

### CATEGORY DEFINITION

Made from non-woven synthetic fiber mesh, which is impregnated with abrasives and bound with resins, non-woven wheels are designed to create desired surface finish where little or no stock removal is required. The industry's broadest offer is available for light stock removal, deburring, blending, finishing and polishing. Non woven wheels have an open mesh construction that is waterproof, washable, conformable and non-loading.

- APPLICATIONS:** Clean and remove imperfections on metal surfaces, clean built-up residue, deburr or finish a variety of surfaces, blend weld seams or create decorative finishes.  
Non-woven surface finishing products have excellent versatility.
- ABRASIVE GRAIN:** Aluminum Oxide, Silicon Carbide
- GRIT RANGE:** Extra Coarse (XC), Coarse (C), Medium (M), Very Fine (VF),

### APPLICATION/GRIT RECOMMENDATION GUIDE

	MOST AGGRESSIVE ← → LEAST AGGRESSIVE						
	RAPID STRIP	VORTEX & NEX UNIFIED WHEELS	SERIES 4000 & 1000 CONVOLUTE WHEELS	METAL FINISHING CONVOLUTE WHEELS	CLEAN & FINISH WHEELS	LIGHT FINISHING CONVOLUTE WHEELS	NON-WOVEN / INTERLEAF FLAP WHEELS
<b>SCALE REMOVAL</b>	BEST CHOICE						
<b>STOCK REMOVAL</b>		BEST CHOICE	2ND CHOICE				
<b>HEAVY DEBURRING</b>		BEST CHOICE	2ND CHOICE				
<b>DECORATIVE FINISHING</b>				BEST CHOICE	2ND CHOICE		
<b>BLENDING</b>			BEST CHOICE	2ND CHOICE			
<b>CLEANING</b>				2ND CHOICE	BEST CHOICE		
<b>LIGHT DEBURRING</b>			2ND CHOICE			BEST CHOICE	
<b>LIGHT FINISHING</b>			2ND CHOICE			BEST CHOICE	
<b>POLISHING</b>						BEST CHOICE	2ND CHOICE
<b>BUFFING</b>							BEST CHOICE

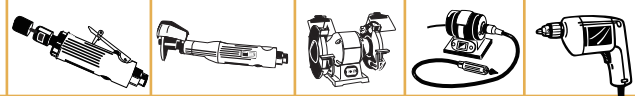
### SURFACE FINISH VARIABLES

Changes in any one of many factors can affect the surface finish on the workpiece. This chart shows the effect on surface finish by changes in single factors of product specifications. Arrows have been used to signify the trend direction. The arrow length does not signify that the effect of each factor is equal.

Variable Factor	Rough Finish High Rms Reading	Smooth Surface Lower Rms Reading
1. <b>Wheel Speed</b>	Slow ←	Fast →
2. <b>Feed Speed</b>	Faster (Long Scratch) ←	Slower (Short Scratch) →
3. <b>Oscillation</b>	No Oscillation ←	Oscillation →
4. <b>Lubricants</b>	Dry ←	Water → Soluble Oil → Straight Oil → Compounds →

### NON-WOVEN MARKING SYSTEM

<b>ABRASIVE</b>	S/C	A/O			
	SHARPER, FINER/BRIGHTER SCRATCH PATTERN	MORE DURABLE, LONGER LASTING, POLISHED FINISH			
<b>GRIT SIZE</b>	XC (24-36)	C (50-80)	M (100-150)	F (180-220)	VF (240-360)
	FASTER, AGGRESSIVE CUT, ROUGHER FINISH				REDUCED CUT RATE, FINER FINISH
<b>DENSITY</b>	2	9			
	SOFT, OPEN, CONFORMABLE, LESS BURNING/LOADING	HARDER, MORE DURABLE, FASTER CUTTING, BETTER FINISH			



