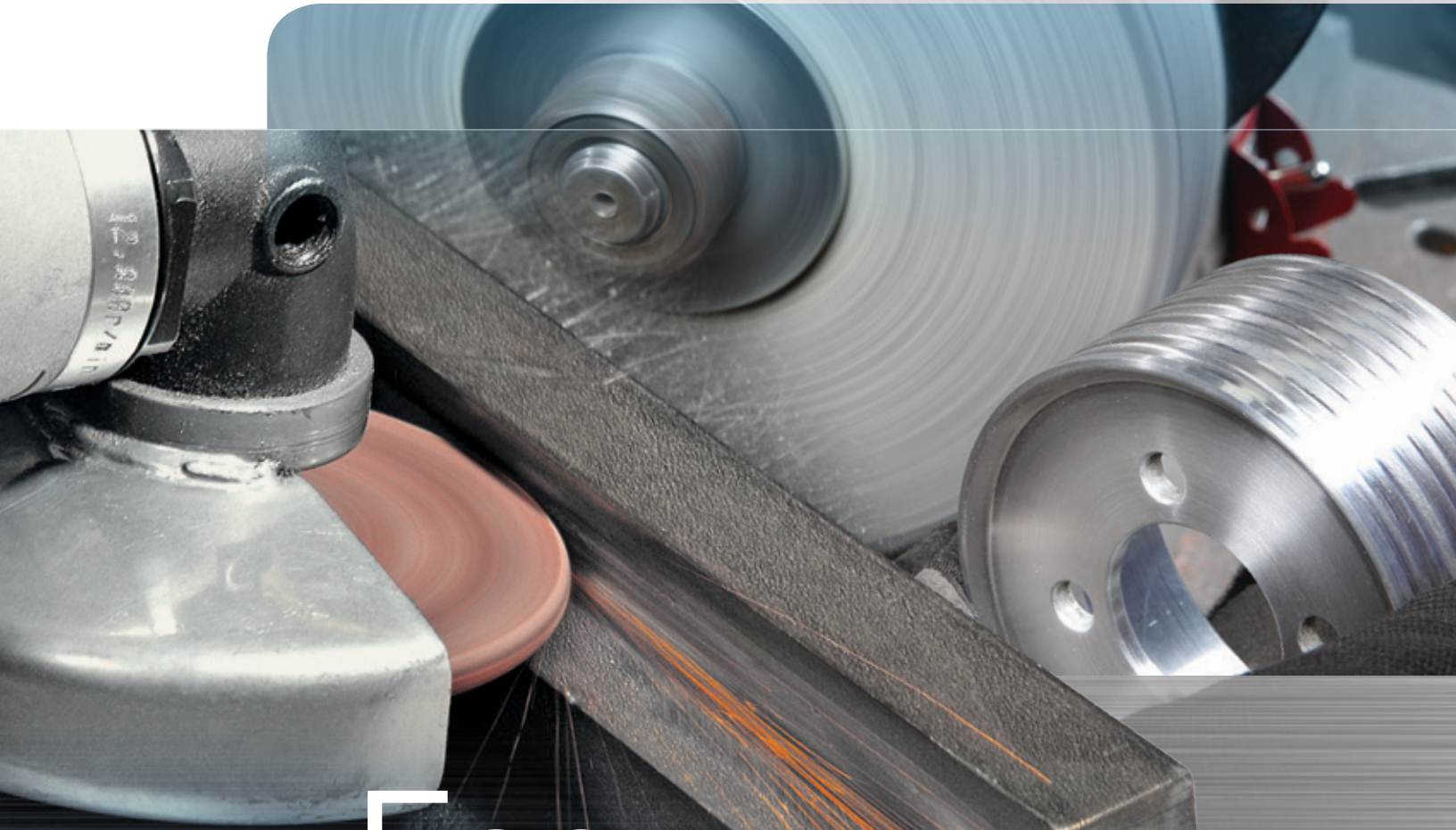


Scotch-Brite™
Surface Conditioning Wheels Selection Guide



Easy
Does It

For deburring, finishing,
blending, cleaning & more!

