

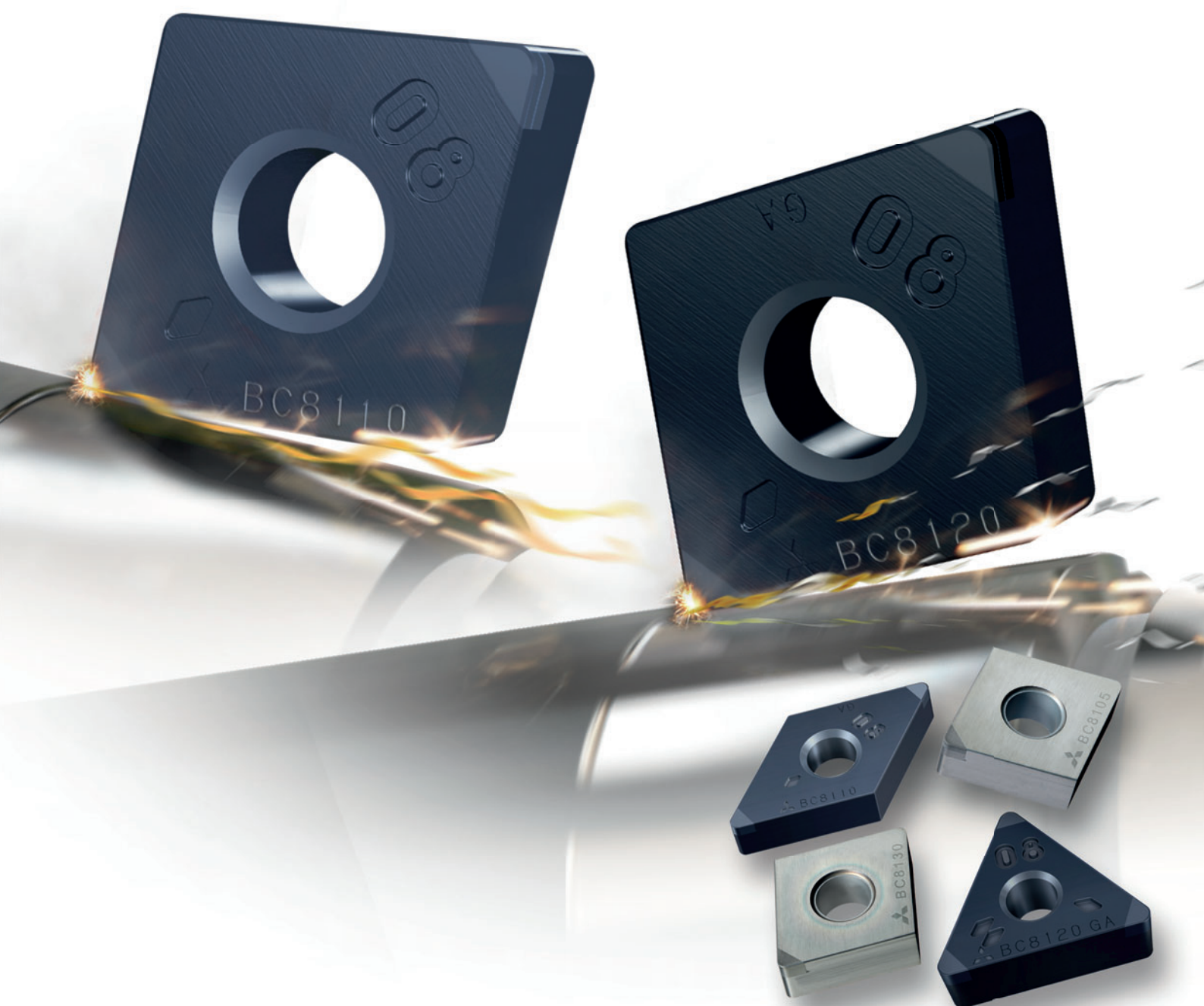
CBN-series for Hardened Steel Turning

BC8100/MB8100 Series

Series
Expansion

New Generation CBN Grades

Wear and fracture resistance greatly improved for a wide range of continuous and interrupted applications.

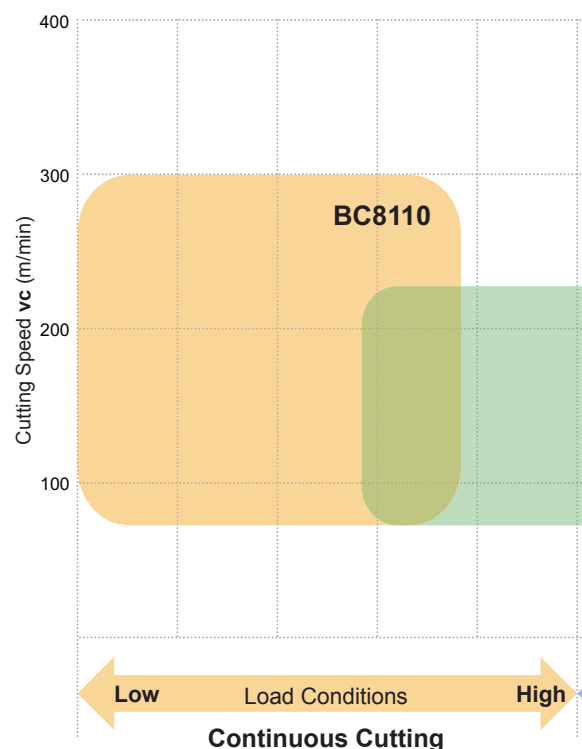


Coated CBN-series for Hardened Steel Turning

BC8100 Series

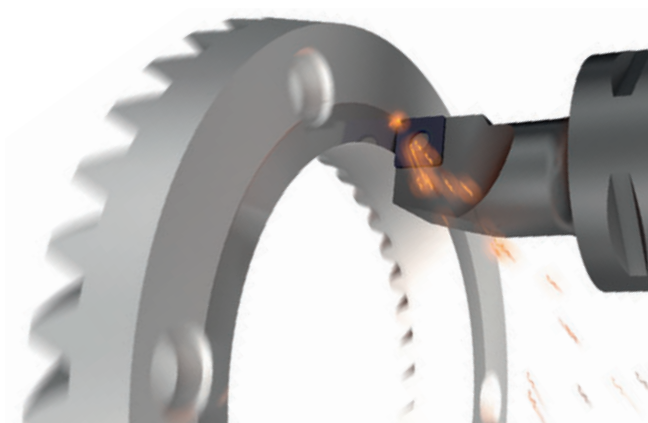
BC8110 High Speed Turning

For Continuous Cutting



BC8120 General Applications

For Continuous to Medium Interrupted Cutting
1st choice for roughing and pre-finishing.



Low Frequency

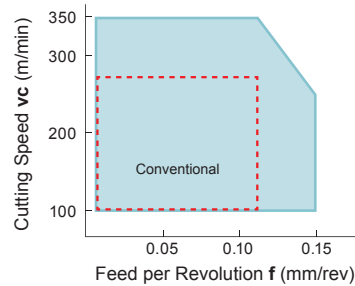
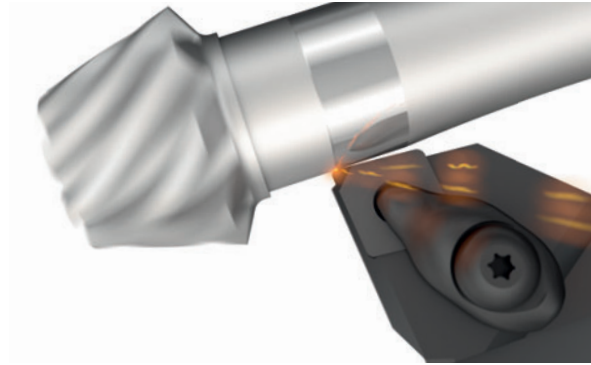
For Excellent Surface Finishes

BC8105 Highest Accuracy

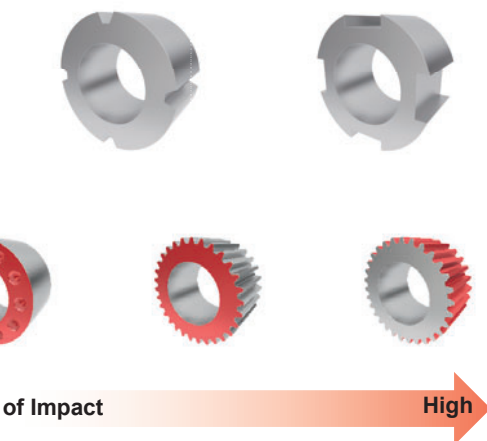
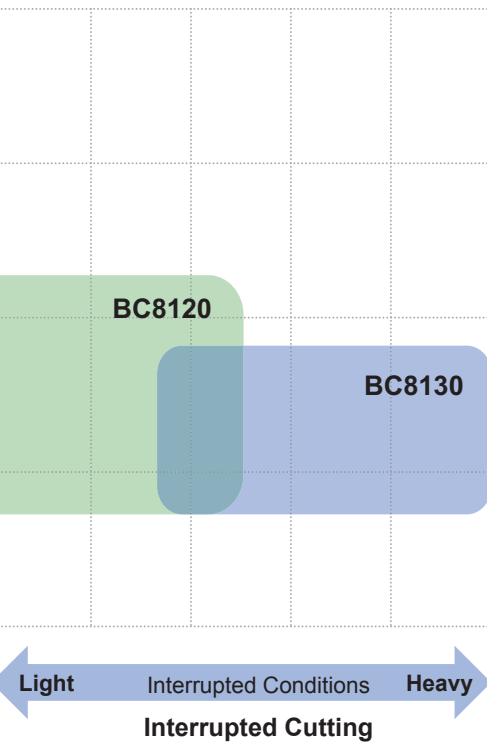
For Super Finish Cutting

Excellent surface finishes and close tolerances with long tool life.

For surface finishes up to $R_z 2.4\mu\text{m}$ ($R_a 0.6\mu\text{m}$).



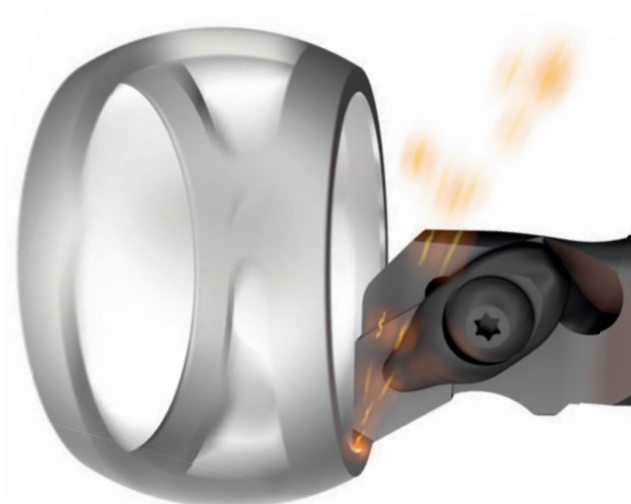
*BC8110 is recommended to improve wear resistance.



BC8130 Tough Machining

For Unstable Applications and Heavy Interrupted Cutting

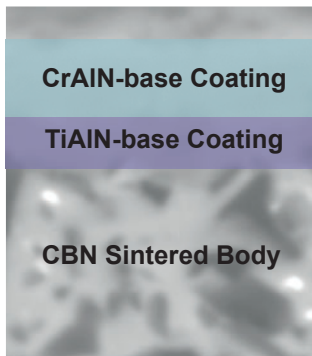
Tolerance accuracy held over a high no. of impacts.



Features of the Grade

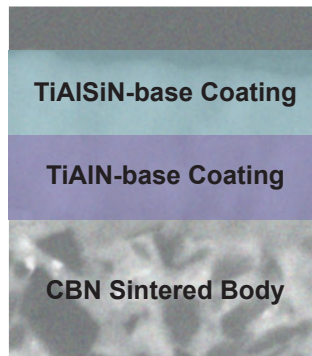
Newly Developed Special PVD Coating

BC8105



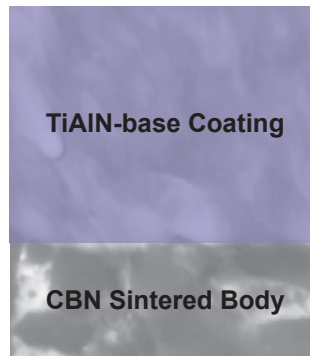
Offers excellent surface finishes. Peeling resistance and adhesion strength are improved by having both lubricity and wear resistance.

BC8110



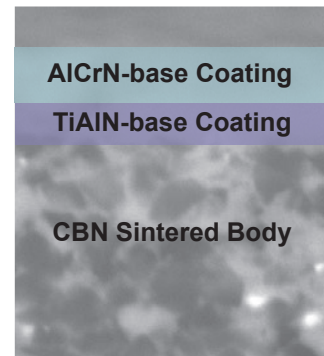
Chipping caused by built up edge is prevented with improved welding resistance. Improved wear and adhesion strength to the CBN surface.

