Cubic Boron Nitride (PCBN) Inserts

WNGA	Insert Hole							Dimensions (Inches)				
—	No Breaker	Full Tip	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip		Mini-Tip					
Sumitomo Cat. No.	New ISO Cat. No.			BN700	BNC80	BNC150	BNC200	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
3NU-WNGA432	3NU-WNGA080408			•				1/2	3/16	1/32	.015	.2031
3NU-WNGA433	3NU-WNGA080412			•						3/64	.015	
6NC-WNGA432	6NC-WNGA080408				★	★	★	1/2	3/16	1/32	.015	.2031

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

■ POSITIVE POLYCRYSTALLINE CUBIC BORON NITRIDE INSERTS

CCGA	Insert Hole								Dimensions (Inches)				
—	No Breaker	Full Tip	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip			Mini-Tip					
Sumitomo Cat. No.	New ISO Cat. No.			BN700	BNC80	BNC150	BNC200	BNX20 BN250 BN600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
2NU-CCGA21.50.5	2NU-CCGW060202			•					1/4	3/32	1/128	.015	.110
2NU-CCGA21.51	2NU-CCGW060204			•							1/64	.015	
2NU-CCGA21.52	2NU-CCGW060208			•							1/32	.015	
2NU-CCGA32.51	2NU-CCGW09T304			•					3/8	5/32	1/64	.015	.1732
2NU-CCGA32.51W	2NU-CCGW09T304W			•							1/64	.015	
2NU-CCGA32.52	2NU-CCGW09T308			•							1/32	.015	
2NU-CCGA431	2NU-CCGW120404			•					1/2	3/16	1/64	.015	.2165
2NU-CCGA432	2NU-CCGW120408			•							1/32	.015	
NC-CCGA21.51	NC-CCGW060204				•	•	•		1/4	3/32	1/64	.015	.110
2NC-CCGA21.50.5	2NC-CCGW060202						★				1/128	.015	
2NC-CCGA21.51	2NC-CCGW060204						★				1/64	.015	
2NC-CCGA32.50.5	2NC-CCGW09T302				★		★		3/8	5/32	1/128	.015	.1732
2NC-CCGA32.51	2NC-CCGW09T304				•	•	•				1/64	.015	
2NC-CCGA32.52	2NC-CCGW09T308				•	•	•				1/32	.015	
NU-CCGA21.50.5	NU-CCGW060202							• •	1/4	3/32	1/128	.015	.110
NU-CCGA21.50.5F	NU-CCGW060202F							★			1/128	.015	
NU-CCGA21.50.5S	NU-CCGW060202S							★			1/128	.015	
NU-CCGA21.51	NU-CCGW060204							• •			1/64	.015	
NU-CCGA32.50.5	NU-CCGW09T302							• •	3/8	5/32	1/128	.015	.1732
NU-CCGA32.51	NU-CCGW09T304							• •			1/64	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.
F = No edge preparation
W = Wiper insert

CCGE	Insert Hole						Dimensions (Inches)				
—	No Breaker	Full Tip	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip					
Sumitomo Cat. No.	New ISO Cat. No.					BN250 BN600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
NU-CCGE621	NU-CCGW040104					• •	3/16	1/8	1/64	.015	–
NU-CCGE622	NU-CCGW040108					• •			1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

CPGA

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BN700	Multi Mid-Tip	Multi Mini-Tip BN700	Coated Mini-Tip	Mini-Tip BN250	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
2NU-CPGA32.51	NU-CPGW09T304			•			3/8	5/32	1/64	.015	.1732
2NU-CPGA32.52	NU-CPGW09T308			•					1/32	.015	
NU-CPGA2.51.50.5	NU-CPGW080202					★	5/16	3/32	1/128	.015	.134
NU-CPGA2.51.51	NU-CPGW080204					★			1/64	.015	
NU-CPGA2.51.52	NU-CPGW080208					★			1/32	.015	
NU-CPGA320.5	NU-CPGW090302					★	3/8	1/8	1/128	.015	.1732
NU-CPGA321	NU-CPGW090304					★			1/64	.015	
NU-CPGA322	NU-CPGW090308					★			1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

