

FEATURED PRODUCTS



UPGRADED PERFORMANCE

NORTON QUANTUM (5NQ)

BEST CHOICE FOR VERSATILITY, MAXIMUM PERFORMANCE AND COST SAVINGS

FEATURES

- Revolutionary, engineered ceramic grain shape and chemistry with proven bond technology – green
- NEW! Coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond

BENEFITS

- 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
- Highest productivity; lowest cycle and process time; most accurate finished parts



UPGRADED PERFORMANCE

NORTON SG

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

FEATURES

- High-performance seeded gel ceramic aluminum oxide abrasive
- Self-sharpening abrasive
- High performance VS and VSP bonds
- NEW! coolest cutting, high-speed, precise form holding Vitrium 3 VS3 Bond
- Provide sharp edge on tools and dies
- 5SG – durable Norton SG and aluminum oxide blend – blue
- NORPOR 3SGR – Norton SG and 48A abrasive blend with VP2 porous bond – purple

BENEFITS

- Fast stock removal, cool, superior cutting
- 3X - 5X more life than aluminum oxide wheels
- Double rough stock removal rate versus conventional abrasives
- Less burn, less dressing; very consistent performing wheel
- Versatile; exceptional form holding
- Highest productivity; lowest cycle and process time; most accurate finished parts
- Longer life of tools and dies in production
- High stock removal rates, excellent productivity, long wheel life, low overall grinding cost
- Maximum productivity in heat-sensitive, heavy stock removal operations



NORTON 32A

BETTER CHOICE FOR MEDIUM TO HEAVY STOCK REMOVAL

FEATURES

- Sharp monocrystalline aluminum oxide grain – the industry's most versatile abrasive – purple

BENEFITS

- Free cutting on a wide range of applications and materials
- Outstanding form holding



NORTON 38A

GOOD CHOICE FOR LIGHT GRINDING OF TOOL STEELS

FEATURES

- White, friable abrasive grain
- Consistent quality
- NORPOR 38A – most friable, aluminum oxide abrasive with VP2 porous bond – white
- Versatile

BENEFITS

- Cool and burn-free cutting; ideal for heat-sensitive applications with light to moderate feed rates
- Excellent balance and dimensional accuracy time after time
- Exceptionally cool cutting in light pressure grinding applications, or heat-sensitive applications
- Ideal for use across a broad variety of tool steels



NORTON GEMINI ALUMINUM OXIDE

GOOD CHOICE FOR USE ON GENERAL PURPOSE APPLICATIONS; ECONOMICAL

FEATURES

- Durable aluminum oxide abrasive and strong vitrified bond – Blue
- Versatile, economical

BENEFITS

- Consistent stock removing performance on narrow to medium contact areas; cool cutting
- Ideal when numerous small jobs are run on one machine
- The choice when initial price is the main purchasing criterion

ID and Race Wheels



ID and Race Wheel FastTrack Availability

Type 01 Straight

Diameter: 0.164" thru 4.532"

Thickness: 0.150" thru 2.750"

Type 05 Recessed One Side

Diameter: 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 Quantum (NQ) 32A, and 53A			

* 46 GRIT ONLY AVAILABLE IN .312 DIAMETER
 ** 5TG IS AVAILABLE IN /1 COMBINATION, ONLY
 *** SPEEDS UP TO 12,500 SFPM BY REQUEST AND SAFETY APPROVAL

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

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

AVAILABILITY

TIER:
 BRAND:
 TRADENAME:
 ABRASIVE:

