Turning Indexable Inserts

B1~B95

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Grooving Inserts	GH / GS	B95

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	Hexagon
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

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

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

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

(4) Hole / Chipbreaker Symbol

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)

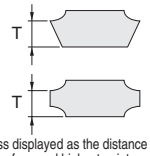
(5) Edge Length Symbol (ISO)

C	D	R	S	T	V	W	I.C. Size (mm)	(5) I.C. Size (ANSI) 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 Symbol

ISO Thickness (mm)	ISO Symbol	ANSI Thickness (inch)	ANSI 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(r_ε) Symbol

ISO Corner-R (r_ε) (mm)	ISO Symbol	ANSI Corner-R (r_ε) (inch)	ANSI 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 MO (metric)	Round insert	0

(8) Manufacturer's Option

Hand Symbol
Chipbreaker
Symbol, etc.

● Positive Insert Identification System

CCGT060201M E R - U

- Minus tolerance for Corner-R(r_ε)
- With Honing
- Insert Hand
- Chipbreakers

CCGT060201M F P - GF

- Minus tolerance for Corner-R(r_ε)
- Sharp edge
- Polished
- Chipbreakers

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

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

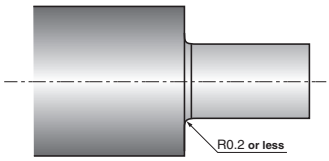
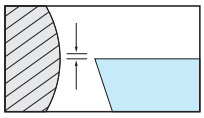


Fig.1 Example of a specified corner-R in the drawing

●Features of insert with tolerance symbol of "E" Class

"E" Class Turning Insert

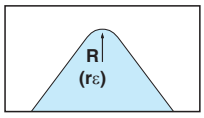
· Accuracy of index position after insert replacement



Thickness Tolerance

±0.13mm → ±0.025mm

(Conventional)



Corner-R (rε) Tolerance

±0.1mm → ±0.02mm

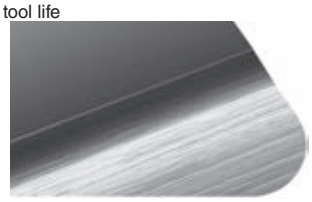
(Conventional)

●High Quality Ground Insert "Super Fine"

· Applicable for mechatronics, electronics and high precision machined parts
· Sub-micron accuracy possible

High Quality Ground Insert

· Reduced micro chipping during edge grounding
· Less adhesion
· Long tool life

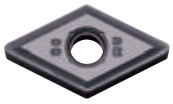


Insert Color

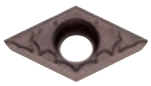
●Cermet, MEGACOAT NANO Cermet, MEGACOAT Cermet and PVD Coated Cermet

Grades	Cermet							MEGACOAT NANO Cermet	MEGACOAT Cermet				PVD Coated Cermet	
	NEW TN620	TN6010	TN6020	TN60	TN100M	TC40N	TC60M	NEW PV720	PV7005	PV7010	PV7025	PV7040	PV7020	PV90
Insert Color														

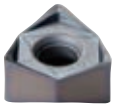
●MEGACOAT (PVD Coated Carbide)

Grades	MEGACOAT						
	PR1210	PR1215	PR1225	PR1230	PR1305	PR1310	PR1325
Insert Color							

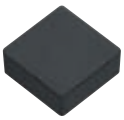
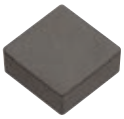
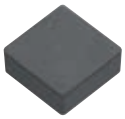
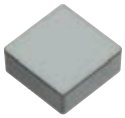
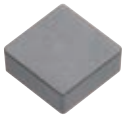
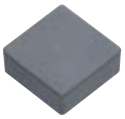
●CVD Coated Carbide and PVD Coated Carbide

Grades	CVD Coated Carbide						PVD Coated Carbide								
	NEW CA420M	CA45 series	CA40/CA41 series	NEW CA510 CA515 CA525 CA530		CA55 series	CA65 series	PR660	PR830	PR905	PR915	PR930	PR1005	PR1025	PR1115	PR1125
Insert Color																

●MEGACOAT NANO (PVD Coated Carbide)

Grades	MEGACOAT NANO			
	PR1425	PR1510	PR1525	PR1535
Insert Color	NEW 			

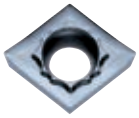
●Ceramic

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	KS6050	CS7050	NEW KS6030	KS6040	CF1
Insert Color										

●CBN and PCD

Grades	CBN					PCD			MEGACOAT CBN	PVD Coated CBN
	KBN65B	NEW KBN475	KBN510	KBN525	NEW KBN570	KPD001	KPD010	KPD230	KBN··M	KBN900
Insert Color	CBN and PCD									

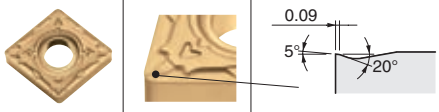
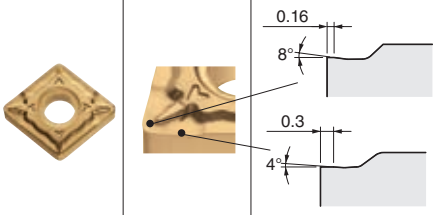
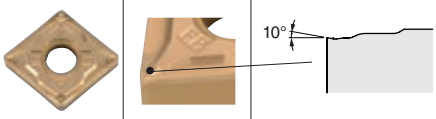
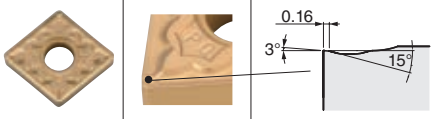
●Carbide

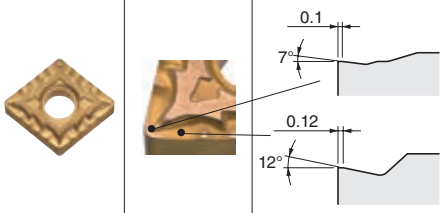
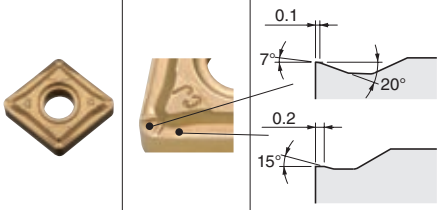
Grades	Carbide			
	GW15	GW25	KW10	SW05
Insert Color				

Chipbreaker Selection (Negative Inserts)

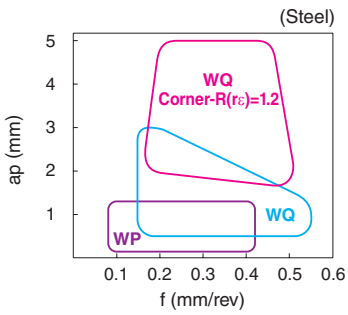
Steel

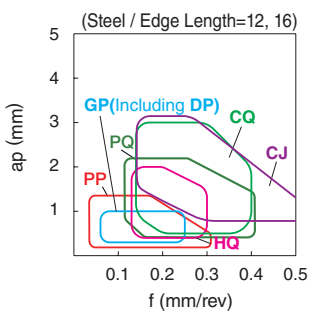
1 Molded Chipbreaker

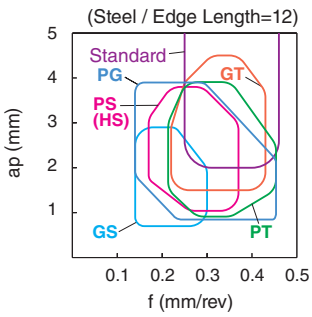
Cutting Range	Name	Design	Advantages
Finishing (With Wiper Edge)	WP		Wiper Insert. Double feed rate is available for finishing to light machining, while maintaining a smooth finish.
Finishing-Medium (With Wiper Edge)	WQ		Wiper Insert. Double feed rate possible while maintaining a smooth finish. High 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.

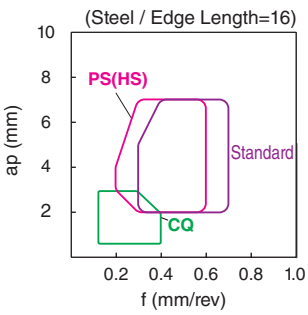
Cutting Range	Name	Design	Advantages
Finishing	GP		Finishing to light machining. Good chip control.
Finishing-Medium	HQ		Sharp cutting performance with 3-D rake angle and double projection design.
Finishing-Medium	CQ		Good chip control for varied ap such as copying. Applicable for up facing.
Finishing-Medium (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.

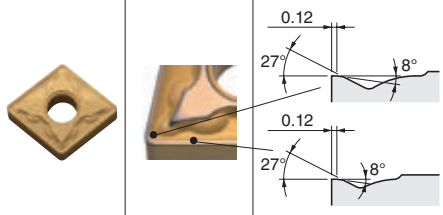
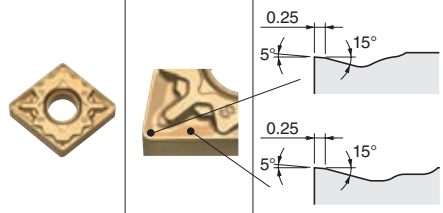
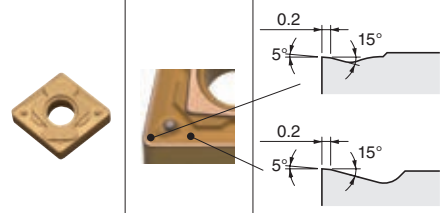
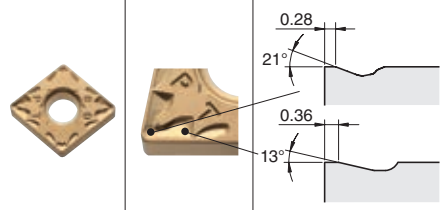
●Applicable Chipbreaker Range (ap indicates radius)

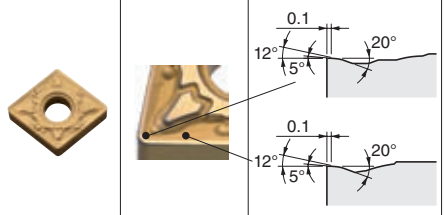
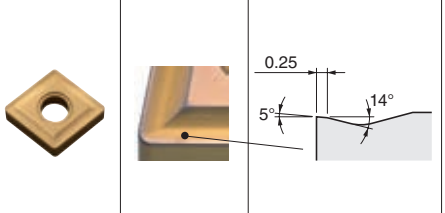
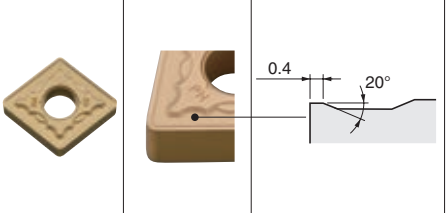
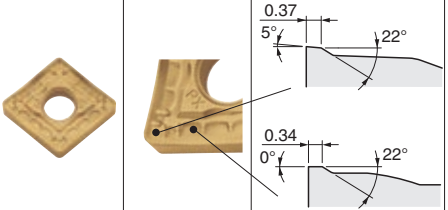




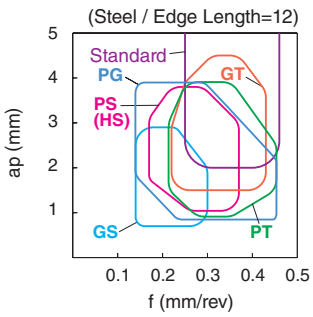


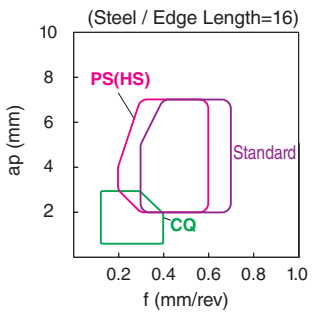


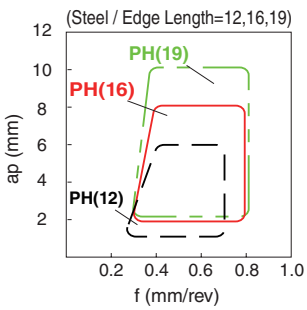
Cutting Range	Name	Design	Advantages
Medium - Roughing	GS		Strong edge chipbreaker. Stable for continuous machining and light interrupted machining.
Medium - Roughing	PS		General purpose chipbreaker. More stable due to large contact surface.
Medium - Roughing	HS		General purpose chipbreaker. Applicable to copying.
Medium-Roughing (High Feed Rate)	PT		Low cutting force at high feed machining. Land support structure.

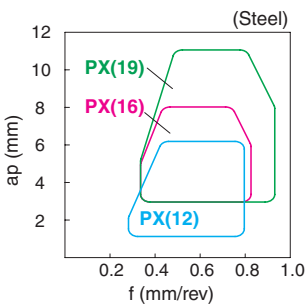
Cutting Range	Name	Design	Advantages
Medium-Roughing (High Feed Rate)	GT		Strong edge chipbreaker. Wide land design and smooth chip control even at high feed rate machining.
Roughing	Standard (without Symbol)		Low cutting force and suitable for large ap roughing.
Roughing	PH		For roughing of steel. Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge.
Single Sided Roughing (High Feed Rate)	PX		Roughing and high feed rate operation. Low cutting force chipbreaker.

●Applicable Chipbreaker Range (ap indicates radius)



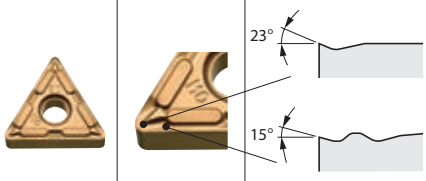
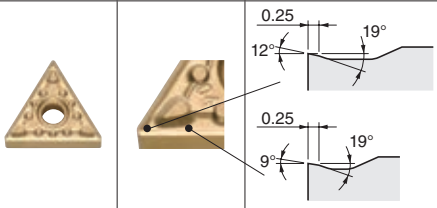
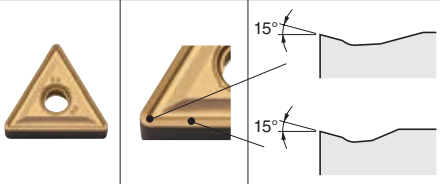
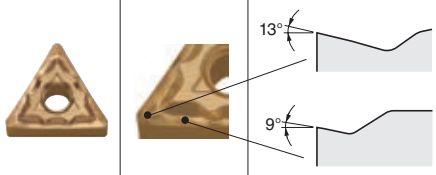


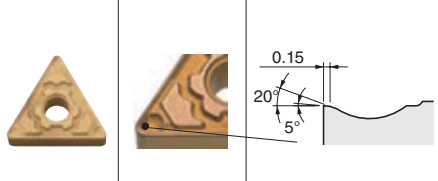
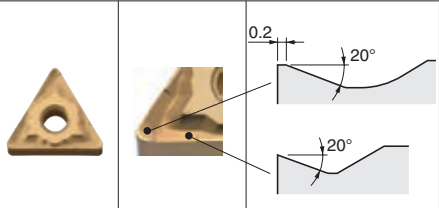
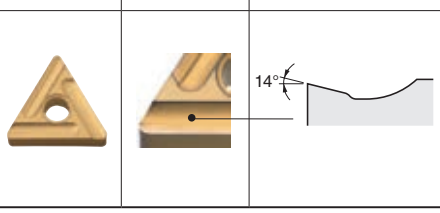




Chipbreaker Selection (Negative Inserts)

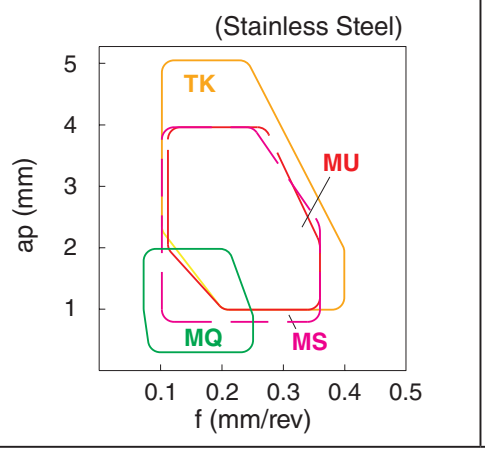
Stainless Steel / Heat-Resistant Alloy / Titanium Alloy

Cutting Range	Name	Design	Advantages
Finishing	MQ		Large rake angle and circular edge line. 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.
Medium - Roughing	TK		Smooth chipbreaker geometry improves chip flow with less adhesion. Large curled chips.

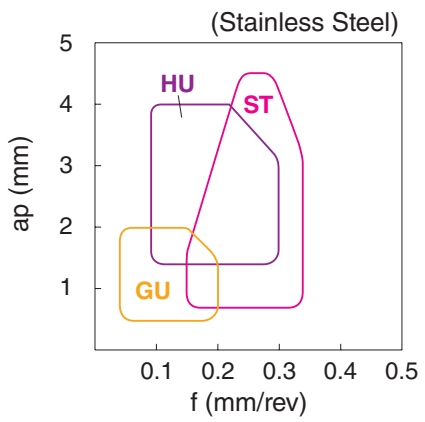
Cutting Range	Name	Design	Advantages
Finishing	GU		Sharp cutting performance and low cutting force due to 3-D rake angle.
Medium - Roughing	HU		Sharp cutting performance due to 3-D rake angle.
Medium - Roughing	ST		Less cutting force due to large rake angle. Less notching by special design.

Stainless Steel

●Applicable Chipbreaker Range (ap indicates radius)

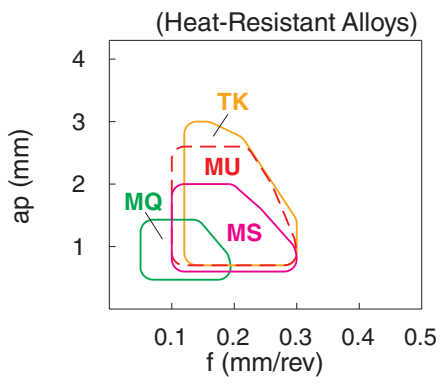


●Applicable Chipbreaker Range (ap indicates radius)



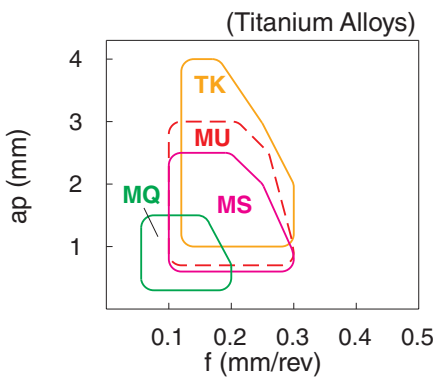
Heat-Resistant Alloys (PR13 Series)

●Applicable Chipbreaker Range (ap indicates radius)

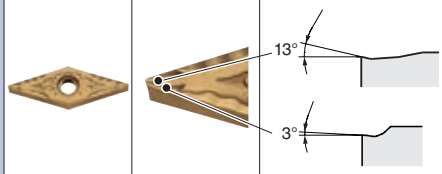


Titanium Alloys (SW Series)

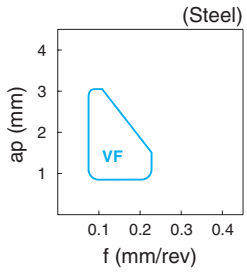
●Applicable Chipbreaker Range (ap indicates radius)



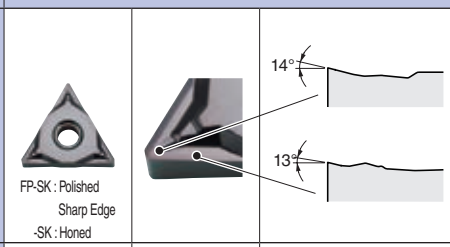
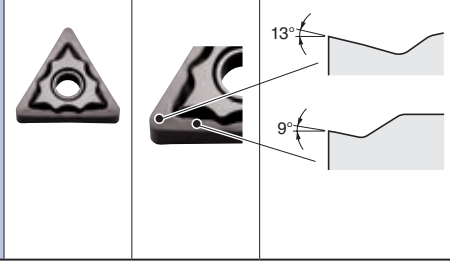
Steel (Copying / Undercutting , Varied ap)

Cutting Range	Name	Design	Advantages
Finishing-Medium	VF		Good chip control for varied ap such as copying and undercutting.

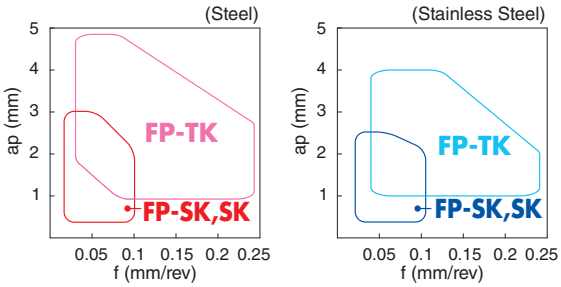
●Applicable Chipbreaker Range (ap indicates radius)



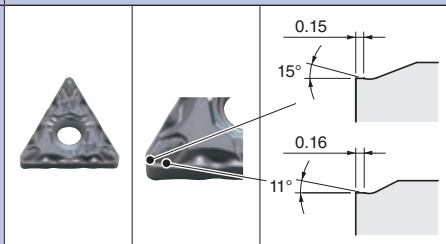
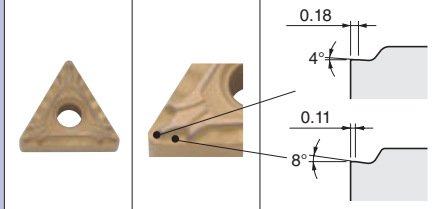
Steel / Stainless Steel (for automatic lathe)

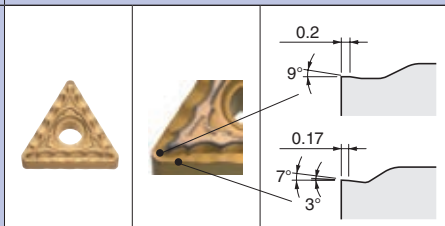
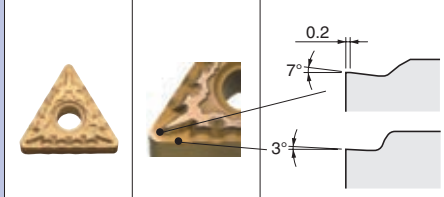
Cutting Range	Name	Design	Advantages
Finishing-Medium	SK	 FP-SK : Polished Sharp Edge -SK : Honed	For finishing to medium machining in automatic lathes. Sharp cutting performance equivalent to positive inserts. 2-step dot design provides reliable chip control at various ap.
Medium-Roughing	FP-TK		For medium to high feed rate 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.

●Applicable Chipbreaker Range (ap indicates radius)

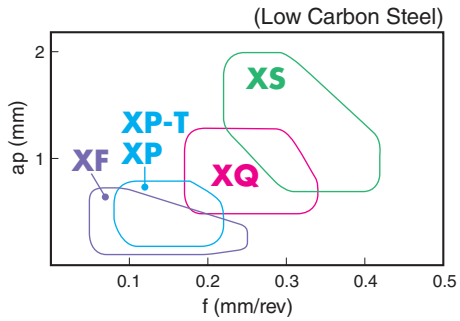


Low Carbon Steel (Pipe / Rolled Plate / Rolled Steel)

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.

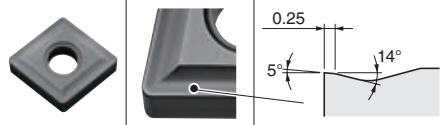
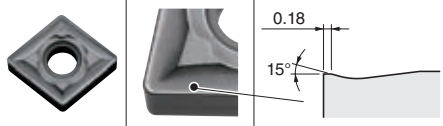
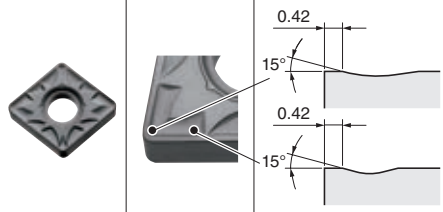
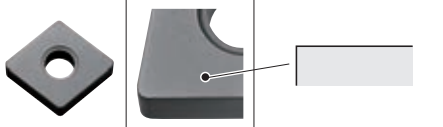
Cutting Range	Name	Design	Advantages
Medium	XQ		Consistent chip breaking at medium machining due to moderate rake face and special design.
Roughing	XS		Consistent chip breaking when roughing due to special rake face and rake angle design.

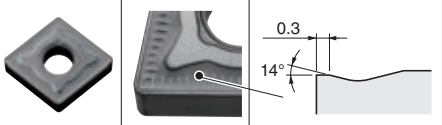
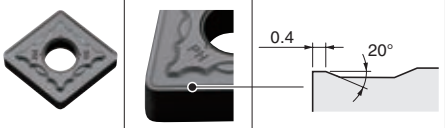
●Applicable Chipbreaker Range (ap indicates radius)



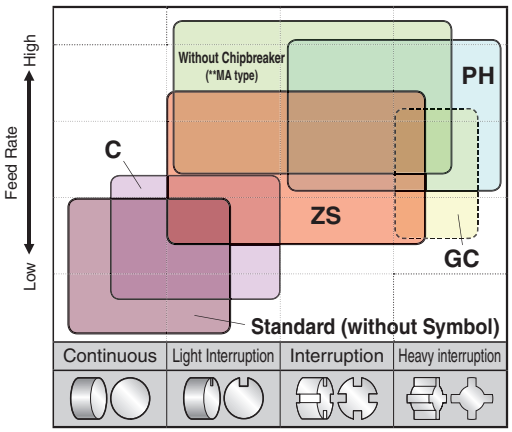
Chipbreaker Selection (Negative Inserts)

Cast Iron

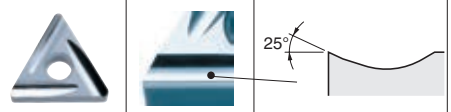
Cutting Range	Name	Design	Advantages
Sharp Cutting Oriented	Standard (without Symbol)		Standard chipbreaker for continuous to light interrupted machining of cast iron. (Low cutting force)
	C		High feed rate chipbreaker for continuous to light interrupted machining of cast iron.
	ZS		Standard chipbreaker for light interrupted to interrupted machining of cast iron. (High stability)
	Without Chipbreaker		High feed rate chipbreaker for light interrupted machining of cast iron.

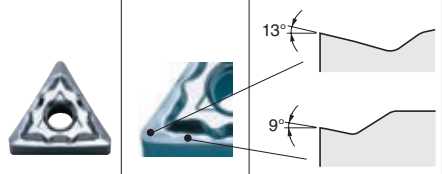
Cutting Range	Name	Design	Advantages
Stability Oriented	GC		Chipbreaker for heavy interrupted machining of cast iron. (Tough edge chipbreaker)
	PH		Chipbreaker for roughing of cast iron. Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge.

Chipbreaker Selection (Negative Inserts)

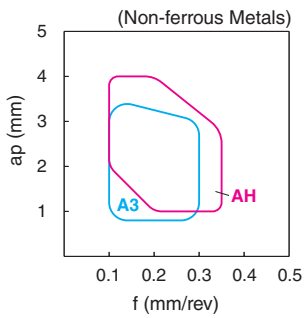


Non-ferrous Metals

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 Prep. M Class: Horned Edge Prep.	Polished chipbreaker. Smooth chip control and less adhesion.

●Applicable Chipbreaker Range (ap indicates radius)

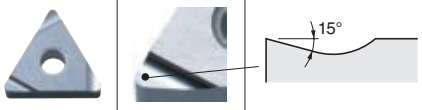
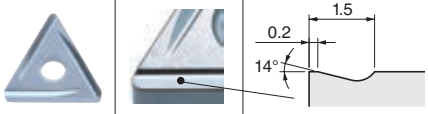
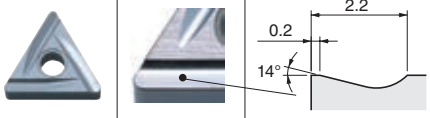


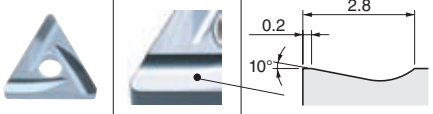
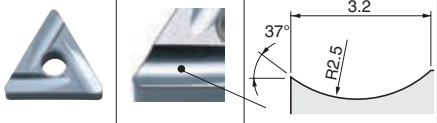
A3 Chipbreaker	
	ap=2mm f=0.2mm/rev
	ap=2mm f=0.3mm/rev

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

Steel

2 Ground Chipbreaker

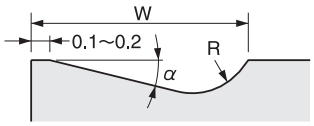
Cutting Range	Name	Design	Advantages
Finishing	S		Sharp edge and less cutting force. Good chip control and smooth chip evacuation.
Finishing-Medium	B		Suitable for general purpose machining at feed rate 0.15 to 0.25mm/rev.
Medium - Roughing	C		Suitable for general purpose machining at feed rate 0.20 to 0.35mm/rev.

