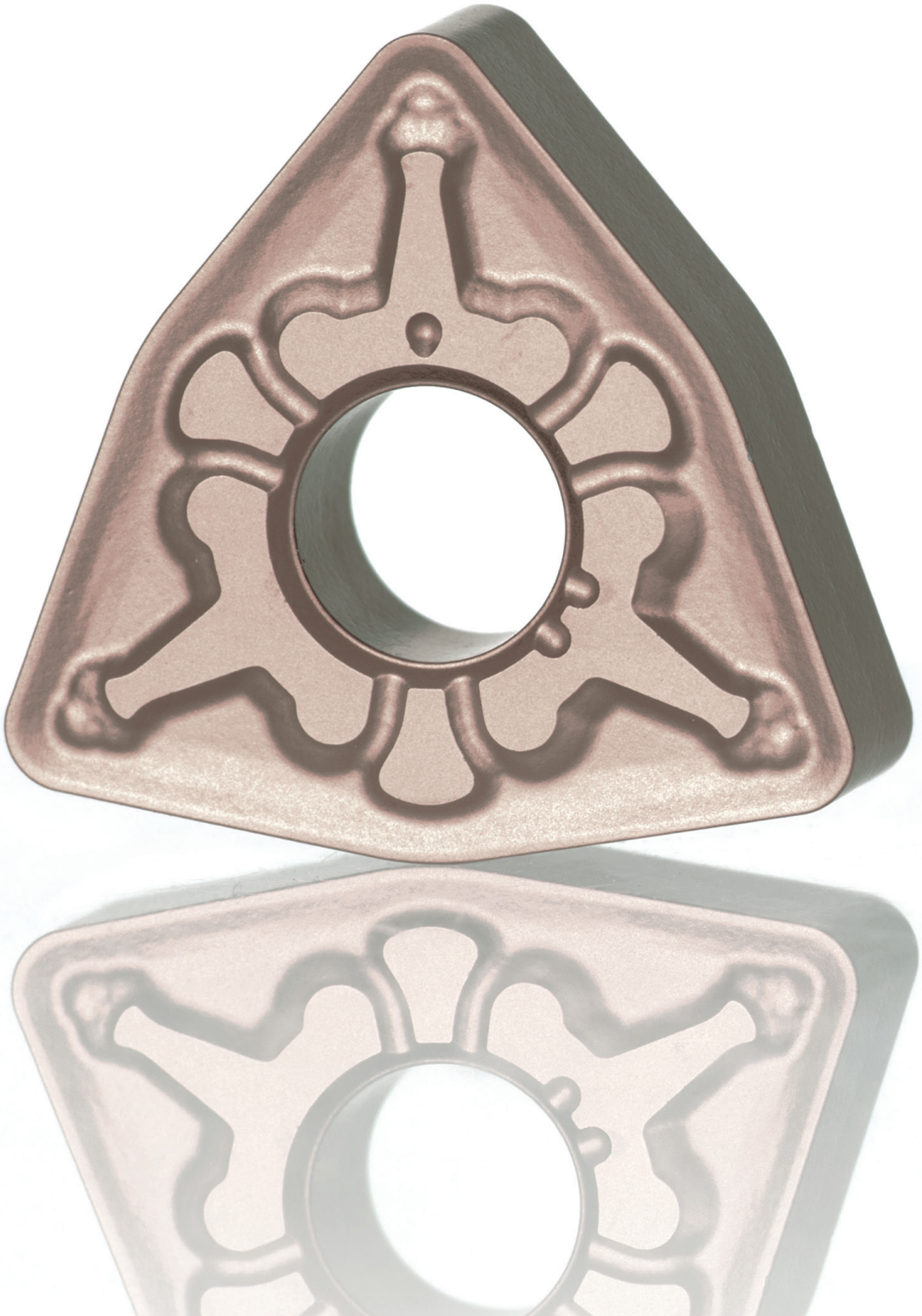
Insert



Insert - Content structure

- Inserts are grouped in Positive type, Negative type, and CBN/PCD.
- The list is in alphabetical order.
- The order of the list: C (80°) → D (55°) → R (360°) → S (90°) → T (60°) → V (35°) → W (80°) → Y (25°) → Other shapes
- The order of inserts:
  - Negative type (each shape with hole → without hole)
  - Positive type (each shape with hole → without hole)
- The order of chipbreakers:
  From precision finishing to heavy cutting, in the order of the values of cutting depth and feed rate.
- Insert without chipbreaker is on the last page of each shape.
- Introduces the proposed inserts according to the workpiece materials and the shape of workpiece materials.
- The standard cutting conditions for typical chipbreakers are at the bottom of the pages.
- ● in the catalog describes our standard stock items, and ▲ means the item to be discontinued in the future.

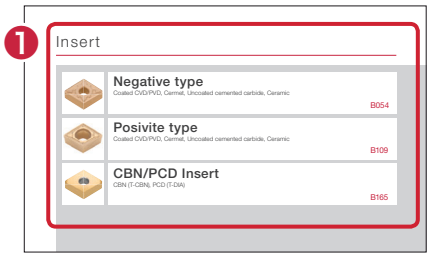
How to use the page

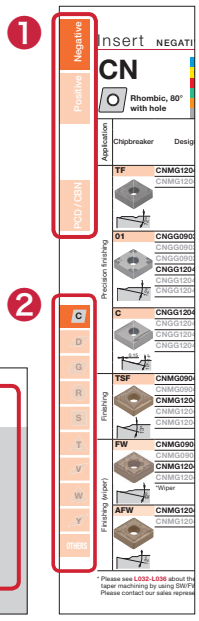
Method ①

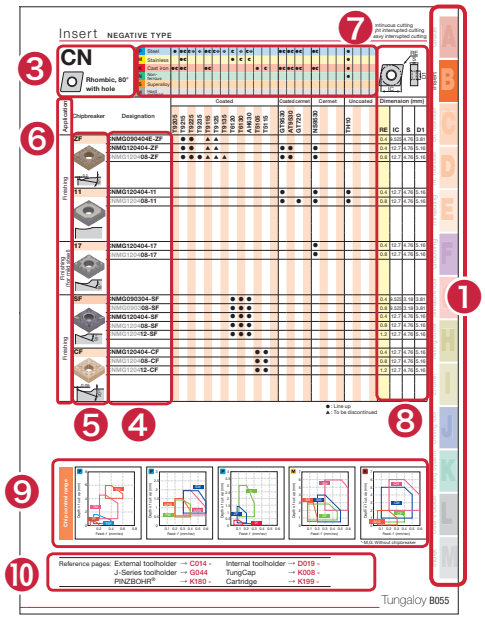
Select an insert at the right end, and choose the information page by the insert type (❶) and the outer shape of the insert (❷) at the left end.

Method ②

Check the page of each insert type from the index on B003 (❶), and choose the page of the setting information according to the outer shape of the insert (❷).

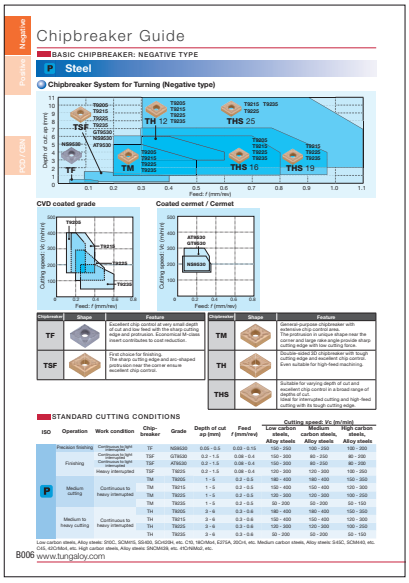


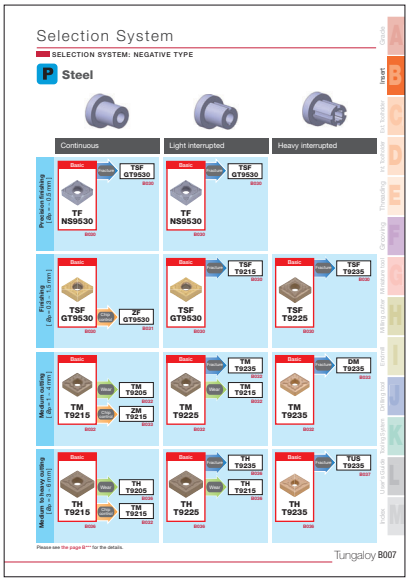




Method ③

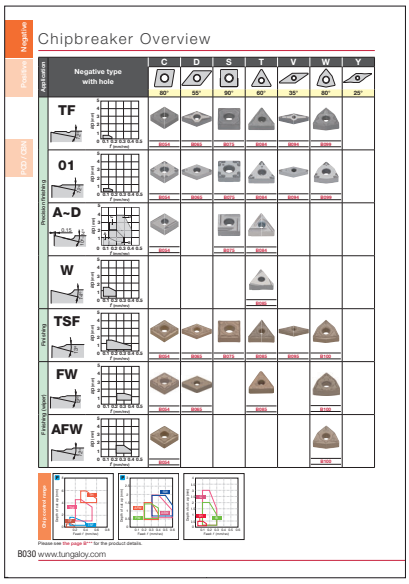
Select an insert at the chipbreaker introduction and the selection guide on B006 - B029 and check the details on the product page.





Method ④

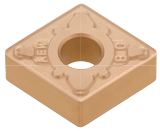
Select an insert from the list of chipbreaker shapes on B030-B053 and check the details on each page.



When ordering

- Please specify the designation, grade, and quantity.
  e.g. **CNMG120408-TM T9115 ... 10 pieces** (10 inserts per package)
  *You will find a note if the number per package is not 10.

Insert



Negative type

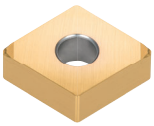
Coated CVD/PVD, Cermet, Uncoated cemented carbide, Ceramic

B054

Posivite type

Coated CVD/PVD, Cermet, Uncoated cemented carbide, Ceramic

B109



CBN / PCD Insert

CBN (T-CBN), PCD (T-DIA)

B165

Designation system for Insert

● How to decide the insert designation (conforms to JIS B4120-1998, ISO 1832 / AM1:1998)

Symbol	Shape	Nose angle (degree)	Figure
H	Hexagonal	120°	
O	Octagonal	135°	
P	Pentagonal	108°	
S	Square	90°	
T	Triangular	60°	
C	Rhombic	80°	
D		55°	
E		75°	
F		50°	
G	G-shape (Tungaloy's symbol)	70°	
M	Rhombic	86°	
V		35°	
Y	Y-shape (Tungaloy's symbol)	25°	
W	Trigon	80°	
L	Rectangular	90°	
A	Parallelogram	85°	
B		82°	
K		55°	
R	Round	-	

❶ Shape

Note: For rhombic and parallelogram inserts, use the smaller nose angle.

Symbol	Relief angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Others
X	Special

❷ Relief angle

Symbol (class)	Tolerance (mm)		
	Corner height (M)	Thickness (S)	I.C. dia. (IC)
A	±0.005	±0.025	±0.025
F	±0.005	±0.025	±0.013
C	±0.013	±0.025	±0.025
H	±0.013	±0.025	±0.013
E	±0.025	±0.025	±0.025
G	±0.025	±0.13	±0.025
J	±0.005	±0.025	±0.005 ~ ±0.13
K	±0.013	±0.025	±0.05 ~ ±0.13
L	±0.025	±0.025	±0.05 ~ ±0.13
M	±0.08 ~ ±0.18	±0.13	±0.05 ~ ±0.13
N	±0.08 ~ ±0.18	±0.025	±0.05 ~ ±0.13
U	±0.13 ~ ±0.38	±0.13	±0.08 ~ ±0.25

❸ Accuracy

	❶	❷	❸	❹	❺
	T	N	M	G	16
[Example]					
[Example]	C	C	G	T	09
	❶	❷	❸	❹	❺

❹ Groove and hole

Symbol	Hole	Shape of hole	Chip-breaker	Shape
N	Without	-	Without	
R			Single-sided	
F			Double-sided	
A	With	Cylindrical hole	Without	
M			Single-sided	
G			Double-sided	
W		Partly cylindrical hole, single-side 40° ~ 60° Counter sink	Without	
T			Single-sided	
Q		Partly cylindrical hole, double-side 40° ~ 60° Counter sink	Without	
U			Double-sided	
B		Partly cylindrical hole, single-side 70° ~ 90° Counter sink	Without	
H			Single-sided	
C		Partly cylindrical hole, double-side 70° ~ 90° Counter sink	Without	
J			Double-sided	
X	Special			

❺ Cutting edge length and I.C. symbol

* R		S		C		W		T		D		V		K		I.C. dia.
Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	
		03	3.97	03	4.0			06	6.9	04	4.8					3.97
		04	4.76	04	4.8			08	8.2	05	5.8	08	8.3			4.76
05	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5
		05	5.56	05	5.6	03	3.8	09	9.6	06	6.8					5.56
06	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6
		06	6.35	06	6.5	04	4.3	11	11	07	7.8	11	11.2			6.35
		07	7.94	08	8.1	05	5.4	13	13.8	09	9.7					7.94
08	8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8
09	9.525	09	9.525	09	9.7	06	6.5	16	16.5	11	11.6	16	16.6	16	19.7	9.525
10	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10
12	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12
12	12.7	12	12.7	12	12.9	08	8.7	22	22	15	15.5	22	22.1			12.7
15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4					15.875
16	16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16
19	19.05	19	19.05	19	19.3	13	13	33	33	23	23.3					19.05
20	20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20
		22	22.225	22	22.6			38	38.5	27	27.1					22.225
25	25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25
25	25.4	25	25.4	25	25.8			44	44	31	31					25.4
31	31.75	31	31.75	32	32.2			55	55	38	38.8					31.75
32	32	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32

*When M0 is included in Designation, the inscribed-circle diameter is metric size. (mm)

● Detailed accuracy for J,K,L,M,N and U classes

For inserts with nose corner angles larger than 55°

(mm)

Inscribed circle	Tolerance on inscribed circle dia. (IC)		Tolerance on corner height (M)		Applicable insert shape
	J,K,L,M,N (class)	U (class)	J,K,L,M,N (class)	U (class)	
6.35	±0.05	±0.08	±0.08	±0.13	H W O R P S T C,E,M
9.525					
12.7	±0.08	±0.13	±0.13	±0.2	
15.875	±0.1	±0.18	±0.15	±0.27	
19.05					
25.4	±0.13	±0.25	±0.18	±0.38	
31.75	±0.15	±0.25	±0.2	±0.38	
32					

For M-type inserts with nose corner angles of 55° (Shape: D), 35° (Shape: V), 25° (Shape: Y)

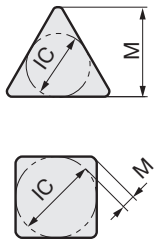
(mm)

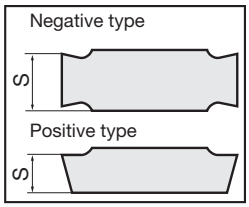
Inscribed circle	Tolerance on inscribed circle dia. (IC)	Tolerance on corner height (M)	Applicable insert shape
6.35	±0.05	±0.11	D
9.525			
12.7	±0.08	±0.15	
15.875	±0.1	±0.18	
19.05			
6.35	±0.05	±0.16	V
9.525			Y

● Insert thickness

For many of the inserts with chipbreaker, the insert height of the cutting edge is lower. In that case, the insert thickness outlined in the drawing of external dimensions is equivalent of "S" in the figure on the right.

Inscribed circle (IC)
Corner height (M)





Symbol	Thickness (mm)
X1	1.39
01	1.59
T1	1.98(1.79)
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

⑥ Thickness

[Example]

⑥	⑦				⑩
04	08			-	TM
T3	04	F	N	-	JS
⑥	⑦	⑧	⑨		⑩

(Optional symbol) (Optional symbol) (Supplementary symbol)

⑦ Corner radius

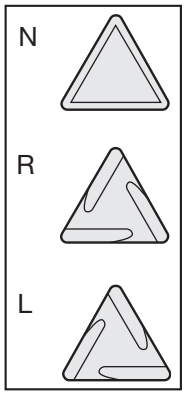
Symbol	Corner radius RE (mm)
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2

⑧ Major cutting edge

Symbol	Cutting edge	Shape
F	Sharp	
E	Rounded	
W.T	Chamfered	
S	Combination	

⑨ Hand of insert

Symbol	Hand
R	Right
L	Left
N	Neutral



⑩ Chipbreaker

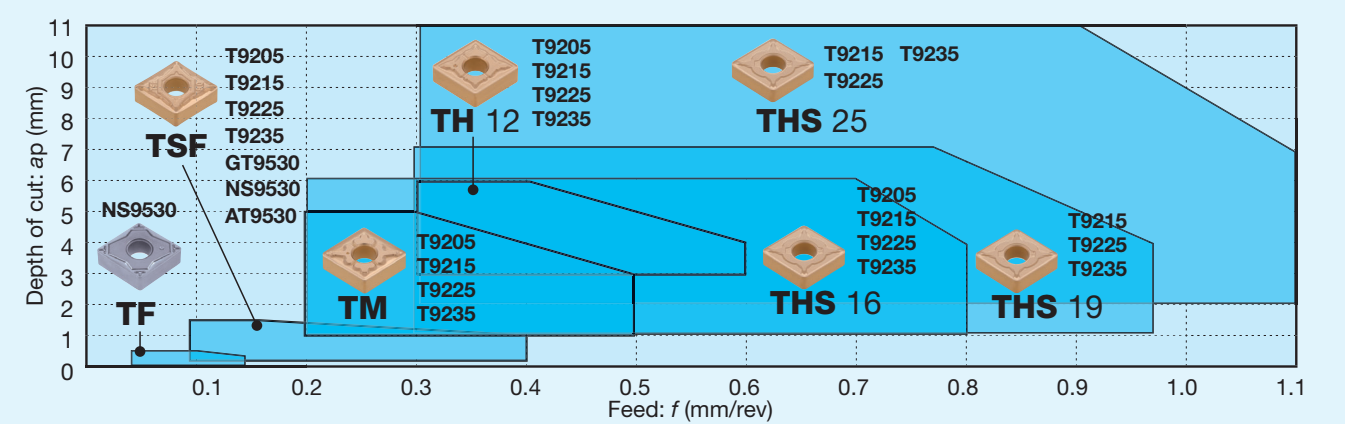
Symbol	Applications	Symbol	Applications
01(TF)	Precision finishing (Basic selection)	AFW	Small depth of cut and high feed (Wiper type Inserts)
TS	Finishing (Basic selection)	ASW	Small depth of cut and high feed (Wiper type Inserts)
TSF	Finishing (Basic selection)	CB	Medium cutting
TM	Medium cutting (Basic selection)	CM	Medium cutting of cast irons
THS	Medium to heavy cutting (Basic selection)	All-round	Medium cutting
TRS	Medium to heavy cutting	A	Finishing (Right and left hand)
TUS	Heavy cutting	B	Finishing (Right and left hand)
DM	Medium cutting	C	Finishing (Right and left hand)
HRF	Finishing	D	Finishing (Right and left hand)
HRM	Finishing to medium cutting	P	Finishing of Aluminium alloys
HMM	Finishing to medium cutting	W	Finishing (Angular type)
SF	Finishing of stainless steels	PSF	Finishing (Positive type)
SS	Finishing of stainless and mild steels	PSS	Finishing to light cutting (Positive insert)
SM	Medium cutting of stainless steels	PS	Finishing to medium cutting (Positive type Basic selection)
S	Medium cutting of stainless steels	PM	Medium cutting (Positive type)
SH	Medium to heavy cutting of stainless steels	AL	Finishing to medium cutting of aluminium alloys
SA	For heat-resisting alloys and stainless steels	RS	Medium cutting (For round inserts)
ZF	Finishing and profiling	W□□	Finishing (Angular type)
ZM	Finishing to medium cutting and profiling	H□□	Finishing to medium cutting (Parallel)
NS	Finishing and profiling	11	Finishing
NM	Finishing to medium cutting and profiling	61	Small depth of cut and high feed (For round inserts)
AS	Small depth of cut and high feed	S1	Finishing (For KNMX type)
TA	Medium cutting	J08,J10	For small lathes
TQ	Medium cutting	JS	For small lathes
AM	Small depth of cut and high feed	JRP	For small lathes
FW	Finishing (Wiper type)	JPP	For small lathes
SW	Finishing to medium cutting (Wiper type)	JSP	For small lathes

Chipbreaker Guide

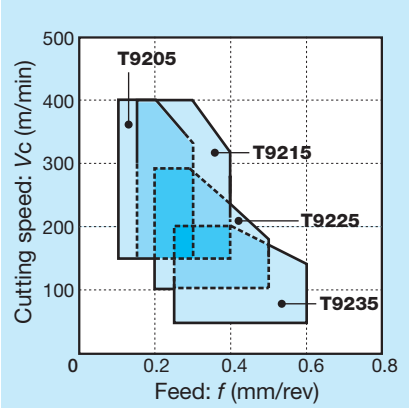
BASIC CHIPBREAKER: NEGATIVE TYPE

P Steel

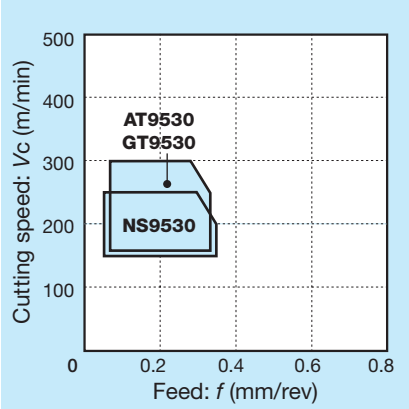
Chipbreaker System for Turning (Negative type)

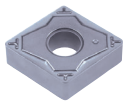


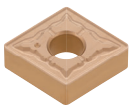
CVD coated grade



Coated cermet / Cermet



Chipbreaker	Shape	Feature
TF		Excellent chip control at very small depth of cut and low feed with the sharp cutting edge and protrusion. Economical M-class insert contributes to cost reduction.
TSF		First choice for finishing. The sharp cutting edge and arc-shaped protrusion near the corner ensure excellent chip control.

Chipbreaker	Shape	Feature
TM		General-purpose chipbreaker with extensive chip control area. The protrusion in unique shape near the corner and large rake angle provide sharp cutting edge with low cutting force.
TH		Double-sided 3D chipbreaker with tough cutting edge and excellent chip control. Even suitable for high-feed machining.
THS		Suitable for varying depth of cut and excellent chip control in a broad range of depths of cut. Ideal for interrupted cutting and high-feed cutting with its tough cutting edge.

STANDARD CUTTING CONDITIONS

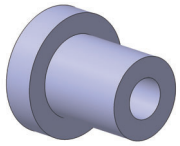
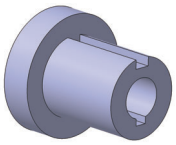
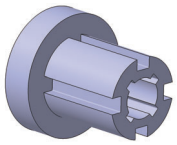
ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min) Low carbon steels, Alloy steels	Medium carbon steels, Alloy steels	High carbon steels, Alloy steels
P	Precision finishing	Continuous to light interrupted	TF	NS9530	0.05 - 0.5	0.03 - 0.15	150 - 250	100 - 250	100 - 200
	Finishing	Continuous to light interrupted	TSF	GT9530	0.2 - 1.5	0.08 - 0.4	150 - 300	80 - 250	80 - 200
		Continuous to light interrupted	TSF	AT9530	0.2 - 1.5	0.08 - 0.4	150 - 300	80 - 250	80 - 200
		Heavy interrupted	TSF	T9225	0.2 - 1.5	0.08 - 0.4	120 - 300	120 - 300	100 - 250
	Medium cutting	Continuous to heavy interrupted	TM	T9205	1 - 5	0.2 - 0.5	180 - 400	180 - 400	150 - 350
			TM	T9215	1 - 5	0.2 - 0.5	150 - 400	150 - 400	120 - 300
			TM	T9225	1 - 5	0.2 - 0.5	120 - 300	120 - 300	100 - 250
			TM	T9235	1 - 5	0.2 - 0.5	50 - 200	50 - 200	50 - 150
	Medium to heavy cutting	Continuous to heavy interrupted	TH	T9205	3 - 6	0.3 - 0.6	180 - 400	180 - 400	150 - 350
			TH	T9215	3 - 6	0.3 - 0.6	150 - 400	150 - 400	120 - 300
			TH	T9225	3 - 6	0.3 - 0.6	120 - 300	120 - 300	100 - 250
			TH	T9235	3 - 6	0.3 - 0.6	50 - 200	50 - 200	50 - 150

Low carbon steels, Alloy steels: S10C、SCM415, SS400, SCr420H, etc. C10, 18CrMo4, E275A, 20Cr4, etc. Medium carbon steels, Alloy steels: S45C, SCM440, etc. C45, 42CrMo4, etc. High carbon steels, Alloy steels: SNCM439, etc. 41CrNiMo2, etc.

Selection System

SELECTION SYSTEM: NEGATIVE TYPE

P Steel

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.5 mm]	Basic: TF NS9530 (B030) → Fracture: TSF GT9530 (B030)	Basic: TF NS9530 (B030) → Fracture: TSF GT9530 (B030)	
Finishing [a_p = 0.3 ~ 1.5 mm]	Basic: TSF GT9530 (B030) → Chip control: ZF GT9530 (B031)	Basic: TSF GT9530 (B030) → Fracture: TSF T9215 (B030)	Basic: TSF T9225 (B030) → Fracture: TSF T9235 (B030)
Medium cutting [a_p = 1 ~ 4 mm]	Basic: TM T9215 (B032) → Wear: TM T9205 (B032); Chip control: ZM T9215 (B033)	Basic: TM T9225 (B032) → Fracture: TM T9235 (B032); Wear: TM T9215 (B032)	Basic: TM T9235 (B032) → Fracture: DM T9235 (B033)
Medium to heavy cutting [a_p = 3 ~ 6 mm]	Basic: TH T9215 (B036) → Wear: TH T9205 (B036); Chip control: TM T9215 (B032)	Basic: TH T9225 (B036) → Fracture: TH T9235 (B036); Wear: TH T9215 (B036)	Basic: TH T9235 (B036) → Fracture: TUS T9235 (B037)

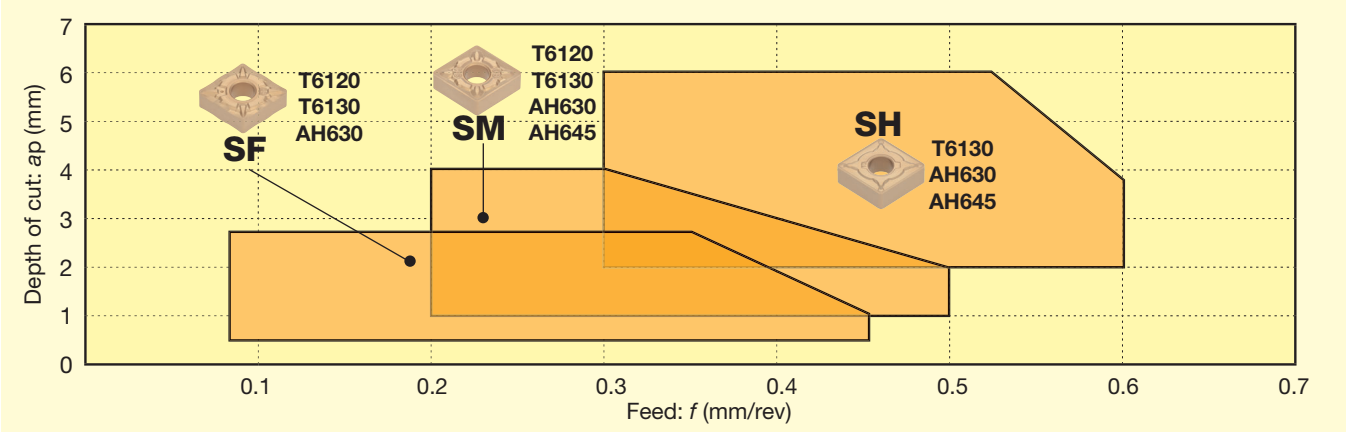
Please see the page B*** for the details.

Chipbreaker Guide

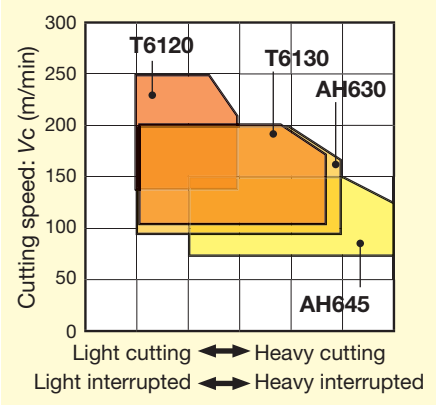
BASIC CHIPBREAKER: NEGATIVE TYPE

M Stainless Steel

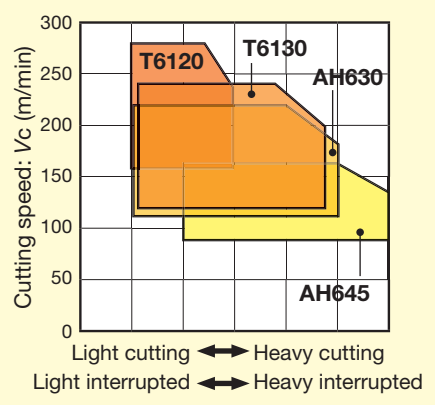
Chipbreaker System for Turning (Negative type)



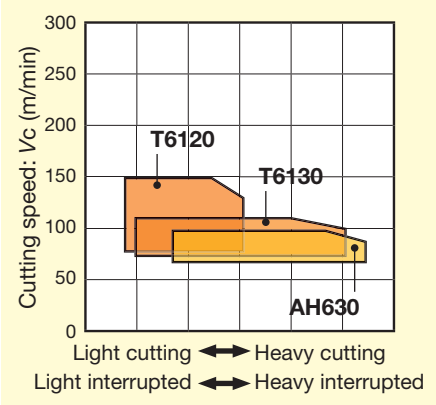
Austenitic stainless steel

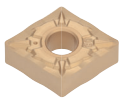
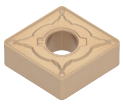


Ferritic / martensite stainless steel



Precipitation hardened stainless steel



Chipbreaker	Shape	Feature
SF		Excellent chip control with small depth of cut at high feed. Suitable for finishing stainless steel.
SH		Suitable for medium to heavy cutting. High fracture resistance with specially reinforced cutting edge. Ideal for machining that requires cutting edge strength. such as roughing and interrupted cutting.

Chipbreaker	Shape	Feature
SM		General-purpose chipbreaker with sharpness and good chip control. First choice for stainless steel.

STANDARD CUTTING CONDITIONS

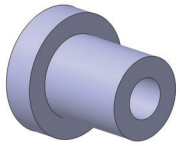
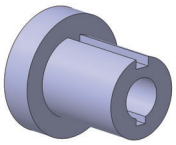
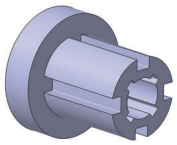
ISO	Operation	Work condition	Chipbreaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed *Vc* (m/min)
M	Finishing	Continuous	SF	T6120	0.5 - 2.5	0.08 - 0.45	140 - 240
		Continuous to light interrupted	SF	T6130	0.5 - 2.5	0.08 - 0.45	100 - 200
		Heavy interrupted	SF	AH630	0.5 - 2.5	0.08 - 0.45	90 - 190
	Medium cutting	Continuous	SM	T6120	1 - 4	0.2 - 0.5	140 - 240
		Continuous to light interrupted	SM	T6130	1 - 4	0.2 - 0.5	100 - 200
		Light interrupted	SM	AH630	1 - 4	0.2 - 0.5	90 - 190
		Heavy interrupted	SM	AH645	1 - 4	0.2 - 0.5	70 - 150
	Medium to heavy cutting	Continuous to light interrupted	SH	T6130	2 - 6	0.3 - 0.6	100 - 200
		Light interrupted	SH	AH630	2 - 6	0.3 - 0.6	90 - 190
		Heavy interrupted	SH	AH645	2 - 6	0.3 - 0.6	70 - 150

Stainless steels: SUS304、SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.

Selection System

SELECTION SYSTEM: NEGATIVE TYPE

M Stainless Steel

	Continuous	Light interrupted	Heavy interrupted
Finishing [a_p = 0.5 ~ 1.5 mm]	Basic: SF T6120 (B031) → Fracture: SF T6130 (B031)	Basic: SF T6130 (B031) → Fracture: SF AH630 (B031); Wear: SF T6120 (B031)	Basic: SF AH630 (B031) → Fracture: SF AH645 (B031); Wear: SF T6130 (B031)
Medium cutting [a_p = 1 ~ 4 mm]	Basic: SM T6130 (B035) → Wear: SM T6120 (B035); Chip control: SF T6130 (B031)	Basic: SM AH630 (B035) → Fracture: SM AH645 (B035); Wear: SM T6130 (B035)	Basic: SM AH645 (B035) → Fracture: SH AH645 (B037)
Medium to heavy cutting [a_p = 2 ~ 6 mm]	Basic: SH T6130 (B037) → Fracture: SH AH630 (B037); Wear: SH T6120 (B037); Chip control: SM T6130 (B035)	Basic: SH AH630 (B037) → Fracture: SH AH645 (B037); Wear: SH T6130 (B037)	Basic: SH AH645 (B037) → Wear: SH AH630 (B037)

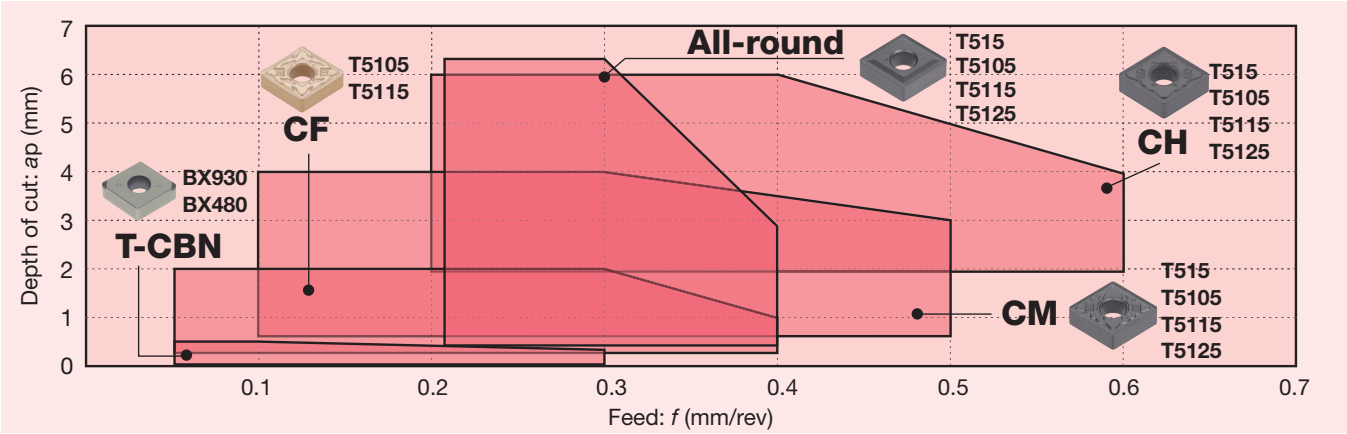
Please see the page B*** for the details.

Chipbreaker Guide

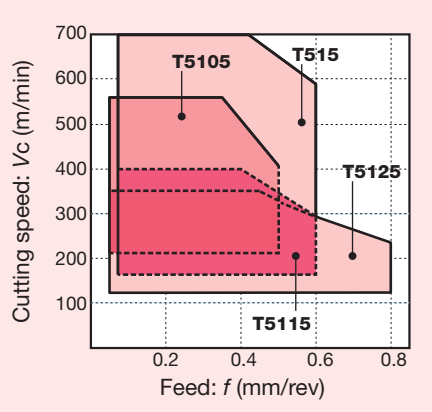
BASIC CHIPBREAKER: NEGATIVE TYPE

K Cast Iron

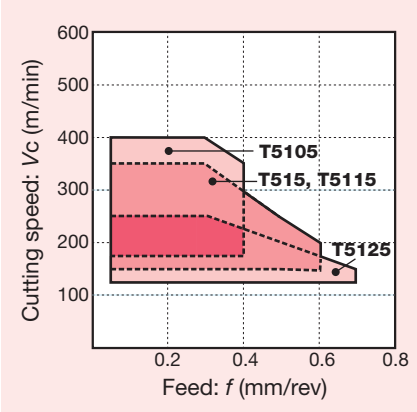
Chipbreaker System for Turning (Negative type)



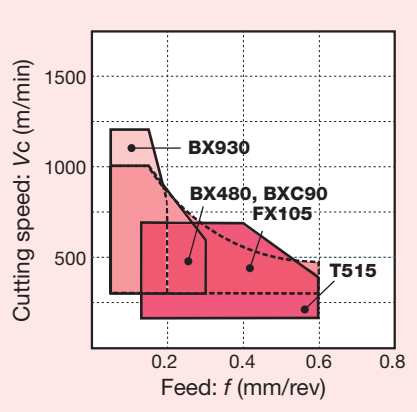
Grey cast iron

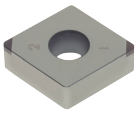
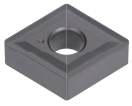


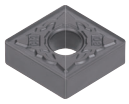
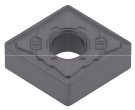
Ductile cast iron



Grey cast iron (high speed cutting)



Chipbreaker	Shape	Feature
No chip-breaker (T-CBN)		Excellent performance in high-speed finishing of cast iron with CBN sintered body on the cutting edge.
CF		Low cutting force chipbreaker for cast iron. Combined with an arc-shaped high rake angle (substantially 20°) drastically reduces cutting force and prevents the deformation and burr of thin-walled components.
All-round		Excellent performance in interrupted cutting. Highly reliable chipbreaker with great stability.

Chip-breaker	Shape	Feature
CM		First choice for cast iron. Versatile chipbreaker for a wide range of applications from continuous to interrupted cutting thanks to the positive land and wide chip pocket.
CH		Chipbreaker with reinforced cutting edge. The negative land and the land support provide stable insert seating and increase cutting edge strength, resulting in no fracture even in heavy cutting.

STANDARD CUTTING CONDITIONS

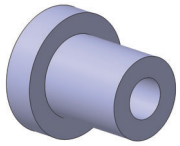
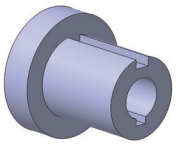
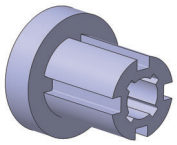
ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min) Grey cast iron	Cutting speed: *Vc* (m/min) Ductile cast iron
K	High speed cutting	Continuous	Without	BX930	0.05 - 0.5	0.05 - 0.2	300 - 1200	100 - 500
		Light interrupted	Without	BX480	0.05 - 0.5	0.05 - 0.3	300 - 1000	100 - 300
		Continuous	Without	BXC90	0.08 - 3	0.05 - 0.4	300 - 1000	100 - 300
	Finishing	Continuous	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
		Light interrupted	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
		Heavy interrupted	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
	Medium cutting	Continuous	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
		Light interrupted	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
		Heavy interrupted	CH	T515	3 - 6	0.2 - 0.6	150 - 700	140 - 370
	Medium to heavy cutting	Continuous	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
		Light interrupted	All-round	T515	1 - 5	0.1 - 0.5	150 - 700	140 - 370
		Heavy interrupted	CH	T515	3 - 6	0.2 - 0.6	150 - 700	140 - 370

Grey cast iron: FC250, etc. 250, etc. Ductile cast iron: FCD450, etc. 450-10S, etc.

Selection System

SELECTION SYSTEM: NEGATIVE TYPE

K Cast Iron

	Continuous	Light interrupted	Heavy interrupted
Finishing [a_p = 0.5 ~ 2 mm]	Basic: **All-round T515** (B033) Wear → **All-round T5105** (B033) Burr occurrence → **CF T5105** (B031)	Basic: **All-round T515** (B033) Wear → **All-round T5105** (B033) Fracture → **CH T515** (B037) Burr occurrence → **CF T5115** (B031)	Basic: **CH T515** (B037) Wear → **CH T5105** (B037) Fracture → **CH T5125** (B037) Burr occurrence → **All-round T515** (B033)
Medium cutting [a_p = 1 ~ 5 mm]	Basic: **All-round T515** (B033) Wear → **All-round T5105** (B033) Burr occurrence → **CF T5105** (B031)	Basic: **All-round T515** (B033) Wear → **All-round T5105** (B033) Fracture → **CH T515** (B037) Burr occurrence → **CF T5115** (B031)	Basic: **CH T515** (B037) Wear → **CH T5105** (B037) Fracture → **CH T5125** (B037) Burr occurrence → **All-round T515** (B033)
Medium to heavy cutting [a_p = 3 ~ 6 mm]	Basic: **All-round T515** (B033) Wear → **All-round T5105** (B033) Burr occurrence → **CF T5105** (B031)	Basic: **All-round T515** (B033) Wear → **All-round T5105** (B033) Fracture → **CH T515** (B037) Burr occurrence → **CF T5115** (B031)	Basic: **CH T515** (B037) Wear → **CH T5105** (B037) Fracture → **CH T5125** (B037) Burr occurrence → **All-round T515** (B033)

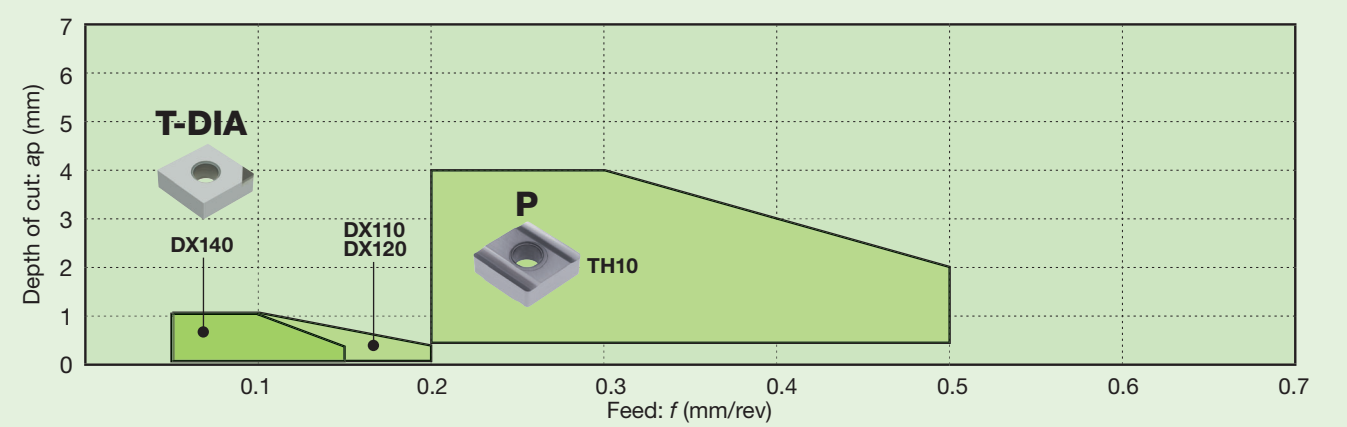
Please see the page B*** for the details.

Chipbreaker Guide

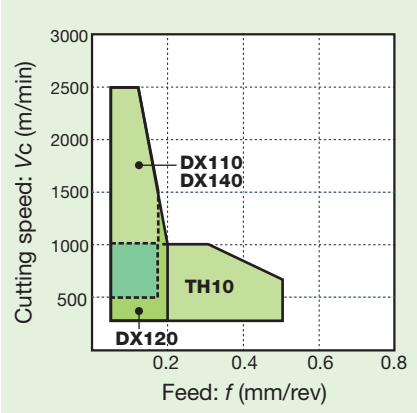
BASIC CHIPBREAKER: NEGATIVE TYPE

N Non-ferrous Metal

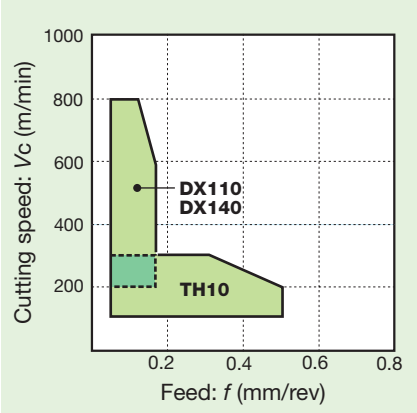
Chipbreaker System for Turning (Negative type)



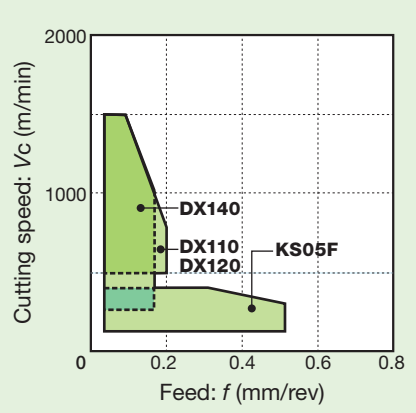
Aluminium alloy (Si < 12%)

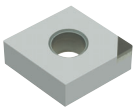
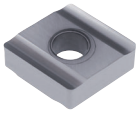


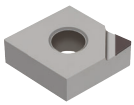
Aluminium alloy (Si ≥ 12%)



Copper alloy



Chipbreaker	Shape	Feature
No chip-breaker (T-DIA)		Excellent performance in high-speed finishing of non-ferrous metal, such as aluminium and copper alloy, with diamond sintered body on the cutting edge.
P		Excellent sharpness for non-ferrous metal, such as aluminium and copper alloy.

Chipbreaker	Shape	Feature
With chip-breaker (T-DIA)		Wide chipbreaker for excellent chip control.

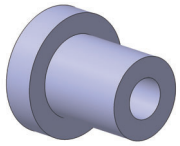
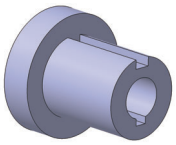
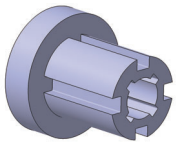
STANDARD CUTTING CONDITIONS

ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min) Aluminium alloy (Si < 12%)	Aluminium alloy (Si ≥ 12%)	Copper alloy
N	Precision finishing	Continuous	With	DX110	0.05 - 0.5	0.05 - 0.15	500 - 2500	400 - 800	500 - 1500
		Light interrupted	Without	DX140	0.05 - 0.5	0.05 - 0.20	300 - 2500	-	500 - 1500
	Finishing	Continuous	Without	DX140	0.05 - 2	0.05 - 0.15	500 - 2500	400 - 800	500 - 1500
		Light interrupted	Without	DX140	0.05 - 2	0.05 - 0.15	300 - 1800	400 - 600	400 - 1200
		Heavy interrupted	P	TH10	0.5 - 4	0.2 - 0.5	100 - 500	100 - 200	100 - 200
	Medium cutting	Continuous	P	TH10	0.5 - 4	0.2 - 0.5	100 - 1000	100 - 300	100 - 300
		Light interrupted	P	TH10	0.5 - 4	0.2 - 0.5	100 - 800	100 - 200	100 - 200
		Heavy interrupted	P	TH10	0.5 - 4	0.2 - 0.5	100 - 500	100 - 200	100 - 200

Selection System

SELECTION SYSTEM: NEGATIVE TYPE

N Non-ferrous Metal

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.5 mm]	Basic: With chipbreaker DX110 (B192, B194) → Wear → T-DIA DX140 (B193, B195, B196)	Basic: T-DIA DX140 (B193, B195, B196) → Surface quality → With chipbreaker T-DIA DX110 (B192, B194); → Wear → T-DIA DX160 (B193, B196)	
Finishing [a_p = 0.5 ~2 mm]	Basic: T-DIA DX140 (B193, B195, B196) → Surface quality → With chipbreaker T-DIA DX110 (B192, B194); → Wear → T-DIA DX160 (B193, B196)	Basic: T-DIA DX140 (B193, B195, B196) → Fracture → P TH10 (B035); → Wear → T-DIA DX160 (B193, B196)	Basic: P TH10 (B035)
Medium cutting [a_p = 1 ~ 4 mm]	Basic: P TH10 (B035) → Wear → T-DIA DX140 (B193, B195, B196)	Basic: P TH10 (B035) → Wear → T-DIA DX140 (B193, B195, B196)	Basic: P TH10 (B035)

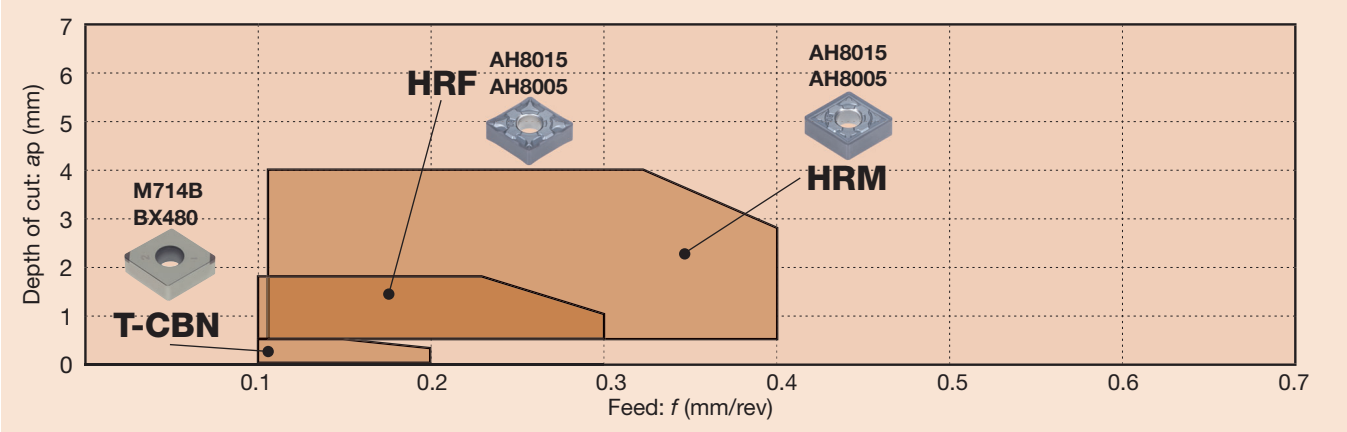
Please see the page B*** for the details.

Chipbreaker Guide

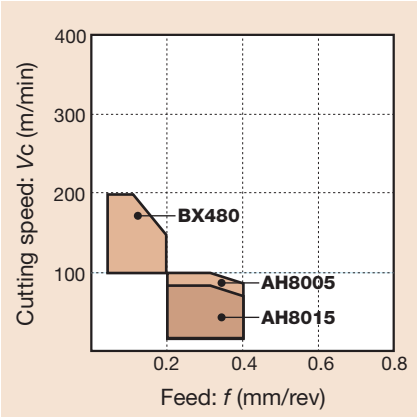
BASIC CHIPBREAKER: NEGATIVE TYPE

S Superalloys and titanium

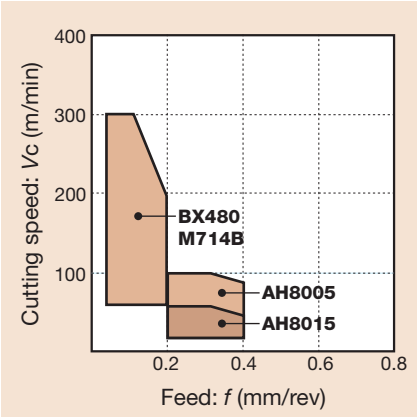
Chipbreaker System for Turning (Negative type)

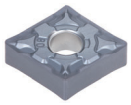
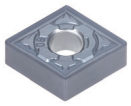


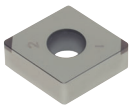
Titanium alloy



Ni-base alloy



Chipbreaker	Shape	Feature
HRF		Suitable for finishing superalloy. Unique protrusion improves chip control in cutting low depth.
HRM		First choice for heat-resistant alloy. The geometry optimized for a wide range of depths of cut.

Chipbreaker	Shape	Feature
No chip-breaker (T-CBN)		Excellent performance in finishing of heat-resistant alloy and titanium alloy with CBN sintered body on the cutting edge.

STANDARD CUTTING CONDITIONS

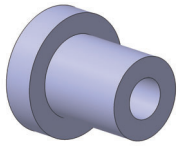
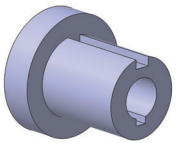
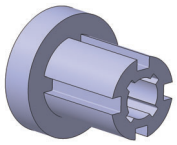
ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min)	
							Titanium alloy	Ni-base alloy
S	Precision finishing	Continuous	Without	BX480	0.1 - 0.5	0.05 - 0.2	100 - 200	70 - 300
			Without	M714B	0.1 - 0.5	0.05 - 0.2	-	70 - 400
		Light interrupted	Without	BX480	0.1 - 0.5	0.05 - 0.2	100 - 200	-
	Finishing to medium cutting	Continuous	HRF	AH8005	0.5 - 1.5	0.05 - 0.25	20 - 100	20 - 100
		Light interrupted	HRF	AH8015	0.5 - 1.5	0.05 - 0.25	20 - 80	20 - 50
		Heavy interrupted	HRF	AH8015	0.5 - 1.5	0.05 - 0.25	10 - 60	10 - 40
	Medium cutting	Continuous	HRM	AH8005	0.5 - 4	0.1 - 0.4	20 - 100	20 - 100
		Light interrupted	HRM	AH8015	0.5 - 4	0.1 - 0.4	20 - 80	20 - 50
		Heavy interrupted	HRM	AH8015	0.5 - 4	0.1 - 0.4	10 - 60	10 - 40

Ni-base alloy: INCONEL718, etc. Titanium alloy: Ti-6Al-4V, etc.

Selection System

SELECTION SYSTEM: NEGATIVE TYPE

S Superalloys and titanium

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.5 mm]	Basic: T-CBN BX470 M714B (B170 - B190)	Basic: T-CBN BX470 (B170 - B190) → Fracture → No chipbreaker TH10 (B038)	
Finishing [a_p = 0.5 ~ 1.5 mm]	Basic: HRF AH8005 (B031) → Fracture → HRF AH8015 (B031); → Chip control → 28 AH8005 (B034)	Basic: HRF AH8015 (B031) → Fracture → HRM AH8015 (B035); → Wear → HRF AH8005 (B031); → Chip control → 28 AH8015 (B034)	Basic: HRF AH8015 (B031) → Fracture → HRM AH8015 (B035); → Wear → HRF AH8005 (B031)
Medium cutting [a_p = 0.5 ~ 4 mm]	Basic: HRM AH8005 (B035) → Fracture → HRM AH8015 (B035); → Burr occurrence → HRF AH8015 (B031); → Chip control → 28 AH8005 (B034)	Basic: HRM AH8015 (B035) → Fracture → SM AH630 (B035); → Wear → HRM AH8005 (B035); → Chip control → 28 AH8015 (B034)	Basic: HRM AH8015 (B035) → Fracture → SM AH630 (B035); → Wear → HRF AH8005 (B031)

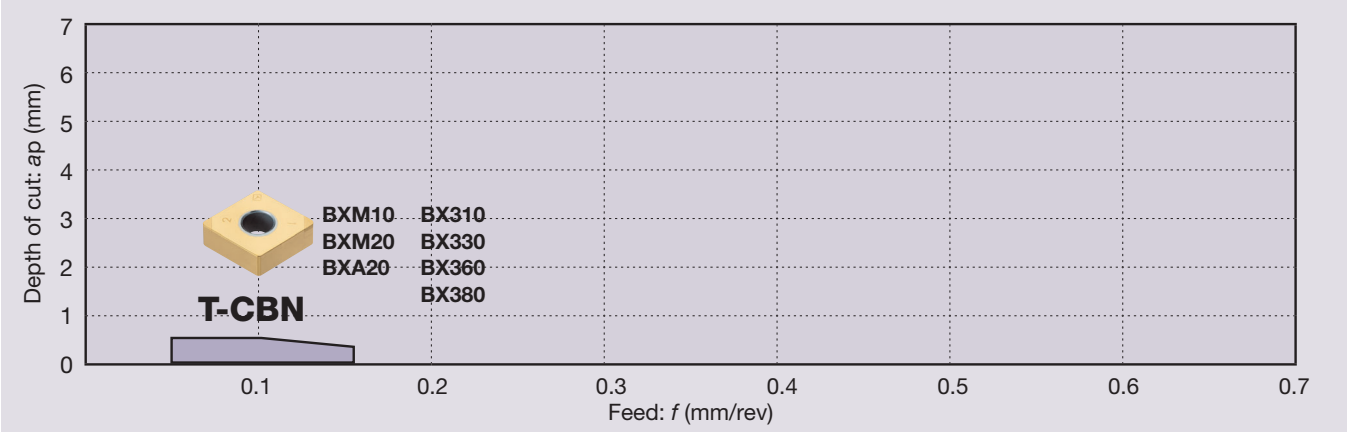
Please see the page B*** for the details.

Chipbreaker Guide

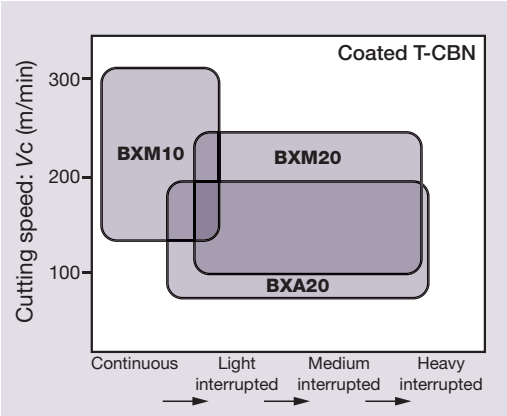
BASIC CHIPBREAKER: NEGATIVE TYPE

H Hard Materials

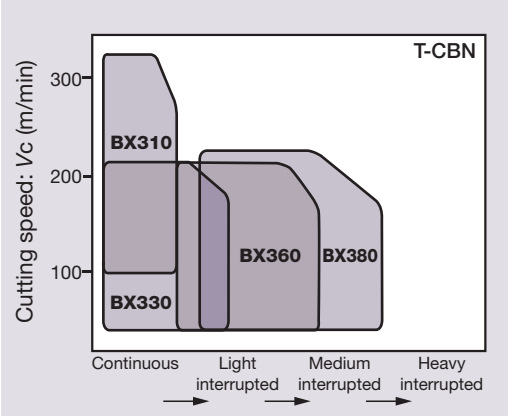
Chipbreaker System for Turning (Negative type)

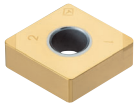


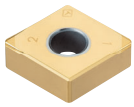
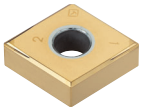
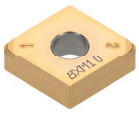
Coated T-CBN



T-CBN



Chipbreaker	Shape	Feature
No chip-breaker (T-CBN)		Excellent performance in finishing of hard material with CBN sintered body on the cutting edge.

Chipbreaker	Shape	Feature
HF		Excellent chip control in removing carburized layer at small depth of cut.
HM		Excellent chip control in removing carburized layer at large depth of cut.
HP		Excellent chip control in precision finishing.

STANDARD CUTTING CONDITIONS

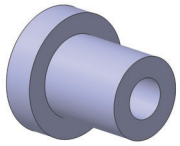
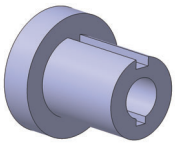
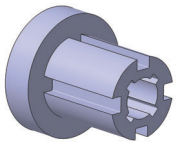
ISO	Operation	Work condition	Chipbreaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed *Vc* (m/min)
H	Precision finishing	Continuous to light interrupted	HP	BXM10 BXA20	0.05 - 0.2	0.03 - 0.18	150 - 350
	Finishing	Continuous to heavy interrupted	Without	BXM10 BXM20 BXA20	0.05 - 0.5	0.05 - 0.25	70 - 220
	Removing of carburized layer	Continuous	HF	BXM20	0.2 - 0.75	0.05 - 0.2	70 - 200
		Continuous	HM	BXM20 BXA20	0.5 - 1	0.05 - 0.2	70 - 200

Hardened steels, Pre-hardened steels: SKD11, SKD61, etc. X153CrMoV12, X40CrMoV5-1, etc.

Selection System

SELECTION SYSTEM: NEGATIVE TYPE

H Hard Materials

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.2 mm]	Basic: **T-CBN HP BXM10** (B171 - B179)	Basic: **T-CBN BXA20** (B170 - B179) → Fracture: **-H BXM20** (B170 - B179); → High-speed wear: **T-CBN BXM10** (B170 - B179)	
Finishing [a_p = ~ 0.5 mm]	Basic: **T-CBN BXM10** (B170 - B179)	Basic: **T-CBN BXA20** (B170 - B179) → Fracture: **-H BXM20** (B170 - B179); → High-speed wear: **T-CBN BXM10** (B170 - B179)	Basic: **T-CBN BXM20** (B170 - B179) → Fracture: **-H BXM20** (B170 - B179)

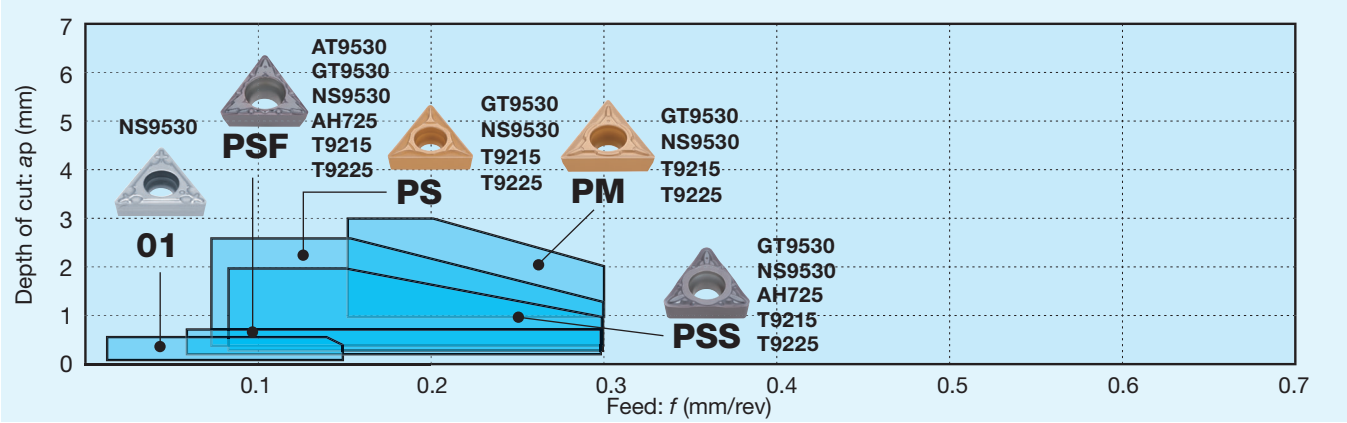
Please see the page B*** for the details.

Chipbreaker Guide

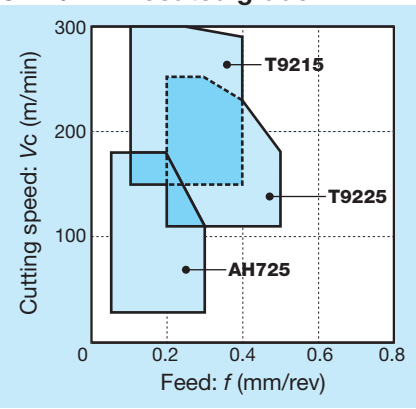
BASIC CHIPBREAKER: POSITIVE TYPE

P Steel

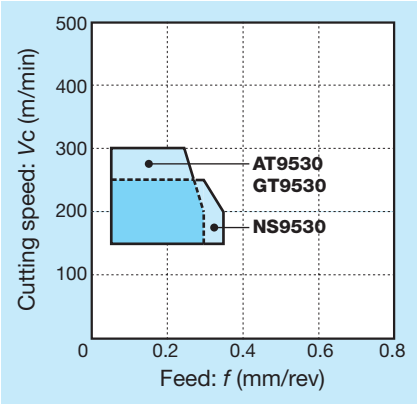
Chipbreaker System for Turning (Positive Type)

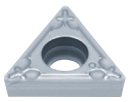
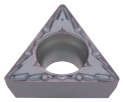
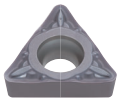


CVD / PVD coated grade



Coated cermet / Cermet



Chipbreaker	Shape	Feature
01		Excellent chip control in machining very small depth of cut thanks to the sharp cutting edge and protrusion.
PSF		Low cutting force and high wear resistance. First choice for finishing. Excellent chip control in finishing prevents chip entanglement in internal machining.
PSS		3D chipbreaker for finishing to medium cutting with excellent chip control and low cutting force.

Chipbreaker	Shape	Feature
PS		3D chipbreaker for finishing to medium cutting with excellent chip control and sharpness. M-class insert delivers cost reduction and highly efficient boring in a wide range of applications.
PM		First choice for medium cutting with excellent sharpness and good chip control. Delivers stable machining of stainless steel.

STANDARD CUTTING CONDITIONS

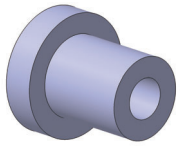
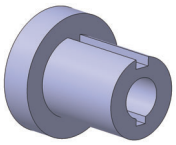
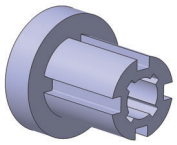
ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min) Low carbon steels, Alloy steels	Medium carbon steels, Alloy steels	High carbon steels, Alloy steels
P	Precision finishing	Continuous	01	NS9530	0.05 - 0.5	0.03 - 0.15	150 - 250	80 - 220	80 - 180
		Light interrupted	01	NS9530	0.05 - 0.5	0.03 - 0.15	150 - 250	80 - 220	80 - 180
	Finishing	Continuous	PSS	NS9530	0.1 - 0.5	0.05 - 0.3	150 - 250	80 - 220	80 - 180
		Light interrupted	PSS	NS9530	0.1 - 0.5	0.05 - 0.3	150 - 250	80 - 220	80 - 180
		Heavy interrupted	PSS	NS9530	0.1 - 0.5	0.05 - 0.3	150 - 250	80 - 220	80 - 180
	Finishing to light cutting	Continuous	PS	NS9530	0.3 - 2	0.08 - 0.3	150 - 250	80 - 220	80 - 180
		Light interrupted	PS	NS9530	0.3 - 2	0.08 - 0.3	150 - 250	80 - 220	80 - 180
		Heavy interrupted	PS	NS9530	0.3 - 2	0.08 - 0.3	150 - 250	80 - 220	80 - 180
	Finishing to Medium cutting	Continuous to Heavy interrupted	PS	T9215	0.5 - 2.5	0.08 - 0.3	120 - 350	100 - 350	80 - 250
			PS	T9225	0.5 - 2.5	0.08 - 0.3	100 - 300	80 - 300	80 - 250
	Medium cutting	Continuous to Heavy interrupted	PM	-	1 - 3	0.15 - 0.3	150	100 - 200	80 - 180
			PM	-	1 - 3	0.15 - 0.3	120	80 - 180	80 - 120

Low carbon steels, Alloy steels: S10C, SCM415, SS400, SCr420H, etc. C10, 18CrMo4, E275A, 20Cr4, etc. Medium carbon steels, Alloy steels: S45C, SCM440, etc. C45, 42CrMo4, etc. Hi carbon steels, Alloy steels: SNCM439, etc. 41CrNiMo2, etc.

Selection System

SELECTION SYSTEM: POSITIVE TYPE

P Steel

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.5 mm]	Basic: 01 NS9530 (B040, B045)	Basic: 01 NS9530 (B040, B045) → Fracture: PSF NS9530 (B040, B045, B049)	
Finishing [a_p = 0.1 ~ 0.5 mm]	Basic: PSS NS9530 (B040, B045, B049) → Wear: PSS GT9530 (B040, B045, B049); Fracture: PS NS9530 (B040, B045, B049); Chip control: PSF NS9530 (B040, B045, B049)	Basic: PSS NS9530 (B040, B045, B049) → Wear: PSS GT9530 (B040, B045, B049); Fracture: PS NS9530 (B040, B045, B049); Chip control: PSF NS9530 (B040, B045, B049)	Basic: PSS NS9530 (B040, B045, B049) → Wear: PSS GT9530 (B040, B045, B049); Fracture: PS NS9530 (B040, B045, B049); Chip control: PSF NS9530 (B040, B045, B049)
Finishing to medium cutting [a_p = 0.5 ~ 2.5 mm]	Basic: PS T9215 (B040, B045, B049) → Fracture: PS T9215 (B040, B045, B049); Wear: PS NS9530 (B040, B045, B049)	Basic: PS T9215 (B040, B045, B049) → Fracture: PS T9215 (B040, B045, B049); Wear: PS NS9530 (B040, B045, B049)	Basic: PS T9215 (B040, B045, B049) → Fracture: PM T9215 (B042, B046); Chip control: TSF T9215 (B040, B045)
Medium cutting [a_p = 1 ~ 3 mm]	Basic: PM T9215 (B042, B046) → Wear: PM NS9530 (B042, B046)	Basic: PM T9215 (B042, B046) → Fracture: PM T9215 (B042, B046)	Basic: PM T9215 (B042, B046) → Chip control: TM T9215 (B041, B045)

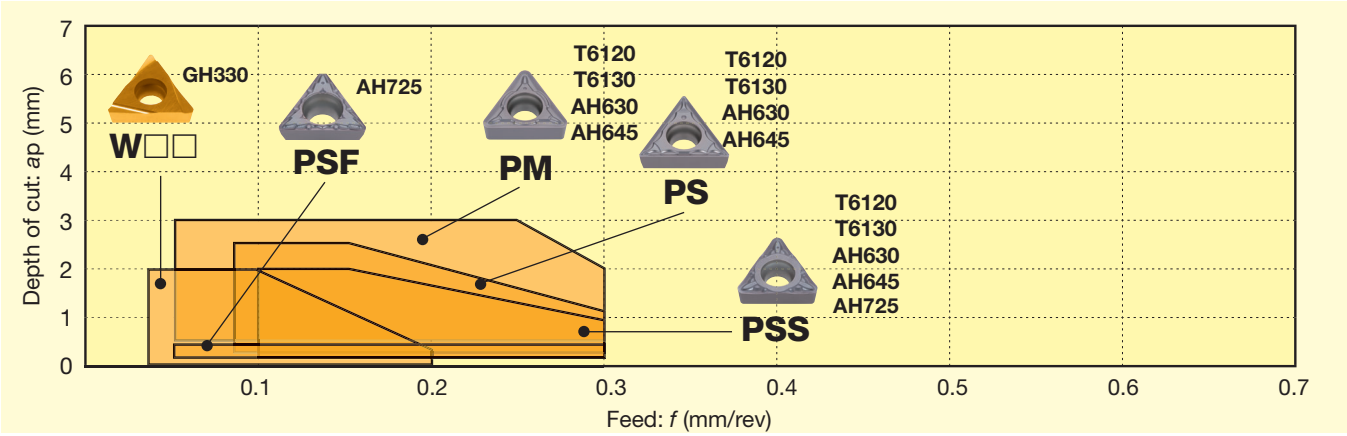
Please find the details on the pages: B***/7° relief angle, B***/11° relief angle, B***/5° relief angle.

Chipbreaker Guide

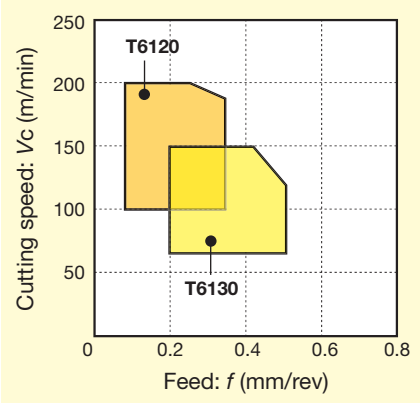
BASIC CHIPBREAKER: POSITIVE TYPE

M Stainless Steel

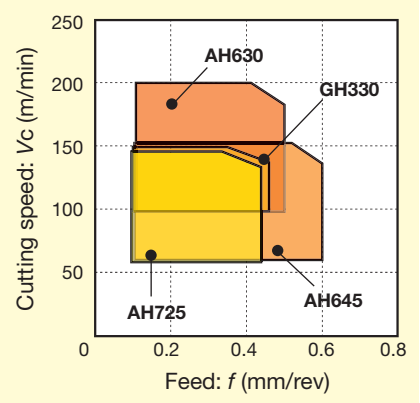
Chipbreaker System for Turning (Positive Type)

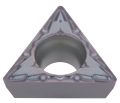


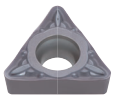
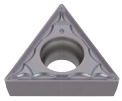
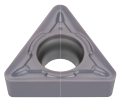
CVD coated grade



PVD coated grade



Chipbreaker	Shape	Feature
W□□		Designed to control the direction of chip flow in precision finishing. Smooth chip evacuation in boring.
PSF		Low cutting force and high wear resistance. First choice for finishing. Excellent chip control in finishing prevents chip entanglement in internal machining.

Chipbreaker	Shape	Feature
PSS		3D chipbreaker for finishing to medium cutting with excellent chip control and low cutting force.
PS		3D chipbreaker for finishing to medium cutting with excellent chip control and sharpness. M-class insert delivers cost reduction and highly efficient boring in a wide range of applications.
PM		First choice for medium cutting with excellent sharpness and good chip control. Delivers stable machining of stainless steel.

STANDARD CUTTING CONDITIONS

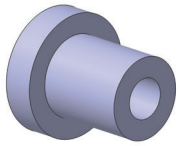
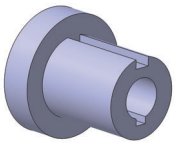
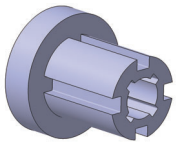
ISO	Operation	Work condition	Chipbreaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed *Vc* (m/min)
M	Precision finishing	Continuous	W□□	GH330	0.05 - 2.0	0.03 - 0.2	100 - 150
	Finishing	Continuous	PSF	AH725	0.1 - 0.5	0.05 - 0.3	50 - 150
		Light interrupted	PSF	AH725	0.1 - 0.5	0.05 - 0.3	50 - 150
		Heavy interrupted	PSF	AH725	0.1 - 0.5	0.05 - 0.3	50 - 120
	Finishing to light cutting	Continuous	PSS	AH630	0.3 - 2	0.08 - 0.3	90 - 190
		Light interrupted	PSS	AH630	0.3 - 2	0.08 - 0.3	90 - 190
		Heavy interrupted	PSS	AH630	0.3 - 2	0.08 - 0.3	90 - 190
	Finishing to medium cutting	Continuous	PS	T6130	0.5 - 2.5	0.08 - 0.3	100 - 200
		Light interrupted	PS	AH630	0.5 - 2.5	0.08 - 0.3	90 - 190
		Heavy interrupted	PS	AH630	0.5 - 2.5	0.08 - 0.3	90 - 190
	Medium cutting	Continuous	PM	T6130	1 - 3*	0.15 - 0.3	100 - 200
		Light interrupted	PM	AH630	1 - 3*	0.15 - 0.3	90 - 190
		Heavy interrupted	PM	AH630	1 - 3*	0.15 - 0.3	90 - 190

* For CCMT0602 and DCMT0702 type inserts, *ap* = 0.5 - 2.5
Stainless steels: SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.

Selection System

SELECTION SYSTEM: POSITIVE TYPE

M Stainless Steel

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.5 mm]	Basic: W□□ GH330 (B041, B046, B049)	Basic: W□□ GH330 (B041, B046, B049)	
Finishing [a_p = 0.3 ~ 1.5 mm]	Basic: PSF AH725 (B040, B045, B049) → Wear: PSS T6130 (B040, B045, B049)	Basic: PSF AH725 (B040, B045, B049) → Fracture: PSS AH630 (B040, B045, B049); Wear: PSS T6130 (B040, B045, B049)	Basic: PSF AH725 (B040, B045, B049) → Fracture: PSS AH630 (B040, B045, B049)
Finishing to medium cutting [a_p = 0.5 ~ 2.5 mm]	Basic: PSS AH630 (B040, B045, B049) → Wear: PS T6130 (B040, B045, B049)	Basic: PS AH630 (B040, B045, B049) → Fracture: PM AH645 (B042, B046); Wear: PS T6130 (B040, B045, B049)	Basic: PS AH630 (B040, B045, B049) → Fracture: PM AH645 (B042, B046); Wear: PS T6130 (B040, B045, B049)
Medium cutting [a_p = 1 ~ 3 mm]	Basic: PM T6130 (B042, B046)	Basic: PM AH630 (B042, B046) → Fracture: PM AH645 (B042, B046); Wear: PM T6130 (B042, B046)	Basic: PM AH630 (B042, B046) → Fracture: PM AH645 (B042, B046)

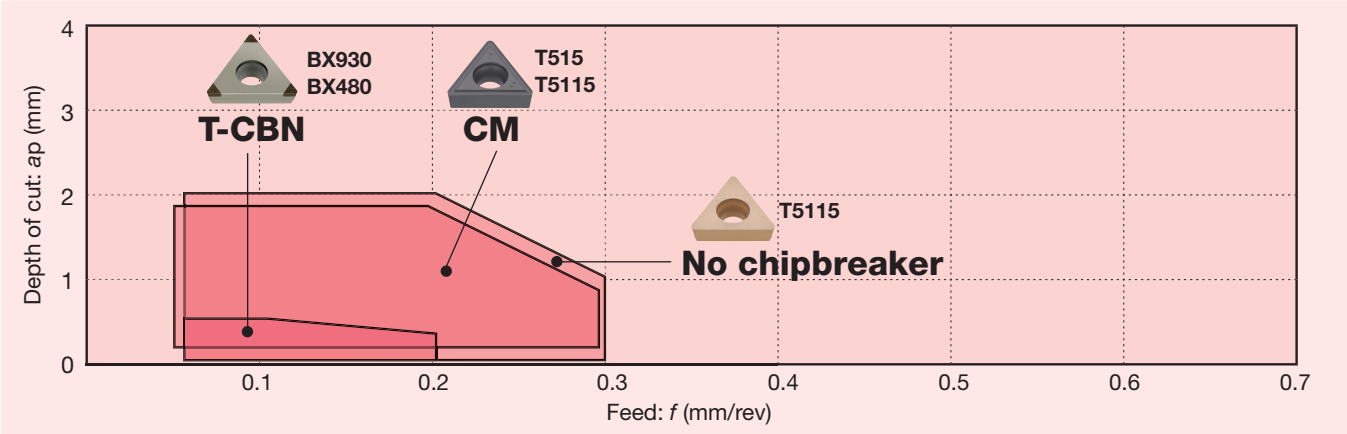
Please find the details on the pages: B***/7° relief angle, B***/11° relief angle, B***/5° relief angle.

