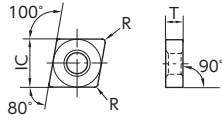


Item Number	IC	T
CN_1204_	12.7	4.76

<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
 Negative type
 Positive type

Item Number	IC	T
CN_1204_	12.7	4.76

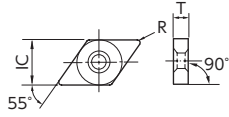
<80 degree Rhombic Negative type>

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)					PCD	For applicable holder, see pages:	
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40			B52
<p>4 corners available</p>	DNGA 150404 BQ	DNGA431BQ	T00520	0.4	●											
	150408 BQ	432BQ	T00520	0.8	●											
	150412 BQ	433BQ	T00520	1.2	●											
<p>4 corners available</p>	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

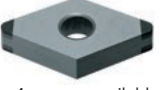
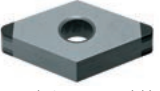

Negative type

Positive type



Item Number	IC	T
DN_1504_	12.7	4.76
DN_1506_	12.7	6.35

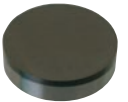

<55 degree Rhombic Negative type>

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>

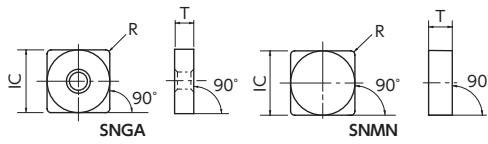
Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating			PCD	For applicable holder, see pages:			
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1	PD1			PD2		
 <p>(top full-face CBN)</p>	RNGN 120400 S	RNGN430S	Z01015	—																	
 <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	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
<p>8 corners available</p>	SNGA 120402 PE SXF	SNGA4308PES0525	S01325	0.2								●	●					
	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													●		
<p>(Solid CBN)</p>	SNMN 090308 S TNB	SNMN322STNB	T00525	0.8			●											
	090312 S TN	323STN	T01025	1.2			●											
	SNMN 120308 S TN	SNMN422STN	T01025	0.8			●											
	120312 S TN	423STN	T01025	1.2			●											
	SNMN 120408 S TN	SNMN432STN	T01025	0.8			●											
	120412 S TNF	433STNF	T02025	1.2			●											
	120416 S TNF	434STNF	T02025	1.6			●											

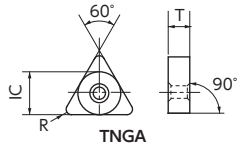
F17
F19
K36

F17
F19
F21
K36
N12
N14
N16

● : 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

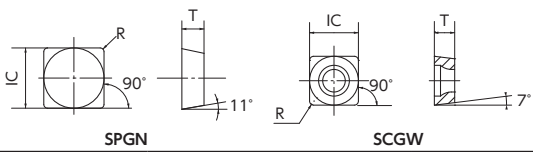
Shape	ISO Item Number	Inch Item Number	Edge Prep.	R	BIDEMICS (Coated)	CBN (Brazed) (Coated)			CBN (Brazed)					Diamond Coating		PCD	For applicable holder, see pages:					
					JP2	B16	B5K	B6K	B22	B23	B30	B36	B40	B52	UC1			PD1	PD2			
 <p>6 corners available</p>	TNGA 160401 PH F	TNGA3304PHFNX	None	0.1																		
	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

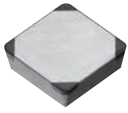
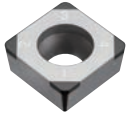
Item Number	IC	T	Relief angle
SP_0903_	9.525	3.18	11°
SC_09T3_	9.525	3.97	7°

<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			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