11T302PP	0.2		
	DCMT 11T304PP	0.4		
	DCMT 11T308PP	0.8		
Finishing	DCMT 070202GP	0.2		
	DCMT 070204GP	0.4		
	DCMT 11T304GP	0.4		
	DCMT 11T308GP	0.8		

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).
· See "Precautions when Using Wiper Inserts" in the **R36** and **R37** for WP chipbreaker.

Applicable Chipbreaker Range

ap indicates radius

1



● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

Turning Indexable Inserts

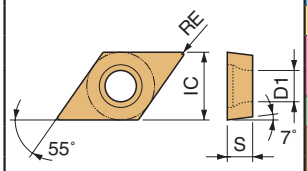
How to read pages of "Turning Inserts" ➔ See Page **B15**

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P	◓	● ◓ ◔ ◔							
M		◔ ◔ ◔	◓						
K				● ◓ ◓ ✠	○ ◓ ◓ ✠				
N									
S			◓				◓	◓	
H									

Insert	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing - Medium	DCMT 070202GK	0.2	●	●		●	●	●	●				●	●	●	●		●	●		●	●							●	●				●					Ref. to the table above	B63 1
	070204GK	0.4	●	●		●	●	●	●				●	●	●	●		●	●	●	●	●	●	●	●	●	●		●	●				●						
	070208GK	0.8	●	●		●	●	●	●				●	●	●	●		●	●		●	●	●	●	●		●		●	●				●						
	DCMT 11T302GK	0.2	●	●		●	●	●	●				●	●	●	●		●	●		●	●							●	●				●						
	11T304GK	0.4	●	●		●	●	●	●			●	●	●	●	●		●	●	●	●	●	●	●	●		●		●	●				●						
	11T308GK	0.8	●	●		●	●	●	●			●	●	●	●	●		●	●	●	●	●	●	●	●		●		●	●				●						
Finishing - Medium	DCMT 070202HQ	0.2	●	●	●	●	●	●	●				●	●	●	●		●	●										●	●				●						
	070204HQ	0.4	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●				●						
	070208HQ	0.8	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●				●						
	DCMT 11T302HQ	0.2	●	●	●	●	●	●	●	▲		●	●	●	●	●		●	●	●	●	●							●	●				●						
	11T304HQ	0.4	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●				●						
	11T308HQ	0.8	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●				●						
Medium	DCGT 070201	0.1	●	●	●		●	●	●	▲																				●										
	070202	0.2	●	●	●		●	●	●	▲																				●										
	070204	0.4	●	●	●		●	●	●	▲																				●										
	DCGT 11T301	0.1	●	●	●		●	●	●	▲																				●										
	11T302	0.2	●	●	●		●	●	●	▲																				●										
	11T304	0.4	●	●	●		●	●	●	▲																				●										
	DCMT 11T308	0.8	●	●	●	●	●	●	●		●						●						●	●	●	●	●		●	●										
	DCGT 0702005M	<0.05																											●											
	070201M	<0.1																											●											
	070202M	<0.2																											●											
	070204M	<0.4																											●											
	DCGT 11T3005M	<0.05																											●											
	11T301M	<0.1																											●											
	11T302M	<0.2																											●											
	11T304M	<0.4																											●											
Medium	DCGT 0702005MF	<0.05																											●		●			●						
	070201MF	<0.1																										●	●		●			●						
	070202MF	<0.2																										●	●		●			●						
	070204MF	<0.4																										●	●		●			●						
	DCGT 11T3005MF	<0.05																											●		●			●						
	11T301MF	<0.1																										●	●		●			●						
	11T302MF	<0.2																										●	●		●			●						
	11T304MF	<0.4																										●	●		●			●						

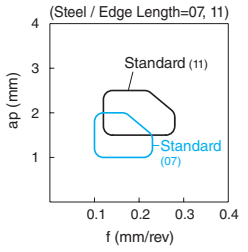
Sharp Edge

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1



Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

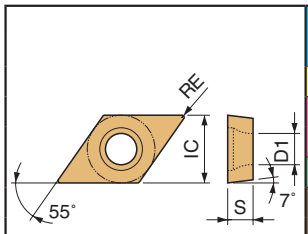
How to read pages of "Turning Inserts" ➡ See Page **B15**

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



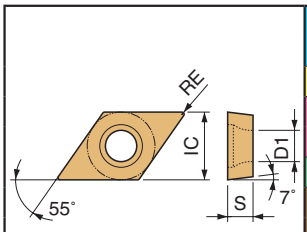
| | | |

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓			●	◓	◔																					◓								
P																											◓	◔	◔							
M																											◔	◔	◓			◓				
K																																				
K																																				
N																																	●	◓		
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S																																◓				
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

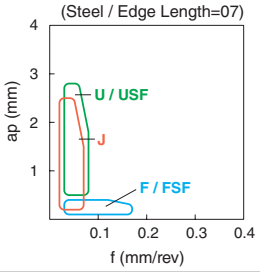
Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	Super Fine	DCET 0702003R-FSF	0.03																												●									Ref. to the table above	1
		0702003L-FSF	0.03																												●										
		070201R-FSF	0.1																												●										
		070201L-FSF	0.1																												●										
		070202R-FSF	0.2			●																									●										
		070202L-FSF	0.2			●																									●										
		070204R-FSF	0.4			●																									●										
		070204L-FSF	0.4			●																									●										
		DCET 11T3003R-FSF	0.03																												●										
		11T3003L-FSF	0.03																												●										
		11T301R-FSF	0.1			●																									●										
		11T301L-FSF	0.1			●																									●										
		11T302R-FSF	0.2			●																									●										
		11T302L-FSF	0.2			●																									●										
		11T304R-FSF	0.4			●																									●										
		11T304L-FSF	0.4			●																									●										
		DCET 0702005MR-FSF	<0.05																													●									
		0702005ML-FSF	<0.05																													●									
		070201MR-FSF	<0.1																													●									
		070201ML-FSF	<0.1																													●									
		070202MR-FSF	<0.2																													●									
		070202ML-FSF	<0.2																													●									
		070204MR-FSF	<0.4																													●									
		070204ML-FSF	<0.4																													●									
		DCET 11T3005MR-FSF	<0.05																													●									
		11T3005ML-FSF	<0.05																													●									
		11T301MR-FSF	<0.1																													●									
		11T301ML-FSF	<0.1																													●									
		11T302MR-FSF	<0.2																													●									
		11T302ML-FSF	<0.2																													●									
		11T304MR-FSF	<0.4																													●									
		11T304ML-FSF	<0.4																													●									
Finishing	Sharp Edge / Precision	DCET 0702005MR-F	<0.05																										●	●					●		●				
		0702005ML-F	<0.05																										●												
		070201MR-F	<0.1	●	●			●	●	●																				●					●	●	●				
		070201ML-F	<0.1	●	●			●	●	●																				●					●	●	●				
		070202MR-F	<0.2	●	●			●	●	●																				●					●	●	●				
		070202ML-F	<0.2	●	●			●	●	●																				●					●	●	●				
		070204MR-F	<0.4	●	●			●	●	●																				●					●	●	●				
		070204ML-F	<0.4	●	●			●	●	●																				●					●	●	●				
		DCET 11T3005MR-F	<0.05																											●					●	●	●				
		11T301MR-F	<0.1	●	●			●	●	●																				●					●	●	●				
		11T301ML-F	<0.1	●	●			●	●	●																				●					●	●	●				
		11T302MR-F	<0.2	●	●			●	●	●																			●	●					●	●	●				
		11T302ML-F	<0.2	●	●			●	●	●																			●	●					●	●	●				
		11T304MR-F	<0.4	●	●			●	●	●																			●	●					●	●	●				
		11T304ML-F	<0.4	●	●			●	●	●																			●	●					●	●	●				

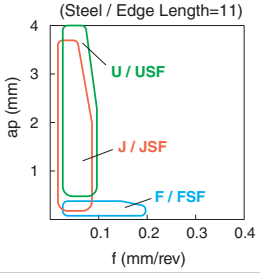
· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1





Inserts are sold in 10 piece boxes

● : Std. Item

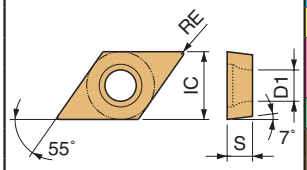
How to read pages of "Turning Inserts" ➡ See Page **B15**

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



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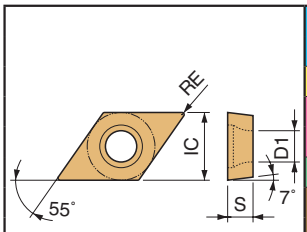
55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide														PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●	◓			●	◓	◔																					◓								
P																											◓	◔	◔							
M																											◔	◔	◓			◓				
K																																				
K																																				
N																																	●	◓	◔	
S																																◓				
S																																◓			◔	
H																																				

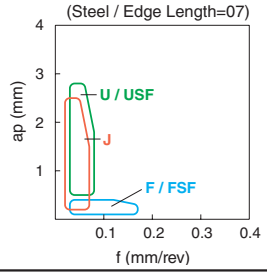
Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

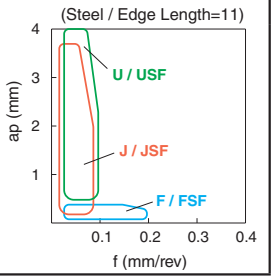
Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed	Super Fine	DCET 0702003FR-USF	0.03																												●									Ref. to the table above	1
		0702003FL-USF	0.03																												●										
		070201FR-USF	0.1																												●										
		070201FL-USF	0.1																												●										
		070202FR-USF	0.2			●																									●										
		070202FL-USF	0.2			●																									●										
		DCET 11T3003FR-USF	0.03																												●										
		11T3003FL-USF	0.03																												●										
		11T301FR-USF	0.1			●																									●										
		11T301FL-USF	0.1																												●										
		11T302FR-USF	0.2			●																									●										
		11T302FL-USF	0.2			●																									●										
		DCET 0702005MFR-USF	<0.05																													●									
		070201MFR-USF	<0.1																													●									
		070201MFL-USF	<0.1																													●									
		070202MFR-USF	<0.2																													●									
		070202MFL-USF	<0.2																													●									
		DCET 11T3005MFR-USF	<0.05																													●									
		11T3005MFL-USF	<0.05																													●									
		11T301MFR-USF	<0.1																													●									
		11T301MFL-USF	<0.1																													●									
		11T302MFR-USF	<0.2																													●									
		11T302MFL-USF	<0.2																													●									
	Sharp Edge / Precision																																								
Low Feed		DCET 0702003FR-U	0.03																											●											
		DCET 0702005MFR-U	<0.05																											●					●		●				
		070201MFR-U	<0.1	●				●																					●	●					●	●	●				
		070201MFL-U	<0.1	●				●																						●					●	●	●				
		070202MFR-U	<0.2	●	●			●	●	●																			●	●					●	●	●				
		070202MFL-U	<0.2	●	●			●	●	●																				●					●	●	●				
		DCET 11T3005MFR-U	<0.05																										●	●					●		●				
		11T301MFR-U	<0.1	●				●																					●	●					●	●	●				
		11T301MFL-U	<0.1	●				●																						●					●	●	●				
		11T302MFR-U	<0.2	●	●			●	●	●																			●	●					●	●	●				
		11T302MFL-U	<0.2	●	●			●	●	●																			●	●					●	●	●				
	Sharp Edge	11T304MFR-U	<0.4																										●	●					●	●	●				
Low Feed		DCGT 0702003FR-U	0.03																												●							●			
		0702003FL-U	0.03																												●										
		070201FR-U	0.1			●																									●							●			
		070201FL-U	0.1			●																									●							●			
		070202FR-U	0.2			●																									●										
		070202FL-U	0.2			●																									●										
		DCGT 11T3003FR-U	0.03			●																									●							●			
		11T3003FL-U	0.03			●																									●										
		11T301FR-U	0.1			●																									●							●			
		11T301FL-U	0.1			●																									●							●			
		11T302FR-U	0.2			●					▲																				●							●			
		11T302FL-U	0.2			●																									●							●			
	Sharp Edge																																								