Cutting Range	Name	Design	Advantages
Roughing	D		Suitable for general purpose machining at feed rate 0.30 to 0.45mm/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

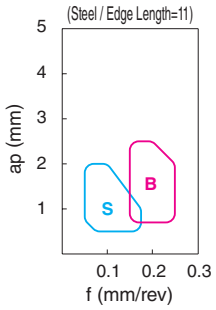
(1) Lower cutting force and improve edge
(2) Improved adhesion resistance
(3) Improved dimension accuracy and finishing surface accuracy
(4) Controlled chip evacuation direction

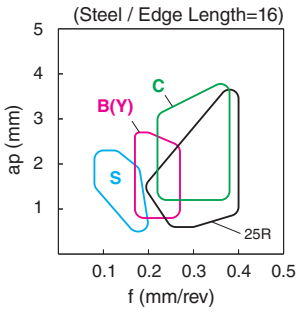
●Specification of B, C, D and parallel ground chipbreaker

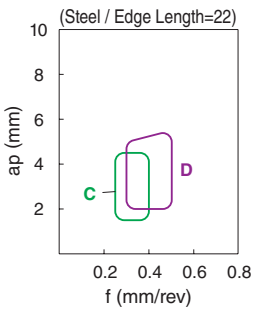


Insert Type	Size	Chipbreaker Name	W	α	R
CNGG	09,12	Without Indication (Similar to C)	2.2	14°	1.0
WNGG	06	Without Indication (Similar to C)	2.2	14°	1.0
TNGG	11,16	B	1.5	14°	0.5
	16,22	C	2.2	14°	1.0
	16,22	D	2.8	10°	1.5
DNGG	11,15	Without Indication (Similar to C)	2.5	14°	2.0
VNGG	16	Without Indication (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)

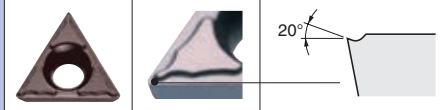
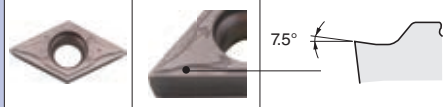
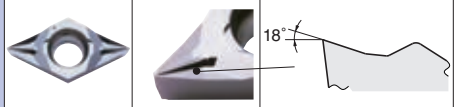
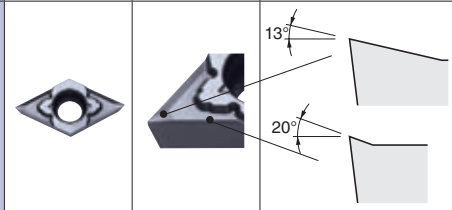
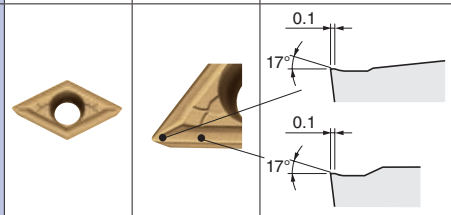
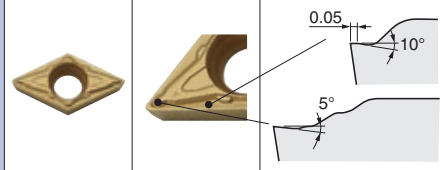


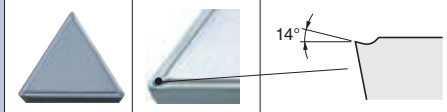
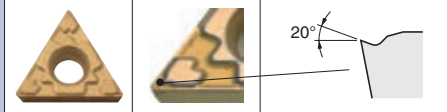
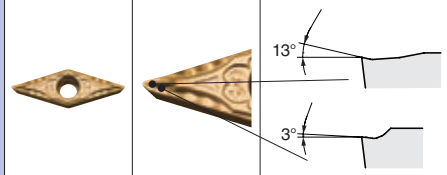
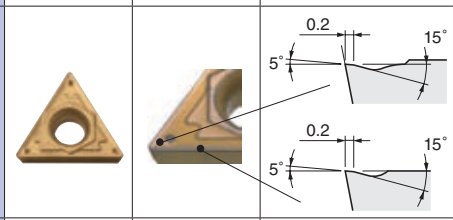
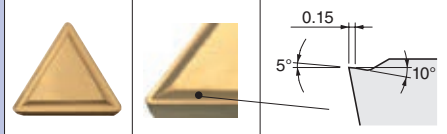
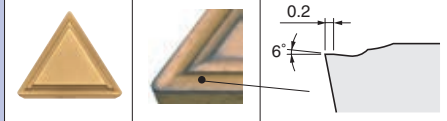




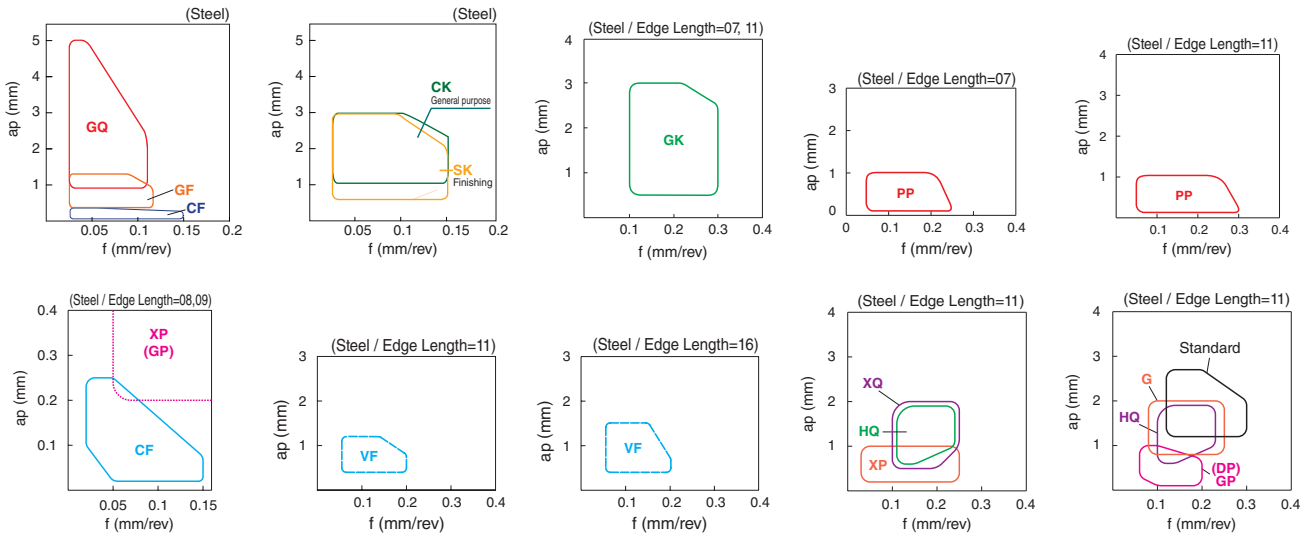
Steel

1 Molded Chipbreaker

Cutting Range	Name	Design	Advantages
Minute ap	CF		Available for minute ap (0.02 to 0.2mm) finishing.
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	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-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.

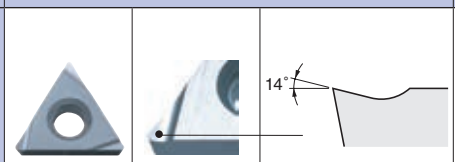
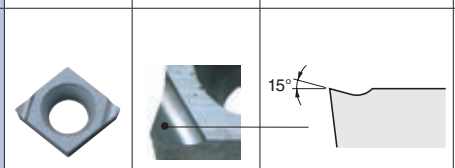
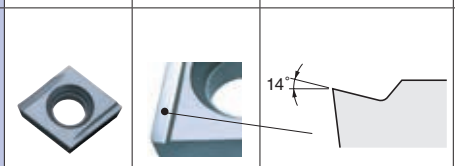
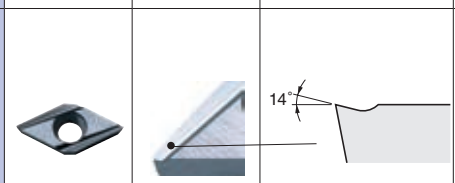
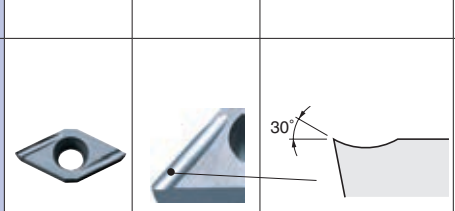
Cutting Range	Name	Design	Advantages
Finishing	DP		Consistent chip breaking performance for finishing.
Finishing	GP		Good chip control.
Finishing	VF		Good chip control for varied ap such as copying and undercutting.
Finishing-Medium	HQ		General purpose chipbreaker for medium machining.
Medium	G		Chipbreaker for short chips at medium machining.
Medium	Standard (without Symbol)		Strong edge chipbreaker for medium machining range.

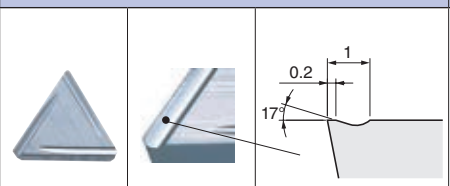
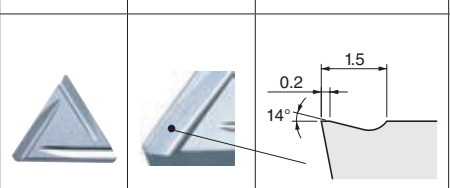
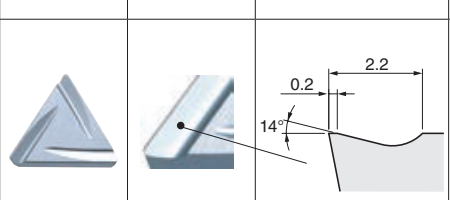
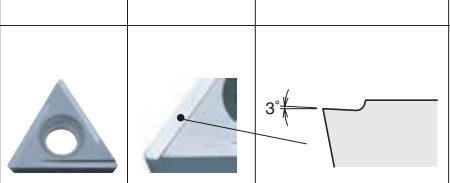
●Applicable Chipbreaker Range (ap indicates radius)



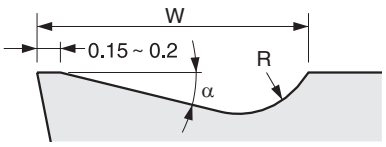
Steel

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.
Medium	Y		Sharp cutting performance and good surface finish.
Low Feed	J		Slant chipbreaker width and chip control at various ap. Suitable for automatic lathes.
Low Feed	U		Good chip control at low feed rate and varied ap with low cutting force.

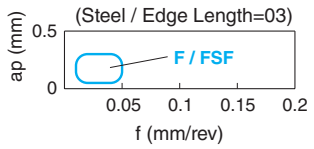
Cutting Range	Name	Design	Advantages
Finishing	A		Large rake angle and low cutting force. Narrow chipbreaker width and consistent chip control.
Finishing-Medium	B		Genera purpose chipbreaker for medium machining. Good balance between chip control and sharp cutting.
Medium	C		Applicable to high load machining.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

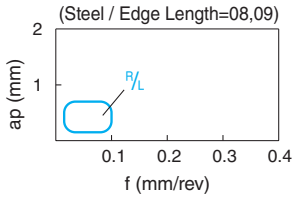
●Specification of A, B, C and parallel ground chipbreaker

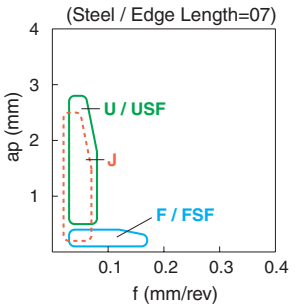


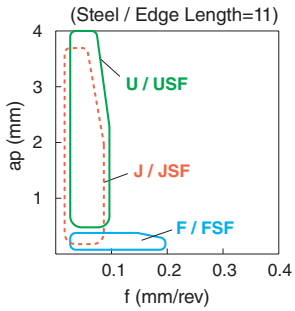
Insert Type	Size	Chipbreaker Name	W	α	R
TPGR	11	A	1.0	17°	0.5
	11,16	B	1.5	14°	0.5
	16	C	2.2	14°	1.0
SPGR	09	Without Indication (Similar to B)	1.5	14°	0.5
	12	Without Indication (Similar to C)	2.2	14°	1.0

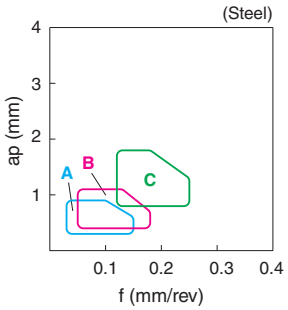
●Applicable Chipbreaker Range (ap indicates radius)

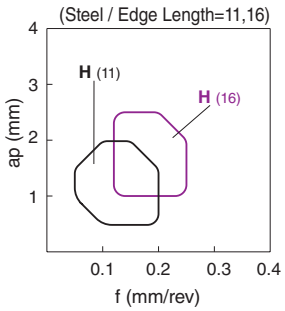






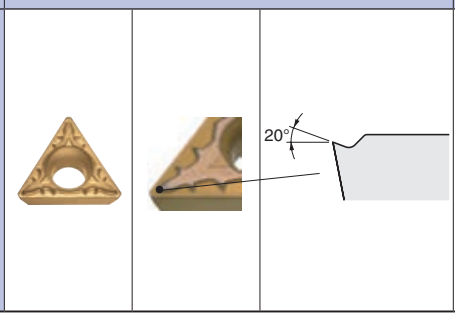


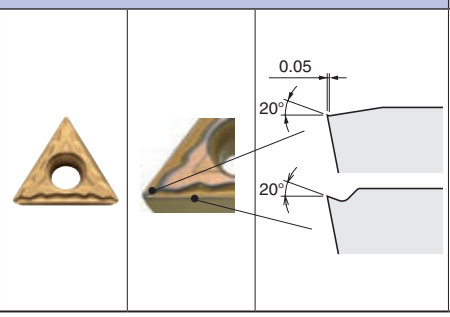




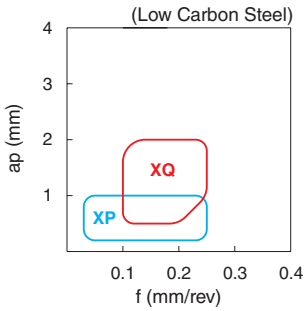
Chipbreaker Selection (Positive Inserts)

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

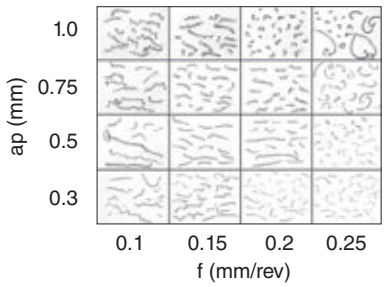
Cutting Range	Name	Design	Advantages
Finishing	XP		Consistent chip breaking performance even for low carbon steel and sticky material.

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

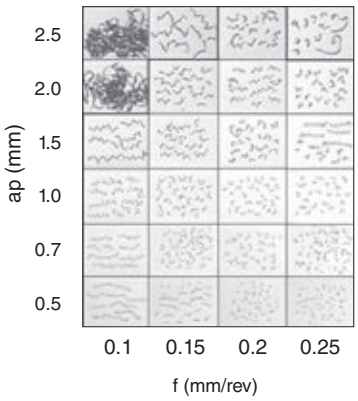
●Applicable Chipbreaker Range (ap indicates radius)



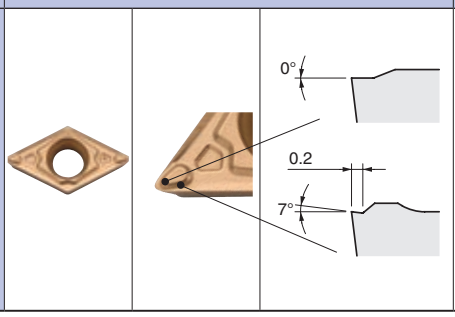
XP Chipbreaker



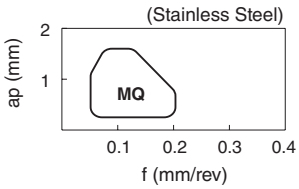
XQ Chipbreaker



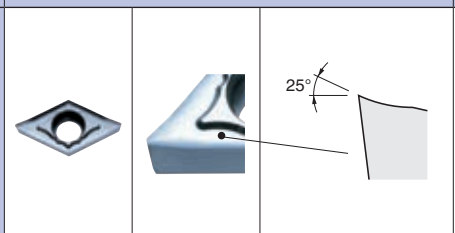
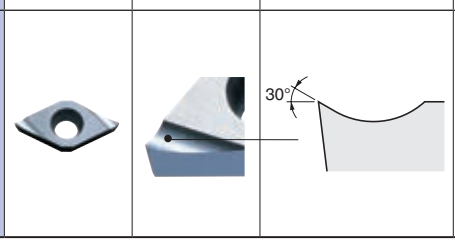
Stainless Steel

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.

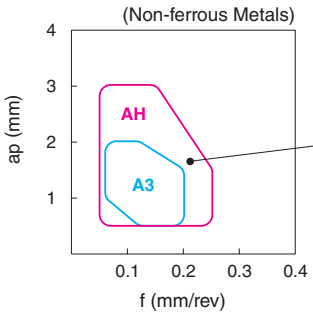
●Applicable Chipbreaker Range (ap indicates radius)



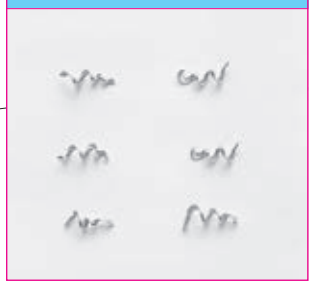
Non-ferrous Metals

Cutting Range	Name	Design	Advantages
Finishing-Medium	AH		Positive chip groove and good chip control with low cutting force.Polished surface reduces adhesion.
Finishing-Medium	A3		Large rake angle, smooth chip flow and less adhesion. Sharp edge and good surface finish.

●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 under 45HRC)

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(rε)

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 Ref. to Page **B3** for insert color.

Applicable Chipbreaker Range No.

Stock

Purchase unit

Applicable Toolholder

Applicable range map No.

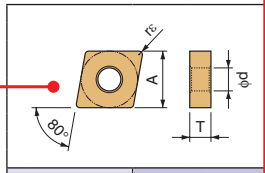
Turning Indexable Inserts

How to read pages of "Turning Inserts" B13

80° Rhombic / Negative with Hole

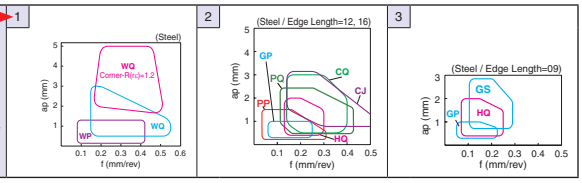
Description	A	T	ϕd	Description	A	T	ϕd
CN_0904_	9.525	4.76	3.81	CN_1606_	15.875	6.35	6.35
CN_1204_	12.70	4.76	5.16	CN_1906_	19.05	6.35	7.94

(mm)



Insert	Description	Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA5510	CA5515	CA5525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4605	CA4615	CA4105	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR830	PR1005	PR1025	PR1125	KW10	SW05	Applicable Toolholder	Applicable Chipbreaker Range
			Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide															MEGACOAT MEGACOAT NANO						PVD Coated Carbide				Carbide		
With Wiper Edge	CNMG 120404WP	0.4	●		●		●	●	●			●	●	●	●	●	●	●	●																					D8 F61 F65 F66	1
	120408WP	0.8	●		●		●	●	●			●	●	●	●	●	●	●	●																						
With Wiper Edge	CNMG 120404WQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						
	120408WQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●				●	●																	
	120412WQ	1.2	●		●		●						●	●	●	●	●	●	●				●	●																	
Finishing	CNMG 120402PP	0.2	●	●	●		●	●	●				●	●	●	●		●	●																						
	120404PP	0.4	●	●	●		●	●	●				●	●	●	●		●	●																						
	120408PP	0.8	●	●	●		●	●	●				●	●	●	●		●	●																						
	120412PP	1.2	●	●	●		●	●	●				●	●	●	●																									
Finishing	CNMG 090404GP	0.4	●			●	●				●																													D8 F66	3
	090408GP	0.8	●			●	●				●																														
	CNMG 120402GP	0.2	●		●	●	●	●	●		●	●	●	●	●	●		●	●																					D8 F61 F65 F66	
	120404GP	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																						
	120408GP	0.8	●		●	●	●	●	●		●	●	●	●	●	●		●	●																						
Finishing-Medium	CNMG 120404PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																						2
	120408PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																						
	120412PQ	1.2	●	●	●		●	●	●				●	●	●	●		●	●																						
Finishing-Medium	CNMG 090404HQ	0.4	●			●	●				●		●	●	●	●		●	●																					D8 F66	3
	090408HQ	0.8	●			●	●				●		●	●	●	●		●	●																						
	CNMG 120404HQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●														●				D8	
	120408HQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●														●					
	120412HQ	1.2				●					●		●	●	●	●		●	●	●	●	●														●					
	CNGG 120408HQ	0.8																●	●																					D8 F61 F65	
	120412HQ	1.2																●	●																						
Finishing-Medium (Up Rang)	CNMG 120404CQ	0.4	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●																				F66	2
	120408CQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●																					
	120412CQ	1.2				●					●		●	●	●	●	●	●	●	●																					
Finishing-Medium (Up Rang)	CNMG 160608CQ	0.8											●	●	●	●		●	●																					D8	
	160612CQ	1.2											●	●	●	●		●	●																						
Finishing-Medium (Up Rang)	CNMG 120408CJ	0.8											●	●	●	●	●	●	●	●																				D8 F61 F65 F66	
	120412CJ	1.2											●	●	●	●		●	●	●																					
	CNMG 160612CJ	1.2											●	●	●	●		●	●																					D8	
	160616CJ	1.6											●	●	●	●		●	●																						

Applicable Chipbreaker Range
ap indicates radius



B14 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

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How to read pages of "Turning Inserts" B13

80° Rhombic / Negative with Hole

(mm)

Description	A	T	φd
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CN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	φd
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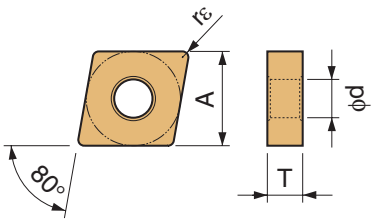
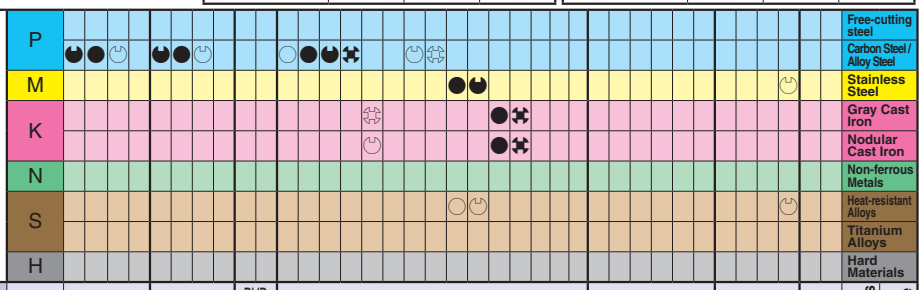
CN_1906_	19.05	6.35	7.94



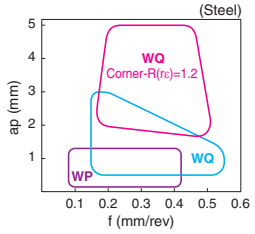


Insert	Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
With Wiper Edge Finishing	CNMG 120404WP	0.4	●		●		●	●	●			●	●	●	●	●	●	●	●																							
	CNMG 120408WP	0.8	●		●		●	●	●			●	●	●	●	●	●	●	●																							
With Wiper Edge Finishing-Medium	CNMG 120404WQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						D8 F61 F65 F66	1
	CNMG 120408WQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●				●	●																		
	CNMG 120412WQ	1.2	●		●		●					●	●	●	●	●	●	●	●				●	●																		
Finishing NEW	CNMG 120402PP	0.2	●	●	●		●	●	●				●	●	●	●		●	●																							
	CNMG 120404PP	0.4	●	●	●		●	●	●				●	●	●	●		●	●																							
	CNMG 120408PP	0.8	●	●	●		●	●	●				●	●	●	●		●	●																							2
	CNMG 120412PP	1.2	●	●	●		●	●	●				●	●	●	●																										
Finishing	CNMG 090404GP	0.4	●			●	●				●																														D8 F66	3
	CNMG 090408GP	0.8	●			●	●				●																															
	CNMG 120402GP	0.2	●		●	●	●	●	●		●	●	●	●	●	●		●	●																							
	CNMG 120404GP	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						D8	
	CNMG 120408GP	0.8	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●																						D8 F61 F65 F66	2
Finishing-Medium NEW	CNMG 120404PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																							
	CNMG 120408PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																							
	CNMG 120412PQ	1.2	●	●	●		●	●	●				●	●	●	●		●	●																							
Finishing-Medium	CNMG 090404HQ	0.4	●			●	●				●		●	●	●	●		●	●																						D8 F66	3
	CNMG 090408HQ	0.8	●			●	●				●		●	●	●	●		●	●																							
	CNMG 120404HQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●				
	CNMG 120408HQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●				
	CNMG 120412HQ	1.2				●					●		●	●	●	●		●	●	●		●															●				D8	
	CNGG 120408HQ	0.8																●	●																						F61 F65	
	CNGG 120412HQ	1.2																●	●																							
Finishing-Medium / Up Facing	CNMG 120404CQ	0.4	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●																					F66	
	CNMG 120408CQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●																						
	CNMG 120412CQ	1.2				●					●		●	●	●	●	●	●	●	●																						2
	CNMG 160608CQ	0.8											●	●	●	●		●	●																						D8	
	CNMG 160612CQ	1.2											●	●	●	●		●	●																							
Finishing-Medium / Up Facing	CNMG 120408CJ	0.8											●	●	●	●	●	●	●	●																					D8 F61 F65 F66	
	CNMG 120412CJ	1.2											●	●	●	●		●	●	●																							
	CNMG 160612CJ	1.2											●	●	●	●		●	●																						D8	
	CNMG 160616CJ	1.6											●	●	●	●		●	●																							

Applicable Chipbreaker Range

ap indicates radius

1



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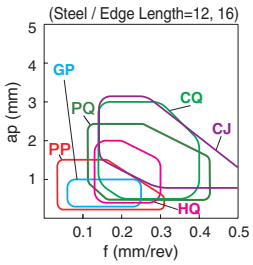

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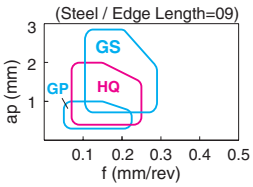

Inserts are sold in 10 piece boxes.

 ●: Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

80° Rhombic / Negative with Hole

(mm)

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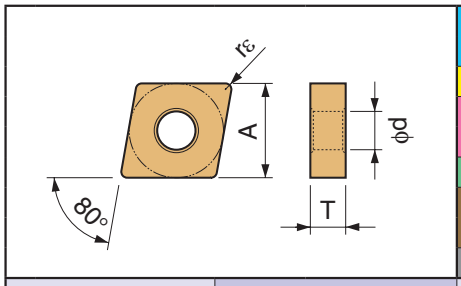
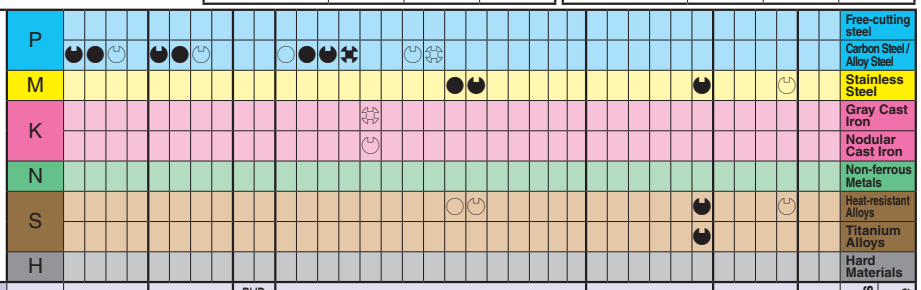
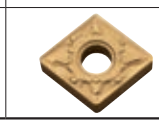
CN_1204_	12.54	4.76	5.16

(mm)

Description	A	T	φd
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



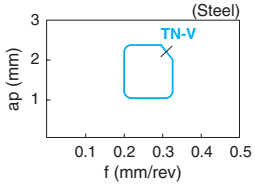


Insert	Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA525	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT MEGACOAT NANO PR1425	MEGACOAT MEGACOAT NANO PR1225	MEGACOAT MEGACOAT NANO PR1305	MEGACOAT MEGACOAT NANO PR1310	MEGACOAT MEGACOAT NANO PR1325	MEGACOAT MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium	CNMG 120404TN-V	0.4				●																																		D8 F61 F65 F66	1
	CNMG 120408TN-V	0.8				●																																			
Medium - Roughing	CNMG 090404GS	0.4	●			●	●				●		●	●	●	●		●	●																					D8 F66	B14 2
	CNMG 090408GS	0.8	●			●	●				●		●	●	●	●		●	●																						
	CNMG 120404GS	0.4							●		●	●	●	●	●	●		●	●																						
	CNMG 120408GS	0.8							●		●	●	●	●	●	●		●	●																						
	CNMG 120412GS	1.2									●		●	●	●	●		●	●																						
Medium - Roughing NEW	CNMG 120404PG	0.4	●				●						●	●	●	●																	●							D8 F61 F65 F66	
	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											●	●	●	●	●	●	●	●	●	●																		D8	
	CNMG 160616PS	1.6											●	●	●	●	●	●	●	●																					
Medium - Roughing	CNMG 120404HS	0.4			●	●					●	●						●	●																					D8 F61 F65 F66	2
	CNMG 120408HS	0.8			●	●					●	●						●	●																						
	CNMG 120412HS	1.2			●	●						●						●	●																						
	CNMG 120416HS	1.6																●	●																						
	CNMG 160612HS	1.2																								□														D8	
Medium-Roughing / High Feed Rate	CNMG 120408PT	0.8											●	●	●	●	●	●	●	●	●	●																		D8 F61 F65 F66	
	CNMG 120412PT	1.2											●	●	●	●	●	●	●	●		●																			
	CNMG 160608PT	0.8											●	●	●	●	●	●	●	●	●	●																		D8	
	CNMG 160612PT	1.2											●	●	●	●	●	●	●	●		●																			
	CNMG 160616PT	1.6											●	●	●	●	●	●	●	●		●																			
Medium-Roughing / High Feed Rate 	CNMG 120408GT	0.8							●		●	●	●	●	●	●		●	●																					D8 F61 F65 F66	
	CNMG 120412GT	1.2									●	●	●	●	●	●		●	●																						

Applicable Chipbreaker Range

ap indicates radius

1



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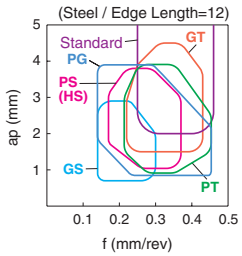

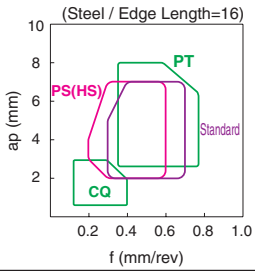

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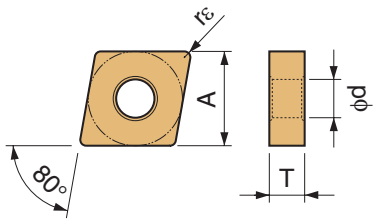


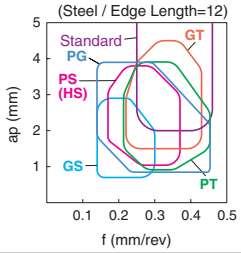
	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P	●●	●●	○	○	○	○	○	○	○
M	○	○	●●	○	○	○	○	○	○
K	○	○	○	●●	●●	○	○	○	○
N	○	○	○	○	○	●●	○	○	○
S	○	○	○	○	○	○	●●	●●	○
H	○	○	○	○	○	○	○	○	●●