BC8120



Chipping caused by built up edge is prevented with improved welding resistance. Improved adhesion to the coating to the CBN surface enhances peeling resistance. The CBN is also improved in toughness by adopting new binder and sintering method.

BC8130

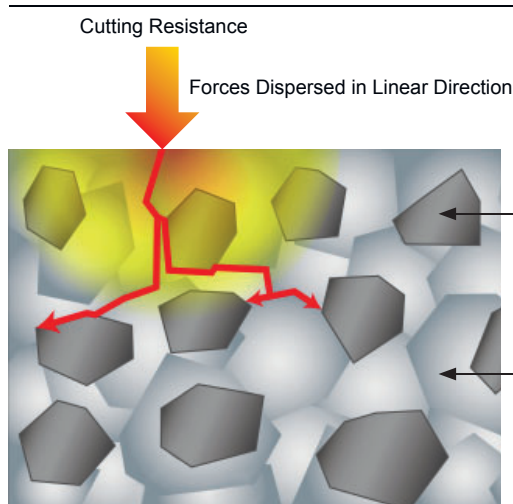


Peeling caused by severe impact and chipping are prevented with high fracture resistances. Improved adhesion strength to the CBN surface.

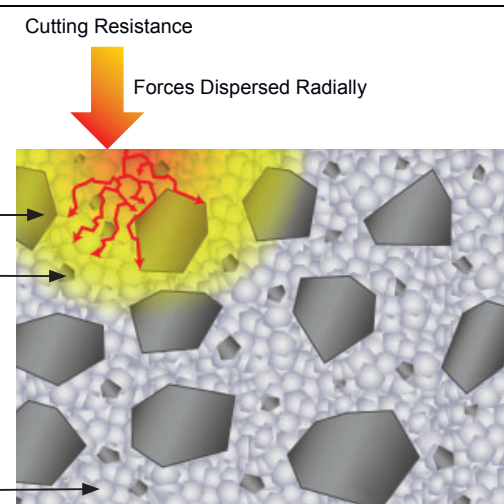
*Graphical representation.

Optimized Substrate Technology

Conventional



BC8100 Series



The new ultra micro-particle binder prevents linear crack development to avoid sudden fracturing.



CBN-series for Hardened Steel Turning

MB8100 Series

Non-coated CBN Grades Applied Ultra Micro-particle Binder Technology

MB8110 For Continuous Cutting

MB8100 having a most excellent wear resistance on this is ideal for continuous cutting.

MB8120 For General Cutting

MB8120 provides excellent wear and fracture resistance and is suitable for wider range of applications.

MB8130 For Heavy Interrupted Cutting

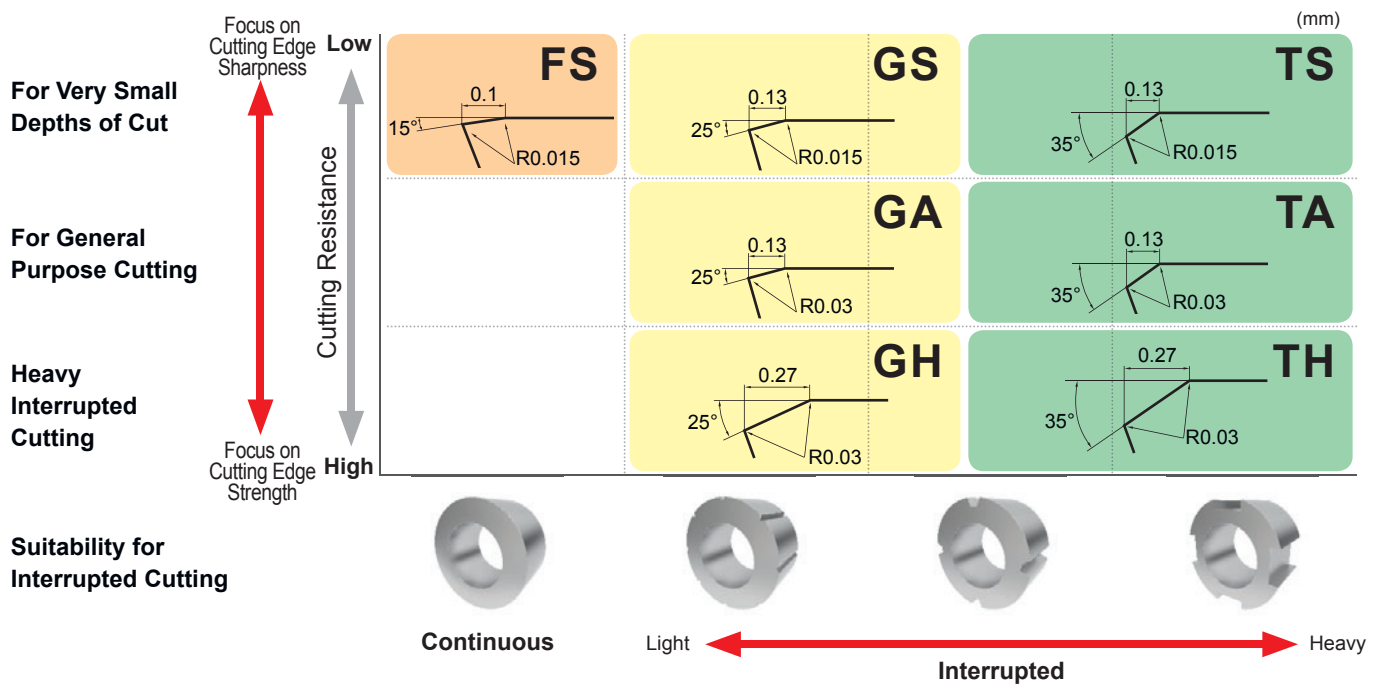
MB8130 having a most excellent fracture resistance on this series is ideal for heavy interrupted machining and in an unstable cutting condition.

Recommended Cutting Conditions

Grade	Workpiece Material	Machining Methods	Cutting Speed v_c (m/min)					f (mm/rev)	a_p (mm)	Cutting Mode
			50	100	150	200	300			
MB8110	Hardened Steels (Heat Treated Steels etc)	External						0.2	0.3	Dry, Wet
		Continuous Cutting								
MB8120	Hardened Steels (Heat Treated Steels etc)	External						0.2	0.5	Dry, Wet
		Continuous Cutting								
		External						0.2	0.3	Dry, Wet
		Interrupted Cutting								
MB8130	Hardened Steels (Heat Treated Steels etc)	External						0.2	0.3	Dry, Wet
		Interrupted Cutting								

Features of the Insert

Edge Preparation (Honing)



A variety of cutting edge preparations for all application.

Chip Breaker



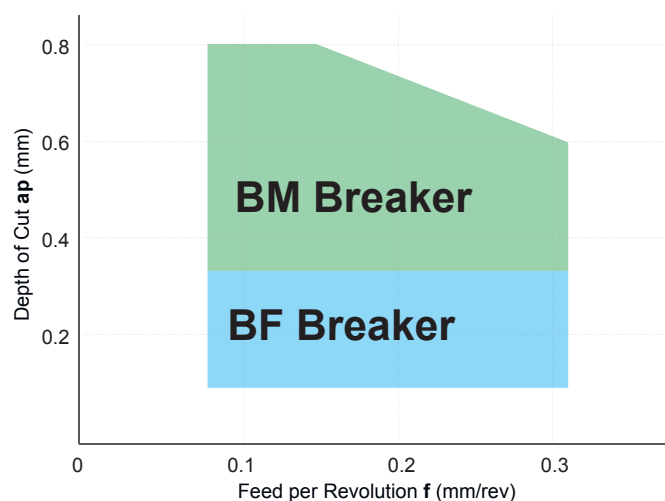
BM

Removal of Carburized Layer
For Deep Depth of Cut



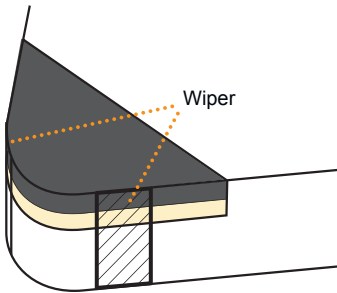
BF

Finishing Applications



Chip breaker system for excellent chip control when finishing, removing carburized layers and hard-soft cutting.

Wiper Insert



Improving Surface Finish

Under the same machining conditions as conventional chip breakers, but with the feed rate increased, the surface finish of the workpiece can be improved.

Improving Efficiency

High feed rates not only shorten machining times but also make it possible to combine roughing and finishing operations.

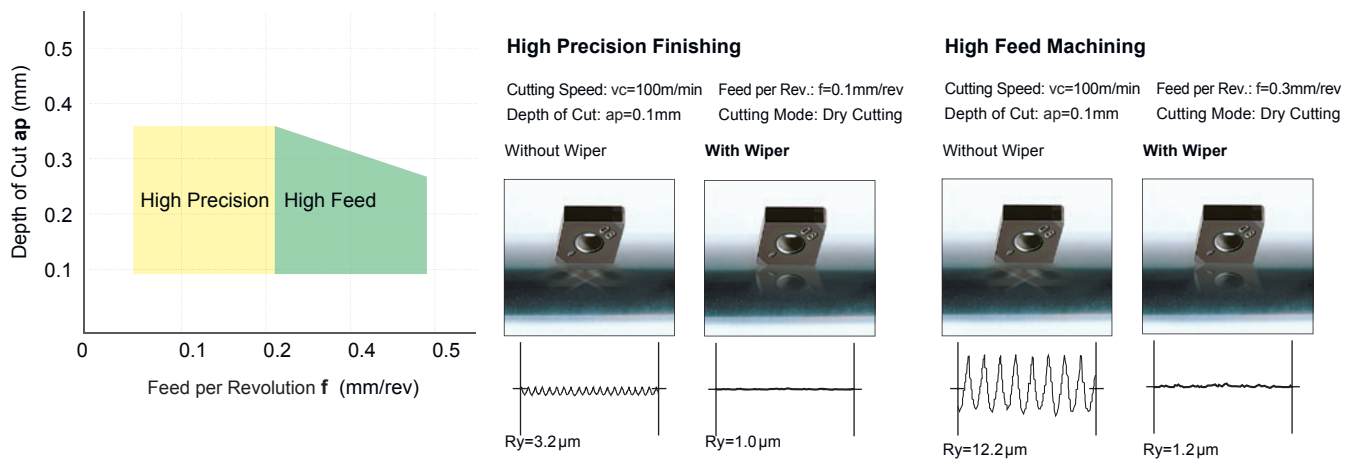
Increased Tool Life

When using at high feed conditions, the time required to cut one component is decreased, thus more parts can be machined with each insert. In addition, the high feed rate prevents rubbing, therefore, delaying the progression of wear and increasing tool life.

Improving Chip Control

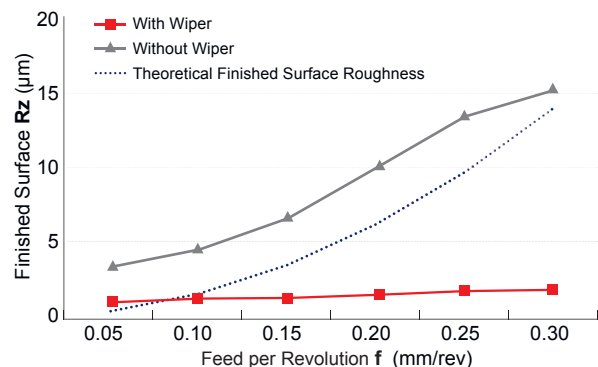
Under high feed conditions, the chips generated become thicker and are more easily broken, thus, chip control is improved.

Recommended Cutting Conditions and Performance



Cutting Performance

Insert	NP-CNGA120408
Workpiece Material	Hardened Steel (60HRC)
Machining Methods	Continuous
Cutting Speed v_c (m/min)	120
Depth of Cut a_p (mm)	0.1
Cutting Mode	Dry Cutting



WL Wiper Insert

Preventing the cutting edge from vibration during boring and turning of small diameter workpieces as well as providing excellent finish surface roughness.

