

A woman with extensive colorful tattoos on her arms and a pink hard hat is smiling in a workshop. She is wearing a blue t-shirt and jeans. In the foreground, there are welding tools including a blue welding mask, a red grinding wheel, and leather gloves.

NORTON

SAINT-GOBAIN

Reshaping
your
world.

CATALOG #7364

ABRASIVE PRODUCTS FOR THE
WELDING AND METAL
FABRICATION MARKET

BECAUSE **RIGHT CHOICES** MATTER™


SAINT-GOBAIN

Reshaping
your
world.

Our Mission

We offer powerful, precise, user-friendly solutions, which enable our customers to cut, shape and finish all materials even in the most complex and challenging applications. By working closely with end-users and our grinding expert partners, we design and provide customized solutions to secure the best option for performance, cost and safety.

Our Expertise

Norton is the leading brand of Saint-Gobain Abrasives, with more than 135 years of experience in manufacturing abrasives.

We are committed to providing access to our expert's knowledge whenever you need it. Whether it is through our [Process Solutions Program \(PSP\)](#), ongoing training programs, or through on-line expert articles and white papers you can stay up-to-date with Norton where and when you need it.

Bring us your grinding challenges, we have solutions!

Our Commitment

You be the final judge in performance! We are so confident of the superior performance of our abrasive products, as recommended for specific applications, that we invite in-plant tests against any other brand of abrasive product on the market. Contact your Norton Representative to find out more about our No Risk test policy or visit www.nortonabrasives.com

**NO-RISK TEST**

Why Tiers Matter

At Norton we believe in delivering right choices that matter. Our abrasives are classified in BEST, BETTER, and GOOD performance/price tiers to help you choose the right product for your specific application every time.

BEST

Our BEST tier products are designed for the customer who is seeking the highest productivity at the lowest total cost.

BETTER

Our BETTER tier products provide an excellent blend of performance and price.

GOOD

And, our GOOD tier products promise the highest quality you expect from the Norton name with a low initial price.

If you need help determining the right tier for your specific needs, don't hesitate to contact us directly or reach out to your Norton sales representative.

Go Further

Visit our website at www.nortonabrasives.com for a more comprehensive outline of products, safety and application information. We continually update it with our most current information.

Connect with us:



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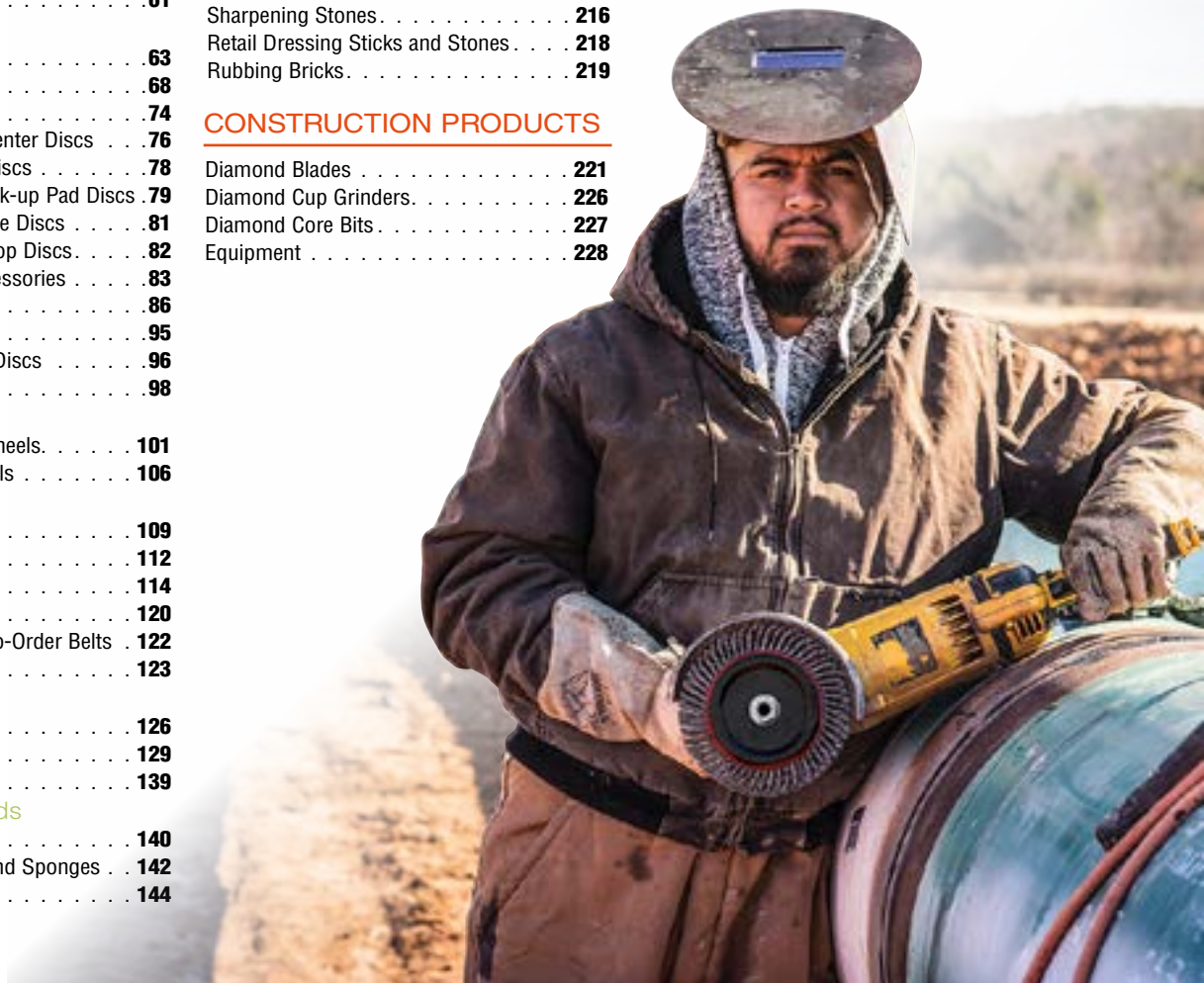
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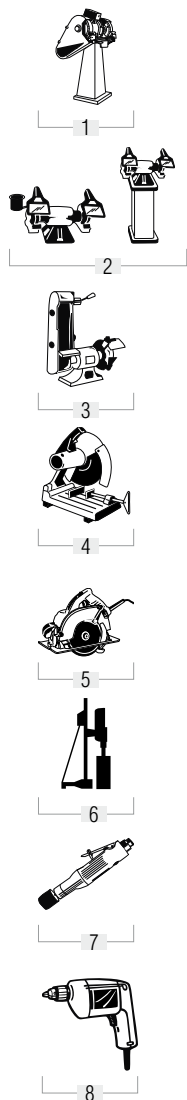
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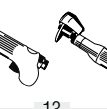
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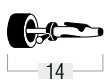
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Easy-to-Follow Page Guide

Key Questions to Simplify Product Selection

Am I in the right section?

- A** Product
- B** Category overview
- C** General attributes
- D** Correct machine use

How do I narrow choices?

- E** Product design variations

How do I match my end-user needs?

- F** Application recommendations
- G** Best/Better/Good performance color coding
- H** Full application / grit guide

How do I match or upgrade from a competitive product?

- I** Cross reference guide





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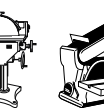
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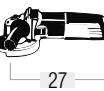
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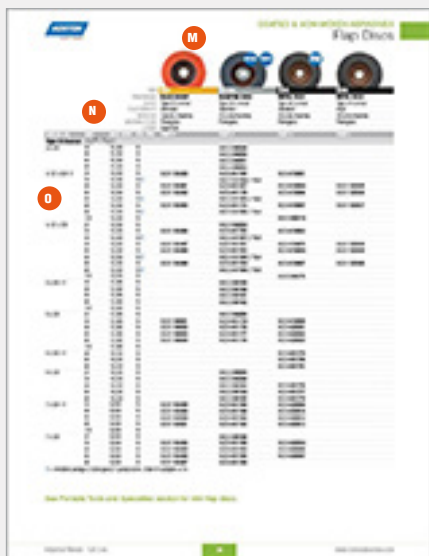
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What are the Leading Products by Tier?

J Tiers by color-coding: Best, Better, Good

K Features and benefits

L New, improved, and/or expanded offering

How Do I Find What I Want Now That I Know What I Want?

M Visual identification

N Key product attributes

O Full specification and product number

PLAY IT SAFE
— AT THE WHEEL —



Visit our newly updated safety website for safety guides, safety data sheets, videos and lots of additional safety resources at <https://nortonsga.us/safety>

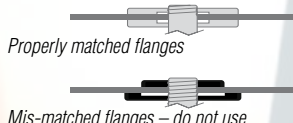
⚠ WARNING

Improper use of abrasive products might cause grinding wheel breakage and serious injury. Comply with ANSI B7.1, OSHA and Safety Guide furnished with package. Don't overspeed, abuse, or drop wheel. Always use a guard, personal protective equipment and proper mounting procedures.



Speeds

Check machine spindle speed and speed listed on machine against safe maximum operating speed marked on the grinding wheel. Do not overspeed the wheel.



Flanges

When mounting most grinding wheels, use flanges of equal diameter and bearing surface. For exceptions, see ANSI B7.1.



Safety Gloves

Grinding applications are conducted in harsh environments. The use of proper fitting gloves is recommended.



Wheel Guard

Always use the wheel guard as supplied by the machine manufacturer, in the proper position.



Do Not Use Damaged Wheel

Always check each wheel for cracks or damage before use. Never use a damaged wheel.



Eye/Face Protection

Always wear government-approved face and eye protection when using abrasive products.



Hearing Protection

Use of abrasive products can create elevated sound levels. Hearing protection must be worn where required.



Safety Guides, SDS and Wheel Warning Messages

Before using any abrasive materials, READ:

- The Safety Guides
- Wheel Warning Messages
- Safety Data Sheets (SDS)

All Norton products provide information pertaining to safe use. Please take the time to read it carefully. Contact suppliers of the workpiece and abrasive materials for copies of the SDS if one is not readily available. Norton abrasives SDS can be obtained on <https://nortonsga.us/safety>



Dust Protection

Exposure to dust generated from workpiece and/or abrasive materials can result in lung damage and/or other physical injury.

Use dust capture or local exhaust as stated in the SDS. Wear government-approved respiratory protection and eye and skin protection. Failure to follow this warning can result in serious lung damage and/or physical injury.

This is a general dust warning and does not cover specific situations. For more information, refer to the SDS dust warning provided with your products, and workpiece.

Please see [pages 240 - 247](#) for additional safety information

when the going
gets rough


**RELY ON
NORTON INNOVATION**

For stock removal, rough blending, cleaning castings and welds...Norton depressed center wheels are constructed to tackle the demanding work of all material types.

Depressed Center Wheels





Depressed center wheels may also be referred to as raised hub wheels or by their shape designation of "Type", with Type 27 being the most popular. The depressed center design allows the flange/lock nut to recess within the wheel so that it can be used for various grinding and cutting applications. Depressed center wheels are designed to handle the most severe right angle grinding applications from heavy stock removal to rough blending. More recently, depressed center wheels have been designed to increase the utility of the tool for cut-off applications. While large right angle grinders (7" & 9") have been around for many years, small or mini grinders that handle 4", 4-1/2", 5", and 6" wheels have made this machine, and wheel category, the most popular in power tools.

Applications:	Grinding, stock removal, edge chamfering, beveling, weld blending, and cutting-off
Size Range:	2" – 9"
Thickness Range:	.040" – 1/4"
Grit Range:	24 – 46 grits for stock removal; 60, 80 grits for blending and finishing
Abrasive Grain:	Ceramic Alumina, Diamond, Zirconia Alumina, Aluminum Oxide, Silicon Carbide
Mounting Options:	Plain hole (3/8", 5/8" and 7/8") and discard mount (5/8"-11)
Shape:	Type 27, Type 28, Type 29
Machine Used:	

RIGHT ANGLE GRINDER

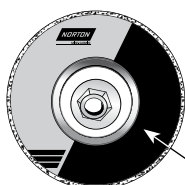
How to Pick the Right Wheel

DEPRESSED CENTER WHEEL DESCRIPTION CODES					
BLANK = All Purpose	ALU = Aluminum	FC = Fast Cut	HD = Heavy Duty	INOX/SS = Contaminant Free	XXL = Extra Long Life
 = Aluminum	 = Foundry	 = Stainless	 = Steel / Metal		

DESCRIPTION CODE DEFINITIONS	
BLANK = All Purpose	Where an excellent blend of cut rate and life is needed.
ALU = Aluminum	Specially formulated bond for reduced loading and surface contamination while cutting aluminum and soft materials.
FC = Fast Cut	Where fast stock removal is needed, or the application only allows for low-pressure or under-horsepowered grinders.
HD = Heavy Duty	Triple reinforced for the most aggressive foundry applications
INOX/SS = Contaminate Free	Contain <0.1% iron, sulfur or chlorine for rust-free and corrosion-free results. Will not contaminate stainless steel.
LL = Long Life	Where durability is needed due to severe application, and when horsepower of the grinder allows for heavy pressure.
XXL = Extra Long Life	Offers 50% more life and metal removal than standard aluminum oxide wheels.

How to Pick the Right Mount

Most wheel sizes come with a plain hole or a discard mount option. While the plain hole has a small, initial cost advantage, the discard mount can provide a labor cost advantage with the quicker wheel change.

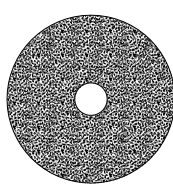
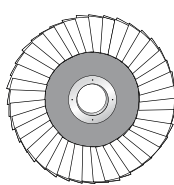
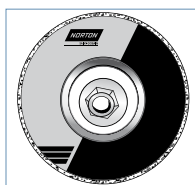


Mini-Mount Hub

Our unique mini-mount hub used on 4-1/2" and 5" depressed center wheels provides up to 30% more wheel life because the hub covers just a small surface area, providing maximum grinding area exposure and usage.

Standard throw-away hub size

Why Choose Depressed Center Wheels?



