

VSM BA970X CBN products  
for processing extremely hard and  
brittle materials

# For maximum performance on the hardest materials: VSM CBN abrasives BA970X – the new SUPER-ABRASIVE product

CBN (cubic boron nitride) is chemically inert and, after diamond, the hardest abrasive grain that is available. Our new VSM CBN abrasives are especially suitable for processing hardened steel (>55 HRC), ceramic materials, high-speed steel, nickel-based superalloys and chilled castings etc.

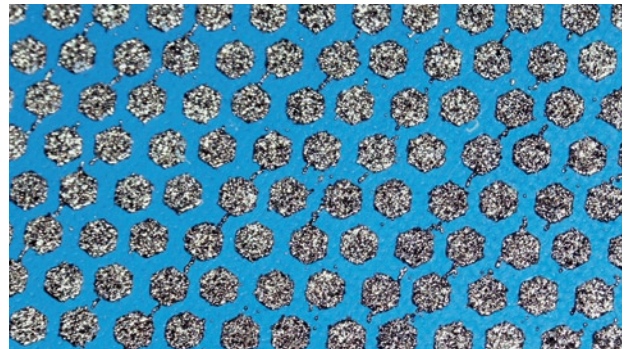
## Very long service life Extremely hard materials can be machined

### High stock removal rate

- due to patent-registered manufacturing method
- due to selective and first-class grain quality
- due to the use of special cloth
- due to innovative grain and belt bonding technology

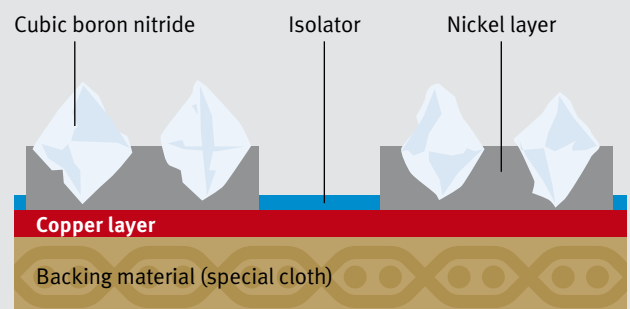
## Consistent surface quality Suitable for dry and wet grinding

- due to excellent grinding power of the cubic boron nitride
- due to the avoidance of thermal damage to the parent material by cool grinding



## VSM BA970X CBN belt

- Grain type:** cubic boron nitride  
**Backing material:** aramid cloth  
**Bonding:** electroplated (nickel)  
**Coverage:** dot pattern  
**Colour:** blue  
**Fabricated width:** 325 mm



# Application example

Workpiece: wire drawing unit  
 Material: surface nitride treated casings for the conductor industry  
 Dimension: 1,000 x 300 mm

## Grinding conditions

Grinding machine: cylindrical semiautomatic machine  
 Contact wheel Ø: 200 mm  
 Hardness: 80–90° Shore A  
 Tothing: 1:1.5  
 Cutting speed: 22–25 m/s  
 Pressure force: support/compound slide rest  
 Belt dimension: 40 x 1,260 mm  
 Grit: VSM CBN 251 µm  
 Additives: dry grinding



## Grinding task

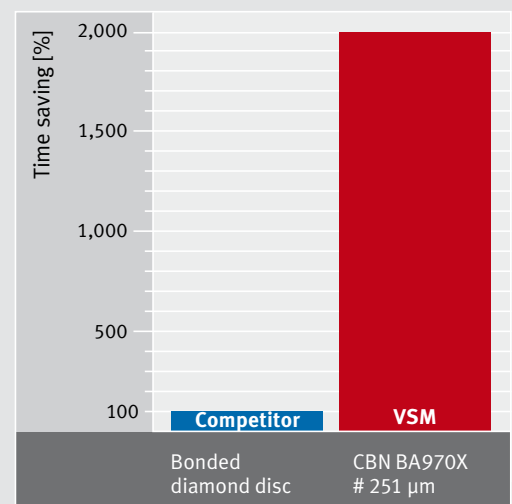
Cylindrical grinding of wire drawing unit and conditioning of nitrified surfaces

# Result

## Benchmarking

### VSM BA 970C CBN belt

- **machining time:**  
 VSM BA970X: 0.5 hours  
 Competitor's bonded diamond disc: 10.0 hours
- **20-fold time saving**
- **reduction of handling charges per workpiece**
- **increase of productivity**



# Advantages of VSM BA970X

- processing of hardened steel
- processing of carbonic metals
- processing of porcelain/ceramic
- very long service life
- high stock removal rate
- consistent surface quality
- suitable for dry and wet grinding\*

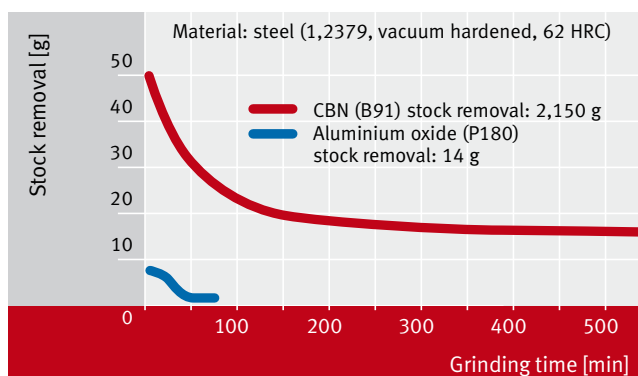
Make use of the remarkable potential of BA970X on your grinding process!

We are happy to advise you how to optimise the quality and cost-effectiveness of your specific process by using BA970X.

\* To obtain optimal service life, VSM Diamond and CBN products should be used with less-than-standard amounts of coolant (e.g. water, emulsion, oil).

Technical data	
<b>Grain type:</b>	cubic boron nitride (CBN)
<b>Grit:</b>	251 µm (60-80), 126 µm (120), 91 µm (180), 64 µm (240-320), 46 µm (400)
<b>Backing material:</b>	special cloth with copper layer (pat.-reg.)
<b>Bonding:</b>	galvanic-bonded
<b>Fabricated width:</b>	325 mm

Recommended applications	
<b>Material:</b>	hardened steel (>55 HRC), high-speed steel (HSS), thermal sprayed alloys (nickel-, cobalt-, iron-based), chilled castings, porcelain
<b>Workpiece:</b>	rolls and cylinders of hardened steel, castings, porcelain, carbonic metal parts
<b>Operation:</b>	automatic grinding, robotic grinding, backstand grinding, grinding by hand



Our worldwide locations can be found at  
[www.vsmag.de](http://www.vsmag.de)

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