Insert		Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Roughing		CNMG 120404	0.4	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●			●	●	●	●	□	□	□											●			D8	1
		CNMG 120408	0.8	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	□	□	□											●			F61	
		CNMG 120412	1.2				●				●			●	●	●	●	●	●	●	●	●	●	●	●	□	□	□											●			F65	
		CNMG 120416	1.6															●						●	●	□	□	□														F66	
		CNMG 160608	0.8													●	●	●	●	●																							D8	2
		CNMG 160612	1.2													●	●	●	●	●	●				●																			
		CNMG 160616	1.6															○	●		●				●																			
		CNMG 190608	0.8															●						●	●		□	□															-	
		CNMG 190612	1.2											●	●	●	●		●	●	●			●	●		□	□																
		CNMG 190616	1.6											●	●	●	●		●	●	●			●	●		□																
Roughing		CNMG 120408PH	0.8											●	●	●	●		●	●	●			●	●																		D8	3
		CNMG 120412PH	1.2											●	●	●	●		●	●	●			●	●																		F61	
		CNMG 120416PH	1.6											●	●	●	●		●	●	●			●	●																		F65	
																																											F66
		CNMG 160608PH	0.8											●	●	●	●		●	●																							D8	
		CNMG 160612PH	1.2											●	●	●	●		●	●	●			●	●																			
		CNMG 160616PH	1.6											●	●	●	●		●	●				●	●																			
		CNMG 190608PH	0.8											●	●	●	●		●	●																							-	
		CNMG 190612PH	1.2											●	●	●	●		●	●	●																							
		CNMG 190616PH	1.6											●	●	●	●		●	●	●																							
		CNMG 190624PH	2.4											●	●	●	●		●	●																								
Single Sided / Roughing / High Feed Rate		CNMM 120408PX	0.8											●	●	●	●		●	●	●																						D8	4
		CNMM 120412PX	1.2											●	●	●	●		●	●	●																							F61	
		CNMM 120416PX	1.6													●	●		●	●	●																							F65
																																											F66
		CNMM 160608PX	0.8											●	●	●	●		●	●	●																						D8	
		CNMM 160612PX	1.2											●	●	●	●		●	●	●																							
		CNMM 160616PX	1.6											●	●	●	●		●	●	●																							
		CNMM 190608PX	0.8													●	●		○	●																							-	
		CNMM 190612PX	1.2											●	●	●	●		●	●	●																							
		CNMM 190616PX	1.6											●	●	●	●		●	●	●																							
		CNMM 190624PX	2.4													●	●		●	●	●																							

Applicable Chipbreaker Range

ap indicates radius

1



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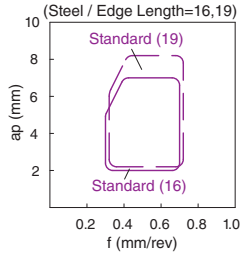

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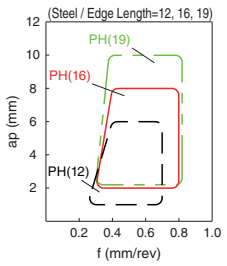

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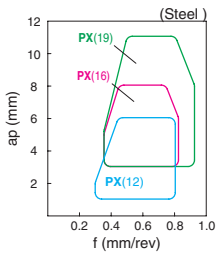


 ●: Std. Item ○: Check Availability □: Deleted from the next catalogue

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ B13

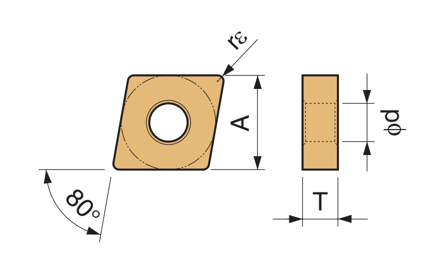
80° Rhombic / Negative with Hole

(mm)

Description	A	T	ϕd
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

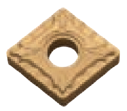
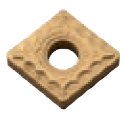
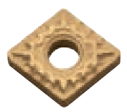
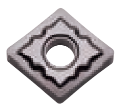
(mm)

Description	A	T	ϕd
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



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

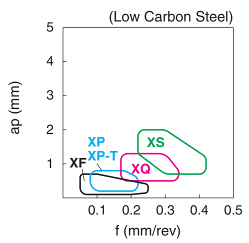
Grade groups: Cermet (TN620, TN6010, TN6020, TN60); MEGACOAT Cermet (PV720, PV7010, PV7025, PV7005); PVD Coated Cermet (PV90, PV7020); CVD Coated Carbide (CA510, CA515, CA525, CA530, CA5505, CA5515, CA5525, CA5535, CA6515, CA6525, CA4505, CA4515, CA4010, CA4115, CA4120); MEGACOAT / MEGACOAT NANO (PR1425, PR1225, PR1305, PR1310, PR1325, PR1535); PVD Coated Carbide (PR930, PR1005, PR1025, PR1125); Carbide (KW10, SW05)

Insert	Description	Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Carbon Steel NEW Finishing / Small ap	**CNMG 120404XF**	0.4	●	●			●	●	●																															D8 F61 F65 F66	1
	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 NEW Sharp Edge / Polished	**CNGG 120402MFP-SK**	<0.2																										●	●											D8 E40 F61 F65 F66	2
	120404MFP-SK	<0.4																										●	●												
Medium-Roughing  Sharp Edge / Polished	**CNGG 120404FP-TK**	0.4																										●	●												
	120408FP-TK	0.8																										●	●												

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

Applicable Chipbreaker Range
ap indicates radius

1



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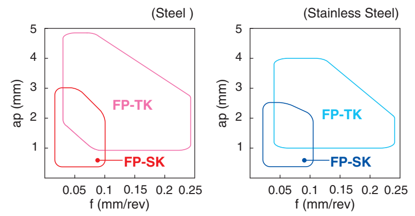


● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) ☐ : Deleted from the next catalogue

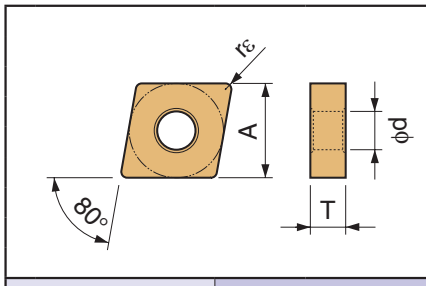
Inserts are sold in 10 piece boxes.

How to read pages of "Turning Inserts" B13

80° Rhombic / Negative with Hole

(mm)

Description	A	T	φd
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



	Insert	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Stainless Steel / Heat-Resistant Alloys	Medium-Roughing / Sharp Edge	CNGG 120404TK	0.4																												●	●									●		
		CNGG 120408TK	0.8																												●	●									●		
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	CNMG 120404TK	0.4																			●	●								●	●	●						●				
		CNMG 120408TK	0.8																			●	●								●	●	●						●			D8 F61	
Stainless Steel / Heat-Resistant Alloys	Finishing-Medium	CNMG 120404MQ	0.4																			●	●								●	●	●	●					●		●	F65 F66	
		CNMG 120408MQ	0.8																			●	●								●	●	●	●					●		●		1
Stainless Steel / Heat-Resistant Alloys	Medium-Roughing	CNMG 120404MS	0.4																			●	●								●	●	●	●					●		●		
		CNMG 120408MS	0.8																			●	●								●	●	●	●					●		●		
		CNMG 120412MS	1.2																			●	●								●	●	●	●					●		●		
		CNMG 120416MS	1.6																			●	●								●	●	●						●				
Stainless Steel / Heat-Resistant Alloys	Medium-Roughing	CNMG 120404MU	0.4																			●	●								●	●	●	●					●		●	D8 F61 F65 F66	
		CNMG 120408MU	0.8																			●	●								●	●	●	●					●		●		
		CNMG 120412MU	1.2																			●	●											●					●				
		CNMG 160608MU	0.8																			●	●									●	●						●			D8	
		CNMG 160612MU	1.2																			●	●									●	●						●				
		CNMG 160616MU	1.6																			●	●									●	●						●				
	Medium-Roughing	CNMG 190612MU	1.2																													●	●									-	
		CNMG 190616MU	1.6																													●	●										

	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						

	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
MEGACOAT NANO PR1305			●				●		
MEGACOAT NANO PR1310			◐				◐		
MEGACOAT NANO PR1325							◐		
MEGACOAT NANO PR1535			◐				◐	◐	
PVD Coated Carbide PR1125			◐				◐		
Carbide SW05			●						

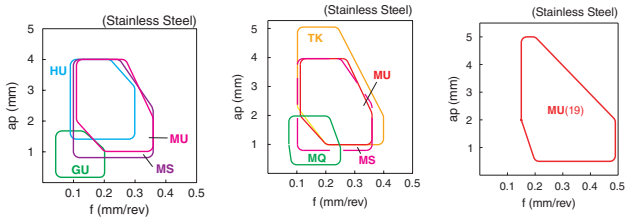
Applicable Chipbreaker Range

ap indicates radius

1

Heat-Resistant Alloys
Titanium Alloys

B6



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How to read pages of "Turning Inserts" B13

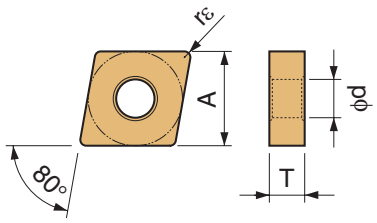
80° Rhombic / Negative with Hole

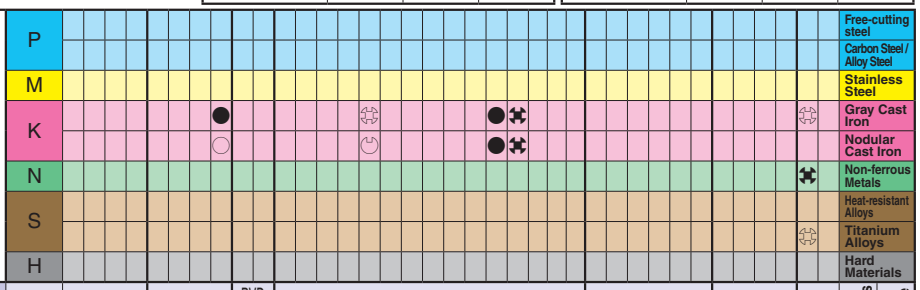
(mm)

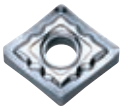
Description	A	T	φd
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	φd
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



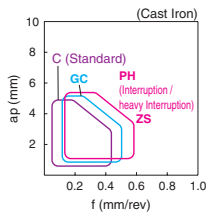


Insert (Handed Insert shows Right-hand)		Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT NANO PR1425	MEGACOAT NANO PR1225	MEGACOAT NANO PR1305	MEGACOAT NANO PR1310	MEGACOAT NANO PR1325	MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Cast Iron	Roughing	CNMG 120404C	0.4															●						●	●		□	□													D8	1
		CNMG 120408C	0.8															●						●	●		□	□													F61	
		CNMG 120412C	1.2															●						●	●		□	□													F65	
		CNMG 120416C	1.6															●						●	●		□	□													F66	
		CNMG 160612C	1.2																					●	●		□	□													D8	
Cast Iron	Roughing	CNMG 120408ZS	0.8															●						●	●		□	□														
		CNMG 120412ZS	1.2															●						●	●		□	□														
Cast Iron	Roughing	CNMG 120408GC	0.8															●						●	●		□	□														
		CNMG 120412GC	1.2																					●	●		□	□														
Cast Iron	Without Chipbreaker	CNGA 120404	0.4								●																											●				
		CNGA 120408	0.8								●																											●				
		CNMA 120404	0.4								●							●						●	●		□	□											●				
		CNMA 120408	0.8								●							●						●	●		□	□											●				
		CNMA 120412	1.2															●						●	●		□	□													D8	
		CNMA 120416	1.6															●						●	●		□	□													F61	
Non-ferrous Metals	Finishing-Medium Sharp Edge	CNGG 120404R/L-A3	0.4																																			●		F65	
		CNGG 120408R/L-A3	0.8																																			●		F66	
Non-ferrous Metals	Medium-Roughing Sharp Edge	CNGG 120404AH	0.4																																			●				2
		CNGG 120408AH	0.8																																			●				
Non-ferrous Metals	 Medium-Roughing	CNMG 120404AH	0.4																																			●				
		CNMG 120408AH	0.8																																			●				

Applicable Chipbreaker Range

ap indicates radius

1



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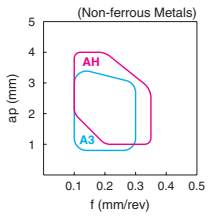

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Inserts are sold in 10 piece boxes.

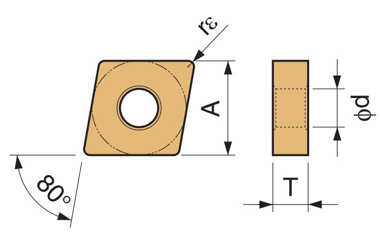
80° Rhombic / Negative with Hole

(mm)

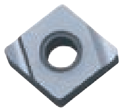
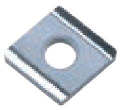
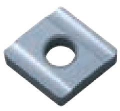
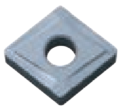
Description	A	T	ϕd
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	ϕd
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



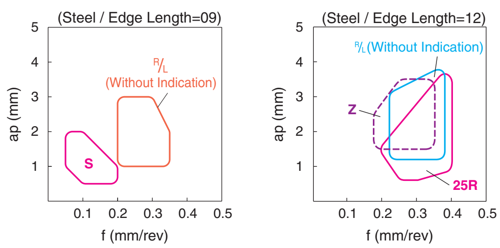
Workpiece Material		TN620	TN6010	TN6020	PV720	KW10
P	Free-cutting steel					
P	Carbon Steel / Alloy Steel	◕	●	○	◕	
M	Stainless Steel					
K	Gray Cast Iron					○
K	Nodular Cast Iron					
N	Non-ferrous Metals					●
S	Heat-resistant Alloys					
S	Titanium Alloys					○
H	Hard Materials					

Application	Insert (Handed Insert shows Right-hand)	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT / MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	 Surface Roughness Oriented	CNGG 090402R/L-S	0.2		●		●					R																													D8 F66	
Finishing		CNGG 090404R/L-S	0.4		●		●					R																											L			
Finishing		CNGG 090408R/L-S	0.8		●																																					
Medium		CNGG 090404R/L	0.4																																				L			
Medium		CNGG 090408R/L	0.8																																				L			
Medium		CNGG 120404R/L	0.4	●	●	●	●	●																																		1
Medium		CNGG 120408R/L	0.8		●	●	●																																			
Medium - Roughing	 Low Cutting Force	CNGG 120404R/L-25R	0.4		●		●																																●		D8 F61 F65 F66	
Medium - Roughing		CNGG 120408R/L-25R	0.8		●		●																																●			
Medium - Roughing		CNGG 120404Z	0.4				●																																			

Applicable Chipbreaker Range

ap indicates radius

1



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How to read pages of "Turning Inserts" B13

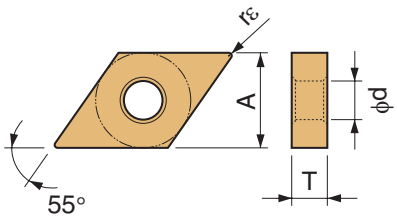
55° Rhombic / Negative with Hole

(mm)

Description	A	T	φd
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	A	T	φd
DN_1506_	12.70	6.35	5.16

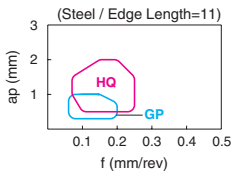


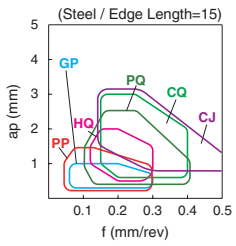
	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide													MEGACOAT MEGACOAT NANO						PVD Coated Carbide				Carbide		
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P	●	●	◎		●	●	◎				○	●	●	✱		◎	✱																			
M																			●	●														◎		
K															✱																					
K															◎																					
N																																				
S																			○	◎														◎		
H																																				

Insert	Description	Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing NEW	DNMG 150402PP	0.2	●	●	●		●	●	●				●	●	●	●		●	●																					D10	
	150404PP	0.4	●	●	●		●	●	●				●	●	●	●		●	●																					D11	
	150408PP	0.8	●	●	●		●	●	●				●	●	●	●		●	●																					F62	
	150412PP	1.2	●	●	●		●	●	●				●	●	●	●																								F68	
																																								F69	
	DNMG 150602PP	0.2	●	●	●		●	●	●				●	●	●	●		●	●																					D10	
	150604PP	0.4	●	●	●		●	●	●				●	●	●	●		●	●																					D11	
	150608PP	0.8	●	●	●		●	●	●				●	●	●	●		●	●																					F62	
	150612PP	1.2	●	●	●		●	●	●				●	●	●	●																									
Finishing	DNMG 110404GP	0.4	●			●	●				●		●	●	●	●		●	●																					D11	
	110408GP	0.8	●			●	●				●		●	●	●	●			●																					F67	
	DNMG 150402GP	0.2	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																					D10	
	150404GP	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																					D11	
	150408GP	0.8	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●																					F62	
																																								F68	
																																								F69	
	DNMG 150602GP	0.2		●				●																																D10	
	150604GP	0.4		●				●																																D11	
	150608GP	0.8		●				●																																F62	1
Finishing-Medium NEW	DNMG 150404PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																					D10	
	150408PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																					D11	
	150412PQ	1.2	●	●	●		●	●	●				●	●	●	●		●	●																					F62	
																																								F68	
																																								F69	
	DNMG 150604PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																					D10	
	150608PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																					D11	
	150612PQ	1.2	●	●	●		●	●	●				●	●	●	●		●	●																					F62	
Finishing-Medium	DNMG 110402HQ	0.2	●			●	●				●		●	●	●	●		●	●																					D11	
	110404HQ	0.4	●			●	●				●		●	●	●	●		●	●																					F67	
	DNMG 150404HQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●															●				D10	
	150408HQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●															●				D11	
	150412HQ	1.2		●	●	●			●		●	●	●	●	●	●	●	●	●																					F62	
																																								F68	
																																								F69	
	DNMG 150604HQ	0.4		●				●	●				●	●	●	●	●	●	●		●	●														●				D10	
	150608HQ	0.8		●				●	●				●	●	●	●	●	●	●	●	●	●														●				D11	
	150612HQ	1.2		●				●					●	●	●	●	○	□	●	●																				F62	

Applicable Chipbreaker Range
ap indicates radius

1





● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

How to read pages of "Turning Inserts" B13

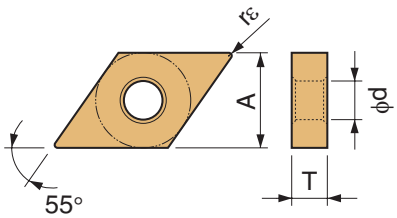
55° Rhombic / Negative with Hole

(mm)

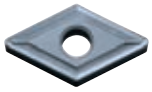
Description	A	T	ϕd
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	A	T	ϕd
DN_1506_	12.70	6.35	5.16



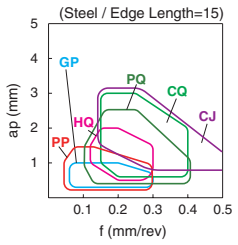
	Cermet				MEGACOAT Cermet			PVD Coated Cermet		CVD Coated Carbide													MEGACOAT NANO					PVD Coated Carbide				Carbide		
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing-Medium / Up Facing	DNMG 150404CQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																					D10	1
	DNMG 150408CQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																					D11	
	DNMG 150412CQ	1.2		●	●				●		●	●	●	●	●	●	●	●	●																					F62	
																																								F68	
																																								F69	
	DNMG 150604CQ	0.4		●				●					●	●	●	●	●	●	●																					D10	
	DNMG 150608CQ	0.8											●	●	●	●	●	●	●	●																					D11	
	DNMG 150612CQ	1.2											●	●	●	●	□	●	●	●																					F62	
Finishing-Medium / Up Facing	DNMG 150408CJ	0.8											●	●	●	●	●	●	●	●																					D10	
	DNMG 150412CJ	1.2											●	●	●	●	●	●	●																						D11	
																																								F62	
																																								F68	
																																								F69	
	DNMG 150608CJ	0.8											●	●	●	●	●	●	●	●																					D10	
	DNMG 150612CJ	1.2											●	●	●	●	□	●	●																						D11	
																																								F62	
Medium 	DNMG 150404TN-V	0.4				●																																		D10	2
																																								D11	
	DNMG 150408TN-V	0.8				●																																		F62	
																																								F68	
																																								F69	
Medium - Roughing	DNMG 110404GS	0.4	●			●	●				●		●	●	●	●		●	●																					D11	3
	DNMG 110408GS	0.8	●			●	●				●		●	●	●	●		●	●																					F67	
	DNMG 150404GS	0.4							●		●	●	●	●	●	●		●	●																					D10	
																																								D11	
	DNMG 150408GS	0.8							●		●	●	●	●	●	●		●	●																					F62	
	DNMG 150412GS	1.2									●		●	●	●	●		●	●																					F68	
																																								F69	
	DNMG 150604GS	0.4									●				●	●																								D10	
	DNMG 150608GS	0.8									●				●	●																								D11	
																																								F62	
Medium - Roughing NEW	DNMG 150404PG	0.4	●				●						●	●	●	●																●								D10	
																																								D11	
	DNMG 150408PG	0.8	●				●						●	●	●	●																●								F62	
	DNMG 150412PG	1.2	●				●						●	●	●	●																●								F68	
	DNMG 150416PG	1.6											●	●	●	●																								F69	
	DNMG 150604PG	0.4	●				●						●	●	●	●																								D10	
	DNMG 150608PG	0.8	●				●						●	●	●	●																								D11	
	DNMG 150612PG	1.2	●				●						●	●	●	●																								F62	
	DNMG 150616PG	1.6											●	●	●	●																									

Applicable Chipbreaker Range

ap indicates radius

1



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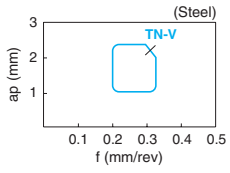

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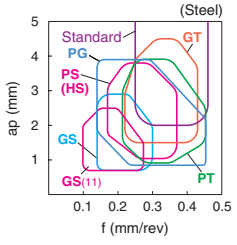


Inserts are sold in 10 piece boxes.

 ●: Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □: Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

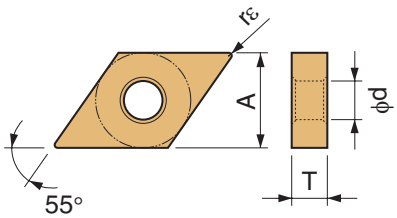
55° Rhombic / Negative with Hole

(mm)

Description	A	T	ϕd
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

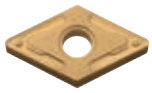
(mm)

Description	A	T	ϕd
DN_1506_	12.70	6.35	5.16



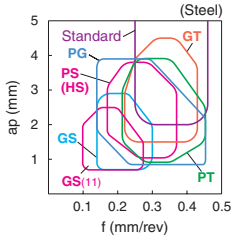
	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide												MEGACOAT NANO						PVD Coated Carbide				Carbide	
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P	●◐	●◐	◐		●◐	●◐	◐				○	●◐	●◐	✖			◐	✖																		
M																			●◐	●◐														◐		
K								●						✖							●✖															
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	Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium - Roughing	DNMG 150404PS	0.4		●				●	●				●	●	●	●	●	●	●	●	●	●														●			D10	
	DNMG 150408PS	0.8		●				●	●				●	●	●	●	●	●	●	●	●	●														●			D11	
	DNMG 150412PS	1.2							●				●	●	●	●		●	●	●		●																	F62	
	DNMG 150416PS	1.6																●	●																				F68	
																																							F69	
	DNMG 150604PS	0.4		●				●	●				●	●	●	●		●	●		□	●														●			D10	
	DNMG 150608PS	0.8		●				●	●				●	●	●	●	●	●	●	●	●	●														●			D11	
	DNMG 150612PS	1.2		○				●	●				●	●	●	●	●	●	●	●	●	●																	F62	
	DNMG 150616PS	1.6											●	●	●	●		●	●																					
Medium - Roughing 	DNMG 150404HS	0.4			●	●					●	●						●	●																				D10	
	DNMG 150408HS	0.8			●	●					●	●						●	●																				D11	
	DNMG 150412HS	1.2			●	●					●	●						●	●																				F62	
																																							F68	
																																							F69	
	DNMG 150604HS	0.4				●					●							●	●																				D10	
	DNMG 150608HS	0.8				●					●							●	●																				D11	
	DNMG 150612HS	1.2				●													●																				F62	
Medium-Roughing / High Feed Rate	DNMG 150408PT	0.8											●	●	●	●	●	●	●	●		●																	D10	
																																							D11	
	DNMG 150412PT	1.2											●	●	●	●	●	●	●	●		●																	F62	
																																							F68	
																																							F69	1
	DNMG 150608PT	0.8											●	●	●	●	●	●	●	●		□																	D10	
	DNMG 150612PT	1.2											●	●	●	●	●	●	●	●	●																		D11	
																																							F62	
Medium-Roughing / High Feed Rate	DNMG 150408GT	0.8									●		●	●	●	●		●	●																				D10	
																																							D11	
	DNMG 150412GT	1.2									●		●	●	●	●		●	●																				F62	
																																							F68	
																																							F69	
	DNMG 150608GT	0.8									□		●	●	●	●		●	●																				D10	
	DNMG 150612GT	1.2											●	●	●	●		●	●																				D11	
																																							F62	
Roughing	DNMG 150404	0.4	●	●	●	●	●	●	●		●		●	●	●	●	●	●	●				●	●	□	□	□												D10	
																																							D11	
	DNMG 150408	0.8	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●			●	●	□	□	□												F62	
																																							F68	
																																							F69	
	DNMG 150604	0.4																					●	●															D10	
	DNMG 150608	0.8								●			●	●	●	●	●	●	●	●			●	●		□	□												D11	
	DNMG 150612	1.2											●	●	●	●		●	●				●	●		□	□												F62	

Applicable Chipbreaker Range
ap indicates radius

1



● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

55° Rhombic / Negative with Hole

(mm)

Description	A	T	ϕd
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(mm)

Description	A	T	ϕd
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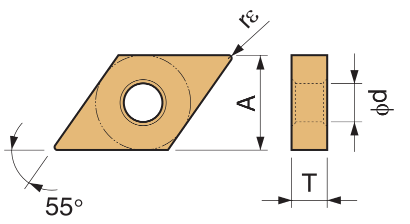
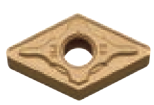
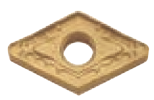
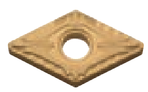
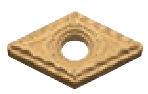
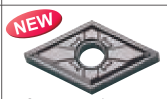
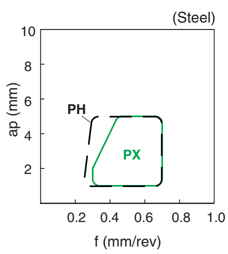


Insert	Description	rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
		Dimension (mm)	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide															MEGACOAT / MEGACOAT NANO						PVD Coated Carbide				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																																								
Roughing 	DNMG 150408PH	0.8											●	●	●	●		●	●				●	●																D10 D11 F62 F68 F69	1
	DNMG 150412PH	1.2											●	●	●	●		●	●				●	●																	
	DNMG 150416PH	1.6													●	●		●	●																						
	DNMG 150608PH	0.8											●	●	●	●		●	●	●			●	●																D10 D11 F62	
	DNMG 150612PH	1.2											●	●	●	●		●	●	●			●	●																	
	DNMG 150616PH	1.6											●	●	●	●		●	●																						
Single Sided / Roughing / High Feed Rate 	DNMM 150408PX	0.8													●	●			●	●																				D10 D11 F62 F68 F69	
	DNMM 150412PX	1.2													●	●			●																						
	DNMM 150416PX	1.6													●	●																									
	DNMM 150608PX	0.8											●	●	●	●		●	●																					D10 D11 F62	
	DNMM 150612PX	1.2											●	●	●	●		●	●	●																					
	DNMM 150616PX	1.6													●	●		○	●	●																					
Low Carbon Steel Finishing / Small ap	DNMG 150404XF	0.4	●	●			●	●	●																															D10 D11 F62 F68 F69	2
	DNMG 150408XF	0.8	●	●			●	●	●																																
Low Carbon Steel  Finishing	DNMG 150404XP	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						
	DNMG 150408XP	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						
	DNMG 150604XP	0.4						●																																D10 D11 F62	
	DNMG 150608XP	0.8						●																																	
Low Carbon Steel  Medium	DNMG 150404XQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																					D10 D11 F62 F68 F69	
	DNMG 150408XQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																						
	DNMG 150604XQ	0.4						●																																D10 D11 F62	
	DNMG 150608XQ	0.8						●																																	
Low Carbon Steel Roughing	DNMG 150408XS	0.8	●	●	●		●		●		●	●	●	●	●	●		●	●																					D10 D11 F62 F68 F69	
Finishing-Medium  Sharp Edge / Polished	DNGG 150402MFP-SK	<0.2																										●	●												3
	DNGG 150404MFP-SK	<0.4																										●	●												

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

Applicable Chipbreaker Range
ap indicates radius

1



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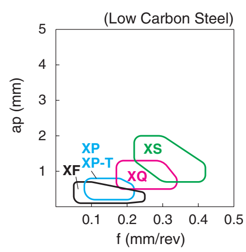

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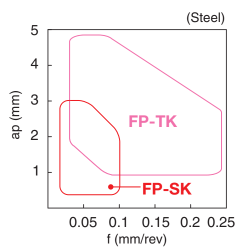
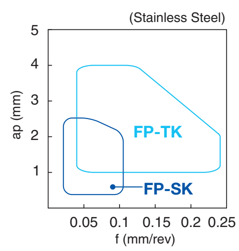




Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability ☐ : Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

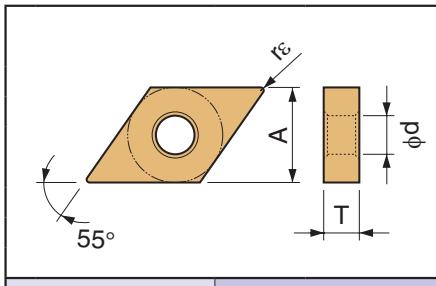
55° Rhombic / Negative with Hole

(mm)

Description	A	T	φd
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	A	T	φd
DN_1506_	12.70	6.35	5.16



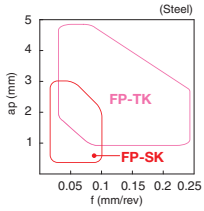
	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide												MEGACOAT MEGACOAT NANO						PVD Coated Carbide				Carbide		
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P																																				
P																										◐	◯									
M																			●	◐						◯	◐				◐				◯	
K																																				
K																																				
N																																				
S																			◯	◯								●	◯	◯	◐				◯		
S																															◐					◯
H																																				

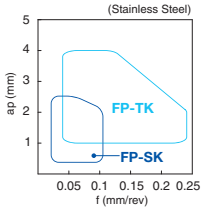
Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