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range 1

ap indicates radius





Inserts are sold in 10 piece boxes

● : Std. Item ▲ :To be replaced by a new product

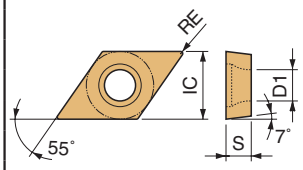
How to read pages of "Turning Inserts" ➔ See Page **B15**

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



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Turning Indexable Inserts

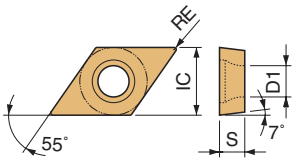
How to read pages of "Turning Inserts" ➔ See Page **B15**

55° Rhombic / Positive with Hole

Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



	Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide													PVD Coated Carbide							DLC		Carbide		
	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	●				●																					◓										
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M																											◔	◔	◓			◓				
K																																				
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S																															◓					
																															◓			◔		
H																																				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

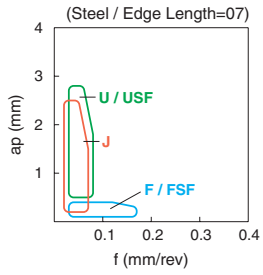
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed, Super Fine, Sharp Edge / Precision	DCET 11T3003FR-JSF	0.03																												●									Ref. to the table above	1
	11T3003FL-JSF	0.03																												●										
	11T301FR-JSF	0.1																												●										
	11T301FL-JSF	0.1																												●										
	11T302FR-JSF	0.2																												●										
	11T302FL-JSF	0.2																												●										
	DCET 11T3005MFR-JSF	<0.05																													●									
	11T3005MFL-JSF	<0.05																													●									
	11T301MFR-JSF	<0.1																													●									
	11T301MFL-JSF	<0.1																													●									
	11T302MFR-JSF	<0.2																													●									
	11T302MFL-JSF	<0.2																													●									
Low Feed, Sharp Edge	DCET 0702005MFR-J	<0.05																											●		●			●						
	070201MFR-J	<0.1																											●		●			●						
	070201MFL-J	<0.1																											●					●						
	070202MFR-J	<0.2																											●		●			●						
	070202MFL-J	<0.2																											●		●			●						
Low Feed, Sharp Edge	DCET 11T3005MFR-J	<0.05																											●					●						
	11T301MFR-J	<0.1	●				●																					●	●					●						
	11T301MFL-J	<0.1	●				●																						●					●						
	11T302MFR-J	<0.2	●				●																					●	●					●						
	11T302MFL-J	<0.2	●				●																						●					●						
	11T304MFR-J	<0.4																										●	●					●						
	11T304MFL-J	<0.4																										●												
Low Feed, Sharp Edge	DCGT 11T3003FR-J	0.03																												●										
	11T301FR-J	0.1			●																									●							●			
	11T301FL-J	0.1																												●										
	11T302FR-J	0.2			●																									●							●			
	11T302FL-J	0.2			●																									●							●			
	DCGT 11T3005MFR-J	<0.05																													●									
	11T3005MFL-J	<0.05																													●									
	11T301MFR-J	<0.1																													●									
	11T301MFL-J	<0.1																													●									
	11T302MFR-J	<0.2																													●									
	11T302MFL-J	<0.2																													●									
	11T304MFR-J	<0.4																													●									
	11T304MFL-J	<0.4																													●									

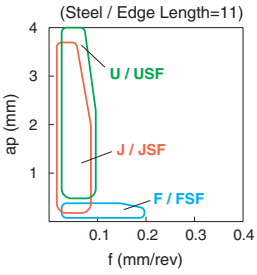
· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1





Inserts are sold in 10 piece boxes

● : Std. Item

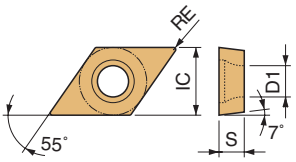
How to read pages of "Turning Inserts" ➡ See Page **B15**

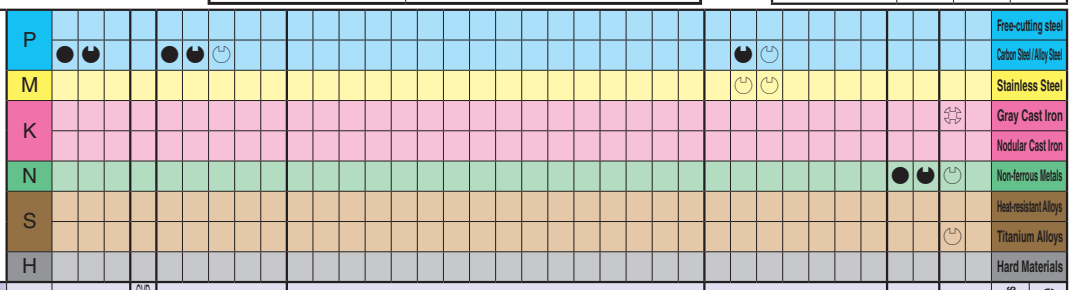
55° Rhombic / Positive with Hole

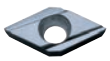
Insert Description	See Page for Applicable Toolholders
DC..07 type	**E28,E29,E32,E33,E44,F45~F47**
DC..11 type	**E24,E28~E30,E32,E33,E44,F45~F47,F67**

(mm)

Description	IC	S	D1
DC_0702_	6.35	2.38	2.8
DC_11T3_	9.525	3.97	4.4



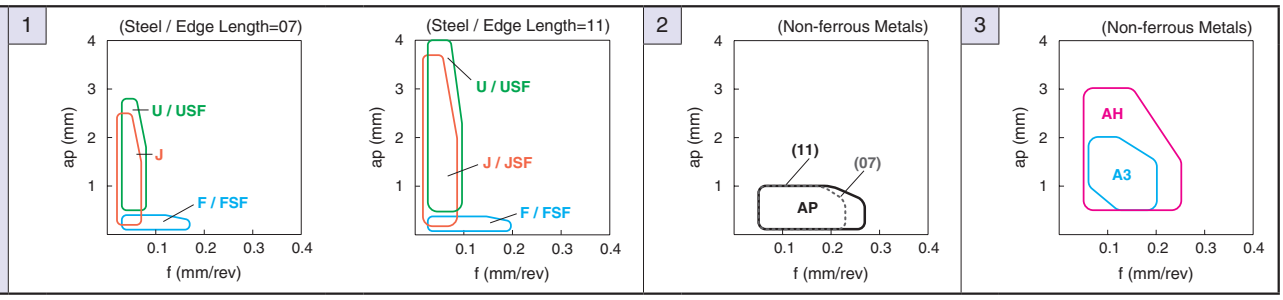


Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed  With Honing	DCGT 11T3003ER-J	0.03																												●											
	11T301ER-J	0.1	●	●	●		●	●	●																					●								●			
	11T301EL-J	0.1	●				●																																		
	11T302ER-J	0.2	●	●	●		●	●	●																					●								●			
	11T302EL-J	0.2	●		●		●																							●											
	11T304ER-J	0.4	●	●	●		●	●	●																					●								●			1
	11T304EL-J	0.4	●	●	●		●	●	●																					●								●			
	DCGT 11T3005MER-J	<0.05																											●												
	11T301MER-J	<0.1																											●												
	11T302MER-J	<0.2																											●												
	11T304MER-J	<0.4																											●												
	11T304MEL-J	<0.4																											●												
Non-ferrous Metals Finishing / Sharp Edge	DCGT 070202AP	0.2																																		●		●		Ref. to the table above	
	070204AP	0.4																																		●		●			
	DCGT 11T302AP	0.2																																		●		●			2
	11T304AP	0.4																																		●		●			
	11T308AP	0.8																																		●		●			
Non-ferrous Metals Finishing - Medium / Sharp Edge	DCGT 11T302R-A3	0.2																																		●	●	●			
	11T302L-A3	0.2																																		●	●	●			
	11T304R-A3	0.4																																		●	●	●			
	11T304L-A3	0.4																																		●	●	●			
	11T308R-A3	0.8																																		●	●				3
	11T308L-A3	0.8																																		●	●				
Non-ferrous Metals Finishing - Medium / Sharp Edge	DCGT 11T304AH	0.4																																		●	●	●			
	11T308AH	0.8																																		●	●	●			
Cast Iron Without Chipbreaker	DCGW 070201	0.1																																				●			
	070202	0.2																																				●			
	DCGW 11T301	0.1																																				●			-
	11T302	0.2																																				●			
	11T304	0.4																																				●			

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius



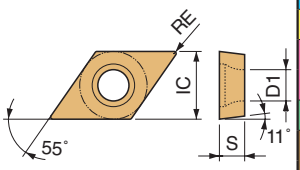
Inserts are sold in 10 piece boxes

● : Std. Item

55° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
DP_0702_	6.35	2.38	2.8
DP_11T3_	9.525	3.97	4.4



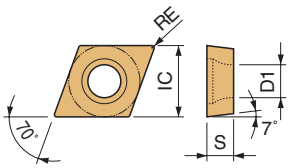
| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

70° Rhombic / Positive with Hole

(mm)

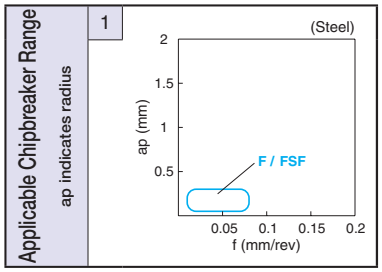
Description	IC	S	D1
JC_0301_	3.5	1.4	1.9



	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P									
M									
K									
N									
S									
H									

Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PV720	PV730	PV90	PV7005	CVD Coated Carbide CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PVD Coated Carbide PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	DLC PDL010	PDL025	Carbide KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	Super Fine	JCET 030101R-FSF	0.1																											●											F48	1
		030101L-FSF	0.1																											●												
		030102R-FSF	0.2			●																								●												
		030102L-FSF	0.2			●																								●												
		030104L-FSF	0.4																											●												
	Sharp Edge / Precision	JCET 030101MR-FSF	<0.1																										●												
		030101ML-FSF	<0.1																										●												
Finishing	Sharp Edge	JCET 030102MR-F	<0.2																										●						●						
		030102ML-F	<0.2																										●						●						
		030104MR-F	<0.4																										●						●						
		030104ML-F	<0.4																										●						●						
Finishing	Sharp Edge	JCGT 030101R-F	0.1																											●											
		030101L-F	0.1			●																								●									●		
		030102R-F	0.2			●																								●									●		
		030102L-F	0.2			●																								●									●		
		030104R-F	0.4			●																								●											
		030104L-F	0.4			●																								●											

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).