DCGA

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BN700	Multi Mid-Tip	Multi Mini-Tip BN700	Coated Mini-Tip BNC80 BNC150 BNC200	Mini-Tip BN250 BN600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
2NU-DCGA21.50.5	2NU-DCGW070202			•			1/4	3/32	1/128	.015	.110
2NU-DCGA21.51	2NU-DCGW070204			•					1/64	.015	
2NU-DCGA21.52	2NU-DCGW070208			•					1/32	.015	
2NU-DCGA32.51	2NU-DCGW11T304			•			3/8	5/32	1/64	.015	.1732
2NU-DCGA32.52	2NU-DCGW11T308			•					1/32	.015	
2NC-DCGA21.50.5	2NC-DCGW070202				★		1/4	3/32	1/128	.015	.110
2NC-DCGA21.51	2NC-DCGW070204				• • •				1/64	.015	
2NC-DCGA32.50.5	2NC-DCGW11T302				★ ★		3/8	5/32	1/128	.015	.1732
2NC-DCGA32.51	2NC-DCGW11T304				• • •				1/64	.015	
2NC-DCGA32.52	2NC-DCGW11T308				• • •				1/32	.015	
NU-DCGA21.50.5	NU-DCGW070202					• •	1/4	3/32	1/128	.015	.110
NU-DCGA21.50.5F	NU-DCGW070202F					★			1/128	.015	
NU-DCGA21.51	NU-DCGW070204					• •			1/64	.015	
NU-DCGA21.51F	NU-DCGW070204F					★			1/64	.015	
NU-DCGA32.50.5	NU-DCGW11T302					•	3/8	5/32	1/128	.015	.1732
NU-DCGA32.50.5F	NU-DCGW11T302F					★			1/128	.015	
NU-DCGA32.51	NU-DCGW11T304					• •			1/64	.015	
NU-DCGA32.51F	NU-DCGW11T304F					★			1/64	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.
F = No edge preparation

RCGA RCGX

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BN250 BN600	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
RCGA094	RCGA0906MO	★					.354	.250	–	.040	–
RCGX102	RCGX102	•					1/4	.309	–	.040	–
RCGX103	RCGX103	•					3/8	.309	–	.040	–
RCGX104	RCGX104	•					1/2	.312	–	.040	–
RCGX105	RCGX105	•					5/8	.388	–	.040	–

SPG

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BN100 BN250 BN500 BN600	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip BNX20 BN250 BN300 BN500 BN600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
SPG221	SPGN060304	• • •					1/4	1/8	1/64	.020	–
SPG321	SPGN090304	• • •							1/64	.020	
SPG322	SPGN090308	• • •					3/8	1/8	1/32	.020	–
SPG323	SPGN090312	• •							3/64	.020	
SPG421	SPGN120304	• • •					1/2	1/8	1/64	.020	–
SPG422	SPGN120308	• • •							1/32	.020	
SPG423	SPGN120312	• •							3/64	.020	
NU-SPG321	NU-SPGN090304					• • ★ • •	3/8	1/8	1/64	.015	–
NU-SPG322	NU-SPGN090308					• • ★ • •			1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

SPGA

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BN250 BN500 BN600	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
SPGA321	SPGW090304	• • •					3/8	1/8	1/64	.020	.130
SPGA322	SPGW090308	• • •							1/32	.020	
SPGA323	SPGW090312	• •							3/64	.020	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

TBGE

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Top BNX10 BNX20 BN250 BN300 BN500 BN600 BN700	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
TBGE520.5B	TBGE060102B	★ • • •					5/32	1/16	1/128	.020	–
TBGE520.5BSN	TBGE060102-BSN	★							1/128	.020	
TBGE521B	TBGE060104B	★ ★ • ★ • • •							1/64	.020	
TBGE521BSN	TBGE060104-BSN	★							1/64	.020	
TBGE522B	TBGE060108B	★ • ★ • • •							1/32	.020	
TBGE522BSN	TBGE060108-BSN	★							1/32	.020	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

TPEE TPGE

Insert Hole: —
No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Top BN500 BN700	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
TPEE632B	TPEE080208B	•					3/16	3/32	1/32	.020	–
TPEE632BH	TPEE080208BH	•							1/32	.020	
TPGE1.81.51	TPGN090204	★					7/32	3/32	1/64	.020	–

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.
H = Hone only

Cubic Boron Nitride (PCBN) Inserts

TCGA

Insert Hole

No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
				BN700	BNC80 BNC150 BNC200		Dimensions (Inches)				
3NU-TCGA21.51	3NU-TCGW110204			•			1/4	3/32	1/64	.015	.110
3NU-TCGA21.52	3NU-TCGW110208			•					1/32	.015	
NC-TCGA21.51	NC-TCGW110204				• • •		1/4	3/32	1/64	.015	.110
NC-TCGA21.52	NC-TCGW110208				• • •				1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

