MITSUBISHI MATERIALS

Positive Inserts

FOR TURNING





TOOL NEWS **B210A-I**

Chipbreaker with Depth of Small Cutting for Hard-to-cut Materials

FSF/FSF-P Chipbreaker

Sharp Cutting Edge

The steep 25° rake angle provides a sharp cutting edge and enables excellent component surface finishes.

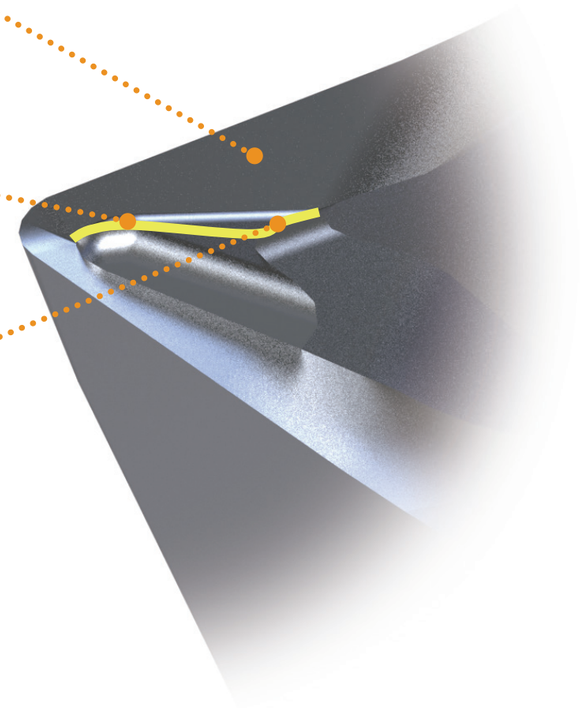
Low Resistance

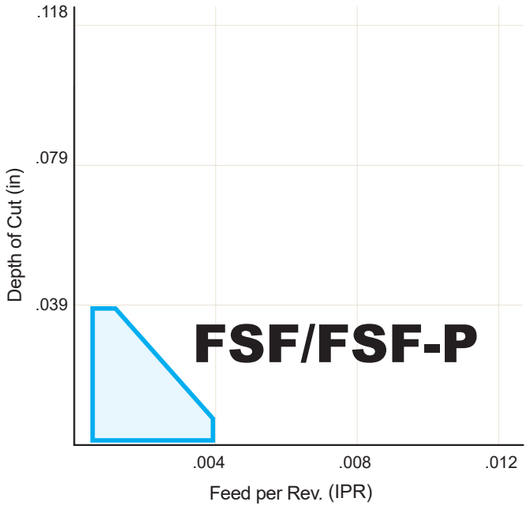
Low resistance design with gradual chipbreaker protrusion.

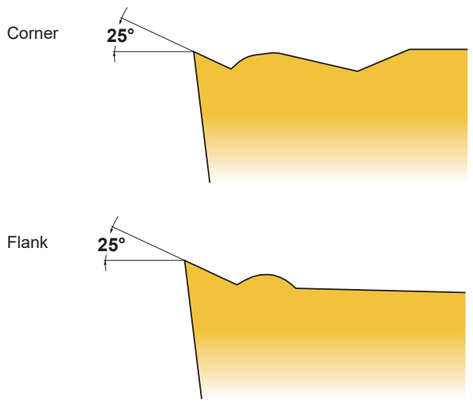
Multi-Stage Chipbreaker

Ideal for fluctuations in depth of cut.

FSF-P has a polished finish to the insert surface, greatly improving welding resistance.



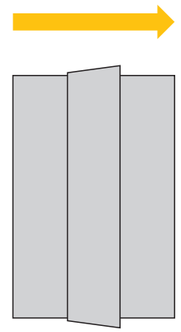




Examples of Usage

304: External turning

With fewer burrs and good chip evacuation, it was possible to turn 750 pieces compared to the tool life of 150 pieces with conventional products.



<Cutting Conditions>
Material : AISI 304
Inserts : DCGT11T301M-FSF-P
Grade : MS9025
Cutting Speed : vc = 395 SFM
Feed per Rev. : f = .0008 IPR
Depth of Cut : ap = .004"
Cutting Mode : Wet Cutting (Oil)

Recommended Cutting Conditions

Cutting Speed

	Material	Properties	Cutting Area	Cutting Condision	MP9025 vc (SFM)	MS7025 vc (SFM)	MS9025 vc (SFM)	VP30RT vc (SFM)	HTI10 vc (SFM)
P	Soft Magnetic Iron, Mild Steel	≤180 HB	F	●	–	330–985	–	–	–
				✣	–	–	–	510–620	–
	Carbon Steel, Alloy Steel	180–280 HB	F	●	–	130–425	–	–	–
				✣	–	–	–	375–460	–
	Carbon Steel, Alloy Steel	280–350 HB	F	✣	–	–	–	260–330	–
M	Austenitic Stainless Steel	≤200 HB	F	●	–	130–330	195–490	–	–
				✣	–	–	–	165–295	–
	Ferritic and Martensitic Stainless Steel	≤200 HB	F	●	–	130–330	–	–	–
			F	✣	–	–	–	165–295	–
	Austenitic, Ferritic and Martensitic Stainless Steel	>200 HB	F	✣	–	–	–	130–245	–
	Electromagnetic Stainless Steel	230 HBW	F	●	–	130–525	165–590	–	–
	Duplex Stainless Steel	≤280 HB	F	✣	–	–	–	115–195	–
	Precipitation Hardening Stainless Steel	<450 HB	F	✣	230–280	130–260	165–330	–	–
K	Gray Cast Iron	≤350 MPa	M	◐ ✣	–	–	–	–	295–410
	Ductile Cast Iron	≤450 MPa	M	● ◐ ✣	–	–	–	–	230–330
	Ductile Cast Iron	≤800 MPa	M	● ◐ ✣	–	–	–	–	195–295
N	Aluminum Alloys	–	M	● ◐ ✣	–	–	–	–	985–2295
S	Heat Resistant Alloys	–	F	●	–	–	130–460	–	–
				✣	80–130	–	–	–	–

● : Stable Cutting ◐ : General Cutting ✣ : Unstable Cutting

Chipbreaker	Feed per Rev. f (IPR)	Depth of Cut ap (in)
FSF, FSF-P	.001–.004	.0008–.039
FS-P	.002–.008	.008–.035
Standard	.003–.012	.012–.079
Flat Top	.003–.012	.012–.079

Quick note

Ideal Inserts for Turning Small Parts.

Set the corner radius to a minus tolerance.

Order Number

DCGT11T302 M R-SN → **02M R.008" (R.006"-R.008")**
DCGT11T304 M -SMG → **04M R.016" (R.014"-R.016")**

Tolerance Class			
Symbol	Tolerance of Nose Height **M** (in)	Tolerance of Inscribed Circle **IC** (in)	Tolerance of Thickness **S** (in)
E	±.001	±.001	±.001
G	±.001	±.001	±.005
M *	±.003−±.007	±.002−±.006	±.005

The surface of insert with * mark is sintered.

Extremely High Quality Cutting Edge

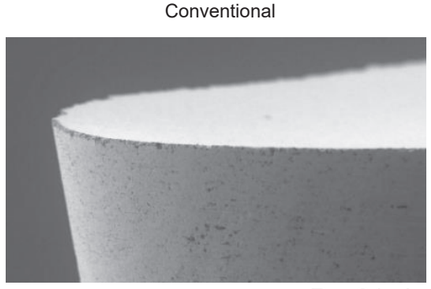
Technology that provides superior dimensional stability and reduces burrs.

MS9025



Rz=6 µin

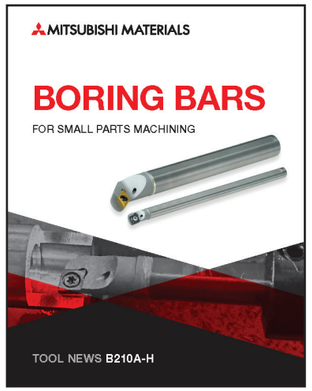
Conventional



Rz=24 µin

Recommended Cutting Conditions

Please use the following QR code to access our website for recommended conditions for each material and boring bar.



B210A-H

For Small Parts Machining BORING BARS

This is a boring bar compatible with Swiss-type lathes.
Recommended conditions are also listed.



B275A

For High Precision and Small Parts Machining

Contemporary Machining of High Precision Small Parts

B266A

For Steel Turning
MC6100 Series



B277A

For Stainless Steel Turning
MC/MP7100 Series



B269A

For Cast Iron Turning
MC5100 Series

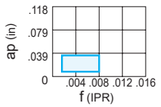
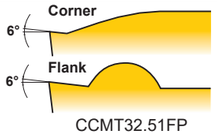
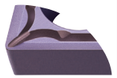
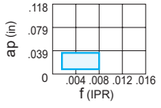
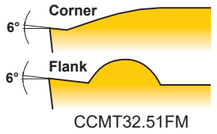
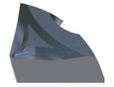
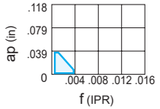
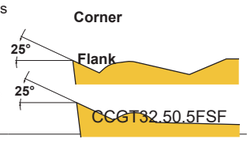
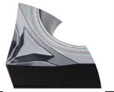
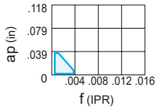
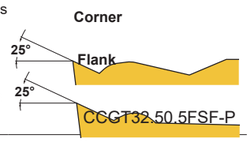
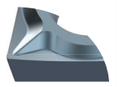
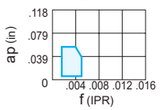
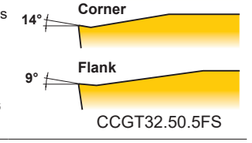
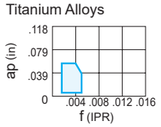
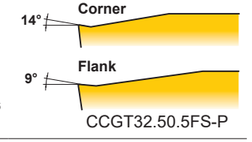
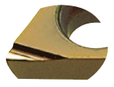
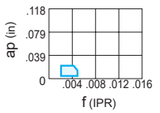
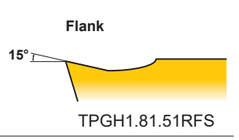
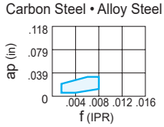
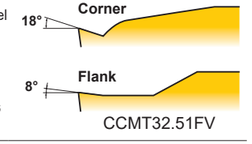
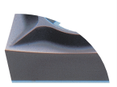
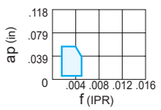
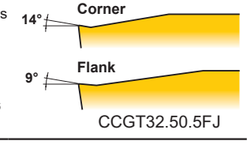


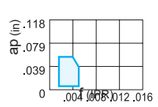
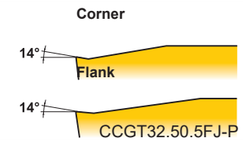
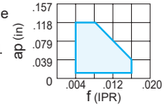
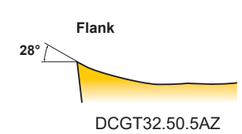
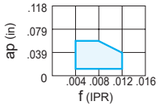
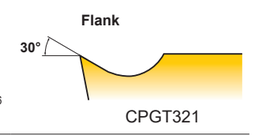
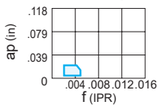
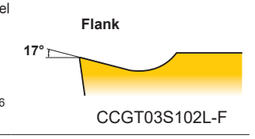
B214A

For Difficult-to-cut Materials
MP/MT9000 Series

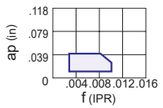
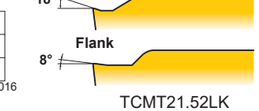
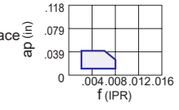
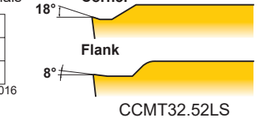
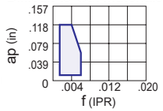
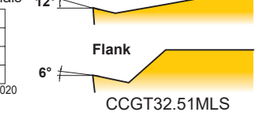
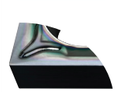
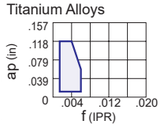
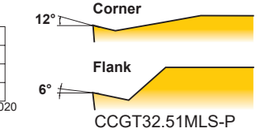
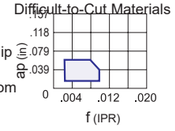
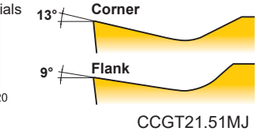
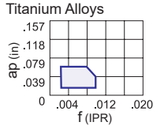
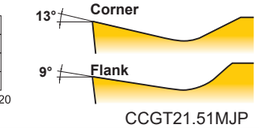
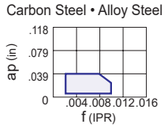
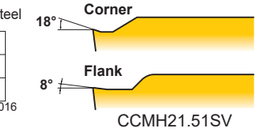
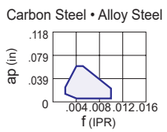
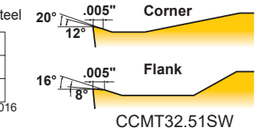
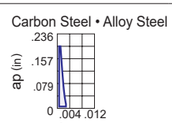
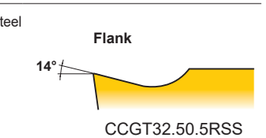


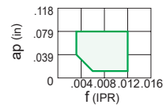
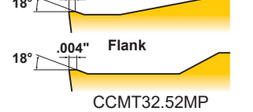
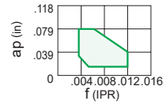
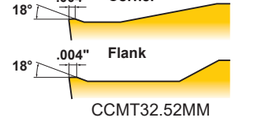
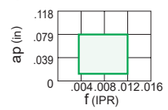
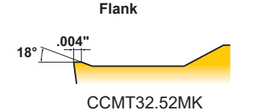
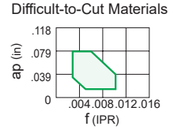
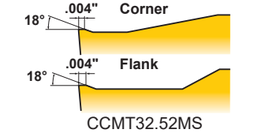
CLASSIFICATION

Application	Tolerance	Chipbreaker Name and Picture	Features	Cross Section Geometry
Finishing	M	**FP** 	**First recommendation for finishing carbon steel, alloy steel and mild steel** Chipbreaker protrusion at the corner tip controls chips even at small depths of cut. Maintains the edge strength at the corner and prevents sudden fractures.	Carbon Steel • Alloy Steel  
	M	**FM** 	**First recommendation for finishing stainless steel** Chipbreaker protrusion at the corner tip controls chips even at small depths of cut. Maintains the edge strength at the corner and prevents sudden fractures.	Stainless Steel  
	G	**FSF** 	**Chipbreaker for Small Depth of Cut in Hard-to-cut Materials** The steep rake angle provides a sharp cutting edge and enables excellent component surface finishes. Ideal for fluctuations in depth of cut.	Difficult-to-Cut Materials  
	G	**FSF-P** 	**Chipbreaker for Small Depth of Cut in Hard-to-cut Materials** The steep rake angle provides a sharp cutting edge and enables excellent component surface finishes. Ideal for fluctuations in depth of cut. Lapping of the top surface gives a mirror finish for improved welding resistance.	Difficult-to-Cut Materials  
	G M	**FS** 	**First recommendation for finishing difficult-to-cut materials** Ideal for heat resistant alloys, titanium alloys and cobalt chromium alloys. The sharp edge produces a good surface finish. The curved edge allows smooth chip discharge.	Difficult-to-Cut Materials  
	G	**FS-P** 	**First recommendation for finishing titanium alloys** Ideal for titanium alloys and copper alloys. The sharp edge produces a good surface finish. The curved edge allows smooth chip discharge. Lapping of the top surface gives a mirror finish for improved welding resistance.	Titanium Alloys  
	G	**R/L-FS** 	**Chipbreaker for finishing carbon steel, alloy steel, stainless steel, cast iron and aluminum alloys** Narrow lead chipbreaker. Sharp cutting edge gives a good surface finish.	Carbon Steel • Alloy Steel  
	M	**FV** 	**Alternative chipbreaker for finishing carbon steel, alloy steel, mild steel and stainless steel** Suitable for low depths of cut and low feed rates. Sharp cutting edge and low resistance design achieve excellent cutting performance.	Carbon Steel • Alloy Steel  
	G	**FJ** 	**Alternative chipbreaker for finishing difficult-to-cut materials** Ideal for heat resistant alloys and titanium alloys. The sharp edge produces a good surface finish. The curved edge allows smooth chip discharge.	Difficult-to-Cut Materials  

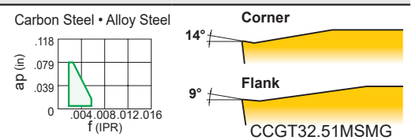
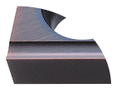
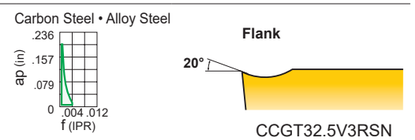
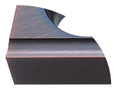
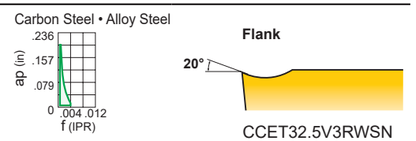
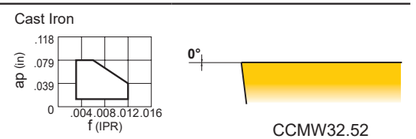
Application	Tolerance	Chipbreaker Name and Picture	Features	Cross Section Geometry
Finish Cutting	G	**FJ-P** 	**Finishing titanium alloys** Ideal for aluminum alloys and copper alloys. The sharp edge produces excellent surface finishes. The curved edge allows smooth chip discharge. The polished insert face prevents built up edge.	Titanium Alloys  
	G	**AZ** 	**Chipbreaker for aluminum alloys** The high rake angle and 3D curved cutting edge provide sharpness at the cutting point. Additionally the 3D shape of the rake face enables excellent chip control. Lapping of the top surface gives a mirror finish for improved welding resistance.	Aluminum Alloys  
	G	**Standard** 	**Chipbreaker for finishing** Lead chipbreaker controls chip flow. Good chip control for low to medium feed rates.	Aluminum Alloys  
	G M	**R/L-F** 	**Chipbreaker for finishing** Lead chipbreaker controls chip flow. Sharp cutting edge gives a good surface finish.	Carbon Steel • Alloy Steel  
	M	**SQ** 	**Finishing carbon steel, alloy steel and stainless steel** For small depth of cut and low feed.	Carbon Steel·Alloy Steel·Stainless Steel
	G E	**R/L-SRF**	**Chipbreaker for finishing** Lead chipbreaker controls chip flow. Sharp cutting edge gives a good surface finish.	Carbon Steel • Alloy Steel • Stainless Steel, Difficult-to-Cut Materials
	G M	**R/L**	**Chipbreaker for finishing** Lead chipbreaker. Excellent chip control at low to medium feed rates.	Carbon Steel • Alloy Steel
Light Cutting	M	**LP**	**First recommendation for light cutting of carbon steel, alloy steel and mild steel** Sharp cutting edge due to a large rake angle. Prevents welding of the insert and controls white turbidity of the surface finish. Chipbreaker protrusion suitable for depth of cut area achieves a wide range of chip control.	Carbon Steel • Alloy Steel
	M	**LM**	**First recommendation for light cutting of stainless steel** Sharp cutting edge due to a large rake angle. Prevents welding of the insert and controls white turbidity of the surface finish. Chipbreaker protrusion suitable for depth of cut area achieves a wide range of chip control.	Stainless Steel

