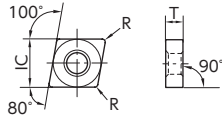


Item Number	IC	T
CN_1204_	12.7	4.76

<80 degree Rhombic Negative type>



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	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating			PCD	For applicable holder, see pages:
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1		
 4 corners available	CNGA 120404 BQ	CNGA431BQ	T00520	0.4	●													
	120408 BQ	432BQ	T00520	0.8	●													
	120412 BQ	433BQ	T00520	1.2	●													
 4 corners available	CNGA 120402 PQ SCD	CNGA4308PQS0415	S01015	0.2							●	●	●					
	120402 PQ SXF	4308PQS0525	S01325	0.2							●	●	●					
	120402 PQ SEH	4308PQS0635	S01535	0.2							●	●	●					
	120402 PQ TCE	4308PQT0420	T01020	0.2							●							
	120404 PQ F	431PQFNX	None	0.4							●			●				
	120404 PQ SCD	431PQS0415	S01015	0.4		●	●				●	●	●					
	120404 PQ SCE	431PQS0420	S01020	0.4						●								
	120404 PQ SXF	431PQS0525	S01325	0.4		●	●				●	●	●					
	120404 PQ SEH	431PQS0635	S01535	0.4		●	●				●	●	●					
	120404 PQ TCE	431PQT0420	T01020	0.4							●							
	120408 PQ F	432PQFNX	None	0.8							●			●				
	120408 PQ SCD	432PQS0415	S01015	0.8		●	●				●	●	●					
	120408 PQ SCE	432PQS0420	S01020	0.8						●								
	120408 PQ SXF	432PQS0525	S01325	0.8		●	●				●	●	●					
	120408 PQ SEH	432PQS0635	S01535	0.8		●	●				●	●	●					
	120408 PQ TBD	432PQT0215	T00515	0.8							●							
	120408 PQ TCE	432PQT0420	T01020	0.8							●							
	120412 PQ F	433PQFNX	None	1.2							●			●				
	120412 PQ SCD	433PQS0415	S01015	1.2		●	●				●	●	●					
	120412 PQ SCE	433PQS0420	S01020	1.2						●								
120412 PQ SXF	433PQS0525	S01325	1.2		●	●				●	●	●						

F9
F11
G40
K34

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

BIDEMICS (Brazed) • CBN • PCD
 F
 Negative type
 Positive type

Item Number	IC	T
CN_1204_	12.7	4.76

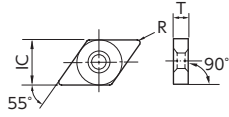
<80 degree Rhombic Negative type>

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating		PCD	For applicable holder, see pages:		
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1			PD1	PD2
					Steel	P													
					Stainless Steel	M													
					Cast Iron	K	●	●		●	●	●	●	●	●	●	●		
					Non-Ferrous Material	N										●	●		
					Heat Resistant Alloy	S	●												
					Hardened Material	H		●	●	●									
<p>4 corners available</p>	CNGA 120412 PQ SEH	CNGA433PQS0635	S01535	1.2			●	●											
	120412 PQ TBD	433PQT0215	T00515	1.2															
	120412 PQ TCE	433PQT0420	T01020	1.2															
	120416 PQ SCD	434PQS0415	S01015	1.6															
	120416 PQ SCE	434PQS0420	S01020	1.6						●									
	120416 PQ SXF	434PQS0525	S01325	1.6				●											
	120416 PQ SEH	434PQS0635	S01535	1.6															
	120416 PQ TCE	434PQT0420	T01020	1.6															
	120420 PQ SCD	435PQS0415	S01015	2															
	120420 PQ SCE	435PQS0420	S01020	2						●									
	120420 PQ SXF	435PQS0525	S01325	2					●										
	120420 PQ SEH	435PQS0635	S01535	2															
	120420 PQ TCE	435PQT0420	T01020	2															
<p>one side 2 corners available</p>	CNGA 120404 PD F	CNGA431PDFNX	None	0.4															
	120408 PD F	432PDFNX	None	0.8															
	120412 PD F	433PDFNX	None	1.2															
<p>4 corners available with wiper</p>	CNGA 120404 PQ W SCD	CNGA431PQWS0415	S01015	0.4															
	120404 PQ W SEH	431PQWS0635	S01535	0.4															
	120408 PQ W SCD	432PQWS0415	S01015	0.8															
	120408 PQ W SEH	432PQWS0635	S01535	0.8															
	120412 PQ W SCD	433PQWS0415	S01015	1.2															
	120412 PQ W SEH	433PQWS0635	S01535	1.2															
<p>4 corners available</p>	CNMG 120404 FN ZP	CNMG431-FN-ZP	None	0.4															
	120408 FN ZP	432-FN-ZP	None	0.8															
<p>1 corner available with chipbreaker (rake angle 10°)</p>	CNMX 120404 P F		None	0.4															●
	120408 P F		None	0.8															

