

Cubic Boron Nitride (PCBN) Inserts

General Info	DNGA		Insert Hole						Dimensions (Inches)							
	—	No Breaker	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	Sumitomo Cat. No.		New ISO Cat. No.	
													BNX20	BN250	BN300	BN700
Negative Inserts	2NU-DNGA431	2NU-DNGA150404						1/2	3/16	1/64	.015	.2031				
	2NU-DNGA431F	2NU-DNGA150404F								1/64	.015					
	2NU-DNGA431T	2NU-DNGA150404T								1/64	.015					
Positive Inserts	2NU-DNGA432	2NU-DNGA150408								1/32	.015					
	2NU-DNGA432F	2NU-DNGA150408F								1/32	.015					
	2NU-DNGA432T	2NU-DNGA150408T								1/32	.015					
	2NU-DNGA433	2NU-DNGA150412								3/64	.015					
	2NU-DNGA433T	2NU-DNGA150412T								3/64	.015					
Ace-Fix Inserts	2NC-DNGA432	2NC-DNGA150408								1/32	.015					
	2NC-DNGA433	2NC-DNGA150412								3/64	.015					
	4NC-DNGA431	4NC-DNGA150404								1/64	.015	.2031				
	4NC-DNGA432	4NC-DNGA150408								1/32	.015					
	4NC-DNGA433	4NC-DNGA150412								3/64	.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
 T = .004"-.006" X -25° with hone

Ceramic Inserts	DNG		Insert Hole						Dimensions (Inches)							
	—	No Breaker	Solid CBN	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter	Sumitomo Cat. No.		New ISO Cat. No.	
													BNS800	BNX20	BN250	BN600
PCBN & PCD Inserts	DNG322	DNGN110308	*					3/8	1/8	1/32	.150	-				
	DNG322F	DNGN110308F	*							1/32	.150					
	DNG323	DNGN110312	*							3/64	.150					
	DNG323F	DNGN110312F	*							3/64	.150					

F = No edge preparation

Toolholders	RNG		Insert Hole						Dimensions (Inches)							
	RNG	RNGA	Solid CBN	Full Top	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter	Sumitomo Cat. No.		New ISO Cat. No.	
													BNS800	BN100	BNX20	BN250
Swiss Toolholders	RNG32	RNGN090300	*					3/8	1/8	-	.150	-				
	RNG32F	RNGN090300F	*							1/2	1/8	-.150				
	RNG42	RNGN120300	*							1/2	1/8	-.150				
	RNG42F	RNGN120300F	*							1/2	3/16	-.150				
	RNG43	RNGN120400	*							3/8	1/8	-.020				
Boring Bars	RNG32B	RNGN090300B								1/2	3/16	-.020				
	RNG43B	RNGN120400B								1/2	3/16	-.020				
	RNGA094	RNGA094								.354	1/4	-.020				

Note: Holders available for RNG/RNGA inserts. Contact the Engineering Department.
 F = No edge preparation
 B = Full top

Cubic Boron Nitride (PCBN) Inserts

General Info	SNMA		Insert Hole						Dimensions (Inches)							
	—	No Breaker	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	Sumitomo Cat. No.		New ISO Cat. No.	
													BN100	BNX20	BN250	BN300
Negative Inserts	SNMA432	SNMA120408	*					1/2	3/16	1/32	.020	.2031				
	SNMA433	SNMA120412	*							3/64	.020					
Positive Inserts	2MD-SNMA431	2MD-SNMA120404								1/64	.020					
	2MD-SNMA432	2MD-SNMA120408								1/32	.020	.2031				
	2MD-SNMA433	2MD-SNMA120412								3/64	.020					
Ace-Fix Inserts	NS-SNMA431	NS-SNMA120404								1/64	.015					
	NS-SNMA432	NS-SNMA120408								1/32	.015					
	NS-SNMA433	NS-SNMA120412								3/64	.015	.2031				
	NU-SNMA431	NU-SNMA120404								1/64	.015					
	NU-SNMA432	NU-SNMA120408								1/32	.015					
	NU-SNMA433	NU-SNMA120412								3/64	.015					