CLASSIFICATION

Application	Tolerance	Chipbreaker Name and Picture	Features	Cross Section Geometry
Light Cutting	M	**LK** 	**First recommendation for light cutting of cast iron** Sharp cutting edge due to a large rake angle. Prevents welding of the insert and controls white turbidity of the surface finish. Chipbreaker protrusion suitable for depth of cut area achieves a wide range of chip control.	Stainless Steel   TCMT21.52LK
	M	**LS** 	**First recommendation for light cutting of difficult-to-cut materials** Prevents welding of the insert and controls cloudy surface of the surface finish.	Difficult-to-Cut Materials   CCMT32.52LS
	G	**LS** 	**First recommendation for light cutting of difficult-to-cut materials** Ideal for heat resistant alloys, titanium alloys and cobalt chromium alloys. Parallel cutting edge. Achieves stable chip control in a wide range of areas from low to medium depths of cut.	Difficult-to-Cut Materials   CCGT32.51MLS
	G	**LS-P** 	**First recommendation for light cutting of titanium alloys** Ideal for titanium alloys and copper alloys. Parallel cutting edge. Achieves stable chip control in a wide range of areas from low to medium depths of cut. Lapping of the top surface gives a mirror finish for improved welding resistance.	Titanium Alloys   CCGT32.51MLS-P
	G	**MJ** 	**Light cutting of difficult-to-cut materials** **Ideal for heat resistant alloys and titanium alloys** The curved cutting edges support changes in cutting depth, smooth chip discharge and disposal. The high rake angle is highly suitable for difficult-to-cut materials, from finish cutting to light cutting.	Difficult-to-Cut Materials   CCGT21.51MJ
	G	**MJ-P** 	**Light cutting for titanium alloys** Ideal for aluminum and copper. The sharp edge produces excellent surface finishes. The curved edge allows smooth chip discharge. The polished insert face prevents built up edge.	Titanium Alloys   CCGT21.51MJP
	M	**SV** 	**Alternative chipbreaker for light cutting of carbon steel, alloy steel, mild steel and stainless steel** Large rake angle provides sharp cutting action. A peninsular dot ensures chip control at depths of cut under 1mm.	Carbon Steel • Alloy Steel   CCMH21.51SV
	M	**SW** 	**Wiper insert for light cutting of carbon steel, alloy steel, mild steel and stainless steel** In comparison to conventional chipbreakers, the surface finish is maintained even if the feed per revolution is doubled. Positive land improves sharpness.	Carbon Steel • Alloy Steel   CCMT32.51SW
	G E	**R/L-SS** 	**Chipbreaker for light cutting of automatic lathe machining** A parallel chipbreaker. Excellent chip control at low feed rates.	Carbon Steel • Alloy Steel   CCGT32.50.5RSS

Application	Tolerance	Chipbreaker Name and Picture	Features	Cross Section Geometry
Medium Cutting	M	**MP** 	**First recommendation for medium cutting of carbon steel, alloy steel and mild steel** Good balance of wear resistance and fracture resistance because of the flat land cutting edge. A wide chip pocket controls increasing of the cutting resistance and reduces vibration and chip jamming even at large depths of cut.	Carbon Steel • Alloy Steel   CCMT32.52MP
	M	**MM** 	**First recommendation for medium cutting of stainless steel** Good balance of wear resistance and fracture resistance because of the flat land cutting edge. A wide chip pocket controls increasing of the cutting resistance and reduces vibration and chip jamming even at large depths of cut.	Stainless Steel   CCMT32.52MM
	M	**MK** 	**First recommendation for medium cutting of cast iron** Optimum balance between sharpness and high edge strength for general use.	Cast Iron   CCMT32.52MK
	M	**MS** 	**First recommendation for medium cutting of difficult-to-cut materials** A wide chip pocket controls increasing of the cutting resistance and reduces vibration and chip jamming even at large depths of cut.	Difficult-to-Cut Materials   CCMT32.52MS
	M	**Standard** 	**Alternative chipbreaker for medium cutting of carbon steel, alloy steel, mild steel, stainless steel and cast iron** Balance of edge strength and sharpness due to a combination of a flat land and large rake angle.	Carbon Steel • Alloy Steel CCMT32.52
	M	**MV**	**Alternative chipbreaker for medium cutting of carbon steel, alloy steel, mild steel and stainless steel** A positive insert and the large rake angle achieve sharp cutting edge performance. The double chipbreakers and round shape in the rake face achieve a wide range of chip discharge.	Carbon Steel • Alloy Steel CCMH21.51MV
	M	**MW**	**Wiper insert for medium cutting of carbon steel, alloy steel, mild steel and stainless steel** The wiper allows up to two times higher feed. A wide chip pocket prevents chip jamming.	Carbon Steel • Alloy Steel CCMT32.52MW
	M	**MQ**	**Medium cutting of carbon steel, alloy steel and stainless steel** Can be used under a wide range of cutting conditions.	Copper CPMT32.51MQ
	E	**R/L-SR**	**Chipbreaker for medium cutting of automatic lathe machining** A wide lead chipbreaker. Insert designed for low resistance chip control.	Carbon Steel • Alloy Steel CCET32.5V3RSR

CLASSIFICATION

Application	Tolerance	Chipbreaker Name and Picture	Features	Cross Section Geometry
Medium Cutting	G	**SMG** 	**Chipbreaker for medium cutting of automatic lathe machining** 3D moulded chipbreaker provides good chip control. G class insert gives sharp cutting action, allowing high precision machining. Chipbreaker geometry appropriate for copying and back turning.	
Medium Cutting	G E	**R/L-SN** 	**Chipbreaker for medium cutting of automatic lathe machining** A parallel chipbreaker. Excellent chip control at low to medium feed rates.	
Medium Cutting	E	**R/LW-SN** 	**Chipbreaker for medium cutting of automatic lathe machining** A parallel chipbreaker. Excellent chip control at low to medium feed rates. The wiper produces a good surface finish.	
For Cast Iron	G M	**Flat Top** 	**Chipbreaker for heavy cutting of cast iron** Flat top. Most effective for unstable machining due to its high edge strength.	

Chipbreaker Series Selection Chart

			C		D	T				V			W
			7°	11°	7°	5°	7°	11°		5°	7°	11°	7°
	Chipbreaker	Class	With Hole	With Hole	With Hole	With Hole	With Hole	With Hole	Without Hole	With Hole	With Hole	With Hole	With Hole
Finish Cutting	FP	M	●	●	●		●	●		●	●		
	FM	M	●	●	●		●	●		●	●		
	FSF	G	●		●			●					
	FSF-P	G	●		●	●		●			●	●	●
	FS	M	●	●	●			●		●	●		
	FS	G	●		●								
	FS-P	G	●		●					●	●	●	
	R/LFS	G						●					
	FV	M	●	●	●		●	●		●	●		●
	FJ	G	●		●					●			
	FJ-P	G	●		●		●			●			●
	AZ	G	●		●		●						
	Standard	G		●									
	R/LF	M		●									
	R/LF	G	●	●	●		●			●	●		
	R/LSRF	G			●								
	R/LSRF	E	●		●					●	●	●	
	R/L	G						●					●
	L	M						●					
	SQ	M		●				●					
Light Cutting	LP	M	●	●	●		●	●		●	●		
	LM	M	●	●	●		●	●	●	●	●		
	LK	M					●	●					
	LS	M	●	●	●		●	●		●	●		
	LS	G	●		●								
	LS-P	G	●		●								
	MJ	G	●		●		●			●			●
	MJ-P	G	●		●		●			●			●
	SV	M	●	●	●			●		●	●		
	SW	M	●		●		●	●					
	R/LSS	G	●		●								
	R/LSS	E	●		●		●					●	
Medium Cutting	MP	M	●	●	●		●			●			●
	MM	M	●	●	●		●		●	●			●
	MK	M	●	●	●		●			●			
	MS	M	●	●	●		●			●			
	Standard	M	●	●	●		●	●		●			●
	MV	M	●	●	●			●		●	●		
	MW	M	●										
	R/LSR	E	●		●			●		●			
	SMG	G	●		●								
	R/LSN	G	●		●								
	R/LSN	E	●		●					●		●	
	R/LWSN	E	●		●					●			
	MQ	M		●				●					
etc.	Flat Top	M	●	●	●		●			●			
	Flat Top	G	●		●		●	●	●				

80° CC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																								Coated Cermet			Cermet		Carbide							
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel	◐	●	◐	✤														✤	✤	❁	◐	○	○	◔	○	◔				❁			○
M	Stainless Steel					◐	●	◐	✤	✤				◐				◔	✤	✤	❁		○	○		○	◔							
K	Cast Iron										●	◐	✤					◔	✤		❁		○	○							❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✤	◔	✤		●	○	◐											

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
FP	CCMT21.50.5FP	CCMT060202-FP	.008	●	●	●																		●			●								
	CCMT21.51FP	CCMT060204-FP	.016	●	●	●																		●			●								
	CCMT32.50.5FP	CCMT09T302-FP	.008	●	●	●																		●			●								
	CCMT32.51FP	CCMT09T304-FP	.016	●	●	●																		●			●								
Finish Cutting	CCMT32.52FP	CCMT09T308-FP	.031	●	●	●																		●			●								
FM	CCMT21.50.5FM	CCMT060202-FM	.008						●												●														
	CCMT21.51FM	CCMT060204-FM	.016						●	●	●										●														
	CCMT32.50.5FM	CCMT09T302-FM	.008							●											●														
	CCMT32.51FM	CCMT09T304-FM	.016						●	●	●										●														
Finish Cutting	CCMT32.52FM	CCMT09T308-FM	.031						●	●	●										●														
FSF	*2 CCGT03S101M-FSF	CCGT03S101M-FSF	.016*1																●																
	*2 CCGT03S102M-FSF	CCGT03S102M-FSF	.031*1																●																
	*2 CCGT04T001M-FSF	CCGT04T001M-FSF	.016*1																●																
	*2 CCGT04T002M-FSF	CCGT04T002M-FSF	.031*1																●																
	CCGT21.50.2MFSF	CCGT060201M-FSF	.004*1																●																
	CCGT21.50.5MFSF	CCGT060202M-FSF	.008*1																●																
Finish Cutting	CCGT21.51MFSF	CCGT060204M-FSF	.016*1																●																
FSF-P	*2 CCGT03S101M-FSF-P	CCGT03S101M-FSF-P	.004*1						●								●																		
	*2 CCGT03S102M-FSF-P	CCGT03S102M-FSF-P	.008*1						●								●																		
	*2 CCGT04T001M-FSF-P	CCGT04T001M-FSF-P	.004*1						●								●																		
	*2 CCGT04T002M-FSF-P	CCGT04T002M-FSF-P	.008*1						●								●																		
	CCGT21.5V5MFSF-P	CCGT0602V5M-FSF-P	.002*1						●													●													
	CCGT21.50.2MFSF-P	CCGT060201M-FSF-P	.004*1						●								●					●													
	CCGT21.50.5MFSF-P	CCGT060202M-FSF-P	.008*1						●								●					●													
	CCGT21.51MFSF-P	CCGT060204M-FSF-P	.016*1						●								●					●													
	CCGT32.5V5MFSF-P	CCGT09T3V5M-FSF-P	.002*1						●													●													
	CCGT32.50.2MFSF-P	CCGT09T301M-FSF-P	.004*1						●								●					●													
	CCGT32.50.5MFSF-P	CCGT09T302M-FSF-P	.008*1						●													●													
Finish Cutting	CCGT32.51MFSF-P	CCGT09T304M-FSF-P	.016*1						●													●													
FS	CCMT21.50.5FS	CCMT060202-FS	.008																●																
	CCMT21.51FS	CCMT060204-FS	.160																●																
	CCMT32.50.5FS	CCMT09T302-FS	.008																●																
	CCMT32.51FS	CCMT09T304-FS	.016																●																
Finish Cutting	CCMT32.52FS	CCMT09T308-FS	.031																●																
FS	CCGT21.50.2MFS	CCGT060201M-FS	.004*1														●	●	●			●													
	CCGT21.50.5MFS	CCGT060202M-FS	.008*1														●	●	●			●													
	CCGT21.51MFS	CCGT060204M-FS	.016*1																●			●													
	CCGT32.50.2MFS	CCGT09T301M-FS	.004*1														●	●	●			●													
	CCGT32.50.5MFS	CCGT09T302M-FS	.008*1														●	●	●			●													
Finish Cutting	CCGT32.51MFS	CCGT09T304M-FS	.016*1														●	●	●			●													

*1 Indicates the maximum value of the corner R.
*2 Diameter of inscribed circle is special.

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																								Coated Cermet			Cermet		Carbide							
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel	◐	●	◐	✤														✤	✤	❁	◐	○	○	◔	○	◔				❁			○
M	Stainless Steel					◐	●	◐	✤	✤				◐				◔	✤	✤	❁		○	○		○	◔							
K	Cast Iron										●	◐	✤					◔	✤		❁		○	○		○					❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✤	◔	✤		●	○	◐											

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
FS-P	CCGT21.50.2MFS-P	CCGT060201M-FS-P	.004*						●								●					●													
	CCGT21.50.5MFS-P	CCGT060202M-FS-P	.008*						●								●					●													
	CCGT21.51MFS-P	CCGT060204M-FS-P	.016*						●								●					●													
	CCGT32.50.2MFS-P	CCGT09T301M-FS-P	.004*						●								●					●													
	CCGT32.50.5MFS-P	CCGT09T302M-FS-P	.008*						●								●					●													
Finish Cutting	CCGT32.51MFS-P	CCGT09T304M-FS-P	.016*						●								●					●													
FV	CCMT21.50.5FV	CCMT060202-FV	.008		●	●															●			●	★	★	●								
	CCMT21.51FV	CCMT060204-FV	.016		●	●															●			●	★	★	●								
	CCMT32.50.5FV	CCMT09T302-FV	.008		★	★																				●	●								
	CCMT32.51FV	CCMT09T304-FV	.016		●	●																		●	★	★	●								
Finish Cutting	CCMT32.52FV	CCMT09T308-FV	.031		●	●																		●	★	★	●								
FJ	CCGT21.5V5FJ	CCGT0602V5-FJ	.002																	●															
	CCGT21.50.2FJ	CCGT060201-FJ	.004																	●															
	CCGT21.50.5FJ	CCGT060202-FJ	.008																	●															
	CCGT32.5V5FJ	CCGT09T3V5-FJ	.002																	●															
	CCGT32.50.2FJ	CCGT09T301-FJ	.004																	●											★				
	CCGT32.50.5FJ	CCGT09T302-FJ	.008																	●											★				
Finish Cutting	CCGT32.51FJ	CCGT09T304-FJ	.016																	●											★				
FJ-P	CCGT21.5V5FJ-P	CCGT0602V5-FJ-P	.002																											●					
	CCGT21.50.2FJ-P	CCGT060201-FJ-P	.004																											●					
	CCGT21.50.5FJ-P	CCGT060202-FJ-P	.008																											●					
	CCGT32.5V5FJ-P	CCGT09T3V5-FJ-P	.002																											●					
	CCGT32.50.2FJ-P	CCGT09T301-FJ-P	.004																											●					
	CCGT32.50.5FJ-P	CCGT09T302-FJ-P	.008																											●					
Finish Cutting	CCGT32.51FJ-P	CCGT09T304-FJ-P	.016																											●					
AZ	CCGT21.50.5AZ	CCGT060202-AZ	.008																															●	
	CCGT21.51AZ	CCGT060204-AZ	.016																															●	
	CCGT32.50.5AZ	CCGT09T302-AZ	.008																															●	
	CCGT32.51AZ	CCGT09T304-AZ	.016																															●	
Medium Cutting ~ Finish Cutting	CCGT32.52AZ	CCGT09T308-AZ	.031																															●	

* Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

80° CC TYPE INSERTS WITH HOLE

● : Stable Cutting (1st recommendation)　◐ : General Cutting (1st recommendation)　✤ : Unstable Cutting (1st recommendation)
○ : Stable Cutting (2nd recommendation)　◔ : General Cutting (2nd recommendation)　❁ : Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide										
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✤													❁	✤	❁	◐	○	○	◔		○								○
M	Stainless Steel						◐	●	◐	✤	✤				◐				◔	❁	❁	❁	○	○											
K	Cast Iron											●	◐	✤					◔	❁			○	○							❁	○	◔	○	
N	Non-ferrous Metal																																◔	○	
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✤	◔	❁									●	○	◐		◔		○

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
R/L-F	*2 CCGT03S1V3L-F	CCGT03S1V3L-F	.001																		●							●							
	*2 CCGT03S101L-F	CCGT03S101L-F	.004																		●							●							
	*2 CCGT03S102L-F	CCGT03S102L-F	.008																		●			●				★							
	*2 CCGT03S104L-F	CCGT03S104L-F	.016																		●			●				★							
	*2 CCGT04T0V3L-F	CCGT04T0V3L-F	.001																		●							●							
	*2 CCGT04T001L-F	CCGT04T001L-F	.004																		●							●							
	*2 CCGT04T002L-F	CCGT04T002L-F	.008																		●			●				★							
	*2 CCGT04T004L-F	CCGT04T004L-F	.016																		●			●				★							
	*2 CCGT03S101MR-F	CCGT03S101MR-F	.004*1	●																																
	*2 CCGT03S101ML-F	CCGT03S101ML-F	.004*1	●																																
	*2 CCGT03S102MR-F	CCGT03S102MR-F	.008*1	●																																
	*2 CCGT03S102ML-F	CCGT03S102ML-F	.008*1	●																																
	*2 CCGT03S104MR-F	CCGT03S104MR-F	.016*1	●																																
	*2 CCGT03S104ML-F	CCGT03S104ML-F	.016*1	●																																
	*2 CCGT04T001MR-F	CCGT04T001MR-F	.004*1	●																																
	*2 CCGT04T001ML-F	CCGT04T001ML-F	.004*1	●																																
	*2 CCGT04T002MR-F	CCGT04T002MR-F	.008*1	●																																
	*2 CCGT04T002ML-F	CCGT04T002ML-F	.008*1	●																																
	*2 CCGT04T004MR-F	CCGT04T004MR-F	.016*1	●																																
Finish Cutting	*2 CCGT04T004ML-F	CCGT04T004ML-F	.016*1	●																																
R/LF	CCGH21.50.5RF	CCGH060202R-F	.008																		●			★		★										●
	CCGH21.50.5LF	CCGH060202L-F	.008																		●			★		★										●
	CCGH21.51RF	CCGH060204R-F	.016																		●			★		★										●
	CCGH21.51LF	CCGH060204L-F	.016																		●			★		★										●
	CCGH21.50.5MRF	CCGH060202MR-F	.008*1	●																																
	CCGH21.50.5MLF	CCGH060202ML-F	.008*1	●																																
	CCGH21.51MRF	CCGH060204MR-F	.016*1	●																																
Finish Cutting	CCGH21.51MLF	CCGH060204ML-F	.016*1	●																																

*1 Indicates the maximum value of the corner R.
*2 Diameter of inscribed circle is special.

● : USA Stock　★ : Stocked in Japan
10 inserts in one case.