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

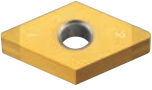
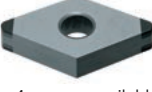
Item Number	IC	T
DN_1504	12.7	4.76
DN_1506	12.7	6.35

<55 degree Rhombic Negative type>



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	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diameter Coating	PCD	For applicable holder, see pages:
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40			
 4 corners available	DNGA 150404 BQ	DNGA431BQ	T00520	0.4	●											
	150408 BQ	432BQ	T00520	0.8	●											
	150412 BQ	433BQ	T00520	1.2	●											
 4 corners available	DNGA 150402 PQ SCD	DNGA4308PQS0415	S01015	0.2												
	150402 PQ SXF	4308PQS0525	S01325	0.2												
	150402 PQ SEH	4308PQS0635	S01535	0.2												
	150402 PQ TCE	4308PQT0420	T01020	0.2												
	150404 PQ F	431PQFNX	None	0.4												
	150404 PQ SCD	431PQS0415	S01015	0.4			●	●								
	150404 PQ SCE	431PQS0420	S01020	0.4												
	150404 PQ SXF	431PQS0525	S01325	0.4			●	●								
	150404 PQ SEH	431PQS0635	S01535	0.4			●	●								
	150404 PQ TCE	431PQT0420	T01020	0.4												
	150408 PQ F	432PQFNX	None	0.8												
	150408 PQ SCD	432PQS0415	S01015	0.8			●	●								
	150408 PQ SCE	432PQS0420	S01020	0.8												
	150408 PQ SXF	432PQS0525	S01325	0.8			●	●								
	150408 PQ SEH	432PQS0635	S01535	0.8			●	●								
	150408 PQ TCE	432PQT0420	T01020	0.8												
	150412 PQ F	433PQFNX	None	1.2												
	150412 PQ SCD	433PQS0415	S01015	1.2			●	●								
	150412 PQ SCE	433PQS0420	S01020	1.2												
	150412 PQ SXF	433PQS0525	S01325	1.2			●	●								
	150412 PQ SEH	433PQS0635	S01535	1.2			●	●								
	150412 PQ TCE	433PQT0420	T01020	1.2												
	150416 PQ SCD	434PQS0415	S01015	1.6			●	●								
	150416 PQ SCE	434PQS0420	S01020	1.6												
	150416 PQ SXF	434PQS0525	S01325	1.6			●	●								
	150416 PQ SEH	434PQS0635	S01535	1.6			●	●								
	150416 PQ TCE	434PQT0420	T01020	1.6												
	150420 PQ SCD	435PQS0415	S01015	2				●								
	150420 PQ SXF	435PQS0525	S01325	2				●								
	150420 PQ SEH	435PQS0635	S01535	2				●								
DNGA 150602 PQ SCD	4408PQS0415	S01015	0.2													
150604 PQ SCD	441PQS0415	S01015	0.4													
150604 PQ SXF	441PQS0525	S01325	0.4													

F13
F15
G41
K35

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

BIDEMICS (Brazed) • CBN • PCD

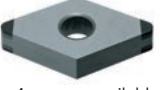
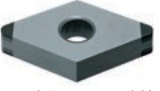

Negative type

Positive type



Item Number	IC	T
DN_1504_	12.7	4.76
DN_1506_	12.7	6.35

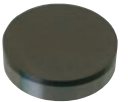

<55 degree Rhombic Negative type>

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating			PCD	For applicable holder, see pages:		
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1			PD2	
 <p>4 corners available</p>	DNGA 150604 PQ TCE	DNGA441PQT0420	T01020	0.4																
	150608 PQ SCD	442PQS0415	S01015	0.8																
	150608 PQ SXF	442PQS0525	S01325	0.8																
	150608 PQ TCE	442PQT0420	T01020	0.8																
	150612 PQ SCD	443PQS0415	S01015	1.2																
	150612 PQ SXF	443PQS0525	S01325	1.2																
	150612 PQ TCE	443PQT0420	T01020	1.2																
	150616 PQ SCD	444PQS0415	S01015	1.6																
	150616 PQ SXF	444PQS0525	S01325	1.6																
 <p>one side 2 corners available</p>	DNGA 150404 PD F	DNGA431PDFNX	None	0.4																
	150408 PD F	432PDFNX	None	0.8																
	150412 PD F	433PDFNX	None	1.2																
 <p>1 corner available with chipbreaker (rake angle 10°)</p>	DNMX 150404 P F		None	0.4																
	150408 P F		None	0.8																

