FEATURED PRODUCTS



NORTON QUANTUM (5NQ)

BEST CHOICE FOR VERSATILITY, MAXIMUM PERFORMANCE AND COST SAVINGS

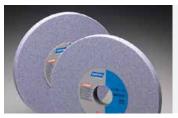
FEATURES	BENEFITS
Revolutionary, engineered ceramic grain shape and chemistry with proven bond technology – green	 Versatile; for all low, medium and high force applications ranging from cast iron, to stainless steel and hard-to-grind Inconel and titanium Perform well on old and new machines 33% to 100% longer life vs. competitive ceramic products 30%+ higher metal removal rate 15%+ lower threshold power Lowest total grinding costs
■ NEW! Coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond	Highest productivity; lowest cycle and process time; most accurate finished parts



NORTON SG

BEST CHOICE FOR HIGH PRODUCTIVITY, LOW TOTAL PER-PART GRINDING COST

FEATURES	BENEFITS		
High-performance seeded gel ceramic aluminum oxide abrasive	 Fast stock removal, cool, superior cutting 3X - 5X more life than aluminum oxide wheels Double rough stock removal rate versus conventional abrasives 		
Self-sharpening abrasive	Less burn, less dressing; very consistent performing wheel		
■ High performance VS and VSP bonds	■ Versatile; exceptional form holding		
NEW! coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond	Highest productivity; lowest cycle and process time; most accurate finished parts		
Provide sharp edge on tools and dies	Longer life of tools and dies in production		
5SG – durable Norton SG and aluminum oxide blend – blue	High stock removal rates, excellent productivity, long wheel life, low overall grinding cost		
 NORPOR 3SGR – Norton SG and 48A abrasive blend with VP2 porous bond – purple 	Maximum productivity in heat-sensitive, heavy stock removal operations		



NORTON 32A

BETTER CHOICE FOR MEDIUM TO HEAVY STOCK REMOVAL

FEATURES	BENEFITS	
 Sharp monocrystalline aluminum oxide grain – the industry's most versatile abrasive – purple 	Free cutting on a wide range of applications and materialsOutstanding form holding	



NORTON 38A

GOOD CHOICE FOR LIGHT GRINDING OF TOOL STEELS.

FEATURES	BENEFITS		
■ White, friable abrasive grain	Cool and burn-free cutting; ideal for heat-sensitive applications with light to moderate feed rates		
■ Consistent quality	■ Excellent balance and dimensional accuracy time after time		
■ NORPOR 38A – most friable, aluminum oxide abrasive with VP2 porous bond – white	Exceptionally cool cutting in light pressure grinding applications, or heat-sensitive applications		
■ Versatile	■ Ideal for use across a broad variety of tool steels		



NORTON GEMINI ALUMINUM OXIDE

GOOD CHOICE FOR USE ON GENERAL PURPOSE APPLICATIONS; ECONOMICAL

FEATURES	BENEFITS		
Durable aluminum oxide abrasive and strong vitrified bond – Blue	 Consistent stock removing performance on narrow to medium contact areas; cool cutting 		
■ Versatile, economical	Ideal when numerous small jobs are run on one machineThe choice when initial price is the main purchasing criterion		

ID and Race Wheels



For more program details, ask your Norton sales representative to review the First Line VFL ID & Race Wheel Brochure #6981 with you.

ID and Race Wheel FastTrack Availability

Type 01 Straig	ght 💮 💮					
Diameter	r: 0.164" thru 4.532"	Thicknes				
Type 05 Rece	ssed One Side					
Diameter	r: 0.407" thru 4.625"	Thickness: 3/16" thru 3.100"				
ABRASIVE	25A, 32A, 38A, 48A, 53A, 57A	5TG**	Quantum (NQ) 1SG, 3SG, 5SG	32AA		
GRIT	46* - 120	80/1, 120/1	36 - 150	46 - 80		
GRADE	J - P	I - M	I - N	I - M		
STRUCTURE	6	8	6	6		
BOND	VFL	VFL	VFL	VFL		
SPEED	8,500 SFPM***					
TREAT 22	Available for Quantu	Available for Quantum (NQ) 32A, and 53A				

* 46 GRIT ONLY AVAILABLE IN .312 DIAMETER ** 5TG IS AVAILABLE IN /1 COMBINATION ONLY

Vitrified First Line (VFL) ID and Race Wheel availability encompasses over 1,000 wheel sizes and most abrasive types. These high-performance wheels are made-to-order and shipped within two weeks of receipt of your order.