3M

Wheel Selection in 3 Easy Steps

Step 1

Select the type of wheel that will work with your equipment.

Convolute wheels are typically bigger and used on stationary equipment.

Unitized wheels are generally smaller wheels used on portable tools.

Step 2

What are you trying to do with the wheel?

There are two main applications for surface conditioning wheels: deburring and finishing. If you are deburring parts or radiusing edges, use a *deburring wheel* (see pg. 4 for convolute, pg. 6 for unitized). To create an aesthetic finish, use an appropriate *finishing wheel* (see pg. 5).

If your part requires both deburring and aesthetic finishing, start with a deburring wheel. If necessary, follow up with a finishing wheel to create the required finish.

Step 3

Use the next 4 pages to select your wheel.

Wheel descriptions include many pieces of relevant information, from wheel composition to size.

Use this key to read Scotch-Brite wheel descriptions:

9	S	FIN	8"	x	1"	x	3"
Density	Mineral	Grade	Diameter		Width		Core

Getting Started

For over 50 years, 3M has made your toughest jobs easier with a broad portfolio of surface conditioning wheels. Now, we're making it even easier to choose the best option for your application – from aesthetic finishing to weld blending, deburring and more!

Convolute Wheels

Scotch-Brite™ EXL PRO

UPC (051125)	Grade	Max RPM	Size
94904-5	9S FIN	6,000	6 × 1/2 × 1"
94926-7	10S FIN		
94905-2	9S FIN		6 × 1 × 1"
94917-0	10S FIN		
94907-1	9S FIN	4,500	8 × 1/2 × 3"
94927-4	10S FIN		
94908-8	9S FIN		8 × 1 × 3"
94918-7	10S FIN		
94913-2	9S FIN	3,000	12 × 1 × 5"
94902-6	10S FIN		12 × 2 × 5"
94914-9	9S FIN		

Scotch-Brite™ EXL Deburring Wheels

UPC (048011)	Grade	Max RPM	Size
13616-5	8A MED	6,000	6 × 1/2 × 1"
09548-6	8S FIN		
05790-3	9S FIN		
13617-2	8A MED		
09549-3	8S FIN	4,500	6 × 1 × 1"
05132-1	9S FIN		
17459-4	8A MED		8 × 1/2 × 3"
14629-4	8S FIN		
05791-0	9S FIN	4,500	8 × 1 × 3"
13619-6	8A MED		
09551-6	8S FIN		8 × 2 × 3"
05135-2	9S FIN		
13620-2	8A MED	9S FIN	8 × 2 × 3"
09552-3	8S FIN		
05136-9	9S FIN		

Scotch-Brite™ Metal Finishing Wheels

UPC (048011)	Grade	Max RPM	Size
01862-1	5A MED	6,000	6 × 1 × 1"
01863-8	5A CRS		
01869-0	5A MED		6 × 2 × 1"
01888-1	5A CRS		
01871-3	5A MED	4,500	8 × 1 × 3"
01872-0	5A CRS		
01876-8	5A MED		8 × 2 × 3"
01904-8	5A CRS		

3M™ General Deburring Wheels

UPC (048011)	Grade	Max RPM	Size
64899-6	9S FIN	6,000	6 × 1/2 × 1"
64900-9	9S FIN		6 × 1 × 1"
64901-6	9S FIN	4,500	6 × 1/2 × 1"
64902-3	9S FIN		8 × 1 × 3"

Scotch-Brite™ Multi-Finish Wheels

UPC (048011)	Grade	Max RPM	Size
13170-2	2S CRS	6,000	6 × 1 × 1"
13171-9	2S MED		
13172-6	2S FIN		6 × 2 × 1"
13176-4	2S CRS		
13177-1	2S MED	4,500	8 × 1 × 3"
13178-8	2S FIN		
13183-2	2S MED		8 × 2 × 3"
13184-9	2S FIN		
13185-6	2S CRS	9S FIN	8 × 2 × 3"
13186-3	2S MED		

