NORTON
SAINT-GOBAIN

WINTER

Transforming surfaces ...and beyond

VITRON™

FOR UP TO **30%** MORE (TOOL) LIFE

"Top results in precision, performance and wheel life ... save us a lot of time by reducing the number of dressings and setups. Perfect."

nortonabrasives.com

SAINT-GOBAIN

NORTON SAINT-GOBAIN WINTER

VITRON7™

IMPROVES TOOL LIFE BY UP TO **30%**

Vitron7 is a new high-performance cBN vitrified bond featuring a very regular distribution of the cBN grains. This reduces variations in grinding results and increases the number of parts per dressing, resulting in a **reliable 30% longer tool life** while significantly reducing the cost per part and overall manufacturing costs.

ID Grinding Applications:
Bearing bore and race grind

OD Grinding Applications:
Steel and cast iron cam, crank and E-rotor shaft

VITRON7 – APPLICATION RANGE

Automotive, Automotive Suppliers, Gear Manufacturers

- E-rotor shafts
- Crankshaft
- Camshaft
- Gear shaft
- Centreless applications
- Internal grinding (ID, e. g. bores in gears, crankshafts, bushings, etc.)

VITRON7 – FEATURES AND BENEFITS

- Improved tool life
- Higher productivity
- Consistent workpiece quality
- More parts per dress
- Fewer tool changes
- Reduced variation of grinding results
- High bond strength
- Homogeneous wear – less friction
- Less thermal damage

VITRON7 – CUSTOM MADE PERFORMANCE

Dimensions

Vitron7 is manufactured as MTO (made to order) and meets your exact requirements. We can provide all common shapes and sizes of cBN wheel.*

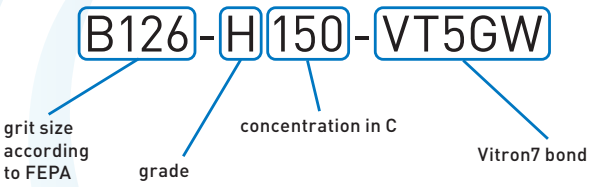
D: 6 mm to 900 mm
U: 3 mm to 450 mm

*Viability will be verified individually.

Specifications

Grit sizes: B46 - B213
Concentrations: C125 - C184 (V320 - V460)

Example



VITRON7 – EXAMPLES OF TOP PERFORMANCE

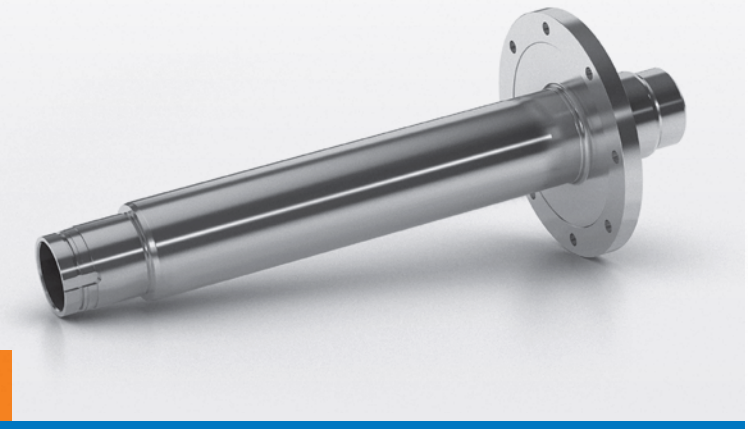
Case Study 1 – EV Shafts

Application
OD grinding, EV shafts

Workpiece
E-rotor shaft: 20MnCr5, 61 HRC
Stock removal: ae = 0,3mm on Ø
Roughness: Ra 1,6µm
Roundness: 20µm

Results
3x Plunging: Wheel speeds: vc = 95 m/s
Workpiece speed: nw = 340 rpm

Traverse grinding
Traverse rate: vfa = 480 mm / min
Stock: 3 × 6 µm, 1 spark out
Grinding time: ts = 60 s