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

Item Number	IC	T
RN_1203_	12.7	3.18
RN_1204_	12.7	4.76

<Round Negative type>

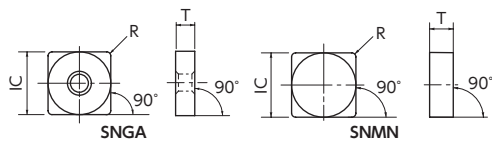
Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating			PCD	For applicable holder, see pages:		
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1			PD2	
 <p>(top full-face CBN)</p>	RNGN 120400 S	RNGN430S	Z01015	—																
 <p>(Solid CBN)</p>	RNMN 120300 S TN	RNMN420STN	T01025	—																
	RNMN 120400 S TN	RNMN430STN	T01025	—																

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

New Products
Tool Materials / Selection Guide
BIDEMICS, PCD, CBN and Ceramics
Micrograin Capable, PVD Coated Capable
Insert Item List
General Turning Toolholders
Unique Swiss Tooling
Grooving / Side Turning
Threading
Shaper
ID Tooling
Application Introduction
Endmills
Rotating Tools
Information
Index

Item Number	IC	T
SN_0903_	9.525	3.18
SN_1203_	12.7	3.18
SN_1204_	12.7	4.76

<90 degree Square Negative type>



Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material

P
M
K
N
S
H

BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating		PCD	
JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1	PD2

● : 1st Choice
● : 2nd choice

BIDEMICS (Brazed) • CBN • PCD

Negative type

Positive type

G

D

R

S

T

V



8 corners available

F17
F19
K36



(Solid CBN)

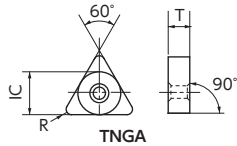
F17
F19
F21
K36
N12
N14
N16

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating		PCD	For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1			PD1
SNGA	120402 PE SXF	SNGA4308PES0525	S01325	0.2								●	●	●				F17 F19 K36
	120404 PE SCD	431PES0415	S01015	0.4									●	●				
	120404 PE SCE	431PES0420	S01020	0.4					●									
	120404 PE SXF	431PES0525	S01325	0.4									●					
	120404 PE SEH	431PES0635	S01535	0.4										●	●			
	120404 PE TCE	431PET0420	T01020	0.4						●								
	120408 PE SCD	432PES0415	S01015	0.8										●	●			
	120408 PE SCE	432PES0420	S01020	0.8						●								
	120408 PE SXF	432PES0525	S01325	0.8										●				
	120408 PE SEH	432PES0635	S01535	0.8											●	●		
	120408 PE TCE	432PET0420	T01020	0.8							●							
	120412 PE SCD	433PES0415	S01015	1.2										●	●			
	120412 PE SCE	433PES0420	S01020	1.2						●								
	120412 PE SXF	433PES0525	S01325	1.2										●				
	120412 PE SEH	433PES0635	S01535	1.2											●	●		
	120412 PE TCE	433PET0420	T01020	1.2							●							
	120416 PE SCD	434PES0415	S01015	1.6											●			
	120416 PE SXF	434PES0525	S01325	1.6										●				
120416 PE TCE	434PET0420	T01020	1.6							●								
SNMN	090308 S TNB	SNMN322STNB	T00525	0.8		●												F17 F19 F21 K36 N12 N14 N16
	090312 S TN	323STN	T01025	1.2		●												
	120308 S TN	SNMN422STN	T01025	0.8		●												
	120312 S TN	423STN	T01025	1.2		●												
	120408 S TN	SNMN432STN	T01025	0.8		●												
	120412 S TNF	433STNF	T02025	1.2		●												
	120416 S TNF	434STNF	T02025	1.6		●												