● : Stable Cutting (1st recommendation)　◐ : General Cutting (1st recommendation)　✤ : Unstable Cutting (1st recommendation)
○ : Stable Cutting (2nd recommendation)　◔ : General Cutting (2nd recommendation)　❁ : Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide										
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✤													❁	✤	❁	◐	○	○	◔		○								○
M	Stainless Steel						◐	●	◐	✤	✤				◐				◔	❁	❁	❁	○	○											
K	Cast Iron											●	◐	✤					◔	❁			○	○							❁	○	◔	○	
N	Non-ferrous Metal																																◔	○	
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✤	◔	❁									●	○	◐		◔		○

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
R/L-SRF	*2 CCET03S1V3R-SRF	CCET03S1V3R-SRF	.001					●									●		●		●							●							
	*2 CCET03S1V3L-SRF	CCET03S1V3L-SRF	.001					●									●		●		●							●							
	*2 CCET04T0V3R-SRF	CCET04T0V3R-SRF	.001					●									●		●		●							●							
	*2 CCET04T0V3L-SRF	CCET04T0V3L-SRF	.001					●									●		●		●							●							
	*2 CCET03S101MR-SRF	CCET03S101MR-SRF	.004*1					●									●		●		●							●							
	*2CCET03S101ML-SRF	CCET03S101ML-SRF	.004*1					●									●		●		●							●							
	*2CCET03S102MR-SRF	CCET03S102MR-SRF	.008*1					●									●		●		●							●							
	*2CCET03S102ML-SRF	CCET03S102ML-SRF	.008*1					●									●		●		●							●							
	*2CCET03S104MR-SRF	CCET03S104MR-SRF	.016*1					●									●		●		●							●							
	*2CCET03S104ML-SRF	CCET03S104ML-SRF	.016*1					●									●		●		●							●							
	*2CCET04T001MR-SRF	CCET04T001MR-SRF	.004*1					●									●		●		●							●							
	*2CCET04T001ML-SRF	CCET04T001ML-SRF	.004*1					●									●		●		●							●							
	*2CCET04T002MR-SRF	CCET04T002MR-SRF	.008*1					●									●		●		●							●							
	*2CCET04T002ML-SRF	CCET04T002ML-SRF	.008*1					●									●		●		●							●							
	*2CCET04T004MR-SRF	CCET04T004MR-SRF	.016*1					●									●		●		●							●							
Finish Cutting	*2CCET04T004ML-SRF	CCET04T004ML-SRF	.016*1					●									●		●		●							●							
R/LSRF	CCET21.50.2MRSRF	CCET060201MR-SRF	.004*1														●																			
	CCET21.50.2MLSRF	CCET060201ML-SRF	.004*1														●																			
	CCET21.50.5MRSRF	CCET060202MR-SRF	.008*1														●																			
	CCET21.50.5MLSRF	CCET060202ML-SRF	.008*1														●																			
	CCET21.51MRSRF	CCET060204MR-SRF	.016*1														●																			
	CCET21.51MLSRF	CCET060204ML-SRF	.016*1														●																			
	CCET32.50.2MRSRF	CCET09T301MR-SRF	.004*1														●																			
	CCET32.50.2MLSRF	CCET09T301ML-SRF	.004*1														●																			
	CCET32.50.5MRSRF	CCET09T302MR-SRF	.008*1														●																			
	CCET32.50.5MLSRF	CCET09T302ML-SRF	.008*1														●																			
	CCET32.51MRSRF	CCET09T304MR-SRF	.016*1														●																			
Finish Cutting	CCET32.51MLSRF	CCET09T304ML-SRF	.016*1														●																			
LP	CCMT21.50.5LP	CCMT060202-LP	.008	●	★	★																														
	CCMT21.51LP	CCMT060204-LP	.016	●	●	●																												●		●
	CCMT21.52LP	CCMT060208-LP	.031	●	●	★																												●		●
	CCMT32.50.5LP	CCMT09T302-LP	.031	●	●	●																														
	CCMT32.51LP	CCMT09T304-LP	.016	●	●	●																												●		●
Light Cutting	CCMT32.52LP	CCMT09T308-LP	.031	●	●	●																												●		●
LM	CCMT21.51LM	CCMT060204-LM	.016						●	●	●									●																
	CCMT21.52LM	CCMT060208-LM	.031						●	●	●									●																
	CCMT32.50.5LM	CCMT09T302-LM	.008																																	
	CCMT32.51LM	CCMT09T304-LM	.016						●	●	●									●																
Light Cutting	CCMT32.52LM	CCMT09T308-LM	.031						●	●	●									●																
LS	CCMT21.50.5LS	CCMT060202-LS	.008															●	●	●									●							
	CCMT21.51LS	CCMT060204-LS	.016															●	●	●									●							
	CCMT32.50.5LS	CCMT09T302-LS	.008															●	●	●									●							
	CCMT32.51LS	CCMT09T304-LS	.016															●	●	●									●							
Light Cutting	CCMT32.52LS	CCMT09T308-LS	.031															●	●	●									●							

*1 Indicates the maximum value of the corner R.
*2 Diameter of inscribed circle is special.

● = NEW

Please refer to the general catalog for CBN & PCD inserts.

80° CC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																						Coated Cermet			Cermet		Carbide								
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
	P	Steel					◐	●	◐	✤														✤	❁	❁	◐	○	○	◔	○	◔							○
	M	Stainless Steel									◐	●	◐	✤	✤				◐				◔	❁	❁	❁		○	○		○								
	K	Cast Iron														●	◐	✤					◔	❁	❁	❁		○	○		○				❁	○	◔	◔	○
	N	Non-ferrous Metal																																			◔	◔	○
	S	Heat Resistant Alloys, Titanium Alloys																	◐	●	◐	✤	◔	❁							●	○	◐				◔		○
			LS	CCGT21.50.2MLS	CCGT060201M-LS	.004*													●	●	●			●															
				CCGT21.50.5MLS	CCGT060202M-LS	.008*													●	●	●			●															
				CCGT21.51MLS	CCGT060204M-LS	.016*															●			●															
				CCGT32.50.2MLS	CCGT09T301M-LS	.004*													●	●	●			●															
				CCGT32.50.5MLS	CCGT09T302M-LS	.008*													●	●	●			●															
			Light Cutting	CCGT32.51MLS	CCGT09T304M-LS	.016*													●	●	●			●															
			LS-P	CCGT21.5V5MLS-P	CCGT0602V5M-LS-P	.002*													●																			
				CCGT21.50.2MLS-P	CCGT060201M-LS-P	.004*	●				●								●															●						
				CCGT21.50.5MLS-P	CCGT060202M-LS-P	.008*	●				●								●															●						
				CCGT21.51MLS-P	CCGT060204M-LS-P	.016*					●								●																				
				CCGT32.50.2MLS-P	CCGT09T301M-LS-P	.004*	●				●								●															●						
				CCGT32.50.5MLS-P	CCGT09T302M-LS-P	.008*	●				●								●															●						
			Light Cutting	CCGT32.51MLS-P	CCGT09T304M-LS-P	.016*	●				●								●															●						
			MJ	CCGT21.51MJ	CCGT060204-MJ	.016																	●															
				CCGT32.52MJ	CCGT09T308-MJ	.031																	●															
			Light Cutting																																				
			MJ-P	CCGT21.51MJ-P	CCGT060204-MJ-P	.016																											●						
				CCGT32.52MJ-P	CCGT09T308-MJ-P	.031																											●						
			Light Cutting																																				
			SV	CCMH21.50.5SV	CCMH060202-SV	.008				●								★							●		★	★	●									
				CCMH21.51SV	CCMH060204-SV	.016				●								★							●		★	★	●									
			Light Cutting																																				
			SW*	CCMT21.50.5SW	CCMT060202-SW	.008	●	★	★										●							●		●	●									
				CCMT21.51SW	CCMT060204-SW	.016	★	★	★							★			●							●		●	●									
				CCMT21.52SW	CCMT060208-SW	.031	●	●	●										●																			
				CCMT32.50.5SW	CCMT09T302-SW	.008	●	●	●							★			●							●		●	●									
			Light Cutting (Wiper)	CCMT32.51SW	CCMT09T304-SW	.016	●	●	●							●			●							●		●	●									
				CCMT32.52SW	CCMT09T308-SW	.031	●	●	●										●																			

★ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																						Coated Cermet			Cermet		Carbide								
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
	P	Steel					◐	●	◐	✤														✤	❁	❁	◐	○	○	◔	○	◔							○
	M	Stainless Steel									◐	●	◐	✤	✤				◐				◔	❁	❁	❁		○	○		○								
	K	Cast Iron														●	◐	✤					◔	❁	❁	❁		○	○		○				❁	○	◔	◔	○
	N	Non-ferrous Metal																																			◔	◔	○
	S	Heat Resistant Alloys, Titanium Alloys																	◐	●	◐	✤	◔	❁							●	○	◐				◔		○
			R/LSS	CCGT21.5V3RSS	CCGT0602V3R-SS	.001																	●															
				CCGT21.5V3LSS	CCGT0602V3L-SS	.001																	●															
				CCGT21.50.2RSS	CCGT060201R-SS	.004																	●															
				CCGT21.50.2LSS	CCGT060201L-SS	.004																	●															
				CCGT21.50.5RSS	CCGT060202R-SS	.008																	●															
				CCGT21.50.5LSS	CCGT060202L-SS	.008																	●															
				CCGT32.5V3RSS	CCGT09T3V3R-SS	.001																	●															
				CCGT32.5V3LSS	CCGT09T3V3L-SS	.001																	●															
				CCGT32.50.2RSS	CCGT09T301R-SS	.004																	●															
				CCGT32.50.2LSS	CCGT09T301L-SS	.004																	●															
				CCGT32.50.5RSS	CCGT09T302R-SS	.008																	●															
				CCGT32.50.5LSS	CCGT09T302L-SS	.008																	●															
				CCGT21.50.2MRSS	CCGT060201MR-SS	.004*	●																																
				CCGT21.50.2MLSS	CCGT060201ML-SS	.004*	●																																
				CCGT21.50.5MRSS	CCGT060202MR-SS	.008*	●																																
				CCGT21.50.5MLSS	CCGT060202ML-SS	.008*	●																																
				CCGT32.50.2MRSS	CCGT09T301MR-SS	.004*	●																																
				CCGT32.50.2MLSS	CCGT09T301ML-SS	.004*	●																																
				CCGT32.50.5MRSS	CCGT09T302MR-SS	.008*	●																																
				CCGT32.50.5MLSS	CCGT09T302ML-SS	.008*	●																																
				CCGT32.51MRSS	CCGT09T304MR-SS	.016*	●																																
			Light Cutting	CCGT32.51MLSS	CCGT09T304ML-SS	.016*	●																																
			R/LSS	CCET21.5V3RSS	CCET0602V3R-SS	.001																	●															
				CCET21.5V3LSS	CCET0602V3L-SS	.001																	●															
				CCET32.5V3RSS	CCET09T3V3R-SS	.001																	●															
				CCET32.5V3LSS	CCET09T3V3L-SS	.001																	●															
				CCET21.50.2MRSS	CCET060201MR-SS	.004*																	●															
				CCET21.50.2MLSS	CCET060201ML-SS	.004*																	●															
				CCET21.50.5MRSS	CCET060202MR-SS	.008*																	●															
				CCET21.50.5MLSS	CCET060202ML-SS	.008*																	●															
				CCET21.51MRSS	CCET060204MR-SS	.016*																	●															
				CCET21.51MLSS	CCET060204ML-SS	.016*																	●															
				CCET32.50.2MRSS	CCET09T301MR-SS	.004*																	●															
				CCET32.50.2MLSS	CCET09T301ML-SS	.004*																	●															
				CCET32.50.5MRSS	CCET09T302MR-SS	.008*																	●															
				CCET32.50.5MLSS	CCET09T302ML-SS	.008*																	●															
				CCET32.51MRSS	CCET09T304MR-SS	.016*																	●															
			Light Cutting	CCET32.51MLSS	CCET09T304ML-SS	.016*																	●															
			MP	CCMT21.50.5MP	CCMT060202-MP	.008													●	●	●																		
				CCMT21.51MP	CCMT060204-MP	.016													●	●	●																		
				CCMT21.52MP	CCMT060208-MP	.031													●	●	●																		
				CCMT32.50.5MP	CCMT09T302-MP	.008													●	●	●																		
				CCMT32.51MP	CCMT09T304-MP	.016													●	●	●																		
			Medium Cutting	CCMT32.52MP	CCMT09T308-MP	.031													●	●	●																		

★ Indicates the maximum value of the corner R.

● = NEW

Please refer to the general catalog for CBN & PCD inserts.

80° CC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																								Coated Cermet				Cermet		Carbide									
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		MM	CCMT21.50.5MM	CCMT060202-MM	.008						●	●																												
M	Stainless Steel			CCMT21.51MM	CCMT060204-MM	.016						●	●											●																
K	Cast Iron			CCMT21.52MM	CCMT060208-MM	.031						●	●											●																
N	Non-ferrous Metal			CCMT32.50.5MM	CCMT09T302-MM	.008						●	●																										
S	Heat Resistant Alloys, Titanium Alloys			CCMT32.51MM	CCMT09T304-MM	.016						●	●											●																
			Medium Cutting	CCMT32.52MM	CCMT09T308-MM	.031						●	●											●																
			MK	CCMT21.50.5MK	CCMT060202-MK	.008										●	●																							
				CCMT21.51MK	CCMT060204-MK	.016										●	●																							
				CCMT21.52MK	CCMT060208-MK	.031										●	●																							
				CCMT32.50.5MK	CCMT09T302-MK	.008										●	●																							
				CCMT32.51MK	CCMT09T304-MK	.016										●	●																							
			Medium Cutting	CCMT32.52MK	CCMT09T308-MK	.031										●	●																							
			MS	CCMT21.50.5MS	CCMT060202-MS	.008														●	●													●						
				CCMT21.51MS	CCMT060204-MS	.016														●	●													●						
				CCMT21.52MS	CCMT060208-MS	.031														●	●													●						
				CCMT32.50.5MS	CCMT09T302-MS	.008														●	●																			
				CCMT32.51MS	CCMT09T304-MS	.016														●	●													●						
			Medium Cutting	CCMT32.52MS	CCMT09T308-MS	.031														●	●													●						
			Standard	CCMT21.50.5	CCMT060202	.008							●														●	●		★	●							●	
				CCMT21.51	CCMT060204	.016							●											●			●	●		★	●							●	
				CCMT21.52	CCMT060208	.031							●											●						★								●	
				CCMT32.50.5	CCMT09T302	.008							●														●	●		★	●							●	
				CCMT32.51	CCMT09T304	.016							●											●			●	●		★	●							●	
			Medium Cutting	CCMT32.52	CCMT09T308	.031							●											●			●	●		★	●							●	
			MV	CCMH21.50.5MV	CCMH060202-MV	.008		★	★			●	●	●										★			●	●	●	★	●								
				CCMH21.51MV	CCMH060204-MV	.016		●	●			●	●	●		★								●			●	●	●	★	●								
			Medium Cutting																																				
			MW	CCMT21.51MW	CCMT060204-MW	.016		★	★	●																	●	●	●										
				CCMT21.52MW	CCMT060208-MW	.031		●	●	★																	●	●	●										
				CCMT32.51MW	CCMT09T304-MW	.160		●	●	●																	●	●	★										
			Medium Cutting (Wiper)	CCMT32.52MW	CCMT09T308-MW	.031		●	●	●																	●	●	●										

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																								Coated Cermet				Cermet		Carbide									
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		R/LSR	CCET21.5V3RSR	CCET0602V3R-SR	.001*																		●							★							●	
M	Stainless Steel			CCET21.5V3LSR	CCET0602V3L-SR	.001*																		●							★							●	
K	Cast Iron			CCET21.50.2RSR	CCET060201R-SR	.004*																		●							★							●	
N	Non-ferrous Metal			CCET21.50.2LSR	CCET060201L-SR	.004*																		●							★							●	
S	Heat Resistant Alloys, Titanium Alloys			CCET21.50.5RSR	CCET060202R-SR	.008*																		●							★							●	
				CCET21.50.5LSR	CCET060202L-SR	.008*																		●							★							●	
				CCET21.51RSR	CCET060204R-SR	.016*																		●							★							●	
				CCET21.51LSR	CCET060204L-SR	.016*																		●							★							●	
				CCET32.5V3RSR	CCET09T3V3R-SR	.001*																		●							★							●	
				CCET32.5V3LSR	CCET09T3V3L-SR	.001*																		●							★							●	
				CCET32.50.2RSR	CCET09T301R-SR	.004*																		●							★							●	
				CCET32.50.2LSR	CCET09T301L-SR	.004*																		●							★							●	
				CCET32.50.5RSR	CCET09T302R-SR	.008*																		●							★							●	
				CCET32.50.5LSR	CCET09T302L-SR	.008*																		●							★							●	
				CCET32.51RSR	CCET09T304R-SR	.016*																		●							★							●	
			Medium Cutting	CCET32.51LSR	CCET09T304L-SR	.016*																		●							★							●	
			R/LSR	CCET21.50.2MRSR	CCET060201MR-SR	.004*						●								●																				
				CCET21.50.2MLSR	CCET060201ML-SR	.004*						●								●																				
				CCET21.50.5MRSR	CCET060202MR-SR	.008*						●								●																				
				CCET21.50.5MLSR	CCET060202ML-SR	.008*						●								●																				
				CCET21.51MRSR	CCET060204MR-SR	.016*						●								●																				
				CCET21.51MLSR	CCET060204ML-SR	.016*						●								●																				
				CCET32.50.2MRSR	CCET09T301MR-SR	.004*						●								●																				
				CCET32.50.2MLSR	CCET09T301ML-SR	.004*						●								●																				
				CCET32.50.5MRSR	CCET09T302MR-SR	.008*						●								●																				
				CCET32.50.5MLSR	CCET09T302ML-SR	.008*						●								●																				
				CCET32.51MRSR	CCET09T304MR-SR	.016*						●								●																				
			Medium Cutting	CCET32.51MLSR	CCET09T304ML-SR	.016*						●								●																				
			SMG	CCGT21.50.2MSMG	CCGT060201M-SMG	.004*	●																																	
				CCGT21.50.5MSMG	CCGT060202M-SMG	.008*	●																		●															
				CCGT21.51MSMG	CCGT060204M-SMG	.016*	●																		●															
				CCGT32.50.2MSMG	CCGT09T301M-SMG	.004*	●																																	
				CCGT32.50.5MSMG	CCGT09T302M-SMG	.008*	●																																	
			Medium Cutting	CCGT32.51MSMG	CCGT09T304M-SMG	.016*	●																																	

∗ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

80° CC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet	Carbide								
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													❁	✲	❁	◐	○	○	◔	○	◔				❁				○
M	Stainless Steel						◐	●	◐	✲	✲				◐			◔	❁	✲	❁		○	○		○					❁				
K	Cast Iron											●	◐	✲				◔	❁				○	○		○					❁	○	○	◔	○
N	Non-ferrous Metal																																	◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐		◔	○	