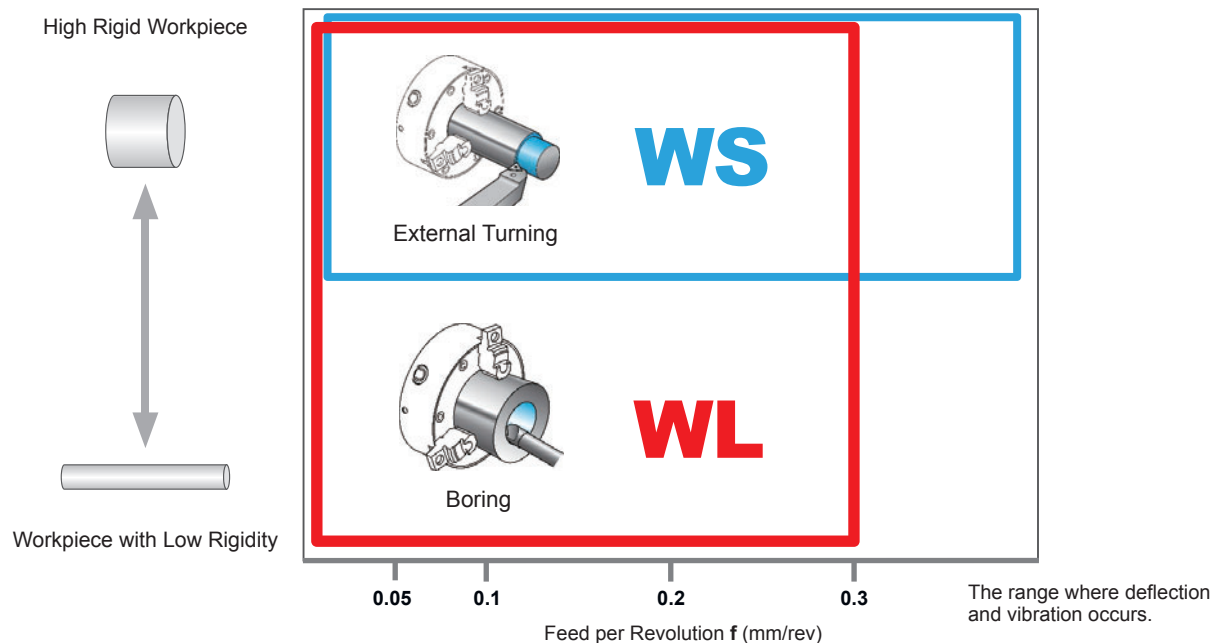


Inclination of the Wiper

The Optimum Wiper Width

Applying slight slope on the wiper cutting edge reduces cutting resistance.

Application of Wiper Inserts



Identification

NP-CNGA120404 **FB** **WL** 2

Edge Preperation	
Symbol	Application
GS GA GH GB	General Cutting
FS FB	Continuous Cutting
TS TA TH	Interrupted Cutting

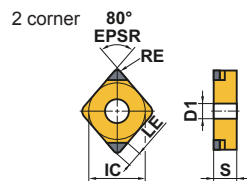
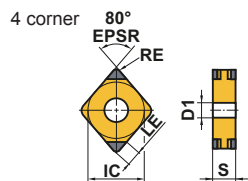
Wiper	
WS	For High Rigidity Workpiece Material
WL	For Deflection and Vibration Prevention
No Mark	Without Wiper

CBN-series for Hardened Steel Turning

Negative Inserts (With Hole)

G Class

CNGA, CNGM



NEW PETIT CUT	NEW PETIT CUT	NEW PETIT CUT	NEW PETIT CUT
NP_004	NP_00WS4	NP_002	NP_00W02
	(With Wiper)		(With Wiper)
NEW PETIT CUT			
BF_ BM_			
(With Breaker)			

(mm)

Order Number	Coated CBN				CBN NEW		Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120						
NP-CNGA120404GA4			●	●	●		4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GA4			●	●	●		4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GA4			●	●	●		4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GS4	●	●					4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GS4	●	●					4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GS4	●	●					4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GH4		●	●	●			4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GH4		●	●	●			4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GH4		●	●	●			4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404FS4	●	●	●		●		4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408FS4	●	●	●		●		4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412FS4	●	●	●		●		4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404TA4			●	●	●	●	4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408TA4			●	●	●	●	4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412TA4			●	●	●	●	4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404TS4		●					4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408TS4		●					4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412TS4		●					4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404TH4			●	●		●	4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408TH4			●	●		●	4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412TH4			●	●		●	4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404FSWS4	●	●	●		●		4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408FSWS4	●	●	●		●		4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412FSWS4	●	●	●		●		4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GAWS4			●	●	●		4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GAWS4			●	●	●		4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GAWS4			●	●	●		4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GSWS4	●	●					4	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GSWS4	●	●					4	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GSWS4	●	●					4	12.7	4.76	1.2	5.16	2.3
NP-CNGA120402GA2			●		●		2	12.7	4.76	0.2	5.16	1.8
NP-CNGA120404GA2			●	●	●		2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GA2			●	●	●		2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GA2			●	●	●		2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120402GS2	●						2	12.7	4.76	0.2	5.16	1.8
NP-CNGA120404GS2	●	●					2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GS2	●	●					2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GS2	●	●					2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GH2		●	●	●			2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GH2		●	●	●			2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GH2		●	●	●			2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120402FS2		●			●		2	12.7	4.76	0.2	5.16	1.8

● : Inventory maintained in Japan. (1 insert in one case)

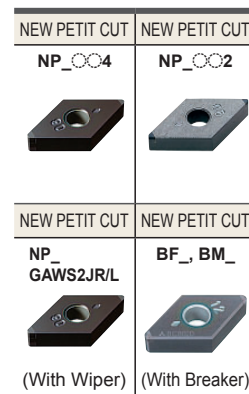
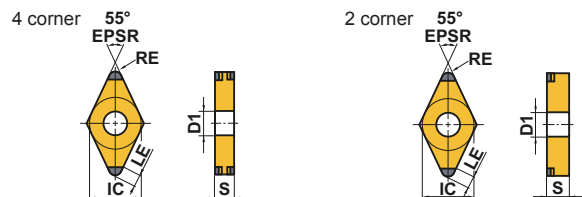
(mm)													
Order Number	Coated CBN				CBN NEW			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-CNGA120404FS2	●	●	●		●			2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408FS2	●	●	●		●			2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412FS2	●	●	●		●			2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404TA2			●	●		●	●	2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408TA2			●	●		●	●	2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412TA2			●	●		●	●	2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404TS2		●						2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408TS2		●						2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412TS2		●						2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404TH2			●	●			●	2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408TH2			●	●			●	2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412TH2			●	●			●	2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404FBWL2	●	●	●		●			2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408FBWL2	●	●	●		●			2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412FBWL2	●	●	●		●			2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404FSWS2	●	●	●		●			2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408FSWS2	●	●	●		●			2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412FSWS2	●	●	●		●			2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GAWS2			●	●		●		2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GAWS2			●	●		●		2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GAWS2			●	●		●		2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GBWL2	●	●	●			●		2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GBWL2	●	●	●			●		2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GBWL2	●	●	●			●		2	12.7	4.76	1.2	5.16	2.3
NP-CNGA120404GSWS2	●	●						2	12.7	4.76	0.4	5.16	1.9
NP-CNGA120408GSWS2	●	●						2	12.7	4.76	0.8	5.16	2.1
NP-CNGA120412GSWS2	●	●						2	12.7	4.76	1.2	5.16	2.3
BF-CNGM120404TS2		●						2	12.7	4.76	0.4	5.16	1.9
BF-CNGM120408TS2		●						2	12.7	4.76	0.8	5.16	2.1
BF-CNGM120412TS2		●						2	12.7	4.76	1.2	5.16	2.3
BM-CNGM120404TA2			●					2	12.7	4.76	0.4	5.16	1.9
BM-CNGM120408TA2			●					2	12.7	4.76	0.8	5.16	2.1
BM-CNGM120412TA2			●					2	12.7	4.76	1.2	5.16	2.3

CBN-series for Hardened Steel Turning

Negative Inserts (With Hole)

G Class

DNGA, DNGM



Order Number	Coated CBN			CBN			Cutting Edges	IC	S	RE	D1	LE	
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120							MB8130
NP-DNGA150404GA4			●	●		●		4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408GA4			●	●		●		4	12.7	4.76	0.8	5.16	2
NP-DNGA150412GA4			●	●		●		4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604GA4			●	●		●		4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608GA4			●	●		●		4	12.7	6.35	0.8	5.16	2
NP-DNGA150612GA4			●	●		●		4	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404GS4	●	●						4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408GS4	●	●						4	12.7	4.76	0.8	5.16	2
NP-DNGA150412GS4	●	●						4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604GS4	●	●						4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608GS4	●	●						4	12.7	6.35	0.8	5.16	2
NP-DNGA150612GS4	●	●						4	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404GH4		●	●	●				4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408GH4		●	●	●				4	12.7	4.76	0.8	5.16	2
NP-DNGA150412GH4		●	●	●				4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604GH4		●	●	●				4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608GH4		●	●	●				4	12.7	6.35	0.8	5.16	2
NP-DNGA150612GH4		●	●	●				4	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404FS4	●	●	●		●			4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408FS4	●	●	●		●			4	12.7	4.76	0.8	5.16	2
NP-DNGA150412FS4	●	●	●		●			4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604FS4	●	●			●			4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608FS4	●	●			●			4	12.7	6.35	0.8	5.16	2
NP-DNGA150612FS4	●	●			●			4	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404TA4			●	●		●	●	4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408TA4			●	●		●	●	4	12.7	4.76	0.8	5.16	2
NP-DNGA150412TA4			●	●		●	●	4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604TA4			●	●		●		4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608TA4			●	●		●		4	12.7	6.35	0.8	5.16	2
NP-DNGA150612TA4			●	●		●		4	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404TS4		●						4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408TS4		●						4	12.7	4.76	0.8	5.16	2
NP-DNGA150412TS4		●						4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604TS4		●						4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608TS4		●						4	12.7	6.35	0.8	5.16	2
NP-DNGA150612TS4		●						4	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404TH4			●	●			●	4	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408TH4			●	●			●	4	12.7	4.76	0.8	5.16	2
NP-DNGA150412TH4			●	●			●	4	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604TH4			●	●				4	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608TH4			●	●				4	12.7	6.35	0.8	5.16	2
NP-DNGA150612TH4			●	●				4	12.7	6.35	1.2	5.16	1.9

● : Inventory maintained in Japan. (1 insert in one case)

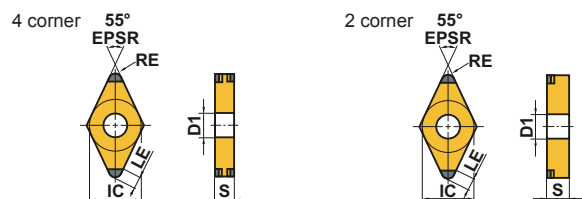
(mm)													
Order Number	Coated CBN				CBN NEW			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-DNGA110408GA2			●	●		●		2	9.525	4.76	0.8	3.81	2
NP-DNGA150402GA2			●					2	12.7	4.76	0.2	5.16	2.3
NP-DNGA150404GA2			●	●		●		2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408GA2			●	●		●		2	12.7	4.76	0.8	5.16	2
NP-DNGA150412GA2			●	●		●		2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150602GA2			●					2	12.7	6.35	0.2	5.16	2.3
NP-DNGA150604GA2			●	●		●		2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608GA2			●	●		●		2	12.7	6.35	0.8	5.16	2
NP-DNGA150612GA2			●	●		●		2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150402GS2		●						2	12.7	4.76	0.2	5.16	2.3
NP-DNGA150404GS2	●	●						2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408GS2	●	●						2	12.7	4.76	0.8	5.16	2
NP-DNGA150412GS2	●	●						2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604GS2	●	●						2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608GS2	●	●						2	12.7	6.35	0.8	5.16	2
NP-DNGA150612GS2	●	●						2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404GH2		●	●	●				2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408GH2		●	●	●				2	12.7	4.76	0.8	5.16	2
NP-DNGA150412GH2		●	●	●				2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604GH2		●	●	●				2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608GH2		●	●	●				2	12.7	6.35	0.8	5.16	2
NP-DNGA150612GH2		●	●	●				2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150402FS2		●			●			2	12.7	4.76	0.2	5.16	2.3
NP-DNGA150404FS2	●	●	●		●			2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408FS2	●	●	●		●			2	12.7	4.76	0.8	5.16	2
NP-DNGA150412FS2	●	●	●		●			2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604FS2	●	●	●		●			2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608FS2	●	●	●		●			2	12.7	6.35	0.8	5.16	2
NP-DNGA150612FS2	●	●	●		●			2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404TA2			●	●		●	●	2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408TA2			●	●		●	●	2	12.7	4.76	0.8	5.16	2
NP-DNGA150412TA2			●	●		●	●	2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604TA2			●	●		●		2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608TA2			●	●		●		2	12.7	6.35	0.8	5.16	2
NP-DNGA150612TA2			●	●		●		2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404TS2		●						2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408TS2		●						2	12.7	4.76	0.8	5.16	2
NP-DNGA150412TS2		●						2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604TS2		●						2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608TS2		●						2	12.7	6.35	0.8	5.16	2
NP-DNGA150612TS2		●						2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404TH2			●	●			●	2	12.7	4.76	0.4	5.16	2.1
NP-DNGA150408TH2			●	●			●	2	12.7	4.76	0.8	5.16	2
NP-DNGA150412TH2			●	●			●	2	12.7	4.76	1.2	5.16	1.9
NP-DNGA150604TH2			●	●				2	12.7	6.35	0.4	5.16	2.1
NP-DNGA150608TH2			●	●				2	12.7	6.35	0.8	5.16	2
NP-DNGA150612TH2			●	●				2	12.7	6.35	1.2	5.16	1.9
NP-DNGA150404GAWS2JR			●			●		2	12.7	4.76	0.4	5.16	1.9
NP-DNGA150404GAWS2JL			●			●		2	12.7	4.76	0.4	5.16	1.9
NP-DNGA150408GAWS2JR			●			●		2	12.7	4.76	0.8	5.16	1.7
NP-DNGA150408GAWS2JL			●			●		2	12.7	4.76	0.8	5.16	1.7
NP-DNGA150604GAWS2JR			●			●		2	12.7	6.35	0.4	5.16	1.9
NP-DNGA150604GAWS2JL			●			●		2	12.7	6.35	0.4	5.16	1.9
NP-DNGA150608GAWS2JR			●			●		2	12.7	6.35	0.8	5.16	1.7
NP-DNGA150608GAWS2JL			●			●		2	12.7	6.35	0.8	5.16	1.7