Depressed Center Wheels vs. Flap Discs or Fiber Discs

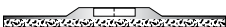
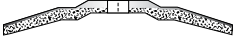

- Up to 5X life over flap discs, less downtime and inventory
- Up to 100X life over fiber discs, less downtime and inventory
- Rigidity for severe operations and high power grinders
- 1/8" wheels can be used for cutting and grinding
- Can be used to grind inside corners at outer edge of wheel

Mounting Depressed Center Wheels



See how to correctly mount a depressed center wheel on our youtube page at <https://nortonsga.us/7hc5m>

Type-To-Application Recommendation Guide

Wheel Type/Thickness	Applications	90° ANGLE	30° ANGLE	15° ANGLE
TYPE 27 	Type 27 wheels are essentially straight wheels that have a “depressed center/ raised hub”. Different types of fiberglass reinforcement mesh give the product stability for use on the periphery, on the face, or a combination of the two.			
.040", .045", and 1/16" Type 27/42 RightCut	Cutting only, where fast cutting and low kerf loss are desired	◆		
3/32" and .125" Type 27/42	For tough cutting and notching applications where stability is important; cutting and cleaning burr-free narrow root pass welds	◆		
1/8" Type 27	For multiple applications ranging from cutting-off, notching and light-duty side grinding	◆	◆	
1/8" Pipe Notcher Type 27	2-1/2 pieces of reinforcement; durable face grinding; root pass grinding without removing pipe material	◆	◆	
1/8" Type 27 Flexible	For light stock/blending/finishing/polishing		◆	
.140" and 1/8" Type 27 Foundry Notchers	Triple-reinforced for grinding steel and dirty/scale-covered castings; removing and cleaning gates and risers	◆	◆	
1/4" Type 27	For light- to heavy-duty grinding on the bottom/face of the wheel		◆	
1/4" Type 27 Foundry Snaggers	Designed for cleaning parting lines, pads and slag		◆	
1/4" Type 27 Heavy-Duty Foundry	Triple-reinforced for the most aggressive foundry applications		◆	
TYPE 28 	Type 28 wheels are constructed with a downward angle built into the grinding section to facilitate a flatter grinding angle. These wheels can only be used on the face and never on the periphery for cutting-off.			
1/4" Type 28 Saucers	Smooth, gouge-free grinding at shallow angles			◆
TYPE 29 	Type 29 wheels are constructed with an upward angle built into the grinding section to provide full face contact for light stock removal and blending operations. These wheels can only be used on the face and never on the periphery for cutting-off.			
1/8" Type 29 Flexible, AVOS	Polishing and blending applications			◆

Material/Application-To-Product Recommendation Guide

	BEST Quantum3	BETTER BlueFire	GOOD Gemini	Metal
CUTTING				
Mild Carbon / High Tensile Steel	◆	◆	◆	◆
Stainless Steel / Alloys	◆	◆	◆	◆
Contaminate Free*		◆ FC/INOX/SS	◆ INOX/SS	
Cast Iron	◆		◆	
Aluminum / Bronze / Brass			◆ ALU	
NOTCHING				
Mild Carbon / High Tensile Steel	◆	◆	◆	◆
Stainless Steel / Alloys	◆	◆	◆ INOX/SS	
Contaminate Free*		◆ FC/INOX/SS	◆ INOX/SS	
Cast Iron	◆	◆ Foundry	◆	
GRINDING				
Mild Carbon / High Tensile Steel	◆	◆	◆	
Stainless Steel / Alloys	◆	◆	◆	
Contaminate Free*	◆	◆ FC/INOX/SS	◆ INOX/SS	
Cast Iron		◆ Foundry	◆	
Gray Iron	◆	◆ Foundry	◆	
Aluminum / Bronze / Brass			◆ ALU	
BLENDING				
Mild Carbon / High Tensile Steel			◆ Flexible	
Stainless Steel / Alloys			◆ Flexible	
Aluminum / Bronze / Brass			◆ Flexible	
Fiberglass / Plastic			◆	

Typical Steel, Stainless Steel, Cast Iron Products: Angle Iron, Bar Stock, Ductile Pipe, Channel Iron, Decking, Rebar, I-Beams, Rail Steel, Studs, Tubing, and Welds

* For use in nuclear and food industry applications that require contaminant free (<0.1% iron, sulfur or chlorine)

Cross Reference Guides

Type 27 and 28 – 1/8" and 1/4"

TOTAL PERFORMANCE				INITIAL PRICE				SPECIALTY	
	BEST	BETTER		GOOD				BETTER	GOOD
NORTON	Quantum3	BlueFire	BlueFire FC/INOX/SS	Gemini	Gemini Fast Cut	Gemini SS	Metal	BlueFire Foundry	Gemini ALU
3M	Cubitron II	Silver, High Perform., Green Corps	–	–	–	–	–	–	–
Arc	–	–	–	Predator A24R	–	–	–	–	–
Bullard	TA24S	ZA24R Competitor	ZA24R	A24R	A24N	A46Q	A24R CompetitorC24R	–	AL36N
Camel	–	–	ZA24T	A24R	Ultra A24-N-BF, A24T Super Quickie Cut	WA24S	A24N, R&T Fast CutC24R	–	A30N, Fast Cut
DeWalt	XP Ceramic	XP, HP	–	–	–	HP SS	Metal	–	–
Flexovit	Flexon ZA24P, ZA30T, Flexon ZA20Q	Metalhog, AXT24S	–	High Perform. A24/30T	High Performance A30S, Specialist A30Q & R	Free Grind A30Q	High Perform. C24/30P	Flexon ZA16U	Specialist A24ALU
Metabo	M-Calibur	ZA24T	–	A24R & T	A24N	A360	C24N	–	A36M
Pearl	–	–	Z24T	Premium Metal A24S, Redline Max A/WA24S	Premium Metal A24R, Redline Max A/WA24R	WA24R, SRT24	Silver Line A24R & & Silver Line C24S	–	D.A. Series AL24M
Pferd	SG-Elastic Ceramic C024Q	ZA SGP, ZAT SGP, SG-Elastic	ZA R SGP, Z-SG	A-PS, A-SG	–	A-SG INOX, A-PS INOX	S-SG, Masonry	–	A-SG ALU
Sait	The Ultimate Grind, Saitech Ultimate Perform, Saitech Attacker, Pipeline	Z24R Z-Tech	Stainless	A24R, A24Turbo	A24N	XA24Q	A24T, C24N	CA24R - Foundry	A46N-ALU
Tyrolit	–	ZA24P-BFX	ZA24N-BFX	A30S & Q-BFX	A30R-BFX	A30-BF INOX	A30-BF	ZZA24R-BFX	A36N-BFX WA46-BF
Walter	–	Allsteel XX, Allsteel	Double-X	HP	–	Stainless	–	–	–
Weiler	Tiger Ceramic	Tiger Zirc, Tiger LL	Tiger Inox	Wolverine A24R	–	–	Wolverine A24N	–	–

Type 27 – Flexible 1/8"

	GOOD
NORTON	Gemini Flexible
Bullard	Flexlite AC
Camel	FGF, Special Wheel
Flexovit	Flexcel
Metabo	Z-Plus
Pearl	Flexible AC
Pferd	SG-Flex
Sait	Challenger II
Walter	Flexcut



Depressed Center Wheels

Best choice for stainless and carbon steel applications; efficiently grinds and cuts a variety of materials from alloys to gray iron



QUANTUM3 CERAMIC ALUMINA

- 100% next-generation, uniquely-shaped, ceramic alumina abrasive grain and tough new bond system result in 5-6 times the life of aluminum oxide wheels and up to 100% increase in performance and life over competitive ceramic wheels
- Significantly increase production, for the lowest total grinding cost of any wheel in the market place today
- Better operator control, improved comfort, and exceptional finished part quality with a more robust, sharper, yet smoother cutting action; wheels don't grab or dig

Best for metal plate, pipe, tubing, cast iron, carbon and mild steel, foundry and welding applications, and ceramics



DIALAST DIAMOND WHEELS

- A combination of high-quality diamond and advanced brazed single-layer bonding technology for extra-long life versus conventional abrasives or other vacuum-brazed diamond tools
- Retains diamond grains and wheel shape for full life with low sparks, while keeping a continuous grinding depth for exceptional wheel life; less blade changes reduce downtime and labor costs
- Environmentally friendly design generates minimal dust for less clean-up and safer working conditions

Better choice for stainless steel, carbon steel, alloys and gray iron



BLUEFIRE ZIRCONIA ALUMINA / A/O BLEND

- A blend of the most advanced zirconia alumina and premium aluminum oxide abrasives delivers 2 to 3 times the life of aluminum oxide wheels
- Broad utility; from light-to heavy-pressure applications
- Engineered specifically to deliver fast cut rate; excellent blend of performance and price

Good choice for steel and ferrous metals as well as specialty applications in aluminum and foundries



GEMINI ALUMINUM OXIDE

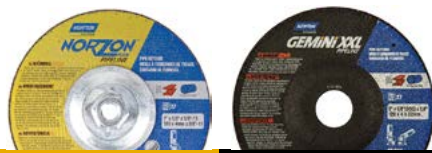
- Quality aluminum oxide for consistent performance at an economical price
- High-performance bond and wheel hardness are designed for fast cut while retaining excellent wheel life
- Versatile, general purpose specification for use on variety of materials including 400 series stainless, hard carbon steels, soft carbon steels

Good choice for steel/ferrous metal applications with low initial price



METAL ALUMINUM OXIDE

- Durable bond and wheel hardness are designed to provide an good mix of cut rate and life
- Good choice when low initial price is needed for small jobs or newer operators
- Metal (Aluminum Oxide) engineered for all steel/ferrous materials



TIER:	BEST	GOOD
TRADENAME:	NORZON PLUS	GEMINI XXL
SHAPE:	Type 27	Type 27
ABRASIVE:	Ceramic Alumina/ Zirconia Alumina	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #
1/8" (5/32") – Pipe Notching – Type 27				
4-1/2 x 1/8 (5/32) x 5/8-11	13,580	10		662533 70272 XXL
4-1/2 x 1/8 (5/32) x 7/8	13,580	25		662533 70271 XXL
5 x 1/8 (5/32) x 5/8-11	12,225	10		662533 70273 XXL
5 x 1/8 (5/32) x 7/8	12,225	25		662528 42038 XXL
6 x 1/8 (5/32) x 5/8-11	10,185	10		662528 41193 XXL
7 x 1/8 (5/32) x 5/8-11	8,600	10	662529 39184	662533 70274 XXL
9 x 1/8 (5/32) x 5/8-11	6,600	10	662530 49066	662533 70275 XXL

Pipe Notchers are to be used for cutting/notching only.

See Type 27 .040" – 1/4" Foundry, Type 28 Saucer, Type 27 Flexible, and Type 29 Blending Wheels at the end of this section.



TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	QUANTUM3	BLUEFIRE	GEMINI	METAL
SHAPE:	Type 27	Type 27	Type 27	Type 27
ABRASIVE:	Ceramic Alumina	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL ALUMINUM	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #
1/8" – Cutting / Notching / Light Grinding – Type 27					
4 x 1/8 x 3/8	15,280	25		662528 43178	662528 42016
4 x 1/8 x 5/8	15,280	25			662528 42017
4-1/2 x 1/8 x 5/8-11	13,580	10	662528 39423	662528 43211	662528 43590
	13,580	10		662528 43191 FC/INOX/SS	662528 42029 ALU 46
4-1/2 x 1/8 x 7/8	13,580	25	662528 39424	662528 43212	662528 43591
	13,580	25		662528 43190 FC/INOX/SS	662528 42030 ALU 46
5 x 1/8 x 5/8-11	12,225	10	662528 39425	662528 43215	
5 x 1/8 x 7/8	12,225	25	662528 39426	662528 43216	662528 43596
	12,225	25		662528 43194 FC/INOX/SS	
6 x 1/8 x 5/8-11	10,185	10	662528 39427	662528 43199 FC/INOX/SS	662528 33965
6 x 1/8 x 7/8	10,185	20	662528 39428	662528 43202	662528 01864
	10,185	20		662528 43198 FC/INOX/SS	
7 x 1/8 x 5/8-11	8,600	10	662528 39429	662528 43233	662529 39259
	8,600	10		662528 43183 FC/INOX/SS	076607 02678
7 x 1/8 x 7/8	8,600	20	662528 39430	662528 43234	662529 39207
	8,600	25*			076607 75956 5-Pk
9 x 1/8 x 5/8-11	6,600	10	662528 39431	662528 43244	662530 48983
	6,600	10		662528 43187 FC/INOX/SS	
9 x 1/8 x 7/8	6,600	20	662528 39432	662528 43245	662530 48994

* 5-wheel Job Packs; wheels are packed 5 wheels/Pack, with 5 Job Packs/carton. Order per each wheel in standard package quantities of 25. Order in multiples of 25.

DEPRESSED CENTER WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	FC = Fast Cut	HD = Heavy Duty	INOX/SS = Contaminant Free	XXL = Extra Long Life
■ = Aluminum	■ = Foundry	■ = Stainless	■ = Steel / Metal		



TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	QUANTUM3	BLUEFIRE	GEMINI	METAL
SHAPE:	Type 27	Type 27	Type 27	Type 27
ABRASIVE:	Ceramic Alumina	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
1/4" – Grinding – Type 27						
3 x 1/4 x 3/8	18,000	25			662528 42179	
4 x 1/4 x 3/8	15,280	25	662533 71180	662528 43179	662528 42018	
4 x 1/4 x 5/8	15,280	25	662533 71181	662528 43177		662528 42011
	15,280	25			662528 42019	
	15,280	25			662528 42183 ALU 46	
4-1/2 x 1/4 x 5/8-11	13,580	10	662533 70793	662528 43213	662528 43593	662528 43605
	13,580	10		662528 43193 FC/INOX/SS	662528 43585 FC	
	13,580	10			662528 42031 ALU 46	
	13,580	40				662528 19559
4-1/2 x 1/4 x 7/8	13,580	25	662533 70794	662528 43214	662528 43594	662528 43607
	13,580	25		662528 43192 FC/INOX/SS	662528 43584 FC	
	13,580	25			662528 42033 INOX/SS	
	13,580	25			662528 42034 ALU 46	
	13,580	50				662528 36796
5 x 1/4 x 5/8-11	12,225	10	662533 70795	662528 43217	662528 43597	662528 43613
	12,225	10		662528 43197 FC/INOX/SS		
5 x 1/4 x 7/8	12,225	25	662533 70796	662528 43218	662528 43598	662528 43614
	12,225	25			662528 42040 INOX/SS	
	12,225	25			662528 42039 ALU 46	
6 x 1/4 x 5/8-11	10,185	10	662533 70797	662528 43224	662528 32390	
6 x 1/4 x 7/8	10,185	20	662533 70798	662528 43203	662528 01865	
7 x 1/4 x 5/8-11	8,600	10	662533 70799	662528 43235	662529 40147 FC	662529 12633
	8,600	10		662528 43185 FC/INOX/SS	662529 40148 LL	
	8,600	10			662529 40514 ALU 24	
7 x 1/4 x 7/8	8,600	20	662533 70800	662528 43236	662529 40098 LL	
	8,600	20			662529 40516 ALU 24	
	8,600	25*				076607 75936 5-Pk
9 x 1/4 x 5/8-11	6,600	10	662533 70801	662528 43246	662530 49105 FC	
	6,600	10			662530 49104 LL	
	6,600	10			662530 49045 ALU 24	
	6,600	25*				076607 75938 5-Pk
9 x 1/4 x 7/8	6,600	20	662533 70802	662528 43247	662530 49077 FC	
	6,600	20		662528 43188 FC/INOX/SS	662530 48991 LL	

* 5-wheel Job Packs; wheels are packed 5 wheels/Pack. with 5 Job Packs/carton. Order per each wheel in standard package quantities of 25. Order in multiples of 25.




See 1/4 inch thick Type 27 Foundry and Type 28 Saucer Wheels on the next page.

DEPRESSED CENTER WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	FC = Fast Cut	HD = Heavy Duty	INOX/SS = Contaminant Free	XXL = Extra Long Life
■ = Aluminum	■ = Foundry	■ = Stainless	■ = Steel / Metal		





TIER:	BEST	BEST	BEST	BETTER	GOOD
TRADENAME:	QUANTUM3	DIALAST	DIALAST	BLUEFIRE	GEMINI
SHAPE:	Type 28	Type 29	Reversible	Type 28	Type 28
ABRASIVE:	Ceramic Alumina	Diamond	Diamond	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
1/4" – Grinding – Type 28 Saucer 							
7 x 1/4 x 5/8-11	8,600	10	662533 70803			662528 43229	662529 40149
7 x 1/4 x 7/8	8,600	20					662529 40095
9 x 1/4 x 5/8-11	6,600	10	662533 70804			662528 43237	662530 49106
9 x 1/4 x 7/8	6,600	20	662533 70805				662530 49081
Light Grinding – Type 29 							
4-1/2 x 5/8-11	13,600	1		662533 70009			
5 x 5/8-11	12,225	1		662533 70010			
6 x 5/8-11	10,200	1		662533 70011			
7 x 5/8-11	8,600	1		662533 70012			
1/4" – Grinding – Reversible Grinding Disc 							
4-1/2 x 1/4 x 5/8-11	13,600	1			662533 70019		
7 x 1/4 x 5/8-11	8,600	1			662533 70020		






TIER:	BEST	BEST	BETTER
TRADENAME:	QUANTUM3	DIALAST	BLUEFIRE
SHAPE:	Type 27	Type 27	Type 27
ABRASIVE:	Ceramic Alumina	Diamond	Zirconia Alumina/ Silicon Carbide
MATERIAL:	FOUNDRY	FOUNDRY	FOUNDRY

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #
.140", 1/8" – Cutting / Notching / Lt. Grinding – Type 27 					
4-1/2 x 1/8 x 5/8-11	13,580	10			662528 43206
4-1/2 x 1/8 x 7/8	13,580	25			662528 43204
7 x .140 x 5/8-11	8,600	1		662533 70014	
7 x 1/8 x 5/8-11	8,600	10			662528 43232
7 x 1/8 x 7/8	8,600	20			662529 15526
9 x .140 x 5/8-11	6,600	1		662533 70015	
9 x 1/8 x 5/8-11	6,600	10			662528 43240
9 x 1/8 x 7/8	6,600	20			662528 43238
1/4" – Grinding – Type 27 					
4 x 1/4 x 3/8	15,280	25			662528 43181
4 x 1/4 x 5/8	15,280	25			662528 43180
4-1/2 x 1/4 x 5/8-11	13,580	10			662528 43207
4-1/2 x 1/4 x 7/8	13,580	25			662528 43205
7 x 1/4 x 5/8-11	8,600	10			662528 43231
7 x 1/4 x 7/8	8,600	20			662528 43230
9 x 1/4 x 5/8-11	6,600	10	662533 70849 HD		662528 43241
	6,600	10			662528 43261 HD
9 x 1/4 x 7/8	6,600	20	662533 70848 HD		662528 43239
	6,600	20			662528 43260 HD

All Norton foundry wheels are designed and reinforced to withstand the most aggressive foundry applications.

