



GRIND TODAY; HEAR TOMORROW; OUTPERFORM ALWAYS.

We heard you – loud and clear now. You are continually being challenged to do more with less – produce more perfect parts with less cost, less time, less inventory, less reported safety incidents, less downtime for changeovers... Using fewer, more productive wheels, on a wider variety of products is guaranteed to help conquer your challenges. We built solutions to all of your challenges into Norton Century45 technology: reduced cycle times (up to 50%), extended wheel life, and the versatility to effectively grind a wide range of materials.

Knowing that safety is always a primary concern, Norton R & D also took Norton Century45 technology to the next safety level. This new, industry-unique technology offers a significant reduction in noise level to help you meet OSHA standards even while grinding hard-to-grind alloys such as Inconel 718. Norton Century45 wheels are available with ceramic, aluminum oxide, silicon carbide grain and abrasive blends to maximize your grinding and safety efficiency.

KEY APPLICATIONS

BAR GRINDING | FASTENER AND TOOL GRINDING |
AUTOMOTIVE COMPONENTS | BEARING | AEROSPACE

www.nortonabrasives.com

KEY MARKETS

HIGH PRODUCTION GRINDING | AUTOMOTIVE COMPONENTS |
BEARING | JOB SHOPS

FEATURES & BENEFITS

- Wheel life increase from 30%–100+% vs. standard products
- Over 30% improvement of stock removal
- Up to 50% reduction in cycle time
- Less grinding noise significantly improves operator safety
- More versatility to grind a wide range of materials
- Improved surface finish on the part

(Not) Hearing Is Believing:

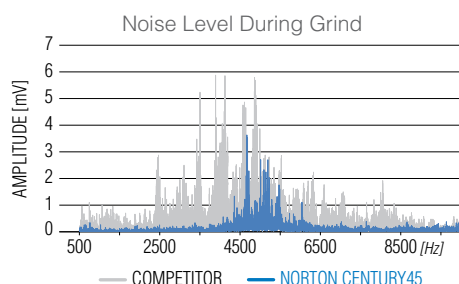
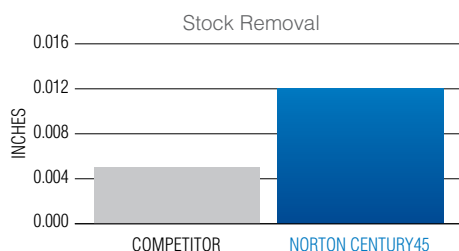
The Norton Century45 wheel was shown to reduce the grinding noise by a staggering 23.2 dB. To put this reduction in context, many commercially-available foam ear plugs offer Noise Reduction Ratings in the range of 25 to 28 dB.

All Norton Century45 wheels are custom made to your exact requirements. Contact your Norton representative to learn how these wheels can benefit your operation.

Case Study #1

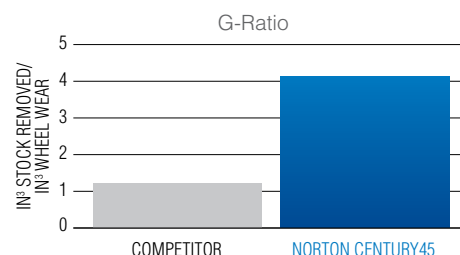
APPLICATION:	Centerless Bar Grinding
MATERIAL:	Inconel, alloys
PART DIAMETER:	0.5"-1.75"
PART LENGTH:	28 feet
COMPETITOR WHEEL:	24" x 20" x 12" 80-grit silicon carbide resin wheel
NORTON TEST WHEEL:	32CA60-PB45 (10"), 32CA80-PB45 (10")
RESULTS:	The Norton Century45 wheel was able to increase stock removal from 0.005" per pass to 0.012" per pass, showing an improvement of 140%. The Norton wheel also produced a 100% increase in wheel life while offering a 50% reduction in cycle time. Additionally, it was observed that the Norton wheel significantly reduced the noise during grind.

COMPONENTS	STANDARD PRODUCT	NORTON CENTURY45	NET BENEFIT
Wheel Cost / Annum	\$16,813.88	\$7,686.93	\$9,126.95
Machining Cost / Annum	\$313,868.72	\$224,564.34	\$89,304.04
Wheel Change Cost / Annum	\$672.56	\$302.65	\$369.91
Components / Wheel (Max)	1,667 wheels	3,704 wheels	2,037 wheels
TOTAL COST:	\$331,355.00	\$232,554.00	\$98,801.00 (30% Savings)



Case Study #2

APPLICATION:	Centerless Bar Grinding
MATERIAL:	1045, stainless steel (300 series), copper
PART DIAMETER:	1"-2"
PART LENGTH:	10"-144"
COMPETITOR WHEEL:	24" x 8" x 12" 46-grit aluminum oxide resin wheel
NORTON TEST WHEEL:	3NQAC54-RB45 Norton Quantum ceramic alumina resin wheel
RESULTS:	With the Norton Century45 wheel, there was a 243% increase in G-ratio over the competitive wheel. An improved surface finish was also observed across the bar length.



BEST Norton Century45 in Ceramic Blends; 3NQMC-B45

BETTER Norton Century45 in AO/SC Blends; 32AC-B45

GOOD – Defer to BETTER Product

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