BEST
 Norton
NORTON SG
 Ceramic Alumina

BETTER
 Norton
32A
 Aluminum Oxide

GOOD
 Norton
38A
 Aluminum Oxide

SIZE (D x T x H)	MAX. RPM	MIN./STD. PKG.	SPEC.	PART #	SPEC.	PART #	MIN./STD. PKG.	SPEC.	PART #
Type 01 Straight									
2 x 1/2 x 3/8	16,235	10/50			32A60-KVBE	66243428214			
3 x 1/4 x 1/2	10,825	10/50			32A60-KVBE	66243528696			
3 x 1/2 x 3/8	10,825	10/50			32A60-KVBE	66243528825	10/50	38A60-JVBE	66243529032
3 x 1/2 x 1/2	10,825	10/50			32A60-KVBE	66243528828			
3 x 1 x 1/2	10,825						1/10	38A60-MVBE	66243529145
	10,825						1/10	38A80-MVBE	66243529146
4 x 1/4 x 1/2	8,120	1/10			32A60-KVBE	66243529532	1/10	38A60-KVBE	66243529777
	8,120						1/10	38A100-IVBE	66243529782
4 x 1/4 x 3/4	8,120	1/10			32A60-KVBE	66243529736			
4 x 1/2 x 1/2	8,120	1/10			32A46-KVBE	66243529845	1/10	38A60-KVBE	66243529947
	8,120						1/10	38A100-KVBE	66243529954
4 x 1/2 x 3/4	8,120	1/10			32A60-KVBE	66243529849	1/10	38A60-KVBE	66243529961
	8,120	1/10			32A80-KVBE	66243529850			
4 x 1 x 1/2	8,120						1/10	38A60-MVBE	66243530126
5 x 1/4 x 1/2	4,970	1/10			32A60-KVBE	66252830572			
6 x 1/8 x 1-1/4	4,140	1/10			32A80-KVBE	66252835361	1/10	38A150-LVBE	66252835506
6 x 1/4 x 1/2	4,140	1/10			32A60-KVBE	66252835784			
6 x 1/4 x 1-1/4	4,140	1/10			32A60-KVBE	66252835786	1/10	38A60-KVBE	66252835803
	4,140						1/10	38A80-KVBE	66252835807
	4,140						1/10	38A150-KV	66252835759
6 x 1/2 x 1/2	4,140	1/10			32A60-KVBE	66252836394	1/10	38A60-KVBE	66252836530
	4,140						1/10	38A80-KVBE	66252836548
6 x 1/2 x 1-1/4	4,140	1/10			32A46-KVBE	66252836380	1/10	38A46-KVBE	66252836520
	4,140	1/10	5SG60-KVS	66252803344	32A60-KVBE	66252836396 B	1/10	38A60-KVBE	66252836533
	4,140	1/10			32A80-JVBE	66252836405	1/10	38A80-KVBE	66252836550
	4,140						1/10	38A120-KVBE	66252836664
6 x 3/4 x 1/2	4,140	1/10			32A60-KVBE	66252837420			
6 x 3/4 x 5/8	4,140						1/10	38A60-KVBE	66252837444
6 x 3/4 x 1-1/4	4,140	1/10			32A60-KVBE	66252837421	1/10	38A60-KVBE	66252837445
6 x 1 x 1-1/4	4,140	1/10			32A60-KVBE	66252837921 B			

B = BEST SELLER; PERFORMS WELL IN A VARIETY OF APPLICATIONS FOR MANY SATISFIED CUSTOMERS S = SINGLE PACK

Vitrified Wheels For Steel Applications CONTINUED

AVAILABILITY



TIER:
BRAND:
TRADENAME:
ABRASIVE:

BEST	BETTER	GOOD
Norton	Norton	Norton
NORTON SG	32A / 48A	38A / 25A / 53A
Ceramic Alumina	Aluminum Oxide	Aluminum Oxide