### CROSS REFERENCE GUIDE

	STRIPPING	HEAVY/LIGHT DEBURRING	LIGHT DEBURRING/BLENDING/POLISHING				CLEANING/FINISHING		
<b>NORTON</b>	GOOD Rapid Strip	BEST Vortex Debur & Blend	BETTER NEX Deburring & Blending	BEST Series 4000	BETTER Series 1000	BEST Light Finishing	BEST Metal Finishing	GOOD Clean & Finish	GOOD Non-Woven / Interleaf Flap Wheels
3M	Clean Strip	Cut & Polish Unitized	EXL Unitized	EX2 & EX3	EXL Deburring	Light Deburring	Metal Finishing	Multi Finishing	Finishing Flap Brush
Standard	Britestrip	800 & 900 Series Unitized	500 - 700 Series Unitized	GP Plus	Deburring Convolute	LDW	Metal Finishing	Multi Finishing	Buff & Blend Flap Brush



## Surface Stripping Wheels

- Surface Stripping material provides a unique combination of aggressive performance, long life and improved finish. It is ideal for removing coatings on a variety of substrates, such as wood, metal and plastics.
- Incorporated with extruded nylon fibers, flexible resin technology and extra-coarse silicon carbide mineral that provide aggressive performance while outperforming traditional coated abrasives. They leave a thoroughly cleaned surface that ensures excellent adhesion for subsequent processes such as coating, painting and soldering.

### AVAILABILITY

TIER: **GOOD**  
TRADENAME: **SURFACE STRIPPING WHEELS**

SIZE	MAX. RPM	STD. PKG.	PART NO.
<b>ARBOR HOLE</b>			
4 x 1/4	8,000	25	66261008008
4 x 1/2	8,000	25	66261007916
6 x 1/2	5,500	15	66261008051
8 x 1/2	3,000	24	08834191432
<b>MANDREL-MOUNTED</b>			
4 x 1/2 x 1/4 sk.	8,000	5	08834120974
4 x 1 x 1/4 sk.	8,000	5	08834120973

## Deburring and Blending Unified Wheels

- Designed for maintenance operations needing an efficient and cost-effective method of deburring, polishing, cleaning or finishing metals and composites. Easily preformed for use on a wide variety of shapes / contours. Hold shape well; less wheel dressing. Non-metallic so no contamination of workpiece. Uniform construction maintains part tolerance; prevents cutting or gouging.



### NORTON VORTEX UNIFIED WHEELS

**BEST CHOICE FOR LIGHT WELD BEAD AND WELD SPLATTER REMOVAL, HEAVY DEBURRING AND FINISHING APPLICATIONS**

#### FEATURES

- High-performance engineered grain and improved resin bond system
- Thick nylon web
- Controlled porosity

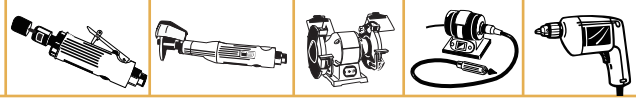
#### BENEFITS

- Aggressive, fast, stock removal, reduced cycle times, and increased part quality
- 2X longer life and faster finishing – with minimal shedding
- Cool cutting and improved cut rate

### AVAILABILITY

TIER: **BEST**  
TRADENAME: **VORTEX DEBURRING AND BLENDING UNIFIED WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT SIZE	STD. PKG.	MAX. RPM	3 DENSITY PART NO.	MAX. RPM	5 DENSITY PART NO.	MAX. RPM	7 DENSITY PART NO.	MAX. RPM	9 DENSITY PART NO.
2 x 1/8 x 1/8	A/O	M	60			22,000	66254425657	20,000	66254410849		
2 x 1/8 x 1/4	A/O	M	60			22,000	66254406346	22,000	66261191446		
2 x 1/4 x 1/4	A/O	M	60	18,000	66254428456	22,000	66254433504	22,000	66261080270		
2 x 1 x 1/4	A/O	M	15					22,000	66261080269		
3 x 1/8 x 1/4	A/O	M	40			18,000	66261093448	18,000	66261191445		
3 x 1/8 x 3/8	A/O	M	40			18,000	66254433503	18,000	66254401131		
3 x 1/4 x 1/4	A/O	M	40	12,000	66254428454	18,000	66254414832	18,000	66261199696		
3 x 1/4 x 3/8	A/O	M	40	12,000	66254433505	12,000	66254433506	18,000	66261199697		
3 x 1/2 x 1/4	A/O	M	20			18,000	66254432925	18,000	66261080267	18,000	66254433507
3 x 1/2 x 3/8	A/O	M	20			18,000	66254433508	18,000	66261080266	18,000	66254420696



