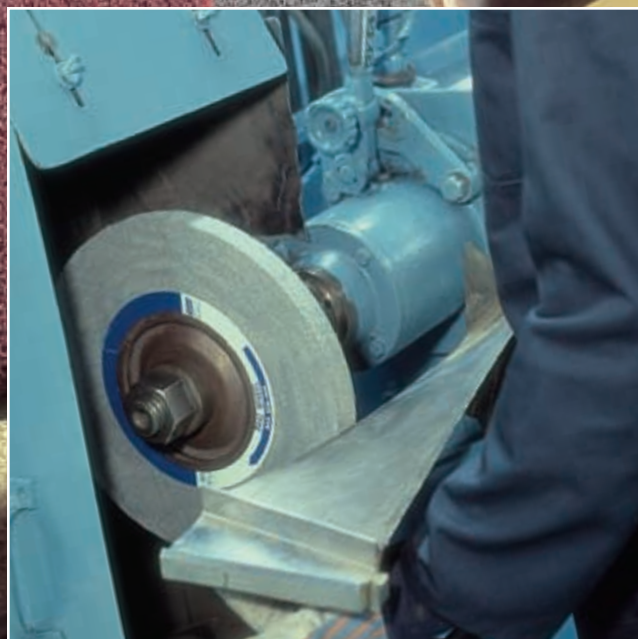


NORTON

BEAR-TEX CONVOLUTE WHEELS

Norton BearTex

- EXCELLENT GENERAL PURPOSE WHEELS
- SMEAR RESISTANT
- HEAT RESISTANT
- WIDE RANGE OF STOCK APPLICATIONS



*Consistent, High Quality for Deburring,
Blending and Polishing*

Norton Bear-Tex Convolute Wheels

Bear-Tex Convolute Wheels are formed by wrapping Bear-Tex web material around a center core and bonding the layers together to create an abrasive wheel. Norton Company offers seven convolute wheels for applications ranging from cleaning rust and oxides to heavy burr removal. Convolute wheel applications can be divided into two general categories which include the following applications:

CLEANING AND FINISHING

- Removing rust and oxides
- Blending weld areas on stainless steel to a #4 finish
- Applying decorative finishes including antique finishing

DEBURRING / BLENDING / POLISHING

- Burr and flashing removal
- Blending of coated abrasive scratch patterns
- Surface roughness reduction
- Edge radiusing
- Weld polishing

CLEAN/FINISH WHEELS

FINE FINISH WITH LIGHT PRESSURE

Features

- Open mesh construction
- Silicon carbide grain

Benefits

- Used with light to moderate pressure, low speed
- Good for blending, rust removal, applying decorative contrast finishes and low to moderate speed applications
- Not used for deburring

Applications

- Blending weld areas on stainless steel to #4 finish
- Removing rust and oxides
- Applying decorative contrast finishes
- General clean-up



SURFACE FINISHING WHEELS

UNIFORM FINISH WITH MODERATE PRESSURE

Features

- Stronger web compared to Bear-Tex Clean/Finish wheels

Benefits

- More aggressive cutting action and more durability than Clean/Finish wheels
- Ideal for rust and paint removal, coarse decorative finishes, and blending

Applications

- Removing rust and paint
- Applying coarse decorative finishes
- Blending to a higher degree
- General clean-up



Norton BearTex

METAL FINISHING WHEELS BLENDING AND FINAL FINISHING

Features

- Strongest resin binders
- Dense, very durable web
- Premium, medium grit aluminum oxide grain
- Uniform grain dispersion and coating

Benefits

- Resilient long life construction
- Can be used for light deburring applications
- Generates uniform distinct satin and antique finishes
- Cleans and conditions without gouging or changing dimensions of workpiece

Applications

- Blend and match #3 or #4 mill finishes
- Generate the uniform appearance required for decorative finishing
- Prepare a surface for buffing or polishing
- For blending or finishing operations

B442-XHD WHEELS HEAVY PRESSURE AND HIGH SPEEDS

Features

- Closed mesh, very dense product
- Yields faster cut rates while producing finer finishes

Benefits

- Superior performance
- Long life

Applications

- Deburring and finishing stainless steel and titanium
- Polishing stainless steel cutlery, golf clubs and computer parts
- General deburring
- Used wherever wheel life is critical