DEPRESSED CENTER WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	FC = Fast Cut	HD = Heavy Duty	INOX/SS = Contaminant Free	XXL = Extra Long Life
 = Aluminum	 = Foundry	 = Stainless	 = Steel / Metal		

Depressed Center Wheels



Blending Wheels

Gemini Flexible

Type 27 wheel features a unique pattern with square grooves that prevent loading and promote cooling, this Gemini Flexible grinding wheel polishes your aluminum, hard carbon steel and soft carbon steel projects effectively and efficiently without gouging. 7/8 arbor wheels are sold with a back plate included for safety.

The Gemini Type 29 blending wheel is ideal for larger blending jobs and has a raised bump surface pattern to promote cool grinding, ideal for aluminum. The shape allows for a flatter grind and higher contact area. Can also be used to blend stainless, hard, and soft carbon steel.



TIER:	GOOD	GOOD
TRADENAME:	GEMINI FLEXIBLE	GEMINI
SHAPE:	Type 27	Type 29
ABRASIVE:	Aluminum Oxide	Aluminum Oxide
MATERIAL:	ALUMINUM	ALUMINUM
	STEEL/METAL	STEEL/METAL
PKG. GRIT	PART #	PART #
		
60	662528 35632 *	
36	662435 29721 #	
36		662528 42203
36	662528 30424 #	662528 42204
36		662528 42205
36	662529 39024	662529 17052

*5 wheels per display pack; 5 display packs per standard package.

These wheels are packed 20 per box, and must be used with this specific back plate. Two back plates are included in each box.



Depressed Center Adapter Kit

This reusable adapter kit contains everything you need to mount depressed center wheels and saucers with 7/8" center holes on to portable right angle or vertical shaft grinders. Adapter hubs are threaded for mounting on to standard 5/8"-11 NCRH spindles.

KIT NO.	WHEEL DIAMETER	WHEEL THICKNESS	PART #	STD. PKG.
114	7" thru 9"	1/16" thru 1/4"	076607 89275	1

DEPRESSED CENTER WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	FC = Fast Cut	HD = Heavy Duty	INOX/SS = Contaminant Free	XXL = Extra Long Life
■ = Aluminum	■ = Foundry	■ = Stainless	■ = Steel / Metal		

no short cuts taken here
**SATISFY ALL YOUR
CUT-OFF REQUIREMENTS**

From small diameter portable cut-off wheels to large diameter foundry cut-off wheels; from portable high-speed gas saw wheels to precision toolroom and Metlab wheels, our Norton offering encompasses the broadest range of applications.



Small Diameter Reinforced Cut-off



The Norton small diameter cut-off wheel line consists of Type 01/41 straight and Type 27/42 depressed center cut-off wheels from 1-1/2" to 9" diameters. These wheels come in ultra thin .035" for quick burn-free and burr-free cutting to .125" for more durable applications. All are reinforced for the demanding nature of portable cut-off.

Applications:

Cutting sheet metal, cutting pipe, and metal fabrication

Size Range:

1-1/2" - 9" diameter

Thickness Range:

.035", .040", .045", .050", .060", 1/16", .090", 3/32" and .125"

Abrasive Grain:

Ceramic Alumina / Zirconia Alumina, Zirconia Alumina / Aluminum Oxide, Aluminum Oxide, Silicon Carbide, Diamond

Shape:

Type 01/41 Straight and Type 27/42 Depressed Center

Machine Used:



PORTABLE
CUT-OFF TOOL



RIGHT ANGLE
GRINDER



DRILL

How to Pick the Right Wheel Type

CUT-OFF WHEEL DESCRIPTION CODES

BLANK = All Purpose

ALU = Aluminum

INOX/SS = Contaminant Free

LL = Long Life

1-2-3 = Cutting/Notching/Grinding

■ = Stainless

■ = Steel / Metal

DESCRIPTION CODE DEFINITIONS

BLANK = All Purpose

Where an excellent blend of cut rate and life is needed

ALU = Aluminum

Specially formulated bond for reduced loading and surface contamination while cutting aluminum and soft materials

INOX/SS = Contaminate Free

Contain <0.1% iron, sulfur or chlorine for rust-free and corrosion-free results. Will not contaminate stainless steel

LL = Long Life

Where durability is needed due to severe application, and when horsepower of the grinder allows for heavy pressure

RightCut = Cutting-off Only

RightCut wheels for cutting only, provide noticeably longer life and faster cut rate versus competitive wheels, and less pressure is required for first cut

1-2-3 = Cutting/Notching/Grinding

Can be used in cutting, notching and grinding applications

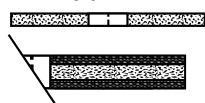
Type-to-Application Recommendation Guide

Wheel Type/Thickness

Applications

TYPE 01/41

Type 01/41 straight cut-off wheels are designed for portable cut-off tool applications. All are supplied with full fiberglass reinforcing.



.035, .040, .060, and 1/16

Where fast cutting and low kerf loss are desired



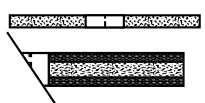
.125

For tough cutting and notching applications where stability is important



TYPE 01/41 RIGHTCUT

Type 01/41 RightCut straight cut-off wheels are designed for use on right angle grinder cut-off applications. All are supplied with full fiberglass reinforcing.



90° angle

.035, .040, .045, .050, 1/16

Where fast cutting and low kerf loss are desired



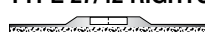
3/32

For tough cutting and notching applications where stability is important



TYPE 27/42 RIGHTCUT

Type 27/42 RightCut depressed center cut-off wheels are designed for use on right angle grinder cut-off applications. Their depressed center shape provides a recess for the hub, which allows flush cutting. All are supplied with full fiberglass reinforcing.



90° angle

.040, .045, 1/16

Where fast cutting and low kerf loss are desired



3/32, .125

For tough cutting and notching applications where stability is important



Small Diameter Reinforced Cut-off

Material-To-Product Recommendation Guide

	BEST	BETTER	GOOD	
	Quantum3	BlueFire	Gemini	Metal
Mild Carbon / High Tensile Steel	◆	◆		◆
Stainless Steel / Alloys	◆	◆	◆	
Contaminate Free*			◆ INOX/SS	
Cast Iron	◆	◆	◆	
Aluminum / Bronze / Brass			◆ ALU	

* For use in nuclear and food industry applications that require contaminant free (<0.1% iron, sulfur or chlorine)

Cross Reference Guides

Type 01/41 .035" - .125" Reinforced Cut-off Wheels for Portable Cut-off Tools



	TOTAL PERFORMANCE		INITIAL PRICE		
	BEST	BETTER	GOOD		
NORTON	NorZon Plus	BlueFire	Gemini Free Cut	Gemini Long Life	Metal
Bullard	—	ZA46T, ZA60T	TA36T	TA46T, TA60T	A36T, A60T Comp.
Camel	—	ZA60-TBF	A36 RBF	A60 RBF	Fast Cut RBF
DeWalt	XP extended performance	—	HP metal	—	Metal
Flexovit	Flexon Fast Cut A46, 60	—	High Perf Fast Grind A36	High Perf Fast Cut A36, 46, 60	—
Metabo	—	—	Original Slicer	Original Slicer LL	—
Pearl	—	SRT, Zirconia	—	Premium	Silver Line
Pferd	—	—	—	—	PSF-A
Sait	Saittech	—	A60S	A24R, A36T, A60T	—
Walter	—	—	A24 ZIP	A60 ZIP	—
Weiler	Tiger Ceramic	Tiger Zirc	—	Tiger	Wolverine A60T, A36T

Type 01/41 and Type 27/42 .035" - .125" Reinforced Cut-off Wheels for Right Angle Grinders



90° angle

NORTON	TOTAL PERFORMANCE				INITIAL PRICE		SPECIALTY	
	BEST		BETTER	GOOD		GOOD		
	Quantum3 .045"	Quantum3 1/16"	BlueFire	Gemini Free Cut	Gemini	Metal	Gemini ALU	Gemini INOX/SS
3M	—	Cubitron II .045	Silver	—	—	—	—	—
Bullard	—	—	ZA60T	SGA60U	TA46T, TA60T, TA60U	A46T, A60T Comp.	AL46N	—
Camel	—	—	ZA Quickie Cut	A36-S-BF	Super Quickie Cut	Quickie Cut	A46 Quickie Cut	A60-T-BF, WA60R, Quickie Cut
DeWalt	XP Ceramic 0.040	XP Ceramic 1/16", XP Ceramic 0.045	XP	—	HP	Metal	—	—
Flexovit	—	—	—	Razorblade A60SST	Razorblade A24T, 30V, 36T	—	Razorblade A30Q	—
Klingspor	—	—	—	—	A960TZ, Kronenflex edge	A46TZ	—	—
Metabo	Slicer Limited Edition .040	M-Calibur 1/16	Super Slicer	—	Slicer-Plus, Original Slicer LL	Original Slicer	—	—
Pearl	—	—	Redline Max Slimcut	—	Slimcut	Slimcut Pro-V, Silverline	—	—
Pferd	SG Elastic, SG Plus 1mm	SG Plus 1.6, SG Elastic 1.6	—	—	—	PS-Forte	SG-ALU	—
Sait	—	The Ultimate Ceramic Cutoff .045, Saittech	Z-tech	SAIT.M.X	Sait .045, The Ultimate Cutoff	—	A46N	XA46R
Tyrolit	—	Cerabond	—	—	—	—	—	—
Walter	Zip One	—	Zip+ Xtra	A-30-ZIP	A-60-ZIP	—	A-60-ZIP-ALU	A60-SS-ZIP
Weiler	Tiger Zirc Ultra Cut 1mm, Tiger INOX UltraCut 1mm	Tiger Ceramic .045, Tiger Zirc .045, Tiger INOX .045	—	—	Tiger	Wolverine	—	—

Small Diameter Reinforced Cut-off

SAFETY

Dangerous Pairing: Die Grinders and Cut-off Wheels

While die grinders and cut-off tools may look similar, they are not interchangeable. Small diameter cut-off wheels can be used only on portable cut-off tools. Several crucial differences exist between the two handheld machines.

- Small diameter cut-off wheels must be used on portable cut-off tools with guards for the safety of the operator and bystanders. Also, portable cut-off tool guards prevent use of an oversize wheel.
- These cut-off wheels must be mounted between proper flanges on portable cut-off tools as described in the national safety standard for abrasive wheels, ANSI B7.1. Die grinders make use of a collet for mounting.
- All cut-off wheels must be used at or below their maximum operating speed, marked clearly on the side of the wheel. Die grinders operate above cut-off wheel speeds. Excessive speed can result in breakage and serious personal injury.



It is the user's responsibility to refer to and comply with ANSI B7.1

TECH TIP

Measure Your Wheel's Thickness

Why should you measure your wheel thickness? Many competitors market their wheels as .045", but they are truly thicker. New Norton Quantum3 RightCut wheels are true to size so you can pick the right wheel for the job whether you need precision cutting or rugged durability. Compare our 1/16" Quantum3 with competitive 0.045" ceramic cut-off wheels and you will see the longest life and fastest cut on the market.



It is the user's responsibility to refer to and comply with ANSI B7.1

Norton Quantum3 RightCut Wheels

The Norton Quantum3 RightCut is our top tier cut-off wheel, available in 0.045" and 1/16" thickness. If you want speed of cut and work on thin or hollow materials, the 0.045" will get you there with comfort. If you are cutting thicker materials and life of the wheel is important, then the 1/16" is ideal. Whatever your pick is, experience the extra-smooth cutting action, thanks to our premium ceramic grain.



Norton Quantum3 RightCut: 0.045" versus 1/16"

How to match the wheel to the application

5" x .045" x 7/8"
125 x 1.2 x 22mm

5" x 1/16" x 7/8"
125 x 1.6 x 22mm

PRODUCT	0.045" (FAST CUTTING)	1/16" (LONGEST LIFE)
Abrasive:	Ceramic	Ceramic
Target application:	Thin metals and/or light-style cutting	Thick metals and/or aggressive-style cutting
Strengths:	Fast cutting, smooth easy feel, precise and maneuverable, reduced burrs	Long lasting, durable, aggressive easy feel, versatile across applications and metals

Small Diameter Reinforced Cut-off



Best choice for stainless steel and carbon steel applications

QUANTUM3 CERAMIC ALUMINA

- 100% advanced ceramic alumina grain with a special shape for comfort and performance guaranteeing 7X the life of aluminum oxide wheels and 3X the life of zirconia alumina wheels
- Unique bond system prevents premature grain release maximizing wheel life
- Available in type 01 straight and type 27 depressed center cut-off wheels from 4-1/2 inch to 6 inch diameters



Best for metal plate, pipe, tubing, cast iron, carbon and mild steel, foundry and welding applications, and ceramics

DIALAST DIAMOND WHEELS

- A combination of high-quality diamond and advanced brazed single-layer bonding technology for extra-long life versus conventional abrasives or other vacuum-brazed diamond tools
- Retains diamond grains and wheel shape for full life with low sparks, while keeping a continuous grinding depth for exceptional wheel life; less blade changes reduces downtime and labor costs
- Environmentally-friendly grinding for minimal dust, less clean-up and safer working conditions



Better choice for stainless steel, carbon steel, alloys and gray iron

BLUEFIRE ZIRCONIA ALUMINA / A/O BLEND

- A blend of the most advanced zirconia alumina and premium aluminum oxide abrasives delivers 2 to 3 times the life of aluminum oxide wheels
- Ultra-thin side reinforcing for maximum cut rate with minimum kerf loss; ideal when precise, thin cut is desired
- Broad utility from light-to heavy-pressure applications



Good, versatile choice for steel and ferrous metals

GEMINI ALUMINUM OXIDE

- Quality aluminum oxide for consistent performance at an economical price
- Designed for portable cut-off tool applications where a fast cut and minimum material loss are desired
- Durable bond designed for fast cut while retaining excellent wheel life



Good choice for grinding alloys, metals, steels, and ferrous metals

METAL ALUMINUM OXIDE

- Quality aluminum oxide abrasive for quick cutting action
- Resin bond provides free cutting action with long life
- Good choice when low initial price is needed for small jobs or newer operators

Small Diameter Reinforced Cut-off



TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	NORZON PLUS	BLUEFIRE	GEMINI	METAL
SHAPE:	Type 01/41	Type 01/41	Type 01/41	Type 01/41
ABRASIVE:	Ceramic Alumina/ Zirconia Alumina	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
.035", .040", .060", 1/16" and .125" Type 01/41 – Cut-off						
2 x .035 x 1/8	30,560	25			662434	11392
2 x .035 x 1/4	30,560	25			662434	11393
2 x .035 x 3/8	30,560	25			662434	11394
2 x 1/16 x 1/4	30,560	25			662434	11395
2 x 1/16 x 3/8	30,560	25			662434	11396
2 x .125 x 1/4	30,560	25			662434	11402
2 x .125 x 3/8	30,560	25			662434	11403
2-1/2 x 1/16 x 1/4	30,560	25			662435	10640
2-1/2 x 1/16 x 3/8	30,560	25			662435	10641
3 x .035 x 1/4	25,465	25	662435	10668	662435	10627
3 x .035 x 3/8	25,465	25	662435	10669	662528	43174
3 x 1/16 x 1/4	25,465	25	662435	10670	662435	10645
3 x 1/16 x 3/8	25,465	25	662435	10671	662528	43175
3 x .125 x 1/4	25,465	25			662435	10650
3 x .125 x 3/8	25,465	25	662435	10673	662435	10651
4 x .035 x 1/4	19,100	25			662435	10629
4 x .035 x 3/8	19,100	25	662435	10675	662528	43173
4 x 1/16 x 1/4	19,100	25			662435	10654
4 x 1/16 x 3/8	19,100	25	662435	10677	662528	43171
4 x .125 x 1/4	19,100	25			662435	10658
4 x .125 x 3/8	19,100	25	662435	10680	662528	43172
					662435	10659



Drill-Mount Mandrel

Used for mounting 2" and 3" x 3/8" hole cut-off wheels on to a drill

DESCRIPTION	STD. PKG.	PART #
Drill-Mount Mandrel	1	076607 47769



CUT-OFF WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	INOX/SS = Contaminant Free	LL = Long Life	1-2-3 = Cutting/Notching/Grinding
■ = Stainless	■ = Steel / Metal			