● : Std. Item

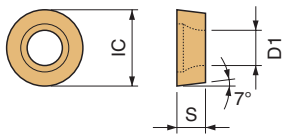
Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➔ See Page **B15**

Round / Positive with Hole

(mm)

Description	IC	S	D1
RC_1003_	10.0	3.18	3.6
RC_1204_	12.0	4.76	4.2



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

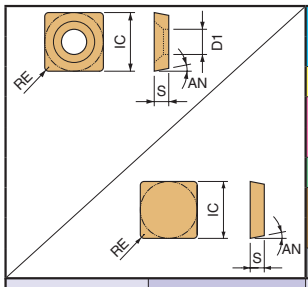
90° Square / Positive with Hole
90° Square / Positive without Hole

(mm)

Description	IC	S	D1	AN
SC_09T3_	9.525	3.97	4.4	7°
SP_0903_	9.525	3.18	4.5	11°

(mm)

Description	IC	S	D1	AN
SP_0903_	9.525	3.18	-	11°
SP_1203_	12.7	3.18	-	11°
SP_1204_	12.7	4.76	-	11°

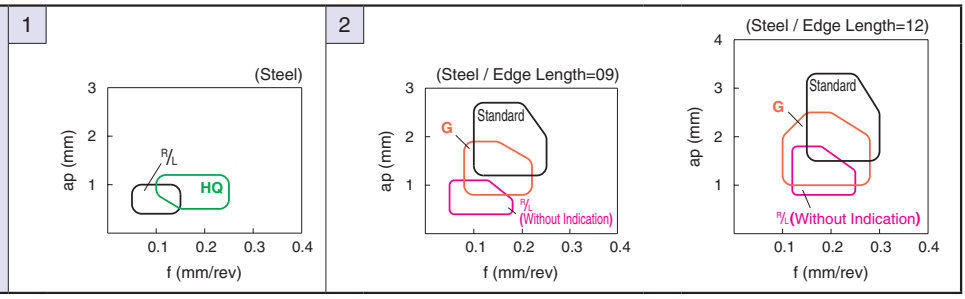


		Cermet			CVD Coated Cermet	PVD Coated Cermet					CVD Coated Carbide													PVD Coated Carbide							DLC		Carbide			
		TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P	Free-cutting steel																																			
P	Carbon Steel / Alloy Steel	●	◓			●	◓	◔			○	●	◓	◔	✖			◔	✥																	
M	Stainless Steel																				◓												◓				
K	Gray Cast Iron									●						✥						●	◓	✥												✥	
K	Nodular Cast Iron									○						◔						○	◓	✖													
N	Non-ferrous Metals																																		◓		
S	Heat-resistant Alloys																				◔												◓				
S	Titanium Alloys																																◓		◓		
H	Hard Materials																																				

Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing - Medium	SCMT 09T304HQ	0.4	●	●	●		●	●	●			●	●	●	●	●		●	●	●																			-	1
	09T308HQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●	●																				
Finishing	SPGH 090304L	0.4			●																																	F62	
Medium	SPMR 090304G	0.4		●	●			●	●	▲																													
	090308G	0.8		●	●			●	●																														
	SPMR 120304G	0.4		●	●			●	●																														
	120308G	0.8		●	●			●	●																														
Medium	SPMR 090304	0.4											●	●	●			●	●			●											●						2
	090308	0.8											●	●	●			●	●			●											●						
	SPMR 120304	0.4											●	●	●	●		●	●			●											●						
	120308	0.8											●	●	●			●	●			●											●						
Finishing	SPGR 090304R	0.4	●	●	●		●	●																															
	090304L	0.4	●	●	●		●	●																															
	090308R	0.8	●	●	●		●	●																															
	090308L	0.8	●	●	●		●	●																															
	SPGR 120304R	0.4	●	●	●		●	●																															
	120304L	0.4	●	●	●		●	●																															
	120308R	0.8	●	●	●		●	●																															
	120308L	0.8	●	●	●		●	●																															
Cast Iron	SPGN 090304	0.4																																		●			-
	090308	0.8																																		●			
	SPGN 120304	0.4																																		●			
	120308	0.8									●																									●			
	SPMN 120304	0.4																				●	●	●		●													
	120308	0.8	●	●	●		●	●								●						●	●	●		●													
	120312	1.2	●	●	●	●	●	●																															
Without Chipbreaker	SPMN 120408	0.8																				●	●	●		●													
	120412	1.2																				●	●	●															

Applicable Chipbreaker Range

ap indicates radius



● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

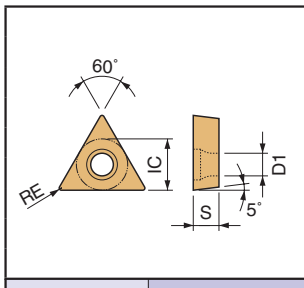
Turning Indexable Inserts

How to read pages of "Turning Inserts" ➔ See Page **B15**

60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TB_0601_	3.97	1.59	2.3



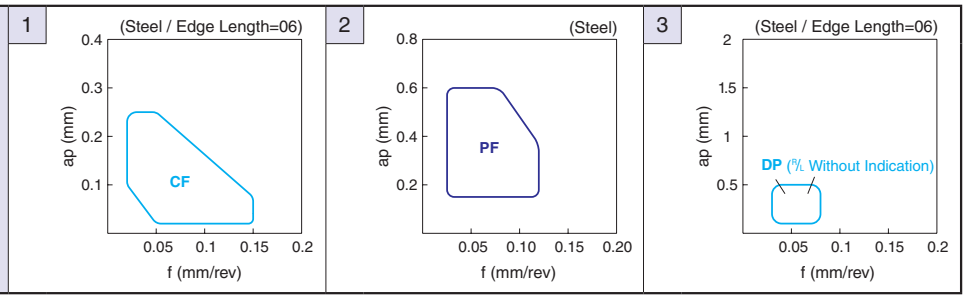
	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P		●							
M									
K									
N									
S									
H									

Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	Cermet TN610	TN620	TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PV720	PV730	PV90	PV7005	CVD Coated Carbide CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PVD Coated Carbide PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	DLC PDL010	PDL025	Carbide KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Minute ap	Sharp Edge / Polished	TBGT 060101MP-CF	<0.1																											●		●			●							1
		TBGT 060102MP-CF	<0.2																										●	●		●			●							
Minute ap	Sharp Edge	TBGT 060102CF	0.2																												●										
Finishing	Sharp Edge / Polished	TBGT 060101MFP-PF	<0.1																											●					●							2
		060102MFP-PF	<0.2																											●					●							
		060104MFP-PF	<0.4																											●					●							
Finishing		TBMT 060102DP	0.2	●	●	●	●	●	●	●			●	●	●	●	●		●	●																						
		060104DP	0.4	●	●	●	●	●	●	●			●	●	●	●	●		●	●																						
Finishing		TBET 0601005MR	<0.05																											●					●					F24 F51 F53	
		0601005ML	<0.05																											●					●						
		060101MR	<0.1																											●					●						
		060101ML	<0.1																											●					●						
		060102MR	<0.2																											●					●						3
		060102ML	<0.2																										●	●					●						
		060104MR	<0.4																										●	●					●						
		060104ML	<0.4																										●	●					●						
		TBGT 0601003L	0.03																												●										
		060101R	0.1																												●							●			
		060101L	0.1			●																									●							●			
		060102R	0.2	●	●	●		●	●	●																					●							●			
		060102L	0.2	●	●	●		●	●	●																					●							●			
		060104R	0.4	●	●	●		●	●	●																					●							●			
		060104L	0.4	●	●	●		●	●	●																					●							●			
Cast Iron	Without Chipbreaker	TBGW 060102	0.2			●																																●			-
		060104	0.4			●																																●			

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius



Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

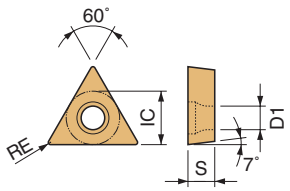
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TC_0802_	4.76	2.38	2.3
TC_0902_	5.56	2.38	2.5

(mm)

Description	IC	S	D1
TC_1102_	6.35	2.38	2.8
TC_1103_	6.35	3.18	2.8
TC_16T3_	9.525	3.97	4.4



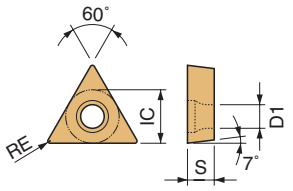
| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TC_0802_	4.76	2.38	2.3
TC_1103_	6.35	3.18	2.8



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

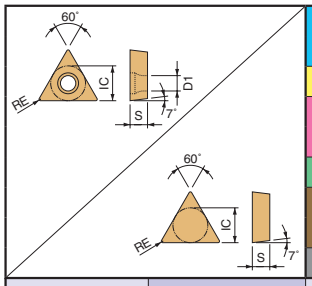
60° Triangle / Positive with Hole
60° Triangle / Positive without Hole

(mm)

Description	IC	S	D1
TCG_0601_	3.97	1.59	-
TC_0802_	4.76	2.38	2.3

(mm)

Description	IC	S	D1
TC_1103_	6.35	3.18	2.8



| | | |

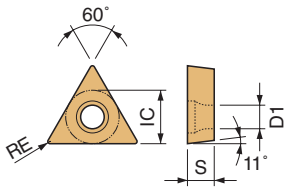
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_T(X)0902_	5.56	2.38	2.8

(mm)

Description	IC	S	D1
TP_H0902_	5.56	2.38	3.2
TP_1103_	6.35	3.18	3.3
TPMT1603_	9.525	3.18	4.4



	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P	◐	● ◐							
M			↻ ↻ ↻				◐		
K									
N									
S							◐	◐	
H									

Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Minute ap	Sharp Edge / Polished	TPGT 080201MP-CF	<0.1																										●		●			●						
		TPGT 080202MP-CF	<0.2																										●	●		●			●						
		TPGT 090201MP-CF	<0.1																										●		●			●						
		TPGT 090202MP-CF	<0.2																										●	●		●			●						
Minute ap	Sharp Edge	TPGT 080202CF	0.2																												●									
		TPGT 090202CF	0.2																												●									
Finishing	Sharp Edge / Polished	TPGT 090201MFP-PF	<0.1																										●					●						
		090202MFP-PF	<0.2																										●					●						
		090204MFP-PF	<0.4																										●					●						
With Wiper Edge	Finishing	TPMX 090202WP	0.2	●	●			●	●				●	●	●	●	●												●		●									1
		090204WP	0.4	●	●			●	●				●	●	●	●	●												●		●									
		090208WP	0.8	●	●			●	●				●	●	●	●	●												●		●									
		TPMX 110302WP	0.2	●	●			●	●				●	●	●	●	●												●		●									
		110304WP	0.4	●	●			●	●				●	●	●	●	●												●		●									
		110308WP	0.8	●	●			●	●				●	●	●	●	●												●		●									
With Wiper Edge	Finishing	TPMX 110304R-WP	0.4		●				●																				●											
		110304L-WP	0.4		●				●																				●											
Finishing		TPMT 090202PP	0.2	●	●		●	●	●	●				●	●	●													●		●			●						
		090204PP	0.4	●	●		●	●	●	●			●	●	●	●	●												●		●			●						
		TPMT 110302PP	0.2	●	●		●	●	●	●				●	●	●													●		●			●						
		110304PP	0.4	●	●		●	●	●	●			●	●	●	●	●												●		●			●						
		110308PP	0.8	●	●		●	●	●	●				●	●	●	●												●		●			●						

Ref. to the table below

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

· See "Precautions when Using Wiper Inserts" in the **R36** and **R37** for WP chipbreaker.