Deburring and Blending Unified Wheels CONTINUED



**NEX UNIFIED WHEELS**  
 BETTER CHOICE FOR LIGHT DEBURRING AND BLENDING

**FEATURES**

- Uniform construction
- Smear-resistant formula

**BENEFITS**

- Extra long life
- Excellent, consistent, smear-free finishes

AVAILABILITY

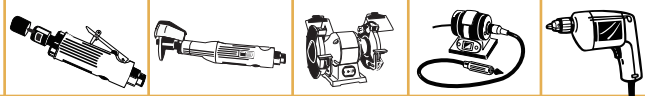
TIER:

BETTER

TRADENAME:

**NEX DEBURRING AND BLENDING UNIFIED WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	2 DENSITY PART NO.	3 DENSITY PART NO.	4 DENSITY PART NO.	6 DENSITY PART NO.	7 DENSITY PART NO.	8 DENSITY PART NO.
1 x 1 x 3/16	A/O	C	30,000	50	66261014891			66261014908		66261014915
	A/O	M	18,000							
	A/O	M	30,000							
	S/C	F	18,000							
	S/C	F	30,000							
66261014883			66261014904		66261014924					
2 x 1/8 x 1/4	A/O	M	22,000	60						66261014927
2 x 1/4 x 1/4	A/O	C	22,000	60	66261014892			66261014901		66261014916
	A/O	M	18,000							
	A/O	M	22,000							
	A/O	F	22,000							
	S/C	M	22,000							
	S/C	F	18,000							
66261014884					66261014964					
2 x 1/2 x 1/4	A/O	M	22,000	30						66261014925
3 x 1/8 x 1/4	A/O	M	18,000	40						66261014934
3 x 1/4 x 1/4	A/O	C	18,000	40	66261014894		66261015565	66261014909	66261014902	66261014919
	A/O	M	12,000							
	A/O	M	18,000							
	A/O	F	18,000							
	S/C	M	18,000							
	S/C	F	12,000							
66261014886	66261016392				66261014937					
3 x 1/4 x 3/8	A/O	C	18,000	40	66261014895		66261014899	66261014910		66261014920
	A/O	M	12,000							
	A/O	M	18,000							
	A/O	F	12,000							
	S/C	M	18,000							
	S/C	F	12,000							
	S/C	F	18,000							
66261014887	66261016006			66261014905	66261014933					
66261014965					66261014965					
3 x 1/2 x 1/4	A/O	C	18,000	20	66261014893			66261014928		66261014917
	A/O	M	12,000							
	A/O	M	18,000							
	S/C	F	12,000							
66261014885										
3 x 1/2 x 3/8	A/O	C	18,000	20					66261014913	66261014918
	A/O	M	18,000							
	S/C	XC	14,000							
66261014929										
3 x 1 x 3/8	S/C	XC	14,000	10					66261014914	
6 x 1/2 x 1	A/O	M	7,500	4						66261014931
	S/C	F	5,000							
6 x 1 x 1	A/O	M	5,000	2	66261014896					
	S/C	F	5,000							
66261014888										



Deburring and Blending Unified Wheels CONTINUED

AVAILABILITY

TIER:

**GOOD**

TRADENAME:

**GENERAL DUTY  
UNIFIED WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT	DENSITY	MAX. RPM	STD. PKG.	PART NO.
1 x 1 x 3/16	A/O	C	8	15,000	50	66261000938
2 x 1/4 x 1/4	A/O	C	8	11,000	60	66261052275
2 x 1/2 x 1/4	A/O	F	4	11,000	40	66261058764
3 x 1/4 x 1/4	A/O	C	8	8,000	40	66261052276
	A/O	F	4	8,000		66261058816
	S/C	F	4	8,000		66261000745
3 x 1/2 x 1/4	A/O	F	4	8,000	20	66261054046
	S/C	F	4	8,000		66261054048
3 x 3/4 x 1/4	A/O	F	4	8,000	20	66261058769
	S/C	M	4	8,000		66261058773
	S/C	F	4	8,000		66261058771
6 x 1/2 x 1/2	S/C	M	4	4,800	8	66261058779
6 x 1 x 1/2	S/C	M	4	4,800	4	66261058792
	S/C	F	4	4,800		66261058790
6 x 1 x 1	S/C	F	4	4,800	4	66261058797

Mandrels for Unified Wheels

FITS WHEEL CENTER HOLE	FOR WHEEL WIDTH	FOR WHEEL DIAMETER	SHANK DIAMETER	OVERALL LENGTH	WASHER DIAMETER	3M EQUIVALENT	STD. PKG.	PART NO.
<b>MANDREL ASSEMBLIES FOR UNIFIED WHEELS AND DISCS ON EDGE</b>								
1/8" - 3/16"	Up to 1/2"	Up to 2"	1/8"	1-3/4"	7/16"	931	1	66261009849
3/16"	1/8" - 1/2"	1" - 2"	1/4"	2"	7/16"	994	1	66261009852
1/4" - 5/16"	Up to 1/2"	Up to 2"	1/4"	2"	5/8"	932	1	66261015146
1/4" - 5/16"	Up to 1"	Up to 2"	1/4"	2-1/2"	5/8"	932	1	66261059422
	Up to 1"	2" - 3"	1/4"	2-1/2"	1"	933	1	66261059421
3/8"	Up to 1/2"	2" - 4"	1/4"	2-1/2"	1"	990	1	66261009851
1/2"	Up to 1"	3" - 6"	1/4"	3-1/8"	1-5/8"	934	1	66261009850

SHANK LENGTH	SHANK DIAMETER	FOR CENTER HOLE	USE WITH UNIFIED WHEEL	3M EQUIVALENT	STD. PKG.	PART NO.
<b>THREADED MANDREL FOR UNIFIED WHEELS</b>						
1-3/4"	1/4"	3/16	1 x 1 x 3/16	948	5	66261047584



MANDREL ASSEMBLY 66261059421 FOR UNIFIED WHEELS



MANDREL ASSEMBLY 66261059422 FOR UNIFIED WHEELS



THREADED MANDREL 66261047584 FOR UNIFIED WHEELS



### Convolute Wheels

- Formed by wrapping and bonding web material impregnated with abrasive grain and resin around a center core. Convolute wheels offer a wide range of uses from burr removal to cleaning rust and oxides.
- Burr and flashing removal
- Surface roughness reduction
- Blending weld areas on stainless steel
- Blending scratch patterns
- Weld polishing
- Removing rust and oxides
- Applying decorative finishes including antique patterns

#### FEATURED PRODUCTS



#### SERIES 4000 CONVOLUTE WHEELS BEST CHOICE FOR HEAVY DEBURRING APPLICATIONS

**FEATURES**

- Advanced resin bond system
- High quality synthetic web

**BENEFITS**

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

#### AVAILABILITY

TIER: **BEST**

TRADENAME: **SERIES 4000 CONVOLUTE WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	8 DENSITY PART NO.	9 DENSITY PART NO.
<b>SERIES 4000 CONVOLUTE WHEELS</b>						
6 x 1/2 x 1	S/C	F	6,000	4		66261004021
6 x 1 x 1	A/O	M	6,000	3	66261004208	66261004141
	S/C	F			66261004142	
8 x 1 x 3	A/O	M	4,500	3	66261004165	66261004135
	S/C	F			66261004123	
12 x 1 x 5	S/C	F	3,000	2	66261004284	66261004148
12 x 2 x 5	S/C	F	3,000	1		66261004011

## TECHtip

- Convolute wheels must always run in the direction indicated by the arrow printed on the side of each wheel.
- Light to medium pressure is recommended. Excessive pressure may result in part damage.
- Lubricants such as water-soluble oil and straight oil will decrease the heat and improve the surface finish and lustre.