Shape	Order Number	(ISO)Number	RE (in)																																
R/LSN	CCGT21.5V3RSN	CCGT0602V3R-SN	.001																	●															
	CCGT21.50.2RSN	CCGT060201R-SN	.004																	●															
	CCGT21.50.2LSN	CCGT060201L-SN	.004																	●															
	CCGT21.50.5RSN	CCGT060202R-SN	.008																	●															
	CCGT21.50.5LSN	CCGT060202L-SN	.008																	●															
	CCGT32.5V3RSN	CCGT09T3V3R-SN	.001																	●															
	CCGT32.5V3LSN	CCGT09T3V3L-SN	.001																	●															
	CCGT32.50.2RSN	CCGT09T301R-SN	.004																	●															
	CCGT32.50.2LSN	CCGT09T301L-SN	.004																	●															
	CCGT32.50.5RSN	CCGT09T302R-SN	.008																	●															
	CCGT32.50.5LSN	CCGT09T302L-SN	.008																	●															
	CCGT32.51RSN	CCGT09T304R-SN	.016																	●															
	CCGT32.51LSN	CCGT09T304L-SN	.016																	●															
	CCGT21.50.2MRSN	CCGT060201MR-SN	.004*	●			●								●																				
	CCGT21.50.2MLSN	CCGT060201ML-SN	.004*	●																															
	CCGT21.50.5MRSN	CCGT060202MR-SN	.008*	●			●								●																				
	CCGT21.50.5MLSN	CCGT060202ML-SN	.008*	●																															
	CCGT32.50.2MRSN	CCGT09T301MR-SN	.004*	●			●								●																				
	CCGT32.50.2MLSN	CCGT09T301ML-SN	.004*	●																															
	CCGT32.50.5MRSN	CCGT09T302MR-SN	.008*	●			●								●																				
	CCGT32.50.5MLSN	CCGT09T302ML-SN	.008*	●																															
Medium Cutting	CCGT32.51MRSN	CCGT09T304MR-SN	.016*	●			●								●																				
Medium Cutting	CCGT32.51MLSN	CCGT09T304ML-SN	.016*	●																															
R/LSN	CCET21.5V0RSN	CCET060200R-SN	.000*																	●								★							●
	CCET21.5V0LSN	CCET060200L-SN	.000*																	●								★							●
	CCET21.5V3RSN	CCET0602V3R-SN	.001*																	●								★							●
	CCET21.5V3LSN	CCET0602V3L-SN	.001*																	●								★							●
	CCET21.50.2RSN	CCET060201R-SN	.004*																	●								★							●
	CCET21.50.2LSN	CCET060201L-SN	.004*																	●								★							●
	CCET21.50.5RSN	CCET060202R-SN	.008*																	●								★							●
	CCET21.50.5LSN	CCET060202L-SN	.008*																	●								★							●
	CCET21.51RSN	CCET060204R-SN	.016*																	●								★							●
	CCET21.51LSN	CCET060204L-SN	.016*																	●								★							●
	CCET32.5V0RSN	CCET09T300R-SN	.000*																	●								★							●
	CCET32.5V0LSN	CCET09T300L-SN	.000*																	●								★							●
	CCET32.5V3RSN	CCET09T3V3R-SN	.001*																	●								★							●
	CCET32.5V3LSN	CCET09T3V3L-SN	.001*																	●								★							●
	CCET32.50.2RSN	CCET09T301R-SN	.004*																	●								★							●
	CCET32.50.2LSN	CCET09T301L-SN	.004*																	●								★							●
	CCET32.50.5RSN	CCET09T302R-SN	.008*																	●								★							●
	CCET32.50.5LSN	CCET09T302L-SN	.008*																	●								★							●
	CCET32.51RSN	CCET09T304R-SN	.016*																	●								★							●
Medium Cutting	CCET32.51LSN	CCET09T304L-SN	.016*																	●								★							●

✱ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet	Carbide								
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													❁	✲	❁	◐	○	○	◔	○	◔				❁				○
M	Stainless Steel						◐	●	◐	✲	✲				◐			◔	❁	✲	❁		○	○		○					❁				
K	Cast Iron											●	◐	✲				◔	❁				○	○		○					❁	○	○	◔	○
N	Non-ferrous Metal																																	◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐		◔	○	

Shape	Order Number	(ISO)Number	RE (in)																																
R/LSN	CCET21.50.2MRSN	CCET060201MR-SN	.004*						●							●			●		●														
	CCET21.50.2MLSN	CCET060201ML-SN	.004*						●							●			●		●														
	CCET21.50.5MRSN	CCET060202MR-SN	.008*						●							●			●		●														
	CCET21.50.5MLSN	CCET060202ML-SN	.008*						●							●			●		●														
	CCET32.50.2MRSN	CCET09T301MR-SN	.004*						●							●			●		●														
	CCET32.50.2MLSN	CCET09T301ML-SN	.004*						●							●			●		●														
	CCET32.50.5MRSN	CCET09T302MR-SN	.008*						●							●			●		●														
	CCET32.50.5MLSN	CCET09T302ML-SN	.008*						●							●			●		●														
	CCET32.51MRSN	CCET09T304MR-SN	.016*						●							●			●		●														
Medium Cutting	CCET32.51MLSN	CCET09T304ML-SN	.016*						●							●			●		●														
R/LWSN	CCET21.5V3RWSN	CCET0602V3RW-SN	.001*																		●														
	CCET21.5V3LWSN	CCET0602V3LW-SN	.001*																		●														
	CCET32.5V3RWSN	CCET09T3V3RW-SN	.001*																		●														
	CCET32.5V3LWSN	CCET09T3V3LW-SN	.001*																		●														
Medium Cutting (Wiper)																																			

✱ Indicates the maximum value of the corner R.

● = NEW

Please refer to the general catalog for CBN & PCD inserts.

80° CC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◕: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																						Coated Cermet			Cermet		Carbide									
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTi20T	HTi05T	HTi10	TF15
P	Steel		Flat Top	CCMW21.50.5	CCMW060202	.008																																	★	
M	Stainless Steel			CCMW21.51	CCMW060204	.016										★	●	●																	★		★	
K	Cast Iron			CCMW21.52	CCMW060208	.031										●	★	★																				
N	Non-ferrous Metal			CCMW32.51	CCMW09T304	.016										●	●	●																			★	
S	Heat Resistant Alloys, Titanium Alloys			CCMW32.52	CCMW09T308	.031										●	●	●																	★		★	
				CCMW32.53	CCMW09T312	.047										★	★	★																				
			Flat Top	CCGW21.5V0	CCGW060200	.000																									●							
				CCGW21.5V5	CCGW0602V5	.002																									●							
				CCGW21.50.2	CCGW060201	.004																															●	
				CCGW21.50.5	CCGW060202	.008																															●	★
				CCGW21.51	CCGW060204	.016																																★
				CCGW21.52	CCGW060208	.031																																★
				CCGW32.5V0	CCGW09T300	.000																									●						●	
				CCGW32.5V5	CCGW09T3V5	.002																									●							
				CCGW32.50.2	CCGW09T301	.004																															●	
				CCGW32.50.5	CCGW09T302	.008																															●	
				CCGW32.51	CCGW09T304	.016																															●	
				CCGW21.50.5E	CCGW060202E	.008																										★						
				CCGW21.51E	CCGW060204E	.016																										★						
				CCGW21.52E	CCGW060208E	.008																										★						

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

80° CP TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◕: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																						Coated Cermet			Cermet		Carbide									
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTi20T	HTi05T	HTi10	TF15
P	Steel		FP	CPMH2.51.50.5FP	CPMH080202-FP	.008		●	●																															
M	Stainless Steel			CPMH2.51.51FP	CPMH080204-FP	.016		●	●																															
K	Cast Iron			CPMH320.5FP	CPMH090302-FP	.008		●	●																															
N	Non-ferrous Metal			CPMH321FP	CPMH090304-FP	.016		●	●																															
S	Heat Resistant Alloys, Titanium Alloys		Finish Cutting	CPMH322FP	CPMH090308-FP	.031		●	●																															
			FM	CPMH2.51.50.5FM	CPMH080202-FM	.008																			●														
				CPMH2.51.51FM	CPMH080204-FM	.016																			●														
				CPMH320.5FM	CPMH090302-FM	.008																			●														
				CPMH321FM	CPMH090304-FM	.016																			●														
			Finish Cutting	CPMH322FM	CPMH090308-FM	.031																			●														
			FS	CPMH2.51.50.5FS	CPMH080202-FS	.008																●																		
				CPMH2.51.51FS	CPMH080204-FS	.016																●																		
				CPMH320.5FS	CPMH090302-FS	.008																●																		
				CPMH321FS	CPMH090304-FS	.016																●																		
			Finish Cutting	CPMH322FS	CPMH090308-FS	.031																●																		
			FV	CPMH2.51.50.5FV	CPMH080202-FV	.008		★	★															●		●				●	★								
				CPMH2.51.51FV	CPMH080204-FV	.016		★	★													●		●	●	●				●	★								
				CPMH320.5FV	CPMH090302-FV	.008		★	★															●		●				●	★								
				CPMH321FV	CPMH090304-FV	.016		●	★													●		●	●	●				●	★								
			Finish Cutting	CPMH322FV	CPMH090308-FV	.031		●	★													●		●	●	●				●	★								
			Standard	CPGT2.51.50.5	CPGT080202	.008																																	●	
				CPGT2.51.51	CPGT080204	.016																																	●	
				CPGT320.5	CPGT090302	.008																																	●	
				CPGT321	CPGT090304	.016																																	●	
			Finish Cutting																																					
			R/LF	CPMH2.51.51RF	CPMH080204R-F	.016																			●							★						●	
				CPMH2.51.51LF	CPMH080204L-F	.016																			●							★						●	
				CPMH321RF	CPMH090304R-F	.016																			●							★						●	
				CPMH321LF	CPMH090304L-F	.016																			●			★				★						●	
			Finish Cutting																																					
			R/LF	CPGT2.51.51RF	CPGT080204R-F	.016																											★							
				CPGT2.51.51LF	CPGT080204L-F	.016																											★							
				CPGT320.5RF	CPGT090302R-F	.008																											★							
				CPGT320.5LF	CPGT090302L-F	.008																											★							
				CPGT321RF	CPGT090304R-F	.016																											★							
			Finish Cutting	CPGT321LF	CPGT090304L-F	.016																											★							
			SQ	CPMT21.51SQ	CPMT060204-SQ	.016																				●													
				CPMT32.51SQ	CPMT09T304-SQ	.016																				●													
				CPMT32.52SQ	CPMT09T308-SQ	.031																				●													
			Finish Cutting																																					

Please refer to the general catalog for CBN & PCD inserts.

80° CP TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide										
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													❁	✲	❁		◐	○	○	◔	○	◔						○	
M	Stainless Steel						◐	●	◐	✲	✲				◐			◔	❁	✲	❁			○	○										
K	Cast Iron											●	◐	✲				◔	❁					○	○						○	◔	◔	○	
N	Non-ferrous Metal																																	◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐			◔	○

Shape	Order Number	(ISO)Number	RE (in)																																		
LP	CPMH2.51.50.5LP	CPMH080202-LP	.008			★	★																														
	CPMH2.51.51LP	CPMH080204-LP	.016		●	★	★																														
	CPMH2.51.52LP	CPMH080208-LP	.031		●	●	●																														
	CPMH320.5LP	CPMH090302-LP	.008			★	★																														
Light Cutting	CPMH321LP	CPMH090304-LP	.016		●	★	★																														
	CPMH322LP	CPMH090308-LP	.031		●	★	★																														
LM	CPMH2.51.51LM	CPMH080204-LM	.016						●	●	●										●																
	CPMH2.51.52LM	CPMH080208-LM	.031						●	●	●										●																
	CPMH321LM	CPMH090304-LM	.016						●	●	●										●																
Light Cutting	CPMH322LM	CPMH090308-LM	.031						●	●	●										●																
LS	CPMH2.51.51LS	CPMH080204-LS	.016														●																				
	CPMH2.51.52LS	CPMH080208-LS	.031														●																				
	CPMH321LS	CPMH090304-LS	.016														●																				
Light Cutting	CPMH322LS	CPMH090308-LS	.031														●																				
SV	CPMH2.51.50.5SV	CPMH080202-SV	.008								●									★			●		●	★	●										
	CPMH2.51.51SV	CPMH080204-SV	.016								●									★			●		●	★	●										
	CPMH320.5SV	CPMH090302-SV	.008								●									★			●		●	★	●										
	CPMH321SV	CPMH090304-SV	.016								●									★			●		●	★	●										
Light Cutting	CPMH322SV	CPMH090308-SV	.031								●									★			●		●	★	●										
MP	CPMH2.51.51MP	CPMH080204-MP	.016		●	●	●																														
	CPMH2.51.52MP	CPMH080208-MP	.031		●	●	●																														
	CPMH321MP	CPMH090304-MP	.016		●	●	●																														
Medium Cutting	CPMH322MP	CPMH090308-MP	.031		●	●	●																														
MM	CPMH2.51.51MM	CPMH080204-MM	.016																		●																
	CPMH2.51.52MM	CPMH080208-MM	.031																		●																
	CPMH321MM	CPMH090304-MM	.016																		●																
Medium Cutting	CPMH322MM	CPMH090308-MM	.031																		●																
MK	CPMH2.51.51MK	CPMH080204-MK	.016									●	●	●																							
	CPMH2.51.52MK	CPMH080208-MK	.031									●	●	●																							
	CPMH321MK	CPMH090304-MK	.016									●	●	●																							
Medium Cutting	CPMH322MK	CPMH090308-MK	.031									●	●	●																							
MS	CPMH2.51.51MS	CPMH080204-MS	.016															●																			
	CPMH2.51.52MS	CPMH080208-MS	.031															●																			
	CPMH321MS	CPMH090304-MS	.016															●																			
Medium Cutting	CPMH322MS	CPMH090308-MS	.031															●																			

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide										
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													❁	✲	❁		◐	○	○	◔	○	◔						○	
M	Stainless Steel						◐	●	◐	✲	✲				◐			◔	❁	✲	❁			○	○										
K	Cast Iron											●	◐	✲				◔	❁					○	○						○	◔	◔	○	
N	Non-ferrous Metal																																	◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐			◔	○

Shape	Order Number	(ISO)Number	RE (in)																																		
Standard	CPMH2.51.51	CPMH080204	.016		●	●																															
	CPMH2.51.52	CPMH080208	.031		●	●																															
	CPMH321	CPMH090304	.016		●	●																															
Medium Cutting	CPMH322	CPMH090308	.031		●	●	★																														
Standard	CPMX2.51.51	CPMX080204	.016																			★															
	CPMX2.51.52	CPMX080208	.031																			★															
	CPMX321	CPMX090304	.016																			★					★				★						
Medium Cutting	CPMX322	CPMX090308	.031																			★									★						
MV	CPMH2.51.51MV	CPMH080204-MV	.016			●	●			●	●	●		★						●			●	●		●	★	●									
	CPMH2.51.52MV	CPMH080208-MV	.031			●	●			●	●	●		★						●			●	●		●	★	●									
	CPMH321MV	CPMH090304-MV	.016			●	●			●	●	●		★						●			●	●		●	★	●									
Medium Cutting	CPMH322MV	CPMH090308-MV	.031			●	●			●	●	●		★						●			●	●		●	★	●									
MQ	CPMT21.51MQ	CPMT060204-MQ	.016									●												●													
	CPMT21.52MQ	CPMT060208-MQ	.031									●												●													
	CPMT32.51MQ	CPMT09T304-MQ	.016									●												●													
Medium Cutting	CPMT32.52MQ	CPMT09T308-MQ	.031									●												●													
Flat Top	CPMB2.51.50.5	CPMB080202	.008																																		●
	CPMB2.51.51	CPMB080204	.016																																		●
	CPMB2.51.52	CPMB080208	.031																																		●
	CPMB320.5	CPMB090302	.008																																		●
	CPMB321	CPMB090304	.016																																		●
	CPMB322	CPMB090308	.031																																		●

Please refer to the general catalog for CBN & PCD inserts.

55° DC TYPE INSERTS WITH HOLE

● : Stable Cutting (1st recommendation) ◕ : General Cutting (1st recommendation) ✲ : Unstable Cutting (1st recommendation)
○ : Stable Cutting (2nd recommendation) ◔ : General Cutting (2nd recommendation) ❁ : Unstable Cutting (2nd recommendation)

Material		
P	Steel	◕ ● ◕ ✲ ❁ ✲ ❁ ❁ ◕ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◕ ● ◕ ✲ ✲ ✲ ◕ ◔ ❁ ❁ ✲ ✲ ❁ ○ ○ ○ ○
K	Cast Iron	● ◕ ✲ ◔ ❁ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◕ ● ◕ ✲ ◔ ❁ ● ○ ◕ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																						Coated Cermet				Cermet		Carbide						
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTi20T	HTi05T	HTi10	TF15
FP	DCMT21.50.5FP	DCMT070202-FP	.008	●	★	★																		●				●								
	DCMT21.51FP	DCMT070204-FP	.016	●	●	●																		●				●								
	DCMT32.50.5FP	DCMT11T302-FP	.008	●	★	●																		●				●								
	DCMT32.51FP	DCMT11T304-FP	.016	●	●	●																		●				●								
Finish Cutting	DCMT32.52FP	DCMT11T308-FP	.031	●	●	★																		●				●								
FM	DCMT21.50.5FM	DCMT070202-FM	.008						●												●	●														
	DCMT21.51FM	DCMT070204-FM	.016						●	●											●	●														
	DCMT32.50.5FM	DCMT11T302-FM	.008						●												●	●														
	DCMT32.51FM	DCMT11T304-FM	.016						●	●	●										●	●														
Finish Cutting	DCMT32.52FM	DCMT11T308-FM	.031						●	●	●										●	●														
FSF	DCGT21.50.2MFSF	DCGT070201M-FSF	.004*																●																	
	DCGT21.50.5MFSF	DCGT070202M-FSF	.008*																●																	
	DCGT32.50.2MFSF	DCGT11T301M-FSF	.004*																●																	
	DCGT32.50.5MFSF	DCGT11T302M-FSF	.008*																●																	
Finish Cutting																																				
FSF-P	DCGT21.5V5MFSF-P	DCGT0702V5M-FSF-P	.002*					●														●														
	DCGT21.50.2MFSF-P	DCGT070201M-FSF-P	.004*					●									●					●														
	DCGT21.50.5MFSF-P	DCGT070202M-FSF-P	.008*					●									●					●														
	DCGT32.5V5MFSF-P	DCGT11T3V5M-FSF-P	.002*					●														●														
	DCGT32.50.2MFSF-P	DCGT11T301M-FSF-P	.004*					●									●					●														
	DCGT32.50.5MFSF-P	DCGT11T302M-FSF-P	.008*					●									●					●														
Finish Cutting	DCGT32.51MFSF-P	DCGT11T304M-FSF-P	.016*					●														●														
FS	DCMT21.50.5FS	DCMT070202-FS	.008																●																	
	DCMT21.51FS	DCMT070204-FS	.016																●																	
	DCMT32.50.5FS	DCMT11T302-FS	.008																●																	
	DCMT32.51FS	DCMT11T304-FS	.016																●																	
Finish Cutting	DCMT32.52FS	DCMT11T308-FS	.031																●																	
FS	DCGT21.50.2MFS	DCGT070201M-FS	.004*														●	●	●			●														
	DCGT21.50.5MFS	DCGT070202M-FS	.008*														●	●	●			●														
	DCGT21.51MFS	DCGT070204M-FS	.016*														●	●	●			●														
	DCGT32.50.2MFS	DCGT11T301M-FS	.004*														●	●	●			●														
	DCGT32.50.5MFS	DCGT11T302M-FS	.008*														●	●	●			●														
Finish Cutting	DCGT32.51MFS	DCGT11T304M-FS	.016*														●	●	●			●														
FS-P	DCGT21.50.2MFS-P	DCGT070201M-FS-P	.004*					●									●					●													●	
	DCGT21.50.5MFS-P	DCGT070202M-FS-P	.008*					●									●					●													●	
	DCGT21.51MFS-P	DCGT070204M-FS-P	.016*					●									●					●													●	
	DCGT32.50.2MFS-P	DCGT11T301M-FS-P	.004*					●									●					●													●	
	DCGT32.50.5MFS-P	DCGT11T302M-FS-P	.008*					●									●					●													●	
Finish Cutting	DCGT32.51MFS-P	DCGT11T304M-FS-P	.016*					●									●					●													●	
FV	DCMT21.50.5FV	DCMT070202-FV	.008	★	★	★													●		●	●		●				★	●							
	DCMT21.51FV	DCMT070204-FV	.016	★	●	●													●		●	●		●				★	●							
	DCMT21.52FV	DCMT070208-FV	.031		●	★															●							●	★							
	DCMT32.50.5FV	DCMT11T302-FV	.008		●	★															●							●	★							
	DCMT32.51FV	DCMT11T304-FV	.016	★	●	●													●		●	●		●				★	●							
Finish Cutting	DCMT32.52FV	DCMT11T308-FV	.031	★	●	●													●		●	●		●				★	●							

★ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

● : Stable Cutting (1st recommendation) ◕ : General Cutting (1st recommendation) ✲ : Unstable Cutting (1st recommendation)
○ : Stable Cutting (2nd recommendation) ◔ : General Cutting (2nd recommendation) ❁ : Unstable Cutting (2nd recommendation)

Material		
P	Steel	◕ ● ◕ ✲ ❁ ✲ ❁ ❁ ◕ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◕ ● ◕ ✲ ✲ ✲ ◕ ◔ ❁ ❁ ✲ ✲ ❁ ○ ○ ○ ○
K	Cast Iron	● ◕ ✲ ◔ ❁ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◕ ● ◕ ✲ ◔ ❁ ● ○ ◕ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																						Coated Cermet				Cermet		Carbide						
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTi20T	HTi05T	HTi10	TF15
FJ	DCGT21.5V5FJ	DCGT0702V5-FJ	.002																		●															
	DCGT21.50.2FJ	DCGT070201-FJ	.004																		●															
	DCGT21.50.5FJ	DCGT070202-FJ	.008																		●															
	DCGT32.5V5FJ	DCGT11T3V5-FJ	.002																		●															
	DCGT32.50.2FJ	DCGT11T301-FJ	.004																		●															
Finish Cutting	DCGT32.50.5FJ	DCGT11T302-FJ	.008																		●															
FJ-P	DCGT21.5V5FJ-P	DCGT0702V5-FJ-P	.002																											●						
	DCGT21.50.2FJ-P	DCGT070201-FJ-P	.004																											●						
	DCGT21.50.5FJ-P	DCGT070202-FJ-P	.008																											●						
	DCGT32.5V5FJ-P	DCGT11T3V5-FJ-P	.002																											●						
	DCGT32.50.2FJ-P	DCGT11T301-FJ-P	.004																											●						
Finish Cutting	DCGT32.50.5FJ-P	DCGT11T302-FJ-P	.008																											●						
AZ	DCGT21.50.5AZ	DCGT070202-AZ	.008																																●	
	DCGT21.51AZ	DCGT070204-AZ	.016																																●	
	DCGT32.50.5AZ	DCGT11T302-AZ	.008																																●	
	DCGT32.51AZ	DCGT11T304-AZ	.016																																●	
Medium Cutting ~ Finish Cutting	DCGT32.52AZ	DCGT11T308-AZ	.031																																●	
R/LF	DCGT21.50.5RF	DCGT070202R-F	.008																		●							★							●	
	DCGT21.50.5LF	DCGT070202L-F	.008																		●					●		★							●	
	DCGT21.51RF	DCGT070204R-F	.016																		●							★							●	
	DCGT21.51LF	DCGT070204L-F	.016																		●					●		★							●	
	DCGT32.50.5RF	DCGT11T302R-F	.008																		●							★							●	
	DCGT32.50.5LF	DCGT11T302L-F	.008																		●					●		★							●	
	DCGT32.51RF	DCGT11T304R-F	.016																		●							★							●	
Finish Cutting	DCGT32.51LF	DCGT11T304L-F	.016																		●					●		★							●	
RSRF	DCGT32.50.2MRSRF	DCGT11T301MR-SRF	.004*														●																			
	DCGT32.50.5MRSRF	DCGT11T302MR-SRF	.008*														●																			
	DCGT32.51MRSRF	DCGT11T304MR-SRF	.016*														●																			
Finish Cutting																																				

★ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

55° DC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✤ ✤ ❁ ❁ ◐ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◐ ● ◐ ✤ ✤ ◐ ✤ ❁ ❁ ❁ ◔ ○ ○ ○ ◔ ❁
K	Cast Iron	● ◐ ✤ ◔ ❁ ❁ ○ ○ ○ ◔ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✤ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated: MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	Coated Cermet: MP3025	AP25N	VP25N	VP45N	Cermet: NX2525	NX3035	Carbide: MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
R/LSRF	DCET21.5V3RSRF	DCET0702V3R-SRF	.001																											●						
	DCET21.5V3LSRF	DCET0702V3L-SRF	.001																											●						
	DCET32.5V3RSRF	DCET11T3V3R-SRF	.001																											●						
	DCET32.5V3LSRF	DCET11T3V3L-SRF	.001																											●						
	DCET21.50.2MRSRF	DCET070201MR-SRF	.004*					●								●			●			●								●						
	DCET21.50.2MLSRF	DCET070201ML-SRF	.004*					●								●			●			●								●						
	DCET21.50.5MRSRF	DCET070202MR-SRF	.008*					●								●			●			●								●						
	DCET21.50.5MLSRF	DCET070202ML-SRF	.008*					●								●			●			●								●						
	DCET21.51MRSRF	DCET070204MR-SRF	.016*					●								●			●			●								●						
	DCET21.51MLSRF	DCET070204ML-SRF	.016*					●								●			●			●								●						
	DCET32.50.2MRSRF	DCET11T301MR-SRF	.004*					●								●			●			●								●						
	DCET32.50.2MLSRF	DCET11T301ML-SRF	.004*					●								●			●			●								●						
	DCET32.50.5MRSRF	DCET11T302MR-SRF	.008*					●								●			●			●								●						
	DCET32.50.5MLSRF	DCET11T302ML-SRF	.008*					●								●			●			●								●						
	DCET32.51MRSRF	DCET11T304MR-SRF	.016*					●								●			●			●								●						
Finish Cutting	DCET32.51MLSRF	DCET11T304ML-SRF	.016*					●								●			●			●								●						
LP	DCMT21.50.5LP	DCMT070202-LP	.008	● ★ ★																																
	DCMT21.51LP	DCMT070204-LP	.016	● ● ●																				●			●									
	DCMT21.52LP	DCMT070208-LP	.031	★ ● ●																				●			●									
	DCMT32.50.5LP	DCMT11T302-LP	.008	★ ● ★																																
	DCMT32.51LP	DCMT11T304-LP	.016	● ● ●																				●			●									
Light Cutting	DCMT32.52LP	DCMT11T308-LP	.031	● ● ●																				●			●									
LM	DCMT21.50.5LM	DCMT070202-LM	.008						●													●														
	DCMT21.51LM	DCMT070204-LM	.016						● ● ●													● ●														
	DCMT21.52LM	DCMT070208-LM	.031						● ● ●													● ●														
	DCMT32.50.5LM	DCMT11T302-LM	.008						●													●														
	DCMT32.51LM	DCMT11T304-LM	.016						● ● ●													● ●														
Light Cutting	DCMT32.52LM	DCMT11T308-LM	.031						● ● ●													● ●														
LS	DCMT21.50.5LS	DCMT070202-LS	.008														● ● ●														●						
	DCMT21.51LS	DCMT070204-LS	.016														● ● ●														●						
	DCMT21.52LS	DCMT070208-LS	.031																●																		
	DCMT32.50.5LS	DCMT11T302-LS	.008														● ● ●														●						
	DCMT32.51LS	DCMT11T304-LS	.016														● ● ●														●						
Light Cutting	DCMT32.52LS	DCMT11T308-LS	.031														● ● ●														●						
LS	DCGT21.50.2MLS	DCGT070201M-LS	.004*														● ● ●					●														
	DCGT21.50.5MLS	DCGT070202M-LS	.008*														● ● ●					●														
	DCGT21.51MLS	DCGT070204M-LS	.016*														● ● ●					●														
	DCGT32.50.2MLS	DCGT11T301M-LS	.004*														● ● ●					●														
	DCGT32.50.5MLS	DCGT11T302M-LS	.008*														● ● ●					●														
Light Cutting	DCGT32.51MLS	DCGT11T304M-LS	.016*														● ● ●					●														

∗ Indicates the maximum value of the corner R.

● = NEW

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✤ ❁ ◐ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◐ ● ◐ ✤ ✤ ◐ ◔ ❁ ❁ ❁ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✤ ◔ ❁ ○ ○ ○ ◔ ❁ ○ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✤ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated: MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	Coated Cermet: MP3025	AP25N	VP25N	VP45N	Cermet: NX2525	NX3035	Carbide: MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
LS-P	DCGT21.5V5MLS-P	DCGT0702V5M-LS-P	.002*													●																				
	DCGT21.50.2MLS-P	DCGT070201M-LS-P	.004*	●				●								●															●						
	DCGT21.50.5MLS-P	DCGT070202M-LS-P	.008*	●				●								●															●						
	DCGT21.51MLS-P	DCGT070204M-LS-P	.016*	●				●								●															●						
	DCGT32.50.2MLS-P	DCGT11T301M-LS-P	.004*	●				●								●															●						
	DCGT32.50.5MLS-P	DCGT11T302M-LS-P	.008*	●				●								●															●						
Light Cutting	DCGT32.51MLS-P	DCGT11T304M-LS-P	.016*	●				●								●															●						
MJ	DCGT21.51MJ	DCGT070204-MJ	.016																	●																
	DCGT32.51MJ	DCGT11T304-MJ	.016																	●																
Light Cutting	DCGT32.52MJ	DCGT11T308-MJ	.031																	●																
MJ-P	DCGT21.51MJ-P	DCGT070204-MJ-P	.016																												●					
	DCGT32.51MJ-P	DCGT11T304-MJ-P	.016																												●					
Light Cutting	DCGT32.52MJ-P	DCGT11T308-MJ-P	.031																												●					
SV	DCMT21.50.5SV	DCMT070202-SV	.008									●								●						●			★	●						
	DCMT21.51SV	DCMT070204-SV	.016									●								●						●			★	●						
	DCMT21.52SV	DCMT070208-SV	.031									●								●						●			★	●						
	DCMT32.50.5SV	DCMT11T302-SV	.008									●								●						●			★	●						
	DCMT32.51SV	DCMT11T304-SV	.016									●								●						●			★	●						
Light Cutting	DCMT32.52SV	DCMT11T308-SV	.031									●								●						●			★	●						
SW	DCMX21.50.5SW	DCMX070202-SW	.008	● ● ●																●																
	DCMX21.51SW	DCMX070204-SW	.016	● ● ●																●																
	DCMX21.52SW	DCMX070208-SW	.031	● ● ●																●																
	DCMX32.50.5SW	DCMX11T302-SW	.008	● ● ●																●																
Light Cutting (Wiper)	DCMX32.51SW	DCMX11T304-SW	.016	● ● ●																●																
	DCMX32.52SW	DCMX11T308-SW	.031	● ● ●																●																

∗ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

55° DC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✤: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✤ ✤ ✤

55° DC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide					
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													✲	✲	❁	❁	◐	○	○	◔	○	◔				❁			○
M	Stainless Steel						◐	●	◐	✲	✲				◐				◔	❁	❁	❁		○	○		○					❁			
K	Cast Iron											●	◐	✲					◔	❁		❁		○	○		○					❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐			◔	○

Shape	Order Number	(ISO)Number	RE (in)	
R/LSR	DCET21.5V3RSR	DCET0702V3R-SR	.001*	
	DCET21.5V3LSR	DCET0702V3L-SR	.001*	
	DCET21.50.2RSR	DCET070201R-SR	.004*	
	DCET21.50.2LSR	DCET070201L-SR	.004*	
	DCET21.50.5RSR	DCET070202R-SR	.008*	
	DCET21.50.5LSR	DCET070202L-SR	.008*	
	DCET21.51RSR	DCET070204R-SR	.016*	
	DCET21.51LSR	DCET070204L-SR	.016*	
	DCET32.5V3RSR	DCET11T3V3R-SR	.001*	
	DCET32.5V3LSR	DCET11T3V3L-SR	.001*	
	DCET32.50.2RSR	DCET11T301R-SR	.004*	
	DCET32.50.2LSR	DCET11T301L-SR	.004*	
	DCET32.50.5RSR	DCET11T302R-SR	.008*	
	DCET32.50.5LSR	DCET11T302L-SR	.008*	
	DCET32.51RSR	DCET11T304R-SR	.016*	
Medium Cutting	DCET32.51LSR	DCET11T304L-SR	.016*	
R/LSR	DCET21.50.2MRSR	DCET070201MR-SR	.004*	
	DCET21.50.2MLSR	DCET070201ML-SR	.004*	
	DCET21.50.5MRSR	DCET070202MR-SR	.008*	
	DCET21.50.5MLSR	DCET070202ML-SR	.008*	
	DCET21.51MRSR	DCET070204MR-SR	.016*	
	DCET21.51MLSR	DCET070204ML-SR	.016*	
	DCET32.50.2MRSR	DCET11T301MR-SR	.004*	
	DCET32.50.2MLSR	DCET11T301ML-SR	.004*	
	DCET32.50.5MRSR	DCET11T302MR-SR	.008*	
	DCET32.50.5MLSR	DCET11T302ML-SR	.008*	
	DCET32.51MRSR	DCET11T304MR-SR	.016*	
Medium Cutting	DCET32.51MLSR	DCET11T304ML-SR	.016*	
SMG	DCGT21.50.2MSMG	DCGT070201M-SMG	.004*	
	DCGT21.50.5MSMG	DCGT070202M-SMG	.008*	
	DCGT21.51MSMG	DCGT070204M-SMG	.016*	
	DCGT32.50.2MSMG	DCGT11T301M-SMG	.004*	
	DCGT32.50.5MSMG	DCGT11T302M-SMG	.008*	
Medium Cutting	DCGT32.51MSMG	DCGT11T304M-SMG	.016*	

✶ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide					
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													✲	✲	❁	❁	◐	○	○	◔	○	◔				❁			○
M	Stainless Steel						◐	●	◐	✲	✲				◐				◔	❁	❁	❁		○	○		○					❁			
K	Cast Iron											●	◐	✲					◔	❁		❁		○	○		○					❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐			◔	○

Shape	Order Number	(ISO)Number	RE (in)	
R/LSN	DCGT21.5V3RSN	DCGT0702V3R-SN	.001	
	DCGT21.50.2RSN	DCGT070201R-SN	.004	
	DCGT21.50.5RSN	DCGT070202R-SN	.008	
	DCGT21.50.5LSN	DCGT070202L-SN	.008	
	DCGT32.5V3RSN	DCGT11T3V3R-SN	.001	
	DCGT32.5V3LSN	DCGT11T3V3L-SN	.001	
	DCGT32.50.2RSN	DCGT11T301R-SN	.004	
	DCGT32.50.2LSN	DCGT11T301L-SN	.004	
	DCGT32.50.5RSN	DCGT11T302R-SN	.008	
	DCGT32.50.5LSN	DCGT11T302L-SN	.008	
	DCGT32.51RSN	DCGT11T304R-SN	.016	
	DCGT32.51LSN	DCGT11T304L-SN	.016	
	DCGT21.50.2MRSN	DCGT070201MR-SN	.004*	
	DCGT21.50.2MLSN	DCGT070201ML-SN	.004*	
	DCGT21.50.5MRSN	DCGT070202MR-SN	.008*	
	DCGT21.50.5MLSN	DCGT070202ML-SN	.008*	
	DCGT21.51MRSN	DCGT070204MR-SN	.016*	
	DCGT32.50.2MRSN	DCGT11T301MR-SN	.004*	
	DCGT32.50.2MLSN	DCGT11T301ML-SN	.004*	
	DCGT32.50.5MRSN	DCGT11T302MR-SN	.008*	
	DCGT32.50.5MLSN	DCGT11T302ML-SN	.008*	
	DCGT32.51MRSN	DCGT11T304MR-SN	.016*	
Medium Cutting	DCGT32.51MLSN	DCGT11T304ML-SN	.016*	

✶ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

55° DC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide					
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													❁	✲	❁		◐	○	○	◔	○	◔						○
M	Stainless Steel						◐	●	◐	✲	✲				◐				◔	❁	❁	❁		○	○		○					❁		
K	Cast Iron											●	◐	✲					◔	❁		❁		○	○		○				❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐		◔	○

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
R/LSN	DCET21.5V0RSN	DCET070200R-SN	.000																		●							★							●
	DCET21.5V0LSN	DCET070200L-SN	.000																		●							★							●
	DCET21.5V3RSN	DCET0702V3R-SN	.001					●								●		●				●													
	DCET21.5V3LSN	DCET0702V3L-SN	.001					●								●		●				●													
	DCET21.5V3RSN	DCET0702V3R-SN	.001*																		●							★							●
	DCET21.5V3LSN	DCET0702V3L-SN	.001*																		●							★							●
	DCET21.50.2RSN	DCET070201R-SN	.004*																		●							★							●
	DCET21.50.2LSN	DCET070201L-SN	.004*																		●							★							●
	DCET21.50.5RSN	DCET070202R-SN	.008*																		●							★							●
	DCET21.50.5LSN	DCET070202L-SN	.008*																		●							★							●
	DCET21.51RSN	DCET070204R-SN	.016*																		●							★							●
	DCET21.51LSN	DCET070204L-SN	.016*																		●							★							●
	DCET32.5V0RSN	DCET11T300R-SN	.000																		●							★							●
	DCET32.5V0LSN	DCET11T300L-SN	.000																		●							★							●
	DCET32.5V3RSN	DCET11T3V3R-SN	.001													●		●				●								●					
	DCET32.5V3LSN	DCET11T3V3L-SN	.001													●		●				●								●					
	DCET32.5V3RSN	DCET11T3V3R-SN	.001*																		●							★							●
	DCET32.5V3LSN	DCET11T3V3L-SN	.001*																		●							★							●
	DCET32.50.2RSN	DCET11T301R-SN	.004*																		●							★							●
	DCET32.50.2LSN	DCET11T301L-SN	.004*																		●							★							●
	DCET32.50.5RSN	DCET11T302R-SN	.008*																		●							★							●
	DCET32.50.5LSN	DCET11T302L-SN	.008*																		●							★							●
	DCET32.51RSN	DCET11T304R-SN	.016*																		●							★							●
	DCET32.51LSN	DCET11T304L-SN	.016*																		●							★							●
	DCET21.50.2MRSN	DCET070201MR-SN	.004*					●								●		●				●													
	DCET21.50.2MLSN	DCET070201ML-SN	.004*					●								●		●				●													
	DCET21.50.5MRSN	DCET070202MR-SN	.008*					●								●		●				●													
	DCET21.50.5MLSN	DCET070202ML-SN	.008*					●								●		●				●													
	DCET21.51MRSN	DCET070204MR-SN	.016*					●								●																			
	DCET32.50.2MRSN	DCET11T301MR-SN	.004*					●								●		●				●								●					
	DCET32.50.2MLSN	DCET11T301ML-SN	.004*					●								●		●				●								●					
	DCET32.50.5MRSN	DCET11T302MR-SN	.008*					●								●		●				●								●					
	DCET32.50.5MLSN	DCET11T302ML-SN	.008*					●								●		●				●								●					
	DCET32.51MRSN	DCET11T304MR-SN	.016*					●								●		●				●								●					
Medium Cutting	DCET32.51MLSN	DCET11T304ML-SN	.016*					●								●		●				●								●					
R/LWSN	DCET21.5V3RWSN	DCET0702V3RW-SN	.001*																		●														
	DCET21.5V3LWSN	DCET0702V3LW-SN	.001*																		●														
	DCET32.5V3RWSN	DCET11T3V3RW-SN	.001*																		●														
Medium Cutting (Wiper)	DCET32.5V3LWSN	DCET11T3V3LW-SN	.001*																		●														

∗ Indicates the maximum value of the corner R.