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


Item Number	IC	T
TN_1604_	9.525	4.76
TN_2204_	12.7	4.76

<60 degree Triangle Negative type>



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

● : 1st Choice
● : 2nd choice

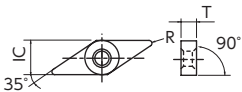
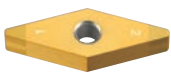
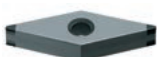
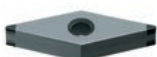
Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating		PCD	For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1			PD1
 <p>6 corners available</p>	TNGA 160401 PH F	TNGA3304PHFNX	None	0.1														
	160401 PH SCD	3304PHS0415	S01015	0.1			●	●										
	160401 PH SXF	3304PH0525	S01325	0.1			●	●										
	160401 PH SEH	3304PHS0635	S01535	0.1														
	160402 PH F	3308PHFNX	None	0.2														
	160402 PH SCD	3308PHS0415	S01015	0.2			●	●										
	160402 PH SXF	3308PHS0525	S01325	0.2			●	●										
	160402 PH SEH	3308PHS0635	S01535	0.2			●											
	160404 PH F	331PHFNX	None	0.4														
	160404 PH SCD	331PHS0415	S01015	0.4			●	●										
	160404 PH SCE	331PHS0420	S01020	0.4														
	160404 PH SXF	331PHS0525	S01325	0.4			●	●										
	160404 PH SEH	331PHS0635	S01535	0.4			●	●										
	160404 PH TCE	331PHT0420	T01020	0.4														
	160408 PH F	332PHFNX	None	0.8														
	160408 PH SCD	332PHS0415	S01015	0.8			●	●										
	160408 PH SCE	332PHS0420	S01020	0.8														
	160408 PH SXF	332PHS0525	S01325	0.8			●	●										
	160408 PH SEH	332PHS0635	S01535	0.8			●	●										
	160408 PH TCE	332PHT0420	T01020	0.8														
	160412 PH F	333PHFNX	None	1.2														
	160412 PH SCD	333PHS0415	S01015	1.2			●	●										
	160412 PH SCE	333PHS0420	S01020	1.2														
	160412 PH SXF	333PHS0525	S01325	1.2			●	●										
	160412 PH SEH	333PHS0635	S01535	1.2			●	●										
	160412 PH TCE	333PHT0420	T01020	1.2														
	160416 PH SCD	334PHS0415	S01015	1.6			●	●										
	160416 PH SXF	334PHS0525	S01325	1.6			●	●										
	160416 PH SEH	334PHS0635	S01535	1.6			●	●										
	160416 PH TCE	334PHT0420	T01020	1.6														
220412 PH SCD	433PHS0415	S01015	1.2															
220412 PH SEH	433PHS0635	S01535	1.2															

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

F23
F25
G39

Item Number	IC	T
VN_1604_	9.525	4.76

<35 degree Rhombic Negative type>

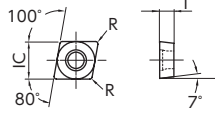
Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)				Diamond Coating			PCD	For applicable holder, see pages:		
					JP2	B16	B5K	B6K	B22	B23	B30	B36			B40	B52
					Steel	P										
					Stainless Steel	M										
					Cast Iron	K	●	●		●	●	●	●	●	●	
					Non-Ferrous Material	N							●	●	●	
					Heat Resistant Alloy	S	●									
					Hardened Material	H		●	●	●						
	VNGA 160404 BQ	VNGA331BQ	T00520	0.4	●											
	160408 BQ	332BQ	T00520	0.8	●											
	160412 BQ	333BQ	T00520	1.2	●											
 <p>4 corners available</p>	VNGA 160401 PQ SCD	VNGA3304PQS0415	S01015	0.1								●				
	160401 PQ SEH	3304PQS0635	S01535	0.1								●				
	160402 PQ F	3308PQFNX	None	0.2						●						
	160402 PQ SCD	3308PQS0415	S01015	0.2		●					●	●	●			
	160402 PQ SXF	3308PQS0525	S01325	0.2		●					●	●	●			
	160402 PQ SEH	3308PQS0635	S01535	0.2		●					●	●	●			
	160402 PQ TCE	3308PQT0420	T01020	0.2						●						
	160404 PQ F	331PQFNX	None	0.4							●		●			
	160404 PQ SCD	331PQS0415	S01015	0.4			●	●			●	●	●			
	160404 PQ SXF	331PQS0525	S01325	0.4			●	●			●	●	●			
	160404 PQ SEH	331PQS0635	S01535	0.4			●	●			●	●	●			
	160404 PQ TCE	331PQT0420	T01020	0.4							●					
	160408 PQ F	332PQFNX	None	0.8							●		●			
	160408 PQ SCD	332PQS0415	S01015	0.8			●	●			●	●	●			
	160408 PQ SXF	332PQS0525	S01325	0.8			●	●			●	●	●			
	160408 PQ SEH	332PQS0635	S01535	0.8			●	●			●	●	●			
	160408 PQ TCE	332PQT0420	T01020	0.8							●					
	160412 PQ SCD	333PQS0415	S01015	1.2			●	●			●	●	●			
160412 PQ SXF	333PQS0525	S01325	1.2			●	●			●	●	●				
160412 PQ SEH	333PQS0635	S01535	1.2			●	●			●	●	●				
160412 PQ TCE	333PQT0420	T01020	1.2							●						
 <p>one side 2 corners available</p>	VNGA 160402 PD F	VNGA3308PDFNX	None	0.2												
	160404 PD F	331PDFNX	None	0.4							●					
	160408 PD F	332PDFNX	None	0.8							●					
	160412 PD F	333PDFNX	None	1.2							●					

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

F27

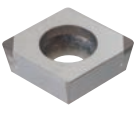
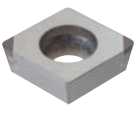