SIZE (D x T x H)	MAX. RPM	MIN./STD. PKG.	SPEC.	PART #	SPEC.	PART #	MIN./STD. PKG.	SPEC.	PART #
Type 05 Recessed One Side									
14 x 1-1/2 x 5	•	1/-	3SGR46-GVP2	66253319953	32A46-HVBE	66253364359			
Rec 1/S 8 x 1/2	•	1/-	3SGR46-HVP2	66253319954	32A46-IVBE	66253364300			
	•	1/-	3SGR60-HVP2	66253319956	32A46-KVBE	66253364362			
	1,800	1/-	5SG46-IVS	66253364102	32A60-JVBE	66253364364			
	1,800	1/-	5SG46-JVS	66253364103	32A60-KVBE	66253364365			
	•	1/-	5SG60-IVS	66253364104	48A46-HVP2	66253319958			
	1,800	1/-	5SG60-JVS	66253364105					
14 x 2 x 5	2,320	1/-	3SGR46-GVP2	66253319936	48A46-HVP2	66253319941	1/-	25A46-HVP2	66253319945
Rec 1/S 8 x 1/2	2,320	1/-	3SGR46-HVP2	66253319937			1/-	38A46-HVP2	66253319949
	2,320						1/-	38A60-HVP2	66253319951
14 x 2 x 5	1,800	1/-			32A60-KVBE	66253364390			
Rec 1/S 8 x 1	1,800	1/-			32A60-LVBE	66253364525			
Type 06 Straight Cup									
3-1/2 x 1-1/2 x 1/2	6,550						1/10	38A60-KVBE	66243529372
Rim 1/2" Back 1/2"									
100mm x 50mm x 20mm	6,550						1/10	38A80-JVBE	66243530429
Rim 10mm									
Back 13mm									
4 x 1-1/2 x 1/2	5,730	1/10			32A60-KVBE	66243530218			
Rim 1/2" Back 1/2"									
4 x 1-1/2 x 1-1/4	5,730						1/10	38A60-KVBE	66243530221
Rim 1/2" Back 1/2"									
4 x 2 x 20mm	5,730						1/10	38A80-JVBE	66243530523
Rim 3/8" Back 1/2"									
5 x 1-1/2 x 1-1/4	4,585	1/10			32A46-KVBE	66252830832	1/10	38A46-KVBE	66252830842
Rim 3/8" Back 3/8"	4,585	1/10			32A60-JVBE	66252830837		38A60-KVBE	66252830846
Face Y (ME19243)	4,585	1/10			32A60-KVBE	66252830838			
5 x 2 x 5/8	4,585	1/10			32A60-JVBE	66252830987			
Rim 1/2" Back 1/2"									
6 x 1-1/2 x 1/2	3,820	1/10			32A46-KVBE	66252838458			
Rim 1" Back 1/2"									
6 x 2 x 1-1/4	3,820	1/10			32A46-IVBE	66252838544	1/10	38A60-KVBE	66252838486
Rim 1/2" Back 1/2"	3,820	1/10			32A60-JVBE	66252838538			
7 x 2 x 1-1/4	3,275	1/8			32A46-JVBE	66252942856			
Rim 1/2" Back 1/2"									
9-1/2 x 1-1/2 x 1-1/2	2,415						1/-	53A46-LVBE	66253149136
Rim 1-1/2" Back 5/8"									
10 x 4 x 1-1/2	2,295						1/-	38A46-IVBE	66253161797
Rim 1-1/4" Back 1"									
Tape Wound									
12 x 2-1/2 x 7	1,910	1/-			32A46-LVBE	66253263614			
Rim 1-1/2" Back 7/8"									
Type 07 Recessed Two Sides									
12 x 2 x 3	2,070	1/-			32A46-IVBE	66253263588			
Rec 2/S 5-1/2 x 3/8									
12 x 2 x 3	2,070	1/-			32A46-HVBE	66253263590			
Rec 2/S 7-1/4 x 1/2	2,070	1/-			32A46-JVBE	66253263348			
12 x 2 x 5	2,070	1/-			32A46-IVBE	66253263594			
Rec 2/S 7-1/4 x 1/2									
12 x 2 x 5	2,070	1/-	5SG46-JVS	66253209930	32A46-HVBE	66253263591	1/-	38A46-IVBE	66253263600
Rec 2/S 7-1/2 x 1/2	2,070	1/-			32A46-HVBEP	66253263603			
	2,070	1/-			32A46-JVBE	66253263483			
	2,070	1/-			32A46-KVBE	66253263596			
	2,070	1/-			32A60-IVBE	66253263597			

• 14" TYPE 05 WHEEL MAXIMUM RPM: NORPOR VP2 WHEELS = 2,320; ALL OTHERS = 1,800

How to Read an Abrasive Product Specification

Conventional Grinding Wheels																	
32A			46			I			8			V			BE		
ABRASIVE			GRIT SIZE			GRADE			STRUCTURE			BOND TYPE			NORTON SYMBOL		
ALUMINUM OXIDE	CERAMIC ALUMINUM OXIDE	SILICON CARBIDE	ZIRCONIA ALUMINA	COARSE	MEDIUM	FINE	SOFT	MEDIUM	HARD	RELATIVE GRAIN SPACING	Resin = B Shellac = E Plastic = P Rubber = R Vitrified = V	Designates a variation or modification to bond.					
23A	OXIDE	37C	4NZ	12	30	80	D	I	Q	↑ ↓	2						
25A	3SGP	39C	4ZF	16	46	100	F	K	S		4						
32A	3SGR	Crystolon	5ZF	20	54	120	G	L	T		5						
32AC (blend)	5SG	Masonry	AZ (blend)	24	60	150	H	M	U		6						
38A	BRG		BlueFire		70	220		N	V		8						
48A	SG		Charger					O	Y		12						
53A	SXG		(blend)					P	Z		16						
55A	NorZon Plus		NZ								19						
57A	(blend)		NZC (blend)								25						
U57A	NQ Quantum		NZIII								28						
64A	Targa		NZIV														
86A			NorZon														
90A			ZI														
Alundum																	
FabCut																	
India																	
Gemini																	
Metal																	
Vortex																	

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.