Chipbreaker Guide

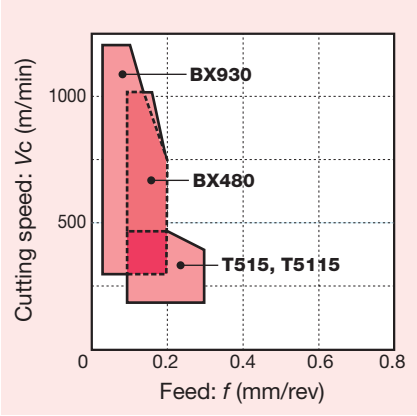
BASIC CHIPBREAKER: POSITIVE TYPE

K Cast Iron

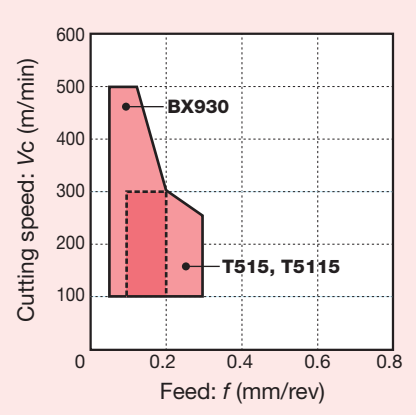
Chipbreaker System for Turning (Positive Type)

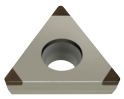
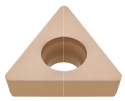


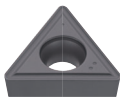
Grey cast iron



Ductile cast iron



Chipbreaker	Shape	Feature
No chip-breaker (T-CBN)		Excellent performance in high-speed finishing of cast iron with CBN sintered body on the cutting edge.
No chip-breaker		Suitable for a wide range of applications from finishing to roughing cast iron. Excellent performance with high cutting edge strength.

Chipbreaker	Shape	Feature
CM		Highly versatile all-round chipbreaker with low cutting force. Suitable for finishing to medium cutting.

STANDARD CUTTING CONDITIONS

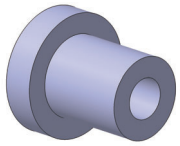
ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min)	
							Grey cast iron	Ductile cast iron
K	Precision finishing	Continuous	Without	BX930	0.05 - 0.5	0.05 - 0.2	300 - 1200	100 - 500
		Light interrupted	Without	BX480	0.05 - 0.5	0.05 - 0.2	300 - 800	100 - 300
		Light interrupted	Without	BX470	0.05 - 0.5	0.05 - 0.2	300 - 800	100 - 300
	Finishing	Continuous	CM	T515	0.05 - 2	0.05 - 0.3	150 - 700	150 - 300
		Heavy interrupted	CM	T515	0.05 - 2	0.05 - 0.3	100 - 200	100 - 200
	Medium cutting	Light interrupted	CM	T515	0.05 - 2	0.05 - 0.3	100 - 300	100 - 250

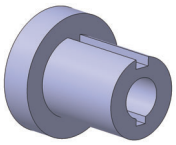
Grey cast iron: FC250, etc. 250, etc.
Ductile cast iron: FCD450, etc. 450-10S, etc.

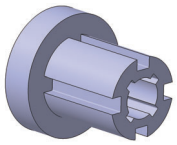
Selection System

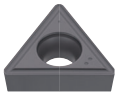
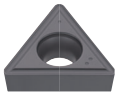
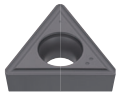
SELECTION SYSTEM: POSITIVE TYPE

K Cast Iron







	Continuous	Light interrupted	Heavy interrupted
Finishing to Medium cutting [a_p = 0.5 ~ 3 mm]	Basic  **CM T515** B042, B046, B049 Wear → **T-CBN BX930** B184 -	Basic  **CM T515** B042, B046, B049	Basic  **CM T515** B042, B046, B049

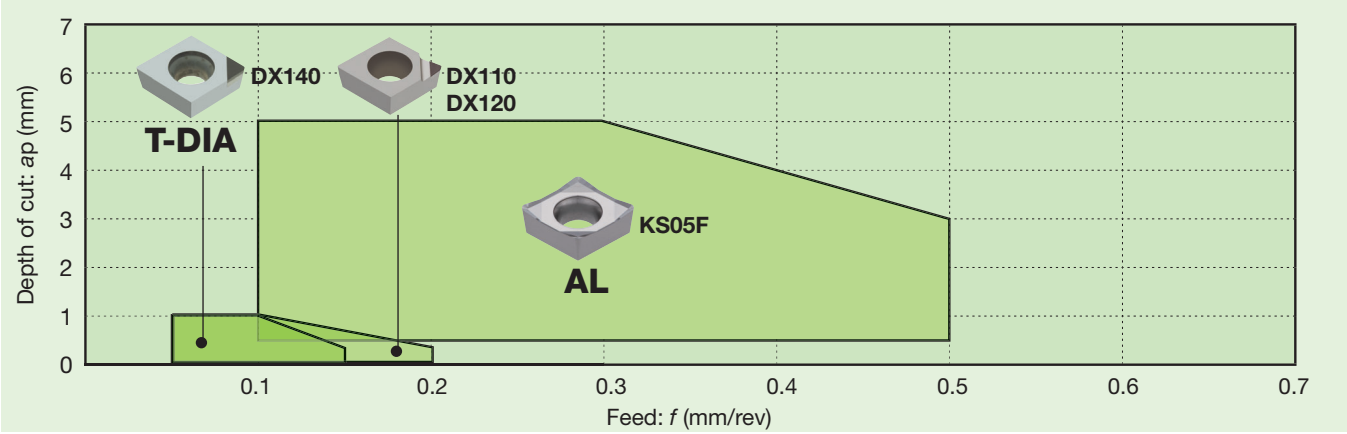
Please find the details on the pages: B***/7° relief angle, B***/11° relief angle, B***/5° relief angle.

Chipbreaker Guide

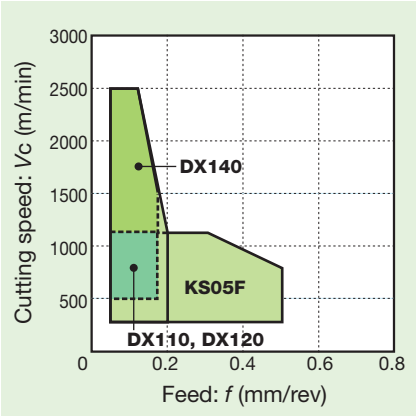
BASIC CHIPBREAKER: POSITIVE TYPE

N Non-ferrous Metal

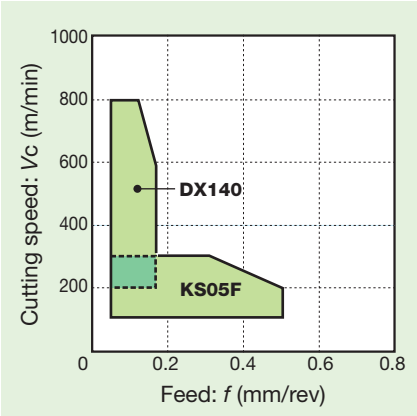
Chipbreaker System for Turning (Positive Type)



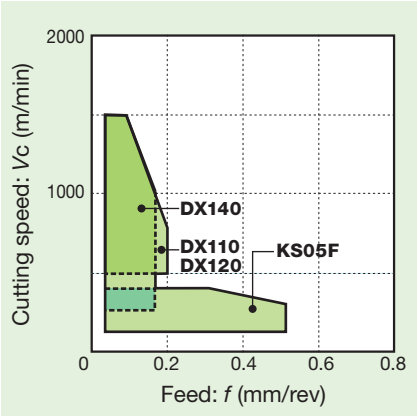
Aluminium alloy (Si < 12%)

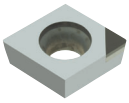
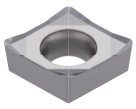


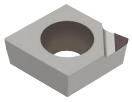
Aluminium alloy (Si ≥ 12%)



Copper alloy



Chipbreaker	Shape	Feature
No chip-breaker (T-DIA)		Excellent performance in high-speed finishing of non-ferrous metal with diamond sintered body on the cutting edge.
AL		Large rake angle and sharp cutting edge reduce cutting force. Lapped rake face prevents adhesion. Large inclination on the cutting edge (wavy cutting edge) for more stable chip control.

Chipbreaker	Shape	Feature
With chip-breaker (T-DIA)		Wide chipbreaker for smooth chip evacuation. Large rake face reduces cutting force. DIA on the cutting edge delivers high-speed machining and long tool life.

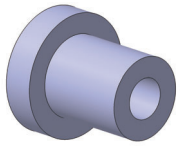
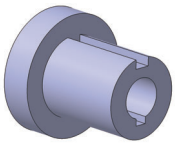
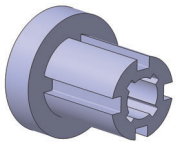
STANDARD CUTTING CONDITIONS

ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min) Aluminium alloy (Si < 12%)	Aluminium alloy (Si ≥ 12%)	Copper alloy
N	Precision finishing	Continuous	With	DX110	0.05 - 1	0.05 - 0.15	500 - 2500	400 - 800	500 - 1500
		Light interrupted	Without	DX140	0.05 - 1	0.05 - 0.2	300 - 2500	-	500 - 1500
	Finishing	Continuous	Without	DX140	0.05 - 1	0.05 - 0.15	500 - 2500	400 - 800	500 - 1500
		Light interrupted	Without	DX140	0.05 - 1	0.05 - 0.15	300 - 1800	400 - 600	400 - 1200
		Heavy interrupted	AL	KS05F	0.5 - 5	0.1 - 0.5	100 - 600	100 - 200	-
	Medium cutting	Continuous	AL	KS05F	0.5 - 5	0.1 - 0.5	100 - 1200	100 - 300	100 - 300
		Light interrupted	AL	KS05F	0.5 - 5	0.1 - 0.5	100 - 900	100 - 200	100 - 200
		Heavy interrupted	AL	KS05F	0.5 - 5	0.1 - 0.5	100 - 600	100 - 200	-

Selection System

SELECTION SYSTEM: POSITIVE TYPE

N Non-ferrous Metal

	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.5 mm]	Basic: With chipbreaker DX110 (B192, B194) → Wear → T-DIA DX140 (B193, B195, B196)	Basic: With chipbreaker DX110 (B192, B194) → Wear → T-DIA DX140 (B193, B195, B196)	
Finishing [a_p = 0.5 ~ 2 mm]	Basic: T-DIA DX140 (B193, B195, B196) → Wear → T-DIA DX160 (B193, B196); → Chip control → With chipbreaker T-DIA DX110 (B192, B194)	Basic: T-DIA DX140 (B193, B195, B196) → Fracture → AL KS05F (B042); → Wear → T-DIA DX160 (B193, B196)	Basic: AL KS05F (B042)
Medium cutting [a_p = 1 ~ 5 mm]	Basic: AL KS05F (B042) → Wear → With chipbreaker T-DIA DX120 (B192, B194 - B193)	Basic: AL KS05F (B042) → Wear → T-DIA DX140 (B193, B195, B196)	Basic: AL KS05F (B042)

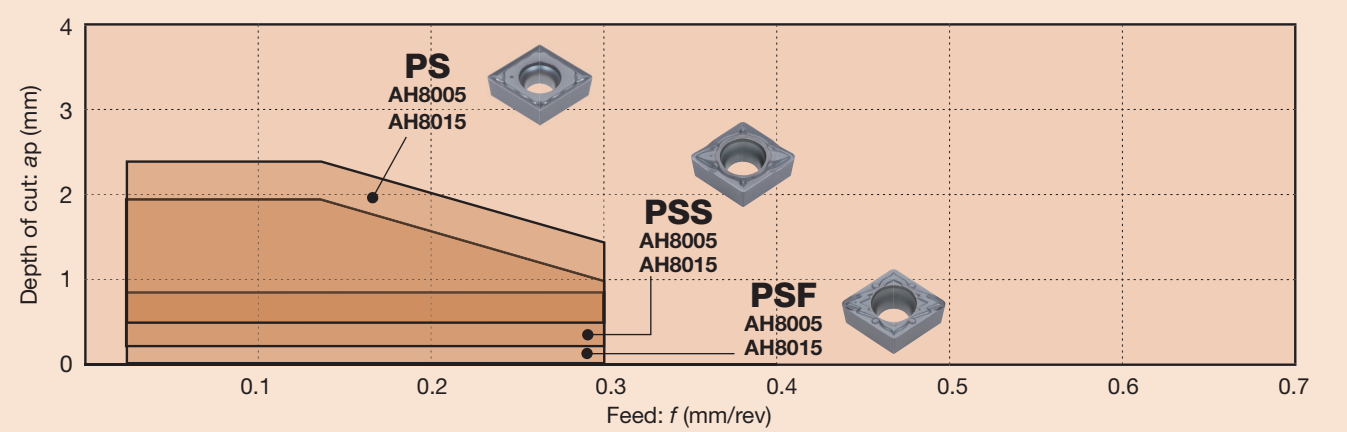
Please find the details on the pages: B***/7° relief angle, B***/11° relief angle, B***/5° relief angle.

Chipbreaker Guide

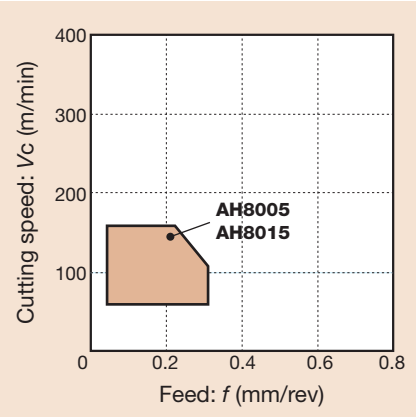
BASIC CHIPBREAKER: POSITIVE TYPE

S Superalloys and titanium

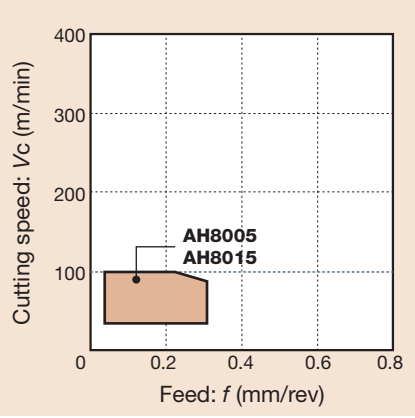
Chipbreaker System for Turning (Positive Type)

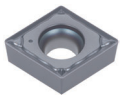


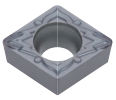
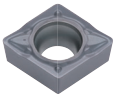
Titanium alloy



Ni-base alloy



Chipbreaker	Shape	Feature
PS		3D chipbreaker for finishing to medium cutting with excellent chip control and sharpness. M-class insert delivers cost reduction and highly efficient boring in a wide range of applications.

Chipbreaker	Shape	Feature
PSF		Low cutting force and high wear resistance. First choice for finishing. Excellent chip control in finishing prevents chip entanglement in internal machining.
PSS		3D chipbreaker for finishing to medium cutting with excellent chip control and low cutting force.

STANDARD CUTTING CONDITIONS

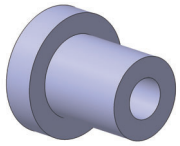
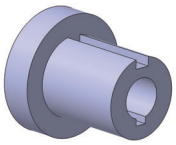
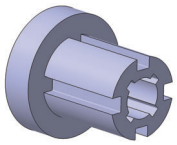
ISO	Operation	Work condition	Chip-breaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed: *Vc* (m/min)	
							Titanium alloy	Ni-base alloy
S	Finishing	Continuous	PSS	AH8015	0.3 - 2	0.02 - 0.3	20 - 150	20 - 100
		Light interrupted	PSS	AH8015	0.3 - 2	0.02 - 0.3	20 - 150	20 - 100
	Finishing to medium cutting	Continuous	PS	AH8015	0.5 - 2.5	0.02 - 0.3	20 - 150	20 - 100
		Light interrupted	PS	AH8015	0.5 - 2.5	0.02 - 0.3	20 - 150	20 - 100

Ni-base alloy: INCONEL718, etc.
Titanium alloy: Ti-6Al-4V, etc.

Selection System

SELECTION SYSTEM: POSITIVE TYPE

S Superalloys and titanium

	Continuous	Light interrupted	Heavy interrupted
Finishing [a_p = 0.3 ~ 2 mm]	Basic: **PSS AH8015** (B040, B045, B049) → Wear: **PSS AH8005** (B042, B045, B049)	Basic: **PSS AH8015** (B040, B045, B049) → Wear: **PSS AH8005** (B040, B045, B049); Fracture: **PS AH8015** (B040, B045, B049)	
Finishing to medium cutting [a_p = 0.5 ~ 2.5 mm]	Basic: **PS AH8015** (B040, B045, B049) → Wear: **PSS AH8005** (B040, B045, B049)	Basic: **PS AH8015** (B040, B045, B049) → Fracture: **All-round AH8015** (B042, B047)	Basic: **PS AH8015** (B040, B045, B049) → Fracture: **All-round AH8015** (B042, B047)

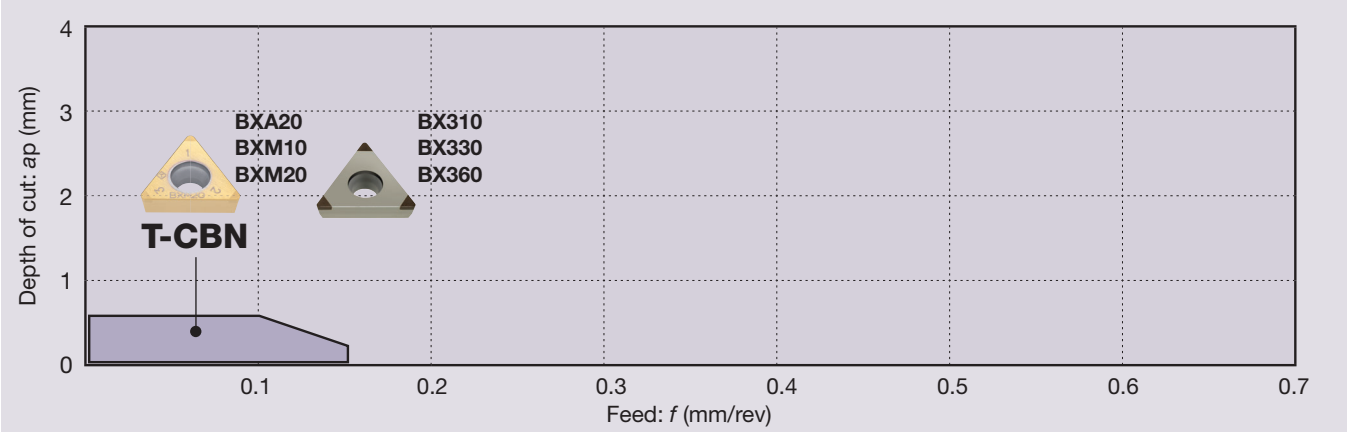
Please find the details on the pages: B***/7° relief angle, B***/11° relief angle, B***/5° relief angle.

Chipbreaker Guide

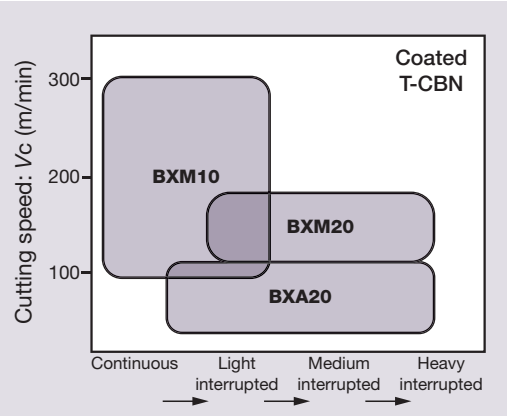
BASIC CHIPBREAKER: POSITIVE TYPE

H Hard Materials

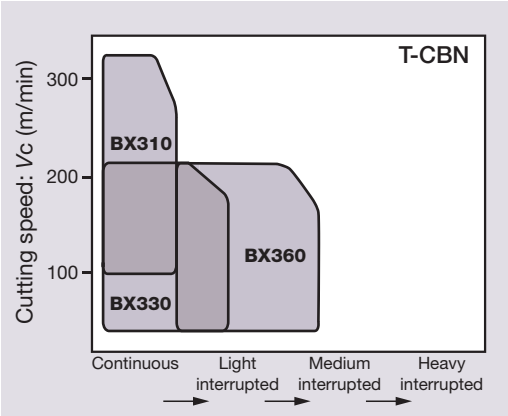
Chipbreaker System for Turning (Positive Type)



Coated T-CBN



T-CBN



Chipbreaker	Shape	Feature
No chip-breaker (T-CBN)		Excellent performance in high-speed finishing of hard material with CBN sintered body on the cutting edge.

Chipbreaker	Shape	Feature
HP (T-CBN)		Excellent chip control in precision finishing.

STANDARD CUTTING CONDITIONS

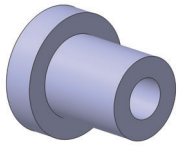
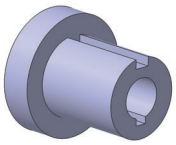
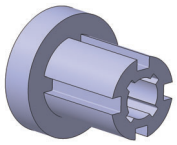
ISO	Operation	Work condition	Chipbreaker	Grade	Depth of cut *ap* (mm)	Feed *f* (mm/rev)	Cutting speed *Vc* (m/min)
H	Precision finishing	Continuous	HP	BXM10	0.05 - 0.2	0.03 - 0.15	150 - 350
		Light interrupted	Without	BXM20 BXA20	0.05 - 0.2	0.03 - 0.15	70 - 220
	Finishing	Continuous to heavy interrupted	Without	BXM20 BXA20	0.07 - 0.5	0.05 - 0.3	70 - 220

Hardened steels, Pre-hardened steels: SKD11, SKD61, etc. X153CrMoV12, X40CrMoV5-1, etc.

Selection System

SELECTION SYSTEM: POSITIVE TYPE

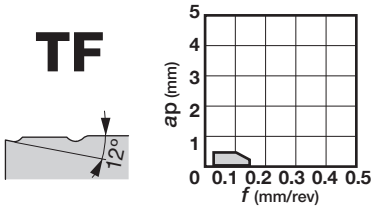
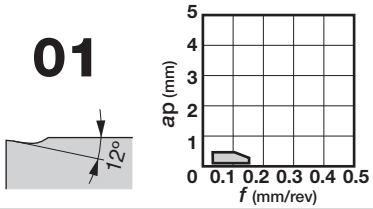
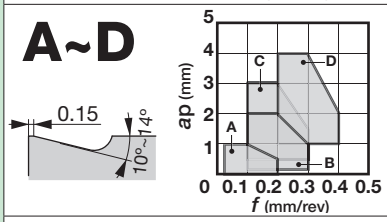
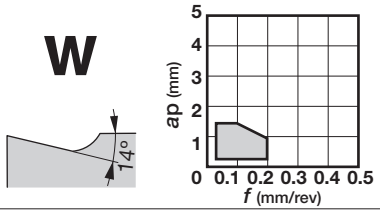
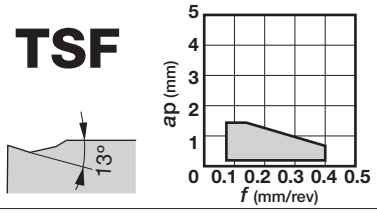
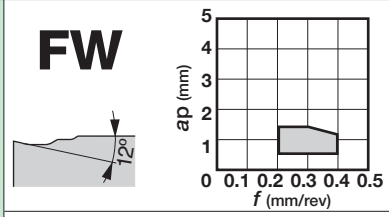
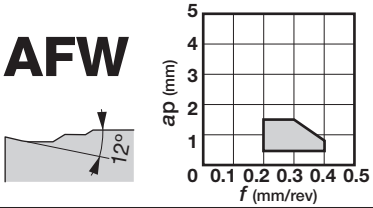
H Hard Materials

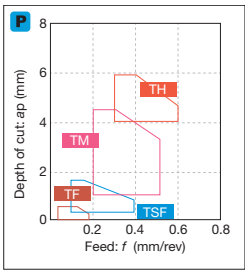
	Continuous	Light interrupted	Heavy interrupted
Precision finishing [a_p = ~ 0.3 mm]	Basic T-CBN HP BXM10 B180 - B190	Basic T-CBN BXM10 B180 - B190 Fracture → T-CBN BXA20 B180 -	
Finishing [a_p = ~ 0.5 mm]	Basic T-CBN BXM10 B180 - B190	Basic T-CBN BXM10 B180 - B190 Fracture → T-CBN BXA20 B180 - B190	Basic T-CBN BXM20 B180 - B190 Fracture → T-CBN BXA20 B180 - B190

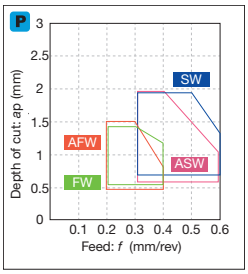
Please find the details on the pages: B***/7° relief angle, B***/11° relief angle, B***/5° relief angle.

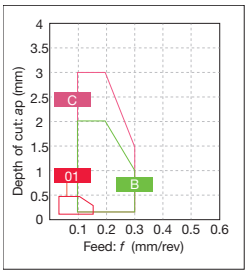
Chipbreaker Overview

Application	Negative type with hole		C 80°	D 55°	S 90°	T 60°	V 35°	W 80°	Y 25°
Precision finishing	TF		B054	B065	B075	B084	B094	B099	
Precision finishing	01		B054	B065	B075	B084	B094	B099	
Precision finishing	A~D		B054		B075	B084			
Precision finishing	W					B085			
Finishing	TSF		B054	B065	B075	B085	B095	B100	
Finishing (wiper)	FW		B054	B065		B085		B100	
Finishing (wiper)	AFW		B054					B100	

Chip control range



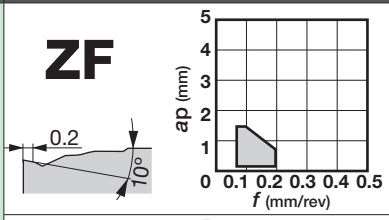




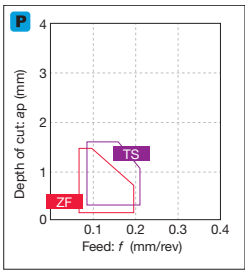
Please see the page B*** for the product details.

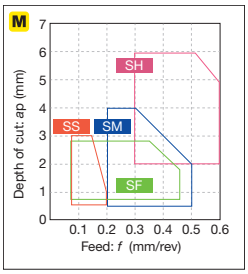
Chipbreaker Overview

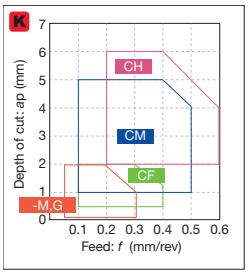
Application	Negative type with hole	C 80°	D 55°	S 90°	T 60°	V 35°	W 80°	Y 25°
Finishing	ZF (0.2, 10°)	B055	B066		B085	B095	B100	B107
Finishing	11	B055	B066	B076	B086	B095	B100	
Finishing (for mild steel)	17 (18°)	B055	B066	B076	B086		B100	
Finishing	SF (18°)	B055	B066	B076	B086	B095	B101	
Finishing	CF (0.06, 20°)	B055	B066	B076	B086	B096	B101	
Finishing	HRF (20°)	B056	B066	B076	B086	B096	B101	
Finishing	TS (10°)	B056	B067	B076	B087	B096	B101	

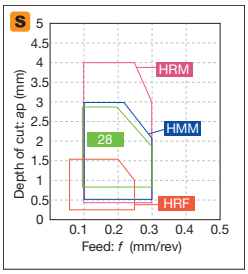


Chip control range





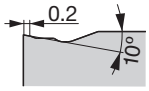
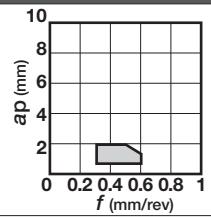
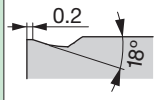
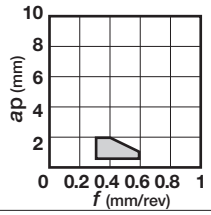
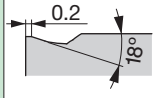
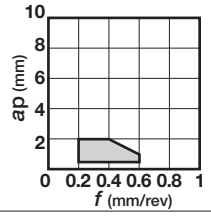
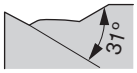
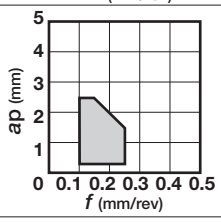
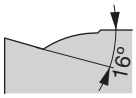
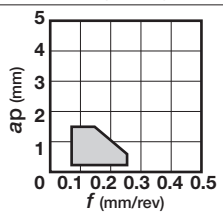
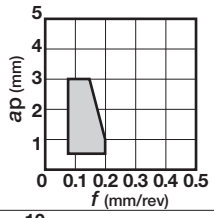
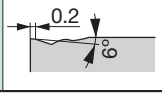
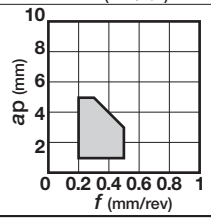




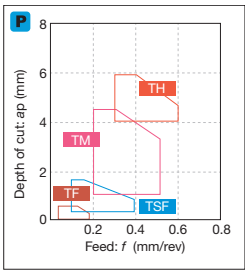
Please see the page B*** for the product details.

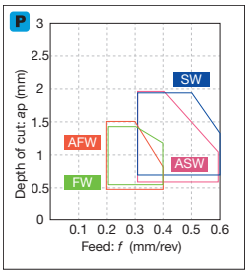
*-M,G: Without chipbreaker

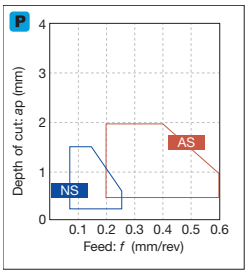
Chipbreaker Overview

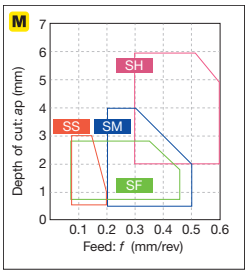
Application	Negative type with hole	C 80°	D 55°	S 90°	T 60°	V 35°	W 80°	Y 25°
Finishing to medium cutting (wiper)	**SW**  	B056	B067		B087		B102	
Finishing to medium cutting (wiper)	**ASW**  	B056					B102	
High feed, small depth of cut	**AS**  	B056	B067	B076	B087		B102	
Boring (double side)	**CB**  	B056	B067		B087		B102	
Finishing	**NS**  	B056	B067	B077	B087		B102	
Finishing	**SS** 	B057	B068	B077	B088	B096	B102	
Medium cutting	**TM**  	B057	B068	B077	B088	B096	B103	

Chip control range



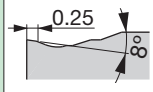
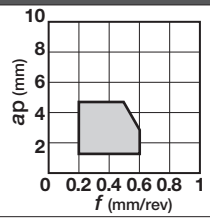
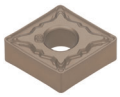
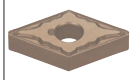
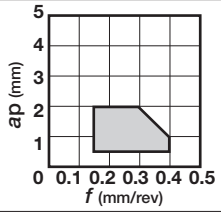
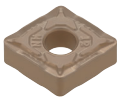
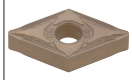
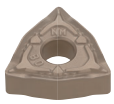
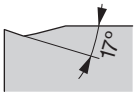
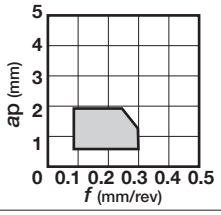
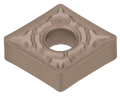
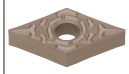
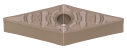
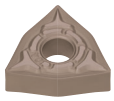
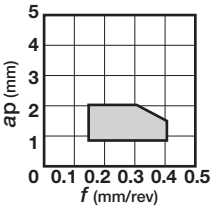
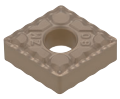
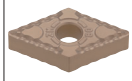
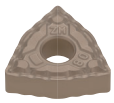
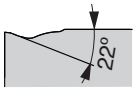
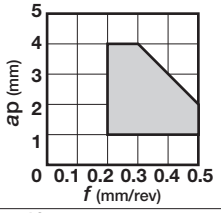
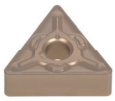
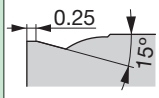
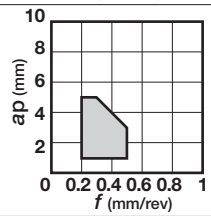
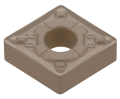
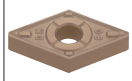
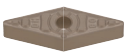
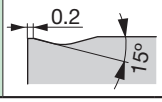
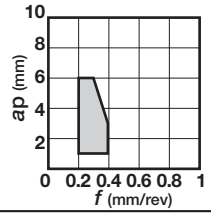
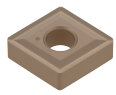
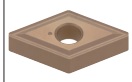
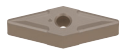
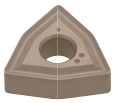




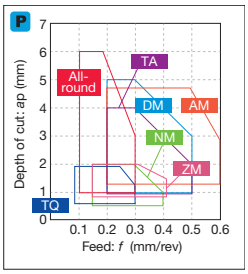


Please see the page B*** for the product details.

Chipbreaker Overview

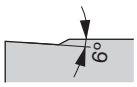
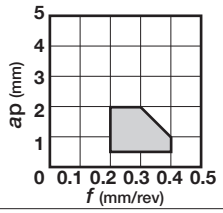
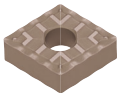
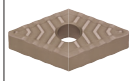
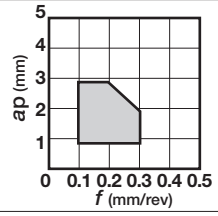
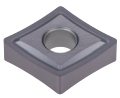
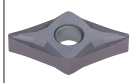
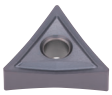
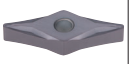
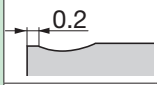
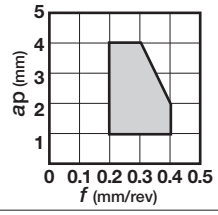
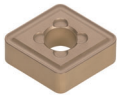
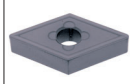
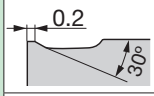
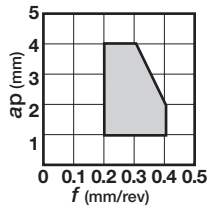
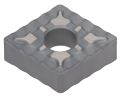
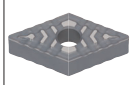
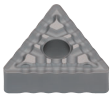
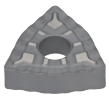
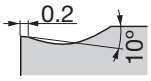
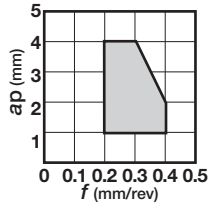
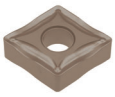
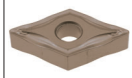
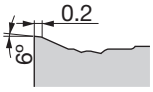
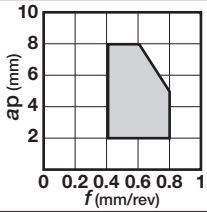
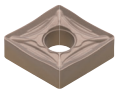
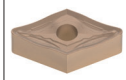
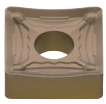
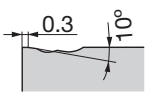
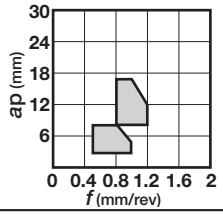
Application	Negative type with hole	C 80°	D 55°	S 90°	T 60°	V 35°	W 80°	Y 25°
Finishing to medium cutting	**AM**  	 B057	 B068		B088		B103	
	NM 	 B057	 B068		B088		 B103	
	TQ  	 B058	 B069		B088	 B096	 B103	
	ZM 	 B058	 B069	B077	B089	B097	 B104	B107
Medium cutting	**TA**  	B058		B077	 B088		B103	
	DM  	 B058	 B069	B078	B089	 B097	B104	
	All-round  	 B058	 B069	B078	B089	 B097	 B104	

Chip control range



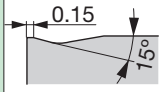
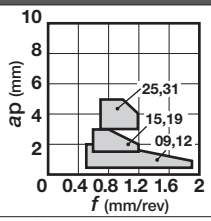
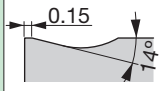
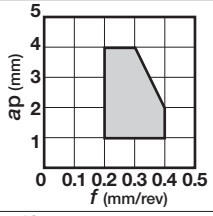
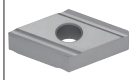
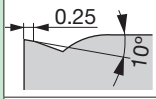
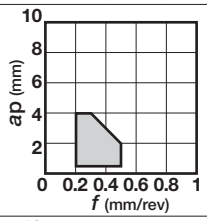
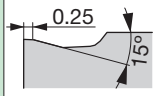
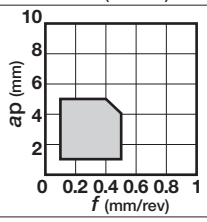
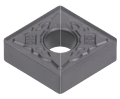
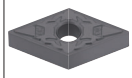
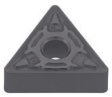
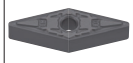
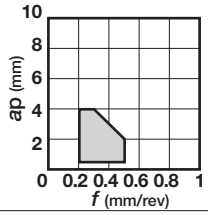
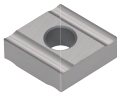
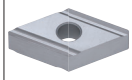
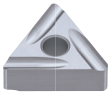
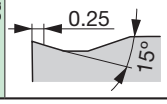
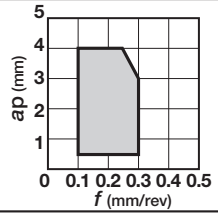
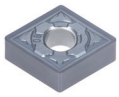
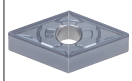
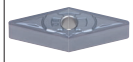
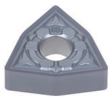
Please see the page B*** for the product details.

Chipbreaker Overview

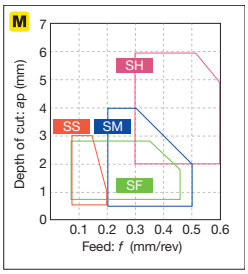
Application	Negative type with hole	C 80°	D 55°	S 90°	T 60°	V 35°	W 80°	Y 25°
Finishing to medium cutting	**27**  	 B059	 B069	B078	B089		B104	
Medium cutting	**28** 	 B059	 B070		 B090	 B097		
	33  	 B059	 B070	B078	B090	B097	B104	
	37  	 B059	 B070	B078	 B090		 B104	
	38  	 B059	 B070		B090			
	57  	 B061	 B072	 B081	B092			
	65  	B062		B081				

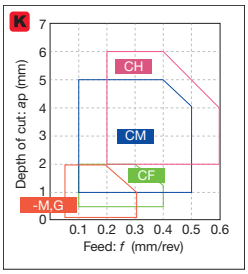
Please see the page B*** for the product details.

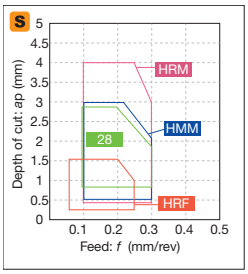
Chipbreaker Overview

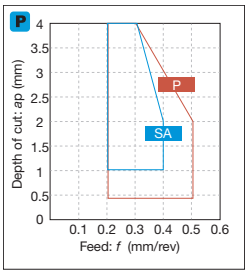
Application	Negative type with hole	C 80°	D 55°	R	S 90°	T 60°	V 35°	W 80°
Heavy cutting	**61**  			B074				
Medium cutting	**Parallel**  		 B070					
	SM  	B060	B070		B078	B090	B098	B105
	CM  	 B060	 B070		B079	 B090	 B098	B105
	P 	 B060	 B071		B079	 B091		
Finishing to medium cutting	**HRM**  	 B060	 B071		B079	B091	 B098	 B105

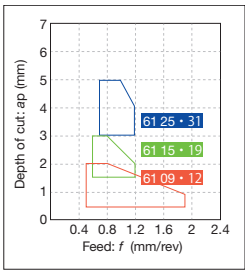
Chip control range





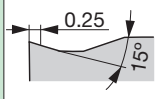
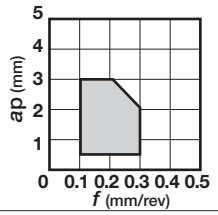
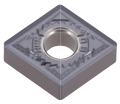
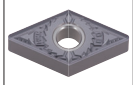
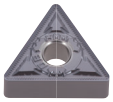
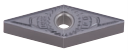
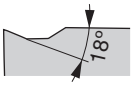
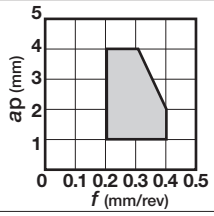
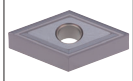
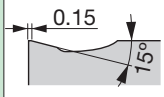
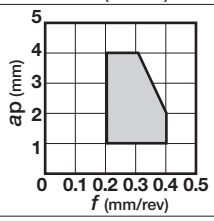
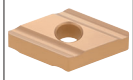
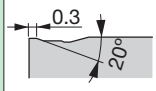
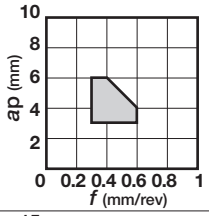
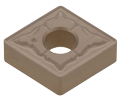
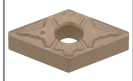
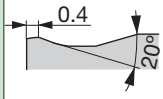
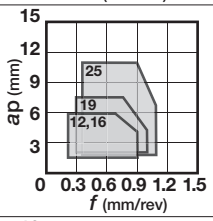
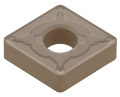
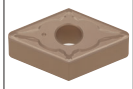
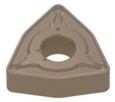
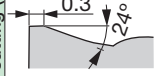
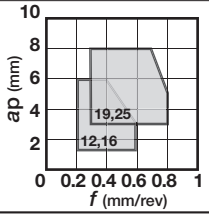
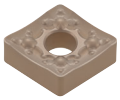




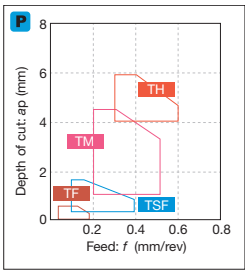


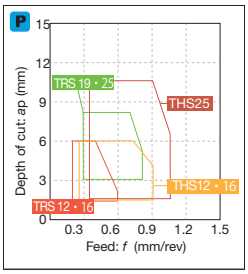
Please see the page B*** for the product details. *-M,G: Without chipbreaker

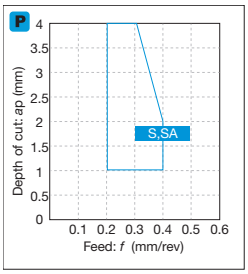
Chipbreaker Overview

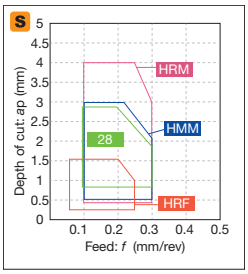
Application	Negative type with hole		C	D	R	S	T	V	W
			80°	55°		90°	60°	35°	80°
Medium cutting	**HMM** 		 B060	 B071		B079	 B091	 B098	B105
	SA 		B060	 B071		B079	B091		B105
	S 		B060	 B071		B080	B092		
Medium to heavy cutting	**TH** 		 B061	 B072		B080	B092		B106
	THS 		 B061	 B072		B080	B092		 B106
Medium to heavy cutting (single side)	**TRS** 		 B062			B080			

Chip control range



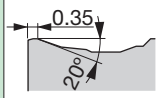
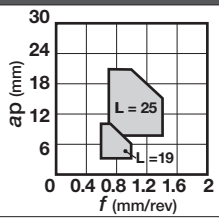
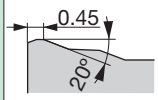
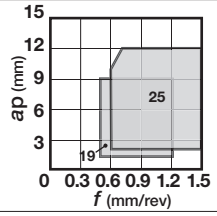
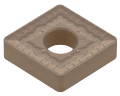
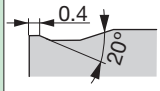
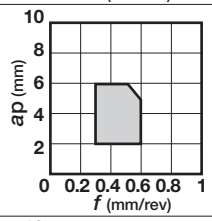
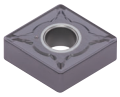
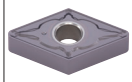
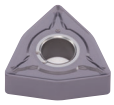
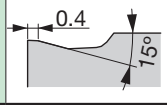
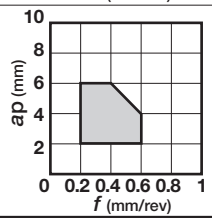
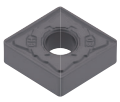
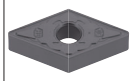
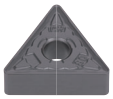
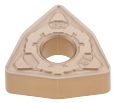




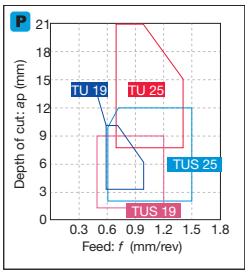


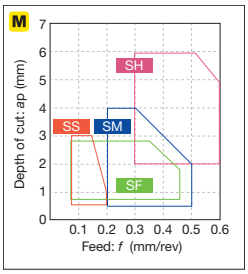
Please see the page B*** for the product details.

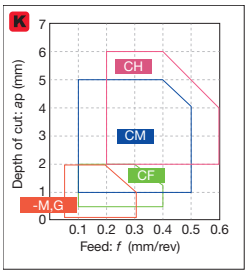
Chipbreaker Overview

Application	Negative type with hole		C	D	R	S	T	V	W
			80°	55°		90°	60°	35°	80°
Heavy cutting (single side)	**TU**	 	B062			B080			
	TUS	 	 B062			B081			
Medium to heavy cutting	**SH**	 	 B062	 B072		B081			 B106
	CH	 	 B062	 B072		B081	 B092		 B106

Chip control range



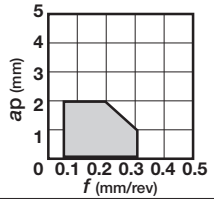
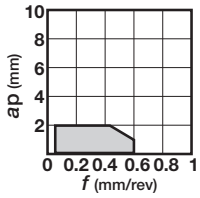


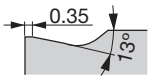
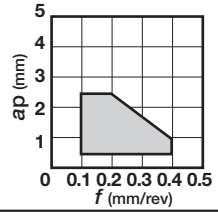


Please see the page B*** for the product details.

*-M,G: Without chipbreaker

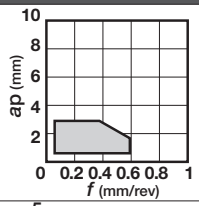
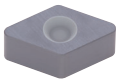
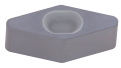
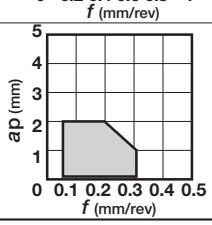
Chipbreaker Overview

Application	Negative type with hole	C	D	R	S	T	V	W
		80°	55°		90°	60°	35°	80°
Finishing to medium cutting	— M,G-class 	B063	B072	B074	B082	B093	B098	B106
Finishing to medium cutting	Wiper M-class 	B063						

Application	Negative type with hole	C	D	KNMX	LNGN	R	S	T
		80°	55°	55°	90°		90°	60°
Finishing	S1  			B108				

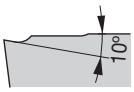
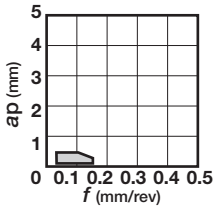
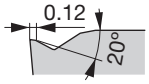
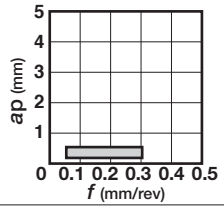
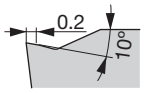
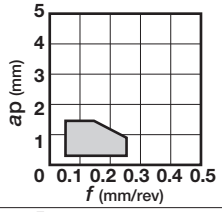
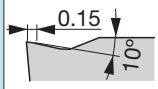
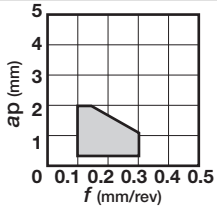
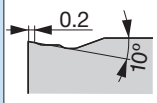
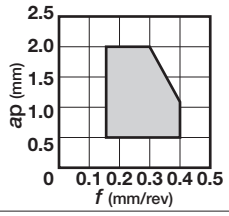
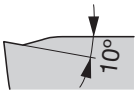
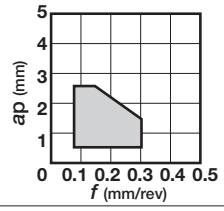
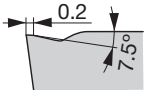
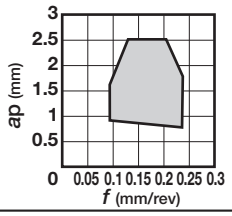
Please see the page B*** for the product details.

Chipbreaker Overview

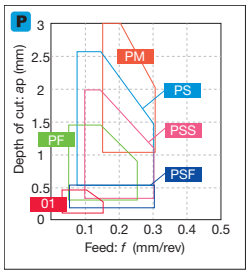
Application	Negative type without hole	C	D	H	R	S	T	V
		80°	55°	120°		90°	60°	35°
Finishing to medium cutting	— G-class 	B064	 B073	B108		B082		 B099
	— M,G-class 	B064	B073		B074	B082	B094	

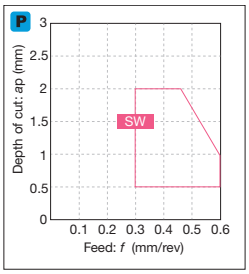
Please see the page B*** for the product details.

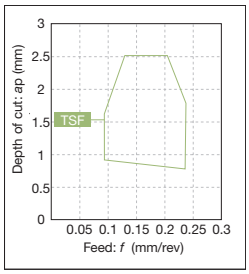
Chipbreaker Overview

Application	Positive 7° with hole	C 80°	D 55°	R	S 90°	T 60°	V 35°	Y 25°
Precision finishing	01  	B109	B119			B137		
Finishing	PSF  	B109	B119			B137	B153	
Finishing	PF  	B109	B119				B153	
Finishing to light cutting	PSS  	B110	B120			B137	B153	
Med ium cutting (wiper)	SW  	B110						
Finishing to medium cutting	PS  	B110	B120		B133	B138	B153	
Finishing to medium cutting	TSF  	B110	B120			B138	B153	

Chip control range

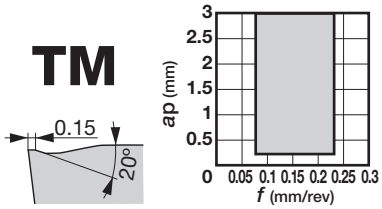
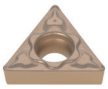
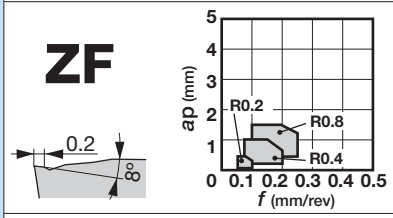
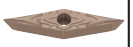
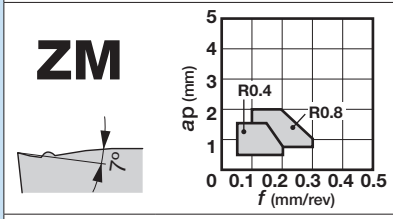
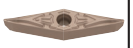
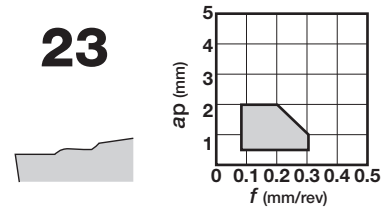
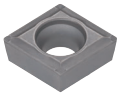
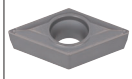
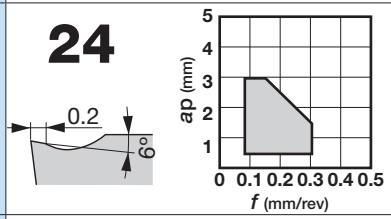
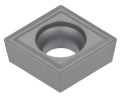
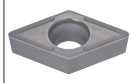
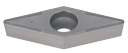
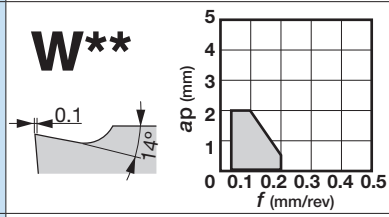
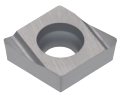
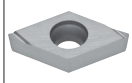
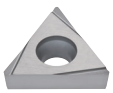
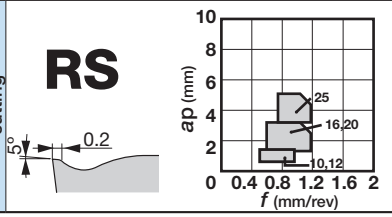




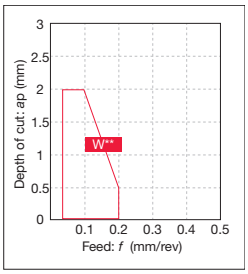


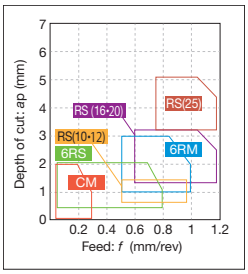
Please see the page B*** for the product details.

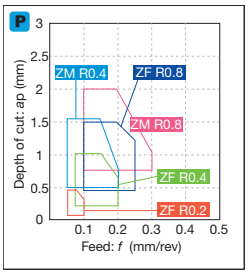
Chipbreaker Overview

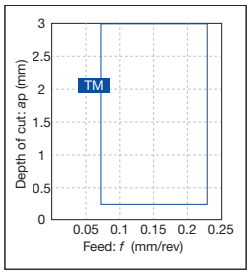
Application	Positive 7° with hole	C 80°	D 55°	R	S 90°	T 60°	V 35°	Y 25°
Finishing to medium cutting	**TM** 	B110	B120			 B138	B153	
Finishing to medium cutting	**ZF** 							 B160
Finishing to medium cutting	**ZM** 							 B160
Finishing to medium cutting	**23** 	 B111	 B120		B133	B138		
Medium cutting	**24** 	 B111	 B120		B133	B138	 B154	
Finishing	**W**** 	 B111, B112	 B121			 B138		
Finishing to medium cutting	**RS** 			B129				

Chip control range



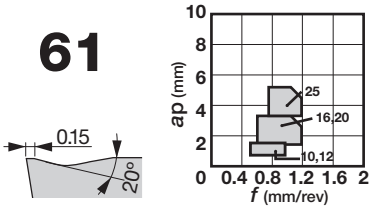
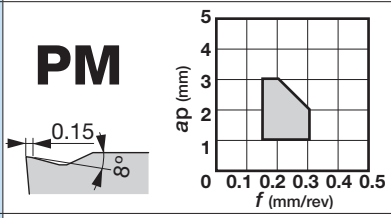
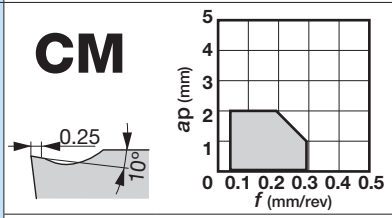
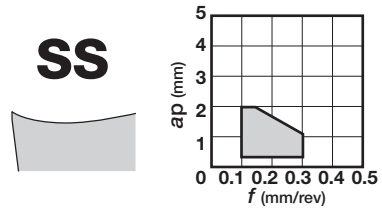
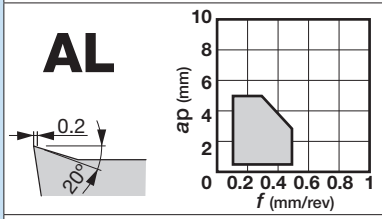
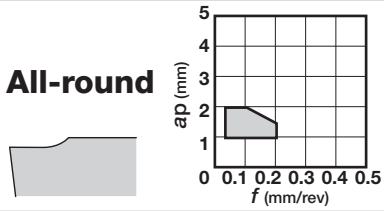
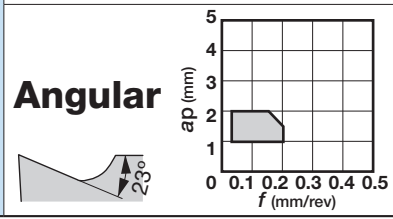




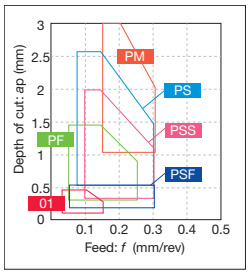


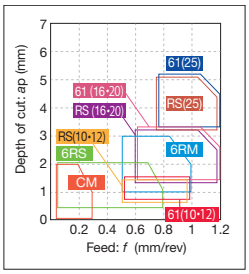
Please see the page B*** for the product details.

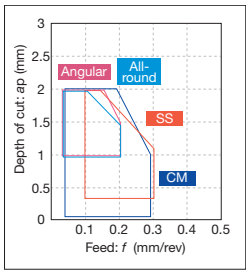
Chipbreaker Overview

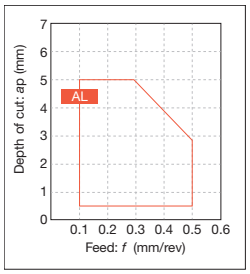
Application	Positive 7° with hole	C 80°	D 55°	R	S 90°	T 60°	V 35°	Y 25°
Heavy cutting	**61** 			B130				
Medium cutting	**PM** 	B112	B121		B133	B139		
Finishing to medium cutting	**CM** 	B112	B121	B129	B133	B139	B154	
	SS 					B139		
	AL 	B113	B122	B129		B139	B154	
	All-round 	B113	B122				B154	
	Angular 	B113	B122					

Chip control range



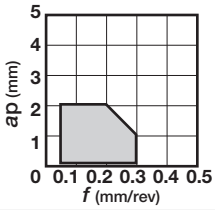
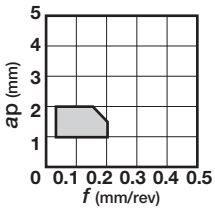
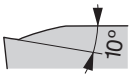
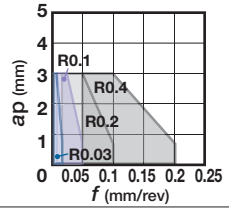
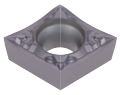
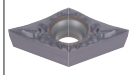
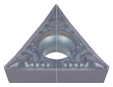
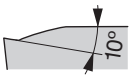
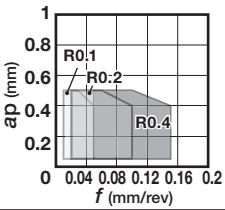
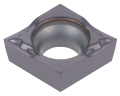
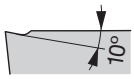
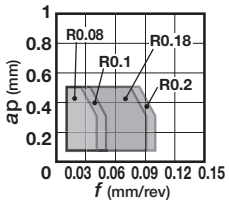
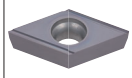
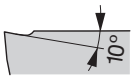
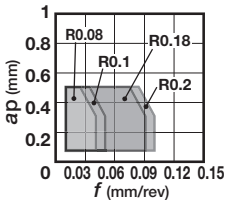
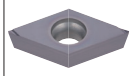




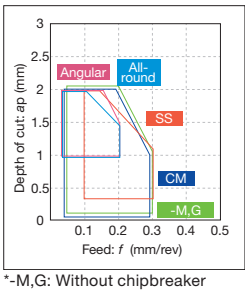


Please see the page B*** for the product details.

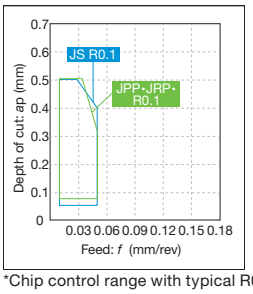
Chipbreaker Overview

Application	Positive 7° with hole	C	D	R	S	T	V	Y
		80°	55°		90°	60°	35°	25°
Finishing to medium cutting	— M,G-class 	B113	B122					
Finishing	— (with hand) 					B140		
For external turning on Swiss lathes (including sharp edge type)	JS  	 B114	 B123			 B140		
For external turning on Swiss lathes (including sharp edge type)	JS  	 B114						
For external turning on Swiss lathes (sharp edge)	JPP  		 B123					
For external turning on Swiss lathes (sharp edge)	JRP  		 B124					

Chip control range



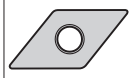
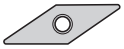
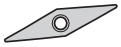
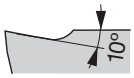
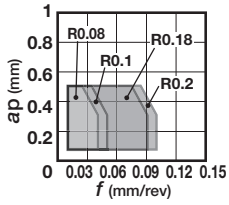
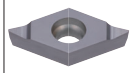
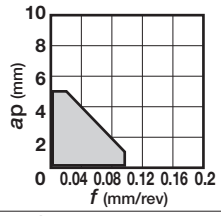
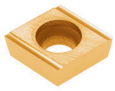
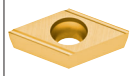
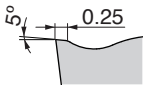
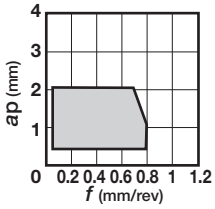
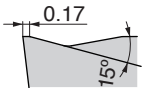
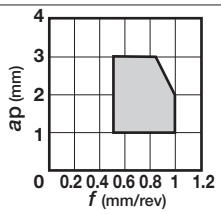
*-M,G: Without chipbreaker



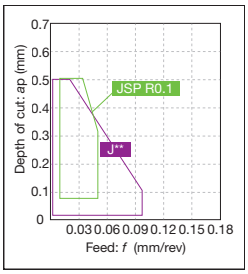
*Chip control range with typical R0.1

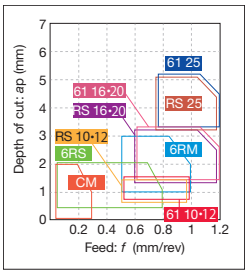
Please see the page B*** for the product details.

Chipbreaker Overview

Application	Positive 7° with hole	C	D	R	S	T	V	Y
								
		80°	55°		90°	60°	35°	25°
For external turning on Swiss lathes (sharp edge)	**JSP**  		 B124					
	J** 	 B115	 B124			B140, B141		
Low cutting force	**6RS**  			B129				
Medium cutting	**6RM**  			B129				

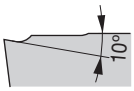
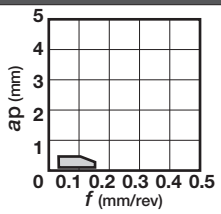
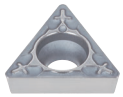
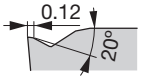
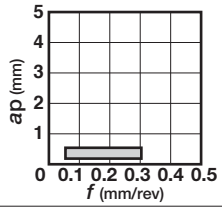
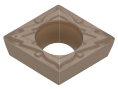
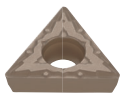
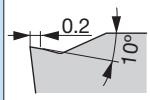
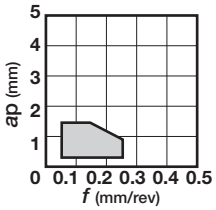
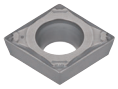
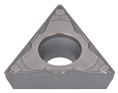
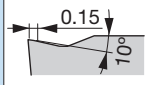
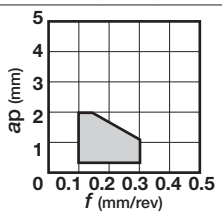
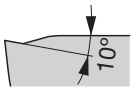
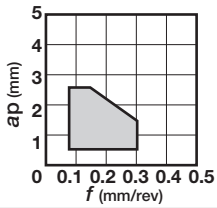
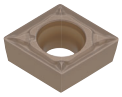
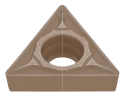
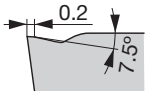
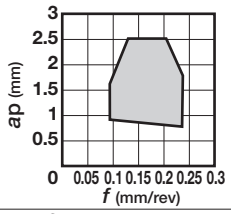
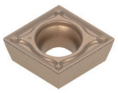
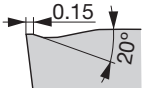
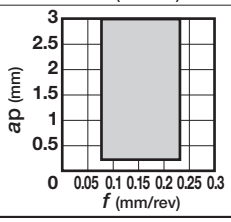
Chip control range



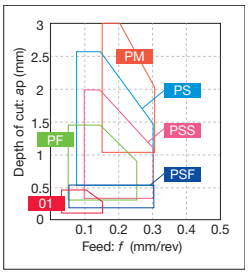


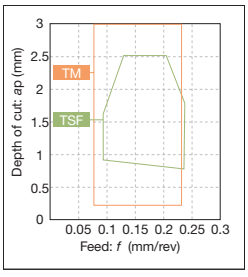
Please see the page B*** for the product details.

Chipbreaker Overview

Application	Positive 11° with hole	C 80°	E 75°	S 90°	T 60°	V 35°
Precision finishing	**01**  				 B142	
Finishing	**PSF**  	 B116			 B142	
	PF  	 B116			 B142	
Finishing to light cutting	**PSS**  	B116			B143	
Finishing to medium cutting	**PS**  	 B116		B134	 B143	
	TSF  	 B116			B143	
	TM  	B116			B144	

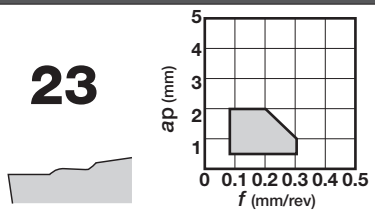
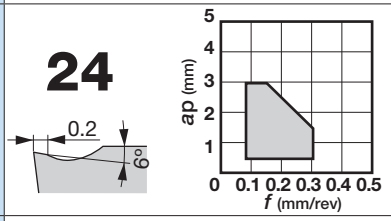
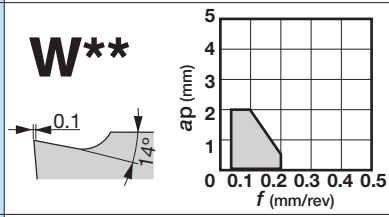
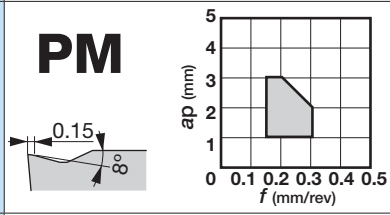
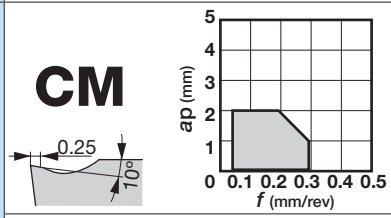
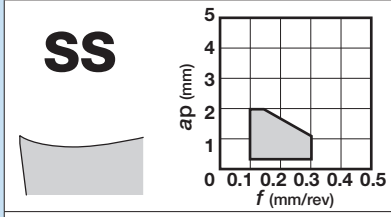
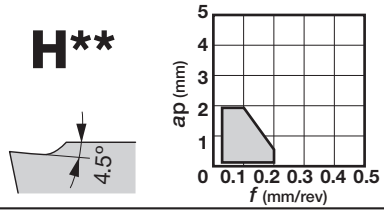
Chip control range



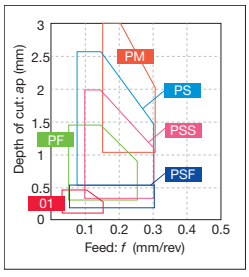


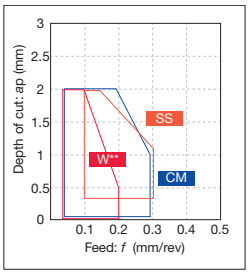
Please see the page B*** for the product details.

Chipbreaker Overview

Application	Positive 11° with hole	C 80°	E 75°	S 90°	T 60°	V 35°
Finishing to medium cutting	**23** 			B134	B144	
Medium cutting	**24** 	B117		B134	B144	
Finishing	**W**** 	B117	B127	B134	B144, B145	
Medium cutting	**PM** 	B118			B146	
Finishing to medium cutting	**CM** 	B118		B135	B146	
	SS 				B146	
	H** 				B146	

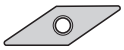
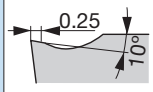
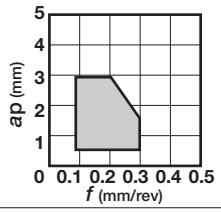
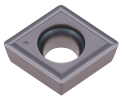
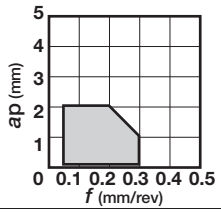
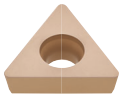
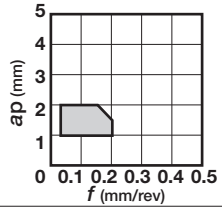
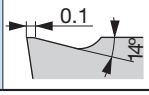
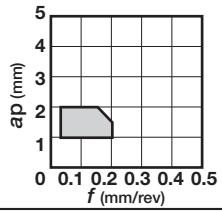
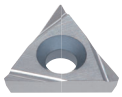
Chip control range



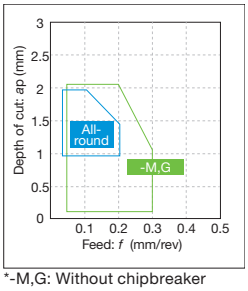


Please see the page B*** for the product details.

Chipbreaker Overview

Application	Positive 11° with hole	C	E	S	T	V
						
		80°	75°	90°	60°	35°
Medium cutting	**All-round**  	 B118				
Finishing to medium cutting	— M,G-class 	B118		B135	 B147, B148	
Finishing to medium cutting	— (with hand) 			(Tungaloy standard hole specification) ISO non-compliant B135		
Finishing to medium cutting	— (with hand)  				 (Tungaloy standard hole specification) ISO non-compliant B147	

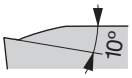
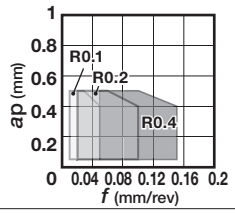
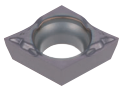
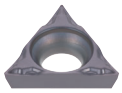
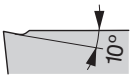
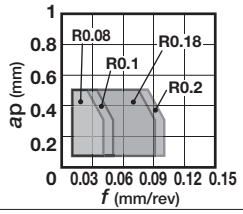
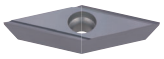
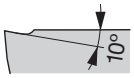
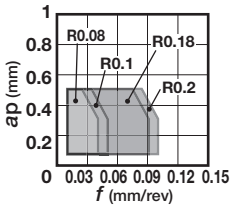
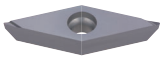
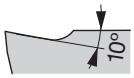
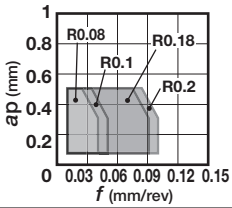
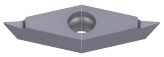
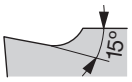
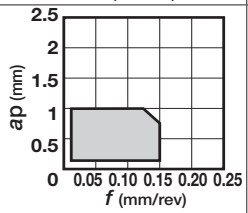
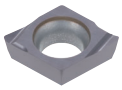
Chip control range

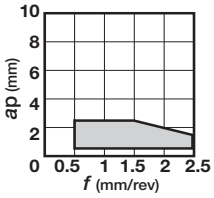


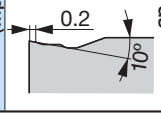
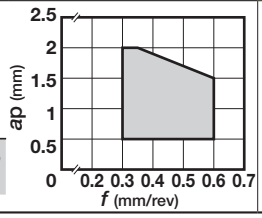
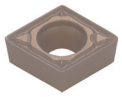
*-M,G: Without chipbreaker

Please see the page B*** for the product details.

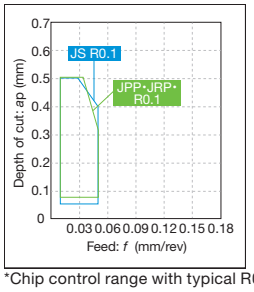
Chipbreaker Overview

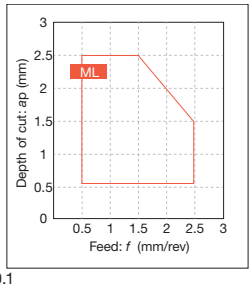
Application	Positive 11° with hole	C 80°	E 75°	S 90°	T 60°	V 35°
For internal turning on Swiss lathes	**JS**  		 B128		 B148	
For external turning on Swiss lathes (sharp edge)	**JPP**  					 B155
	JRP  					 B155
	JSP  					 B156
Finishing	**J08**  		 B128			

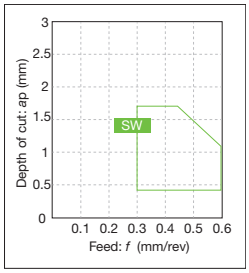
Application	Positive 11° with hole	W 80°
Heavy cutting	**ML** 	B156

Application	Positive 7° with hole	C 80°
Medium cutting (wiper)	**SW**  	 B110

Chip control range







*Chip control range with typical R0.1

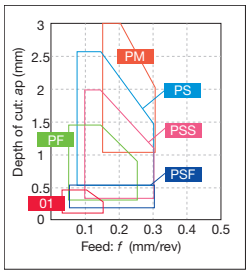
Please see the page B*** for the product details.

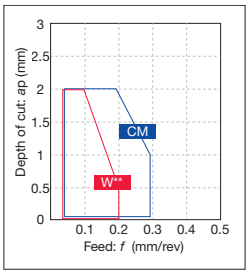
Chipbreaker Overview

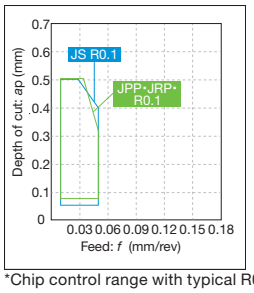
Application	Positive 5° with hole	V 35°	W 80°
Finishing	**PSF** (0.12, 20°)	B150	
Finishing	**PF** (0.2, 10°)	B151	
Finishing to light cutting	**PSS** (0.15, 10°)	B151	
Finishing to medium cutting	**PS** (10°)	B151	
Finishing to medium cutting	**TSF** (0.2, 7.5°)	B151	
Finishing to medium cutting	**TM** (0.15, 20°)	B151	
Finishing	**W08** (15°)		B157

Application	Positive 5° with hole	V 35°	W 80°
Finishing	**W11** (15°)		B158
Medium cutting	**24** (0.2, 6°)	B152	
Finishing to medium cutting	**CM** (0.25, 10°)	B152	
For external turning on Swiss lathes (sharp edge)	**JS** (10°)	B152	
For internal turning on Swiss lathes	**JS** (10°)		B158
For external turning on Swiss lathes (sharp edge)	**J10** (30°)	B152	
For external turning on Swiss lathes (honed edge)	**J10** (30°)	B152	

Chip control range



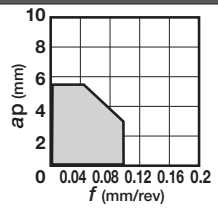


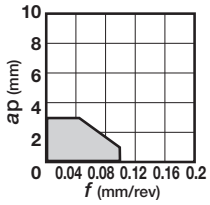


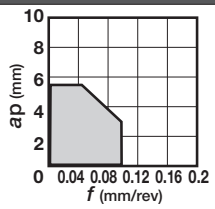
Please see the page B*** for the product details.

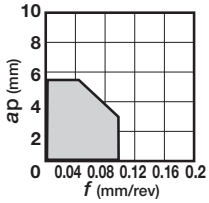
*Chip control range with typical R0.1

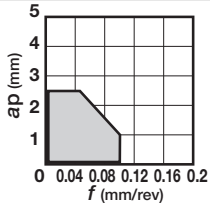
Chipbreaker Overview

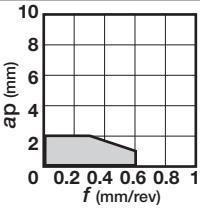
Application	Positive type with hole	JXF
Front turning	— 	B160

Application	Positive type with hole	J10E
Back turning	— 	B162, B163

Application	Positive type with hole	JXB
Back turning	— 	B161

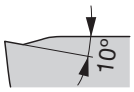
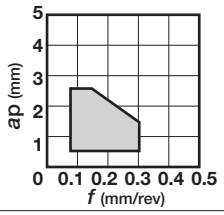
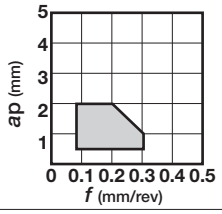
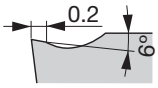
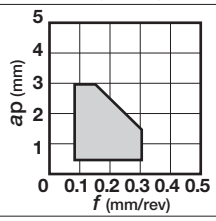
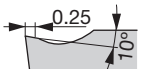
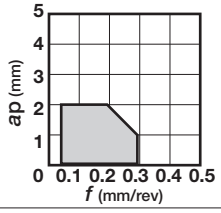
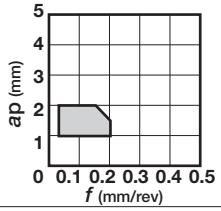
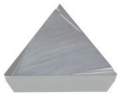
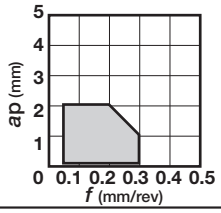
Application	Positive type with hole	JXR
Reverse turning	— 	B161

Application	Positive type with hole	JTB
Back turning	— 	B162

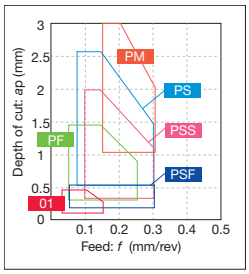
Application	Round	RT
Medium cutting	— 	Special round insert B130

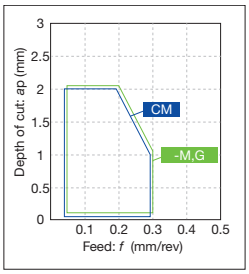
Please see the page B*** for the product details.

