

### <80 degree Rhombic Negative type>

Item Number	IC	T
CN_1204	12.7	4.76

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:		
				PVD Coated					CVD Coated								
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1				
				Steel	P	●	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●	●	●		
	CNGG 120404 FN UL	CNGG431FNUL	0.4			●		●		●							F9 F11 G40 K34
UL	120408 FN UL	432FNUL	0.8			●		●		●							
	CNMG 120408 G	CNMG432-G	0.8										●				
G	120412 G	433-G	1.2										●				
G	120416 G	434-G	1.6										●				
	CNMG 120408 TNB Z5	432-TNB-Z5	0.8				●							●			
Z5																	
	CNGG 120404 FN ZP	CNGG431-FN-ZP	0.4			●	●							●			
ZP	120408 FN ZP	432-FN-ZP	0.8			●	●							●			

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

### <55 degree Rhombic Negative type>

Item Number	IC	T
DN_1504	12.7	4.76

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:	
				PVD Coated					CVD Coated							
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1			
				Steel	P	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●	●		
	DNMG 150404 G	DNMG431-G	0.4											●		
G	150408 G	432-G	0.8											●		
G	150412 G	433-G	1.2											●		
	DNMG 150404 TN G	DNMG431-TN-G	0.4				●									
G																
	DNMG 150408 TNB Z5	DNMG432-TNB-Z5	0.8				●							●		
Z5																
	DNGG 150404 FN ZP	DNGG431-FN-ZP	0.4			●	●							●		
ZP	150408 FN ZP	432-FN-ZP	0.8			●	●							●		

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

## <90 degree Square Negative type>

Item Number	IC	T
SN_1204	12.7	4.76

Shape	ISO Item Number	Inch Item Number	R	Carbide								Chip Control Range	For applicable holder, see pages:																																																																
				PVD Coated				CVD Coated																																																																					
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1			CP7	KM1																																																														
			<table border="1"> <tr><td>Steel</td><td>P</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Stainless Steel</td><td>M</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Cast Iron</td><td>K</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Non-Ferrous Material</td><td>N</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Heat Resistant Alloy</td><td>S</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Hardened Material</td><td>H</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> </table>	Steel	P	●	●	●	●	●	●	●	●	●	●	Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	Cast Iron	K	●	●	●	●	●	●	●	●	●	●	Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	Hardened Material	H	●	●	●	●	●	●	●	●	●	●	<p>● : 1st Choice ● : 2nd choice</p>	
Steel	P	●	●	●	●	●	●	●	●	●	●																																																																		
Stainless Steel	M	●	●	●	●	●	●	●	●	●	●																																																																		
Cast Iron	K	●	●	●	●	●	●	●	●	●	●																																																																		
Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●																																																																		
Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●																																																																		
Hardened Material	H	●	●	●	●	●	●	●	●	●	●																																																																		
	SNMG 120408 G SNMG 120412 G SNMG 120416 G	SNMG432-G SNMG433-G SNMG434-G	0.8 1.2 1.6							●	●			F17 F19																																																															
	SNMG 120408 TNB Z5	SNMG432-TNB-Z5	0.8			●					●			K36																																																															