TPG

Insert Hole

No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BN100	BNX20	BN250	BN300	BN500	BN600	Multi Mid-Tip	Multi Mini-Tip BN700	Coated Mini-Tip	Mini-Tip BNX10	BNX20	BN250	BN300	BN500	BN600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
																	Dimensions (Inches)				
TPG221	TPGN110304		•	•		•	•										1/4	1/8	1/64	.020	–
TPG222	TPGN110308	•	•	•		•	•												1/32	.020	
TPG321	TPGN160304	•	•	•	•	•	•										3/8	1/8	1/64	.020	–
TPG322	TPGN160308	•	•	•	•	•	•												1/32	.020	
TPG323	TPGN160312					•	•												3/64	.020	
TPG432	TPGN220408		•														1/2	3/16	1/32	.020	–
3NU-TPG221	3NU-TPGN110304								•								1/4	1/8	1/64	.015	–
3NU-TPG222	3NU-TPGN110308								•										1/32	.015	
3NU-TPG321	3NU-TPGN160304								•								3/8	1/8	1/64	.015	–
3NU-TPG322	3NU-TPGN160308								•										1/32	.015	
NU-TPG221	NU-TPGN110304										•	•	•	★	•	•	1/4	1/8	1/64	.015	–
NU-TPG222	NU-TPGN110308										•	•	•	★	•	•			1/32	.015	
NU-TPG321	NU-TPGN160304										•	•	•	★	•	•	3/8	1/8	1/64	.015	–
NU-TPG322	NU-TPGN160308										•	•	•	★	•	•			1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

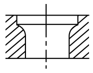
● = USA stocked item
★ = Worldwide Warehouse item
▲ = USA limited availability item

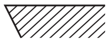
Tool Tip™

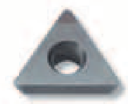
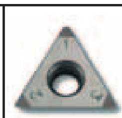
BNS800 can take a maximum depth of cut of 0.150” in gray cast iron. For chilled iron, the depth of cut should not exceed 0.080”.

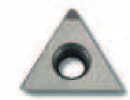
Cubic Boron Nitride (PCBN) Inserts

TPGA

Insert Hole 

— No Breaker 



Sumitomo Cat. No.	New ISO Cat. No.	Full Tip						Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip			Mini-Tip								Dimensions (Inches)				
		BN100	BNX20	BN250	BN300	BN500	BN600		BN700	BNC80	BNC150	BNC200	BNX10	BNX20	BNX25	BN250	BN300	BN500	BN600	BN700	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
TPGA221	TPGW110304	●	●	●		●	●														1/4	1/8	1/64	.020	.130
TPGA222	TPGW110308	●	●	●		●	●																1/32	.020	
TPGA331	TPGW160404		★	●		●	●														3/8	3/16	1/64	.020	.1693
TPGA332	TPGW160408		★	●	●	●	●																1/32	.020	
TPGA333	TPGW160412					●	●																3/64	.020	
3NU-TPGA21.51	3NU-TPGW110204								●												1/4	3/32	1/64	.015	.110
3NU-TPGA21.52	3NU-TPGW110208								●														1/32	.015	
3NU-TPGA220.5	3NU-TPGW110302								●												1/4	1/8	1/128	.015	.130
3NU-TPGA221	3NU-TPGW110304								●														1/64	.015	
3NU-TPGA222	3NU-TPGW110308								●														1/32	.015	
3NU-TPGA331	3NU-TPGW160404								●												3/8	3/16	164	.015	.1693
3NU-TPGA332	3NU-TPGW160408								●														1/32	.015	
NC-TPGA221	NC-TPGW110304									●	●	●									1/4	1/8	1/64	.015	.130
NC-TPGA222	NC-TPGW110308									●	●	●											1/32	.015	
3NC-TPGA331	3NC-TPGW160404										★	★									3/8	3/16	164	.015	.1693
3NC-TPGA332	3NC-TPGW160408									●	●	●											1/32	.015	
NS-TPGA221	NS-TPGW110304														★						1/4	1/8	1/64	.015	.130
NS-TPGA222	NS-TPGW110308														★								1/32	.015	
NS-TPGA331	NS-TPGW160404														★						3/8	3/16	1/64	.015	.1693
NS-TPGA332	NS-TPGW160408														★								1/32	.015	
NU-TPGX630.5	NU-TPGW080202															●			●		3/32	3/16	1/128	.015	.090
NU-TPGX631	NU-TPGW080204																	●					1/64	.015	
NU-TPGX21.50.5	NU-TPGW110202															●			●		1/4	3/32	1/128	.015	.110
NU-TPGX21.51	NU-TPGW110204															●			●				1/64	.015	
NU-TPGX21.51S	NU-TPGW110204S															●			●				1/64	.015	
NU-TPGA630.5	NU-TPGW080202															●			●	●	3/32	3/16	1/128	.015	.090
NU-TPGA630.5S	NU-TPGW080202S															★							1/128	.015	
NU-TPGA631	NU-TPGW080204															★				●			1/64	.015	
NU-TPGA631F	NU-TPGW080204F												★	★		★	★	★	★				1/64	.015	
NU-TPGA631S	NU-TPGW080204S																		★				1/64	.015	
NU-TPGA632	NU-TPGW080208													★		★							1/32	.015	
NU-TPGA1.81.50.5	NU-TPGW090202												●	●		●	★	●	●		7/32	3/32	1/128	.015	.102
NU-TPGA1.81.51	NU-TPGW090204																		★				1/64	.015	
NU-TPGA220.5	NU-TPGA110302													★		★					1/4	1/8	1/128	.015	.130
NU-TPGA220.5F	NU-TPGA110302F												●	●		●	★	●	●				1/128	.015	
NU-TPGA220.5S	NU-TPGA110302S																		★				1/128	.015	
NU-TPGA221	NU-TPGA110304													★		★							1/64	.015	
NU-TPGA221F	NU-TPGW110304F															●							1/64	.015	
NU-TPGA221S	NU-TPGW110304S															●							1/64	.015	
NU-TPGA222	NU-TPGW110308												●	●		●	★	●	●				1/32	.015	
NU-TPGA222F	NU-TPGW110308F																		★				1/32	.015	
NU-TPGA222S	NU-TPGW110308S													★		★							1/32	.015	
NU-TPGA321	NU-TPGW160304												●	●		●	★	●	●		3/8	1/8	1/64	.015	.1693
NU-TPGA322	NU-TPGW160308													★		★							1/32	.015	
NU-TPGA331	NU-TPGW160404															★					3/8	3/16	1/64	.015	.1693
NU-TPGA331F	NU-TPGW160404F												★			★							1/64	.015	
NU-TPGA331S	NU-TPGW160404S																		★				1/64	.015	
NU-TPGA332	NU-TPGW160408															★							1/32	.015	
NU-TPGA332S	NU-TPGW160408S																		★				1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.
F = No edge preparation
S = Edge preparation for hardened steel boring