Chipbreaker Overview

Application	Positive 11° without hole	R	S 90°	T 60°
Finishing to medium cutting	**PS**  			B149
	23 		B136	B149
Medium cutting	**24**  			B149
Finishing to medium cutting	**CM**  		B136	B149
	— (with hand) 		B136	 B150
	— M,G-class 		B136	B150

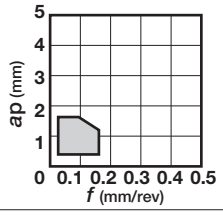
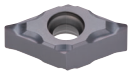
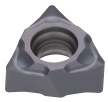
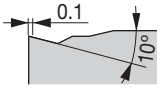
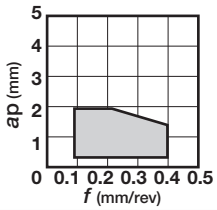
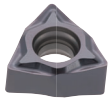
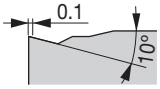
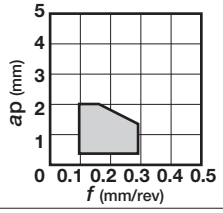
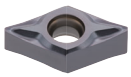
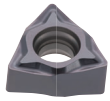
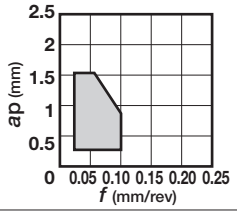
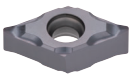
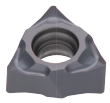
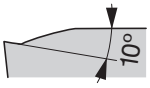
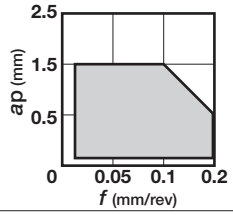
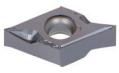
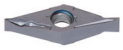
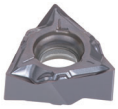
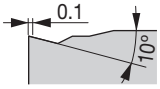
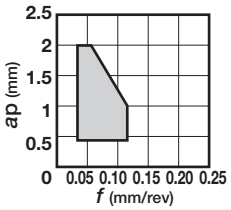
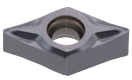
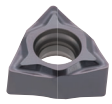
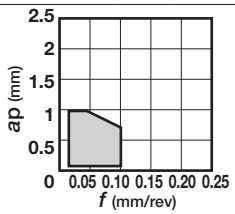
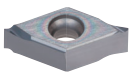
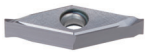
Chip control range



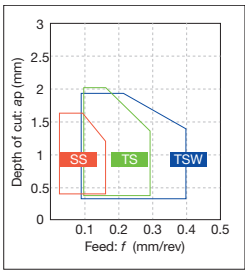


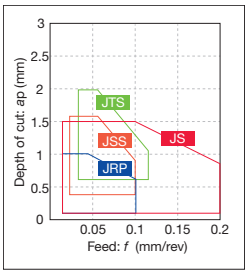
Please see the page B*** for the product details. *-M,G: Without chipbreaker

Chipbreaker Overview

Application	Double-sided positive type with hole	D	V	W
		55°	35°	80°
Finishing (low cutting force)	**SS** 	 B126		 B159
Finishing (wiper)	**TSW**  			 B159
Finishing to medium cutting	**TS**  	 B126		 B159
Finishing (low cutting force) (sharp edge)	**JSS** 	 B126		 B159
Finishing to medium cutting (sharp edge)	**JS**  	 B125	 B156	 B158
	JTS  	 B126		 B158
Finishing (sharp edge)	**JRP** 	 B125	 B156	

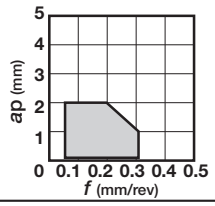
Chip control range





Please see the page B*** for the product details.

Chipbreaker Overview

Application	Positive 7° without hole	RCGX
		Special round insert
Medium cutting	– 	B131

Please see the page B*** for the product details.

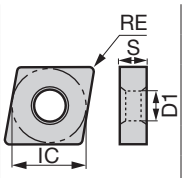
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	GH110	GT9530	AT9530	NS9530	NS520	TH10
P	Steel	●	●ⓒ	●ⓒ✠	✠	●	●ⓒ	●ⓒ✠	✠	●ⓒ	●	●ⓒ	●ⓒ			●
M	Stainless		●ⓒ							●ⓒ	●					●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●ⓒ	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous															●
S	Superalloy									●ⓒ	●					
H	Hard material															



Application	Chipbreaker	Designation	Coated										Coated cermet			Cermet			Uncoated					Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	GH110	GT9530	AT9530		NS9530	NS520		TH10					RE	IC	S	D1
Precision finishing	TF	CNMG120404-TF														●			●					0.4	12.7	4.76	5.16
		CNMG120408-TF														●								0.8	12.7	4.76	5.16
	01	CNGG090302-01														●								0.2	9.525	3.18	3.81
		CNGG090304-01														●								0.4	9.525	3.18	3.81
		CNGG090308-01														●								0.8	9.525	3.18	3.81
		CNGG120402-01														●	●		●					0.2	12.7	4.76	5.16
		CNGG120404-01														●	●		●					0.4	12.7	4.76	5.16
		CNGG120408-01														●	●		●					0.8	12.7	4.76	5.16
	C	CNGG120404R-C										●				●								0.4	12.7	4.76	5.16
		CNGG120404L-C														●								0.4	12.7	4.76	5.16
		CNGG120408R-C														●								0.8	12.7	4.76	5.16
		CNGG120408L-C														●								0.8	12.7	4.76	5.16
Finishing	TSF	CNMG090404E-TSF		●	●			▲	▲				●	●		●								0.4	9.525	4.76	3.81
		CNMG090408E-TSF		●	●			▲	▲				●	●		●								0.8	9.525	4.76	3.81
		CNMG120404-TSF	●	●	●		▲	▲	▲		●		●	●		●								0.4	12.7	4.76	5.16
		CNMG120408-TSF	●	●	●	●	▲	▲	▲	▲	●		●	●		●								0.8	12.7	4.76	5.16
		CNMG120412-TSF		●	●			▲	▲		●													1.2	12.7	4.76	5.16
Finishing (wiper)	FW	CNMG090404E-FW	●	●	●		▲	▲	▲				●			●								0.4	9.525	4.76	3.81
		CNMG090408E-FW	●	●	●		▲	▲	▲				●			●								0.8	9.525	4.76	3.81
		CNMG120404-FW		●				▲					●			●								0.4	12.7	4.76	5.16
		CNMG120408-FW	●	●	●		▲	▲	▲				●			●								0.8	12.7	4.76	5.16
		*Wiper																									
	AFW	CNMG120404-AFW		●	●			▲	▲				●			●								0.4	12.7	4.76	5.16
		CNMG120408-AFW	●	●	●	●	▲	▲	▲	▲			●											0.8	12.7	4.76	5.16

* Please see **L032-L036** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up
▲ : To be discontinued

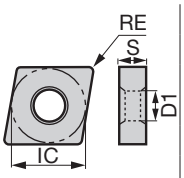
Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

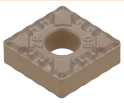
CN

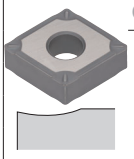
Rhombic, 80° with hole

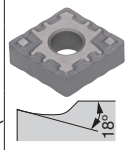
		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	GT9530	AT9530	GT720	NS9530			TH10			
P	Steel	●	●◐	◐✠	✠	●◐	◐✠	✠	◐	✠	◐✠			●◐	●◐	●◐		●◐					●
M	Stainless		●◐						●	◐	◐												●
K	Cast iron	●◐	●◐			●◐						●	◐	●◐	●◐	●◐		●◐					●
N	Non-ferrous																						●
S	Superalloy																						
H	Hard material																						

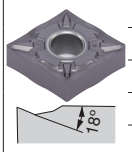


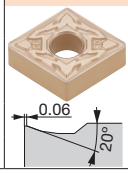
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	GT9530	AT9530	GT720	NS9530			TH10			RE	IC	S	D1
			Coated												Coated cermet			Cermet			Uncoated			Dimension (mm)			
Finishing	ZF	CNMG090404E-ZF		●	●		▲	▲																0.4	9.525	4.76	3.81
		CNMG120404-ZF		●	●		▲	▲							●	●		●						0.4	12.7	4.76	5.16
		CNMG120408-ZF		●	●	●	▲	▲	▲						●	●		●						0.8	12.7	4.76	5.16
	11	CNMG120404-11													●			●			●			0.4	12.7	4.76	5.16
		CNMG120408-11													●		●	●			●			0.8	12.7	4.76	5.16
Finishing (for mild steel)	17	CNMG120404-17																●						0.4	12.7	4.76	5.16
		CNMG120408-17																●						0.8	12.7	4.76	5.16
Finishing	SF	CNMG090304-SF								●	●	●												0.4	9.525	3.18	3.81
		CNMG090308-SF								●	●	●												0.8	9.525	3.18	3.81
		CNMG120404-SF								●	●	●												0.4	12.7	4.76	5.16
		CNMG120408-SF								●	●	●												0.8	12.7	4.76	5.16
		CNMG120412-SF								●	●	●												1.2	12.7	4.76	5.16
	CF	CNMG120404-CF											●	●										0.4	12.7	4.76	5.16
		CNMG120408-CF											●	●										0.8	12.7	4.76	5.16
		CNMG120412-CF											●	●										1.2	12.7	4.76	5.16





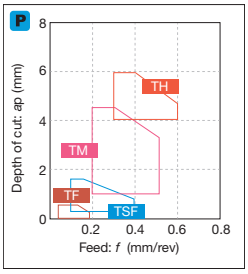


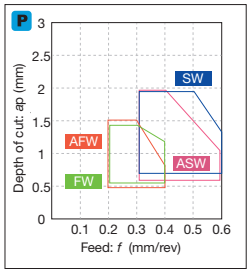


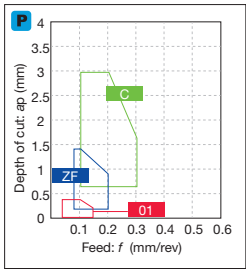


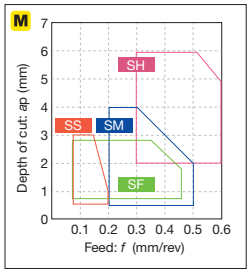
● : Line up
▲ : To be discontinued

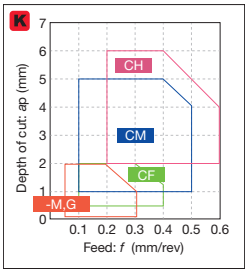
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

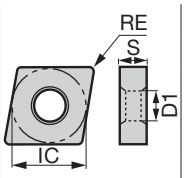
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

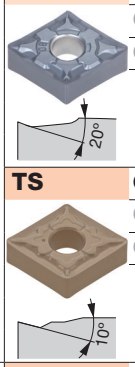
CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	T515	T5115	AH8005	AH8015	GT9530	AT9530	NS9530	NS520
		Coated													Coated cermet		Cermet	
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	✠					●ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless		●ⓒ							ⓒ			●	ⓒ				
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ				●ⓒ	ⓒ			●ⓒ	●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																	
S	Superalloy												●	ⓒ				
H	Hard material																	



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	T515	T5115	AH8005	AH8015	GT9530	AT9530	NS9530	NS520	RE	IC	S	D1
Finishing	HRF	CNMG120404-HRF												●	●					0.4	12.7	4.76	5.16
		CNMG120408-HRF												●	●					0.8	12.7	4.76	5.16
		CNMG120412-HRF												●	●					1.2	12.7	4.76	5.16
	TS	CNMG120404-TS		●	●	●		▲	▲	▲						●	●	●	●	0.4	12.7	4.76	5.16
		CNMG120408-TS	●	●	●	●	▲	▲	▲	▲	●					●	●	●	●	0.8	12.7	4.76	5.16
		CNMG120412-TS		●	●	●		▲	▲	▲										1.2	12.7	4.76	5.16
Finishing to medium cutting (wiper)	SW	CNMG090408E-SW	●	●	●		▲	▲	▲				●							0.8	9.525	4.76	3.81
		CNMG090412E-SW	●	●	●		▲	▲	▲				●							1.2	9.525	4.76	3.81
		CNMG120408-SW	●	●	●		▲	▲	▲			●	●							0.8	12.7	4.76	5.16
		CNMG120412-SW	●	●	●		▲	▲	▲			●	●							1.2	12.7	4.76	5.16
		*Wiper																					
	ASW	CNMG120408-ASW		●	●		▲	▲	▲									●		0.8	12.7	4.76	5.16
		CNMG120412-ASW		●	●		▲	▲	▲											1.2	12.7	4.76	5.16
High feed, small depth of cut	AS	CNMG120404-AS		●	●		▲	▲	▲									●		0.4	12.7	4.76	5.16
		CNMG120408-AS		●	●		▲	▲	▲	▲								●		0.8	12.7	4.76	5.16
		CNMG120412-AS		●	●			▲	▲	▲										1.2	12.7	4.76	5.16
Boring (double side)	CB	CNMG090304-CB																●		0.4	9.525	3.18	3.81
		CNMG090308-CB																●		0.8	9.525	3.18	3.81
Finishing	NS	CNMG120404-NS																●		0.4	12.7	4.76	5.16
		CNMG120408-NS		●	●			▲	▲									●		0.8	12.7	4.76	5.16



* Please see **L032-L036** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up
▲ : To be discontinued

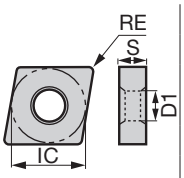
Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

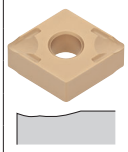
CN

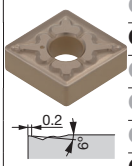
Rhombic, 80° with hole

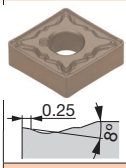
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T515	AH110	AH120	AH725	AH8015	GH330			NS9530				
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	◐	✠	◐✠	✠		●	●◐	◐		●◐			●◐				
M	Stainless		●◐							●	◐	◐	✠		●	●◐	◐	◐	●◐							
K	Cast iron	●◐	●◐			●◐	●◐							●◐	●	●◐	◐		●◐			●◐				
N	Non-ferrous																									
S	Superalloy														●	●◐	●	◐								
H	Hard material																									

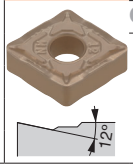


Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T515	AH110	AH120	AH725	AH8015	GH330			NS9530					RE	IC	S	D1
			Coated																				Cermet					Dimension (mm)			
Finishing	SS	CNMG090404E-SS											●	●														0.4	9.525	4.76	3.81
		CNMG090408E-SS											●	●														0.8	9.525	4.76	3.81
		CNMG120404-SS									●	●	●	●			●			●								0.4	12.7	4.76	5.16
		CNMG120408-SS									●	●	●	●			●			●								0.8	12.7	4.76	5.16
		CNMG120412-SS									●	●	●	●						●								1.2	12.7	4.76	5.16
Medium cutting	TM	CNMG090304-TM		●	●			▲	▲																			0.4	9.525	3.18	3.81
		CNMG090308-TM		●	●	●		▲	▲	▲																		0.8	9.525	3.18	3.81
		CNMG090404E-TM		●	●			▲	▲		●	●	●		●		●		●									0.4	9.525	4.76	3.81
		CNMG090408E-TM		●	●			▲	▲		●	●	●		●		●		●									0.8	9.525	4.76	3.81
		CNMG090412E-TM		●	●			▲	▲		●	●	●		●		●		●									1.2	9.525	4.76	3.81
		CNMG120404-TM	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●		●		●									0.4	12.7	4.76	5.16
		CNMG120408-TM	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●		●	●	●									0.8	12.7	4.76	5.16
		CNMG120412-TM	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●	●		●									1.2	12.7	4.76	5.16
		CNMG120416-TM		●	●	●		▲	▲	▲	●	●	●	●	●		●		●									1.6	12.7	4.76	5.16
		CNMG160612-TM	●	●	●	●	▲	▲	▲	▲							●											1.2	15.875	6.35	6.35
		CNMG190608-TM	●	●	●	●	▲	▲	▲	▲							●											0.8	19.05	6.35	7.93
		CNMG190612-TM	●	●	●	●	▲	▲	▲	▲							●											1.2	19.05	6.35	7.93
Finishing to medium cutting	AM	CNMG120408-AM		●	●			▲	▲																			0.8	12.7	4.76	5.16
		CNMG120412-AM		●	●			▲	▲																			1.2	12.7	4.76	5.16
		CNMG120416-AM		●	●			▲	▲																			1.6	12.7	4.76	5.16
	NM	CNMG120408-NM	●	●	●	●	▲	▲	▲	▲													●					0.8	12.7	4.76	5.16
		CNMG120412-NM		●	●	●		▲	▲	▲																		1.2	12.7	4.76	5.16



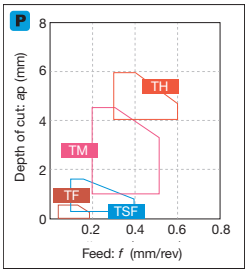


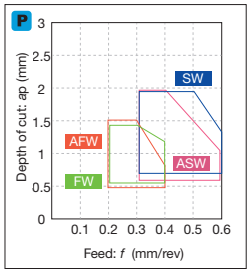


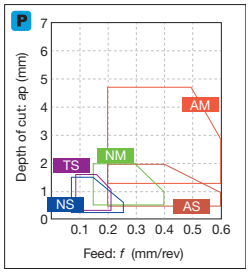


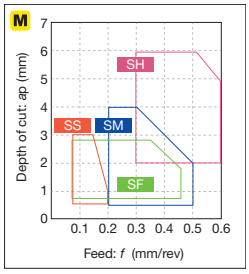
● : Line up
▲ : To be discontinued

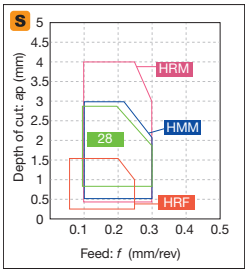
Chip control range











Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

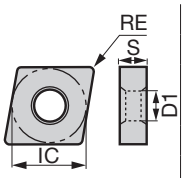
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	GT9530	AT9530	GT720	NS9530	NS520	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠					●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ											●	●ⓒ						●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●ⓒ	●	ⓒ	✠	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																				●
S	Superalloy													●	●ⓒ						
H	Hard material																				



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	GT9530	AT9530	GT720	NS9530	NS520	TH10	RE	IC	S	D1
			Coated														Coated cermet			Cermet		Un-coated	Dimension (mm)			
Finishing to medium cutting	TQ	CNMG120404-TQ		●	●												●	●		●			0.4	12.7	4.76	5.16
		CNMG120408-TQ		●	●												●	●		●			0.8	12.7	4.76	5.16
Medium cutting	TA	CNMG120408-TA		●	●																		0.8	12.7	4.76	5.16
		CNMG120412-TA		●	●																		1.2	12.7	4.76	5.16
Finishing to medium cutting	ZM	CNMG090408E-ZM		●	●			▲	▲														0.8	9.525	4.76	3.81
		CNMG120408-ZM		●	●	●		▲	▲	▲							●			●			0.8	12.7	4.76	5.16
		CNMG120412-ZM		●	●	●		▲	▲	▲							●						1.2	12.7	4.76	5.16
		CNMG120416-ZM		●	●			▲	▲														1.6	12.7	4.76	5.16
Medium cutting	DM	CNMG120404-DM		●	●			▲	▲														0.4	12.7	4.76	5.16
		CNMG120408-DM	●	●	●	●	▲	▲	▲	▲													0.8	12.7	4.76	5.16
		CNMG120412-DM	●	●	●	●	▲	▲	▲	▲													1.2	12.7	4.76	5.16
	All-round	CNMG090304		●	●			▲	▲											●			0.4	9.525	3.18	3.81
		CNMG090308	●	●	●	●	▲	▲	▲	▲									●	●			0.8	9.525	3.18	3.81
		CNMG120404	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●	●			●		●	0.4	12.7	4.76	5.16
		CNMG120408	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●	●			●	●	●	0.8	12.7	4.76	5.16
		CNMG120412	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●					●	●	1.2	12.7	4.76	5.16
		CNMG120416	●	●	●	●	▲	▲	▲	▲	●	●	●	●									1.6	12.7	4.76	5.16
		CNMG160608	●	●	●	●	▲	▲	▲	▲		●	●	●		●							0.8	15.875	6.35	6.35
		CNMG160612	●	●	●	●	▲	▲	▲	▲	●	●	●	●		●							1.2	15.875	6.35	6.35
		CNMG160616	●	●	●	●	▲	▲	▲	▲	●	●	●	●									1.6	15.875	6.35	6.35
		CNMG190608		●	●	●		▲	▲	▲													0.8	19.05	6.35	7.93
		CNMG190612	●	●	●	●	▲	▲	▲	▲	●	●	●	●		●							1.2	19.05	6.35	7.93
		CNMG190616		●	●	●		▲	▲	▲	●	●	●	●		●							1.6	19.05	6.35	7.93

● : Line up
▲ : To be discontinued

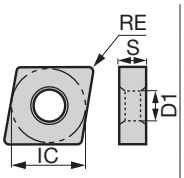
Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

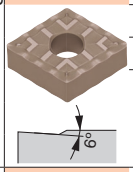
CN

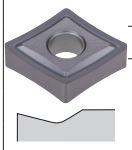
Rhombic, 80° with hole

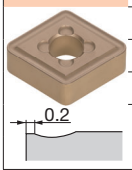
		T9205	T9215	T9225	T9235	T9115	T9125	T9135	AH110	AH120	AH725	AH8005	AH8015	GH330	GT720	NS9530	TH10
P	Steel	●	●ⓒ	●ⓒ✠	✠	●ⓒ	●ⓒ✠	✠	●	●ⓒ	ⓒ			●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ						●	●ⓒ	ⓒ	●	ⓒ	●ⓒ			●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ			●	●ⓒ	ⓒ			●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																●
S	Superalloy								●	●ⓒ	●	●	ⓒ				
H	Hard material																

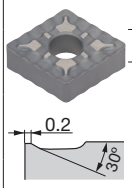


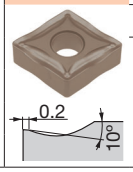
Application	Chipbreaker	Designation	Coated													Coated cermet				Cermet				Uncoated				Dimension (mm)			
			T9205	T9215	T9225	T9235	T9115	T9125	T9135	AH110	AH120	AH725	AH8005	AH8015	GH330	GT720				NS9530				TH10				RE	IC	S	D1
Finishing to medium cutting	27	CNMG120404-27		●	●		▲	▲												●								0.4	12.7	4.76	5.16
		CNMG120408-27		●	●	●	▲	▲	▲											●								0.8	12.7	4.76	5.16
		CNMG120412-27			●			▲																				1.2	12.7	4.76	5.16
Medium cutting	28	CNMG120404-28			●			▲		●	●		●	●														0.4	12.7	4.76	5.16
		CNMG120408-28								●	●		●	●														0.8	12.7	4.76	5.16
		CNMG120412-28											●	●														1.2	12.7	4.76	5.16
	33	CNMG120408-33								●						●												0.8	12.7	4.76	5.16
		CNMG120416-33		●			▲																					1.6	12.7	4.76	5.16
		CNMG160612-33		●			▲																					1.2	15.875	6.35	6.35
		CNMG190612-33		●			▲																					1.2	19.05	6.35	7.93
	37	CNMG120404-37		●			▲													●								0.4	12.7	4.76	5.16
		CNMG120408-37		●			▲								●					●				●				0.8	12.7	4.76	5.16
		CNMG120412-37		●			▲																					1.2	12.7	4.76	5.16
	38	CNMG120404-38													●													0.4	12.7	4.76	5.16
		CNMG120408-38		●			▲					●			●													0.8	12.7	4.76	5.16





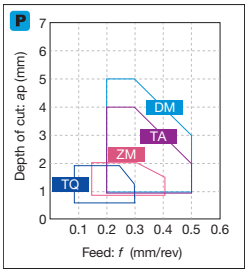


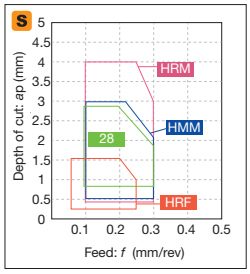


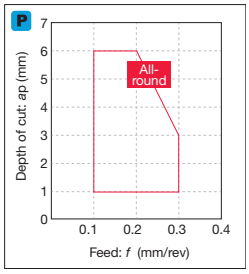


● : Line up
▲ : To be discontinued

Chip control range







Reference pages: External toolholder → C018 - Internal toolholder → D023 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

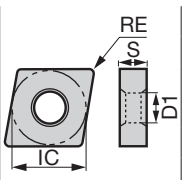
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9225	T9235	T9125	T9135	T6120	T6130	AH630	AH645	AH110	AH120	T515	T5105	T5115	T5125	AH725	AH8005	AH8015	AH905	GH110	GH330	GT720	NS9530	TH10	KS05F	KS20
P	Steel	ⓒ✠	✠	ⓒ✠	✠	ⓒ	✠	ⓒ✠	✠	●	●ⓒ					ⓒ				●	●ⓒ	●ⓒ	●ⓒ	●		
M	Stainless					●	ⓒ	ⓒ	✠	●	●ⓒ					ⓒ	●	ⓒ		●	●ⓒ			●		
K	Cast iron									●	●ⓒ	●ⓒ	●	ⓒ	✠	ⓒ				●	●ⓒ	●ⓒ	●ⓒ	●	●	ⓒ✠
N	Non-ferrous																							●	●	ⓒ✠
S	Superalloy									●	●ⓒ					●	●	ⓒ	ⓒ	●					●	ⓒ✠
H	Hard material																									



Application	Chipbreaker	Designation	T9225	T9235	T9125	T9135	T6120	T6130	AH630	AH645	AH110	AH120	T515	T5105	T5115	T5125	AH725	AH8005	AH8015	AH905	GH110	GH330	GT720	NS9530	TH10	KS05F	KS20	RE	IC	S	D1
			Coated																				Coated cermet	Cer-met	Uncoated			Dimension (mm)			
Medium cutting	SM	CNMG090404E-SM					●	●	●																			0.4	9.525	4.76	3.81
		CNMG090408E-SM					●	●	●																			0.8	9.525	4.76	3.81
		CNMG090412E-SM					●	●	●																			1.2	9.525	4.76	3.81
		CNMG120404-SM					●	●	●	●							●											0.4	12.7	4.76	5.16
		CNMG120408-SM					●	●	●	●							●			●								0.8	12.7	4.76	5.16
		CNMG120412-SM					●	●	●	●							●											1.2	12.7	4.76	5.16
	CM	CNMG120404-CM											●	●	●	●												0.4	12.7	4.76	5.16
		CNMG120408-CM											●	●	●	●												0.8	12.7	4.76	5.16
		CNMG120412-CM											●	●	●	●												1.2	12.7	4.76	5.16
		CNMG160608-CM												●	●	●												0.8	15.875	6.35	6.35
		CNMG160612-CM											●	●	●	●												1.2	15.875	6.35	6.35
	P	CNGG120404R-P																			●			●	●			0.4	12.7	4.76	5.16
		CNGG120404L-P																			●			●	●			0.4	12.7	4.76	5.16
		CNGG120408R-P																			●				●			0.8	12.7	4.76	5.16
		CNGG120408L-P																			●				●			0.8	12.7	4.76	5.16
Finishing to medium cutting	HRM	CNMG120404-HRM																●	●									0.4	12.7	4.76	5.16
		CNMG120408-HRM																●	●									0.8	12.7	4.76	5.16
		CNMG120412-HRM																●	●									1.2	12.7	4.76	5.16
		CNMG160608-HRM																●	●									0.8	15.875	6.35	6.35
		CNMG160612-HRM																●	●									1.2	15.875	6.35	6.35
		CNMG190612-HRM																●	●									1.2	19.05	6.35	7.93
		CNMG190616-HRM																●	●									1.6	19.05	6.35	7.93
Medium cutting	HMM	CNMG120404-HMM																		●								0.4	12.7	4.76	5.16
		CNMG120408-HMM																		●						●		0.8	12.7	4.76	5.16
		CNMG120412-HMM																		●								1.2	12.7	4.76	5.16
		CNMG160608-HMM																		●								0.8	15.875	6.35	6.35
		CNMG160612-HMM																		●								1.2	15.875	6.35	6.35
		CNMG160616-HMM																		●								1.6	15.875	6.35	6.35
	SA	CNMG120404-SA					●	●	●	●		●																0.4	12.7	4.76	5.16
		CNMG120408-SA					●	●	●	●	●	●															●	0.8	12.7	4.76	5.16
		CNMG120412-SA					●	●	●	●		●															●	1.2	12.7	4.76	5.16
		CNMG190612-SA										●															●	1.2	19.05	6.35	7.93
		CNMG190616-SA										●															●	1.6	19.05	6.35	7.93
	S	CNMG120404R-S	●	●	▲	▲		●	●	●												●	●	●				0.4	12.7	4.76	5.16
		CNMG120404L-S	●	●	▲	▲		●	●	●												●		●				0.4	12.7	4.76	5.16
		CNMG120408R-S	●	●	▲	▲		●	●	●												●	●	●				0.8	12.7	4.76	5.16
		CNMG120408L-S	●	●	▲	▲		●	●	●												●		●				0.8	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

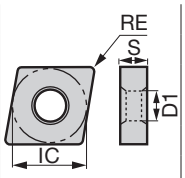
Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	AH120
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	✠	●◐
M	Stainless		●◐							◐	●◐
K	Cast iron	●◐	●◐			●◐	●◐				●◐
N	Non-ferrous										
S	Superalloy										●◐
H	Hard material										



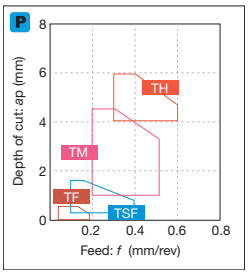
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	AH120	RE	IC	S	D1
Medium to heavy cutting	TH	CNMG120408-TH	●	●	●	●	▲	▲	▲	▲	●	●	0.8	12.7	4.76	5.16
		CNMG120412-TH	●	●	●	●	▲	▲	▲	▲	●	●	1.2	12.7	4.76	5.16
		CNMG120416-TH	●	●	●	●	▲	▲	▲	▲			1.6	12.7	4.76	5.16
		CNMG160612-TH	●	●	●	●	▲	▲	▲	▲		●	1.2	15.875	6.35	6.35
		CNMG160616-TH	●	●	●	●	▲	▲	▲	▲		●	1.6	15.875	6.35	6.35
		CNMG190612-TH	●	●	●	●	▲	▲	▲	▲		●	1.2	19.05	6.35	7.93
		CNMG190616-TH	●	●	●	●	▲	▲	▲	▲		●	1.6	19.05	6.35	7.93
	THS	CNMG120408-THS	●	●	●	●	▲	▲	▲	▲			0.8	12.7	4.76	5.16
		CNMG120412-THS	●	●	●	●	▲	▲	▲	▲			1.2	12.7	4.76	5.16
		CNMG120416-THS	●	●	●	●	▲	▲	▲	▲			1.6	12.7	4.76	5.16
		CNMG160612-THS	●	●	●	●	▲	▲	▲	▲			1.2	15.875	6.35	6.35
		CNMG160616-THS	●	●	●	●	▲	▲	▲	▲			1.6	15.875	6.35	6.35
		CNMG190612-THS		●	●	●		▲	▲	▲			1.2	19.05	6.35	7.93
		CNMG190616-THS		●	●	●		▲	▲	▲			1.6	19.05	6.35	7.93
		CNMG190624-THS		●	●	●		▲	▲	▲			2.4	19.05	6.35	7.93
		CNMG250924-THS		●	●	●		▲	▲	▲			2.4	25.4	9.52	9.12
Medium to heavy cutting (single side)	57	CNMM120404-57			●				▲				0.4	12.7	4.76	5.16
		CNMM120408-57		●	●			▲	▲				0.8	12.7	4.76	5.16
		CNMM120412-57			●				▲				1.2	12.7	4.76	5.16
		CNMM190612-57			●				▲				1.2	12.7	4.76	5.16
		CNMM190616-57			●				▲				1.6	12.7	4.76	5.16

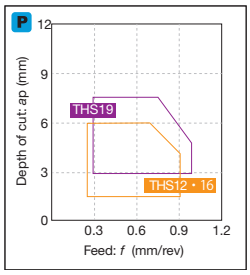
Coated

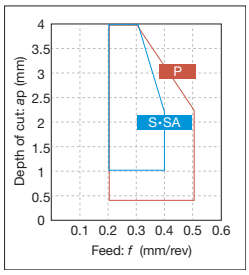
Dimension (mm)

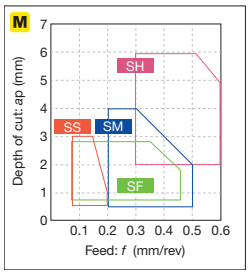
● : Line up
▲ : To be discontinued

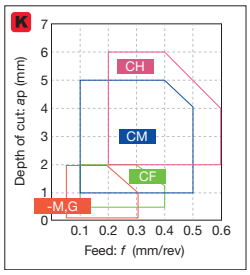
Chip control range



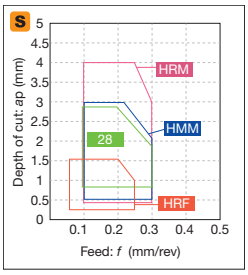








*-M,G: Without chipbreaker



Reference pages: External toolholder → C018 - Internal toolholder → D023 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

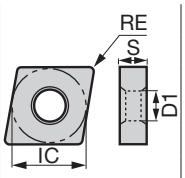
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125
P	Steel	●	●◐	◐✠	✠	●◐	◐✠	✠	✠	◐✠	✠				
M	Stainless		●◐						◐	◐	✠				
K	Cast iron	●◐	●◐			●◐						●◐	●	◐	✠
N	Non-ferrous														
S	Superalloy														
H	Hard material														



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	RE	IC	S	D1
			Coated														Dimension (mm)			
Medium to heavy cutting (single side)	TRS	CNMM120408-TRS		●	●	●	▲	▲	▲								0.8	12.7	4.76	5.16
		CNMM120412-TRS		●	●	●	▲	▲	▲								1.2	12.7	4.76	5.16
		CNMM160612-TRS		●	●	●	▲	▲	▲								1.2	15.875	6.35	6.35
		CNMM160616-TRS		●	●	●	▲	▲	▲								1.6	15.875	6.35	6.35
		CNMM190616-TRS		●	●	●	▲	▲	▲								1.6	19.05	6.35	7.93
		CNMM190624-TRS		●	●	●	▲	▲	▲								2.4	19.05	6.35	7.93
		CNMM250924-TRS		●	●	●	▲	▲	▲								2.4	25.4	9.52	9.12
Heavy cutting (single side)	TU	CNMM190612-TU			●	●		▲	▲								1.2	19.05	6.35	7.93
		CNMM190616-TU			●	●		▲	▲								1.6	19.05	6.35	7.93
		CNMM190624-TU		●	●	●	▲	▲	▲								2.4	19.05	6.35	7.93
		CNMM250924-TU			●	●		▲	▲								2.4	25.4	9.52	9.12
	TUS	CNMM190608-TUS		●	●		▲	▲									0.8	19.05	6.35	7.93
		CNMM190612-TUS		●	●	●	▲	▲	▲								1.2	19.05	6.35	7.93
		CNMM190616-TUS		●	●	●	▲	▲	▲								1.6	19.05	6.35	7.93
		CNMM190624-TUS		●	●	●	▲	▲	▲								2.4	19.05	6.35	7.93
		CNMM190632-TUS		●	●		▲	▲									3.2	19.05	6.35	7.93
		CNMM250916-TUS		●	●	●	▲	▲	▲								1.6	25.4	9.52	9.12
		CNMM250924-TUS		●	●	●	▲	▲	▲								2.4	25.4	9.52	9.12
		CNMM250932-TUS		●	●		▲	▲									3.2	25.4	9.52	9.12
Medium to heavy cutting (single side)	65	CNMM120412-65			●			▲									1.2	12.7	4.76	5.16
Medium to heavy cutting	SH	CNMG120408-SH								●	●	●					0.8	12.7	4.76	5.16
		CNMG120412-SH								●	●	●					1.2	12.7	4.76	5.16
		CNMG120416-SH								●	●	●					1.6	12.7	4.76	5.16
		CNMG160612-SH								●	●	●					1.2	15.875	6.35	6.35
		CNMG160616-SH								●	●	●					1.6	15.875	6.35	6.35
		CNMG190612-SH								●	●	●					1.2	19.05	6.35	7.93
		CNMG190616-SH								●	●	●					1.6	19.05	6.35	7.93
	CH	CNMG120404-CH												●	●	●	0.4	12.7	4.76	5.16
		CNMG120408-CH											●	●	●	●	0.8	12.7	4.76	5.16
		CNMG120412-CH											●	●	●	●	1.2	12.7	4.76	5.16
		CNMG160612-CH												●	●	●	1.2	15.875	6.35	6.35
		CNMG160616-CH												●	●	●	1.6	15.875	6.35	6.35
		CNMG190612-CH												●	●	●	1.2	19.05	6.35	7.93
		CNMG190616-CH												●	●	●	1.6	19.05	6.35	7.93

● : Line up
▲ : To be discontinued

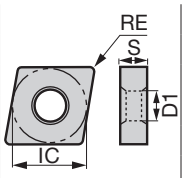
Reference pages: External toolholder → C018 - Internal toolholder → D023 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

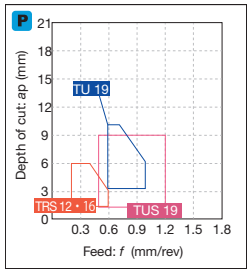
		T9205	T9105	T515	T5105	T5115	T5125	NS520	TH10	FX105	LX21	LX11
P	Steel	●	●					●ⓒ	●			
M	Stainless								●			
K	Cast iron	●ⓒ	●ⓒ	●ⓒ	●	ⓒ	✠	●ⓒ	●	●ⓒ	●	
N	Non-ferrous								●			
S	Superalloy											
H	Hard material										●	

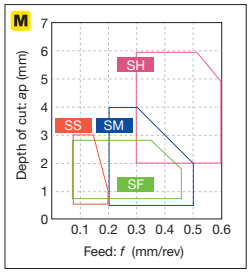


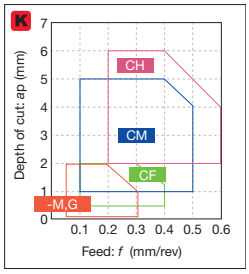
Application	Chipbreaker	Designation	T9205	T9105	T515	T5105	T5115	T5125	NS520	TH10	FX105	LX21	LX11	RE	IC	S	D1
			Coated						Cermet	Uncoated	Ceramic			Dimension (mm)			
Finishing to medium cutting	-	CNMA090404E			●									0.4	9.525	4.76	3.81
		CNMA090408E			●									0.8	9.525	4.76	3.81
		CNMA090412E			●									1.2	9.525	4.76	3.81
		CNMA090416E			●									1.6	9.525	4.76	3.81
		CNMA120404				●	●	●		●				0.4	12.7	4.76	5.16
		CNMA120408	●	▲	●	●	●	●	●	●	●			0.8	12.7	4.76	5.16
		CNMA120412	●	▲	●	●	●	●		●	●			1.2	12.7	4.76	5.16
		CNMA120416	●	▲		●	●	●		●	●			1.6	12.7	4.76	5.16
		CNMA160608				●	●	●						0.8	15.875	6.35	6.35
		CNMA160612			●	●	●	●						1.2	15.875	6.35	6.35
		CNMA160616			●	●	●	●						1.6	15.875	6.35	6.35
		CNMA190612			●	●	●	●						1.2	19.05	6.35	7.93
		CNMA190616			●	●	●	●						1.6	19.05	6.35	7.93
	Wiper	CNMA120408W									●			0.8	12.7	4.76	5.16
		CNMA120412W									●		●	1.2	12.7	4.76	5.16
		CNMA120416W									●			1.6	12.7	4.76	5.16
	-	CNGA120404										●	●	0.4	12.7	4.76	5.16
		CNGA120408							●		●	●	●	0.8	12.7	4.76	5.16
		CNGA120412									●	●	●	1.2	12.7	4.76	5.16
		CNGA120416									●		●	1.6	12.7	4.76	5.16
		CNGA120420											●	2	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

Chip control range







*-M,G: Without chipbreaker

Reference pages: External toolholder → C018 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

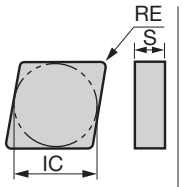
Insert NEGATIVE TYPE

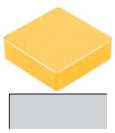
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CN

Rhombic, 80° without hole

P	Steel				
M	Stainless				
K	Cast iron	●◐	●		●◐
N	Non-ferrous				
S	Superalloy				
H	Hard material			●	



Application	Chipbreaker	Designation	Ceramic FX105	LX21	LX11	CX710	Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	-	CNGD120712	●				1.2	12.7	7.94	-
		CNGD120716	●				1.6	12.7	7.94	-
	-	CNMN120408	●				0.8	12.7	4.76	-
		CNMN120412	●				1.2	12.7	4.76	-
	-	CNGN120404			●		0.4	12.7	4.76	-
		CNGN120408	●		●		0.8	12.7	4.76	-
		CNGN120412	●		●	●	1.2	12.7	4.76	-
		CNGN120416	●	●	●		1.6	12.7	4.76	-
		CNGN120420	●				2	12.7	4.76	-
		CNGN120708	●		●		0.8	12.7	7.94	-
		CNGN120712	●		●		1.2	12.7	7.94	-
		CNGN120716	●		●		1.6	12.7	7.94	-
		CNGN120720			●		2	12.7	7.94	-

● : Line up

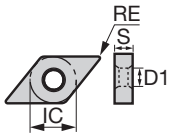
Reference pages: CNGD...: External toolholder → C022

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

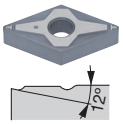
DN

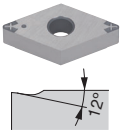
Rhombic, 55° with hole

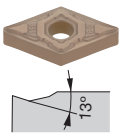
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	GH110	GT9530	AT9530	GT720	NS9530	NS520	TH10
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	●◐	●	●◐	●◐	●◐	●◐	●◐	●
M	Stainless		●◐							●◐	●						●
K	Cast iron	●◐	●◐			●◐	●◐			●◐	●	●◐	●◐	●◐	●◐	●◐	●
N	Non-ferrous																●
S	Superalloy									●◐	●						
H	Hard material																

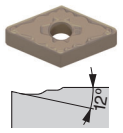


Application	Chipbreaker	Designation	Coated										Coated cermet			Cermet		Uncoated	Dimension (mm) RE	IC	S	D1
Precision finishing	TF	DNMG150404-TF														●		●	0.4	12.7	4.76	5.16
		DNMG150408-TF														●			0.8	12.7	4.76	5.16
	01	DNGG110402-01														●			0.2	9.525	4.76	3.81
		DNGG110404-01														●	●		0.4	9.525	4.76	3.81
		DNGG110408-01												●		●			0.8	9.525	4.76	3.81
		DNGG150402-01														●	●	●	0.2	12.7	4.76	5.16
		DNGG150404-01									●					●	●	●	0.4	12.7	4.76	5.16
		DNGG150408-01									●					●	●	●	0.8	12.7	4.76	5.16
Finishing	TSF	DNMG110404E-TSF		●	●			▲	▲				●	●		●			0.4	9.525	4.76	3.81
		DNMG110408E-TSF		●	●			▲	▲				●	●		●			0.8	9.525	4.76	3.81
		DNMG110412E-TSF		●	●			▲	▲				●	●		●			1.2	9.525	4.76	3.81
		DNMG150404-TSF	●	●	●	●	▲	▲	▲	▲	●		●	●		●			0.4	12.7	4.76	5.16
		DNMG150408-TSF	●	●	●	●	▲	▲	▲	▲	●		●	●		●			0.8	12.7	4.76	5.16
		DNMG150412-TSF	●	●	●	●	▲	▲	▲	▲	●								1.2	12.7	4.76	5.16
		DNMG150604-TSF		●	●			▲	▲				●	●		●			0.4	12.7	6.35	5.16
		DNMG150608-TSF	●	●	●	●	▲	▲	▲	▲			●	●		●			0.8	12.7	6.35	5.16
		DNMG150612-TSF	●	●	●	●	▲	▲	▲	▲									1.2	12.7	6.35	5.16
Finishing (wiper)	FW	DNMG110404E-FW		●				▲											0.4	9.525	4.76	3.81
		DNMG110408E-FW		●				▲											0.8	9.525	4.76	3.81
		DNMG150404-FW		●				▲											0.4	12.7	4.76	5.16
		DNMG150408-FW		●				▲											0.8	12.7	4.76	5.16
		DNMG150604-FW		●				▲											0.4	12.7	6.35	5.16
		DNMG150608-FW		●				▲											0.8	12.7	6.35	5.16
		*Wiper																				





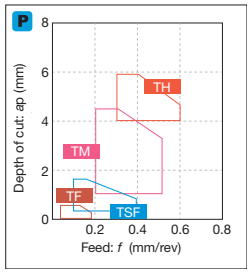


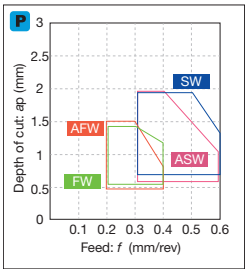


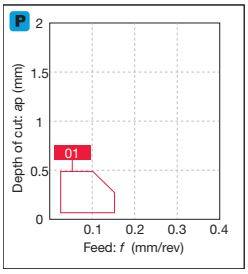
* Please see L032-L036 about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up
▲ : To be discontinued

Chip control range







Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

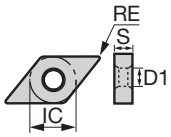
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

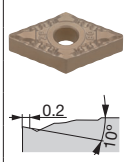
DN

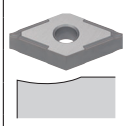
Rhombic, 55° with hole

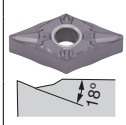
		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GH330	GT9530	AT9530			NS9530	NS520			TH10		RE	IC	S	D1
		Coated															Coated cermet				Cermet				Un-coated		Dimension (mm)			
P	Steel	●	●ⓒ	ⓒ✠	✠	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠					●ⓒ	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●					
M	Stainless		●ⓒ						●	ⓒ	ⓒ			●	ⓒ	●ⓒ									●					
K	Cast iron	●ⓒ	●ⓒ			●ⓒ						●	ⓒ			●ⓒ	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●					
N	Non-ferrous																								●					
S	Superalloy													●	ⓒ															
H	Hard material																													

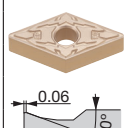


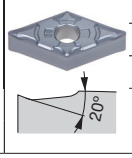
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GH330	GT9530	AT9530			NS9530	NS520			TH10		RE	IC	S	D1
Finishing	ZF	DNMG110404E-ZF		●	●		▲	▲																				0.4	9.525	4.76	3.81
		DNMG150404-ZF		●	●	●	▲	▲	▲									●	●			●						0.4	12.7	4.76	5.16
		DNMG150408-ZF		●	●	●	▲	▲	▲									●	●			●						0.8	12.7	4.76	5.16
		DNMG150412-ZF		●	●	●	▲	▲	▲																			1.2	12.7	4.76	5.16
		DNMG150604-ZF		●	●		▲	▲															●					0.4	12.7	6.35	5.16
		DNMG150608-ZF		●	●	●	▲	▲	▲																			0.8	12.7	6.35	5.16
		DNMG150612-ZF		●	●		▲	▲																				1.2	12.7	6.35	5.16
Finishing	11	DNMG110404-11																				●						0.4	9.525	4.76	3.81
		DNMG110408-11																				●						0.8	9.525	4.76	3.81
		DNMG150404-11														●						●				●		0.4	12.7	4.76	5.16
		DNMG150408-11		●			▲															●						0.8	12.7	4.76	5.16
Finishing (for mild steel)	17	DNMG150404-17																				●						0.4	12.7	4.76	5.16
		DNMG150408-17																				●						0.8	12.7	4.76	5.16
Finishing	SF	DNMG150404-SF								●	●	●																0.4	12.7	4.76	5.16
		DNMG150408-SF								●	●	●																0.8	12.7	4.76	5.16
		DNMG150604-SF								●	●	●																0.4	12.7	6.35	5.16
		DNMG150608-SF								●	●	●																0.8	12.7	6.35	5.16
Finishing	CF	DNMG150404-CF											●	●														0.4	12.7	4.76	5.16
		DNMG150408-CF											●	●														0.8	12.7	4.76	5.16
		DNMG150412-CF											●	●														1.2	12.7	4.76	5.16
		DNMG150604-CF											●	●														0.4	12.7	6.35	5.16
		DNMG150608-CF											●	●														0.8	12.7	6.35	5.16
		DNMG150612-CF											●	●														1.2	12.7	6.35	5.16
	HRF	DNMG150404-HRF													●	●												0.4	12.7	4.76	5.16
		DNMG150408-HRF													●	●												0.8	12.7	4.76	5.16
		DNMG150604-HRF													●	●												0.4	12.7	6.35	5.16
		DNMG150608-HRF													●	●												0.8	12.7	6.35	5.16











● : Line up
▲ : To be discontinued

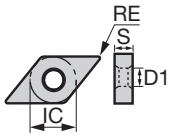
Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

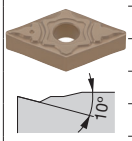
DN

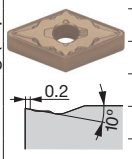
Rhombic, 55° with hole

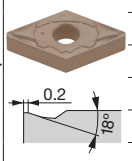
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	GT9530	AT9530	NS9530	NS520
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	●◐	●◐	●◐	●◐
M	Stainless		●◐										
K	Cast iron	●◐	●◐			●◐	●◐			●◐	●◐	●◐	●◐
N	Non-ferrous												
S	Superalloy												
H	Hard material												

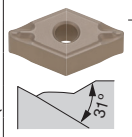


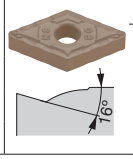
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	GT9530	AT9530	NS9530	NS520	RE	IC	S	D1
			Coated								Coated cermet		Cermet		Dimension (mm)			
Finishing	TS	DNMG150404-TS		●	●	●		▲	▲	▲	●	●	●	●	0.4	12.7	4.76	5.16
		DNMG150408-TS	●	●	●	●	▲	▲	▲	▲	●	●	●	●	0.8	12.7	4.76	5.16
		DNMG150412-TS	●	●	●	●	▲	▲	▲	▲					1.2	12.7	4.76	5.16
		DNMG150604-TS									●	●	●	●	0.4	12.7	6.35	5.16
		DNMG150608-TS		●	●			▲	▲		●	●	●	●	0.8	12.7	6.35	5.16
		DNMG150612-TS		●	●			▲	▲						1.2	12.7	6.35	5.16
Finishing to medium cutting (wiper)	SW	DNMG110408E-SW		●				▲							0.8	9.525	4.76	3.81
		DNMG110412E-SW		●				▲							1.2	9.525	4.76	3.81
		DNMG150408-SW		●				▲							0.8	12.7	4.76	5.16
		DNMG150412-SW		●				▲							1.2	12.7	4.76	5.16
		DNMG150608-SW		●				▲							0.8	12.7	6.35	5.16
		DNMG150612-SW		●				▲							1.2	12.7	6.35	5.16
		*Wiper																
High feed, small depth of cut	AS	DNMG150404-AS		●		●		▲		▲			●		0.4	12.7	4.76	5.16
		DNMG150408-AS		●	●	●		▲	▲	▲			●		0.8	12.7	4.76	5.16
		DNMG150412-AS		●	●	●		▲	▲	▲					1.2	12.7	4.76	5.16
		DNMG150604-AS		●				▲							0.4	12.7	6.35	5.16
		DNMG150608-AS		●	●			▲	▲						0.8	12.7	6.35	5.16
		DNMG150612-AS		●				▲							1.2	12.7	6.35	5.16
Boring (double side)	CB	DNMG110404-CB									●		●		0.4	9.525	4.76	3.81
		DNMG110408-CB		●				▲			●		●		0.8	9.525	4.76	3.81
Finishing	NS	DNMG150404-NS			●				▲				●		0.4	12.7	4.76	5.16
		DNMG150408-NS	●	●	●		▲	▲	▲				●		0.8	12.7	4.76	5.16







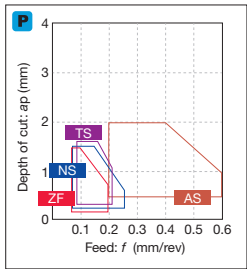


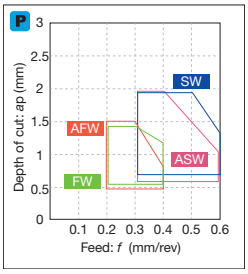


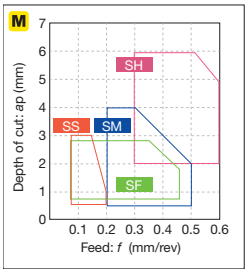
* Please see L032-L036 about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

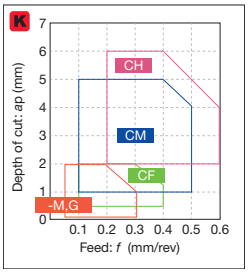
● : Line up
▲ : To be discontinued

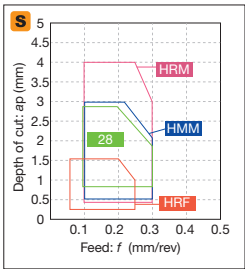
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

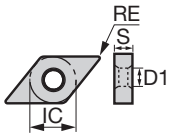
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH110	AH120	GH330	GT9530	NS9530	KS20
		Coated															Coated cermet	Cermet	Un-coated
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠	✠	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	
M	Stainless		●ⓒ							●	ⓒ	ⓒ	✠	●	●ⓒ	●ⓒ			
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ							●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	ⓒ✠
N	Non-ferrous																		ⓒ✠
S	Superalloy													●	●ⓒ				ⓒ✠
H	Hard material																		



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH110	AH120	GH330	GT9530	NS9530	KS20	RE	IC	S	D1
Finishing	SS	DNMG110404E-SS											●	●							0.4	9.525	4.76	3.81
		DNMG110408E-SS											●	●							0.8	9.525	4.76	3.81
		DNMG150404-SS									●	●	●	●			●				0.4	12.7	4.76	5.16
		DNMG150408-SS									●	●	●	●			●			●	0.8	12.7	4.76	5.16
		DNMG150412-SS									●	●	●	●							1.2	12.7	4.76	5.16
		DNMG150604-SS									●	●	●	●		●	●				0.4	12.7	6.35	5.16
		DNMG150608-SS									●	●	●	●		●	●				0.8	12.7	6.35	5.16
		DNMG150612-SS									●	●	●	●							1.2	12.7	6.35	5.16
Medium cutting	TM	DNMG110404E-TM		●	●			▲	▲												0.4	9.525	4.76	3.81
		DNMG110408E-TM		●	●			▲	▲												0.8	9.525	4.76	3.81
		DNMG110412E-TM		●	●			▲	▲												1.2	9.525	4.76	3.81
		DNMG110404-TM		●	●	●		▲	▲	▲											0.4	9.525	4.76	3.81
		DNMG110408-TM		●	●	●		▲	▲	▲											0.8	9.525	4.76	3.81
		DNMG150404-TM	●	●	●	●	▲	▲	▲	▲						●					0.4	12.7	4.76	5.16
		DNMG150408-TM	●	●	●	●	▲	▲	▲	▲						●					0.8	12.7	4.76	5.16
		DNMG150412-TM	●	●	●	●	▲	▲	▲	▲					●	●					1.2	12.7	4.76	5.16
		DNMG150416-TM		●	●			▲	▲												1.6	12.7	4.76	5.16
		DNMG150604-TM	●	●	●	●	▲	▲	▲	▲						●					0.4	12.7	6.35	5.16
		DNMG150608-TM	●	●	●	●	▲	▲	▲	▲						●					0.8	12.7	6.35	5.16
		DNMG150612-TM	●	●	●	●	▲	▲	▲	▲						●					1.2	12.7	6.35	5.16
		DNMG150616-TM	●	●	●	●	▲	▲	▲	▲											1.6	12.7	6.35	5.16
Finishing to medium cutting	AM	DNMG150408-AM		●	●			▲	▲												0.8	12.7	4.76	5.16
		DNMG150412-AM		●	●			▲	▲												1.2	12.7	4.76	5.16
		DNMG150416-AM		●	●			▲	▲												1.6	12.7	4.76	5.16
		DNMG150608-AM		●	●			▲	▲												0.8	12.7	6.35	5.16
		DNMG150612-AM		●	●			▲	▲												1.2	12.7	6.35	5.16
		DNMG150616-AM		●	●			▲	▲												1.6	12.7	6.35	5.16
	NM	DNMG150408-NM		●	●	●		▲	▲	▲							●		●		0.8	12.7	4.76	5.16
		DNMG150412-NM		●	●	●		▲	▲	▲											1.2	12.7	4.76	5.16
		DNMG150608-NM															●		●		0.8	12.7	6.35	5.16

● : Line up
▲ : To be discontinued

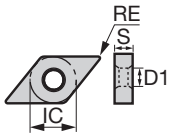
Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

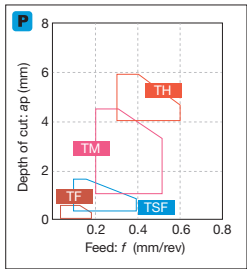
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	GT9530	AT9530	NS9530	NS520	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠					●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ											●	●ⓒ					●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●ⓒ	●	ⓒ	✠	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																			●
S	Superalloy													●	●ⓒ					
H	Hard material																			

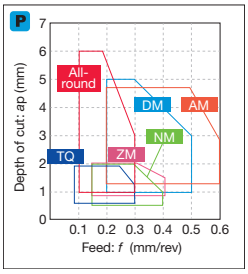


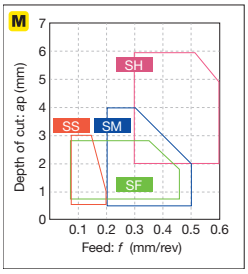
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	GT9530	AT9530	NS9530	NS520	TH10	RE	IC	S	D1
			Coated														Coated cermet		Cermet		Un-coated	Dimension (mm)			
Finishing to medium cutting	TQ	DNMG150404-TQ			●												●	●	●			0.4	12.7	4.76	5.16
		DNMG150408-TQ			●												●	●	●			0.8	12.7	4.76	5.16
	ZM	DNMG110408E-ZM		●	●			▲	▲													0.8	9.525	4.76	3.81
		DNMG150408-ZM		●	●	●		▲	▲	▲							●		●			0.8	12.7	4.76	5.16
		DNMG150412-ZM		●	●	●		▲	▲	▲												1.2	12.7	4.76	5.16
		DNMG150608-ZM		●	●	●		▲	▲	▲												0.8	12.7	6.35	5.16
		DNMG150612-ZM		●	●			▲	▲													1.2	12.7	6.35	5.16
Medium cutting	DM	DNMG150408-DM		●	●	●		▲	▲	▲												0.8	12.7	4.76	5.16
		DNMG150412-DM	●	●	●	●	▲	▲	▲	▲												1.2	12.7	4.76	5.16
		DNMG150604-DM		●				▲														0.4	12.7	6.35	5.16
		DNMG150608-DM		●	●	●		▲	▲	▲												0.8	12.7	6.35	5.16
		DNMG150612-DM	●	●	●	●	▲	▲	▲	▲												1.2	12.7	6.35	5.16
		DNMG150616-DM	●				▲															1.6	12.7	6.35	5.16
	All-round	DNMG110404		●	●			▲	▲			●	●	●			●		●			0.4	9.525	4.76	3.81
		DNMG110408	●	●	●	●	▲	▲	▲	▲		●	●	●			●		●			0.8	9.525	4.76	3.81
		DNMG150404		●	●	●		▲	▲	▲		●	●	●	●	●	●		●	●	●	0.4	12.7	4.76	5.16
		DNMG150408	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●	●		●	●	●	0.8	12.7	4.76	5.16
		DNMG150412	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●			●	●	●	1.2	12.7	4.76	5.16
		DNMG150416		●	●			▲	▲			●	●	●								1.6	12.7	4.76	5.16
		DNMG150604		●	●			▲	▲			●	●	●							●	0.4	12.7	6.35	5.16
		DNMG150608	●	●	●	●	▲	▲	▲	▲	●	●	●	●							●	0.8	12.7	6.35	5.16
		DNMG150612	●	●	●	●	▲	▲	▲	▲	●	●	●	●							●	1.2	12.7	6.35	5.16
		DNMG150616		●	●			▲	▲													1.6	12.7	6.35	5.16
Finishing to medium cutting	27	DNMG150404-27			●				▲										●			0.4	12.7	4.76	5.16
		DNMG150408-27		●	●			▲	▲										●			0.8	12.7	4.76	5.16
		DNMG150412-27			●				▲													1.2	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

Chip control range







Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

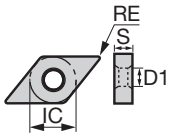
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

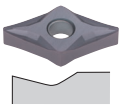
DN

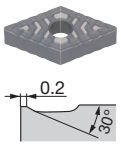
Rhombic, 55° with hole

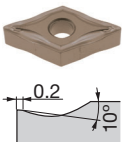
		T9215	T9115	T6120	T6130	T515	T5105	T5115	T5125	AH630	AH645	AH8005	AH8015	AH110	AH120	GH330	GT9530	NS9530	TH10
P	Steel	●ⓒ	●ⓒ	ⓒ	✠					ⓒ✠	✠			●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless	●ⓒ		●	ⓒ					ⓒ	✠	●	ⓒ	●	●ⓒ	●ⓒ			●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●	ⓒ	✠					●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																		●
S	Superalloy											●	ⓒ	●	●ⓒ				
H	Hard material																		

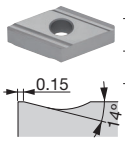


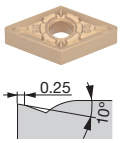
Application	Chipbreaker	Designation	T9215	T9115	T6120	T6130	T515	T5105	T5115	T5125	AH630	AH645	AH8005	AH8015	AH110	AH120	GH330	GT9530	NS9530	TH10	RE	IC	S	D1
			Coated															Coated cermet	Cermet	Un-coated	Dimension (mm)			
Medium cutting	28	DNMG150404-28											●	●		●					0.4	12.7	4.76	5.16
		DNMG150408-28											●	●		●					0.8	12.7	4.76	5.16
		DNMG150604-28											●	●							0.4	12.7	6.35	5.16
		DNMG150608-28											●	●							0.8	12.7	6.35	5.16
	33	DNMG150404-33													●						0.4	12.7	4.76	5.16
		DNMG150408-33													●					●	0.8	12.7	4.76	5.16
	37	DNMG150404-37																	●		0.4	12.7	4.76	5.16
		DNMG150408-37															●		●		0.8	12.7	4.76	5.16
		DNMG150608-37	●	▲																	0.8	12.7	6.35	5.16
	38	DNMG150412-38	●	▲																	1.2	12.7	4.76	5.16
	Parallel	DNGG150404R																●	●		0.4	12.7	4.76	5.16
		DNGG150404L																●	●		0.4	12.7	4.76	5.16
		DNGG150408R																	●		0.8	12.7	4.76	5.16
		DNGG150408L																	●		0.8	12.7	4.76	5.16
	SM	DNMG110404E-SM			●	●					●										0.4	9.525	4.76	3.81
		DNMG110408E-SM			●	●					●										0.8	9.525	4.76	3.81
		DNMG150404-SM			●	●					●	●									0.4	12.7	4.76	5.16
		DNMG150408-SM			●	●					●	●									0.8	12.7	4.76	5.16
		DNMG150412-SM			●	●					●	●									1.2	12.7	4.76	5.16
		DNMG150604-SM			●	●					●	●									0.4	12.7	6.35	5.16
		DNMG150608-SM			●	●					●	●									0.8	12.7	6.35	5.16
		DNMG150612-SM			●	●					●	●									1.2	12.7	6.35	5.16
Medium cutting	CM	DNMG150404-CM					●	●	●	●											0.4	12.7	4.76	5.16
		DNMG150408-CM					●	●	●	●											0.8	12.7	4.76	5.16
		DNMG150412-CM					●	●	●	●											1.2	12.7	4.76	5.16
		DNMG150604-CM						●	●	●											0.4	12.7	6.35	5.16
		DNMG150608-CM						●	●	●											0.8	12.7	6.35	5.16
		DNMG150612-CM						●	●	●											1.2	12.7	6.35	5.16

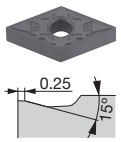












● : Line up
▲ : To be discontinued

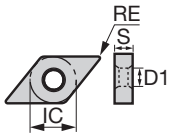
Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

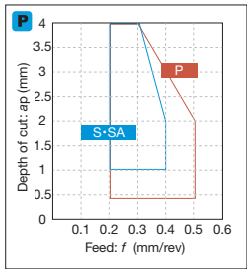
		T9225	T9235	T9125	T9135	T6130	AH630	AH645	AH120	AH8005	AH8015	AH905	GH110	GH330	NS9530	TH10
P	Steel	⊂✠	✠	⊂✠	✠	✠	⊂✠	✠	●⊂				●	●⊂	●⊂	●
M	Stainless					⊂	⊂	✠	●⊂	●	⊂		●	●⊂		●
K	Cast iron								●⊂				●	●⊂	●⊂	●
N	Non-ferrous															●
S	Superalloy								●⊂	●	⊂	⊂	●			
H	Hard material															

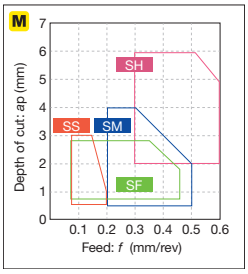


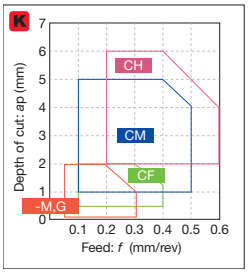
Application	Chipbreaker	Designation	Coated													Cermet		Uncoated		Dimension (mm)			
			T9225	T9235	T9125	T9135	T6130	AH630	AH645	AH120	AH8005	AH8015	AH905	GH110	GH330	NS9530		TH10		RE	IC	S	D1
Medium cutting	P	DNGG150402R-P												●				●		0.2	12.7	4.76	5.16
		DNGG150402L-P												●				●		0.2	12.7	4.76	5.16
		DNGG150404R-P												●				●		0.4	12.7	4.76	5.16
		DNGG150404L-P												●				●		0.4	12.7	4.76	5.16
		DNGG150408R-P																●		0.8	12.7	4.76	5.16
		DNGG150408L-P																●		0.8	12.7	4.76	5.16
Finishing to medium cutting	HRM	DNMG150404-HRM									●	●								0.4	12.7	4.76	5.16
		DNMG150408-HRM									●	●								0.8	12.7	4.76	5.16
		DNMG150412-HRM									●	●								1.2	12.7	4.76	5.16
		DNMG150604-HRM									●	●								0.4	12.7	6.35	5.16
		DNMG150608-HRM									●	●								0.8	12.7	6.35	5.16
		DNMG150612-HRM									●	●								1.2	12.7	6.35	5.16
Medium cutting	HMM	DNMG150404-HMM											●							0.4	12.7	4.76	5.16
		DNMG150408-HMM											●							0.8	12.7	4.76	5.16
		DNMG150412-HMM											●							1.2	12.7	4.76	5.16
	SA	DNMG150404-SA								●										0.4	12.7	4.76	5.16
		DNMG150408-SA								●										0.8	12.7	4.76	5.16
		DNMG150604-SA								●										0.4	12.7	6.35	5.16
		DNMG150608-SA								●										0.8	12.7	6.35	5.16
	S	DNMG150404R-S	●	●	▲	▲	●	●	●					●		●				0.4	12.7	4.76	5.16
		DNMG150404L-S	●	●	▲	▲	●	●	●					●		●				0.4	12.7	4.76	5.16
		DNMG150408R-S	●	●	▲	▲	●	●	●					●		●				0.8	12.7	4.76	5.16
		DNMG150408L-S	●	●	▲	▲	●	●	●					●		●				0.8	12.7	4.76	5.16
		DNMG150604R-S	●	●	▲	▲	●	●	●											0.4	12.7	6.35	5.16
		DNMG150604L-S	●	●	▲	▲	●	●	●											0.4	12.7	6.35	5.16
		DNMG150608R-S	●	●	▲	▲	●	●	●					●						0.8	12.7	6.35	5.16
		DNMG150608L-S	●	●	▲	▲	●	●	●											0.8	12.7	6.35	5.16

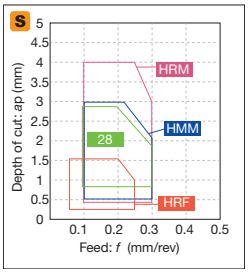
● : Line up
▲ : To be discontinued

Chip control range









*-M,G: Without chipbreaker

Reference pages: External toolholder → C042 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

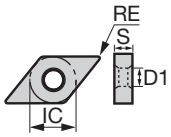
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	GT720	NS520	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●ⓒ	ⓒ✠	✠	✠	ⓒ✠	✠					●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ						ⓒ	ⓒ	✠					●ⓒ			●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ						●ⓒ	●	ⓒ	✠	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																		●
S	Superalloy															●ⓒ			
H	Hard material																		



Application	Chipbreaker	Designation	Coated															Coated cermet			Cermet			Uncoated			Dimension (mm)			
			T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	GT720			NS520			TH10			RE	IC	S	D1
Medium to heavy cutting (single side)	57	DNMM150608-57			●			▲																			0.8	12.7	6.35	5.16
		DNMM150612-57			●			▲																			1.2	12.7	6.35	5.16
Medium to heavy cutting	TH	DNMG150408-TH		●	●	●	▲	▲	▲								●										0.8	12.7	4.76	5.16
		DNMG150412-TH		●	●	●	▲	▲	▲								●										1.2	12.7	4.76	5.16
		DNMG150416-TH		●	●		▲	▲																			1.6	12.7	4.76	5.16
		DNMG150608-TH		●	●	●	▲	▲	▲								●										0.8	12.7	6.35	5.16
		DNMG150612-TH		●	●	●	▲	▲	▲								●										1.2	12.7	6.35	5.16
		DNMG150616-TH		●	●	●	▲	▲	▲																		1.6	12.7	6.35	5.16
	THS	DNMG150408-THS		●	●	●	▲	▲	▲																		0.8	12.7	4.76	5.16
		DNMG150412-THS		●	●	●	▲	▲	▲																		1.2	12.7	4.76	5.16
		DNMG150416-THS		●	●		▲	▲																			1.6	12.7	4.76	5.16
		DNMG150608-THS		●	●	●	▲	▲	▲																		0.8	12.7	6.35	5.16
		DNMG150612-THS		●	●	●	▲	▲	▲																		1.2	12.7	6.35	5.16
		DNMG150616-THS		●	●		▲	▲																			1.6	12.7	6.35	5.16
	SH	DNMG150408-SH								●	●	●															0.8	12.7	4.76	5.16
		DNMG150412-SH								●	●	●															1.2	12.7	4.76	5.16
		DNMG150416-SH								●	●	●															1.6	12.7	4.76	5.16
		DNMG150608-SH								●	●	●															0.8	12.7	6.35	5.16
		DNMG150612-SH								●	●	●															1.2	12.7	6.35	5.16
	CH	DNMG150404-CH												●	●	●											0.4	12.7	4.76	5.16
		DNMG150408-CH											●	●	●	●											0.8	12.7	4.76	5.16
		DNMG150412-CH											●	●	●	●											1.2	12.7	4.76	5.16
		DNMG150604-CH												●	●	●											0.4	12.7	6.35	5.16
		DNMG150608-CH												●	●	●											0.8	12.7	6.35	5.16
		DNMG150612-CH												●	●	●											1.2	12.7	6.35	5.16
Finishing to medium cutting	-	DNMA110404E											●														0.4	9.525	4.76	3.81
		DNMA110408E											●														0.8	9.525	4.76	3.81
		DNMA110412E											●														1.2	9.525	4.76	3.81
		DNMA150404											●	●	●	●		●			●			●			0.4	12.7	4.76	5.16
		DNMA150408											●	●	●	●								●			0.8	12.7	4.76	5.16
		DNMA150412												●	●	●											1.2	12.7	4.76	5.16
		DNMA150604											●	●	●	●											0.4	12.7	6.35	5.16
		DNMA150608											●	●	●	●											0.8	12.7	6.35	5.16
		DNMA150612												●	●	●											1.2	12.7	6.35	5.16

● : Line up
▲ : To be discontinued

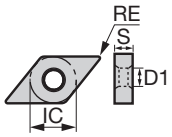
Reference pages: External toolholder → C037 - Internal toolholder → D052 -
J-Series toolholder → G046 TungCap → C045, K012 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel	●◐			●																										
M	Stainless				●																										
K	Cast iron	●◐			●			●◐	●																						
N	Non-ferrous				●																										
S	Superalloy																														
H	Hard material										●																				

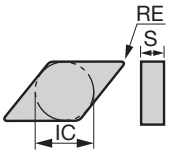


Application	Chipbreaker	Designation	Cermet NS520			Uncoated TH10			Ceramic FX105	LX21	LX11																					Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	-	**DNGA150404**	●			●				●	●																					0.4	12.7	4.76	5.16
		DNGA150408	●			●			●	●	●																					0.8	12.7	4.76	5.16
		DNGA150412							●	●	●																					1.2	12.7	4.76	5.16
		DNGA150416							●																							1.6	12.7	4.76	5.16
		DNGA150604									●																					-	-	-	-
		DNGA150608									●																					0.8	12.7	6.35	5.16
		DNGA150612									●																					1.2	12.7	6.35	5.16
		DNGA150616									●																					1.6	12.7	6.35	5.16
		DNGA150620									●																					2	12.7	6.35	5.16

DN

Rhombic, 55° without hole

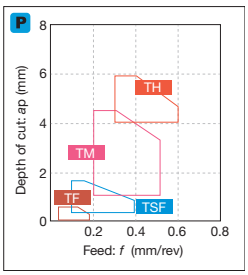
P	Steel																														
M	Stainless																														
K	Cast iron	●◐																													
N	Non-ferrous																														
S	Superalloy																														
H	Hard material		●																												

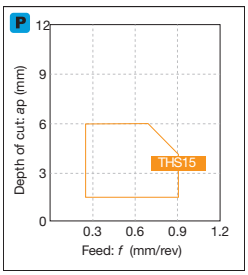


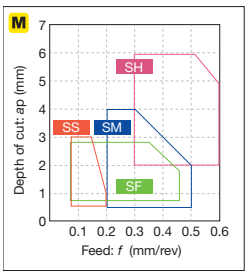
Application	Chipbreaker	Designation	Ceramic FX105	LX11																											Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	-	**DNGD150708**	●																												0.8	12.7	7.94	-
		DNGD150712	●																												1.2	12.7	7.94	-
		DNGD150716	●																												1.6	12.7	7.94	-
	-	**DNGN150404**		●																											0.4	12.7	4.76	-
		DNGN150408		●																											0.8	12.7	4.76	-
		DNGN150412	●	●																											1.2	12.7	4.76	-
		DNGN150416	●																												1.6	12.7	4.76	-
		DNGN150708		●																											0.8	12.7	7.94	-
		DNGN150712		●																											1.2	12.7	7.94	-
		DNGN150716		●																											1.6	12.7	7.94	-

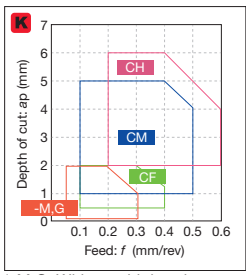
● : Line up

Chip control range









*-M,G: Without chipbreaker

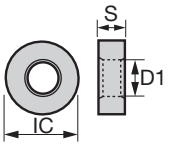
Reference pages: DNGA...: External toolholder → C042 -, Internal toolholder → D052 -, J-Series toolholder → G046, TungCap → C045, K012 -
DNGD...: External toolholder → C046 -

Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

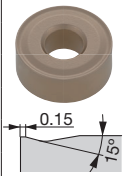
RN

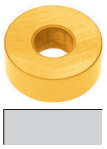
Round, with hole



		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	TH10	LX11
		Coated									Uncoated	Ceramic
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	●ⓒ	●	
M	Stainless		●ⓒ							●ⓒ	●	
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●ⓒ	●	
N	Non-ferrous										●	
S	Superalloy									●ⓒ		
H	Hard material											●

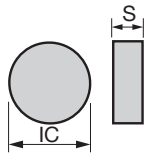
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	TH10	LX11	RE	IC	S	D1
Heavy cutting	61	RNMG090300-61		●	●			▲	▲					-	9.525	3.18	3.81
		RNMG120400-61	●	●	●	●	▲	▲	▲	▲	●	●		-	12.7	4.76	5.16
		RNMG150600-61		●	●			▲	▲					-	15.875	6.35	6.43
		RNMG190600-61		●	●	●		▲	▲	▲				-	19.05	6.35	7.93
		RNMG250900-61		●	●			▲	▲					-	25.4	9.52	9.22
Finishing to medium cutting	-	RNGA120400											●	-	12.7	4.76	5.16





RN

Round, without hole



		FX105	LX11	WG300
		Ceramic		
P	Steel			
M	Stainless			
K	Cast iron	●ⓒ		
N	Non-ferrous			
S	Superalloy			●ⓒ
H	Hard material		●	

Application	Chipbreaker	Designation	FX105	LX11	WG300	RE	IC	S	D1
Finishing to medium cutting	-	RNGN120400	●	●		-	12.7	4.76	-
		RNGN120700	●	●		-	12.7	7.94	-

● : Line up
▲ : To be discontinued

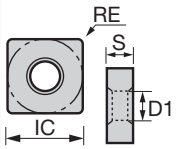
Reference pages: RNMG..., RNGA...:External toolholder → C080 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

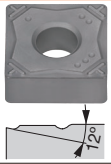
SN

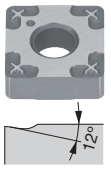
Square, 90° with hole

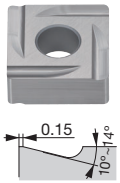
		T9215	T9225	T9115	T9125	GT9530	AT9530	NS9530	NS520	X407
P	Steel	●◐	◐✠	●◐	◐✠	●◐	●◐	●◐	●◐	●
M	Stainless	●◐								
K	Cast iron	●◐		●◐		●◐	●◐	●◐	●◐	●
N	Non-ferrous									
S	Superalloy									
H	Hard material									

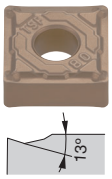


Application	Chipbreaker	Designation	Coated				Coated cermet		Cermet			Dimension (mm)			
			T9215	T9225	T9115	T9125	GT9530	AT9530	NS9530	NS520	X407	RE	IC	S	D1
Precision finishing	TF	SNMG120404-TF							●			0.4	12.7	4.76	5.16
		SNMG120408-TF							●			0.8	12.7	4.76	5.16
	01	SNGG090302-01							●	●		0.2	9.525	3.18	3.81
		SNGG090304-01							●			0.4	9.525	3.18	3.81
		SNGG090308-01							●	●		0.8	9.525	3.18	3.81
		SNGG120402-01							●			0.2	12.7	4.76	5.16
		SNGG120404-01							●			0.4	12.7	4.76	5.16
		SNGG120408-01							●	●		0.8	12.7	4.76	5.16
	B ~ D	SNGG090304R-B					●		●		●	0.4	9.525	3.18	3.81
		SNGG090304L-B					●		●		●	0.4	9.525	3.18	3.81
		SNGG090308R-B							●		●	0.8	9.525	3.18	3.81
		SNGG090308L-B							●		●	0.8	9.525	3.18	3.81
		SNGG120404R-C					●		●			0.4	12.7	4.76	5.16
		SNGG120404L-C					●		●		●	0.4	12.7	4.76	5.16
		SNGG120408R-C							●			0.8	12.7	4.76	5.16
		SNGG120408L-C							●		●	0.8	12.7	4.76	5.16
		SNGG120408R-D							●			0.8	12.7	4.76	5.16
		SNGG120408L-D							●			0.8	12.7	4.76	5.16
Finishing	TSF	SNMG120404-TSF	●	●	▲	▲	●	●	●			0.4	12.7	4.76	5.16
		SNMG120408-TSF	●	●	▲	▲	●	●	●			0.8	12.7	4.76	5.16
		SNMG120412-TSF	●	●	▲	▲						1.2	12.7	4.76	5.16