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

## <60 degree Triangle Negative type>

Item Number	IC	T
TN_1604	9.525	4.76

Shape	ISO Item Number	Inch Item Number	R	Carbide								Chip Control Range	For applicable holder, see pages:																																																																
				PVD Coated				CVD Coated																																																																					
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1			CP7	KM1																																																														
			<table border="1"> <tr><td>Steel</td><td>P</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Stainless Steel</td><td>M</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Cast Iron</td><td>K</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Non-Ferrous Material</td><td>N</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Heat Resistant Alloy</td><td>S</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>Hardened Material</td><td>H</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> </table>	Steel	P	●	●	●	●	●	●	●	●	●	●	Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	Cast Iron	K	●	●	●	●	●	●	●	●	●	●	Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	Hardened Material	H	●	●	●	●	●	●	●	●	●	●	<p>● : 1st Choice ● : 2nd choice</p>	
Steel	P	●	●	●	●	●	●	●	●	●	●																																																																		
Stainless Steel	M	●	●	●	●	●	●	●	●	●	●																																																																		
Cast Iron	K	●	●	●	●	●	●	●	●	●	●																																																																		
Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●																																																																		
Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●																																																																		
Hardened Material	H	●	●	●	●	●	●	●	●	●	●																																																																		
	TNMG 160408 G 160412 G	TNMG332-G 333-G	0.8 1.2							●	●																																																																		
	TNMG 160404 TNB Z5 160408 TNB Z5	331-TNB-Z5 332-TNB-Z5	0.4 0.8			●				●																																																																			
	TNGG 160402 FN ZP 160404 FN ZP 160408 FN ZP	TNGG33Y-FN--ZP 331-FN--ZP 332-FN--ZP	0.2 0.4 0.8			●	●	●		●																																																																			
	TNGG 160402 F <sup>R</sup> / <sub>L</sub> C	TNGG33Y-F <sup>R</sup> / <sub>L</sub> --C	0.2			R								F23 F25 G39																																																															
	TNEG 160402 F <sup>R</sup> / <sub>L</sub> D1 160404 F <sup>R</sup> / <sub>L</sub> D1 160408 F <sup>R</sup> / <sub>L</sub> D1		0.2 0.4 0.8					●		●																																																																			
	TNGG 160401 F <sup>R</sup> / <sub>L</sub> DA	TNGG331CF <sup>R</sup> / <sub>L</sub> --DA	0.1			R	R																																																																						
	TNGG 160401 F <sup>R</sup> / <sub>L</sub> U2 160402 F <sup>R</sup> / <sub>L</sub> U2 160404 F <sup>R</sup> / <sub>L</sub> U2 160408 F <sup>R</sup> / <sub>L</sub> U2	TNGG331CF <sup>R</sup> / <sub>L</sub> --U2 33Y-F <sup>R</sup> / <sub>L</sub> --U2 331-F <sup>R</sup> / <sub>L</sub> --U2 332-F <sup>R</sup> / <sub>L</sub> --U2	0.1 0.2 0.4 0.8			R				●																																																																			
	TNGG 160401M FN UL 160402M FN UL 160404M FN UL 160408M FN UL	TNGG3304MFNUL 3308MFNUL 331MFNUL 332MFNUL	*0.08 *0.18 *0.38 *0.78			●	●	●		●																																																																			

\*Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.   ● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

### <35 degree Rhombic Negative type>

Item Number	IC	T
VN_1604	9.525	4.76

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:		
				PVD Coated					CVD Coated								
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1				
				Steel	P	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice	
				Stainless Steel	M	●	●	●	●	●	●	●	●	●			
				Cast Iron	K	●	●	●	●	●	●	●	●	●			
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●			
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●			
				Hardened Material	H	●	●	●	●	●	●	●	●	●			
AM1	VNMG 160404 TNB AM1	331-TNB-AM1	0.4			●											
	160408 TNB AM1	332-TNB-AM1	0.8			●											
G	VNMG 160404 G	VNMG331-G	0.4									●				F27	
	160408 G	332-G	0.8								●						
	160412 G	333-G	1.2								●						
ZP	VNMG 160402 FN ZP	VNMG331-FN-ZP	0.2			●											
	160404 FN ZP	331-FN-ZP	0.4			●											
	160408 FN ZP	332-FN-ZP	0.8			●											

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

### <80 degree Hexagon Negative type>

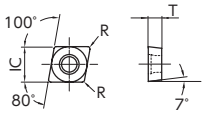
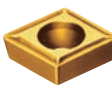
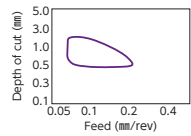
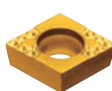
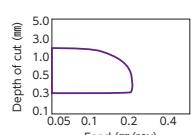

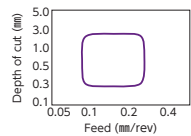
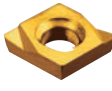
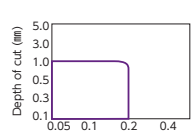
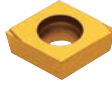
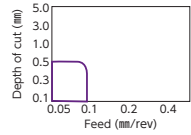
Item Number	IC	T
WN_0804	12.7	4.76

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:	
				PVD Coated					CVD Coated							
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1			
				Steel	P	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice	
				Stainless Steel	M	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●	●		
G	WNMG 080408 G	WNMG432-G	0.8									●				
	080412 G	433-G	1.2								●					
Z5	WNMG 080408 TNB Z5	WNMG432-TNB-Z5	0.8			●										F29
	080412 TNB Z5	433-TNB-Z5	1.2			●										
ZP	WNGG 080404 FN ZP	WNGG431-FN-ZP	0.4			●	●					●				K37
	080408 FN ZP	432-FN-ZP	0.8			●	●					●				
UL	WNGG 080404 FN UL	WNGG431FNUL	0.4			●		●				●				
	080408 FN UL	432FNUL	0.8			●		●				●				

