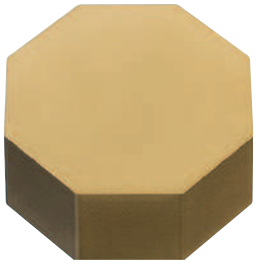
CBN (SINTERED CBN)



- MB710 and MB730 for cast iron finishing.
- BC5030 for high speed machining of cast iron.
- The combination of the BC5030 insert geometry and the AOX cutter allows the use of up to 16 corners per insert, enabling cost effective high efficiency machining.

SELECTION STANDARD / RECOMMENDED CUTTING CONDITIONS

FINISHING

Work Material		Structure	Cutting Speed (m/min) 250 500 750 1000 1250	Feed (mm/tooth)	Depth of Cut (mm)	Coolant
Grey Cast Iron	DIN GG25	Ferritic + Pearilitic	MB710 / MB730	—0.3	—0.5	Dry
	DIN GG30	Pearilitic				

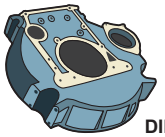
ROUGHING

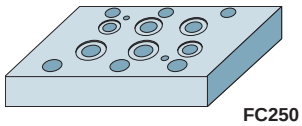
Work Material		Structure	Cutting Speed (m/min) 250 500 1000 1500 2000	Feed (mm/tooth)	Depth of Cut (mm)	Coolant
Grey Cast Iron	DIN GG25	Pearilitic	BC5030	—0.15	—3.0	Dry

FEATURES AND BASE

Grade	Application	Features	Main Component	Coating Layer
MB710	For General Cutting	General purpose grade with well balanced wear and fracture resistance.	CBN TiC Al_2O_3	—
MB730	For High Speed Cutting	Has the largest CBN content and therefore displays good thermal conductivity. It is suitable for the high temperatures that are generated in high speed cutting.	CBN (High Content) Co Base Alloy	—
BC5030	For high-speed machining at large depths of cut High-speed interrupted machining at large depths of cut	High CBN content and high thermal conductivity. The whole insert is composed of sintered CBN. This enables high speed, high efficiency machining at larger depths of cut. The coating also ensures easy recognition of used corners.	CBN AlN	TiN

APPLICATION EXAMPLES

Tool		AOX445R10008D
Insert		SL-ONEN120404ASN (BC5030)
Machine		Machining Centre
Workpiece		 DIN GG25
Cutting Condition	Cutting Speed (m/min)	1200
	Depth of Cut (mm)	2.8
	Width of Cut (mm)	70
	Table Feed (mm/min)	3057
	Feed per Tooth (mm/tooth)	0.1
Result		10 times longer tool life and 4 times higher efficiency than ceramics. Excellent machining with a surface finish of Ra < 1.6μm

Tool		NF10000R0408D (MB730)
Workpiece		 FC250
Component		Hydraulic component
Cutting Condition	Cutting Speed (m/min)	1800
	Feed (mm/tooth)	0.1
	Table Feed (mm/min)	4584
	Depth of Cut (mm)	0.05
	Cutting Width (mm)	90
Coolant		Dry cutting (Wet cut at previous process)
Axial Runout (mm)		Below 0.005mm
Result		Compared to the competitor item, wear was reduced offering longer tool life while maintaining higher surface finishes.