

NORTON

SAINT-GOBAIN®

WINTER



BACKGRINDING WHEELS

AGGRESSIVE ON MATERIAL REMOVAL WHILE SOFT ON FINISH

New Prisma Coarse Fixed Abrasive Vertical Spindle (FAVS) wheels allow for high stock removal and long wheel life while maintaining a high quality surface finish when grinding semiconductor wafers. With a patent-pending design these free-cutting wheels require extremely low forces minimizing the risk of sub-surface damage. Able to handle either wire sawn or laser sawn wafers, these wheels tackle even the sharpest features while achieving fast stock removal.

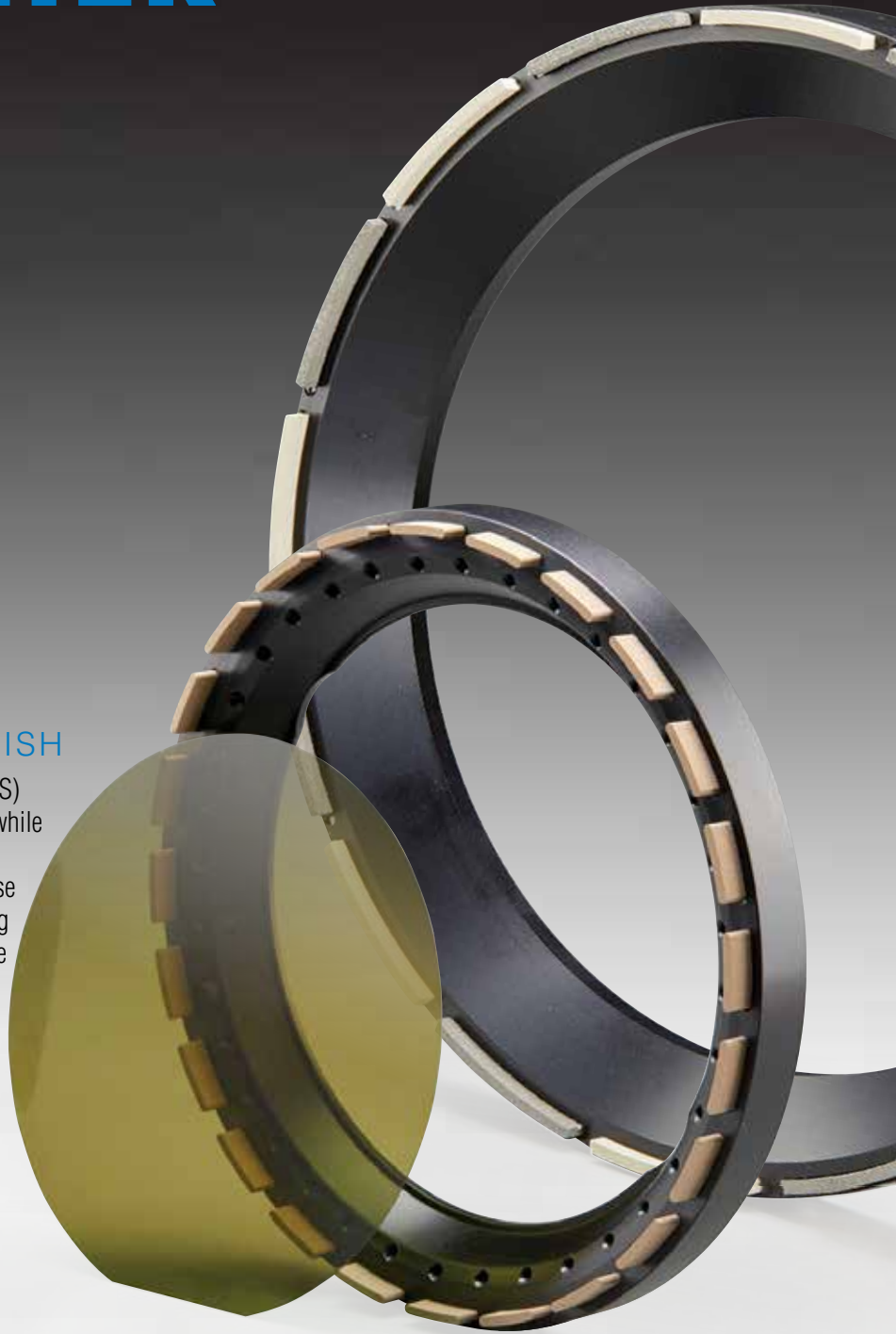
KEY MARKET SEGMENTS

SEMICONDUCTOR WAFER MANUFACTURING

KEY MATERIAL SEGMENTS

SILICON CARBIDE, AMBER, ALUMINA, STRUCTURAL CERAMICS, ADVANCED CERAMICS

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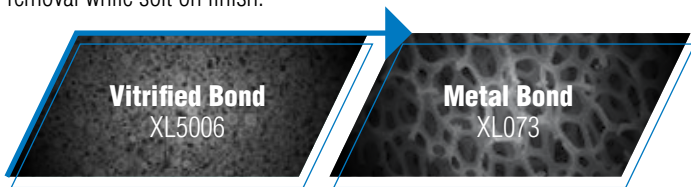


FEATURES & BENEFITS

- Grinds multiple incoming surface finishes (wire sawn, laser sawn, lapped, ground, polished) on wafer and boule
- Offers high stock removal for optimized productivity
- Easily grinds sharp features while maintaining good wheel life
- Lower grinding power for reduced sub-surface damage
- Combines the long life and superior finish of metal and vitrified bonds

Vitrified and Metal Bond