Small Diameter Reinforced Cut-off



TIER:	BEST	BEST	BETTER	GOOD	GOOD
TRADENAME:	QUANTUM3 RIGHTCUT	DIALAST RIGHTCUT	BLUEFIRE RIGHTCUT	GEMINI RIGHTCUT	METAL RIGHTCUT
SHAPE:	Type 01/41	Type 01/41	Type 01/41	Type 01/41	Type 01/41
ABRASIVE:	Ceramic Alumina	Diamond	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
.035", .040", .045", .050", 1/16, and 3/32" Type 01/41 – RightCut Cut-off							
4 x .040 x 5/8	15,280	25					076607 01616
4 x .045 x 5/8	15,280	25				662435 27956	
4 x 3/32 x 5/8	15,280	25				662435 27955	
4-1/2 x .040 x 7/8	13,580	25					076607 01617
	13,580	250+					662528 40001
4-1/2 x .045 x 7/8	13,580	25	662528 38454			662528 23602	
	13,580	25				662528 41994 ALU	
	13,580	25				662528 41997 INOX/SS	
	13,580	250+				662528 41213	
4-1/2 x .050 x 7/8	13,580	1		662533 70016			
4-1/2 x 1/16 x 7/8	13,580	25	662528 38455		662528 43208		
4-1/2 x 3/32 x 7/8	13,580	25				662528 23599	
5 x .040 x 7/8	12,225	25					076607 01618
5 x .045 x 7/8	12,225	25	662528 38460			662528 23603	
	12,225	25				662528 41995 ALU	
	12,225	250+				662528 41214	
5 x .050 x 7/8	12,225	1		662533 70017			
5 x 1/16 x 7/8	12,225	25	662528 38462		662528 43209		
5 x 3/32 x 7/8	12,225	25				662528 23600	
6 x .040 x 7/8	10,185	25					076607 02757
6 x .045 x 7/8	10,185	25				662528 23604	
	10,185	25				662528 41996 ALU	
	10,185	25				662528 41999 INOX/SS	
	10,185	250+				662528 41215	
6 x .050 x 7/8	10,185	1		662533 70018			
6 x 1/16 x 7/8	10,185	25	662528 38465		662528 43210		
6 x 3/32 x 7/8	10,185	25				662528 23601	
7 x .045 x 7/8	8,600	25				662528 32323	
	8,600	20				662528 42000 INOX/SS	
7 x 1/16 x 7/8	8,600	1		701846 94055			
9 x .060 x 7/8	6,600	1		701846 94056			

RightCut wheels are to be used for cutting only

+ Bulk packed 250 Wheels/carton; 5 inner boxes of 50 wheels each. Order in multiples of 250 wheels.

Angle Grinder Conversion



Learn how to ensure proper Angle Grinder conversion when moving from grinding to cutting.

<https://youtu.be/AMue0p1Gjqc>

CUT-OFF WHEEL DESCRIPTION CODES

BLANK = All Purpose

ALU = Aluminum

INOX/SS = Contaminant Free

LL = Long Life

1-2-3 = Cutting/Notching/Grinding

■ = Stainless

■ = Steel / Metal

Small Diameter Reinforced Cut-off



TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	QUANTUM3	BLUEFIRE	GEMINI	METAL
SHAPE:	Type 27/42	Type 27/42	Type 27/42	Type 27/42
ABRASIVE:	Ceramic Alumina	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
.040", .045", 1/16" – RightCut Cut-off – Type 27/42						
4 x .045 x 5/8	15,280	25			662528 42180	076607 05249
4-1/2 x .045 x 5/8-11	13,580	10			662528 42025	
	13,580	10			662528 41913 INOX/SS	
4-1/2 x .045 x 7/8	13,580	25			662528 42026	662528 43604
	13,580	25			662528 41912 INOX/SS	
	13,580	25			662528 41909 ALU 36	
	13,580	250+			662533 70065	
4-1/2 x 1/16 x 5/8-11	13,580	10	662528 38457	662528 43223		
4-1/2 x 1/16 x 7/8	13,580	10		662528 43219		
	13,580	25	662528 38456			
5 x .045 x 5/8-11	12,225	10			662528 41939	
5 x .045 x 7/8	12,225	25			662528 42036	662528 43849
	12,225	25			662528 41914 INOX/SS	
	12,225	25			662528 41910 ALU 36	
	12,225	250+			662533 70066	
5 x 1/16 x 7/8	12,225	25	662528 38464	662528 43220		
6 x .045 x 5/8-11	10,185	10			662528 30587	
6 x .045 x 7/8	10,185	25			662528 42202	662528 42015
	10,185	25			662528 41911 ALU 36	
6 x 1/16 x 5/8-11	10,185	25	662528 46246			
6 x 1/16 x 7/8	10,185	25	662528 38466	662528 43221		
7 x .045 x 5/8-11	8,600	10			662528 41919 INOX/SS	
7 x .045 x 7/8	8,600	20			662529 12626	
	8,600	20			662528 41918 INOX/SS	
9 x 1/16 x 5/8-11	6,600	10			662530 19115	
9 x 1/16 x 7/8	6,600	10			662530 17734	

RightCut wheels are to be used for cutting only.

3/32", .125" – Cut-off – Type 27/42						
4-1/2 x 3/32 x 5/8-11	13,580	10			662528 41903	
	13,580	10			662528 42027 INOX/SS	
4-1/2 x 3/32 x 7/8	13,580	25			662528 41940	
	13,580	25			662528 42028 INOX/SS	
	13,580	25			662528 43582 1-2-3	
4-1/2 x .125 x 5/8-11	13,580	10			662528 43588	
4-1/2 x .125 x 7/8	13,580	25			662528 43589	
5 x 3/32 x 5/8-11	12,225	10			662528 41904	
5 x 3/32 x 7/8	12,225	25			662528 42037 INOX/SS	
	12,225	25			662528 43587 LL	
6 x 3/32 x 5/8-11	10,185	10			662528 41905	
6 x 3/32 x 7/8	10,185	25			662528 41906	
6 x .125 x 5/8-11	10,185	10			662528 41192	
7 x 3/32 x 5/8-11	8,600	10			662528 41907	
7 x 3/32 x 7/8	8,600	20			662528 41908	
9 x 3/32 x 5/8-11	6,600	10		662528 42378		

These wheels are to be used for cutting only.

+ Bulk packed 250 Wheels/carton; 5 inner boxes of 50 wheels each. Order in multiples of 250 wheels.

CUT-OFF WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	INOX/SS = Contaminant Free	LL = Long Life	1-2-3 = Cutting/Notching/Grinding
■ = Stainless	■ = Steel / Metal			

Chop Saw Reinforced Cut-off



A chop saw is a light, low-horsepower portable machine. Although very similar to a compound miter saw, it is designed for cutting denser materials, like metal bar, tubing or pipe. Chop saw cut-off wheels are designed specifically for this machine with finer grit, softer grades, and reinforcement layers that match the application.

Applications:

Cutting small-diameter metal pieces, bar stock, metal pipe, tubing, decking, cable, drywall studs, and metal plate dimensioning

Size Range:

10" - 16" diameter

Thickness Range:

3/32" and 7/64"

Abrasive Grain:

Zirconia Alumina / Aluminum Oxide Blend, Aluminum Oxide, and Diamond

Shape:

Type 01/41 Straight

Reinforcement Type:

Side reinforced, centrally reinforced

Machine Used:

CHOP SAW

Cross Reference Guide

	TOTAL PERFORMANCE			INITIAL PRICE			SPECIALTY	
	BETTER			GOOD			GOOD	
NORTON	BlueFire Free Cut	BlueFire Rapid Cut	BlueFire Long Life	Gemini Free Cut	Gemini Rapid Cut	Gemini Long Life	Stud Cutter	Gemini Aluminum
Astromax	737 FC	—	—	733,758	742, 764	733+, 744	—	—
BMC	—	—	—	Westside A36P	—	—	—	—
Bullard	ZA36T	—	—	TA36T A46T The Competitor	A36R The Competitor	A36R Ironmaster	A46T Studmaster	AL36R
Camel	—	—	ZA24-S	A36-P, WA36-P	—	A36-S	A30-R Mr. Stud	A30-N
Dewalt	—	—	XP	GP, Stainless Fabrication	—	—	Stud Cutting	—
Flexovit	—	—	—	A30R Fast Cut A30-Q Free Cut	—	A30S Long Life	A30T Drywall Stud	—
Makita	—	—	—	—	General Purpose, A-93859-5	—	—	—
Pearl	SRT36	—	—	A36P Premium, A36S, A36T	A30P Silver Line	—	A46S Stud Cutting	—
Pferd	—	—	—	A 36 K SG CHOP	PSF CHOP	—	A 36 K SG- STUD	—
Sait	Saitech Steel Worker	Z-tech	—	EZ-Chop	EZ-Chop Attacker	Iron Worker	Stud King	Aluminum
Walter	—	—	—	—	A-30	A-30-HC+	—	A30-ALU

Application-to-Product Recommendation Guide

Wheel Type/Reinforcement**TYPE 01/41 STRAIGHT SIDE-REINFORCED CUT-OFF WHEEL**

Side-reinforced wheels have two full layers of reinforcing and are designed for a fast cut and the most aggressive applications. All Purpose, Free Cut, and Long Life are side reinforced.

**TYPE 01/41 STRAIGHT CENTRALLY-REINFORCED CUT-OFF WHEEL**

Centrally-reinforced wheels have a single layer of reinforcing with exposed rough sides for free-cutting, non-binding applications where minimal burr and burn are the key requirements. Rapid Cut wheels are centrally reinforced.



How to Pick the Right Bond Type

DESCRIPTION CODE DEFINITIONS

BLANK = All Purpose	Where an excellent blend of cut rate and life is needed
FC = Free Cut	Used when fast, burn-free cutting is desired or when cutting pieces with larger cross sections
LL = Long Life	Where durability is needed due to severe application, and when cutting parts with small cross sections
RC = Rapid Cut	Where a free cutting, non-binding wheel is needed for burn-free and burr-free cuts
STUD = High-Performance	High-performance aluminum oxide/resin bond combination designed for cleaner cuts and longer life when cutting steel studs
ALU = Aluminum	Specially formulated bond for reduced loading/surface contamination when cutting aluminum/soft materials

Chop Saw Reinforced Cut-off



Designed for cutting steel, metal studs, stainless steel, non-ferrous materials, tile, brick, plastic and much more

DIALAST DIAMOND

- A combination of high-quality diamond and advanced brazed single-layer bonding technology for extra-long life versus conventional abrasives or other vacuum-brazed diamond tools
- Retains diamond grains and wheel shape for full life with low sparks, while keeping a continuous grinding depth for exceptional wheel life; less blade changes reduce downtime and labor costs
- Environmentally-friendly grinding for minimal dust, less clean-up and safer working conditions



Better choice for steel, stainless steel and all other ferrous metals

BLUEFIRE ZIRCONIA ALUMINA / A/O BLEND

- Durable, latest generation zirconia alumina and premium aluminum oxide abrasive blend outperforms competitive chop saw zirconia wheels by 20 percent
- Delivers twice the life and cut rate of aluminum oxide wheels on difficult to cut metals
- High performance resin bond is designed for free cut and long life



Good choice for all steel and ferrous metals as well as specialty applications in aluminum

GEMINI ALUMINUM OXIDE

- Durable, versatile aluminum oxide abrasive engineered for consistent performance and economical price on chop saw cut-off machine applications
- Abrasive and bond combination designed for smooth clean cut on low HP machines
- Good choice for consistent performance at an economical price

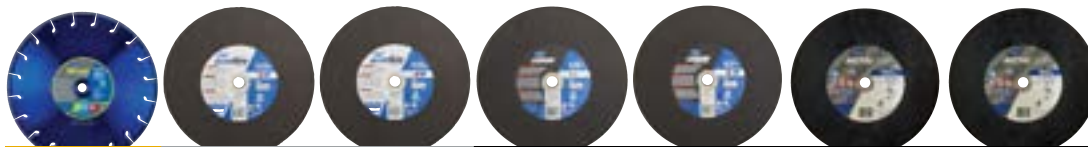


Good choice for drywall studs

METAL ALUMINUM OXIDE

- Quality aluminum oxide abrasive designed for cutting alloys, steels and ferrous metals including 400 series stainless, soft and hard carbon steels
- Designed with finer grit and softer grades, specifically for chop saw machines that typically have lower horsepower
- Constructed with full fiberglass reinforcing; Stud Cutter version designed specifically for cutting steel studs

Chop Saw Reinforced Cut-off



TIER:	BEST	BETTER	BETTER	GOOD	GOOD	GOOD	GOOD
TRADENAME:	DIALAST	BLUEFIRE	BLUEFIRE	GEMINI	GEMINI	METAL	METAL
SHAPE:	Type 01/41	Type 01/41	Type 01/41	Type 01/41	Type 01/41	Type 01/41	Type 01/41
ABRASIVE:	Diamond	Zirconia Alumina/ Aluminum Oxide	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
REINFORCING:		Side	Central	Side	Central	Side	Central
MATERIAL:	STAINLESS	STAINLESS	STAINLESS	STAINLESS	STAINLESS	STAINLESS	STAINLESS
		STEEL/METAL	STEEL/METAL	STEEL/METAL	STEEL/METAL	STEEL/METAL	STEEL/METAL

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
Type 01/41 Straight Cut-off								
10 x 7/64 x 1	6,110	10			662531	06109 LL		
12 x 7/64 x 1	5,095	10		662528	43250	662532	07554 LL	
	5,095	5						076607
14 x 3/32 x 1	4,365	10			662533	06627 FC	662533	13588 RC
	4,365	10			662533	06626 LL		076607
								89405
								STUD
	4,365	5 V						076607
14 x 7/64 x 1	4,365	10			662528	43254 RC	662533	14816 ALU
	4,365	10		662528	43253 LL			
14 x .155 x 1	5,400	1	701846	94053				
16 x 7/64 x 1	3,820	10				662534	10198 LL	
	3,820	10		662528	43257 LL			



V Vendible 2-wheel Package. Ideal for vending machings and small jobs. 5 packs/carton. Order in multiples of 10.

CUT-OFF WHEEL DESCRIPTION CODES

BLANK = All Purpose	ALU = Aluminum	FC = Free Cut	LL = Long Life	RC = Rapid Cut	STUD = Stud Cutter
■ = Stainless	■ = Steel / Metal				



High-Speed Reinforced Cut-off



Norton high-speed cut-off abrasive wheels provide the industry's leading performance in all high-speed gas and electric-powered applications.

Applications:

Metalworking: steel, stainless, ductile, cast iron, rail steel and metal decking

Non-Metal Building Materials: concrete, brick, masonry, asphalt aggregate, stone and schedule 40 and 80 PVC pipe

Rescue and Demolition: steel, acrylic, fiberglass, rubber, glass, wood, concrete, brick and asphalt

Size Range:

12" – 16" diameter

Thickness Range:

1/8" and 5/32"

Abrasive Grain:

Aluminum Oxide, Silicon Carbide, Silicon Carbide / Aluminum Oxide Blend

Shape:

Type 01/41 Straight

Reinforcement:

Wheels are offered in standard two-layer reinforcement as well as three-layer reinforcement for higher-speed saws and heavy-duty applications.

Arbor:

Wheels are offered with patented universal arbor that accommodates both 20mm and all other machines with 1" arbors.