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

Ceramic Inserts	SNGA		Insert Hole						Dimensions (Inches)							
	—	No Breaker	Solid CBN	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter	Sumitomo Cat. No.		New ISO Cat. No.	
													BNS800	BNX20	BN250	BN600
PCBN & PCD Inserts	SNGA432	SNGA120408	*					1/2	3/16	1/32	.150	-				
	SNGA433	SNGA120412	*							3/64	.150					
	2NU-SNGA431	2NU-SNGA120404								1/64	.015					
	2NU-SNGA432	2NU-SNGA120408								1/32	.015	.2031				
	2NU-SNGA432T	2NU-SNGA120408T								1/32	.015					
Toolholders	2NU-SNGA433	2NU-SNGA120412								3/64	.015					
	2NU-SNGA433T	2NU-SNGA120412T								3/64	.015					
	2NC-SNGA432	2NC-SNGA120408								1/32	.015	.2031				
	2NC-SNGA433	2NC-SNGA120412								3/64	.015					

T = .004"-.006" X -25° with hone

Toolholders	SNGX		Insert Hole						Dimensions (Inches)							
	—	No Breaker	Solid CBN	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter	Sumitomo Cat. No.		New ISO Cat. No.	
													BNS800	BNX20	BN250	BN600
Swiss Toolholders	SNGX433	SNGX120412	*					1/2	3/16	3/64	.150	-				
	SNGX434	SNGX120416	*							1/16	.150					

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

Cubic Boron Nitride (PCBN) Inserts

General Info	SNG		Insert Hole						Dimensions (Inches)							
	Sumitomo Cat. No.	New ISO Cat. No.	BNS800	Solid CBN	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Full Tip	BNS20	BNS500	BNS600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
Negative Inserts	SNG322	SNGN090308	•									3/8	1/8	1/32	.150	-
Positive Inserts	SNG322F	SNGN090308F	★									3/8	1/8	1/32	.150	-
	SNG323	SNGN090312	•									3/8	1/8	3/64	.150	-
Ace-Fix Inserts	SNG323F	SNGN090312F	★									3/8	1/8	3/64	.150	-
	SNG422	SNGN120308	•									1/2	3/16	1/32	.150	-
Threading, Grooving, & Cut-Off Inserts	SNG422F	SNGN120308F	★									1/2	3/16	1/32	.150	-
	SNG423	SNGN120312	•									1/2	3/16	3/64	.150	-
Ceramic Inserts	SNG423F	SNGN120312F	★									1/2	3/16	3/64	.150	-
	SNG424	SNGN120316	•									1/2	3/16	1/16	.150	-
PCBN & PCD Inserts	SNG432	SNGN120408	•									1/2	3/16	1/32	.150	-
	SNG433	SNGN120412	•									1/2	3/16	1/32	.150	-
Toolholders	SNG434	SNGN120416	•									1/2	3/16	1/16	.150	-
	SNG432	SNGN120408							★	★		1/2	3/16	1/32	.020	-
Swiss Toolholders	SNG432B	SNGN120408-B								★		1/2	3/16	1/32	.020	-