	Insert	Description	Dimension (mm) rε	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium - Roughing	Sharp Edge / Polished	DNGG 150404FP-TK	0.4	D10 D11 F62	1
		DNGG 150408FP-TK	0.8		
Stainless Steel / Heat-Resistant Alloys	Medium-Roughing Sharp Edge	DNGG 150404TK	0.4	F68 F69	
		DNGG 150408TK	0.8		
		DNGG 150604TK	0.4	D10 D11 F62	
		DNGG 150608TK	0.8		
	Medium-Roughing	DNMG 150404TK	0.4	D10 D11 F62 F68 F69	2
		DNMG 150408TK	0.8		
		DNMG 150604TK	0.4	D10 D11 F62	
		DNMG 150608TK	0.8		
Stainless Steel / Heat-Resistant Alloys	Finishing-Medium	DNMG 150404MQ	0.4	D10 D11 F62 F68 F69	
		DNMG 150408MQ	0.8		
		DNMG 150604MQ	0.4	D10 D11 F62	
		DNMG 150608MQ	0.8		
Stainless Steel / Heat-Resistant Alloys	Medium-Roughing	DNMG 150404MS	0.4	D10 D11 F62 F68 F69	3
		DNMG 150408MS	0.8		
		DNMG 150412MS	1.2		
		DNMG 150604MS	0.4	D10 D11 F62	
		DNMG 150608MS	0.8		
		DNMG 150612MS	1.2		
Stainless Steel / Heat-Resistant Alloys	Medium - Roughing	DNMG 150404MU	0.4	D10 D11 F62 F68 F69	
		DNMG 150408MU	0.8		
		DNMG 150604MU	0.4	D10 D11 F62	
		DNMG 150608MU	0.8		

Applicable Chipbreaker Range
ap indicates radius

1





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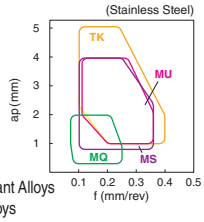
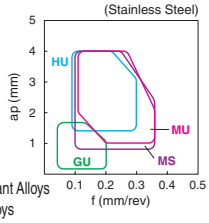
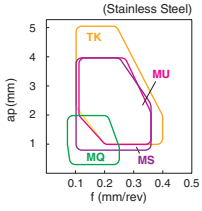


Heat-Resistant Alloys
Titanium Alloys
B6

3





Heat-Resistant Alloys
Titanium Alloys
B6

● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

B

Negative · C · D · R · S · T · V · W · Ceramic

Insert (Turning)

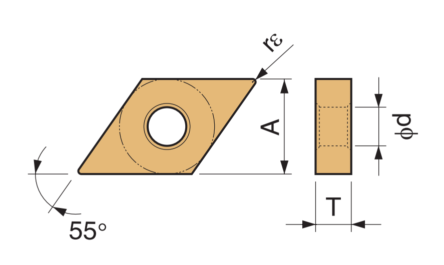
55° Rhombic / Negative with Hole

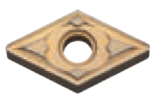
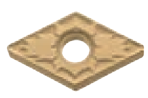
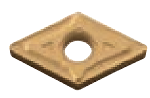
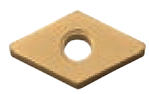
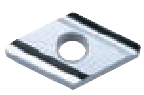
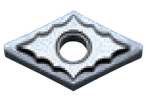
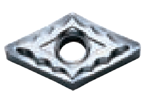
(mm)

Description	A	T	ϕd
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

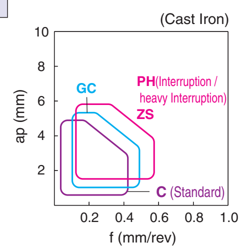
Description	A	T	ϕd
DN_1506_	12.70	6.35	5.16



Insert	Description	Dimension (mm)	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide															MEGACOAT / MEGACOAT NANO						PVD Coated Carbide				Carbide		Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Handed Insert shows Right-hand		rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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																																							
 Cast Iron / Roughing	DNMG 150404C	0.4																					●	●		□	□													D10 D11 F62 F68 F69	1
	DNMG 150408C	0.8																					●	●		□	□														
	DNMG 150412C	1.2																						●		□															
	DNMG 150604C	0.4																					●	●																D10 D11 F62	
	DNMG 150608C	0.8																					●	●			□														
	DNMG 150612C	1.2																						●			□														
 Cast Iron / Roughing	DNMG 150408ZS	0.8															●						●	●	□	□	□													D10 D11 F62 F68 F69	
	DNMG 150412ZS	1.2															●						●	●		□	□														
	DNMG 150608ZS	0.8																					●	●		□	□													D10 D11 F62	
	DNMG 150612ZS	1.2																					●	●			□														
 Cast Iron / Roughing	DNMG 150408GC	0.8															●						●	●	□		□													D10 D11 F62 F68 F69	
	DNMG 150412GC	1.2																						●			□														
	DNMG 150608GC	0.8															□						●	●			□													D10 D11 F62	
	DNMG 150612GC	1.2																						●																	
 Cast Iron / Without Chipbreaker	DNMA 150404	0.4															●						●	●		□	□											●		D10 D11 F62 F68 F69	-
	DNMA 150408	0.8								●							●						●	●	□	□	□											●			
	DNMA 150604	0.4																					●	●																D10 D11 F62	
	DNMA 150608	0.8																					●	●																	
 Non-ferrous Metals / Finishing-Medium / Sharp Edge	DNGG 150404R/L-A3	0.4																																				●		D10 D11 F62 F68 F69	2
	DNGG 150408R/L-A3	0.8																																				●			
 Non-ferrous Metals / Medium-Roughing / Sharp Edge	DNGG 150404AH	0.4																																				●			
	DNGG 150408AH	0.8																																				●			
	DNGG 150604AH	0.4																																				□		D10 D11 F62	
	DNGG 150608AH	0.8																																				□			
 Non-ferrous Metals / Medium-Roughing	DNMG 150404AH	0.4																																				●		D10 D11 F62 F68 F69	
	DNMG 150408AH	0.8																																				●			

Applicable Chipbreaker Range
ap indicates radius

1



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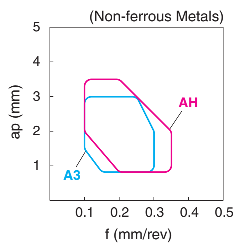


 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

How to read pages of "Turning Inserts" ➡ B13

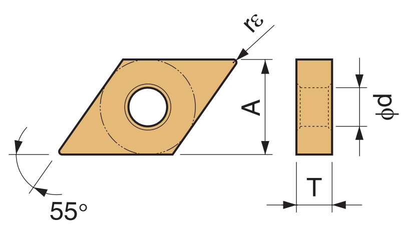
55° Rhombic / Negative with Hole

(mm)

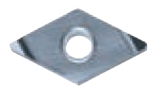
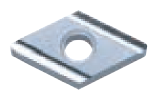
Description	A	T	ϕd
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	A	T	ϕd
DN_1506_	12.70	6.35	5.16

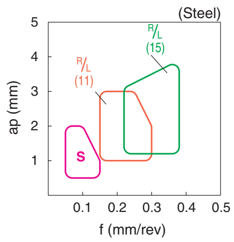


Material		TN620	TN6010	TN6020	PV720	PV7025	PV7005	KW10
P	Free-cutting steel							
P	Carbon Steel / Alloy Steel	◐	●	○	◐	○		
M	Stainless Steel							
K	Gray Cast Iron						●	⊕
K	Nodular Cast Iron						○	
N	Non-ferrous Metals							✚
S	Heat-resistant Alloys							
S	Titanium Alloys							✚
H	Hard Materials							

Insert (Handed Insert shows Right-hand)	Description	Dimension (mm)	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide															MEGACOAT / MEGACOAT NANO						PVD Coated Carbide				Carbide			
		rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing  Surface Roughness Oriented	DNGG 110402R/L-S	0.2				●					●																											●		D11 F67	1
	DNGG 110404R/L-S	0.4				●					●																											●			
	DNGG 110408R/L-S	0.8				●					●																											R			
Medium 	DNGG 110404R/L	0.4				●																																●			
	DNGG 110408R/L	0.8				R																																			
	DNGG 150404R/L	0.4	●	●	●	●	●		●	●	●	●																						●				●		D10 D11 F62 F68 F69	
	DNGG 150408R/L	0.8	●	●	●	●	●		●	●	●	●																						●				●			

Applicable Chipbreaker Range
ap indicates radius

1



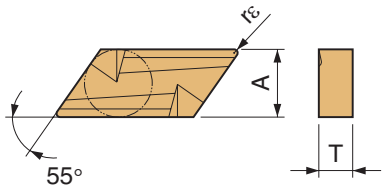
● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

55° Parallelogram / Negative with Hole

(mm)

Description	A	T	φd
KNMX1604_	9.525	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 (Handed Insert shows Right-hand)	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium-Roughing	KNMX 160405R/L-1	0.5																●●																							-	1
	160410R/L-1	1.0																●●																								

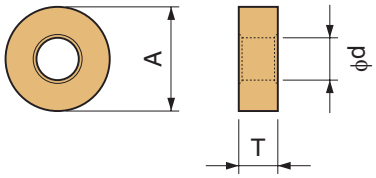
Round / Negative with Hole

(mm)

Description	A	T	φd
RN_0903_	9.525	3.18	3.81
RN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	φd
RN_1506_	15.875	6.35	6.35



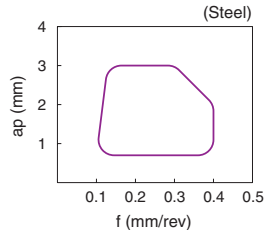
	Free-cutting steel	Carbon Steel / Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant Alloys	Titanium Alloys	Hard Materials
P		○	●◐✖	◡					
M									
K			●	✖	✖				
N									
S									
H									

Insert	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium-Roughing	RNMG 090300	-				●				●			●	●	●	●			●																							D19	2
	RNMG 120400	-				●				●			●	●	●	●		●	●					●																			
	RNMG 150600	-													●	●		●	●					●		□																-	

Applicable Chipbreaker Range

ap indicates radius

1



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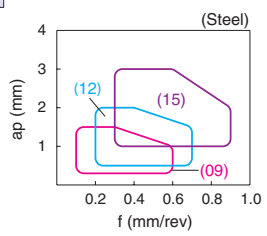


Inserts are sold in 10 piece boxes.

● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

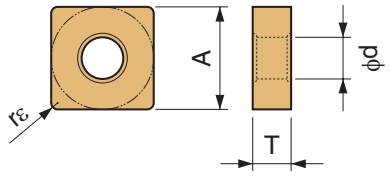
90° Square / Negative with Hole

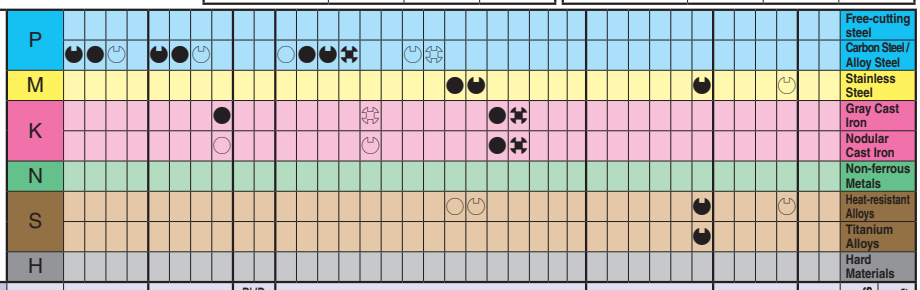
(mm)

Description	A	T	φd
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	φd
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94



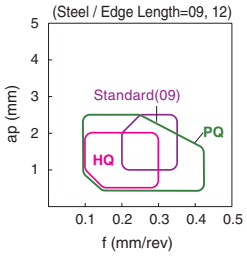


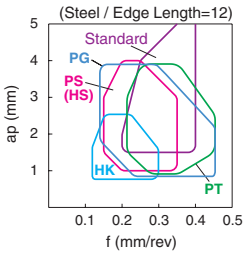
Insert	Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA525	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT MEGACOAT NANO PR1425	MEGACOAT MEGACOAT NANO PR1225	MEGACOAT MEGACOAT NANO PR1305	MEGACOAT MEGACOAT NANO PR1310	MEGACOAT MEGACOAT NANO PR1325	MEGACOAT MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing-Medium NEW	SNMG 120404PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																						
	SNMG 120408PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																						
	SNMG 120412PQ	1.2											●	●	●	●		●	●																						
Finishing-Medium	SNMG 120404HQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																	●				
	SNMG 120408HQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●																			
	SNMG 120412HQ	1.2		●	●	●			●		●	●	●	●	●	●		●	●	●																					
Medium - Roughing NEW	SNMG 120408PG	0.8	●				●						●	●	●	●																	●								
	SNMG 120412PG	1.2	●				●						●	●	●	●																	●								
	SNMG 120416PG	1.6	●				●						●	●	●	●																									
Medium - Roughing	SNMG 120408PS	0.8		●				●	●				●	●	●	●	●	●	●	●	●	●															●			
	SNMG 120412PS	1.2							●				●	●	●	●		●	●	●		●															●			
	SNMG 120416PS	1.6											●	●	●	●		●	●	●																			D12 D13 F71	1
Medium - Roughing	SNMG 120408HS	0.8			●	●					●	●						●	●																						
	SNMG 120412HS	1.2			●	●					●	●						●	●																						
	SNMG 120416HS	1.6			●	●						●							●																						
Medium-Roughing / High Feed Rate	SNMG 120408PT	0.8											●	●	●	●	●	●	●	●		●																			
	SNMG 120412PT	1.2											●	●	●	●	●	●	●	●		●																			
Roughing	SNMG 090304	0.4		●		●									●	●			●																						
	SNMG 090308	0.8		●		●									●	●			●					●																	
Roughing	SNMG 120404	0.4	●	●	●	●	●		●	●	●						●						●	●		□	□													
	SNMG 120408	0.8	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●		□	□										●			
	SNMG 120412	1.2			●	●					●		●	●	●	●	●	●	●	●			●	●		□	□										●			
	SNMG 120416	1.6			●	●									●	●	●	●	●	●				●		□	□													
	SNMG 120420	2.0				●											●							●		□	□													
	SNMG 190612	1.2															●			●																			-	2
	SNMG 190616	1.6																		●																				

Applicable Chipbreaker Range

ap indicates radius

1





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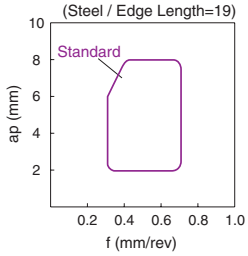


● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

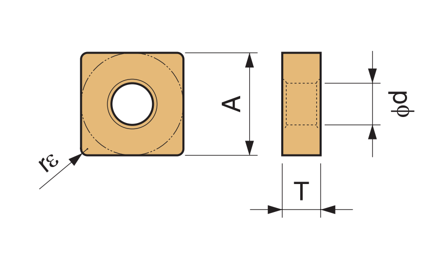
90° Square / Negative with Hole

(mm)

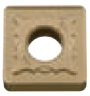
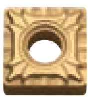
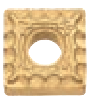
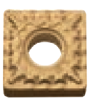
Description	A	T	ϕd
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	ϕd
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94



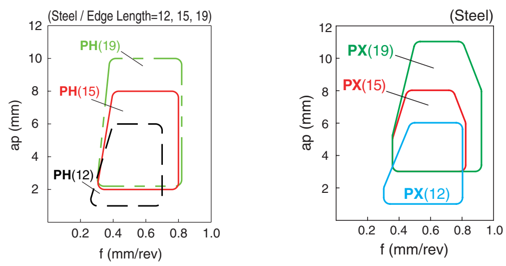
Work materials: P (Free-cutting steel; Carbon Steel / Alloy Steel), M (Stainless Steel), K (Gray Cast Iron; Nodular Cast Iron), N (Non-ferrous Metals), S (Heat-resistant Alloys; Titanium Alloys), H (Hard Materials)

Insert	Description	rε (mm)	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
			Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide															MEGACOAT / MEGACOAT NANO						PVD Coated Carbide				Carbide			
Roughing 	SNMG 120408PH	0.8											●	●	●	●		●	●	●			●	●																D12 D13 F71	1
	SNMG 120412PH	1.2											●	●	●	●		●	●	●			●	●																	
	SNMG 120416PH	1.6											●	●	●	●		●	●	●			●	●																	
	SNMG 150612PH	1.2											●	●	●	●		●	●				●	●																-	
	SNMG 150616PH	1.6											●	●	●	●		●	●				●	●																	
	SNMG 190612PH	1.2													●	●		●	●	●																					
	SNMG 190616PH	1.6													●	●		●	●	●																					
	SNMG 190624PH	2.4																●	●																						
Single Sided / Roughing / High Feed Rate	SNMM 120408PX	0.8											●	●	●	●		●	●																					D12 D13 F71	1
	SNMM 120412PX	1.2											●	●	●	●		●	●	●																					
	SNMM 120416PX	1.6													●	●		□	●																						
	SNMM 150612PX	1.2													●	●		□	●	●																				-	
	SNMM 150616PX	1.6													●	●		□	●	●																					
	SNMM 190612PX	1.2											●	●	●	●		●	●	●																					
	SNMM 190616PX	1.6											●	●	●	●		●	●	●																					
	SNMM 190624PX	2.4													●	●		●	●																						
Low Carbon Steel  Finishing	SNMG 120408XP	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																					D12 D13 F71	2
Low Carbon Steel  Medium	SNMG 120408XQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●																						
Low Carbon Steel  Roughing	SNMG 120408XS	0.8	●	●	●		●		●				●	●	●	●		●	●																						

Applicable Chipbreaker Range

ap indicates radius

1



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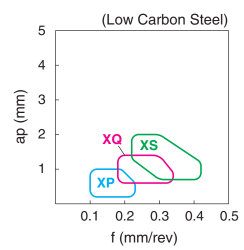


Inserts are sold in 10 piece boxes.

● : Std. Item   R : Std. Item (Right-hand Only)   L : Std. Item (Left-hand Only)   □ : Deleted from the next catalogue

How to read pages of "Turning Inserts" ➡ B13

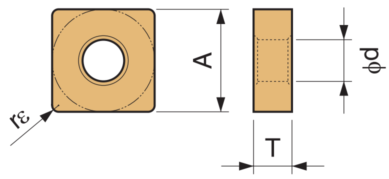
90° Square / Negative with Hole
90° Square / Negative without Hole

(mm)

Description	A	T	ϕd
SN_1204_	12.70	4.76	5.16
SN_1506_	15.875	6.35	6.35

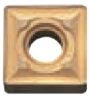
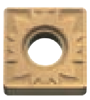
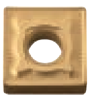
(mm)

Description	A	T	ϕd
SN_1906_	19.05	6.35	7.94
SNMN1204_	12.70	4.76	-



Cermet: TN620, TN6010, TN6020, TN60 · MEGACOAT Cermet: PV720, PV7010, PV7025, PV7005 · PVD Coated Cermet: PV90, PV7020 · CVD Coated Carbide: CA510, CA515, CA525, CA530, CA5505, CA5515, CA5525, CA5535, CA6515, CA6525, CA4505, CA4515, CA4010, CA4115, CA4120 · MEGACOAT / MEGACOAT NANO: PR1425, PR1225, PR1305, PR1310, PR1325, PR1535 · PVD Coated Carbide: PR930, PR1005, PR1025, PR1125 · Carbide: KW10, SW05

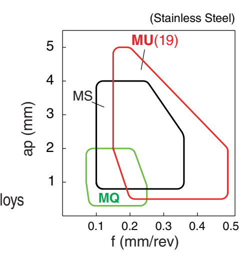
Workpiece		TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P	Free-cutting steel																																					
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	rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Stainless Steel / Heat-Resistant Alloys Finishing-Medium	SNMG 120404MQ	0.4																			●	●								●	●	●					●		●	D12 D13 F71	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																													●	●									
Cast Iron  Roughing	SNMG 120408C	0.8															○							●		□	□													D12 D13 F71	2
	SNMG 120412C	1.2																						●			□														
Cast Iron  Roughing	SNMG 120408ZS	0.8															●						●	●	□	□	□														
	SNMG 120412ZS	1.2															●						●	●	□	□	□														
Cast Iron  Roughing	SNMG 120408GC	0.8															●						●	●		□	□														
	SNMG 120412GC	1.2															●							●	□	□	□														
Cast Iron Without Chipbreaker	SNGA 120404	0.4																																				●		D25 D34 D35 F77	-
	SNGA 120408	0.8								●																												●			
	SNMA 120404	0.4															●							●		□															
	SNMA 120408	0.8															●						●	●	□	□	□														
	SNMA 120412	1.2															●						●	●	□	□	□														
	SNMA 120416	1.6															●						●	●			□														
	SNMA 120420	2.0																						●																	
Cast Iron Without Chipbreaker	SNMN 120408	0.8															●							●																	
	SNMN 120412	1.2																						●																	

Applicable Chipbreaker Range
ap indicates radius

1

Heat-Resistant Alloys
Titanium Alloys
➡ B6



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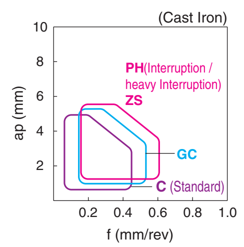


● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

How to read pages of "Turning Inserts" ➔ B13

90° Square / Negative with Hole

(mm)

Description	A	T	ϕd
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	ϕd
SN_1906_	19.05	6.35	7.94
SNMN1204_	12.70	4.76	-

Insert drawing labels: rε, A, T, ϕd

Work material suitability:

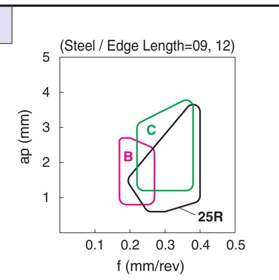
Material	Grade(s)
P – Free-cutting steel	
P – Carbon Steel / Alloy Steel	TN6010 ●
M – Stainless Steel	
K – Gray Cast Iron	PV7005 ●
K – Nodular Cast Iron	PV7005 ○
N – Non-ferrous Metals	KW10 ✱
S – Heat-resistant Alloys	
S – Titanium Alloys	KW10 (✱)
H – Hard Materials	

Grade groups: Cermet (TN620, TN6010, TN6020, TN60); MEGACOAT Cermet (PV720, PV7010, PV7025, PV7005); PVD Coated Cermet (PV90, PV7020); CVD Coated Carbide (CA510, CA515, CA525, CA530, CA5505, CA5515, CA5525, CA5535, CA6515, CA6525, CA4505, CA4515, CA4010, CA4115, CA4120); MEGACOAT / MEGACOAT NANO (PR1425, PR1225, PR1305, PR1310, PR1325, PR1535); PVD Coated Carbide (PR930, PR1005, PR1025, PR1125); Carbide (KW10, SW05)

Insert (Handed Insert shows Right-hand)	Description	rε (mm)	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing-Medium / Medium-Roughing; -B : Finishing-Medium, -C : Medium-Roughing	SNGG 090304R/L-B	0.4		●		●				●																														D12	1
	SNGG 090308R/L-B	0.8		●		●																																		D13	
	SNGG 120404R/L-C	0.4		●		●				●	●																											●			
	SNGG 120408R/L-C	0.8		●		●				●	●																											●			
	SNMG 120404R/L-C	0.4		●		●																																		D12	
	SNMG 120408R/L-C	0.8		●		●																																		D13	
Medium - Roughing; Low Cutting Force	SNGG 120404R/L-25R	0.4		●		●																																		F71	
	SNGG 120408R/L-25R	0.8		●		●																																			

Applicable Chipbreaker Range
ap indicates radius

1



 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) ☐ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

How to read pages of "Turning Inserts" B13

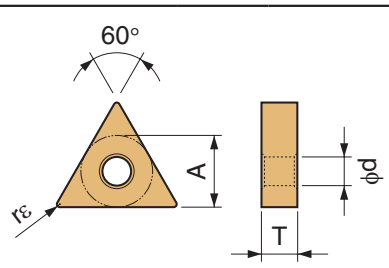
60° Triangle / Negative with Hole

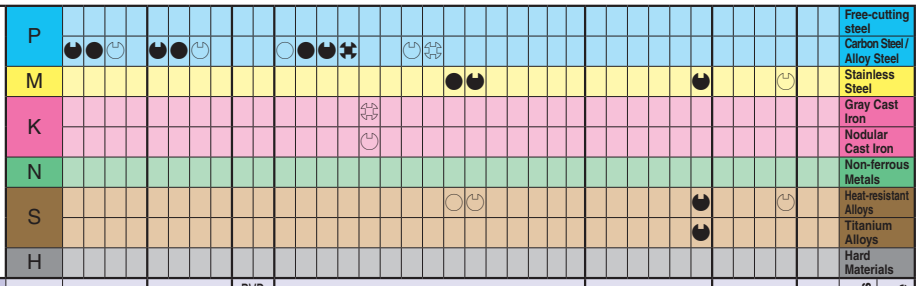
(mm)

Description	A	T	φd
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	A	T	φd
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

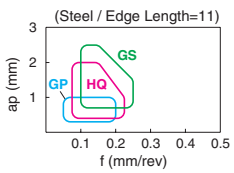


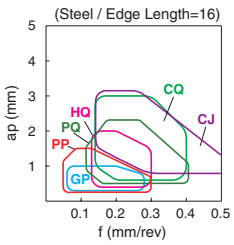


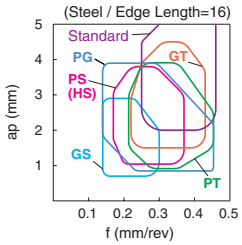
Insert	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing (NEW)	TNMG 160402PP	0.2	●	●	●		●	●	●				●	●	●	●		●	●																						D14	
	TNMG 160404PP	0.4	●	●	●		●	●	●				●	●	●	●		●	●																						D15	
	TNMG 160408PP	0.8	●	●	●		●	●	●				●	●	●	●		●	●																						F62	
	TNMG 160412PP	1.2	●	●	●		●	●	●				●	●	●	●																									F72	
																																									F73	
Finishing	TNMG 110404GP	0.4	●			●	●				●																													D14	
	TNMG 110408GP	0.8	●			●	●				●																													F73	
	TNMG 160402GP	0.2	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																							
	TNMG 160404GP	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						D14	
	TNMG 160408GP	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																						D15	
Finishing-Medium (NEW)	TNMG 160404PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																						F62	
	TNMG 160408PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																						F72	1
	TNMG 160412PQ	1.2	●	●	●		●	●	●				●	●	●	●		●	●																						F73	
Finishing-Medium	TNMG 110404HQ	0.4	●			●	●				●		●	●	●	●		●	●																						D14	
	TNMG 110408HQ	0.8	●			●	●				●		●	●	●	●		●	●																						F73	
	TNMG 160404HQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●			D14	
	TNMG 160408HQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●			D15	
	TNMG 160412HQ	1.2			●	●			●		●	●	●	●	●	●		●	●																						F62	
Finishing-Medium / Up Facing	TNMG 160404CQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●																					F72	
	TNMG 160408CQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●																					F73	
	TNMG 160412CQ	1.2	●		●	●	●		●		●	●	●	●	●	●	●	●	●	●																						
	TNMG 220408CQ	0.8											●	●	●	●		●	●																						D14	
	TNMG 220412CQ	1.2											●	●	●	●		●	●																						F72	
Medium - Roughing	TNMG 110404GS	0.4	●			●	●								●	●			●																						D14	
	TNMG 110408GS	0.8													●	●			●																						F73	
	TNMG 160404GS	0.4							●		●	●	●	●	●	●		●	●																							
	TNMG 160408GS	0.8							●		●	●	●	●	●	●		●	●																							
	TNMG 160412GS	1.2									●																														D14	
Medium - Roughing (NEW)	TNMG 160404PG	0.4	●				●						●	●	●	●																	●								D15	
	TNMG 160408PG	0.8	●				●						●	●	●	●																	●								F62	
	TNMG 160412PG	1.2	●				●						●	●	●	●																	●								F72	2
																																									F73	
Medium - Roughing	TNMG 160404PS	0.4		●				●	●				●	●	●	●	●	●	●	●	●	●															●				
	TNMG 160408PS	0.8		●				●	●				●	●	●	●	●	●	●	●	●	●															●				
	TNMG 160412PS	1.2											●	●	●	●		●	●	●	●	●																			
	TNMG 220404PS	0.4											●	●	●	●		●	●	●																					
	TNMG 220408PS	0.8											●	●	●	●	●	●	●	●	●	●																			D14
	TNMG 220412PS	1.2											●	●	●	●		●	●	●		●																			F72
	TNMG 220416PS	1.6											●	●	●	●		●	●																						

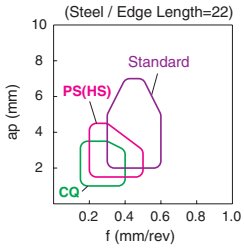
Applicable Chipbreaker Range

ap indicates radius









● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes.

How to read pages of "Turning Inserts" B13

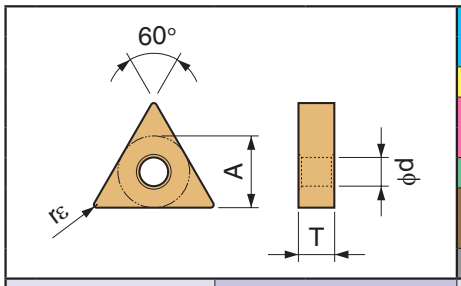
60° Triangle / Negative with Hole

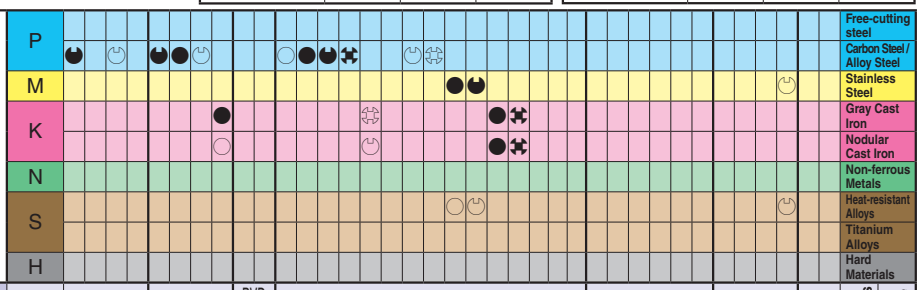
(mm)

Description	A	T	ϕd
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	A	T	ϕd
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



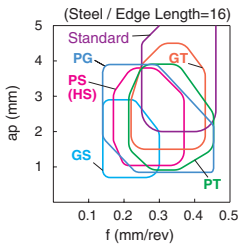


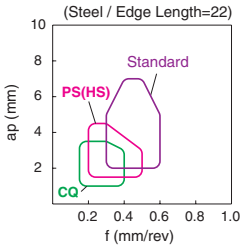
Insert	Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA525	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT NANO PR1425	MEGACOAT NANO PR1225	MEGACOAT NANO PR1305	MEGACOAT NANO PR1310	MEGACOAT NANO PR1325	MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium - Roughing	TNMG 160404HS	0.4			●	●					●	●						●	●																					D14 D15 D62 F72 F73	1
	TNMG 160408HS	0.8			●	●					●	●						●	●																						
	TNMG 160412HS	1.2			●	●					●							●	●																						
	TNMG 220404HS	0.4				●																																		D14 F72	
	TNMG 220408HS	0.8				●					●																														
	TNMG 220412HS	1.2																●																							
Medium-Roughing / High Feed Rate	TNMG 160408PT	0.8											●	●	●	●	●	●	●	●		●																		D14 D15 D62 F72 F73	1
	TNMG 160412PT	1.2											●	●	●	●	●	●	●	●																						
Medium-Roughing / High Feed Rate	TNMG 160408GT	0.8							●		●	●	●	●	●	●		●	●																						
	TNMG 160412GT	1.2									●	●	●	●	●	●		●	●																						
Roughing	TNMG 160404	0.4	●		●	●	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●	□	□	□											●		D14 D15 D62 F72 F73	1
	TNMG 160408	0.8	●		●	●	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●	□	□	□											●			
	TNMG 160412	1.2				●			●		●		●	●	●	●	●	●	●			●		●	□	□	□														
	TNMG 160416	1.6															●							●			□														
	TNMG 160420	2.0															●							●			□														
	TNMG 220404	0.4															●						●	●	□															D14 F72	
	TNMG 220408	0.8				●							●	●	●	●	●	●	●				●	●	□	□	□														
	TNMG 220412	1.2				●							●	●	●	●		●	●				●	●	□	□	□														
Medium - Roughing	TNMG 160408PH	0.8											●	●	●	●		●	●				●	●																D14 D15 D62 F72 F73	2
	TNMG 160412PH	1.2											●	●	●	●		●	●				●	●																	
	TNMG 220408PH	0.8											●	●	●	●		●	●																					D14 F72	
	TNMG 220412PH	1.2											●	●	●	●		●	●	●																					
	TNMG 220416PH	1.6											●	●	●	●		●	●																						
Single Sided / Roughing / High Feed Rate	TNMM 160408PX	0.8													●	●		●	●	●																				D14 D15 D62 F72 F73	3
	TNMM 160412PX	1.2													●	●		●	●	●																						
	TNMM 220408PX	0.8													●	●		□	●	●																				D14 F72	
	TNMM 220412PX	1.2													●	●		□	●																						
	TNMM 220416PX	1.6													●	●		□	●																						

Applicable Chipbreaker Range

ap indicates radius

1





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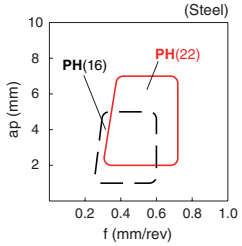

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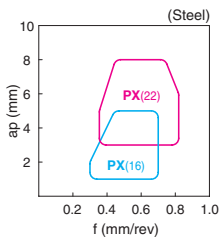


Inserts are sold in 10 piece boxes.