Most Popular Products



Unitized Wheels

Scotch-Brite™ EXL Unitized Wheel

UPC (048011)	Grade	Max RPM	Size
15527-2	2A MED	25,100	1 × 1 × 3/16"
13713-1	2S FIN	30,100	
14063-6	6A MED	35,100	
13753-7	8A MED		
13752-0	8A CRS	12,100	3 × 1/4 × 3/8"
16054-2	2A MED		
14750-5	2S FIN		18,100
15118-2	6A MED		
14753-6	8A MED	18,100	3 × 1/4 × 3/8"
13766-7	8A CRS		

Scotch-Brite™ Roloc™ EXL Unitized Wheels

UPC (048011)	Grade	Max RPM	Size
17185-2	2A MED	22,100	2" × NH
17183-8	2S FIN		
17190-6	6A MED		
17192-0	8A MED		
17186-9	2A MED	15,100	3" × NH
17184-5	2S FIN		
17191-3	6A MED		
17193-7	8A MED		

Scotch-Brite™ Rapid Cut Unitized Wheels

UPC (051115)	Density	Grade	Max RPM	Size
66699-5	7	CRS+	35,100	1 × 1 × 3/16"
66725-1	7	XCS+		
66722-0	9	CRS+	18,100	3 × 1/4 × 3/8"
66748-0	9	XCS+		
66704-6	7	CRS+	12,100	4 × 1/4 × 5/8"
66730-5	7	XCS+		
66721-3	9	CRS+		
66747-3	9	XCS+		

Scotch-Brite™ Roloc™ Rapid Cut Unitized Wheels

UPC	Density	Grade	Max RPM	Size
051115-66759-6	9	CRS+	22,100	2" × NH
048011-64859-0	9	CRS+	15,100	3" × NH
051115-66760-2	9	XCS+	15,100	3" × NH

Deburring with Convolute Wheels

Scotch-Brite Deburring Wheels are typically used for removing the metal burrs left by fabrication activities. They are also used for radiusing sharp edges, cleaning and light blending.

3M General Deburring

- General purpose
- Single packaging
- Value pricing

Scotch-Brite EXL

- Improved consistency
- Versatile and broad product line
- Trusted performance

Scotch-Brite EXL PRO

- Longest life without sacrificing feel or conformability
- Extra cut without sacrificing finish
- Ideal in off-hand applications

↑
Performance



Scotch-Brite™ EXL PRO

The new EXL PRO Deburring Wheel was designed with the operator in mind. It provides longer life and extra cut, but is not too hard and does not finish too coarse. It runs smoothly and requires less pressure to get the job done. For operators who can feel the difference, this is the wheel of choice.



High Performance

- 30–50% longer life than original EXL
- More total cut – with less operator pressure
- Soft and smooth
- Operator friendly

Density	Mineral	Grade	Diameter	Width
9 & 10	S/C	FIN	4–24"	1/2–42"

↑
Ideal starting point

Scotch-Brite™ EXL, EX2 & EX3 Deburring Wheels

The original EXL, EX2 and EX3 Deburring Wheels offer good value and the most versatile product portfolio. For years these wheels have provided customers with an easy solution for deburring, radiusing and blending their metal parts. This line provides versatility and consistent performance.



Good Performance

- Broad range of products and sizes (many stocked items)
- Consistent performance

Density	Mineral	Grade	Diameter	Width
EXL (Soft)	A/O & S/C	FIN & MED	4–24"	1/2–42"
EX2 (Med)				
EX3 (Hard)				