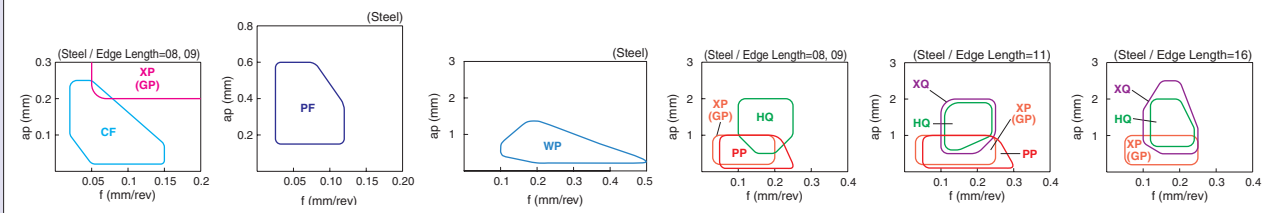
Insert Description	See Page for Applicable Toolholders
TP..0802 type	**E35,F51,F53**
TP..0902 type	**F24,F51,F53**

Insert Description	See Page for Applicable Toolholders
TP..1103 type	**E35,F51,F52**
TP..1603 type	**F51,F52**

Applicable Chipbreaker Range

ap indicates radius

1



Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

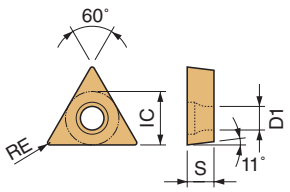
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_T(X)0902_	5.56	2.38	2.8

(mm)

Description	IC	S	D1
TP_H0902_	5.56	2.38	3.2
TP_1103_	6.35	3.18	3.3
TPMT1603_	9.525	3.18	4.4



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How to read pages of "Turning Inserts" ➔ See Page **B15**

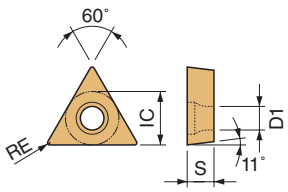
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_H0902_	5.56	2.38	3.2
TP_1102_	6.35	2.38	3.7

(mm)

Description	IC	S	D1
TP_1103_	6.35	3.18	3.3
TP_1603_	9.525	3.18	4.7
TPGT1604_	9.525	4.76	4.5



| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

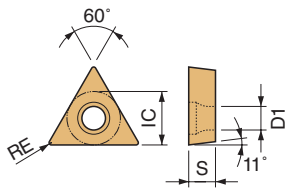
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_H0902_	5.56	2.38	3.2
TP_1102_	6.35	2.38	3.7

(mm)

Description	IC	S	D1
TP_1103_	6.35	3.18	3.3
TP_1603_	9.525	3.18	4.7
TPGT1604_	9.525	4.76	4.5



| | | |

How to read pages of "Turning Inserts" ➔ See Page B15

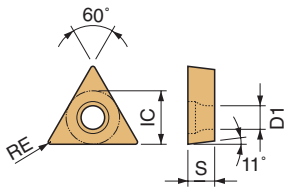
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_H0902_	5.56	2.38	3.2
TP_1102_	6.35	2.38	3.7

(mm)

Description	IC	S	D1
TP_1103_	6.35	3.18	3.3
TP_1603_	9.525	3.18	4.7
TPGT1604_	9.525	4.76	4.5



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

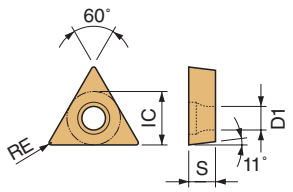
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_H0902_	5.56	2.38	3.2
TP_1102_	6.35	2.38	3.7

(mm)

Description	IC	S	D1
TP_1103_	6.35	3.18	3.3
TP_1603_	9.525	3.18	4.7
TPGT1604_	9.525	4.76	4.5



| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

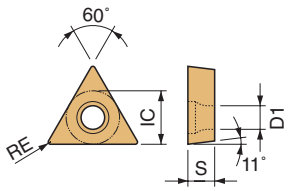
60° Triangle / Positive with Hole

(mm)

Description	IC	S	D1
TP_0802_	4.76	2.38	2.3
TP_0902_	5.56	2.38	2.8
TPGB0902_	5.56	2.38	3.2

(mm)

Description	IC	S	D1
TPGT1102_	6.35	2.38	3.7
TP_1103_	6.35	2.38	3.3
TP_1603_	9.525	3.18	4.7



Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed, Super Fine, Sharp Edge / Precision	TPET 080201FL-USF	0.1																												●										Ref. to the table below B80	B85 1
	080202FR-USF	0.2			●																								●	●											
	080202FL-USF	0.2			●																								●	●											
	TPET 1103003FL-USF	0.03																												●											
	110301FR-USF	0.1			●																									●											
	110301FL-USF	0.1			●																								●	●											
	110302FR-USF	0.2			●																								●	●											
	110302FL-USF	0.2			●																								●	●											
	TPET 080202MFR-USF	<0.2																											●												
	080202MFL-USF	<0.2																											●												
	TPET 110301MFL-USF	<0.1																											●												
	110302MFR-USF	<0.2																											●												
	110302MFL-USF	<0.2																											●												
Non-ferrous Metals, Finishing / Sharp Edge	TPGT 090202AP	0.2																																	●		●				B85 3
	090204AP	0.4																																	●		●				
	090208AP	0.8																																	●		●				
	TPGT 110302AP	0.2																																	●		●				
	110304AP	0.4																																	●		●				
	110308AP	0.8																																	●		●				
Cast Iron	TPGB 080202	0.2			●																																●		Ref. to the table below B80	-
	080204	0.4		●	●			●	●		●																										●			
	080208	0.8			●																																			
	TPGB 090202	0.2			●																																●			
	090204	0.4		●	●			●	●		●																										●			
	TPGB 1102005	0.05			●																																●		F52	
	110201	0.1			●																																●			
	110202	0.2			●																																●			
	110204	0.4	●	●	●		●	●	●																												●			
	TPGB 1103005	0.05			●																																●		Ref. to the table below B80	
	110301	0.1			●																																●			
	110302	0.2	●	●	●		●	●	●																												●			
	110304	0.4	●	●	●		●	●	●		●																										●			
	110308	0.8	●	●	●		●	●	●		●																										●			
	TPGB 160304	0.4	●	●	●		●	●	●		●																										●			
	160308	0.8	●	●	●		●	●	●																												●			

Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Inserts are sold in 10 piece boxes

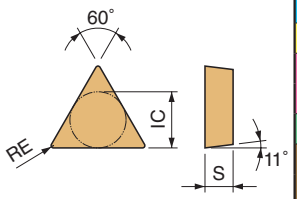
● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

60° Triangle / Positive without Hole

(mm)

Description	IC	S	D1
TP_0902_	5.56	2.38	-
TP_1103_	6.35	3.18	-
TP_1603_	9.525	3.18	-



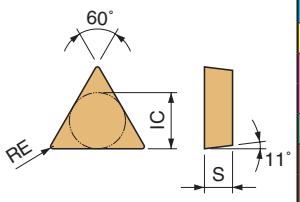
| | | |

How to read pages of "Turning Inserts" ➔ See Page B15

60° Triangle / Positive without Hole

(mm)

Description	IC	S	D1
TP_0902_	5.56	2.38	-
TP_1103_	6.35	3.18	-
TP_1603_	9.525	3.18	-



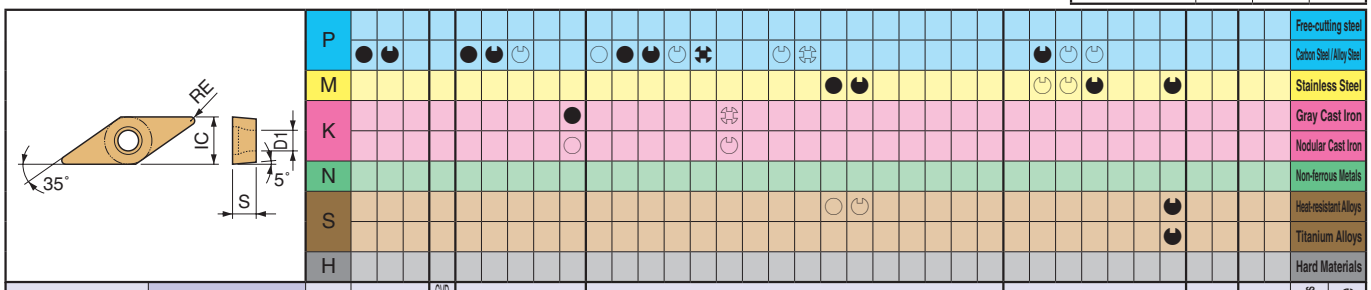
| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VB_1103_	6.35	3.18	2.8
VB_1604_	9.525	4.76	4.4



Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Coated Cermet CCX	PVD Coated Cermet PV710	PVD Coated Cermet PV720	PVD Coated Cermet PV730	PVD Coated Cermet PV90	PVD Coated Cermet PV7005	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	PVD Coated Carbide PR1705	PVD Coated Carbide PR1725	PVD Coated Carbide PR930	PVD Coated Carbide PR1225	PVD Coated Carbide PR005S	PVD Coated Carbide PR015S	PVD Coated Carbide PR1535	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing		VBMT 110302PP	0.2	●	●		●	●	●	●			●	●	●	●	●													●		●			●					Ref. to the table below	1
		110304PP	0.4	●	●		●	●	●	●			●	●	●	●	●													●		●			●						
		110308PP	0.8	●	●		●	●	●	●			●	●	●	●	●													●		●			●						
		VBMT 160404PP	0.4	●	●		●	●	●	●			●	●	●	●	●													●		●			●						
		160408PP	0.8	●	●		●	●	●	●			●	●	●	●	●													●		●			●						
		160412PP	1.2	●	●		●	●	●				●	●	●	●	●													●		●			●						
Finishing		VBMT 110304GP	0.4	●	●	●		●	●	●	▲		●	●	●	●	●		●	●										●	●				●						
		VBMT 160404GP	0.4	●	●	●		●	●	●	▲		●	●	●	●	●		●	●										●	●										
		160408GP	0.8	●	●	●		●	●	●	▲			●	●	●	●		●	●										●	●										
Finishing		VBMT 110302VF	0.2	●	●		●	●	●	●			●	●	●	●			●	●										●	●				●						1
		110304VF	0.4	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●									●	●				●						
		110308VF	0.8	●	●		●	●	●	●			●	●	●	●	●	●	●	●										●	●				●						
		VBMT 160402VF	0.2	●	●		●	●	●	●			●	●	●	●	●	●	●	●										●	●										
		160404VF	0.4	●	●		●	●	●	●	▲		●	●	●	●	●	●	●	●	●									●	●										
		160408VF	0.8	●	●		●	●	●	●	▲		●	●	●	●	●	●	●	●	●									●	●										
		160412VF	1.2	●	●		●	●	●				●	●	●	●	●		●	●										●											
Finishing - Medium		VBMT 110304HQ	0.4	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●				●						
		110308HQ	0.8	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●				●						
		VBMT 160404HQ	0.4	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●										
		160408HQ	0.8	●	●	●	●	●	●	●	▲	●	●	●	●	●	●		●	●	●	●	●							●	●										
		160412HQ	1.2	●	●		●	●	●	●	▲		●	●	●	●	●		●	●	●									●	●										
Finishing	Super Fine	VBET 1103003R-FSF	0.03			●																									●										
		1103003L-FSF	0.03																												●										
		110301R-FSF	0.1			●																									●										
		110301L-FSF	0.1			●																									●										
		110302R-FSF	0.2			●																									●										
		110302L-FSF	0.2			●																									●										2
		VBET 1103005MR-FSF	<0.05																													●									
		1103005ML-FSF	<0.05																													●									
		110301MR-FSF	<0.1																													●									
		110301ML-FSF	<0.1																													●									
		110302MR-FSF	<0.2																													●									
	Sharp Edge / Precision	110302ML-FSF	<0.2																													●									

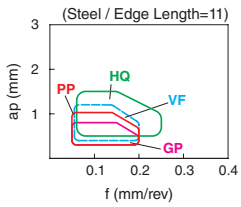
· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

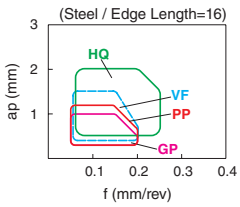
Insert Description	See Page for Applicable Toolholders
VB..1103 type	**E36,E37,E38,E45,F54,F56,F59**
VB..1604 type	**E37,E38,F54,F56,F59**

Applicable Chipbreaker Range

ap indicates radius

1





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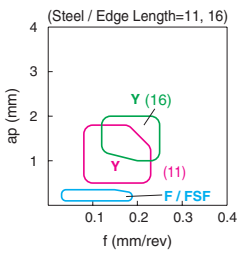