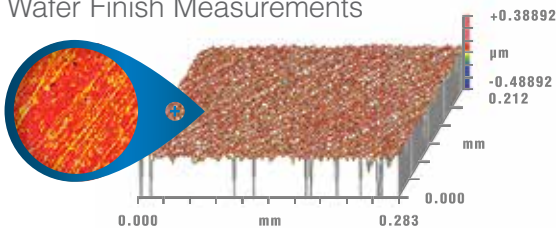
Hybrid wheel features alternating vitrified and metal bonded segments offering the benefits of both bond types in a single wheel - aggressive on material removal while soft on finish.



Specifications

- COMMON WHEEL SIZES:** 8", 10", 11", 12"
- GRIT SIZE:** From 320 mesh to 5000 mesh
- BOND:** Metal, Vitrified
- CUSTOMIZATION:** Size/Specification can be engineered upon request for optimized process independent of machine tool platform
- OEMS:** Revasum, Disco, Speedfam, Accretech, Okamoto
- *Patent Pending

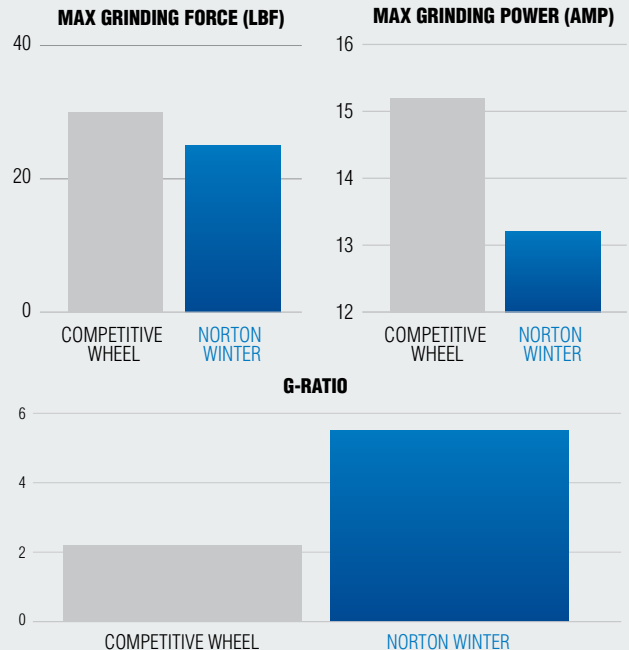
Wafer Finish Measurements



Ra	269	A	Size X	0.28	mm	Filter High Wavelen:	µm
Rz	7717	A	Size Y	0.21	mm	Filter Low Wavelen:	µm
Rv	8778	A					
Peak	3889	A	Removed:	Cylinder			
Valley	-4009	A	Trimmed:	0			

Case Study

- APPLICATION:** 150 mm 4H-N SiC Wafer
- MACHINE:** Revasum 7AF-HMG
- NORTON PRODUCT :** Prisma Coarse
- COMPETITOR:** Competitive Backgrinding Wheel
- RESULTS:**
- The Prisma coarse wheel removed all damaged surfaces of the sliced wafers from Laser separation/Wire saw/Lapped
 - Stable grinding power achieved with 10+ wafers ground
 - More than 2X life versus the competitor with lower grinding force/power



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