● = NEW

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet		Carbide					
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel		◐	●	◐	✲													❁	✲	❁		◐	○	○	◔	○	◔						○
M	Stainless Steel						◐	●	◐	✲	✲				◐				◔	❁	❁	❁		○	○		○					❁		
K	Cast Iron											●	◐	✲					◔	❁		❁		○	○		○				❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◐	●	◐	✲	◔	❁									●	○	◐		◔	○

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
Flat Top	DCMW21.51	DCMW070204	.016										★	★	★																			★
	DCMW32.51	DCMW11T304	.016										●	★	★																		●	★
	DCMW32.52	DCMW11T308	.031										★	★	★																			★
Flat Top	DCGW21.5V0	DCGW070200	.000																										★						
	DCGW21.5V5	DCGW0702V5	.002																										★						
	DCGW21.50.2	DCGW070201	.004																															●	
	DCGW21.50.5	DCGW070202	.008																															●	
	DCGW32.5V0	DCGW11T300	.000																										★						
	DCGW32.5V5	DCGW11T3V5	.002																										★						
	DCGW32.50.2	DCGW11T301	.004																															●	
	DCGW32.50.5	DCGW11T302	.008																															●	
	DCGW32.51	DCGW11T304	.016																															●	

Please refer to the general catalog for CBN & PCD inserts.

60° TB,TC TYPE INSERTS WITH HOLE

● : Stable Cutting (1st recommendation)　◕ : General Cutting (1st recommendation)　✲ : Unstable Cutting (1st recommendation)
○ : Stable Cutting (2nd recommendation)　◔ : General Cutting (2nd recommendation)　❁ : Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet				Cermet		Carbide									
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel	◕	●	◕	✲																◕	○	○	◔	○	◔				❁			○
M	Stainless Steel			◕	●	◕	✲	✲						◕				◔	❁	✲	❁					○	○				❁			
K	Cast Iron						●	◕	✲									◔	❁							○	○				❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◕	●	◕	✲	◔	❁									●	○	◕			◔	

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
FSF-P	TBGT1.210.2MFSF-P	TBGT060101M-FSF-P	.004*					●								●						●													
	TBGT1.210.5MFSF-P	TBGT060102M-FSF-P	.008*					●								●						●													
Finish Cutting																																			
FP	TCMT1.81.50.5FP	TCMT090202-FP	.008		★	★	★																●				●								
	TCMT1.81.51FP	TCMT090204-FP	.016		●	★	★																●				●								
	TCMT21.50.5FP	TCMT110202-FP	.008		●	★	★																●				●								
	TCMT21.51FP	TCMT110204-FP	.016		●	●	●																●				●								
Finish Cutting	TCMT32.51FP	TCMT16T304-FP	.016		★	★	★																●				●								
FM	TCMT1.81.50.5FM	TCMT090202-FM	.008																		●														
	TCMT1.81.51FM	TCMT090204-FM	.016						●	●	●										●														
	TCMT21.50.5FM	TCMT110202-FM	.008																		●														
	TCMT21.51FM	TCMT110204-FM	.016																		●														
Finish Cutting	TCMT32.51FM	TCMT16T304-FM	.016																		●														
FV	TCMT21.51FV	TCMT110204-FV	.016		●	●																	●	★	★	●									
	TCMT32.51FV	TCMT16T304-FV	.016		★	★																	●		★	●									
Finish Cutting																																			
FJ-P	TCGT21.5V5FJ-P	TCGT1102V5-FJ-P	.002																																
	TCGT21.50.2FJ-P	TCGT110201-FJ-P	.004																																
	TCGT21.50.5FJ-P	TCGT110202-FJ-P	.008																																
	TCGT32.5V5FJ-P	TCGT16T3V5-FJ-P	.002																																
	TCGT32.50.2FJ-P	TCGT16T301-FJ-P	.004																																
Finish Cutting	TCGT32.50.5FJ-P	TCGT16T302-FJ-P	.008																																
AZ	TCGT21.50.5AZ	TCGT110202-AZ	.008																																
	TCGT21.51AZ	TCGT110204-AZ	.016																																
	TCGT21.52AZ	TCGT110208-AZ	.031																																
	TCGT32.50.5AZ	TCGT16T302-AZ	.008																																
	TCGT32.51AZ	TCGT16T304-AZ	.016																																
Medium Cutting ~ Finish Cutting	TCGT32.52AZ	TCGT16T308-AZ	.031																																
R/LF	TCGT1.21V3LF	TCGT0601V3L-F	.001																								★								
	TCGT1.210.2LF	TCGT060101L-F	.004																		●						★								
	TCGT1.210.5RF	TCGT060102R-F	.008																		★						★								★
	TCGT1.210.5LF	TCGT060102L-F	.008																		●						★								●
	TCGT1.211RF	TCGT060104R-F	.016																								★								★
	TCGT1.211LF	TCGT060104L-F	.016																		●						★								●
	TCGT1.210.2MRF	TCGT060101MR-F	.004*	●																															
	TCGT1.210.2MLF	TCGT060101ML-F	.004*	●																															
	TCGT1.210.5MRF	TCGT060102MR-F	.008*	●																															
	TCGT1.210.5MLF	TCGT060102ML-F	.008*	●																															
	TCGT1.211MRF	TCGT060104MR-F	.016*	●																															
Finish Cutting	TCGT1.211MLF	TCGT060104ML-F	.016*	●																															

★ Indicates the maximum value of the corner R.

● : USA Stock　★ : Stocked in Japan

10 inserts in one case.

60° TC TYPE INSERTS WITH HOLE

● : Stable Cutting (1st recommendation)　◕ : General Cutting (1st recommendation)　✲ : Unstable Cutting (1st recommendation)
○ : Stable Cutting (2nd recommendation)　◔ : General Cutting (2nd recommendation)　❁ : Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet				Cermet		Carbide									
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel	◕	●	◕	✲																◕	○	○	◔	○	◔				❁			○
M	Stainless Steel			◕	●	◕	✲	✲						◕				◔	❁	✲	❁					○	○				❁			
K	Cast Iron						●	◕	✲									◔	❁							○	○				❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◕	●	◕	✲	◔	❁									●	○	◕			◔	

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
LP	TCMT1.81.51LP	TCMT090204-LP	.016		★	●	★																●				●								
	TCMT1.81.52LP	TCMT090208-LP	.031		★	★	★																●				●								
	TCMT21.50.5LP	TCMT110202-LP	.008		●	●	●																												
	TCMT21.51LP	TCMT110204-LP	.016		●	●	●																●				●								
	TCMT21.52LP	TCMT110208-LP	.031		★	●	★																●				●								
	TCMT32.51LP	TCMT16T304-LP	.016		●	●	★																●				●								
Light Cutting	TCMT32.52LP	TCMT16T308-LP	.031		●	●	★																●				●								
LM	TCMT1.81.51LM	TCMT090204-LM	.016							●	●									●															
	TCMT1.81.52LM	TCMT090208-LM	.031																	●															
	TCMT21.51LM	TCMT110204-LM	.016							●	●									●															
	TCMT21.52LM	TCMT110208-LM	.031							●	●									●															
	TCMT32.51LM	TCMT16T304-LM	.016							●	●	●								●															
Light Cutting	TCMT32.52LM	TCMT16T308-LM	.031							●	●	●								●															
LK	TCMT21.50.5LK	TCMT110202-LK	.008										●	●	●																				
	TCMT21.51LK	TCMT110204-LK	.016										●	●	●																				
	TCMT21.52LK	TCMT110208-LK	.031										●	●	●																				
Light Cutting																																			
LS	TCMT1.81.50.5LS	TCMT090202-LS	.008													●	●	●																		
	TCMT21.50.5LS	TCMT110202-LS	.008													●	●	●																		
Light Cutting																																			
SW	TCMX1.81.51SW	TCMX090204-SW	.016		●	●	●													●															
	TCMX21.51SW	TCMX110204-SW	.016		●	●	●													●															
Light Cutting (Wiper)																																			
R/LSS	TCET1.51.50.2MRSS	TCET080201MR-SS	.004*																																
	TCET1.51.50.2MLSS	TCET080201ML-SS	.004*																																
	TCET1.51.50.5MRSS	TCET080202MR-SS	.008*																																
	TCET1.51.50.5MLSS	TCET080202ML-SS	.008*																																
	TCET21.50.2MRSS	TCET110201MR-SS	.004*																																
	TCET21.50.2MLSS	TCET110201ML-SS	.004*																																
	TCET21.50.5MRSS	TCET110202MR-SS	.008*																																
	TCET21.50.5MLSS	TCET110202ML-SS	.008*																																
	TCET21.51MRSS	TCET110204MR-SS	.016*																																
Light Cutting	TCET21.51MLSS	TCET110204ML-SS	.016*																																

★ Indicates the maximum value of the corner R.

● = NEW

Please refer to the general catalog for CBN & PCD inserts.

60° TC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ❁ ✲ ❁ ◐ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ✲ ◐ ✲ ❁ ○ ○ ○ ◔ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ✲ ❁ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																										Coated Cermet				Cermet		Carbide									
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
MJ	TCGT21.51MJ	TCGT110204-MJ	.016																	●																						
	TCGT32.51MJ	TCGT16T304-MJ	.016																	●																						
	TCGT32.52MJ	TCGT16T308-MJ	.031																	●																						
Light Cutting																																											
MJ-P	TCGT21.51MJ-P	TCGT110204-MJ-P	.016																												●										
	TCGT32.51MJ-P	TCGT16T304-MJ-P	.016																												●										
	TCGT32.52MJ-P	TCGT16T308-MJ-P	.031																												●										
Light Cutting																																											
MP	TCMT1.81.51MP	TCMT090204-MP	.016		●	★	★																	●				●														
	TCMT1.81.52MP	TCMT090208-MP	.031		★	●	★																	●				●														
	TCMT21.50.5MP	TCMT110202-MP	.008		★	●	★																																				
	TCMT21.51MP	TCMT110204-MP	.016		●	●	●																	●				●														
	TCMT21.52MP	TCMT110208-MP	.031		●	●	●																	●				●														
	TCMT32.51MP	TCMT16T304-MP	.016		●	●	●																	●				●														
	TCMT32.52MP	TCMT16T308-MP	.031		●	★	●																	●				●														
Medium Cutting	TCMT32.53MP	TCMT16T312-MP	.047		●	★	★																	●				●														
MM	TCMT1.81.51MM	TCMT090204-MM	.016						●	●										●																						
	TCMT1.81.52MM	TCMT090208-MM	.031						●											●																						
	TCMT21.51MM	TCMT110204-MM	.016						●	●										●																						
	TCMT21.52MM	TCMT110208-MM	.031						●	●	●									●																						
	TCMT32.51MM	TCMT16T304-MM	.016						●	●	●									●																						
	TCMT32.52MM	TCMT16T308-MM	.031						●	●	●									●																						
Medium Cutting	TCMT32.53MM	TCMT16T312-MM	.047						●	●										●																						
MK	TCMT21.51MK	TCMT110204-MK	.016										●	●	★																										
	TCMT21.52MK	TCMT110208-MK	.031										★	●	★																										
	TCMT32.51MK	TCMT16T304-MK	.016										★	●	★																										
	TCMT32.52MK	TCMT16T308-MK	.031										★	●	●																										
Medium Cutting	TCMT32.53MK	TCMT16T312-MK	.047										★	★	★																										
MS	TCMT1.81.51MS	TCMT090204-MS	.016													●	●	●												●											
	TCMT1.81.52MS	TCMT090208-MS	.031													●	●	●												●											
	TCMT21.51MS	TCMT110204-MS	.016													●	●	●																							
	TCMT21.52MS	TCMT110208-MS	.031													●	●	●																							
	TCMT32.51MS	TCMT16T304-MS	.016													●	●	●												●											
	TCMT32.52MS	TCMT16T308-MS	.031													●	●	●												●											
Medium Cutting	TCMT32.53MS	TCMT16T312-MS	.047													●	●	●												●											
Standard	TCMT1.81.51	TCMT090204	.016								★													●	●		★	●		★					★		●						
	TCMT21.50.5	TCMT110202	.008								●									●				●	●		★	●														
	TCMT21.51	TCMT110204	.016								●									●				●	●		★	●								●		●					
	TCMT21.52	TCMT110208	.031								●									●				●																		
	TCMT32.51	TCMT16T304	.016								●									●				●	●		★	●								●		●					
Medium Cutting	TCMT32.52	TCMT16T308	.031								●									●				●	●		★	●								●		●					

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ❁ ✲ ❁ ◐ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ✲ ◐ ✲ ❁ ○ ○ ○ ◔ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ✲ ❁ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																										Coated Cermet				Cermet		Carbide									
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
Flat Top	TCMW21.51	TCMW110204	.016										●	★	★																										
	TCMW32.51	TCMW16T304	.016										★	●	★																										
	TCMW32.52	TCMW16T308	.031										★	●	★																										
	TCMW32.53	TCMW16T312	.047										★	★	★																										
Flat Top	TCGW1.51.50.2	TCGW080201	.004																																						
	TCGW1.51.50.5	TCGW080202	.008																																						
	TCGW21.50.2	TCGW110201	.004																																						
	TCGW21.50.5	TCGW110202	.008																																						
	TCGW21.51	TCGW110204	.016																																						
	TCGW21.52	TCGW110208	.031																																						
	TCGW21.51E	TCGW110204E	.016																																						
	TCGW21.52E	TCGW110208E	.031																																						

Please refer to the general catalog for CBN & PCD inserts.

60° TP TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ◔ ❁ ❁ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ○ ○ ○ ❁ ❁ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated: MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	Coated Cermet: MP3025	AP25N	VP25N	VP45N	Cermet: NX2525	NX3035	Carbide: MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
FP	TPMH1.81.50.5FP	TPMH090202-FP	.008	●	●	●																														
	TPMH1.81.51FP	TPMH090204-FP	.016	●	●	●																														
	TPMH220.5FP	TPMH110302-FP	.008	●	●	●																														
	TPMH221FP	TPMH110304-FP	.016	●	●	●																														
Finish Cutting	TPMH222FP	TPMH110308-FP	.031	●	●	●																														
FM	TPMH1.81.50.5FM	TPMH090202-FM	.008																			●														
	TPMH1.81.51FM	TPMH090204-FM	.016																			●														
	TPMH220.5FM	TPMH110302-FM	.008																			●														
	TPMH221FM	TPMH110304-FM	.016																			●														
Finish Cutting	TPMH222FM	TPMH110308-FM	.031																			●														
FSF	TPGH1.81.50.2MFSF	TPGH090201M-FSF	.004*																●																	
	TPGH1.81.50.5MFSF	TPGH090202M-FSF	.008*																●																	
	TPGH1.81.51MFSF	TPGH090204M-FSF	.016*																●																	
Finish Cutting																																				
FSF-P	TPGH1.51.50.2MFSF-P	TPGH080201M-FSF-P	.004*				●									●						●														
	TPGH1.51.50.5MFSF-P	TPGH080202M-FSF-P	.008*				●															●														
	TPGH1.81.50.2MFSF-P	TPGH090201M-FSF-P	.004*				●									●						●														
	TPGH1.81.50.5MFSF-P	TPGH090202M-FSF-P	.008*				●									●						●														
Finish Cutting	TPGH1.81.51MFSF-P	TPGH090204M-FSF-P	.016*				●									●						●														
FV	TPMH1.51.50.5FV	TPMH080202-FV	.008		★	★															●			●				●	★							
	TPMH1.51.51FV	TPMH080204-FV	.016		●	★															●			●				●	★							
	TPMH1.81.50.5FV	TPMH090202-FV	.008		★	★														●	●	●		●				●	★							
	TPMH1.81.51FV	TPMH090204-FV	.016		●	★														●	●	●		●				●	★							
	TPMH220.5FV	TPMH110302-FV	.008		●	★																●		●				●	★							
	TPMH221FV	TPMH110304-FV	.016	●	●	★														●	●	●		●				●	★							
	TPMH222FV	TPMH110308-FV	.031	●	●	★														●	●	●		●				●	★							
Finish Cutting	TPMH321FV	TPMH160304-FV	.016	●	●	★														●	●	●		●				●	●							
FS	TPMH1.81.50.5FS	TPMH090202-FS	.008																	●																
	TPMH1.81.51FS	TPMH090204-FS	.016																	●																
	TPMH220.5FS	TPMH110302-FS	.008																	●																
	TPMH221FS	TPMH110304-FS	.016																	●																
Finish Cutting	TPMH222FS	TPMH110308-FS	.031																	●																
R/LFS	TPGH1.51.50.5RFS	TPGH080202R-FS	.008																			●						★								●
	TPGH1.51.50.5LFS	TPGH080202L-FS	.008																			●		●	★			★								●
	TPGH1.51.51RFS	TPGH080204R-FS	.016																			●						★								●
	TPGH1.51.51LFS	TPGH080204L-FS	.016																			●		●	★			★								●
	TPGH1.81.50.5RFS	TPGH090202R-FS	.008																			●						★								●
	TPGH1.81.50.5LFS	TPGH090202L-FS	.008																			●		●	★			★								●
	TPGH1.81.51RFS	TPGH090204R-FS	.016																			●						★								●
	TPGH1.81.51LFS	TPGH090204L-FS	.016																			●		●	★			★								●
	TPGH220.5RFS	TPGH110302R-FS	.008																			●						★								●
	TPGH220.5LFS	TPGH110302L-FS	.008																			●		●	★			★								●
	TPGH221RFS	TPGH110304R-FS	.016																			●						★								●
Finish Cutting	TPGH221LFS	TPGH110304L-FS	.016																			●		●	★			★								●

✲ Indicates the maximum value of the corner R.

●: USA Stock ★: Stocked in Japan

10 inserts in one case.