Machine Used:



HIGH-SPEED GAS
OR ELECTRIC SAW

Material / Application-to-Product Recommendation Guide

Icon		Application
	Metal	High-performance aluminum oxide grain wheels designed for general purpose cutting of all steel and stainless parts including rebar, steel pipe, structural steel, sheet metal, cable and small to medium diameter solid pieces.
	Metal Decking	High-performance aluminum oxide abrasive combined with a thicker wheel (5/32") that stands up to the sharp edges of sheet metal and roof decking.
	Ductile/Cast Iron	A special blend of silicon carbide abrasive for cutting and aluminum oxide abrasive for life, designed to cut ductile and cast iron pipe, concrete-lined water pipes, sewer construction and heavy duty PVC.
	Rescue	For ventilation, forcible entry, rescue and demolition. A versatile abrasive formula that can be used on a wide range of materials including all types of metals and masonry.
	Concrete	Coarse grit silicon carbide abrasive provides a low initial cost solution for cutting brick, block, concrete or other masonry materials. For higher-production applications that require optimum speed of cut and product life, please see our complete selection of high-speed diamond wheels in our Norton Construction diamond product line.
	Asphalt	A special blend of extra coarse silicon carbide abrasive grains provides a low initial cost solution for cutting asphalt, green concrete, asphalt over concrete, a wide range of aggregates and abrasive materials. For higher-production applications that require optimum speed of cut and product life, please see our Norton Construction diamond blade product offering in the Construction Product section of this catalog -and the complete offering in our "Diamond, Abrasives and Equipment for the Construction Market Catalog" #7719 found on www.nortonabrasives.com

Cross Reference Guide

NORTON	SPECIALTY				
	GOOD				
	Gemini Metal	Gemini Metal Decking	Gemini Ductile	Gemini Concrete	Gemini Asphalt
Abmast	A 24 R, Kompetitor Metal	A 24 T	AC 24 R, Kompetitor Ductile Iron	C 24 R, Kompetitor Concrete	C 16 T, Kompetitor Asphalt
Bullard Blaze & Road Warrior	A24R, ZA24Q, The Competitor	TA24R	AC24R	C24R, The Competitor	CC20R
Camel	A24-R	A24-T	AC24-R	C24-R	C16-U
Flexovit	A24/30SB	A24TB	AC24SB	C30UB	C16UB
Husqvarna	Blue XHS, Blue QMS-CM, Blue EHS	Grey QMS-CM	Green QMS-CM, Green EHS	Red XHS, Red QHS-CM, Red EHS	Black QMS-AS
Pearl	SRT, Premium A36S, Silver Line A30R	—	AC30S	Premium C36S, Silver Line C24R	—
Pferd	A 24 R SG	A 24 Q SG-RAIL	AC 24 Q SG	C 24 R SG	—
Sait	A24R, A30S, XFC	Brute	Ductile	C24R	Big M.A.C, XFC
Tyrolit	A30P, A30BF	—	AC24, AC30BF	1C24, C30BF	—
Virginia Abrasives	Metal	—	Ductile	Concrete	Asphalt
Walter	A-24	—	—	—	—

High-Speed Reinforced Cut-off







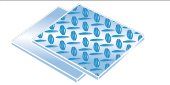

How to Pick the Right Reinforcement



Two full layers of reinforcing are offered for lower power machines, and light-to-medium applications where speed of cut is the primary selection criterion.

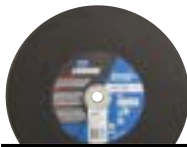
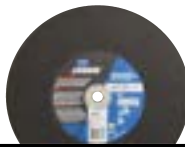










Three full layers of reinforcing are recommended for high-speed, high-power machines where the application is heavy-duty, and durability is the primary selection criterion.

				
TIER:	GOOD	GOOD	GOOD	GOOD
TRADENAME:	GEMINI METAL HD	GEMINI METAL	GEMINI METAL DECKING	GEMINI RESCUE
SHAPE:	Type 01/41	Type 01/41	Type 01/41	Type 01/41
ABRASIVE:	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Silicon Carbide/ Aluminum Oxide Blend
REINFORCING:	3 Layers	2 Layers	2 Layers	2 Layers
MATERIAL:				

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
Type 01/41 Cut-off – for Gas & Electric-Powered Saws						
12 x 1/8 x 1" / 20mm	6,300	10	662528 36708	662528 37838		
14 x 1/8 x 1" / 20mm	5,400	10	662528 35386	662528 37841		662435 78262
14 x 5/32 x 1" / 20mm	5,400	10			662528 32521	
16 x 1/8 x 1" / 20mm	4,700	10		662528 30886		

See additional Rail Cut wheels on page 32 for larger-volume jobs.

					
TIER:	GOOD	GOOD	GOOD	GOOD	GOOD
TRADENAME:	GEMINI DUCTILE HD	GEMINI DUCTILE	GEMINI CONCRETE HD	GEMINI CONCRETE	GEMINI ASPHALT
SHAPE:	Type 01/41	Type 01/41	Type 01/41	Type 01/41	Type 01/41
ABRASIVE:	Silicon Carbide / Aluminum Oxide Blend	Silicon Carbide / Aluminum Oxide Blend	Silicon Carbide	Silicon Carbide	Silicon Carbide
REINFORCING:	3 Layers	2 Layers	3 Layers	2 Layers	2 Layers
MATERIAL:					

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
Type 01/41 Cut-off – for Gas & Electric-Powered Saws							
12 x 1/8 x 1" / 20mm	6,300	10		662528 37840		662528 37839	
14 x 1/8 x 1" / 20mm	5,400	10	662528 35388	662528 37843	662528 35387	662528 37842	701846 72877
16 x 1/8 x 1" / 20mm	4,700	10				701846 23029	



Universal Arbor

Two Blade Sizes in One

Our Norton patented 1"/20mm knock-out arbor fits all gas and electric high-speed saws. A 20mm bushing is pre-mounted into the 1" molded arbor hole. The wheel, with the 20mm bushing, can be mounted directly on any 20mm arbor high-speed saw. With the bushing removed, exposing the 1" arbor hole, the wheel can be mounted on any 1" arbor high-speed saw. Combining this arbor, with heavy-duty triple reinforcing results in a higher performing, extra strong, longer lasting cutting wheel. Once the 20mm bushing is removed, it cannot be replaced.

Stationary Saw Reinforced Cut-off



The Norton stationary saw reinforced cut-off wheel line consists of Type 01/41 straight 10" - 24" wheels, designed to fit on fixed-base stationary saws that are free-standing or mounted on a workbench.

Applications:

Primary applications are cutting of all metal parts (flat stock, bars, studs, pipes, tubes, angle iron, cable), wire rope and hydraulic hose used in fabrication, construction and plant maintenance.

Size Range:

10" - 20" diameter

Thickness Range:

3/32", 1/8", 5/32", 3/16"

Abrasive Grain:

Zirconia Alumina / Aluminium Oxide Blend, Aluminum Oxide, Silicon Carbide

Shape:

Type 01/41 Straight

Machine Used:



STATIONARY SAW

Cross Reference Guide

	TOTAL PERFORMANCE		INITIAL PRICE		SPECIALITY
	BETTER	GOOD			GOOD
NORTON	BlueFire	Gemini Free Cut	Gemini Long Life	Gemini Rapid Cut*	Foundry Cut**
Abmast	Z 24 R3	A 30 R	—	—	AC 24 R3
Bullard	—	A30-R	A30-T	A300	—
Camel	ZA24-R	A24-R, A46-T	—	—	WA24-S
Flexovit	—	A30RB Multi Purpose	A30SB Long Life, A24TB Long Life	—	AC24PB Heavy Duty
Metabo	—	A30N, A30R	A30S, A30V	—	—
Pearl	SRT36	A30P Premium, A30Q Silver Line	A30S Premium, A36R Premium	—	—
Pferd	ZA 24 Q/R SG-HD	A 24 N/P SG-HD	A 24 Q/S SG-HD	—	—
Sait	—	A24N, A36R	A24R	—	—
Tyrolit	—	A30BF	—	—	—
Walter	—	A-24-FC	A-24-RIP	—	—

* For Burr-Free applications, please see centrally-reinforced BlueFire Rapid Cut and Gemini Rapid Cut wheels in Chop Saw cut-off wheel section or at www.nortonabrasives.com

** For Foundry and other cut-off wheels, please refer to that section of this Norton Full Line Catalog #7362 or at www.nortonabrasives.com



			TIER: BETTER	GOOD	GOOD
			TRADENAME: BLUEFIRE	GEMINI FREE CUT	GEMINI LONG LIFE
			SHAPE: Type 01/41	Type 01/41	Type 01/41
			ABRASIVE: Zirconia Alumina/Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
			MATERIAL: STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL
SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #
Type 01/41 Straight Cut-Off					
10 x 3/32 x 5/8	6,110	10	662528 43248	662531 06101 FC	662531 06102 LL
	6,110	5			
12 x 1/8 x 1	5,095	10	662528 43249		662532 07548 LL
	5,095	5			
14 x 1/8 x 1	4,365	10	662528 43251	662533 06609 FC	662533 06611 LL
	4,365	5			
16 x 5/32 x 1	3,820	10	662528 43255	662534 10183 FC	662534 10184 LL
18 x 5/32 x 1	3,015	10		662534 10185 FC	
20 x 5/32 x 1	2,710	5	662528 43258 FC	690786 09031 FC	690786 09032 LL
	2,710	5	662528 43259 LL		
20 x 3/16 x 1	2,710	5		690786 09033 FC	690786 09034 LL

CUT-OFF WHEEL DESCRIPTION CODES

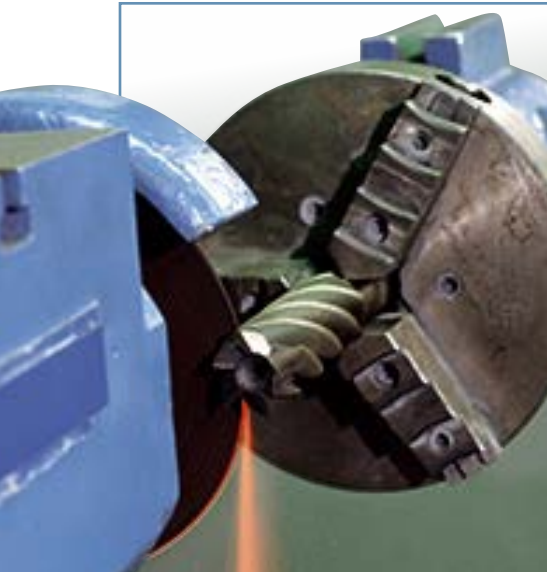
BLANK = All Purpose

FC = Free Cut

LL = Long Life

■ = Stainless

■ = Steel / Metal



Reinforced and non-reinforced engineered cut-off wheels for cutting all types of tool steel with fixed-based cut-off machines.

Applications:

Reinforced cut-off wheels are designed to resist breakage caused by severe cross-bending and are required on any operation where the work is not securely clamped.

Non-Reinforced cut-off wheels are designed for use on fixed-based machines where the work is securely clamped, guarded, and where the wheel operates on a controlled cutting plane.

Size range:

6" – 12" diameter

Grit range:

36 – 90 grit

Abrasive grain:

Aluminum Oxide

Bond:

Resinoid, Rubber, and Shellac

Shape:

Type 01/41 Straight

Cross Reference Guide

NORTON	BETTER		
	Reinforced A60-QBNA2	Reinforced 57A364-TB25N	Non-Reinforced 57A60-M8B
Bates	A602-T-BF	A36-R-BF	-
Buffalo	A60-R-BF2	-	-
Dia. Tool	A80-SP	A46-SP	-
Radiac	A54-N6-B20	-	A54-N6-B20
Tyrolit	A60-QBF38A2	-	-

TECH TIP

- Smooth side pattern – Used when a precise thickness tolerance is needed
- Rough (R) side pattern – Abrasive particles protrude from sides of wheel

Troubleshooting Guide

PROBLEM	POSSIBLE CAUSES	SUGGESTED CORRECTION
Poor cut rate	Insufficient power used	Increase feed or pressure to full power
	Wheel too hard	Use softer grade, or thinner wheel
	Contact area too large	Reduce contact area
	Wheel too coarse	Use finer grit
	Wheel side out of truth	Check spindle runout
Non-square cuts	Work not clamped properly	Check clamp and clean to remove swarf
	Misaligned spindle bearings	Check for bearing truth and alignment
	Poor coolant distribution	Ensure equal volume of coolant to each wheel side
	Wheel is too hard	Use softer acting wheel: softer grade, or finer grit
Workpiece burn	Insufficient feed rate	Work machine to maximum power available
	Poor coolant flow	Increase volume and direct at cutting point
	Wheel is too coarse	Use finer grit or more machine power
	Wheel is too hard	Use softer grade wheel
	Wheel is running out	Check spindle and flanges
	Wheel speed is too slow	Ensure tight flanges and maximum safe operating speed being used
Poor finish	Too much burr	Use finer grit, or softer grade
	Wheel too coarse	Use finer grit

TECH TIP

- Wheels with a "W" reinforcement (reinforcement around the hole) are not considered to be truly reinforced.
- Clamp or fixture the workpiece for straightest cuts.
- Run wheels at the highest possible speed marked on the wheel and make cuts as quickly as possible. Do not overspeed wheels.
- It is recommended that a cut-off machine should have 1 horsepower for every inch of wheel diameter. For less than this, we recommend using a softer specification.
- Using a harder grade wheel increases wheel life, but it also increases burn, power required and decreases cut rate.
- Using a coarser grit wheel increases wheel life and cut rate, but it also increases burr and power required.

Better choice for cutting tool steel on fixed-based machines when work is not securely clamped



TOOLROOM REINFORCED ALUMINUM OXIDE

- Tough, versatile aluminum oxide grain for toolroom cut-off applications
- Constructed with full diameter fiberglass reinforcement on each side of wheel, to provide greatest possible resistance to side pressure and bending
- OBNA2 full side reinforced, resin bond; yields maximum cut rate and minimum kerf loss; ideal when thin cut is desired
- B25N full side reinforced, resin bond; versatile; durable, free cutting; offer greatest stiffness

SIZE (D x T x H)	MAX. RPM	STD. PKG.	TIER: BETTER SPEC.	PART #
Type 01/41 Straight Cut-off – Reinforced				
6 x .035 x 1/2	10,190	25	A60-OBNA2	662528 35053
6 x .035 x 1-1/4	10,190	25	A60-OBNA2	662528 35055
6 x .060 x 1/2	10,190	25	A60-OBNA2	662528 35164
6 x .060 x 1/2	10,190	25	57A364-TB25N	662528 22969
6 x .060 x 1-1/4	10,190	25	A60-OBNA2	662528 35165
7 x .035 x 1/2	8,730	25	A60-OBNA2	662529 38786
7 x .035 x 1-1/4	8,730	25	A60-OBNA2	662529 38788
7 x .060 x 1/2	8,730	25	A60-OBNA2	662529 38816
7 x .060 x 1-1/4	8,730	25	A60-OBNA2	662529 38796
7 x .060 x 1-1/4	8,730	25	57A364-TB25N	662529 22676

SIZE (D x T x H)	MAX. RPM	STD. PKG.	TIER: BETTER SPEC.	PART #
Type 01/41 Straight Cut-off – Reinforced				
8 x .035 x 1/2	7,640	25	A60-OBNA2	662530 43014
8 x .035 x 1-1/4	7,640	25	A60-OBNA2	662530 42980
8 x .060 x 1/2	7,640	25	A60-OBNA2	662530 43009
8 x .060 x 1-1/4	7,640	25	A60-OBNA2	662530 42983
8 x .060 x 1-1/4	7,640	25	57A364-TB25N	662530 22705
10 x .060 x 5/8	6,110	25	A60-OBNA2	662531 49317
10 x .060 x 1-1/4	6,110	25	A60-OBNA2	662531 49186
12 x .060 x 1	5,095	10	A60-OBNA2	662532 61811
12 x .075 x 1	5,095	10	A60-OBNA2	662532 61910
12 x .075 x 1-1/4	5,095	10	A60-OBNA2	662532 61858

Better choice for cutting tool steel on fixed-based machines when the work is securely clamped



TOOLROOM NON-REINFORCED ALUMINUM OXIDE

- Tough, durable and versatile aluminum oxide grain for toolroom cut-off applications
- Non-reinforced, use on fixed-based machines where the work is securely clamped
- B bond (smooth sides); a mild acting resin bond for light cut-off applications
- B25 bond (smooth sides); a versatile, free-cutting, more durable resin bond; ideal for dry cutting metal in high production runs
- E7 bond (smooth sides); a shellac bond with very mild cutting action, recommended for highly critical applications where no burr, heat checks, or discoloration is permitted
- R30 bond (smooth sides); mild acting rubber bond primarily for wet, ultra-thin cutting

SIZE (D x T x H)	MAX. RPM	STD. PKG.	TIER: BETTER SPEC.	PART #
Type 01/41 Straight Cut-off – Non-Reinforced				
6 x .015 x 1-1/4	6,370	25	57A90-R0R30	662528 22953
6 x .020 x 1-1/4	6,370	25	57A90-R0R30	662528 22954
6 x .035 x 1-1/4	6,370	25	57A60-M8B	662528 22958
6 x .060 x 1/2	7,640	25	57A541-RB25	662528 22970
6 x .060 x 1-1/4	7,640	25	57A60-M8B	662528 22975
7 x .035 x 1-1/4	5,460	25	57A60-M8B	662529 22983
	5,460	25	57A60-Q8B	662529 22986
	5,460	25	57A60-Q8B	662529 22987
7 x .035 x 1-1/4	5,460	25	57A601-PB25	662529 22988
	5,460	25	57A601-RB25	662529 22989
	5,185	25	57A60-OE7	662529 22985
7 x .035 x 1-1/4	5,460	25	23A601-PB25	662529 38701
7 x .050 x 1-1/4	5,460	25	23A601-PB25	662529 38724*
7 x .060 x 1/2	6,550	25	57A60-Q8B	662529 22672

*Exception: rough sides

SIZE (D x T x H)	MAX. RPM	STD. PKG.	TIER: BETTER SPEC.	PART #
Type 01/41 Straight Cut-off – Non-Reinforced				
7 x .060 x 1-1/4	6,550	25	57A46-M8B	662529 22677
	6,550	25	57A60-M8B	662529 22681
	6,550	25	57A60-Q8B	662529 22684
	5,185	25	57A60-OE7	662529 22683
7 x .090 x 1-1/4	6,550	25	57A60-M8B	662529 22690
7 x .125 x 1-1/4	6,550	25	57A60-M8B	662529 22692
8 x .035 x 1-1/4	4,775	25	57A60-N8B	662530 22694
8 x .060 x 1/2	5,730	25	57A60-M8B	662530 22702
8 x .060 x 1-1/4	5,730	25	57A60-M8B	662530 22708
10 x .060 x 5/8	4,585	25	57A46-Q8BW	662531 22816
	4,585	25	57A60-M8BW	662531 22818
	4,585	25	57A60-M8BW	662531 22824

Rail Reinforced Cut-off



The Norton RailCut line is designed for high-speed fixtured hydraulic or gas-powered rail saws.