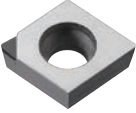

Item Number	IC	T	Relief angle
CC 0602	6.35	2.38	7°
CC 09T3	9.525	3.97	7°

<80 degree Rhombic Positive type>



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	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)				Diamond Coating		PCD	For applicable holder, see pages:					
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52			UC1	PD1	PD2		
 <p>2 corners available</p>	CCGW 060202 PD F	CCGW21.508PDFNX	None	0.2																	
	060202 PD SCD	21.508PDS0415	S01015	0.2																	
	060202 PD SXF	21.508PDS0525	S01325	0.2																	
	060202 PD SEH	21.508PDS0635	S01535	0.2																	
	060204 PD F	21.51PDFNX	None	0.4																	
	060204 PD SCD	21.51PDS0415	S01015	0.4																	
	060204 PD SXF	21.51PDS0525	S01325	0.4																	
	060204 PD SEH	21.51PDS0635	S01535	0.4																	
	060208 PD F	21.52PDFNX	None	0.8																	
	060208 PD SCD	21.52PDS0415	S01015	0.8																	
	060208 PD SXF	21.52PDS0525	S01325	0.8																	
	060208 PD SEH	21.52PDS0635	S01535	0.8																	
	060208 PD TEE	21.52PDT0620	T01520	0.8																	
	 <p>2 corners available</p>	CCGW 09T302 PD F	CCGW32.508PDFNX	None	0.2																
		09T302 PD SCD	32.508PDS0415	S01015	0.2																
		09T302 PD SXF	32.508PDS0525	S01325	0.2																
		09T302 PD SEH	32.508PDS0635	S01535	0.2																
		09T304 PD F	32.51PDFNX	None	0.4																
		09T304 PD SCD	32.51PDS0415	S01015	0.4																
		09T304 PD SXF	32.51PDS0525	S01325	0.4																
09T304 PD SEH		32.51PDS0635	S01535	0.4																	
09T308 PD F		32.52PDFNX	None	0.8																	
09T308 PD SCD		32.52PDS0415	S01015	0.8																	
09T308 PD SXF		32.52PDS0525	S01325	0.8																	
09T308 PD SEH		32.52PDS0635	S01535	0.8																	
 <p>1 corner available</p>	CCMW 09T301	—	None	0.1																	
	09T302	—	None	0.2																	
	09T304	—	None	0.4																	
	09T308	—	None	0.8																	
 <p>1 corner available with 3D chipbreaker (rake angle 10°)</p>	CCMT 060201 PB F		None	0.1																	
	060202 PB F		None	0.2																	
	060204 PB F		None	0.4																	
	09T301 PB F		None	0.1																	
	09T302 PB F		None	0.2																	
 <p>1 corner available with chipbreaker (rake angle 10°)</p>	09T304 PB F		None	0.4																	
	09T302 P F		None	0.2																	
	09T304 P F		None	0.4																	

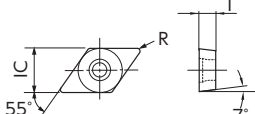
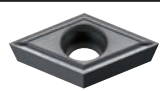

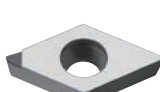
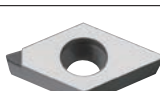
G23
K28