F = No edge preparation
B = Full top

General Info	TNMA		Insert Hole						Dimensions (Inches)													
	Sumitomo Cat. No.	New ISO Cat. No.	BN100	BNX20	BN250	BN300	BN500	BN600	BN250	BN300	BNX10	BNX20	BNX25	BN250	BN300	BN500	BN600	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
Negative Inserts	TNMA330.5	TNMA160402	•	★														3/8	3/16	1/128	.020	.150
Positive Inserts	TNMA331	TNMA160404	•	•	•	•	•	•										3/8	3/16	1/64	.020	.150
	TNMA332	TNMA160408	•	•	•	•	•	•										3/8	3/16	1/32	.020	.150
Ace-Fix Inserts	TNMA333	TNMA160412	•	•	•	•	•	•										3/8	3/16	3/64	.020	.150
	TNMA431	TNMA220404	•	•	•	•	•	•										1/2	3/16	1/64	.020	.2031
Ceramic Inserts	TNMA432	TNMA220408	•	•	•	•	•	•										1/2	3/16	1/32	.020	.2031
	TNMA433	TNMA220412	•	•	•	•	•	•										1/2	3/16	3/64	.020	.2031
PCBN & PCD Inserts	3MD-TNMA331	3MD-TNMA160404							•	•								3/8	3/16	1/64	.020	.150
	3MD-TNMA332	3MD-TNMA160408							•	•								3/8	3/16	1/32	.020	.150
Toolholders	3MD-TNMA333	3MD-TNMA160412							•	•								3/8	3/16	3/64	.020	.150
	NS-TNMA331	NS-TNMA160404									•							3/8	3/16	1/64	.015	.150
Swiss Toolholders	NS-TNMA332	NS-TNMA160408									•							3/8	3/16	1/32	.015	.150
	NS-TNMA333	NS-TNMA160412									•							3/8	3/16	3/64	.015	.150
Boring Bars	NU-TNMA331	NU-TNMA160404									•	•	•	•	•	•	•	3/8	3/16	1/64	.015	.150
	NU-TNMA331F	NU-TNMA160404F									•	•	•	•	•	•	•	3/8	3/16	1/64	.015	.150
Technical Info	NU-TNMA332	NU-TNMA160408									•	•	•	•	•	•	•	3/8	3/16	1/32	.015	.150
	NU-TNMA332F	NU-TNMA160408F									•	•	•	•	•	•	•	3/8	3/16	1/32	.015	.150
ALMT	NU-TNMA333	NU-TNMA160412									•	•	•	•	•	•	•	3/8	3/16	3/64	.015	.150
	NU-TNMA431	NU-TNMA220404									•	•	•	•	•	•	•	1/2	3/16	1/64	.015	.2031
ALMT	NU-TNMA432	NU-TNMA220408									•	•	•	•	•	•	•	1/2	3/16	1/32	.015	.2031
	NU-TNMA433	NU-TNMA220412									•	•	•	•	•	•	•	1/2	3/16	3/64	.015	.2031

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

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

Cubic Boron Nitride (PCBN) Inserts

General Info	TNGA		Insert Hole						Dimensions (Inches)													
	Sumitomo Cat. No.	New ISO Cat. No.	BNS800	Solid CBN	Multi Mid-Tip	Multi Mini-Tip	Coated Mini-Tip	Full Tip	BNS20	BNS25	BNS500	BNS600	BNS700	BNC80	BNC150	BNC200	BNC300	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
Negative Inserts	TNGA332	TNGA160408	★															3/8	3/16	1/32	.150	.150
Positive Inserts	TNGA333	TNGA160412	★															3/8	3/16	3/64	.150	.150
	3NS-TNGA331	3NS-TNGA160404								★								3/8	3/16	1/64	.015	.150
Ace-Fix Inserts	3NS-TNGA332	3NS-TNGA160408								★								3/8	3/16	1/32	.015	.150
	3NU-TNGA331	3NU-TNGA160404								★	•	•						3/8	3/16	1/64	.015	.150
Ceramic Inserts	3NU-TNGA331F	3NU-TNGA160404F								★	•	•						3/8	3/16	1/64	.015	.150
	3NU-TNGA331T	3NU-TNGA160404T								★	•	•						3/8	3/16	1/64	.015	.150
PCBN & PCD Inserts	3NU-TNGA332	3NU-TNGA160408								★								3/8	3/16	1/32	.015	.150
	3NU-TNGA332F	3NU-TNGA160408F								★								3/8	3/16	1/32	.015	.150
Toolholders	3NU-TNGA332T	3NU-TNGA160408T								★								3/8	3/16	1/32	.015	.150
	3NU-TNGA333	3NU-TNGA160412								★	★	•						3/8	3/16	3/64	.015	.150
Swiss Toolholders	6NC-TNGA331	6NC-TNGA160404												•	•	•	•	3/8	3/16	1/64	.015	.150
	6NC-TNGA332	6NC-TNGA160408												•	•	•	•	3/8	3/16	1/32	.015	.150
ALMT	6NC-TNGA333	6NC-TNGA160412												•	•	•	•	3/8	3/16	3/64	.015	.150

