



TurnLine



For more information

CBN Insert

BX5015

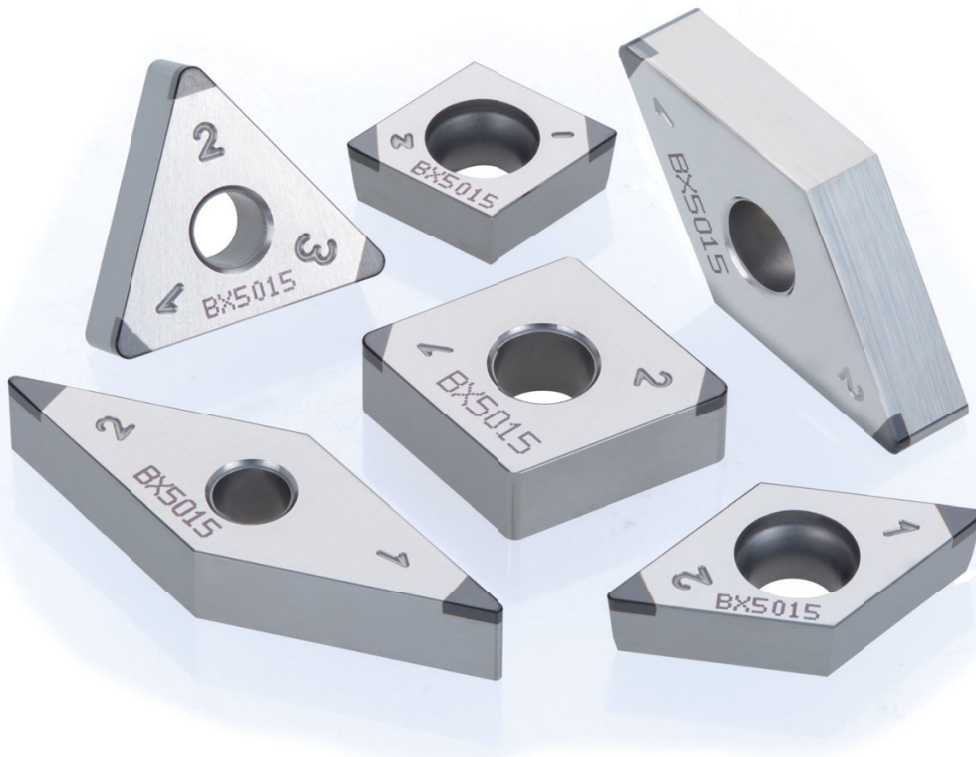
Tungaloy Report No. 573-G

New CBN Grade for Gray Cast Iron





BX5015

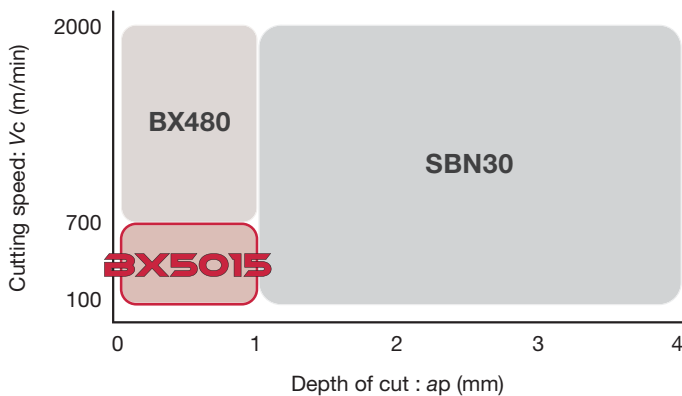


New CBN grade developed
for low-speed machining of gray cast iron



New CBN grade developed for low-speed machining of gray cast iron

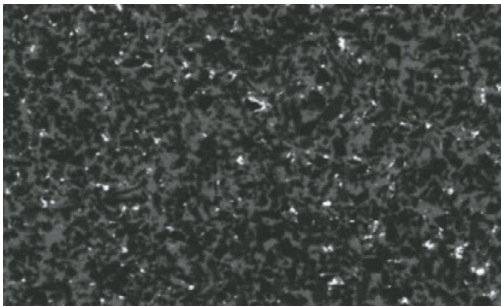
Application areas



BX5015

Delivers excellent performance in low-speed machining of gray cast iron.

Grade properties

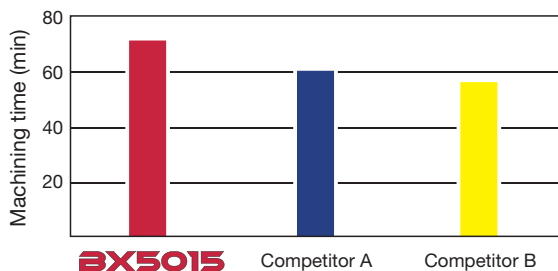


- By incorporating a binder with excellent heat and oxidation resistance, **BX5015** exhibits superior wear resistance during the low-speed machining of gray cast iron.
- The uniform distribution of sub-micron CBN grains within the binder phase provides **BX5015** with excellent fracture resistance.