 ●: Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

How to read pages of “Turning Inserts” ➡ B13

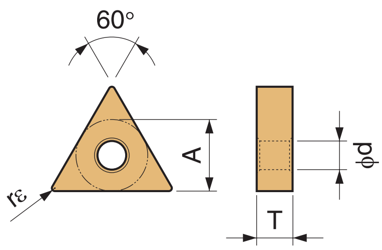
60° Triangle / Negative with Hole

(mm)

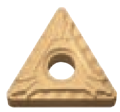
Description	A	T	ϕd
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	A	T	ϕd
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



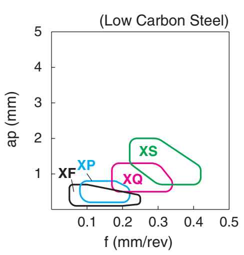
Workpiece		TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P	Free-cutting steel																																					
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) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT / MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Carbon Steel, NEW Finishing / Small ap	TNMG 160404XF	0.4	●	●			●	●	●																															D14 D15 F62 F72 F73	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, NEW Sharp Edge / Polished	TNGG 160401MFP-SK	<0.1																										●	●											D14 D15 E41 F62 F72 F73	2
	TNGG 160402MFP-SK	<0.2																										●	●												
	TNGG 160404MFP-SK	<0.4																										●	●												
Medium - Roughing Sharp Edge / Polished	TNGG 160404FP-TK	0.4																										●	●												
	TNGG 160408FP-TK	0.8																										●	●												

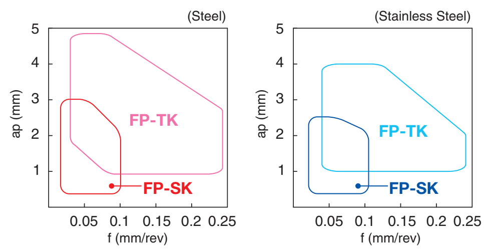
· Insert whose corner-R (rε) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance for corner-R (rε).

Applicable Chipbreaker Range
ap indicates radius

1



2



● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) ☐ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

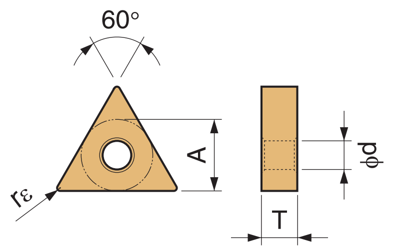
60° Triangle / Negative with Hole

(mm)

Description	A	T	ϕd
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

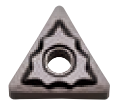
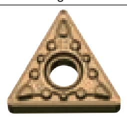
(mm)

Description	A	T	ϕd
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



Grade groups: Cermet (TN620, TN6010, TN6020, TN60) · MEGACOAT Cermet (PV720, PV7010, PV7025, PV7005) · PVD Coated Cermet (PV90, PV7020) · CVD Coated Carbide (CA510 … CA4120) · MEGACOAT / MEGACOAT NANO (PR1425 … PR1535) · PVD Coated Carbide (PR930, PR1005, PR1025, PR1125) · Carbide (KW10, SW05)

Work material	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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																																					

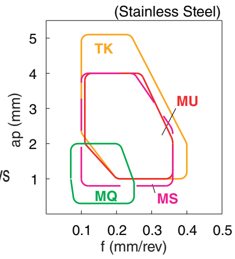
Insert (Handed Insert shows Right-hand)	Description	rε (Dimension (mm))	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Stainless Steel / Heat-Resistant Alloys:  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																			●	●								●	●	●	●				●		●	D14 D15 F62 F72 F73	1
	TNMG 160408MQ	0.8																			●	●								●	●	●	●				●		●		
 Medium-Roughing	TNMG 160404MS	0.4																			●	●								●	●	●	●				●		●		
	TNMG 160408MS	0.8																			●	●								●	●	●	●				●		●		
	TNMG 160412MS	1.2																			●	●								●	●	●	●				●		●		
Medium-Roughing	TNMG 160404MU	0.4																			●	●								●	●	●	●						●		
	TNMG 160408MU	0.8																			●	●								●	●	●	●						●		
Stainless Steel: Medium-Roughing	TNMG 160404R/L-ST	0.4		●		●							●	●	●	●		●	●		●	●															●				
	TNMG 160408R/L-ST	0.8				●							●	●	●	●		●	●		●	●															●				

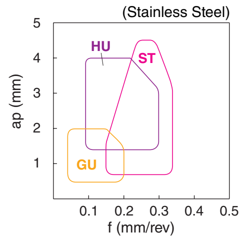
Applicable Chipbreaker Range

ap indicates radius

1

Heat-Resistant Alloys
Titanium Alloys
B6





● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

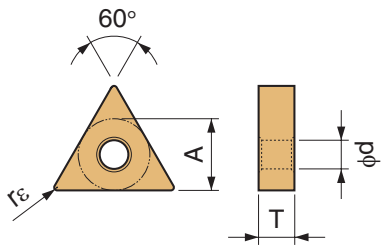
60° Triangle / Negative with Hole

(mm)

Description	A	T	ϕd
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	A	T	ϕd
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



| | | |

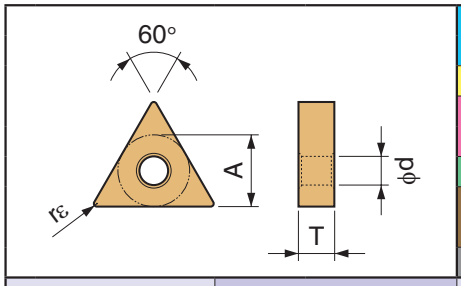
60° Triangle / Negative with Hole

(mm)

Description	A	T	ϕd
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	A	T	ϕd
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



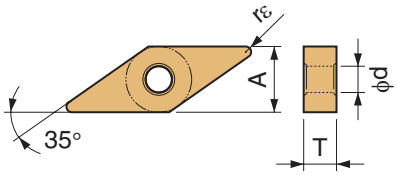
| | | |

How to read pages of "Turning Inserts" B13

35° Rhombic / Negative with Hole

(mm)

Description	A	T	φd
VN_1604_	9.525	4.76	3.81

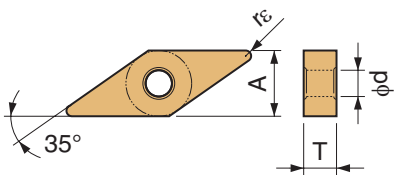


| | | |

35° Rhombic / Negative with Hole

(mm)

Description	A	T	φd
VN_1604_	9.525	4.76	3.81



| | | |

How to read pages of "Turning Inserts" B13

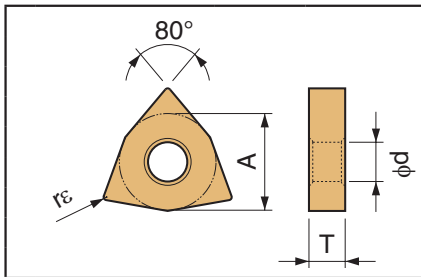
80° Trigon / Negative with Hole

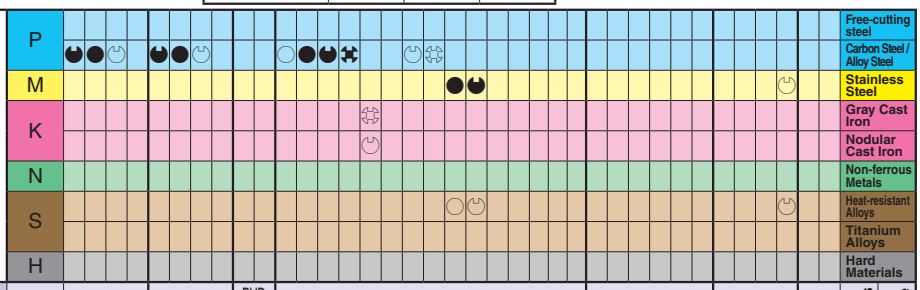
(mm)

Description	A	T	φd
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	A	T	φd
WN_0804_	12.70	4.76	5.16



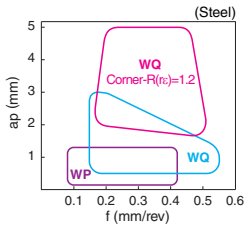


Insert	Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
With Wiper Edge Finishing	WNMG 080404WP	0.4	●	●	●		●	●	●			●	●	●	●	●	●	●	●																							
	WNMG 080408WP	0.8	●		●		●	●	●			●	●	●	●	●	●	●	●																							
With Wiper Edge Finishing-Medium	WNMG 080404WQ	0.4	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●																					D20	1
	WNMG 080408WQ	0.8	●		●		●	●	●		●	●	●	●	●	●	●	●	●																					F75	
	WNMG 080412WQ	1.2	●		●		●		●			●	●	●	●	●	●	●	●																					F76	
Finishing NEW	WNMG 080402PP	0.2	●	●	●		●	●	●				●	●	●	●																									
	WNMG 080404PP	0.4	●	●	●		●	●	●				●	●	●	●																									
	WNMG 080408PP	0.8	●	●	●		●	●	●				●	●	●	●																									
	WNMG 080412PP	1.2	●	●	●		●	●	●				●	●	●	●																									
Finishing	WNMG 060404GP	0.4	●			●	●				●																													D20	
	WNMG 060408GP	0.8	●			●	●				●																													F74	
	WNMG 080404GP	0.4	●	●	●	●	●	●	●		●	●																													
	WNMG 080408GP	0.8	●	●	●	●	●	●	●		●	●																												D20	
Finishing-Medium NEW	WNMG 080404PQ	0.4	●	●	●		●	●	●				●	●	●	●		●	●																					F75	
	WNMG 080408PQ	0.8	●	●	●		●	●	●				●	●	●	●		●	●																					F76	
	WNMG 080412PQ	1.2											●	●	●	●		●	●																						
Finishing-Medium	WNMG 06T304HQ	0.4				●									●	●			●																					-	2
	WNMG 06T308HQ	0.8				●									●	●			●																						
	WNMG 060404HQ	0.4	●			●	●				●		●	●	●	●		●	●																					D20	
	WNMG 060408HQ	0.8	●			●	●				●		●	●	●	●		●	●																					F74	
	WNMG 080404HQ	0.4	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●			
	WNMG 080408HQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●			
	WNMG 080412HQ	1.2			●	●		●	●		●	●	●	●	●	●		●	●	●																				
Finishing-Medium / Up Facing	WNMG 080404CQ	0.4	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●																					D20	
	WNMG 080408CQ	0.8	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●																				F75	
	WNMG 080412CQ	1.2	●		●	●	●		●			●	●	●	●	●	●	●	●	●																				F76	
Finishing-Medium / Up Facing	WNMG 080408CJ	0.8											●	●	●	●	●	●	●	●																					
	WNMG 080412CJ	1.2											●	●	●	●	●	●	●	●																					

Applicable Chipbreaker Range

ap indicates radius

1



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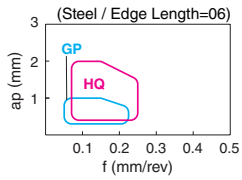

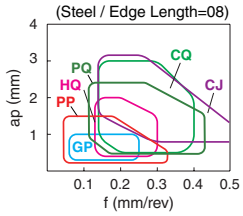

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Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

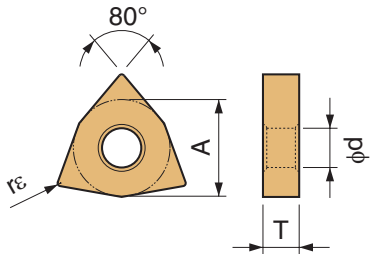
80° Trigon / Negative with Hole

(mm)

Description	A	T	φd
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	A	T	φd
WN_0804_	12.70	4.76	5.16



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How to read pages of "Turning Inserts" B13

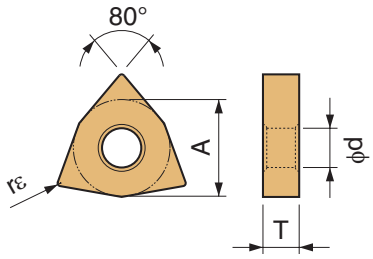
80° Trigon / Negative with Hole

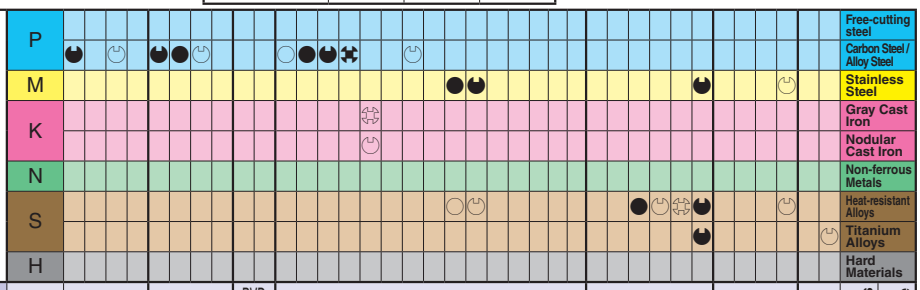
(mm)

Description	A	T	φd
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	A	T	φd
WN_0804_	12.70	4.76	5.16



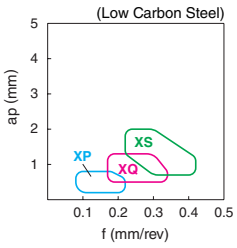


Insert		Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA525	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT NANO PR1425	MEGACOAT NANO PR1225	MEGACOAT NANO PR1305	MEGACOAT NANO PR1310	MEGACOAT NANO PR1325	MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Carbon Steel	Finishing	WNMG 080404XP	0.4	●		●	●	●	●	●		●	●	●	●	●	●		●	●																						
		080408XP	0.8	●		●	●	●	●	●		●	●	●	●	●	●		●	●																						
Low Carbon Steel	Medium	WNMG 080404XQ	0.4	●		●		●	●	●		●	●	●	●	●	●	●	●	●																						1
		080408XQ	0.8	●		●	●	●	●	●		●	●	●	●	●	●		●	●																						
Low Carbon Steel	Roughing	WNMG 080408XS	0.8	●		●		●		●		●	●	●	●	●	●	●	●	●																						
Stainless Steel / Heat-Resistant Alloys	Medium-Roughing / Sharp Edge	WNGG 080404TK	0.4																											●	●								●	D20 F75 F76	
		080408TK	0.8																											●	●								●		
	Medium-Roughing	WNMG 080404TK	0.4																		●	●								●	●	●					●				
		080408TK	0.8																		●	●								●	●	●					●				
	Finishing-Medium	WNMG 080404MQ	0.4																		●	●								●	●	●	●				●		●		2
		080408MQ	0.8																		●	●								●	●	●	●				●		●		
	Medium-Roughing	WNMG 080404MS	0.4																		●	●								●	●	●	●				●		●		
		080408MS	0.8																		●	●								●	●	●	●				●		●		
		080412MS	1.2																		●	●								●	●	●	●				●		●		
	Medium-Roughing	WNMG 080404MU	0.4																		●	●								●	●	●	●				●		●		
		080408MU	0.8																		●	●								●	●	●	●				●		●		

Applicable Chipbreaker Range

ap indicates radius

1



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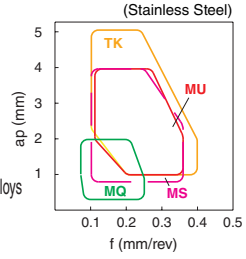

Heat-Resistant Alloys
Titanium Alloys

B6

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Inserts are sold in 10 piece boxes

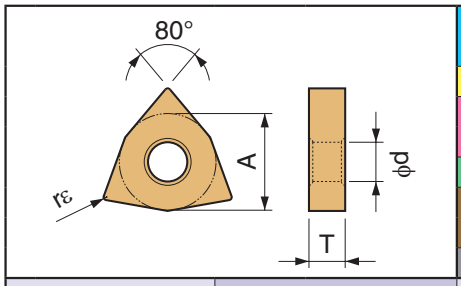
80° Trigon / Negative with Hole

(mm)

Description	A	T	φd
WN_06T3_	9.525	3.97	3.81
WN_0604_	9.525	4.76	3.81

(mm)

Description	A	T	φd
WN_0804_	12.70	4.76	5.16



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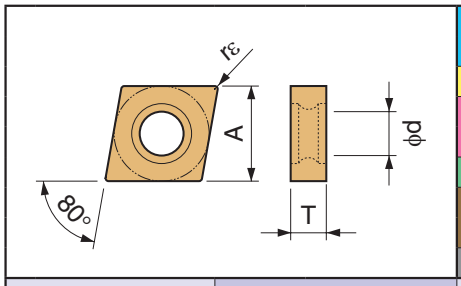
How to read pages of "Turning Inserts" B13

Small Double Sided Tools

(mm)

Description	A	T	φd
CN_U0703_	7.5	3.18	3.6

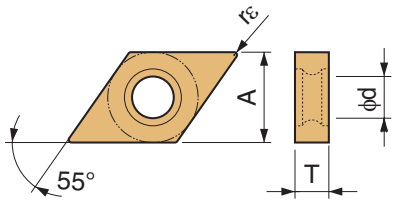


| | | |

Small Double Sided Tools

(mm)

Description	A	T	φd
DN_U0803_	7.0	3.18	3.6



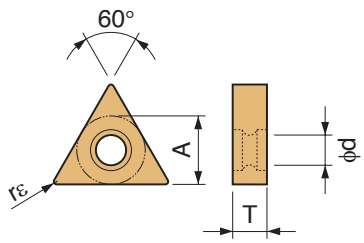
| | | |

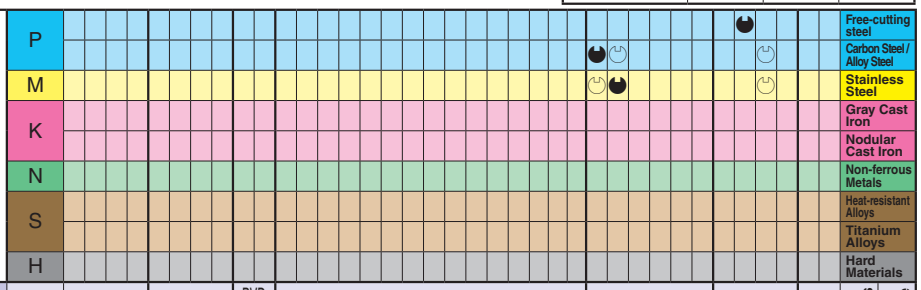
How to read pages of "Turning Inserts" B13

Small Double Sided Tools

(mm)

Description	A	T	ϕd
TN_U0903_	5.56	3.18	3.0



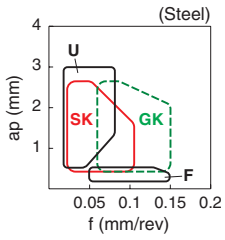


Insert (Handed Insert shows Right-hand)		Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT MEGACOAT NANO PR1425	MEGACOAT MEGACOAT NANO PR1225	MEGACOAT MEGACOAT NANO PR1305	MEGACOAT MEGACOAT NANO PR1310	MEGACOAT MEGACOAT NANO PR1325	MEGACOAT MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	Sharp Edge	TNGU 0903005MF R/L-F	<0.05																										R							R						
		TNGU 090301MF R/L-F	<0.1																									R	R						R	R						
		TNGU 090302MF R/L-F	<0.2																									R	R						R	R						
		TNGU 090304MF R/L-F	<0.4																									R	R						R	R						
Low Feed	Sharp Edge	TNGU 0903005MF R/L-U	<0.05																										R							R					E39	3
		TNGU 090301MF R/L-U	<0.1																									R	R							R						
		TNGU 090302MF R/L-U	<0.2																									R	R						R	R						
		TNGU 090304MF R/L-U	<0.4																									R	R						R	R						
Low Feed	With Honing	TNGU 090301ME R/L-U	<0.1																																	R						
		TNGU 090302ME R/L-U	<0.2																																R	R						
		TNGU 090304ME R/L-U	<0.4																																R	R						

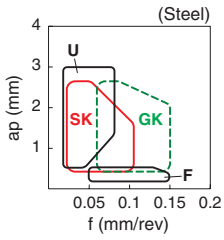
· Insert whose corner-R (rε) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance for corner-R (rε).

Applicable Chipbreaker Range
ap indicates radius

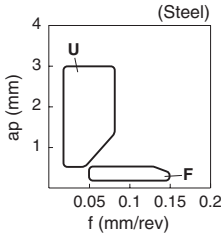
1



2



3



● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" ➡ B13

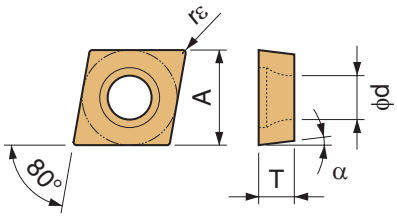
80° Rhombic / Positive with Hole

*Thickness of CC_0301_and CC_0401_are different (mm)

Description	A	T	φd	α
*CC_0301_	3.5	1.4	1.9	7°
*CC_0401_	4.3	1.8	2.3	7°

(mm)

Description	A	T	φd	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°



	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									

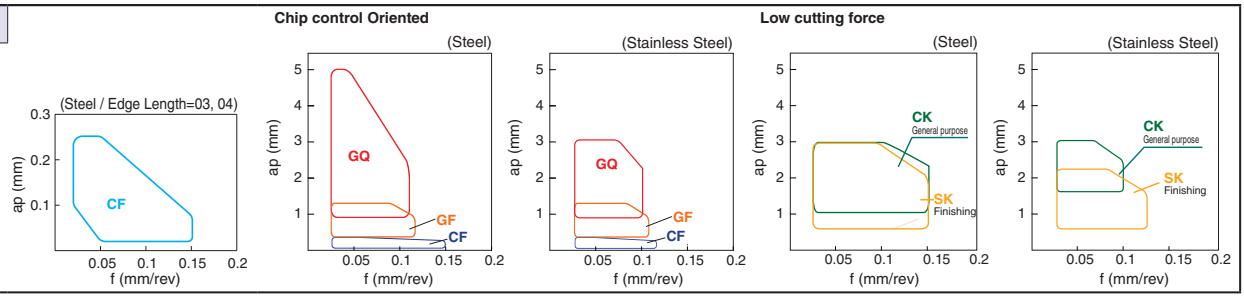
Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT MEGACOAT NANO PR1425	MEGACOAT MEGACOAT NANO PR1225	MEGACOAT MEGACOAT NANO PR1305	MEGACOAT MEGACOAT NANO PR1310	MEGACOAT MEGACOAT NANO PR1325	MEGACOAT MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Minute ap	Sharp Edge	*CCGT 030101M-CF	<0.1																																●	●					F18 F37	
		030102M-CF	<0.2																																●	●						
		*CCGT 040101M-CF	<0.1																																●	●						
		040102M-CF	<0.2																																●	●						
Minute ap	Sharp Edge / Polished	*CCGT 030101MP-CF	<0.1																										●	●						●						
		030102MP-CF	<0.2																										●	●						●						
		*CCGT 040101MP-CF	<0.1																										●	●						●						
		040102MP-CF	<0.2																										●	●						●						
Finishing	Sharp Edge	CCGT 060201MF-GF	<0.1																																	●					Ref. to the table below	1
		060202MF-GF	<0.2																																	●						
		CCGT 09T301MF-GF	<0.1																																	●						
		09T302MF-GF	<0.2																																	●						
		09T304MF-GF	<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 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	NEW 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	CCGT 060201MF-GQ	<0.1																																	●						
		060202MF-GQ	<0.2																																	●						
		060204MF-GQ	<0.4																																	●						
		CCGT 09T301MF-GQ	<0.1																																	●						
		09T302MF-GQ	<0.2																																	●						
		09T304MF-GQ	<0.4																																	●						

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

Insert Description	Ref. to Page for Applicable Toolholders
CC..0602 type	**E22,E23,E34,F37**
CC..09T3 type	**E22,E23,E34,F37,F63**

Applicable Chipbreaker Range
ap indicates radius

1



 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

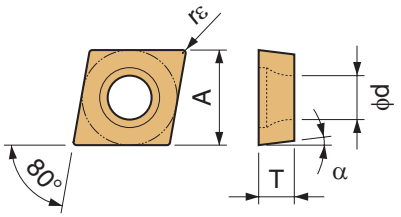
Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

80° Rhombic / Positive with Hole

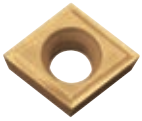
(mm)

Description	A	T	ϕd	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°



	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide												MEGACOAT NANO						PVD Coated Carbide			Carbide		
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P	●◐	●◐	◡		●◐	●◐	◡				○	●◐	◐✖	✖		◡	✖									●◐	◡					◡		◡		
M																			●◐	●◐						◡	◐					◡		◡	◡	
K								●						✖							●✖															
K								○						◡							●✖															
N																																				
S																			○◡														◡	◡		
H																																				

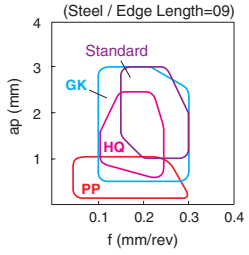
Free-cutting steel / Carbon Steel / Alloy Steel / Stainless Steel / Gray Cast Iron / Nodular Cast Iron / Non-ferrous Metals / Heat-resistant Alloys / Titanium Alloys / Hard Materials

Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) rε	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing-Medium Sharp Edge / Polished	CCGT 060201MFP-GQ	<0.1	Ref. to the table below B48	B48 1
	CCGT 060202MFP-GQ	<0.2		
	CCGT 060204MFP-GQ	<0.4		
	CCGT 09T301MFP-GQ	<0.1		
	CCGT 09T302MFP-GQ	<0.2		
	CCGT 09T304MFP-GQ	<0.4		
Finishing NEW	CCMT 060202PP	0.2		1
	CCMT 060204PP	0.4		
	CCMT 09T302PP	0.2		
	CCMT 09T304PP	0.4		
	CCMT 09T308PP	0.8		
Finishing-Medium	CCMT 060202GK	0.2		
	CCMT 060204GK	0.4		
	CCMT 09T302GK	0.2		
	CCMT 09T304GK	0.4		
	CCMT 120404GK	0.4	E23	
	CCMT 120408GK	0.8		
	CCMT 120412GK	1.2		
Finishing-Medium	CCMT 060202HQ	0.2	Ref. to the table below B48	
	CCMT 060204HQ	0.4		
	CCMT 09T302HQ	0.2		
	CCMT 09T304HQ	0.4		
	CCMT 09T308HQ	0.8		
Medium 	CCGT 060201	0.1		
	CCGT 060202	0.2		
	CCGT 060204	0.4		
	CCGT 09T301	0.1		
	CCGT 09T302	0.2		
	CCGT 09T304	0.4		
	CCMT 09T308	0.8		
	CCGT 0602005M	<0.05		
	CCGT 060201M	<0.1		
	CCGT 060202M	<0.2		
	CCGT 060204M	<0.4		
	CCGT 09T3005M	<0.05		
	CCGT 09T301M	<0.1		
	CCGT 09T302M	<0.2		
	CCGT 09T304M	<0.4		

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

Applicable Chipbreaker Range
ap indicates radius

1



● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

Turning Indexable Inserts

How to read pages of "Turning Inserts" ➡ B13

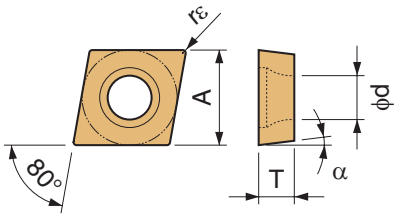
80° Rhombic / Positive with Hole

*Thickness of CC_0301_ and CC_0401_ are different (mm)

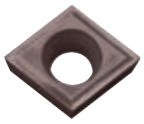
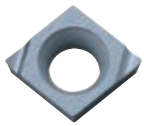
Description	A	T	ϕd	α
*CC_0301_	3.5	1.4	1.9	7°
*CC_0401_	4.3	1.8	2.3	7°

(mm)

Description	A	T	ϕd	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°



	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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																																					