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ◔ ❁ ❁ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ○ ○ ○ ❁ ❁ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated: MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	Coated Cermet: MP3025	AP25N	VP25N	VP45N	Cermet: NX2525	NX3035	Carbide: MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
SQ	TPMT1.81.51SQ	TPMT090204-SQ	.016								●																									
	TPMT21.50.5SQ	TPMT110202-SQ	.008								●																									
	TPMT21.51SQ	TPMT110204-SQ	.016								●																									
	TPMT21.52SQ	TPMT110208-SQ	.031								●																									
	TPMT32.51SQ	TPMT16T304-SQ	.016								●																									
Finish Cutting	TPMT32.52SQ	TPMT16T308-SQ	.031								●																									
R/L	TPGX1.51.50.5R	TPGX080202R	.008																									★								
	TPGX1.51.50.5L	TPGX080202L	.008																									★						★		●
	TPGX1.51.51R	TPGX080204R	.016																									★								●
	TPGX1.51.51L	TPGX080204L	.016																				★					★						★		●
	TPGX1.81.50.5R	TPGX090202R	.008																									★								
	TPGX1.81.50.5L	TPGX090202L	.008																									★						★		●
	TPGX1.81.51R	TPGX090204R	.016																									★								●
	TPGX1.81.51L	TPGX090204L	.016																				★					★						★		●
	TPGX1.81.52R	TPGX090208R	.031																									★								★
	TPGX1.81.52L	TPGX090208L	.031																									★								★
	TPGX220.5L	TPGX110302L	.008																									★						★		★
	TPGX221R	TPGX110304R	.016																				★					★								★
	TPGX221L	TPGX110304L	.016																				★					★						★		★
	TPGX222R	TPGX110308R	.031																									★								★
Finish Cutting	TPGX222L	TPGX110308L	.031																				★					★						★		★ ●
L	TPMX1.81.51L	TPMX090204L	.016																									★								
	TPMX221L	TPMX110304L	.016																									★								
Finish Cutting																																				
LP	TPMH1.51.50.5LP	TPMH080202-LP	.008		★	★																														
	TPMH1.51.51LP	TPMH080204-LP	.016		★	★																														
	TPMH1.81.50.5LP	TPMH090202-LP	.008		●	★																														
	TPMH1.81.51LP	TPMH090204-LP	.016		●	★																														
	TPMH220.5LP	TPMH110302-LP	.008		●	★																														
	TPMH221LP	TPMH110304-LP	.016		●	★																														
Light Cutting	TPMH222LP	TPMH110308-LP	.031		●	★																														
LM	TPMH1.81.50.5LM	TPMH090202-LM	.008																				●													
	TPMH1.81.51LM	TPMH090204-LM	.016																		●	●	●													
	TPMH220.5LM	TPMH110302-LM	.008																				●													
	TPMH221LM	TPMH110304-LM	.016																		●	●	●													
	TPMH222LM	TPMH110308-LM	.031																		●	●	●													
	TPMH320.5LM	TPMH160302-LM	.008																				●													
	TPMH321LM	TPMH160304-LM	.016																		●	●	●													
Light Cutting	TPMH322LM	TPMH160308-LM	.031																		●	●	●													

Please refer to the general catalog for CBN & PCD inserts.

60° TP TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ○: Stable Cutting (2nd recommendation)
◐: General Cutting (1st recommendation) ◔: General Cutting (2nd recommendation)
✲: Unstable Cutting (1st recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																				Coated Cermet			Cermet		Carbide									
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel	◐●◐✲	LK	TPMH220.5LK	TPMH110302-LK	.008										● ● ●																							
M	Stainless Steel	◐●◐✲		TPMH221LK	TPMH110304-LK	.016										● ● ●																							
K	Cast Iron	●◐✲		TPMH222LK	TPMH110308-LK	.031										● ● ●																							
N	Non-ferrous Metal	●◐✲	Light Cutting																																				
S	Heat Resistant Alloys, Titanium Alloys	◐●◐✲◔	LS	TPMH1.81.50.5LS	TPMH090202-LS	.008															●																		
				TPMH1.81.51LS	TPMH090204-LS	.016															●																		
				TPMH220.5LS	TPMH110302-LS	.008															●																		
				TPMH221LS	TPMH110304-LS	.016															●																		
				TPMH222LS	TPMH110308-LS	.031															●																		
				TPMH320.5LS	TPMH160302-LS	.008															●																		
				TPMH321LS	TPMH160304-LS	.016															●																		
			Light Cutting	TPMH322LS	TPMH160308-LS	.031															●																		
			SV	TPMH1.51.50.5SV	TPMH080202-SV	.008									●								★			●				★ ●									
				TPMH1.51.51SV	TPMH080204-SV	.016									●								★			●			●	★ ●									
				TPMH1.81.50.5SV	TPMH090202-SV	.008									●								★			●				★ ●									
				TPMH1.81.51SV	TPMH090204-SV	.016									●								★			●			●	★ ●									
				TPMH220.5SV	TPMH110302-SV	.008									●								★			●			●	★ ●									
				TPMH221SV	TPMH110304-SV	.016									●								★			●			●	★ ●									
			Light Cutting	TPMH222SV	TPMH110308-SV	.031									●								★			●			●	★ ●									
			SW	TPMX1.81.50.5SW	TPMX090202-SW	.008	● ● ●														●																		
				TPMX1.81.51SW	TPMX090204-SW	.016	● ● ●														●																		
				TPMX1.81.52SW	TPMX090208-SW	.031	● ● ●														●																		
				TPMX220.5SW	TPMX110302-SW	.008	● ● ●														●																		
				TPMX221SW	TPMX110304-SW	.016	● ● ●														●																		
			Light Cutting (Wiper)	TPMX222SW	TPMX110308-SW	.031	● ● ●														●																		
			Standard	TPMX221	TPMX110304	.016																			●				★ ●									
				TPMX222	TPMX110308	.031																			●				★ ●									
																																							
			Medium Cutting																																				
			MV	TPMH1.51.50.5MV	TPMH080202-MV	.008		★ ★		● ● ●											●																		
				TPMH1.51.51MV	TPMH080204-MV	.016		★ ★		● ● ●	●										●																		
				TPMH1.81.50.5MV	TPMH090202-MV	.008		★ ★		●											●																		
				TPMH1.81.51MV	TPMH090204-MV	.016		★ ★		● ● ●	★										●																		
				TPMH1.81.52MV	TPMH090208-MV	.031		★ ★		● ●	★										●																		
				TPMH220.5MV	TPMH110302-MV	.008		★ ★		● ● ●											★																		
				TPMH221MV	TPMH110304-MV	.016		★ ★		● ● ●	●										●																		
			Medium Cutting	TPMH222MV	TPMH110308-MV	.031		★ ★		● ● ●	●										●																		

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

●: Stable Cutting (1st recommendation) ○: Stable Cutting (2nd recommendation)
◐: General Cutting (1st recommendation) ◔: General Cutting (2nd recommendation)
✲: Unstable Cutting (1st recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Shape	Order Number	(ISO)Number	RE (in)	Coated																				Coated Cermet			Cermet		Carbide									
							MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
P	Steel	◐●◐✲	R/LSR	TPEH1.51.5V3RSR	TPEH0802V3R-SR	.001						●									●			●															
M	Stainless Steel	◐●◐✲		TPEH1.51.5V3LSR	TPEH0802V3L-SR	.001						●									●			●															
K	Cast Iron	●◐✲		TPEH22V3RSR	TPEH1103V3R-SR	.001						●									●			●															
N	Non-ferrous Metal	●◐✲		TPEH22V3LSR	TPEH1103V3L-SR	.001						●									●			●															
S	Heat Resistant Alloys, Titanium Alloys	◐●◐✲◔		TPEH1.51.50.2MRSR	TPEH080201MR-SR	.004*						●									●			●															
				TPEH1.51.50.2MLSR	TPEH080201ML-SR	.004*						●									●			●															
				TPEH1.51.50.5MRSR	TPEH080202MR-SR	.008*						●									●			●															
				TPEH1.51.50.5MLSR	TPEH080202ML-SR	.008*						●									●			●															
				TPEH220.2MRSR	TPEH110301MR-SR	.004*						●									●			●															
				TPEH220.2MLSR	TPEH110301ML-SR	.004*						●									●			●															
				TPEH220.5MRSR	TPEH110302MR-SR	.008*						●									●			●															
			Medium Cutting	TPEH220.5MLSR	TPEH110302ML-SR	.008*						●									●			●															
			MQ	TPMT21.51MQ	TPMT110204-MQ	.016								●																											
				TPMT21.52MQ	TPMT110208-MQ	.031								●													●														
																																									
			Medium Cutting																																						
			Flat Top	TPGX1.51.50.5	TPGX080202	.008																																	●	
				TPGX1.51.51	TPGX080204	.016																		★	★					★						●	●		
				TPGX1.51.52	TPGX080208	.031																									★						●	★	
				TPGX1.81.50.5	TPGX090202	.008																																	●	
				TPGX1.81.51	TPGX090204	.016																			★						★						●	●	
				TPGX1.81.52	TPGX090208	.031																			★						★						●	●	
				TPGX220.5	TPGX110302	.008																																	●	
				TPGX221	TPGX110304	.016																		★	★					★						●	★	●
				TPGX222	TPGX110308	.031																			★						★						●	★	●
			Flat Top	TPGB1.51.50.5	TPGB080202	.008																																	●	
				TPGB1.51.51	TPGB080204	.016																																	●	
				TPGB1.51.52	TPGB080208	.031																																	●	
				TPGB1.81.50.5	TPGB090202	.008																																	●	
				TPGB1.81.51	TPGB090204	.016																																	●	
				TPGB21.5V5	TPGB1102V5	.002																																	●	
				TPGB21.50.2	TPGB110201	.004																																	●	
				TPGB21.50.5	TPGB110202	.008																																	●	
				TPGB21.51	TPGB110204	.016																																	●	
				TPGB321	TPGB160304	.016																																	●	
				TPGB322	TPGB160308	.031																																	●	

★ Indicates the maximum value of the corner R.

● = NEW

Please refer to the general catalog for CBN & PCD inserts.

60° TP TYPE INSERTS WITHOUT HOLE

●: Stable Cutting (1st recommendation) ◕: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet	Carbide								
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UT20T	HTi05T	HTi10	TF15
P	Steel		◕	●	◕	✲													❁	✲	❁	◕	○	○	◔	○	◔				❁			○
M	Stainless Steel						◕	●	◕	✲	✲				◕				◔	❁	❁		○	○		○					❁			
K	Cast Iron											●	◕	✲					◔	❁			○	○		○					❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◕	●	◕	✲	◔	❁									●	○	◕			◔	○

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UT20T	HTi05T	HTi10	TF15
LM	TPMR221LM	TPMR110304-LM	.016																			●													
	TPMR222LM	TPMR110308-LM	.031																			●													
	TPMR321LM	TPMR160304-LM	.016																			●													
	TPMR322LM	TPMR160308-LM	.031																			●													
Light Cutting																																			
MM	TPMR221MM	TPMR110304-MM	.016																			●													
	TPMR222MM	TPMR110308-MM	.031																			●													
	TPMR321MM	TPMR160304-MM	.016																			●													
	TPMR322MM	TPMR160308-MM	.031																			●													
Medium Cutting																																			
Flat Top	TPG1.81.50.5	TPGN090202	.008																															●	
	TPG1.81.51	TPGN090204	.016																															●	
	TPG1.81.52	TPGN090208	.031																															●	

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

35° VB TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◕: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			Coated																				Coated Cermet			Cermet	Carbide								
			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UT20T	HTi05T	HTi10	TF15
P	Steel		◕	●	◕	✲													❁	✲	❁	◕	○	○	◔	○	◔				❁			○
M	Stainless Steel						◕	●	◕	✲	✲				◕				◔	❁	❁		○	○		○					❁			
K	Cast Iron											●	◕	✲					◔	❁			○	○		○					❁	○	◔	○
N	Non-ferrous Metal																																◔	○
S	Heat Resistant Alloys, Titanium Alloys														◕	●	◕	✲	◔	❁									●	○	◕			◔	○

Shape	Order Number	(ISO)Number	RE (in)	MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UT20T	HTi05T	HTi10	TF15
FP	VBMT220.5FP	VBMT110302-FP	.008		●	●	●																					●							
	VBMT221FP	VBMT110304-FP	.016		●	★	●																					●							
	VBMT222FP	VBMT110308-FP	.031		●	★	●																					●							
	VBMT331FP	VBMT160404-FP	.016		●	★	●																					●							
	VBMT332FP	VBMT160408-FP	.031		★	★	★																					●							
Finish Cutting	VBMT333FP	VBMT160412-FP	.047		●	●	●																													
FM	VBMT220.5FM	VBMT110302-FM	.008						●	●											●	●														
	VBMT221FM	VBMT110304-FM	.016						●	●	●										●	●														
	VBMT222FM	VBMT110308-FM	.031						●	●											●	●														
	VBMT331FM	VBMT160404-FM	.016						●	●	●										●	●														
	VBMT332FM	VBMT160408-FM	.031						●	●											●	●														
Finish Cutting	VBMT333FM	VBMT160412-FM	.047																			●														
FS	VBMT220.5FS	VBMT110302-FS	.008																●																	
	VBMT221FS	VBMT110304-FS	.016																●																	
	VBMT222FS	VBMT110308-FS	.031																●																	
	VBMT331FS	VBMT160404-FS	.016																●																	
	VBMT332FS	VBMT160408-FS	.031																●																	
Finish Cutting	VBMT333FS	VBMT160412-FS	.047																●																	
FS-P	VBGT220.2MFS-P	VBGT110301M-FS-P	.004*															●																		
	VBGT220.5MFS-P	VBGT110302M-FS-P	.008*															●																		
	VBGT221MFS-P	VBGT110304M-FS-P	.016*															●																		
	VBGT330.2MFS-P	VBGT160401M-FS-P	.004*															●																		
	VBGT330.5MFS-P	VBGT160402M-FS-P	.008*															●																		
	VBGT331MFS-P	VBGT160404M-FS-P	.016*															●																		
Finish Cutting	VBGT332MFS-P	VBGT160408M-FS-P	.031*															●																		
FV	VBMT221FV	VBMT110304-FV	.016		●	★	★												●		●	●						●	★							
	VBMT222FV	VBMT110308-FV	.031			●	★														●								●	★						
	VBMT331FV	VBMT160404-FV	.016		●	●	★												●		●	●						●	★							
	VBMT332FV	VBMT160408-FV	.031		●	●	★												●		●	●						●	★							
Finish Cutting																																			
FJ	VBGT33V5FJ	VBGT1604V5-FJ	.002																●																	
	VBGT330.2FJ	VBGT160401-FJ	.004																●																	
	VBGT330.5FJ	VBGT160402-FJ	.008																●																	
Finish Cutting																																			
FJ-P	VBGT33V5FJ-P	VBGT1604V5-FJ-P	.002																															●	
	VBGT330.2FJ-P	VBGT160401-FJ-P	.004																															●	
	VBGT330.5FJ-P	VBGT160402-FJ-P	.008																															●	
Finish Cutting																																			

★ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

35° VB TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ✲ ❁ ❁ ◐ ○ ○ ◔ ○ ◔ ❁ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ✲ ◔ ❁ ❁ ✲ ❁ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ❁ ○ ◐ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔

Shape	Order Number	(ISO)Number	RE (in)	Coated MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	Coated Cermet MP3025	AP25N	VP25N	VP45N	Cermet NX2525	NX3035	Carbide MT9005	RT9005	RT9010	UTi20T	HTi05T	HT110	TF15
R/LF	VBGT220.5RF	VBGT110302R-F	.008																		●			●	★			★								●
	VBGT220.5LF	VBGT110302L-F	.008																		●			●	★			★								●
	VBGT221RF	VBGT110304R-F	.016																		●				★			★								●
	VBGT221LF	VBGT110304L-F	.016																		●				★			★								●
	VBGT330.5RF	VBGT160402R-F	.008																		★				★			★								★
	VBGT330.5LF	VBGT160402L-F	.008																		★				★			★								★
	VBGT331RF	VBGT160404R-F	.016																		★				★			★								★
Finish Cutting	VBGT331LF	VBGT160404L-F	.016																		★				★			★								★
R/LSRF	VBET22V3RSRF	VBET1103V3R-SRF	.001					●								●		●		●										●						
	VBET22V3LSRF	VBET1103V3L-SRF	.001					●								●		●		●										●						
	VBET220.2MRSRF	VBET110301MR-SRF	.004*					●								●		●		●										●						
	VBET220.2MLSRF	VBET110301ML-SRF	.004*					●								●		●		●										●						
	VBET220.5MRSRF	VBET110302MR-SRF	.008*					●								●		●		●										●						
Finish Cutting	VBET220.5MLSRF	VBET110302ML-SRF	.008*					●								●		●		●										●						
LP	VBMT221LP	VBMT110304-LP	.016	●	●	★																		●				●								
	VBMT222LP	VBMT110308-LP	.031	●	●	●																		●				●								
	VBMT331LP	VBMT160404-LP	.016	●	●	★																		●				●								
	VBMT332LP	VBMT160408-LP	.031	●	●	●																		●				●								
Light Cutting	VBMT333LP	VBMT160412-LP	.047	●	●	●																														
LM	VBMT221LM	VBMT110304-LM	.016						●	●												●	●													
	VBMT222LM	VBMT110308-LM	.031						●	●												●	●													
	VBMT331LM	VBMT160404-LM	.016						●	●												●														
Light Cutting	VBMT332LM	VBMT160408-LM	.031						●	●												●														
LS	VBGT220.5LS	VBMT110302-LS	.008														●	●	●											●						
	VBMT221LS	VBMT110304-LS	.016														●	●	●											●						
	VBMT222LS	VBMT110308-LS	.031														●	●	●											●						
	VBMT331LS	VBMT160404-LS	.016														●	●	●											●						
	VBMT332LS	VBMT160408-LS	.031														●	●	●											●						
Light Cutting	VBMT333LS	VBMT160412-LS	.047															●																		
SV	VBMT221SV	VBMT110304-SV	.016																		●								●						
	VBMT222SV	VBMT110308-SV	.031																		●								●						
	VBMT331SV	VBMT160404-SV	.016																		●								●						
Light Cutting	VBMT332SV	VBMT160408-SV	.031																		●								●						
MJ	VBGT331MJ	VBGT160404-MJ	.016																		●														
	VBGT332MJ	VBGT160408-MJ	.031																		●														
Light Cutting																																			
MJ-P	VBGT331MJ-P	VBGT160404-MJ-P	.016																											●						
	VBGT332MJ-P	VBGT160408-MJ-P	.031																											●						
Light Cutting																																			

★ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan
10 inserts in one case.