Applications:

Fixed rail track cutting

Size range:

14" and 16" diameter

Thickness range:

1/8"

Grit range:

14 – 16

Abrasive grain:

Zirconia Alumina / Aluminum Oxide Blend, Zirconia Alumina, and Aluminum Oxide

Shape:

Type 01/41 Straight

Reinforcement:

Side reinforced with R (rough) sides

Speed rating:

All wheels are rated for 20,000 SFPM applications

Machines Used:

FIXTURED HYDRAULIC OR
GAS-POWERED RAIL SAW

Cross Reference Guide and Machine-to-Product Recommendation Guide

	BEST	BETTER	GOOD	GOOD
NORTON	RailCut X	RailCut NorZon III	RailCut A30X	RailCut Metal
Bullard Abrasive	Trackmaster Pro ZA24 Q-BF (Blue)	Trackmaster Pro ZA24 Q-BF (Blue)	Trackmaster A30 R-BF (Red)	—
DiaTool	—	—	—	RailMaster Rail Cut 27
Flexovit USA	—	—	A30-PB	—
Giesmar	AM303-R	AM303-R	NR242-Q	NR242-Q
Klingspor	A 24 SX Special	A 24 SX Special	—	—
Portaco	A30 R-BF	A30 R-BF	—	—
Racine Kwik Kut	A24R	A24R	—	—

NORTON	BEST	BETTER		GOOD	
	RailCut X	RailCut NorZon III	RailCut NorZon III FastCut	RailCut A30X	RailCut Metal
HYDRAULIC SAW	◆			◆	◆
GAS SAW					
High-Horsepower / Newer Machine	◆	◆		◆	◆
Low-Horsepower / Older Machine	◆	◆	◆	◆	◆



Best choice for high-performance cutting of rails on applications where the hydraulic or gas saw is fixtured and has adequate power

RAILCUT X ZIRCONIA ALUMINA / A/O BLEND

- Highest-performance zirconia alumina and engineered aluminum oxide abrasive blend expertly cuts a broad range of rail material
- Rough sides enable fastest cutting and longest lasting wheels
- Achieve highest productivity with lowest total abrasive costs



Good choice for price-sensitive jobs with lowest initial price

RAILCUT METAL ALUMINUM OXIDE

- Quality aluminum oxide abrasive wheels designed for jobs where low initial price is a key purchasing criterion
- Side reinforced with rough sides; rated for 20,000 SFPM applications
- Designed for multi-purpose use; great versatility on a variety of rail materials



TIER: BEST

BETTER

BETTER

GOOD

GOOD

TRADENAME: RAILCUT X

RAILCUT NORZON III

RAILCUT NORZON III FASTCUT

RAILCUT A30X

RAILCUT METAL

ABRASIVE: Zirconia Alumina/Aluminum Oxide Blend

Zirconia Alumina

Zirconia Alumina

Aluminum Oxide

Aluminum Oxide

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
Type 01/41 Cut-Off							
14 x 1/8 x 1	5,400	10	662533 37716	662533 60493	662533 63694	662532 60462	
16 x 1/8 x 1	4,800	10	662533 35024	662534 64607	662534 64415	662532 59935	662434 82066



Foundry cut-off wheels are designed with abrasives, bonds and reinforcement types specific to foundry machine parameters and materials. Most of the specifications are non-stock. This stock listing is designed to provide popular size and starting specifications.

Size Range:

Reinforced: 14" – 30" diameter; Non-reinforced: 12" – 20" diameter

Grit Range:

24 – 46 grit

Abrasive Grain:

Ceramic Alumina (Norton Quantum; non-stock only), Zirconia Alumina, Aluminum Oxide

Reinforcement:

Reinforced: Engineered with strengthening fabric or filaments, which make wheels resistant to cross-bending breakage. All portable cut-off, swingframe, locked-head push-through and foundry chop stroke operations require reinforced cut-off wheels.

B: One or more full diameter pieces of filament molded inside each wheel. This construction leaves the abrasive exposed on the side of the wheel, improving freeness of cut. Used for fixed work operations with low probability of side pressure.

N: Full diameter pieces of reinforcement on the side of the wheel. Offers greatest possible resistance to side pressure and bending.

Non-Reinforced: Designed for use on fixed-base types of machines where the work is securely clamped and guarded, and where the wheel operates on a controlled cutting plane.

W: Reinforcement around the center hole only. These wheels are not considered to be truly reinforced.

Side Patterns:

Smooth sides: Used for precision cutting applications

Rough (R) sides: Abrasive particles protrude from sides of wheel

Used wet or dry on most metals

Material-to-Product Recommendation Guide

	BEST Foundry X Quantum*	BETTER Foundry X BlueFire	GOOD Foundry X	GOOD Foundry Metal
INVESTMENT CAST ALLOYS			◆	
Stainless Steel	◆	◆	◆	◆
Titanium	◆	◆	◆	◆
CAST IRON	◆	◆	◆	◆
CAST STEEL			◆	
Carbon and Low Alloy	◆	◆	◆	◆
Stainless Steel and High Alloy	◆	◆	◆	◆
Aluminum Alloy	◆	◆	◆	◆
Copper Alloys, Brass, Bronze	◆	◆	◆	◆

*Foundry X Quantum wheels are non-stock, custom-made to your requirements

Cross Reference Guide

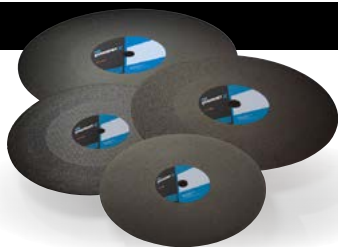
	TOTAL PERFORMANCE		INITIAL PRICE	
	BEST Foundry X Quantum and B97 (Non-stock; custom-made to your exact requirements)	BETTER Foundry X BlueFire	GOOD Foundry X	GOOD Foundry Metal
Allison	TA362 R6 8045HA, YW462 MR B2HA	TA302-T6-B6HA, A46-T6-BX5T6A, HF 1247 K – CHALLENGER	—	Economiser
Avery	—	TA30-V680	A 3226 C7A, C11922 W071	92871H
Buckeye	—	Steel Shark	—	—
DiaTool	BV1734R 710	BV 1397-5284-C	—	—
Flexovit	—	ZAX30TB	A24PB, A30RB	—
Klingspor	20A24-QBF	—	—	—
NATAB	—	—	T 1584 HA	—
Rappold	—	6Z30U-B3F2	—	—



Better choice on stainless steel, aerospace alloys, cast iron, and steel

FOUNDRY X BLUEFIRE REINFORCED

- Next generation self-sharpening zirconia alumina abrasive provides fast cuts on foundry cut-off applications
- Improved durability and heat resistance result in longer abrasive life
- More aggressive; can withstand very demanding applications



Good choice on general purpose applications

FOUNDRY X ALUMINUM OXIDE

- Durable, versatile aluminum oxide abrasive engineered for consistent performance and economical price on foundry cut-off applications
- Advanced bond technology with improved thermal stability and mechanical strength
- Excellent value on stainless steel and exotic aerospace alloys



Good choice for price-sensitive jobs with lowest initial price

FOUNDRY METAL ALUMINUM OXIDE

- Great versatility from multi-purpose aluminum oxide abrasive formulated specifically for typical foundry applications
- Bond and reinforcement engineered to foundry market machine parameters and materials
- Good choice for small jobs and quick applications where performance is not measured

Reinforced



		TIER: BETTER			GOOD		GOOD	
		TRADENAME: FOUNDRY X BLUEFIRE			FOUNDRY X		FOUNDRY METAL	
		ABRASIVE: Zirconia Alumina / Aluminum Oxide			Aluminum Oxide		Aluminum Oxide	
SIZE (D x T x H)	MAX. RPM	STD. PKG.	SPEC.	PART #	SPEC.	PART #	SPEC.	PART #
Type 01/41 Straight Cut-off – Foundry Reinforced								
14 x 1/8 x 1	4,365	10	NV24-TB75N	662533 47674	U57A30-TB75N	662533 45779		
	4,365	10	NV24-VB75N	662531 79193	U57A30-VB75N	662531 79191		
	4,365	10	NV24-YB97N	662533 47698				
16 x 5/32 x 1	3,820	10	NV24-TB75N	662533 47676	U57A30-TB75N	662533 45781	Side Reinforced	66243 485919
	3,820	10	NV24-VB75N	662531 79147	U57A30-VB75N	662531 79148		
20 x 5/32 x 1	2,710	10	NV24-TB75N	662533 47683	U57A30-TB75N	662533 47546	Side Reinforced	66243 485920
	2,710	10	NV24-VB75N	662531 79363	U57A30-VB75N	662531 79364		
	2,710	10	NV24-YB97N	662533 47694	U57A30-YB97N	662533 47701		
20 x 3/16 x 1	2,710	10	NV24-TB75B	662533 47684	U57A30-TB75B	662533 47547	Centrally Reinforced	66243 485921
	2,710	10	NV24-VB75B	662531 79366				
	2,710	10	NV24-YB97B	662533 47699	U57A30-YB97B	662533 47702		
24 x 7/32 x 1-3/4	2,260	10	NV24-TB75B	662533 47685				
	2,260	10	NV24-VB75B	662531 79374	U57A30-VB75B	662531 79375		
	2,260	10	NV24-YB97B	662533 47697				
30 x 1/4 x 1-3/4	1,810	10	NV24-TB75B	662533 47722	U57A30-TB75B	662533 47720		
	1,810	10			U57A30-YB97B	662533 47721		

Specifications ending in "B" are centrally reinforced; specifications ending in "N" are side reinforced.

Non-Reinforced



		TIER: BETTER			GOOD	
		TRADENAME: U57A			GEMINI	
		ABRASIVE: Aluminum Oxide			Aluminum Oxide	
SIZE (D x T x H)	MAX. RPM	STD. PKG.	SPEC	PART #	SPEC	PART #
Type 01/41 Straight Cut-off – Foundry Non-Reinforced R-Sides						
12 x 3/32 x 1	5,095	10	U57A461-PB25	662532 61887		
16 x 1/8 x 1	3,820	10			AP	662534 22942
20 x 1/8 x 1	2,710	10	U57A304-VB25W	690786 65497		

Ask your Norton representative about our custom, made-to-order Norton Foundry X Quantum ceramic alumina wheels for high alloys, stainless steel, and aerospace applications.

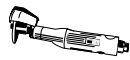
CUT-OFF WHEEL DESCRIPTION CODES

AP = All Purpose

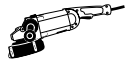
Where a good blend of cut rate and life is needed




For consistent, quality performance in foundries, welding shops, fabrication facilities, steel mills and shipyards, Norton portable snagging wheels maximize your productivity. Used on horizontal/straight shaft grinders or right angle portable cup grinders.

- Applications:** Removing flaws, cracks, gates, risers and parting lines, smoothing weld seams, cleaning castings, and rough beveling
- Size Range:** Type 01 Straight Wheels: 2-1/2" – 8" diameter
Type 06 and 11 Cup Wheels: 4" – 6" diameter
Cones and Plugs: Type 16, 17, 17R, 18 and 18R
- Grit Range:** 14 – 24
- Abrasive Types:** Zirconia Alumina NZ and NV; Zirconia Alumina / Silicon Carbide Blend NVC; Aluminum Oxide 57A and Metal; Aluminum Oxide / Silicon Carbide Blend 57AC, Silicon Carbide 37C and Masonry
- Machine Used:**
- 

PORTABLE
CUT-OFF TOOL



RIGHT ANGLE
GRINDER



PORTABLE
GRINDER

Material-To-Product Recommendation Guide

	BEST NorZon Plus	BETTER BlueFire	GOOD Gemini	Metal
IRON				
Gray	◆ NZ14-R	◆ NV16-Q	◆ 57A16-Q	◆
Ductile/Malleable	◆ NZ14-R	◆ NV16-Q	◆ 57A16-Q	◆
Dirty/Scale-covered		◆ NVC16-Q	◆ 57AC16-Q	
STEEL				
Carbon and Low Alloy	◆ NZ14-Q	◆	◆ 57A16-Q	◆
Stainless and High Alloy	◆ NZ14-P	◆	◆ 57A16-Q	◆
ALUMINUM, COPPER, BRASS, & BRONZE ALLOYS		◆ NVC16-Q	◆ 57AC16-Q	

NOTE: Grade, Grit and Abrasive tuning may be necessary to obtain optimum performance

Cross Reference Guide for Type 01, 06 and 11 Wheels

	TOTAL PERFORMANCE			INITIAL PRICE	
	BEST	BETTER	GOOD		
NORTON	NorZon Plus	BlueFire NV	Gemini 57A/Metal	Gemini 57AC	Gemini 37C/Masonry
Bullard	—	ZA16PB	A16R	AC16	C16P
Camel	—	—	A	CA	C
Flexovit	ZA16PB	—	A16QB	AC16QB	C16PB
Gulf States	Zirconium	—	A16	—	C16
Pacific	Z, Z-GPC	—	A	CA	—
Pearl	—	—	A16Q	—	C16-Q
Pferd	ZA 16 Q SG	—	A 16 Q SG	—	C 16 Q SG
Sait	—	Z16	A16, 20	CA16	C16
Tyrolit	—	—	A16PB	—	C16PB
Walter	—	—	A	—	C



Best choice for heavy-duty stock removal on medium- and high-horsepower grinders

NORZON PLUS ZIRCONIA ALUMINA

- Tough, durable, premium zirconia alumina grain provides 10X life and 50% faster grinding versus aluminum oxide products
- Engineered to excel on the toughest foundry snagging applications
- Best performance on a wide variety of materials; 300 and 400 series stainless, soft and hard carbon steels, tool steels, titanium, super alloys, soft metals, and cast, ductile and gray iron



Better choice for stock removal on high- and medium-horsepower grinders

BLUEFIRE ZIRCONIA ALUMINA

- Friable zirconia alumina grain and durable resin bond technologies deliver sharper grain longer, for extended wheel life, higher metal removal rates, and faster, freer cutting action than standard zirconia alumina blends
- Ideal for foundry snagging, tool sharpening, portable grinding and stock removal applications on high- and medium-horsepower grinders
- Strong operator preference for these smooth-acting wheels that require less pressure and exertion, while improving productivity
- NVC – zirconia alumina / silicon carbide blend is highly effective on dirty, scale-covered castings
- Available with low odor bond to help reduce odors associated with portable grinding when used in confined spaces



Good choice for steel and ferrous metals as well as specialty applications in aluminum and foundries

GEMINI ALUMINUM OXIDE

- Tough, durable aluminum oxide abrasive for heavy-duty work including foundry snagging, tool sharpening, and stock removal
- Work well with a variety of machines, horsepower, and operations
- Good general-purpose choice for numerous small jobs
- Available with low odor bond to help reduce odors associated with portable grinding when used in confined spaces