F = No edge preparation

T = .004"-.006" X -25° with hone

General Info	TNG		Insert Hole						Dimensions (Inches)					
	Sumitomo Cat. No.	New ISO Cat. No.	BNS800	Solid CBN	Full Tip	Multi Mini-Tip	Coated Mini-Tip	Mini-Tip	BNX20	Inscribed Circle	Thickness	Nose Radius	Max. Depth of Cut	Insert Hole Diameter
Negative Inserts	TNG222	TNGN110308	•							1/4	1/8	1/32	.150	.150
Positive Inserts	TNG222F	TNGN110312	★							1/4	1/8	1/32	.150	.150
	TNG223	TNGN160408	•							1/4	1/8	3/64	.150	.150
Ace-Fix Inserts	TNG223F	TNGN160412	★							1/4	1/8	3/64	.150	.150
	TNG332	TNGN160416	•							3/8	3/16	1/32	.150	.150
Ceramic Inserts	TNG333	TNGN110308F	★							3/8	3/16	3/64	.150	.150
	TNG334	TNGN110312F	★							3/8	3/16	1/16	.150	.150
PCBN & PCD Inserts	TNG332	TNGN160416								3/8	3/16	1/32	.020	-

F = No edge preparation

Cubic Boron Nitride (PCBN) Inserts

General Info	VNMA		Insert Hole										Dimensions (Inches)				
	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
			BN100	BN200	BN250	BN300	BN500	BN600	BNX20	BNX250	BNX300	BNX20					
Negative Inserts	VNMA331	VNMA160404	•	•	•	•	•						3/8	3/16	1/64	.020	.150
	VNMA332	VNMA160408	•	•	•	•	•						3/8	3/16	1/32	.020	.150
	VNMA333	VNMA160412	•	•	•	•	•						3/8	3/16	3/64	.020	.150
Positive Inserts	2MD-VNMA331	2MD-VNMA160404											3/8	3/16	1/64	.020	.150
	2MD-VNMA332	2MD-VNMA160408											3/8	3/16	1/32	.020	.150
	2MD-VNMA333	2MD-VNMA160412											3/8	3/16	3/64	.020	.150
Ace-Fix Inserts	NS-VNMA331	NS-VNMA160404											3/8	3/16	1/64	.015	.150
	NS-VNMA332	NS-VNMA160408											3/8	3/16	1/32	.015	.150
	NS-VNMA333	NS-VNMA160412											3/8	3/16	3/64	.015	.150

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

Threading, Grooving, & Cut-Off Inserts	VNGA		Insert Hole										Dimensions (Inches)				
	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
			BNX20	BNX25	BNX250	BNX300	BNX700	BNC80	BNC150	BNC200	BNC300	BNX20					
Ceramic Inserts	2NS-VNGA331	2NS-VNGA160404											3/8	3/16	1/64	.015	.150
	2NS-VNGA332	2NS-VNGA160408											3/8	3/16	1/32	.015	.150
	2NS-VNGA333	2NS-VNGA160412											3/8	3/16	3/64	.015	.150
PCBN & PCD Inserts	2NU-VNGA331	2NU-VNGA160404											3/8	3/16	1/64	.015	.150
	2NU-VNGA332	2NU-VNGA160408											3/8	3/16	1/32	.015	.150
	2NU-VNGA333	2NU-VNGA160412											3/8	3/16	3/64	.015	.150
Toolholders	4NC-VNGA331	4NC-VNGA160404											3/8	3/16	1/64	.015	.150
	4NC-VNGA332	4NC-VNGA160408											3/8	3/16	1/32	.015	.150
	4NC-VNGA333	4NC-VNGA160412											3/8	3/16	3/64	.015	.150