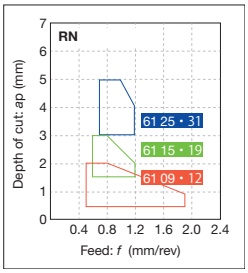


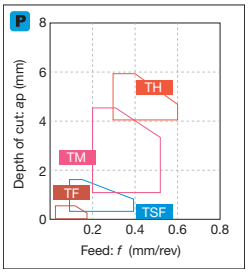


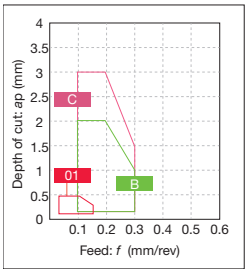


● : Line up
▲ : To be discontinued

Chip control range







Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

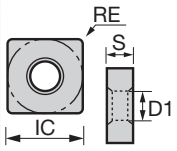
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

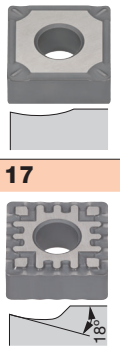
SN

Square, 90° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GT9530	AT9530	NS9530	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠					●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ							●	ⓒ	ⓒ			●	ⓒ				●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ						●	ⓒ			●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																			●
S	Superalloy														●	ⓒ				
H	Hard material																			



Application	Chipbreaker	Designation	Coated															Coated cermet			Cermet		Un-coated	Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GT9530	AT9530		NS9530		TH10	RE	IC	S	D1
Finishing	11	SNMG120404-11																			●			0.4	12.7	4.76	5.16
		SNMG120408-11																			●		●	0.8	12.7	4.76	5.16
Finishing (for mild steel)	17	SNMG120408-17																			●			0.8	12.7	4.76	5.16
Finishing	SF	SNMG120404-SF									●	●	●											0.4	12.7	4.76	5.16
		SNMG120408-SF									●	●	●											0.8	12.7	4.76	5.16
	CF	SNMG120408-CF												●	●									0.8	12.7	4.76	5.16
		SNMG120412-CF												●	●									1.2	12.7	4.76	5.16
	HRF	SNMG120408-HRF														●	●							0.8	12.7	4.76	5.16
		SNMG120412-HRF														●	●							1.2	12.7	4.76	5.16
Finishing	TS	SNMG120404-TS		●	●			▲	▲									●	●		●			0.4	12.7	4.76	5.16
		SNMG120408-TS	●	●	●	●	▲	▲	▲	▲								●	●		●			0.8	12.7	4.76	5.16
		SNMG120412-TS		●	●	●		▲	▲	▲														1.2	12.7	4.76	5.16
High feed, small depth of cut	AS	SNMG120404-AS																			●			0.4	12.7	4.76	5.16
		SNMG120408-AS	●	●			▲	▲													●			0.8	12.7	4.76	5.16



● : Line up
▲ : To be discontinued

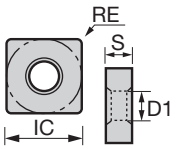
Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

SN

Square, 90° with hole

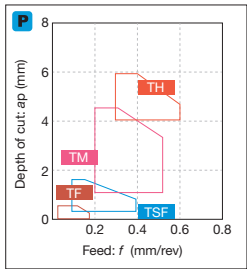
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH120	GH330
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	◐	✠	◐✠	✠	●◐	●◐
M	Stainless		●◐							●	◐	◐	✠	●◐	●◐
K	Cast iron	●◐	●◐			●◐	●◐							●◐	●◐
N	Non-ferrous														
S	Superalloy													●◐	
H	Hard material														

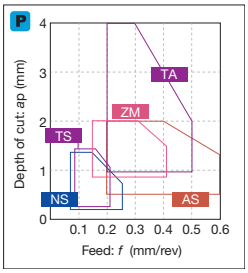


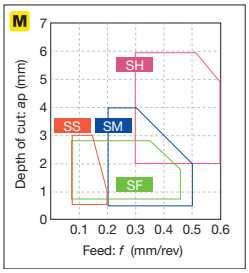
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH120	GH330	RE	IC	S	D1
			Coated														Dimension (mm)			
Finishing	NS	SNMG120408-NS		●	●			▲	▲								0.8	12.7	4.76	5.16
Finishing	SS	SNMG120404-SS									●	●	●	●		●	0.4	12.7	4.76	5.16
		SNMG120408-SS									●	●	●	●		●	0.8	12.7	4.76	5.16
		SNMG120412-SS									●	●	●	●			1.2	12.7	4.76	5.16
Medium cutting	TM	SNMG090304-TM		●	●	●		▲	▲	▲							0.4	9.525	3.18	3.81
		SNMG090308-TM		●	●	●		▲	▲	▲							0.8	9.525	3.18	3.81
		SNMG120404-TM		●	●			▲	▲						●		0.4	12.7	4.76	5.16
		SNMG120408-TM	●	●	●	●	▲	▲	▲	▲					●		0.8	12.7	4.76	5.16
		SNMG120412-TM	●	●	●	●	▲	▲	▲	▲					●		1.2	12.7	4.76	5.16
		SNMG120416-TM		●	●	●		▲	▲	▲							1.6	12.7	4.76	5.16
		SNMG150608-TM		●				▲									0.8	15.875	6.35	6.35
		SNMG150612-TM		●				▲							●		1.2	15.875	6.35	6.35
		SNMG190608-TM		●				▲									0.8	19.05	6.35	7.93
		SNMG190612-TM		●				▲							●		1.2	19.05	6.35	7.93
Medium cutting	TA	SNMG120408-TA		●	●												0.8	12.7	4.76	5.16
		SNMG120412-TA		●	●												1.2	12.7	4.76	5.16
Finishing to medium cutting	ZM	SNMG120408-ZM		●	●	●		▲	▲	▲							0.8	12.7	4.76	5.16
		SNMG120412-ZM		●	●	●		▲	▲	▲							1.2	12.7	4.76	5.16

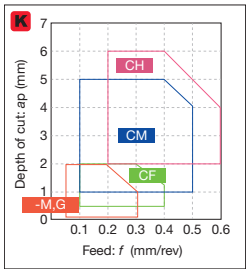
● : Line up
▲ : To be discontinued

Chip control range

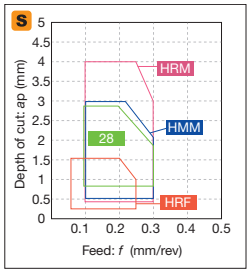








*-M,G: Without chipbreaker



Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

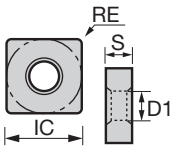
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

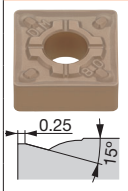
SN

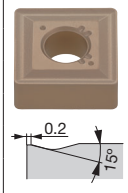
Square, 90° with hole

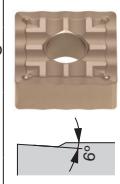
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH725	AH110	AH120	GH330	GT720	NS9530	NS520	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠	✠					ⓒ	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ							●	ⓒ	ⓒ	✠					ⓒ	●	●ⓒ	●ⓒ				●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ							●ⓒ	●	ⓒ	✠	ⓒ	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																								●
S	Superalloy																	●	●	●ⓒ					
H	Hard material																								

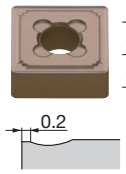


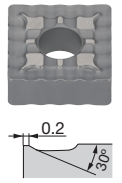
Application	Chipbreaker	Designation	RE	IC	S	D1
Medium cutting	DM	SNMG120408-DM	0.8	12.7	4.76	5.16
		SNMG120412-DM	1.2	12.7	4.76	5.16
	All-round	SNMG090304	0.4	9.525	3.18	3.81
		SNMG090308	0.8	9.525	3.18	3.81
		SNMG120404	0.4	12.7	4.76	5.16
		SNMG120408	0.8	12.7	4.76	5.16
		SNMG120412	1.2	12.7	4.76	5.16
		SNMG120416	1.6	12.7	4.76	5.16
		SNMG120420	2	12.7	4.76	5.16
		SNMG150612	1.2	15.875	6.35	6.35
		SNMG150616	1.6	15.875	6.35	6.35
		SNMG190612	1.2	19.05	6.35	7.93
		SNMG190616	1.6	19.05	6.35	7.93
		SNMG250724	2.4	25.4	7.94	9.12
Finishing to medium cutting	27	SNMG120408-27	0.8	12.7	4.76	5.16
		SNMG120412-27	1.2	12.7	4.76	5.16
Medium cutting	33	SNMG120408-33	0.8	12.7	4.76	5.16
		SNMG120412-33	1.2	12.7	4.76	5.16
		SNMG150612-33	1.2	15.875	6.35	6.35
		SNMG190616-33	1.6	19.05	6.35	7.93
	37	SNMG120408-37	0.8	12.7	4.76	5.16
		SNMG120412-37	1.2	12.7	4.76	5.16
	SM	SNMG120408-SM	0.8	12.7	4.76	5.16
		SNMG120412-SM	1.2	12.7	4.76	5.16

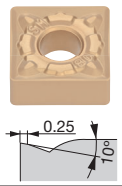












Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

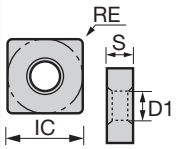
● : Line up
▲ : To be discontinued

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

SN

Square, 90° with hole

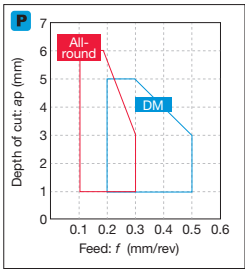
		T6120	T6130	AH630	AH645	AH120	T515	T5105	T5115	T5125	AH8005	AH8015	GH110	AH905	GH330	TH10	KS20
P	Steel	◐	✠	◐✠	✠	●◐							●		●◐	●◐	
M	Stainless	●	◐	◐	✠	●◐					●	◐	●		●◐		
K	Cast iron					●◐	●◐	●	◐	✠			●		●◐	●◐	◐✠
N	Non-ferrous																◐✠
S	Superalloy					●◐					●	◐	●	◐			◐✠
H	Hard material																

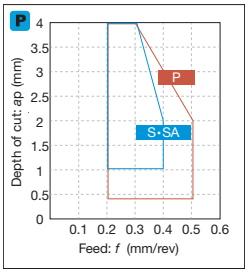


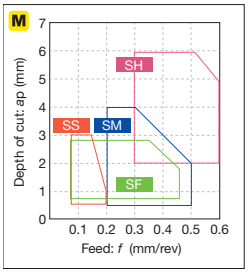
Application	Chipbreaker	Designation	Coated														Uncoated		Dimension (mm)			
			T6120	T6130	AH630	AH645	AH120	T515	T5105	T5115	T5125	AH8005	AH8015	GH110	AH905	GH330	TH10	KS20	RE	IC	S	D1
Medium cutting	CM	SNMG120408-CM						●	●	●	●								0.8	12.7	4.76	5.16
		SNMG120412-CM						●	●	●	●								1.2	12.7	4.76	5.16
	P	SNGG090304R-P												●			●		0.4	9.525	3.18	3.81
		SNGG090304L-P												●			●		0.4	9.525	3.18	3.81
		SNGG090308R-P												●		●	●		0.8	9.525	3.18	3.81
		SNGG090308L-P															●		0.8	9.525	3.18	3.81
		SNGG120404R-P												●			●		0.4	12.7	4.76	5.16
		SNGG120404L-P												●			●		0.4	12.7	4.76	5.16
		SNGG120408R-P												●			●		0.8	12.7	4.76	5.16
		SNGG120408L-P												●			●		0.8	12.7	4.76	5.16
Finishing to medium cutting	HRM	SNMG120408-HRM										●	●						0.8	12.7	4.76	5.16
		SNMG120412-HRM										●	●						1.2	12.7	4.76	5.16
		SNMG150608-HRM										●	●						0.8	15.875	6.35	6.35
		SNMG150612-HRM										●	●						1.2	15.875	6.35	6.35
		SNMG190612-HRM										●	●						1.2	19.05	6.35	7.93
		SNMG190616-HRM										●	●						1.6	19.05	6.35	7.93
Medium cutting	HMM	SNMG120408-HMM													●				0.8	12.7	4.76	5.16
		SNMG120412-HMM													●				1.2	12.7	4.76	5.16
	SA	SNMG120404-SA	●	●	●	●	●												0.4	12.7	4.76	5.16
		SNMG120408-SA	●	●	●	●	●											●	0.8	12.7	4.76	5.16
		SNMG120412-SA	●	●	●	●	●												1.2	12.7	4.76	5.16
		SNMG190612-SA					●											●	1.2	19.05	6.35	7.93

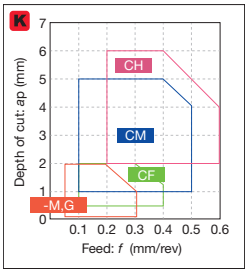
● : Line up

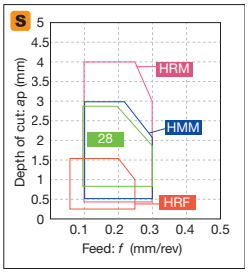
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

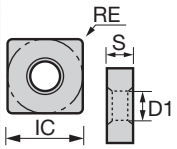
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

SN

Square, 90° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	AH630	AH645	AH120	GH330	NS9530
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	✠	◐✠	✠	●◐	●◐	●◐
M	Stainless		●◐							◐	◐	✠	●◐	●◐	
K	Cast iron	●◐	●◐			●◐	●◐						●◐	●◐	●◐
N	Non-ferrous														
S	Superalloy												●◐		
H	Hard material														



Application	Chipbreaker	Designation	Coated													Cermet				Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	AH630	AH645	AH120	GH330	NS9530				RE	IC	S	D1
Medium cutting	S	SNMG120404R-S			●	●			▲	▲	●	●	●			●				0.4	12.7	4.76	5.16
		SNMG120404L-S			●	●			▲	▲	●	●	●			●				0.4	12.7	4.76	5.16
		SNMG120408R-S			●	●			▲	▲	●	●	●		●	●				0.8	12.7	4.76	5.16
		SNMG120408L-S			●	●			▲	▲	●	●	●		●	●				0.8	12.7	4.76	5.16
Medium to heavy cutting	TH	SNMG120408-TH		●	●	●		▲	▲	▲				●						0.8	12.7	4.76	5.16
		SNMG120412-TH		●	●	●		▲	▲	▲				●						1.2	12.7	4.76	5.16
		SNMG150612-TH	●	●	●		▲	▲	▲					●						1.2	15.875	6.35	6.35
		SNMG150616-TH	●	●	●		▲	▲	▲					●						1.6	15.875	6.35	6.35
		SNMG190612-TH	●	●	●	●	▲	▲	▲	▲				●						1.2	19.05	6.35	7.93
		SNMG190616-TH	●	●	●	●	▲	▲	▲	▲				●						1.6	19.05	6.35	7.93
	THS	SNMG120408-THS		●	●	●		▲	▲	▲										0.8	12.7	4.76	5.16
		SNMG120412-THS		●	●	●		▲	▲	▲										1.2	12.7	4.76	5.16
		SNMG150612-THS		●	●			▲	▲											1.2	15.875	6.35	6.35
		SNMG150616-THS		●	●			▲	▲											1.6	15.875	6.35	6.35
		SNMG190608-THS		●	●	●		▲	▲	▲										0.8	19.05	6.35	7.93
		SNMG190612-THS		●	●	●		▲	▲	▲										1.2	19.05	6.35	7.93
		SNMG190616-THS		●	●	●		▲	▲	▲										1.6	19.05	6.35	7.93
		SNMG190624-THS		●	●	●		▲	▲	▲										2.4	19.05	6.35	7.93
		SNMG250716-THS		●	●	●		▲	▲	▲										1.6	25.4	7.94	9.12
		SNMG250724-THS		●	●	●		▲	▲	▲										2.4	25.4	7.94	9.12
Medium to heavy cutting (single side)	TRS	SNMM150612-TRS		●	●	●		▲	▲	▲										1.2	15.875	6.35	6.35
		SNMM150616-TRS		●	●	●		▲	▲	▲										1.6	15.875	6.35	6.35
		SNMM190616-TRS		●	●	●		▲	▲	▲										1.6	19.05	6.35	7.93
		SNMM190624-TRS		●	●	●		▲	▲	▲										2.4	19.05	6.35	7.93
		SNMM250924-TRS		●	●	●		▲	▲	▲										2.4	25.4	9.52	9.12
Heavy cutting (single side)	TU	SNMM190616-TU				●				▲										1.6	19.05	6.35	7.93
		SNMM190624-TU			●	●			▲	▲										2.4	19.05	6.35	7.93
		SNMM250724-TU			●	●			▲	▲										2.4	25.4	7.94	9.12
		SNMM250924-TU		●	●			▲	▲											2.4	25.4	9.52	9.12

● : Line up
▲ : To be discontinued

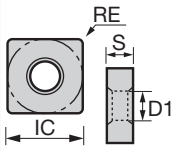
Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

SN

Square, 90° with hole

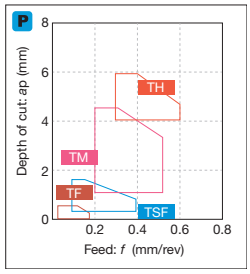
		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T5105	T5115	T5125
P	Steel	●	●◐	◐✠	✠	●◐	◐✠	✠	✠	◐✠	✠			
M	Stainless		●◐						◐	◐	✠			
K	Cast iron	●◐	●◐			●◐						●	◐	✠
N	Non-ferrous													
S	Superalloy													
H	Hard material													

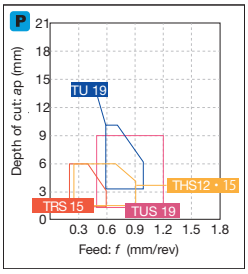


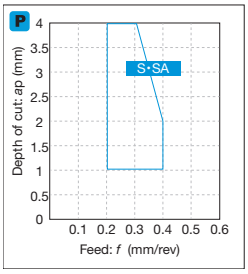
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T5105	T5115	T5125	RE	IC	S	D1
			Coated													Dimension (mm)			
Heavy cutting (single side)	TUS	SNMM190612-TUS		●	●	●	▲	▲	▲							1.2	19.05	6.35	7.93
		SNMM190616-TUS		●	●	●	▲	▲	▲							1.6	19.05	6.35	7.93
		SNMM190624-TUS		●	●	●	▲	▲	▲							2.4	19.05	6.35	7.93
		SNMM250724-TUS		●	●	●	▲	▲	▲							2.4	25.4	7.94	9.12
		SNMM250732-TUS		●	●		▲	▲								3.2	25.4	7.94	9.12
		SNMM250924-TUS		●	●	●	▲	▲	▲							2.4	25.4	9.52	9.12
		SNMM250932-TUS		●	●		▲	▲								3.2	25.4	9.52	9.12
	57	SNMM120408-57		●	●		▲	▲								0.8	12.7	4.76	5.16
		SNMM150616-57			●											1.6	15.875	6.35	6.35
		SNMM190612-57			●											1.2	19.05	6.35	7.93
Medium to heavy cutting (single side)	65	SNMM190612-65			●			▲								1.2	19.05	6.35	7.93
		SNMM310924-65			●			▲								2.4	31.75	9.52	8.8
Medium to heavy cutting	SH	SNMG120408-SH								●	●	●				0.8	12.7	4.76	5.16
		SNMG120412-SH								●	●	●				1.2	12.7	4.76	5.16
		SNMG150612-SH								●	●	●				1.2	15.875	6.35	6.35
		SNMG150616-SH								●	●	●				1.6	15.875	6.35	6.35
		SNMG190612-SH								●	●	●				1.2	19.05	6.35	7.93
		SNMG190616-SH								●	●	●				1.6	19.05	6.35	7.93
	CH	SNMG120408-CH											●	●	●	0.8	12.7	4.76	5.16
		SNMG120412-CH											●	●	●	1.2	12.7	4.76	5.16
		SNMG120416-CH											●	●	●	1.6	12.7	4.76	5.16

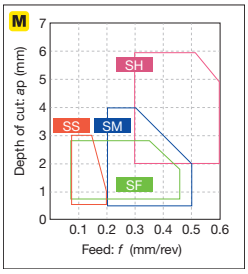
● : Line up
▲ : To be discontinued

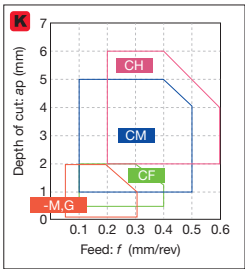
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197

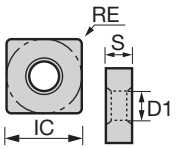
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

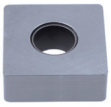
SN

Square, 90° with hole

		T515	T5105	T5115	T5125	GT720	NS520	TH10	FX105	LX21	LX11
		Coated				Coated cermet	Cermet	Uncoated	Ceramic		
P	Steel					●◐	●◐	●			
M	Stainless							●			
K	Cast iron	●◐	●	◐	✠	●◐	●◐	●	●◐	●	
N	Non-ferrous							●			
S	Superalloy										
H	Hard material										●



Application	Chipbreaker	Designation	T515	T5105	T5115	T5125	GT720	NS520	TH10	FX105	LX21	LX11	RE	IC	S	D1
Finishing to medium cutting	-	SNMA090308		●					●				0.8	9.525	3.18	3.81
		SNMA120404		●	●	●	●						0.4	12.7	4.76	5.16
		SNMA120408	●	●	●	●		●	●	●			0.8	12.7	4.76	5.16
		SNMA120412	●	●	●	●		●	●	●			1.2	12.7	4.76	5.16
		SNMA120416		●	●	●							1.6	12.7	4.76	5.16
	-	SNGA090304							●				0.4	9.525	3.18	3.81
		SNGA120404					●		●			●	0.4	12.7	4.76	5.16
		SNGA120408						●	●	●		●	0.8	12.7	4.76	5.16
		SNGA120412							●	●	●	●	1.2	12.7	4.76	5.16
		SNGA120416								●		●	1.6	12.7	4.76	5.16

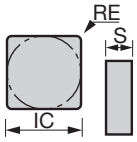


● : Line up

SN

Square, 90° without hole

		TH10	FX105	LX21	LX11
		Uncoated	Ceramic		
P	Steel	●			
M	Stainless	●			
K	Cast iron	●	●◐	●	
N	Non-ferrous	●			
S	Superalloy				
H	Hard material				●



Application	Chipbreaker	Designation	TH10	FX105	LX21	LX11	RE	IC	S	D1
Finishing to medium cutting	-	SNGD120712		●			1.2	12.7	7.94	-
		SNGD120716		●			1.6	12.7	7.94	-
	-	SNGN090308			●	●	0.8	9.525	3.18	-
		SNGN120304				●	0.4	12.7	3.18	-
		SNGN120312				●	1.2	12.7	3.18	-
		SNGN120404				●	0.4	12.7	4.76	-
		SNGN120408	●	●	●	●	0.8	12.7	4.76	-
		SNGN120412		●	●	●	1.2	12.7	4.76	-
		SNGN120416		●	●	●	1.6	12.7	4.76	-
		SNGN120420		●	●		2	12.7	4.76	-
		SNGN120424		●			2.4	12.7	4.76	-
		SNGN120708				●	0.8	12.7	7.94	-
		SNGN120712		●		●	1.2	12.7	7.94	-
		SNGN120716		●		●	1.6	12.7	7.94	-
		SNGN120720				●	2	12.7	7.94	-

● : Line up

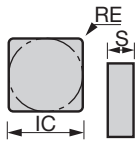
Reference pages: External toolholder → C093 - Cartridge → K197
SNGD...: External toolholder → C108

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

SN

Square, 90° without hole

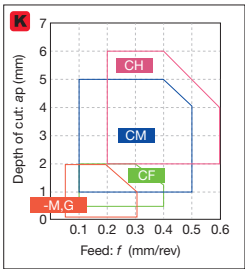
		AH120	TH10
P	Steel	●◐	●
M	Stainless	●◐	●
K	Cast iron	●◐	●
N	Non-ferrous		●
S	Superalloy	●◐	
H	Hard material		



Application	Chipbreaker	Designation	Coated AH120	Uncoated TH10	RE	IC	S	D1
Finishing to medium cutting	-	SNMN120408		●	0.8	12.7	4.76	-
		SNMN120412	●		1.2	12.7	4.76	-

● : Line up

Chip control range



*-M,G: Without chipbreaker

Reference pages: SNMN...: External toolholder → C093 -

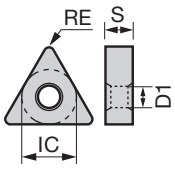
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° with hole

		GH110	GH330	SH725	GT9530	GT720	NS9530	NS520	X407	TH10
P	Steel	●	◐	◐	◐	◐	◐	◐	●	●
M	Stainless	●	◐	◐						●
K	Cast iron	●	◐		◐	◐	◐	◐	●	●
N	Non-ferrous									●
S	Superalloy	●								
H	Hard material									



Application	Chipbreaker	Designation	Coated			Coated cermet		Cermet			Uncoated	Dimension (mm) RE	IC	S	D1
Precision finishing	TF	TNMG160404-TF						●	●		●	0.4	9.525	4.76	3.81
		TNMG160408-TF						●	●			0.8	9.525	4.76	3.81
	01	TNGG110302-01						●				0.2	6.35	3.18	2.26
		TNGG110304-01						●				0.4	6.35	3.18	2.26
		TNGG110308-01						●	●			0.8	6.35	3.18	2.26
		TNGG160402-01	●					●	●		●	0.2	9.525	4.76	3.81
		TNGG160404-01	●					●	●		●	0.4	9.525	4.76	3.81
		TNGG160408-01	●					●	●			0.8	9.525	4.76	3.81
		TNGG160412-01					●	●				1.2	9.525	4.76	3.81
Precision finishing (sharp edge)	01	TNGG160402F-01			●							0.2	9.525	4.76	3.81
		TNGG160404F-01			●							0.4	9.525	4.76	3.81
		TNGG160408F-01			●							0.8	9.525	4.76	3.81
Precision finishing	A, C	TNGG110304R-A				●		●				0.4	6.35	3.18	2.26
		TNGG110304L-A				●		●				0.4	6.35	3.18	2.26
		TNGG110308R-A				●		●				0.8	6.35	3.18	2.26
		TNGG110308L-A				●		●				0.8	6.35	3.18	2.26
		TNGG160304R-C						●		●		0.4	9.525	3.18	3.81
		TNGG160304L-C						●				0.4	9.525	3.18	3.81
		TNGG160308R-C						●				0.8	9.525	3.18	3.81
		TNGG160308L-C						●				0.8	9.525	3.18	3.81
		TNGG160400R-C						●				0.03	9.525	4.76	3.81
		TNGG160400L-C						●				0.03	9.525	4.76	3.81
		TNGG160402R-C				●		●		●	●	0.2	9.525	4.76	3.81
		TNGG160402L-C				●		●				0.2	9.525	4.76	3.81
		TNGG160404R-C	●	●		●		●	●	●	●	0.4	9.525	4.76	3.81
		TNGG160404L-C	●	●		●		●		●	●	0.4	9.525	4.76	3.81
		TNGG160408R-C	●	●		●		●	●	●	●	0.8	9.525	4.76	3.81
		TNGG160408L-C	●	●		●		●		●	●	0.8	9.525	4.76	3.81
	D	TNGG220404R-D						●		●		0.4	12.7	4.76	5.16
		TNGG220404L-D						●				0.4	12.7	4.76	5.16
		TNGG220408R-D						●		●		0.8	12.7	4.76	5.16
		TNGG220408L-D						●				0.8	12.7	4.76	5.16

● : Line up

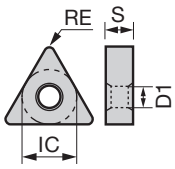
Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	SH725	GT9530	AT9530	NS9530	TH10
P	Steel	●	◐	◐✠	✠	●	◐	◐✠	✠	◐	◐	◐	◐	◐	●
M	Stainless		◐							◐	◐				●
K	Cast iron	◐	◐			◐	◐			◐		◐	◐	◐	●
N	Non-ferrous														●
S	Superalloy									◐					
H	Hard material														

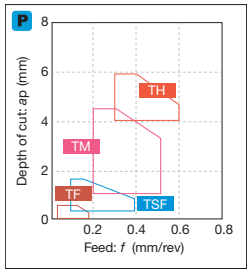


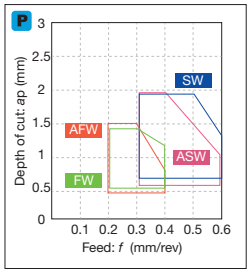
Application	Chipbreaker	Designation	Coated										Coated cermet		Cermet	Uncoated	Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	SH725	GT9530	AT9530	NS9530	TH10	RE	IC	S	D1
Precision finishing	W	TNGG160404R-W													●	●	0.4	9.525	4.76	3.81
		TNGG160404L-W													●	●	0.4	9.525	4.76	3.81
		TNGG160408R-W													●		0.8	9.525	4.76	3.81
		TNGG160408L-W													●		0.8	9.525	4.76	3.81
Precision finishing (sharp edge)	W	TNGG160402FR-W										●					0.2	9.525	4.76	3.81
		TNGG160402FL-W										●					0.2	9.525	4.76	3.81
		TNGG160404FR-W										●					0.4	9.525	4.76	3.81
		TNGG160404FL-W										●					0.4	9.525	4.76	3.81
		TNGG160408FR-W										●					0.8	9.525	4.76	3.81
		TNGG160408FL-W										●					0.8	9.525	4.76	3.81
Finishing	TSF	TNMG110404E-TSF		●	●			▲	▲				●	●	●		0.4	6.35	4.76	2.26
		TNMG110408E-TSF		●	●			▲	▲				●	●	●		0.8	6.35	4.76	2.26
		TNMG160402-TSF									●		●	●	●		0.2	9.525	4.76	3.81
		TNMG160404-TSF		●	●	●		▲	▲	▲	●		●	●	●		0.4	9.525	4.76	3.81
		TNMG160408-TSF	●	●	●	●	▲	▲	▲	▲	●		●	●	●		0.8	9.525	4.76	3.81
		TNMG160412-TSF		●	●	●		▲	▲	▲			●				1.2	9.525	4.76	3.81
Finishing (wiper)	FW	TNMG110404E-FW		●				▲									0.4	6.35	4.76	2.26
		TNMG110408E-FW		●				▲									0.8	6.35	4.76	2.26
		TNMG160404-FW		●				▲									0.4	9.525	4.76	3.81
		TNMG160408-FW		●				▲									0.8	9.525	4.76	3.81
		*Wiper																		
Finishing	ZF	TNMG160404-ZF		●	●	●		▲	▲	▲			●	●	●		0.4	9.525	4.76	3.81
		TNMG160408-ZF		●	●	●		▲	▲	▲			●	●	●		0.8	9.525	4.76	3.81
		TNMG160412-ZF			●				▲								1.2	9.525	4.76	3.81

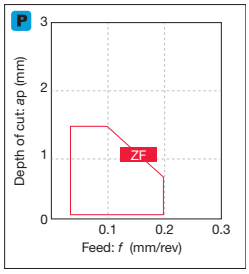
* Please see **L032-L036** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

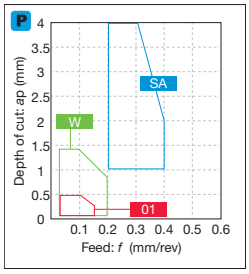
● : Line up
▲ : To be discontinued

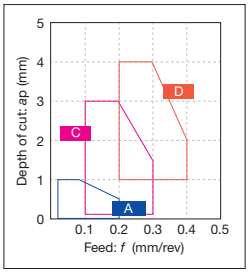
Chip control range











Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

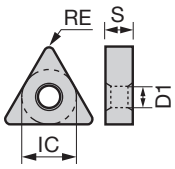
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

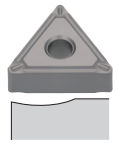
TN

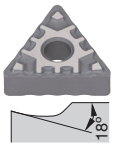
Triangular, 60° with hole

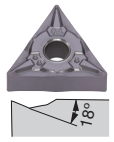
		T9125	T9225	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GH330	NS9530	TH10
		Coated										Coated cermet	Uncoated
P	Steel	ⓒ✠	ⓒ✠	ⓒ	✠	ⓒ✠					●ⓒ	●ⓒ	●
M	Stainless			●	ⓒ	ⓒ			●	ⓒ	●ⓒ		●
K	Cast iron						●	ⓒ			●ⓒ	●ⓒ	●
N	Non-ferrous												●
S	Superalloy								●	ⓒ			
H	Hard material												

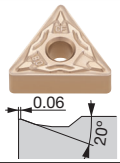


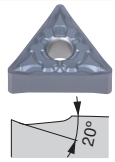
Application	Chipbreaker	Designation	T9125	T9225	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GH330	NS9530	TH10	RE	IC	S	D1
Finishing	11	TNMG110304-11											●		0.4	6.35	3.18	2.26
		TNMG110308-11											●		0.8	6.35	3.18	2.26
		TNMG160402-11											●		0.2	9.525	4.76	3.81
		TNMG160404-11										●	●	●	0.4	9.525	4.76	3.81
		TNMG160408-11											●		0.8	9.525	4.76	3.81
		TNMG220404-11											●		0.4	12.7	4.76	5.16
		TNMG220408-11											●		0.8	12.7	4.76	5.16
Finishing (for mild steel)	17	TNMG160404-17	▲	●								●	●		0.4	9.525	4.76	3.81
		TNMG160408-17	▲	●									●		0.8	9.525	4.76	3.81
Finishing	SF	TNMG160404-SF			●	●	●								0.4	9.525	4.76	3.81
		TNMG160408-SF			●	●	●								0.8	9.525	4.76	3.81
		TNMG160412-SF			●	●	●								1.2	9.525	4.76	3.81
	CF	TNMG160404-CF						●	●						0.4	9.525	4.76	3.81
		TNMG160408-CF						●	●						0.8	9.525	4.76	3.81
	HRF	TNMG160404-HRF								●	●				0.4	9.525	4.76	3.81
		TNMG160408-HRF								●	●				0.8	9.525	4.76	3.81











● : Line up
▲ : To be discontinued

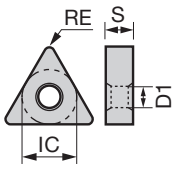
Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

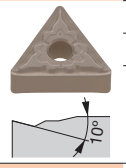
TN

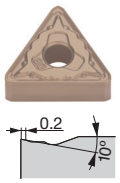
Triangular, 60° with hole

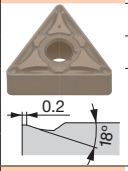
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	GT9530	AT9530	NS9530	NS520
P	Steel	●	◐	◐✠	✠	●	◐	◐✠	✠	◐	◐	◐	◐
M	Stainless		◐										
K	Cast iron	◐	◐			◐	◐			◐	◐	◐	◐
N	Non-ferrous												
S	Superalloy												
H	Hard material												

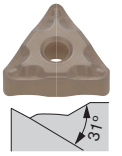


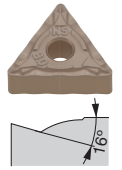
Application	Chipbreaker	Designation	Coated								Coated cermet		Cermet		Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	GT9530	AT9530	NS9530	NS520	RE	IC	S	D1
Finishing	TS	TNMG160404-TS		●	●	●		▲	▲	▲	●	●	●	●	0.4	9.525	4.76	3.81
		TNMG160408-TS	●	●	●	●	▲	▲	▲	▲	●	●	●	●	0.8	9.525	4.76	3.81
		TNMG160412-TS	●	●	●	●	▲	▲	▲	▲					1.2	9.525	4.76	3.81
Finishing to medium cutting (wiper)	SW	TNMG110408E-SW		●				▲							0.8	6.35	4.76	2.26
		TNMG110412E-SW		●				▲							1.2	6.35	4.76	2.26
		TNMG160408-SW		●				▲							0.8	9.525	4.76	3.81
		TNMG160412-SW		●				▲							1.2	9.525	4.76	3.81
		*Wiper																
High feed, small depth of cut	AS	TNMG160404-AS			●	●			▲	▲			●		0.4	9.525	4.76	3.81
		TNMG160408-AS	●	●	●	●	▲	▲	▲	▲			●		0.8	9.525	4.76	3.81
		TNMG160412-AS	●	●	●		▲	▲	▲						1.2	9.525	4.76	3.81
Boring (double side)	CB	TNMG110304-CB		●				▲					●		0.4	6.35	3.18	2.26
		TNMG110308-CB		●				▲					●		0.8	6.35	3.18	2.26
Finishing	NS	TNMG160404-NS		●	●			▲	▲				●		0.4	9.525	4.76	3.81
		TNMG160408-NS	●	●	●		▲	▲	▲				●		0.8	9.525	4.76	3.81







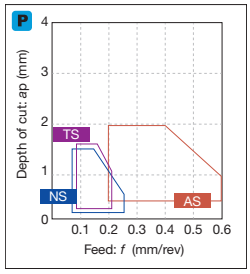


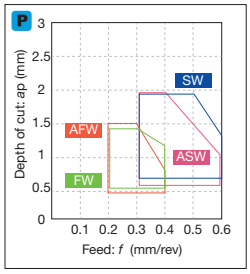


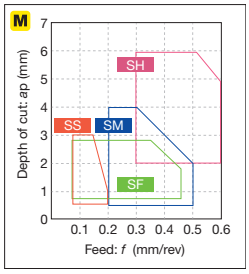
* Please see **L032-L036** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

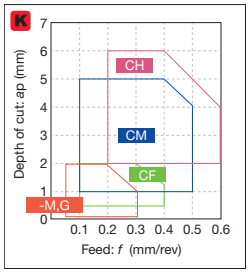
● : Line up
▲ : To be discontinued

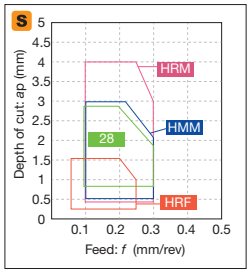
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

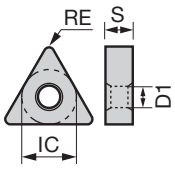
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

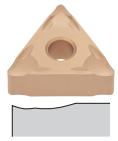
TN

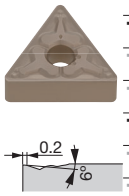
Triangular, 60° with hole

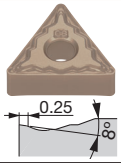
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH120	AH725	GH330	GT9530	AT9530	NS9530	KS20
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠	✠	●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	
M	Stainless		●ⓒ							●	ⓒ	ⓒ	✠	●ⓒ	ⓒ	●ⓒ				
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ							●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	ⓒ✠
N	Non-ferrous																			ⓒ✠
S	Superalloy													●ⓒ	●					ⓒ✠
H	Hard material																			

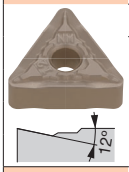


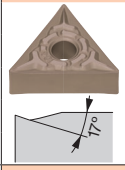
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH120	AH725	GH330	GT9530	AT9530	NS9530	KS20	RE	IC	S	D1
Finishing	SS	TNMG110404E-SS											●	●								0.4	6.35	4.76	2.26
		TNMG110408E-SS											●	●								0.8	6.35	4.76	2.26
		TNMG160404-SS									●	●	●	●	●		●				●	0.4	9.525	4.76	3.81
		TNMG160408-SS									●	●	●	●	●		●				●	0.8	9.525	4.76	3.81
		TNMG160412-SS									●	●	●	●			●					1.2	9.525	4.76	3.81
		TNMG220404-SS									●	●	●	●			●					0.4	12.7	4.76	5.16
		TNMG220408-SS									●	●	●	●			●					0.8	12.7	4.76	5.16
		TNMG220412-SS									●	●	●	●								1.2	12.7	4.76	5.16
Medium cutting	TM	TNMG110304-TM		●	●	●		▲	▲	▲												0.4	6.35	3.18	2.26
		TNMG110308-TM		●	●	●		▲	▲	▲												0.8	6.35	3.18	2.26
		TNMG110404E-TM		●	●			▲	▲													0.4	6.35	4.76	2.26
		TNMG110408E-TM		●	●			▲	▲													0.8	6.35	4.76	2.26
		TNMG110412E-TM		●	●			▲	▲													1.2	6.35	4.76	2.26
		TNMG160404-TM		●	●	●		▲	▲	▲					●	●						0.4	9.525	4.76	3.81
		TNMG160408-TM	●	●	●	●	▲	▲	▲	▲					●	●						0.8	9.525	4.76	3.81
		TNMG160412-TM	●	●	●	●	▲	▲	▲	▲												1.2	9.525	4.76	3.81
		TNMG220404-TM		●	●			▲	▲						●							0.4	12.7	4.76	5.16
		TNMG220408-TM	●	●	●	●	▲	▲	▲	▲					●							0.8	12.7	4.76	5.16
		TNMG220412-TM		●	●	●		▲	▲	▲					●							1.2	12.7	4.76	5.16
		TNMG220416-TM		●	●			▲	▲													1.6	12.7	4.76	5.16
Finishing to medium cutting	AM	TNMG160408-AM		●	●			▲	▲													0.8	9.525	4.76	3.81
		TNMG160412-AM		●	●			▲	▲													1.2	9.525	4.76	3.81
	NM	TNMG160408-NM			●				▲													0.8	9.525	4.76	3.81
		TNMG160412-NM		●	●			▲	▲													1.2	9.525	4.76	3.81
	TQ	TNMG160404-TQ		●	●													●	●	●		0.4	9.525	4.76	3.81
		TNMG160408-TQ		●	●													●	●	●		0.8	9.525	4.76	3.81
Medium cutting	TA	TNMG160404-TA		●	●																	0.4	9.525	4.76	3.81
		TNMG160408-TA		●	●																	0.8	9.525	4.76	3.81
		TNMG160412-TA		●	●																	1.2	9.525	4.76	3.81

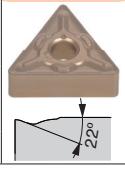












Coated | Coated cermet | Cermet | Un-coated | Dimension (mm)

● : Line up
▲ : To be discontinued

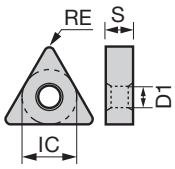
Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° with hole

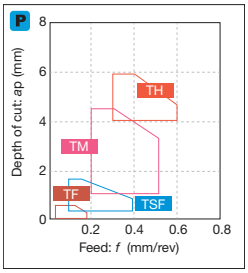
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH630	T515	T5105	T5115	T5125	AH110	AH120	GT9530	GT720	NS9530	NS520	TH10
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	◐✠					●	●◐	●◐	●◐	●◐	●◐	●
M	Stainless		●◐							◐					●	●◐					●
K	Cast iron	●◐	●◐			●◐	●◐				●◐	●	◐	✠	●	●◐	●◐	●◐	●◐	●◐	●
N	Non-ferrous																				●
S	Superalloy														●	●◐					
H	Hard material																				

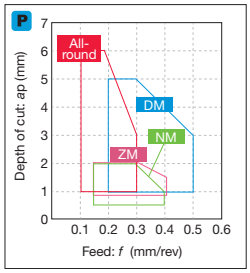


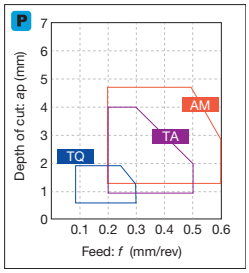
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH630	T515	T5105	T5115	T5125	AH110	AH120	GT9530	GT720	NS9530	NS520	TH10	RE	IC	S	D1
Finishing to medium cutting	ZM	TNMG160404-ZM		●	●	●		▲	▲	▲								●		●			0.4	9.525	4.76	3.81
		TNMG160408-ZM		●	●	●		▲	▲	▲								●		●			0.8	9.525	4.76	3.81
		TNMG160412-ZM		●	●	●		▲	▲	▲													1.2	9.525	4.76	3.81
		TNMG220412-ZM			●				▲														1.2	12.7	4.76	5.16
Medium cutting	DM	TNMG160408-DM	●	●	●	●	▲	▲	▲	▲													0.8	9.525	4.76	3.81
		TNMG160412-DM		●	●			▲	▲														1.2	9.525	4.76	3.81
	All-round	TNMG110304		●	●			▲	▲				●	●	●					●		●	0.4	6.35	3.18	2.26
		TNMG110308		●	●			▲	▲				●	●	●					●		●	0.8	6.35	3.18	2.26
		TNMG160304																				●	0.4	9.525	3.18	3.81
		TNMG160308																				●	0.8	9.525	3.18	3.81
		TNMG160404	●	●	●	●	▲	▲	▲	▲		●	●	●	●	●	●			●	●	●	0.4	9.525	4.76	3.81
		TNMG160408	●	●	●	●	▲	▲	▲	▲		●	●	●	●	●	●		●	●	●	●	0.8	9.525	4.76	3.81
		TNMG160412	●	●	●	●	▲	▲	▲	▲		●	●	●	●	●	●					●	1.2	9.525	4.76	3.81
		TNMG160416		●	●	●		▲	▲	▲			●	●	●							●	1.6	9.525	4.76	3.81
		TNMG160420		●	●	●		▲	▲	▲													2	9.525	4.76	3.81
		TNMG220408	●	●	●	●	▲	▲	▲	▲			●	●	●							●	0.8	12.7	4.76	5.16
		TNMG220412	●	●	●	●	▲	▲	▲	▲	●		●	●	●							●	1.2	12.7	4.76	5.16
		TNMG220416		●	●			▲	▲		●		●	●	●							●	1.6	12.7	4.76	5.16
		TNMG270608			●				▲								●						0.8	15.875	6.35	6.35
		TNMG270612			●				▲								●						1.2	15.875	6.35	6.35
		TNMG270616															●						1.6	15.875	6.35	6.35
Finishing to medium cutting	27	TNMG160404-27		●	●			▲	▲														0.4	9.525	4.76	3.81
		TNMG160408-27		●	●			▲	▲											●			0.8	9.525	4.76	3.81
		TNMG160412-27		●	●			▲	▲														1.2	9.525	4.76	3.81
		TNMG220404-27			●				▲														0.4	12.7	4.76	5.16
		TNMG220408-27			●				▲														0.8	12.7	4.76	5.16
		TNMG220412-27			●				▲														1.2	12.7	4.76	5.16

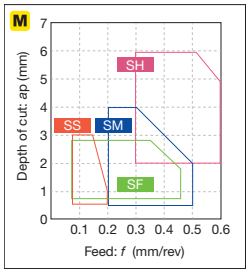
● : Line up
▲ : To be discontinued

Chip control range









Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

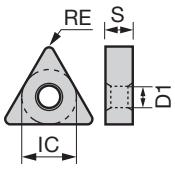
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° with hole

		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH8005	AH8015	T515	T5105	T5115	T5125	AH120	AH725	GH330	GT720		NS9530		TH10
P	Steel	●	●◐	◐✠	✠	●◐	◐✠	✠	◐	✠	◐✠	✠							●◐	◐	●◐	●◐		●◐		●
M	Stainless		●◐						●	◐	◐	✠	●	◐					●◐	◐	●◐					●
K	Cast iron	●◐	●◐			●◐									●◐	●	◐	✠	●◐	◐	●◐	●◐		●◐		●
N	Non-ferrous																									●
S	Superalloy												●	◐					●◐	●						
H	Hard material																									



Application	Chipbreaker	Designation	Coated																			Coated cermet		Cermet		Un-coated	Dimension (mm)			
			T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	AH645	AH8005	AH8015	T515	T5105	T5115	T5125	AH120	AH725	GH330	GT720		NS9530		TH10	RE	IC	S	D1
Medium cutting	28	TNMG160404-28												●	●					●								0.4	9.525	4.76	3.81
		TNMG160408-28												●	●					●								0.8	9.525	4.76	3.81
		TNMG220404-28																		●								0.4	12.7	4.76	5.16
		TNMG220408-28																		●								0.8	12.7	4.76	5.16
	33	TNMG160404-33																									●	0.4	9.525	4.76	3.81
		TNMG160408-33																									●	0.8	9.525	4.76	3.81
		TNMG160416-33			●			▲																				1.6	9.525	4.76	3.81
		TNMG220404-33			●			▲															●					0.4	12.7	4.76	5.16
		TNMG220412-33				●			▲																			1.2	12.7	4.76	5.16
		TNMG220416-33			●			▲																				1.6	12.7	4.76	5.16
	37	TNMG160404-37		●			▲															●			●			0.4	9.525	4.76	3.81
		TNMG160408-37		●			▲															●			●			0.8	9.525	4.76	3.81
	38	TNMG160404-38																				●						0.4	9.525	4.76	3.81
		TNMG160408-38																				●						0.8	9.525	4.76	3.81
	SM	TNMG110404E-SM								●	●	●																0.4	6.35	4.76	2.26
		TNMG110408E-SM								●	●	●																0.8	6.35	4.76	2.26
		TNMG160404-SM								●	●	●	●								●							0.4	9.525	4.76	3.81
		TNMG160408-SM								●	●	●	●								●							0.8	9.525	4.76	3.81
		TNMG160412-SM								●	●	●	●															1.2	9.525	4.76	3.81
		TNMG220408-SM								●	●	●	●															0.8	12.7	4.76	5.16
		TNMG220412-SM								●	●	●	●															1.2	12.7	4.76	5.16
	CM	TNMG160404-CM														●	●	●	●									0.4	9.525	4.76	3.81
		TNMG160408-CM														●	●	●	●									0.8	9.525	4.76	3.81
		TNMG160412-CM														●	●	●	●									1.2	9.525	4.76	3.81
		TNMG220408-CM															●	●	●									0.8	12.7	4.76	5.16
		TNMG220412-CM															●	●	●									1.2	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

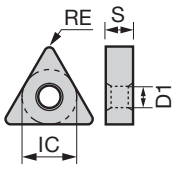
Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

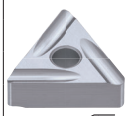
TN

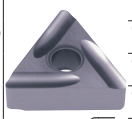
Triangular, 60° with hole

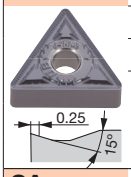
		T6120	T6130	AH630	AH645	AH120	AH8005	AH8015	AH905	GH110	GH330	SH725	NS9530	TH10	KS20
P	Steel	◐	✠	◐✠	✠	●◐				●	●◐	●◐			
M	Stainless	●	◐	◐	✠	●◐	●	◐		●	●◐	●◐			
K	Cast iron					●◐				●	●◐		●◐	●	◐✠
N	Non-ferrous													●	◐✠
S	Superalloy					●◐	●	◐	◐	●					◐✠
H	Hard material														

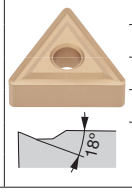


Application	Chipbreaker	Designation	Coated											Cermet		Uncoated		Dimension (mm)			
			T6120	T6130	AH630	AH645	AH120	AH8005	AH8015	AH905	GH110	GH330	SH725	NS9530		TH10	KS20	RE	IC	S	D1
Medium cutting	P	TNGG160402R-P									●	●		●		●		0.2	9.525	4.76	3.81
		TNGG160402L-P									●	●		●		●		0.2	9.525	4.76	3.81
		TNGG160404R-P									●	●		●		●		0.4	9.525	4.76	3.81
		TNGG160404L-P									●	●		●		●		0.4	9.525	4.76	3.81
		TNGG160408R-P									●	●		●		●		0.8	9.525	4.76	3.81
		TNGG160408L-P									●	●		●		●		0.8	9.525	4.76	3.81
Medium cutting (sharp edge)	P	TNGG160402FR-P											●					0.2	9.525	4.76	3.81
		TNGG160402FL-P											●					0.2	9.525	4.76	3.81
		TNGG160404FR-P											●					0.4	9.525	4.76	3.81
		TNGG160404FL-P											●					0.4	9.525	4.76	3.81
		TNGG160408FR-P											●					0.8	9.525	4.76	3.81
		TNGG160408FL-P											●					0.8	9.525	4.76	3.81
Finishing to medium cutting	HRM	TNMG160404-HRM						●	●									0.4	9.525	4.76	3.81
		TNMG160408-HRM						●	●									0.8	9.525	4.76	3.81
		TNMG160412-HRM						●	●									1.2	9.525	4.76	3.81
Medium cutting	HMM	TNMG160404-HMM								●								0.4	9.525	4.76	3.81
		TNMG160408-HMM								●								0.8	9.525	4.76	3.81
		TNMG160412-HMM								●								1.2	9.525	4.76	3.81
	SA	TNMG160404-SA	●	●	●	●	●											0.4	9.525	4.76	3.81
		TNMG160408-SA	●	●	●	●	●										●	0.8	9.525	4.76	3.81
		TNMG160412-SA	●	●	●	●	●										●	1.2	9.525	4.76	3.81
		TNMG220408-SA	●	●	●	●	●										●	0.8	12.7	4.76	5.16
		TNMG220412-SA	●	●	●	●												1.2	12.7	4.76	5.16



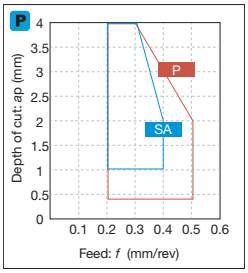


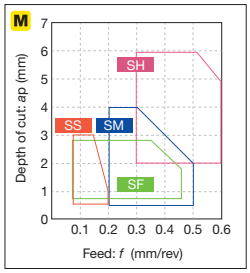


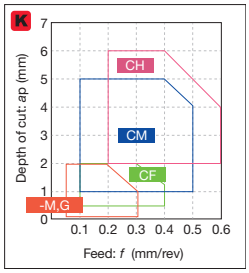


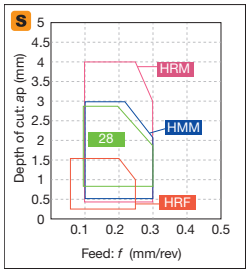
● : Line up

Chip control range









*-M,G: Without chipbreaker

Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

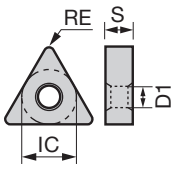
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° with hole

		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	AH725	GH330	NS9530
P	Steel	●	●ⓒ	ⓒ✠	✠	●ⓒ	ⓒ✠	✠	✠	ⓒ✠	✠					●ⓒ	ⓒ	●ⓒ	●ⓒ
M	Stainless		●ⓒ						ⓒ	ⓒ	✠					●ⓒ	ⓒ	●ⓒ	
K	Cast iron	●ⓒ	●ⓒ			●ⓒ						●ⓒ	●	ⓒ	✠	●ⓒ	ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																		
S	Superalloy															●ⓒ	●		
H	Hard material																		



Application	Chipbreaker	Designation	Coated																	Cermet	Dimension (mm)			
			T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	AH725	GH330	NS9530	RE	IC	S	D1
Medium cutting	S	TNMG160404R-S		●	●	●	▲	▲	▲	●	●	●						●	●	●	0.4	9.525	4.76	3.81
		TNMG160404L-S			●	●		▲	▲	●	●	●							●	●	0.4	9.525	4.76	3.81
		TNMG160408R-S			●	●		▲	▲	●	●	●						●	●	●	0.8	9.525	4.76	3.81
		TNMG160408L-S			●	●		▲	▲	●	●	●							●	●	0.8	9.525	4.76	3.81
		TNMG220404R-S			●	●		▲	▲	●	●	●							●	●	0.4	12.7	4.76	5.16
		TNMG220404L-S			●	●		▲	▲	●	●	●							●	●	0.4	12.7	4.76	5.16
		TNMG220408R-S			●	●		▲	▲	●	●	●							●	●	0.8	12.7	4.76	5.16
		TNMG220408L-S			●	●		▲	▲	●	●	●							●	●	0.8	12.7	4.76	5.16
Medium to heavy cutting	TH	TNMG220408-TH		●	●	●	▲	▲	▲								●				0.8	12.7	4.76	5.16
		TNMG220412-TH		●	●	●	▲	▲	▲												1.2	12.7	4.76	5.16
	THS	TNMG220408-THS		●	●	●	▲	▲	▲												0.8	12.7	4.76	5.16
		TNMG220412-THS		●	●	●	▲	▲	▲												1.2	12.7	4.76	5.16
	CH	TNMG160404-CH											●	●	●	●					0.4	9.525	4.76	3.81
		TNMG160408-CH											●	●	●	●					0.8	9.525	4.76	3.81
		TNMG160412-CH											●	●	●	●					1.2	9.525	4.76	3.81
		TNMG220408-CH												●	●	●					0.8	12.7	4.76	5.16
		TNMG220412-CH												●	●	●					1.2	12.7	4.76	5.16
		TNMG220416-CH												●	●	●					1.6	12.7	4.76	5.16
Medium to heavy cutting (single side)	57	TNMM160408-57			●				▲												0.8	9.525	4.76	3.81
		TNMM220408-57			●				▲												0.8	12.7	4.76	5.16
		TNMM220412-57			●				▲												1.2	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

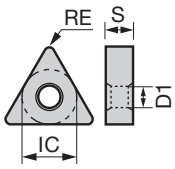
Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° with hole

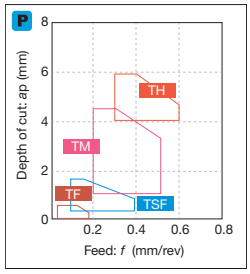
		T515	T5105	T5115	T5125	GH110	GT720	NS520	TH03	TH10	FX105	LX21	LX11
		Coated					Coated cermet	Cermet	Uncoated		Ceramic		
P	Steel					●	●◐	●◐	●	●			
M	Stainless					●			●	●			
K	Cast iron	●◐	●	◐	✠	●	●◐	●◐	●	●	●◐	●	
N	Non-ferrous								●	●			
S	Superalloy					●							
H	Hard material												●

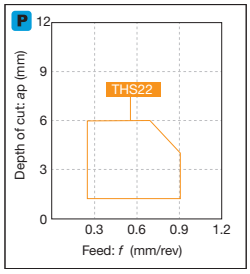


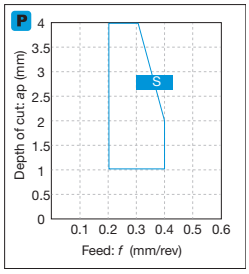
Application	Chipbreaker	Designation	T515	T5105	T5115	T5125	GH110	GT720	NS520	TH03	TH10	FX105	LX21	LX11	RE	IC	S	D1
Finishing to medium cutting	-	TNMA110404E	●												0.4	6.35	4.76	2.26
		TNMA110408E	●												0.8	6.35	4.76	2.26
		TNMA110412E	●												1.2	6.35	4.76	2.26
		TNMA160404	●	●	●	●					●				0.4	9.525	4.76	3.81
		TNMA160408	●	●	●	●		●	●		●	●			0.8	9.525	4.76	3.81
		TNMA160412	●	●	●	●						●			1.2	9.525	4.76	3.81
		TNMA160416		●	●	●									1.6	9.525	4.76	3.81
		TNMA160420		●	●	●									2	9.525	4.76	3.81
		TNMA220404		●	●	●									0.4	12.7	4.76	5.16
		TNMA220408		●	●	●									0.8	12.7	4.76	5.16
		TNMA220412		●	●	●									1.2	12.7	4.76	5.16
		TNMA220416		●	●	●									1.6	12.7	4.76	5.16
	-	TNGA110304									●				0.4	6.35	3.18	2.26
		TNGA110308									●				0.8	6.35	3.18	2.26
		TNGA160304									●				0.4	9.525	3.18	3.81
		TNGA160308									●				0.8	9.525	3.18	3.81
		TNGA160402												●	0.2	9.525	4.76	3.81
		TNGA160404					●		●	●	●		●	●	0.4	9.525	4.76	3.81
		TNGA160408					●		●	●	●	●	●	●	0.8	9.525	4.76	3.81
		TNGA160412							●		●	●	●	●	1.2	9.525	4.76	3.81
		TNGA160416									●	●		●	1.6	9.525	4.76	3.81
		TNGA220408									●				0.8	12.7	4.76	5.16

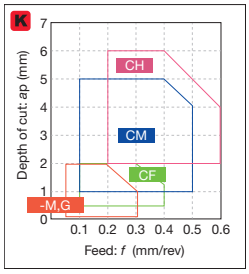
● : Line up

Chip control range









*-M,G: Without chipbreaker

Reference pages: External toolholder → C027 - Internal toolholder → D046 -
J-Series toolholder → G045 - Cartridge → K193 -

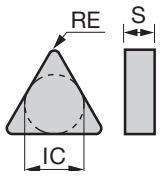
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TN

Triangular, 60° without hole

		TH10	FX105	LX21	LX11
P	Steel	●			
M	Stainless	●			
K	Cast iron	●	●◐	●	
N	Non-ferrous	●			
S	Superalloy				
H	Hard material				●



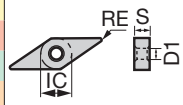
Application	Chipbreaker	Designation	Uncoated TH10	Ceramic FX105	Ceramic LX21	Ceramic LX11	Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	-	TNGN110308	●				0.8	6.35	3.18	-
		TNGN160404			●	●	0.4	9.525	4.76	-
		TNGN160408	●		●	●	0.8	9.525	4.76	-
		TNGN160412	●	●	●	●	1.2	9.525	4.76	-
		TNGN160416		●		●	1.6	9.525	4.76	-
		TNGN160420		●			2	9.525	4.76	-
		TNGN160708				●	0.8	9.525	7.94	-
		TNGN160712				●	1.2	9.525	7.94	-

● : Line up

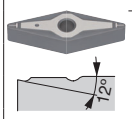
VN

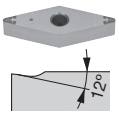
Rhombic, 35° with hole

		GH110	GT720	NS9530	NS520	TH10
P	Steel	●	●◐	●◐	●◐	●
M	Stainless	●				●
K	Cast iron	●	●◐	●◐	●◐	●
N	Non-ferrous					●
S	Superalloy	●				
H	Hard material					



Application	Chipbreaker	Designation	Coated GH110	Coated cermet GT720	Cermet NS9530	Cermet NS520	Uncoated TH10	Dimension (mm) RE	IC	S	D1
Precision finishing	TF	VNMG160404-TF			●			0.4	9.525	4.76	3.81
		VNMG160408-TF		●	●			0.8	9.525	4.76	3.81
	01	VNGG160402-01	●		●	●	●	0.2	9.525	4.76	3.81
		VNGG160404-01			●	●	●	0.4	9.525	4.76	3.81
		VNGG160408-01			●	●		0.8	9.525	4.76	3.81





● : Line up

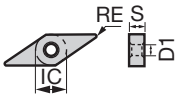
Reference pages: TNGN...: External toolholder → C027 -
VNMG..., VNGG...: External toolholder → C059 -, Internal toolholder → D070 -,
TungCap → K015 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

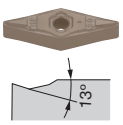
VN

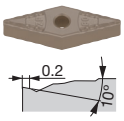
Rhombic, 35° with hole

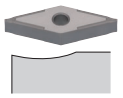
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH120	GH330	GT9530	AT9530	NS9530	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ							●	ⓒ		●ⓒ	●ⓒ				●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ						●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																	●
S	Superalloy												●ⓒ					
H	Hard material																	

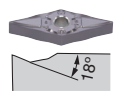


Application	Chipbreaker	Designation	Coated													Coated cermet				Cermet				Uncoated				Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH120	GH330	GT9530	AT9530			NS9530				TH10				RE	IC	S	D1
Finishing	TSF	VNMG120402E-TSF		●	●			▲	▲							●	●			●								0.2	7.15	4.76	3.81
		VNMG120404E-TSF		●	●			▲	▲							●	●			●								0.4	7.15	4.76	3.81
		VNMG120408E-TSF		●	●			▲	▲							●	●			●								0.8	7.15	4.76	3.81
		VNMG160402-TSF												●		●	●			●								0.2	9.525	4.76	3.81
		VNMG160404-TSF	●	●	●	●	▲	▲	▲	▲				●		●	●			●								0.4	9.525	4.76	3.81
		VNMG160408-TSF	●	●	●	●	▲	▲	▲	▲				●		●	●			●								0.8	9.525	4.76	3.81
		VNMG160412-TSF	●	●	●	●	▲	▲	▲	▲																		1.2	9.525	4.76	3.81
	ZF	VNMG160404-ZF		●	●	●		▲	▲	▲						●	●			●								0.4	9.525	4.76	3.81
		VNMG160408-ZF		●	●	●		▲	▲	▲						●	●			●								0.8	9.525	4.76	3.81
		VNMG160412-ZF		●	●	●		▲	▲	▲																		1.2	9.525	4.76	3.81
	11	VNMG160404-11													●					●				●				0.4	9.525	4.76	3.81
		VNMG160408-11																		●								0.8	9.525	4.76	3.81
		VNMG160412-11														●				●								1.2	9.525	4.76	3.81
	SF	VNMG160404-SF									●	●	●															0.4	9.525	4.76	3.81
		VNMG160408-SF									●	●	●															0.8	9.525	4.76	3.81



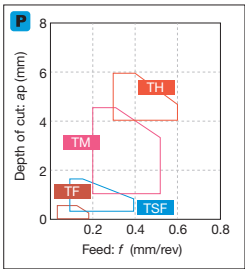


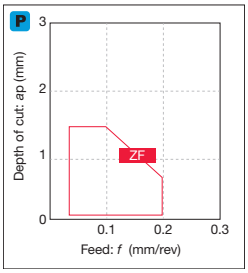


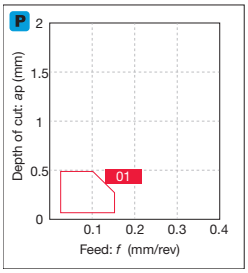


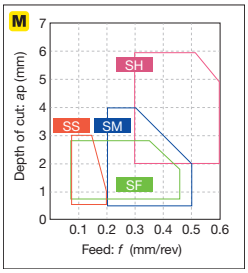
● : Line up
▲ : To be discontinued

Chip control range









Reference pages: External toolholder → C054 - Internal toolholder → D070 -
TungCap → C061, K015 -

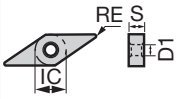
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

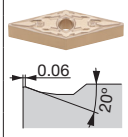
VN

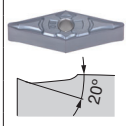
Rhombic, 35° with hole

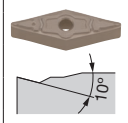
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T5105	T5115	AH110	AH120	AH8005	AH8015	GH330	GT9530	AT9530	NS9530	NS520
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠	✠			●	●ⓒ			●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless		●ⓒ							●	ⓒ	ⓒ	✠			●	●ⓒ	●	ⓒ	●ⓒ				
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ							●	ⓒ	●	●ⓒ			●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																							
S	Superalloy															●	●ⓒ	●	ⓒ					
H	Hard material																							

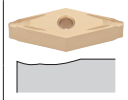


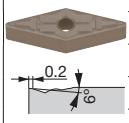
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T5105	T5115	AH110	AH120	AH8005	AH8015	GH330	GT9530	AT9530	NS9530	NS520	RE	IC	S	D1
			Coated																			Coated cermet		Cermet		Dimension (mm)			
Finishing	CF	VNMG160404-CF													●	●										0.4	9.525	4.76	3.81
		VNMG160408-CF													●	●										0.8	9.525	4.76	3.81
	HRF	VNMG160404-HRF																	●	●						0.4	9.525	4.76	3.81
		VNMG160408-HRF																	●	●						0.8	9.525	4.76	3.81
	TS	VNMG160404-TS		●	●	●		▲	▲	▲												●	●	●	●	0.4	9.525	4.76	3.81
		VNMG160408-TS		●	●	●		▲	▲	▲												●	●	●	●	0.8	9.525	4.76	3.81
		VNMG160412-TS		●	●	●		▲	▲	▲																1.2	9.525	4.76	3.81
	SS	VNMG120404E-SS									●	●	●	●												0.4	7.15	4.76	3.81
		VNMG120408E-SS									●	●	●	●												0.8	7.15	4.76	3.81
		VNMG160404-SS									●	●	●	●				●			●					0.4	9.525	4.76	3.81
		VNMG160408-SS									●	●	●	●				●			●					0.8	9.525	4.76	3.81
		VNMG160412-SS									●	●	●	●							●					1.2	9.525	4.76	3.81
Medium cutting	TM	VNMG120404E-TM		●	●			▲	▲																	0.4	7.15	4.76	3.81
		VNMG120408E-TM		●	●			▲	▲																	0.8	7.15	4.76	3.81
		VNMG160404-TM	●	●	●	●	▲	▲	▲	▲		●						●								0.4	9.525	4.76	3.81
		VNMG160408-TM	●	●	●	●	▲	▲	▲	▲							●	●								0.8	9.525	4.76	3.81
		VNMG160412-TM	●	●	●	●	▲	▲	▲	▲							●									1.2	9.525	4.76	3.81
Finishing to medium cutting	TQ	VNMG160404-TQ		●	●																	●	●	●		0.4	9.525	4.76	3.81
		VNMG160408-TQ		●	●																	●	●	●		0.8	9.525	4.76	3.81

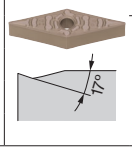










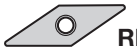


● : Line up
▲ : To be discontinued

Reference pages: External toolholder → C054 - Internal toolholder → D070 -
TungCap → C061, K015 -

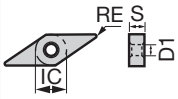
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

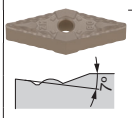
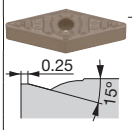
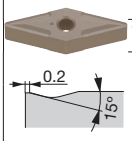
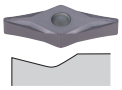
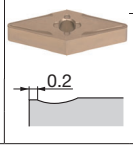
VN



Rhombic, 35° with hole

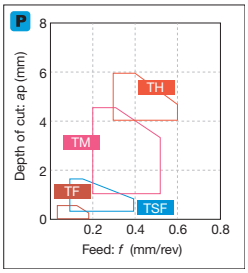
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	AH8005	AH8015	NS9530	TH10
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠					●	●◐			●◐	●
M	Stainless		●◐											●	●◐	●	◐		●
K	Cast iron	●◐	●◐			●◐	●◐			●◐	●	◐	✠	●	●◐			●◐	●
N	Non-ferrous																		●
S	Superalloy													●	●◐	●	◐		
H	Hard material																		

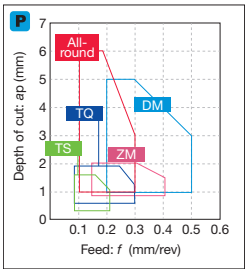


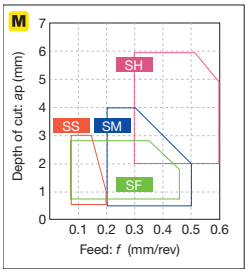
Application	Chipbreaker	Designation	Coated															Cermet				Uncoated				Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	AH8005	AH8015	NS9530				TH10				RE	IC	S	D1
Finishing to medium cutting	ZM	VNMG160408-ZM		●	●	●		▲	▲	▲																	0.8	9.525	4.76	3.81
		VNMG160412-ZM		●	●	●		▲	▲	▲																	1.2	9.525	4.76	3.81
																														
Medium cutting	DM	VNMG160408-DM	●	●	●	●	▲	▲	▲	▲																	0.8	9.525	4.76	3.81
		VNMG160412-DM		●	●	●		▲	▲	▲																	1.2	9.525	4.76	3.81
																														
	All-round	VNMG160404	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●			●				●				0.4	9.525	4.76	3.81
		VNMG160408	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●			●				●				0.8	9.525	4.76	3.81
		VNMG160412		●	●			▲	▲		●	●	●	●					●								1.2	9.525	4.76	3.81
																														
	28	VNMG160404-28														●	●	●									0.4	9.525	4.76	3.81
		VNMG160408-28														●	●	●									0.8	9.525	4.76	3.81
																														
	33	VNMG160404-33			●				▲						●								●				0.4	9.525	4.76	3.81
		VNMG160408-33		●	●			▲	▲														●				0.8	9.525	4.76	3.81
																														

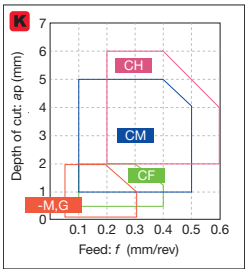
● : Line up
▲ : To be discontinued

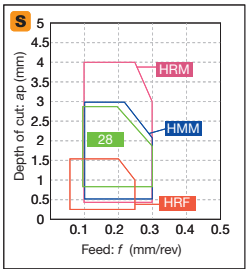
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C059 - Internal toolholder → D070 -
TungCap → C061, K015 -

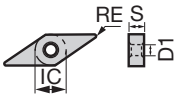
Insert NEGATIVE TYPE

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

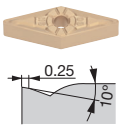
VN

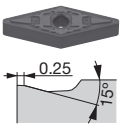
Rhombic, 35° with hole

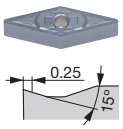
		T6120	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH8005	AH8015	AH905	NS520	TH10	LX11
P	Steel	⊂	✠	⊂✠	✠								●⊂	●	
M	Stainless	●	⊂	⊂	✠					●	⊂			●	
K	Cast iron					●⊂	●	⊂	✠				●⊂	●	
N	Non-ferrous													●	
S	Superalloy									●	⊂	⊂			
H	Hard material														●

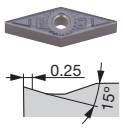


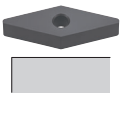
Application	Chipbreaker	Designation	Coated											Cermet	Uncoated	Ceramic	Dimension (mm)			
			T6120	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH8005	AH8015	AH905	NS520	TH10	LX11	RE	IC	S	D1
Medium cutting	SM	VNMG120404E-SM	●	●	●	●											0.4	7.15	4.76	3.81
		VNMG120408E-SM	●	●	●	●											0.8	7.15	4.76	3.81
		VNMG160404-SM	●	●	●	●											0.4	9.525	4.76	3.81
		VNMG160408-SM	●	●	●	●											0.8	9.525	4.76	3.81
		VNMG160412-SM	●	●	●	●											1.2	9.525	4.76	3.81
	CM	VNMG160408-CM					●	●	●	●							0.8	9.525	4.76	3.81
		VNMG160412-CM						●	●	●							1.2	9.525	4.76	3.81
Finishing to medium cutting	HRM	VNMG160404-HRM									●	●					0.4	9.525	4.76	3.81
		VNMG160408-HRM									●	●					0.8	9.525	4.76	3.81
		VNMG160412-HRM									●	●					1.2	9.525	4.76	3.81
Medium cutting	HMM	VNMG160404-HMM											●				0.4	9.525	4.76	3.81
		VNMG160408-HMM											●				0.8	9.525	4.76	3.81
		VNMG160412-HMM											●				1.2	9.525	4.76	3.81
Finishing to medium cutting	-	VNMA120404E					●										0.4	7.15	4.76	3.81
		VNMA120408E					●										0.8	7.15	4.76	3.81
		VNMA160402													●		0.2	9.525	4.76	3.81
		VNMA160404						●	●	●				●	●		0.4	9.525	4.76	3.81
		VNMA160408						●	●	●				●	●		0.8	9.525	4.76	3.81
		VNGA160404														●	0.4	9.525	4.76	3.81
		VNGA160408														●	0.8	9.525	4.76	3.81











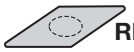
* Please see **L032-L036** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up

Reference pages: External toolholder → C054 - Internal toolholder → D070 -
TungCap → C061, K015 -

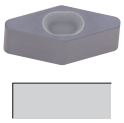
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

VN



Rhombic, 35° without hole

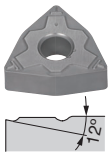
			Ceramic	Dimension (mm)			
Application	Chipbreaker	Designation	FX105	RE	IC	S	D1
Finishing to medium cutting	-	VNGD160712	●	1.2	9.525	4.76	-

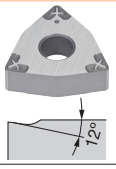


WN

Trigon, 80° with hole

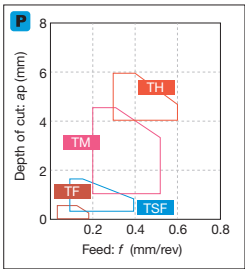
			Coated cermet	Cermet		Dimension (mm)			
Application	Chipbreaker	Designation	GT720	NS9530	NS520	RE	IC	S	D1
Precision finishing	TF	WNMG080404-TF		●		0.4	12.7	4.76	5.16
		WNMG080408-TF		●		0.8	12.7	4.76	5.16
	01	WNGG080402-01		●	●	0.2	12.7	4.76	5.16
		WNGG080404-01	●	●	●	0.4	12.7	4.76	5.16
		WNGG080408-01	●	●		0.8	12.7	4.76	5.16

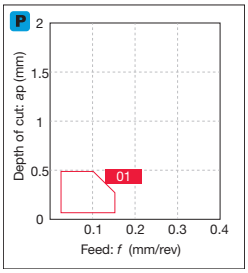


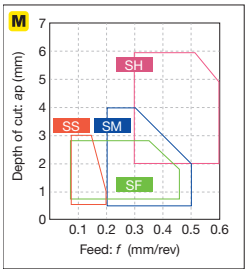


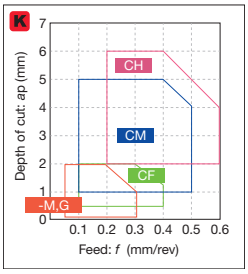
● : Line up

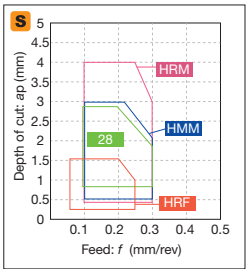
Chip control range











*-M,G: Without chipbreaker

Reference pages: VNGD...: External toolholder → C070
WNMG..., WNGG...: External toolholder → C034 -, Internal toolholder → D031 -,
TungCap → C035 -, K011 -

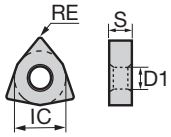
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

WN

Trigon, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	GT9530	AT9530	NS9530
P	Steel	●	●◐	◐✠	✠	●	●◐	◐✠	✠	●◐	●◐	●◐	●◐
M	Stainless		●◐							●◐			
K	Cast iron	●◐	●◐			●◐	●◐			●◐	●◐	●◐	●◐
N	Non-ferrous												
S	Superalloy									●◐			
H	Hard material												