Good choice for steel/ferrous metal applications with low initial price

METAL ALUMINUM OXIDE

- Tough, durable aluminum oxide abrasive for heavy-duty work including foundry snagging, tool sharpening, and stock removal
- Work well with a variety of machines, horsepower, and operations
- Good general-purpose choice for numerous small jobs on 300 and 400 series stainless, soft and hard carbon steels, tool steels, titanium, super alloys, soft metals, and cast, ductile and gray iron







Good choice for masonry applications with low initial price

MASONRY ALUMINUM OXIDE

- Sharp silicon carbide abrasive for small-volume snagging jobs
- Delivers rapid stock removal in small areas on a portable cup grinder
- Versatile; good starting specification where initial price is a primary purchasing consideration, especially nonferrous and masonry



TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	NORZON PLUS	BLUEFIRE	GEMINI	METAL/MASONRY
SHAPE:	Type 01 and 11	Type 01, 06, and 11	Type 01 and 11	Type 11
ABRASIVE:	Premium Zirconia Alumina	Zirconia Alumina NV Zirconia Alumina/ Silicon Carbide NVC	Aluminum Oxide 57A, Silicon Carbide 37C, Aluminum Oxide/ Silicon Carbide 57AC	Metal – Aluminum Oxide Masonry – Silicon Carbide

SIZE (D x T x H)	MAX. RPM	STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #	SPEC	PART #
Type 01 Straight 										
2-1/2 x 1/2 x 3/8	21,700	20					57A24-R	662435	22381	
3 x 1/4 x 3/8	20,370	25			NV20-T	662533	57A24-T	662435	28831	
3 x 3/8 x 3/8	18,080	10					57A24-R	662435	22415	
3 x 1/2 x 3/8	18,080	10					57A24-P	662435	22417	
4 x 1/4 x 3/8	15,280	10			NV20-T	662533	57A24-R	662435	22221	
6 x 1 x 5/8	8,000	5			NV14-R	662531	57A16-QS	662528	09563	
S Webs	8,000	5			NZ III 14-Q	662528				
	8,000	5			NZ III 14-R	662528				
8 x 3/4 x 5/8	6,000	10			NV14-S	662533				
S Webs										
8 x 1 x 5/8	6,000	5	NZ IV 16-Q	662530	NV16-Q	662531				
S Webs	6,000	5	NZ IV 16-Q	662530						
	6,000	10			NV14-R	662533				
	6,000	10			NV14-T	662533				
	6,000	10			NVC16-Q	662531				
Type 06 Straight Cup 										
6 x 2 x 5/8-11	6,000	5			NZ III 16-R	662528				
Rim 2" Back 3/4"										
Type 11 Flaring Cup 										
4/3 x 2 x 5/8-11	9,070	10	NZ IV 16-Q	662435	NV16-Q	662531	57A16-Q	662435	10512	Masonry C16-Q 07660789431
Rim 3/4" Back 3/4"										
5/3-3/4 x 2 x 5/8-11	7,260	5			NV16-Q	662531	57A16-Q	662528	09598	Metal 16-Q 07660789430
Rim 1" Back 3/4"	7,260	5			4NZ16-Q RB	690786	57AC16-Q RB	690786	40234	
6/4-3/4 x 2 x 5/8-11	6,000	5			NV16-Q	662531	57A16-Q	662528	25201	
Rim 1" Back 3/4"	6,000	5			NZ III 16-Q	662528				
6/4-3/4 x 2 x 5/8-11	6,000	5	NZ IV 16-P	662528	NV14-R	662533	37C16-P	662528	09609	
Rim 1-1/2" Back 3/4"	6,000	5			NV16-Q	662531	57A16-Q	662528	09618	
	6,000	5			NVC16-Q	662531	57AC16-Q	662528	09608	
	6,000	5			4NZ16-Q RB	690786	9CA16-Q RB Ti	690786	40488	
							57AC16-Q RB	690786	40485	
Type 11 Flaring Cup with Steel Back 										
4/3 x 2 x 5/8-11	9,070	10			NV16-Q	662531				
Rim 3/4" Back 3/4"										
5/3-13/16 x 2 x 5/8-11	7,260	10			NV16-Q	662531				
Rim 1" Back 3/4"										
6/4-13/16 x 2 x 5/8-11	6,000	5			NV14-R	662533	57A16-Q	662528	09599	
Rim 1-1/2" Back 3/4"	6,000	5			NV16-Q	662531	57AC16-Q	662528	09600	
	6,000	5			NVC16-Q	662531	57AC16-Q RB	690786	40486	
	6,000	5			4NZ16-Q RB	690786	9CA16-Q RB Ti	690786	40489	

* Std. Pkg. = 50






RB = Low odor bond. Note: Ti formulation optimized for grinding Titanium

TECH TIP

Norton BlueFire and Gemini Type 11 cup wheels now available in new RB low odor bond to help reduce odors associated with portable grinding when used in confined spaces.



TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	NORZON PLUS	BLUEFIRE	GEMINI	METAL
ABRASIVE:	Zirconia Alumina	Zirconia Alumina/Aluminum Oxide	Aluminum Oxide	Aluminum Oxide

SIZE (D x T x H)	MAX. RPM	STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #	SPEC	PART #
Type 16 Cones 										
1 x 3 x 3/8-24 (ME 107019)	36,290	10			NV20-S	662533 44376	57A24-R	614636 22342	Metal 24	662533 49752
1-1/2 x 2-1/2 x 3/8-24 (ME 44436)	24,190	10					57A24-R	614636 22349	Metal 24	662533 49754
1-1/2 x 2-1/2 x 5/8-11 ME 171651	24,190	10					57A24-R	690786 40166	Metal 20	690786 40046
1-1/2 x 3 x 3/8-24 (ME 139029)	24,190	10			NV20-S	662533 44377				
1-1/2 x 3 x 3/8-24 (ME 171652)	24,190	10							Metal 20	690786 40215
1-1/2 x 3 x 5/8-11 (ME 70535)	24,190	10	NZ IV 20-R	614636 44231	NV20-S	662533 44379	57A24-R	614636 22190	Metal 24	662533 49757
1-3/4 x 3 x 3/8-24 (ME49226)	20,735	10					57A24-R	614636 14503	Metal 24	662533 49840
1-3/4 x 3 x 5/8-11 (ME 33432)	20,740	10					57A24-R	614636 22195	Metal 24	662533 49841
2 x 3 x 3/8-24 ME 157287	18,145	10							Metal 24	662534 76413
2 x 3 x 5/8-11 (ME 28229)	18,145	10	NZ IV 20-R	614636 44232	NV20-S	662533 44381	57A24-R	614636 22218	Metal 24	662533 49846
2-3/4 x 3-1/2 x 5/8-11 (ME 18265)	13,195	10			NV20-S	662533 44383	57A24-R	614636 22387	Metal 24	662533 49855
3 x 3 x 5/8-11 (ME70537)	12,100	10							Metal 24	662434 96885
Type 17 Cones, Square Tip 										
1-1/2 / 1/2 x 3 x 3/8-24	24,190	10					57A24-R	614636 22194	Metal 24	662533 49753
1-1/2 / 1/2 x 3 x 5/8-11	24,190	10					57A24-R	690786 40225	Metal 20	690786 40224
2 / 1/2 x 3 x 5/8-11	18,145	10					57A24-R	614636 15722	Metal 24	662533 49845
Type 17R Cones, Round Tip 										
2 / 3/4 x 3 x 5/8-11 (ME 151373)	18,145	10			NV20-S	662533 44384				
Type 18 Plugs, Square Tip 										
1-1/2 x 2-1/2 x 3/8-24	24,190	10					57A24-R	614636 22217	Metal 24	662533 49755
1-1/2 x 2-1/2 x 5/8-11	24,190	10	NZ IV 20-R	614636 44224	NV20-S	662533 44385	57A24-R	614636 22351	Metal 20	690786 40226
1-1/2 x 3 x 5/8-11	24,190	10			NV20-S	662533 44386	57A24-R	614636 22191	Metal 24	662533 49838
2 x 3 x 5/8-11	18,145	10	NZ IV 20-R	614636 44234	NV20-S	662533 44387	57A24-R	614636 22219	Metal 24	662533 49847
	18,145	10			NV24-S	662533 44391				
2 x 4 x 5/8-11	18,145	10					57A24-R	614636 22366	Metal 24	662533 49850
Type 18R Plugs, Round Tip 										
1-1/2 x 2-1/2 x 3/8-24	24,190	10					57A24-R	690786 40230	Metal 20	690786 40229
1-1/2 x 2-1/2 x 5/8-11	24,190	10					57A24-R	690786 40228	Metal 20	690786 40227
1-1/2 x 3 x 3/8-24	24,190	10					57A24-R	614636 22192	Metal 24	662533 49756
1-1/2 x 3 x 5/8-11	24,190	10							Metal 24	662434 95628
2 x 3 x 5/8-11	18,145	10			NV20-S	662533 44389	57A24-R	614636 22220	Metal 24	662533 49849
3 x 3 x 3/8-24	12,095	10					57A24-R	690786 40232		
3 x 3 x 5/8-11	12,095	10							Metal 20	690786 40231

Core Files

These files consist of coarse grit silicon carbide abrasive in a hard grade, resin-bonded to a reinforcing rod. Half-round in shape, they are a frequent choice for easy cleaning of rough castings.



TIER:	GOOD
ABRASIVE:	Silicon Carbide

SIZE (T x W x L)	STD. PKG.	SPEC.	PART #
Stock Resinoid Core Files – Silicon Carbide			
1/2 x 1 x 10	5	37C24-SB	614636 10314

get wired **FOR SUCCESS**

Our broad wire brush offering includes the shapes, wire configurations and filament materials you'll need for heavy- to light-duty brushing applications.





Our Norton wire brush broad offering includes all the basic shapes and configurations. Informative, attractive packaging clearly explains dimensions, structure, safety and machine usage. All brushes are individually clamshell packaged unless otherwise noted. When using wire brushes, be sure to comply with ANSI B165 "Power-Driven Brushing Tools: Safety Requirement for the Design, Care and Use." and safety documents on www.nortonabrasives.com website.

Applications:

Cleaning rust, scale and dirt; light deburring; edge blending; roughening for adhesion; finishing for appearance; finish preparation prior to plating or painting

Shapes:**Wire Design:**

Cup, saucer cup, wheel, joint/crack, end brush, hand brush

Other:

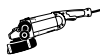
Twist knot, crimped, and stringer bead

Machine Used:

Color-coded for easy identification: **STEEL** **STAINLESS** **BRASS** **NYLON**



MINI DIE GRINDER



RIGHT-ANGLE CUP GRINDER



RIGHT-ANGLE GRINDER



BENCH GRINDER



PEDESTAL GRINDER



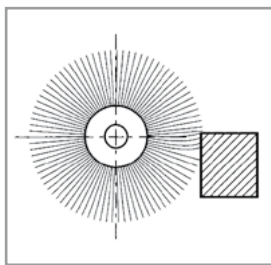
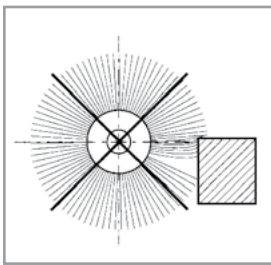
WALK-BEHIND SAW



HAND APPLICATION

Why Use Wire Brushes vs. Other Brushes, Coated Abrasive, and Surface-Cleaning Products

Norton Wire brushes remove rust and oxidations, paint, slag, weld spatter and other unwanted surface contaminants, without removing any base material. Other products can remove base material along with the surface contaminant. Our flexible wire brushes are able to clean hard-to-reach places and conform to irregular surfaces, which more rigid products cannot do.



Let the tip of the wire brush do the work – operate the brush with the lightest pressure. If heavy pressure is used, wires will be overstressed, resulting in a wiping action, which, if continued, creates wire fatigue and will shorten brush life. Reversing the rotation periodically sharpens the wire tips for faster cutting action and longer life. Use finest suitable wire size.



Crimped



Standard Twist Knot



Stringer Bead Twist Knot

TECH TIP

When to Use Crimped Wire vs. Standard Twist Knot vs. Stringer Bead Twist Knot Brushes

Crimped Wire Brushes

Crimped wire brushes' individual filaments are supported only by each other – creating extra flexibility.

Ideal for work on irregular surfaces, finer surface finishing, and light- to medium-duty contaminant removal applications.

Standard Twist Knot Wire Brushes

Ensuring longer life, making them the choice for more aggressive applications requiring higher-impact action, and a rougher surface finish.

Standard twist knot brushes are made with straight wire filaments that are twisted together to make more rigid rope- or cable-like pieces.

Stringer Bead Twist Knot Wire Brushes

Stringer bead twist knots (vs. standard twist knots) are more tightly twisted to the end of the knot, creating a narrower face and highest-impact action.

The choice for tough weld scale cleaning, removing the bead scale that occurs at the initial joining of two sections of pipe, root and hot weld pass cleaning, and the most aggressive brushing applications.

Workpiece Material To Wire Brush Recommendation Guide



Workpiece Material	Steel	Stainless Steel	Brass	Nylon
ALUMINUM				
BRASS				
COPPER				
IRON				
PLASTIC				
CARBON STEEL/METAL				
STAINLESS STEEL				
WOOD				

Wire Diameter

Choose the appropriate wire brush wire diameter for the job

- Very fine to fine wire for light-duty applications
- Medium to coarse wire for heavy-duty applications

Wire	Coarse		Medium to Coarse		Medium		Fine		Very Fine	
DIAMETER IN INCHES	.032	.020	.020	.015	.012	.0104	.010	.008	.006	.005
DIAMETER IN MM	.80	.50	.50	.37	.30	.26	.25	.20	.15	.13

TECH TIP

Trim Length

Choose the appropriate trim length for the job. "Trim Length" equals the amount of usable filament:

- Longer trim lengths are more flexible, making them the choice for irregular surfaces
- Shorter trim lengths are fast acting and more rigid, so better for more severe applications

TECH TIP

Filament Do's and Don'ts

Excessive pressure bends and could break brush filaments. Instead of increasing the pressure applied, consider:

- A more aggressive brush:
 - Increasing wire diameter
 - Shorter trim length
- Different brush type, e.g. twist knot versus crimped wire
- Increasing RPM without exceeding the MAX RPMs marked on the brush

Slick Packaging

A good looking product on and off the shelf. Norton BlueFire wire brushes come in a sturdy, clear clamshell package protecting the wire brush until it's ready for use.

Educational information is prominently displayed for ease of selection in three languages.

The new packaging will be a great addition to the merchandising POP display signage.



To learn which wire style is the best choice for your job and see what makes Norton Wire Brushes the ultimate power tool accessories visit <https://nortonsga.us/wgazw>

Better choice for deburring, removing rust, paint, corrosion and weld spatter from metal surfaces

BLUEFIRE WIRE BRUSHES

- Perfect for removing rust, scale, paint, and dirt from metal and other surface
- Available in a variety of brush types and sizes for large flat areas to small, tight spaces
- Durable design provides a uniform finish while offering the longest life



Good choice for removing rust oxidation, paint, slag and weld spatter without removing base material

GEMINI WIRE BRUSHES

- Ideal low-impact solution for refining surfaces without removing any base material
- Flexible design for cleaning hard-to-reach places and conforming to irregular surfaces, which more rigid products cannot do
- Economically priced yet solid-performing to complement your projects perfectly while bringing real savings to the bottom line





EXPANDED
OFFERING

Deburring; roughing; cleaning rust, scale, paint and oxidation; cleaning corners, recesses, and other hard-to-reach areas and removing concrete and large surfaces

WIRE CUP BRUSHES

- Used on right angle cup grinders
- Twist Knot style for heavy-duty applications
- Crimped cup for light- to medium-duty applications

Twist Knot Wire Saucer Cup Brushes

- Saucer cup brushes are ideal for reaching into and cleaning corners and hard-to-reach areas where a standard cup brush cannot.