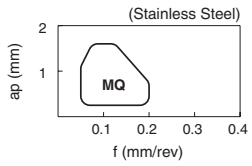
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium  Sharp Edge	CCGT 0602005MF	<0.05																										●	●							●					Ref. to the table below B48	B49 1
	CCGT 060201MF	<0.1																										●	●						●	●						
	CCGT 060202MF	<0.2																										●	●						●	●						
	CCGT 060204MF	<0.4																										●	●						●	●						
	CCGT 09T3005MF	<0.05																										●	●							●						
	CCGT 09T301MF	<0.1																										●	●						●	●						
	CCGT 09T302MF	<0.2																										●	●						●	●						
	CCGT 09T304MF	<0.4																										●	●						●	●						
Stainless Steel / Heat-Resistant Alloys Finishing-Medium	CCMT 09T304MQ	0.4																			●	●								●	●	●					●		●		Ref. to the table below B48	1
	CCMT 09T308MQ	0.8																			●	●								●	●	●					●		●			
Finishing Super Fine  Sharp Edge / Precision	*CCET 0301003R/L-FSF	0.03																															●							F18 F37	2
	*CCET 030101R/L-FSF	0.1		●		L																											●								
	*CCET 030102R/L-FSF	0.2		●		●																											●								
	*CCET 030104R/L-FSF	0.4		●		●																											●								
	*CCET 0401003R/L-FSF	0.03																															●								
	*CCET 040101R/L-FSF	0.1		●		L																											●								
	*CCET 040102R/L-FSF	0.2		●		●																											●								
	*CCET 040104R/L-FSF	0.4		●		L																											●								
	*CCET 0301005MR/L-FSF	<0.05																											●							L					
	*CCET 030101MR/L-FSF	<0.1																											●							●					
	*CCET 030102MR/L-FSF	<0.2																											●							●					
	*CCET 030104MR/L-FSF	<0.4																											●							L					
	*CCET 0401005MR/L-FSF	<0.05																											●							●					
	*CCET 040101MR/L-FSF	<0.1																											●							●					
	*CCET 040102MR/L-FSF	<0.2																											●							●					
	*CCET 040104MR/L-FSF	<0.4																											●							L					
Finishing NEW Sharp Edge	*CCET 0301005MR/L-F	<0.05																										●													
	*CCET 030101MR/L-F	<0.1																										●													
	*CCET 030102MR/L-F	<0.2	L				L																					●													
	*CCET 030104MR/L-F	<0.4	L				L																					●													
	*CCET 040101MR/L-F	<0.1																										●													
	*CCET 040102MR/L-F	<0.2	L				L																					●													
	*CCET 040104MR/L-F	<0.4	L				L																					●													

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

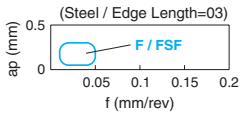
Applicable Chipbreaker Range

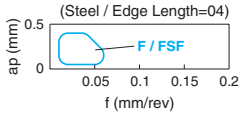
ap indicates radius

1



2





 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

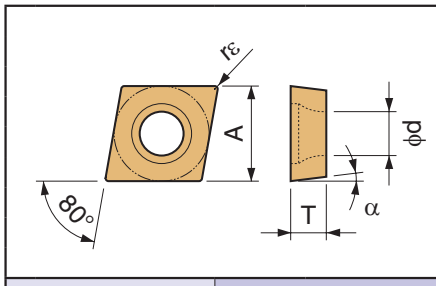
How to read pages of "Turning Inserts" B13 (mm)

80° Rhombic / Positive with Hole

*Thickness of CC_0301_ and CC_0401_ are different (mm)

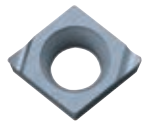
Description	A	T	ϕd	α
*CC_0301_	3.5	1.4	1.9	7°
*CC_0401_	4.3	1.8	2.3	7°

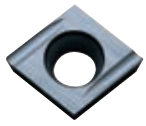
Description	A	T	ϕd	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°

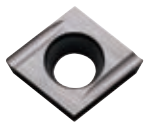


	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide																MEGACOAT NANO						PVD Coated Carbide				Carbide		
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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







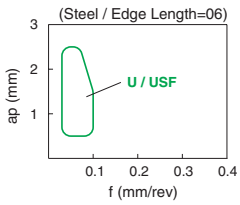
	Insert	Description	Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	Sharp Edge	*CCGT 0301003R/L-F	0.03				L																											●							F18 F37	B50 2
		030101R/L-F	0.1		●		●			L																								●				●				
		030102R/L-F	0.2		●	L	●		L	●		L	L																					●				●				
		030104R/L-F	0.4		●	L	●		L	●		L	L																					●				●				
		*CCGT 0401003R/L-F	0.03																															●								
		040101R/L-F	0.1		●		●			L																								●				●				
		040102R/L-F	0.2		●	L	●		L	●		L	L																					●				●				
		040104R/L-F	0.4		●	L	●		L	●		L	L																					●				●				
		*CCGT 0301005MR/L-F	<0.05																											●						L						
		030101MR/L-F	<0.1																											●						L						
		030102MR/L-F	<0.2																											●					L	●						
		030104MR/L-F	<0.4																											●					L	●						
		*CCGT 0401005MR/L-F	<0.05																											●						L						
		040101MR/L-F	<0.1																											●						L						
		040102MR/L-F	<0.2																											●					●	●						
		040104MR/L-F	<0.4																											●					L	●						
Low Feed	Super Fine / Sharp Edge / Precision	CCET 0602003FR/L-USF	0.03																															●							Ref. to the table below B48	1
		060201FR/L-USF	0.1		●		●																											●								
		060202FR/L-USF	0.2		●		●																											●								
		CCET 09T3003FR/L-USF	0.03				R																											●								
		09T301FR/L-USF	0.1		●		●																											●								
		09T302FR/L-USF	0.2		●		●																											●								
		CCET 0602005MFR/L-USF	<0.05																											●						●						
		060201MFR/L-USF	<0.1																											●						●						
		060202MFR/L-USF	<0.2																											●						●						
		CCET 09T3005MFR/L-USF	<0.05																											●						●						
		09T301MFR/L-USF	<0.1																											●						●						
		09T302MFR/L-USF	<0.2																											●						●						
Low Feed	NEW / Sharp Edge	CCET 0602005MFR/L-U	<0.05																										●												
		060201MFR/L-U	<0.1	●				●																					●												
		060202MFR/L-U	<0.2	●				●																					●												
		CCET 09T3005MFR/L-U	<0.05																										●												
		09T301MFR/L-U	<0.1	R				R																					●												
		09T302MFR/L-U	<0.2	R				R																					●												
		09T304MFR/L-U	<0.4																										●												

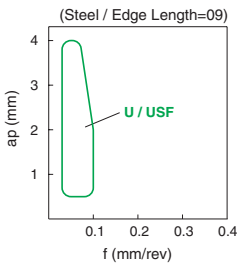
· Insert whose corner-R (rε) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance for corner-R (rε).

Applicable Chipbreaker Range

ap indicates radius

1





● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

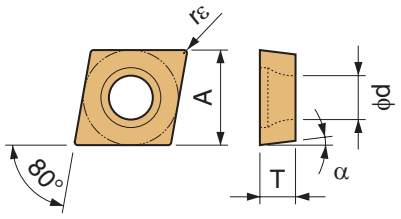
Inserts are sold in 10 piece boxes

Turning Indexable Inserts

How to read pages of "Turning Inserts" ➡ B13 (mm)

Description	A	T	φd	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°

80° Rhombic / Positive with Hole

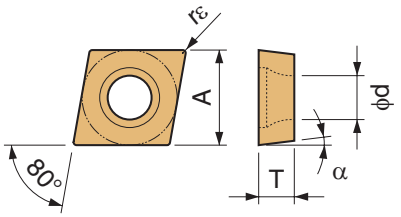


| | Cermet | | | | MEGACOAT Cermet | | | PVD Coated Cermet | | CVD Coated Carbide | | | |

How to read pages of "Turning Inserts" B13 (mm)

Description	A	T	ϕd	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°

80° Rhombic / Positive with Hole



| | | |

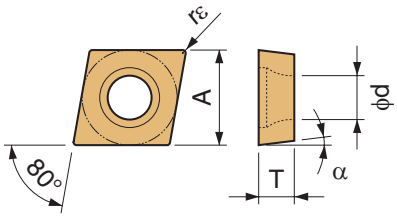
80° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
CPMT0802_	7.94	2.38	3.3	11°
CPMT0903_	9.525	3.18	4.4	11°

(mm)

Description	A	T	ϕd	α
CP_0802_	7.94	2.38	3.5	11°
CP_0903_	9.525	3.18	4.5	11°



| | | |

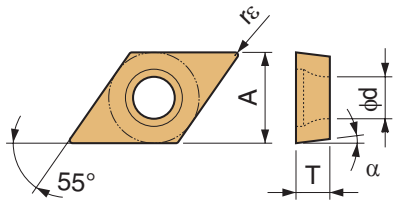
How to read pages of "Turning Inserts" B13

55° Rhombic / Positive with Hole

Insert Description	Ref. to Page for Applicable Toolholders
DC..07 type	E24~E27,E35,F41~F43
DC..11 type	E20,E24~E27,E35,F41~F43,F63

(mm)

Description	A	T	ϕd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



| | | |

B

Positive

C

D

R

S

T

V

W

Ceramic

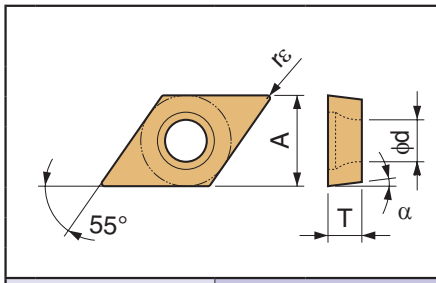
Insert (Turning)

55° Rhombic / Positive with Hole

Insert Description	Ref. to Page for Applicable Toolholders
DC..07 type	E24~E27,E35,F41~F43
DC..11 type	E20,E24~E27,E35,F41~F43,F63

(mm)

Description	A	T	φd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



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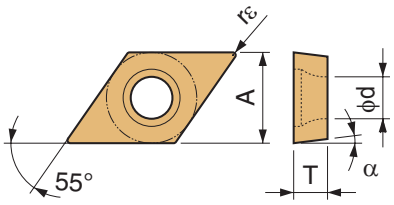
How to read pages of "Turning Inserts" B13

55° Rhombic / Positive with Hole

Insert Description	Ref. to Page for Applicable Toolholders
DC..07 type	E24~E27,E35,F41~F43
DC..11 type	E20,E24~E27,E35,F41~F43,F63

(mm)

Description	A	T	ϕd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



| | | |

B

Positive

C D R S T V W

Ceramic

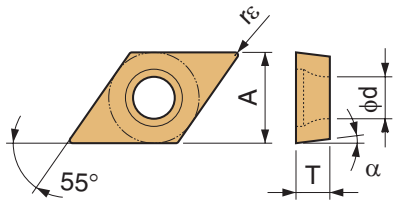
Insert (Turning)

55° Rhombic / Positive with Hole

Insert Description	Ref. to Page for Applicable Toolholders
DC..07 type	E24~E27,E35,F41~F43
DC..11 type	E20,E24~E27,E35,F41~F43,F63

(mm)

Description	A	T	ϕd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



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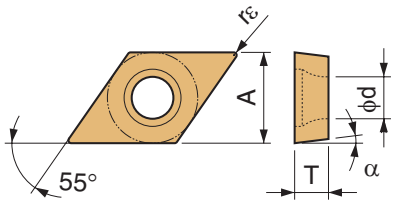
How to read pages of "Turning Inserts" B13

55° Rhombic / Positive with Hole

Insert Description	Ref. to Page for Applicable Toolholders
DC..07 type	E24~E27,E35,F41~F43
DC..11 type	E20,E24~E27,E35,F41~F43,F63

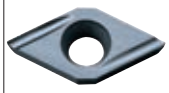
(mm)

Description	A	T	ϕd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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

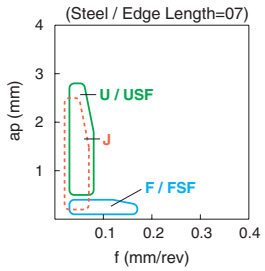
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed, Super Fine	DCET 0702003F R/L-USF	0.03																																●							
	070201F R/L-USF	0.1				R																												●							
	070202F R/L-USF	0.2				●																												●							
	DCET 11T3003F R/L-USF	0.03																																●							
	11T301F R/L-USF	0.1				●																												●							
	11T302F R/L-USF	0.2				●																												●							
	DCET 0702005MF R/L-USF	<0.05																											●							R					
	070201MF R/L-USF	<0.1																											●							●					
	070202MF R/L-USF	<0.2																											●							●					
	DCET 11T3005MF R/L-USF	<0.05																											●							R					
	11T301MF R/L-USF	<0.1																											●							●					
	11T302MF R/L-USF	<0.2																											●							●					
Sharp Edge / Precision																																									
Low Feed, NEW	DCET 0702005MF R/L-U	<0.05																									R														
	070201MF R/L-U	<0.1																									●														
	070202MF R/L-U	<0.2	●				●																				●														
	DCET 11T3005MF R/L-U	<0.05																									R														1
	11T301MF R/L-U	<0.1																									●														
	11T302MF R/L-U	<0.2	●				●																				●														
	11T304MF R/L-U	<0.4																									R														
Low Feed 	DCGT 0702003F R/L-U	0.03																																●				●			
	070201F R/L-U	0.1		●	●	●						R																						●				●			
	070202F R/L-U	0.2		●	●	●			●		●	●																						●							
	DCGT 11T3003F R/L-U	0.03				●																												●				R			
	11T301F R/L-U	0.1		●		●																												●				●			
	11T302F R/L-U	0.2		●	●	●			●		R	●																						●				●			
	DCGT 0702003MF R/L-U	<0.03																																	R	●					
	0702005MF R/L-U	<0.05																											●						R	●					
	070201MF R/L-U	<0.1																											●						R	●					
	070202MF R/L-U	<0.2																											●						R	●					
	070204MF R/L-U	<0.4																											●						R	●					
	DCGT 11T3005MF R/L-U	<0.05																											●						R	R					
	11T301MF R/L-U	<0.1																											●						R	●					
	11T302MF R/L-U	<0.2																											●						●	●					
Sharp Edge	11T304MF R/L-U	<0.4																											●						R	●					

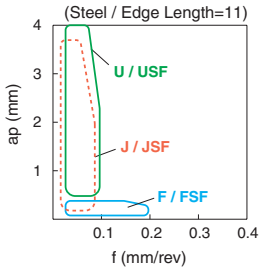
· Insert whose corner-R (rε) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance for corner-R (rε).

Applicable Chipbreaker Range

ap indicates radius

1





● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

B

Positive

C D R S T V W

Ceramic

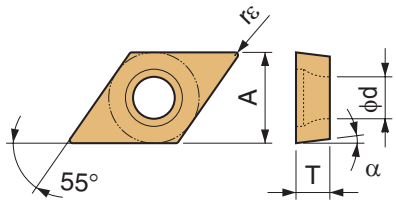
Insert (Turning)

55° Rhombic / Positive with Hole

Insert Description	Ref. to Page for Applicable Toolholders
DC..07 type	E24~E27,E35,F41~F43
DC..11 type	E20,E24~E27,E35,F41~F43,F63

(mm)

Description	A	T	ϕd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



| | | |

How to read pages of "Turning Inserts" B13

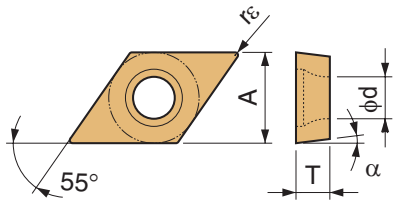
55° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°

(mm)

Description	A	T	ϕd	α
DP_0702_	6.35	2.38	2.8	11°
DP_11T3_	9.525	3.97	4.4	11°



| | | |

B

Positive

C D R S T V W

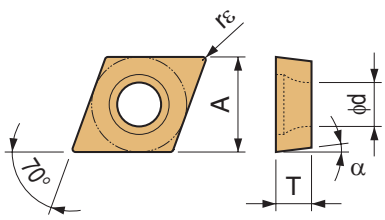
Ceramic

Insert (Turning)

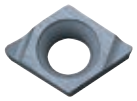
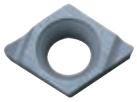
70° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
JC_0301_	3.5	1.4	1.9	7°



	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									

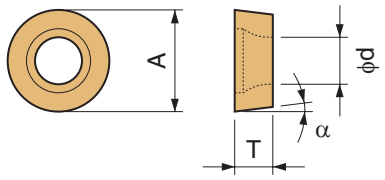
	Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	Super Fine  Sharp Edge / Precision	JCET 030101R/L-FSF	0.1				L																													●						F44	1
		JCET 030102R/L-FSF	0.2				●																													●							
		JCET 030104R/L-FSF	0.4																																	L							
		JCET 030101MR/L-FSF	<0.1																																			●					
		JCET 030102MR/L-FSF	<0.2																																			●					
Finishing	NEW Sharp Edge	JCET 030102MR/L-F	<0.2																											●													
		JCET 030104MR/L-F	<0.4																											●													
Finishing	 Sharp Edge	JCGT 030101R/L-F	0.1				L																													●				L			
		JCGT 030102R/L-F	0.2				●																													●				●			
		JCGT 030104R/L-F	0.4				●																													●				L			
		JCGT 030101MR/L-F	<0.1																																			L					
		JCGT 030102MR/L-F	<0.2																																			●					
		JCGT 030104MR/L-F	<0.4																																			L					

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

Round / Positive with Hole

(mm)

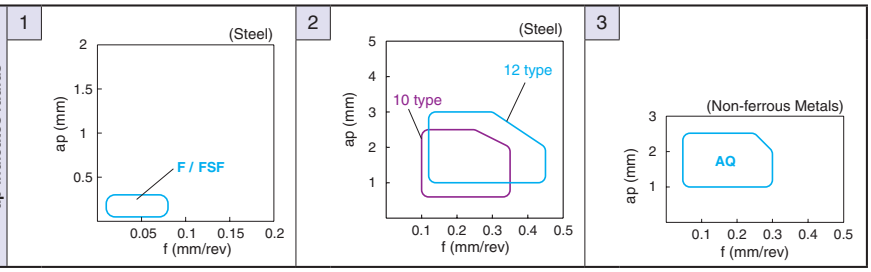
Description	A	T	ϕd	α
RC_1003_	10.0	3.18	3.6	7°
RC_1204_	12.0	4.76	4.2	7°



	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) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Medium	*	RCMX 1003M0	-	●		●	●	●					●	●	●	●	●	●	●	●			●																			D19	2
		RCMX 1204M0	-	●		●	●	●					●	●	●	●	●	●	●	●			●	●	●		□	□															
Non-ferrous Metals	Finishing-Medium	RCGX 1003M0-AQ	-																																					●			3

Applicable Chipbreaker Range
ap indicates radius



*Chipbreaker shape of RCMX... varies by grade (cermet / PVD coated cermet / CVD coated carbide)

Inserts are sold in 10 piece boxes

 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

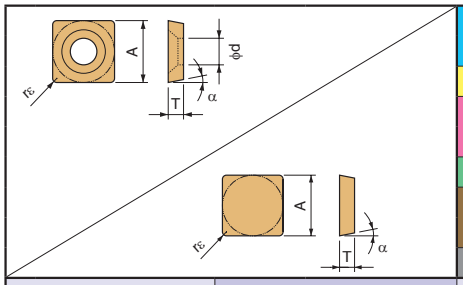
90° Square / Positive with Hole
90° Square / Positive without Hole

(mm)

Description	A	T	φd	α
SC_09T3_	9.525	3.97	4.4	7°
SP_0903_	9.525	3.18	4.5	11°
SP_1203_	12.7	3.18	5.5	11°

(mm)

Description	A	T	φd	α
SP_0903_	9.525	3.18	-	11°
SP_1203_	12.7	3.18	-	11°
SP_1204_	12.7	4.76	-	11°



| | | |

B

Positive

C D R S T V W

Ceramic

Insert (Turning)

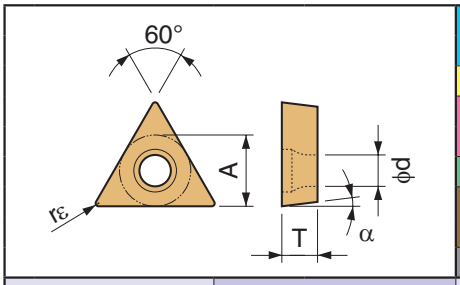
60° Triangle / Positive with Hole

(mm)

Description	A	T	ϕd	α
TB_0601_	3.97	1.59	2.3	5°
TC_0902_	5.56	2.38	2.5	7°

(mm)

Description	A	T	ϕd	α
TC_1102_	6.35	2.38	2.8	7°
TC_16T3_	9.525	3.97	4.4	7°



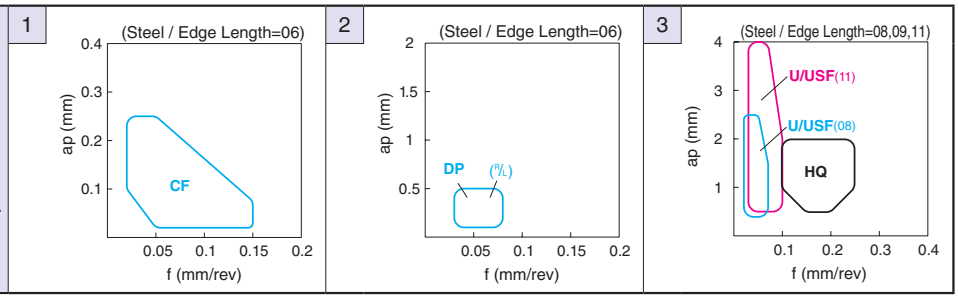
	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05
P	◓	●	◔		◓	●	◔				○	●	◓	✖			◔	✥								◓	◔						◓		◔		◔	
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) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Minute ap Sharp Edge	TBGT 060102CF	0.2																																●							
	TBGT 060101M-CF	<0.1																																		●					
	060102M-CF	<0.2																																	●	●					1
Minute ap Sharp Edge / Polished	TBGT 060101MP-CF	<0.1																									●	●							●					
	060102MP-CF	<0.2																									●	●							●					
Finishing	TBMT 060102DP	0.2	●	●	●	●	●	●	●			●	●	●	●	●		●	●																						
	060104DP	0.4	●	●	●	●	●	●	●			●	●	●	●	●		●	●																						
Finishing	TBET 0601005M R/L	<0.05																									●													F47	
	060101M R/L	<0.1																									●													F49	
	060102M R/L	<0.2																									●														
	060104M R/L	<0.4																									●														2
	TBGT 0601003 R/L	0.03																															L								
	060101 R/L	0.1				●																											●				●				
	060102 R/L	0.2	L	●	L	●	L	L	L		L	L																					●				●				
	060104 R/L	0.4	L	●	L	●	L	L	L		L	L																					●				●				
	TBGT 0601005M R/L	<0.05																																L	●						
	060101M R/L	<0.1																																L	●						
	060102M R/L	<0.2																																L	●						
	060104M R/L	<0.4																																●	●						
Cast Iron Without Chipbreaker	TBGW 060102	0.2				●																															●				
	060104	0.4				●																															●				-
Finishing-Medium	TCMT 090202HQ	0.2	●	●		●	●	●	●																																
	090204HQ	0.4	●	●		●	●	●	●																																
	TCMT 110202HQ	0.2	●	●		●	●	●	●																															F45	
	110204HQ	0.4	●	●		●	●	●	●				●	●	●	●		●	●	●				●																	3
	110208HQ	0.8	●	●		●	●	●	●				●	●	●	●		●	●	●				●																	
	TCMT 16T304HQ	0.4	●				●		●																																
	16T308HQ	0.8	●				●		●															●																-	
	16T312HQ	1.2																						●																	

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

Applicable Chipbreaker Range
ap indicates radius



 ●: Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

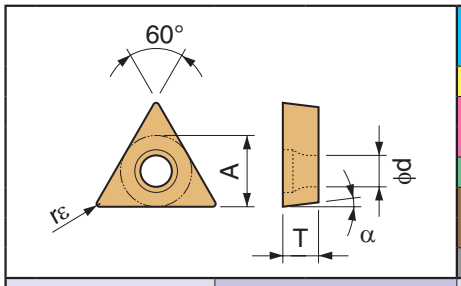
Inserts are sold in 10 piece boxes

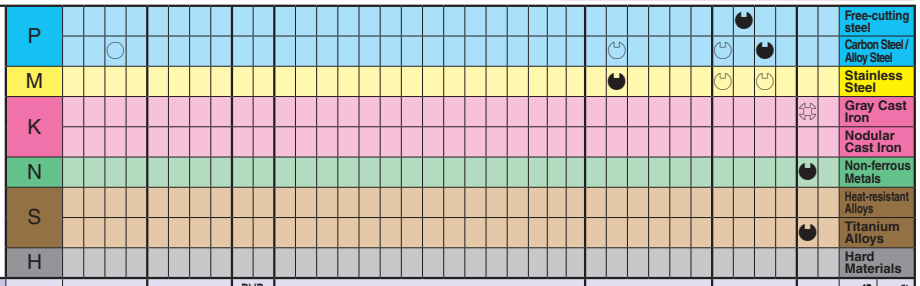
How to read pages of "Turning Inserts" B13

60° Triangle / Positive with Hole

(mm)

Description	A	T	ϕd	α
TC_0802_	4.76	2.38	2.3	7°
TC_1103_	6.35	3.18	2.8	7°



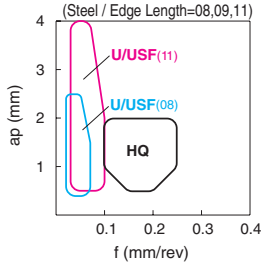


Insert (Handed Insert shows Left-hand)		Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Feed	Super Fine Sharp Edge / Precision	TCET 0802003F R/L-USF	0.03																																●						E29	1
		TCET 080201F R/L-USF	0.1																																R							
		TCET 080202F R/L-USF	0.2																																R							
		TCET 1103003F R/L-USF	0.03																																●							
		TCET 110301F R/L-USF	0.1				R																												●							
		TCET 110302F R/L-USF	0.2				R																												●							
		TCET 1103005MF R/L-USF	<0.05																																		R					
		TCET 110301MF R/L-USF	<0.1																																		R					
		TCET 110302MF R/L-USF	<0.2																																		R					
Low Feed	Sharp Edge	TCGT 0802003F R/L-U	0.03																																R							
		TCGT 080201F R/L-U	0.1				●																												R				R			
		TCGT 080202F R/L-U	0.2			R	●																												●				●			
		TCGT 1103003F R/L-U	0.03																																R				R			
		TCGT 110301F R/L-U	0.1				●																												R				●			
		TCGT 110302F R/L-U	0.2			R	●																												●				●			
		TCGT 0802005MF R/L-U	<0.05																											●												1
		TCGT 080201MF R/L-U	<0.1																											●												
		TCGT 080202MF R/L-U	<0.2																											●							R					
		TCGT 1103005MF R/L-U	<0.05																											●							R					
		TCGT 110301MF R/L-U	<0.1																											●							R					
		TCGT 110302MF R/L-U	<0.2																											●						R	●					
		TCGT 110304MF R/L-U	<0.4																											●						R	●					
Low Feed	With Honing	TCGT 080202E R/L-U	0.2				●																												●							
		TCGT 110301E R/L-U	0.1			●	●																												R							
		TCGT 110302E R/L-U	0.2			●	●																												●							
		TCGT 110304E R/L-U	0.4			●	●																												●							
		TCGT 080202ME R/L-U	<0.2																																		R					
		TCGT 110301ME R/L-U	<0.1																																		●					
		TCGT 110302ME R/L-U	<0.2																																		●					
		TCGT 110304ME R/L-U	<0.4																																		●					
Non-ferrous Metals	Finishing-Medium / Sharp Edge	TCGT 110302 R/L-A3	0.2																																				●			2
		TCGT 110304 R/L-A3	0.4																																				●			

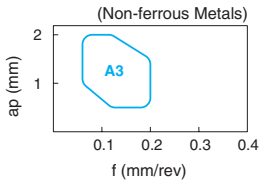
· Insert whose corner-R (rε) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance for corner-R (rε).