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	GT9530	AT9530	NS9530	RE	IC	S	D1
			Coated									Coated cermet		Cermet	Dimension (mm)			
Finishing	TSF	WNMG060404E-TSF		●	●			▲	▲			●	●	●	0.4	9.525	4.76	3.81
		WNMG060408E-TSF		●	●			▲	▲			●	●	●	0.8	9.525	4.76	3.81
		WNMG060412E-TSF		●	●			▲	▲			●		●	1.2	9.525	4.76	3.81
		WNMG060404-TSF		●	●			▲	▲						0.4	9.525	4.76	3.81
		WNMG060408-TSF		●	●			▲	▲						0.8	9.525	4.76	3.81
		WNMG080404-TSF		●	●	●		▲	▲	▲	●	●	●	●	0.4	12.7	4.76	5.16
		WNMG080408-TSF		●	●	●		▲	▲	▲	●	●	●	●	0.8	12.7	4.76	5.16
		WNMG080412-TSF	●	●	●	●	▲	▲	▲	▲	●				1.2	12.7	4.76	5.16
Finishing (wiper)	FW	WNMG060404E-FW	●	●	●		▲	▲	▲			●		●	0.4	9.525	4.76	3.81
		WNMG060408E-FW	●	●	●		▲	▲	▲			●		●	0.8	9.525	4.76	3.81
		WNMG080404-FW		●	●			▲	▲			●		●	0.4	12.7	4.76	5.16
		WNMG080408-FW	●	●	●		▲	▲	▲			●		●	0.8	12.7	4.76	5.16
		*Wiper																
	AFW	WNMG060404-AFW		●	●			▲	▲					●	0.4	9.525	4.76	3.81
		WNMG060408-AFW	●	●	●	●	▲	▲	▲	▲				●	0.8	9.525	4.76	3.81
		WNMG080404-AFW		●	●			▲	▲					●	0.4	12.7	4.76	5.16
		WNMG080408-AFW	●	●	●	●	▲	▲	▲	▲				●	0.8	12.7	4.76	5.16
Finishing	ZF	WNMG060404E-ZF		●	●			▲	▲						0.4	9.525	4.76	3.81
		WNMG060404-ZF		●	●			▲	▲						0.4	9.525	4.76	3.81
		WNMG060408-ZF		●	●			▲	▲						0.8	9.525	4.76	3.81
		WNMG080404-ZF		●	●	●		▲	▲	▲		●	●	●	0.4	12.7	4.76	5.16
		WNMG080408-ZF		●	●	●		▲	▲	▲		●	●	●	0.8	12.7	4.76	5.16
		WNMG080412-ZF		●				▲							1.2	12.7	4.76	5.16
	11	WNMG080404-11												●	0.4	12.7	4.76	5.16
		WNMG080408-11												●	0.8	12.7	4.76	5.16
Finishing (for mild steel)	17	WNMG080404-17												●	0.4	12.7	4.76	5.16
		WNMG080408-17												●	0.8	12.7	4.76	5.16

* Please see L032-L036 about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up
▲ : To be discontinued

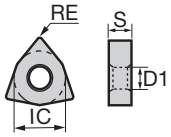
Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

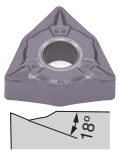
WN

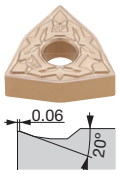
Trigon, 80° with hole

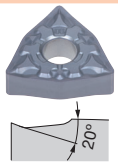
		T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GT9530	AT9530	NS9530	NS520
P	Steel	●	●◐	◐✠	✠	●◐	◐✠	✠	◐	✠	◐✠					●◐	●◐		●◐
M	Stainless		●◐						●	◐	◐			●	◐				●◐
K	Cast iron	●◐	●◐			●◐						●	◐			●◐	●◐		●◐
N	Non-ferrous																		
S	Superalloy													●	◐				
H	Hard material																		

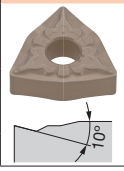


Application	Chipbreaker	Designation	RE	IC	S	D1
Finishing	SF	WNMG060404-SF	0.4	9.525	4.76	3.81
		WNMG060408-SF	0.8	9.525	4.76	3.81
		WNMG080404-SF	0.4	12.7	4.76	5.16
		WNMG080408-SF	0.8	12.7	4.76	5.16
	CF	WNMG080404-CF	0.4	12.7	4.76	5.16
		WNMG080408-CF	0.8	12.7	4.76	5.16
		WNMG080412-CF	1.2	12.7	4.76	5.16
	HRF	WNMG080404-HRF	0.4	12.7	4.76	5.16
		WNMG080408-HRF	0.8	12.7	4.76	5.16
	TS	WNMG080404-TS	0.4	12.7	4.76	5.16
		WNMG080408-TS	0.8	12.7	4.76	5.16
		WNMG080412-TS	1.2	12.7	4.76	5.16





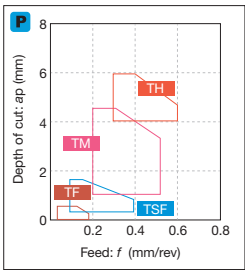


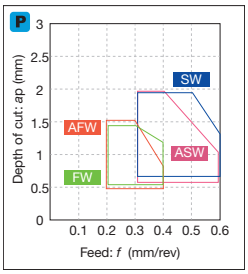


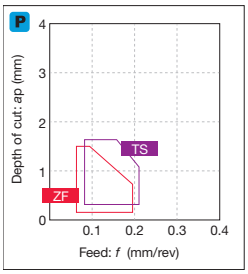
	Coated														Coated cermet				Cermet		
Coated	T9205	T9215	T9225	T9235	T9115	T9125	T9135	T6120	T6130	AH630	T5105	T5115	AH8005	AH8015	GT9530	AT9530	NS9530	NS520
SF	●	●	●
CF	●	●
HRF	●	●
TS	●	●	●	▲	▲	▲	●	●

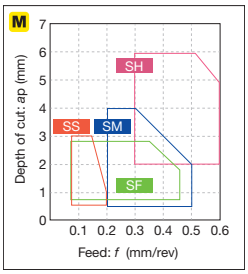
● : Line up
▲ : To be discontinued

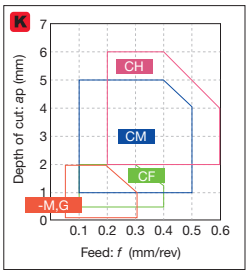
Chip control range



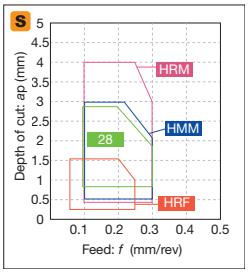








*-M,G: Without chipbreaker



Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

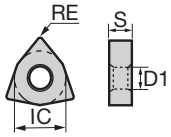
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

WN

Trigon, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T515	T5115	GH330	NS9530
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	ⓒ	✠	ⓒ✠	✠			●ⓒ	●ⓒ
M	Stainless		●ⓒ							●	ⓒ	ⓒ	✠			●ⓒ	
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ							●ⓒ	ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																
S	Superalloy																
H	Hard material																



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6120	T6130	AH630	AH645	T515	T5115	GH330	NS9530	RE	IC	S	D1
			Coated															Cermet	Dimension (mm)			
Finishing to medium cutting (wiper)	SW	WNMG060408E-SW	●	●	●		▲	▲	▲							●			0.8	9.525	4.76	3.81
		WNMG060412E-SW	●	●	●		▲	▲	▲							●			1.2	9.525	4.76	3.81
		WNMG080408-SW	●	●	●		▲	▲	▲						●	●			0.8	12.7	4.76	5.16
		WNMG080412-SW		●	●			▲	▲						●	●			1.2	12.7	4.76	5.16
		*Wiper																				
	ASW	WNMG060408-ASW	●	●	●		▲	▲	▲										0.8	9.525	4.76	3.81
		WNMG060412-ASW	●	●	●	●	▲	▲	▲	▲									1.2	9.525	4.76	3.81
		WNMG080408-ASW	●	●	●	●	▲	▲	▲	▲									0.8	12.7	4.76	5.16
		WNMG080412-ASW	●	●	●	●	▲	▲	▲	▲									1.2	12.7	4.76	5.16
High feed, small depth of cut	AS	WNMG080404-AS	●				▲											●	0.4	12.7	4.76	5.16
		WNMG080408-AS	●	●	●	●	▲	▲	▲	▲								●	0.8	12.7	4.76	5.16
		WNMG080412-AS	●	●	●	●	▲	▲	▲	▲									1.2	12.7	4.76	5.16
Boring (double side)	CB	WNMG060404-CB			●				▲									●	0.4	9.525	4.76	3.81
		WNMG060408-CB			●				▲									●	0.8	9.525	4.76	3.81
Finishing	NS	WNMG080404-NS		●	●			▲	▲									●	0.4	12.7	4.76	5.16
		WNMG080408-NS		●	●			▲	▲									●	0.8	12.7	4.76	5.16
	SS	WNMG060404E-SS											●	●					0.4	9.525	4.76	3.81
		WNMG060408E-SS											●	●					0.8	9.525	4.76	3.81
		WNMG060412E-SS											●	●					1.2	9.525	4.76	3.81
		WNMG080404-SS									●	●	●	●			●		0.4	12.7	4.76	5.16
		WNMG080408-SS									●	●	●	●			●		0.8	12.7	4.76	5.16
		WNMG080412-SS									●	●	●	●					1.2	12.7	4.76	5.16

* Please see L032-L036 about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up
▲ : To be discontinued

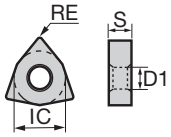
Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

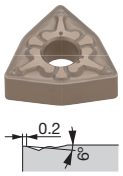
WN

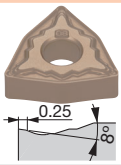
Trigon, 80° with hole

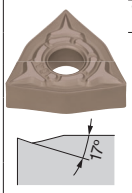
		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	AH725	GT9530	AT9530	NS9530
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless		●ⓒ							●ⓒ	ⓒ			
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous													
S	Superalloy									●ⓒ	●			
H	Hard material													

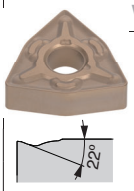


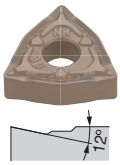
Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	AH120	AH725	GT9530	AT9530	NS9530	RE	IC	S	D1
			Coated										Coated cermet		Cermet	Dimension (mm)			
Medium cutting	TM	WNMG060404E-TM		●	●			▲	▲							0.4	9.525	4.76	3.81
		WNMG060408E-TM		●	●			▲	▲							0.8	9.525	4.76	3.81
		WNMG060412E-TM		●	●			▲	▲							1.2	9.525	4.76	3.81
		WNMG060404-TM		●	●	●		▲	▲	▲						0.4	9.525	4.76	3.81
		WNMG060408-TM	●	●	●	●	▲	▲	▲	▲	●					0.8	9.525	4.76	3.81
		WNMG080404-TM	●	●	●	●	▲	▲	▲	▲	●	●				0.4	12.7	4.76	5.16
		WNMG080408-TM	●	●	●	●	▲	▲	▲	▲	●	●				0.8	12.7	4.76	5.16
		WNMG080412-TM	●	●	●	●	▲	▲	▲	▲	●					1.2	12.7	4.76	5.16
		WNMG080416-TM	●	●	●		▲	▲	▲		●					1.6	12.7	4.76	5.16
Finishing to medium cutting	AM	WNMG080408-AM		●	●			▲	▲							0.8	12.7	4.76	5.16
		WNMG080412-AM		●	●			▲	▲							1.2	12.7	4.76	5.16
		WNMG080416-AM		●	●			▲	▲							1.6	12.7	4.76	5.16
	TQ	WNMG080404-TQ			●								●	●	●	0.4	12.7	4.76	5.16
		WNMG080408-TQ			●								●	●	●	0.8	12.7	4.76	5.16
Medium cutting	TA	WNMG080408-TA		●	●											0.8	12.7	4.76	5.16
		WNMG080412-TA		●	●											1.2	12.7	4.76	5.16
Finishing to medium cutting	NM	WNMG060412E-NM			●				▲							1.2	9.525	4.76	3.81
		WNMG080408-NM	●	●	●		▲	▲	▲							0.8	12.7	4.76	5.16
		WNMG080412-NM	●	●	●	●	▲	▲	▲	▲						1.2	12.7	4.76	5.16





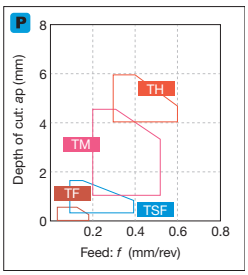


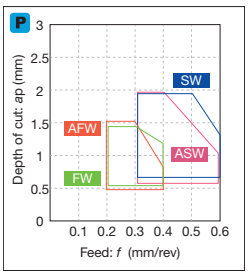


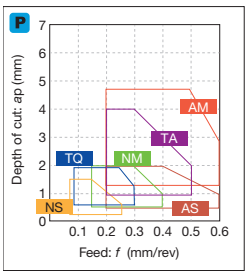


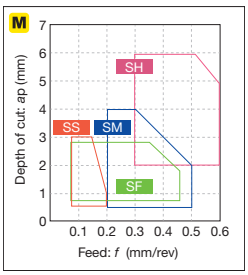
● : Line up
▲ : To be discontinued

Chip control range









Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

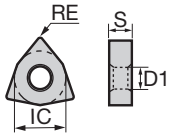
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

WN

Trigon, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	GH330	GT720	GT9530	NS9530	NS520	TH10
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠					●	●ⓒ	●ⓒ		●ⓒ	●ⓒ	●ⓒ	●
M	Stainless		●ⓒ											●	●ⓒ	●ⓒ					●
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ			●ⓒ	●	ⓒ	✠	●	●ⓒ	●ⓒ		●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																				●
S	Superalloy													●	●ⓒ						
H	Hard material																				



Application	Chipbreaker	Designation	Coated															Coated cermet		Cermet		Uncoated	Dimension (mm)			
			T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T515	T5105	T5115	T5125	AH110	AH120	GH330	GT720	GT9530	NS9530	NS520	TH10	RE	IC	S	D1
Finishing to medium cutting	ZM	WNMG060408E-ZM		●	●			▲	▲														0.8	9.525	4.76	3.81
		WNMG060408-ZM		●	●	●		▲	▲	▲													0.8	9.525	4.76	3.81
		WNMG060412-ZM		●	●	●		▲	▲	▲													1.2	9.525	4.76	3.81
		WNMG080408-ZM		●	●	●		▲	▲	▲									●	●			0.8	12.7	4.76	5.16
		WNMG080412-ZM		●	●	●		▲	▲	▲													1.2	12.7	4.76	5.16
		WNMG080416-ZM		●	●			▲	▲														1.6	12.7	4.76	5.16
Medium cutting	DM	WNMG080408-DM	●	●	●	●	▲	▲	▲	▲													0.8	12.7	4.76	5.16
		WNMG080412-DM	●	●	●	●	▲	▲	▲	▲													1.2	12.7	4.76	5.16
	All-round	WNMG060404		●	●			▲	▲			●	●	●									0.4	9.525	4.76	3.81
		WNMG060408		●	●			▲	▲			●	●	●									0.8	9.525	4.76	3.81
		WNMG080404	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●				●		●	0.4	12.7	4.76	5.16
		WNMG080408	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●				●	●	●	0.8	12.7	4.76	5.16
		WNMG080412	●	●	●	●	▲	▲	▲	▲	●	●	●	●	●	●						●	1.2	12.7	4.76	5.16
		WNMG080416	●	●	●	●	▲	▲	▲	▲	●	●	●	●									1.6	12.7	4.76	5.16
Finishing to medium cutting	27	WNMG080408-27			●				▲														0.8	12.7	4.76	5.16
Medium cutting	33	WNMG080404-33																●					0.4	12.7	4.76	5.16
		WNMG080408-33					▲															●	0.8	12.7	4.76	5.16
	37	WNMG080404-37																		●			0.4	12.7	4.76	5.16
		WNMG080408-37		●				▲								●				●			0.8	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

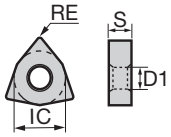
Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

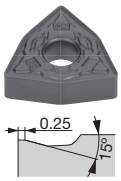
WN

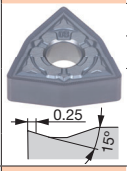
Trigon, 80° with hole

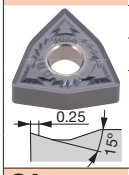
		T6120	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	AH725	AH8005	AH8015	AH905	KS20
P	Steel	◐	✠	◐✠	✠					●◐	◐				
M	Stainless	●	◐	◐	✠					●◐	◐	●	◐		
K	Cast iron					●◐	●	◐	✠	●◐	◐				●✠
N	Non-ferrous														●✠
S	Superalloy									●◐	●	●	◐	◐	●✠
H	Hard material														

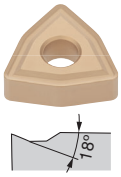


Application	Chipbreaker	Designation	Coated													Uncoated	Dimension (mm)			
			T6120	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	AH725	AH8005	AH8015	AH905	KS20	RE	IC	S	D1
Medium cutting	SM	WNMG060404E-SM	●	●	●												0.4	9.525	4.76	3.81
		WNMG060408E-SM	●	●	●												0.8	9.525	4.76	3.81
		WNMG060412E-SM	●	●	●												1.2	9.525	4.76	3.81
		WNMG060408-SM										●					0.8	9.525	4.76	3.81
		WNMG080404-SM	●	●	●	●											0.4	12.7	4.76	5.16
		WNMG080408-SM	●	●	●	●						●					0.8	12.7	4.76	5.16
		WNMG080412-SM	●	●	●	●						●					1.2	12.7	4.76	5.16
	CM	WNMG080404-CM							●								0.4	12.7	4.76	5.16
		WNMG080408-CM					●	●	●	●							0.8	12.7	4.76	5.16
		WNMG080412-CM					●	●	●	●							1.2	12.7	4.76	5.16
Finishing to medium cutting	HRM	WNMG080404-HRM											●	●			0.4	12.7	4.76	5.16
		WNMG080408-HRM											●	●			0.8	12.7	4.76	5.16
		WNMG080412-HRM											●	●			1.2	12.7	4.76	5.16
Medium cutting	HMM	WNMG080404-HMM													●		0.4	12.7	4.76	5.16
		WNMG080408-HMM													●		0.8	12.7	4.76	5.16
		WNMG080412-HMM													●		1.2	12.7	4.76	5.16
	SA	WNMG080408-SA	●	●	●	●					●	●				●	0.8	12.7	4.76	5.16
		WNMG080412-SA	●	●	●	●					●						1.2	12.7	4.76	5.16



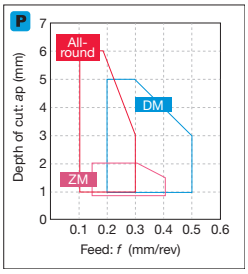


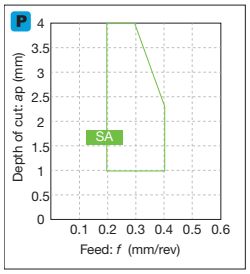


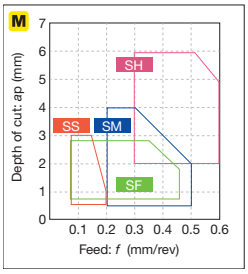


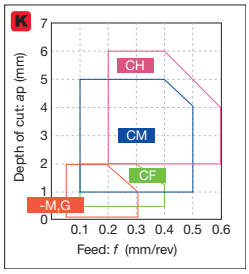
● : Line up

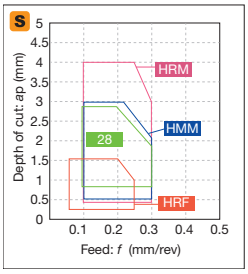
Chip control range











*-M,G: Without chipbreaker

Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

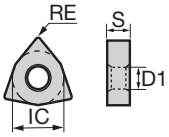
Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

WN

Trigon, 80° with hole

		T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	NS520	TH10	LX11
P	Steel	●	●ⓒ	ⓒ✠	✠	●	●ⓒ	ⓒ✠	✠	✠	ⓒ✠	✠					●ⓒ	●ⓒ	●	
M	Stainless		●ⓒ							ⓒ	ⓒ	✠					●ⓒ		●	
K	Cast iron	●ⓒ	●ⓒ			●ⓒ	●ⓒ						●ⓒ	●	ⓒ	✠	●ⓒ	●ⓒ	●	
N	Non-ferrous																		●	
S	Superalloy																●ⓒ			
H	Hard material																			●



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9105	T9115	T9125	T9135	T6130	AH630	AH645	T515	T5105	T5115	T5125	AH120	NS520	TH10	LX11	RE	IC	S	D1
			Coated																Cermet	Uncoated	Ceramic	Dimension (mm)			
Medium to heavy cutting	TH	WNMG080408-TH	●	●	●	●	▲	▲	▲	▲	●							●				0.8	12.7	4.76	5.16
		WNMG080412-TH	●	●	●	●	▲	▲	▲	▲								●				1.2	12.7	4.76	5.16
		WNMG080416-TH	●	●	●		▲	▲	▲													1.6	12.7	4.76	5.16
		WNMG100612-TH		●	●			▲	▲													1.2	15.875	6.35	6.35
		WNMG100616-TH		●	●			▲	▲													1.6	15.875	6.35	6.35
	THS	WNMG080408-THS	●	●	●	●	▲	▲	▲	▲												0.8	12.7	4.76	5.16
		WNMG080412-THS	●	●	●	●	▲	▲	▲	▲												1.2	12.7	4.76	5.16
		WNMG080416-THS		●	●			▲	▲													1.6	12.7	4.76	5.16
		WNMG100612-THS		●	●	●		▲	▲	▲												1.2	15.875	6.35	6.35
		WNMG100616-THS		●	●	●		▲	▲	▲												1.6	15.875	6.35	6.35
	SH	WNMG080408-SH									●	●	●									0.8	12.7	4.76	5.16
		WNMG080412-SH									●	●	●									1.2	12.7	4.76	5.16
	CH	WNMG080408-CH													●	●	●					0.8	12.7	4.76	5.16
		WNMG080412-CH													●	●	●					1.2	12.7	4.76	5.16
Finishing to medium cutting	-	WNMA060404E												●								0.4	9.525	4.76	3.81
		WNMA060408E												●								0.8	9.525	4.76	3.81
		WNMA060412E												●								1.2	9.525	4.76	3.81
		WNMA060416E												●								1.6	9.525	4.76	3.81
		WNMA080404													●	●	●			●		0.4	12.7	4.76	5.16
		WNMA080408												●	●	●	●		●	●		0.8	12.7	4.76	5.16
		WNMA080412												●	●	●	●					1.2	12.7	4.76	5.16
		WNMA080416												●	●	●	●					1.6	12.7	4.76	5.16
		WNGA080404																			●	0.4	12.7	4.76	5.16
		WNGA080408																			●	0.8	12.7	4.76	5.16
		WNGA080412																			●	1.2	12.7	4.76	5.16

● : Line up
▲ : To be discontinued

Reference pages: External toolholder → C029 - Internal toolholder → D029 -
TungCap → C035 -, K011 -

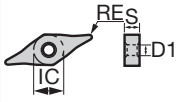
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

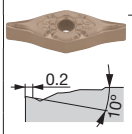
YN

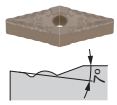
Rhombic, 25° with hole

		T9125	T9225	T9235	T9135	GT9530	NS9530
P	Steel	◐✠	◐✠	✠	✠	●◐	●◐
M	Stainless						
K	Cast iron					●◐	●◐
N	Non-ferrous						
S	Superalloy						
H	Hard material						



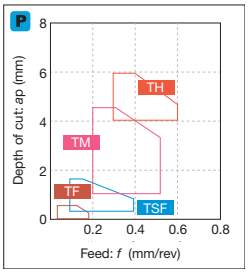
Application	Chipbreaker	Designation	Coated T9125	Coated T9225	Coated T9235	Coated T9135	Coated cermet GT9530	Cermet NS9530	Dimension (mm) RE	IC	S	D1
Finishing	ZF	YNMG160404-ZF	●	●	●	▲	●	●	0.4	9.525	4.76	3.81
		YNMG160408-ZF	●	●	●	▲	●	●	0.8	9.525	4.76	3.81
Finishing to medium cutting	ZM	YNMG160404-ZM	●	●	●	▲	●	●	0.4	9.525	4.76	3.81
		YNMG160408-ZM	●	●	●	▲	●	●	0.8	9.525	4.76	3.81

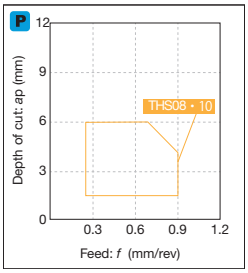


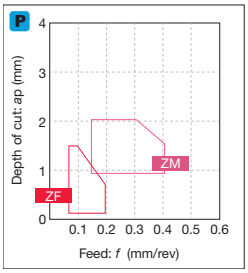


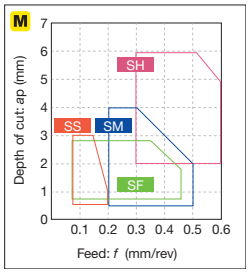
● : Line up
▲ : To be discontinued

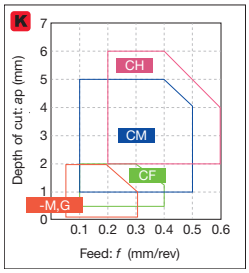
Chip control range











*-M,G: Without chipbreaker

Reference pages: YNMG...: External toolholder → C059 -, Internal toolholder → D073 -

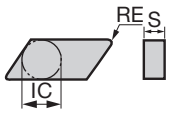
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

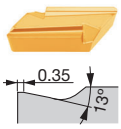
KN

Parallelogram, 55° without hole

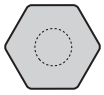
P	Steel	●◐
M	Stainless	●◐
K	Cast iron	●◐
N	Non-ferrous	
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation	Coated GH330	RE	IC	S	D1
Finishing	S1	KNMX160405R-S1	●	0.5	9.525	4.76	-
		KNMX160405L-S1	●	0.5	9.525	4.76	-

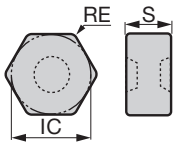


HN



Hexagonal, 120° without hole

P	Steel	
M	Stainless	
K	Cast iron	●◐
N	Non-ferrous	
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation	Ceramic FX105	RE	IC	S	D1
Finishing to medium cutting	-	HNGD050712	●	1.2	12.7	7.94	-
		HNGD050716	●	1.6	12.7	7.94	-

● : Line up

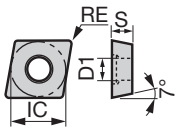
Reference pages: HNGD...: External toolholder → C105

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

		T9215	T9225	T9115	T9125	T6130	AH725	AH8005	AH8015	GH730	SH725	J740	GT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	✠	ⓒ			ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				ⓒ	ⓒ	●	ⓒ	ⓒ	●ⓒ	●ⓒ		
K	Cast iron	●ⓒ		●ⓒ			ⓒ			ⓒ			●ⓒ	●ⓒ
N	Non-ferrous													
S	Superalloy						●	●	ⓒ					
H	Hard material													

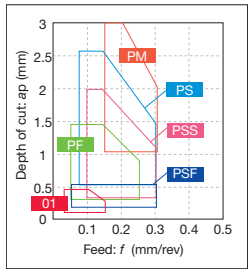


Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6130	AH725	AH8005	AH8015	GH730	SH725	J740	GT9530	NS9530	RE	IC	S	D1
			Coated											Coated cermet	Cermet	Dimension (mm)			
Precision finishing	01	CCGT060202-01											●			0.2	6.35	2.38	2.8
		CCGT09T302-01											●			0.2	9.525	3.97	4.4
Precision finishing (sharp edge)	01	CCGT060202F-01										●				<0.2	6.35	2.38	2.8
		CCGT060204-01										●				<0.4	6.35	2.38	2.8
		CCGT09T302F-01										●				<0.2	9.525	3.97	4.4
		CCGT09T304F-01										●				<0.4	9.525	3.97	4.4
Finishing	PSF	CCMT060202-PSF						●						●	●	0.2	6.35	2.38	2.8
		CCMT060204-PSF	●	●	▲	▲		●	●	●				●	●	0.4	6.35	2.38	2.8
		CCMT09T302-PSF						●							●	0.2	9.525	3.97	4.4
		CCMT09T304-PSF	●	●	▲	▲		●	●	●				●	●	0.4	9.525	3.97	4.4
		CCMT09T308-PSF	●	●	▲	▲		●						●	●	0.8	9.525	3.97	4.4
	PF	CCMT060202-PF									●			●	●	0.2	6.35	2.38	2.8
		CCMT060204-PF					●				●			●	●	0.4	6.35	2.38	2.8
		CCMT060208-PF												●	●	0.8	6.35	2.38	2.8
		CCMT09T302-PF									●				●	0.2	9.525	3.97	4.4
		CCMT09T304-PF									●			●	●	0.4	9.525	3.97	4.4
		CCMT09T308-PF		●		▲								●	●	0.8	9.525	3.97	4.4

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up
▲ : To be discontinued

Chip control range



Reference pages: External toolholder → C024 - Internal toolholder → D014
J-Series toolholder → G019 - PINZBOHR® → K180 -

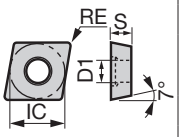
Insert POSITIVE TYPE

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	GH730	GT9530	AT9530	NS9530
P	Steel	●⊂	⊂✠	●⊂	⊂✠	⊂	✠	⊂✠	✠	●⊂	⊂			⊂	●⊂	●⊂	●⊂
M	Stainless	●⊂				●	⊂	⊂	✠	●⊂	⊂	●	⊂	⊂			
K	Cast iron	●⊂		●⊂						●⊂	⊂			⊂	●⊂	●⊂	●⊂
N	Non-ferrous																
S	Superalloy									●⊂	●	●	⊂				
H	Hard material																



Application	Chipbreaker	Designation	Coated													Coated cermet		Cermet	Dimension (mm)			
			T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	GH730	GT9530	AT9530	NS9530	RE	IC	S	D1
Finishing to light cutting	PSS	CCMT060204-PSS	●	●	▲	▲	●	●	●	●		●	●	●		●		●	0.4	6.35	2.38	2.8
		CCMT060208-PSS	●	●	▲	▲	●	●	●	●		●	●	●		●		●	0.8	6.35	2.38	2.8
		CCMT09T304-PSS	●	●	▲	▲	●	●	●	●		●	●	●		●		●	0.4	9.525	3.97	4.4
		CCMT09T308-PSS	●	●	▲	▲	●	●	●	●		●	●	●		●		●	0.8	9.525	3.97	4.4
		CCMT120404-PSS	●	●	▲	▲	●	●	●	●		●							0.4	12.7	4.76	5.5
		CCMT120408-PSS	●	●	▲	▲	●	●	●	●		●							0.8	12.7	4.76	5.5
		CCMT120412-PSS	●	●	▲	▲	●	●	●	●		●							1.2	12.7	4.76	5.5
Medium cutting (wiper)	SW	CCMT060204-SW	●	●	▲	▲													0.4	6.35	2.38	2.8
		CCMT060208-SW	●	●	▲	▲													0.8	6.35	2.38	2.8
		CCMT09T304-SW	●	●	▲	▲													0.4	9.525	3.97	4.4
		CCMT09T308-SW	●	●	▲	▲													0.8	9.525	3.97	4.4
		*Wiper																				
Finishing to medium cutting	PS	CCMT060202-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.2	6.35	2.38	2.8
		CCMT060204-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.4	6.35	2.38	2.8
		CCMT060208-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.8	6.35	2.38	2.8
		CCMT09T302-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.2	9.525	3.97	4.4
		CCMT09T304-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.4	9.525	3.97	4.4
		CCMT09T308-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.8	9.525	3.97	4.4
		CCMT120404-PS	●	●	▲	▲	●	●	●	●		●	●	●					0.4	12.7	4.76	5.5
		CCMT120408-PS	●	●	▲	▲	●	●	●	●		●	●	●					0.8	12.7	4.76	5.5
		CCMT120412-PS	●	●	▲	▲	●	●	●	●		●							1.2	12.7	4.76	5.5
	TSF	CCMT060204-TSF	●	●															0.4	6.35	2.38	2.8
		CCMT060208-TSF	●	●															0.8	6.35	2.38	2.8
		CCMT09T304-TSF	●	●															0.4	9.525	3.97	4.4
		CCMT09T308-TSF	●	●															0.8	9.525	3.97	4.4
	TM	CCMT060204-TM	●	●															0.4	6.35	2.38	2.8
		CCMT060208-TM	●	●															0.8	6.35	2.38	2.8
		CCMT09T304-TM	●	●															0.4	9.525	3.97	4.4
		CCMT09T308-TM	●	●															0.8	9.525	3.97	4.4

* Please see L032-L036 about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up
▲ : To be discontinued

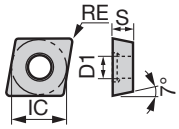
Reference pages: External toolholder → C024 - Internal toolholder → D014
J-Series toolholder → G019 - PINZBOHR® → K180 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

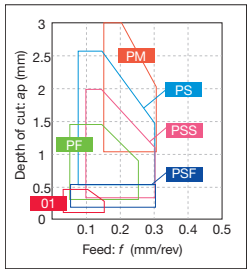
		T9215	T9225	T9115	T9125	T6130	AH120	SH730	NS9530	TH10
P	Steel	●◐	◐✠	●◐	◐✠	✠	●◐	●◐	●◐	●
M	Stainless	●◐				◐	●◐	●◐		●
K	Cast iron	●◐		●◐			●◐		●◐	●
N	Non-ferrous									●
S	Superalloy						●◐	●◐		
H	Hard material									

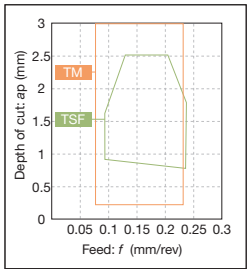


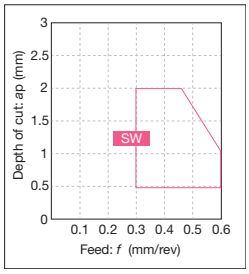
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6130	AH120	SH730	NS9530	TH10	RE	IC	S	D1
			Coated							Cermet	Uncoated	Dimension (mm)			
Finishing to medium cutting	23	CCMT060202-23								●		0.2	6.35	2.38	2.8
		CCMT060204-23		●		▲				●		0.4	6.35	2.38	2.8
		CCMT060208-23		●		▲						0.8	6.35	2.38	2.8
		CCMT09T304-23		●		▲				●		0.4	9.525	3.97	4.4
		CCMT09T308-23		●		▲				●		0.8	9.525	3.97	4.4
Medium cutting	24	CCMT060202-24		●		▲				●		0.2	6.35	2.38	2.8
		CCMT060204-24	●	●	▲	▲		●		●		0.4	6.35	2.38	2.8
		CCMT060208-24	●	●	▲	▲	●			●		0.8	6.35	2.38	2.8
		CCMT09T302-24		●		▲				●		0.2	9.525	3.97	4.4
		CCMT09T304-24	●	●	▲	▲				●		0.4	9.525	3.97	4.4
		CCMT09T308-24	●	●	▲	▲	●			●		0.8	9.525	3.97	4.4
		CCMT120408-24	●	●	▲	▲		●		●		0.8	12.7	4.76	5.5
Finishing	W08	CCGT03X100R-W08							●		●	0.03	3.57	1.39	1.9
		CCGT03X100L-W08							●		●	0.03	3.57	1.39	1.9
		CCGT03X101R-W08							●		●	0.1	3.57	1.39	1.9
		CCGT03X101L-W08							●		●	0.1	3.57	1.39	1.9
		CCGT03X102R-W08							●		●	0.2	3.57	1.39	1.9
		CCGT03X102L-W08							●		●	0.2	3.57	1.39	1.9
		CCGT03X104R-W08							●		●	0.4	3.57	1.39	1.9
		CCGT03X104L-W08							●		●	0.4	3.57	1.39	1.9
		CCGT04T100R-W08							●		●	0.03	4.37	1.79	2.2
		CCGT04T100L-W08							●		●	0.03	4.37	1.79	2.2
		CCGT04T101R-W08							●		●	0.1	4.37	1.79	2.2
		CCGT04T101L-W08							●		●	0.1	4.37	1.79	2.2
		CCGT04T102R-W08							●		●	0.2	4.37	1.79	2.2
		CCGT04T102L-W08							●		●	0.2	4.37	1.79	2.2
		CCGT04T104R-W08							●		●	0.4	4.37	1.79	2.2
		CCGT04T104L-W08							●		●	0.4	4.37	1.79	2.2

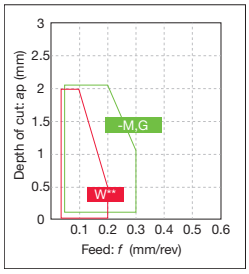
● : Line up
▲ : To be discontinued

Chip control range









*-M,G: Without chipbreaker

Reference pages: External toolholder → C024 - Internal toolholder → D014
J-Series toolholder → G019 - PINZBOHR® → K180 -

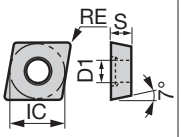
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GH110	GH330	GH730	SH725	GT9530	NS9530	TH10	UX30
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠			●ⓒ	ⓒ	●	●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●	ⓒ
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠			●ⓒ	ⓒ	●	●ⓒ	ⓒ	●ⓒ			●	ⓒ
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	●ⓒ	ⓒ	●	●ⓒ	ⓒ		●ⓒ	●ⓒ	●	
N	Non-ferrous																			●	
S	Superalloy											●ⓒ	●	●							
H	Hard material																				



Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GH110	GH330	GH730	SH725	GT9530	NS9530	TH10	UX30	RE	IC	S	D1
			Coated																Coated cermet	Cermet	Uncoated		Dimension (mm)			
Finishing (sharp edge)	W08	CCGT03X100FL-W08																●					0.03	3.57	1.39	1.9
		CCGT03X100FR-W08																●					0.03	3.57	1.39	1.9
		CCGT03X101FL-W08																●					0.1	3.57	1.39	1.9
		CCGT03X101FR-W08																●					0.1	3.57	1.39	1.9
		CCGT03X102FL-W08																●					0.2	3.57	1.39	1.9
		CCGT03X102FR-W08																●					0.2	3.57	1.39	1.9
		CCGT03X104FL-W08																●					0.4	3.57	1.39	1.9
		CCGT03X104FR-W08																●					0.4	3.57	1.39	1.9
		CCGT04T100FL-W08																●					0.03	4.37	1.79	2.2
		CCGT04T100FR-W08																●					0.03	4.37	1.79	2.2
		CCGT04T101FL-W08																●					0.1	4.37	1.79	2.2
		CCGT04T101FR-W08																●					0.1	4.37	1.79	2.2
		CCGT04T102FL-W08																●					0.2	4.37	1.79	2.2
		CCGT04T102FR-W08																●					0.2	4.37	1.79	2.2
		CCGT04T104FL-W08																●					0.4	4.37	1.79	2.2
		CCGT04T104FR-W08																●					0.4	4.37	1.79	2.2
Finishing	W15	CCGT060200R-W15																			●		0.03	6.35	2.38	2.8
		CCGT060200L-W15																		●	●		0.03	6.35	2.38	2.8
		CCGT060202R-W15																		●	●		0.2	6.35	2.38	2.8
		CCGT060202L-W15																	●	●	●		0.2	6.35	2.38	2.8
		CCGT060204R-W15														●				●	●		0.4	6.35	2.38	2.8
		CCGT060204L-W15													●	●			●	●	●	●	0.4	6.35	2.38	2.8
	W20	CCGT09T302R-W20																		●	●		0.2	9.525	3.97	4.4
		CCGT09T302L-W20																	●	●	●		0.2	9.525	3.97	4.4
		CCGT09T304R-W20																		●			0.4	9.525	3.97	4.4
		CCGT09T304L-W20													●	●			●	●	●		0.4	9.525	3.97	4.4
		CCGT09T308R-W20																		●			0.8	9.525	3.97	4.4
		CCGT09T308L-W20																	●	●			0.8	9.525	3.97	4.4
Medium cutting	PM	CCMT060204-PM	●	●	▲	▲	●	●	●	●			●	●			●		●	●			0.4	6.35	2.38	2.8
		CCMT060208-PM	●	●	▲	▲	●	●	●	●			●	●			●		●	●			0.8	6.35	2.38	2.8
		CCMT09T304-PM	●	●	▲	▲	●	●	●	●			●	●			●		●	●			0.4	9.525	3.97	4.4
		CCMT09T308-PM	●	●	▲	▲	●	●	●	●			●	●			●		●	●			0.8	9.525	3.97	4.4
		CCMT09T312-PM	●	●	▲	▲	●	●	●	●				●									1.2	9.525	3.97	4.4
		CCMT120408-PM					●	●	●	●				●									0.8	12.7	4.76	5.5
		CCMT120412-PM					●	●	●	●				●									1.2	12.7	4.76	5.5
Finishing to medium cutting	CM	CCMT060204-CM									●	●											0.4	6.35	2.38	2.8
		CCMT060208-CM									●	●											0.8	6.35	2.38	2.8
		CCMT09T304-CM									●	●											0.4	9.525	3.97	4.4
		CCMT09T308-CM									●	●											0.8	9.525	3.97	4.4
		CCMT09T312-CM										●											1.2	9.525	3.97	4.4
		CCMT120404-CM										●											0.4	12.7	4.76	5.5
		CCMT120408-CM										●											0.8	12.7	4.76	5.5

● : Line up
▲ : To be discontinued

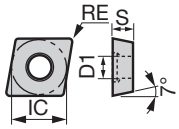
Reference pages: External toolholder → C024 - Internal toolholder → D016 -
J-Series toolholder → G019 - PINZBOHR® → K180 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

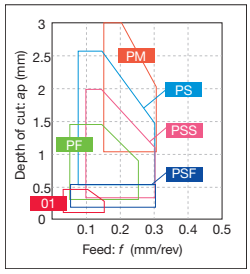
		T5115	GH110	NS9530	TH10	KS05F
P	Steel		●	●◐	●	
M	Stainless		●		●	
K	Cast iron	◐	●	●◐	●	●
N	Non-ferrous				●	●
S	Superalloy		●			●
H	Hard material					

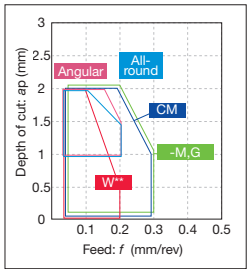


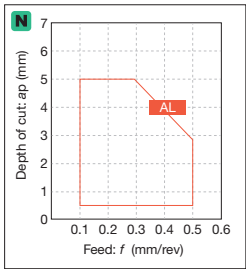
Application	Chipbreaker	Designation	Coated T5115	Coated GH110	Cermet NS9530	Uncoated TH10	Uncoated KS05F	RE	IC	S	D1
Finishing to medium cutting	AL	CCGT060202-AL					●	0.2	6.35	2.38	2.8
		CCGT060204-AL					●	0.4	6.35	2.38	2.8
		CCGT09T302-AL					●	0.2	9.525	3.97	4.4
		CCGT09T304-AL					●	0.4	9.525	3.97	4.4
		CCGT09T308-AL					●	0.8	9.525	3.97	4.4
		CCGT120402-AL					●	0.2	12.7	4.76	5.5
		CCGT120404-AL					●	0.4	12.7	4.76	5.5
		CCGT120408-AL					●	0.8	12.7	4.76	5.5
	All-round	CCGT060202			●			0.2	6.35	2.38	2.8
		CCGT060204			●			0.4	6.35	2.38	2.8
		CCGT09T302			●			0.2	9.525	3.97	4.4
		CCGT09T304			●			0.4	9.525	3.97	4.4
		CCGT09T308			●			0.8	9.525	3.97	4.4
	Angular	CCGT060200R				●		0.03	6.35	2.38	2.8
		CCGT060202R				●		0.2	6.35	2.38	2.8
		CCGT060202L				●		0.2	6.35	2.38	2.8
		CCGT060204L				●		0.4	6.35	2.38	2.8
		CCGT09T302R				●		0.2	9.525	3.97	4.4
		CCGT09T302L				●		0.2	9.525	3.97	4.4
		CCGT09T304R				●		0.4	9.525	3.97	4.4
		CCGT09T304L				●		0.4	9.525	3.97	4.4
	-	CCMW060204	●					0.4	6.35	2.38	2.8
		CCMW060208	●					0.8	6.35	2.38	2.8
		CCMW09T304	●					0.4	9.525	3.97	4.4
		CCMW09T308	●					0.8	9.525	3.97	4.4
	-	CCGW060202				●		0.2	6.35	2.38	2.8
		CCGW060204				●		0.4	6.35	2.38	2.8
		CCGW09T304		●		●		0.4	9.525	3.97	4.4

● : Line up

Chip control range







*-M,G: Without chipbreaker

Reference pages: External toolholder → C024 - Internal toolholder → D016 -
J-Series toolholder → G019 - PINZBOHR® → K180 -

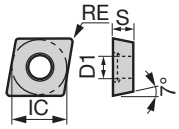
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

		AH725	SH725	SH730
P	Steel	◐	●◐	●◐
M	Stainless	◐	●◐	●◐
K	Cast iron	◐		
N	Non-ferrous			
S	Superalloy	●		●◐
H	Hard material			



Application	Chipbreaker	Designation	Coated AH725	SH725	SH730	RE	IC	S	D1
For internal turning on Swiss lathes	JS	CCGT03X101-JS			●	<0.1	3.57	1.39	1.9
		CCGT03X102-JS			●	<0.2	3.57	1.39	1.9
		CCGT03X104-JS			●	<0.4	3.57	1.39	1.9
		CCGT04T101-JS			●	<0.1	4.37	1.79	2.2
		CCGT04T102-JS			●	<0.2	4.37	1.79	2.2
		CCGT04T104-JS			●	<0.4	4.37	1.79	2.2
For internal turning on Swiss lathes (sharp edge)	JS	CCGT03X101F-JS		●		<0.1	3.57	1.39	1.9
		CCGT03X102F-JS		●		<0.2	3.57	1.39	1.9
		CCGT03X104F-JS		●		<0.4	3.57	1.39	1.9
		CCGT04T101F-JS		●		<0.1	4.37	1.79	2.2
		CCGT04T102F-JS		●		<0.2	4.37	1.79	2.2
		CCGT04T104F-JS		●		<0.4	4.37	1.79	2.2
For external turning on Swiss lathes	JS	CCGT060201N-JS	●			0.1	6.35	2.38	2.8
		CCGT060202N-JS	●			0.2	6.35	2.38	2.8
		CCGT060204N-JS	●			0.4	6.35	2.38	2.8
		CCGT09T301N-JS	●			0.1	9.525	3.97	4.4
		CCGT09T302N-JS	●			0.2	9.525	3.97	4.4
		CCGT09T304N-JS	●			0.4	9.525	3.97	4.4
For external turning on Swiss lathes (sharp edge)	JS	CCGT060200FN-JS		●	●	0.03	6.35	2.38	2.8
		CCGT060201FN-JS		●	●	<0.1	6.35	2.38	2.8
		CCGT060202FN-JS		●	●	<0.2	6.35	2.38	2.8
		CCGT060204FN-JS		●	●	<0.4	6.35	2.38	2.8
		CCGT09T300FN-JS		●	●	0.03	9.525	3.97	4.4
		CCGT09T301FN-JS		●	●	<0.1	9.525	3.97	4.4
		CCGT09T302FN-JS		●	●	<0.2	9.525	3.97	4.4
		CCGT09T304FN-JS		●	●	<0.4	9.525	3.97	4.4

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

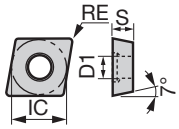
Reference pages: External toolholder → C024 - Internal toolholder → D016 -
J-Series toolholder → G019 - PINZBOHR® → K180 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

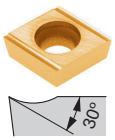
CC

Rhombic, 80° with hole Positive 7°

		SH725	J740	NS9530	TH10
P	Steel	◐	◐	◐	●
M	Stainless	◐	◐		●
K	Cast iron			◐	●
N	Non-ferrous				●
S	Superalloy				
H	Hard material				

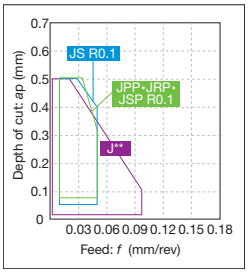


Application	Chipbreaker	Designation	Coated SH725	Coated J740	Cermet NS9530	Uncoated TH10	Dimension (mm) RE	IC	S	D1
For external turning on Swiss lathes (sharp edge)	J10	CCGT060200FR-J10	●	●		●	0.03	6.35	2.38	2.8
		CCGT060200FL-J10	●	●		●	0.03	6.35	2.38	2.8
		CCGT060201FR-J10	●	●	●	●	0.1	6.35	2.38	2.8
		CCGT060201FL-J10	●	●		●	0.1	6.35	2.38	2.8
		CCGT060202FR-J10	●	●	●	●	0.2	6.35	2.38	2.8
		CCGT060202FL-J10	●	●	●	●	0.2	6.35	2.38	2.8
		CCGT09T300FR-J10	●	●		●	0.03	9.525	3.97	4.4
		CCGT09T300FL-J10	●	●		●	0.03	9.525	3.97	4.4
		CCGT09T301FR-J10	●	●		●	0.1	9.525	3.97	4.4
		CCGT09T301FL-J10	●	●		●	0.1	9.525	3.97	4.4
		CCGT09T302FR-J10	●	●		●	0.2	9.525	3.97	4.4
		CCGT09T302FL-J10	●	●		●	0.2	9.525	3.97	4.4
		CCGT09T304FR-J10	●				0.4	9.525	3.97	4.4



● : Line up

Chip control range



*Chip control range with typical R0.1

Reference pages: External toolholder → C024 - Internal toolholder → D016 -
J-Series toolholder → G019 - PINZBOHR® → K180 -

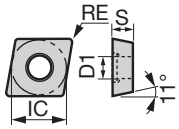
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CP

Rhombic, 80° with hole Positive 11°

		T9205	T9215	T9225	T9235	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	GH730	GT9530	AT9530			NS9530					
		Coated															Coated cermet				Cermet					
P	Steel	●	●ⓒ	ⓒ✠	✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠	●ⓒ	ⓒ			ⓒ	●ⓒ	●ⓒ			●ⓒ					
M	Stainless		●ⓒ					●	ⓒ	ⓒ	✠	●ⓒ	ⓒ	●	ⓒ	ⓒ										
K	Cast iron	●ⓒ	●ⓒ			●ⓒ						●ⓒ	ⓒ			ⓒ	●ⓒ	●ⓒ			●ⓒ					
N	Non-ferrous																									
S	Superalloy											●ⓒ	●	●	ⓒ											
H	Hard material																									



Application	Chipbreaker	Designation	T9205	T9215	T9225	T9235	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	GH730	GT9530	AT9530			NS9530					Dimension (mm) RE	IC	S	D1
Finishing	PSF	CPMT060202-PSF												●													0.2	6.35	2.38	2.8
		CPMT060204-PSF		●	●		▲	▲						●													0.4	6.35	2.38	2.8
		CPMT080202-PSF												●													0.2	7.94	2.38	3.4
		CPMT080204-PSF		●	●		▲	▲						●													0.4	7.94	2.38	3.4
		CPMT090302-PSF												●				●				●					0.2	9.525	3.18	4.4
		CPMT090304-PSF		●	●		▲	▲						●				●				●					0.4	9.525	3.18	4.4
		CPMT09T302-PSF												●													0.2	9.525	3.97	4.4
		CPMT09T304-PSF		●	●		▲	▲						●													0.4	9.525	3.97	4.4
	PF	CPMT090302-PF																●				●					0.2	9.525	3.18	4.4
		CPMT090304-PF																●				●					0.4	9.525	3.18	4.4
Finishing to light cutting	PSS	CPMT060204-PSS		●	●		▲	▲						●				●				●					0.4	6.35	2.38	2.8
		CPMT080204-PSS		●	●		▲	▲	●	●	●	●		●				●				●					0.4	7.94	2.38	3.4
		CPMT080208-PSS		●	●		▲	▲	●	●	●	●		●				●				●					0.8	7.94	2.38	3.4
		CPMT090304-PSS		●	●		▲	▲	●	●	●	●		●				●				●					0.4	9.525	3.18	4.4
		CPMT090308-PSS		●	●		▲	▲	●	●	●	●		●				●				●					0.8	9.525	3.18	4.4
		CPMT09T304-PSS		●	●		▲	▲						●													0.4	9.525	3.97	4.4
		CPMT09T308-PSS		●	●		▲	▲						●													0.8	9.525	3.97	4.4
Finishing to medium cutting	PS	CPMT060202-PS		●	●		▲	▲						●	●	●	●					●					0.2	6.35	2.38	2.8
		CPMT060204-PS		●	●		▲	▲					●	●	●	●	●	●	●			●					0.4	6.35	2.38	2.8
		CPMT080202-PS		●	●		▲	▲	●	●	●	●		●				●	●			●					0.2	7.94	2.38	3.4
		CPMT080204-PS		●	●		▲	▲	●	●	●	●		●				●	●			●					0.4	7.94	2.38	3.4
		CPMT080208-PS		●	●		▲	▲	●	●	●	●		●				●	●			●					0.8	7.94	2.38	3.4
		CPMT090304-PS		●	●		▲	▲	●	●	●	●		●				●	●			●					0.4	9.525	3.18	4.4
		CPMT090308-PS		●	●		▲	▲	●	●	●	●		●				●	●			●					0.8	9.525	3.18	4.4
		CPMT09T302-PS		●	●		▲	▲						●	●	●											0.2	9.525	3.97	4.4
		CPMT09T304-PS		●	●		▲	▲						●	●	●						●					0.4	9.525	3.97	4.4
		CPMT09T308-PS		●	●		▲	▲					●	●	●	●											0.8	9.525	3.97	4.4
	TSF	CPMT09T304-TSF		●	●																						0.4	9.525	3.97	4.4
		CPMT09T308-TSF		●	●																						0.8	9.525	3.97	4.4
	TM	CPMT09T304-TM		●	●																						0.4	9.525	3.97	4.4
		CPMT09T308-TM		●	●																						0.8	9.525	3.97	4.4

● : Line up
▲ : To be discontinued

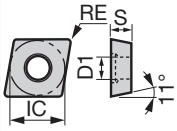
Reference pages: Internal toolholder → D019 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

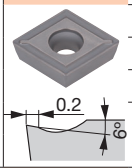
CP

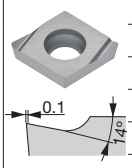
Rhombic, 80° with hole Positive 11°

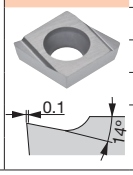
		T9215	T9225	T9115	T9125	NS9530	TH10
P	Steel	●◐	◐✠	●◐	◐✠	●◐	●
M	Stainless	●◐					●
K	Cast iron	●◐		●◐		●◐	●
N	Non-ferrous						●
S	Superalloy						
H	Hard material						



Application	Chipbreaker	Designation	Coated T9215	Coated T9225	Coated T9115	Coated T9125	Cermet NS9530	Uncoated TH10	RE	IC	S	D1
Medium cutting	24	CPMT080204-24	●		▲	▲			0.4	7.94	2.38	3.4
		CPMT120408-24		●			●		0.8	12.7	4.76	5.5
		CPMT160508-24		●		▲	●		0.8	15.875	5.56	5.5
		CPMT160512-24		●			●		1.2	15.875	5.56	5.5
Finishing	W15	CPGT050202L-W15					●		0.2	5.56	2.35	2.5
		CPGT050204L-W15					●		0.4	5.56	2.35	2.5
		CPGT080202R-W15						●	0.2	7.94	2.38	3.4
		CPGT080202L-W15					●	●	0.2	7.94	2.38	3.4
		CPGT080204R-W15						●	0.4	7.94	2.38	3.4
		CPGT080204L-W15					●	●	0.4	7.94	2.38	3.4
	W20	CPGT090302R-W20					●	●	0.2	9.525	3.18	4.4
		CPGT090302L-W20					●	●	0.2	9.525	3.18	4.4
		CPGT090304R-W20					●	●	0.4	9.525	3.18	4.4
		CPGT090304L-W20					●	●	0.4	9.525	3.18	4.4

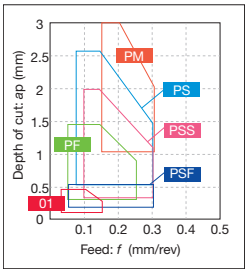


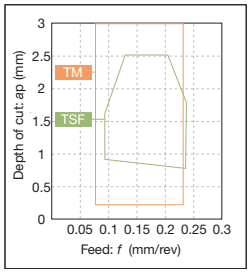


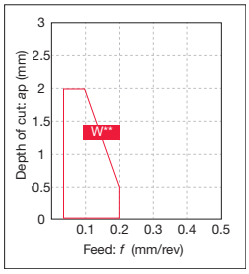


● : Line up
▲ : To be discontinued

Chip control range







Reference pages: Internal toolholder → D019 - Cartridge → K194 -
Boring bar tool → K209 -

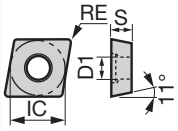
Insert POSITIVE TYPE

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

CP

Rhombic, 80° with hole Positive 11°

		T9225	T9105	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH725	AH8005	AH8015	AH905	NS9530
		Coated													Cermet
P	Steel	⊂✠	●	⊂✠	⊂	✠	⊂✠	✠			⊂				●⊂
M	Stainless				●	⊂	⊂	✠			⊂	●	⊂		
K	Cast iron		●⊂						●⊂	⊂	⊂				●⊂
N	Non-ferrous														
S	Superalloy										●	●	⊂	⊂	
H	Hard material														



Application	Chipbreaker	Designation	T9225	T9105	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH725	AH8005	AH8015	AH905	NS9530	RE	IC	S	D1
Medium cutting	PM	CPMT060204-PM				●	●	●	●			●					0.4	6.35	2.38	2.8
		CPMT060208-PM	●		▲	●	●	●	●			●					0.8	6.35	2.38	2.8
		CPMT090304-PM	●		▲	●	●	●	●			●				●	0.4	9.525	3.18	4.4
		CPMT090308-PM	●		▲	●	●	●	●			●				●	0.8	9.525	3.18	4.4
Finishing to medium cutting	CM	CPMT060204-CM									●						0.4	6.35	2.38	2.8
		CPMT060208-CM									●						0.8	6.35	2.38	2.8
		CPMT080204-CM									●						0.4	7.94	2.38	3.4
		CPMT080208-CM									●						0.8	7.94	2.38	3.4
		CPMT090304-CM								●	●						0.4	9.525	3.18	4.4
		CPMT090308-CM								●	●						0.8	9.525	3.18	4.4
		CPMT09T304-CM								●	●						0.4	9.525	3.97	4.4
		CPMT09T308-CM								●	●						0.8	9.525	3.97	4.4
		CPMT09T312-CM									●						1.2	9.525	3.97	4.4
		CPMT120408-CM									●						0.8	12.7	4.76	5.5
		CPMT120412-CM									●						1.2	12.7	4.76	5.5
Medium cutting	All-round	CPMT120408											●	●	●		0.8	12.7	4.76	5.5
	-	CPMW080204									●						0.4	7.94	2.38	3.4
		CPMW080208									●						0.8	7.94	2.38	3.4
		CPMW090304		▲							●						0.4	9.525	3.18	4.4
		CPMW090308									●						0.8	9.525	3.18	4.4

● : Line up
▲ : To be discontinued

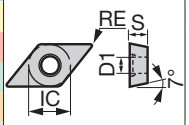
Reference pages: Internal toolholder → D019 - Boring bar tool → K209 -

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

		T9215	T9225	T9115	T9125	AH725	AH8005	AH8015	AH905	GH730	SH725	J740	GT9530	J9530	NS9530
		Coated											Coated cermet		Cermet
P	Steel	●⊂	⊂✠	●⊂	⊂✠	⊂				⊂	●⊂	●⊂	●⊂	●⊂	●⊂
M	Stainless	●⊂				⊂	●	⊂		⊂	●⊂	●⊂			
K	Cast iron	●⊂		●⊂		⊂				⊂			●⊂	●⊂	●⊂
N	Non-ferrous														
S	Superalloy					●	●	⊂	⊂						
H	Hard material														

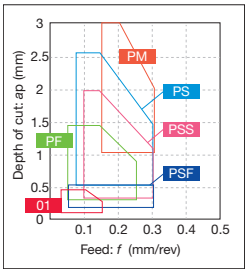


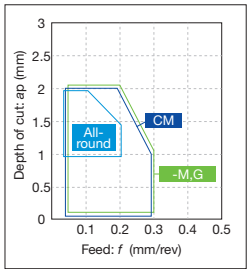
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	AH725	AH8005	AH8015	AH905	GH730	SH725	J740	GT9530	J9530	NS9530	RE	IC	S	D1
Precision finishing	01	DCGT070202-01											●		●		0.2	6.35	2.38	2.8
		DCGT11T302-01											●				0.2	9.525	3.97	4.4
Precision finishing (sharp edge)	01	DCGT070202F-01										●					<0.2	6.35	2.38	2.8
		DCGT070204-01										●					<0.4	6.35	2.38	2.8
		DCGT11T302F-01										●					<0.2	9.525	3.97	4.4
		DCGT11T304-01										●					<0.4	9.525	3.97	4.4
Finishing	PSF	DCMT070202-PSF					●							●		●	0.2	6.35	2.38	2.8
		DCMT070204-PSF	●	●	▲	▲	●							●		●	0.4	6.35	2.38	2.8
		DCMT11T302-PSF					●							●		●	0.2	9.525	3.97	4.4
		DCMT11T304-PSF	●	●	▲	▲	●	●	●	●				●		●	0.4	9.525	3.97	4.4
		DCMT11T308-PSF	●	●	▲	▲	●	●	●	●							0.8	9.525	3.97	4.4
	PF	DCMT070202-PF									●			●		●	0.2	6.35	2.38	2.8
		DCMT070204-PF									●			●		●	0.4	6.35	2.38	2.8
		DCMT070208-PF												●		●	0.8	6.35	2.38	2.8
		DCMT11T302-PF									●			●		●	0.2	9.525	3.97	4.4
		DCMT11T304-PF									●			●		●	0.4	9.525	3.97	4.4
		DCMT11T308-PF												●			0.8	9.525	3.97	4.4

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up
▲ : To be discontinued

Chip control range





*-M,G: Without chipbreaker

Reference pages: External toolholder → C048 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

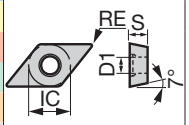
Insert POSITIVE TYPE

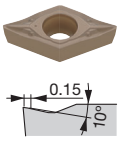
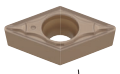
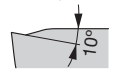
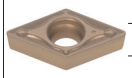
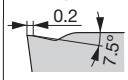
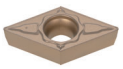
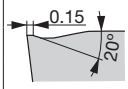
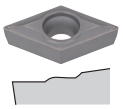
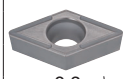
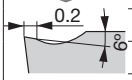
● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	AH905	GH730	GT9530	AT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠	●ⓒ	ⓒ				ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠	●ⓒ	ⓒ	●	ⓒ		ⓒ			
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ				ⓒ	●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																	
S	Superalloy									●ⓒ	●	●	ⓒ	ⓒ				
H	Hard material																	



Application	Chipbreaker	Designation	Coated														Coated cermet				Cermet				Dimension (mm)			
			T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	AH905	GH730	GT9530	AT9530			NS9530				RE	IC	S	D1
Finishing to light cutting	**PSS**	**DCMT070204-PSS**	●	●	▲	▲	●	●	●	●		●					●				●				0.4	6.35	2.38	2.8
		DCMT070208-PSS	●	●	▲	▲	●	●	●	●		●					●				●				0.8	6.35	2.38	2.8
		DCMT11T304-PSS	●	●	▲	▲	●	●	●	●		●	●	●	●		●				●				0.4	9.525	3.97	4.4
		DCMT11T308-PSS	●	●	▲	▲	●	●	●	●		●	●	●	●		●				●				0.8	9.525	3.97	4.4
		DCMT11T312-PSS	●	●	▲	▲	●	●	●	●		●	●	●	●										1.2	9.525	3.97	4.4
Finishing to medium cutting	**PS**	**DCMT070202-PS**	●	●	▲	▲	●	●	●	●	●	●	●	●		●	●	●			●				0.2	6.35	2.38	2.8
		DCMT070204-PS	●	●	▲	▲	●	●	●	●	●	●	●	●		●	●	●			●				0.4	6.35	2.38	2.8
		DCMT070208-PS	●	●	▲	▲						●	●	●		●	●	●			●				0.8	6.35	2.38	2.8
		DCMT11T302-PS	●	●	▲	▲	●	●	●	●	●	●	●	●		●	●	●			●				0.2	9.525	3.97	4.4
		DCMT11T304-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●			●				0.4	9.525	3.97	4.4
		DCMT11T308-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●			●				0.8	9.525	3.97	4.4
		DCMT11T312-PS	●	●	▲	▲	●	●	●	●		●	●	●	●										1.2	9.525	3.97	4.4
	TSF	**DCMT070202-TSF**	●	●																					0.2	6.35	2.38	2.8
		DCMT070204-TSF	●	●																					0.4	6.35	2.38	2.8
		DCMT070208-TSF	●	●																					0.8	6.35	2.38	2.8
		DCMT11T304-TSF	●	●																					0.4	9.525	3.97	4.4
		DCMT11T308-TSF	●	●																					0.8	9.525	3.97	4.4
	TM	**DCMT070202-TM**	●	●																					0.2	6.35	2.38	2.8
		DCMT070204-TM	●	●																					0.4	6.35	2.38	2.8
		DCMT070208-TM	●	●																					0.8	6.35	2.38	2.8
		DCMT11T304-TM	●	●																					0.4	9.525	3.97	4.4
		DCMT11T308-TM	●	●																					0.8	9.525	3.97	4.4
	23	**DCMT070204-23**																			●				0.4	6.35	2.38	2.8
		DCMT11T304-23																			●				0.4	9.525	3.97	4.4
		DCMT11T308-23																			●				0.8	9.525	3.97	4.4
Medium cutting	**24**	**DCMT070202-24**		●																	●				0.2	6.35	2.38	2.8
		DCMT070204-24	●	●	▲	▲															●				0.4	6.35	2.38	2.8
		DCMT070208-24		●		▲															●				0.8	6.35	2.38	2.8
		DCMT11T302-24		●		▲															●				0.2	9.525	3.97	4.4
		DCMT11T304-24	●	●	▲	▲															●				0.4	9.525	3.97	4.4
		DCMT11T308-24	●	●	▲	▲		●													●				0.8	9.525	3.97	4.4

● : Line up
▲ : To be discontinued

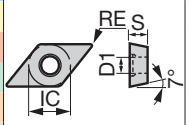
Reference pages: External toolholder → C048 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

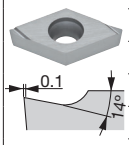
DC

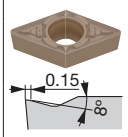
Rhombic, 55° with hole Positive 7°

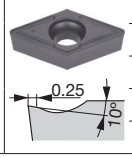
		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GH330	GH730	GT9530	NS9530	TH10
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠			●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	●ⓒ	●
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠			●ⓒ	ⓒ	●ⓒ	ⓒ			●
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous																	●
S	Superalloy											●ⓒ	●					
H	Hard material																	



Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GH330	GH730	GT9530	NS9530	TH10	RE	IC	S	D1
			Coated														Coated cermet	Cermet	Uncoated	Dimension (mm)			
Finishing	W10	DCGT070200R-W10																	●	0.03	6.35	2.38	2.8
		DCGT070200L-W10																	●	0.03	6.35	2.38	2.8
		DCGT070202R-W10																●	●	0.2	6.35	2.38	2.8
		DCGT070202L-W10															●	●		0.2	6.35	2.38	2.8
		DCGT070204R-W10													●			●	●	0.4	6.35	2.38	2.8
		DCGT070204L-W10													●		●	●	●	0.4	6.35	2.38	2.8
	W15	DCGT11T302R-W15																●	●	0.2	9.525	3.97	4.4
		DCGT11T302L-W15															●	●		0.2	9.525	3.97	4.4
		DCGT11T304R-W15																●		0.4	9.525	3.97	4.4
		DCGT11T304L-W15													●		●	●	●	0.4	9.525	3.97	4.4
		DCGT11T308R-W15																●	●	0.8	9.525	3.97	4.4
		DCGT11T308L-W15																●	●	0.8	9.525	3.97	4.4
Medium cutting	PM	DCMT070204-PM	●	●	▲	▲	●	●	●	●			●	●		●	●	●		0.4	6.35	2.38	2.8
		DCMT070208-PM	●	●	▲	▲	●	●	●	●			●	●		●	●	●		0.8	6.35	2.38	2.8
		DCMT11T304-PM	●	●	▲	▲	●	●	●	●			●	●		●	●	●		0.4	9.525	3.97	4.4
		DCMT11T308-PM	●	●	▲	▲	●	●	●	●			●	●		●	●	●		0.8	9.525	3.97	4.4
		DCMT11T312-PM		●		▲	●	●	●	●				●						1.2	9.525	3.97	4.4
Finishing to medium cutting	CM	DCMT070204-CM										●								0.4	6.35	2.38	2.8
		DCMT070208-CM										●								0.8	6.35	2.38	2.8
		DCMT11T304-CM									●	●								0.4	9.525	3.97	4.4
		DCMT11T308-CM									●	●								0.8	9.525	3.97	4.4
		DCMT11T312-CM										●								1.2	9.525	3.97	4.4

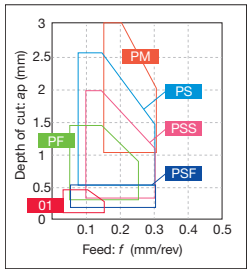


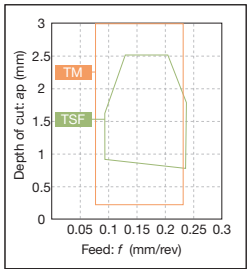


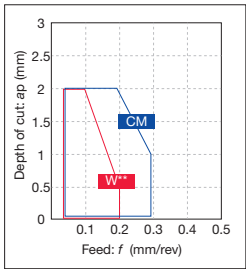


● : Line up
▲ : To be discontinued

Chip control range







Reference pages: External toolholder → C048 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

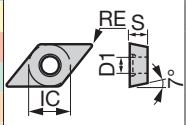
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

		Coated						Cermet				Uncoated												
		T9105	T5115	GH110				NS9530				TH10	KS05F											
P	Steel	●		●				●◐				●												
M	Stainless			●								●												
K	Cast iron	●◐	◐	●				●◐				●	●											
N	Non-ferrous											●	●											
S	Superalloy			●									●											
H	Hard material																							



Application	Chipbreaker	Designation	T9105	T5115	GH110	NS9530	TH10	KS05F	RE	IC	S	D1
Finishing to medium cutting	**AL**	**DCGT070202-AL**						●	0.2	6.35	2.38	2.8
		DCGT070204-AL						●	0.4	6.35	2.38	2.8
		DCGT11T302-AL						●	0.2	9.525	3.97	4.4
		DCGT11T304-AL						●	0.4	9.525	3.97	4.4
		DCGT11T308-AL						●	0.8	9.525	3.97	4.4
	All-round	**DCGT070202**				●			0.2	6.35	2.38	2.8
		DCGT070204				●			0.4	6.35	2.38	2.8
		DCGT11T302				●			0.2	9.525	3.97	4.4
		DCGT11T304				●			0.4	9.525	3.97	4.4
		DCGT11T308				●			0.8	9.525	3.97	4.4
	Angular	**DCGT070202R**					●		0.2	6.35	2.38	2.8
		DCGT070202L					●		0.2	6.35	2.38	2.8
		DCGT070204R					●		0.4	6.35	2.38	2.8
		DCGT070204L					●		0.4	6.35	2.38	2.8
		DCGT11T302R					●		0.2	9.525	3.97	4.4
		DCGT11T302L					●		0.2	9.525	3.97	4.4
		DCGT11T304R					●		0.4	9.525	3.97	4.4
		DCGT11T304L					●		0.4	9.525	3.97	4.4
Medium cutting	**-**	**DCMW070204**	▲	●					0.4	6.35	2.38	2.8
		DCMW070208		●					0.8	6.35	2.38	2.8
		DCMW11T304	▲	●					0.4	9.525	3.97	4.4
		DCMW11T308		●					0.8	9.525	3.97	4.4
	-	**DCGW070202**					●		0.2	6.35	2.38	2.8
		DCGW070204			●		●		0.4	6.35	2.38	2.8
		DCGW11T304					●		0.4	9.525	3.97	4.4
		DCGW11T308					●		0.8	9.525	3.97	4.4

● : Line up
▲ : To be discontinued

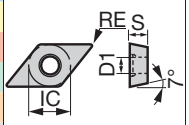
Reference pages: External toolholder → C048 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

		AH725	SH725	SH730
P	Steel	◐	●◐	●◐
M	Stainless	◐	●◐	●◐
K	Cast iron	◐		
N	Non-ferrous			
S	Superalloy	●		●◐
H	Hard material			

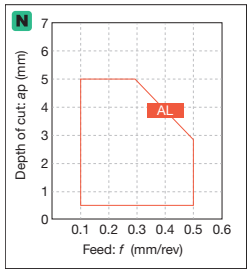


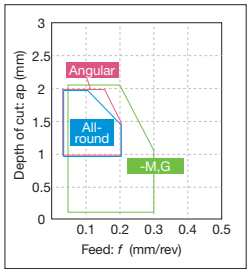
Application	Chipbreaker	Designation	Coated AH725	SH725	SH730	Dimension (mm) RE	IC	S	D1
For external turning on Swiss lathes (sharp edge)	JS	DCGT070200FN-JS		●	●	0.03	6.35	2.38	2.8
		DCGT070201FN-JS		●	●	<0.1*	6.35	2.38	2.8
		DCGT070202FN-JS		●	●	<0.2*	6.35	2.38	2.8
		DCGT11T300FN-JS		●	●	0.03	9.525	3.97	4.4
		DCGT11T301FN-JS		●	●	<0.1*	9.525	3.97	4.4
		DCGT11T302FN-JS		●	●	<0.2*	9.525	3.97	4.4
		DCGT11T304FN-JS		●	●	<0.4*	9.525	3.97	4.4
For external turning on Swiss lathes	JS	DCGT070201N-JS	●			0.1	6.35	2.38	2.8
		DCGT070202N-JS	●			0.2	6.35	2.38	2.8
		DCGT11T301N-JS	●			0.1	9.525	3.97	4.4
		DCGT11T302N-JS	●			0.2	9.525	3.97	4.4
		DCGT11T304N-JS	●			0.4	9.525	3.97	4.4
For external turning on Swiss lathes (sharp edge)	JPP	DCET0702008MFR-JPP		●	●	<0.08*	6.35	2.38	2.8
		DCET070201MFR-JPP		●	●	<0.1*	6.35	2.38	2.8
		DCET070201MFL-JPP		●	●	<0.1*	6.35	2.38	2.8
		DCET070202MFR-JPP		●	●	<0.2*	6.35	2.38	2.8
		DCET070202MFL-JPP		●	●	<0.2*	6.35	2.38	2.8
		DCET11T3008MFR-JPP		●	●	<0.08*	9.525	3.97	4.4
		DCET11T301MFR-JPP		●	●	<0.1*	9.525	3.97	4.4
		DCET11T301MFL-JPP		●	●	<0.1*	9.525	3.97	4.4
		DCET11T3018MFR-JPP		●	●	<0.18*	9.525	3.97	4.4
		DCET11T3018MFL-JPP		●		<0.18*	9.525	3.97	4.4
		DCET11T302MFR-JPP		●	●	<0.2*	9.525	3.97	4.4
		DCET11T302MFL-JPP		●	●	<0.2*	9.525	3.97	4.4

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

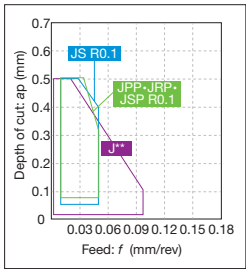
● : Line up

Chip control range





*-M,G: Without chipbreaker



*Chip control range with typical R0.1

Reference pages: External toolholder → C049 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

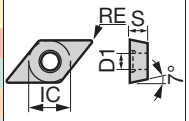
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°

		SH725	SH730	J740	J9530	NS9530	TH10
		Coated			Coated cermet	Cermet	Uncoated
P	Steel	◐	◐	◐	◐	◐	●
M	Stainless	◐	◐	◐			●
K	Cast iron				◐	◐	●
N	Non-ferrous						●
S	Superalloy		◐				
H	Hard material						



Application	Chipbreaker	Designation	SH725	SH730	J740	J9530	NS9530	TH10	RE	IC	S	D1
For external turning on Swiss lathes (sharp edge)	JRP	DCET0702008MFR-JRP	●	●					<0.08*	6.35	2.38	2.8
		DCET070201MFR-JRP	●	●					<0.1*	6.35	2.38	2.8
		DCET070201MFL-JRP	●						<0.1*	6.35	2.38	2.8
		DCET070218MFR-JRP		●					<0.18*	6.35	2.38	2.8
		DCET070218MFL-JRP	●	●					<0.18*	6.35	2.38	2.8
		DCET070202MFR-JRP	●	●					<0.2*	6.35	2.38	2.8
		DCET070202MFL-JRP	●	●					<0.2*	6.35	2.38	2.8
		DCET11T3008MFR-JRP	●	●					<0.08*	9.525	3.97	4.4
		DCET11T301MFR-JRP	●	●					<0.1*	9.525	3.97	4.4
		DCET11T3018MFR-JRP		●					<0.18*	9.525	3.97	4.4
		DCET11T3018MFL-JRP	●						<0.18*	9.525	3.97	4.4
		DCET11T302MFR-JRP	●	●					<0.2*	9.525	3.97	4.4
		DCET11T302MFL-JRP	●	●					<0.2*	9.525	3.97	4.4
	JSP	DCET0702008MFN-JSP	●	●					<0.08*	6.35	2.38	2.8
		DCET070201MFN-JSP	●	●					<0.1*	6.35	2.38	2.8
		DCET070202MFN-JSP	●	●					<0.2*	6.35	2.38	2.8
		DCET11T3008MFN-JSP	●	●					<0.08*	9.525	3.97	4.4
		DCET11T301MFN-JSP	●	●					<0.1*	9.525	3.97	4.4
		DCET11T3018MFN-JSP	●	●					<0.18*	9.525	3.97	4.4
		DCET11T302MFN-JSP	●	●					<0.2*	9.525	3.97	4.4
	J10	DCGT070200FR-J10	●		●			●	0.03	6.35	2.38	2.8
		DCGT070200FL-J10	●		●			●	0.03	6.35	2.38	2.8
		DCGT070201FR-J10	●		●		●	●	0.1	6.35	2.38	2.8
		DCGT070201FL-J10	●		●		●	●	0.1	6.35	2.38	2.8
		DCGT070202FR-J10	●		●		●	●	0.2	6.35	2.38	2.8
		DCGT070202FL-J10	●		●		●	●	0.2	6.35	2.38	2.8
		DCGT070204FR-J10	●						0.4	6.35	2.38	2.8
		DCGT070204FL-J10	●						0.4	6.35	2.38	2.8
		DCGT11T300FR-J10	●		●			●	0.03	9.525	3.97	4.4
		DCGT11T300FL-J10	●		●			●	0.03	9.525	3.97	4.4
		DCGT11T301FR-J10	●		●		●	●	0.1	9.525	3.97	4.4
		DCGT11T301FL-J10	●		●		●	●	0.1	9.525	3.97	4.4
		DCGT11T302FR-J10	●		●		●	●	0.2	9.525	3.97	4.4
		DCGT11T302FL-J10	●		●		●	●	0.2	9.525	3.97	4.4
For external turning on Swiss lathes (honed edge)	J10	DCGT070202R-J10				●			0.2	6.35	2.38	2.8
		DCGT11T302R-J10				●			0.2	9.525	3.97	4.4