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

## <80 degree Rhombic Positive type>

Item Number	IC	T	Relief angle
CC_0602	6.35	2.38	7°
CC_09T3	9.525	3.97	7°

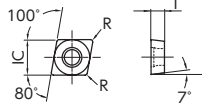
Shape	ISO Item Number	Inch Item Number	R	Carbide											Chip Control Range	For applicable holder, see pages:				
				PVD Coated							CVD Coated									
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1							
				Steel	P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Cast Iron	K	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Hardened Material	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
 AM3	CCGT 060200 FN AM3		0.03						●	●										
	060202 FN AM3		0.2		●			●												
	060204 FN AM3		0.4		●															
	060201M FN AM3		*0.08	●		●			●	●										
	060202M FN AM3		*0.18	●		●			●	●										
	060204M FN AM3		*0.38	●		●			●	●										
	CCGT 09T300 FN AM3		0.03					●	●	●										
	09T302 FN AM3		0.2					●	●	●										
	09T304 FN AM3		0.4					●	●	●										
	09T301M FN AM3		*0.08	●	●	●	●	●	●	●										
	09T302M FN AM3		*0.18	●	●	●	●	●	●	●										
	09T304M FN AM3		*0.38	●	●	●	●	●	●	●										
 AZ7	CCGT 060200 AZ7		0.03			●													G23 K28	
	060201M AZ7		*0.08			●														
	060202M AZ7		*0.18			●														
	CCGT 09T300 AZ7		0.03		●	●		●	●											
	09T301M AZ7		*0.08		●	●		●	●											
	09T302M AZ7		*0.18		●	●		●	●											
 AZ8	CCMT 060202 ENA AZ8		0.2																	
	060204 ENB AZ8		0.4																	
	060208 ENB AZ8		0.8																	
	CCMT 09T302 ENA AZ8		0.2																	
	09T304 ENB AZ8		0.4																	
 F1 R-hand shown	CCGT 060201 F <sub>R/L</sub> F1		0.1	R		R		R												
	060202 F <sub>R/L</sub> F1		0.2	R		R		R												
	060204 F <sub>R/L</sub> F1		0.4	R		R		R												
	CCGT 09T302 F <sub>R/L</sub> F1		0.2	R		R		R												
	09T304 F <sub>R/L</sub> F1		0.4	R		R		R												
 KHG	CCET 0602005 F <sub>R/L</sub> KHG		0.05				●													
	0602008 F <sub>R/L</sub> KHG		0.08				●													
	0602018 F <sub>R/L</sub> KHG		0.18				●													
	060202 F <sub>R/L</sub> KHG		0.2				●													
	CCET 09T3005 F <sub>R/L</sub> KHG		0.05				●	R												
	09T3008 F <sub>R/L</sub> KHG		0.08				●	R												
	09T3018 F <sub>R/L</sub> KHG		0.18				●	R												
09T302 F <sub>R/L</sub> KHG		0.2				●	R													

\*Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.

● : Standard stock ● : New standard stock ■ : Scheduled to be produced by order ★ : Standard stock (Specified)

Item Number	IC	T	Relief angle
CC_0602	6.35	2.38	7°
CC_09T3	9.525	3.97	7°

### <80 degree Rhombic Positive type>



Material	P	M	K	N	S	H
Steel	●	●	●	●	●	●
Stainless Steel	●	●	●	●	●	●
Cast Iron	●	●	●	●	●	●
Non-Ferrous Material	●	●	●	●	●	●
Heat Resistant Alloy	●	●	●	●	●	●
Hardened Material	●	●	●	●	●	●