Applicable Chipbreaker Range
ap indicates radius

1



2



● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

B

Positive

C D R S T V W

Ceramic

Insert (Turning)

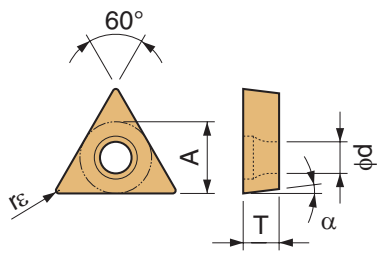
60° Triangle / Positive with Hole
60° Triangle / Positive without Hole

(mm)

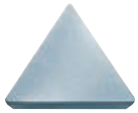
Description	A	T	ϕd	α
TCG_0601_	3.97	1.59	-	7°
TC_0802_	4.76	2.38	2.3	7°

(mm)

Description	A	T	ϕd	α
TC_1103_	6.35	3.18	2.8	7°

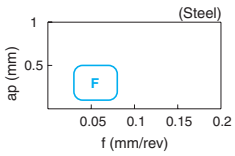


P	Free-cutting steel / Carbon Steel / Alloy Steel
M	Stainless Steel
K	Gray Cast Iron / Nodular Cast Iron
N	Non-ferrous Metals
S	Heat-resistant Alloys / Titanium Alloys
H	Hard Materials

Insert		Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Cast Iron	Without Chipbreaker	TCGW 080201	0.1																																					●		E29	-
		TCGW 080202	0.2																																					●			
		TCGW 110301	0.1																																					●			
		TCGW 110302	0.2																																					●			
		TCGW 110304	0.4																																					●			
Finishing	Sharp Edge	TCGR 060102R/L-F	0.2				L																																			-	1
		TCGR 060104R/L-F	0.4				L																																				
Cast Iron	 Without Chipbreaker	TCGN 060102	0.2				●																																			-	-
		TCGN 060104	0.4				●																																				

Applicable Chipbreaker Range
ap indicates radius

1



 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

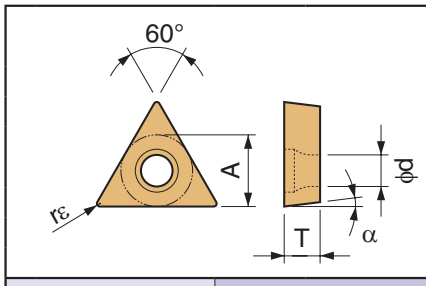
How to read pages of "Turning Inserts" ➡ B13

60° Triangle / Positive with Hole

(mm)

Description	A	T	φd	α
TP_0802_	4.76	2.38	2.3	11°
TPMT0902_	5.56	2.38	2.8	11°

Description	A	T	φd	α
TP_0902_	5.56	2.38	3.0	11°
TP_1103_	6.35	3.18	3.3	11°
TPMT1603_	9.525	3.18	4.4	11°



| | | |

Turning Indexable Inserts

How to read pages of "Turning Inserts" B13

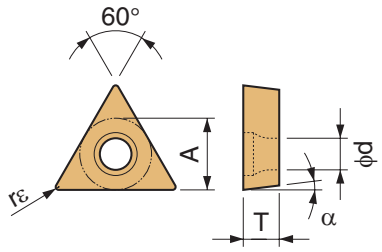
60° Triangle / Positive with Hole

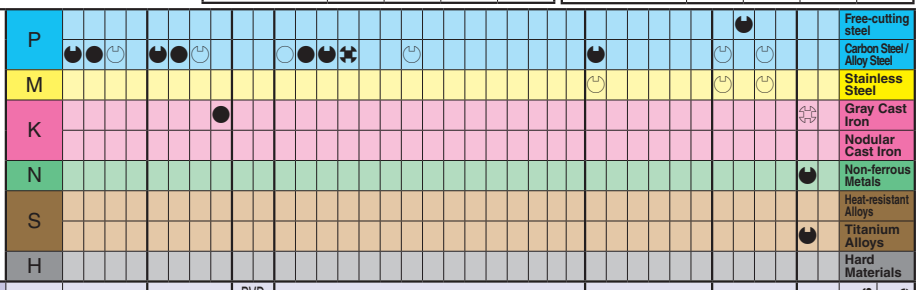
(mm)

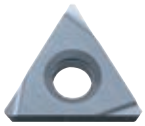
Description	A	T	φd	α
TP_0802_	4.76	2.38	2.3	11°
TP_0902_	5.56	2.38	3.0	11°
TP_1102_	6.35	2.38	3.5	11°

(mm)

Description	A	T	φd	α
TP_1103_	6.35	3.18	3.3	11°
TP_1603_	9.525	3.18	4.5	11°
TP_1604_	9.525	4.76	4.4	11°





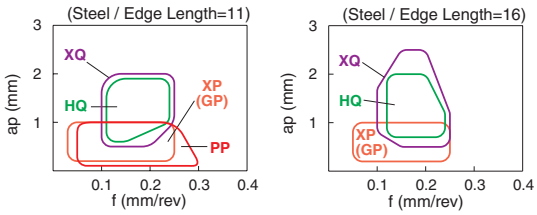
Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CVD Coated Carbide CA515	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 CA4505	CVD Coated Carbide CA4515	CVD Coated Carbide CA4010	CVD Coated Carbide CA4115	CVD Coated Carbide CA4120	MEGACOAT NANO PR1425	MEGACOAT NANO PR1225	MEGACOAT NANO PR1305	MEGACOAT NANO PR1310	MEGACOAT NANO PR1325	MEGACOAT NANO PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	Carbide KW10	Carbide SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Low Carbon Steel Finishing-Medium	TPMT 110304XQ	0.4	●	●	●		●	●	●		●	●	●	●	●	●		●	●																						Ref. to the table below B67	1
	TPMT 110308XQ	0.8	●	●	●		●	●	●		●	●	●	●	●	●		●	●																							
	TPMT 160304XQ	0.4	●	●	●		●	●	●		●	●	●	●	●	●		●	●																							
	TPMT 160308XQ	0.8	●	●	●		●	●	●		●	●	●	●	●	●		●	●																							
Finishing 	TPGH 080201 R/L	0.1				●																						●						●				●				2
	TPGH 080202 R/L	0.2	●	L	●	●	●	L	●	●	L	●																●						●				●				
	TPGH 080204 R/L	0.4	●	L	●	●	●	L	●	●	L	●																●						●				●				
	TPGH 090201 R/L	0.1				L																						●						●				●				
	TPGH 090202 R/L	0.2	●	L	●	●	●	L	●	●	L	●																●						●				●				
	TPGH 090204 R/L	0.4	●	L	●	●	●	L	●	●	L	●																●						●				●				
	TPGH 110202 R/L	0.2		L		L																						●						●				●		F48		
	TPGH 110204 R/L	0.4		L		●				●	L																	●						●				●				
	TPGH 110302 R/L	0.2	●	L	●	●	●	L	●	●	L	●																●						●				●		Ref. to the table below B67		
	TPGH 110304 R/L	0.4	●	L	●	●	●	L	●	●	L	●																●						●				●				
	TPGH 110308 R/L	0.8	L	●		●	L		L		L																	●						●				●				
	TPGH 160302 R/L	0.2		●		●																						●						●				●				
	TPGH 160304 R/L	0.4	●	●	●	●	●	L	L	●	L	L																●						●				●				
	TPGH 160308 R/L	0.8		L		●			L	●																		●						L				L				
	TPGH 080201M R/L	<0.1																																		L						
	TPGH 080202M R/L	<0.2																																	●	●						
	TPGH 080204M R/L	<0.4																																	●	●						
	TPGH 090201M R/L	<0.1																																		L						
	TPGH 090202M R/L	<0.2																																	●	●						
	TPGH 090204M R/L	<0.4																																	●	●						
	TPGH 110202M R/L	<0.2																																	L	L				F48		
	TPGH 110204M R/L	<0.4																																	L	●						
	TPGH 110302M R/L	<0.2																																	●	●				Ref. to the table below B67		
	TPGH 110304M R/L	<0.4																																	●	●						
	TPGH 110308M R/L	<0.8																																	L	L						
	TPGH 160302M R/L	<0.2																																		L						
	TPGH 160304M R/L	<0.4																																	L	●						
	TPGH 160308M R/L	<0.8																																		L						

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

Applicable Chipbreaker Range

ap indicates radius

1



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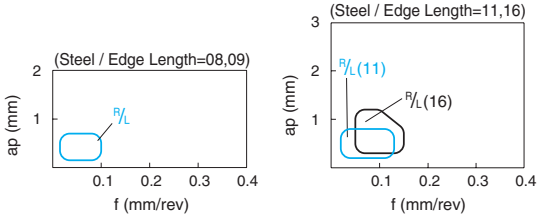


 ●: Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

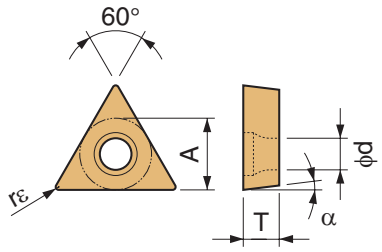
60° Triangle / Positive with Hole

(mm)

Description	A	T	ϕd	α
TP_0802_	4.76	2.38	2.3	11°
TP_0902_	5.56	2.38	3.0	11°
TP_1102_	6.35	2.38	3.5	11°

(mm)

Description	A	T	ϕd	α
TP_1103_	6.35	3.18	3.3	11°
TP_1603_	9.525	3.18	4.5	11°
TP_1604_	9.525	4.76	4.4	11°



| | | |

Turning Indexable Inserts

How to read pages of "Turning Inserts" B13

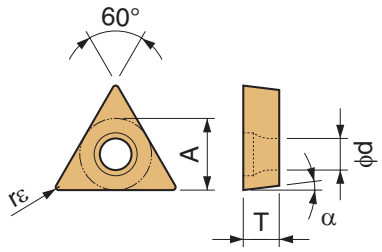
60° Triangle / Positive with Hole

(mm)

Description	A	T	ϕd	α
TP_0802_	4.76	2.38	2.3	11°
TP_0902_	5.56	2.38	3.0	11°

(mm)

Description	A	T	ϕd	α
TP_1102_	6.35	2.38	3.5	11°
TP_1103_	6.35	3.18	3.3	11°
TP_1603_	9.525	3.18	4.5	11°



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		Description		Dimension (mm) rε	Cermet TN620	Cermet TN6010	Cermet TN6020	Cermet TN60	MEGACOAT Cermet PV720	MEGACOAT Cermet PV7010	MEGACOAT Cermet PV7025	MEGACOAT Cermet PV7005	PVD Coated Cermet PV90	PVD Coated Cermet PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Cast Iron	Without Chipbreaker	TPGB	080202	0.2			●	●				●																														Ref. to the table below B67	-
			080204	0.4	●		●	●	●		●	●		●																										●			
			080208	0.8				●																																			
		TPGB	090202	0.2				●																																●			
			090204	0.4	●		●	●	●		●	●		●																										●			
		TPGB	1102005	0.05				●																																●		F48	-
			110201	0.1				●																																●			
			110202	0.2				●																																●			
			110204	0.4		●		●																																●			
		TPGB	1103005	0.05				●																																●		Ref. to the table below B67	
			110301	0.1				●																																●			
			110302	0.2	●	●	●	●	●		●			●																										●			
			110304	0.4	●	●	●	●	●		●	●		●																										●			
			110308	0.8	●	●	●	●	●		●	●		●																										●			
		TPGB	160304	0.4		●		●				●																												●			
			160308	0.8		●		●																																●			

 ● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

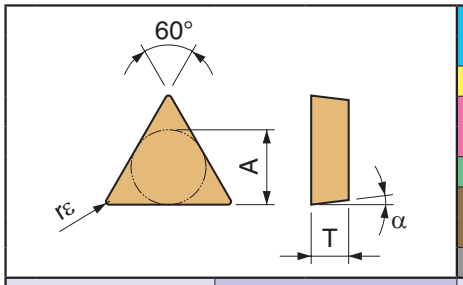
Inserts are sold in 10 piece boxes

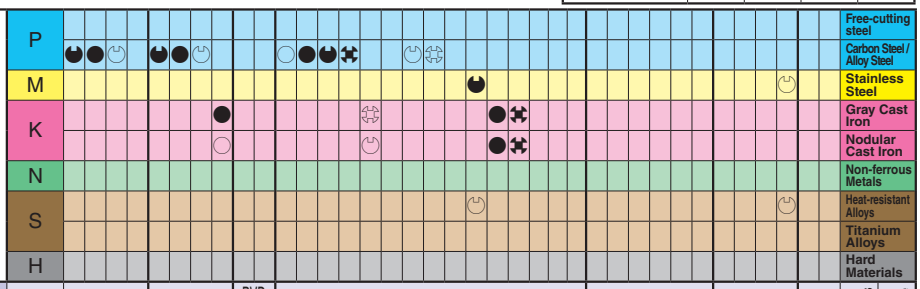
How to read pages of "Turning Inserts" B13

60° Triangle / Positive without Hole

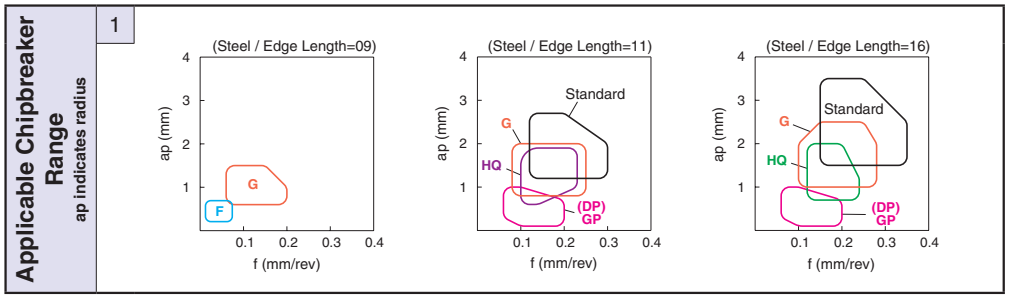
(mm)

Description	A	T	ϕd	α
TP_0902_	5.56	2.38	-	11°
TP_1103_	6.35	3.18	-	11°
TP_1603_	9.525	3.18	-	11°





Insert (Handed Insert shows Left-hand)	Description	Dimension (mm) rε	Cermet TN620	TN6010	TN6020	TN60	MEGACOAT Cermet PV720	PV7010	PV7025	PV7005	PVD Coated Cermet PV90	PV7020	CVD Coated Carbide CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	MEGACOAT NANO PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	SW05	Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Finishing	TPMR 110304DP	0.4				●																																				
	TPMR 110308DP	0.8				●																																				
	TPMR 160304DP	0.4				●																																				
	TPMR 160308DP	0.8				●																																				
Finishing	TPMR 110304GP	0.4	●		●	●	●				●	●																												E43	
	TPMR 160304GP	0.4	●		●	●	●				●	●	●	●	●	●		●	●																					F59	
Finishing-Medium	TPMR 110304HQ	0.4	●			●	●		●		●		●	●	●	●		●	●	●		●															●				
	TPMR 110308HQ	0.8	●			●	●		●		●		●	●	●	●		●	●	●		●															●				
	TPMR 160304HQ	0.4	●	●		●	●	●	●		●		●	●	●	●		●	●	●		●															●				
	TPMR 160308HQ	0.8	●	●		●	●	●	●		●		●	●	●	●		●	●	●		●															●				1
Medium	TPMR 090202G	0.2				●																																		F59	
	TPMR 090204G	0.4				●												●	●																						
	TPMR 110304G	0.4				●					●																														
	TPMR 110308G	0.8				●					●																														
	TPMR 160304G	0.4				●					●																														
	TPMR 160308G	0.8				●					●																														
Medium	TPMR 110304	0.4		●		●				●			●	●	●	●		●	●			●		●	□	□											●			E43	
	TPMR 110308	0.8		●		●				●			●	●	●	●		●	●			●	●	●	□	□											●			F59	
	TPMR 160304	0.4		●		●				●			●	●	●	●	●	●	●			●	●	●	□	□	□										●				
	TPMR 160308	0.8		●		●		●		●			●	●	●	●	●	●	●			●	●	●	□	□	□										●				
Finishing Sharp Edge	TPGR 090202R/L-F	0.2				●																																		F59	
	TPGR 090204R/L-F	0.4				●																																				



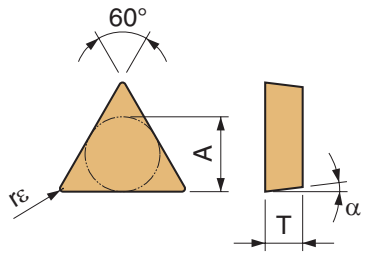
● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

60° Triangle / Positive without Hole

(mm)

Description	A	T	φd	α
TP_0902_	5.56	2.38	-	11°
TP_1103_	6.35	3.18	-	11°
TP_1603_	9.525	3.18	-	11°



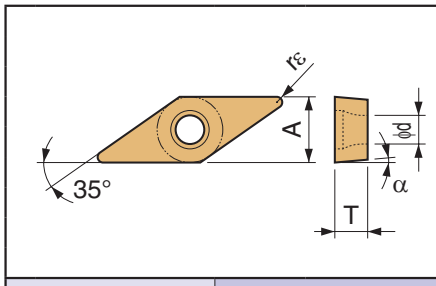
| | | |

How to read pages of "Turning Inserts" B13

35° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
VB_1103_	6.35	3.18	2.8	5°
VB_1604_	9.525	4.76	4.4	5°

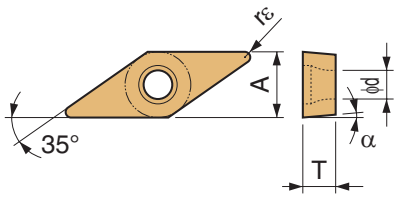


| | | |

35° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
VB_1103_	6.35	3.18	2.8	5°
VB_1604_	9.525	4.76	4.4	5°



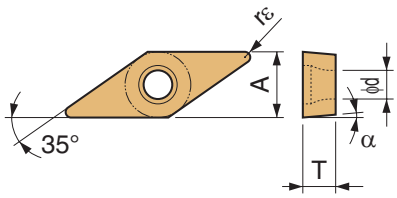
| | | |

How to read pages of "Turning Inserts" B13

35° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
VC_0802_	4.76	2.38	2.3	7°
VC_1604_	9.525	4.76	4.4	7°

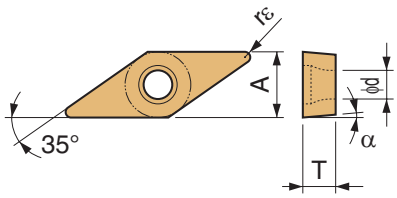


| | | |

35° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
VP_0802_	4.76	2.38	2.3	11°
VP_1103_	6.35	3.18	2.8	11°



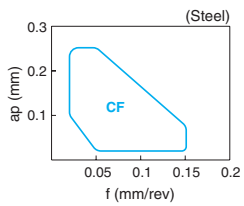
	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide														MEGACOAT MEGACOAT NANO						PVD Coated Carbide			Carbide		Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Insert / Handed Insert shows Left-hand / Description / Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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																																							
Minute ap — Sharp Edge — VPGT 110302CF																																●						Ref. to the table below	1
Minute ap — Sharp Edge — VPGT 110301M-CF																																	●	●					
Minute ap — Sharp Edge — VPGT 110302M-CF																																	●	●					
Minute ap — Sharp Edge / Polished — VPGT 110301MP-CF																										●	●							●					
Minute ap — Sharp Edge / Polished — VPGT 110302MP-CF																										●	●							●					
Finishing — Sharp Edge — VPGT 110301MF-GF																																		●					2
Finishing — Sharp Edge — VPGT 110302MF-GF																																		●					
Finishing — Sharp Edge / Polished — VPGT 110301MFP-GF																										●	●							●					
Finishing — Sharp Edge / Polished — VPGT 110302MFP-GF																										●	●							●					
Finishing — VPGT 080201CK																																●							
Finishing — VPGT 080202CK																																●							
Finishing — VPGT 110301CK																																●							
Finishing — VPGT 110302CK																																●							
Finishing — VPGT 080201M-CK																																	●	●					
Finishing — VPGT 080202M-CK																																	●	●					
Finishing — VPGT 110301M-CK																																	●	●					3
Finishing — VPGT 110302M-CK																																	●	●					
Finishing — Sharp Edge / Polished — VPGT 080201MP-CK																										●	●							●					
Finishing — Sharp Edge / Polished — VPGT 080202MP-CK																										●	●							●					
Finishing — Sharp Edge / Polished — VPGT 110301MP-CK																										●	●							●					
Finishing — Sharp Edge / Polished — VPGT 110302MP-CK																										●	●							●					

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

Insert Description	Ref. to Page for Applicable Toolholders
VP..0802 type	**E32,E33,F50**
VP..1103 type	**E21,E32,E33**

Applicable Chipbreaker Range
ap indicates radius

1



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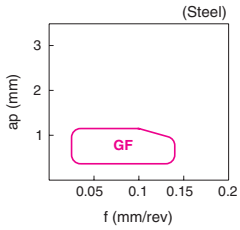
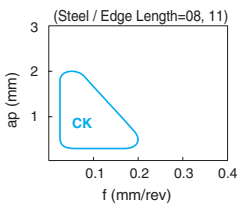


3



 ●: Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

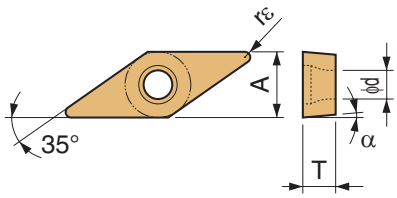
Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

35° Rhombic / Positive with Hole

(mm)

Description	A	T	ϕd	α
VP_0802_	4.76	2.38	2.3	11°
VP_1103_	6.35	3.18	2.8	11°

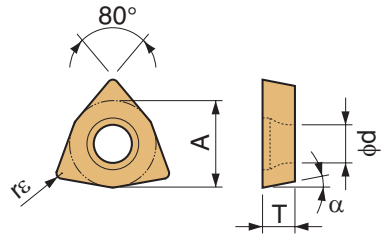


| | | |

80° Trigon / Positive with Hole

(mm)

Description	A	T	ϕd	α
WB_0601_	3.97	1.59	2.3	5°
WB_0802_	4.76	2.38	2.3	5°

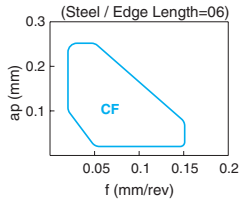


	Cermet				MEGACOAT Cermet				PVD Coated Cermet		CVD Coated Carbide														MEGACOAT NANO						PVD Coated Carbide			Carbide		Ref. to Page for Applicable Toolholders	Applicable Chipbreaker Range
Insert / Description / Dimension (mm) rε	TN620	TN6010	TN6020	TN60	PV720	PV7010	PV7025	PV7005	PV90	PV7020	CA510	CA515	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4505	CA4515	CA4010	CA4115	CA4120	PR1425	PR1225	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	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																																								
Minute ap — Sharp Edge — WBGT 060101M R/L-CF	<0.1																																	●						1
Minute ap — Sharp Edge — WBGT 060102M R/L-CF	<0.2																																L	●						
Minute ap — Sharp Edge / Polished — WBGT 060101MP R/L-CF	<0.1																									●	●							●						
Minute ap — Sharp Edge / Polished — WBGT 060102MP R/L-CF	<0.2																									●	●							●						
Finishing — WBMT 060102 R/L-DP	0.2	L	L	L	●	L	L	L		L	L	L	L	L		L	L									●						●		●						
Finishing — WBMT 060104 R/L-DP	0.4	L	L	L	●	L	L	L		L	L	L	L	L		L	L									●						●		●						
Finishing — WBMT 080202 R/L-DP	0.2	L	L	L	●	L	L	L		L	L	L	L	L		●	●									●						●		●						
Finishing — WBMT 080204 R/L-DP	0.4	L	L	L	●	L	L	L		L	L	L	L	L		●	●									●						●		●						
Finishing — NEW — Sharp Edge — WBET 0601005M R/L-F	<0.05																									L														
Finishing — Sharp Edge — WBET 060101M R/L-F	<0.1																									●														
Finishing — Sharp Edge — WBET 060102M R/L-F	<0.2	L				L																				●														
Finishing — Sharp Edge — WBET 060104M R/L-F	<0.4	L				L																				●														
Finishing — Sharp Edge — WBET 080201M R/L-F	<0.1																									L														
Finishing — Sharp Edge — WBET 080202M R/L-F	<0.2	L				L																				L														
Finishing — Sharp Edge — WBET 080204M R/L-F	<0.4	L				L																				●														
Finishing — Sharp Edge — WBGT 0601003 R/L-F	0.03				L																											L				L				2
Finishing — Sharp Edge — WBGT 060101 R/L-F	0.1				L																											●				L				
Finishing — Sharp Edge — WBGT 060102 R/L-F	0.2		●	L	●		●	L	L	L																						●				●				
Finishing — Sharp Edge — WBGT 060104 R/L-F	0.4		●	●	●		●	L	L	●																						●				●				
Finishing — Sharp Edge — WBGT 0802003 R/L-F	0.03																															L								
Finishing — Sharp Edge — WBGT 080201 R/L-F	0.1		●		L																											●				L				
Finishing — Sharp Edge — WBGT 080202 R/L-F	0.2		●	L	●		●	L	L	L																						●				●				
Finishing — Sharp Edge — WBGT 080204 R/L-F	0.4		●	●	●		●	L	L	●																						●				●				
Finishing — Sharp Edge — WBGT 060101M R/L-F	<0.1																																L	L						
Finishing — Sharp Edge — WBGT 060102M R/L-F	<0.2																																L	●						
Finishing — Sharp Edge — WBGT 060104M R/L-F	<0.4																																L	●						
Finishing — Sharp Edge — WBGT 080201M R/L-F	<0.1																																	L						
Finishing — Sharp Edge — WBGT 080202M R/L-F	<0.2																																	L						
Finishing — Sharp Edge — WBGT 080204M R/L-F	<0.4																																	●						
Cast Iron — Without Chipbreaker — WBGW 060102 R/L	0.2				L																															L				-
Cast Iron — Without Chipbreaker — WBGW 060104 R/L	0.4				L																																			
Cast Iron — Without Chipbreaker — WBGW 080202 R/L	0.2				L																															L				
Cast Iron — Without Chipbreaker — WBGW 080204 R/L	0.4				L																																			

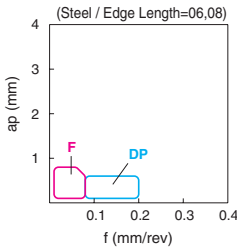
· Insert whose corner-R (rε) dimension expressed with less than sign (e.g. **< 0.05, < 0.1, < 0.2** etc.) indicate models with minus tolerance for corner-R (rε).

Applicable Chipbreaker Range
ap indicates radius

1



2



Inserts are sold in 10 piece boxes

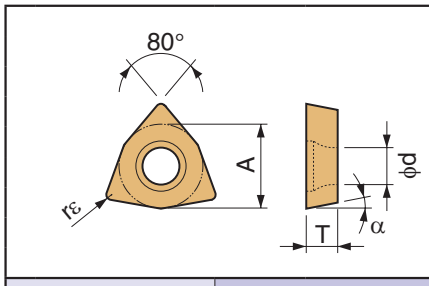
● : Std. Item R : Std. Item (Right-hand Only) L : Std. Item (Left-hand Only) □ : Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

80° Trigon / Positive with Hole

(mm)

Description	A	T	ϕd	α
WP_1102_	6.35	2.38	2.8	11°
WP_1603_	9.525	3.18	4.4	11°



| | | |

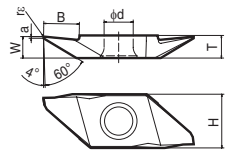
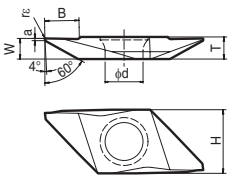
B

Insert (Turning)

Insert for Back Turning (Small Tools)

		NEW				
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		Dimension (mm) W	a	B	rε	T	H	ϕd	MEGACOAT / MEGACOAT NANO PR1425	PR1535	PR1225	PVD Coated Carbide PR1025	Carbide KW10	Ref. to Page for Applicable Toolholders
 ● Right-hand shown	TKFB	12R15005M	1.5	0.25	2.6	<0.05	3.0	8.7	5.2	●	●	●	●	●	E12
		12R28005M	2.8	0.3	4.6	<0.05				●	●	●	●	●	
		12R28010M				<0.1				●	●	●	●	●	
	TKFB	16R38005M	3.8	0.3	6.3	<0.05	4.0	9.5	5.2	●	●	●	●	●	
		16R38010M				<0.1				●	●	●	●	●	
 ● Left-hand shown	TKFB	12L28005MR	2.8	0.3	4.6	<0.05	3.0	8.7	5.2		●	●			
		12L28010MR				<0.1					●	●			
	TKFB	16L38005MR	3.8	0.3	6.3	<0.05	4.0	9.5	5.2		●	●			
		16L38010MR				<0.1					●	●			

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

●Insert 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 (rε)
- M: Indicates the corner-R (rε) has a minus tolerance
- R: Hand of Cutting Edge Angle (R: Right-hand)

Table1

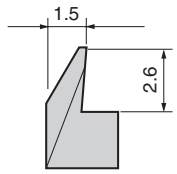
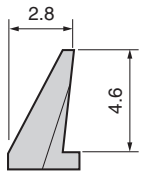
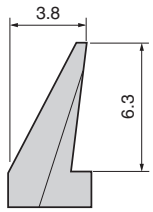
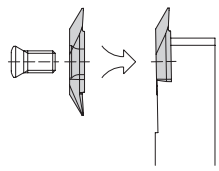
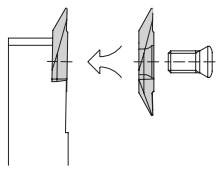
Small machining	General purpose	Large machining
 TKFB12R15..	 TKFB12R28..	 TKFB16R38..