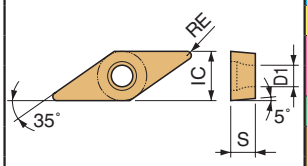
● : Std. Item ▲ :To be replaced by a new product

Inserts are sold in 10 piece boxes

35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VB_1103_	6.35	3.18	2.8
VB_1604_	9.525	4.76	4.4



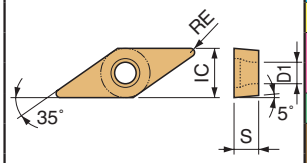
| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VB_1103_	6.35	3.18	2.8
VB_1604_	9.525	4.76	4.4



| | | |

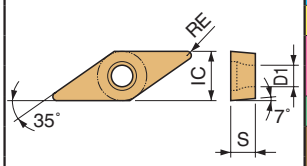
35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VC_0802_	4.76	2.38	2.3

(mm)

Description	IC	S	D1
VC_1103_	6.35	3.18	2.8
VC_1604_	9.525	4.76	4.4



| | | |

How to read pages of "Turning Inserts" ➡ See Page **B15**

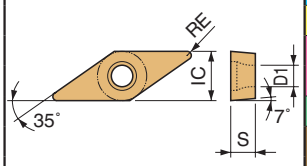
35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VC_0802_	4.76	2.38	2.3

(mm)

Description	IC	S	D1
VC_1103_	6.35	3.18	2.8
VC_1604_	9.525	4.76	4.4



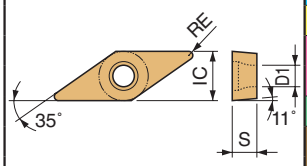
| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VP_0802_	4.76	2.38	2.3
VP_1103_	6.35	3.18	2.8



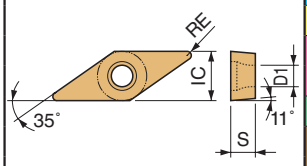
| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VP_0802_	4.76	2.38	2.3
VP_1103_	6.35	3.18	2.8

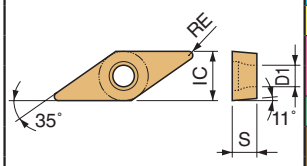


| | | |

35° Rhombic / Positive with Hole

(mm)

Description	IC	S	D1
VP_0802_	4.76	2.38	2.3
VP_1103_	6.35	3.18	2.8



	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05
P																											◓	◔	◔							
M																											◔	◔	◓			◓				
K																																				
N																																				
S																																◓				
H																																◓				

Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

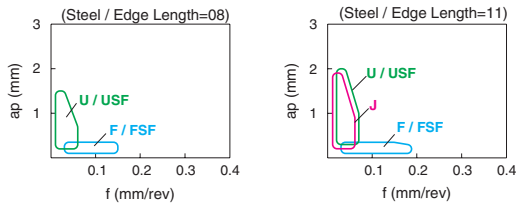
Insert (Handed Insert shows Left-hand)	Description	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV90	PV7005	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR930	PR1225	PR005S	PR015S	PR1535	PDL010	PDL025	KW10	SW05	See Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed, Super Fine	VPET 080201FR-USF	0.1																												●									Ref. to the table below **B94**	1
	080201FL-USF	0.1																												●										
	080202FR-USF	0.2			●																									●										
	080202FL-USF	0.2			●																									●										
	VPET 1103003FR-USF	0.03																												●										
	1103003FL-USF	0.03																												●										
	110301FR-USF	0.1			●																									●										
	110301FL-USF	0.1																												●										
	110302FR-USF	0.2			●																									●										
	110302FL-USF	0.2			●																									●										
	VPET 080201MFR-USF	<0.1																													●									
	080202MFR-USF	<0.2																													●									
	080202MFL-USF	<0.2																													●									
	VPET 1103005MFR-USF	<0.05																													●									
	1103005MFL-USF	<0.05																													●									
	110301MFR-USF	<0.1																													●									
	110301MFL-USF	<0.1																													●									
	110302MFR-USF	<0.2																													●									
	110302MFL-USF	<0.2																													●									
Sharp Edge / Precision																																								
Low Feed, Sharp Edge	VPET 080201MFR-U	<0.1																										●						●						
	080201MFL-U	<0.1																										●						●						
	080202MFR-U	<0.2																										●						●						
	080202MFL-U	<0.2																										●						●						
	VPET 1103005MFR-U	<0.05																										●						●						
	1103005MFL-U	<0.05																										●						●						
	110301MFR-U	<0.1																										●						●						
	110301MFL-U	<0.1																										●						●						
	110302MFR-U	<0.2																										●						●						
	110302MFL-U	<0.2																										●						●						
Sharp Edge																																								
Low Feed, Sharp Edge	VPET 1103005MFR-J	<0.05																										●		●				●						
	110301MFR-J	<0.1																										●		●				●						
	110301MFL-J	<0.1																										●		●				●						
	110302MFR-J	<0.2																										●		●				●						
	110302MFL-J	<0.2																										●		●				●						

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Applicable Chipbreaker Range

ap indicates radius

1



Inserts are sold in 10 piece boxes

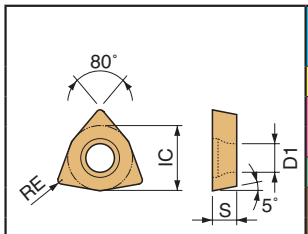
● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

80° Trigon / Positive with Hole

(mm)

Description	IC	S	D1
WB_0601_	3.97	1.59	2.3
WB_0802_	4.76	2.38	2.3



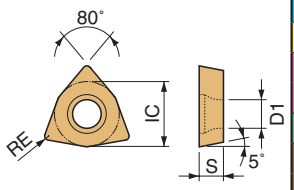
| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

80° Trigon / Positive with Hole

(mm)

Description	IC	S	D1
WB_0601_	3.97	1.59	2.3
WB_0802_	4.76	2.38	2.3



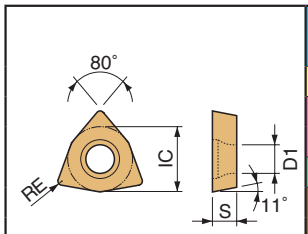
| | | |

How to read pages of "Turning Inserts" ➔ See Page **B15**

80° Trigon / Positive with Hole

(mm)

Description	IC	S	D1
WP_1102_	6.35	2.38	2.8
WP_1603_	9.525	3.18	4.4

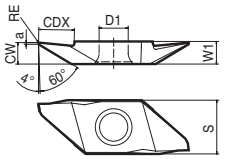
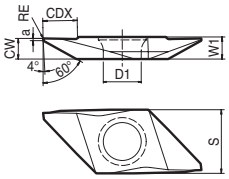


| | | |

Inserts for Back Turning (Small Parts Machining)

		PR1725	PR1535	PR1225	KW10
P	Free-cutting steel				
	Carbon Steel / Alloy Steel	●	◐	◐	
M	Stainless Steel	◐	●	◐	
K	Gray Cast Iron				●
	Nodular Cast Iron				◐
N	Non-ferrous Metals				●
S	Heat-resistant Alloys	◐	●	◐	
	Titanium Alloys		●		◐
H	Hard Materials				

For KTKF toolholder

Insert (Photo shows Right-hand)	Description	CW	a	CDX	RE	W1	S	D1	MEGACOAT NANO PLUS PR1725	MEGACOAT MEGACOAT NANO PR1535	MEGACOAT MEGACOAT NANO PR1225	Carbide KW10	See Page for Applicable Toolholders
 ●Right-hand shown	TKFB 12R15005M	1.5	0.25	2.6	<0.05	3.0	8.7	5.2	●	●	●	●	E13
	TKFB 12R28005M	2.8	0.3	4.6	<0.05	3.0	8.7	5.2	●	●	●	●	
	TKFB 12R28010M				<0.1				●	●	●	●	
	TKFB 16R38005M	3.8	0.3	6.3	<0.05	4.0	9.5	5.2	●	●	●	●	
	TKFB 16R38010M				<0.1				●	●	●	●	
 ●Left-hand shown	TKFB 12L28005MR	2.8	0.3	4.6	<0.05	3.0	8.7	5.2		●	●		
	TKFB 12L28010MR				<0.1					●	●		
	TKFB 16L38005MR	3.8	0.3	6.3	<0.05	4.0	9.5	5.2		●	●		
	TKFB 16L38010MR				<0.1					●	●		

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance on corner-R(RE).

Inserts Identification System (Ref. to Tables 1 and 2)

TKFB 12 R 15 005 M R

- TKFB: Insert Type
- 12: Insert Size
- R: Insert Hand (R : Right-hand, L : Left-hand)
- 15: Insert width
- 005: Corner-R(RE)
- M: Indicates the corner-R(RE) has a minus tolerance
- R: Hand of Cutting Lead Angle (R : Right-hand)

Table 1

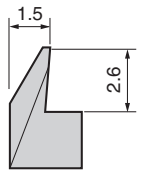
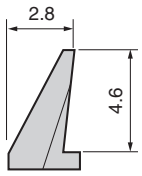
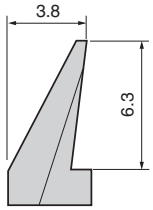
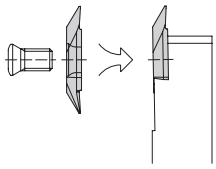
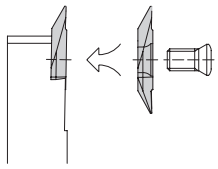
Small machining	General purpose	Large machining
 TKFB12R15..	 TKFB12R28..	 TKFB16R38..

Table 2

Toolholder	Right-hand	Toolholder	Left-hand
Insert	Right-hand	Insert	Left-hand
Lead angle	Right-hand	Lead angle	Right-hand
			

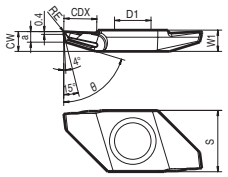
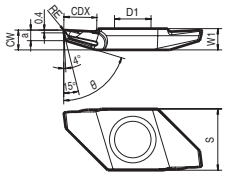
Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page B15

P	Free-cutting steel				See Page for Applicable Toolholders
	Carbon Steel / Alloy Steel	●	◡	◡	
M	Stainless Steel	◡	●	◡	
K	Gray Cast Iron				
	Nodular Cast Iron				
N	Non-ferrous Metals				
S	Heat-resistant Alloys	◡	●	◡	
	Titanium Alloys		●		
H	Hard Materials				

For KTKF toolholder (GQ Chipbreaker)

Insert (Handed Insert shows Right-hand)		Description	CW	a	CDX	RE	W1	S	D1	θ	MEGACOAT NANO PLUS PR1725	MEGACOAT MEGACOAT NANO PR1535	MEGACOAT MEGACOAT NANO PR1225	See Page for Applicable Toolholders
Polished		TKFB 12R28005P-GQ	2.8	1.5	4.6	0.05	3.0	8.7	5.2	74°	●	●	●	E13
		TKFB 12R28015P-GQ				0.15					●	●	●	
		TKFB 16R38005P-GQ	3.8	1.8	6.3	0.05	4.0	9.5	5.2	72°	●	●	●	
		TKFB 16R38015P-GQ				0.15					●	●	●	
		TKFB 12R28005-GQ	2.8	1.5	4.6	0.05	3.0	8.7	5.2	74°	●	●	●	
		TKFB 12R28015-GQ				0.15					●	●	●	
		TKFB 16R38005-GQ	3.8	1.8	6.3	0.05	4.0	9.5	5.2	72°	●	●	●	
		TKFB 16R38015-GQ				0.15					●	●	●	