G23
K28

● : 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>

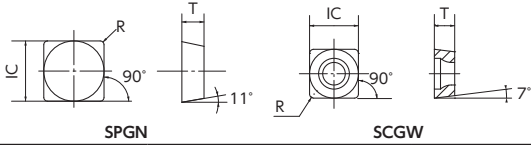
Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)				Diamond Coating			PCD	For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36			B40
 2 corners available	DCGW 070202 PD F	DCGW21.508PDFNX	None	0.2											
	070202 PD SCD	21.508PDS0415	S01015	0.2											
	070202 PD SEH	21.508PDS0635	S01535	0.2											
	070204 PD F	21.51PDFNX	None	0.4											
	070204 PD SCD	21.51PDS0415	S01015	0.4											
	070204 PD SEH	21.51PDS0635	S01535	0.4											
	070208 PD F	21.52PDFNX	None	0.8											
	070208 PD SCD	21.52PDS0415	S01015	0.8											
	070208 PD SXF	21.52PDS0525	S01325	0.8											
	070208 PD SEH	21.52PDS0635	S01535	0.8											
	DCGW 11T301 PD SCD	DCGW32.504PDS0415	S01015	0.1											
	11T302 PD F	32.508PDFNX	None	0.2											
	11T302 PD SCD	32.508PDS0415	S01015	0.2											
	11T302 PD SXF	32.508PDS0525	S01325	0.2											
	11T302 PD SEH	32.508PDS0635	S01535	0.2											
	11T304 PD F	32.51PDFNX	None	0.4											
	11T304 PD SCD	32.51PDS0415	S01015	0.4											
	11T304 PD SXF	32.51PDS0525	S01325	0.4											
	11T304 PD SEH	32.51PDS0635	S01535	0.4											
	11T304 PD TCD	32.51PDT0415	T01015	0.4											
11T308 PD F	32.52PDFNX	None	0.8												
11T308 PD SCD	32.52PDS0415	S01015	0.8												
11T308 PD SXF	32.52PDS0525	S01325	0.8												
11T308 PD SEH	32.52PDS0635	S01535	0.8												
11T312 PD SCD	32.53PDS0415	S01015	1.2												
 2 corners available	DCMT 11T301 FN AM3	—	None	0.1											
	11T302 FN AM3	—	None	0.2											
	11T304 FN AM3	—	None	0.4											
 1 corner available	DCMW 11T301	—	None	0.1											
	11T302	—	None	0.2											
	11T304	—	None	0.4											
	11T308	—	None	0.8											
 1 corner available with 3D chipbreaker (rake angle 10°)	DCMT 070201 PB F		None	0.1											
	070202 PB F		None	0.2											
	11T301 PB F		None	0.1											
	11T302 PB F		None	0.2											
	11T304 PB F		None	0.4											
 1 corner available with chipbreaker (rake angle 10°)	DCMT 070201 P F		None	0.1											
	070202 P F		None	0.2											
	11T302 P F		None	0.2											
	11T304 P F		None	0.4											

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

G25
G27

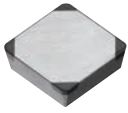
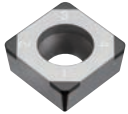
Item Number	IC	T	Relief angle
SP_0903_	9.525	3.18	11°
SC_09T3_	9.525	3.97	7°

<90 degree Square Positive type>



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

● : 1st Choice
● : 2nd choice

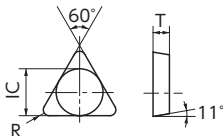

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating		PCD	For applicable holder, see pages:				
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1			PD1	PD2		
 <p>4 corners available</p>	SPGN 090304 PQ SCD	SPGN321PQS0415	S01015	0.4																	
	090304 PQ SCE	321PQS0420	S01020	0.4																	
	090304 PQ SEH	321PQS0635	S01535	0.4																	
	090304 PQ TCE	321PQT0420	T01020	0.4																	
	SPGN 090308 PQ SCD	SPGN322PQS0415	S01015	0.8																	
	090308 PQ SCE	322PQS0420	S01020	0.8																	
	090308 PQ SEH	322PQS0635	S01535	0.8																	
	090308 PQ TCE	322PQT0420	T01020	0.8																	
	SPGN 090312 PQ SCD	SPGN323PQS0415	S01015	1.2																	
	090312 PQ SCE	323PQS0420	S01020	1.2																	
	090312 PQ SEH	323PQS0635	S01535	1.2																	
	090312 PQ TCE	323PQT0420	T01020	1.2																	
	SCGW 09T304 PQ ZCD	SCGW32.51PQZ0415	Z01015	0.4																	
	09T308 PQ ZCD	32.52PQZ0415	Z01015	0.8																	

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

- F
- BIDEMICS (Brazed) • CBN • PCD
- Negative type
- Positive type
- C
- D
- R
- S
- T
- V