CBN-series for Hardened Steel Turning

Negative Inserts (With Hole)

G Class

DNGA, DNGM

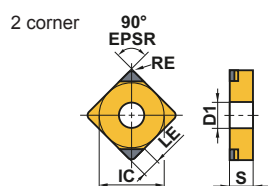


Order Number	Coated CBN				CBN NEW			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
BF-DNGM150404TS2		●						2	12.7	4.76	0.4	5.16	2.1
BF-DNGM150408TS2		●						2	12.7	4.76	0.8	5.16	2
BF-DNGM150412TS2		●						2	12.7	4.76	1.2	5.16	1.9
BM-DNGM150404TA2			●					2	12.7	4.76	0.4	5.16	2.1
BM-DNGM150408TA2			●					2	12.7	4.76	0.8	5.16	2
BM-DNGM150412TA2			●					2	12.7	4.76	1.2	5.16	1.9
BM-DNGM150604TA2			●					2	12.7	6.35	0.4	5.16	2.1
BM-DNGM150608TA2			●					2	12.7	6.35	0.8	5.16	2
BM-DNGM150612TA2			●					2	12.7	6.35	1.2	5.16	1.9

Negative Inserts (With Hole)

G Class

SNGA



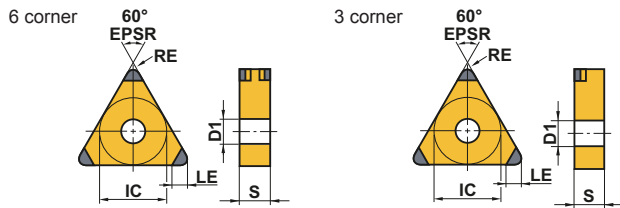
													(mm)
Order Number	Coated CBN				CBN NEW			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-SNGA120408GA2			●	●		●		2	12.7	4.76	0.8	5.16	2.3
NP-SNGA120412GA2			●	●		●		2	12.7	4.76	1.2	5.16	2.5

● : Inventory maintained in Japan. (1 insert in one case)

Negative Inserts (With Hole)

G Class

TNGA, TNGM



Order Number	Coated CBN						Cutting Edges	IC	S	RE	D1	LE	
	BC8105	BC8110	BC8120	BC8130	CBN								
					MB8110	MB8120							MB8130
NP-TNGA160404GA6			●	●		●		6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408GA6			●	●		●		6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412GA6			●	●		●		6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404GS6	●	●						6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408GS6	●	●						6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412GS6	●	●						6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404GH6		●	●	●				6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408GH6		●	●	●				6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412GH6		●	●	●				6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404FS6	●	●	●		●			6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408FS6	●	●	●		●			6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412FS6	●	●	●		●			6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404TA6			●	●		●	●	6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408TA6			●	●		●	●	6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412TA6			●	●		●	●	6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404TS6		●						6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408TS6		●						6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412TS6		●						6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404TH6			●	●			●	6	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408TH6			●	●			●	6	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412TH6			●	●			●	6	9.525	4.76	1.2	3.81	1.9
NP-TNGA160402GA3			●			●		3	9.525	4.76	0.2	3.81	1.5
NP-TNGA160404GA3			●	●		●		3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408GA3			●	●		●		3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412GA3			●	●		●		3	9.525	4.76	1.2	3.81	1.9
NP-TNGA160402GS3		●						3	9.525	4.76	0.2	3.81	1.5
NP-TNGA160404GS3	●	●						3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408GS3	●	●						3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412GS3	●	●						3	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404GH3		●	●	●				3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408GH3		●	●	●				3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412GH3		●	●	●				3	9.525	4.76	1.2	3.81	1.9
NP-TNGA160402FS3		●			●			3	9.525	4.76	0.2	3.81	1.5
NP-TNGA160404FS3	●	●	●		●			3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408FS3	●	●	●		●			3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412FS3	●	●	●		●			3	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404TA3			●	●		●	●	3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408TA3			●	●		●	●	3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412TA3			●	●		●	●	3	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404TS3		●						3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408TS3		●						3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412TS3		●						3	9.525	4.76	1.2	3.81	1.9
NP-TNGA160404TH3			●	●			●	3	9.525	4.76	0.4	3.81	1.6
NP-TNGA160408TH3			●	●			●	3	9.525	4.76	0.8	3.81	1.8
NP-TNGA160412TH3			●	●			●	3	9.525	4.76	1.2	3.81	1.9
BM-TNGM160408TA3			●					3	9.525	4.76	0.8	3.81	1.8
BM-TNGM160412TA3			●					3	9.525	4.76	1.2	3.81	1.9

CBN-series for Hardened Steel Turning

Negative Inserts (With Hole)

G Class

VNGA

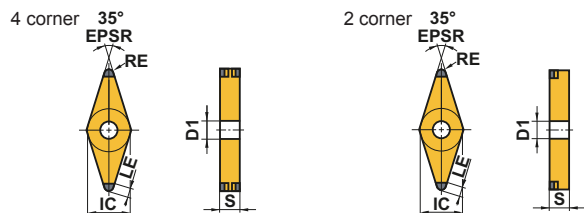
NEW PETIT CUT

NP_004



NEW PETIT CUT

NP_002



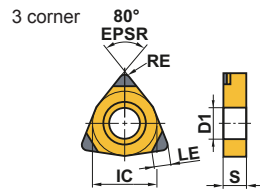
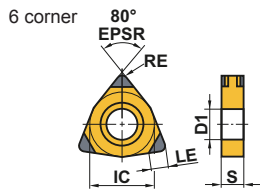
(mm)

Order Number	Coated CBN				CBN			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-VNGA160404GA4			●	●		●		4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408GA4			●	●		●		4	9.525	4.76	0.8	3.81	2
NP-VNGA160412GA4			●	●		●		4	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404GS4	●	●						4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408GS4	●	●						4	9.525	4.76	0.8	3.81	2
NP-VNGA160412GS4		●						4	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404GH4		●	●	●				4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408GH4		●	●	●				4	9.525	4.76	0.8	3.81	2
NP-VNGA160412GH4		●	●	●				4	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404FS4	●	●	●		●			4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408FS4	●	●	●		●			4	9.525	4.76	0.8	3.81	2
NP-VNGA160412FS4			●					4	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404TA4			●	●		●		4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408TA4			●	●		●		4	9.525	4.76	0.8	3.81	2
NP-VNGA160412TA4			●	●		●		4	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404TS4		●						4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408TS4		●						4	9.525	4.76	0.8	3.81	2
NP-VNGA160404TH4			●	●				4	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408TH4			●	●				4	9.525	4.76	0.8	3.81	2
NP-VNGA160412TH4			●	●				4	9.525	4.76	1.2	3.81	1.6
NP-VNGA160402GA2			●			●		2	9.525	4.76	0.2	3.81	2.5
NP-VNGA160404GA2			●	●		●		2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408GA2			●	●		●		2	9.525	4.76	0.8	3.81	2
NP-VNGA160412GA2			●	●		●		2	9.525	4.76	1.2	3.81	1.6
NP-VNGA160402GS2		●						2	9.525	4.76	0.2	3.81	2.5
NP-VNGA160404GS2	●	●						2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408GS2	●	●						2	9.525	4.76	0.8	3.81	2
NP-VNGA160412GS2		●						2	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404GH2		●	●	●				2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408GH2		●	●	●				2	9.525	4.76	0.8	3.81	2
NP-VNGA160412GH2		●	●	●				2	9.525	4.76	1.2	3.81	1.6
NP-VNGA160402FS2		●				●		2	9.525	4.76	0.2	3.81	2.5
NP-VNGA160404FS2	●	●	●		●			2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408FS2	●	●	●		●			2	9.525	4.76	0.8	3.81	2
NP-VNGA160412FS2			●					2	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404TA2			●	●		●		2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408TA2			●	●		●		2	9.525	4.76	0.8	3.81	2
NP-VNGA160412TA2			●	●		●		2	9.525	4.76	1.2	3.81	1.6
NP-VNGA160404TS2		●						2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408TS2		●						2	9.525	4.76	0.8	3.81	2
NP-VNGA160404TH2			●	●				2	9.525	4.76	0.4	3.81	2.5
NP-VNGA160408TH2			●	●				2	9.525	4.76	0.8	3.81	2
NP-VNGA160412TH2			●	●				2	9.525	4.76	1.2	3.81	1.6

Negative Inserts (With Hole)

G Class

WNGA



NEW PETIT CUT	NEW PETIT CUT
NP_006	NP_003
NEW PETIT CUT	
NP_GSWS3	
(With Wiper)	

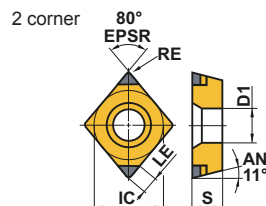
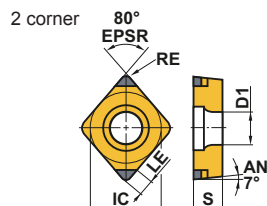
Order Number	Coated CBN				CBN			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-WNGA080408GS6	●	●						6	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408FS6	●	●						6	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408TS6		●						6	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408GA3			●	●				3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408GS3	●	●						3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408GH3		●	●	●				3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408FS3	●	●	●					3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408TA3			●	●				3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408TS3		●						3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408TH3			●	●				3	12.7	4.76	0.8	5.16	2.1
NP-WNGA080408GSWS3		●						3	12.7	4.76	0.8	5.16	2.1

CBN-series for Hardened Steel Turning

Positive Inserts (With Hole)

G Class

CCGW 7°, CCGT 7°, CPGB 11°



NEW PETIT CUT	NEW PETIT CUT	NEW PETIT CUT	NEW PETIT CUT
NP_002	NP_00W02	BF_, BM_	NP
			
	(With Wiper)	(With Breaker)	(Non-ISO) *
NEW PETIT CUT			
NP_002			
			

(mm)