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → C049 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

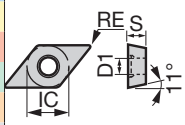
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

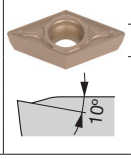
DP

Rhombic, 55° with hole Positive 11°

		T9225	T9125	AH8015	NS9530
P	Steel	◐✠	◐✠		●◐
M	Stainless			◐	
K	Cast iron				●◐
N	Non-ferrous				
S	Superalloy			◐	
H	Hard material				



Application	Chipbreaker	Designation	Coated T9225	Coated T9125	Coated AH8015	Cermet NS9530	Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	PS	DPMT070202-PS	●	▲	●	●	0.2	6.35	2.38	2.8
		DPMT070204-PS	●	▲	●	●	0.4	6.35	2.38	2.8
		DPMT070208-PS	●	▲	●	●	0.8	6.35	2.38	2.8



● : Line up
▲ : To be discontinued

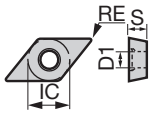
Insert POSITIVE TYPE / DOUBLE SIDE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

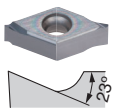
DX

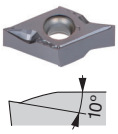
Rhombic, 55° with hole

		SH725
P	Steel	●◐
M	Stainless	●◐
K	Cast iron	
N	Non-ferrous	
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation	Coated SH725	Dimension (mm) RE	IC	S	D1
Finishing (sharp edge)	JRP	DXGU070301MFRE-JRP**	●	<0.1	6.35	3.18	2.7
		DXGU070301MFLE-JRP**	●	<0.1	6.35	3.18	2.7
		DXGU070302MFRE-JRP**	●	<0.2	6.35	3.18	2.7
		DXGU070302MFLE-JRP**	●	<0.2	6.35	3.18	2.7
Finishing to medium cutting (sharp edge)	JS	DXGU070301MFR-JS(1)	●	<0.1	6.35	3.18	2.7
		DXGU070301MFL-JS(1)	●	<0.1	6.35	3.18	2.7
		DXGU070302MFR-JS(1)	●	<0.2	6.35	3.18	2.7
		DXGU070302MFL-JS(1)	●	<0.2	6.35	3.18	2.7
		DXGU070304MFR-JS(1)	●	<0.4	6.35	3.18	2.7
		DXGU070304MFL-JS(1)	●	<0.4	6.35	3.18	2.7

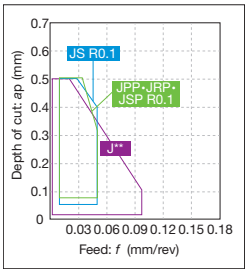


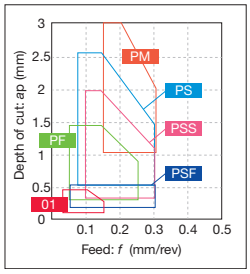


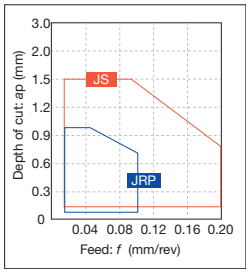
*Corner radius (RE) with a sign of inequality (<) means minus tolerance.
** For external turning applications
(1)Due to chipbreaker profile, max ap for face or ID turning is 1 mm

● : Line up

Chip control range







*Chip control range with typical R0.1

Reference pages: DPMT...: Internal toolholder → D051 -
DXGU...: External toolholder → C039 -, Internal toolholder → D035 -

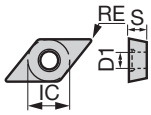
Insert POSITIVE TYPE / DOUBLE SIDE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DX

Rhombic, 55° with hole

		AH725	AH8015	SH725	GT9530	NS9530	KS05F
		Coated			Coated cermet	Cermet	Uncoated
P	Steel	ⓒ		●ⓒ	●ⓒ	●ⓒ	
M	Stainless	ⓒ	ⓒ	●ⓒ			
K	Cast iron	ⓒ			●ⓒ	●ⓒ	●
N	Non-ferrous						●
S	Superalloy	●	ⓒ				●
H	Hard material						



Application	Chipbreaker	Designation	AH725	AH8015	SH725	GT9530	NS9530	KS05F	RE	IC	S	D1
			Coated			Coated cermet	Cermet	Uncoated	Dimension (mm)			
Finishing to medium cutting (sharp edge)	JTS	DXGU070301MFR-JTS			●				<0.1	6.35	3.18	2.7
		DXGU070301MFL-JTS			●				<0.1	6.35	3.18	2.7
		DXGU070302MFR-JTS			●				<0.2	6.35	3.18	2.7
		DXGU070302MFL-JTS			●				<0.2	6.35	3.18	2.7
Finishing to medium cutting	JTS	DXGU070301MR-JTS	●						<0.1	6.35	3.18	2.7
		DXGU070301ML-JTS	●						<0.1	6.35	3.18	2.7
		DXGU070302MR-JTS	●						<0.2	6.35	3.18	2.7
		DXGU070302ML-JTS	●						<0.2	6.35	3.18	2.7
Finishing (low cutting force) (sharp edge)	JSS	DXGU070301MFR-JSS			●				<0.1	6.35	3.18	2.7
		DXGU070301MFL-JSS			●				<0.1	6.35	3.18	2.7
		DXGU070302MFR-JSS			●				<0.2	6.35	3.18	2.7
		DXGU070302MFL-JSS			●				<0.2	6.35	3.18	2.7
Finishing (low cutting force)	JSS	DXGU070301MR-JSS	●						<0.1	6.35	3.18	2.7
		DXGU070301ML-JSS	●						<0.1	6.35	3.18	2.7
		DXGU070302MR-JSS	●						<0.2	6.35	3.18	2.7
		DXGU070302ML-JSS	●						<0.2	6.35	3.18	2.7
Finishing to medium cutting	TS	DXGU070302R-TS	●	●		●	●	●	0.2	6.35	3.18	2.7
		DXGU070302L-TS	●	●		●	●	●	0.2	6.35	3.18	2.7
		DXGU070304R-TS	●	●		●	●	●	0.4	6.35	3.18	2.7
		DXGU070304L-TS	●	●		●	●	●	0.4	6.35	3.18	2.7
		DXGU070308R-TS	●	●		●	●	●	0.8	6.35	3.18	2.7
		DXGU070308L-TS	●	●		●	●	●	0.8	6.35	3.18	2.7
Finishing (low cutting force)	SS	DXGU070302R-SS	●	●		●	●	●	0.2	6.35	3.18	2.7
		DXGU070302L-SS	●	●		●	●	●	0.2	6.35	3.18	2.7
		DXGU070304R-SS	●	●		●	●	●	0.4	6.35	3.18	2.7
		DXGU070304L-SS	●	●		●	●	●	0.4	6.35	3.18	2.7

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

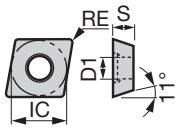
Reference pages: External toolholder → C039 - Internal toolholder → D035 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

EP

Rhombic, 75° with hole Positive 11°

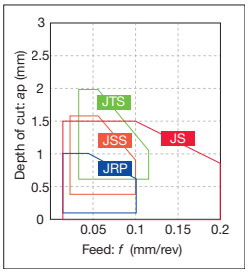
		GH110	SH725	SH730	GT9530	NS9530	TH10	UX30
		Coated			Coated cermet	Cermet	Uncoated	
P	Steel	●	●◐	●◐	●◐	●◐	●	◐
M	Stainless	●	●◐	●◐			●	◐
K	Cast iron	●			●◐	●◐	●	
N	Non-ferrous						●	
S	Superalloy	●		●◐				
H	Hard material							

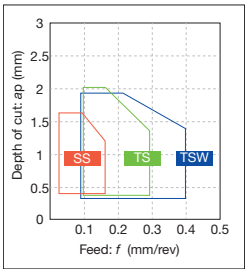


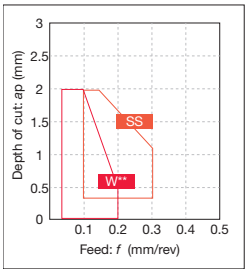
Application	Chipbreaker	Designation	GH110	SH725	SH730	GT9530	NS9530	TH10	UX30	RE	IC	S	D1
Finishing	W08	EPGT03X100R-W08			●			●		0.03	3.57	1.39	1.9
		EPGT03X100L-W08			●			●		0.03	3.57	1.39	1.9
		EPGT03X101R-W08			●			●		0.1	3.57	1.39	1.9
		EPGT03X101L-W08			●			●		0.1	3.57	1.39	1.9
		EPGT03X102R-W08			●			●		0.2	3.57	1.39	1.9
		EPGT03X102L-W08			●			●		0.2	3.57	1.39	1.9
		EPGT03X104R-W08			●			●		0.4	3.57	1.39	1.9
		EPGT03X104L-W08			●			●		0.4	3.57	1.39	1.9
		EPGT040100R-W08			●			●		0.03	3.97	1.59	2.3
		EPGT040100L-W08	●		●		●	●		0.03	3.97	1.59	2.3
		EPGT040101R-W08			●			●		0.1	3.97	1.59	2.3
		EPGT040101L-W08			●			●		0.1	3.97	1.59	2.3
		EPGT040102R-W08	●		●		●	●		0.2	3.97	1.59	2.3
		EPGT040102L-W08	●		●	●	●	●	●	0.2	3.97	1.59	2.3
		EPGT040104R-W08	●		●		●	●		0.4	3.97	1.59	2.3
		EPGT040104L-W08	●		●	●	●	●	●	0.4	3.97	1.59	2.3
Finishing (sharp edge)	W08	EPGT03X100FL-W08		●						0.03	3.57	1.39	1.9
		EPGT03X100FR-W08		●						0.03	3.57	1.39	1.9
		EPGT03X101FL-W08		●						0.1	3.57	1.39	1.9
		EPGT03X101FR-W08		●						0.1	3.57	1.39	1.9
		EPGT03X102FL-W08		●						0.2	3.57	1.39	1.9
		EPGT03X102FR-W08		●						0.2	3.57	1.39	1.9
		EPGT03X104FL-W08		●						0.4	3.57	1.39	1.9
		EPGT03X104FR-W08		●						0.4	3.57	1.39	1.9
		EPGT040100FL-W08		●						0.03	3.97	1.59	2.3
		EPGT040100FR-W08		●						0.03	3.97	1.59	2.3
		EPGT040101FL-W08		●						0.1	3.97	1.59	2.3
		EPGT040101FR-W08		●						0.1	3.97	1.59	2.3
		EPGT040102FL-W08		●						0.2	3.97	1.59	2.3
		EPGT040102FR-W08		●						0.2	3.97	1.59	2.3
		EPGT040104FL-W08		●						0.4	3.97	1.59	2.3
		EPGT040104FR-W08		●						0.4	3.97	1.59	2.3

● : Line up

Chip control range







Reference pages: Internal toolholder → D033 - Boring bar tool → K211 - Top-borer tool → K213

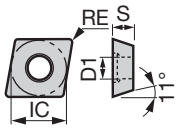
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

EP

Rhombic, 75° with hole Positive 11°

		SH725	SH730	J740
P	Steel	◐	◐	◐
M	Stainless	◐	◐	◐
K	Cast iron			
N	Non-ferrous			
S	Superalloy		◐	
H	Hard material			



Application	Chipbreaker	Designation	SH725	SH730	J740	RE	IC	S	D1
			Coated			Dimension (mm)			
For internal turning on Swiss lathes	JS	EPGT03X101-JS		●		<0.1	3.57	1.39	1.9
		EPGT03X102-JS		●		<0.2	3.57	1.39	1.9
		EPGT03X104-JS		●		<0.4	3.57	1.39	1.9
		EPGT040101-JS		●		<0.1	3.97	1.59	2.3
		EPGT040102-JS		●		<0.2	3.97	1.59	2.3
		EPGT040104-JS		●		<0.4	3.97	1.59	2.3
For internal turning on Swiss lathes (sharp edge)	JS	EPGT03X101F-JS	●			<0.1	3.57	1.39	1.9
		EPGT03X102F-JS	●			<0.2	3.57	1.39	1.9
		EPGT03X104F-JS	●			<0.4	3.57	1.39	1.9
		EPGT040101F-JS	●			<0.1	3.97	1.59	2.3
		EPGT040102F-JS	●			<0.2	3.97	1.59	2.3
		EPGT040104F-JS	●			<0.4	3.97	1.59	2.3
Finishing	J08	EPGT040100L-J08		●	●	0.03	3.97	1.59	2.3
		EPGT040102L-J08		●	●	0.2	3.97	1.59	2.3
		EPGT040104L-J08		●	●	0.4	3.97	1.59	2.3
Finishing (sharp edge)	J08	EPGT040100FL-J08	●			0.03	3.97	1.59	2.3
		EPGT040102FL-J08	●			0.2	3.97	1.59	2.3
		EPGT040104FL-J08	●			0.4	3.97	1.59	2.3

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

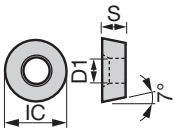
Reference pages: Internal toolholder → D033 - Boring bar tool → K211 - Top-borer tool → K213

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

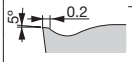
RC

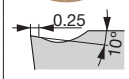
Round, with hole Positive 7°

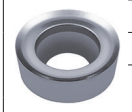
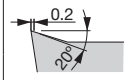
		T9215	T9225	T9115	T9125	T5115	AH120	AH8005	AH8015	AH905	KS05F
P	Steel	●◐	◐✠	●◐	◐✠		●◐				
M	Stainless	●◐					●◐	●	◐		
K	Cast iron	●◐		●◐		◐	●◐				●
N	Non-ferrous										●
S	Superalloy						●◐	●	◐	◐	●
H	Hard material										

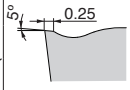


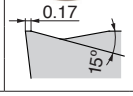
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T5115	AH120	AH8005	AH8015	AH905	KS05F	RE	IC	S	D1
			Coated									Uncoated	Dimension (mm)			
Finishing to medium cutting	RS	RCMT10T3M0-RS	●	●	▲	▲			●	●	●		-	10	3.97	4.4
		RCMT1204M0-RS	●	●	▲	▲			●	●	●		-	12	4.76	4.4
		RCMT1606M0-RS	●	●	▲	▲		●					-	16	6.35	5.5
		RCMT2006M0-RS		●		▲							-	20	6.35	6.5
		RCMT2507M0-RS		●		▲							-	25	7.94	7.6
	CM	RCMT0502M0-CM					●						-	5	2.38	2.5
		RCMT0602M0-CM					●						-	6	2.38	2.8
		RCMT0803M0-CM					●						-	8	3.18	3.4
	AL	RCGT0602M0-AL										●	-	6	2.38	2.8
		RCGT0803M0-AL										●	-	8	3.18	3.4
		RCGT1003M0-AL										●	-	10	3.18	4.4
Finishing (low cutting force)	6RS	RCMT1204M0-6RS	●	●	▲	▲							-	12	4.76	4.4
Medium cutting	6RM	RCMT1204M0-6RM	●	●	▲	▲							-	12	4.76	4.4





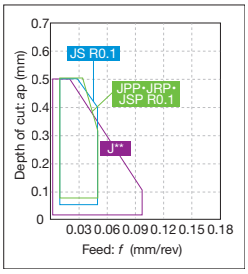



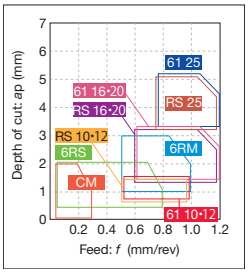


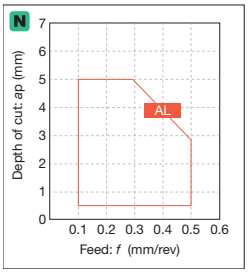


● : Line up
▲ : To be discontinued

Chip control range







*Chip control range with typical R0.1

Reference pages: External toolholder → C074 -, C083

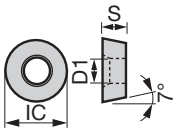
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

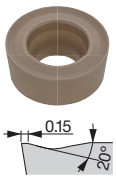
RC

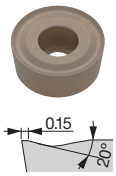
Round, with hole Positive 7°

		T9215	T9225	T9115	T9125	AH8005	AH8015	AH905	NS9530	TH10
P	Steel	●◐	◐✠	●◐	◐✠				●◐	●
M	Stainless	●◐				●	◐			●
K	Cast iron	●◐		●◐					●◐	●
N	Non-ferrous									●
S	Superalloy					●	◐	◐		
H	Hard material									
		Coated							Cermet	Uncoated



Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	AH8005	AH8015	AH905	NS9530	TH10	RE	IC	S	D1
Heavy cutting	61	RCMT0502M0-61	●	●	▲	▲				●	●	-	5	2.38	2.5
		RCMT0602M0-61	●	●	▲	▲				●	●	-	6	2.38	2.8
		RCMT0803M0-61	●	●	▲	▲				●	●	-	8	3.18	3.4
	61	RCMM1003M0-61	●	●	▲	▲	●	●	●	●	●	-	10	3.18	3.6
		RCMM1204M0-61	●	●	▲	▲	●	●	●	●	●	-	12	4.76	4.2
		RCMM1606M0-61	●	●	▲	▲					●	-	16	6.35	5.2
		RCMM2006M0-61		●		▲					●	-	20	6.35	6.5
		RCMM2507M0-61		●		▲						-	25	7.94	7.2



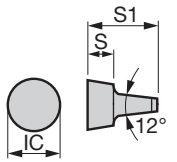


D1 (mm) Designation	0502M0	0602M0	0803M0	1003M0	1204M0	1606M0	2006M0	2507M0
RC*T	2.5	2.8	3.4	4.4	4.4	5.5	6.5	7.6
RCMM	-	-	-	3.6	4.2	5.2	6.5	7.2

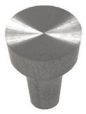
RT

Special round insert

		T9215	T9225	T9115	T9125	AH8005	AH8015	AH905	NS9530	TH10
P	Steel	●								
M	Stainless	●								
K	Cast iron	●	◐✠							
N	Non-ferrous	●	◐✠							
S	Superalloy		◐✠							
H	Hard material									
		Uncoated								



Application	Chipbreaker	Designation	TH10	KS20	RE	IC	S	S1
Medium cutting	-	RT05	●		-	5	2.5	6.5
		RT06	●	●	-	6	3	7.7
		RT08	●		-	8	4.2	10.3



● : Line up
▲ : To be discontinued

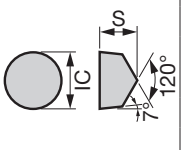
Reference pages: RC...: External toolholder → C074 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

RC

Round, without hole Positive 7°

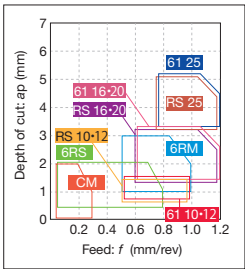
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloy	
H	Hard material	●



Application	Chipbreaker	Designation	Ceramic LX11	Dimension (mm) RE	IC	S	D1
Medium cutting	-	RCGX090800	●	-	9.525	8	-
		RCGX120800	●	-	12.7	8	-

● : Line up

Chip control range



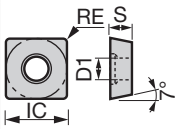
MEMO

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

SC

Square, 90° with hole Positive 7°

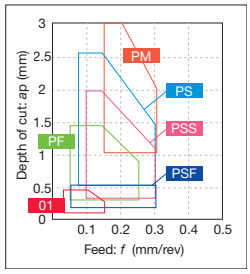
		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GT9530	AT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠			●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠			●ⓒ	ⓒ			
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous															
S	Superalloy											●ⓒ	●			
H	Hard material															

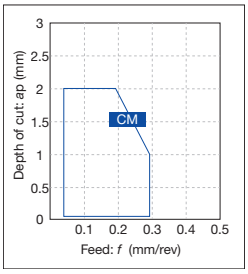


Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GT9530	AT9530	NS9530	RE	IC	S	D1
			Coated												Coated cermet		Cermet	Dimension (mm)			
Finishing to medium cutting	PS	SCMT09T304-PS	●	●	▲	▲	●	●	●	●				●	●	●	●	0.4	9.525	3.97	4.4
		SCMT09T308-PS	●	●	▲	▲	●	●	●	●				●	●	●	●	0.8	9.525	3.97	4.4
		SCMT120404-PS	●	●	▲	▲	●	●	●	●				●			●	0.4	12.7	4.76	5.5
		SCMT120408-PS	●	●	▲	▲	●	●	●	●				●			●	0.8	12.7	4.76	5.5
	23	SCMT09T302-23															●	0.2	9.525	3.97	4.4
		SCMT09T308-23		●		▲							●					0.8	9.525	3.97	4.4
		SCMT120408-23		●		▲							●	●				0.8	12.7	4.76	5.5
Medium cutting	24	SCMT070204-24		●		▲											●	0.4	7.94	2.38	3.4
		SCMT09T302-24															●	0.2	9.525	3.97	4.4
		SCMT09T304-24		●		▲											●	0.4	9.525	3.97	4.4
		SCMT09T308-24	●	●	▲	▲											●	0.8	9.525	3.97	4.4
		SCMT120404-24		●		▲											●	0.4	12.7	4.76	5.5
		SCMT120408-24		●		▲											●	0.8	12.7	4.76	5.5
	PM	SCMT09T304-PM	●	●	▲	▲	●	●	●	●				●			●	0.4	9.525	3.97	4.4
		SCMT09T308-PM	●	●	▲	▲	●	●	●	●				●			●	0.8	9.525	3.97	4.4
		SCMT120408-PM	●	●	▲	▲	●	●	●	●				●			●	0.8	12.7	4.76	5.5
		SCMT120412-PM		●		▲	●	●	●	●				●			●	1.2	12.7	4.76	5.5
Finishing to medium cutting	CM	SCMT09T304-CM									●	●						0.4	9.525	3.97	4.4
		SCMT09T308-CM									●	●						0.8	9.525	3.97	4.4
		SCMT09T312-CM										●						1.2	9.525	3.97	4.4
		SCMT120404-CM									●	●						0.4	12.7	4.76	5.5
		SCMT120408-CM									●	●						0.8	12.7	4.76	5.5

● : Line up
▲ : To be discontinued

Chip control range





Reference pages: External toolholder → C104 -

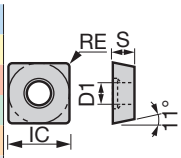
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

SP

Square, 90° with hole Positive 11°

		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	GT9530	AT9530	NS9530	TH10
		Coated										Coated cermet		Cermet	Uncoated
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠	●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠	●ⓒ	ⓒ				●
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous														●
S	Superalloy									●ⓒ	●				
H	Hard material														



Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	GT9530	AT9530	NS9530	TH10	RE	IC	S	D1
																	Dimension (mm)			
Finishing to medium cutting	PS	SPMT090304-PS	●	●	▲	▲	●	●	●	●		●	●	●	●		0.4	9.525	3.18	4.4
		SPMT090308-PS	●	●	▲	▲	●	●	●	●		●	●	●	●		0.8	9.525	3.18	4.4
		SPMT120404-PS	●	●	▲	▲	●	●	●	●		●					0.4	12.7	4.76	5.5
		SPMT120408-PS	●	●	▲	▲	●	●	●	●		●					0.8	12.7	4.76	5.5
	23	SPMT090304-23		●		▲									●		0.4	9.525	3.18	4.4
		SPMT090308-23		●		▲									●		0.8	9.525	3.18	4.4
Medium cutting	24	SPMT090304-24		●		▲									●		0.4	9.525	3.18	4.4
		SPMT090308-24		●		▲					●				●		0.8	9.525	3.18	4.4
		SPMT120404-24													●		0.4	12.7	4.76	5.5
		SPMT120408-24													●		0.8	12.7	4.76	5.5
Finishing	W15	SPGT090302L-W15													●		0.2	9.525	3.18	4.4
		SPGT090304L-W15													●	●	0.4	9.525	3.18	4.4
		SPGT090308R-W15														●	0.8	9.525	3.18	4.4
		SPGT090308L-W15													●	●	0.8	9.525	3.18	4.4
	W20	SPGT120404L-W20													●		0.4	12.7	4.76	5.5

● : Line up
▲ : To be discontinued

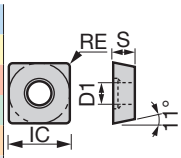
Reference pages: Internal toolholder → D038 - Cartridge → K197 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

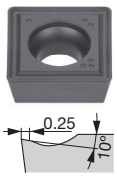
SP

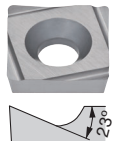
Square, 90° with hole Positive 11°

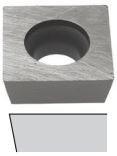
		T515	T5115	NS9530	TH10
P	Steel			●◐	●
M	Stainless				●
K	Cast iron	●◐	◐	●◐	●
N	Non-ferrous				●
S	Superalloy				
H	Hard material				



Application	Chipbreaker	Designation	Coated T515	Coated T5115	Cermet NS9530	Uncoated TH10	RE	IC	S	D1
Finishing to medium cutting	CM	SPMT090304-CM		●			0.4	9.525	3.18	4.4
		SPMT090308-CM		●			0.8	9.525	3.18	4.4
		SPMT120404-CM	●	●			0.4	12.7	4.76	5.5
		SPMT120408-CM	●	●			0.8	12.7	4.76	5.5
	- (Tungaloy standard hole specification)	SPGM090304L			●		0.4	9.525	3.18	4.4
		SPGM120304L			●		0.4	12.7	3.18	5
		SPGM120308L			●		0.8	12.7	3.18	5
	-	SPMW090304		●			0.4	9.525	3.18	4.4
		SPMW090308		●			0.8	9.525	3.18	4.4
		SPMW120404		●			0.4	12.7	4.76	5.5
		SPMW120408		●			0.8	12.7	4.76	5.5
	-	SPGW090302				●	0.2	9.525	3.18	4.4
		SPGW090304				●	0.4	9.525	3.18	4.4
		SPGW120404				●	0.4	12.7	4.76	5.5
	- (Tungaloy standard hole specification)	SPGA090304			●		0.4	9.525	3.18	4.4

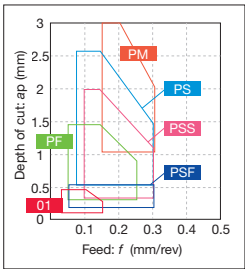


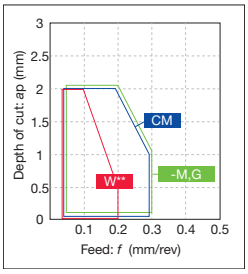




● : Line up

Chip control range





*-M,G: Without chipbreaker

Reference pages: Internal toolholder → D038 - Cartridge → K197 -

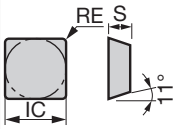
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

SP

Square, 90° without hole Positive 11°

		T9225	T9125	T5115	NS9530	TH10	UX30	LX11
P	Steel	◐✠	◐✠		●◐	●	●	
M	Stainless					●	●	
K	Cast iron			◐	●◐	●		
N	Non-ferrous					●		
S	Superalloy							
H	Hard material							●



Application	Chipbreaker	Designation	Coated T9225	Coated T9125	Coated T5115	Cermet NS9530	Uncoated TH10	Uncoated UX30	Ceramic LX11	RE	IC	S	D1
Finishing to medium cutting	23	SPMR090304-23				●				0.4	9.525	3.18	-
		SPMR090308-23	●	▲		●				0.8	9.525	3.18	-
		SPMR120304-23	●	▲		●				0.4	12.7	3.18	-
		SPMR120308-23	●	▲		●				0.8	12.7	3.18	-
	CM	SPMR090304-CM			●					0.4	9.525	3.18	-
		SPMR090308-CM			●					0.8	9.525	3.18	-
		SPMR120304-CM			●					0.4	12.7	3.18	-
		SPMR120308-CM			●					0.8	12.7	3.18	-
		SPMR120312-CM			●					1.2	12.7	3.18	-
	-	SPGR090304L				●				0.4	9.525	3.18	-
	-	SPGN090304					●		●	0.4	9.525	3.18	-
		SPGN090308					●		●	0.8	9.525	3.18	-
		SPGN120304					●		●	0.4	12.7	3.18	-
		SPGN120308					●		●	0.8	12.7	3.18	-
		SPGN120312				●			●	1.2	12.7	3.18	-
		SPGN120408					●			0.8	12.7	4.76	-
	-	SPMN090304			●					0.4	9.525	3.18	-
		SPMN090308			●					0.8	9.525	3.18	-
		SPMN120304			●					0.4	12.7	3.18	-
		SPMN120308			●	●	●	●		0.8	12.7	3.18	-
		SPMN120312			●		●			1.2	12.7	3.18	-
		SPMN120408			●		●			0.8	12.7	4.76	-
		SPMN120412			●					1.2	12.7	4.76	-

Dimension (mm)

● : Line up
▲ : To be discontinued

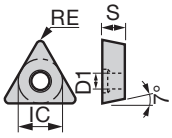
Reference pages: Internal toolholder → D038 - Cartridge → K197 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TC

Triangular, 60° with hole Positive 7°

		T9215	T9225	T9115	T9125	AH725	SH725	J740	GT9530	NS9530	NS520	TH10
		Coated							Coated cermet	Cermet		Uncoated
P	Steel	●◐	◐✠	●◐	◐✠	◐	●◐	●◐	●◐	●◐	●◐	●
M	Stainless	●◐				◐	●◐	●◐				●
K	Cast iron	●◐		●◐		◐			●◐	●◐	●◐	●
N	Non-ferrous											●
S	Superalloy					●						
H	Hard material											

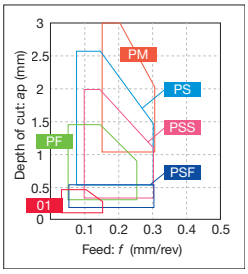


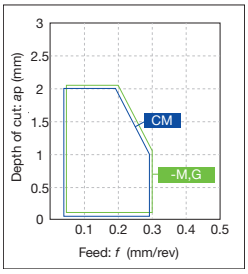
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	AH725	SH725	J740	GT9530	NS9530	NS520	TH10	RE	IC	S	D1
Precision finishing	01	TCGT090204-01										●	●	0.4	5.56	2.38	2.5
		TCGT110202-01							●					0.2	6.35	2.38	2.8
		TCGT110204-01								●	●	●	●	0.4	6.35	2.38	2.8
		TCGT110208-01									●			0.8	6.35	2.38	2.8
		TCGT16T304-01											●	0.4	9.525	3.97	4.4
		TCGT16T308-01										●	●	0.8	9.525	3.97	4.4
Precision finishing (sharp edge)	01	TCGT110202F-01						●						<0.2	6.35	2.38	2.8
		TCGT110204F-01						●						<0.4	6.35	2.38	2.8
Finishing	PSF	TCMT090202-PSF					●							0.2	5.56	2.38	2.5
		TCMT090204-PSF	●	●	▲	▲	●							0.4	5.56	2.38	2.5
		TCMT110202-PSF					●							0.2	6.35	2.38	2.8
		TCMT110204-PSF	●	●	▲	▲	●							0.4	6.35	2.38	2.8
		TCMT110302-PSF					●							0.2	6.35	3.18	2.8
		TCMT110304-PSF	●	●	▲	▲	●							0.4	6.35	3.18	2.8
		TCMT16T304-PSF	●	●	▲	▲	●							0.4	9.525	3.97	4.4
Finishing to light cutting	PSS	TCMT090204-PSS	●	●	▲	▲	●							0.4	5.56	2.38	2.5
		TCMT090208-PSS	●	●	▲	▲	●							0.8	5.56	2.38	2.5
		TCMT110204-PSS	●	●	▲	▲	●							0.4	6.35	2.38	2.8
		TCMT110208-PSS	●	●	▲	▲	●							0.8	6.35	2.38	2.8
		TCMT110304-PSS	●	●	▲	▲	●							0.4	6.35	3.18	2.8
		TCMT110308-PSS	●	●	▲	▲	●							0.8	6.35	3.18	2.8
		TCMT16T304-PSS	●	●	▲	▲	●							0.4	9.525	3.97	4.4
		TCMT16T308-PSS	●	●	▲	▲	●							0.8	9.525	3.97	4.4
		TCMT16T312-PSS	●	●	▲	▲	●							1.2	9.525	3.97	4.4

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up
▲ : To be discontinued

Chip control range





*-M,G: Without chipbreaker

Reference pages: External toolholder → C076 - Internal toolholder → D042
J-Series toolholder → G039 - PINZBOHR® → K180 -

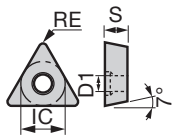
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

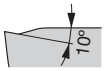
TC

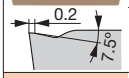
Triangular, 60° with hole Positive 7°

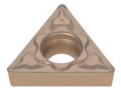
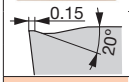
		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH725	GH730	GT9530	AT9530	NS9530	TH10
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠	ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠	ⓒ	ⓒ				●
K	Cast iron	●ⓒ		●ⓒ						ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ	●
N	Non-ferrous														●
S	Superalloy									●					
H	Hard material														

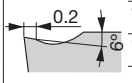


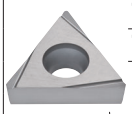
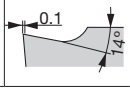
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH725	GH730	GT9530	AT9530	NS9530	TH10	RE	IC	S	D1
			Coated										Coated cermet		Cermet	Uncoated	Dimension (mm)			
Finishing to medium cutting	PS	TCMT090204-PS									●						0.4	5.56	2.38	2.5
		TCMT090208-PS									●						0.8	5.56	2.38	2.5
		TCMT110202-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●		0.2	6.35	2.38	2.8
		TCMT110204-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●		0.4	6.35	2.38	2.8
		TCMT110208-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●		0.8	6.35	2.38	2.8
		TCMT110302-PS	●	●	▲	▲	●	●	●	●							0.2	6.35	3.18	2.8
		TCMT110304-PS	●	●	▲	▲	●	●	●	●							0.4	6.35	3.18	2.8
		TCMT110308-PS	●	●	▲	▲	●	●	●	●							0.8	6.35	3.18	2.8
		TCMT16T302-PS	●	●	▲	▲	●	●	●	●	●				●		0.2	9.525	3.97	4.4
		TCMT16T304-PS	●	●	▲	▲	●	●	●	●	●				●		0.4	9.525	3.97	4.4
		TCMT16T308-PS	●	●	▲	▲	●	●	●	●	●						0.8	9.525	3.97	4.4
	TSF	TCMT110204-TSF	●	●													0.4	6.35	2.38	2.8
		TCMT110208-TSF	●	●													0.8	6.35	2.38	2.8
		TCMT16T304-TSF	●	●													0.4	9.525	3.97	4.4
		TCMT16T308-TSF	●	●													0.8	9.525	3.97	4.4
	TM	TCMT110204-TM	●	●													0.4	6.35	2.38	2.8
		TCMT110208-TM	●	●													0.8	6.35	2.38	2.8
		TCMT16T304-TM	●	●													0.4	9.525	3.97	4.4
		TCMT16T308-TM	●	●													0.8	9.525	3.97	4.4
	23	TCMT090204-23		●		▲									●		0.4	5.56	2.38	2.5
		TCMT110204-23													●		0.4	6.35	2.38	2.8
		TCMT16T304-23													●		0.4	9.525	3.97	4.4
		TCMT16T308-23		●		▲											0.8	9.525	3.97	4.4
Medium cutting	24	TCMT090202-24													●		0.2	5.56	2.38	2.5
		TCMT090204-24	●	●	▲	▲									●		0.4	5.56	2.38	2.5
		TCMT110202-24													●		0.2	6.35	2.38	2.8
		TCMT110204-24	●	●	▲	▲									●		0.4	6.35	2.38	2.8
		TCMT110208-24		●		▲											0.8	6.35	2.38	2.8
		TCMT16T304-24	●	●	▲	▲									●		0.4	9.525	3.97	4.4
		TCMT16T308-24	●	●	▲	▲					●						0.8	9.525	3.97	4.4
Finishing	W15	TCGT16T302L-W15														●	0.2	9.525	3.97	4.4
		TCGT16T304L-W15													●	●	0.4	9.525	3.97	4.4
		TCGT16T308L-W15														●	0.8	9.525	3.97	4.4







● : Line up
▲ : To be discontinued

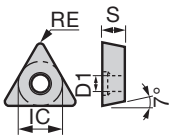
Reference pages: External toolholder → C076 - Internal toolholder → D042
J-Series toolholder → G039 - PINZBOHR® → K180 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

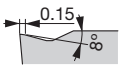
TC

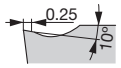
Triangular, 60° with hole Positive 7°

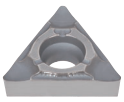
		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH725	NS9530	KS05F
P	Steel	●◐	◐✠	●◐	◐✠	◐	✠	◐✠	✠		●◐	◐	●◐	
M	Stainless	●◐				●	◐	◐	✠			◐		
K	Cast iron	●◐		●◐						●◐	●◐	◐	●◐	●
N	Non-ferrous													●
S	Superalloy											●		●
H	Hard material													

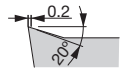


Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH725	NS9530	KS05F	RE	IC	S	D1
			Coated											Cermet	Uncoated	Dimension (mm)			
Medium cutting	PM	TCMT110202-PM					●	●	●	●			●			0.2	6.35	2.38	2.8
		TCMT110204-PM	●	●	▲	▲	●	●	●	●			●	●		0.4	6.35	2.38	2.8
		TCMT110208-PM	●	●	▲	▲	●	●	●	●			●	●		0.8	6.35	2.38	2.8
		TCMT110302-PM					●	●	●	●						0.2	6.35	3.18	2.8
		TCMT110304-PM					●	●	●	●						0.4	6.35	3.18	2.8
		TCMT110308-PM					●	●	●	●						0.8	6.35	3.18	2.8
		TCMT16T304-PM			▲	▲	●	●	●	●			●	●		0.4	9.525	3.97	4.4
		TCMT16T308-PM	●	●	▲	▲	●	●	●	●			●	●		0.8	9.525	3.97	4.4
		TCMT16T312-PM	●	●	▲	▲	●	●	●	●			●			1.2	9.525	3.97	4.4
Finishing to medium cutting	CM	TCMT090204-CM										●				0.4	5.56	2.38	2.5
		TCMT090208-CM										●				0.8	5.56	2.38	2.5
		TCMT110204-CM										●				0.4	6.35	2.38	2.8
		TCMT110208-CM										●				0.8	6.35	2.38	2.8
		TCMT110304-CM										●				0.4	6.35	3.18	2.8
		TCMT110308-CM										●				0.8	6.35	3.18	2.8
		TCMT16T304-CM									●	●				0.4	9.525	3.97	4.4
		TCMT16T308-CM									●	●				0.8	9.525	3.97	4.4
		TCMT16T312-CM									●	●				1.2	9.525	3.97	4.4
	SS	TCGT110202-SS												●		0.2	6.35	2.38	2.8
		TCGT110204-SS												●		0.4	6.35	2.38	2.8
		TCGT110208-SS												●		0.8	6.35	2.38	2.8
		TCGT16T304-SS												●		0.4	9.525	3.97	4.4
	AL	TCGT110202-AL													●	0.2	6.35	2.38	2.8
		TCGT110204-AL													●	0.4	6.35	2.38	2.8
		TCGT16T302-AL													●	0.2	9.525	3.97	4.4
		TCGT16T304-AL													●	0.4	9.525	3.97	4.4
		TCGT16T308-AL													●	0.8	9.525	3.97	4.4



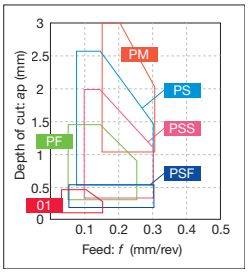


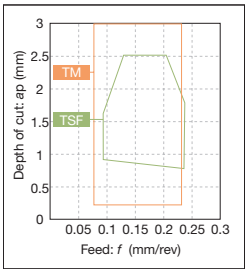


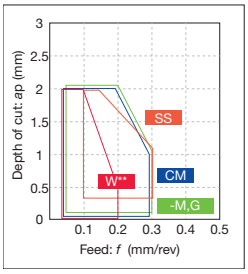


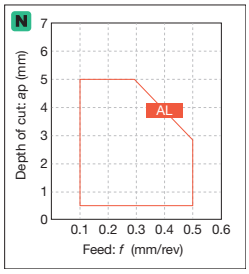
● : Line up
▲ : To be discontinued

Chip control range









*-M,G: Without chipbreaker

Reference pages: External toolholder → C076 - Internal toolholder → D042
J-Series toolholder → G039 - PINZBOHR® → K180 -

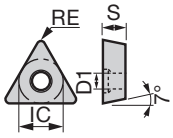
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

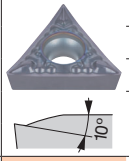
TC

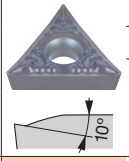
Triangular, 60° with hole Positive 7°

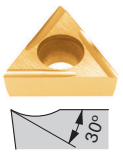
		AH725	SH725	SH730	J740	NS9530	TH10
P	Steel	◐	●◐	●◐	●◐	●◐	●
M	Stainless	◐	●◐	●◐	●◐		●
K	Cast iron	◐				●◐	●
N	Non-ferrous						●
S	Superalloy	●		●◐			
H	Hard material						



Application	Chipbreaker	Designation	Coated				Cermet	Uncoated	Dimension (mm)			
			AH725	SH725	SH730	J740	NS9530	TH10	RE	IC	S	D1
Finishing	-	TCGT080102R					●	●	0.2	4.76	1.59	2.7
For external turning on Swiss lathes (sharp edge)	JS	TCGT110200FN-JS		●	●				0.03	6.35	2.38	2.8
		TCGT110201FN-JS		●	●				<0.1	6.35	2.38	2.8
		TCGT110202FN-JS		●	●				<0.2	6.35	2.38	2.8
		TCGT110204FN-JS		●	●				<0.4	6.35	2.38	2.8
For external turning on Swiss lathes (honed edge)	JS	TCGT110201N-JS	●						0.1	6.35	2.38	2.8
		TCGT110202N-JS	●						0.2	6.35	2.38	2.8
		TCGT110204N-JS	●						0.4	6.35	2.38	2.8
For external turning on Swiss lathes (sharp edge)	J08	TCGT080200FR-J08		●		●		●	0.03	4.76	2.38	2.3
		TCGT080200FL-J08		●		●		●	0.03	4.76	2.38	2.3
		TCGT080201FR-J08		●		●		●	0.1	4.76	2.38	2.3
		TCGT080201FL-J08		●		●		●	0.1	4.76	2.38	2.3
		TCGT080202FR-J08		●		●		●	0.2	4.76	2.38	2.3
		TCGT080202FL-J08		●		●		●	0.2	4.76	2.38	2.3
		TCGT080204FR-J08		●					0.4	4.76	2.38	2.3







*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

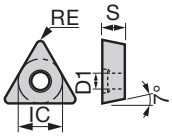
Reference pages: J-Series toolholder → G039

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TC

Triangular, 60° with hole Positive 7°

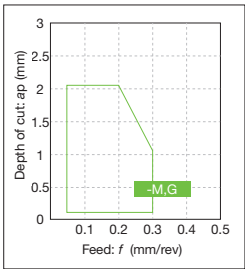
		SH725	J740	J9530	NS9530	TH10
P	Steel	◐	◐	◐	◐	●
M	Stainless	◐	◐			●
K	Cast iron			◐	◐	●
N	Non-ferrous					●
S	Superalloy					
H	Hard material					



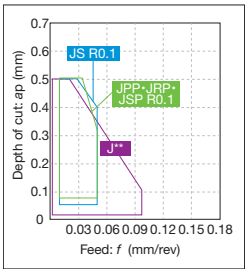
Application	Chipbreaker	Designation	Coated SH725	Coated J740	Coated cermet J9530	Cermet NS9530	Uncoated TH10	Dimension (mm) RE	IC	S	D1
For external turning on Swiss lathes (sharp edge)	J10	TCGT110200FR-J10	●	●			●	0.03	6.35	2.38	2.8
		TCGT110200FL-J10	●	●			●	0.03	6.35	2.38	2.8
		TCGT110201FR-J10	●	●			●	0.1	6.35	2.38	2.8
		TCGT110201FL-J10	●	●			●	0.1	6.35	2.38	2.8
		TCGT110202FR-J10	●	●		●	●	0.2	6.35	2.38	2.8
		TCGT110202FL-J10	●	●		●	●	0.2	6.35	2.38	2.8
		TCGT110204FR-J10	●					0.4	6.35	2.38	2.8
		TCGT110300FR-J10	●	●			●	0.03	6.35	3.18	2.8
		TCGT110300FL-J10	●	●			●	0.03	6.35	3.18	2.8
		TCGT110301FR-J10	●	●			●	0.1	6.35	3.18	2.8
		TCGT110301FL-J10	●	●			●	0.1	6.35	3.18	2.8
		TCGT110302FR-J10	●	●		●	●	0.2	6.35	3.18	2.8
		TCGT110302FL-J10	●	●		●	●	0.2	6.35	3.18	2.8
For external turning on Swiss lathes (honed edge)	J10	TCGT110302R-J10			●			0.2	6.35	3.18	2.8
		TCGT110302L-J10			●			0.2	6.35	3.18	2.8

● : Line up

Chip control range



*-M,G: Without chipbreaker



*Chip control range with typical R0.1

Reference pages: Internal toolholder → D042 J-Series toolholder → G039

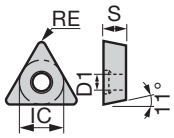
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

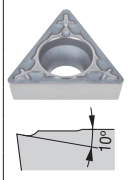
TP

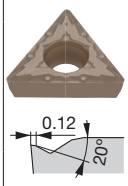
Triangular, 60° with hole Positive 11°

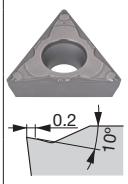
		T9215	T9225	T9115	T9125	AH725	GH730	GT9530	GT720	NS9530	NS520	TH10
		Coated						Coated cermet		Cermet		Uncoated
P	Steel	●◐	◐✠	●◐	◐✠	◐	◐	●◐	●◐	●◐	●◐	●
M	Stainless	●◐				◐	◐					●
K	Cast iron	●◐		●◐		◐	◐	●◐	●◐	●◐	●◐	●
N	Non-ferrous											●
S	Superalloy					●						
H	Hard material											



Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	AH725	GH730	GT9530	GT720	NS9530	NS520	TH10	RE	IC	S	D1
														Dimension (mm)			
Precision finishing	01	TPGT090202-01							●		●			0.2	5.56	2.38	2.5
		TPGT090204-01							●		●	●	●	0.4	5.56	2.38	2.5
		TPGT110202-01							●		●			0.2	6.35	2.38	2.8
		TPGT110204-01							●		●	●	●	0.4	6.35	2.38	2.8
		TPGT110208-01									●			0.8	6.35	2.38	2.8
		TPGT130302-01								●	●			0.2	7.94	3.18	3.4
		TPGT130304-01							●		●	●	●	0.4	7.94	3.18	3.4
		TPGT130308-01									●	●		0.8	7.94	3.18	3.4
		TPGT16T304-01							●		●	●	●	0.4	9.525	3.97	4.4
		TPGT16T308-01								●	●	●		0.8	9.525	3.97	4.4
Finishing	PSF	TPMT090202-PSF					●				●			0.2	5.56	2.38	2.5
		TPMT090204-PSF	●	●	▲	▲	●		●		●			0.4	5.56	2.38	2.5
		TPMT110202-PSF					●		●		●			0.2	6.35	2.38	2.8
		TPMT110204-PSF	●	●	▲	▲	●		●		●			0.4	6.35	2.38	2.8
		TPMT110302-PSF					●				●			0.2	6.35	3.18	3.4
		TPMT110304-PSF	●	●	▲	▲	●		●		●			0.4	6.35	3.18	3.4
		TPMT130304-PSF	●	●	▲	▲	●							0.4	7.94	3.18	3.4
		TPMT16T304-PSF	●	●	▲	▲	●							0.4	9.525	3.97	4.4
	PF	TPMT110204-PF						●	●		●			0.4	6.35	2.38	2.8
		TPMT110208-PF							●		●			0.8	6.35	2.38	2.8
		TPMT110302-PF						●			●			0.2	6.35	3.18	3.4
		TPMT110304-PF						●	●		●			0.4	6.35	3.18	3.4
		TPMT130304-PF							●		●			0.4	7.94	3.18	3.4
		TPMT130308-PF									●			0.8	7.94	3.18	3.4
		TPMT16T304-PF							●		●			0.4	9.525	3.97	4.4







● : Line up
▲ : To be discontinued

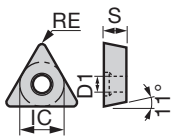
Reference pages: Mounting hole specification → B147
Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 - Top-borer tool → K213

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

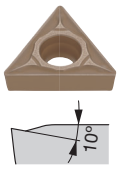
TP

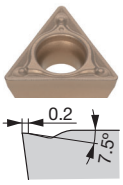
Triangular, 60° with hole Positive 11°

		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	GH730	GT9530	AT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠	●ⓒ	ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠	●ⓒ	ⓒ	ⓒ			
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	ⓒ	●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous														
S	Superalloy									●ⓒ	●				
H	Hard material														



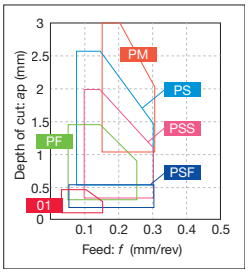
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	GH730	GT9530	AT9530	NS9530	RE	IC	S	D1
			Coated											Coated cermet		Cermet	Dimension (mm)			
Finishing to light cutting	PSS	TPMT090204-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.4	5.56	2.38	2.5
		TPMT090208-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.8	5.56	2.38	2.5
		TPMT110204-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.4	6.35	2.38	2.8
		TPMT110208-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.8	6.35	2.38	2.8
		TPMT110304-PSS	●	●	▲	▲	●	●	●	●		●					0.4	6.35	3.18	3.4
		TPMT110308-PSS	●	●	▲	▲	●	●	●	●		●					0.8	6.35	3.18	3.4
		TPMT130304-PSS	●	●	▲	▲	●	●	●	●		●					0.4	7.94	3.18	3.4
		TPMT130308-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.8	7.94	3.18	3.4
		TPMT16T304-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.4	9.525	3.97	4.4
		TPMT16T308-PSS	●	●	▲	▲	●	●	●	●		●		●		●	0.8	9.525	3.97	4.4
Finishing to medium cutting	PS	TPMT090202-PS	●	●	▲	▲	●	●	●	●		●	●	●	●	●	0.2	5.56	2.38	2.5
		TPMT090204-PS	●	●	▲	▲	●	●	●	●		●	●	●	●	●	0.4	5.56	2.38	2.5
		TPMT090208-PS	●	●	▲	▲	●	●	●	●		●	●	●	●	●	0.8	5.56	2.38	2.5
		TPMT110202-PS	●	●	▲	▲	●	●	●	●		●	●	●	●	●	0.2	6.35	2.38	2.8
		TPMT110204-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	0.4	6.35	2.38	2.8
		TPMT110208-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	0.8	6.35	2.38	2.8
		TPMT110304-PS	●	●	▲	▲	●	●	●	●		●	●	●	●	●	0.4	6.35	3.18	3.4
		TPMT110308-PS	●	●	▲	▲	●	●	●	●		●	●	●	●	●	0.8	6.35	3.18	3.4
		TPMT130302-PS	●	●	▲	▲						●		●	●	●	0.2	7.94	3.18	3.4
		TPMT130304-PS	●	●	▲	▲	●	●	●	●		●		●	●	●	0.4	7.94	3.18	3.4
		TPMT130308-PS	●	●	▲	▲	●	●	●	●		●		●	●	●	0.8	7.94	3.18	3.4
		TPMT16T304-PS	●	●	▲	▲	●	●	●	●		●		●	●	●	0.4	9.525	3.97	4.4
		TPMT16T308-PS	●	●	▲	▲	●	●	●	●		●		●	●	●	0.8	9.525	3.97	4.4
	TSF	TPMT110204-TSF	●	●													0.4	6.35	2.38	2.8
		TPMT110208-TSF	●	●													0.8	6.35	2.38	2.8
		TPMT110304-TSF	●	●													0.4	6.35	3.18	2.8
		TPMT110308-TSF	●	●													0.8	6.35	3.18	2.8
		TPMT16T304-TSF	●	●													0.4	9.525	3.97	4.4
		TPMT16T308-TSF	●	●													0.8	9.525	3.97	4.4

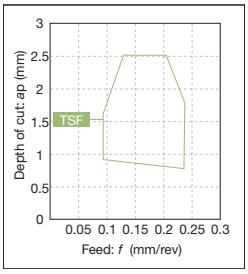




● : Line up
▲ : To be discontinued

Chip control range





Reference pages: Mounting hole specification → B147
Internal toolholder → D043 -
Boring bar tool → K209 -
Cartridge → K193 -
Top-borer tool → K213

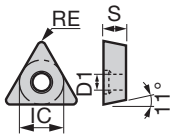
Insert POSITIVE TYPE

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

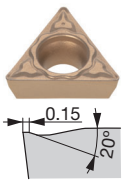
TP

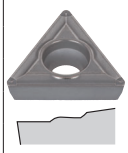
Triangular, 60° with hole Positive 11°

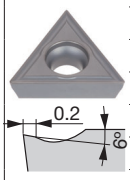
		T9215	T9225	T9125	GH110	SH725	SH730	GT9530	NS9530	TH10	UX30
		Coated						Coated cermet	Cermet	Uncoated	
P	Steel	⊂✠	●⊂	⊂✠	●	●⊂	●⊂	●⊂	●⊂	●	⊂
M	Stainless		●⊂		●	●⊂	●⊂			●	⊂
K	Cast iron		●⊂		●			●⊂	●⊂	●	
N	Non-ferrous									●	
S	Superalloy				●		●⊂				
H	Hard material										

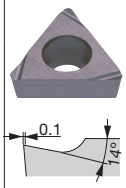


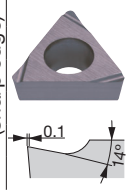
Application	Chipbreaker	Designation	T9215	T9225	T9125	GH110	SH725	SH730	GT9530	NS9530	TH10	UX30	RE	IC	S	D1
													Dimension (mm)			
Finishing to medium cutting	TM	TPMT110204-TM	●	●									0.4	6.35	2.38	2.8
		TPMT110208-TM	●	●									0.8	6.35	2.38	2.8
		TPMT110304-TM	●	●									0.4	6.35	3.18	3.4
		TPMT110308-TM	●	●									0.8	6.35	3.18	3.4
		TPMT16T304-TM	●	●									0.4	9.525	3.97	4.4
		TPMT16T308-TM	●	●									0.8	9.525	3.97	4.4
	23	TPMT090202-23								●			0.2	5.56	2.38	2.5
		TPMT090204-23		●	▲					●			0.4	5.56	2.38	2.5
		TPMT110204-23		●	▲					●			0.4	6.35	2.38	2.8
		TPMT130304-23		●	▲					●			0.4	7.94	3.18	3.4
		TPMT130308-23		●	▲					●			0.8	7.94	3.18	3.4
		TPMT16T304-23								●			0.4	9.525	3.97	4.4
		TPMT16T308-23		●	▲					●			0.8	9.525	3.97	4.4
Medium cutting	24	TPMT090204-24		●	▲					●			0.4	5.56	2.38	2.5
		TPMT110204-24		●	▲					●			0.4	6.35	2.38	2.8
		TPMT110208-24								●			0.8	6.35	2.38	2.8
		TPMT130304-24		●	▲					●			0.4	7.94	3.18	3.4
		TPMT130308-24		●	▲					●			0.8	7.94	3.18	3.4
		TPMT16T304-24		●	▲					●			0.4	9.525	3.97	4.4
		TPMT16T308-24		●	▲					●			0.8	9.525	3.97	4.4
Finishing	W08	TPGT070100R-W08						●			●		0.03	4.37	1.59	2.58
		TPGT070100L-W08						●			●		0.03	4.37	1.59	2.58
		TPGT070101R-W08						●			●		0.1	4.37	1.59	2.58
		TPGT070101L-W08						●			●		0.1	4.37	1.59	2.58
		TPGT070102R-W08						●			●		0.2	4.37	1.59	2.58
		TPGT070102L-W08						●			●		0.2	4.37	1.59	2.58
		TPGT070104R-W08						●			●		0.4	4.37	1.59	2.58
		TPGT070104L-W08						●			●		0.4	4.37	1.59	2.58
		TPGT080200L-W08							●	●			0.03	4.76	2.38	2.3
		TPGT080202L-W08				●			●	●	●	●	0.2	4.76	2.38	2.3
		TPGT080204L-W08				●			●	●	●	●	0.4	4.76	2.38	2.3
Finishing (sharp edge)	W08	TPGT070100FL-W08					●						0.03	4.37	1.59	2.58
		TPGT070100FR-W08					●						0.03	4.37	1.59	2.58
		TPGT070101FL-W08					●						0.1	4.37	1.59	2.58
		TPGT070101FR-W08					●						0.1	4.37	1.59	2.58
		TPGT070102FL-W08					●						0.2	4.37	1.59	2.58
		TPGT070102FR-W08					●						0.2	4.37	1.59	2.58
		TPGT070104FL-W08					●						0.4	4.37	1.59	2.58
		TPGT070104FR-W08					●						0.4	4.37	1.59	2.58











● : Line up
▲ : To be discontinued

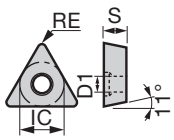
Reference pages: Mounting hole specification → B147
Internal toolholder → D043 - Cartridge → K193 -
Top-borer tool → K213

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular, 60° with hole Positive 11°

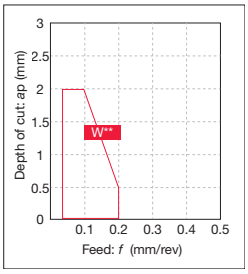
		GH110	GH330	GT9530	NS9530	TH10	UX30
P	Steel	●	●◐	●◐	●◐	●	◐
M	Stainless	●	●◐			●	◐
K	Cast iron	●	●◐	●◐	●◐	●	
N	Non-ferrous					●	
S	Superalloy	●					
H	Hard material						

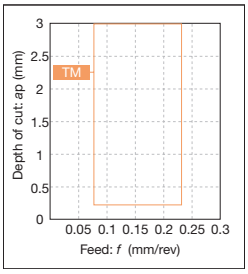


Application	Chipbreaker	Designation	Coated		Coated cermet	Cermet	Uncoated		Dimension (mm)			
			GH110	GH330	GT9530	NS9530	TH10	UX30	RE	IC	S	D1
Finishing	W10	TPGH080202L-W10			●	●			0.2	4.76	2.38	2.3
		TPGH080204L-W10			●	●			0.4	4.76	2.38	2.3
		TPGH090204L-W10			●	●			0.4	5.56	2.38	3
	W13	TPGH110204L-W13			●	●			0.4	6.35	2.38	3.4
		TPGH110302L-W13			●	●			0.2	6.35	3.18	3.4
		TPGH110304L-W13			●	●			0.4	6.35	3.18	3.4
	W15	TPGT090202R-W15				●			0.2	5.56	2.38	2.5
		TPGT090202L-W15			●	●	●		0.2	5.56	2.38	2.5
		TPGT090204R-W15				●			0.4	5.56	2.38	2.5
		TPGT090204L-W15	●	●	●	●	●	●	0.4	5.56	2.38	2.5
		TPGT110202R-W15				●			0.2	6.35	2.38	2.8
		TPGT110202L-W15			●	●	●		0.2	6.35	2.38	2.8
		TPGT110204L-W15	●	●	●	●	●	●	0.4	6.35	2.38	2.8
		TPGT110208R-W15				●			0.8	6.35	2.38	2.8
		TPGT110208L-W15						●	0.8	6.35	2.38	2.8
		TPGT110302L-W15				●			0.2	6.35	3.18	3.4
		TPGT110304R-W15				●			0.4	6.35	3.18	3.4
		TPGT110304L-W15				●			0.4	6.35	3.18	3.4
		TPGT110308L-W15				●			0.8	6.35	3.18	3.4
		TPGT130302R-W15				●			0.2	7.94	3.18	3.4
		TPGT130302L-W15			●	●	●		0.2	7.94	3.18	3.4
		TPGT130304R-W15	●			●			0.4	7.94	3.18	3.4
		TPGT130304L-W15	●	●	●	●	●	●	0.4	7.94	3.18	3.4
		TPGT130308L-W15				●	●		0.8	7.94	3.18	3.4
		TPGT16T302R-W15				●			0.2	9.525	3.97	4.4
		TPGT16T302L-W15			●	●	●		0.2	9.525	3.97	4.4
		TPGT16T304R-W15				●	●		0.4	9.525	3.97	4.4
		TPGT16T304L-W15	●	●	●	●	●	●	0.4	9.525	3.97	4.4
		TPGT16T308L-W15				●	●	●	0.8	9.525	3.97	4.4

● : Line up

Chip control range





Reference pages: Mounting hole specification → B147
Internal toolholder → D043 - Cartridge → K193 -
Top-borer tool → K213

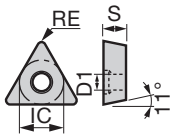
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular, 60° with hole Positive 11°

		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GH330	GH730	GT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠			●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠			●ⓒ	ⓒ	●ⓒ	ⓒ		
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																
S	Superalloy											●ⓒ	●				
H	Hard material																



Application	Chipbreaker	Designation	Coated														Coated cermet				Cermet				Dimension (mm)			
			T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	GH330	GH730	GT9530				NS9530				RE	IC	S	D1
Medium cutting	PM	TPMT090204-PM					●	●	●	●				●											0.4	5.56	2.38	2.5
		TPMT090208-PM					●	●	●	●				●											0.8	5.56	2.38	2.5
		TPMT110204-PM	●	●	▲	▲	●	●	●	●				●		●	●				●				0.4	6.35	2.38	2.8
		TPMT110208-PM	●	●	▲	▲	●	●	●	●			●	●		●									0.8	6.35	2.38	2.8
		TPMT110304-PM	●	●	▲	▲	●	●	●	●				●		●	●				●				0.4	6.35	3.18	3.4
		TPMT110308-PM	●	●	▲	▲	●	●	●	●				●		●									0.8	6.35	3.18	3.4
		TPMT130304-PM		●		▲	●	●	●	●				●							●				0.4	7.94	3.18	3.4
		TPMT130308-PM		●		▲	●	●	●	●				●			●				●				0.8	7.94	3.18	3.4
		TPMT16T304-PM		●		▲	●	●	●	●				●							●				0.4	9.525	3.97	4.4
		TPMT16T308-PM		●		▲	●	●	●	●				●											0.8	9.525	3.97	4.4
		TPMT16T312-PM		●		▲	●	●	●	●				●											1.2	9.525	3.97	4.4
Finishing to medium cutting	CM	TPMT090204-CM										●													0.4	5.56	2.38	2.5
		TPMT090208-CM										●													0.8	5.56	2.38	2.5
		TPMT110204-CM										●													0.4	6.35	2.38	2.8
		TPMT110208-CM										●													0.8	6.35	2.38	2.8
		TPMT110304-CM										●													0.4	6.35	3.18	3.4
		TPMT110308-CM										●													0.8	6.35	3.18	3.4
		TPMT130304-CM										●													0.4	7.94	3.18	3.4
		TPMT130308-CM										●													0.8	7.94	3.18	3.4
		TPMT16T304-CM									●	●													0.4	9.525	3.97	4.4
		TPMT16T308-CM									●	●													0.8	9.525	3.97	4.4
		TPMT16T312-CM									●	●													1.2	9.525	3.97	4.4
	SS	TPGT110202-SS																			●				0.2	6.35	2.38	2.8
		TPGT110204-SS													●						●				0.4	6.35	2.38	2.8
		TPGT130302-SS																			●				0.2	7.94	3.18	3.4
		TPGT130304-SS													●						●				0.4	7.94	3.18	3.4
		TPGT16T304-SS													●						●				0.4	9.525	3.97	4.4
	H11	TPGH110302L-H11															●				●				0.2	6.35	3.18	3.4
		TPGH110304L-H11															●				●				0.4	6.35	3.18	3.4

● : Line up
▲ : To be discontinued

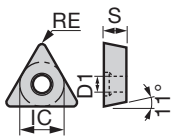
Reference pages: Mounting hole specification → B147
Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 - Top-borer tool → K213

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular, 60° with hole Positive 11°

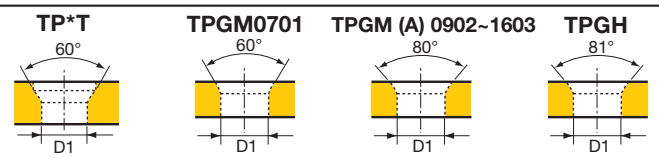
		T5115 (Coated)	NS9530 (Cermet)	TH10 (Uncoated)	UX30 (Uncoated)
P	Steel		●◐	●	◐
M	Stainless			●	◐
K	Cast iron	◐	●◐	●	
N	Non-ferrous			●	
S	Superalloy				
H	Hard material				



Application	Chipbreaker	Designation	T5115	NS9530	TH10	UX30	RE	IC	S	D1
Finishing to medium cutting	-	TPGM070102R		●			0.2	4.37	1.59	2.7
		TPGM070102L		●	●		0.2	4.37	1.59	2.7
		TPGM070104R		●			0.4	4.37	1.59	2.7
		TPGM070104L		●	●		0.4	4.37	1.59	2.7
		TPGM090202R		●			0.2	5.56	2.38	3.2
		TPGM090202L		●			0.2	5.56	2.38	3.2
		TPGM090204L		●			0.4	5.56	2.38	3.2
	(Tungaloy standard hole specification) ISO non-compliant	TPGM110202R		●			0.2	6.35	2.38	3
		TPGM110202L		●		●	0.2	6.35	2.38	3
		TPGM110204R		●			0.4	6.35	2.38	3
		TPGM110204L		●		●	0.4	6.35	2.38	3
		TPGM110302R		●			0.2	6.35	3.18	3
	TPGM...R/L	TPGM110302L		●			0.2	6.35	3.18	3
		TPGM110302L-2			●		0.2	6.35	3.18	3
		TPGM110304R		●			0.4	6.35	3.18	3
		TPGM110304L		●		●	0.4	6.35	3.18	3
		TPGM110304L-2			●		0.4	6.35	3.18	3
		TPGM160302L		●			0.2	9.525	3.18	4
		TPGM160304R		●			0.4	9.525	3.18	4
		TPGM160304L		●		●	0.4	9.525	3.18	4
		TPGM160304L-2			●		0.4	9.525	3.18	4
	-	TPMW110204	●				0.4	6.35	2.38	2.8
		TPMW110208	●				0.8	6.35	2.38	2.8
		TPMW130304	●				0.4	7.94	3.18	3.4
		TPMW130308	●				0.8	7.94	3.18	3.4
		TPMW16T304	●				0.4	9.525	3.97	4.4
		TPMW16T308	●				0.8	9.525	3.97	4.4

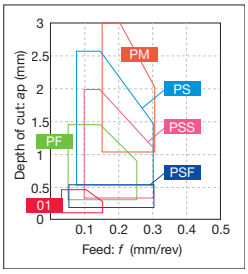
● : Line up

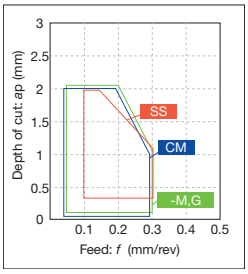
Mounting hole specification



D1 (mm)	0701**	0802**	0902**	1102**	1103**	1303**	1603**	16T3**
TP*T(W)	-	2.3	2.5	2.8	3.4	3.4	-	4.4
TPGM(A)	2.7	-	3.2	3.0	3.0	-	4.0	-
TPGH	-	2.3	3.0	3.4	3.4	-	4.5	-

Chip control range





*-M,G: Without chipbreaker

Reference pages: Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 -

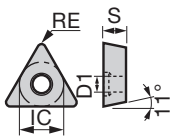
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular, 60° with hole Positive 11°

		GH110	SH725	SH730	NS9530	TH10
		Coated			Cermet	Uncoated
P	Steel	●	●◐	●◐	●◐	●
M	Stainless	●	●◐	●◐		●
K	Cast iron	●			●◐	●
N	Non-ferrous					●
S	Superalloy	●		●◐		
H	Hard material					



Application	Chipbreaker	Designation	GH110	SH725	SH730	NS9530	TH10	RE	IC	S	D1
								Dimension (mm)			
Finishing to medium cutting	- (Tungaloy standard hole specification) ISO non-compliant	TPGA090204					●	0.4	5.56	2.38	3.2
		TPGA110202				●	●	0.2	6.35	2.38	3
		TPGA110204					●	0.4	6.35	2.38	3
		TPGA110302				●	●	0.2	6.35	3.18	3
		TPGA110304					●	0.4	6.35	3.18	3
		TPGA160304				●	●	0.4	9.525	3.18	4
		TPGA160308					●	0.8	9.525	3.18	4
	-	TPGW090202					●	0.2	5.56	2.38	2.5
		TPGW090204					●	0.4	5.56	2.38	2.5
		TPGW110202					●	0.2	6.35	2.38	2.8
		TPGW110204	●				●	0.4	6.35	2.38	2.8
		TPGW110304					●	0.4	6.35	3.18	3.4
		TPGW130304					●	0.4	7.94	3.18	3.4
		TPGW16T304	●				●	0.4	9.525	3.97	4.4
		TPGW16T308					●	0.8	9.525	3.97	4.4
For internal turning on Swiss lathes	JS	TPGT070101-JS			●			<0.1	4.37	1.59	2.58
		TPGT070102-JS			●			<0.2	4.37	1.59	2.58
		TPGT070104-JS			●			<0.4	4.37	1.59	2.58
For internal turning on Swiss lathes (sharp edge)	JS	TPGT070101F-JS		●				<0.1	4.37	1.59	2.58
		TPGT070102F-JS		●				<0.2	4.37	1.59	2.58
		TPGT070104F-JS		●				<0.4	4.37	1.59	2.58

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

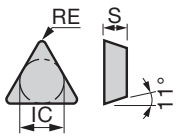
Reference pages: Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular, 60° without hole Positive 11°

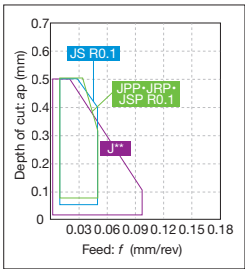
		T9215	T9225	T9115	T9125	T5115	AH725			NS9530				TH10												
P	Steel	●◐	◐✠	●◐	◐✠		◐			●◐				●												
M	Stainless	●◐					◐							●												
K	Cast iron	●◐		●◐		◐	◐			●◐				●												
N	Non-ferrous													●												
S	Superalloy						●																			
H	Hard material																									



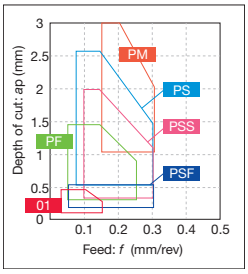
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T5115	AH725			NS9530				TH10												RE	IC	S	D1
			Coated								Cermet				Uncoated												Dimension (mm)			
Finishing to medium cutting	PS	TPMR110304-PS		●		▲																					0.4	6.35	3.18	-
		TPMR110308-PS		●		▲																					0.8	6.35	3.18	-
		TPMR160304-PS		●		▲																					0.4	9.525	3.18	-
		TPMR160308-PS		●		▲																					0.8	9.525	3.18	-
	23	TPMR110304-23	●	●	▲	▲					●																0.4	6.35	3.18	-
		TPMR110308-23		●		▲					●				●												0.8	6.35	3.18	-
		TPMR160304-23	●	●	▲	▲					●				●												0.4	9.525	3.18	-
		TPMR160308-23		●		▲					●																0.8	9.525	3.18	-
Medium cutting	24	TPMR110304-24		●		▲					●																0.4	6.35	3.18	-
		TPMR110308-24		●		▲					●																0.8	6.35	3.18	-
		TPMR160304-24	●	●	▲	▲		●			●																0.4	9.525	3.18	-
		TPMR160308-24	●	●	▲	▲					●																0.8	9.525	3.18	-
Finishing to medium cutting	CM	TPMR110304-CM					●																				0.4	6.35	3.18	-
		TPMR110308-CM					●																				0.8	6.35	3.18	-
		TPMR160304-CM					●																				0.4	9.525	3.18	-
		TPMR160308-CM					●																				0.8	9.525	3.18	-
		TPMR160312-CM					●																				1.2	9.525	3.18	-

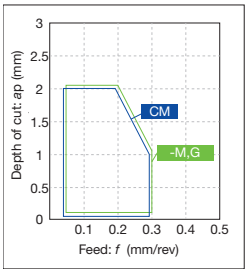
● : Line up
▲ : To be discontinued

Chip control range



*Chip control range with typical R0.1





*-M,G: Without chipbreaker

Reference pages: Internal toolholder → D044 - Cartridge → K193 -

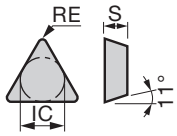
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular, 60° without hole Positive 11°

		T5115	GH110	AH120	NS9530	TH10	UX30	LX21	LX11
P	Steel		●	●ⓒ	●ⓒ	●	ⓒ		
M	Stainless		●	●ⓒ		●	ⓒ		
K	Cast iron	ⓒ	●	●ⓒ	●ⓒ	●		●	
N	Non-ferrous					●			
S	Superalloy		●	●ⓒ					
H	Hard material								●



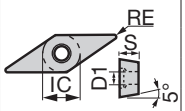
Application	Chipbreaker	Designation	Coated			Cermet	Uncoated		Ceramic		Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	-	TPGR110302L				●					0.2	6.35	3.18	-
		TPGR110304L				●					0.4	6.35	3.18	-
		TPGR160304R				●					0.4	9.525	3.18	-
		TPGR160304L				●					0.4	9.525	3.18	-
		TPGR160308L				●					0.8	9.525	3.18	-
	-	TPMN110304	●				●				0.4	6.35	3.18	-
		TPMN110308	●								0.8	6.35	3.18	-
		TPMN160304	●		●		●	●			0.4	9.525	3.18	-
		TPMN160308	●		●		●	●			0.8	9.525	3.18	-
		TPMN160312	●								1.2	9.525	3.18	-
		TPMN220408						●			0.8	12.7	4.76	-
		TPMN220412						●			1.2	12.7	4.76	-
	-	TPGN110302					●				0.2	6.35	3.18	-
		TPGN110304		●			●		●	●	0.4	6.35	3.18	-
		TPGN110308					●			●	0.8	6.35	3.18	-
		TPGN160302					●				0.2	9.525	3.18	-
		TPGN160304		●		●	●			●	0.4	9.525	3.18	-
		TPGN160308		●		●	●			●	0.8	9.525	3.18	-
		TPGN160312								●	1.2	9.525	3.18	-
		TPGN220404					●				0.4	12.7	4.76	-

● : Line up

VB

Rhombic, 35° with hole Positive 5°

		T9215	T9225	T9115	T9125	AH725	GT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				ⓒ		
K	Cast iron	●ⓒ		●ⓒ		ⓒ	●ⓒ	●ⓒ
N	Non-ferrous							
S	Superalloy					●		
H	Hard material							



Application	Chipbreaker	Designation	Coated					Coated cermet	Cermet	Dimension (mm) RE	IC	S	D1
Finishing	PSF	VBMT110302-PSF					●	●	●	0.2	6.35	3.18	2.8
		VBMT110304-PSF	●	●	▲	▲	●	●	●	0.4	6.35	3.18	2.8
		VBMT160402-PSF					●	●	●	0.2	9.525	4.76	4.4
		VBMT160404-PSF	●	●	▲	▲	●	●	●	0.4	9.525	4.76	4.4

● : Line up
▲ : To be discontinued

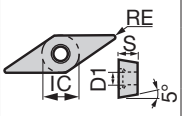
Reference pages: VBMT...: External toolholder → C062
Internal toolholder → D044 - Cartridge → K193 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

VB

Rhombic, 35° with hole Positive 5°

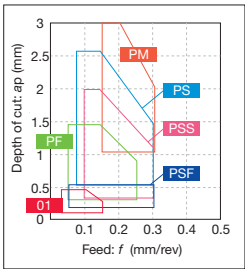
		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	AH8005	AH8015	GT9530	AT9530	NS9530
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠	ⓒ	✠	ⓒ✠	✠			●ⓒ	ⓒ			●ⓒ	●ⓒ	●ⓒ
M	Stainless	●ⓒ				●	ⓒ	ⓒ	✠			●ⓒ	ⓒ	●	ⓒ			
K	Cast iron	●ⓒ		●ⓒ						●ⓒ	ⓒ	●ⓒ	ⓒ			●ⓒ	●ⓒ	●ⓒ
N	Non-ferrous																	
S	Superalloy											●ⓒ	●	●	ⓒ			
H	Hard material																	

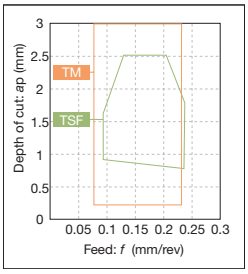


Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	T515	T5115	AH120	AH725	AH8005	AH8015	GT9530	AT9530	NS9530	RE	IC	S	D1
			Coated														Coated cermet		Cermet	Dimension (mm)			
Finishing	PF	VBMT110302-PF															●		●	0.2	6.35	3.18	2.8
		VBMT110304-PF															●		●	0.4	6.35	3.18	2.8
		VBMT110308-PF															●		●	0.8	6.35	3.18	2.8
		VBMT160404-PF															●		●	0.4	9.525	4.76	4.4
		VBMT160408-PF		●		▲											●		●	0.8	9.525	4.76	4.4
Finishing to light cutting	PSS	VBMT110304-PSS	●	●	▲	▲	●	●	●	●				●			●		●	0.4	6.35	3.18	2.8
		VBMT110308-PSS	●	●	▲	▲	●	●	●	●				●			●		●	0.8	6.35	3.18	2.8
		VBMT160404-PSS	●	●	▲	▲	●	●	●	●				●			●		●	0.4	9.525	4.76	4.4
		VBMT160408-PSS	●	●	▲	▲	●	●	●	●				●			●		●	0.8	9.525	4.76	4.4
		VBMT160412-PSS	●	●	▲	▲								●						1.2	9.525	4.76	4.4
Finishing to medium cutting	PS	VBMT110302-PS	●	●	▲	▲	●	●	●	●				●	●	●	●	●	●	0.2	6.35	3.18	2.8
		VBMT110304-PS	●	●	▲	▲	●	●	●	●			●	●	●	●	●	●	●	0.4	6.35	3.18	2.8
		VBMT110308-PS	●	●	▲	▲	●	●	●	●			●	●	●	●	●	●	●	0.8	6.35	3.18	2.8
		VBMT160402-PS	●	●	▲	▲	●	●	●	●				●	●	●	●	●	●	0.2	9.525	4.76	4.4
		VBMT160404-PS	●	●	▲	▲	●	●	●	●			●	●	●	●	●	●	●	0.4	9.525	4.76	4.4
		VBMT160408-PS	●	●	▲	▲	●	●	●	●			●	●	●	●	●	●	●	0.8	9.525	4.76	4.4
	TSF	VBMT110302-TSF	●	●																0.2	6.35	3.18	2.8
		VBMT110304-TSF	●	●																0.4	6.35	3.18	2.8
		VBMT110308-TSF	●	●																0.8	6.35	3.18	2.8
		VBMT160404-TSF	●	●																0.4	9.525	4.76	4.4
		VBMT160408-TSF	●	●																0.8	9.525	4.76	4.4
	TM	VBMT110302-TM	●	●																0.2	6.35	3.18	2.8
		VBMT110304-TM	●	●																0.4	6.35	3.18	2.8
		VBMT110308-TM	●	●																0.8	6.35	3.18	2.8
		VBMT160404-TM	●	●																0.4	9.525	4.76	4.4
		VBMT160408-TM	●	●																0.8	9.525	4.76	4.4