3M™ General Deburring Wheel

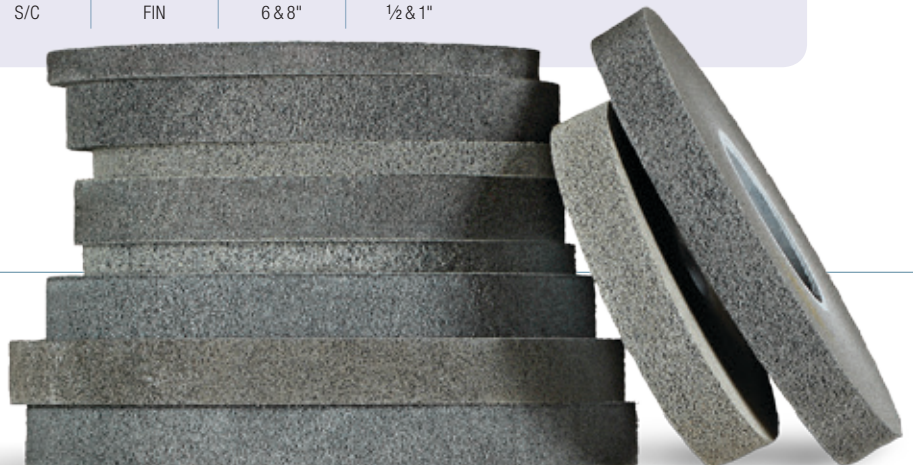
This General Deburring Wheel provides basic performance at competitive prices and order quantities. This wheel provides the performance required for light to medium deburring applications, as well as for cleaning and finishing applications.



Basic Use

- Single package quantities
- Strong overall value
- Value priced

Density	Mineral	Grade	Diameter	Width
9	S/C	FIN	6 & 8"	1/2 & 1"



Finishing with Convolute Wheels

**Introducing the
“Finishing Four.”
The easiest way to
achieve the look
you’re going for!**

These wheels are primarily used for producing various aesthetic finishes on metal. Each wheel creates a different finish, as described below.

Width	3/8–42"									
Core Size	1	1	3	5	5	8	10	12	12	
Diameter	4	6	8	10	12	14	16	20	24	



Scotch-Brite™ Light Deburring Wheels

Produces a bright and consistent finish with a tight scratch pattern. These very soft, conformable wheels can be used for finishing and light deburring.

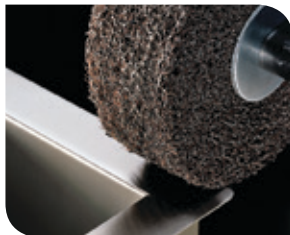
Density	Mineral	Grade	Diameter	Width
6, 7 & 8	S/C	FIN	4–24"	1/2–42"



Scotch-Brite™ Cut and Polish Wheels

Produces a dull finish with a tight scratch pattern. This denser, harder wheel can be used for aggressive finishing applications, and is good for defect removal and scratch blending.

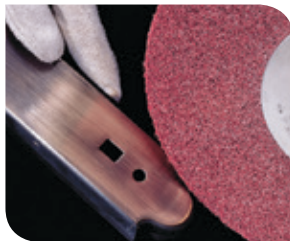
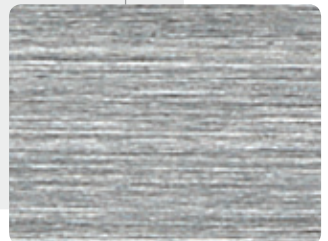
Density	Mineral	Grade	Diameter	Width
5 & 7	A/O & S/C	FIN, MED & CRS	4–24"	1/2–42"



Scotch-Brite™ Multi-Finishing Wheels

For creating a bright finish with a wide scratch pattern. This multi-purpose wheel is often used on inline sanding tools for large surface repair.

