

Grooving System

GY Series

Grooving Revolution

Innovative clamping system ensures reliable grooving.

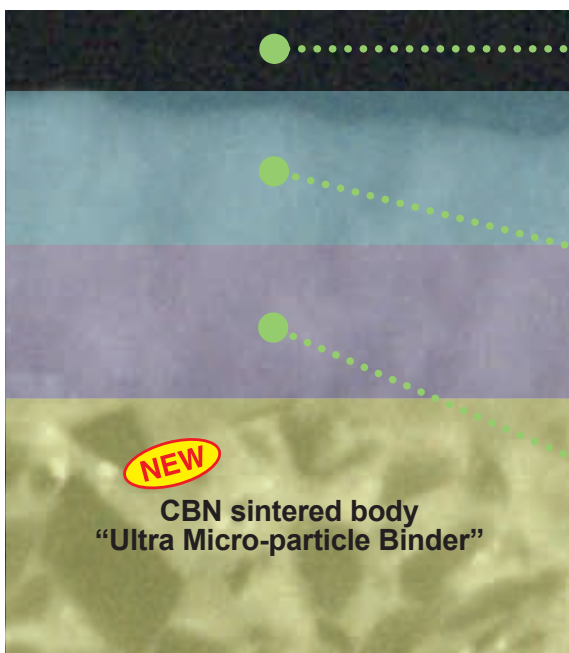


Coated CBN Grade for High Hardened Steel Turning

BC8110

Longer tool life with a coated CBN grade when turning hardened steels.

Newly developed special ceramic coating



Prevention of welding

Peeling of the coating is prevented by improving welding resistance.

NEW

TiAlSiN Coating

Improved wear and chipping resistance.

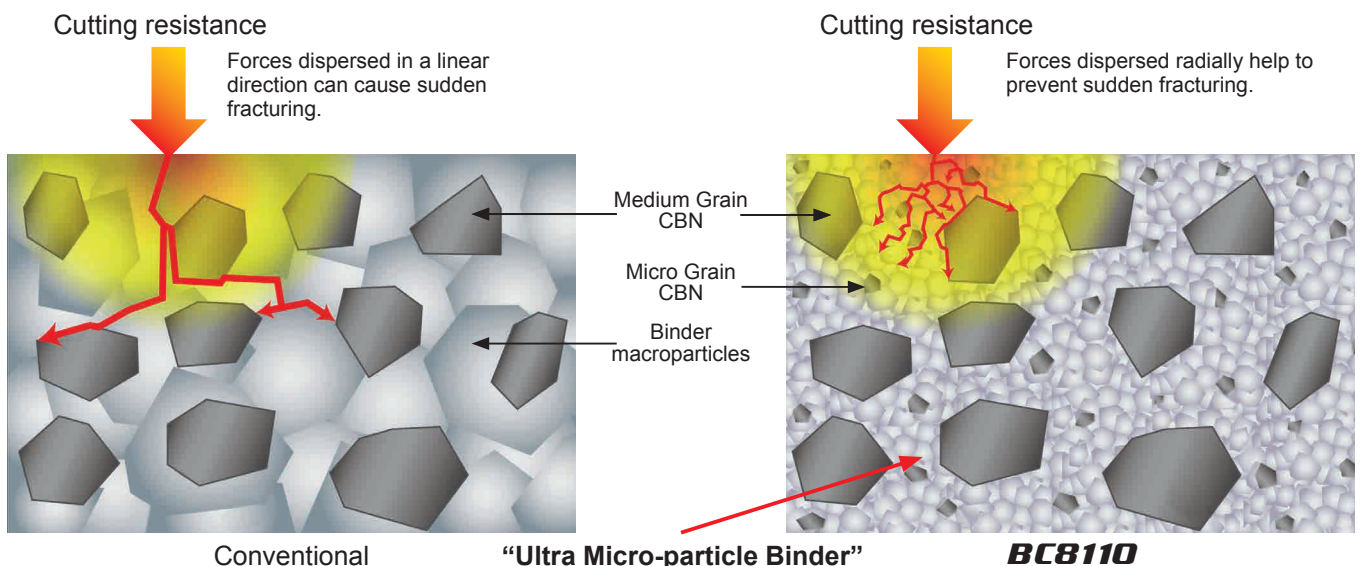
TiAlN Coating

Improved adhesion to the CBN surface provides increased peeling resistance.