NORTON

SERIES 1000 WHEELS

GENERAL DEBURRING, BLENDING AND FINISHING

Features

- Smear and heat resistant formula
- Waterproof
- Non-metallic
- Dense web construction (9 density)
- More open web construction (6 density)

Benefits

- Use dry, wet or with oil
- No contamination of workpiece
- Long life and consistent high quality results
- Starting point for deburring, blending polishing and finishing
- Smear proof and cool cutting on light deburring applications

Applications

- General Deburring
- Blending coated abrasive scratch patterns
- Polishing stainless steel cutlery, golf clubs and computer parts
- Deburring and finishing intricate shapes
- Centerless polishing
- Glass polishing
- Edge radiusing



SERIES 2000 WHEELS

DEBURRING OF HEAT SENSITIVE METALS

Features

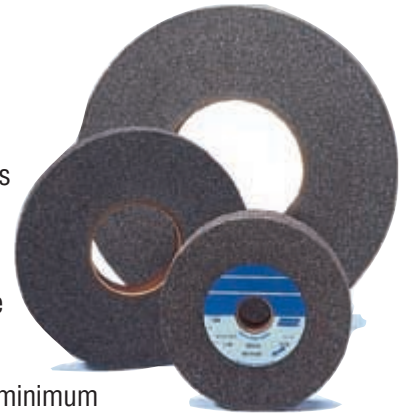
- Improved resin bond system
- Conformable and flexible

Benefits

- Consistent, high quality results
- Smear-proof
- Eliminates "over cut" or gouging on titanium products like prostheses and aerospace turbine blades
- Cool cutting where heat generation must be kept to a minimum

Applications

- Light deburring and finishing of exotic alloys
- Heat sensitive workpiece operations



SERIES 4000 WHEELS

HEAVY DEBURRING APPLICATIONS

Features

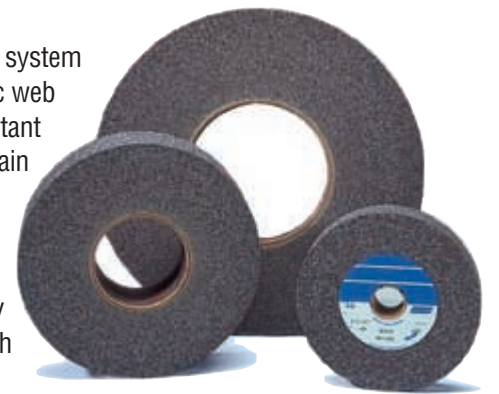
- Improved resin bond system
- High quality synthetic web
- Smear and heat resistant
- Premium abrasive grain
- Waterproof

Benefits

- Free cutting
- Use both wet and dry
- More consistent finish
- Better performance
- Long life for heavy deburring, edge breaking and removing parting lines on exotic metals

Applications

- The choice where edge and form holding are of primary importance
- Ideal for heavy duty deburring, edge breaking and parting line removal on metals for all sharp, narrow point of contract applications



Starting Specifications – Series 1000 Wheels

We recommend starting these applications with a Series 1000 Wheel

TOOL/EQUIPMENT	APPLICATIONS			
Straight Shaft Portable / Stationary	Cleaning	Deburring	Blending	Finishing
Recommended Starting Point	1-6AM / 1-8AM	1-9SF	1-7SF	1-7SF
Application Information	<ul style="list-style-type: none"> • General purpose cleaning • Removing rust, oxidation, corrosion, discoloration flashings, pipe threats, machine parts, plastic molded parts 	<ul style="list-style-type: none"> • Removing medium to heavy burrs • Deburring die cast • Smoothing radii on metal parts • Blending coated abrasive scratch pattern 	<ul style="list-style-type: none"> • Smoothing parting lines • Polishing welds, machine parts 	<ul style="list-style-type: none"> • Satin Finish • Cosmetic finish • Brush finish

Bear-TeX Series 1000, 2000 and 4000 Marking System

1 - 9 S F

BOND SYSTEM

- 1 = Series 1000 Bond
- 2 = Series 2000 Bond
- 3 = Series 4000 Bond

DENSITY

- 6 = Open/
Conformable
- 7
- 8
- 9 = Dense/
Durable

ABRASIVE

- A = Aluminum Oxide
- S = Silicon Carbide

GRIT SIZE

- M = Medium
- F = Fine
- VF = Very Fine



Getting the Most Out of Bear-TeX Wheels

Maximum wheel life and best surface conditioning results can be achieved by closely adhering to the following recommendations.