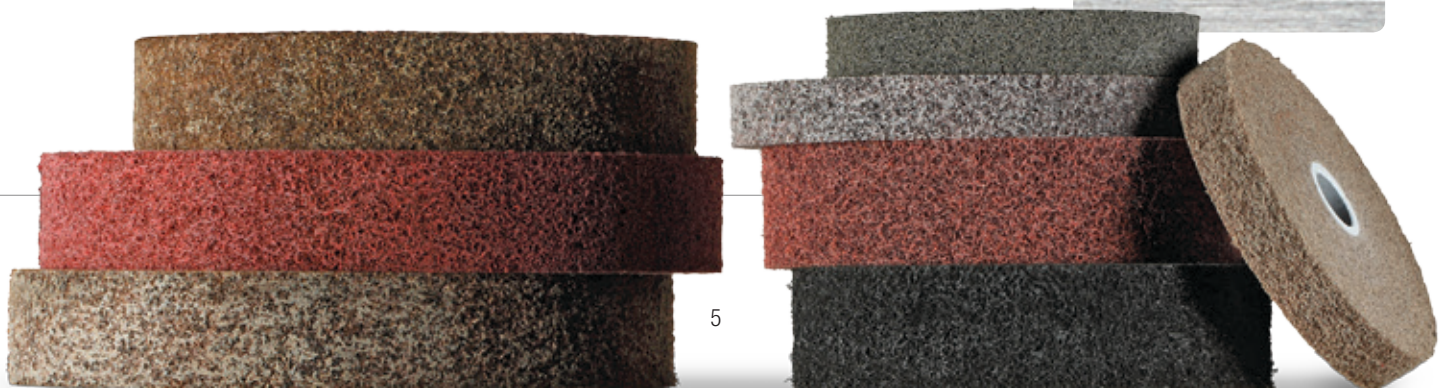
Density	Mineral	Grade	Diameter	Width
2, 3 & 4	S/C	FIN, MED & CRS	4–24"	1/2–42"



Scotch-Brite™ Metal Finishing Wheels

Creates a satin finish that is somewhat coarser and duller than our Light Deburring Wheels.

Density	Mineral	Grade	Diameter	Width
4, 5 & 6	A/O	MED & CRS	4–24"	1/2–42"



Deburring, Blending & Finishing with Unitized Wheels

Unitized wheels are typically smaller for use with portable tools, and are perfect for a variety of applications. The EXL product line offers the most versatile range of products, starting from a soft 2 density (great for delicate and intricate work) to a hard 8 density (for durability in deburring applications).

Scotch-Brite™ EXL Unitized Wheels

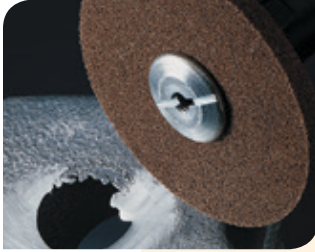
Density	Mineral	Grade	Diameter	Width
2, 4, 6 & 8	A/O & S/C	VFN, FIN, MED, CRS, XCS	½–14"	¼–1"

Scotch-Brite™ EXL Roloc™ Unitized Wheels

Density	Mineral	Grade	Diameter	Width
2, 4, 6 & 8	A/O & S/C	FIN, MED, CRS, XCS	2 & 3"	¼–¾"

Broadest Offering

- Long lasting
- Smear resistant
- Outstanding consistency
- Available with center hole or 3M™ Roloc™ attachment



Heavy Deburring & Weld Blending with Unitized Wheels

Scotch-Brite™ Rapid Cut Wheels combine the proven nonwoven abrasive technology used in all our Scotch-Brite products with 3M's proprietary precision-shaped grain. Now you can get everything you love about Scotch-Brite abrasives – including consistent finishes and ease of use – with up to 3 times higher cut rates than the leading competitive wheels. Makes tough jobs like weld blending and heavy deburring fast and easy!

Scotch-Brite™ Rapid Cut Unitized Wheels

Density	Mineral	Grade	Diameter	Width
7* & 9	Ceramic Precision Shaped Grain	CRS+ and XCS+	1–14"	¼–1"

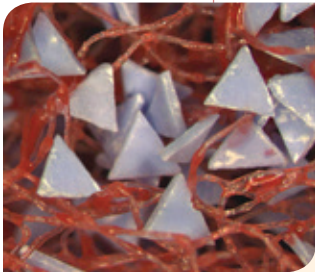
*7 density not available in 3" diameter

Scotch-Brite™ Roloc™ Rapid Cut Unitized Wheels

Density	Mineral	Grade	Diameter	Width
9	Ceramic Precision Shaped Grain	CRS+ and XCS+	2 & 3"	¼–¾"

Fast Cutting

- High cut rate
- Long life
- Helps improve productivity



Tools & Accessories

These are just a few of the many specialized tools and accessories optimized for use with Scotch-Brite™ Abrasives. For product recommendations on your specific application, contact your Authorized 3M Abrasives Distributor or 3M Representative.