It is the user's responsibility to refer to and comply with all safety regulations.



Convolute Wheels CONTINUED



**SERIES 1000 CONVOLUTE WHEELS**

BETTER CHOICE FOR GENERAL DEBURRING, BLENDING, AND FINAL FINISHING

**FEATURES**

- Smear and heat-resistant formula
- Dense web construction (9 density)
- More open web construction (7 density)
- Waterproof
- Non-metallic
- Optimum grain/resin formulation
- Conformable and flexible

**BENEFITS**

- Consistent, high quality results
- Starting point for deburring, blending, polishing and finishing applications
- Smear-proof and cool cutting on light deburring applications
- Use dry, wet or with oil
- No contamination of workpiece
- Durable, long life construction with versatile application range and improved cut rate and shed resistance
- Less operator fatigue

AVAILABILITY

TIER:

BETTER

TRADENAME:

**SERIES 1000 CONVOLUTE WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	7 DENSITY PART NO.	8 DENSITY PART NO.	9 DENSITY PART NO.	
<b>SERIES 1000 LONG LIFE CONVOLUTE WHEELS</b>								
6 x 1/2 x 1	A/O	M	6,000	4	66261018857	66261018789	66261018650	
	S/C	M					66261019540	
	S/C	F			66261018628		66261018629	
6 x 1 x 1	A/O	M	6,000	3	69957397884	66261018636	66261019337	
	S/C	M			69957397882		69957397883	66261018630
	S/C	F			66261018631		66261018774	66261018632
8 x 1 x 3	A/O	M	4,500	3	69957397885	66261018855	66261018633	
	S/C	M			69957394610		66261018673	66261018997
	S/C	F			66261018639		66261018640	66261018641
12 x 1 x 5	A/O	M	3,000	2	69957397887	66261018786	66261018896	
	S/C	M					66261018908	
	S/C	F					66261018626	



**LIGHT FINISHING CONVOLUTE WHEELS**

BEST CHOICE FOR LIGHT DEBURRING, POLISHING, AND FINE FINISHING APPLICATIONS

**FEATURES**

- Controlled cut rate
- Very conformable
- Superior form holding
- New resin bond system
- Advanced manufacturing process

**BENEFITS**

- Prevents "over benching"
- Deburrs and polishes without altering geometry
- Operator friendly, reduces fatigue
- Consistent, reliable edge breaking and finishing with minimal wheel dressing and reshaping
- Less dust and shedding with more uniform wear
- Substantial extended wheel life in a soft, conformable wheel
- Improved web forming and grain distribution produce consistent finish on intricate polishing applications

AVAILABILITY

TIER:

BEST

TRADENAME:

**LIGHT FINISHING CONVOLUTE WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	6 DENSITY PART NO.	7 DENSITY PART NO.	8 DENSITY PART NO.
<b>LIGHT FINISHING CONVOLUTE WHEELS</b>							
6 x 1/2 x 1	S/C	F	6,000	4	66261092322	66261092324	66254421572
6 x 1 x 1	S/C	F	6,000	3	66254403708	66254403709	66254421573
8 x 1/2 x 3	S/C	F	4,500	4	66254403707	66254409698	66254421575
8 x 1 x 3	S/C	F	4,500	3	66261095702	66254409924	66254421577
12 x 1 x 5	S/C	F	3,000	3		66261092480	66254421574*

\* 2 PER STANDARD PACKAGE



Convolute Wheels CONTINUED



**METAL FINISHING CONVOLUTE WHEELS**

BEST CHOICE FOR DECORATIVE FINISHING, BLENDING, AND FINAL FINISHING

**FEATURES**

- Premium, medium grit aluminum oxide grain
- Dense, very durable web
- Strongest resin binders
- Uniform grain dispersion and coating
- Available in 5 and 6 densities