Order Number	Coated CBN				CBN		Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120						
NP-CCGW060202GA2			●			●	2	6.35	2.38	0.2	2.8	1.8
NP-CCGW060204GA2			●	●		●	2	6.35	2.38	0.4	2.8	1.9
NP-CCGW060208GA2			●	●		●	2	6.35	2.38	0.8	2.8	2.1
NP-CCGW09T302GA2			●			●	2	9.525	3.97	0.2	4.4	1.8
NP-CCGW09T304GA2			●	●		●	2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308GA2			●	●		●	2	9.525	3.97	0.8	4.4	2.1
NP-CCGW060202GS2	●	●					2	6.35	2.38	0.2	2.8	1.8
NP-CCGW060204GS2	●	●					2	6.35	2.38	0.4	2.8	1.9
NP-CCGW060208GS2	●	●					2	6.35	2.38	0.8	2.8	2.1
NP-CCGW09T302GS2	●	●					2	9.525	3.97	0.2	4.4	1.8
NP-CCGW09T304GS2	●	●					2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308GS2	●	●					2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304GH2		●	●	●			2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308GH2		●	●	●			2	9.525	3.97	0.8	4.4	2.1
NP-CCGW060202FS2		●			●		2	6.35	2.38	0.2	2.8	1.8
NP-CCGW060204FS2		●			●		2	6.35	2.38	0.4	2.8	1.9
NP-CCGW060208FS2		●			●		2	6.35	2.38	0.8	2.8	2.1
NP-CCGW09T302FS2	●	●			●		2	9.525	3.97	0.2	4.4	1.8
NP-CCGW09T304FS2	●	●	●		●		2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308FS2	●	●	●		●		2	9.525	3.97	0.8	4.4	2.1
NP-CCGW060204TA2				●		●	2	6.35	2.38	0.4	2.8	1.9
NP-CCGW060208TA2				●		●	2	6.35	2.38	0.8	2.8	2.1
NP-CCGW09T304TA2			●	●		●	2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308TA2			●	●		●	2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304TH2			●	●		●	2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308TH2			●	●		●	2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304FBWL2	●	●	●		●		2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308FBWL2	●	●	●		●		2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304FSWS2	●	●	●		●		2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308FSWS2	●	●	●		●		2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304GAWS2			●	●		●	2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308GAWS2			●	●		●	2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304GBWL2	●	●	●			●	2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308GBWL2	●	●	●			●	2	9.525	3.97	0.8	4.4	2.1
NP-CCGW09T304GSWS2	●	●					2	9.525	3.97	0.4	4.4	1.9
NP-CCGW09T308GSWS2	●	●					2	9.525	3.97	0.8	4.4	2.1
BF-CCGT09T304TS2		●					2	9.525	3.97	0.4	4.4	1.9
BF-CCGT09T308TS2		●					2	9.525	3.97	0.8	4.4	2.1
BM-CCGT09T304TA2			●				2	9.525	3.97	0.4	4.4	1.9
BM-CCGT09T308TA2			●				2	9.525	3.97	0.8	4.4	2.1
NP-CCGW03S102GS	●						1	3.57*	1.39	0.2	2	1.1
NP-CCGW03S104GS	●						1	3.57*	1.39	0.4	2	1.1

* Diameter of inscribed circle is non-ISO standard. (For SCLC type)

(mm)													
Order Number	Coated CBN				CBN NEW			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-CCGW04T002GS	●							1	4.37*	1.79	0.2	2.4	1.5
NP-CCGW04T004GS	●							1	4.37*	1.79	0.4	2.4	1.5
NP-CCGW03S102FS		●			●			1	3.57*	1.39	0.2	2	1.1
NP-CCGW03S104FS		●			●			1	3.57*	1.39	0.4	2	1.1
NP-CCGW04T002FS		●			●			1	4.37*	1.79	0.2	2.4	1.5
NP-CCGW04T004FS		●			●			1	4.37*	1.79	0.4	2.4	1.5
NP-CPGB080204GA2			●	●				2	7.94	2.38	0.4	3.5	1.9
NP-CPGB080208GA2			●	●				2	7.94	2.38	0.8	3.5	2.1
NP-CPGB080212GA2			●	●				2	7.94	2.38	1.2	3.5	2.3
NP-CPGB090302GA2			●					2	9.525	3.18	0.2	4.5	1.8
NP-CPGB090304GA2			●	●				2	9.525	3.18	0.4	4.5	1.9
NP-CPGB090308GA2			●	●				2	9.525	3.18	0.8	4.5	2.1
NP-CPGB090312GA2			●	●				2	9.525	3.18	1.2	4.5	2.3
NP-CPGB080204GS2	●	●						2	7.94	2.38	0.4	3.5	1.9
NP-CPGB080208GS2	●	●						2	7.94	2.38	0.8	3.5	2.1
NP-CPGB090302GS2	●	●						2	9.525	3.18	0.2	4.5	1.8
NP-CPGB090304GS2	●	●						2	9.525	3.18	0.4	4.5	1.9
NP-CPGB090308GS2	●	●						2	9.525	3.18	0.8	4.5	2.1
NP-CPGB080204FS2		●						2	7.94	2.38	0.4	3.5	1.9
NP-CPGB080208FS2		●						2	7.94	2.38	0.8	3.5	2.1
NP-CPGB090302FS2	●	●						2	9.525	3.18	0.2	4.5	1.8
NP-CPGB090304FS2	●		●					2	9.525	3.18	0.4	4.5	1.9
NP-CPGB090308FS2	●		●					2	9.525	3.18	0.8	4.5	2.1
NP-CPGB090312FS2			●					2	9.525	3.18	1.2	4.5	2.3
NP-CPGB080204TA2				●				2	7.94	2.38	0.4	3.5	1.9
NP-CPGB080208TA2				●				2	7.94	2.38	0.8	3.5	2.1
NP-CPGB080212TA2				●				2	7.94	2.38	1.2	3.5	2.3
NP-CPGB090304TA2			●	●				2	9.525	3.18	0.4	4.5	1.9
NP-CPGB090308TA2			●	●				2	9.525	3.18	0.8	4.5	2.1
NP-CPGB090312TA2			●	●				2	9.525	3.18	1.2	4.5	2.3

* Diameter of inscribed circle is non-ISO standard. (For SCLC type)

CBN-series for Hardened Steel Turning

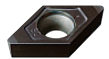
Positive Inserts (With Hole)

G Class

DCGW 7°, DCGT 7°

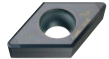
NEW PETIT CUT

NP_002



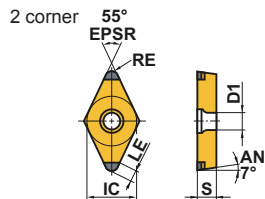
NEW PETIT CUT

BF_, BM_



(With Breaker)

(mm)



Order Number	Coated CBN				CBN NEW		Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120						
NP-DCGW070202GA2			●		●		2	6.35	2.38	0.2	2.8	2.3
NP-DCGW070204GA2			●	●	●		2	6.35	2.38	0.4	2.8	2.1
NP-DCGW070208GA2				●			2	6.35	2.38	0.8	2.8	2
NP-DCGW11T302GA2			●		●		2	9.525	3.97	0.2	4.4	2.3
NP-DCGW11T304GA2			●	●	●		2	9.525	3.97	0.4	4.4	2.1
NP-DCGW11T308GA2			●	●	●		2	9.525	3.97	0.8	4.4	2
NP-DCGW070202GS2	●	●					2	6.35	2.38	0.2	2.8	2.3
NP-DCGW070204GS2	●	●					2	6.35	2.38	0.4	2.8	2.1
NP-DCGW070208GS2	●	●					2	6.35	2.38	0.8	2.8	2
NP-DCGW11T302GS2	●	●					2	9.525	3.97	0.2	4.4	2.3
NP-DCGW11T304GS2	●	●					2	9.525	3.97	0.4	4.4	2.1
NP-DCGW11T308GS2	●	●					2	9.525	3.97	0.8	4.4	2
NP-DCGW11T304GH2		●	●	●			2	9.525	3.97	0.4	4.4	2.1
NP-DCGW11T308GH2		●	●	●			2	9.525	3.97	0.8	4.4	2
NP-DCGW070202FS2		●			●		2	6.35	2.38	0.2	2.8	2.3
NP-DCGW070204FS2		●	●		●		2	6.35	2.38	0.4	2.8	2.1
NP-DCGW070208FS2		●			●		2	6.35	2.38	0.8	2.8	2
NP-DCGW11T302FS2	●	●			●		2	9.525	3.97	0.2	4.4	2.3
NP-DCGW11T304FS2	●	●	●		●		2	9.525	3.97	0.4	4.4	2.1
NP-DCGW11T308FS2	●	●	●		●		2	9.525	3.97	0.8	4.4	2
NP-DCGW070204TA2			●	●	●	●	2	6.35	2.38	0.4	2.8	2.1
NP-DCGW070208TA2				●		●	2	6.35	2.38	0.8	2.8	2
NP-DCGW11T304TA2			●	●	●	●	2	9.525	3.97	0.4	4.4	2.1
NP-DCGW11T308TA2			●	●	●	●	2	9.525	3.97	0.8	4.4	2
NP-DCGW11T304TH2			●	●		●	2	9.525	3.97	0.4	4.4	2.1
NP-DCGW11T308TH2			●	●		●	2	9.525	3.97	0.8	4.4	2
BF-DCGT11T304TS2		●					2	9.525	3.97	0.4	4.4	2.1
BF-DCGT11T308TS2		●					2	9.525	3.97	0.8	4.4	2
BM-DCGT11T304TA2			●				2	9.525	3.97	0.4	4.4	2.1
BM-DCGT11T308TA2			●				2	9.525	3.97	0.8	4.4	2

● : Inventory maintained in Japan. (1 insert in one case)

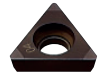
Positive Inserts (With Hole)

G Class

TCGW 7°, TPGB 11°

NEW PETIT CUT

NP_TCGW

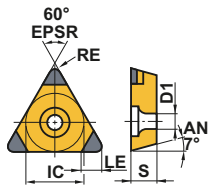


NEW PETIT CUT

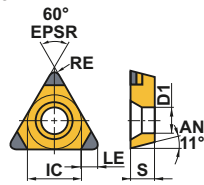
NP-TPGB



3 corner



3 corner



(mm)

Order Number	Coated CBN						Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120						
NP-TCGW090204GS3	●						3	5.56	2.38	0.4	2.5	1.6
NP-TCGW090208GS3	●						3	5.56	2.38	0.8	2.5	1.8
NP-TCGW110202GS3	●						3	6.35	2.38	0.2	2.8	1.5
NP-TCGW110204GS3	●						3	6.35	2.38	0.4	2.8	1.6
NP-TCGW110208GS3	●						3	6.35	2.38	0.8	2.8	1.8
NP-TCGW130304GS3	●						3	7.94	3.18	0.4	3.4	1.6
NP-TCGW130308GS3	●						3	7.94	3.18	0.8	3.4	1.8
NP-TCGW16T304GS3	●						3	9.525	3.97	0.4	4.4	1.6
NP-TCGW16T308GS3	●						3	9.525	3.97	0.8	4.4	1.8
NP-TPGB080204GA3				●			3	4.76	2.38	0.4	2.4	1.6
NP-TPGB080208GA3				●			3	4.76	2.38	0.8	2.4	1.8
NP-TPGB090204GA3			●	●	●		3	5.56	2.38	0.4	2.9	1.6
NP-TPGB090208GA3			●	●	●		3	5.56	2.38	0.8	2.9	1.8
NP-TPGB110302GA3			●		●		3	6.35	3.18	0.2	3.4	1.5
NP-TPGB110304GA3			●	●	●		3	6.35	3.18	0.4	3.4	1.6
NP-TPGB110308GA3			●	●	●		3	6.35	3.18	0.8	3.4	1.8
NP-TPGB160304GA3			●	●	●		3	9.525	3.18	0.4	4.4	1.6
NP-TPGB160308GA3			●	●	●		3	9.525	3.18	0.8	4.4	1.8
NP-TPGB080204GS3	●	●					3	4.76	2.38	0.4	2.4	1.6
NP-TPGB080208GS3	●	●					3	4.76	2.38	0.8	2.4	1.8
NP-TPGB090204GS3	●	●					3	5.56	2.38	0.4	2.9	1.6
NP-TPGB090208GS3	●	●					3	5.56	2.38	0.8	2.9	1.8
NP-TPGB110302GS3	●	●					3	6.35	3.18	0.2	3.4	1.5
NP-TPGB110304GS3	●	●					3	6.35	3.18	0.4	3.4	1.6
NP-TPGB110308GS3	●	●					3	6.35	3.18	0.8	3.4	1.8
NP-TPGB160304GS3	●	●					3	9.525	3.18	0.4	4.4	1.6
NP-TPGB160308GS3	●	●					3	9.525	3.18	0.8	4.4	1.8
NP-TPGB160304GH3		●	●	●			3	9.525	3.18	0.4	4.4	1.6
NP-TPGB160308GH3		●	●	●			3	9.525	3.18	0.8	4.4	1.8
NP-TPGB110302FS3	●	●			●		3	6.35	3.18	0.2	3.4	1.5
NP-TPGB110304FS3	●	●	●		●		3	6.35	3.18	0.4	3.4	1.6
NP-TPGB110308FS3	●	●	●		●		3	6.35	3.18	0.8	3.4	1.8
NP-TPGB160304FS3			●				3	9.525	3.18	0.4	4.4	1.6
NP-TPGB160308FS3			●				3	9.525	3.18	0.8	4.4	1.8
NP-TPGB080204TA3				●		●	3	4.76	2.38	0.4	2.4	1.6
NP-TPGB080208TA3				●		●	3	4.76	2.38	0.8	2.4	1.8
NP-TPGB090204TA3				●		●	3	5.56	2.38	0.4	2.9	1.6
NP-TPGB090208TA3				●		●	3	5.56	2.38	0.8	2.9	1.8
NP-TPGB110304TA3			●	●	●	●	3	6.35	3.18	0.4	3.4	1.6
NP-TPGB110308TA3			●	●	●	●	3	6.35	3.18	0.8	3.4	1.8
NP-TPGB160304TA3			●	●	●	●	3	9.525	3.18	0.4	4.4	1.6
NP-TPGB160308TA3			●	●	●	●	3	9.525	3.18	0.8	4.4	1.8
NP-TPGB160304TH3			●	●		●	3	9.525	3.18	0.4	4.4	1.6
NP-TPGB160308TH3			●	●		●	3	9.525	3.18	0.8	4.4	1.8

