

The Product Catalogue

---- From Nina

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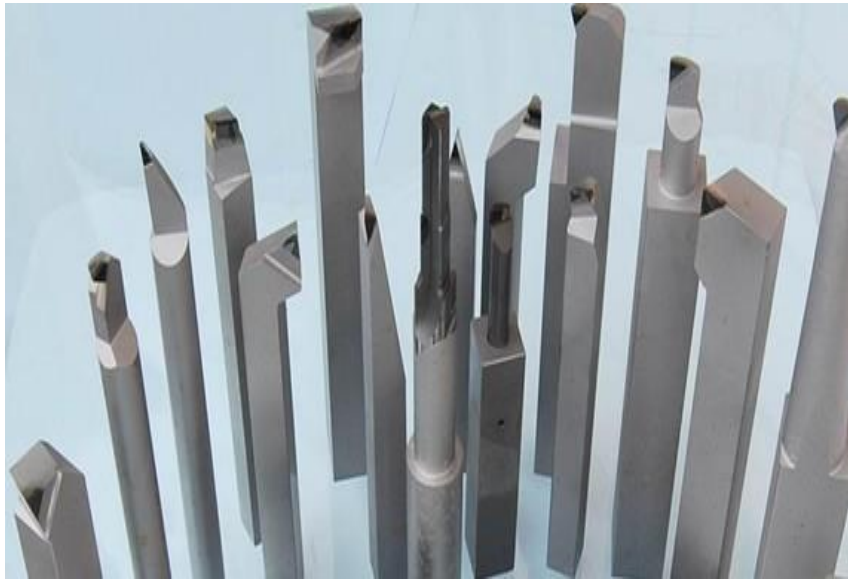
Website: <http://www.zy-superhardtools.com>

---ZY Tools Tech International Department

PCBN (Cubic Boron Nitride) does not react chemically with iron and is ideal for tools machining hard ferrous metal space (HRC 45~80) such as: high speed steel, bearing steel, cast iron, etc. PCBN is typically used to machine brake discs, engine blocks, engine cylinder liners, brake drum, flywheels, valve seats/guides, gears, mold and die parts etc

- CBN inserts Characteristics:
 - (1) Good bond strength between the composite CBN Layer and the tungsten carbide substrate
 - (2) High abrasive resistance
 - (3) Good transverse rupture strength resistance
 - (4) Good chemical stability
 - (5) Uniform dimensional precision
 - (6) Consistent Quality
- Applications:
 - (1) Turning of cast iron
 - (2) Powdered metals,
 - (3) Exotic materials and heat resistant alloys
 - (4) High speed milling of gray cast iron
- Solid CBN characteristics:
 - (1) Solid CBN
 - (2) Good wear resistance
 - (3) Two sides can be used as edges
 - (4) High thermal resistance
 - (5) Excellent fracture resistance
- Applications:
 - (1) High speed turning and milling of gray cast iron
 - (2) Turning of chilled iron, nickel-based iron and ductile iron
- Note : Nonstandard products-i.e.. Those not conforming to any listed specification may be supplied on request.

CBN Inserts and tools

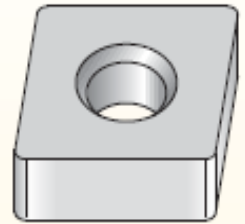


Ø26MM
Ø25MM
Ø19MM
Ø12MM

■ PCBN insert formats

Solid Inserts

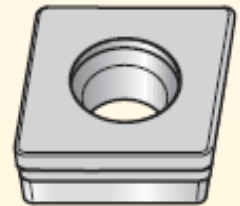
- Inserts are made only from PCBN.
- No material joint.
- Best heat absorption capacity.
- Can work at highest temperatures.



solid

Full-Face Inserts

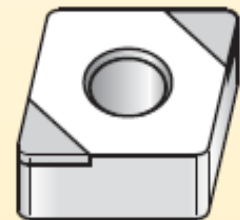
- Inserts are made from a presintered carbide/PCD or PCBN joint.
- Elimination of the brazing joint. Less delamination.
- Better heat absorption capacity.
- Can work at higher temperatures than tipped tools.
- Facilitate larger depth of cut compared to the same size tipped insert.
- The blanks are available with “A” and “W” ISO-style pin-lock holes.



full-face

Tipped Inserts

- Require a carrier and substrate for the insert.
- The tips are brazed to the substrate. Various brazing methods are applied.
- The substrate has to have a pocket that will accommodate and support the tip.
- In these types of tools, the braze joint represents the weak link, so the brazing operation is very important and should be carefully controlled and executed.
- The main advantage of tipped tools over full-faced inserts is the lower cost.



tipped

:: Application

Bearing



:: Application

Pump



:: Application

Superhard Processing

Mining Machinery



:: Application

Milling



:: Application

Metallurgy Roll



:: Application

Auto Parts



:: Application

Gear Machining