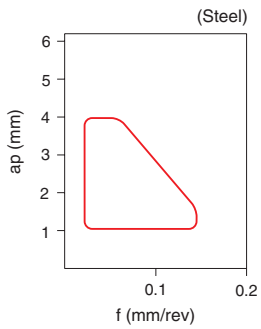
Inserts Identification System

TKFB 12 R 28 005 P -GQ

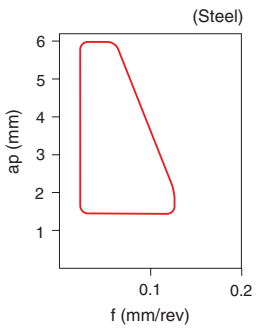
- TKFB: Insert Type
- 12: Insert Size
- R: Insert Hand (R : Right-hand)
- 28: Insert width
- 005: Corner-R(RE)
- P: Polished
- -GQ: GQ Chipbreaker

Applicable Chipbreaker Range

TKFB12R28...GQ



TKFB16R38...GQ



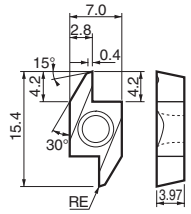
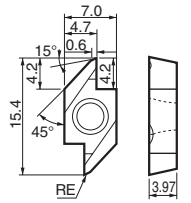
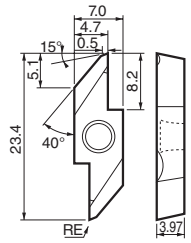
● : Std. Item

Inserts are sold in 10 piece boxes

Inserts for Back Turning (Small Parts Machining)

		TC60M	PR1705	PR1725	PR1225	PR930	KW10
P	Free-cutting steel		●				
	Carbon Steel / Alloy Steel			●	◐	◐	
M	Stainless Steel			◐	●	◐	
K	Gray Cast Iron						●
	Nodular Cast Iron						◐
N	Non-ferrous Metals						●
S	Heat-resistant Alloys			◐	●		
	Titanium Alloys						●
H	Hard Materials						

● For AABS / SABS / AABW / SABW toolholders

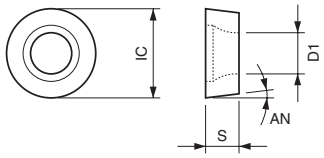
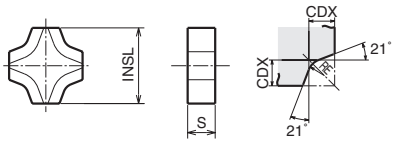
Insert (Handed Insert shows Right-hand)		Description		Dimension (mm) RE	Cermet TC60M	MEGACOAT NANO PLUS PR1705	MEGACOAT NANO PLUS PR1725	MEGACOAT PR1225	P/D Coated Carbide PR930	Carbide KW10	See Page for Applicable Toolholders
		ABS	15R4005	0.05	●				●	●	E21
			15R4015	0.15	●				●	●	
		ABS	15R4005M	<0.05		●	●	●			
			15R4015M	<0.15		●	●	●			
		ABW	15R4005	0.05	●				●	●	E22
			15R4015	0.15	●				●	●	
		ABW	15R4005M	<0.05		●	●	●			
			15R4015M	<0.15		●	●	●			
		ABW	23R5005	0.05	●				●	●	E23
			23R5015	0.15	●				●	●	
		ABW	23R5005M	<0.05			●	●			
			23R5015M	<0.15		●	●	●			

· Insert whose corner-R(RE) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance on corner-R(RE).

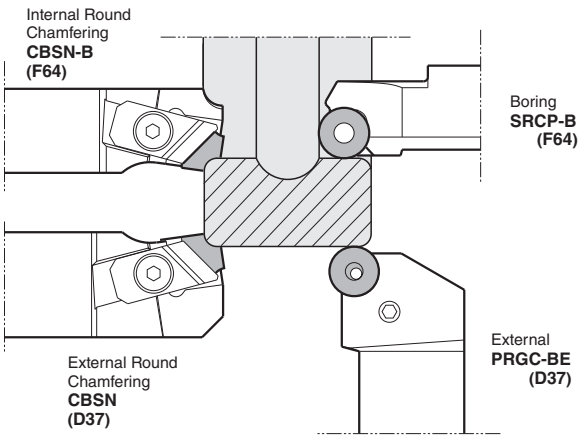
Inserts are sold in 10 piece boxes

● : Std. Item

Bearing Machining

Insert		Description		Dimension (mm) IC	S	D1	RE	Relief Angle AN	Cermet TN90	See Page for Applicable Toolholders
External/Boring/Facing		**RCMT**	**1204M0-BB**	12.0	4.76	4.2	-	7°	●	**D37**
			1606M0-BB	16.0	6.35	5.5			●	
		RPMT	**1203M0-BB**	12.0	3.18	4.4	-	11°	●	**F64**
			1604M0-BB	16.0	4.76	5.5			●	
Round Chamfering		**SNMF**		INSL	S	CDX	RE			
			120406-21	12.70	4.76	1.5	0.6	-	●	**D37**
			120410-21			3.0	1.0		●	
			120416-21			3.1	1.6		●	**F64**
			120421-21			3.2	2.1		●	
			120426-21			3.3	2.6		●	

Tooling for Bearing Machining

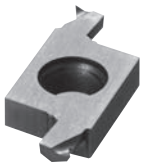
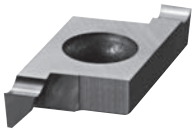
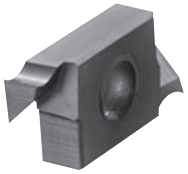


● : Std. Item

Inserts are sold in 10 piece boxes

Micro Boring

● Twin-Bars

Micro Boring	Micro Face Grooving
TWB Twin-Bars ➡ **F38**	TWFG Twin-Bars ➡ **G82**
	
TWBT Twin-Bars ➡ **F39**	TWFGT Twin-Bars ➡ **G83**
	

● EZ Bars / System Tip-Bars

Micro Boring		Micro Back Boring
EZB EZ Bars ➡ **F14**	EZVB EZ Bars ➡ **F20**	EZBT EZ Bars ➡ **F22**
VNB-S / VNB System Tip-Bars ➡ **F32**	VNBX-S System Tip-Bars ➡ **F36**	VNBT System Tip-Bars ➡ **F33**

Micro Boring（90°Lead Angle）
EZBF EZ Bars ➡ **F19**

Solid Tip-Bars [Grooving / Threading]

Micro Grooving	Micro Face Grooving	Micro Internal Threading
EZG EZ Bars ➡ **G51**	EZFG EZ Bars ➡ **G78**	EZT EZ Bars ➡ **J32**
VNG System Tip-Bars ➡ **G53**	VNFG System Tip-Bars ➡ **G80**	VNT System Tip-Bars ➡ **J36**

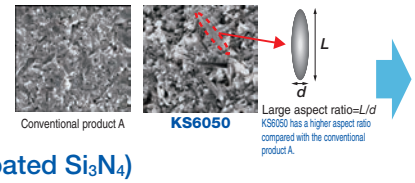
High Speed Machining for Cast Iron KS6015/KS6050/CS7050

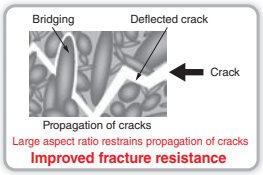
KS6015

Crystallization of Grain Boundary Phase Improves Thermal Conductivity
Excellent Wear Resistance with Reduced Heat at the Cutting Edge

- Improved fracture resistance by high aspect ratio constituents
- Anti-chipping in scale processing and interrupted machining

KS6050

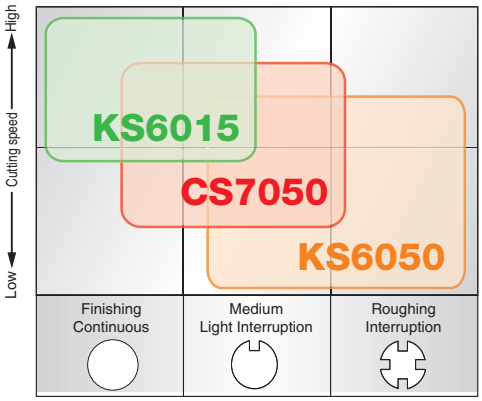




CS7050 (Coated Si_3N_4)

Superior wear resistance attained with strong coating adherence
Applicable to high speed machining

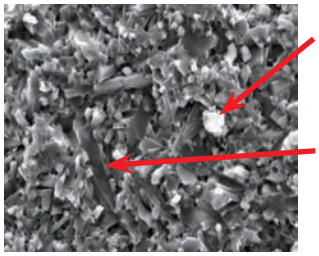
Application Map



Heat-Resistant Alloys Machining SiAlON Ceramic KS6030/KS6040

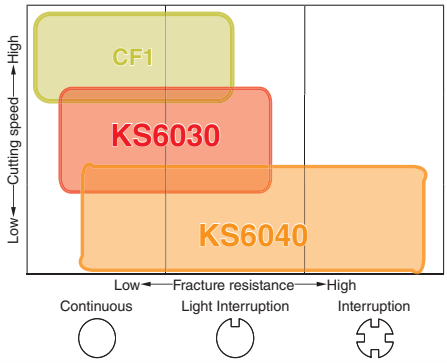
- Improved wear and fracture resistance due to the mixture of the hard and acicular particles

Superior balance in heat resistant alloys machining
achieves optimum balance between wear and fracture resistance



Application Map

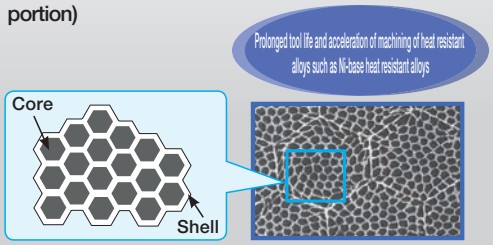
・Heat-Resistant Alloys Machining



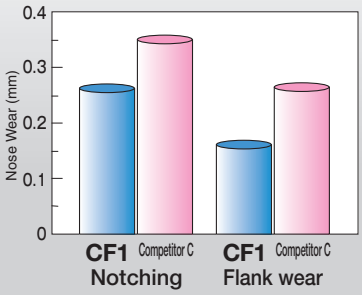
Heat-Resistant Alloys Machining Honeycomb structure Ceramic CF1

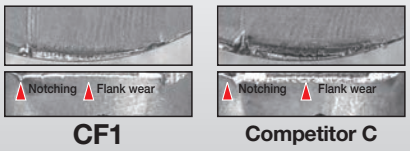
What is Honeycomb structure Ceramic?