● : Line up
▲ : To be discontinued

Chip control range





Reference pages: External toolholder → C062 Internal toolholder → D036 -
J-Series toolholder → G033 -

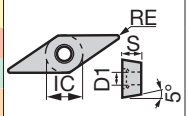
Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

VB

Rhombic, 35° with hole Positive 5°

		T9215	T9225	T9115	T9125	T515	T5115	AH725	SH725	SH730	J740	J9530	NS9530	TH10
P	Steel	●ⓒ	ⓒ✠	●ⓒ	ⓒ✠			ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●ⓒ	●
M	Stainless	●ⓒ						ⓒ	●ⓒ	●ⓒ	●ⓒ			●
K	Cast iron	●ⓒ		●ⓒ		●ⓒ	ⓒ	ⓒ				●ⓒ	●ⓒ	●
N	Non-ferrous													●
S	Superalloy							●		●ⓒ				
H	Hard material													



Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T515	T5115	AH725	SH725	SH730	J740	J9530	NS9530	TH10	RE	IC	S	D1
			Coated										Coated cermet	Cermet	Uncoated	Dimension (mm)			
Medium cutting	24	VBMT160404-24	●	●	▲	▲								●		0.4	9.525	4.76	4.4
		VBMT160408-24	●	●	▲	▲								●		0.8	9.525	4.76	4.4
Finishing to medium cutting	CM	VBMT110304-CM						●								0.4	6.35	3.18	2.8
		VBMT110308-CM						●								0.8	6.35	3.18	2.8
		VBMT160404-CM					●	●								0.4	9.525	4.76	4.4
		VBMT160408-CM					●	●								0.8	9.525	4.76	4.4
		VBMT160412-CM					●	●								1.2	9.525	4.76	4.4
For external turning on Swiss lathes (sharp edge)	JS	VBGT110300FN-JS								●	●					0.03	6.35	3.18	2.8
		VBGT110301FN-JS								●	●					<0.1	6.35	3.18	2.8
		VBGT110302FN-JS								●	●					<0.2	6.35	3.18	2.8
		VBGT110304FN-JS								●	●					<0.4	6.35	3.18	2.8
For external turning on Swiss lathes	JS	VBGT110301N-JS							●							0.1	6.35	3.18	2.8
		VBGT110302N-JS							●							0.2	6.35	3.18	2.8
		VBGT110304N-JS							●							0.4	6.35	3.18	2.8
For external turning on Swiss lathes (sharp edge)	J10	VBGT110300FR-J10								●		●			●	0.03	6.35	3.18	2.8
		VBGT110300FL-J10								●		●			●	0.03	6.35	3.18	2.8
		VBGT110301FR-J10								●		●		●	●	0.1	6.35	3.18	2.8
		VBGT110301FL-J10								●		●		●	●	0.1	6.35	3.18	2.8
		VBGT110302FR-J10								●		●		●	●	0.2	6.35	3.18	2.8
		VBGT110302FL-J10								●		●		●	●	0.2	6.35	3.18	2.8
		VBGT110304FR-J10								●		●		●	●	0.4	6.35	3.18	2.8
		VBGT110304FL-J10								●		●		●	●	0.4	6.35	3.18	2.8
For external turning on Swiss lathes (honed edge)	J10	VBGT110302R-J10											●			0.2	6.35	3.18	2.8
		VBGT110302L-J10											●			0.2	6.35	3.18	2.8
		VBGT110304R-J10											●			0.4	6.35	3.18	2.8
		VBGT110304L-J10											●			0.4	6.35	3.18	2.8

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up
▲ : To be discontinued

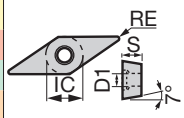
Reference pages: External toolholder → C062 Internal toolholder → D036 -
J-Series toolholder → G033 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

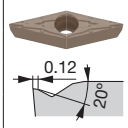
VC

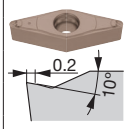
Rhombic, 35° with hole Positive 7°

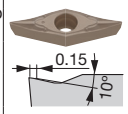
		T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	AH905	GT9530	AT9530	NS9530
		Coated													Coated cermet		Cermet
P	Steel	●◐	◐✠	●◐	◐✠	◐	✠	◐✠	✠	●◐	◐				●◐	●◐	●◐
M	Stainless	●◐				●	◐	◐	✠	●◐	◐	●	◐				
K	Cast iron	●◐		●◐						●◐	◐				●◐	●◐	●◐
N	Non-ferrous																
S	Superalloy									●◐	●	●	◐	◐			
H	Hard material																

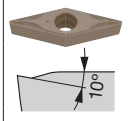


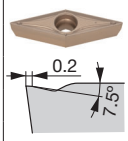
Application	Chipbreaker	Designation	T9215	T9225	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH725	AH8005	AH8015	AH905	GT9530	AT9530	NS9530	RE	IC	S	D1
																			Dimension (mm)			
Finishing	PSF	VCMT080202-PSF										●				●		●	0.2	4.76	2.38	2.3
		VCMT080204-PSF	●	●	▲	▲						●				●		●	0.4	4.76	2.38	2.3
		VCMT110302-PSF										●							0.2	6.35	3.18	2.8
		VCMT110304-PSF	●	●	▲	▲						●							0.4	6.35	3.18	2.8
		VCMT160404-PSF	●	●	▲	▲						●	●	●	●	●		●	0.4	9.525	4.76	4.4
		VCMT160408-PSF	●	●	▲	▲						●	●	●	●	●		●	0.8	9.525	4.76	4.4
	PF	VCMT080202-PF														●		●	0.2	4.76	2.38	2.3
		VCMT080204-PF														●		●	0.4	4.76	2.38	2.3
		VCMT160404-PF														●		●	0.4	9.525	4.76	4.4
		VCMT160408-PF														●		●	0.8	9.525	4.76	4.4
Finishing to light cutting	PSS	VCMT110304-PSS	●	●	▲	▲	●	●	●	●		●				●		●	0.4	6.35	3.18	2.8
		VCMT110308-PSS	●	●	▲	▲	●	●	●	●		●				●		●	0.8	6.35	3.18	2.8
		VCMT160404-PSS	●	●	▲	▲	●	●	●	●		●	●	●	●	●		●	0.4	9.525	4.76	4.4
		VCMT160408-PSS	●	●	▲	▲	●	●	●	●		●	●	●	●	●		●	0.8	9.525	4.76	4.4
Finishing to medium cutting	PS	VCMT110302-PS	●	●	▲	▲	●	●	●	●		●	●	●		●	●	●	0.2	6.35	3.18	2.8
		VCMT110304-PS	●	●	▲	▲	●	●	●	●		●	●	●		●	●	●	0.4	6.35	3.18	2.8
		VCMT110308-PS	●	●	▲	▲	●	●	●	●		●	●	●		●	●	●	0.8	6.35	3.18	2.8
		VCMT160404-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.4	9.525	4.76	4.4
		VCMT160408-PS	●	●	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●	0.8	9.525	4.76	4.4
	TSF	VCMT160404-TSF	●	●															0.4	9.525	4.76	4.4
		VCMT160408-TSF	●	●															0.8	9.525	4.76	4.4
	TM	VCMT160404-TM	●	●															0.4	9.525	4.76	4.4
		VCMT160408-TM	●	●															0.8	9.525	4.76	4.4

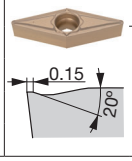






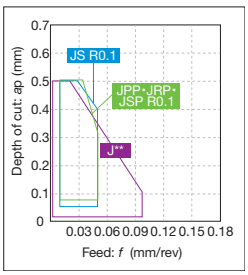




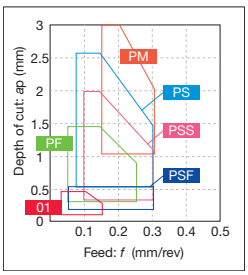


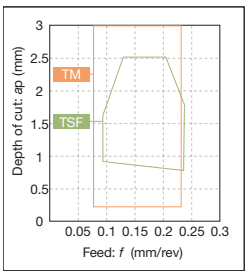
● : Line up
▲ : To be discontinued

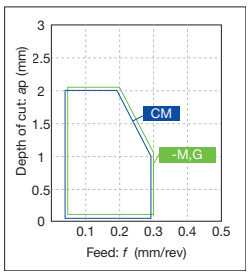
Chip control range



*Chip control range with typical R0.1







*-M,G: Without chipbreaker

Reference pages: External toolholder → C063 - Internal toolholder → D037 -
TungCap → K016 -

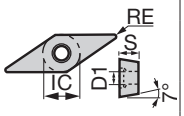
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

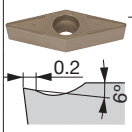
VC

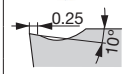
Rhombic, 35° with hole Positive 7°

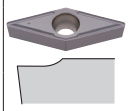
		T9215	T9225	T9115	T9125	T515	T5115	AH8005	AH8015	AH905	NS9530	KS05F
P	Steel	●◐	◐✠	●◐	◐✠						●◐	
M	Stainless	●◐						●	◐			
K	Cast iron	●◐		●◐		●◐	◐				●◐	●
N	Non-ferrous											●
S	Superalloy							●	◐	◐		●
H	Hard material											

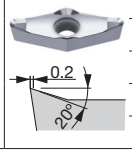


Application	Chipbreaker	Designation	Coated									Cermet	Uncoated	Dimension (mm)			
			T9215	T9225	T9115	T9125	T515	T5115	AH8005	AH8015	AH905	NS9530	KS05F	RE	IC	S	D1
Finishing to medium cutting	24	VCMT160404-24	●	●	▲	▲						●		0.4	9.525	4.76	4.4
		VCMT160408-24	●	●	▲	▲						●		0.8	9.525	4.76	4.4
	CM	VCMT080204-CM						●						0.4	4.76	2.38	2.3
		VCMT160404-CM					●	●						0.4	9.525	4.76	4.4
		VCMT160408-CM					●	●						0.8	9.525	4.76	4.4
		VCMT160412-CM						●						1.2	9.525	4.76	4.4
Medium cutting	All-round	VCMT160404							●	●	●			0.4	9.525	4.76	4.4
		VCMT160408							●	●	●			0.8	9.525	4.76	4.4
		VCMT160412							●	●	●			1.2	9.525	4.76	4.4
Finishing to medium cutting	AL	VCGT160404-AL											●	0.4	9.525	4.76	4.4
		VCGT160408-AL											●	0.8	9.525	4.76	4.4
		VCGT160412-AL											●	1.2	9.525	4.76	4.4
		VCGT220520-AL											●	2	12.7	5.56	5.5
		VCGT220530-AL											●	3	12.7	5.56	5.5









● : Line up
▲ : To be discontinued

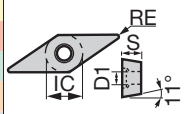
Reference pages: VC*T...: External toolholder → C063 - Internal toolholder → D037 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

VP

Rhombic, 35° with hole Positive 11°

		SH725	SH730
P	Steel	◐	◐
M	Stainless	◐	◐
K	Cast iron		
N	Non-ferrous		
S	Superalloy		◐
H	Hard material		

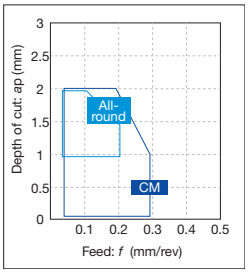


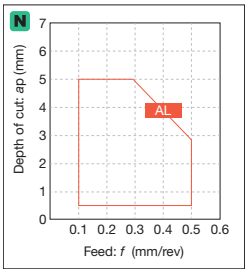
Application	Chipbreaker	Designation	Coated SH725	Coated SH730	RE	IC	S	D1
For external turning on Swiss lathes (sharp edge)	JPP	VPET0802008MFR-JPP	●	●	<0.08*	4.76	2.38	2.3
		VPET0802008MFL-JPP	●		<0.08*	4.76	2.38	2.3
		VPET080201MFR-JPP	●	●	<0.1*	4.76	2.38	2.3
		VPET080201MFL-JPP	●	●	<0.1*	4.76	2.38	2.3
		VPET0802018MFR-JPP	●		<0.18*	4.76	2.38	2.3
		VPET0802018MFL-JPP	●		<0.18*	4.76	2.38	2.3
		VPET080202MFR-JPP	●	●	<0.2*	4.76	2.38	2.3
		VPET080202MFL-JPP	●	●	<0.2*	4.76	2.38	2.3
		VPET1103008MFR-JPP	●	●	<0.08*	6.35	3.18	2.8
		VPET110301MFR-JPP	●	●	<0.1*	6.35	3.18	2.8
		VPET110301MFL-JPP	●		<0.1*	6.35	3.18	2.8
		VPET1103018MFR-JPP	●	●	<0.18*	6.35	3.18	2.8
		VPET110302MFR-JPP	●	●	<0.2*	6.35	3.18	2.8
		VPET110302MFL-JPP	●	●	<0.2*	6.35	3.18	2.8
	JRP	VPET0802008MFR-JRP	●	●	<0.08*	4.76	2.38	2.3
		VPET080201MFR-JRP	●	●	<0.1*	4.76	2.38	2.3
		VPET080201MFL-JRP	●	●	<0.1*	4.76	2.38	2.3
		VPET0802018MFR-JRP	●		<0.18*	4.76	2.38	2.3
		VPET0802018MFL-JRP	●		<0.18*	4.76	2.38	2.3
		VPET080202MFR-JRP	●	●	<0.2*	4.76	2.38	2.3
		VPET080202MFL-JRP	●	●	<0.2*	4.76	2.38	2.3
		VPET1103008MFR-JRP	●	●	<0.08*	6.35	3.18	2.8
		VPET1103008MFL-JRP		●	<0.08*	6.35	3.18	2.8
		VPET110301MFR-JRP	●	●	<0.1*	6.35	3.18	2.8
		VPET110301MFL-JRP	●	●	<0.1*	6.35	3.18	2.8
		VPET1103018MFR-JRP	●	●	<0.18*	6.35	3.18	2.8
		VPET1103018MFL-JRP	●		<0.18*	6.35	3.18	2.8
		VPET110302MFR-JRP	●	●	<0.2*	6.35	3.18	2.8
		VPET110302MFL-JRP	●	●	<0.2*	6.35	3.18	2.8

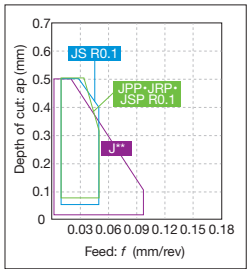
*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Chip control range







*Chip control range with typical R0.1

Reference pages: VPET...: J-Series toolholder → G022 -

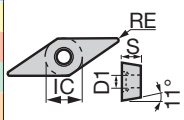
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

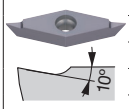
VP

Rhombic, 35° with hole Positive 11°

P	Steel	●◐	●◐	
M	Stainless	●◐	●◐	
K	Cast iron			
N	Non-ferrous			
S	Superalloy		●◐	
H	Hard material			



Application	Chipbreaker	Designation	Coated SH725	Coated SH730	RE	IC	S	D1
For external turning on Swiss lathes (sharp edge)	JSP	VPET0802008MFN-JSP	●	●	<0.08	4.76	2.38	2.3
		VPET080201MFN-JSP	●	●	<0.1	4.76	2.38	2.3
		VPET080201 8MFN-JSP	●	●	<0.18	4.76	2.38	2.3
		VPET080202MFN-JSP	●	●	<0.2	4.76	2.38	2.3
		VPET1103008MFN-JSP	●	●	<0.08	6.35	3.18	2.8
		VPET110301MFN-JSP	●	●	<0.1	6.35	3.18	2.8
		VPET110301 8MFN-JSP	●	●	<0.18	6.35	3.18	2.8
		VPET110302MFN-JSP	●	●	<0.2	6.35	3.18	2.8



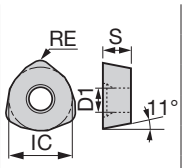
*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

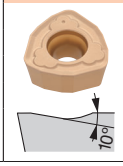
WP

Trigon, 80° with hole Positive 11°

P	Steel	●◐	◐✠	●◐	◐✠	●◐
M	Stainless	●◐				●◐
K	Cast iron	●◐		●◐		●◐
N	Non-ferrous					
S	Superalloy					●◐
H	Hard material					



Application	Chipbreaker	Designation	Coated T9215	Coated T9225	Coated T9115	Coated T9125	Coated AH120	RE	IC	S	D1
Heavy cutting	ML	WPMT090725ZPR-ML	●	●	▲	▲	●	2.5	15	7	5.5
		WPMT090725ZPL-ML	●	●	▲	▲	●	2.5	15	7	5.5



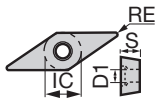
● : Line up
▲ : To be discontinued

Insert POSITIVE TYPE / DOUBLE SIDE

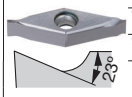
VX

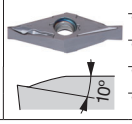
Rhombic, 35° with hole

P	Steel	●◐	
M	Stainless	●◐	
K	Cast iron		
N	Non-ferrous		
S	Superalloy		
H	Hard material		



Application	Chipbreaker	Designation	Coated SH725	RE	IC	S	D1
Finishing (sharp edge)	JRP	VXGU09T201MFRE-JRP**	●	<0.1	5.56	2.47	2.5
		VXGU09T201MFLE-JRP**	●	<0.1	5.56	2.47	2.5
		VXGU09T202MFRE-JRP**	●	<0.2	5.56	2.47	2.5
		VXGU09T202MFLE-JRP**	●	<0.2	5.56	2.47	2.5
Finishing to medium cutting (sharp edge)	JS	VXGU09T201MFR-JS(1)	●	<0.1	5.56	2.47	2.5
		VXGU09T201MFL-JS(1)	●	<0.1	5.56	2.47	2.5
		VXGU09T202MFR-JS(1)	●	<0.2	5.56	2.47	2.5
		VXGU09T202MFL-JS(1)	●	<0.2	5.56	2.47	2.5
		VXGU09T204MFR-JS(1)	●	<0.4	5.56	2.47	2.5
		VXGU09T204MFL-JS(1)	●	<0.4	5.56	2.47	2.5





*Corner radius (RE) with a sign of inequality (<) means minus tolerance.
** For external turning applications
(1)Due to chipbreaker profile, max ap for face or ID turning is 1 mm

● : Line up

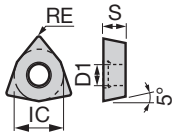
Reference pages: WPMT...: External toolholder → C098 VXGU...: External toolholder → C056 -
VPET... : J-Series toolholder → G022 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

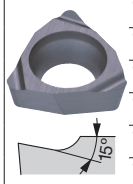
WB

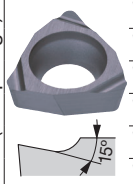
Trigon, 80° with hole Positive 5°

		GH110	SH725	SH730	NS9530	TH10	UX30
P	Steel	●	◐	◐	◐	●	◐
M	Stainless	●	◐	◐		●	◐
K	Cast iron	●			◐	●	
N	Non-ferrous					●	
S	Superalloy	●		◐			
H	Hard material						



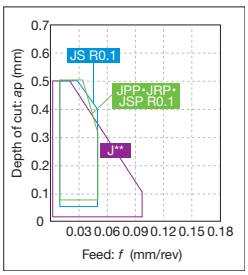
Application	Chipbreaker	Designation	Coated GH110	Coated SH725	Coated SH730	Cermet NS9530	Uncoated TH10	Uncoated UX30	RE	IC	S	D1
Finishing	W08	WBGT030100R-W08			●				0.03	3.97	1.59	2.3
		WBGT030100L-W08			●	●	●	●	0.03	3.97	1.59	2.3
		WBGT030101R-W08			●				0.1	3.97	1.59	2.3
		WBGT030101L-W08			●		●		0.1	3.97	1.59	2.3
		WBGT030102R-W08			●				0.2	3.97	1.59	2.3
		WBGT030102L-W08	●		●	●	●	●	0.2	3.97	1.59	2.3
		WBGT030104R-W08			●				0.4	3.97	1.59	2.3
		WBGT030104L-W08	●		●	●	●	●	0.4	3.97	1.59	2.3
Finishing (sharp edge)	W08	WBGT030100FL-W08		●					0.03	3.97	1.59	2.3
		WBGT030100FR-W08		●					0.03	3.97	1.59	2.3
		WBGT030101FL-W08		●					0.1	3.97	1.59	2.3
		WBGT030101FR-W08		●					0.1	3.97	1.59	2.3
		WBGT030102FL-W08		●					0.2	3.97	1.59	2.3
		WBGT030102FR-W08		●					0.2	3.97	1.59	2.3
		WBGT030104FL-W08		●					0.4	3.97	1.59	2.3
		WBGT030104FR-W08		●					0.4	3.97	1.59	2.3

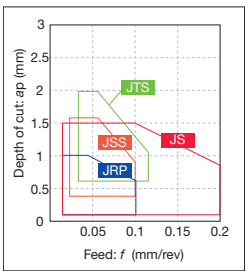


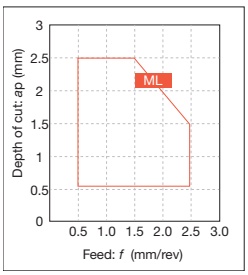


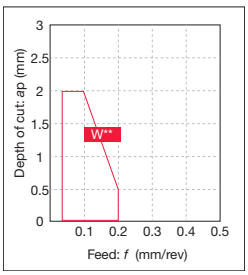
● : Line up

Chip control range









*Chip control range with typical R0.1

Reference pages: Internal toolholder → D075 Top-borer tool → K213

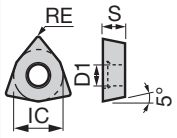
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

WB

Trigon, 80° with hole Positive 5°

		GH110	SH725	SH730	NS9530
P	Steel	●	●◐	●◐	●◐
M	Stainless	●	●◐	●◐	
K	Cast iron	●			●◐
N	Non-ferrous				
S	Superalloy	●		●◐	
H	Hard material				



Application	Chipbreaker	Designation	Coated GH110	Coated SH725	Coated SH730	Cermet NS9530	Dimension (mm) RE	IC	S	D1
Finishing (sharp edge)	W11	WBGT060102L-W11	●			●	0.2	3.97	1.59	2.3
		WBGT060104L-W11				●	0.4	3.97	1.59	2.3
		WBGT080202L-W11				●	0.2	4.76	2.38	2.3
		WBGT080204L-W11				●	0.4	4.76	2.38	2.3
For internal turning on Swiss lathes	JS	WBGT030101R-JS			●		<0.1	3.97	1.59	2.3
		WBGT030101L-JS			●		<0.1	3.97	1.59	2.3
		WBGT030102R-JS			●		<0.2	3.97	1.59	2.3
		WBGT030102L-JS			●		<0.2	3.97	1.59	2.3
		WBGT030104R-JS			●		<0.4	3.97	1.59	2.3
		WBGT030104L-JS			●		<0.4	3.97	1.59	2.3
For internal turning on Swiss lathes (sharp edge)	JS	WBGT030101FL-JS		●			<0.1	3.97	1.59	2.3
		WBGT030101FR-JS		●			<0.1	3.97	1.59	2.3
		WBGT030102FL-JS		●			<0.2	3.97	1.59	2.3
		WBGT030102FR-JS		●			<0.2	3.97	1.59	2.3
		WBGT030104FL-JS		●			<0.4	3.97	1.59	2.3
		WBGT030104FR-JS		●			<0.4	3.97	1.59	2.3

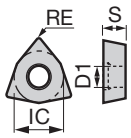
*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

Insert POSITIVE TYPE / DOUBLE SIDE

WX

Trigon, 80° with hole

		AH725	SH725
P	Steel	◐	●◐
M	Stainless	◐	●◐
K	Cast iron	◐	
N	Non-ferrous		
S	Superalloy	●	
H	Hard material		



Application	Chipbreaker	Designation	Coated AH725	Coated SH725	Dimension (mm) RE	IC	S	D1
Finishing to medium cutting (sharp edge)	JS	WXGU040301MFR-JS(1)		●	<0.1	6.35	3.18	2.7
		WXGU040301MFL-JS(1)		●	<0.1	6.35	3.18	2.7
		WXGU040302MFR-JS(1)		●	<0.2	6.35	3.18	2.7
		WXGU040302MFL-JS(1)		●	<0.2	6.35	3.18	2.7
		WXGU040304MFR-JS(1)		●	<0.4	6.35	3.18	2.7
		WXGU040304MFL-JS(1)		●	<0.4	6.35	3.18	2.7
	JTS	WXGU040301MFR-JTS		●	<0.1	6.35	3.18	2.7
		WXGU040301MFL-JTS		●	<0.1	6.35	3.18	2.7
		WXGU040302MFR-JTS		●	<0.2	6.35	3.18	2.7
		WXGU040302MFL-JTS		●	<0.2	6.35	3.18	2.7
Finishing to medium cutting	JTS	WXGU040301MR-JTS	●		<0.1	6.35	3.18	2.7
		WXGU040301ML-JTS	●		<0.1	6.35	3.18	2.7
		WXGU040302MR-JTS	●		<0.2	6.35	3.18	2.7
		WXGU040302ML-JTS	●		<0.2	6.35	3.18	2.7

*Corner radius (RE) with a sign of inequality (<) means minus tolerance. (1)Due to chipbreaker profile, max ap for face or ID turning is 1 mm

● : Line up

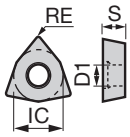
Reference pages: WBGT...: Internal toolholder → D075
WXGU...: External toolholder → C031 -, Internal toolholder → D028

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

WX

Trigon, 80° with hole

		AH725	AH8015	SH725	GT9530	NS9530	KS05F
P	Steel	◐	●◐	●◐	●◐	●◐	
M	Stainless	◐	●◐	●◐			
K	Cast iron	◐			●◐	●◐	●
N	Non-ferrous						●
S	Superalloy	●					●
H	Hard material						

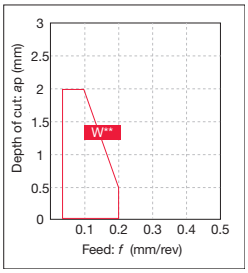


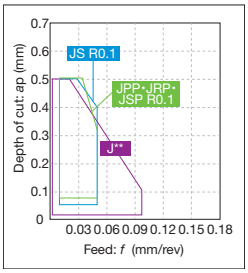
Application	Chipbreaker	Designation	Coated			Coated cermet	Cermet	Uncoated	Dimension (mm)			
			AH725	AH8015	SH725	GT9530	NS9530	KS05F	RE	IC	S	D1
Finishing (low cutting force) (sharp edge)	JSS	WXGU040301MFR-JSS			●				<0.1	6.35	3.18	2.7
		WXGU040301MFL-JSS			●				<0.1	6.35	3.18	2.7
		WXGU040302MFR-JSS			●				<0.2	6.35	3.18	2.7
		WXGU040302MFL-JSS			●				<0.2	6.35	3.18	2.7
Finishing (low cutting force)	JSS	WXGU040301MR-JSS	●						<0.1	6.35	3.18	2.7
		WXGU040301ML-JSS	●						<0.1	6.35	3.18	2.7
		WXGU040302MR-JSS	●						<0.2	6.35	3.18	2.7
		WXGU040302ML-JSS	●						<0.2	6.35	3.18	2.7
Finishing to medium cutting	TS	WXGU040302R-TS	●	●		●	●	●	0.2	6.35	3.18	2.7
		WXGU040302L-TS	●	●		●	●	●	0.2	6.35	3.18	2.7
		WXGU040304R-TS	●	●		●	●	●	0.4	6.35	3.18	2.7
		WXGU040304L-TS	●	●		●	●	●	0.4	6.35	3.18	2.7
		WXGU040308R-TS	●	●		●	●	●	0.8	6.35	3.18	2.7
		WXGU040308L-TS	●	●		●	●	●	0.8	6.35	3.18	2.7
Finishing (wiper)	TSW	WXGU040304R-TSW	●	●		●	●		0.4	6.35	3.18	2.7
		WXGU040304L-TSW	●	●		●	●		0.4	6.35	3.18	2.7
		WXGU040308R-TSW	●	●		●	●		0.8	6.35	3.18	2.7
		WXGU040308L-TSW	●	●		●	●		0.8	6.35	3.18	2.7
Finishing (low cutting force)	SS	WXGU040302R-SS	●	●		●	●	●	0.2	6.35	3.18	2.7
		WXGU040302L-SS	●	●		●	●	●	0.2	6.35	3.18	2.7
		WXGU040304R-SS	●	●		●	●	●	0.4	6.35	3.18	2.7
		WXGU040304L-SS	●	●		●	●	●	0.4	6.35	3.18	2.7

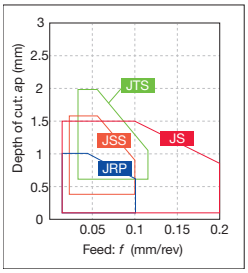
*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

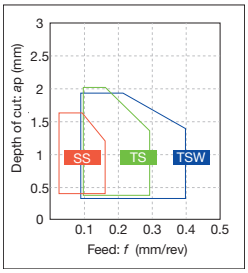
● : Line up

Chip control range









*Chip control range with typical R0.1

Reference pages: External toolholder → C031 - Internal toolholder → D028

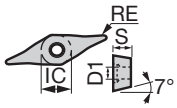
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

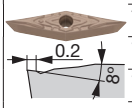
YW

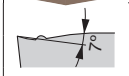
Rhombic, 25° with hole Positive 7°

P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloy
H	Hard material



Application	Chipbreaker	Designation	Coated T9225	Coated T9125	Coated cermet GT9530	Dimension (mm) RE	IC	S	D1
Finishing to medium cutting	ZF	YWMT11T202-ZF	●	▲	●	0.2	4.679	2.78	2.3
		YWMT11T204-ZF	●	▲	●	0.4	4.679	2.78	2.3
		YWMT16T302-ZF	●	▲	●	0.2	7.018	3.97	2.86
		YWMT16T304-ZF	●	▲	●	0.4	7.018	3.97	2.86
		YWMT16T308-ZF	●	▲	●	0.8	7.018	3.97	2.86
	ZM	YWMT11T204-ZM	●	▲	●	0.4	4.679	2.78	2.3
		YWMT16T304-ZM	●	▲	●	0.4	7.018	3.97	2.86
		YWMT16T308-ZM	●	▲	●	0.8	7.018	3.97	2.86

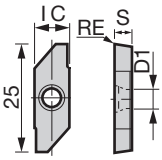




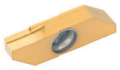
JXF

Front turning

P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloy
H	Hard material



Application	Chipbreaker	Designation	Coated J740	Uncoated TH10	Dimension (mm) RE	IC	S	D1
Front turning	-	JXFR8000F	●	●	0.03	8	3.97	4.4
		JXFR8010F	●	●	0.1	8	3.97	4.4



● : Line up
▲ : To be discontinued

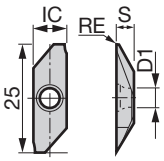
Reference pages: External toolholder → C064, C128 Internal toolholder → D076

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

JXR

Reverse turning

		J740 (Coated)	TH10 (Uncoated)
P	Steel	●◐	●
M	Stainless	●◐	●
K	Cast iron		●
N	Non-ferrous		●
S	Superalloy		
H	Hard material		

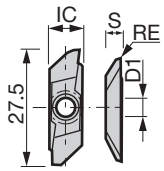


Application	Chipbreaker	Designation	J740	TH10	RE	IC	S	D1
Reverse turning	-	JXRR8000F	●	●	0.03	8	3.97	4.4
		JXRR8010F	●	●	0.1	8	3.97	4.4

JXB

Back turning

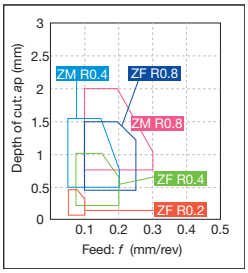
		J740 (Coated)	TH10 (Uncoated)
P	Steel	●◐	●
M	Stainless	●◐	●
K	Cast iron		●
N	Non-ferrous		●
S	Superalloy		
H	Hard material		



Application	Chipbreaker	Designation	J740	TH10	RE	IC	S	D1
Back turning	-	JXBR8000F	●	●	0.03	8	3.97	4.4
		JXBL8000F	●	●	0.03	8	3.97	4.4
		JXBR8005F	●	●	0.05	8	3.97	4.4
		JXBL8005F	●	●	0.05	8	3.97	4.4
		JXBR8005	●		0.05	8	3.97	4.4
		JXBL8005	●		0.05	8	3.97	4.4
		JXBR8010F	●	●	0.10	8	3.97	4.4
		JXBL8010F	●	●	0.10	8	3.97	4.4
		JXBR8010	●		0.10	8	3.97	4.4
		JXBL8010	●		0.10	8	3.97	4.4
		JXBR8015F	●	●	0.15	8	3.97	4.4
		JXBL8015F	●	●	0.15	8	3.97	4.4
		JXBR8015	●		0.15	8	3.97	4.4
		JXBL8015	●		0.15	8	3.97	4.4

● : Line up

Chip control range



Reference pages: JXF..., JXR..., JXB...: J-Series toolholder → G043 -

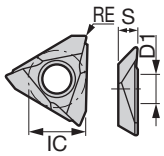
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

JTB*

Back turning

		J9530	NS9530	SH725	J740	TH10
P	Steel	◐	◐	◐	◐	●
M	Stainless			◐	◐	●
K	Cast iron	◐	◐			●
N	Non-ferrous					●
S	Superalloy					
H	Hard material					

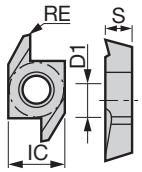


Application	Chipbreaker	Designation	Coated SH725	Coated J740	Coated cermet J9530	Cermet NS9530	Uncoated TH10	Dimension (mm) RE	IC	S	D1
Back turning	-	JTBR3000F	●	●			●	0.03	9.5	3.18	4.4
		JTBL3000F	●	●			●	0.03	9.5	3.18	4.4
		JTBR3005F	●	●			●	0.05	9.5	3.18	4.4
		JTBL3005F	●	●			●	0.05	9.5	3.18	4.4
		JTBR3005		●	●			0.05	9.5	3.18	4.4
		JTBL3005		●				0.05	9.5	3.18	4.4
		JTBR3010F	●	●		●	●	0.10	9.5	3.18	4.4
		JTBL3010F	●	●		●	●	0.10	9.5	3.18	4.4
		JTBR3010		●	●			0.10	9.5	3.18	4.4
		JTBL3010		●				0.10	9.5	3.18	4.4
		JTBR3015F	●	●				0.15	9.5	3.18	4.4
		JTBL3015F	●					0.15	9.5	3.18	4.4

J10E*

Back turning

		J9530	NS9530	SH725	J740	TH10
P	Steel	◐	◐	◐	◐	●
M	Stainless			◐	◐	●
K	Cast iron	◐	◐			●
N	Non-ferrous					●
S	Superalloy					
H	Hard material					



Application	Chipbreaker	Designation	Coated SH725	Coated J740	Coated cermet J9530	Cermet NS9530	Uncoated TH10	Dimension (mm) RE	IC	S	D1
Back turning	-	J10ER005BF	●	●		●	●	0.05	6.35	3.18	3.0
		J10EL005BF	●	●			●	0.05	6.35	3.18	3.0
		J10ER005B		●	●			0.05	6.35	3.18	3.0
		J10EL005B		●				0.05	6.35	3.18	3.0
		J10ER010BF	●	●		●	●	0.10	6.35	3.18	3.0
		J10EL010BF	●	●			●	0.10	6.35	3.18	3.0
		J10ER010B		●	●			0.10	6.35	3.18	3.0
		J10EL010B		●				0.10	6.35	3.18	3.0
		J10EL015BF	●					0.15	6.35	3.18	3.0
		J10ER015BF	●					0.15	6.35	3.18	3.0

● : Line up

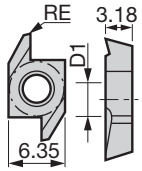
Reference pages: JTB...: J-Series toolholder → G048 J10E...: J-Series toolholder → G050

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

10E*

Back turning

P	Steel	●
M	Stainless	●
K	Cast iron	●
N	Non-ferrous	●
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation	Uncoated TH10	Dimension (mm) RE	IC	S	D1
Back turning	-	10ER100B	●	0.03	6.35	3.18	3.0
		10EL100B	●	0.03	6.35	3.18	3.0
		10ER150B	●	0.03	6.35	3.18	3.0
		10EL150B	●	0.03	6.35	3.18	3.0
		10ER300	●	-	6.35	3.18	3.0
		10EL300	●	-	6.35	3.18	3.0

● : Line up

MEMO

BXA20

- Coated CBN grade for hardened steel

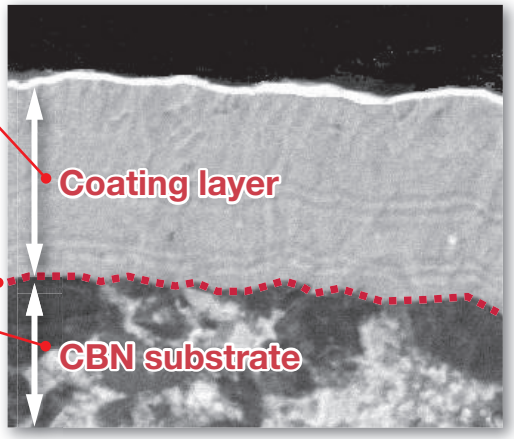
Incredible reliability in hardened steel turning

- Suitable for operations at low to medium cutting speed
- Covers a wide range of application areas from continuous to heavy interrupted cutting

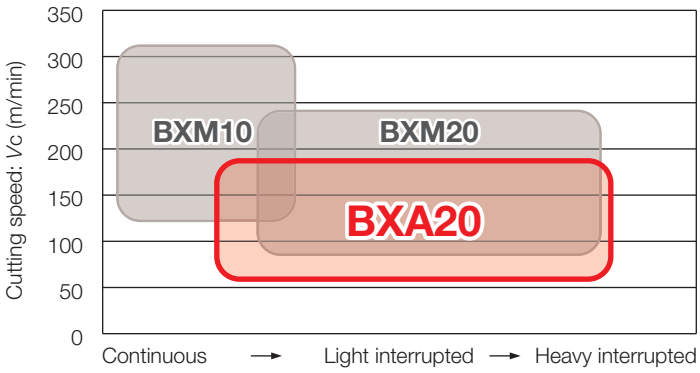
Multi-layered coating 2 times thicker than the conventional grade
- Provides excellent wear resistance

Improved adhesion strength
- Prevents peeling-off, providing excellent surface finish

Newly developed CBN substrate with unique binder
- Optimum CBN content for high wear resistance and toughness



APPLICATION AREA



BXM10
Suitable for continuous to light interrupted cutting at high speed

BXM20
Suitable for a wide range of applications at medium to high speed

BXA20
Exceptional stability in machining at low to medium speed

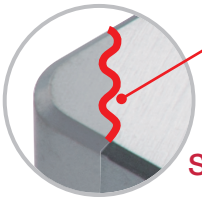
T-CBN SERIES

- WavyJoint

For **high efficiency** hardened steel machining

New brazing technology for increased machining efficiency - "WavyJoint"

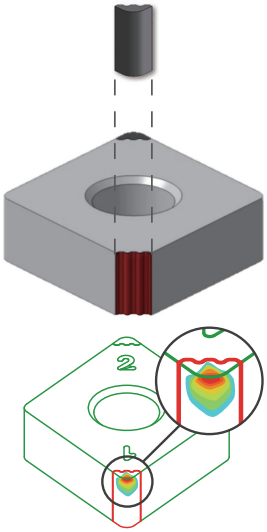
- A maximum depth of cut up to 0.8 mm
  → Reduces the number of passes to increase productivity



The "wavy" contact surface enhances the brazing strength.

Strong joint

WavyJoint BXA20 **Vs.** Standard



CBN tip size:

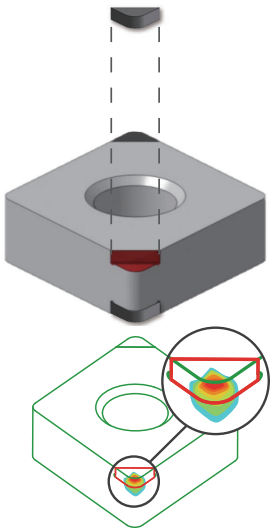
Using the cBN tip in a mass as large as **200%** provides increased thermal conductivity and helps reduce the temperature at the cutting edge

Brazing area:

Increased **160%** for enhanced brazing strength

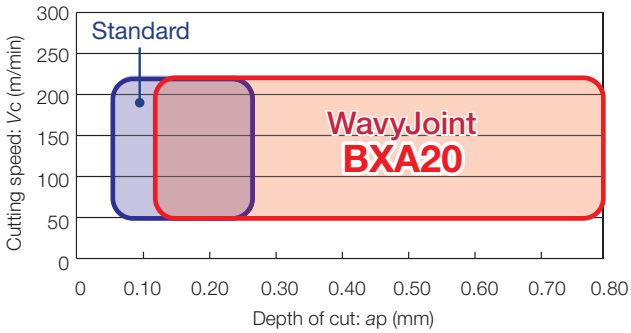
Temperature during machining is concentrated on the CBN tip, reducing temperature issues in the brazing zone.

Workpiece material	: SCM420 / 20CrMo4 (60HRC)
Cutting speed	: *Vc* = 150 m/min
Feed	: *fz* = 0.20 mm/rev
Depth of cut	: *ap* = 0.75 mm
Coolant	: Dry



APPLICATION AREA

Hard Turning



H

WavyJoint BXA20

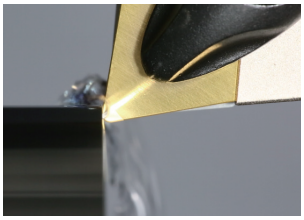
Great performance for continuous to heavy interrupted cutting at low and medium speeds.

T-CBN SERIES - GNGA type CBN

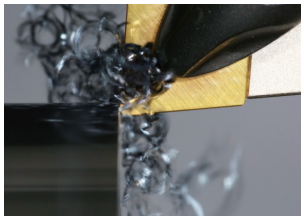
For **high efficiency in finishing** hardened steel, cast iron and sintered metals

Chip control in face turning

Continuous cutting



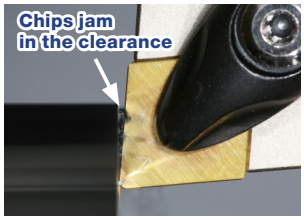
GNGA type
Corner angle: 70°



CNGA type
Corner angle: 80°

Interrupted cutting

GNGA type
Corner angle: 70°



CNGA type
Corner angle: 80°

Since GNGA type inserts have enough space for chip flow, chip packing doesn't occur, improving surface finish and preventing sudden chipping on cutting edge.
Existing standard toolholders for CNGA1204 can be used.

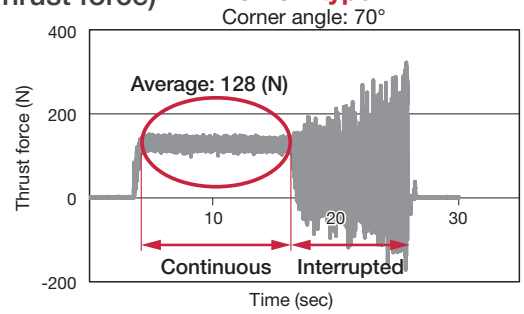
H

Toolholder	: ACLNL2525M12-A
Insert	: 2QP-GNGA120408 BXM20 2QP-CNGA120408 BXM20
Workpiece material	: SCM420 / 18CrMo4 (60HRC)
Cutting speed	: *Vc* = 150 m/min
Feed	: *f* = 0.10 mm/rev
Depth of cut	: *ap* = 0.125 mm
Machining	: Face turning
Coolant	: Dry

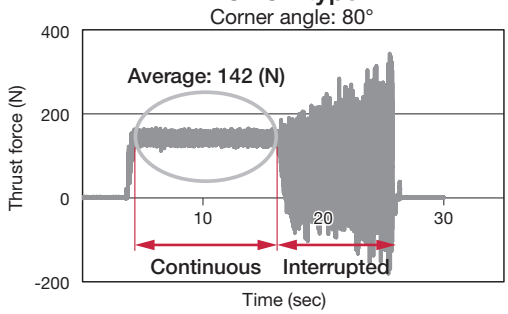
CUTTING PERFORMANCE

Cutting force
(Thrust force)

GNGA type
Corner angle: 70°



CNGA type
Corner angle: 80°



GNGA type has large clearance and reduces cutting force compared to the regular CNGA type.

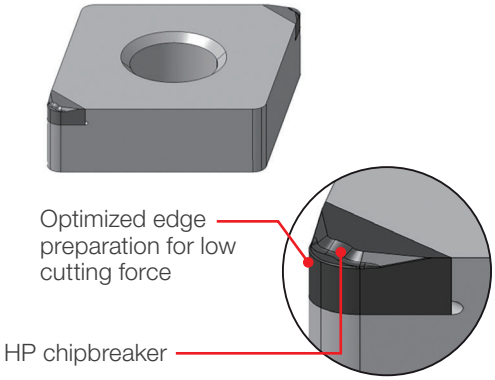
H

Toolholder	: ACLNL2525M12-A
Insert	: 2QP-GNGA120408 BXM20 2QP-CNGA120408 BXM20
Workpiece material	: SCM420 / 18CrMo4 (59HRC)
Cutting speed	: *Vc* = 150 m/min
Feed	: *f* = 0.15 mm/rev
Depth of cut	: *ap* = 0.125 mm
Machining	: Face turning
Coolant	: Dry

HARDBREAKER HP

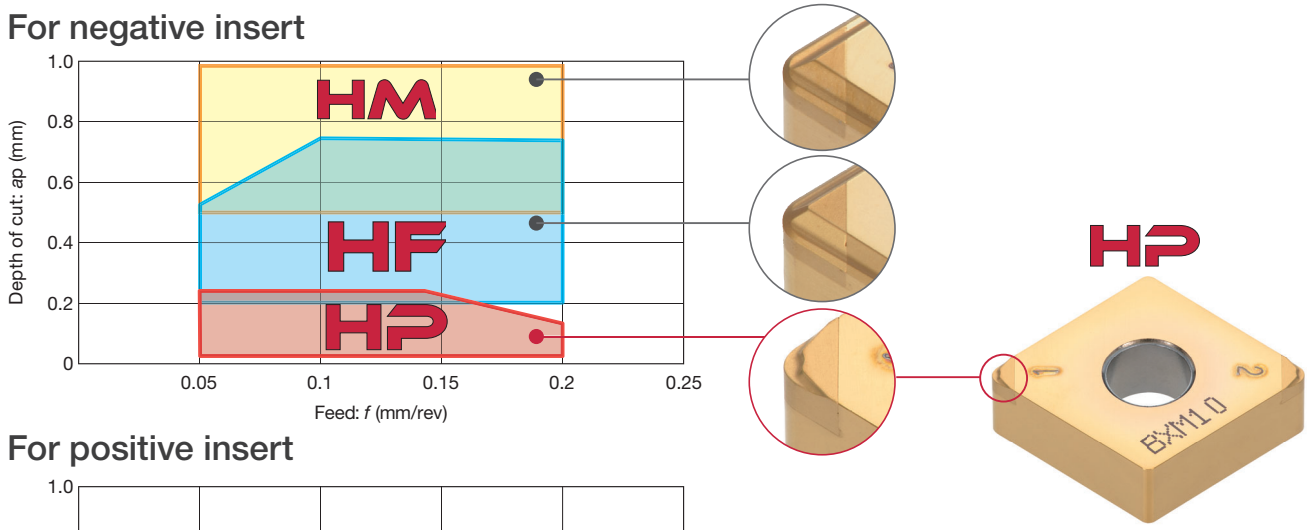
New HP Chipbreaker for Finishing Hardened Steel

1. By separating the chipbreaker from the cutting edge, the cutting force imposed on the cutting edge during machining is significantly reduced, thus providing long tool life.
2. The cutting edge preparation is designed to ensure easy cutting at low cutting forces, while maintaining close tolerances with no deviations.
3. The HP style chipbreaker, combined with built-in wipers, yields excellent surface quality and good chip control.

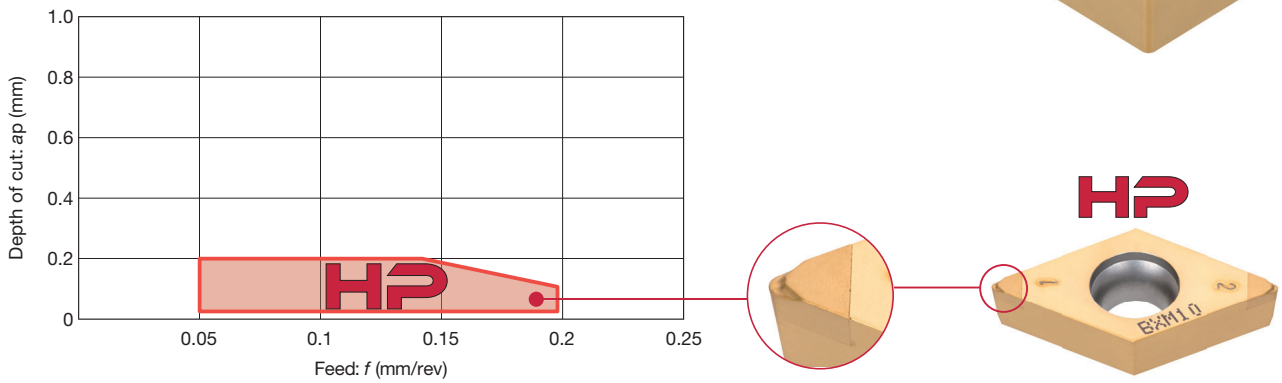


APPLICATION AREA

For negative insert



For positive insert



Designation System for T-CBN (PCBN) Inserts

Multi-Corner type

2 QP - CNGA120404 -L

① Number of corners

② Type

QP	CBN Inserts
QS	WavyJoint

③ ISO symbol

④ Special feature & chipbreaker

Without	Standard honing	W	With wiper
F	Sharp edge	W□	With wiper
-L	Wear resistance priority	-HF	With chipbreaker
-LF	Flank wear resistance priority	-HM	With chipbreaker
-LC	Crater wear resistance priority	-HP	With chipbreaker
-H	Fracture resistance priority		

Multi-Corner type (10 pieces per package)

T 2 QP - CNGA120408

① "T" means 10 pieces per package.

For general turning

TNGA160402 - QBN

① ISO symbol

② CBN inserts

T-CBN (PCBN tipped) grooving inserts

XG R 63 10 S - QBN

① For grooving tool GX-type

② Hand of Insert

L	Left
R	Right

③ Groove width (mm)

10	1.0
15	1.5

④ Corner radius: RE (mm)

S	0.2

⑤ CBN inserts

For TUNGCUT

S G N 200 - 020

① Number of edge

S	Single corner

② Application

G	Grooving

③ For use

N	Non breaker

④ Groove width (mm)

200	2.0

⑤ Corner radius: RE (mm)

020	0.2

Designation System for T-DIA (PCD) Inserts

Inserts for turning

TPGW110204 - DIA

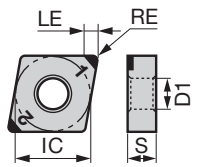
① ISO symbol

② PCD inserts

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX380	BX470	BX480	BX930
P	Steel										
M	Stainless										
K	Cast iron								●◐	✠	●◐
N	Non-ferrous										
S	Superalloy										
H	Hard material	●	●◐	●◐	●	●◐	●◐	✠			
	Sintered metal								●◐	◐✠	



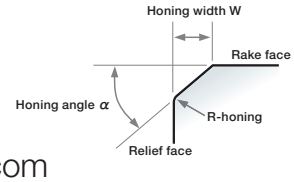
Shape	Designation	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-CNGA	2QP-CNGA120404	2	2.3	0.4	12.7	4.76	5.16	○							
	2QP-CNGA120408	2	2.2	0.8	12.7	4.76	5.16	○							
	2QP-CNGA120412	2	2.4	1.2	12.7	4.76	5.16	○							
	2QP-CNGA120416	2	3.3	1.6	12.7	4.76	5.16	○							
	2QP-CNGA120420	2	3.2	2.0	12.7	4.76	5.16	○							
	2QP-CNGA120424	2	3.1	2.4	12.7	4.76	5.16	○							
T2QP-CNGA	T2QP-CNGA120404	2	2.3	0.4	12.7	4.76	5.16	○							
	T2QP-CNGA120408	2	2.2	0.8	12.7	4.76	5.16	○							
2QP-CNGAF**	2QP-CNGA120404F	2	2.3	0.4	12.7	4.76	5.16		○						
	2QP-CNGA120408F	2	2.2	0.8	12.7	4.76	5.16		○						
2QP-CNGA-L**	2QP-CNGA120404-L	2	2.3	0.4	12.7	4.76	5.16			○					
	2QP-CNGA120408-L	2	2.2	0.8	12.7	4.76	5.16			○					
	2QP-CNGA120412-L	2	2.4	1.2	12.7	4.76	5.16			○					
2QP-CNGA-LF**	2QP-CNGA120404-LF	2	2.3	0.4	12.7	4.76	5.16				○				
	2QP-CNGA120408-LF	2	2.2	0.8	12.7	4.76	5.16				○				
	2QP-CNGA120412-LF	2	2.4	1.2	12.7	4.76	5.16				○				
2QP-CNGA-LC**	2QP-CNGA120404-LC	2	2.3	0.4	12.7	4.76	5.16					○			
	2QP-CNGA120408-LC	2	2.2	0.8	12.7	4.76	5.16					○			
	2QP-CNGA120412-LC	2	2.4	1.2	12.7	4.76	5.16					○			
2QP-CNGA-H**	2QP-CNGA120404-H	2	2.3	0.4	12.7	4.76	5.16						○		
	2QP-CNGA120408-H	2	2.2	0.8	12.7	4.76	5.16						○		
	2QP-CNGA120412-H	2	2.4	1.2	12.7	4.76	5.16						○		
2QP-CNGAWL**	2QP-CNGA120404WL	2	2.3	0.4	12.7	4.76	5.16							○	
	2QP-CNGA120408WL	2	2.2	0.8	12.7	4.76	5.16							○	
	2QP-CNGA120412WL	2	2.4	1.2	12.7	4.76	5.16							○	
2QP-CNMAW**	2QP-CNMA120404W	2	2.3	0.4	12.7	4.76	5.16							○	
	2QP-CNMA120408W	2	2.2	0.8	12.7	4.76	5.16							○	
	2QP-CNMA120412W	2	2.4	1.2	12.7	4.76	5.16							○	

*Please see the page **B199** about the toolholders recommended for wiper inserts of the designation with W, WL, and WJ at the end.

● : Line up

Honing specification

	BXM10 BX310 BX330 BX480	BXA20	BXM20	BX360 BX380	BX470	BX910 BX930 BXC50	BXC90
Standard	S01325	S01325	S01325	S01325	T01315	S01325	T02020
Sharp edge	-	-	-	-	F	-	-
-L	S01315	S01315	S01315	-	-	-	-
-LF	-	S00515	-	-	-	-	-
-LC	-	S00535	-	-	-	-	-
-H	-	S01835	S01835	S01335	-	-	-
Wiper	S01315	S01315	S01315	-	-	-	-



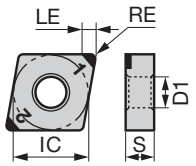
S	0	1	3	2	5
Shape	Honing width (W) (mm)			Honing angle : α	

T ··· Chamfered honing
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BXC50	BX360	BXC90
P	Steel						
M	Stainless						
K	Cast iron					●◐	
N	Non-ferrous						
S	Superalloy						
H	Hard material	●	●◐	●◐	✠	●◐	
	Sintered metal						



Shape	Designation	BXM10	BXM20	BXA20	BXC50	BX360	BXC90	No. of corners	LE	RE	IC	S	D1	Honing: Standard	Honing: Sharp edge	Honing: L	Honing: LF	Honing: LC	Honing: H	Wiper	Chipbreaker
2QP-CNGM**-H*	2QP-CNGM120408-HF		●					2	2.2	0.8	12.7	4.76	5.16								○
	2QP-CNGM120412-HF		●					2	2.4	1.2	12.7	4.76	5.16								○
	2QP-CNGM120408-HM		●	●				2	2.2	0.8	12.7	4.76	5.16								○
	2QP-CNGM120412-HM		●	●				2	2.4	1.2	12.7	4.76	5.16								○
	2QP-CNGM120404-HP	●		●				2	2.3	0.4	12.7	4.76	5.16								○
	2QP-CNGM120408-HP	●		●				2	2.2	0.8	12.7	4.76	5.16								○
	2QP-CNGM120412-HP	●		●				2	2.4	1.2	12.7	4.76	5.16								○
2QP-CNGM**WL-HP	2QP-CNGM120408WL-HP	●		●				2	2.2	0.8	12.7	4.76	5.16							○	○
4QP-CNGA	4QP-CNGA120404				●			4	2.3	0.4	12.7	4.76	5.16	○							
	4QP-CNGA120408				●			4	2.2	0.8	12.7	4.76	5.16	○							
	4QP-CNGA120412				●			4	2.4	1.2	12.7	4.76	5.16	○							
4QP-CNMA**W	4QP-CNMA120404W				●			4	2.3	0.4	12.7	4.76	5.16							○	
	4QP-CNMA120408W				●			4	2.2	0.8	12.7	4.76	5.16							○	
	4QP-CNMA120412W				●			4	2.4	1.2	12.7	4.76	5.16							○	
4QS-CNGA	4QS-CNGA120408			●				4	2.2	0.8	12.7	4.76	5.16	○							
	4QS-CNGA120412			●				4	2.4	1.2	12.7	4.76	5.16	○							
4QS-CNGA**-H	4QS-CNGA120408-H			●				4	1.5	0.8	12.7	4.76	5.16						○		
	4QS-CNGA120412-H			●				4	1.7	1.2	12.7	4.76	5.16						○		
4QS-CNGG**-HM	4QS-CNGG120408-HM			●				4	1.5	0.8	12.7	4.76	5.16								○
	4QS-CNGG120412-HM			●				4	1.7	1.2	12.7	4.76	5.16								○
CNGA**-QBN	CNGA120402-QBN					●		1	4.1	0.2	12.7	4.76	5.16	○							
	CNGA120404-QBN					●		1	4.0	0.4	12.7	4.76	5.16	○							
	CNGA120408-QBN					●		1	3.9	0.8	12.7	4.76	5.16	○							
	CNGA120412-QBN					●		1	3.9	1.2	12.7	4.76	5.16	○							
S-CNGN	S-CNGN090308						●	4	-	0.8	9.525	3.18	-	○							
	S-CNGN090312						●	4	-	1.2	9.525	3.18	-	○							
	S-CNGN120408						●	4	-	0.8	12.7	4.76	-	○							
	S-CNGN120412						●	4	-	1.2	12.7	4.76	-	○							

*Please see the page B199 about the toolholders recommended for wiper inserts of the designation with W, WL, and WJ at the end.

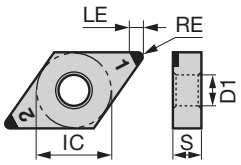
● : Line up

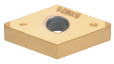
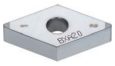
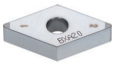
Reference pages: External toolholder → C018 - Internal toolholder → D023 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX380	BX470	BX480	BX930
P Steel										
M Stainless										
K Cast iron								●◐	✠	●◐
N Non-ferrous										
S Superalloy										
H Hard material	●	●◐	●◐	●	●◐	●◐	✠			
Sintered metal								●◐	◐✠	



Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX380	BX470	BX480	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-DNGA	2QP-DNGA110404			●								2	2.5	0.4	9.525	4.76	3.81	○							
	2QP-DNGA110408			●								2	2.1	0.8	9.525	4.76	3.81	○							
	2QP-DNGA110412			●								2	2.0	1.2	9.525	4.76	3.81	○							
	2QP-DNGA150404	●	●	●	●	●	●	●	●	●	●	2	2.5	0.4	12.7	4.76	5.16	○							
	2QP-DNGA150408	●	●	●	●	●	●	●	●	●	●	2	2.1	0.8	12.7	4.76	5.16	○							
	2QP-DNGA150412	●	●	●	●	●	●	●		●	●	2	2.0	1.2	12.7	4.76	5.16	○							
	2QP-DNGA150416			●								2	3.4	1.6	12.7	4.76	5.16	○							
	2QP-DNGA150420			●								2	3.0	2.0	12.7	4.76	5.16	○							
	2QP-DNGA150424			●								2	2.6	2.4	12.7	4.76	5.16	○							
	2QP-DNGA150604	●	●	●								2	2.5	0.4	12.7	6.35	5.16	○							
	2QP-DNGA150608	●	●	●								2	2.1	0.8	12.7	6.35	5.16	○							
	2QP-DNGA150612	●	●	●								2	2.0	1.2	12.7	6.35	5.16	○							
2QP-DNGA**-L	2QP-DNGA150404-L	●	●	●		●						2	2.5	0.4	12.7	4.76	5.16			○					
	2QP-DNGA150408-L	●	●	●		●						2	2.1	0.8	12.7	4.76	5.16			○					
	2QP-DNGA150412-L		●	●		●						2	2.0	1.2	12.7	4.76	5.16			○					
	2QP-DNGA150604-L			●								2	2.5	0.4	12.7	6.35	5.16			○					
	2QP-DNGA150608-L			●								2	2.1	0.8	12.7	6.35	5.16			○					
	2QP-DNGA150612-L			●								2	2.0	1.2	12.7	6.35	5.16			○					
2QP-DNGA**-LF	2QP-DNGA150404-LF			●								2	2.5	0.4	12.7	4.76	5.16				○				
	2QP-DNGA150408-LF			●								2	2.1	0.8	12.7	4.76	5.16				○				
	2QP-DNGA150412-LF			●								2	2.0	1.2	12.7	4.76	5.16				○				
	2QP-DNGA150604-LF			●								2	2.5	0.4	12.7	6.35	5.16				○				
	2QP-DNGA150608-LF			●								2	2.1	0.8	12.7	6.35	5.16				○				
	2QP-DNGA150612-LF			●								2	2.0	1.2	12.7	6.35	5.16				○				
2QP-DNGA**-LC	2QP-DNGA150404-LC			●								2	2.5	0.4	12.7	4.76	5.16					○			
	2QP-DNGA150408-LC			●								2	2.1	0.8	12.7	4.76	5.16					○			
	2QP-DNGA150412-LC			●								2	2.0	1.2	12.7	4.76	5.16					○			
	2QP-DNGA150604-LC			●								2	2.5	0.4	12.7	6.35	5.16					○			
	2QP-DNGA150608-LC			●								2	2.1	0.8	12.7	6.35	5.16					○			
	2QP-DNGA150612-LC			●								2	2.0	1.2	12.7	6.35	5.16					○			
2QP-DNGA**-H	2QP-DNGA150404-H		●	●			●	●				2	2.5	0.4	12.7	4.76	5.16						○		
	2QP-DNGA150408-H		●	●			●	●				2	2.1	0.8	12.7	4.76	5.16						○		
	2QP-DNGA150412-H		●	●			●	●				2	2.0	1.2	12.7	4.76	5.16						○		
	2QP-DNGA150604-H			●								2	2.5	0.4	12.7	6.35	5.16						○		
	2QP-DNGA150608-H			●								2	2.1	0.8	12.7	6.35	5.16						○		
	2QP-DNGA150612-H			●								2	2.0	1.2	12.7	6.35	5.16						○		
2QP-DNGA**WJ	2QP-DNGA150404WJ	●	●	●								2	2.5	0.4	12.7	4.76	5.16							○	
	2QP-DNGA150408WJ	●	●	●								2	2.1	0.8	12.7	4.76	5.16							○	

*Please see the page B199 about the toolholders recommended for wiper inserts of the designation with W, WL, and WJ at the end.

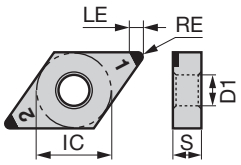
● : Line up

Reference pages: External toolholder → C042 - Internal toolholder → D052 -
J-Series toolholder → G046 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
⊂ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BXC50	BX360
P	Steel					
M	Stainless					
K	Cast iron					
N	Non-ferrous					
S	Superalloy					
H	Hard material	●	●⊂	●⊂	✠	●⊂
	Sintered metal					

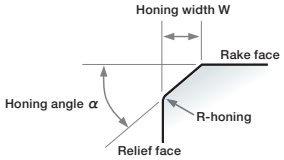


Shape	Designation	BXM10	BXM20	BXA20	BXC50	BX360	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
							Dimension (mm)						Honing							
2QP-DNGM**-H*	2QP-DNGM150408-HF		●				2	2.1	0.8	12.7	4.76	5.16								○
	2QP-DNGM150412-HF		●				2	2.0	1.2	12.7	4.76	5.16								○
	2QP-DNGM150408-HM		●				2	2.1	0.8	12.7	4.76	5.16								○
	2QP-DNGM150412-HM		●				2	2.0	1.2	12.7	4.76	5.16								○
	2QP-DNGM150404-HP	●		●			2	2.5	0.4	12.7	4.76	5.16								○
	2QP-DNGM150408-HP	●		●			2	2.1	0.8	12.7	4.76	5.16								○
	2QP-DNGM150608-HP	●		●			2	2.1	0.8	12.7	6.35	5.16								○
4QP-DNGA	4QP-DNGA150404				●		4	2.5	0.4	12.7	4.76	5.16	○							
	4QP-DNGA150408				●		4	2.1	0.8	12.7	4.76	5.16	○							
	4QP-DNGA150412				●		4	2.0	1.2	12.7	4.76	5.16	○							
4QS-DNGA	4QS-DNGA150408			●			4	2.1	0.8	12.7	4.76	5.16	○							
	4QS-DNGA150412			●			4	2.0	1.2	12.7	4.76	5.16	○							
4QS-DNGA**-H	4QS-DNGA150408-H			●			4	1.6	0.8	12.7	4.76	5.16						○		
	4QS-DNGA150412-H			●			4	1.6	1.2	12.7	4.76	5.16						○		
4QS-DNGG**-HM	4QS-DNGG150408-HM			●			4	1.6	0.8	12.7	4.76	5.16								○
DNGA**-QBN	DNGA150402-QBN					●	1	4.3	0.2	12.7	4.76	5.16	○							
	DNGA150404-QBN					●	1	4.1	0.4	12.7	4.76	5.16	○							
	DNGA150408-QBN					●	1	3.8	0.8	12.7	4.76	5.16	○							
	DNGA150412-QBN					●	1	3.4	1.2	12.7	4.76	5.16	○							

● : Line up

Honing specification

	BXM10 BX310 BX330 BX480	BXA20	BXM20	BX360 BX380	BX470	BX910 BX930 BXC50	BXC90
Standard	S01325	S01325	S01325	S01325	T01315	S01325	T02020
Sharp edge	-	-	-	-	F	-	-
-L	S01315	S01315	S01315	-	-	-	-
-LF	-	S00515	-	-	-	-	-
-LC	-	S00535	-	-	-	-	-
-H	-	S01835	S01835	S01335	-	-	-
Wiper	S01315	S01315	S01315	-	-	-	-



S	0	1	3	2	5
Shape	Honing width (W) (mm)			Honing angle : α	

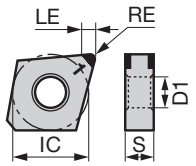
T ··· Chamfered honing
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

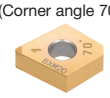
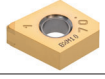
Reference pages: Internal toolholder → D052 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

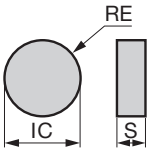
		BXM10	BXM20	BXA20	BX360	BX470	BX930
P	Steel						
M	Stainless						
K	Cast iron					●ⓒ	●ⓒ
N	Non-ferrous						
S	Superalloy						
H	Hard material	●	●ⓒ	●ⓒ	●ⓒ		
	Sintered metal					●ⓒ	



Shape	Designation	BXM10	BXM20	BXA20	BX360	BX470	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-GNGA (Corner angle 70°) 	*2QP-GNGA120404		●	●	●			2	2.1	0.4	12.7	4.76	5.16	○							
	*2QP-GNGA120408		●	●	●	●	●	2	2.1	0.8	12.7	4.76	5.16	○							
	*2QP-GNGA120412		●	●	●	●	●	2	2.2	1.2	12.7	4.76	5.16	○							
2QP-GNGA-L**	*2QP-GNGA120404-L			●				2	2.1	0.4	12.7	4.76	5.16			○					
	*2QP-GNGA120408-L			●				2	2.1	0.8	12.7	4.76	5.16			○					
	*2QP-GNGA120412-L			●				2	2.2	1.2	12.7	4.76	5.16			○					
2QP-GNGA-LF**	*2QP-GNGA120404-LF			●				2	2.1	0.4	12.7	4.76	5.16				○				
	*2QP-GNGA120408-LF			●				2	2.1	0.8	12.7	4.76	5.16				○				
	*2QP-GNGA120412-LF			●				2	2.2	1.2	12.7	4.76	5.16				○				
2QP-GNGA-LC**	*2QP-GNGA120404-LC			●				2	2.1	0.4	12.7	4.76	5.16					○			
	*2QP-GNGA120408-LC			●				2	2.1	0.8	12.7	4.76	5.16					○			
	*2QP-GNGA120412-LC			●				2	2.2	1.2	12.7	4.76	5.16					○			
2QP-GNGA-H**	*2QP-GNGA120404-H			●				2	2.1	0.4	12.7	4.76	5.16						○		
	*2QP-GNGA120408-H			●				2	2.1	0.8	12.7	4.76	5.16						○		
	*2QP-GNGA120412-H			●				2	2.2	1.2	12.7	4.76	5.16						○		
2QP-GNGG-HP** (Corner angle 70°) 	*2QP-GNGG120404-HP	●		●				2	2.1	0.4	12.7	4.76	5.16								○
	*2QP-GNGG120408-HP	●		●				2	2.1	0.8	12.7	4.76	5.16								○
	*2QP-GNGG120412-HP	●		●				2	2.2	1.2	12.7	4.76	5.16								○

* Tungaloy's standard

		BXC90
P	Steel	
M	Stainless	
K	Cast iron	●ⓒ
N	Non-ferrous	
S	Superalloy	
H	Hard material	

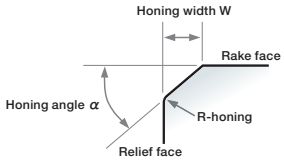


Shape	Designation	BXC90	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
S-RNGN	S-RNGN090300	●	-	-	-	9.525	3.18	-	○							
	S-RNGN120400	●	-	-	-	12.7	4.76	-	○							

● : Line up

Honing specification

	BXM10 BX310 BX330 BX480	BXA20	BXM20	BX360 BX380	BX470	BX910 BX930 BXC50	BXC90
Standard	S01325	S01325	S01325	S01325	T01315	S01325	T02020
Sharp edge	-	-	-	-	F	-	-
-L	S01315	S01315	S01315	-	-	-	-
-LF	-	S00515	-	-	-	-	-
-LC	-	S00535	-	-	-	-	-
-H	-	S01835	S01835	S01335	-	-	-
Wiper	S01315	S01315	S01315	-	-	-	-



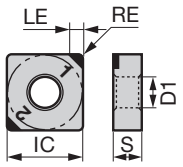
S	0	1	3	2	5
Shape	Honing width (W) (mm)			Honing angle : α	

T ··· Chamfered honing
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM20	BXA20	BXC50	BX310	BX330	BX360	BX380	BX480	BX910	BX930	BXC90
P	Steel											
M	Stainless											
K	Cast iron								✠	●	◐	◐ ◐
N	Non-ferrous											
S	Superalloy											
H	Hard material	◐	◐ ◐	✠	●	◐	◐ ◐	✠				
	Sintered metal								◐ ✠			



Shape	Designation	BXM20	BXA20	BXC50	BX310	BX330	BX360	BX380	BX480	BX910	BX930	BXC90	No. of corners	LE	RE	IC	S	D1	Honing: Standard	Honing: Sharp edge	Honing: L	Honing: LF	Honing: LC	Honing: H	Wiper	Chipbreaker
2QP-SNGA	2QP-SNGA120404	●	●		●	●	●	●	●		●		2	2.4	0.4	12.7	4.76	5.16	○							
	2QP-SNGA120408	●			●	●	●	●	●		●		2	2.4	0.8	12.7	4.76	5.16	○							
	2QP-SNGA120412	●			●	●	●	●	●		●		2	2.4	1.2	12.7	4.76	5.16	○							
2QP-SNGA**-L	2QP-SNGA120404-L					●							2	2.4	0.4	12.7	4.76	5.16			○					
	2QP-SNGA120408-L	●	●			●							2	2.4	0.8	12.7	4.76	5.16			○					
	2QP-SNGA120412-L	●	●			●							2	2.4	1.2	12.7	4.76	5.16			○					
2QP-SNGA**-LF	2QP-SNGA120408-LF		●										2	2.4	0.8	12.7	4.76	5.16				○				
	2QP-SNGA120412-LF		●										2	2.4	1.2	12.7	4.76	5.16				○				
2QP-SNGA**-H	2QP-SNGA120404-H						●	●					2	2.4	0.4	12.7	4.76	5.16						○		
	2QP-SNGA120408-H	●	●				●	●					2	2.4	0.8	12.7	4.76	5.16						○		
	2QP-SNGA120412-H	●	●				●	●					2	2.4	1.2	12.7	4.76	5.16						○		
4QP-SNGA	4QP-SNGA120404			●									4	2.4	0.4	12.7	4.76	5.16	○							
	4QP-SNGA120408			●									4	2.4	0.8	12.7	4.76	5.16	○							
	4QP-SNGA120412			●									4	2.4	1.2	12.7	4.76	5.16	○							
SNGA**-QBN	SNGA120402-QBN						●						1	4.1	0.2	12.7	4.76	5.16	○							
	SNGA120404-QBN						●						1	4.1	0.4	12.7	4.76	5.16	○							
	SNGA120408-QBN						●						1	4.1	0.8	12.7	4.76	5.16	○							
	SNGA120412-QBN						●						1	4.1	1.2	12.7	4.76	5.16	○							
2QP-SNGN	2QP-SNGN090308									●			2	2.4	0.8	9.525	3.18	-	○							
	2QP-SNGN090312									●			2	2.4	1.2	9.525	3.18	-	○							
S-SNGN	S-SNGN090308											●	8	-	0.8	9.525	3.18	-	○							
	S-SNGN090312											●	8	-	1.2	9.525	3.18	-	○							
	S-SNGN120308											●	8	-	0.8	12.7	3.18	-	○							
	S-SNGN120312											●	8	-	1.2	12.7	3.18	-	○							
	S-SNGN120408											●	8	-	0.8	12.7	4.76	-	○							
	S-SNGN120412											●	8	-	1.2	12.7	4.76	-	○							

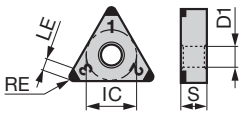
● : Line up

Reference pages: External toolholder → C093 - Internal toolholder → D040 -
Cartridge → K197 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX380	BX470	BX480	BX930
P Steel										
M Stainless										
K Cast iron								●◐	✠	●◐
N Non-ferrous										
S Superalloy										
H Hard material	●	●◐	●◐	●	●◐	●◐	✠			
Sintered metal								●◐	◐✠	



Shape	Designation	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
3QP-TNGA	3QP-TNGA160404	3	2.2	0.4	9.525	4.76	3.81	○							
	3QP-TNGA160408	3	1.9	0.8	9.525	4.76	3.81	○							
	3QP-TNGA160412	3	2.4	1.2	9.525	4.76	3.81	○							
	3QP-TNGA160416	3	3.3	1.6	9.525	4.76	3.81	○							
	3QP-TNGA160420	3	3.0	2.0	9.525	4.76	3.81	○							
	3QP-TNGA160424	3	2.7	2.4	9.525	4.76	3.81	○							
T3QP-TNGA	T3QP-TNGA160404	3	2.2	0.4	9.525	4.76	3.81	○							
	T3QP-TNGA160408	3	1.9	0.8	9.525	4.76	3.81	○							
3QP-TNGA**F	3QP-TNGA160404F	3	2.2	0.4	9.525	4.76	3.81		○						
	3QP-TNGA160408F	3	1.9	0.8	9.525	4.76	3.81		○						
3QP-TNGA**-L	3QP-TNGA160404-L	3	2.2	0.4	9.525	4.76	3.81			○					
	3QP-TNGA160408-L	3	1.9	0.8	9.525	4.76	3.81			○					
	3QP-TNGA160412-L	3	2.4	1.2	9.525	4.76	3.81			○					
3QP-TNGA**-LF	3QP-TNGA160404-LF	3	2.2	0.4	9.525	4.76	3.81				○				
	3QP-TNGA160408-LF	3	1.9	0.8	9.525	4.76	3.81				○				
	3QP-TNGA160412-LF	3	2.4	1.2	9.525	4.76	3.81				○				
3QP-TNGA**-LC	3QP-TNGA160404-LC	3	2.2	0.4	9.525	4.76	3.81					○			
	3QP-TNGA160408-LC	3	1.9	0.8	9.525	4.76	3.81					○			
	3QP-TNGA160412-LC	3	2.4	1.2	9.525	4.76	3.81					○			
3QP-TNGA**-H	3QP-TNGA160404-H	3	2.2	0.4	9.525	4.76	3.81						○		
	3QP-TNGA160408-H	3	1.9	0.8	9.525	4.76	3.81						○		
	3QP-TNGA160412-H	3	2.4	1.2	9.525	4.76	3.81						○		
3QP-TNGA**WG	3QP-TNGA160404WG	3	2.2	0.4	9.525	4.76	3.81							○	
	3QP-TNGA160408WG	3	1.9	0.8	9.525	4.76	3.81							○	
3QP-TNGM**-H*	3QP-TNGM160408-HF	3	1.9	0.8	9.525	4.76	3.81								○
	3QP-TNGM160412-HF	3	2.4	1.2	9.525	4.76	3.81								○
	3QP-TNGM160408-HM	3	1.9	0.8	9.525	4.76	3.81								○
	3QP-TNGM160412-HM	3	2.2	1.2	9.525	4.76	3.81								○
	3QP-TNGM160404-HP	3	2.2	0.4	9.525	4.76	3.81								○
	3QP-TNGM160408-HP	3	1.9	0.8	9.525	4.76	3.81								○

*T at the beginning of the designation means 10 pieces per package.
Please see the page B199 about the toolholders recommended for wiper inserts of the designation with WG at the end.