● : 1st Choice  
● : 2nd choice

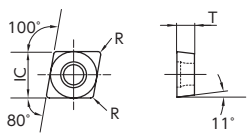

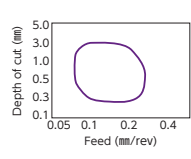

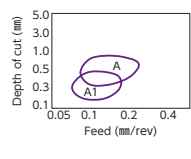

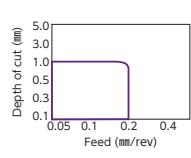

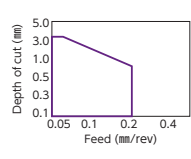
Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:	
				PVD Coated						CVD Coated						
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1			
	CCGT 060200	R/4 S	0.03	●	●	●	●	●	●	●	●	●	●	●		
	060201	R/4 S	0.1	●	●	●	●	●	●	●	●	●	●	●		
	060202	R/4 S	0.2	●	●	●	●	●	●	●	●	●	●	●		
	060201M	R/4 S	*0.08		R			R								
	060202M	R/4 S	*0.18		R			R								
	CCGT 09T300	R/4 S	0.03	R	●		R	R								
	09T301	R/4 S	0.1	●	R	●										
	09T302	R/4 S	0.2	R	R	●										
	09T304	R/4 S	0.4	R												
	09T301M	R/4 S	*0.08		R		R	R								
09T302M	R/4 S	*0.18		R		R	R									
09T304M	R/4 S	*0.38		R		R	R									
	CCGT 060200	R/4 U	0.03		R				R							
	060201	R/4 U	0.1	●				R								
	060202	R/4 U	0.2	●				R								
	CCGT 09T300	R/4 U1	0.03	●				R	R							
	09T301	R/4 U1	0.1	●				R	R							
	09T302	R/4 U1	0.2	●				R	R							
	CCGT 060201M	CL	*0.08	●	●	●	●	●	●	●	●	●	●		<b>G23</b> <b>K28</b>	
	060202M	CL	*0.18	●	●	●	●	●	●	●	●	●	●			
	09T300	CL	0.03				●	●								
	09T301M	CL	*0.08	●	●	●	●	●	●	●	●	●	●			
	09T302M	CL	*0.18	●	●	●	●	●	●	●	●	●	●			
	CCGT 09T300	YL	0.03				●	●								
	09T301M	YL	0.08	●	●	●	●	●	●	●	●	●	●			
	09T302M	YL	0.18	●	●	●	●	●	●	●	●	●	●			
	09T304M	YL	0.38	●	●	●	●	●	●	●	●	●	●			
	09T308M	YL	0.78	●	●	●	●	●	●	●	●	●	●			
	CCGW 060200	FN	0.03	●												
	060201	FN	0.1	●												
	060200	H (M)	0.03									●				
	060201	H (M)	0.1									●				
	060202	H (M)	0.2									●				
	CCGW 09T300	FN	0.03	●												
	09T301	FN	0.1	●												
	09T300	H (M)	0.03									●				
	09T301	H (M)	0.1									●				
	09T302	H (M)	0.2									●				
	09T302M	P (M)	*0.18						●							
	09T30	V (M)	0.0				●									
09T301	P (M)	0.1				●										
09T302	P (M)	0.2				●										

\* Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.  
 ● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)  
 ※2 The specifications of CL chipbreaker are slightly different from the above dimensions, but it has no problem for machining.

## <80 degree Rhombic Positive type>

Item Number	IC	T	Relief angle
CP_0401	4.76	1.59	11°
CP_0602	6.35	2.38	11°

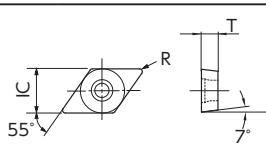
Item Number	IC	T	Relief angle
CP_0802	7.94	2.38	11°
CP_0903	9.525	3.18	11°

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:			
				PVD Coated						CVD Coated								
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1					
				Steel	P	●	●	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●	●	●	●		
 AM5	CPGH 060202 FN AM5	CPGP83Y-FN--AM5	0.2	●				●										
	CPGH 080202 FN AM5	CPGP03Y-FN--AM5	0.2	●				●										
	CPGH 090302 FN AM5	CPGM32Y-FN--AM5	0.2	●				●										
	090304 FN AM5	321-FN--AM5	0.4	●				●										
	090308 FN AM5	322-FN--AM5	0.8	●				●										
 A · A1 L-hand shown	CPGH 040102 F <sub>R/L</sub> A1	CPGP62Y-F <sub>R/L</sub> --A1	0.2	L				L										
	040104 F <sub>R/L</sub> A1	621-F <sub>R/L</sub> --A1	0.4	L				L										
	CPGH 060202 F <sub>R/L</sub> A	CPGP83Y-F <sub>R/L</sub> --A	0.2	L				L										
	060204 F <sub>R/L</sub> A	831-F <sub>R/L</sub> --A	0.4	L				L										
	CPGH 080202 F <sub>R/L</sub> A	CPGP03Y-F <sub>R/L</sub> --A	0.2	L				L										
080204 F <sub>R/L</sub> A	031-F <sub>R/L</sub> --A	0.4	L				L											
 F1 R-hand shown	CPGH 040101 F <sub>R/L</sub> F1		0.1	R				R										
	040102 F <sub>R/L</sub> F1		0.2	R				R										
	040104 F <sub>R/L</sub> F1		0.4	R				R										
	CPGH 060202 F <sub>R/L</sub> F1		0.2	R				R										
	060204 F <sub>R/L</sub> F1		0.4	R				R										
 S L-hand shown	CPGH 040101 <sub>R/L</sub> S		0.1					L		L								
	040102 <sub>R/L</sub> S		0.2					L		L								
	040104 <sub>R/L</sub> S		0.4					L		L								
	CPGH 060202 <sub>R/L</sub> S		0.2					L		L								
	060204 <sub>R/L</sub> S		0.4					L		L								

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

Item Number	IC	T	Relief angle
DC_0702	6.35	2.38	7°
DC_11T3	9.525	3.97	7°

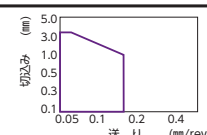
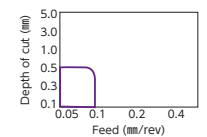
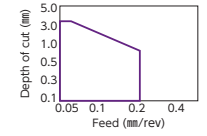
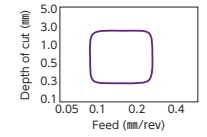
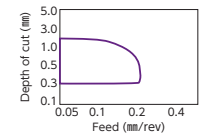
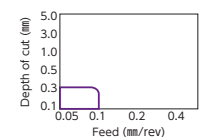
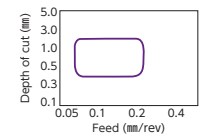
### <55 degree Rhombic Positive type>