NEW
CBN sintered body
"Ultra Micro-particle Binder"

The newly developed "Ultra Micro-particle Binder" prevents sudden fracture

Dispersal of the new Ultra Micro-particle Binder in BC8110 prevents linear crack development that can cause sudden fracturing.



INSERTS

Applications	Geometry	Order Number	Stock	Seat Size	Dimensions (mm)			
			CBN		W ₃		Re	L ₂
			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

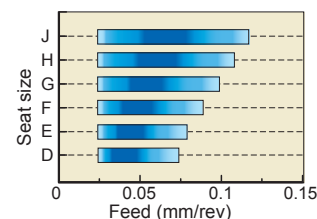
● For External Grooving

Recommended cutting speed(m/min)

	Work Material	Hardness	Cutting Speed (m/min)		
			50	100	150
H	Hardened steel	50HRC≤		80 120	

Recommended feed rate and depth of cut
Flat Top GFGS (CBN)

● Grooving



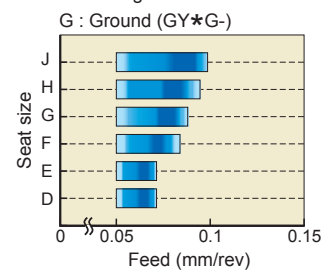
■ : 1st recommended area

● For Face Grooving

Recommended cutting speed(m/min)

	Work Material	Hardness	Cutting Speed (m/min)		
			50	100	150
H	Hardened steel	50HRC≤		60 100	

● Recommended feed rate
For Grooving



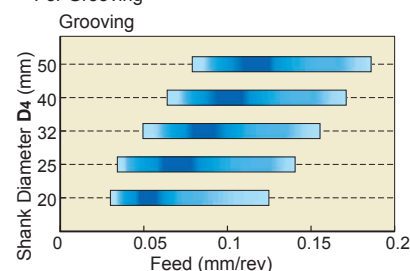
■ : 1st recommended area

● For Internal Grooving

Recommended cutting speed(m/min)

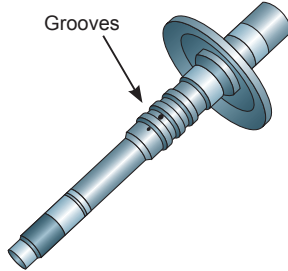
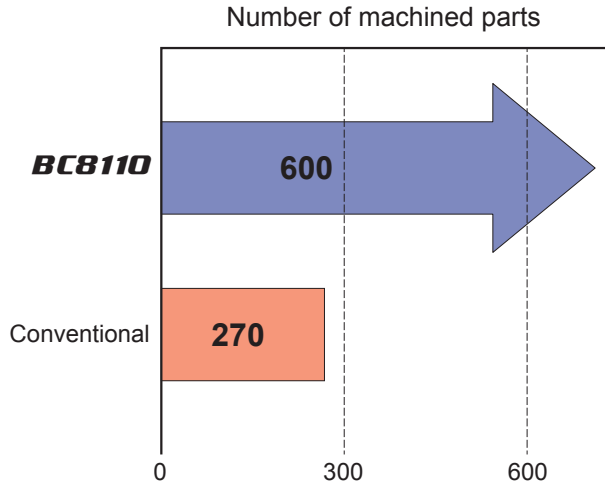


	Work Material	Hardness	Cutting Speed (m/min)		
			50	100	150
H	Hardened steel	50HRC≤		60 100	

● Recommended feed rate
For Grooving



■ : 1st recommended area

APPLICATION EXAMPLES

Tool		GY1G0200D020N-GFGS	
Work piece			
Component		Input shaft	
Cutting Conditions	Cutting Speed (m/min)	130	
	Feed (mm/rev)	0.10	
	Depth of Cut (mm)	0.12 (Depth of groove:2.2 mm)	
Cutting mode		Wet	
Results		<p style="text-align: center;">Number of machined parts</p>  <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>BC8110 600pcs</p> </div> <div style="text-align: center;">  <p>Conventional 270pcs</p> </div> </div>	



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