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
T = .004"-.006" X -25° with hone

Swiss Toolholders	WNMA		Insert Hole										Dimensions (Inches)				
	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
			BNX20	BNX250	BNX600	BNX20	BNX250	BNX600									
Boring Bars	WNMA432	WNMA080408	•										1/2	3/16	1/32	.020	.2031
	NU-WNMA431	NU-WNMA080404											1/2	3/16	1/64	.015	.2031
	NU-WNMA432	NU-WNMA080408											1/2	3/16	1/32	.015	.2031
Technical Info	NU-WNMA433	NU-WNMA080412											1/2	3/16	3/64	.015	.2031

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

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- ▲ = USA limited availability item

Cubic Boron Nitride (PCBN) Inserts

General Info	WNGA		Insert Hole										Dimensions (Inches)				
	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	BNX20	BNX250	BNX600								
Negative Inserts	3NU-WNGA432	3NU-WNGA080408											1/2	3/16	1/32	.015	.2031
	3NU-WNGA433	3NU-WNGA080412											1/2	3/16	3/64	.015	.2031
	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

General Info	CCGA		Insert Hole										Dimensions (Inches)				
	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	BNX20	BNX250	BNX600								
Ceramic Inserts	2NU-CCGA21.50.5	2NU-CCGW060202											1/4	3/32	1/128	.015	.110
	2NU-CCGA21.51	2NU-CCGW060204											1/4	3/32	1/64	.015	.110
	2NU-CCGA21.52	2NU-CCGW060208											1/4	3/32	1/32	.015	.110
PCBN & PCD Inserts	2NU-CCGA21.52	2NU-CCGW060208											3/8	5/32	1/64	.015	.1732
	2NU-CCGA32.51	2NU-CCGW09T304											3/8	5/32	1/64	.015	.1732
	2NU-CCGA32.51W	2NU-CCGW09T304W											3/8	5/32	1/32	.015	.1732
Toolholders	2NU-CCGA32.52	2NU-CCGW09T308											1/2	3/16	1/64	.015	.2165
	2NU-CCGA431	2NU-CCGW120404											1/2	3/16	1/32	.015	.2165
	2NU-CCGA432	2NU-CCGW120408											1/2	3/16	1/32	.015	.2165
Swiss Toolholders	NC-CCGA21.51	NC-CCGW060204											1/4	3/32	1/64	.015	.110
	2NC-CCGA21.50.5	2NC-CCGW060202											1/4	3/32	1/128	.015	.110
	2NC-CCGA21.51	2NC-CCGW060204											1/4	3/32	1/64	.015	.110
Boring Bars	2NC-CCGA32.50.5	2NC-CCGW09T302											3/8	5/32	1/128	.015	.1732
	2NC-CCGA32.51	2NC-CCGW09T304											3/8	5/32	1/64	.015	.1732
	2NC-CCGA32.52	2NC-CCGW09T308											3/8	5/32	1/32	.015	.1732
Technical Info	NU-CCGA21.50.5	NU-CCGW060202											1/4	3/32	1/128	.015	.110
	NU-CCGA21.50.5F	NU-CCGW060202F											1/4	3/32	1/128	.015	.110
	NU-CCGA21.50.5S	NU-CCGW060202S											1/4	3/32	1/128	.015	.110
ALMT	NU-CCGA21.51	NU-CCGW060204											3/8	5/32	1/64	.015	.1732
	NU-CCGA32.50.5	NU-CCGW09T302											3/8	5/32	1/128	.015	.1732
	NU-CCGA32.51	NU-CCGW09T304											3/8	5/32	1/64	.015	.1732

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

General Info	CCGE		Insert Hole										Dimensions (Inches)				
	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
			BN250	BN600	BNX20	BNX250	BNX600										
Technical Info	NU-CCGE621	NU-CCGW040104											3/16	1/8	1/64	.015	-
	NU-CCGE622	NU-CCGW040108											3/16	1/8	1/32	.015	-

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