CBN-series for Hardened Steel Turning

Positive Inserts (With Hole)

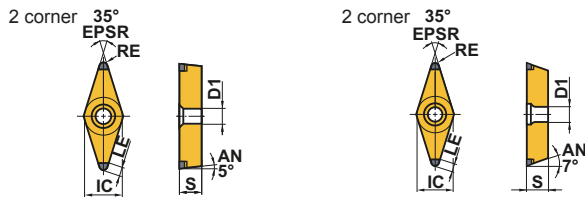
G Class

VBGW 5°, VCGW 7°

NEW PETIT CUT
NP_VBGW



NEW PETIT CUT
NP_VCGW



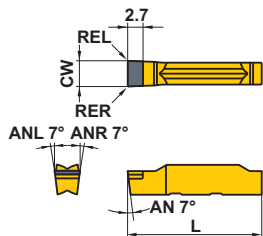
(mm)

Order Number	Coated CBN				CBN NEW			Cutting Edges	IC	S	RE	D1	LE
	BC8105	BC8110	BC8120	BC8130	MB8110	MB8120	MB8130						
NP-VBGW110302GA2			●			●		2	6.35	3.18	0.2	2.9	2.5
NP-VBGW110304GA2			●	●		●		2	6.35	3.18	0.4	2.9	2.5
NP-VBGW110308GA2			●	●		●		2	6.35	3.18	0.8	2.9	2
NP-VBGW160402GA2			●			●		2	9.525	4.76	0.2	4.4	2.5
NP-VBGW160404GA2			●	●		●		2	9.525	4.76	0.4	4.4	2.5
NP-VBGW160408GA2			●	●		●		2	9.525	4.76	0.8	4.4	2
NP-VBGW110302GS2	●	●						2	6.35	3.18	0.2	2.9	2.5
NP-VBGW110304GS2	●	●						2	6.35	3.18	0.4	2.9	2.5
NP-VBGW110308GS2	●	●						2	6.35	3.18	0.8	2.9	2
NP-VBGW160402GS2	●	●						2	9.525	4.76	0.2	4.4	2.5
NP-VBGW160404GS2	●	●						2	9.525	4.76	0.4	4.4	2.5
NP-VBGW160408GS2	●	●						2	9.525	4.76	0.8	4.4	2
NP-VBGW160404GH2		●	●	●				2	9.525	4.76	0.4	4.4	2.5
NP-VBGW160408GH2		●	●	●				2	9.525	4.76	0.8	4.4	2
NP-VBGW110302FS2		●			●			2	6.35	3.18	0.2	2.9	2.5
NP-VBGW110304FS2		●			●			2	6.35	3.18	0.4	2.9	2.5
NP-VBGW110308FS2		●			●			2	6.35	3.18	0.8	2.9	2
NP-VBGW160402FS2		●			●			2	9.525	4.76	0.2	4.4	2.5
NP-VBGW160404FS2			●					2	9.525	4.76	0.4	4.4	2.5
NP-VBGW160408FS2			●					2	9.525	4.76	0.8	4.4	2
NP-VBGW110304TA2				●				2	6.35	3.18	0.4	2.9	2.5
NP-VBGW110308TA2				●				2	6.35	3.18	0.8	2.9	2
NP-VBGW160404TA2			●	●		●		2	9.525	4.76	0.4	4.4	2.5
NP-VBGW160408TA2			●	●		●		2	9.525	4.76	0.8	4.4	2
NP-VBGW160404TH2			●	●				2	9.525	4.76	0.4	4.4	2.5
NP-VBGW160408TH2			●	●				2	9.525	4.76	0.8	4.4	2
NP-VCGW160404GA2			●	●				2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408GA2			●	●				2	9.525	4.76	0.8	4.4	2
NP-VCGW160404GS2	●	●						2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408GS2	●	●						2	9.525	4.76	0.8	4.4	2
NP-VCGW160404GH2		●	●	●				2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408GH2		●	●	●				2	9.525	4.76	0.8	4.4	2
NP-VCGW160404FS2		●	●		●			2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408FS2		●	●		●			2	9.525	4.76	0.8	4.4	2
NP-VCGW160404TA2			●	●				2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408TA2			●	●				2	9.525	4.76	0.8	4.4	2
NP-VCGW160404TS2		●						2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408TS2		●						2	9.525	4.76	0.8	4.4	2
NP-VCGW160404TH2			●	●				2	9.525	4.76	0.4	4.4	2.5
NP-VCGW160408TH2			●	●				2	9.525	4.76	0.8	4.4	2

● : Inventory maintained in Japan. (1 insert in one case)

Inserts

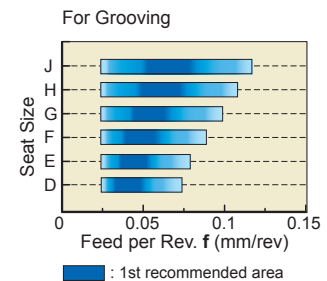
(mm)

Applications	Geometry	Order Number	Stock	Seat Size	CW		RER/L	L
			CBN					
			BC8110		Grooving Width	Tolerance		
For Grooving	Flat Top (For Hardened Material) 	GY1G0200D020N-GFGS	●	D	2.00	±0.03	0.2	20.70
		GY1G0239E020N-GFGS	●	E	2.39	±0.03	0.2	20.70
		GY1G0250E020N-GFGS	●	E	2.50	±0.03	0.2	20.70
		GY1G0300F020N-GFGS	●	F	3.00	±0.03	0.2	20.70
		GY1G0318F020N-GFGS	●	F	3.18	±0.03	0.2	20.70
		GY1G0400G020N-GFGS	●	G	4.00	±0.03	0.2	25.65
		GY1G0475H020N-GFGS	●	H	4.75	±0.03	0.2	25.65
		GY1G0500H020N-GFGS	●	H	5.00	±0.03	0.2	25.65
		GY1G0600J020N-GFGS	●	J	6.00	±0.03	0.2	25.65

Recommended Cutting Conditions

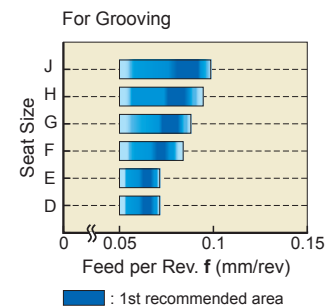
- For External Grooving
Recommended Cutting Speed **vc** (m/min)

	Workpiece Material	Properties	Cutting Speed vc (m/min)		
			50	100	150
H	Hardened Steels	≥50HRC		80 120	



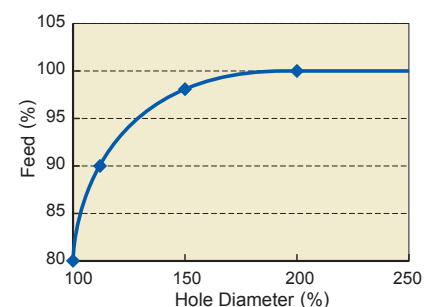
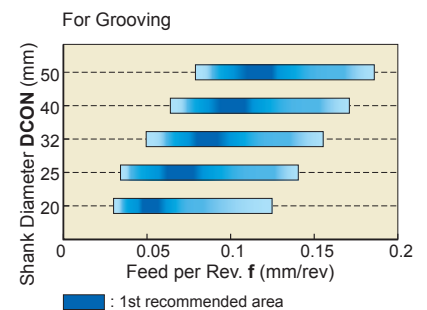
- For Face Grooving
Recommended Cutting Speed **vc** (m/min)

	Workpiece Material	Properties	Cutting Speed vc (m/min)		
			50	100	150
H	Hardened Steels	≥50HRC		60 100	

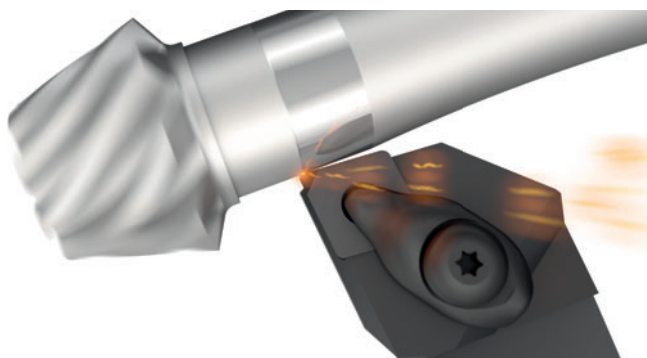


- For Internal Grooving
Recommended Cutting Speed **vc** (m/min)

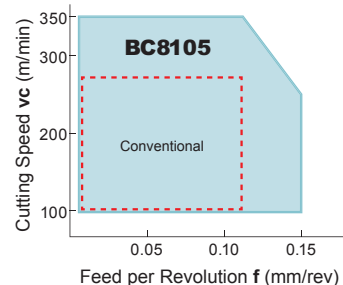
	Workpiece Material	Properties	Cutting Speed vc (m/min)		
			50	100	150
H	Hardened Steels	≥50HRC		60 100	



BC8105 Highest Accuracy



Application Range

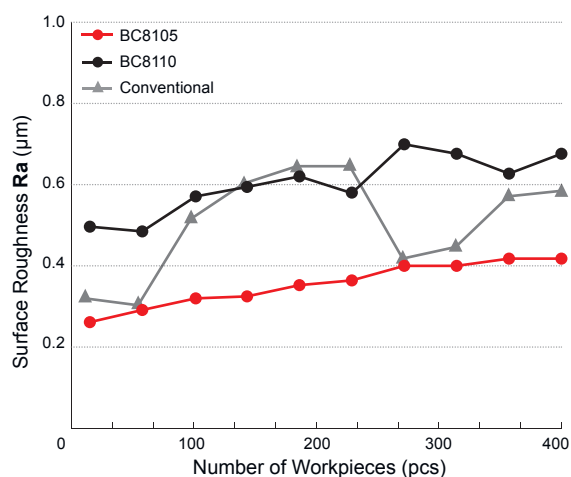


Excellent surface finishes and close tolerances with long tool life
For surface finishes up to $R_z 2.4 \mu\text{m}$ ($R_a 0.6 \mu\text{m}$).

Surface Finish

Insert	NP-DNGA150608GS2
Workpiece Material	AISI 1534 (60HRC)
Machining Methods	External Continuous Cutting
Cutting Speed v_c (m/min)	176
Feed per Rev. f (mm/rev)	0.09
Depth of Cut a_p (mm)	0.15
Cutting Mode	Wet Cutting (Emulsion)

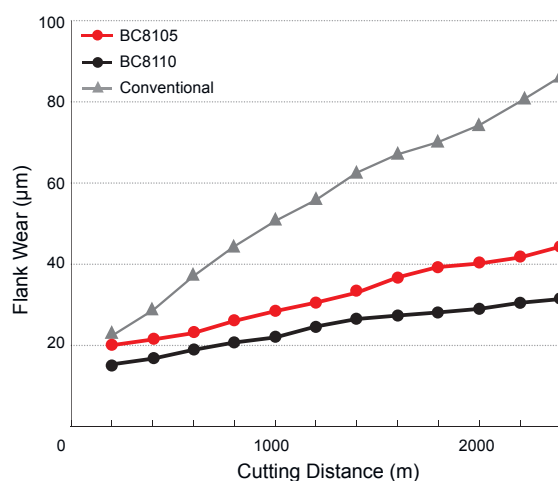
BC8105 is first choice for superior surface finishes.



Tool Life (Flank Wear)

Insert	NP-CNGA120408GS2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Continuous Cutting
Cutting Speed v_c (m/min)	200
Feed per Rev. f (mm/rev)	0.05
Depth of Cut a_p (mm)	0.05
Cutting Mode	Dry Cutting

BC8105 is excellent wear resistance.