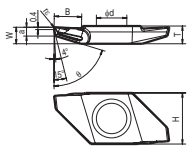
Table 2

Toolholder	Right-hand (R)	Toolholder	Left-hand (L)
Insert	Right-hand (R)	Insert	Left-hand (L)
Lead angle	Right-hand (R)	Lead angle	Right-hand (R)
			

Inserts are sold in 10 piece boxes

P	Free-cutting steel				Ref. to 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) NEW

Insert (Handed Insert shows Right-hand)		Description	Dimension (mm) W	a	B	rε	T	H	ϕd	θ	MEGACOAT / MEGACOAT NANO PR1425	PR1535	PR1225	Ref. to Page for Applicable Toolholders
		TKFB 12R28005-GQ	2.8	1.5	4.6	0.05	3.0	8.7	5.2	74°	●	●	●	E12
		12R28015-GQ				0.15					●	●	●	
		TKFB 16R38005-GQ	3.8	1.8	6.3	0.05	4.0	9.5	5.2	72°	●	●	●	
		16R38015-GQ				0.15					●	●	●	

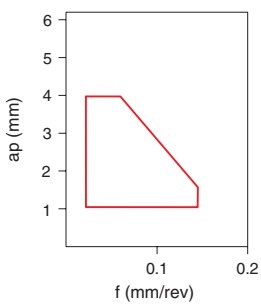
●Insert Identification System

TKFB 12 R 28 005-GQ

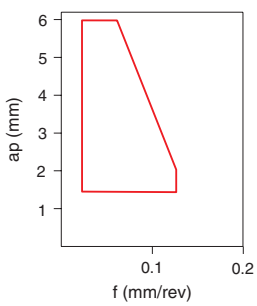
- TKFB: Insert Type
- 12: Insert Size
- R: Insert Hand (R: Right-hand)
- 28: Insert width
- 005: Corner-R (rε)
- GQ: GQ Chipbreaker

●Applicable Chipbreaker Range

TKFB12R28...GQ



TKFB16R38...GQ



● : Std. Item

Inserts are sold in 10 piece boxes

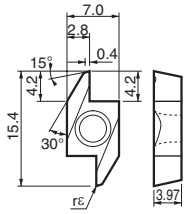
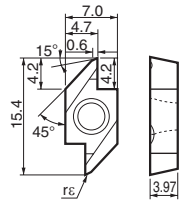
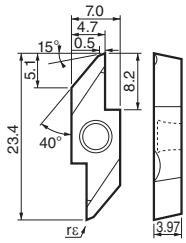
B

Insert (Turning)

Insert for Back Turning (Small Tools)

		NEW						
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

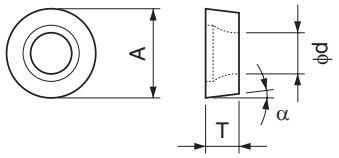
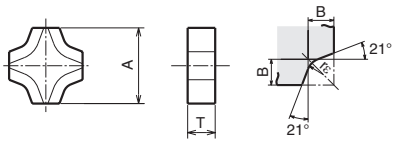
Insert Handed Insert shows Right-hand		Description		Dimension (mm) rε	Cermet TC60M	MEGACOAT / MEGACOAT NANO PR1425	MEGACOAT / MEGACOAT NANO PR1225	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	Carbide KW10	Ref. to Page for Applicable Toolholders
		ABS	15R4005	0.05	●			●			●	E17
			15R4015	0.15	●			●			●	
		ABS	15R4005M	<0.05		●	●		●	●		
			15R4015M	<0.15		●	●		●	●		
		ABW	15R4005	0.05	●			●			●	E18
			15R4015	0.15	●			●			●	
		ABW	15R4005M	<0.05		●	●		●	●		
			15R4015M	<0.15		●	●		●	●		
		ABW	23R5005	0.05	●			●			●	E19
			23R5015	0.15	●			●			●	
		ABW	23R5005M	<0.05		●	●		●	●		
			23R5015M	<0.15		●	●		●	●		

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

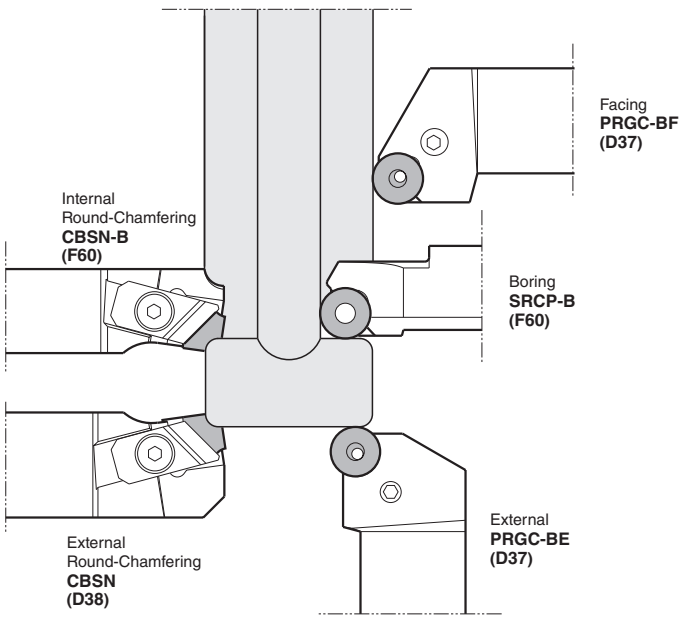
Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

Bearing Machining

Insert		Description		Dimension (mm) A	T	ϕd	rε	Relief Angle α	Cermet TN90	Ref. to 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°	●	**F60**
			1604M0-BB	16.0	4.76	5.5			●	
Round Chamfering						B	rε			
		SNMF	**120406-21**	12.70	4.76	1.5	0.6	-	●	**D38**
			120410-21			3.0	1.0		●	**F60**
			120416-21			3.1	1.6		●	
			120421-21			3.2	2.1		●	
			120426-21			3.3	2.6		●	

◆ Tooling for Bearing Machining

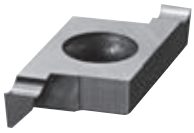


● : Std. Item

Inserts are sold in 10 piece boxes

Micro Boring

●Twin-Bars

Micro Boring	Micro Face Grooving
TWB Twin-Bars ➡ **F32**	TWFG Twin-Bars ➡ **G68**
	
TWBT Twin-Bars ➡ **F33**	TWFGT Twin-Bars ➡ **G69**

●EZ Bars / System Tip-Bars / Tip-Bars

Micro Boring		Micro Back Boring
EZB EZ Bars ➡ **F14**	EZVB EZ Bars ➡ **F19**	-
NEW	NEW	-
VNB-S / VNB System Tip-Bars ➡ **F26**	VNBX-S System Tip-Bars ➡ **F30**	VNBT System Tip-Bars ➡ **F27**
HPB 2-Edge Tip-Bars ➡ **F34**	-	HPBT 2-Edge Tip-Bars ➡ **F34**
	-	
PSB-S Tip-Bars ➡ **F35**	-	PSBT-S Tip-Bars ➡ **F35**
	-	

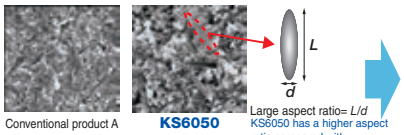
Solid Tip-Bars [Grooving / Threading]

Micro Grooving	Micro Face Grooving	Micro Internal Threading
EZG EZ Bars ➡ **G41**	EZFG EZ Bars ➡ **G64**	EZT EZ Bars ➡ **J24**
NEW	NEW	NEW
VNG System Tip-Bars ➡ **G43**	VNFG System Tip-Bars ➡ **G66**	VNT System Tip-Bars ➡ **J30**
HPG 2-Edge Tip-Bars ➡ **G44**	HPFG 2-Edge Tip-Bars ➡ **G67**	HPT 2-Edge Tip-Bars ➡ **J28**
PSG Tip-Bars ➡ **G44**	PSFG Tip-Bars ➡ **G67**	PST Tip-Bars ➡ **J30**

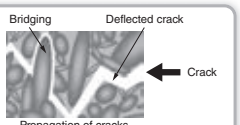
High Speed Machining for Cast Iron KS6050 / CS7050

- Improved fracture resistance by high aspect ratio constituents
- Anti-chipping in scale processing and interrupted machining
- High speed machining of cast iron by controlling grain boundary phase (good wear resistance)

KS6050



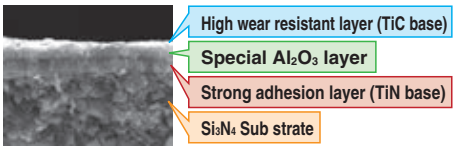
Large aspect ratio= L/d
KS6050 has a higher aspect ratio compared with the conventional product A.



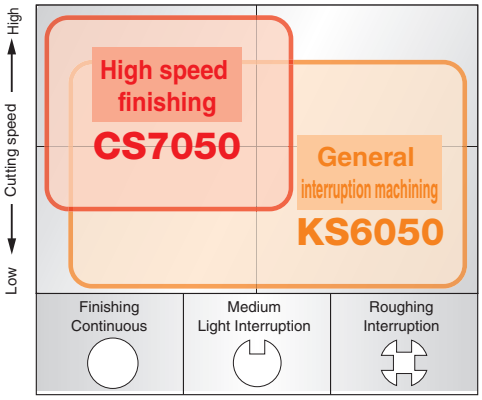
Large aspect ratio restrains propagation of cracks
Superior fracture resistance

CS7050 (Coated Si_3N_4)

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

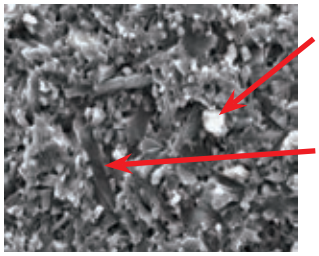


Application Map



Heat-Resistant Alloys Machining SiAlON Ceramic KS6040

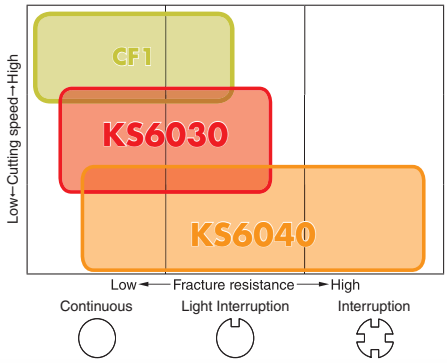
- Improved wear and fracture resistance due to the mixture of the hard and acicular particles



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

Application Map

· For heat-resistant alloys machining

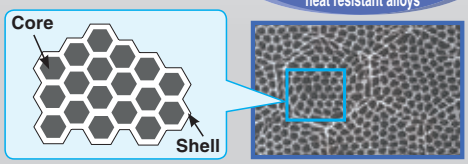


Heat-Resistant Alloys Machining Honeycomb structure Ceramic CF1

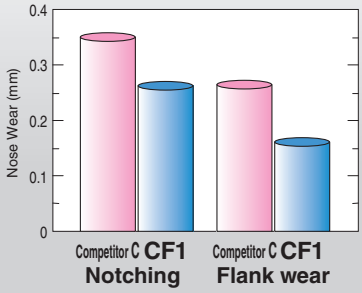
What is Honeycomb structure Ceramic?

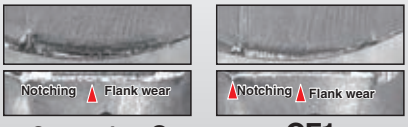
Honeycomb structure Ceramic is a composite material consisting of a core (gray portion) and shell (white portion)

Prolonged tool life and acceleration of machining of heat resistant alloy such as Ni-base heat resistant alloys



Comparison of Wear Resistance





Competitor C CF1

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

Ceramic Inserts Identification System

- Identification System

C	N	G	A	12	04	04	S01525

"Turning Indexable Inserts Identification System" Refer to Page B2

Edge Prep. (Ref. to the Table1)

- How to identify edge preparation

Table1

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	

- Ref. to Page B3 for insert color

How to read pages of "Turning Inserts" B13

80° Rhombic / Negative

(mm)

Description	A	T	ϕd
CN_A 1204_	12.70	4.76	5.16
CN_N 1204_	12.70	4.76	-
1207_		7.94	

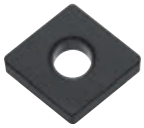
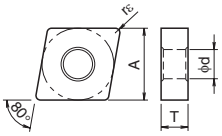
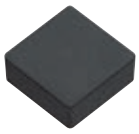
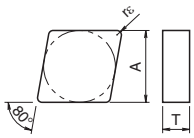
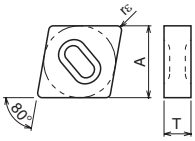
(mm)

Description	A	T	ϕd
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	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				○	●					◔

Aluminum Oxide Ceramic: KA30, A65, KT66, A66N, PT600M; Silicon Nitride Ceramic: KS6050, CS7050; SiAlON Ceramic: KS6030, KS6040; Honeycomb structure Ceramic: CF1

Insert	Description	(Previous Description)	Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
 	CNGA 120412S01025	CNGA 120412	S01025	1.2	●										D8 F61 F65 F66
	CNGA 120404S01525	CNGA 120404	S01525	0.4				●							
	120408S01525	120408		0.8				●							
	120412S01525	120412		1.2				●							
	CNGA 120404S02025	-	S02025	0.4					●						
	120408S02025	-		0.8					●						
	120412S02025	-		1.2					●						
	CNGA 120404S03030	CNGA 120404-T30	S03030	0.4				●							
	120408S03030	120408-T30		0.8				●							
	120412S03030	120412-T30		1.2				●							
	CNGA 120412T00520	CNGA 120412-T05	T00520	1.2	●										
	CNGA 120404T02025	-	T02025	0.4			●		●						
	120408T02025	CNGA 120408		0.8		●	●		●	●	●				
	120412T02025	120412		1.2		●	●		●	●	●				
	CNMA 120408S01525	CNMA 120408	S01525	0.8				●							
	CNMA 120408S03030	CNMA 120408-T30	S03030	0.8				●							
	120412S03030	120412-T30		1.2				●							
 	CNGN 120408S01025	CNGN 120408	S01025	0.8	●										D22
	120412S01025	120412		1.2	●										
	CNGN 120408T01020	CNGN 120408	T01020	0.8									●	●	
	120412T01020	120412		1.2									●	●	
	CNGN 120404T02025	CNGN 120404	T02025	0.4					●						
	120408T02025	120408		0.8					●	●	●		●		
	120412T02025	120412		1.2					●	●	●		●		
	120416T02025	120416		1.6						●					
	CNGN 120708S01525	CNGN 120708	S01525	0.8				●							
	120712S01525	120712		1.2				●							
	CNGN 120708T01020	CNGN 120708	T01020	0.8										●	
	120712T01020	120712		1.2										●	
	CNGN 120704T02025	CNGN 120704	T02025	0.4		●									
	120708T02025	120708		0.8		●									
	120712T02025	120712		1.2		●									
	120716T02025	120716		1.6		●									
	CNGN 160708T02025	CNGN 160708	T02025	0.8		●									
	160712T02025	160712		1.2		●									
	160716T02025	160716		1.6		●									
	CNMN 120708T02025	CNMN 120708	T02025	0.8		●									
	120712T02025	120712		1.2		●									
	CNGX 120712T01020	-	T01020	1.2									●		D28 F78
	120716T01020	-		1.6									●		
	CNGX 120708T02025	-	T02025	0.8						●	●				
	120712T02025	-		1.2						●	●		●		
	120716T02025	-		1.6						●	●		●		

Inserts are sold in 10 piece boxes

 ● : Std. Item □ : Deleted from the next catalogue

How to read pages of "Turning Inserts" B13

55° Rhombic / 75° Rhombic / Negative

(mm)

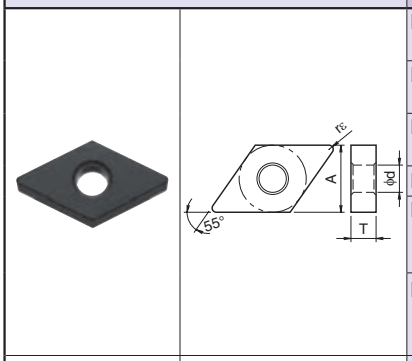
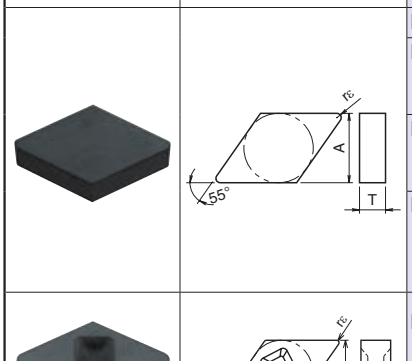
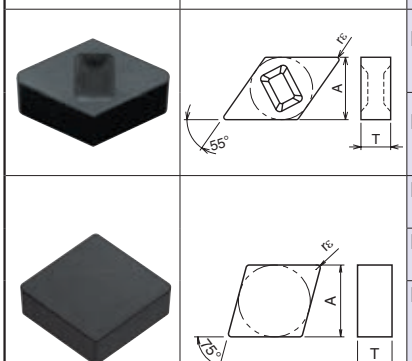
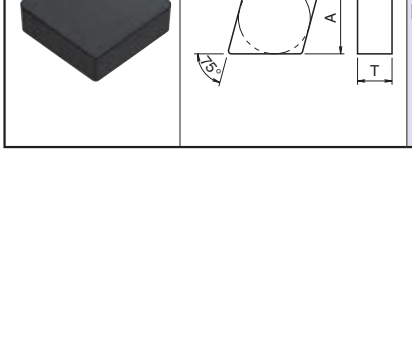
Description	A	T	φd
DNGA 1504_	12.70	4.76	5.16
1506_		6.35	
DNGN 1504_	12.70	4.76	-
1507_		7.94	

(mm)

Description	A	T	φd
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	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	(Previous Description)	Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
	DNGA 150408S01025	DNGA 150408	S01025	0.8	●										D10 D11 F62 F68 F69
	DNGA 150412S01025	DNGA 150412		1.2	●										
	DNGA 150404S01525	DNGA 150404	S01525	0.4				●							
	DNGA 150408S01525	DNGA 150408		0.8				●							
	DNGA 150404S02025	-	S02025	0.4					●						
	DNGA 150408S02025	-		0.8					●						
	DNGA 150408S03030	DNGA 150408-T30	S03030	0.8				●							
	DNGA 150404T02025	DNGA 150404	T02025	0.4		●			●						
	DNGA 150408T02025	DNGA 150408		0.8		●	●		●						
	DNGA 150412T02025	-		1.2			●		●						
	DNGA 150604T02025	-	T02025	0.4			●		●						D10 D11 F62
	DNGA 150608T02025	-		0.8			●		●						
	DNGA 150612T02025	-		1.2			○		●						
	DNGN 150408T02025	-	T02025	0.8					●						-
	DNGN 150704S01525	DNGN 150704	S01525	0.4				●							D23
	DNGN 150708S01525	DNGN 150708		0.8				●							
	DNGN 150712S01525	DNGN 150712		1.2				●							
	DNGN 150704S02025	-	S02025	0.4					●						
	DNGN 150708S02025	-		0.8					●						
	DNGN 150712S02025	-		1.2					●						
	DNGN 150704T02025	DNGN 150704	T02025	0.4		●									
	DNGN 150708T02025	DNGN 150708		0.8		●									
	DNGN 150712T02025	DNGN 150712		1.2		●									
	DNGN 150716T02025	DNGN 150716		1.6		●									
	DNGX 120708T02025	-	T02025	0.8						●					D29 F78
	DNGX 120712T02025	-		1.2						●					
	DNGX 150708T02025	-	T02025	0.8						●	●				D29
	DNGX 150712T02025	-		1.2						●	●				
	ENGN 130708S01525	ENGN 130708	S01525	0.8				●							D23 F77
	ENGN 130712S01525	ENGN 130712		1.2				●							
	ENGN 130708S02025	-	S02025	0.8					●						
	ENGN 130712S02025	-		1.2					●						
	ENGN 130704T02025	ENGN 130704	T02025	0.4		●			●						
	ENGN 130708T02025	ENGN 130708		0.8		●			●						
	ENGN 130712T02025	ENGN 130712		1.2		●			●						
	ENGN 130716T02025	ENGN 130716		1.6		●			●						
	ENGN 130720T02025	ENGN 130720		2.0		●			●						
	ENGN 130730T02025	ENGN 130730		3.0		●			●						

● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

Round / Negative

(mm)

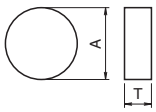
Description	A	T	φd
RNGN 0903_	9.525	3.18	-
0904_		4.76	
0907_		7.94	
1204_	12.70	4.76	

(mm)

Description	A	T	φd
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

		KA30	A65	KT66	A66N	PT600M	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	(Previous Description)	*Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
	RNGN 090300E003	-	E003	-								●			D33
	090300E005	-	E005	-									●		
	090300T01020	-	T01020	-								●	●		
	RNGN 090400S01525	RNGN 090400	S01525	-				●							
	090400S02025	-	S02025	-					●						
	090400T01020	-	T01020	-										●	
	090400T02025	RNGN 090400	T02025	-		●			●						
	RNGN 090700T01020	-	T01020	-										○	-
	RNGN 120400E003	-	E003	-								●			D27 D33
	120400E005	-	E005	-									●		
	120400S01525	RNGN 120400	S01525	-				●							
	120400S02025	-	S02025	-					●						
	120400T01020	-	T01020	-								●	●	●	
	120400T02025	RNGN 120400	T02025	-		●	●		●	●	●				
	RNGN 120700E003	-	E003	-								●			
	120700E005	-	E005	-									●		
	120700K15015	RNGN 120700K	K15015	-					●						
	120700S01525	RNGN 120700	S01525	-				●							
	120700S02025	-	S02025	-					●						
	120700T01020	-	T01020	-								●	●	●	
	120700T02025	RNGN 120700	T02025	-		●	●		●	●	●				
	RNGN 150700S01525	RNGN 150700	S01525	-				●							D27
	150700S02025	-	S02025	-					●						
	150700T02025	RNGN 150700	T02025	-		●									
	RNGN 190700E003	-	E003	-								●			-
	190700E005	-	E005	-									●		
	190700T01020	-	T01020	-								●	●		
	RNGN 250700E003	-	E003	-								MTO			
	250700E005	-	E005	-									●		
	250700T01020	-	T01020	-								MTO	●		

*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 ○ : Check Availability □ : Deleted from the next catalogue MTO : Made to order

How to read pages of "Turning Inserts" B13

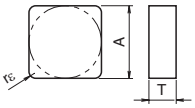
90° Square / Negative

(mm)

Description	A	T	ϕd
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	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	(Previous Description)	Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
		SNGA 120408S01525	SNGA 120408	S01525	0.8				●							D12 D13 F77
		SNGA 120412S01525	SNGA 120412		1.2				●							
		SNGA 120408S02025	-	S02025	0.8					●						
		SNGA 120412S02025	-		1.2					●						
		SNGA 120408T02025	SNGA 120408	T02025	0.8		●	●		●	●	●				
		SNGA 120412T02025	SNGA 120412		1.2		●	●		●	●	●				
		SNGA 120416T02025	SNGA 120416		1.6					●	●	●				
		SNMA 120408S03030	SNMA 120408-T30	S03030	0.8				●							
		SNGN 120408S01025	SNGN 120408	S01025	0.8	●										D25 D34 D35 F77
		SNGN 120412S01025	SNGN 120412		1.2	●										
		SNGN 120416S01025	SNGN 120416		1.6	●										
		SNGN 120420S01025	SNGN 120420		2.0	●										
		SNGN 120408S01525	SNGN 120408	S01525	0.8				●							
		SNGN 120412S01525	SNGN 120412		1.2				●							
		SNGN 120416S01525	SNGN 120416		1.6				●							
		SNGN 120408S02025	-	S02025	0.8					●						
		SNGN 120412S02025	-		1.2					●						
		SNGN 120416S02025	-		1.6					●						
		SNGN 120416S03030	SNGN 120416-T30	S03030	1.6				●							
		SNGN 120408T00520	SNGN 120408-T05	T00520	0.8		●	●								
		SNGN 120408T01020	-	T01020	0.8										○	
		SNGN 120412T01020	-		1.2									●	○	
		SNGN 120416T01020	-		1.6									●	○	
		SNGN 120420T01020	-		2.0										○	
		SNGN 120404T02025	SNGN 120404	T02025	0.4		●			●						
		SNGN 120408T02025	SNGN 120408		0.8		●	●		●						
		SNGN 120412T02025	SNGN 120412		1.2		●	●		●	●	●		●		
		SNGN 120416T02025	SNGN 120416		1.6		●			●	●	●		●		
		SNGN 120420T02025	SNGN 120420		2.0		●			●	●	●				
		SNGN 120708S01025	SNGN 120708	S01025	0.8	●										
		SNGN 120712S01025	SNGN 120712		1.2	●										
		SNGN 120716S01025	SNGN 120716		1.6	●										
		SNGN 120704S01525	SNGN 120704	S01525	0.4				●							
		SNGN 120708S01525	SNGN 120708		0.8				●							
		SNGN 120712S01525	SNGN 120712		1.2				●							
		SNGN 120716S01525	SNGN 120716		1.6				●							
		SNGN 120720S01525	SNGN 120720		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 ○ : Check Availability □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

90° Square / Negative

(mm)

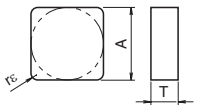
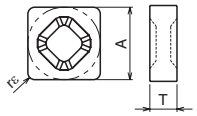
Description	A	T	ϕd
SN_N1207_	12.70	7.94	-
SNGN1507_	15.875	7.94	

(mm)

Description	A	T	ϕd
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	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	(Previous Description)	Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
	SNGN 120704T02025	SNGN 120704	T02025	0.4		●									D25 D34 D35 F77
	SNGN 120708T02025	SNGN 120708		0.8		●			●						
	SNGN 120712T02025	SNGN 120712		1.2		●			●						
	SNGN 120716T02025	SNGN 120716		1.6		●			●	●	●				
	SNGN 120720T02025	SNGN 120720		2.0		●			○						
	SNMN 120716T02025	SNMN 120716	T02025	1.6		●									
	SNGN 150712T02025	SNGN 150712	T02025	1.2		●			●						D25
	SNGN 150716T02025	SNGN 150716		1.6		●									
	SNGX 120712T01020	-	T01020	1.2									●		D30 D31 F78
	SNGX 120716T01020	-		1.6									●		
	SNGX 120712T02025	-	T02025	1.2						●	●		●		
	SNGX 120716T02025	-		1.6						●	●		●		
	SNGX 150716T02025	-	T02025	1.6						●					D30 D31

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

60° Triangle / Negative

(mm)

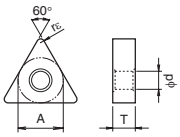
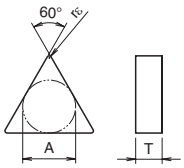
Description	A	T	ϕd
TNGA 1604_	9.525	4.76	3.81
TNGN 1103_	6.35	3.18	-

(mm)

Description	A	T	ϕd
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	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	(Previous Description)	Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
	TNGA 160408S01025	TNGA 160408	S01025	0.8	●										D14 D15 F62 F72 F73
	TNGA 160404S01525 160408S01525 160412S01525	TNGA 160404 160408 160412	S01525	0.4 0.8 1.2				● ● ●							
	TNGA 160404S02025 160408S02025 160412S02025	- - -	S02025	0.4 0.8 1.2					● ● ●						
	TNGA 160408S03030 160412S03030	TNGA 160408-T30 160412-T30	S03030	0.8 1.2				● ●							
	TNGA 160408T00520	TNGA 160408-T05	T00520	0.8	●										
	TNGA 160404T02025 160408T02025 160412T02025	TNGA 160404 160408 160412	T02025	0.4 0.8 1.2		● ● 	● ● ●		● ● ●	● ●	● ●				
	TNGN 110304T00520 110308T00520 110312T00520	TNGN 110304 110308 110312	T00520	0.4 0.8 1.2		● ● ●			● ● ●						D36 F79
	TNGN 160404S01025 160408S01025 160412S01025 160416S01025 160420S01025	TNGN 160404 160408 160412 160416 160420	S01025	0.4 0.8 1.2 1.6 2.0	● ● ● ● ●										D26
	TNGN 160404S01525 160408S01525 160412S01525	TNGN 160404 160408 160412	S01525	0.4 0.8 1.2				● ● ●							
	TNGN 160404S02025 160408S02025 160412S02025	- - -	S02025	0.4 0.8 1.2					● ● ●						
	TNGN 160404T00520 160408T00520 160412T00520	TNGN 160404-T05 160408-T05 160412-T05	T00520	0.4 0.8 1.2	● ●	● ●									
	TNGN 160404T02025 160408T02025 160412T02025	TNGN 160404 160408 160412	T02025	0.4 0.8 1.2		● ● ●	● 		● ● ●	● 					
	TNGN 160708S01525	TNGN 160708	S01525	0.8				●							
	TNGN 160708S02025	-	S02025	0.8					●						
	TNGN 160704T02025 160708T02025 160712T02025 160716T02025 160720T02025	TNGN 160704 160708 160712 160716 160720	T02025	0.4 0.8 1.2 1.6 2.0		● ● ● ● ●			● ● ●						

● : Std. Item □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

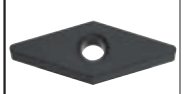
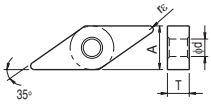
35° Rhombic / Negative

(mm)

Description	A	T	φd
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	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	(Previous Description)	Edge Prep.	Dimension (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
 	VNGA 160404S01525	VNGA 160404	S01525	0.4				●							D16 D17 D18
	VNGA 160408S01525	VNGA 160408		0.8				●							
	VNGA 160404S02025	-	S02025	0.4					●						
	VNGA 160408S02025	-		0.8					●						
	VNGA 160404T02025	VNGA 160404	T02025	0.4		●	●		●						
	VNGA 160408T02025	VNGA 160408		0.8		●	●		●						
	VNGA 160412T02025	-		1.2					●						
	VNMA 160408S01525	VNMA 160408	S01525	0.8				●							

Inserts are sold in 10 piece boxes

How to read pages of "Turning Inserts" B13

Positive

(mm)

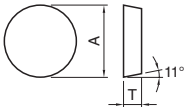
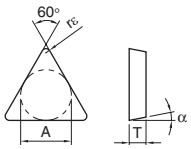
Description	A	T	α
RPGN 0903_	9.525	3.18	11°
RPGN 1204_	12.70	4.76	
SPGN 0903_	9.525	3.18	
SPGN 1203_	12.70	3.18	

(mm)

Description	A	T	α
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

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		(Previous Description)		Edge Prep.	Dimension (mm) rε	Aluminum Oxide Ceramic KA30	A65	KT66	PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6050	CVD Coated Silicon Nitride Ceramic CS7050	SIAION Ceramic KS6030	KS6040	Honeycomb structure Ceramic CF1	Ref. to Page for Applicable Toolholders
		RPGN	090300E003		-	E003	-								●			-
			090300E005		-	E005	-									●		
			090300T01020		-	T01020	-								●	●		
		RPGN	120400E003		-	E003	-								●			
			120400E005		-	E005	-									●		
			120400T01020		-	T01020	-								●	●		
		SPGN	090308T00820	SPGN	090308	T00820	0.8		●			●						E42 F58
		SPGN	120308S00820	SPGN	120308	S00820	0.8				●	●						
		SPGN	120308T00820 120312T00820	SPGN	120308 120312	T00820	0.8 1.2		● ●			● ●						
		TBGN	060104S00820 060108S00820	TBGN	060104 060108	S00820	0.4 0.8				● ●	● ●						-
		TCGN	160404T00820 160408T00820	TCGN	160404 160408	T00820	0.4 0.8		● ●									
		TPGN	090204T00820 090208T00820		- -	T00820	0.4 0.8			●		● ●						F59
		TPGN	110304S00820 110308S00820	TPGN	110304 110308	S00820	0.4 0.8				● ●	● ●						E43 F59
		TPGN	110304T00820 110308T00820	TPGN	110304 110308	T00820	0.4 0.8		● ●			● ●						
		TPGN	160304S00820 160308S00820 160312S00820	TPGN	160304 160308 160312	S00820	0.4 0.8 1.2				● ● ●	● ● ●						
		TPGN	160304T00820 160308T00820 160312T00820	TPGN	160304 160308 160312	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

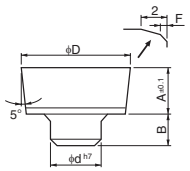
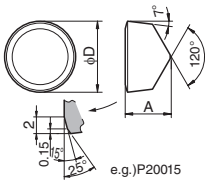
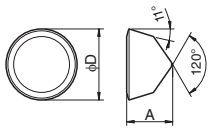
● : Std. Item □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes

Inserts for High 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	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		(Previous Description)	*Edge Prep.	Dimension (mm) φD	φd	A	B	F	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
		RBG	12K20003	-	K20003	12	6	6	3	0.2					○						-
			16K20003	RBG 16W	K20003	16	8	8	5	0.2		●			○						
			20K20003	RBG 20W	K20003	20	10	10	5	0.3		●			○						
		RCGX	060600E003	-	E003	6.35	-	6.35	-	-								●			-
			060600E005		E005														●		
			060600T01020		T01020													●	●		
			090700E003		E003	9.525	-	8	-	-								●			
			090700E005		E005														●		
			090700P20015		P20015								●		●						
			090700S01020		S01020															●	
			090700T01020		T01020													●	●		
			120700E003		E003	12.7	-	8	-	-								●			
			120700E005		E005														●		
			120700P20015		P20015										●						
			120700S01020		S01020															●	
			120700T01020		T01020													●	●		
		RPGX	060600E003	-	E003	6.35	-	6.35	-	-								●			-
			060600E005		E005														●		
			060600T01020		T01020													●	●		
			090700E003		E003	9.525	-	8	-	-								●			
			090700E005		E005														●		
			090700T01020		T01020													●	●		
			120700E003		E003	12.7	-	8	-	-								●			
			120700E005		E005														●		
			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 + Honed Cutting Edge	P20015	2.00mm X 15°Chamfered + Honed Cutting Edge

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

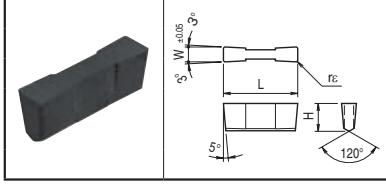
RBG Inserts are sold in 1 piece boxes

Inserts are sold in 10 piece boxes

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	KS6050	CS7050	KS6030	KS6040	CF1
		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic	CVD Coated Silicon Nitride Ceramic	SiAlON 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	(Previous Description)	Edge Prep.	W	rε	L	H	KA30	A65	KT66	A66N	PT600M	KS6050	CS7050	KS6030	KS6040	CF1	Ref. to Page for Applicable Toolholders
	GH 4020-05	-	S01020	4.0	0.5	20	7.5				●							G36 G56
	4020-05		T01020						●			●						
	5020-05		S01020	5.0							●							
	5020-05		T01020						●			●						
	6020-05		T01020	6.0					●			●						
	7020-05		T01020	7.0					●			●						

● : Std. Item □ : Deleted from the next catalogue

Inserts are sold in 10 piece boxes