Item Number	IC	T	Relief angle
TP_1103_	6.35	3.18	11°
TP_1603_	9.525	3.18	11°

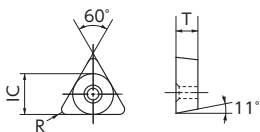
<60 degree Triangle Positive type>

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating	PCD	For applicable holder, see pages:
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	
 	TPGN 110302 PT SCD	TPGN2208PTS0415	S01015	0.2												
	110302 PT SCE	2208PTS0420	S01020	0.2												
	110302 PT SXF	2208PTS0525	S01325	0.2												
	110302 PT SEH	2208PTS0635	S01535	0.2												
	110304 PT SCD	221PTS0415	S01015	0.4												
	110304 PT SCE	221PTS0420	S01020	0.4												
	110304 PT SXF	221PTS0525	S01325	0.4												
	110304 PT SEH	221PTS0635	S01535	0.4												
	110304 PT TCE	221PTT0420	T01020	0.4												
	110308 PT SCD	222PTS0415	S01015	0.8												
	110308 PT SCE	222PTS0420	S01020	0.8												
	110308 PT SXF	222PTS0525	S01325	0.8												
	110308 PT SEH	222PTS0635	S01535	0.8												
	110308 PT TCE	222PTT0420	T01020	0.8												
	110312 PT SCD	223PTS0415	S01015	1.2												
	110312 PT SCE	223PTS0420	S01020	1.2												
	110312 PT SXF	223PTS0525	S01325	1.2												
	110312 PT SEH	223PTS0635	S01535	1.2												
	110312 PT TCE	223PTT0420	T01020	1.2												
	TPGN 160302 PT SCD	TPGN3208PTS0415	S01015	0.2												
	160302 PT SXF	3208PTS0525	S01325	0.2												
	160302 PT SEH	3208PTS0635	S01535	0.2												
	160304 PT SCD	321PTS0415	S01015	0.4												
	160304 PT SCE	321PTS0420	S01020	0.4												
	160304 PT SXF	321PTS0525	S01325	0.4												
	160304 PT SEH	321PTS0635	S01535	0.4												
	160304 PT TCE	321PTT0420	T01020	0.4												
	160308 PT SCD	322PTS0415	S01015	0.8												
	160308 PT SCE	322PTS0420	S01020	0.8												
	160308 PT SXF	322PTS0525	S01325	0.8												
160308 PT SEH	322PTS0635	S01535	0.8													
160308 PT TCE	322PTT0420	T01020	0.8													
160312 PT SCD	323PTS0415	S01015	1.2													
160312 PT SCE	323PTS0420	S01020	1.2													
160312 PT SXF	323PTS0525	S01325	1.2													
160312 PT SEH	323PTS0635	S01535	1.2													
160312 PT TCE	323PTT0420	T01020	1.2													

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

Item Number	IC	T	Relief angle
TP_0902_	5.56	2.38	11°
TP_1103_	6.35	3.18	11°

<60 degree Triangle Positive type>

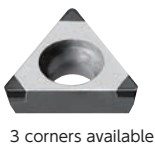


Steel	P
Stainless Steel	M
Cast Iron	K
Non-Ferrous Material	N
Heat Resistant Alloy	S
Hardened Material	H

● : 1st Choice
● : 2nd choice

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)				CBN (Brazed)					Diamond Coating			For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1	PD2		
Positive type	TPGW 090202 PT SCD	TPGD7308PTS0415	S01015	0.2															
	090202 PT SXF	7308PTS0525	S01325	0.2															
	090202 PT SEH	7308PTS0635	S01535	0.2															
	090204 PT SCD	731PTS0415	S01015	0.4															
	090204 PT SXF	731PTS0525	S01325	0.4															
	090204 PT SEH	731PTS0635	S01535	0.4															
	090208 PT SCD	732PTS0415	S01015	0.8															
	090208 PT SXF	732PTS0525	S01325	0.8															
	090208 PT SEH	732PTS0635	S01535	0.8															
	090312 PT SCD	743PTS0415	S01015	1.2															
	090312 PT SXF	743PTS0525	S01325	1.2															
	090312 PT SEH	743PTS0635	S01535	1.2															
Negative type	TPGW 110302 PT SCD	TPGW2208PTS0415	S01015	0.2															
	110302 PT SXF	2208PTS0525	S01325	0.2															
	110302 PT SEH	2208PTS0635	S01535	0.2															
	110302 PT TCE	2208PTT0420	T01020	0.2															
	110304 PT SCD	221PTS0415	S01015	0.4															
	110304 PT SXF	221PTS0525	S01325	0.4															
	110304 PT SEH	221PTS0635	S01535	0.4															
	110304 PT TCE	221PTT0420	T01020	0.4															
	110304 PT TED	221PTT0615	T01515	0.4															
	110308 PT SCD	222PTS0415	S01015	0.8															
	110308 PT SXF	222PTS0525	S01325	0.8															
	110308 PT SEH	222PTS0635	S01535	0.8															
110312 PT SCD	223PTS0415	S01015	1.2																
110312 PT SXF	223PTS0525	S01325	1.2																
110312 PT SEH	223PTS0635	S01535	1.2																
110312 PT TCE	223PTT0420	T01020	1.2																
110312 PT TED	223PTT0615	T01515	1.2																

K30
K31
K32



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

BIDEMICS (Brazed) • CBN • PCD

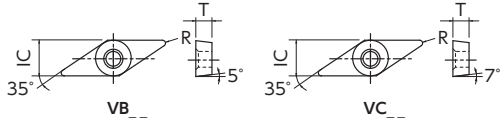
Negative type

Positive type



Item Number	IC	T	Relief angle
VB_1103_	6.35	3.18	5°
VB_1604_	9.525	4.76	5°
VC_0802_	4.76	2.38	7°

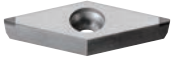
<35 degree Rhombic Positive type>



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

● : 1st Choice
● : 2nd choice

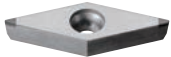
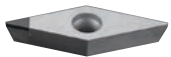
BIDEMICS (Brazed) • CBN • PCD
 Negative type
 Positive type
 C
 D
 R
 S
 T
 V

