

MACHINE HIGH ALLOY MATERIALS WITHOUT THE FEAR OF PREMATURE EDGE FRACTURE

Tailored CBN composition designed for machining high chromium irons and steels

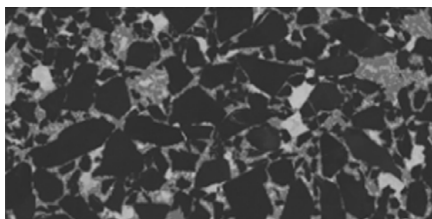
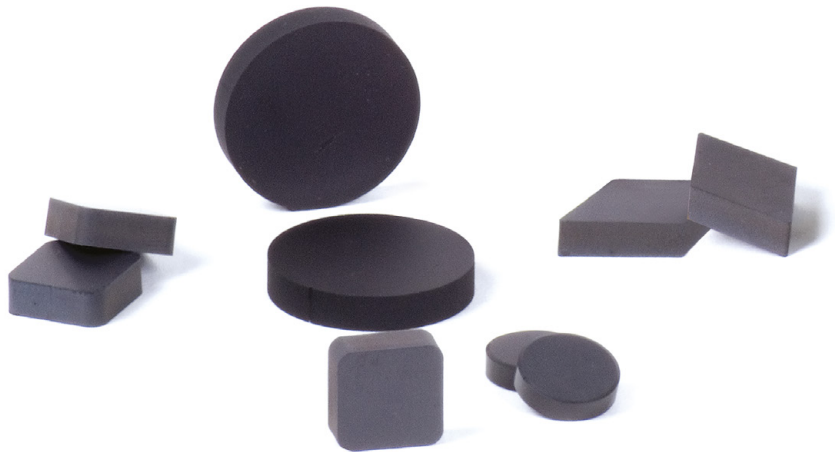
Hyperion BZN® 7300S Benefits

- Chemical wear resistance and fracture toughness needed to perform in difficult-to-machine materials
- Able to complete long cutting lengths with aggressive depths of cut, which is critical on large work pieces such as slurry pump housings and impellers.

Applications for BZN® 7300S

Grade BZN 7300S has been successfully deployed in the following applications:

- Machining of slurry pumps and components
- High alloy steel roll turning
- Roughing and finishing of high strength steel components
- Turning of high speed steels
- Wet or dry applications
- Ideal for machining:
 - White iron
 - Chilled cast iron
 - Grey cast iron
 - High speed steels
 - High chromium iron
 - Bearing steels.



PHYSICAL AND MECHANICAL PROPERTIES

Hyperion Grade	Composition % by Weight		Average CBN Grain Size (µm)	Density (g/cm ³)
	CBN	Ceramic Binder		
BZN 7300S	75	25	6	3.5

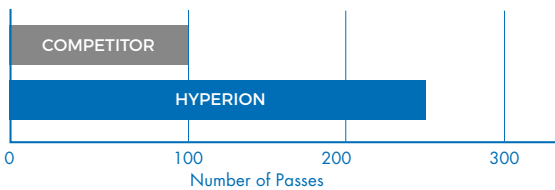
All data shown are typical values.



OPTIMIZED PARTICLE DISTRIBUTION SUPPORTS HIGHER CHIP LOADS, PROVIDING PRODUCTIVITY BOOST

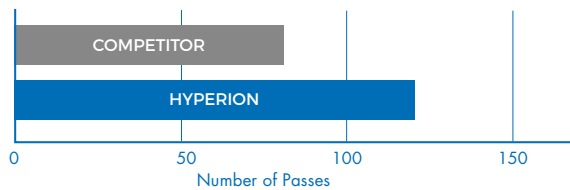
Qualified application results:

Bore Turning of Bearing



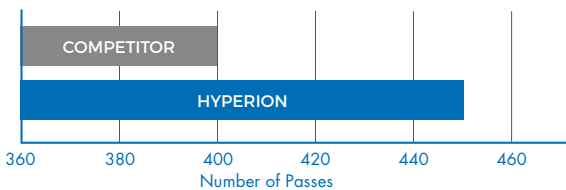
- Continuous cutting
- Workpiece Material: AISI 1050 carbon steel
- Cutting Speed (m/min): 180
- Depth of Cut (mm): 0.15
- Feed Rate (mm/rev): 0.24

Transmission Pulley Turning



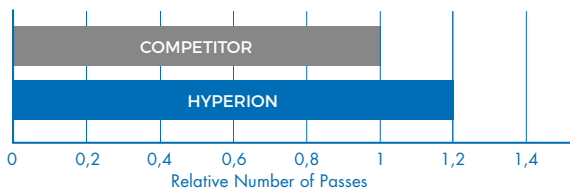
- Continuous cutting
- Workpiece Material: High strength steel
- Cutting Speed (m/min): 180
- Depth of Cut (mm): 0.25
- Feed Rate (mm/rev): 0.18

Rough Turning of Clutch



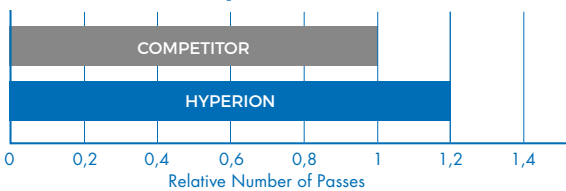
- Mild interruption cutting
- Workpiece Material: 20Cr4 carbon steel
- Cutting Speed (m/min): 100
- Depth of Cut (mm): 0.3
- Feed Rate (mm/rev): 0.15

Spindle Hub, Turning



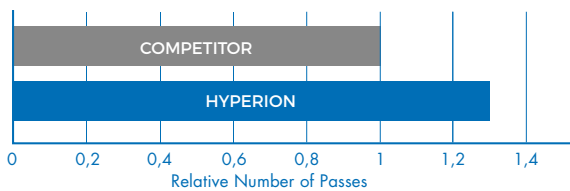
- Continuous cutting
- Workpiece Material: SAE 1055 carbon steel
- Cutting Speed (m/min): 150
- Depth of Cut (mm): 0.1
- Feed Rate (mm/rev): 0.1

Face Turning of a 1.8-m Diameter Impeller



- Continuous cutting
- Workpiece Material: High chromium white iron
- Cutting Speed (m/min): 170
- Depth of Cut (mm): 3.5
- Feed Rate (mm/rev): 0.2

Milling of Slurry Pump Shell



- Milling
- Workpiece Material: High chromium white iron
- Cutting Speed (m/min): 170
- Depth of Cut (mm): 2.5
- Feed Rate (mm/rev): 0.3

Availability

Semi-finished (as EDM cut) inserts.

For a list of available inserts and dimensions, please visit our web site and select [PDF Downloads](#).



Full Round Blanks – 64.0 mm usable diameter available in thicknesses of 1.0, 1.6, and 2.0 mm.
Cut Tips - available in thicknesses of 1.0, 1.6, 2.0, and 4.9 mm.

Please contact your [Hyperion salesperson](#) for more details about this offer.