

INTERNAL GRINDING WHEELS

**NORTON
ADVANTAGE**

Internal grinding finds a large number of applications in bearing and automobile industry. Typical applications are bore grinding of inner rings, bore grinding of gears, track grinding of outer rings and steering nuts etc.



The significant difference between cylindrical grinding of internal & surfaces is the Wheel to Work conformity. In Internal grinding, on account of grinding of internal surfaces the arc of contact and thereby the conformity between the wheel and work-piece, is substantially higher.

In Internal Grinding, high Wheel-Work conformity results in

- ▶ Large number of grains in contact with the work-piece > Lower Force per unit grain
- ▶ Grain and bond fracturing gets hampered due to low Force per grain and can lead to more rubbing and sliding of the abrasive while grinding (Glazing)
- ▶ Poor coolant availability in the grinding zone
- ▶ The work material debris (chips) have a higher probability to be entrapped between the wheel and the work, leading to their increased frictional effect
- ▶ High heat generation due to poor lubricity, higher friction and inability to remove heat effectively from grind zone

Industry	Steel	Auto OEM	Auto Ancillaries	Cutting Tool	General Engg	Others	Tools & Dies	Tobacco
Usage	●	●	●	●	●	●	●	●
	● Primary Use		● Secondary Use					

TYPICAL APPLICATIONS

- ▶ To give dimensional tolerances for engineering components like Bearings, Gears and other Automobile components
- ▶ To give required surface finish for these components

STOCK AVAILABILITY TABLE

Internal Grinding Wheels

Size Dia x Thk x Bore	Std. Pkg.	Specification	Stock No.
13 x 13 x 6.35	100	32A 60 M8 VBE	V1
20 x 20 x 6.35	100	32A 60 M8 VBE	V2
25 x 25 x 6.35	50	32A 60 M8 VBE	V4
25 x 25 x 6.35 1-13 x 16	50	32A 60 M8 VBE	V5

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	FEATURES				BENEFITS
	Abrasive	Grit	Grade	Bond	
BEST	ES, TG	80-120	I-N	VS3	<ul style="list-style-type: none"> ▶ Substantially reduced dressing frequency ▶ For higher material removal rate applications
BETTER	SG, XG	46-120	J-N	VS3	<ul style="list-style-type: none"> ▶ For improved process capacity on size ▶ Recommended for rigid machines
GOOD	32A, 35A, 38A	36-180	J-N	VIN, VBE	<ul style="list-style-type: none"> ▶ Sulphur treatment available ▶ Recommended for optimum performance

TechTips



- ▶ Use quill material with high modulus of Elasticity and highest possible diameter
- ▶ While using rotary dressers, the Dress Ratio should be maintained constant
- ▶ Use of abrasives like XG, TG, ES on rigid machines
- ▶ Use of Threaded Spindle mounted point design while grinding small bore diameter
- ▶ New wheel diameter should be 80-90% of the diameter to be ground
- ▶ Wheel diameter change (from new to discard size) to be kept minimum possible.