Recommended Tools

3M™ Die Grinders, 1 HP (744W)

Model No.	Weight lbs. (kg)	Length inch (mm)	Air Inlet Thread inch	Collet Size inch	Max RPM	UPC
20238	1.69 (0.77)	7.75 (196.9)	1/4 NPT	1/4	18,000	051141-20238-9
20239	2.06 (0.93)	10 (254)	1/4 NPT	1/4	12,000	051141-20239-6
20240	2.06 (0.93)	10 (254)	1/4 NPT	1/4	8,000	051141-20240-2

3M™ Grinders – Type 27, 1 HP (744W)

Model No.	Tool Dia. inch (mm)	Length	Air Inlet Thread inch	Thread Size inch	Max RPM	UPC
28403	4 (100)	Standard	3/8 NPT*	3/8-24 EXT	12,000	051141-29403-3
28413	4 (100)	Extended	3/8 NPT*	3/8-24 EXT	12,000	051141-28413-2
28405	4 1/2 (114.3)	Standard	3/8 NPT*	5/8-11 EXT	12,000	051141-28405-7
28414	4 1/2 (114.3)	Extended	3/8 NPT*	5/8-11 EXT	12,000	051141-28414-9

Extended

*Includes 3/8" to 1/4" reducer

3M™ Inline Sanders 1 HP (744W)

Generate straight line scratches for finishing stainless steel and other metals. These straight shaft sanders can be used with inflatable or slotted wheel accessories and many other wheel products.

Model No.	Weight lbs. (kg)	Length inch (mm)	Air Inlet Thread inch	Collet Size inch	Max RPM	UPC
28338	3.32 (1.51)	9.88 (251)	1/4 NPT	5/8-11	1,600	051141-28338-8
28339	2.64 (1.20)	8.50 (216)	1/4 NPT	5/8-11	3,500	051141-28339-5

Recommended Accessories

3M™ Unitized Wheel Mandrels

Part No.	Description	Shank Size inch	Overall Length inch	Outside Flange Dia. inch	Max RPM	MOQ	UPC
936	<ul style="list-style-type: none"> Use with wheels 1" diameter x 1" wide x 3/16" center hole Plastic mandrel self taps into wheel 	1/4	2 1/16	3/4	22,200	1	048011-04018-9
990	<ul style="list-style-type: none"> Use with high speed or easy loading Unitized Wheels 2" to 3" diameter x 1/8" to 1/2" wide x 3/8" center hole Includes silver cap for 1/8" and 1/4" wide wheels Includes black cap for 3/8" and 1/2" wide wheels 	1/4	1 3/4	1	25,100	1	048011-15012-3

3M™ Flange Adapters

Part No.	Description	Use With	UPC
16860-9	3M™ Flange Adapter #5, 1" wide telescoping wheel adapter. Reduce 1" I.D. core to 1/2", 5/8", 3/4", 7/8"	1/2" wide wheels	040811-16860-9
16859-3	3M™ Flange Adapter #5, 1/2" wide telescoping wheel adapter. Reduce 1" I.D. core to 1/2", 5/8", 3/4", 7/8"	1/2" wide wheels	040811-16859-3

3M™ Roloc™ Disc Pad TR Assembly

Part No.	Description	Dia. inch	Thread Size inch	Color	Density Rating	Max RPM	MOQ	UPC
05539	Includes a 3M™ Roloc™ shank and adapter	2	1/4 - 20 INT	Black	Hard	25,000	1	051144-05539-5
05540	Includes a 3M™ Roloc™ shank and adapter	3	1/4 - 20 INT	Black	Hard	20,000	1	051144-05540-1

Recommendations & Maximum Operating Speeds

Convolute Wheels

Maximum Operating Speeds (RPM)

	Diameter (inch)	All Wheels (RPM)
Scotch-Brite™ EXL, EX2, EX3, EXL PRO,	4	9,000
General Deburring, Light	6	6,000
Deburring, Cut & Polish,	8	4,500
Multi-Finish & Metal	10	3,600
Finishing Wheels	12	3,000
	14	2,550
	16	2,250
	18	2,000
	20	1,800
	24	1,500

This information is for summary purposes only. For detailed recommendations on a specific Scotch-Brite product, consult your Authorized 3M Abrasive Products Distributor or your local 3M representative.