Honeycomb structure Ceramic is a composite material consisting of a core (gray portion) and shell (white portion)



Wear Resistance Comparison(Internal evaluation)





<Cutting Conditions>
Workpiece Material Ni-base heat-resistant alloys
Tool geometry : RNGN120400
Vc =150m/min, ap =1mm
f =0.15mm/rev Wet

Ceramic Inserts Identification System

- Identification System

C	N	G	A	12	04	04	S01525

"Turning Indexable Inserts Identification System" See Page B2

Edge Prep.
(Ref. to the Table 1)

- Edge Preparation Identification System

Table 1

Edge Prep.	Symbol	Cutting Edge Spec.	Example		Shape
	S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge	
	T	Chamfered Cutting Edge	T02025	0.20mm x 25° Chamfered Cutting Edge	

See Page B3 for insert color

How to read pages of "Turning Inserts" ➡ See Page **B15**

80° Rhombic / Negative

(mm)

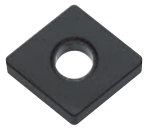
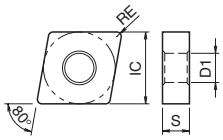
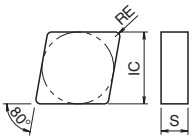
Description	IC	S	D1
CN_A 1204_	12.70	4.76	5.16
CN_N 1204_	12.70	4.76	-
1207_		7.94	

(mm)

Description	IC	S	D1
CNGN1607_	15.875	7.94	-
CNGX1207_	12.70	7.94	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01525	0.15mm x 25° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)						●	✱	◔			
K	Gray Cast Iron (Without Scale)	●	◔	◔		◔		◔	◕			
K	Nodular Cast Iron (With Scale)								◔			
K	Nodular Cast Iron (Without Scale)								◔			
S	Heat-resistant Alloys										✱	◕
H	Hard Materials				○	●						◔

Insert		Description		Edge Prep.	Dimension (mm) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
		CNGA	120412S01025	S01025	1.2	●											D8 D9 F65 F69 F70
		CNGA	120404S01525	S01525	0.4				●								
			120408S01525		0.8				●								
			120412S01525		1.2				●								
		CNGA	120404S02025	S02025	0.4					●							
			120408S02025		0.8					●							
			120412S02025		1.2					●							
		CNGA	120404S03030	S03030	0.4				●								
			120408S03030		0.8				●								
			120412S03030		1.2				●								
		CNGA	120404T02025	T02025	0.4			▲		●							
			120408T02025		0.8		●	▲		●	●	●	●				
			120412T02025		1.2		●	▲		●	●	●	●				
		CNMA	120408S01525	S01525	0.8				●								
		CNMA	120408S03030	S03030	0.8				●								
			120412S03030		1.2				●								
		CNGN	120408S01025	S01025	0.8	●											D26
			120412S01025		1.2	●											
		CNGN	120408T01020	T01020	0.8										●	▲	
			120412T01020		1.2											▲	
		CNGN	120408T02025	T02025	0.8					●	●				●		
			120412T02025		1.2					●	●	●					
			120416T02025		1.6							●					
		CNGN	120708S01525	S01525	0.8				●								
			120712S01525		1.2				●								
		CNGN	120708T01020	T01020	0.8											▲	
			120712T01020		1.2											▲	
		CNGN	120704T02025	T02025	0.4		●										
			120708T02025		0.8		●										
			120712T02025		1.2		●										
			120716T02025		1.6		●										
		CNGN	160708T02025	T02025	0.8		●										
			160712T02025		1.2		●										
			160716T02025		1.6		●										
		CNMN	120708T02025	T02025	0.8		●										
			120712T02025		1.2		●										

Inserts are sold in 10 piece boxes

● : Std. Item ▲ : To be replaced by a new product

How to read pages of "Turning Inserts" ➔ See Page **B15**

55° Rhombic / 75° Rhombic / Negative

(mm)

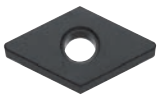
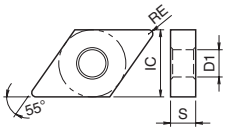
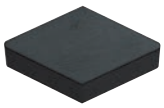
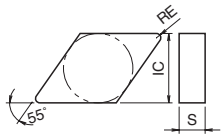
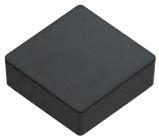
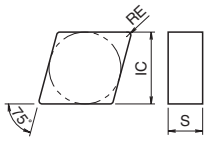
Description	IC	S	D1
DNGA 1504_	12.70	4.76	5.16
1506_		6.35	
DNGN 1504_	12.70	4.76	-
1507_		7.94	

(mm)

Description	IC	S	D1
DNGX 1207_	10.00	7.94	-
DNGX 1507_	12.70	7.94	-
ENGN 1307_	12.70	7.94	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01225	0.12mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm x 15° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)											
	Gray Cast Iron (Without Scale)	●	◌	◌		◌						
	Nodular Cast Iron (With Scale)											
	Nodular Cast Iron (Without Scale)											
S	Heat-resistant Alloys											
H	Hard Materials				○	●						

Insert	Description		Edge Prep.	Dimension (mm) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
 	DNGA	150408S01025	S01025	0.8	●											
	DNGA	150404S01525	S01525	0.4				●								D12
		150408S01525		0.8				●								D13
	DNGA	150404S02025	S02025	0.4					●							F66
		150408S02025		0.8					●							
	DNGA	150408S03030	S03030	0.8				●								F72
	DNGA	150404T02025	T02025	0.4		●			●							F73
		150408T02025		0.8		●	▲		●							
		150412T02025		1.2			▲		●							
	DNGA	150604T02025	T02025	0.4					●							D12
		150608T02025		0.8			▲		●							D13
		150612T02025		1.2					●							F66
 	DNGN	150704S01525	S01525	0.4				●								D27
		150708S01525		0.8				●								
		150712S01525		1.2				●								
	DNGN	150708S02025	S02025	0.8					●							
	DNGN	150704T02025	T02025	0.4		●										
		150708T02025		0.8		●										
		150712T02025		1.2		●										
		150716T02025		1.6		●										
 	ENGN	130708S01525	S01525	0.8				●								D27
		130712S01525		1.2				●								F81
	ENGN	130704T02025	T02025	0.4		●										
		130708T02025		0.8		●										
		130712T02025		1.2		●			●							
		130716T02025		1.6		●										
		130720T02025		2.0		●										

● : Std. Item ▲ : To be replaced by a new product

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ See Page **B15**

Round / Negative

(mm)

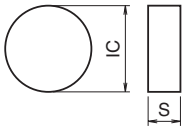
Description	IC	S	D1
RNGN 0903_	9.525	3.18	-
0904_		4.76	
0907_		7.94	
1204_	12.70	4.76	

(mm)

Description	IC	S	D1
RNGN 1207_	12.70	7.94	-
1507_	15.875		
1907_	19.05		
2507_	25.40		

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01225	0.12mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm x 15° Chamfered Cutting Edge

		KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)	●	✖	◷
	Gray Cast Iron (Without Scale)	◷	◷	◷
	Nodular Cast Iron (With Scale)	◷		
	Nodular Cast Iron (Without Scale)	◷		
S	Heat-resistant Alloys	◷	✖	◷
H	Hard Materials	○	●	



Insert	Description		*Edge Prep.	Dimension (mm) RE	Aluminum Oxide Ceramic KA30	A65	KT66	PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6015	KS6050	CVD Coated Silicon Nitride Ceramic CS7050	SIAION Ceramic KS6030	KS6040	Honeycomb structure Ceramic CF1	See Page for Applicable Toolholders
	RNGN	090300E003	E003	-									●			D33
		090300T01020	T01020	-									●			
	RNGN	090400S01525	S01525	-				●								
		090400S02025	S02025	-					●							
		090400T01020	T01020	-											▲	
		090400T02025	T02025	-		●			●							
	RNGN	090700T01020	T01020	-											▲	-
	RNGN	120400E003	E003	-									●			D31 D33
		120400S01525	S01525	-				●								
		120400S02025	S02025	-					●							
		120400T01020	T01020	-									●		▲	
		120400T02025	T02025	-		●	▲		●	●	●	●				
	RNGN	120700E003	E003	-									●			
		120700E005	E005	-										●		
		120700K15015	K15015	-					●							
		120700S01525	S01525	-				●								
		120700S02025	S02025	-					●							
		120700T01020	T01020	-									●	●	▲	
		120700T02025	T02025	-		●	▲		●	●	●					
	RNGN	150700S01525	S01525	-				●								D31
		150700S02025	S02025	-					●							
		150700T02025	T02025	-		●										
	RNGN	190700E003	E003	-									●			-
		190700T01020	T01020	-									●	●		

*For cutting edge "E" and "K", please refer to the table below.

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	R-honed Cutting Edge	E005	R0.05mm Honed
K	Double Chamfered Cutting Edges	K15015	1.5mm x 15°Chamfered Cutting Edge

· Note : Symbol "K" describe only the largest chamfer width and its angle.

Inserts are sold in 10 piece boxes

● : Std. Item ▲ : To be replaced by a new product

How to read pages of "Turning Inserts" ➡ See Page **B15**

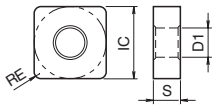
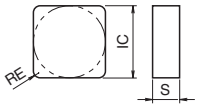
90° Square / Negative

(mm)

Description	IC	S	D1
SN_A1204_	12.70	4.76	5.16
SNGN1204_			-
SNGN1207_		7.94	

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01225	0.12mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm x 15° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)						●	✱	◔			
K	Gray Cast Iron (Without Scale)	●	◔	◔		◔		◔	◕			
K	Nodular Cast Iron (With Scale)								◔			
K	Nodular Cast Iron (Without Scale)								◔			
S	Heat-resistant Alloys										✱	◕
H	Hard Materials				○	●						◔

Insert		Description		Edge Prep.	Dimension (mm) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
		SNGA 120408S01525		S01525	0.8				●								D14 D15 F75
		SNGA 120412S01525			1.2				●								
		SNGA 120408S02025		S02025	0.8					●							
		SNGA 120412S02025			1.2					●							
		SNGA 120408T02025		T02025	0.8		●			●	●	●					
		SNGA 120412T02025			1.2		●			●	●	●					
		SNGA 120416T02025			1.6					●	●	●	●				
		SNMA 120408S03030		S03030	0.8				●								
		SNGN 120408S01025		S01025	0.8	●											D29 D34 D35
		SNGN 120412S01025			1.2	●											
		SNGN 120416S01025			1.6	●											
		SNGN 120420S01025			2.0	●											
		SNGN 120408S01525		S01525	0.8				●								
		SNGN 120412S01525			1.2				●								
		SNGN 120416S01525			1.6				●								
		SNGN 120408S02025		S02025	0.8					●							
		SNGN 120412S02025			1.2					●							
		SNGN 120416S02025			1.6					●							
		SNGN 120416S03030		S03030	1.6				●								
		SNGN 120408T00520		T00520	0.8		●										
		SNGN 120408T01020		T01020	0.8											▲	
		SNGN 120412T01020			1.2										●	▲	
		SNGN 120416T01020			1.6											▲	
		SNGN 120420T01020			2.0											▲	
		SNGN 120404T02025		T02025	0.4		●			●							
		SNGN 120408T02025			0.8		●	▲		●	●						
		SNGN 120412T02025			1.2		●	▲		●	●	●	●				
		SNGN 120416T02025			1.6		●			●	●	●					
		SNGN 120420T02025			2.0		●				●	●					
		SNGN 120708S01025		S01025	0.8	●											
		SNGN 120712S01025			1.2	●											
		SNGN 120716S01025			1.6	●											
		SNGN 120704S01525		S01525	0.4				●								
		SNGN 120708S01525			0.8				●								
		SNGN 120712S01525			1.2				●								
		SNGN 120716S01525			1.6				●								
		SNGN 120720S01525			2.0				●								
		SNGN 120708S02025		S02025	0.8					●							
		SNGN 120712S02025			1.2					●							
		SNGN 120716S02025			1.6					●							
		SNGN 120720S02025			2.0					●							
		SNGN 120708T01020		T01020	0.8											▲	
		SNGN 120712T01020			1.2											▲	
		SNGN 120716T01020			1.6											▲	
		SNGN 120720T01020			2.0											▲	

● : Std. Item ▲ : To be replaced by a new product

Inserts are sold in 10 piece boxes

90° Square / Negative

(mm)

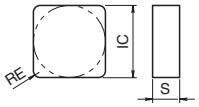
Description	IC	S	D1
SN_N1207_	12.70	7.94	-
SNGN1507_	15.875	7.94	

(mm)

Description	IC	S	D1
SNGX1207_	12.70	7.94	-
SNGX1507_	15.875	7.94	

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01225	0.12mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm x 15° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)						●	✱				
	Gray Cast Iron (Without Scale)		◌			◌		◌				
	Nodular Cast Iron (With Scale)											
	Nodular Cast Iron (Without Scale)											
S	Heat-resistant Alloys											
H	Hard Materials					●						