WHEEL DIRECTION

Convolute Wheels must always be run in the direction indicated by the arrow printed on the side of each wheel.

WHEEL SPEED

Wheel speed is an important factor that affects product finish, rate of cut, and wheel life. In general, fast wheel speeds give harder action and a finer finish, whereas slower speeds give a softer action and a coarser finish for the same wheel density. The following are recommended operating speeds for the most common applications:

<i>Cleaning and upgrading of surface conditions</i>	2200 to 6000 SFPM
<i>Cut-buffing on metal surfaces</i>	6500 to 8000 SFPM
<i>Deburring</i>	5500 to 8000 SFPM
<i>Decorative finishing</i>	500 to 3000 SFPM
<i>Imparting decorative finishes</i>	900 to 3000 SFPM
<i>Oxide removal</i>	3500 to 6500 SFPM

Testing may show that a slower or faster speed is desirable for specific operations. Never exceed the maximum R.P.M. rating of the wheel.

PRESSURE

Light to medium pressure is recommended for most operations. Avoid excessive pressure which may result in wheel deformation and damage to the work surface.

FEED SPEED

Feed speeds directly affect the number of pieces completed over a given period of time. Slow feed speed reduces the number of workpieces completed, while producing a shorter scratch pattern. Slow feed speed allows for longer dwell time and permits more work to be done on each piece. Conversely, a fast feed speed increases the number of workpieces completed, while producing a longer scratch pattern.

OSCILLATION

Oscillation may be used to break up scratch lines and produce a more uniform finish. Additionally, an increase in cut may be experienced. A general starting point for oscillation is 3/8" amplitude at 200 cycles per minute.

LUBRICANTS

Lubricants, such as water, water soluble oil, and straight oil, will decrease the heat generated while running, improve the luster, and improve the surface finish. The higher the viscosity of the lubricant, the lower the surface finish (RMS value) produced.

Norton BearTex

Troubleshooting Guide

PROBLEM	CORRECTION
<ul style="list-style-type: none"> ■ Slow cut rate 	<ul style="list-style-type: none"> ■ Increase density ■ Decrease wheel speed ■ Use coarser grit
<ul style="list-style-type: none"> ■ Low conformability 	<ul style="list-style-type: none"> ■ Decrease density ■ Reduce pressure
<ul style="list-style-type: none"> ■ Poor form holding 	<ul style="list-style-type: none"> ■ Increase density ■ Decrease wheel speed ■ Reduce pressure
<ul style="list-style-type: none"> ■ Poor finish 	<ul style="list-style-type: none"> ■ Increase density ■ Increase oscillation ■ Use of lubricant ■ Water – fine ■ Water soluble – finer ■ Oil – finest ■ Increase wheel speed