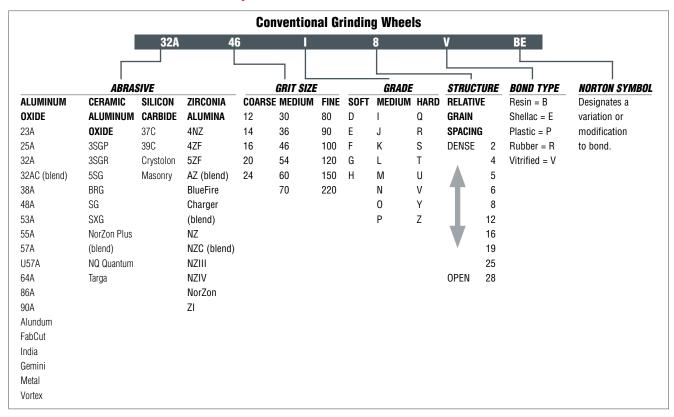
Additional dimensions and grinding faces are available as made-to-order products with 4-week lead-times.

Vitrified Wheels For Steel Applications



^{***} SPEEDS UP TO 12,500 SFPM BY REQUEST AND SAFETY APPROVAL

How to Read an Abrasive Product Specification

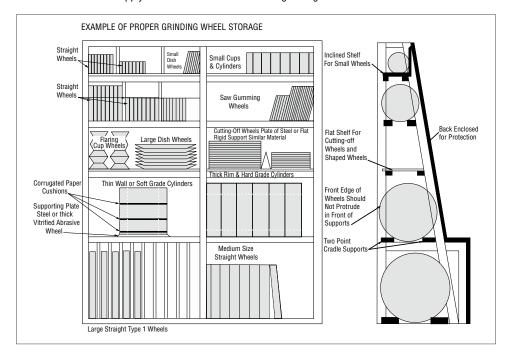


Shelf Life and Proper Storage of Grinding Wheels

It has always been Saint-Gobain Abrasives recommendation that resinoid bonded grinding wheels be used within 2 years from the date of manufacture. This recommendation assumes that resinoid bonded grinding wheels have been stored under ideal storage conditions. It might be true that under ideal storage conditions resinoid bonded grinding wheels can survive without any degradation in strength for well over two years. However, it is always wise to suspect any wheels over two years old and have them reinspected or re-speed tested to determine if there has been any degradation in strength. If the wheels are stored under less than ideal conditions, they might have a much shorter shelf life depending upon the severity of storage conditions. These same comments also apply to rubber and shellac bonded grinding wheels.

As for vitrified grinding wheels, the shelf life is less influenced by humidity and adverse storage conditions as compared to resinoid, rubber or shellac, but even vitrified grinding wheels do not have an infinite shelf life. The best procedure and the best rule of thumb is to have any wheel that is two years old or older re-speed tested and reinspected to ensure it is fit for use. The procedure for having this done and the charges will be explained by our Customer Service Department, but the cost of shipping as well as the cost of re-inspection is the customer's responsibility. Also, any wheels rejected or otherwise lost in the re-inspection process will also be the responsibility of the customer.

Keep in mind, however, that this procedure is good to verify the reliability of a product but must not be performed until you are ready to



consume the wheel. If wheels are sent back after the two year time frame for re-inspection and re-testing and then put back on the shelf, there is no telling how long they will be fit for use after that last inspection. Therefore, these wheels must be consumed as soon as is practical.