Material	P	M	K	N	S	H
Steel	●	●	●	●	●	●
Stainless Steel	●	●	●	●	●	●
Cast Iron	●	●	●	●	●	●
Non-Ferrous Material	●	●	●	●	●	●
Heat Resistant Alloy	●	●	●	●	●	●
Hardened Material	●	●	●	●	●	●

● : 1st Choice  
● : 2nd choice

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:	
				PVD Coated						CVD Coated		KM1				
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1		CP7			
	DCGT 070200 FN AM3		0.03	●	●	●	●	●	●	●	●	●	●			
	070201 FN AM3		0.1	●	●	●	●	●	●	●	●	●	●	●		
	070202 FN AM3		0.2	●	●	●	●	●	●	●	●	●	●	●		
	070204 FN AM3		0.4	●	●	●	●	●	●	●	●	●	●	●		
	070201M FN AM3		*0.08	●	●	●	●	●	●	●	●	●	●	●		
	070202M FN AM3		*0.18	●	●	●	●	●	●	●	●	●	●	●		
	070204M FN AM3		*0.38	●	●	●	●	●	●	●	●	●	●	●		
	DCGT 11T300 FN AM3		0.03	●	●	●	●	●	●	●	●	●	●	●		
	11T302 FN AM3		0.2	●	●	●	●	●	●	●	●	●	●	●		
	11T304 FN AM3		0.4	●	●	●	●	●	●	●	●	●	●	●		
	11T301M FN AM3		*0.08	●	●	●	●	●	●	●	●	●	●	●		
	11T302M FN AM3		*0.18	●	●	●	●	●	●	●	●	●	●	●		
11T304M FN AM3		*0.38	●	●	●	●	●	●	●	●	●	●	●			
DCMT 070202 FN AM3		0.2										●				
070204 FN AM3		0.4										●				
DCMT 11T302 FN AM3		0.2										●				
11T304 FN AM3		0.4										●				
11T308 FN AM3		0.8										●				
	DCGT 070201M AMX		*0.08				●	●	●	●	●					
	070202M AMX		*0.18				●	●	●	●	●					
	070204M AMX		*0.38				●	●	●	●	●					
	DCGT 11T301M AMX		*0.08				●	●	●	●	●					
	11T302M AMX		*0.18				●	●	●	●	●					
	11T304M AMX		*0.38				●	●	●	●	●					
	DCGT 070200 AZ7		0.03		●											
	070201M AZ7		*0.08		●											
	070202M AZ7		*0.18		●											
	DCGT 11T300 AZ7		0.03		●	●	●	●	●	●	●					
	11T301M AZ7		*0.08		●	●	●	●	●	●	●					
	11T302M AZ7		*0.18		●	●	●	●	●	●	●					
	11T304M AZ7		*0.38		●	●	●	●	●	●	●					
11T308 AZ7		0.8		●	●	●	●	●	●	●						
	DCMT 070202 ENA AZ8		0.2									●				
	070204 ENB AZ8		0.4									●				
	070208 ENB AZ8		0.8									●				
	DCMT 11T302 ENA AZ8		0.2									●				
	11T304 ENB AZ8		0.4									●				
	11T308 ENB AZ8		0.8									●				
	DCET 11T301M R/4 AT		*0.08					R								
	11T302M R/4 AT		*0.18					R								
	DCET 0702005 R/4 KHG		0.05				●									
	0702008 R/4 KHG		0.08				●									
	0702018 R/4 KHG		0.18				●									
	070202 R/4 KHG		0.2				●									
	DCET 11T3005 R/4 KHG		0.05				●	R								
	11T3008 R/4 KHG		0.08				●	R								
11T3018 R/4 KHG		0.18				●	R									
11T302 R/4 KHG		0.2				●	R									
	DCET 0702008 R/4 UHG		0.08					R								
	DCET 11T3008 R/4 UHG		0.08					R								



G25  
G27

\*Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.  
 ● : Standard stock    ● : New standard stock    ■ : Scheduled to be produced by order    ★ : Standard stock (Specified)