**BENEFITS**

- Generates uniform distinct satin and antique finishes
- Can be used for blending applications
- Resilient, long life construction
- Clean and condition without gouging or changing dimensions of workpiece
- Ideal for blending and matching #3 and 4 mil. finishes, and surface prep for buffing, polishing and applying decorative finishes

AVAILABILITY

TIER: **BEST**  
 TRADENAME: **METAL FINISHING CONVOLUTE WHEELS**

SIZE (D X T X H)	ABRASIVE	DENSITY	GRIT	MAX. RPM	STD. PKG.	PART NO.
<b>METAL FINISHING CONVOLUTE WHEELS</b>						
6 x 1 x 1	A/O	5	M	6,000	3	66261007936
		6	M			66261010148
6 x 2 x 1	A/O	5	M	6,000	2	66261007957
		6	M			66261009635
8 x 1 x 3	A/O	5	M	4,500	3	66261007831
8 x 2 x 3	A/O	5	M	4,500	2	66261007904
		6	M			66261012971
12 x 1 x 5	A/O	5	M	3,000	2	66261007434
		6	M			66261009481
12 x 2 x 5	A/O	5	M	3,000	1	66261007212
14 x 2 x 8	A/O	5	M	2,550	1	66261007817
		6	M			66261012041



**CLEAN & FINISH CONVOLUTE WHEELS**

BEST CHOICE FOR FINE FINISH WITH LIGHT PRESSURE

**FEATURES**

- Silicon carbide grain
- Open mesh construction

**BENEFITS**

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

AVAILABILITY

TIER: **BEST**  
 TRADENAME: **CLEAN & FINISH CONVOLUTE WHEELS**

SIZE (D X T X H)	ABRASIVE	GRIT	DENSITY	MAX. RPM	STD. PKG.	PART NO.
<b>CLEAN &amp; FINISH CONVOLUTE WHEELS</b>						
4 x 1 x 1	S/C	M	4	4,000	10	66261058502
		F	4			66261058501
6 x 1 x 1	S/C	M	4	3,000	4	66261058507
		F	4			66261058506
6 x 2 x 1	S/C	M	4	3,000	2	66261058510
		F	4			66261058509
6 x 3 x 1	S/C	M	4	3,000	1	66261058512
6 x 4 x 1	S/C	M	4	3,000	1	66261058514
8 x 1 x 3	S/C	M	4	2,500	3	66261058518
8 x 2 x 3	S/C	M	4	2,500	2	66261058521
8 x 3 x 3	S/C	M	4	2,500	1	66261058524
8 x 4 x 3	S/C	M	4	2,500	1	66261058526



### Aluminum Reducing Bushings for Flap and Convolute Wheels



- Durable, aluminum one-piece-design flanges with integrated “contact washer”
- Snug fit; extended usable life
- Available in stock and non-stock sizes: 3" up to 10" in many combinations of ID hole reduction

<i>WHEEL CENTER HOLE</i>	<i>BUSHING REDUCES HOLE SIZE TO</i>	<i>FOR WHEEL DIAMETER</i>	<i>STD. PKG.</i>	<i>PART NO.</i>
<b>ALUMINUM REDUCING BUSHING FOR FLAP AND CONVOLUTE WHEELS</b>				
1	3/8	4 - 6	1 Pair	66261080522
	1/2			66261080523
	5/8			66261080524
	3/4			66261080525
	7/8			66261080526
2	1/2	6	1 Pair	66261080527
	5/8			66261080528
	1			66261080529
	1-1/4			66261080530
3	1	8	1 Pair	66261080531
	1-1/4			66261080532
	1-1/2			66261080383
	1-3/4			66261080384
	2			66261080514
5	1	10 and 12	1 Pair	66261080533
	1-1/4			66261080534
	3			66261080535
8	1-1/4	14	1 Pair	66261080536
	3			66261080512
10	1-1/4	16	1 Pair	66261080520