Recommended Cutting Conditions

Workpiece Material	Machining Methods	Cutting Speed v_c (m/min)	f (mm/rev)	a_p (mm)	Cutting Mode
Hardened Steels (Heat Treated Steels etc)	External Continuous Cutting	50 100 200 300 400	≤ 0.15	≤ 0.2	Dry, Wet

BC8110 High Speed Turning



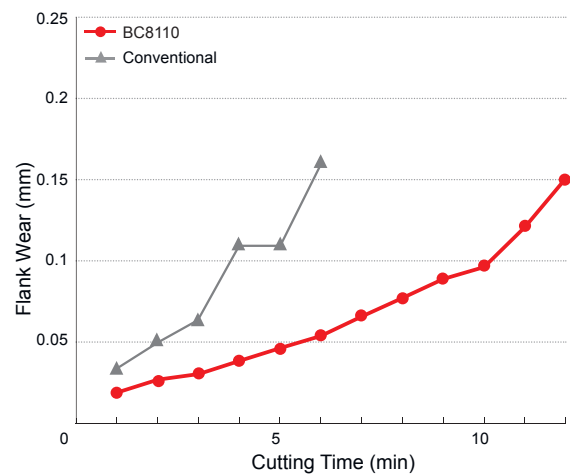
For Continuous Cutting

Covers a wide application range for continuous cutting.

Tool Life (Flank Wear)

Insert	NP-CNGA120408GS2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Continuous Cutting
Cutting Speed v_c (m/min)	250
Feed per Rev. f (mm/rev)	0.10
Depth of Cut a_p (mm)	0.2
Cutting Mode	Dry Cutting

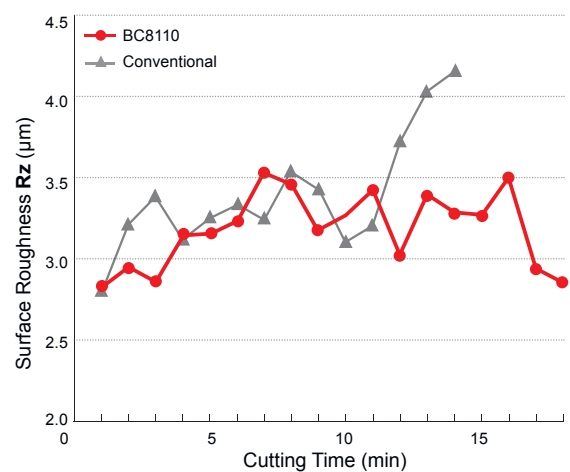
BC8110 is first choice for high speed finishing.



Surface Finish

Insert	NP-CNGA120408GS2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Continuous Cutting
Cutting Speed v_c (m/min)	250
Feed per Rev. f (mm/rev)	0.10
Depth of Cut a_p (mm)	0.2
Cutting Mode	Dry Cutting

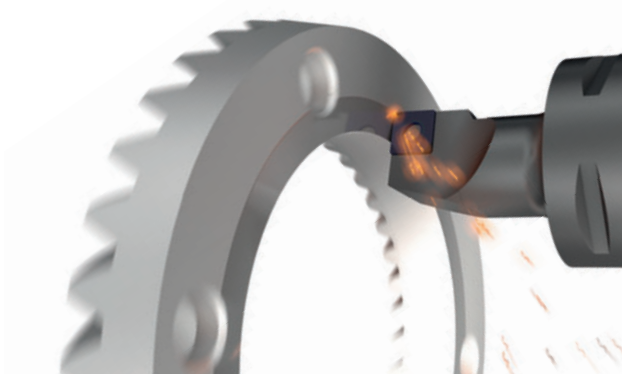
Excellent surface finishes maintained during long continuous cutting.



Recommended Cutting Conditions

Workpiece Material	Machining Methods	Cutting Speed v_c (m/min)	f (mm/rev)	a_p (mm)	Cutting Mode
Hardened Steels (Heat Treated Steels etc)	External Continuous Cutting		≤ 0.20	≤ 0.35	Dry, Wet

BC8120 General Application



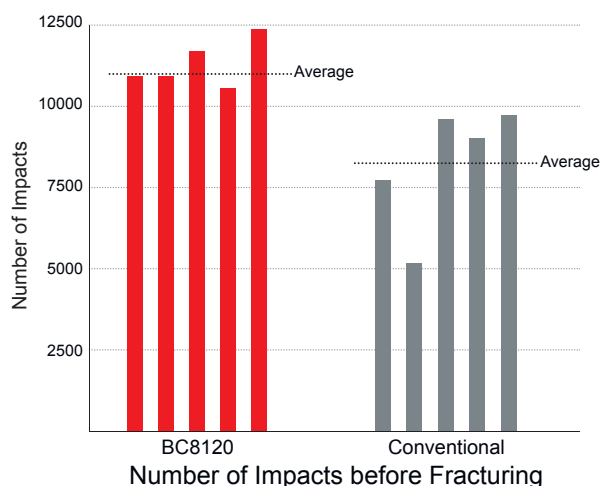
For Continuous and Light Interrupted Cutting

1st choice for roughing and pre-finishing.

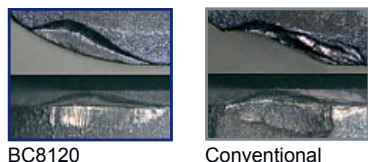
Covers a wide application range between continuous and light-interrupted machining.

Test of Interrupted Cutting

Insert	NP-CNGA120408GA2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Interrupted Cutting
Cutting Speed v_c (m/min)	250
Feed per Rev. f (mm/rev)	0.15
Depth of Cut a_p (mm)	0.1
Cutting Mode	Dry Cutting



Cutting Edge Condition after 8000 Impacts

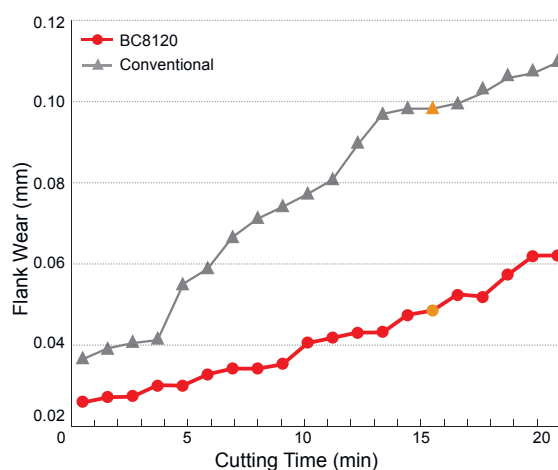


BC8120

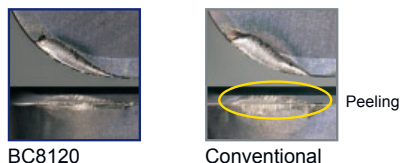
Conventional

Tool Life (Flank Wear)

Insert	NP-CNGA120408GA2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Continuous Cutting
Cutting Speed v_c (m/min)	150
Feed per Rev. f (mm/rev)	0.10
Depth of Cut a_p (mm)	0.2
Cutting Mode	Dry Cutting



Cutting Edge after 15 min.



BC8120

Conventional

Recommended Cutting Conditions

Workpiece Material	Machining Methods	Cutting Speed v_c (m/min)	f (mm/rev)	a_p (mm)	Cutting Mode
Hardened Steels (Heat Treated Steels etc)	External Continuous Cutting	100 - 200	≤ 0.3	≤ 0.5	Dry, Wet
	External Interrupted Cutting	100 - 200	≤ 0.2	≤ 0.3	Dry, Wet

BC8130 Tough Machining



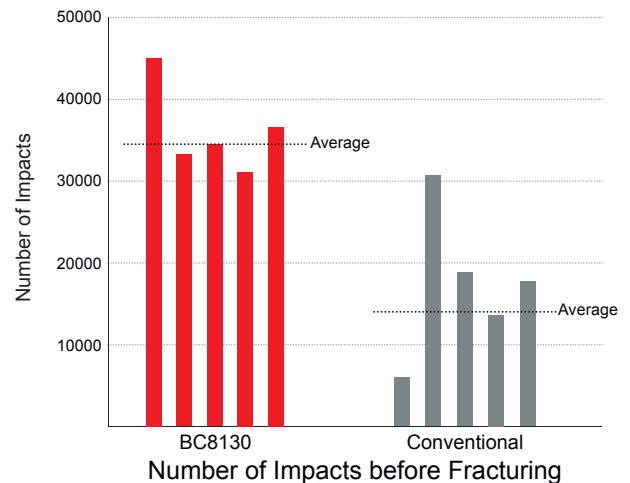
For Unstable Applications and Heavy Interrupted Cutting

Tolerance accuracy maintained over a high number of impacts.

Heavy Interrupted Cutting (Laboratory Test)

Insert	NP-CNGA120408GA2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Heavy Interrupted Cutting
Cutting Speed v_c (m/min)	250
Feed per Rev. f (mm/rev)	0.05
Depth of Cut a_p (mm)	0.1
Cutting Mode	Wet Cutting

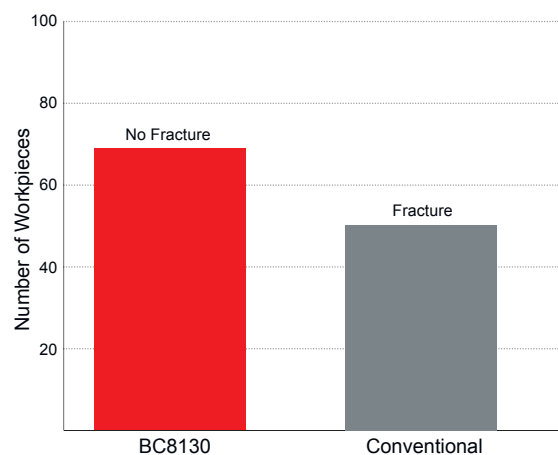
BC8130 provides stability up to 30000 impacts.



Heavy Cutting

Insert	NP-CNGA120408TH2
Workpiece Material	AISI 1045 (58HRC)
Machining Methods	External Heavy Interrupted Cutting
Cutting Speed v_c (m/min)	130
Feed per Rev. f (mm/rev)	0.08
Depth of Cut a_p (mm)	0.15
Cutting Mode	Wet Cutting

No fracturing after machining 70 pcs.



Recommended Cutting Conditions

Workpiece Material	Machining Methods	Cutting Speed v_c (m/min)	f (mm/rev)	a_p (mm)	Cutting Mode
		0 50 100 150 200			
Hardened Steels (Heat Treated Steels etc)	External Interrupted Cutting		≤ 0.20	≤ 0.30	Dry, Wet

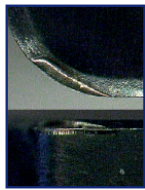
MB8100 Series

Non-coated CBN Grades Applied Ultra Micro-particle Binder Technology

Tool Life (Flank Wear)

Insert	NP-CNGA120408GA2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Continuous Cutting
Cutting Speed v_c (m/min)	250
Feed per Rev. f (mm/rev)	0.1
Depth of Cut a_p (mm)	0.2
Cutting Mode	Dry Cutting

Cutting Edge after 180 sec.

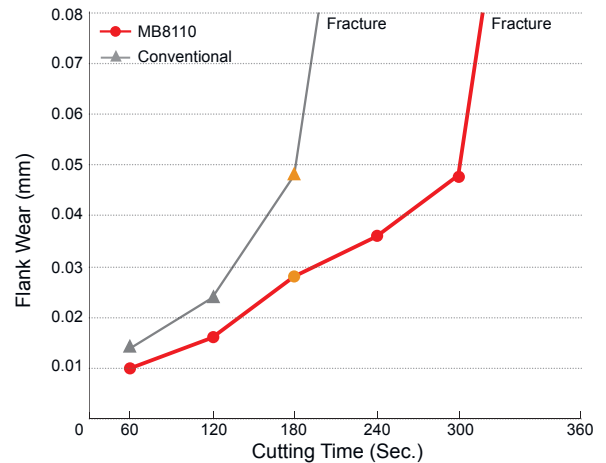


MB8110



Conventional

Large Wear



Heavy Cutting

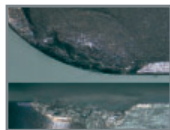
Insert	NP-CNGA120408GA2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Interrupted Cutting
Cutting Speed v_c (m/min)	250
Feed per Rev. f (mm/rev)	0.15
Depth of Cut a_p (mm)	0.1
Cutting Mode	Dry Cutting

17000 Impacts

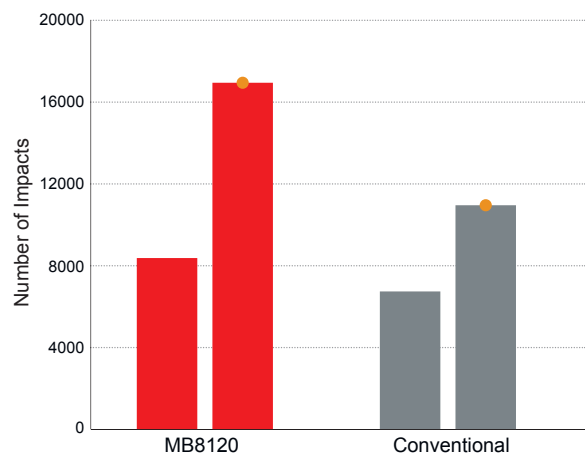


MB8120

11000 Impacts



Conventional



Heavy Cutting

Insert	NP-CNGA120408GA2
Workpiece Material	AISI 5120 (60HRC)
Machining Methods	External Heavy Interrupted Cutting
Cutting Speed v_c (m/min)	150
Feed per Rev. f (mm/rev)	0.05
Depth of Cut a_p (mm)	0.1
Cutting Mode	Wet Cutting