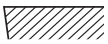
Cubic Boron Nitride (PCBN) Inserts

VBGA

Insert Hole

—

No Breaker



Sumitomo Cat. No.	New ISO Cat. No.	Full Tip	Multi Mid-Tip	Multi Mini-Tip BN700	Coated Mini-Tip BNC80	Coated Mini-Tip BNC150	Coated Mini-Tip BNC200	Mini-Tip	Dimensions (Inches) Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
2NU-VBGA221	2NU-VBGW110304			●					1/4	1/8	1/64	.015	.134
2NU-VBGA222	2NU-VBGW110308			●							1/32	.015	
2NC-VBGA221	2NC-VBGW110304				●	●	●		1/4	1/8	1/64	.015	.134
2NC-VBGA222	2NC-VBGW110308				●	●	●				1/32	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

VCGA

Insert Hole

—

No Breaker

Sumitomo Cat. No.	New ISO Cat. No.	Full Tip	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip BNC80	Coated Mini-Tip BNC150	Mini-Tip BN250	Dimensions (Inches) Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
NU-VCGA220.5	NU-VCGW110302						★	3/8	3/16	1/64	.015	.1732
NU-VCGA221	NU-VCGW110304						★			1/32	.015	
2NC-VCGA331	2NC-VCGW160404				★	★		1/4	1/8	1/128	.015	.134
2NC-VCGA332	2NC-VCGW160408				★	★				1/64	.015	

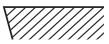
Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

VCMA

Insert Hole

—

No Breaker



Sumitomo Cat. No.	New ISO Cat. No.	Full Tip BNX20	Full Tip BN500	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Dimensions (Inches) Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
VCMA331	VCMW160404	★						3/8	3/16	1/64	.020	.1732
VCMA332	VCMW160408	★	★							1/32	.020	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

ZNEX

Insert Hole

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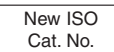
No Breaker



Sumitomo Cat. No.	New ISO Cat. No.	Full Tip	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip BN250	Mini-Tip BN600	Mini-Tip BN700	Dimensions (Inches) Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
NU-ZNEX620.5	NU-ZNEX040102					★	★	●	3/16	1/16	1/128	.015	.090
NU-ZNEX621	NU-ZNEX040104					★	★	●			1/64	.015	

Note: Maximum depth of cut is based on hardened steel applications. Other materials may allow for increased maximum depths of cut.

● = USA stocked item
★ = Worldwide Warehouse item
▲ = USA limited availability item