● = NEW

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ✲ ◔ ❁ ❁ ✲ ❁ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ❁ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔

Shape	Order Number	(ISO)Number	RE (in)	Coated MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	Coated Cermet MP3025	AP25N	VP25N	VP45N	Cermet NX2525	NX3035	Carbide MT9005	RT9005	RT9010	UTi20T	HTi05T	HT110	TF15
MP	VBMT331MP	VBMT160404-MP	.016		●	★	●																	●				●								
	VBMT332MP	VBMT160408-MP	.031		●	●	●																	●				●								
Medium Cutting																																				
MM	VBMT331MM	VBMT160404-MM	.016						●	●	●											●														
	VBMT332MM	VBMT160408-MM	.031						●	●	●											●														
Medium Cutting																																				
MK	VBMT331MK	VBMT160404-MK	.016										★	●	★																					
	VBMT332MK	VBMT160408-MK	.031										●	●	★																					
Medium Cutting																																				
MS	VBMT330.5MS	VBMT160402-MS	.008														●	●	●											●						
	VBMT331MS	VBMT160404-MS	.016														●	●	●											●						
	VBMT332MS	VBMT160408-MS	.031														●	●	●											●						
	VBMT333MS	VBMT160412-MS	.047														●	●	●											●						
Medium Cutting																																				
Standard	VBMT332	VBMT160408	.031								●																									
Medium Cutting																																				
MV	VBMT221MV	VBMT110304-MV	.016		●	●			●	●	●		★								●				●	●	★	★	●							
	VBMT222MV	VBMT110308-MV	.031		●	●			●	●	●		●								●				●	●	★	★	●							
	VBMT331MV	VBMT160404-MV	.016		★	●			●	●	●		★								●				●	●	★	★	●							
	VBMT332MV	VBMT160408-MV	.031		●	●			●	●	●		●								●				●	●	★	★	●							
Medium Cutting																																				
R/LSR	VBET22V3RSR	VBET1103V3R-SR	.001*																		●							★								●
	VBET22V3LSR	VBET1103V3L-SR	.001*																		●							★								●
	VBET220.2RSR	VBET110301R-SR	.004*																		●							★								●
	VBET220.2LSR	VBET110301L-SR	.004*																		●							★								●
	VBET220.5RSR	VBET110302R-SR	.008*																		●							★								●
	VBET220.5LSR	VBET110302L-SR	.008*																		●							★								●
	VBET221RSR	VBET110304R-SR	.016*																		●							★								●
Medium Cutting	VBET221LSR	VBET110304L-SR	.016*																		●							★								●

★ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

35° VB TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ❁: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
	P	Steel	◐	●	◐	✲													❁	✲	✲	❁	◐	○	○	◔	○	◔				❁			○
	M	Stainless Steel					◐	●	◐	✲	✲				◐				◔	❁	✲	❁		○	○		○					❁			
	K	Cast Iron										●	◐	✲					◔	❁				○	○		○					❁	○	◔	○
	N	Non-ferrous Metal																																◔	○
	S	Heat Resistant Alloys, Titanium Alloys													◐	●	◐	✲	◔	❁									●	○	◐			◔	

Shape	Order Number	(ISO)Number	RE (in)	Coated																				Coated Cermet				Cermet		Carbide						
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
R/LSN	VBET22V0RSN	VBET110300R-SN	0*																	●							★							●	
	VBET22V0LSN	VBET110300L-SN	0*																	●							★							●	
	VBET22V3RSN	VBET1103V3R-SN	.001*																	●							★							●	
	VBET22V3LSN	VBET1103V3L-SN	.001*																	●							★							●	
	VBET220.2RSN	VBET110301R-SN	.004*																	●							★							●	
	VBET220.2LSN	VBET110301L-SN	.004*																	●							★							●	
	VBET220.5RSN	VBET110302R-SN	.008*																	●							★							●	
	VBET220.5LSN	VBET110302L-SN	.008*																	●							★							●	
	VBET221RSN	VBET110304R-SN	.016*																	●							★							●	
Medium Cutting	VBET221LSN	VBET110304L-SN	.016*																	●							★							●	
R/LWSN	VBET22V3RWSN	VBET1103V3RW-SN	.001*																	●															
	VBET22V3LWSN	VBET1103V3LW-SN	.001*																	●															
Medium Cutting (Wiper)																																				
Flat Top	VBMW332	VBMW160408	.031										★	★	★																					

★ Indicates the maximum value of the corner R.

●: USA Stock ★: Stocked in Japan
10 inserts in one case.

35° VC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ❁: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material			MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
	P	Steel	◐	●	◐	✲													❁	✲	✲	❁	◐	○	○	◔	○	◔				❁			○
	M	Stainless Steel					◐	●	◐	✲	✲				◐				◔	❁	✲	❁		○	○		○					❁			
	K	Cast Iron										●	◐	✲					◔	❁				○	○		○					❁	○	◔	○
	N	Non-ferrous Metal																																◔	○
	S	Heat Resistant Alloys, Titanium Alloys													◐	●	◐	✲	◔	❁									●	○	◐			◔	

Shape	Order Number	(ISO)Number	RE (in)	Coated																				Coated Cermet				Cermet		Carbide						
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
FP	VCMT1.51.50.5FP	VCMT080202-FP	.008		●	●	●																													
	VCMT1.51.51FP	VCMT080204-FP	.016		●	●	●																													
Finish Cutting																																				
FM	VCMT1.51.50.5FM	VCMT080202-FM	.008																		●															
	VCMT1.51.51FM	VCMT080204-FM	.016																		●															
	VCMT331FM	VCMT160404-FM	.016						●	●	●										●	●														
	VCMT332FM	VCMT160408-FM	.031																		●	●														
Finish Cutting																																				
FSF-P	VCGT220.2MFSF-P	VCGT110301M-FSF-P	.004*						●							●					●															
	VCGT220.5MFSF-P	VCGT110302M-FSF-P	.008*						●							●					●															
	VCGT221MFSF-P	VCGT110304M-FSF-P	.016*						●							●					●															
Finish Cutting																																				
FS	VCMT1.51.50.5FS	VCMT080202-FS	.008															●																		
	VCMT1.51.51FS	VCMT080204-FS	.016															●																		
	VCMT331FS	VCMT160404-FS	.016															●																		
	VCMT332FS	VCMT160408-FS	.031															●																		
Finish Cutting																																				
FS-P	VCGT220.2MFS-P	VCGT110301M-FS-P	.004*						●							●					●															
	VCGT220.5MFS-P	VCGT110302M-FS-P	.008*						●							●					●															
Finish Cutting																																				
FV	VCMT1.51.50.5FV	VCMT080202-FV	.008		★	●														●			●		●		●	★							
	VCMT1.51.51FV	VCMT080204-FV	.016		★	●														●			●		●		●	★							
Finish Cutting																																				
R/LF	VCGT1.51.50.5RF	VCGT080202R-F	.008																	●					●		★								●	
	VCGT1.51.50.5LF	VCGT080202L-F	.008																	●					●		★								●	
	VCGT1.51.51RF	VCGT080204R-F	.016																	●					●		★								●	
	VCGT1.51.51LF	VCGT080204L-F	.016																	●					●		★								●	
Finish Cutting																																				
R/LSRF	VCET1.51.50.5MRSRF	VCET080202MR-SRF	.008*															●																		
	VCET1.51.50.5MLSRF	VCET080202ML-SRF	.008*															●																		
	VCET1.51.51MRSRF	VCET080204MR-SRF	.016*															●																		
	VCET1.51.51MLSRF	VCET080204ML-SRF	.016*															●																		
	VCET220.2MRSRF	VCET110301MR-SRF	.004*						●							●		●			●															
	VCET220.2MLSRF	VCET110301ML-SRF	.004*						●							●		●			●															
	VCET220.5MRSRF	VCET110302MR-SRF	.008*						●							●		●			●															
	VCET220.5MLSRF	VCET110302ML-SRF	.008*						●							●		●			●															
	VCET221MRSRF	VCET110304MR-SRF	.016*						●							●		●			●															
Finish Cutting	VCET221MLSRF	VCET110304ML-SRF	.016*						●							●		●			●															

★ Indicates the maximum value of the corner R.

Please refer to the general catalog for CBN & PCD inserts.

● = NEW

35° VC,VP TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ✲ ✲ ❁
M	Stainless Steel	◐ ● ◐ ✲ ✲ ✲ ◐ ◐ ❁ ✲ ✲ ❁ ○ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ✲ ✲ ○ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																		Coated Cermet				Cermet		Carbide							
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
LP	VCMT1.51.50.5LP	VCMT080202-LP	.008	●	●	★																													
Light Cutting	VCMT1.51.51LP	VCMT080204-LP	.016	●	●	★																													
LM	VCMT1.51.50.5LM	VCMT080202-LM	.008																		●														
Light Cutting	VCMT1.51.51LM	VCMT080204-LM	.016																		●														
LS	VCMT1.51.50.5LS	VCMT080202-LS	.008																●																
Light Cutting	VCMT1.51.51LS	VCMT080204-LS	.016																●																
SV	VCMT1.51.50.5SV	VCMT080202-SV	.008																		●			●					●						
Light Cutting	VCMT1.51.51SV	VCMT080204-SV	.016																		●			●					●						
MV	VCMT1.51.50.5MV	VCMT080202-MV	.008		●	★			●	●	●										●			●			★		★	●					
Medium Cutting	VCMT1.51.51MV	VCMT080204-MV	.016		★	●			●	●	●		●								●			●			★		★	●					
FSF-P	VPGT220.2MFSF-P	VPGT110301M-FSF-P	.004*				●									●						●													
	VPGT220.5MFSF-P	VPGT110302M-FSF-P	.008*				●															●													
Finish Cutting	VPGT221MFSF-P	VPGT110304M-FSF-P	.016*				●															●													
FS-P	VPGT220.2MFS-P	VPGT110301M-FS-P	.004*				●															●													
	VPGT220.5MFS-P	VPGT110302M-FS-P	.008*				●															●													
Finish Cutting																																			
R/LSRF	VPET22V3RSRF	VPET1103V3R-SRF	.001													●																			
	VPET22V3LSRF	VPET1103V3L-SRF	.001													●																			
	VPET1.51.50.2MRSRF	VPET080201MR-SRF	.004*					●								●			●			●													
	VPET1.51.50.2MLSRF	VPET080201ML-SRF	.004*					●								●			●			●													
	VPET1.51.50.5MRSRF	VPET080202MR-SRF	.008*					●								●			●			●													
	VPET1.51.50.5MLSRF	VPET080202ML-SRF	.008*					●								●			●			●													
	VPET220.2MRSRF	VPET110301MR-SRF	.004*					●								●			●			●													
	VPET220.2MLSRF	VPET110301ML-SRF	.004*					●								●			●			●													
	VPET220.5MRSRF	VPET110302MR-SRF	.008*					●								●			●			●													
Finish Cutting	VPET220.5MLSRF	VPET110302ML-SRF	.008*					●								●			●			●													

✲ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

● = NEW

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ✲ ✲ ❁
M	Stainless Steel	◐ ● ◐ ✲ ✲ ✲ ◐ ◐ ❁ ✲ ✲ ❁ ○ ○ ○ ○ ❁
K	Cast Iron	● ◐ ✲ ◔ ❁ ✲ ✲ ○ ○ ○ ○ ❁ ○ ◔ ○
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ◐ ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																		Coated Cermet				Cermet		Carbide							
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
R/LSS	VPET1.51.50.2MRSS	VPET080201MR-SS	.004*					●								●			●			●													
	VPET1.51.50.2MLSS	VPET080201ML-SS	.004*					●								●			●			●													
	VPET1.51.50.5MRSS	VPET080202MR-SS	.008*					●								●			●			●													
	VPET1.51.50.5MLSS	VPET080202ML-SS	.008*					●								●			●			●													
	VPET220.2MRSS	VPET110301MR-SS	.004*					●								●			●			●													
	VPET220.2MLSS	VPET110301ML-SS	.004*					●								●			●			●													
	VPET220.5MRSS	VPET110302MR-SS	.008*					●								●			●			●													
Light Cutting	VPET220.5MLSS	VPET110302ML-SS	.008*					●								●			●			●													
R/LSN	VPET220.2MRSN	VPET110301MR-SN	.004*					●								●			●			●													
	VPET220.2MLSN	VPET110301ML-SN	.004*					●								●			●			●													
	VPET220.5MRSN	VPET110302MR-SN	.008*					●								●			●			●													
Medium Cutting	VPET220.5MLSN	VPET110302ML-SN	.008*					●								●			●			●													

✲ Indicates the maximum value of the corner R.

● = NEW

Please refer to the general catalog for CBN & PCD inserts.

80° WC TYPE INSERTS WITH HOLE

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ✲ ❁ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ✲ ◐ ○ ○ ○ ◔ ❁ ✲ ❁ ❁
K	Cast Iron	● ◐ ✲ ◐ ○ ○ ❁ ○ ◔ ❁ ❁
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ● ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																		Coated Cermet				Cermet		Carbide							
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
FSF-P	WCGT1.51.50.2MFSF-P	WCGTL30201M-FSF-P	.004*					●								●					●														
	WCGT1.51.50.5MFSF-P	WCGTL30202M-FSF-P	.008*					●								●					●														
	WCGT1.210.2MFSF-P	WCGT020101M-FSF-P	.004*					●								●					●														
	WCGT1.210.5MFSF-P	WCGT020102M-FSF-P	.008*					●								●					●														
	WCGT21.50.2MFSF-P	WCGT040201M-FSF-P	.004*					●								●					●														
	WCGT21.50.5MFSF-P	WCGT040202M-FSF-P	.008*					●								●					●														
	WCGT32.50.2MFSF-P	WCGT06T301M-FSF-P	.004*													●																			
	WCGT32.50.5MFSF-P	WCGT06T302M-FSF-P	.008*					●								●					●														
Finish Cutting	WCGT32.51MFSF-P	WCGT06T304M-FSF-P	.016*					●													●														
FV	WCMT1.210.5FV	WCMT020102-FV	.008		●														●		●														
	WCMT1.211FV	WCMT020104-FV	.016		●														●		●														
	WCMT1.51.50.5FV	WCMT30202-FV	.008		●														●		●														
	WCMT1.51.51FV	WCMT30204-FV	.016		●														●		●														
	WCMT21.50.5FV	WCMT040202-FV	.008		●														●		●														
	WCMT21.51FV	WCMT040204-FV	.016		●														●		●														
	WCMT32.50.5FV	WCMT06T302-FV	.008		●														●		●														
Finish Cutting	WCMT32.51FV	WCMT06T304-FV	.016		●														●		●														
FJ-P	WCGT21.5V5FJ-P	WCGT0402V5-FJ-P	.002																											●					
	WCGT21.50.2FJ-P	WCGT040201-FJ-P	.004																											●					
	WCGT21.50.5FJ-P	WCGT040202-FJ-P	.008																											●					
	WCGT32.5V5FJ-P	WCGT06T3V5-FJ-P	.002																											●					
	WCGT32.50.2FJ-P	WCGT06T301-FJ-P	.004																											●					
Finish Cutting	WCGT32.50.5FJ-P	WCGT06T302-FJ-P	.008																											●					
R/LSRF	WCET1.51.50.2MRSRF	WCETL30201MR-SRF	.004*					●								●					●									●					
	WCET1.51.50.2MLSRF	WCETL30201ML-SRF	.004*					●								●					●									●					
	WCET1.51.50.5MRSRF	WCETL30202MR-SRF	.008*					●								●					●									●					
	WCET1.51.50.5MLSRF	WCETL30202ML-SRF	.008*					●								●					●									●					
	WCET1.210.2MRSRF	WCET020101MR-SRF	.004*					●								●					●									●					
	WCET1.210.2MLSRF	WCET020101ML-SRF	.004*					●								●					●									●					
	WCET1.210.5MRSRF	WCET020102MR-SRF	.008*					●								●					●									●					
	WCET1.210.5MLSRF	WCET020102ML-SRF	.008*					●								●					●									●					
	WCET21.50.2MRSRF	WCET040201MR-SRF	.004*					●								●					●									●					
	WCET21.50.2MLSRF	WCET040201ML-SRF	.004*					●								●					●									●					
	WCET21.50.5MRSRF	WCET040202MR-SRF	.008*					●								●					●									●					
	WCET21.50.5MLSRF	WCET040202ML-SRF	.008*					●								●					●									●					
	WCET32.50.5MRSRF	WCET06T302MR-SRF	.008*					●								●					●									●					
	WCET32.50.5MLSRF	WCET06T302ML-SRF	.008*					●								●					●									●					
	WCET32.51MRSRF	WCET06T304MR-SRF	.016*					●								●					●									●					
Finish Cutting	WCET32.51MLSRF	WCET06T304ML-SRF	.016*					●								●					●									●					
R/L	WCGT1.210.5R	WCGT020102R	.008																									★							
	WCGT1.210.5L	WCGT020102L	.008																									★							●
	WCGT1.211R	WCGT020104R	.016																									★							
	WCGT1.211L	WCGT020104L	.016																									★							●
	WCGT1.51.50.5L	WCGTL30202L	.008																									★							
Finish Cutting	WCGT1.51.51L	WCGTL30204L	.016																									★							

★ Indicates the maximum value of the corner R.

● : USA Stock ★ : Stocked in Japan

10 inserts in one case.

● = NEW

●: Stable Cutting (1st recommendation) ◐: General Cutting (1st recommendation) ✲: Unstable Cutting (1st recommendation)
○: Stable Cutting (2nd recommendation) ◔: General Cutting (2nd recommendation) ❁: Unstable Cutting (2nd recommendation)

Material		
P	Steel	◐ ● ◐ ✲ ◐ ○ ○ ◔ ○ ◔ ❁ ✲ ❁ ❁ ○
M	Stainless Steel	◐ ● ◐ ✲ ✲ ◐ ○ ○ ○ ◔ ❁ ✲ ❁ ❁
K	Cast Iron	● ◐ ✲ ◐ ○ ○ ❁ ○ ◔ ❁ ❁
N	Non-ferrous Metal	◔ ○
S	Heat Resistant Alloys, Titanium Alloys	◐ ● ◐ ✲ ◔ ❁ ● ○ ● ◔ ○

Shape	Order Number	(ISO)Number	RE (in)	Coated																		Coated Cermet				Cermet		Carbide							
				MS6015	MC6115	MC6125	MC6135	MS7025	MC7115	MC7125	MP7135	US735	MC5105	MC5115	MC5125	MS9025	MP9005	MP9015	MP9025	VP10RT	VP15TF	VP30RT	UP20M	MP3025	AP25N	VP25N	VP45N	NX2525	NX3035	MT9005	RT9005	RT9010	UTI20T	HTI05T	HTI10	TF15
MJ	WCGT21.51MJ	WCGT040204-MJ	.016																	●															
	WCGT32.51MJ	WCGT06T304-MJ	.016																	●															
	WCGT32.52MJ	WCGT06T308-MJ	.031																	●															
Light Cutting																																			
MJ-P	WCGT21.51MJ-P	WCGT040204-MJ-P	.016																											●					
	WCGT32.51MJ-P	WCGT06T304-MJ-P	.016																											●					
	WCGT32.52MJ-P	WCGT06T308-MJ-P	.031																											●					
Light Cutting																																			
MP	WCMT1.210.5MP	WCMT020102-MP	.008																●	●	●														
	WCMT1.211MP	WCMT020104-MP	.016																●	●	●														
	WCMT1.51.50.5MP	WCMT30202-MP	.008																●	●															
	WCMT1.51.51MP	WCMT30204-MP	.016																●	★															
	WCMT21.50.5MP	WCMT040202-MP	.008																●	●	●														
	WCMT21.51MP	WCMT040204-MP	.016																●	●	●														
	WCMT21.52MP	WCMT040208-MP	.031																	●	●														
	WCMT32.51MP	WCMT06T304-MP	.016																●	●	●														
Medium Cutting	WCMT32.52MP	WCMT06T308-MP	.031																●	●	●														
MM	WCMT1.210.5MM	WCMT020102-MM	.008																																
	WCMT1.211MM	WCMT020104-MM	.016																																
	WCMT1.51.50.5MM	WCMT30202-MM	.008																																
	WCMT1.51.51MM	WCMT30204-MM	.016																																
	WCMT21.50.5MM	WCMT040202-MM	.008																																
	WCMT21.51MM	WCMT040204-MM	.016																																
	WCMT32.51MM	WCMT06T304-MM	.016																																
Medium Cutting	WCMT32.52MM	WCMT06T308-MM	.031																																
Standard	WCMT1.210.5	WCMT020102	.008																																
	WCMT1.211	WCMT020104	.016																																
	WCMT1.51.50.5	WCMT30202	.008																																
	WCMT1.51.51	WCMT30204	.016																																
	WCMT21.50.5	WCMT040202	.008																																
	WCMT21.51	WCMT040204	.016																																
	WCMT32.51	WCMT06T304	.016																																
Medium Cutting	WCMT32.52	WCMT06T308	.031																																

Please refer to the general catalog for CBN & PCD inserts.

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Fax: 248.308.2627

FOR YOUR SAFETY

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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Tools specifications subject to change without notice.

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