Insert	Description	Edge Prep.	Dimension (mm) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
	SNGN 120704T02025	T02025	0.4		●										D29 D34 D35 F81
	SNGN 120708T02025		0.8		●			●							
	SNGN 120712T02025		1.2		●			●							
	SNGN 120716T02025		1.6		●			●	●	●					
	SNGN 120720T02025		2.0		●			●							
	SNMN 120716T02025	T02025	1.6		●										
	SNGN 150712T02025	T02025	1.2		●			●							D29
	SNGN 150716T02025		1.6		●										

Inserts are sold in 10 piece boxes

● : Std. Item

How to read pages of "Turning Inserts" ➡ See Page **B15**

60° Triangle / Negative

(mm)

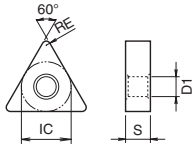
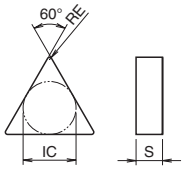
Description	IC	S	D1
TNGA 1604_	9.525	4.76	3.81
TNGN 1103_	6.35	3.18	-

(mm)

Description	IC	S	D1
TNGN 1604_	9.525	4.76	-
1607_		7.94	

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01525	0.15mm x 25° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)						●	✖	◔			
K	Gray Cast Iron (Without Scale)	●	◔	◔		◔		◔	◕			
K	Nodular Cast Iron (With Scale)								◔			
K	Nodular Cast Iron (With Scale)								◔			
S	Heat-resistant Alloys											
H	Hard Materials				○	●						

Insert	Description	Edge Prep.	RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
	TNGA 160408S01025	S01025	0.8	●											D16 D17 D18 F66 F76 F77
	TNGA 160404S01525	S01525	0.4				●								
	TNGA 160408S01525		0.8				●								
	TNGA 160412S01525		1.2				●								
	TNGA 160404S02025	S02025	0.4					●							
	TNGA 160408S02025		0.8					●							
	TNGA 160412S02025		1.2					●							
	TNGA 160408S03030	S03030	0.8				●								
	TNGA 160408T00520	T00520	0.8	●											
	TNGA 160404T02025	T02025	0.4		●	▲		●							
	TNGA 160408T02025		0.8		●	▲		●	●	●					
	TNGA 160412T02025		1.2			▲		●	●	●	●				
	TNGN 110304T00520	T00520	0.4		●			●							D36 F81
	TNGN 110308T00520		0.8		●			●							
	TNGN 110312T00520		1.2		●										
	TNGN 160404S01025	S01025	0.4	●											D30
	TNGN 160408S01025		0.8	●											
	TNGN 160412S01025		1.2	●											
	TNGN 160416S01025		1.6	●											
	TNGN 160420S01025		2.0	●											
	TNGN 160404S01525	S01525	0.4				●								
	TNGN 160408S01525		0.8				●								
	TNGN 160412S01525		1.2				●								
	TNGN 160404S02025	S02025	0.4					●							
	TNGN 160408S02025		0.8					●							
	TNGN 160412S02025		1.2					●							
	TNGN 160404T00520	T00520	0.4		●										
	TNGN 160408T00520		0.8		●										
	TNGN 160412T00520		1.2	●											
	TNGN 160404T02025	T02025	0.4		●			●							
	TNGN 160408T02025		0.8		●			●	●	●					
	TNGN 160412T02025		1.2		●				●						
	TNGN 160704T02025	T02025	0.4		●			●							
	TNGN 160708T02025		0.8		●			●							
	TNGN 160712T02025		1.2		●										
	TNGN 160716T02025		1.6		●										
	TNGN 160720T02025		2.0		●										

● : Std. Item ▲ : To be replaced by a new product

Inserts are sold in 10 piece boxes

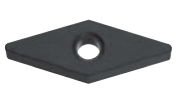
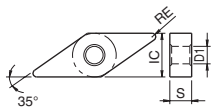
35° Rhombic / Negative

(mm)

Description	IC	S	D1
VN_A1604_	9.525	4.76	3.81

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01525	0.15mm x 25° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic	CVD Coated Silicon Nitride Ceramic		Si AlON Ceramic		Honeycomb structure Ceramic
K	Gray Cast Iron (With Scale)											
K	Gray Cast Iron (Without Scale)		◐	◐		◓						
K	Nodular Cast Iron (With Scale)											
K	Nodular Cast Iron (Without Scale)											
S	Heat-resistant Alloys											
H	Hard Materials				○	●						

Insert	Description	Edge Prep.	Dimension (mm) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
 	VNGA 160404S01525	S01525	0.4				●								D19 D20 D21 D22
	VNGA 160408S01525		0.8				●								
	VNGA 160404S02025	S02025	0.4					●							
	VNGA 160408S02025		0.8					●							
	VNGA 160404T02025	T02025	0.4		●	▲		●							
	VNGA 160408T02025		0.8		●	▲		●							
	VNGA 160412T02025		1.2					●							
	VNMA 160408S01525	S01525	0.8				●								

Inserts are sold in 10 piece boxes

● : Std. Item ▲ : To be replaced by a new product

How to read pages of "Turning Inserts" See Page B15

Positive

(mm)

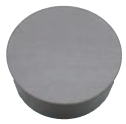
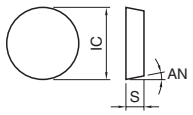
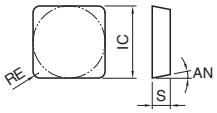
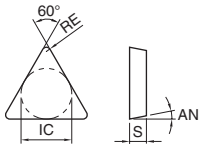
Description	IC	S	AN
RPGN 0903_	9.525	3.18	11°
RPGN 1204_	12.70	4.76	
SPGN 0903_	9.525	3.18	
SPGN 1203_	12.70	3.18	

(mm)

Description	IC	S	AN
TBGN 0601_	3.97	1.59	5°
TCGN 1604_	9.525	4.76	7°
TPGN 0902_	5.56	2.38	11°
1103_	6.35	3.18	
1603_	9.525		

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01525	0.15mm x 25° Chamfered Cutting Edge

		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Honeycomb structure Ceramic	
		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	
K	Gray Cast Iron (With Scale)												
	Gray Cast Iron (Without Scale)		◐	◐		◕							
	Nodular Cast Iron (With Scale)												
	Nodular Cast Iron (Without Scale)												
S	Heat-resistant Alloys									◕	✖		
H	Hard Materials				○	●							

Insert		Description		*Edge Prep.	Dimension (mm) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
		RPGN	090300E003	E003	-									●			-
			090300T01020	T01020	-									●			
		RPGN	120400E003	E003	-									●			
			120400T01020	T01020	-									●	●		
		SPGN	090308T00820	T00820	0.8		●			●							F62
		SPGN	120308S00820	S00820	0.8				●	●							
		SPGN	120308T00820 120312T00820	T00820	0.8 1.2		● ●										
		TBGN	060104S00820 060108S00820	S00820	0.4 0.8				● ●	● ●							-
		TCGN	160408T00820	T00820	0.8		●										
		TPGN	090204T00820 090208T00820	T00820	0.4 0.8			▲		● ●							F63
		TPGN	110304S00820 110308S00820	S00820	0.4 0.8				● ●	● ●							
		TPGN	110304T00820 110308T00820	T00820	0.4 0.8		● ●			● ●							
		TPGN	160304S00820 160308S00820 160312S00820	S00820	0.4 0.8 1.2				● ● ●	● ●							
		TPGN	160304T00820 160308T00820 160312T00820	T00820	0.4 0.8 1.2		● ● ●			● ●							

*For cutting edge "E", please refer to the table below.

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	R-honed Cutting Edge	E005	R0.05mm Honed

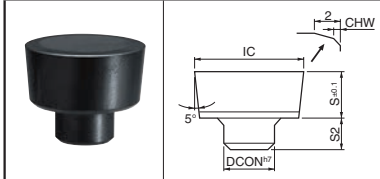
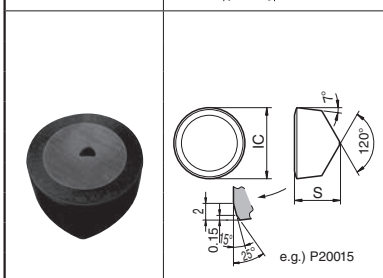
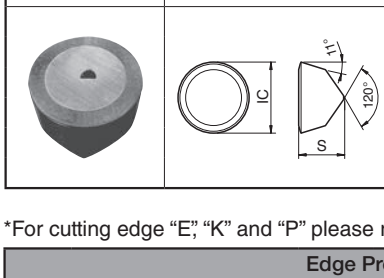
● : Std. Item ▲ : To be replaced by a new product

Inserts are sold in 10 piece boxes

Inserts for Hardened Roll

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01525	0.15mm x 25° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
K	Gray Cast Iron (With Scale)					✖						
	Gray Cast Iron (Without Scale)											
	Nodular Cast Iron (With Scale)											
	Nodular Cast Iron (Without Scale)											
S	Heat-resistant Alloys									●	✖	◔
H	Hard Materials			◔		●						

Insert	Description		*Edge Prep.	Dimension (mm) IC	DCON	S	S2	CHW	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	See Page for Applicable Toolholders
	RBG	16K20003	K20003	16	8	8	5	0.2					●							-
	RCGX	060600E003	E003	6.35	-	6.35	-	-									●			-
		060600E005	E005															●		
		060600T01020	T01020														●	●		
		090700E003	E003	9.525	-	8	-	-									●			
		090700P20015	P20015								▲		●							
		090700S01020	S01020																▲	
		090700T01020	T01020														●	●		
		120700E003	E003	12.7	-	8	-	-									●			
		120700P20015	P20015										●							
		120700S01020	S01020																▲	
		120700T01020	T01020														●			
	RPGX	060600E003	E003	6.35	-	6.35	-	-									●			-
		060600T01020	T01020														●			
		090700E003	E003	9.525	-	8	-	-									●			
		090700T01020	T01020														●			
		120700E003	E003	12.7	-	8	-	-									●			
		120700T01020	T01020														●	●		

*For cutting edge "E," "K" and "P" please refer to the table below.

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	R-honed Cutting Edge	E005	R0.05mm Honed
K	Double Chamfered Cutting Edges	K20003	2.00mm x 3°Chamfered Cutting Edge
P	Double Chamfered and Honed Cutting Edge	P20015	2.00mm x 15°Chamfered and Honed Cutting Edge

· Note : Symbol "K" and "P" describe only the largest chamfer width and its angle.

RBG Inserts are sold in 1 piece boxes

Inserts are sold in 10 piece boxes

● : Std. Item ▲ : To be replaced by a new product

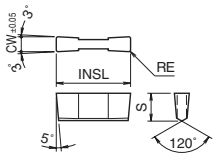
How to read pages of "Turning Inserts" ➡ See Page **B15**

Grooving Inserts

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S01525	0.15mm x 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T01525	0.15mm x 25° Chamfered Cutting Edge

		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SIAION Ceramic		Honeycomb structure Ceramic
K	Gray Cast Iron (With Scale)											
K	Gray Cast Iron (Without Scale)		○			●						
K	Nodular Cast Iron (With Scale)											
K	Nodular Cast Iron (Without Scale)											
S	Heat-resistant Alloys											
H	Hard Materials				○	●						

See Page for Applicable Toolholders: G46, G70

Insert	Description	Edge Prep.	CW	RE	INSL	S	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1
	GH 4020-05	S01020	4.0	0.5	20	7.5				●							
	4020-05	T01020						●			●						
	5020-05	S01020	5.0							●							
	5020-05	T01020						●			●						
	6020-05	T01020	6.0					●			●						
	7020-05	T01020	7.0					●									

● : Std. Item

Inserts are sold in 10 piece boxes