Cutting performance



FC200 / 200 (Pearlitic)



Insert : CNGA120408
Cutting speed : $V_c = 500$ m/min
Feed : $f = 0.2$ mm/rev
Depth of cut : $a_p = 0.2$ mm
Machining : Interrupted cutting
Coolant : Wet



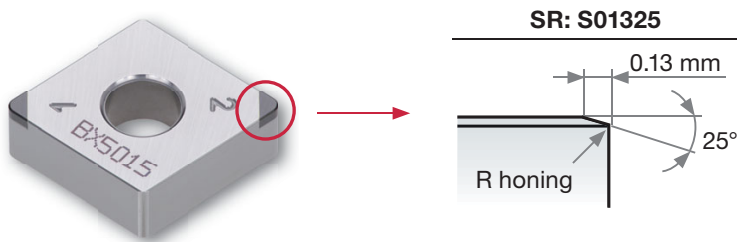
BX5015 achieves superior wear resistance in low-speed continuous machining of gray cast iron.

STANDARD CUTTING CONDITIONS



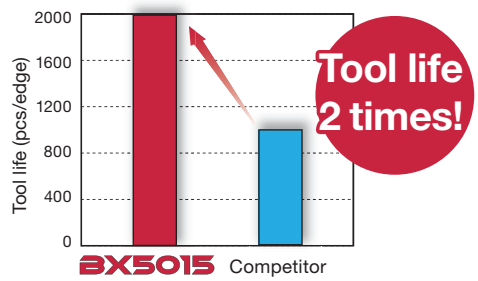
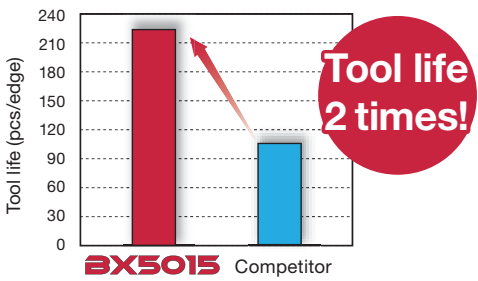
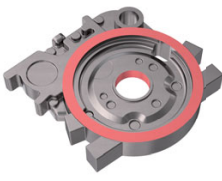

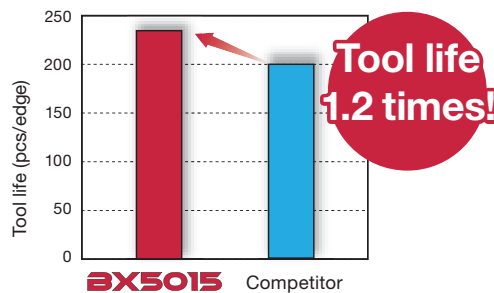
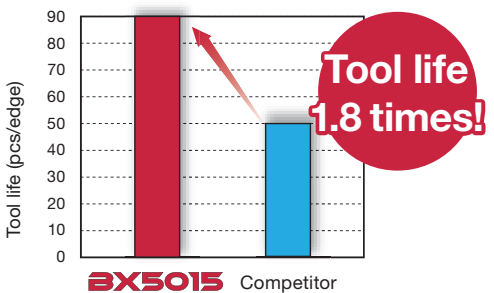
ISO	Workpiece material	Grade	Cutting speed V_c (m/min)	Depth of cut a_p (mm)	Feed f (mm/rev)
K	Gray cast iron FC250, etc. 250, etc.	BX5015	100 - 700	0.05 - 0.5	0.05 - 0.3

CUTTING EDGE PREPARATION

Standard cutting edge preparation optimized for low-speed gray cast iron machining



PRACTICAL EXAMPLES

Workpiece type		New Oil pump housing	New Bearing housing	
Insert		2QP-CCGW09T304SR	2QP-DNGA150404SR	
Grade		BX5015	BX5015	
		FC250 / 250	FC250 / 250	
Workpiece material				
Cutting conditions	Cutting speed: V_c (m/min)	190	500	
	Feed : f (mm/rev)	0.2	0.2	
	Depth of cut : a_p (mm)	0.3 x 2 pass	0.2	
	Machining	Wet	Wet	
Results	 <p>Tool life 2 times!</p>		 <p>Tool life 2 times!</p>	
	<p>Despite cutting speed limitations during I.D. machining of irregular-shaped workpieces, BX5015 provided double the tool life of competitor products through superior low-speed wear resistance.</p>		<p>Despite cutting speed limitations caused by the irregular shape and height of the workpiece, BX5015 delivered double the tool life of the competitor through excellent low-speed wear resistance.</p>	
Workpiece type		New Flywheel housing	New Flywheel	
Insert		2QP-CNGA120404SR	2QP-CNGA120404SR	
Grade		BX5015	BX5015	
		FC250 / 250	FC250 / 250	
Workpiece material				
Cutting conditions	Cutting speed: V_c (m/min)	180 - 300	200 - 240	
	Feed : f (mm/rev)	0.12 - 0.3	0.2 - 0.3	
	Depth of cut : a_p (mm)	0.3 - 3	0.1	
	Machining	Wet	Wet	
Results	 <p>Tool life 1.2 times!</p>		 <p>Tool life 1.8 times!</p>	
	<p>Despite cutting speeds varying from $V_C = 180$ to 300 m/min, BX5015 delivered 1.2 times longer tool life than competitor grades, thanks to its excellent low-speed wear resistance.</p>		<p>In the machining of large components where higher cutting speeds are restricted, BX5015 demonstrated superior wear resistance, delivering 1.8 times the tool life of the competitor grade.</p>	

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