77000 Impacts

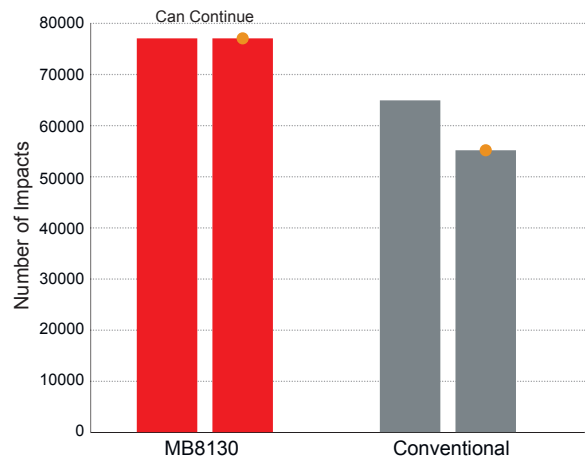


MB8130

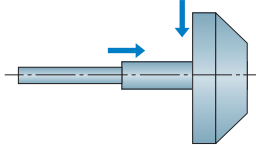
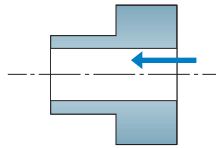
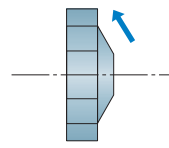
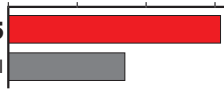
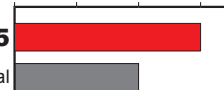
54000 Impacts

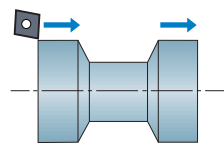
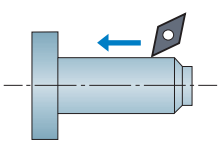
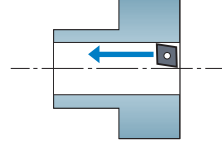
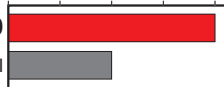
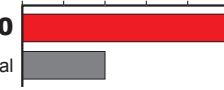
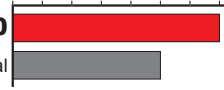


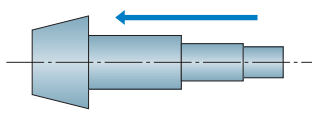
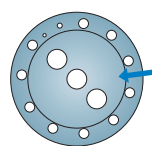
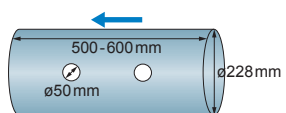
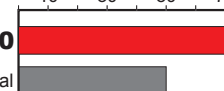
Conventional



Application Examples

Insert	NP-CNGA120408GSWS2	NP-DCGW11T308GS2	NP-CNGA120408FBWL2
Workpiece	AISI 5120H (58-60HRC) 	AISI 4419 (58-60HRC) 	JIS 19CrNi5 (58-62HRC) 
Component	Pinion Gear	Shaft (Internal Continuous Cutting)	Differential Pinion Gear(Continuous Facing)
Cutting Conditions			
Cutting Speed vc (m/min)	160	165	155
Feed per Rev. f (mm/rev)	0.35	0.085	0.12
Depth of Cut ap (mm)	0.15	0.1	0.15
Cutting Mode	Dry Cutting	Dry Cutting	Dry Cutting
Results	Number of Workpieces: 50, 100, 150 BC8105  Conventional Due to excellent surfaces, number of workpieces per cutting edge increased 1.5X compared to conventional product. Rz max : 4.8μm	Number of Workpieces: 40, 80 BC8105  Conventional BC8105 achieved 1.1X longer tool life compared to conventional product.	Number of Workpieces: 150, 300, 450 BC8105  Conventional The surface roughness is more stable compared to conventional products, achieving 1.5X longer tool life. Ra<0.8

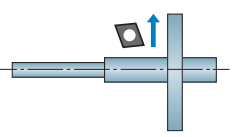
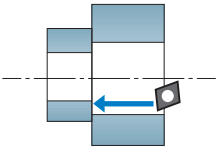
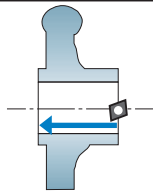
Insert	NP-CNGA120408GS2	NP-DNGA150404FS2	NP-CCGW09T308GS2
Workpiece	AISI 1049 (55-65HRC) 	AISI 1049 (55-65HRC) 	AISI 5115 (60-65HRC) 
Component	Shaft (External Continuous Cutting)	Shaft (External Continuous Cutting)	Gear (Internal Continuous Cutting)
Cutting Conditions			
Cutting Speed vc (m/min)	250	160	110
Feed per Rev. f (mm/rev)	0.15	0.20	0.15
Depth of Cut ap (mm)	0.30	0.20	0.20
Cutting Mode	Wet Cutting	Wet Cutting	Dry Cutting
Results	Number of Workpieces: 100, 200 BC8110  Conventional Increased efficiency with BC8110 due to fewer tool changes required.	Number of Workpieces: 200, 500 BC8110  Conventional BC8110 achieved 2.5X longer tool life and could continue machining.	Number of Workpieces: 2500, 3500 BC8110  Conventional Longer tool life meant reduced insert indexing.

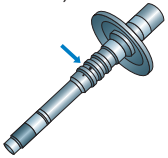
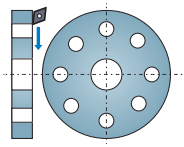
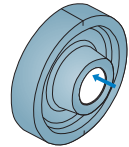
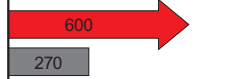
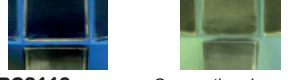
Insert	NP-CNGA120408GBWL2	NP-CNGA120408TH2	NP-DNGA150408GH2
Workpiece	Alloy Steel (60-63HRC) 	AISI 1045 (58HRC) 	JIS SCM815 
Component	Pinion Drive (External Continuous Cutting)	Gear (Interrupted Facing)	Shaft (Tough Machining)
Cutting Conditions			
Cutting Speed vc (m/min)	80	130	150
Feed per Rev. f (mm/rev)	0.22-0.24	0.08	0.15
Depth of Cut ap (mm)	0.15	0.15	0.15
Cutting Mode	Wet Cutting	Wet Cutting	Dry Cutting
Results	Number of Workpieces: 200, 400 BC8110  Conventional A tool life of Rz<6.3 enables 1.2X the processing possible for conventional products.	Number of Workpieces: 10, 30, 50, 70 BC8120  Conventional BC8120 prevented fracturing and extended 1.4X longer tool life when high-load interrupted cutting.	Number of Workpieces: 1, 2 BC8130  Conventional BC8130 achieved stable machining without fracture even under heavy interrupted cutting when machining big workpiece.

The above application examples are customer's application examples, so it can be different from the recommended conditions.

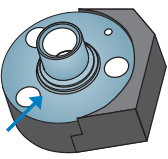
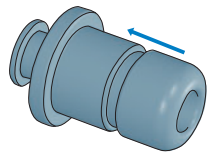
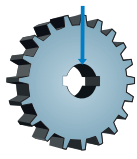
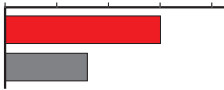
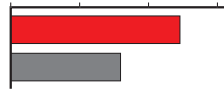
CBN-series for Hardened Steel Turning

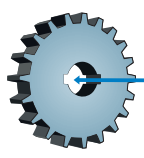
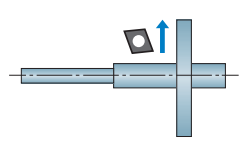
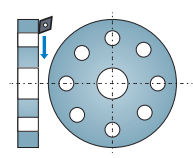
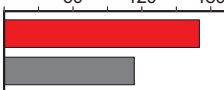
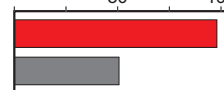
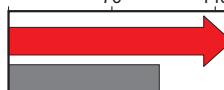
Application Examples

Insert		BF-DNGM150404TS2	NP-CNGA120408FS2	NP-CCGW09T308GS2
Workpiece		AISI 5120 (61-65HRC) 	AISI 5120H (60HRC) 	Forged Steel (60HRC) 
Component		Input Shaft (Continuous Facing)	Gear (Internal Continuous Cutting)	Locker Arm (Internal Continuous Cutting)
Cutting Conditions	Cutting Speed vc (m/min)	150	200	140
	Feed per Rev. f (mm/rev)	0.12	0.08	0.03
	Depth of Cut ap (mm)	0.15	0.15	0.15
Cutting Mode		Wet Cutting	Dry Cutting	Dry Cutting
Results		Number of Workpieces 200 400 600 800 1000 BC8110  Conventional  BC8110 achieved 1.3X longer tool life.	Number of Workpieces 100 200 300 BC8110  Conventional  Surface finish tolerance was maintained even when 3X the number of components were machined.	Number of Workpieces 200 400 600 800 BC8110  Conventional  BC8110 with excellent wear resistance achieved 1.2X longer tool life compared to conventional product.

Insert		GY1G0200D020N-GFGS	NP-CNGA120408TA2	NP-CNGA120412TA2
Workpiece		AISI 4118 (60HRC) 	ASTM (50HRC) 	AISI 5120 (60HRC) 
Component		Input Shaft (Grooving)	Clamp Cylinder (Interrupted Facing)	Automobile Parts (Internal Continuous)
Cutting Conditions	Cutting Speed vc (m/min)	130	130	180
	Feed per Rev. f (mm/rev)	0.10	0.08	0.22
	Depth of Cut ap (mm)	0.12	0.50	0.05 – 0.10
Cutting Mode		Wet Cutting	Wet Cutting	Wet Cutting
Results		Number of Workpieces 300 600 BC8110  Conventional   BC8110 600pcs Conventional 270pcs	Number of Workpieces 40 80 120 BC8120  Conventional  BC8120 achieved 1.5X longer tool life.	Number of Workpieces 100 200 300 BC8120  Conventional  BC8120 achieved stable machining due to improved surfaces.

The above application examples are customer's application examples, so it can be different from the recommended conditions.

Insert		NP-CNGA120408GA2	BM-DNGM150608TA2	NP-CNGA120408TH2
Workpiece		JIS BC3 (55-58 HRC) 	AISI 4142 (56-59 HRC) 	AISI 1045 (58 HRC) 
Component		Automobile Parts (Interrupted Facing)	Shaft (External Interrupted Cutting)	Gear (Interrupted Facing)
Cutting Conditions	Cutting Speed vc (m/min)	150	170	130
	Feed per Rev. f (mm/rev)	0.15	0.15	0.08
	Depth of Cut ap (mm)	0.10	0.07 – 0.10	0.15
Cutting Mode		Dry Cutting	Dry Cutting	Wet Cutting
Results		Number of Workpieces 50 100 150 200 BC8120  Conventional  Tool life was 2X and no sudden fracturing occurred.	Number of Workpieces 1000 2000 3000 BC8120  Conventional  BC8120 achieved 1.5X longer tool life.	Number of Workpieces 35 70 BC8130  Conventional  BC8130 achieved 1.5X longer tool life without abnormal damage.

Insert		NP-CCGW09T308TA2	NP-DNGA150408TA2	NP-CNGA120412TA2
Workpiece		AISI 5115 (58-60 HRC) 	AISI 5120H (60 HRC) 	AISI 431 (58-60 HRC) 
Component		Gear (Internal Interrupted Cutting)	Shaft	Automobile Parts
Cutting Conditions	Cutting Speed vc (m/min)	159 – 175	158	100
	Feed per Rev. f (mm/rev)	0.11	0.12	0.18
	Depth of Cut ap (mm)	0.12	0.17	0.15
Cutting Mode		Dry Cutting	Dry Cutting	Dry Cutting
Results		Number of Workpieces 60 120 180 BC8130  Conventional  BC8130 increased 1.5X number of workpieces per cutting edge.	Number of Workpieces 50 100 BC8130  Conventional  BC8130 achieved 2X longer tool life without any cutting edge chipping.	Number of Workpieces 70 140 BC8130  Conventional  BC8130 achieved 1.5X longer tool life without abnormal damage.

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CBN-series for Hardened Steel Turning

BC8100/MB8100

For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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(Tools specifications subject to change without notice.)