## <55 degree Rhombic Positive type>

Item Number	IC	T	Relief angle
DC_0702	6.35	2.38	7°
DC_11T3	9.525	3.97	7°

Shape	ISO Item Number	Inch Item Number	R	Carbide											Chip Control Range	For applicable holder, see pages:		
				PVD Coated						CVD Coated								
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1					
				Steel	P	●	●	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●	●	●	●	
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	●	●	
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	●	●	
				Hardened Material	H	●	●	●	●	●	●	●	●	●	●	●	●	
 S R-hand shown	DCGT 070200	R/4 S	0.03	●	●	●	●	●	●	●	●	●	●	●	●			
	070201	R/4 S	0.1	●	●	●	●	●	●	●	●	●	●	●	●			
	070202	R/4 S	0.2	●	●	●	●	●	●	●	●	●	●	●	●			
	070204	R/4 S	0.4	●	●	●	●	●	●	●	●	●	●	●	●			
	070201M	R/4 S	*0.08	●	●	●	●	●	●	●	●	●	●	●	●			
	070202M	R/4 S	*0.18	●	●	●	●	●	●	●	●	●	●	●	●			
	DCGT 11T300	R/4 S	0.03	●	●	●	●	●	●	●	●	●	●	●	●			
	11T301	R/4 S	0.1	●	●	●	●	●	●	●	●	●	●	●	●			
	11T302	R/4 S	0.2	●	●	●	●	●	●	●	●	●	●	●	●			
	11T304	R/4 S	0.4	●	●	●	●	●	●	●	●	●	●	●	●			
 U · U1 R-hand shown	DCGT 070200	R/4 U	0.03	●	●	●	●	●	●	●	●	●	●	●				
	070201	R/4 U	0.1	●	●	●	●	●	●	●	●	●	●	●				
	070202	R/4 U	0.2	●	●	●	●	●	●	●	●	●	●	●				
	DCGT 11T300	R/4 U1	0.03	●	●	●	●	●	●	●	●	●	●	●				
	11T301	R/4 U1	0.1	●	●	●	●	●	●	●	●	●	●	●				
	11T304	R/4 U1	0.4	●	●	●	●	●	●	●	●	●	●	●				
 without chipbreaker	DCGW 070200	FN	0.03	●	●	●	●	●	●	●	●	●	●	●	—			
	070201	FN	0.1	●	●	●	●	●	●	●	●	●	●	●				
	070200	H (M)	0.03	●	●	●	●	●	●	●	●	●	●	●				
	070201	H (M)	0.1	●	●	●	●	●	●	●	●	●	●	●				
	070202	H (M)	0.2	●	●	●	●	●	●	●	●	●	●	●				
	07020	V (M)	0.0	●	●	●	●	●	●	●	●	●	●	●				
	DCGW 11T300	FN	0.03	●	●	●	●	●	●	●	●	●	●	●				
	11T301	FN	0.1	●	●	●	●	●	●	●	●	●	●	●				
	11T300	H (M)	0.03	●	●	●	●	●	●	●	●	●	●	●				
	11T301	H (M)	0.1	●	●	●	●	●	●	●	●	●	●	●				
 CL *2	DCGT 070201M	CL	*0.08	●	●	●	●	●	●	●	●	●	●					
	070202M	CL	*0.18	●	●	●	●	●	●	●	●	●	●					
	070204M	CL	*0.38	●	●	●	●	●	●	●	●	●	●					
	DCGT 11T301M	CL	*0.08	●	●	●	●	●	●	●	●	●	●					
	11T302M	CL	*0.18	●	●	●	●	●	●	●	●	●	●					
	11T304M	CL	*0.38	●	●	●	●	●	●	●	●	●	●					
 YL	DCGT 070201M	YL	0.08	●	●	●	●	●	●	●	●	●	●					
	070202M	YL	0.18	●	●	●	●	●	●	●	●	●	●					
	070204M	YL	0.38	●	●	●	●	●	●	●	●	●	●					
	DCGT 11T300	YL	0.03	●	●	●	●	●	●	●	●	●	●					
	11T301M	YL	0.08	●	●	●	●	●	●	●	●	●	●					
	11T302M	YL	0.18	●	●	●	●	●	●	●	●	●	●					
	11T304M	YL	0.38	●	●	●	●	●	●	●	●	●	●					
	11T308M	YL	0.78	●	●	●	●	●	●	●	●	●	●					

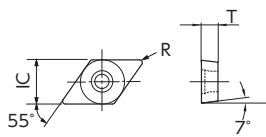
\* Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.  
 \*2 The specifications of CL chipbreaker are slightly different from the above dimensions, but it has no problem for machining.

