

### <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	
				Steel	P	●	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●	●		
	SNMG 120408 G	SNMG432-G	0.8								●				F17 F19 K36	
	SNMG 120412 G	SNMG433-G	1.2								●					
	SNMG 120416 G	SNMG434-G	1.6								●					
	SNMG 120408 TNB Z5	SNMG432-TNB-Z5	0.8			●						●				

● : 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
				Steel	P	●	●	●	●	●	●	●	●	●	● : 1st Choice ● : 2nd choice
				Stainless Steel	M	●	●	●	●	●	●	●	●		
				Cast Iron	K	●	●	●	●	●	●	●	●		
				Non-Ferrous Material	N	●	●	●	●	●	●	●	●		
				Heat Resistant Alloy	S	●	●	●	●	●	●	●	●		
				Hardened Material	H	●	●	●	●	●	●	●	●		
	TNMG 160408 G	TNMG332-G	0.8								●				
	160412 G	333-G	1.2								●				
	TNMG 160404 TNB Z5	331-TNB-Z5	0.4			●						●			
	160408 TNB Z5	332-TNB-Z5	0.8			●						●			
	TNGG 160402 FN ZP	TNGG33Y-FN-ZP	0.2			●	●				●				
	160404 FN ZP	331-FN-ZP	0.4			●	●				●				
	160408 FN ZP	332-FN-ZP	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		0.2				●								
	160404 F <sup>R</sup> / <sub>L</sub> D1		0.4				●								
	160408 F <sup>R</sup> / <sub>L</sub> D1		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	TNGG331CF <sup>R</sup> / <sub>L</sub> -U2	0.1		R		R								
	160402 F <sup>R</sup> / <sub>L</sub> U2	33Y-F <sup>R</sup> / <sub>L</sub> -U2	0.2		●						●				
	160404 F <sup>R</sup> / <sub>L</sub> U2	331-F <sup>R</sup> / <sub>L</sub> -U2	0.4		●						●				
	160408 F <sup>R</sup> / <sub>L</sub> U2	332-F <sup>R</sup> / <sub>L</sub> -U2	0.8		●						●				
	TNGG 160401M FN UL	TNGG3304MFNUL	*0.08	●	●	●	●	●	●	●	●	●	●		
	160402M FN UL	3308MFNUL	*0.18	●	●	●	●	●	●	●	●	●	●		
	160404M FN UL	331MFNUL	*0.38	●	●	●	●	●	●	●	●	●	●		
	160408M FN UL	332MFNUL	*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			●										F27
	160408 TNB AM1	332-TNB-AM1	0.8			●										
G	VNMG 160404 G	VNMG331-G	0.4									●				
	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									●				F29 K37
	080412 G	433-G	1.2									●				
Z5	WNMG 080408 TNB Z5	WNMG432-TNB-Z5	0.8			●										
	080412 TNB Z5	433-TNB-Z5	1.2			●										
ZP	WNGG 080404 FN ZP	WNGG431-FN-ZP	0.4			●	●					●				
	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)