Vitron7-specification: B181 VITRON7

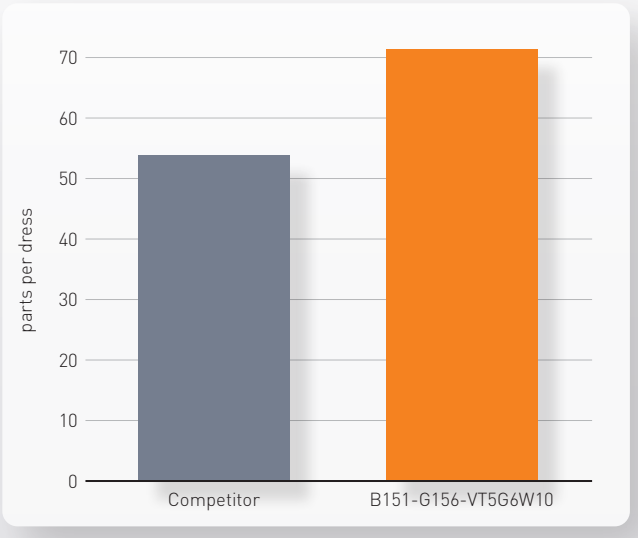
Case Study 2 – Crankshaft

Application
Plunge grinding, mains
Standard specification: Competitor
Grinding wheel geometry: D750 U50

Grinding
Grinding wheel speed: vc = 62 m/s
Spec. material removal rate: Q'_{max} = 10 mm/mm·s

Dressing
CNC-dresser
Speed ratio: q_d = 0.93
Infeed: 10 × 4 µm

Results
Parts per dress (ppd): 54
Dressing criterion: burn (too fine surface finish)



Vitron7-specification: B151-G156-VT5G6W10
Improvement
Parts per dress (ppd): 71 (+30%)

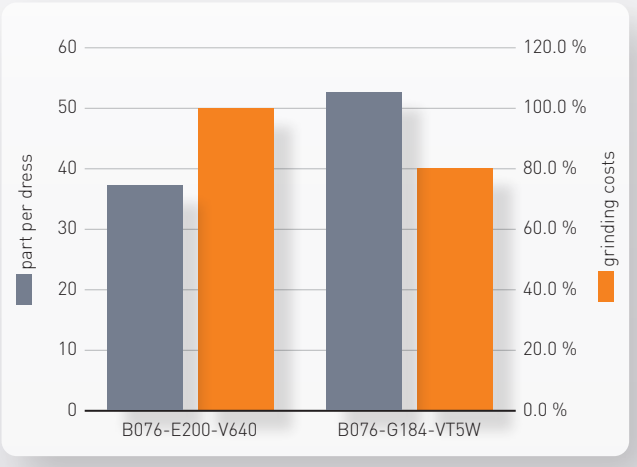
Case Study 3 – Hydraulic valve lifter

Application
ID grinding, hydraulic valve lifter
Standard specification: B076-E200-V640
Wheel geometry: D11.5 U28

Grinding
Grinding wheel speed: vc = 25 m/s
Spec. material removal rate: Q'_{max} = 2.3 mm/mm·s

Dressing
CNC-dresser
Overlap: U_d = 15
Infeed: 1 × 7 µm

Results
Parts per dress (ppd): 38
Dressing criterion: Cylindricity



Vitron7 specification: B076-G184-VT5W
Improvement
Parts per dress (ppd): 52 (+30%)

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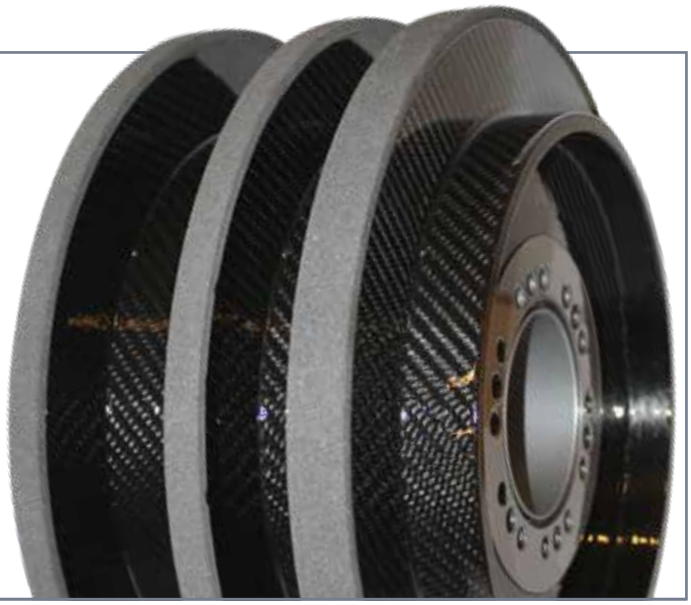
CARBON FORCE™

All Vitron7 OD wheels are available on Norton Winter Carbon-Force cores. CarbonForce proprietary, lightweight, carbon fibre cores, give you all the safety and performance-enhancing benefits of a precision superabrasive wheel – without the negative drawbacks of a heavier (up to 75% heavier!) steelhubbed wheel.



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