Stock Convolute Wheel Availability

SIZE D x T x H	ABRASIVE	GRIT	MAX. RPM	UPC NO.
BEAR-TEX CLEAN & FINISH CONVOLUTE WHEELS				
4 x 1 x 1	Silicon Carbide Silicon Carbide	Medium Fine	4,000	66261058502 66261058501
6 x 1 x 1	Silicon Carbide Silicon Carbide	Medium Fine	3,000	66261058507 66261058506
6 x 2 x 1	Silicon Carbide Silicon Carbide	Medium Fine	3,000	66261058510 66261058509
6 x 3 x 1	Silicon Carbide	Medium	3,000	66261058512
6 x 4 x 1	Silicon Carbide	Medium	3,000	66261058514
8 x 1 x 3	Silicon Carbide	Medium	2,500	66261058518
8 x 2 x 3	Silicon Carbide	Medium	2,500	66261058521
8 x 3 x 3	Silicon Carbide	Medium	2,500	66261058524
8 x 4 x 3	Silicon Carbide	Medium	2,500	66261058526
12 x 2 x 5	Silicon Carbide	Medium	1,900	66261058534
BEAR-TEX SURFACE FINISHING CONVOLUTE WHEELS				
6 x 1 x 1	Aluminum Oxide Silicon Carbide Silicon Carbide	Medium Coarse Medium	4,500	66261058550 66261058553 66261058552
6 x 2 x 1	Aluminum Oxide Silicon Carbide	Medium Medium	4,500	66261058556 66261058560
12 x 2 x 5	Silicon Carbide	Coarse	2,500	66261058574
14 x 1 x 8	Silicon Carbide	Coarse	2,000	66261006351
BEAR-TEX METAL FINISHING CONVOLUTE WHEELS				
6 x 1 x 1	Aluminum Oxide	Medium	6,000	66261007936
6 x 2 x 1	Aluminum Oxide	Medium	6,000	66261007957
8 x 1 x 3	Aluminum Oxide	Medium	4,500	66261007831
8 x 2 x 3	Aluminum Oxide	Medium	4,500	66261007904
12 x 1 x 5	Aluminum Oxide	Medium	3,000	66261007434
12 x 2 x 5	Aluminum Oxide	Medium	3,000	66261007212
14 x 2 x 8	Aluminum Oxide	Medium	2,550	66261007817
BEAR-TEX B442-XHD CONVOLUTE WHEELS				
6 x 1/2 x 1	Silicon Carbide	Fine	6,000	66261054908
6 x 1 x 1	Silicon Carbide	Fine	6,000	66261058700
8 x 1 x 3	Silicon Carbide	Fine	4,500	66261058710
8 x 2 x 3	Silicon Carbide	Fine	4,500	66261058718
10 x 2 x 5	Silicon Carbide	Fine	3,600	66261002302
12 x 1 x 5	Silicon Carbide	Fine	3,000	66261058730
12 x 2 x 5	Silicon Carbide	Fine	3,000	66261058732

NORTON



FLEXIBLE SHAFT GRINDER



BENCH GRINDER



PEDESTALGRINDER

SIZE D X T X H	ABRASIVE	MAX. GRIT	RPM	6 DENSITY UPC NO.	7 DENSITY UPC NO.	8 DENSITY UPC NO.	9 DENSITY UPC NO.
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BEAR-TEX SERIES 1000 CONVOLUTE WHEELS

6 x 1/2 x 1	Silicon Carbide	Fine	6,000			66261055222	66261055248	66261055272	
	Silicon Carbide	Medium						66261055370	
6 x 1 x 1	Aluminum Oxide	Medium	6,000	66261055205	66261055226	66261055252			
	Aluminum Oxide	Fine		66261055204	66261055225	66261055251			
	Silicon Carbide	Medium		66261055202	66261055224	66261055250			66261055371
	Silicon Carbide	Fine		66261055201	66261055223	66261055249			66261055273
	Silicon Carbide	Very Fine		66261055200					
6 x 2 x 1	Aluminum Oxide	Medium	6,000		66261055229				
	Silicon Carbide	Medium		66261055206	66261055228	66261000496			
	Silicon Carbide	Fine			66261055227	66261055253			66261055274
8 x 1 x 3	Aluminum Oxide	Medium	4,500		66261055232				
	Aluminum Oxide	Fine				66261055257			
	Silicon Carbide	Medium		66261055208	66261055231	66261055256			66261055372
	Silicon Carbide	Fine		66261055207	66261055230	66261055255			66261055275
8 x 2 x 3	Aluminum Oxide	Medium	4,500		66261055235	66261055259			
	Aluminum Oxide	Fine				66261001979			
	Silicon Carbide	Medium		66261055211	66261055234				
	Silicon Carbide	Fine			66261055233	66261055258			66261055276
10 x 1 x 5	Aluminum Oxide	Medium	3,600		66261001813				
	Silicon Carbide	Fine				66261055260			66261055277
10 x 2 x 5	Silicon Carbide	Fine	3,600			66261000836	66261002806		
12 x 1 x 5	Aluminum oxide	Medium	3,000	66261055216	66261055239	66261055264			
	Silicon Carbide	Medium				66261055263			66261055373
	Silicon Carbide	Fine		66261055215	66261055237	66261055262			66261055278
12 x 2 x 5	Aluminum Oxide	Medium	3,000		66261055243				
	Silicon Carbide	Medium			66261055241	66261055266			66261055374
	Silicon Carbide	Fine			66261055240	66261055265			66261055279
14 x 1 x 8	Silicon Carbide	Medium	2,550	66261008722			66261002114		
14 x 2 x 8	Aluminum Oxide	Medium	2,550	66261055220					
	Silicon Carbide	Medium				66261055270			
	Silicon Carbide	Fine				66261055281			