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)




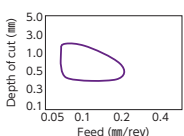
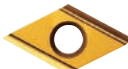
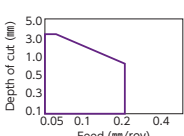
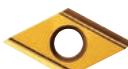
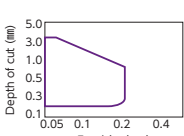

Item Number	IC	T	Relief angle
<b>TFD_07</b>	6.35	2.38	7°
<b>TFD_11</b>	9.525	3.97	7°

### <TFD with Wiper edge>

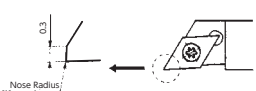


Steel	P	●	●	●	●	●	●	●	●	●	●	●
Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	●
Cast Iron	K	●	●	●	●	●	●	●	●	●	●	●
Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	●
Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	●
Hardened Material	H	●	●	●	●	●	●	●	●	●	●	●

● : 1st Choice  
● : 2nd choice

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:		
				PVD Coated							CVD Coated						
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1				
 AM3	<b>TFD 11 FR 05 AM3</b>	DCGT32.502AM3-WP	0.05			R					R	R					
	<b>11 FR 15 AM3</b>	32.506AM3-WP	0.15			R					R	R					
 S ※ R-hand shown	<b>TFD 07 FR 05</b>	DCGT21.502 <sup>R/L</sup> S-WP	0.05	●		R	R										
	<b>07 FR 15</b>	21.506 <sup>R/L</sup> S-WP	0.15	●		R											
	<b>TFD 11 FR 05</b>	DCGT32.502RS-WP	0.05		R	R	R										
	<b>11 FR 15</b>	32.506RS-WP	0.15		R	R											
 U · U1 ※ R-hand shown	<b>TFD 07 FR 05 U</b>	DCGT21.502RU-WP	0.05		R	R	R										<b>G25</b> <b>G27</b>
	<b>07 FR 15 U</b>	21.506RU-WP	0.15		R	R											
	<b>TFD 11 FR 05 U1</b>	DCGT32.502RU1-WP	0.05		R	R	R										
	<b>11 FR 15 U1</b>	32.506RU1-WP	0.15		R	R											
 without chipbreaker	<b>TFD 07 FR 05 H</b> <sup>M</sup>	DCGW21.502RH-WP	0.05											R			
	<b>TFD 11 FR 05 H</b> <sup>M</sup>	DCGW32.502RH-WP	0.05											R			

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)




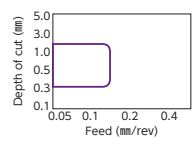

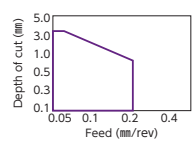

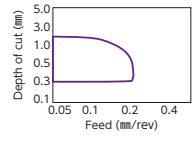

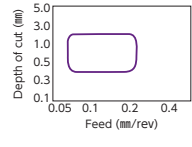

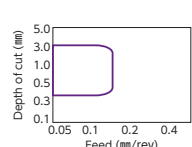
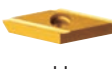
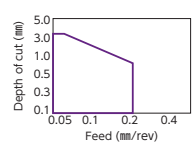





\*Note: NTK WP style inserts have a wiper facet design. The insert has a 0.3mm flat on the cutting edge when the insert is set into the toolholder. The flat on the cutting edge ensures a superior surface when feed rates are increased. WP style inserts can be used in toolholders: SDJC, Y-SDJC, CH-SDUCL and DS-SDUL.



## <35 degree Rhombic Positive type>

Item Number	IC	T	Relief angle
<b>VB_1604</b>	9.525	4.76	5°

Item Number	IC	T	Relief angle
<b>VC_1103</b>	6.35	3.18	7°
<b>VC_1303</b>	7.94	3.18	7°

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:		
				PVD Coated						CVD Coated							
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1				
				Steel	P	●	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●	●	●	
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	●	
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	●	
				Hardened Material	H	●	●	●	●	●	●	●	●	●	●	●	
	<b>VBGT 160402 FN YL</b>		0.2	●					●		●						—
	<b>160404 FN YL</b>		0.4	●					●		●						
	<b>160408 FN YL</b>		0.8	●					●		●						
	<b>VCET 1103008 R<sub>L</sub> UHG</b>		0.08				R										
	<b>VCGT 110300 AZ7</b>		0.03	●	●												<b>G29</b> <b>G31</b> <b>G56</b>
	<b>110301M AZ7</b>		*0.08	●	●												
	<b>110302M AZ7</b>		*0.18	●	●												
	<b>110304M AZ7</b>		*0.38	●	●												
	<b>VCGT 110300 FN AM3</b>		0.03					●	●								
	<b>110301 FN AM3</b>		0.1	●	●												
	<b>110302 FN AM3</b>		0.2	●	●												
	<b>110301M FN AM3</b>		*0.08	●	●	●	●										
	<b>110302M FN AM3</b>		*0.18	●	●	●	●										
	<b>110304M FN AM3</b>		*0.38	●	●	●	●										
	<b>VCMT 110302 FN AM3</b>		0.2								●						
	<b>110304 FN AM3</b>		0.4								●						
	<b>VCGT 130300 F<sub>R</sub> 2M</b>		0.03								●						<b>G29</b> <b>G62</b>
	<b>130301 F<sub>R</sub> 2M</b>		0.1								●						
	<b>VCGT 110300 R<sub>L</sub> U</b>		0.03		R		R										
	<b>110301 R<sub>L</sub> U</b>		0.1		R		R										
	<b>110302 R<sub>L</sub> U</b>		0.2		R		R										
	<b>110301M R<sub>L</sub> U</b>		*0.08						R								
	<b>110302M R<sub>L</sub> U</b>		*0.18						R								
	<b>VCGW 110300 H</b> 		0.03											●			<b>G29</b> <b>G31</b> <b>G56</b>
	<b>110301 H</b> 		0.1											●			
	<b>110302 H</b> 		0.2											●			