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)						Diamond Coating			PCD	For applicable holder, see pages:		
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1	PD2				
 2 corners available	VBGW 110302 PD F	VBGW2208PDFNX	None	0.2								●									
	110302 PD SCD	2208PDS0415	S01015	0.2								●	●								
	110302 PD SXF	2208PDS0525	S01325	0.2								●	●								
	110302 PD SEH	2208PDS0635	S01535	0.2								●	●								
	110304 PD F	221PDFNX	None	0.4								●									
	110304 PD SCD	221PDS0415	S01015	0.4								●	●								
	110304 PD SXF	221PDS0525	S01325	0.4								●	●								
	110304 PD SEH	221PDS0635	S01535	0.4								●	●								
	110304 PD TCE	221PDT0420	T01020	0.4								●									
	110308 PD SCD	222PDS0415	S01015	0.8									●								
	110308 PD SXF	222PDS0525	S01325	0.8									●								
	110308 PD SEH	222PDS0635	S01535	0.8									●								
	110308 PD TCE	222PDT0420	T01020	0.8									●								
	110312 PD SCD	223PDS0415	S01015	1.2									●								
	110312 PD SXF	223PDS0525	S01325	1.2									●								
	110312 PD SEH	223PDS0635	S01535	1.2									●								
	110312 PD TCE	223PDT0420	T01020	1.2									●								
	VBGW 160402 PD SCD	VBGW3308PDS0415	S01015	0.2												●					
		160402 PD SXF	3308PDS0525	S01325	0.2											●					
		160402 PD SEH	3308PDS0635	S01535	0.2											●					
160404 PD SCD		331PDS0415	S01015	0.4											●						
160404 PD SXF		331PDS0525	S01325	0.4											●						
160404 PD SEH		331PDS0635	S01535	0.4											●						
160408 PD SCD		332PDS0415	S01015	0.8									●		●						
160408 PD SXF		332PDS0525	S01325	0.8									●		●						
160408 PD SEH		332PDS0635	S01535	0.8									●		●						
160412 PD SCD		333PDS0415	S01015	1.2											●						
160412 PD SXF		333PDS0525	S01325	1.2											●						
160412 PD SEH		333PDS0635	S01535	1.2											●						
VCGW 080202 PD SCD	VCGW1.51.508PDS0415	S01015	0.2												●						
	080202 PD SXF	1.51.508PDS0525	S01325	0.2											●						
	080204 PD SCD	1.51.51PDS0415	S01015	0.4											●						
	080204 PD SXF	1.51.51PDS0525	S01325	0.4											●						
	080208 PD SCD	1.51.52PDS0415	S01015	0.8											●						
	080208 PD SXF	1.51.52PDS0525	S01325	0.8											●						

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

Item Number	IC	T	Relief angle
VC_1103_	6.35	3.18	7°
VC_1604_	9.525	4.76	7°


<35 degree Rhombic Positive type>

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating			PCD	For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1			PD2
 <p>2 corners available</p>	VCGW 110302 PD SCD	VCGW2208PDS0415	S01015	0.2															
	110302 PD SEH	2208PDS0635	S01535	0.2															
	110304 PD SCD	221PDS0415	S01015	0.4															
	110304 PD SEH	221PDS0635	S01535	0.4															
	110308 PD SCD	222PDS0415	S01015	0.8															
	110308 PD SEH	222PDS0635	S01535	0.8															
	110312 PD SCD	223PDS0415	S01015	1.2															
	110312 PD SEH	223PDS0635	S01535	1.2															
	VCGW 160402 PD SCD	VCGW3308PDS0415	S01015	0.2															
	160402 PD SEH	3308PDS0635	S01535	0.2															
	160404 PD SCD	331PDS0415	S01015	0.4															
	160404 PD SEH	331PDS0635	S01535	0.4															
	160404 PD TCE	331PDT0420	T01020	0.4															
	160408 PD SCD	332PDS0415	S01015	0.8															
	160408 PD SEH	332PDS0635	S01535	0.8															
	160408 PD TCE	332PDT0420	T01020	0.8															
	160412 PD SCD	333PDS0415	S01015	1.2															
	160412 PD SEH	333PDS0635	S01535	1.2															
160412 PD TCE	333PDT0420	T01020	1.2																
 <p>1 corner available</p>	VCMW 110301	—	None	0.1															
	110302	—	None	0.2															
	110304	—	None	0.4															

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

G29
G31
G56

<For Machining Mill Rolls>

Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating			PCD	For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1			PD2
 <p>(Top full-face CBN)</p>	RBGX 16 S	—	S01015	—															
	RBGX 20 S	—	S01015	—															

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

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