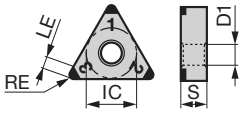
● : Line up

Reference pages: External toolholder → C115 - Internal toolholder → D046 -
J-Series toolholder → G047 - TungCap → K014 -
Cartridge → K193 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXA20	BXC50	BX360	BXC90
P	Steel				
M	Stainless				
K	Cast iron				●◐
N	Non-ferrous				
S	Superalloy				
H	Hard material	●◐	✠	●◐	
	Sintered metal				

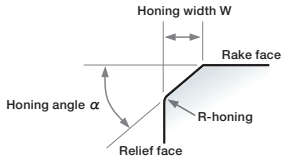


Shape	Designation	BXA20	BXC50	BX360	BXC90	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
						Dimension (mm)						Honing							
6QP-TNGA	**6QP-TNGA160404**		●			6	2.2	0.4	9.525	4.76	3.81	○							
	6QP-TNGA160408		●			6	1.9	0.8	9.525	4.76	3.81	○							
	6QP-TNGA160412		●			6	2.4	1.2	9.525	4.76	3.81	○							
6QS-TNGA	**6QS-TNGA160408**	●				6	1.9	0.8	9.525	4.76	3.81	○							
	6QS-TNGA160412	●				6	2.4	1.2	9.525	4.76	3.81	○							
6QS-TNGA-H**	**6QS-TNGA160408-H**	●				6	1.6	0.8	9.525	4.76	3.81						○		
	6QS-TNGA160412-H	●				6	1.8	1.2	9.525	4.76	3.81						○		
6QS-TNGG-HM**	**6QS-TNGG160408-HM**	●				6	1.6	0.8	9.525	4.76	3.81								○
	6QS-TNGG160412-HM	●				6	1.8	1.2	9.525	4.76	3.81								○
TNGA-QBN**	**TNGA160402-QBN**			●		1	4.4	0.2	9.525	4.76	3.81	○							
	TNGA160404-QBN			●		1	4.2	0.4	9.525	4.76	3.81	○							
	TNGA160408-QBN			●		1	4.0	0.8	9.525	4.76	3.81	○							
	TNGA160412-QBN			●		1	3.7	1.2	9.525	4.76	3.81	○							
S-TNGN	**S-TNGN110308**				●	6	-	0.8	6.35	3.18	-	○							
	S-TNGN110312				●	6	-	1.2	6.35	3.18	-	○							
	S-TNGN160408				●	6	-	0.8	9.525	4.76	-	○							
	S-TNGN160412				●	6	-	1.2	9.525	4.76	-	○							

● : Line up

Honing specification

	BXM10 BX310 BX330 BX480	BXA20	BXM20	BX360 BX380	BX470	BX910 BX930 BXC50	BXC90
Standard	S01325	S01325	S01325	S01325	T01315	S01325	T02020
Sharp edge	-	-	-	-	F	-	-
-L	S01315	S01315	S01315	-	-	-	-
-LF	-	S00515	-	-	-	-	-
-LC	-	S00535	-	-	-	-	-
-H	-	S01835	S01835	S01335	-	-	-
Wiper	S01315	S01315	S01315	-	-	-	-



S	0	1	3	2	5
Shape	Honing width (W) (mm)			Honing angle : α	

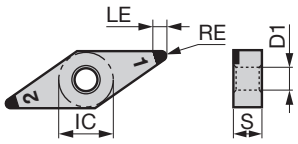
T ··· Chamfered honing
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

Reference pages: External toolholder → C115 - Internal toolholder → D046 -
J-Series toolholder → G047 - TungCap → K014 -
Cartridge → K193 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
ᴄ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BXC50	BX310	BX330	BX360	BX380	BX470	BX480	BX930
P	Steel											
M	Stainless											
K	Cast iron									●ᴄ	✠	●ᴄ
N	Non-ferrous											
S	Superalloy											
H	Hard material	●	●ᴄ	●ᴄ	✠	●	●ᴄ	●ᴄ	✠			
	Sintered metal									●ᴄ	ᴄ✠	



Shape	Designation	BXM10	BXM20	BXA20	BXC50	BX310	BX330	BX360	BX380	BX470	BX480	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-VNGA	2QP-VNGA160404	●	●	●		●	●	●	●	●	●	●	2	3.1	0.4	9.525	4.76	3.81	○							
	2QP-VNGA160408	●	●	●		●	●	●	●	●	●	●	2	2.2	0.8	9.525	4.76	3.81	○							
	2QP-VNGA160412			●									2	3.0	1.2	9.525	4.76	3.81	○							
2QP-VNGA**-L	2QP-VNGA160404-L	●	●	●			●						2	3.1	0.4	9.525	4.76	3.81			○					
	2QP-VNGA160408-L	●	●	●			●						2	2.2	0.8	9.525	4.76	3.81			○					
	2QP-VNGA160412-L			●									2	3.0	1.2	9.525	4.76	3.81			○					
2QP-VNGA**-LF	2QP-VNGA160404-LF			●									2	3.1	0.4	9.525	4.76	3.81				○				
	2QP-VNGA160408-LF			●									2	2.2	0.8	9.525	4.76	3.81				○				
	2QP-VNGA160412-LF			●									2	3.0	1.2	9.525	4.76	3.81				○				
2QP-VNGA**-LC	2QP-VNGA160404-LC			●									2	3.1	0.4	9.525	4.76	3.81					○			
	2QP-VNGA160408-LC			●									2	2.2	0.8	9.525	4.76	3.81					○			
	2QP-VNGA160412-LC			●									2	3.0	1.2	9.525	4.76	3.81					○			
2QP-VNGA**-H	2QP-VNGA160404-H		●	●				●	●				2	3.1	0.4	9.525	4.76	3.81						○		
	2QP-VNGA160408-H		●	●				●	●				2	2.2	0.8	9.525	4.76	3.81						○		
	2QP-VNGA160412-H			●									2	3.0	1.2	9.525	4.76	3.81						○		
2QP-VNGM**-H*	2QP-VNGM160408-HF		●										2	2.2	0.8	9.525	4.76	3.81								○
	2QP-VNGM160408-HM		●										2	2.4	0.8	9.525	4.76	3.81								○
	2QP-VNGM160408-HP	●		●									2	2.2	0.8	9.525	4.76	3.81								○
4QP-VNGA	4QP-VNGA160404				●								4	3.1	0.4	9.525	4.76	3.81	○							
	4QP-VNGA160408				●								4	2.2	0.8	9.525	4.76	3.81	○							
4QS-VNGA	4QS-VNGA160408			●									4	1.7	0.8	9.525	4.76	3.81	○							
4QS-VNGA**-H	4QS-VNGA160408-H			●									4	1.7	0.8	9.525	4.76	3.81						○		
4QS-VNGG**-HM	4QS-VNGG160408-HM			●									4	1.7	0.8	9.525	4.76	3.81								○

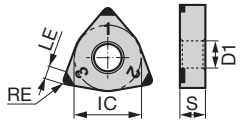
● : Line up

Reference pages: External toolholder → C059 - Internal toolholder → D070 -
TungCap → K015 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BXC50	BX310	BX330	BX360	BX380	BX480	BX930
P	Steel										
M	Stainless										
K	Cast iron									✠	●◐
N	Non-ferrous										
S	Superalloy										
H	Hard material	●	●◐	●◐	✠	●	●◐	●◐	✠		
	Sintered metal									◐✠	



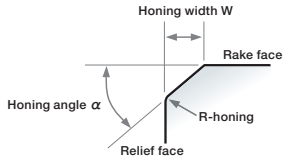
Shape	Designation	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	CL	H	Wiper	Chipbreaker
3QP-WNGA	3QP-WNGA080404	3	2.3	0.4	12.7	4.76	5.16	○							
	3QP-WNGA080408	3	2.2	0.8	12.7	4.76	5.16	○							
	3QP-WNGA080412	3	2.4	1.2	12.7	4.76	5.16	○							
3QP-WNGA**-L	3QP-WNGA080408-L	3	2.2	0.8	12.7	4.76	5.16			○					
3QP-WNGA**-LF	3QP-WNGA080408-LF	3	2.2	0.8	12.7	4.76	5.16				○				
3QP-WNGA**-H	3QP-WNGA080408-H	3	2.2	0.8	12.7	4.76	5.16						○		
3QP-WNGA**WL	3QP-WNGA080408WL	3	2.2	0.8	12.7	4.76	5.16	○						○	
6QP-WNGA	6QP-WNGA080404	6	2.3	0.4	12.7	4.76	5.16	○							
	6QP-WNGA080408	6	2.2	0.8	12.7	4.76	5.16	○							
6QS-WNGA	6QS-WNGA080408	6	1.5	0.8	12.7	4.76	5.16	○							
6QS-WNGA**-H	6QS-WNGA080408-H	6	1.5	0.8	12.7	4.76	5.16						○		

*Please see the page B199 about the toolholders recommended for wiper inserts of the designation with WL at the end.

● : Line up

Honing specification

	BXM10 BX310 BX330 BX480	BXA20	BXM20	BX360 BX380	BX470	BX910 BX930 BXC50	BXC90
Standard	S01325	S01325	S01325	S01325	T01315	S01325	T02020
Sharp edge	-	-	-	-	F	-	-
-L	S01315	S01315	S01315	-	-	-	-
-LF	-	S00515	-	-	-	-	-
-LC	-	S00535	-	-	-	-	-
-H	-	S01835	S01835	S01335	-	-	-
Wiper	S01315	S01315	S01315	-	-	-	-



S	0	1	3	2	5
Shape	Honing width (W) (mm)			Honing angle : α	

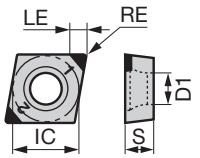
T ··· Chamfered honing
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

Reference pages: External toolholder → C034 - Internal toolholder → D031 -
TungCap → C035 -, K011 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930
P	Steel									
M	Stainless									
K	Cast iron							◐	✠	◐
N	Non-ferrous									
S	Superalloy							◐		
H	Hard material	●	◐	◐	●	◐	◐			
	Sintered metal							◐	◐	✠



Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-CCGW	2QP-CCGW060202	●	●								2	2.3	0.2	6.35	2.38	2.8	○							
	2QP-CCGW060204	●	●	●				●	●		2	2.3	0.4	6.35	2.38	2.8	○							
	2QP-CCGW060208			●							2	2.2	0.8	6.35	2.38	2.8	○							
	2QP-CCGW09T304	●	●	●				●	●		2	2.3	0.4	9.525	3.97	4.4	○							
	2QP-CCGW09T308	●	●	●				●			2	2.2	0.8	9.525	3.97	4.4	○							
2QP-CCGW**-L	2QP-CCGW060204-L			●							2	2.3	0.4	6.35	2.38	2.8			○					
	2QP-CCGW060208-L			●							2	2.2	0.8	6.35	2.38	2.8			○					
	2QP-CCGW09T304-L			●							2	2.3	0.4	9.525	3.97	4.4			○					
	2QP-CCGW09T308-L			●							2	2.2	0.8	9.525	3.97	4.4			○					
2QP-CCGW**-LF	2QP-CCGW060204-LF			●							2	2.3	0.4	6.35	2.38	2.8				○				
	2QP-CCGW060208-LF			●							2	2.2	0.8	6.35	2.38	2.8				○				
	2QP-CCGW09T304-LF			●							2	2.3	0.4	9.525	3.97	4.4				○				
	2QP-CCGW09T308-LF			●							2	2.2	0.8	9.525	3.97	4.4				○				
2QP-CCGW**-LC	2QP-CCGW060204-LC			●							2	2.3	0.4	6.35	2.38	2.8					○			
	2QP-CCGW060208-LC			●							2	2.2	0.8	6.35	2.38	2.8					○			
	2QP-CCGW09T304-LC			●							2	2.3	0.4	9.525	3.97	4.4					○			
	2QP-CCGW09T308-LC			●							2	2.2	0.8	9.525	3.97	4.4					○			
2QP-CCGW**-H	2QP-CCGW09T304-H			●							2	2.3	0.4	9.525	3.97	4.4						○		
	2QP-CCGW09T308-H			●							2	2.2	0.8	9.525	3.97	4.4						○		
2QP-CCGW**WL	2QP-CCGW09T304WL			●							2	2.3	0.4	9.525	3.97	4.4	○						○	
	2QP-CCGW09T308WL			●							2	2.2	0.8	9.525	3.97	4.4	○						○	
2QP-CCGT**-HP	2QP-CCGT060204-HP	●		●							2	2.3	0.4	6.35	2.38	2.8								○
	2QP-CCGT09T304-HP	●		●							2	2.3	0.4	9.525	3.97	4.4								○
	2QP-CCGT09T308-HP	●		●							2	2.2	0.8	9.525	3.97	4.4								○
2QP-CCGT**WL-HP	2QP-CCGT09T304WL-HP	●									2	2.3	0.4	9.525	3.97	4.4							○	○
	2QP-CCGT09T308WL-HP	●									2	2.2	0.8	9.525	3.97	4.4							○	○

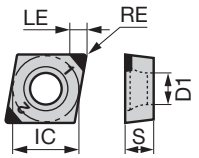
● : Line up

Reference pages: External toolholder → C024 - Internal toolholder → D014 -
J-Series toolholder → G019 - PINZBOHR® → K180 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930
P	Steel									
M	Stainless									
K	Cast iron							●◐	✠	●◐
N	Non-ferrous									
S	Superalloy									
H	Hard material	●	●◐	●◐	●	●◐	●◐			
	Sintered metal							●◐	◐✠	



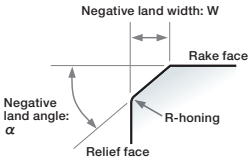
Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-CCMW	**2QP-CCMW060202**				●	●	●				2	2.3	0.2	6.35	2.38	2.8	○							
	2QP-CCMW060204				●	●	●			●	2	2.3	0.4	6.35	2.38	2.8	○							
	2QP-CCMW09T304				●	●	●			●	2	2.3	0.4	9.525	3.97	4.4	○							
	2QP-CCMW09T308				●	●	●				2	2.2	0.8	9.525	3.97	4.4	○							
Q-CCMW	**Q-CCMW060204**					●					1	2.5	0.4	6.35	2.38	2.8	○							
	Q-CCMW09T304					●					1	2.5	0.4	9.525	3.97	4.4	○							
1QP-CCGW	**1QP-CCGW03X102**				●			●			1	1.4	0.2	3.57	1.39	1.9	○							
	1QP-CCGW03X104				●			●			1	1.3	0.4	3.57	1.39	1.9	○							
	1QP-CCGW04T102				●			●			1	1.9	0.2	4.37	1.79	2.3	○							
	1QP-CCGW04T104				●			●			1	1.8	0.4	4.37	1.79	2.3	○							
2QP-CPGW	**2QP-CPGW080204**			●							2	2.3	0.4	7.94	2.38	3.4	○							
	2QP-CPGW080208			●							2	2.2	0.8	7.94	2.38	3.4	○							
	2QP-CPGW090304			●							2	2.3	0.4	9.525	3.18	4.4	○							
	2QP-CPGW090308			●							2	2.2	0.8	9.525	3.18	4.4	○							
CPGA-QBN**	**CPGA090204-QBN**						●				1	4.0	0.4	9.525	2.38	4.0	○							
	CPGA090208-QBN						●				1	3.8	0.8	9.525	2.38	4.0	○							

Q-CCMW: 2 pieces per package

● : Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S	0	1	3	2	5
Edge prep. ID	Negative land width W			Negative land angle α	

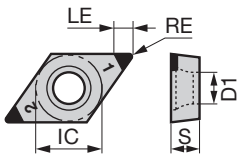
T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

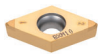
Reference pages: External toolholder → C024 - Internal toolholder → D014 -
J-Series toolholder → G019 - PINZBOHR® → K180 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930
P	Steel									
M	Stainless									
K	Cast iron							●◐	✠	●◐
N	Non-ferrous									
S	Superalloy									
H	Hard material	●	●◐	●◐	●	●◐	●◐			
	Sintered metal							●◐	◐✠	



Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
		Dimension (mm)															Honing							
2QP-DCGW	2QP-DCGW070202	●	●	●							2	2.7	0.2	6.35	2.38	2.8	○							
	2QP-DCGW070204	●	●	●				●	●		2	2.5	0.4	6.35	2.38	2.8	○							
	2QP-DCGW070208			●				●			2	2.5	0.8	6.35	2.38	2.8	○							
	2QP-DCGW11T302	●	●	●							2	2.7	0.2	9.525	3.97	4.4	○							
	2QP-DCGW11T304	●	●	●				●	●		2	2.5	0.4	9.525	3.97	4.4	○							
	2QP-DCGW11T308	●	●	●				●			2	2.1	0.8	9.525	3.97	4.4	○							
2QP-DCGW**-L	2QP-DCGW070204-L			●							2	2.5	0.4	6.35	2.38	2.8			○					
	2QP-DCGW070208-L			●							2	2.5	0.8	6.35	2.38	2.8			○					
	2QP-DCGW11T304-L			●							2	2.5	0.4	9.525	3.97	4.4			○					
	2QP-DCGW11T308-L			●							2	2.1	0.8	9.525	3.97	4.4			○					
2QP-DCGW**-LF	2QP-DCGW070204-LF			●							2	2.5	0.4	6.35	2.38	2.8				○				
	2QP-DCGW070208-LF			●							2	2.5	0.8	6.35	2.38	2.8				○				
	2QP-DCGW11T304-LF			●							2	2.5	0.4	9.525	3.97	4.4				○				
	2QP-DCGW11T308-LF			●							2	2.1	0.8	9.525	3.97	4.4				○				
2QP-DCGW**-LC	2QP-DCGW070204-LC			●							2	2.5	0.4	6.35	2.38	2.8					○			
	2QP-DCGW070208-LC			●							2	2.5	0.8	6.35	2.38	2.8					○			
	2QP-DCGW11T304-LC			●							2	2.5	0.4	9.525	3.97	4.4					○			
	2QP-DCGW11T308-LC			●							2	2.1	0.8	9.525	3.97	4.4					○			
2QP-DCGW**-H	2QP-DCGW11T304-H			●							2	2.5	0.4	9.525	3.97	4.4						○		
	2QP-DCGW11T308-H			●							2	2.1	0.8	9.525	3.97	4.4						○		
2QP-DCGT**-HP	2QP-DCGT070204-HP	●		●							2	2.5	0.4	6.35	2.38	2.8								○
	2QP-DCGT11T304-HP	●		●							2	2.5	0.4	9.525	3.97	4.4								○
	2QP-DCGT11T308-HP	●		●							2	2.1	0.8	9.525	3.97	4.4								○

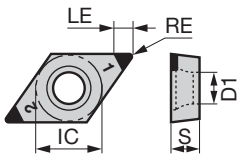
● : Line up

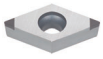
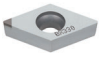
Reference pages: External toolholder → C048 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930
P	Steel									
M	Stainless									
K	Cast iron							◐	✠	◐
N	Non-ferrous									
S	Superalloy									
H	Hard material	●	◐	◐	●	◐	◐			
	Sintered metal							◐	◐✠	



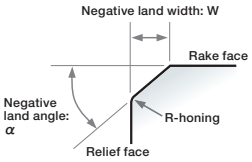
Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
2QP-DCMW	2QP-DCMW070202				●	●	●				2	2.7	0.2	6.35	2.38	2.8	○							
	2QP-DCMW070204				●	●	●			●	2	2.5	0.4	6.35	2.38	2.8	○							
	2QP-DCMW11T302				●	●	●				2	2.7	0.2	9.525	3.97	4.4	○							
	2QP-DCMW11T304				●	●	●			●	2	2.5	0.4	9.525	3.97	4.4	○							
	2QP-DCMW11T308				●	●	●				2	2.1	0.8	9.525	3.97	4.4	○							
2QP-DCGW**F	2QP-DCGW11T302F							●			2	2.7	0.2	9.525	3.97	4.4		○						
	2QP-DCGW11T304F							●			2	2.5	0.4	9.525	3.97	4.4		○						
Q-DCMW	Q-DCMW070204					●					1	2.1	0.4	6.35	2.38	2.8	○							
	Q-DCMW11T304					●					1	2.1	0.4	9.525	3.97	4.4	○							
																								

Q-DCMW: 2 pieces per package

●: Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S	0	1	3	2	5
Edge prep. ID	Negative land width W			Negative land angle α	

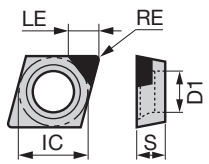
T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

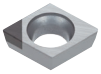
Reference pages: External toolholder → C048 - Internal toolholder → D048 -
J-Series toolholder → G026 - PINZBOHR® → K184 -

CBN Insert POSITIVE TYPE

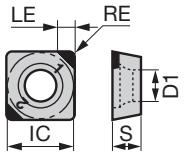
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BX310	BX470
P	Steel		
M	Stainless		
K	Cast iron		●◐
N	Non-ferrous		
S	Superalloy		●◐
H	Hard material	●	
	Sintered metal		●◐



Shape	Designation	BX310	BX470	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
				Dimension (mm)						Honing							
1QP-EPGW	1QP-EPGW03X102	●	●	1	1.4	0.2	3.57	1.39	1.9	○							
	1QP-EPGW03X104	●	●	1	1.3	0.4	3.57	1.39	1.9	○							
	1QP-EPGW040102	●	●	1	1.7	0.2	3.97	1.59	2.3	○							
	1QP-EPGW040104	●	●	1	1.6	0.4	3.97	1.59	2.3	○							

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX910	BX930
P	Steel										
M	Stainless										
K	Cast iron							●◐	✠	●	●◐
N	Non-ferrous										
S	Superalloy										
H	Hard material	●	●◐	●◐	●	●◐	●◐				
	Sintered metal							●◐	◐✠		



Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX910	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
												Dimension (mm)						Honing							
2QP-SPGN	2QP-SPGN090308									●		2	2.4	0.8	9.525	3.18	-	○							
	2QP-SPGN090312									●		2	2.4	1.2	9.525	3.18	-	○							
2QP-SPMN	2QP-SPMN090304					●	●				●	2	2.4	0.4	9.525	3.18	-	○							
	2QP-SPMN090308					●	●				●	2	2.4	0.8	9.525	3.18	-	○							
Q-SPGN	Q-SPGN090304					●						1	2.8	0.4	9.525	3.18	-	○							
	Q-SPGN090308					●						1	2.8	0.8	9.525	3.18	-	○							
SPGN**-QBN	SPGN090304-QBN						●					1	4.1	0.4	9.525	3.18	-	○							
	SPGN090308-QBN						●					1	4.1	0.8	9.525	3.18	-	○							
	SPGN090312-QBN						●					1	4.1	1.2	9.525	3.18	-	○							
	SPGN120308-QBN						●					1	4.1	0.8	12.7	3.18	-	○							
	SPGN120312-QBN						●					1	4.1	1.2	12.7	3.18	-	○							
2QP-SPGW	2QP-SPGW09T308									●		2	2.4	0.8	9.525	3.97	4.4	○							
	2QP-SPGW09T312									●		2	2.4	1.2	9.525	3.97	4.4	○							
	2QP-SPGW120408									●		2	2.4	0.8	12.7	4.76	5.5	○							
	2QP-SPGW120412									●		2	2.4	1.2	12.7	4.76	5.5	○							
	2QP-SPGW120416									●		2	2.4	1.6	12.7	4.76	5.5	○							

Q-SPGN: 2 pieces per package

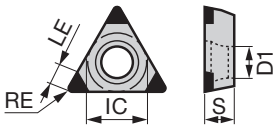
● : Line up

Reference pages: Internal toolholder → D033 - PINZBOHR® → K197 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX910	BX930
P	Steel										
M	Stainless										
K	Cast iron							◐	✠	●	◐
N	Non-ferrous										
S	Superalloy										
H	Hard material	●	◐	◐	●	◐	◐				
	Sintered metal							◐	◐	✠	



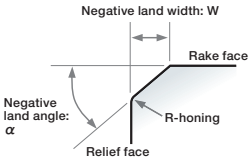
Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX910	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
3QP-TPGN	3QP-TPGN110302								●			3	2.3	0.2	6.35	3.18	-	○							
	3QP-TPGN110304								●			3	2.2	0.4	6.35	3.18	-	○							
	3QP-TPGN110308								●	●		3	2.2	0.8	6.35	3.18	-	○							
	3QP-TPGN110312									●		3	2.4	1.2	6.35	3.18	-	○							
	3QP-TPGN160304								●			3	2.2	0.4	9.525	4.76	-	○							
	3QP-TPGN160308								●			3	1.9	0.8	9.525	4.76	-	○							
3QP-TPMN	3QP-TPMN110302					●	●				●	3	2.3	0.2	6.35	3.18	-	○							
	3QP-TPMN110304					●	●				●	3	2.2	0.4	6.35	3.18	-	○							
	3QP-TPMN110308					●	●				●	3	1.9	0.8	6.35	3.18	-	○							
	3QP-TPMN160304					●	●				●	3	2.2	0.4	9.525	3.18	-	○							
	3QP-TPMN160308					●	●				●	3	1.9	0.8	9.525	3.18	-	○							
Q-TPGN	Q-TPGN110304					●						1	2.2	0.4	6.35	3.18	-	○							
	Q-TPGN110308					●						1	2.2	0.8	6.35	3.18	-	○							
	Q-TPGN160304					●						1	2.3	0.4	9.525	3.18	-	○							
	Q-TPGN160308					●						1	1.9	0.8	9.525	3.18	-	○							
TPGN**-QBN	TPGN110304-QBN						●					1	3.7	0.4	6.35	3.18	-	○							
	TPGN110308-QBN						●					1	3.5	0.8	6.35	3.18	-	○							
	TPGN160304-QBN						●					1	4.2	0.4	9.525	3.18	-	○							
	TPGN160308-QBN						●					1	4.0	0.8	9.525	3.18	-	○							
TBGN**-QBN	TBGN060104-15-QBN						●					3	-	0.4	3.97	1.59	-	○							
	TBGN060108-15-QBN						●					3	-	0.8	3.97	1.59	-	○							

Q-TPGN: 2 pieces per package

● : Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S 0 1 3 2 5

Edge prep. ID: S
Negative land width W: 0 1 3
Negative land angle α: 2 5

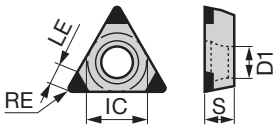
T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

Reference pages: Internal toolholder → D044 - Cartridge → K193 -
Boring bar tool → K209 - Top-borer tool → K213

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX910	BX930
P	Steel										
M	Stainless										
K	Cast iron							●◐	✠	●	●◐
N	Non-ferrous										
S	Superalloy										
H	Hard material	●	●◐	●◐	●	●◐	●◐				
	Sintered metal							●◐	◐✠		



Shape	Designation	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
3QP-TPGW	3QP-TPGW080204	3	2.2	0.4	4.76	2.38	2.3	○							
	3QP-TPGW080208	3	2.2	0.8	4.76	2.38	2.3	○							
	3QP-TPGW090204	3	2.2	0.4	5.56	2.38	2.5	○							
	3QP-TPGW090208	3	2.2	0.8	5.56	2.38	2.5	○							
	3QP-TPGW110202	3	2.3	0.2	6.35	2.38	2.8	○							
	3QP-TPGW110204	3	2.2	0.4	6.35	2.38	2.8	○							
	3QP-TPGW110208	3	2.2	0.8	6.35	2.38	2.8	○							
	3QP-TPGW110302	3	2.3	0.2	6.35	3.18	3.4	○							
	3QP-TPGW110304	3	2.2	0.4	6.35	3.18	3.4	○							
	3QP-TPGW110308	3	2.2	0.8	6.35	3.18	3.4	○							
	3QP-TPGW130302	3	2.3	0.2	7.94	3.18	3.4	○							
	3QP-TPGW130304	3	2.2	0.4	7.94	3.18	3.4	○							
	3QP-TPGW130308	3	2.2	0.8	7.94	3.18	3.4	○							
	3QP-TPGW16T302	3	2.2	0.2	9.525	3.97	4.4	○							
	3QP-TPGW16T308	3	1.9	0.8	9.525	3.97	4.4	○							
	3QP-TPGW160404	3	2.2	0.4	9.525	4.76	4.4	○							
	3QP-TPGW160408	3	1.9	0.8	9.525	4.76	4.4	○							
3QP-TPGW**F	3QP-TPGW110304F	3	2.2	0.4	6.35	3.18	3.4		○						
	3QP-TPGW110308F	3	1.9	0.8	6.35	3.18	3.4		○						
3QP-TPGW**-L	3QP-TPGW110304-L	3	2.2	0.4	6.35	3.18	3.4			○					
	3QP-TPGW110308-L	3	2.2	0.8	6.35	3.18	3.4			○					
3QP-TPGW**-LF	3QP-TPGW110304-LF	3	2.2	0.4	6.35	3.18	3.4				○				
	3QP-TPGW110308-LF	3	2.2	0.8	6.35	3.18	3.4				○				
3QP-TPGW**-LC	3QP-TPGW110304-LC	3	2.2	0.4	6.35	3.18	3.4					○			
	3QP-TPGW110308-LC	3	2.2	0.8	6.35	3.18	3.4					○			
3QP-TPGW**-H	3QP-TPGW110304-H	3	2.2	0.4	6.35	3.18	3.4						○		
	3QP-TPGW110308-H	3	2.2	0.8	6.35	3.18	3.4						○		
	3QP-TPGW160404-H	3	2.2	0.4	9.525	4.76	4.4						○		
	3QP-TPGW160408-H	3	1.9	0.8	9.525	4.76	4.4						○		

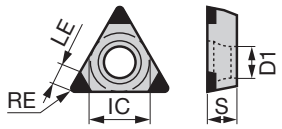
● : Line up

Reference pages: Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX470	BX480	BX910	BX930
P	Steel										
M	Stainless										
K	Cast iron							●◐	✠	●	●◐
N	Non-ferrous										
S	Superalloy										
H	Hard material	●	●◐	●◐	●	●◐	●◐				
	Sintered metal							●◐	◐✠		

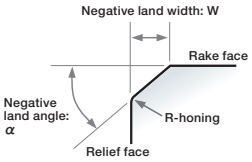


Shape	Designation	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
3QP-TPGT	**3QP-TPGT110304-HP**	3	2.2	0.4	6.35	3.18	3.4								○
	3QP-TPGT110308-HP	3	1.9	0.8	6.35	3.18	3.4								○
3QP-TPMW	**3QP-TPMW080204**	3	2.2	0.4	4.76	2.38	2.3	○							
	3QP-TPMW090202	3	2.3	0.2	5.56	2.38	2.5	○							
	3QP-TPMW090204	3	2.2	0.4	5.56	2.38	2.5	○							
	3QP-TPMW110202	3	2.3	0.2	6.35	2.38	2.8	○							
	3QP-TPMW110204	3	2.2	0.4	6.35	2.38	2.8	○							
	3QP-TPMW110302	3	2.3	0.2	6.35	3.18	3.4	○							
	3QP-TPMW110304	3	2.2	0.4	6.35	3.18	3.4	○							
	3QP-TPMW110308	3	1.9	0.8	6.35	3.18	3.4	○							
	3QP-TPMW130302	3	2.4	0.2	7.94	3.18	3.4	○							
	3QP-TPMW130304	3	2.2	0.4	7.94	3.18	3.4	○							
	3QP-TPMW16T304	3	2.2	0.4	9.525	3.97	4.4	○							
	3QP-TPMW16T308	3	1.9	0.8	9.525	3.97	4.4	○							
	3QP-TPMW160404	3	2.2	0.4	9.525	4.76	4.4	○							
	3QP-TPMW160408	3	1.9	0.8	9.525	4.76	4.4	○							
3QP-TCGW	**3QP-TCGW090204**	3	2.2	0.4	5.56	2.38	2.5	○							
	3QP-TCGW090208	3	1.9	0.8	5.56	2.38	2.5	○							
	3QP-TCGW110204	3	2.2	0.4	6.35	2.38	2.8	○							
	3QP-TCGW110208	3	1.9	0.8	6.35	2.38	2.8	○							
	3QP-TCGW16T304	3	2.2	0.4	9.525	3.97	4.3	○							
	3QP-TCGW16T308	3	1.9	0.8	9.525	3.97	4.3	○							

● : Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S 0 1 3 2 5

- Edge prep. ID: S
- Negative land width W: 0 1 3
- Negative land angle α: 2 5

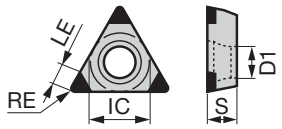
T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

Reference pages: Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BX330	BX360
P	Steel		
M	Stainless		
K	Cast iron		
N	Non-ferrous		
S	Superalloy		
H	Hard material	●◐	●◐



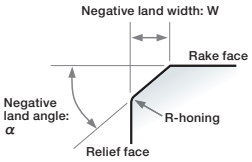
Shape	Designation	BX330	BX360	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
				Dimension (mm)						Honing							
Q-TPMW	**Q-TPMW080204**	●		1	2.2	0.4	4.76	2.38	2.3	○							
	Q-TPMW090202	●		1	2.4	0.2	5.56	2.38	2.5	○							
	Q-TPMW090204	●		1	2.3	0.4	5.56	2.38	2.5	○							
	Q-TPMW110202	●		1	2.4	0.2	6.35	2.38	2.8	○							
	Q-TPMW110204	●		1	2.2	0.4	6.35	2.38	2.8	○							
	Q-TPMW110304	●		1	2.3	0.4	6.35	3.18	3.4	○							
	Q-TPMW110308	●		1	2.2	0.8	6.35	3.18	3.4	○							
	Q-TPMW130302	●		1	2.4	0.2	7.94	3.18	3.4	○							
	Q-TPMW130304	●		1	2.3	0.4	7.94	3.18	3.4	○							
	Q-TPMW16T304	●		1	2.3	0.4	9.525	3.97	4.4	○							
	Q-TPMW160404	●		1	2.3	0.4	9.525	4.76	4.4	○							
	Q-TPMW160408	●		1	1.9	0.8	9.525	4.76	4.4	○							
TPGW-QBN**	**TPGW090202-QBN**		●	1	3.3	0.2	5.56	2.38	2.5	○							
	TPGW090204-QBN		●	1	3.2	0.4	5.56	2.38	2.5	○							
	TPGW110202-QBN		●	1	3.9	0.2	6.35	2.38	2.8	○							
	TPGW110204-QBN		●	1	3.7	0.4	6.35	2.38	2.8	○							
	TPGW130302-QBN		●	1	3.9	0.2	7.94	3.18	3.4	○							
	TPGW130304-QBN		●	1	3.7	0.4	7.94	3.18	3.4	○							
	TPGW16T302-QBN		●	1	4.4	0.2	9.525	3.97	4.4	○							
	TPGW16T304-QBN		●	1	4.2	0.4	9.525	3.97	4.4	○							
	TPGW16T308-QBN		●	1	4.0	0.8	9.525	3.97	4.4	○							
TPGA-QBN**	**TPGA090202-QBN**		●	1	3.1	0.2	5.56	2.38	3.2	○							
	TPGA090204-QBN		●	1	2.9	0.4	5.56	2.38	3.2	○							
	TPGA110202-QBN		●	1	3.9	0.2	6.35	2.38	3.0	○							
	TPGA110204-QBN		●	1	3.7	0.4	6.35	2.38	3.0	○							
	TPGA110302-QBN		●	1	3.9	0.2	6.35	3.18	3.0	○							
	TPGA110304-QBN		●	1	3.7	0.4	6.35	3.18	3.0	○							
	TPGA160302-QBN		●	1	4.4	0.2	9.525	3.18	4.0	○							
	TPGA160304-QBN		●	1	4.2	0.4	9.525	3.18	4.0	○							
	TPGA160308-QBN		●	1	4.0	0.8	9.525	3.18	4.0	○							

Q-TPMW: 2 pieces per package

● : Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S 0 1 3 2 5

Edge prep. ID — Negative land width W — Negative land angle α

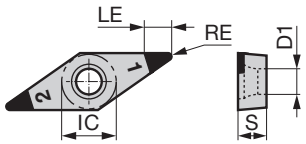
T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

Reference pages: Internal toolholder → D043 - Cartridge → K193 -
Boring bar tool → K209 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX930
P	Steel							
M	Stainless							
K	Cast iron							●◐
N	Non-ferrous							
S	Superalloy							
H	Hard material	●	●◐	●◐	●	●◐	●◐	
	Sintered metal							

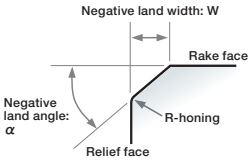


Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
									Dimension (mm)						Honing							
2QP-VBGW	2QP-VBGW110204			●					2	3.1	0.4	6.35	2.38	2.8	○							
	2QP-VBGW110208			●					2	2.2	0.8	6.35	2.38	2.8	○							
	2QP-VBGW110304	●	●	●					2	3.1	0.4	6.35	3.18	2.8	○							
	2QP-VBGW110308	●	●	●					2	2.2	0.8	6.35	3.18	2.8	○							
	2QP-VBGW160404	●	●	●					2	3.1	0.4	9.525	4.76	4.4	○							
	2QP-VBGW160408	●	●	●					2	2.2	0.8	9.525	4.76	4.4	○							
	2QP-VBGW160412			●					2	3.0	1.2	9.525	4.76	4.4	○							
2QP-VBGW**-L	2QP-VBGW110304-L			●					2	3.1	0.4	6.35	3.18	2.8			○					
	2QP-VBGW110308-L			●					2	2.2	0.8	6.35	3.18	2.8			○					
	2QP-VBGW160404-L			●					2	3.1	0.4	9.525	4.76	4.4			○					
	2QP-VBGW160408-L			●					2	2.2	0.8	9.525	4.76	4.4			○					
2QP-VBGW**-LF	2QP-VBGW110304-LF			●					2	3.1	0.4	6.35	3.18	2.8				○				
	2QP-VBGW110308-LF			●					2	2.2	0.8	6.35	3.18	2.8				○				
	2QP-VBGW160404-LF			●					2	3.1	0.4	9.525	4.76	4.4				○				
	2QP-VBGW160408-LF			●					2	2.2	0.8	9.525	4.76	4.4				○				
2QP-VBGW**-LC	2QP-VBGW110304-LC			●					2	3.1	0.4	6.35	3.18	2.8					○			
	2QP-VBGW110308-LC			●					2	2.2	0.8	6.35	3.18	2.8					○			
	2QP-VBGW160404-LC			●					2	3.1	0.4	9.525	4.76	4.4					○			
	2QP-VBGW160408-LC			●					2	2.2	0.8	9.525	4.76	4.4					○			
2QP-VBGW**-H	2QP-VBGW160404-H			●					2	3.1	0.4	9.525	4.76	4.4						○		
	2QP-VBGW160408-H			●					2	2.2	0.8	9.525	4.76	4.4						○		

●: Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S	0	1	3	2	5
Edge prep. ID	Negative land width W			Negative land angle α	

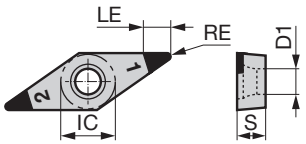
T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

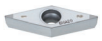
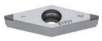
Reference pages: External toolholder → C062 - Internal toolholder → D036 -
J-Series toolholder → G033 - TungCap → K022

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

		BXM10	BXM20	BXA20	BX310	BX330	BX360	BX930
P	Steel							
M	Stainless							
K	Cast iron							●◐
N	Non-ferrous							
S	Superalloy							
H	Hard material	●	●◐	●◐	●	●◐	●◐	
	Sintered metal							

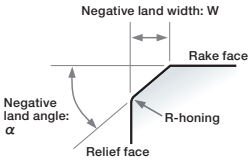


Shape	Designation	BXM10	BXM20	BXA20	BX310	BX330	BX360	BX930	No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LF	LC	H	Wiper	Chipbreaker
									Dimension (mm)						Honing							
2QP-VBGT**-HP	2QP-VBGT110304-HP	●		●					2	3	0.4	6.35	3.18	2.8								○
	2QP-VBGT110308-HP	●		●					2	2.2	0.8	6.35	3.18	2.8								○
	2QP-VBGT160404-HP	●		●					2	3	0.4	9.525	4.76	4.4								○
	2QP-VBGT160408-HP	●		●					2	2.2	0.8	9.525	4.76	4.4								○
2QP-VBMW	2QP-VBMW110304				●	●	●	●	2	3.1	0.4	6.35	3.18	2.8	○							
	2QP-VBMW110308				●	●	●	●	2	2.2	0.8	6.35	3.18	2.8	○							
	2QP-VBMW160404				●	●	●		2	3.1	0.4	9.525	4.76	4.4	○							
	2QP-VBMW160408				●	●	●		2	2.2	0.8	9.525	4.76	4.4	○							
2QP-VCGW	2QP-VCGW080204			●					2	3.1	0.4	4.76	2.38	2.3	○							
	2QP-VCGW080208			●					2	2.2	0.8	4.76	2.38	2.3	○							
	2QP-VCGW160404	●	●	●					2	3.1	0.4	9.525	4.76	4.4	○							
	2QP-VCGW160408			●					2	2.2	0.8	9.525	4.76	4.4	○							
2QP-VCGW**-H	2QP-VCGW160404-H			●					2	3.1	0.4	9.525	4.76	4.4						○		
	2QP-VCGW160408-H			●					2	2.2	0.8	9.525	4.76	4.4						○		
																						
2QP-VCMW	2QP-VCMW160404					●	●	●	2	3.1	0.4	9.525	4.76	4.4	○							
																						

● : Line up

Edge preparation specification

	BXM10 BXM20	BXA20	BX310 BX330 BX360 BX480 BX930	BX470	BX910
Standard	S01325	S01325	S00515	T01315	S01315
Sharp edge	-	-	-	F	
-L	-	S01315	-	-	-
-LF	-	S00515	-	-	-
-LC	-	S00535	-	-	-
-H	-	S01835	-	-	-
Wiper	-	S01315	-	-	-



S	0	1	3	2	5
Edge prep. ID	Negative land width W			Negative land angle α	

T ··· Chamfered
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge

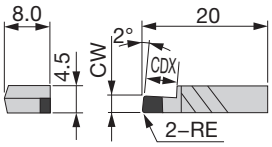
Reference pages: External toolholder → C062 - Internal toolholder → D036 -
J-Series toolholder → G033 - TungCap → K016 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

For GX-RE

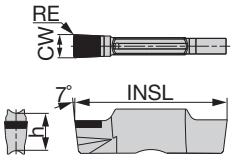
		BX360
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloy	
H	Hard material	●◐



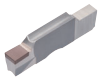
Shape	Designation	BX360	Dimension (mm) CW±0.05	RE	CDX
XGR**-QBN	XGR6310S-QBN		-	-	-
	XGR6315S-QBN	●	1.5	0.2	2.3
	XGR6320S-QBN	●	2	0.2	3
	XGR6325S-QBN	●	2.5	0.2	3.8
	XGR6330S-QBN	●	3	0.2	4.5
	XGR6335S-QBN	●	3.5	0.2	5.3
	XGR6340S-QBN	●	4	0.2	6
	XGR6345S-QBN	●	4.5	0.2	6

For TungCut

		BX360
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloy	
H	Hard material	●◐



Shape	Designation	BX360	Dimension (mm) Seat size	CW±0.025	RE	INSL	h
SGN	SGN200-020	●	2	2	0.2	20	5
	SGN300-020	●	3	3	0.2	20	5
	SGN400-020	●	4	4	0.2	20	5



● : Line up

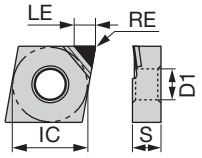
Reference pages: XGR...: Toolholder → F082 - SGN...: Toolholder → F010 -

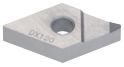
PCD Insert

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

Negative type with rake

		DX110	DX120
P	Steel		
M	Stainless		
K	Cast iron		
N	Non-ferrous	●◐	●◐
S	Superalloy		
H	Hard material		



Shape	Designation	DX110	DX120	No. of corners	LE	RE	IC	S	D1	Sharp edge	Rake angle
				Dimension (mm)						Honing	
CNMN-DIA**	**CNMM120402-DIA**		●	1	3.5	0.2	12.7	4.76	5.16	○	○
	CNMM120404-DIA		●	1	3.5	0.4	12.7	4.76	5.16	○	○
	1QP-CNMM120402	●		1	2.8	0.2	12.7	4.76	5.16	○	○
	1QP-CNMM120404	●		1	2.8	0.4	12.7	4.76	5.16	○	○
DNMM-DIA**	**DNMM150402-DIA**		●	1	3.3	0.2	12.7	4.76	5.16	○	○
	DNMM150404-DIA		●	1	3.1	0.4	12.7	4.76	5.16	○	○
TNMM-DIA**	**TNMM160402-DIA**		●	1	3.3	0.2	9.528	4.76	3.81	○	○
	TNMM160404-DIA		●	1	3.2	0.4	9.528	4.76	3.81	○	○
	1QP-TNMM160402	●		1	2.7	0.2	9.528	4.76	3.81	○	○
	1QP-TNMM160404	●		1	2.6	0.4	9.528	4.76	3.81	○	○
VNMM-DIA**	**VNMM160402-DIA**		●	1	4.8	0.2	9.528	4.76	3.81	○	○
	VNMM160404-DIA		●	1	4.4	0.4	9.528	4.76	3.81	○	○
	VNMM160408-DIA		●	1	3.6	0.8	9.528	4.76	3.81	○	○

● : Line up

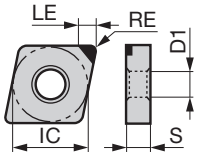
Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 TungCap → K008 -
PINZBOHR® → K180 - Cartridge → K199 -

PCD Insert

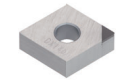
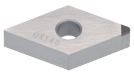
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

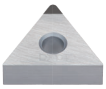
Negative type

		DX140	DX160
P	Steel		
M	Stainless		
K	Cast iron		
N	Non-ferrous	●◐	●◐
S	Superalloy		
H	Hard material		



Shape	Designation	DX140	DX160	No. of corners	LE	RE	IC	S	D1	Sharp edge
				Dimension (mm)						Honing
CNGA**-DIA	CNGA120404-DIA	●		1	3.5	0.4	12.7	4.76	5.16	○
	CNGA120408-DIA	●		1	2.8	0.8	12.7	4.76	5.16	○
DNGA**-DIA	DNGA150404-DIA	●	●	1	3.1	0.4	12.7	4.76	5.16	○
	DNGA150408-DIA	●		1	2.8	0.8	12.7	4.76	5.16	○
SNGA**-DIA	SNGA120404-DIA	●		1	3.6	0.4	12.7	4.76	5.16	○
	SNGA120408-DIA	●		1	3.6	0.8	12.7	4.76	5.16	○
SNGN**-DIA	SNGN120408-DIA	●		1	3.6	0.8	12.7	4.76		○
TNGA**-DIA	TNGA160404-DIA	●	●	1	3.2	0.4	9.525	4.76	3.81	○
	TNGA160408-DIA	●	●	1	2.9	0.8	9.525	4.76	3.81	○



● : Line up

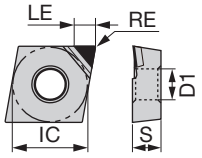
Reference pages: External toolholder → C016 - Internal toolholder → D021 -
J-Series toolholder → G044 - TungCap → K008 -
Cartridge → K193 -

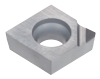
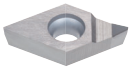
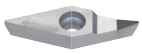
PCD Insert

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

Positive type with rake

		DX110	DX120
P	Steel		
M	Stainless		
K	Cast iron		
N	Non-ferrous	●◐	●◐
S	Superalloy		
H	Hard material		



Shape	Designation	DX110	DX120	No. of corners	LE	RE	IC	S	D1	Sharp edge	Rake angle
				Dimension (mm)						Honing	
CCMT-DIA**	**CCMT060202-DIA**		●	1	2.4	0.2	6.35	2.38	2.8	○	○
	CCMT060204-DIA		●	1	2.4	0.4	6.35	2.38	2.8	○	○
	**CCMT09T302-DIA**		●	1	2.4	0.2	9.525	3.97	4.4	○	○
	CCMT09T304-DIA		●	1	2.4	0.4	9.525	3.97	4.4	○	○
	1QP-CCMT060204	●		1	2.4	0.4	6.35	2.38	2.8	○	○
	1QP-CCMT09T304	●		1	2.4	0.4	6.35	3.97	4.4	○	○
DCMT-DIA**	**DCMT070202-DIA**		●	1	2.3	0.2	6.35	2.38	2.8	○	○
	DCMT070204-DIA		●	1	2.1	0.4	6.35	2.38	2.8	○	○
	**DCMT11T302-DIA**		●	1	3.2	0.2	9.525	3.97	4.4	○	○
	DCMT11T304-DIA		●	1	3.0	0.4	9.525	3.97	4.4	○	○
TCMT-DIA**	**TCMT080202-DIA**		●	1	2.2	0.2	4.76	2.38	2.7	○	○
	TCMT080204-DIA		●	1	2.0	0.4	4.76	2.38	2.7	○	○
	TCMT110202-DIA		●	1	2.4	0.2	6.35	2.38	2.8	○	○
	TCMT110204-DIA		●	1	2.2	0.4	6.35	2.38	2.8	○	○
	TCMT110302-DIA		●	1	2.4	0.2	6.35	3.18	2.8	○	○
	TCMT110304-DIA		●	1	2.2	0.4	6.35	3.18	2.8	○	○
	1QP-TCMT110304	●		1	2.2	0.4	6.35	3.18	2.8	○	○
VCMT-DIA**	**VCMT160402-DIA**		●	1	4.8	0.2	9.525	4.76	4.4	○	○
	VCMT160404-DIA		●	1	4.4	0.4	9.525	4.76	4.4	○	○
											

● : Line up

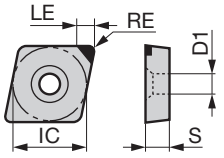
Reference pages: External toolholder → C024 - Internal toolholder → D014 -
J-Series toolholder → G019 - TungCap → K016 -
PINZBOHR® → K180 -

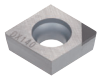
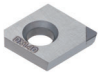
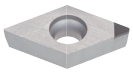
PCD Insert

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

Positive type

		DX120	DX140	DX160
P	Steel			
M	Stainless			
K	Cast iron			
N	Non-ferrous	●◐	●◐	●◐
S	Superalloy			
H	Hard material			



Shape	Designation	DX120	DX140	DX160	No. of corners	LE	RE	IC	S	D1	Sharp edge
					Dimension (mm)						Honing
CCGW-DIA**	**CCGW060200-DIA**		●		1	2.4	0.05	6.35	2.38	2.8	○
	CCGW060202-DIA		●		1	2.4	0.2	6.35	2.38	2.8	○
	CCGW060204-DIA		●		1	2.4	0.4	6.35	2.38	2.8	○
	**CCGW09T302-DIA**		●		1	3.5	0.2	9.525	3.97	4.4	○
	CCGW09T304-DIA		●	●	1	3.5	0.4	9.525	3.97	4.4	○
	CCGW09T308-DIA		●		1	3.4	0.8	9.525	3.97	4.4	○
CPGA-DIA**	**CPGA080202-DIA**		●		1	2.4	0.2	9.525	2.38	4.0	○
	CPGA090204-DIA		●		1	3.5	0.4	9.525	2.38	4.0	○
											
DCGW-DIA**	**DCGW070200-DIA**		●		1	2.4	0.05	6.35	2.38	2.8	○
	DCGW070202-DIA	●	●		1	2.3	0.2	6.35	2.38	2.8	○
	DCGW070204-DIA		●		1	2.1	0.4	6.35	2.38	2.8	○
	**DCGW11T302-DIA**		●		1	3.2	0.2	9.525	3.97	4.4	○
	DCGW11T304-DIA		●		1	3.0	0.4	9.525	3.97	4.4	○
	DCGW11T308-DIA		●		1	2.7	0.8	9.525	3.97	4.4	○
EPGW-DIA**	**EPGW040102-DIA**		●		1	2.0	0.2	3.97	1.59	2.3	○
	EPGW040104-DIA		●		1	1.9	0.4	3.97	1.59	2.3	○
SPGN-DIA**	**SPGN090308-DIA**		●		1	3.6	0.8	9.525	3.18	-	○
	SPGN120302-DIA		●		1	3.6	0.2	12.7	3.18	-	○
	SPGN120304-DIA		●		1	3.6	0.4	12.7	3.18	-	○
	SPGN120308-DIA		●	●	1	3.6	0.8	12.7	3.18	-	○

● : Line up

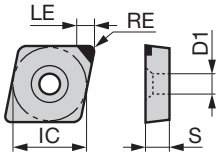
Reference pages: External toolholder → C024 - Internal toolholder → D014 -
Cartridge → K197 - Boring bar tool → K211 -
Top-borer tool → K213

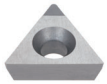
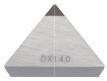
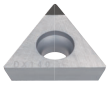
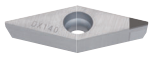
PCD Insert

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

Positive type

		DX120	DX140
P	Steel		
M	Stainless		
K	Cast iron		
N	Non-ferrous	●◐	●◐
S	Superalloy		
H	Hard material		



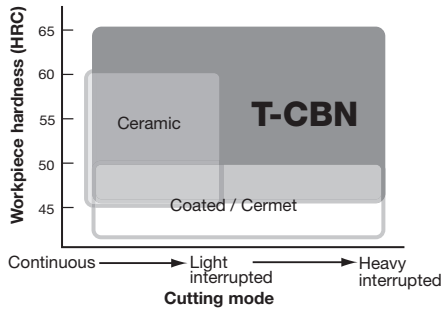
Shape	Designation	DX120	DX140	No. of corners	LE	RE	IC	S	D1	Sharp edge
		Dimension (mm)								Honing
TPGA**-DIA	TPGA090202-DIA		●	1	2.4	0.2	5.56	2.38	2.5	○
	TPGA090204-DIA		●	1	2.2	0.4	5.56	2.38	2.5	○
	TPGA110202-DIA		●	1	2.4	0.2	6.35	2.38	2.8	○
	TPGA110204-DIA		●	1	2.2	0.4	6.35	2.38	2.8	○
	TPGA110302-DIA		●	1	2.4	0.2	6.35	3.18	3.0	○
	TPGA110304-DIA		●	1	2.2	0.4	6.35	3.18	3.0	○
	TPGA110308-DIA		●	1	2.9	0.8	6.35	3.18	3.0	○
	TPGA160302-DIA		●	1	3.3	0.2	9.525	3.18	4.0	○
	TPGA160304-DIA		●	1	3.2	0.4	9.525	3.18	4.0	○
	TPGA160308-DIA		●	1	2.9	0.8	9.525	3.18	4.0	○
TPGN**-DIA	TPGN090204-DIA		●	1	2.2	0.4	5.56	2.38	-	○
	TPGN110304-DIA	●	●	1	3.2	0.4	6.35	3.18	-	○
	TPGN110308-DIA		●	1	2.9	0.8	6.35	3.18	-	○
	TPGN160302-DIA		●	1	3.3	0.2	9.525	3.18	-	○
	TPGN160304-DIA	●	●	1	3.2	0.4	9.525	3.18	-	○
	TPGN160308-DIA		●	1	2.9	0.8	9.525	3.18	-	○
TPGW**-DIA	TPGW080202-DIA		●	1	2.4	0.2	4.76	2.38	2.3	○
	TPGW080204-DIA		●	1	2.3	0.4	4.76	2.38	2.3	○
	TPGW090202-DIA	●	●	1	2.4	0.2	5.56	2.38	2.5	○
	TPGW090204-DIA		●	1	2.2	0.4	5.56	2.38	2.5	○
	TPGW110202-DIA	●	●	1	2.4	0.2	6.35	2.38	2.8	○
	TPGW110204-DIA		●	1	2.2	0.4	6.35	2.38	2.8	○
	TPGW130302-DIA	●	●	1	3.3	0.2	7.94	3.18	3.4	○
	TPGW130304-DIA		●	1	3.2	0.4	7.94	3.18	3.4	○
	TPGW16T302-DIA		●	1	3.3	0.2	9.525	3.97	4.4	○
	TPGW16T304-DIA		●	1	3.2	0.4	9.525	3.97	4.4	○
	TPGW16T308-DIA		●	1	2.9	0.8	9.525	3.97	4.4	○
VCGW**-DIA	VCGW160402-DIA		●	1	4.8	0.2	9.525	4.76	4.4	○
	VCGW160404-DIA		●	1	4.4	0.4	9.525	4.76	4.4	○
										

● : Line up

Reference pages: External toolholder → C063 - Internal toolholder → D043 -
Cartridge → K193 - Boring bar tool → K209 -

H T-CBN series for hardened steel and hard material

Application area



Necessity of PCBN grades

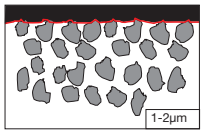
The condition necessary to cut the work

Material is:
Hardness of tool ≥ Hardness of tool X 3

- Hardened steel (60HRC) → 700 Hv
- Cemented carbide → 1600 Hv
- PCBN (BX360) → 3300 Hv

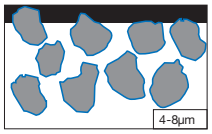
Relation of CBN grain size, surface roughness, and cutting speed

[Fine-grained CBN]



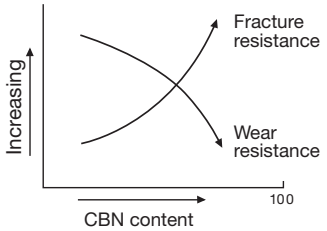
Fine grained PCBN provided with sharp cutting edge.
Good surface roughness

[Rough-grained CBN]



Rough grained PCBN. CBN particles are hold firmly.
Allows high speed machining

Features of CBN grades for machining hardened steel and other hard materials



Fewer CBN content ⇨ Increasing wear resistance
Much CBN content ⇨ Increasing impact resistance

Basic selection of T-CBN grades in machining of hardened steel and hard material

Coated T-CBN grades

BXM10 For high speeds cutting

BXM20 For general purpose, more than *Vc* = 180 m/min

BXA20 For general purpose, less than *Vc* = 180 m/min

Uncoated T-CBN grades

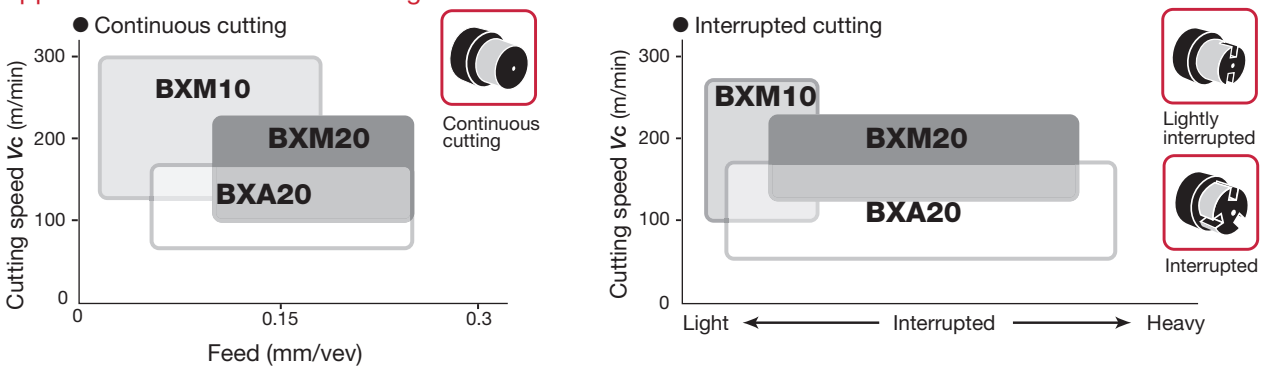
BX310 For high speeds / Priority on wear resistance in continuous cutting

BX330 For medium speeds / Priority on surface quality

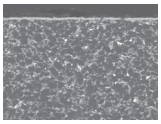
BX360 For low to medium speeds / General purpose grade with excellent fracture resistance

BX380 For low to medium speeds / Priority on fracture resistance in heavy interrupted cutting

Application area of coated T-CBN grades



Effects of Coated T-CBN grades

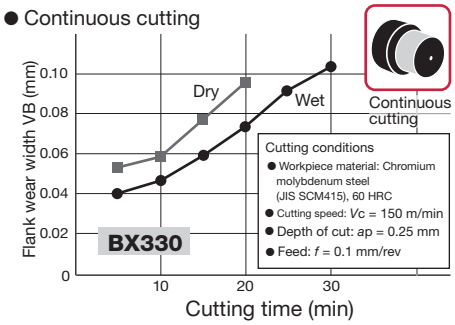


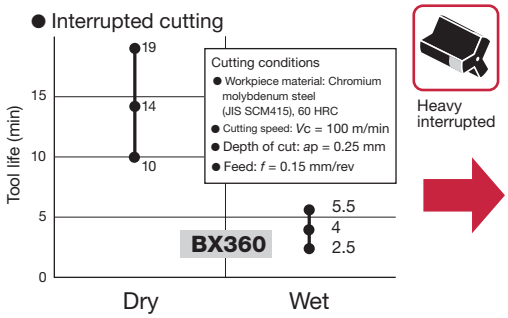
Coated on hard CBN
Hardness:
CBN > Coating layer

- **Protect CBN from oxidation wear**
  Since the coating layer intercepts air, oxidation wear of CBN can be prevented.
- **Peeling of coating layer can be prevented**
  Hard and deformation resistant CBN is excellent substrate material.

→ **Improved resistance to flank wear**

Effects of coolant in machining of hardened steel





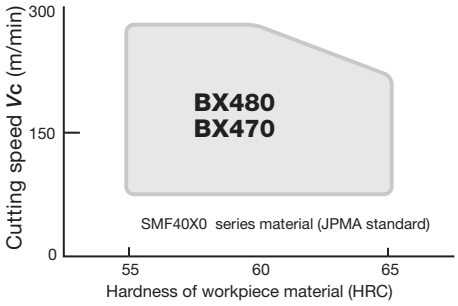
- In continuous cutting, wet cutting is superior to dry cutting in tool life for wear.
- In interrupted cutting, dry cutting is superior to wet cutting in tool life for fracture.

Technical Guide

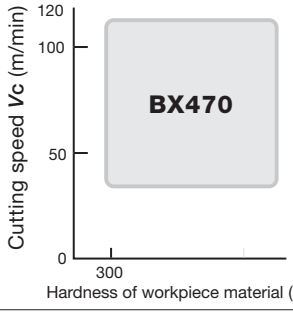
T-CBN series for sintered metal

Application area

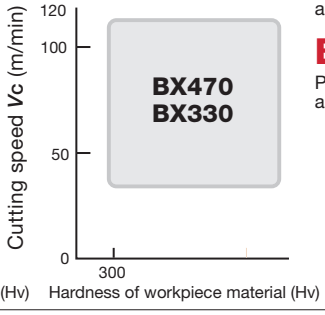
● Ferrous Sintered metal



● Valve seat (Plunge cutting)



● Valve seat (Traverse cutting)

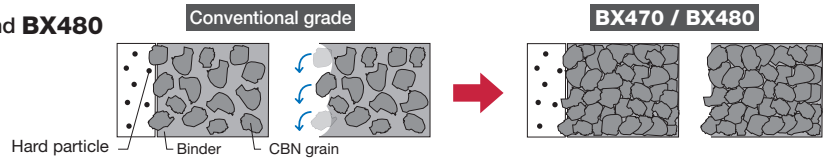


BX470
Priority on burr prevention and surface finish

BX480
Priority on wear resistance and versatility

Features of BX470 and BX480

● Machining of sintered metal with hard particles



Binder phase are selectively worn away by hard particles.
⇨ Wear proceeds with falling-out of CBN grains,

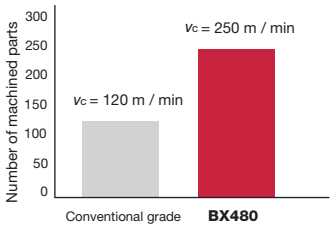
By increasing CBN content, wear of binder layer is suppressed.
⇨ Improved wear resistance

● Features of **BX470** and **BX480**

CBN content: 95 vol%
Hv = 4100 ~ 4300

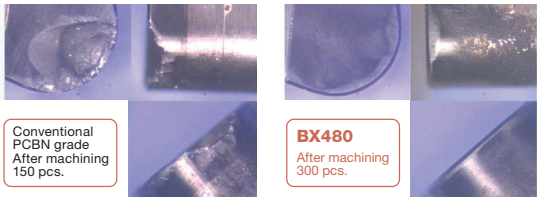
The world highest CBN content as a commercially available material.

■ BX480 (Facing of gears)



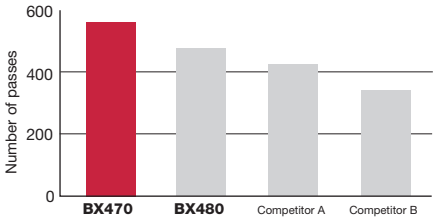
Cutting conditions
- Workpiece material: Sintered metal (> HRA60)
- Insert: DCMW11T308
- Depth of cut: ap = 0.2 ~ 0.5 mm
- Feed : f = 0.07 mm/rev
- Coolant : Water soluble type
- Interrupted cutting

■ BX470/BX480 Tool failure after machining sintered metal



Cutting conditions
- Workpiece material: Sintered metal (> HRA60), Nitriding, Hard particles included
- Cutting speed: Vc = 110 m/min ● Depth of cut: ap = 0.15 mm
- Feed: f = 0.1 mm/rev ● Coolant : Water soluble type
- Interrupted cutting

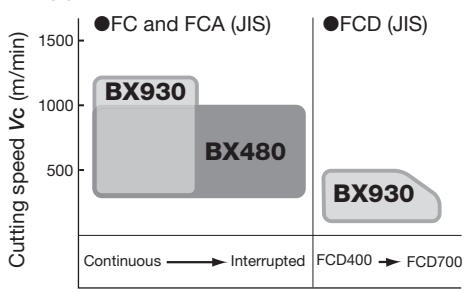
■ BX470 (Tool life criterion: Burr occurrence)



Cutting conditions
- Workpiece material: Ferrous Sintered metal
- Cutting speed: Vc = 100 m/min
- Depth of cut: ap = 0.15 ~ 0.3 mm
- Feed: f = 0.07 ~ 0.25 mm/rev
- Dry and interrupted cutting

K T-CBN series for grey cast iron and ductile cast iron

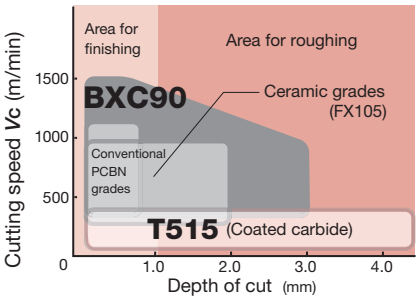
Application area



BX930
- General purpose, first choice grade.
- Dedicated grade for machining ductile Cast iron

BX480
- Suitable for interrupted machining
- Excellent fracture resistance

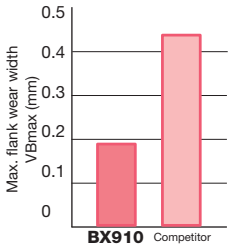
● FC Solid coated T-CBN grades



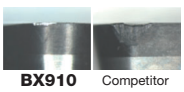
BXC90
- One-piece solid structure
- Applicable for small to large depths of cut

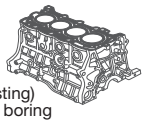
■ Machining of cylinder liners (Machining example of BX910)

●Wear width after machining 120 pcs.



●Tool failure after machining 120 pcs.

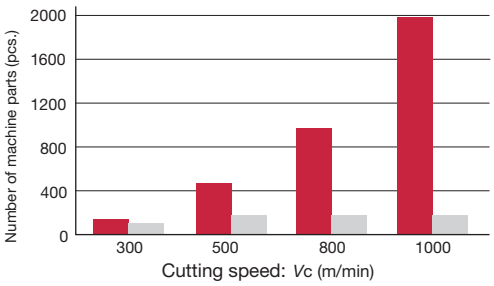




Cutting conditions
- Workpiece material: Cylinder liner (Spin casting) Machining type: Finish boring
- Cutting speed: Vc = 1,000 m/min
- Machine: Special purpose machine
- Coolant: Wet

BX910 For machining cylinder liners

■ Tool life comparison in machining of disc brakes



BXC90
Ceramic

Cutting conditions
- Workpiece material: Disc rotor (JIS FC250)
- Insert: SNGN 120412 BXC90
- Depth of cut: ap = 0.7 mm
- Feed: f = 0.35 mm/rev
- Coolant: Dry
- Tool life criterion: Conditions of finished surface

T-CBN Series

Honing specifications

● T-CBN inserts with special honing specifications are made to order. Refer to the following description.

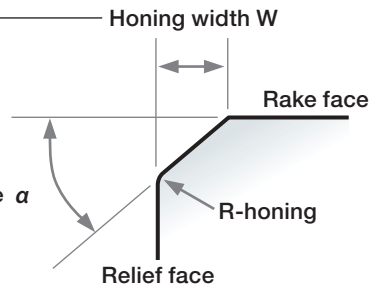
Designation system for honing

Example:
Honing width: 0.15 mm
Honing angle: -30°
With R-honing

S	0	1	3	2	5

Shape — Honing width (W) — Honing angle (α)

T ··· Chamfered honing
S ··· Chamfered + R-honing
E ··· R-honing alone
F ··· Sharp edge



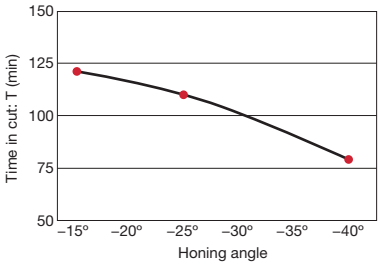
● Symbol

W	Amount of honing (mm)
005	0.05
010	0.10
013	0.13
015	0.15
018	0.18

α	Honing angle
10°	-10°
15°	-15°
20°	-20°
25°	-25°
30°	-30°
35°	-35°
40°	-40°

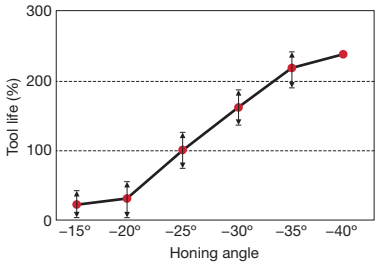
● Honing specification can be selected in combination of items described here.
● Inserts with "R" honing alone are available.

● Relationship between honing angle and tool life in continuous turning



Cutting conditions
Workpiece material: Chromium molybdenum steel (JIS SCM415), 60 HRC
Insert: TNGN160404 BX360
Cutting speed: *Vc* = 100 m/min
Feed: *f* = 0.15 mm/rev
Depth of cut: *ap* = 0.25 mm
Coolant: Dry
Tool life criterion: VBmax = 0.15 mm
Honing: -□□°+ R-honing

● Relationship between honing angle and tool life in interrupted turning



Cutting conditions
Workpiece material: Chromium molybdenum steel (JIS SCM415), 60 HRC
Insert: TNGN160404 BX360
Cutting speed: *Vc* = 100 m/min
Feed: *f* = 0.15 mm/rev
Depth of cut: *ap* = 0.25 mm
Coolant: Dry
Tool life criterion: Fracture
Honing: -□□°+ R-honing

•For continuous cutting, small honing angle is favorable to minimize wear.
•For interrupted cutting, large honing angle is favorable to minimize fracture.

● Standard honing specifications

Grade	BXM10	BXM20	BXA20	BXC50	BX310	BX330	BX360	BX380	BX470	BX480	BX910	BX930
Negative insert	S01325	S01325	S01325	S01325	S01325	S01325	S01325	S01325	T01315	S01325	S01315	S01315
Positive insert	S01325	S01325	S01325	–	S00515	S00515	S00515	–	T01315	S00515	S01315	S00515

Wiper insert

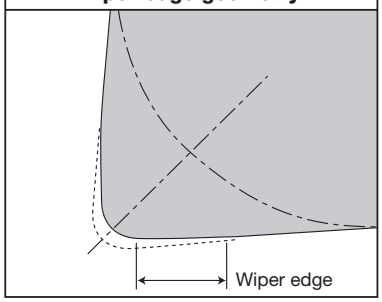
● A finishing edge (wiper edge) is formed at the point of intersection between corner radius and straight cutting edge.

■ Effect of wiper edge

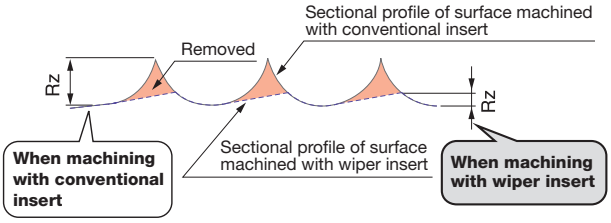
● Doubles the productivity → Reduced machining time
The wiper edge can double the feed rate and moreover does not deteriorate the surface roughness. (Note: Feed rate: *f* < 0.3 mm/rev)

● Superior surface roughness → By integrating roughing and finishing into one process, productivity can be increased.
Compared with conventional inserts only with corner radius, surface roughness can be improved with the wiper edge.

Wiper edge geometry



■ Profiles of surface roughness



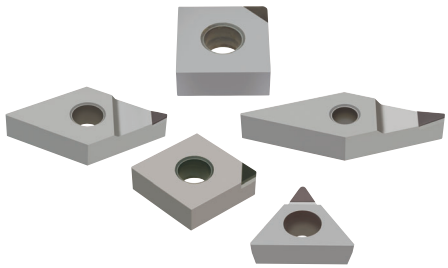
■ Recommended toolholders for wiper inserts

	2QP-CNGA1204**WL	3QP-WNGA080408WL	2QP-DNGA1504**WJ	3QP-TNGA1604**WG
End cutting angle	95°		93°	91°
External toolholder	ACLNR/L**12-A	AWLNR/L**08-A	ADJNR/L**15-A	ATGNR/L**16-A ATFNR/L**16-A
	DCLNR/L**12	DWLNR/L**08	DDJNR/L**15	DTGNR/L**16 DTFNR/L**16
Internal toolholder	A**-ACLNR/L12-D...	A**-AWLNR/L08-D...	A**-ADUNR/L15-D...	A**-ATFNR/L16-D...

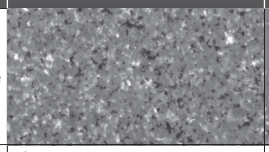
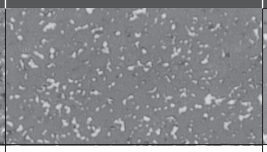
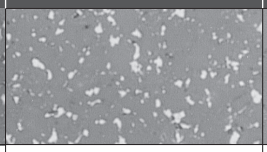
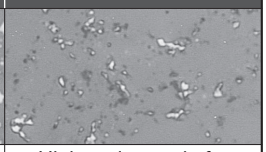
Technical Guide

PCD grade, T-DIA series

Expanded product line allows T-DIA tools to be applied to wider workpiece materials and cutting conditions.

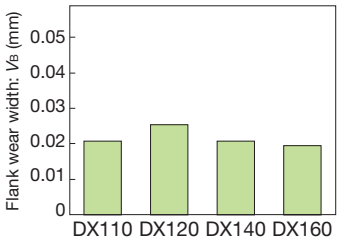


Features and applications (Physical and mechanical properties)

	DX110	DX120	DX140	DX160
Grade				
Property	Super fine grained grade. Excels in surface finish.	Fine grained grade. Excels in surface finish.	General purpose grade	High purity grade for hard materials
Approx. grain size of diamond (μm)	< 1	5	13	28
Hardness (Hv)	8500 →			10000 (Harder)
Wear resistance	→			Higher
Grindability (Cutting edge sharpness)	Better ←			

Cutting performance (Wear resistance)

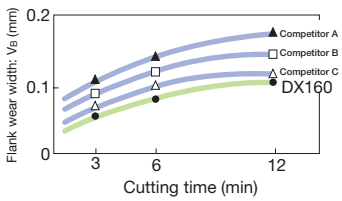
When machining aluminium alloy:



Continuous external turning

- Workpiece material: 10 % Si, aluminium alloy
- Insert: SPGN120308-DIA
- Toolholder: CSBPR2525M4
- Cutting speed: v_c = 500 m/min
- Feed: f = 0.1 mm/rev
- Depth of cut: a_p = 0.5 mm
- Coolant: Dry cutting
- Cutting time: 30 min

When machining FRP:



Face milling

- Workpiece material: Fiber reinforced plastics (FRP)
- Insert: SFCN42ZFN-DIA
- Milling cutter: THF4408RIA
- Cutting speed: v_c = 942 m/min
- Feed: f = 0.1 mm/rev
- Depth of cut: a_p = 1.5 mm
- Coolant: Dry cutting

Grade selection guide

First choice
Excellent finish
DX110
Suitable for finishing aluminum alloys and copper alloy

Good electrical discharge machinability → **Complex shape tools** **DX120**

High diamond content compared to DX110. Suitable for high-speed machining → **High speed machining** **DX140**

Ideal for machining hard materials
Suited for machining bi-metal (ex.aluminum+cast iron) components → **High wear resistance** **DX160**

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade DX110	DX120	DX140	DX160	Cutting speed v_c (m/min)	Depth of cut a_p (mm)	Feed f (mm/rev)
N	Aluminium alloys (Si < 12 %)	◎	○	○		1500 (1000 - 2500)	0.5 (0.05 - 2.0)	0.1 (0.05 - 0.2)
	Aluminium alloys (Si ≥ 12 %)	◎	○	○	○	600 (400 - 800)	0.5 (0.05 - 2.0)	0.1 (0.05 - 0.2)
	Copper, brass	◎	○			800 (500 - 1500)	0.5 (0.05 - 2.0)	0.1 (0.05 - 0.2)
	Phosphor bronze	◎	○	○		400 (300 - 500)	0.5 (0.05 - 2.0)	0.1 (0.05 - 0.2)
	Carbon, graphite		○	○	◎	400 (300 - 500)	0.5 (0.05 - 2.0)	0.1 (0.05 - 0.2)
	FRP		○	○	◎	700 (500 - 1000)	0.2 (0.05 - 0.5)	0.05 (0.03 - 0.1)
	Plastics	◎	○	○		700 (500 - 1000)	0.2 (0.05 - 0.5)	0.03 (0.01 - 0.05)
	Cemented carbides			○	◎	15 (10 - 20)	0.1 (0.05 - 0.2)	0.03 (0.01 - 0.05)
	Green ceramics			○	◎	130 (100 - 150)	0.5 (0.05 - 2.0)	0.05 (0.03 - 0.1)

(Note) ◎ : First choice ○ : Second choice