BEAR-TEX SERIES 2000 CONVOLUTE WHEELS

6 x 1 x 1	Silicon Carbide	Fine	6,000	66261055282		66261055283	
6 x 2 x 1	Silicon Carbide	Fine	6,000			66261055285	
8 x 1 x 3	Silicon Carbide	Fine	4,500	66261055286			
10 x 2 x 5	Silicon Carbide	Fine	3,600			66261008674	
12 x 1 x 5	Silicon Carbide	Fine	3,000			66261055291	
12 x 2 x 5	Silicon Carbide	Fine	3,000			66261055293	

BEAR-TEX SERIES 4000 CONVOLUTE WHEELS

6 x 1/2 x 1	Silicon Carbide	Fine	6,000				66261004021
6 x 1 x 1	Aluminum Oxide	Medium	6,000			66261004208	
	Silicon Carbide	Fine				66261004142	
8 x 1 x 3	Aluminum Oxide	Medium	4,500			66261004165	
	Silicon Carbide	Fine				66261004123	
12 x 1 x 5	Silicon Carbide	Fine	3,000			66261004284	66261004148
12 x 2 x 5	Silicon Carbide	Fine	3,000				66261004011
14 x 1 x 8	Aluminum Oxide	Medium	2,550			66261003944	
	Silicon Carbide	Fine				66261004965	



BEAR-TEX CONVOLUTE WHEELS

Non-Stock Convolute Wheel Availability

PRODUCT	ABRASIVE	GRIT	DENSITY	DIAMETER	WIDTH
Clean / Finish Wheels	Silicon Carbide	Fine, Medium	—	4", 6", 8", 10", 12", 14", 16"	1 inch thru 24 inches
Surface Finishing Wheels	Silicon Carbide	Medium, Coarse	—	6", 8", 10", 12", 14", 16"	1 inch thru 24 inches
	Aluminum Oxide	Medium	—	6", 8", 10", 12", 14", 16"	1 inch thru 24 inches
Metal Finishing Wheels	Aluminum Oxide	Medium	5	6", 8", 10", 12"	1/2 inch thru 24 inches
				14", 16"	1 inch thru 24 inches
Series 1000 Wheels	Silicon Carbide	Very Fine	6, 7, 8	6", 8", 10", 12", 14", 16", 18" 20"	1/2 inch thru 24 inches
		Fine	6, 7, 8, 9	6", 8", 10", 12", 14", 16", 18" 20"	1/2 inch thru 24 inches
		Medium	6, 7, 8, 9	6", 8", 10", 12", 14", 16", 18" 20"	1/2 inch thru 24 inches
Series 1000 Wheels	Aluminum Oxide	Fine	6, 7, 8	6", 8", 10", 12", 14", 16", 18" 20"	1/2 inch thru 24 inches
		Medium	6, 7, 8	6", 8", 10", 12", 14", 16", 18" 20"	1/2 inch thru 24 inches
Series 2000 Wheels	Silicon Carbide	Fine	6, 7, 8	6", 8", 10", 12"	1/2 inch thru 24 inches
				14", 16"	1 inch thru 24 inches
Series 4000 Wheels	Aluminum Oxide	Medium	8	6", 8", 10", 12"	1/2 inch thru 24 inches
				14", 16"	1 inch thru 24 inches
				Silicon Carbide	Fine
				14", 16"	1/2 inch thru 24 inches
B442-XHD Wheels	Silicon Carbide	Fine	—	6", 8", 10", 12", 14", 16", 18", 20"	1/2 inch thru 24 inches

Standard Combinations

WHEEL DIAMETER	CENTER HOLE
4"	1"
6"	1"
8"	3"
10"	5"
12"	5"
14"	8"
16"	10"
18"	10"
20"	12"



BEST: For most abrasive applications, Norton Company offers up to three product performance levels – GOOD, BETTER and BEST. Norton Bear-Tex Convolute Wheels are in the BEST category and represent products that are unmatched in the industry and provide the lowest total grinding cost for the application.

RELY ON YOUR LOCAL AUTHORIZED NORTON DISTRIBUTOR

The nationwide network of knowledgeable Norton distributors is ready to help you select the products that best suit your applications. Call your local Norton abrasives distributor today. For the name of your local distributor, check out the Norton web site or call 1 800 466-1119.



 www.nortonabrasives.com

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