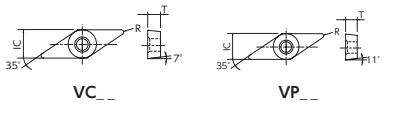
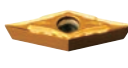

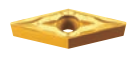



\*Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

### <35 degree Rhombic Positive type>

Item Number	IC	T	Relief angle
VC_1102	6.35	2.38	7°
VC_1103	6.35	3.18	7°

Item Number	IC	T	Relief angle
VP_0802	4.76	2.38	11°
VP_1103	6.35	3.18	11°

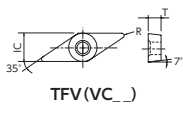

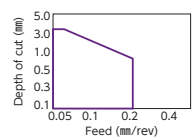

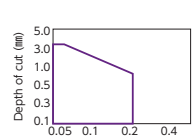
Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:	
				PVD Coated						CVD Coated						
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1			
 VC_1102 VC_1103																
	 VC_1102M CL			*0.18			●		●	●	●					
	 VC_110301M CL			*0.08	●		●		●	●	●					
	110302M CL			*0.18	●		●		●	●	●					
 YL	VC_110301M YL			0.08	●		●		●	●	●					
	110302M YL			0.18	●		●		●	●	●					
	110304M YL			0.38	●		●		●	●	●					
 KHG R-hand shown	VPET 0802005 $\frac{R}{L}$ KHG			0.05			●	R								
	0802008 $\frac{R}{L}$ KHG			0.08			●	R	R							
	0802018 $\frac{R}{L}$ KHG			0.18			●	R								
	080202 $\frac{R}{L}$ KHG			0.2			●	R								
	VPET 1103005 $\frac{R}{L}$ KHG			0.05			●	R								
	1103008 $\frac{R}{L}$ KHG			0.08			●	R								
	1103018 $\frac{R}{L}$ KHG			0.18			●	R								
110302 $\frac{R}{L}$ KHG			0.2			●	R									
 UHG R-hand shown	VPET 0802008 $\frac{R}{L}$ UHG			0.08					●							
 AM3	VPGT 110300 FN AM3			0.03					●	●						
	110301M FN AM3			*0.08	●		●		●	●						
	110302M FN AM3			*0.18	●		●		●	●						

\* Inserts having 01M, 02M or 04M as the R code can be used for machining when the component drawing specifies that the radius is less than R=0.1, R=0.2 or R=0.4 respectively.  
 \*\*2 The specifications of CL chipbreaker are slightly different from the above dimensions, but it has no problem for machining.

● : Standard stock   ● : New standard stock   ■ : Scheduled to be produced by order   ★ : Standard stock (Specified)

## <TFV with Wiper edge>

Item Number	IC	T	Relief angle
TFV_11	6.35	3.18	7°

Shape	ISO Item Number	Inch Item Number	R	Carbide										Chip Control Range	For applicable holder, see pages:			
				PVD Coated						CVD Coated								
				ST4	ZM3	QM3	VM1	TM4	DT4	DM4	CP1	CP7	KM1					
 TFV(VC_)				Steel	P	●	●	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●	●	●	●		
 U	TFV 11 FR 05 U	VCGT2202RU-WP	0.05	●	●												G29 G31	
	11 FR 10 U	2204RU-WP	0.10	●	●													
 Small flat on edge	TFV 11 FR 05 SX	VCGT2202RSX-WP	0.05	●	●													
	11 FR 10 SX	2204RSX-WP	0.10	●	●													

● : Standard stock    ● : New standard stock    ■ : Scheduled to be produced by order    ★ : Standard stock (Specified)



\*Note: NTK WP style inserts have a wiper facet design. The insert has a 0.2mm flat on the cutting edge when the insert is set into the toolholder. The flat on the cutting edge ensures a superior surface when feed rates are increased. WP style inserts can be used in toolholders: SVJC