Recommended Operating Speeds

Application	Surface Feet Per Minute (SFPM)
Decorative Finishing	500–3000
Composites/Soft Materials	1200–2700
Deburring	5000–6500
Blending/Polishing	6000–8000

Unitized Wheels

Maximum Operating Speeds (RPM)

Size (Diameter × Width)	CP-UW	EXL-UW 2S, 3S	EXL-UW 2A MED, 2A XCS, 4A XCS	EXL-UW 4, 6, 8 Except 4A XCS
Less than 1"	40,100	35,100	30,100	40,100
1" × All	35,100	30,100	25,100	35,100
1 1/2" × All	30,100	20,100	18,100	30,100
2 × 1/4–1/2"	22,100	16,100	16,100	22,100
2 × 3/4–1"	22,100	16,100	14,100	22,100
2 1/2 × 1/8"	20,100	–	–	20,100
2 1/2 × 1/4"	20,100	14,100	14,100	20,100
2 1/2 × 3/8"	20,100	14,100	12,100	20,100
2 1/2 × 1/2"	18,100	14,100	12,100	18,100
2 1/2 × 3/4–1"	18,100	12,500	10,000	18,100
3 × 1/8"	18,100	–	–	18,100
3 × 1/4"	18,100	12,100	12,100	18,100
3 × 3/8"	18,100	12,100	10,000	18,100
3 × 1/2"	15,100	10,000	10,000	15,100
3 × 3/4–1"	15,100	10,000	9,000	15,100
4 × 1/8"	12,100	–	–	–
4 × 1/4–1/2"	12,100	8,500	8,000	12,100
4 × 3/4–1"	12,100	8,000	7,000	12,100
5" × All	9,000	6,000	5,500	9,000
6" × All	7,500	5,000	4,500	7,500
7" × All	6,000	4,500	4,000	6,000
8" × All	5,500	4,000	3,500	5,500
9" × All	5,000	3,500	3,000	5,000
10" × All	4,500	3,200	2,800	4,500
11" × All	4,000	2,900	2,500	4,000
12" × All	3,750	2,600	2,300	3,750
13" × All	3,450	2,400	2,100	3,450
14" × All	3,200	2,200	2,000	3,200

Products with "Dual" Ratings & Higher Maximum Operating Speeds (MOS)

Product Name	Density/Grade	Size (Diameter × Width)	RPM		
Clean and Strip Unitized Wheel	7S XCS	3" × 1/4"	18,100		
Cut and Polish Unitized Wheel	5A FIN	3 × 1/2"	18,100		
		3 × 3/4"			
		3 × 1/2"			
		3 × 3/4"			
	7A MED	3 × 1/2"		22,100	
		3 × 3/4"			
		3 × 1/2"			
		3 × 3/4"			
7S MED	3 × 1/2"	22,100			
	3 × 3/4"				
	3 × 1/2"				
	3 × 3/4"				
EXL Unitized Wheel	5A FIN		2 1/2 × 1/2"	18,100	
			2 1/2 × 3/4"		
			2 1/2 × 1/4"		
			2 1/2 × 1/2"		
		2 1/2 × 1/4"			
		2 1/2 × 1/2"			
	4A FIN	3 × 1/2"	20,100		
					4S FIN
					6A FIN
					6S FIN
6A MED	2 1/2 × 1/2"	20,100			
				8A MED	
				8A CRS	
				6A MED	
8A MED					

The Unitized Wheels listed above (in either 1/4" or 3/8" I.D.) have been certified to run at higher maximum operating speeds when using the following hardware (or their equivalents): #990 or #991 Mandrel – or used with 1 1/2" O.D. and 3/8" I.D. flat washers.

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