TIER: **BETTER** **BETTER**
TRADENAME: **BLUEFIRE** **BLUEFIRE**
WIRE TYPE: **STEEL** **STAINLESS**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #
Twist Knot Wire Saucer Cup Brushes - Single Row - with Threaded Nut					
4 x 0.020 x 5/8-11	7/8	15,000	5	662528 33483	
5 x 0.020 x 5/8-11	1-1/8	12,500	10	662528 35585	662528 35586

Twist Knot Wire Cup Brushes

- Their more rigid structure allows efficient, high-impact cutting and cleaning on more demanding applications.
- Single row construction limits flaring of the brush on corners and angles



TIER: **BETTER** **BETTER** **BETTER** **BETTER** **GOOD** **GOOD**
TRADENAME: **BLUEFIRE** **BLUEFIRE** **BLUEFIRE** **BLUEFIRE** **GEMINI** **GEMINI**
WIRE TYPE: **STEEL** **STAINLESS** **STEEL** **STEEL** **STEEL** **STAINLESS**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
Twist Knot Wire Cup Brushes – Single Row – with Threaded Nut									
2-3/4 x 0.014 x 5/8-11	7/8	14,000	5					662528 38870	662528 38871
2-3/4 x 0.014 x 5/8-11	1	14,000	5					662528 39109	
2-3/4 x 0.020 x 5/8-11	3/4	15,000	5	699366 53336	699366 53340				
2-3/4 x 0.020 x 5/8-11	7/8	14,000	5					662528 38872	
2-3/4 x 0.020 x 5/8-11	1	14,000	10					662528 39033	662528 38812
3 x 0.020 x 5/8-11	7/8	14,000	5					662528 38835	662528 39127
3 x 0.020 x M10	7/8	14,000	5					662528 39075	
3-1/2 x 0.020 x 5/8-11	7/8	13,000	5					662528 38813	
3-1/2 x 0.020 x 5/8-11	1-3/8	13,000	5					662528 38868	
4 x 0.014 x 5/8-11	1-1/4	9,000	5					662528 39060	
4 x 0.020 x 5/8-11	1-1/8	9,000	10					662528 39103	
4 x 0.020 x 5/8-11 with bridle	1-1/16	10,200	5	699366 53345	662528 33947				
4 x 0.023 x 5/8-11	1-1/4	9,000	5					662528 39090	
6 x 0.014 x 5/8-11	1-3/8	6,600	5					662528 39037	
6 x 0.020 x 5/8-11	1-3/8	6,000	5	699366 05965	662533 71115			662528 39104	
6 x 0.023 x 5/8-11	1-3/8	6,000	5					662528 39091	
6 x 0.035 x 5/8-11	1-3/8	6,000	5	699366 02003					
Twist Knot Wire Cup Brushes - Single Row - with Threaded Nut and Protective Guard									
2-3/4 x 0.020 x 5/8-11	3/4	15,000	5			662528 33492			
4 x 0.020 x 5/8-11	1-1/8	10,200	5			662528 33496			
5 x 0.020 x 5/8-11	1-1/8	6,500	5			662528 33497			
Twist Knot Wire Cup Brushes - Double Row - with Threaded Nut									
6 x 0.020 x 5/8-11	1-3/8	6,000	5				699366 53346		

Crimped Wire Cup Brushes

For light- to medium-duty brushing applications on flat or irregular surfaces, and bevel buffing where added flexibility is needed; fast-cutting and flexible, with heavy wire fill

- Machine for cups with threaded nuts: right angle cup grinder
- Machine for stem mounted cups: straight in-line grinder, pencil grinder



TIER: **BETTER**
TRADENAME: **BLUEFIRE**
WIRE TYPE: **STEEL**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #
High Performance Cable Crimped Wire Cup Brushes - with Threaded Nut and Protective Guard				
3 x (12 x 0.009) x 5/8-11	7/8	15,000	5	662528 33493
4 x (12 x 0.009) x 5/8-11	1-3/16	9,000	5	662528 33494
5 x (12 x 0.009) x 5/8-11	1-1/8	6,600	5	662528 33495



TIER: **BETTER** **BETTER** **GOOD**
TRADENAME: **BLUEFIRE** **BLUEFIRE** **GEMINI**
WIRE TYPE: **STEEL** **STAINLESS** **STEEL**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #
Crimped Wire Cup Brushes - with Threaded Nut						
2-3/4 x 0.014 x 5/8-11	1	14,000	5			662528 38856
2-3/4 x 0.020 x 3/8-24	1	14,000	5			662528 39080
3 x 0.014 x 5/8-11	13/16	14,000	5			662528 39076
3 x 0.014 x 5/8-11	7/8	15,000	5	699366 53341	662528 36362	
3 x 0.014 x 5/8-11	1	14,000	10			662528 39034
4 x 0.014 x 5/8-11	1-1/8	9,000	10			662528 39121
4 x 0.014 x 5/8-11	1-3/16	10,200	1		699573 70102	
4 x 0.014 x 5/8-11	1-3/16	10,200	5	699366 53347		
4 x 0.020 x 5/8-11	1-3/16	10,200	1	699573 70103		
4 x 0.020 x 5/8-11	1-3/16	10,200	5		662528 43844	
5 x 0.014 x 5/8-11	1-3/8	8,000	5			662528 39105
5 x 0.020 x 5/8-11	1-1/8	9,000	1	699573 70105		
5 x 0.020 x 5/8-11	1-1/2	8,000	5			662528 38864
6 x 0.014 x 5/8-11	1-1/8	6,600	5	699366 53348		
6 x 0.020 x 5/8-11	1-1/8	6,600	5	699366 53349		



TIER: **BETTER** **BETTER**
TRADENAME: **BLUEFIRE** **BLUEFIRE**
WIRE TYPE: **STEEL** **STEEL**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #
Crimped Wire Saucer Cup Brush - with Threaded Nut					
4 x 0.014 x 5/8-11	7/8	15,000	10	662528 33485*	
Crimped Wire Saucer Cup Brush - with Stem Mount					
3 x 0.020 x 1/4	7/8	25,000	12		699573 70129

* Brass-coated carbon steel filaments



TIER: **GOOD** **GOOD** **GOOD**
TRADENAME: **GEMINI** **GEMINI** **GEMINI**
WIRE TYPE: **STEEL** **STAINLESS** **BRASS**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #
Crimped Wire Cup Brushes - with Stem						
5/8 x 0.005 x 1/8	1/4	37,000	100			662528 39087
1-3/4 x 0.006 x 1/4	1/2	13,000	10	662528 38857		
1-3/4 x 0.012 x 1/4	1/2	13,000	10	662528 38858		
1-3/4 x 0.012 x 1/4	3/4	13,000	12	662528 39028		
2 x 0.010 x 1/4	5/8	10,500	12		662528 38859	
2 x 0.012 x 1/4	5/8	13,000	12	662528 39110		
2-1/4 x 0.014 x 1/4	5/8	4,500	10	662528 38860		



Applications range from the toughest, more aggressive surface cleaning applications, including removing weld scale, spatter, extra-heavy rust and corrosion, cleaning pipe joints, or surface roughening to light- to medium- duty surface cleaning and contaminant removal

WIRE WHEEL BRUSHES

- Available in Standard Twist Knot, Stringer Bead Twist Knot, and Crimped
- See specific machines for each wire wheel below



Standard Twist Knot Wire Wheel Brushes

Our twist knot wire design provides added rigidity for extra cutting and cleaning power, and a rougher surface finish.

- Wheel brushes with threaded nuts perform well on more aggressive applications requiring high-impact action: tough welding and metal fabrication applications, including removing weld scale, spatter, extra-heavy rust.
- These stem-mounted wheel brushes are used for small-to medium-duty jobs requiring some flexibility and lighter brushing action for corrosion, or surface roughing applications. These brushes are used on straight shaft, die, pencil grinders, drills and right angle grinders.



TIER:	BETTER	BETTER	BETTER	GOOD	GOOD
TRADENAME:	BLUEFIRE	BLUEFIRE	BLUEFIRE	GEMINI	GEMINI
WIRE TYPE:	STEEL	STAINLESS	PIPELINE	STEEL	STAINLESS

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
Standard Twist Knot Wire Wheel Brushes – with Threaded Nut									
3 x 0.014 x 3/8	3/8	5/8	25,000	1				662528	39021
4 x 0.014 x 5/8	5/16	7/8	20,000	5				662528	39011
4 x 0.014 x 5/8-11	1/2	3/4	20,000	6	699573	70137			
4 x 0.014 x 5/8-11	1/2	7/8	20,000	10				662528	39052
4 x 0.020 x 5/8-11	1/4	3/4	20,000	10					662528 39132
4 x 0.020 x 5/8-11	1/2	3/4	20,000	5	662528	38300			
4 x 0.020 x 5/8-11	1/2	3/4	20,000	6		699573	70138		
4 x 0.020 x 5/8-11	1/2	7/8	20,000	5				662528	39078
4 x 0.020 x 5/8-11	1/2	7/8	20,000	10				662528	39035
4 x 0.020 x 5/8-11	9/16	7/8	20,000	10				662528	39019
4-1/2 x 0.020 x 5/8-11	1/2	1	20,000	5	699366	06275	699366	53333	
4-1/2 x 0.020 x 5/8-11	1/2	1	20,000	6	699366	53331			
4-1/2 x 0.020 x 5/8-11	1/2	1	20,000	6			662528	40466	
5 x 0.020 x 5/8-11	1/2	1	12,500	5	662528	33487	662528	33488	
6 x 0.020 x 5/8-11	1/2	1-3/8	12,500	5	699366	53352			
6 x 0.020 x 5/8-11	5/8	1-1/4	9,000	5				662528	39107
6 x 0.025 x 5/8-11	5/8	1-1/4	9,000	5				662528	39593
6 x 0.025 x 5/8-11	5/8	1-1/4	9,000	5					662528 39594
Standard Twist Knot Wire Wheel Brushes – with Arbor Hole									
3 x 0.014 x 3/8	3/8	5/8	25,000	1				662528	39021
4 x 0.014 x 5/8	5/16	7/8	20,000	5				662528	39011
4 x 0.014 x 5/8	1/2	3/4	20,000	6	699573	70136			
6 x 0.014 x 5/8	1/2	1-1/2	9,000	5				662528	39014



TIER:	GOOD
TRADENAME:	GEMINI
WIRE TYPE:	STEEL

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #
Standard Twist Knot Wire Wheel Brushes - with Stem					
3 x 0.014 x 1/4	1/4	5/8	25,000	12	662528 39015
3-1/4 x 0.014 x 1/4	3/8	5/8	25,000	10	662528 39031
4 x 0.014 x 1/4	1/2	7/8	25,000	8	662528 39032



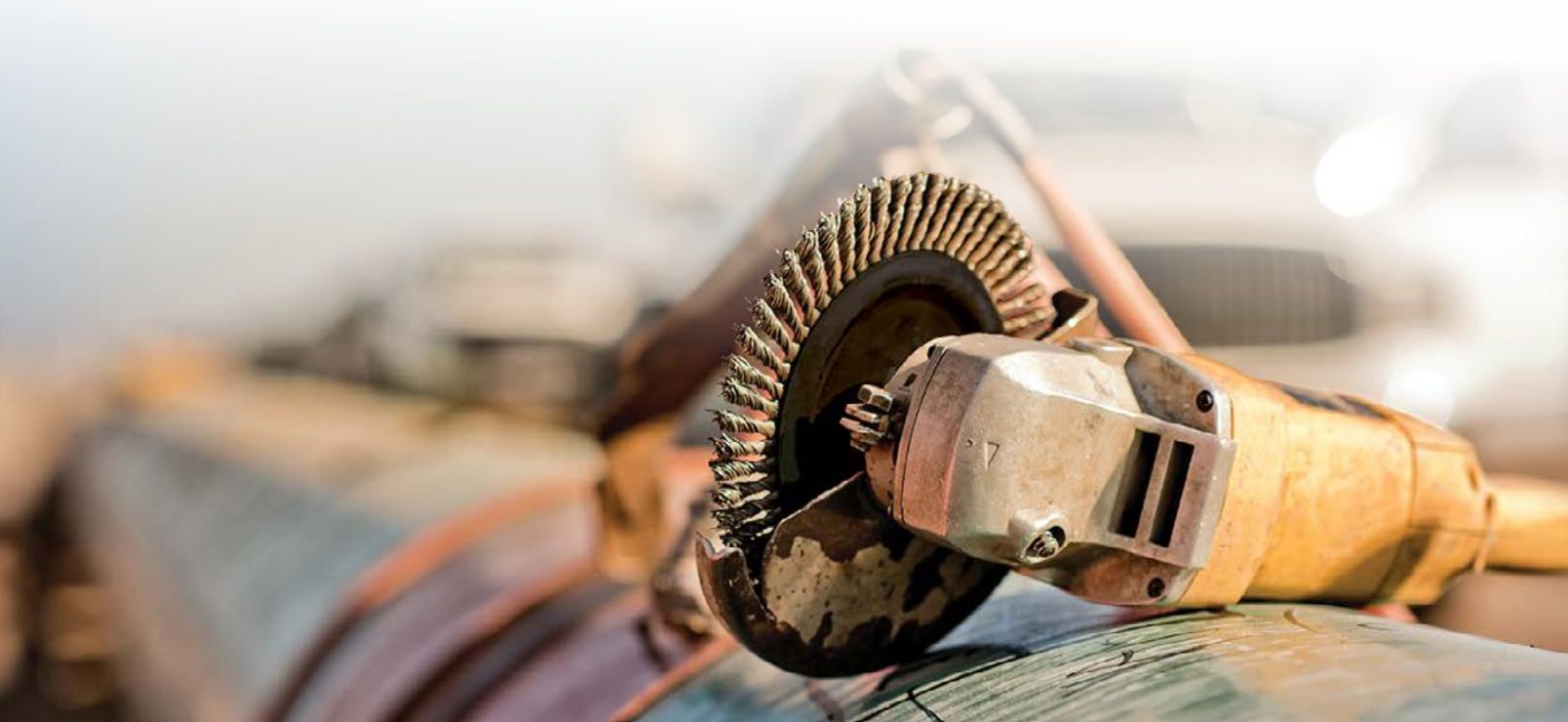
Stringer Bead Twist Knot Wire Wheel Brushes

The choice for toughest weld scale cleaning; removing the bead scale that occurs at the initial joining of two sections of pipe; root, and hot weld pass cleaning, and the most aggressive brushing applications. Stringer Bead Twist Knot Wire Wheel Brushes are best used on right angle grinders for difficult jobs.

TIER:	BETTER	BETTER	BETTER	BETTER	BETTER	GOOD	GOOD
TRADENAME:	BLUEFIRE	BLUEFIRE	BLUEFIRE	BLUEFIRE	BLUEFIRE	GEMINI	GEMINI
WIRE TYPE:	STEEL	STEEL	STEEL	STAINLESS	STAINLESS	STEEL	STAINLESS
OTHER:		Pipeline	Heavy-Duty		Pipeline		

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
Stringer Bead Knot Wire Wheel Brushes – with Threaded Nut										
4 x 0.020 x 5/8-11	3/16	7/8	20,000	5	699366 06277			699366 06278		
4 x 0.020 x 5/8-11	3/16	7/8	20,000	6	662528 33489*	662528 40467*			662528 42233*	
4 x 0.020 x 5/8-11	3/16	7/8	20,000	10	662533 70022*					662528 39036 662528 39039
4 x 0.020 x 5/8-11	1/4	7/8	20,000	5						662528 38997
4 x 0.020 x 5/8-11	1/4	7/8	20,000	10						
4 x 0.020 x 5/8-11	1/2	7/8	20,000	10						662528 39130
4 x 0.020 x 5/8-11	1/2	1	20,000	10						662528 39106
4 x 0.020 x M10	3/16	7/8	20,000	6				699573 70144		
4 x 0.020 x M10	3/16	7/8	20,000	10						
4-1/2 x 0.020 x 5/8-11	3/16	3/16	15,000	5						662528 39111
4-1/2 x 0.020 x 5/8-11	3/16	1-1/8	12,500	6		662528 42299*	662528 44886			
5 x 0.020 x 5/8-11	3/16	7/8	12,500	10	662528 33490*			662528 33491*		
5 x 0.020 x 5/8-11	1/2	7/8	12,500	5						662528 39133
6 x 0.020 x 5/8-11	3/16	1-3/8	12,500	10		662528 40469*	662528 44887	699366 53351		
6-7/8 x 0.020 x 5/8-11	3/16	1-1/8	9,000	5						662528 39026
6-7/8 x 0.020 x 5/8-11	3/16	1-1/8	9,000	10	699366 53329*	662528 40468*	662528 43919*			
6-7/8 x 0.020 x 5/8-11	3/16	1-1/8	9,000	6	662528 10992					
Double Hub										
9 x 0.020 x 5/8-11	3/16	2-1/8	6,000	6	662528 37993					
Joint Crack Cleaning Brush for Walk Behind Machines										
12 x 0.035 x 1-DP	3/8	3-1/4	4,500	2	699366 06280					

*Bulk Packed Item



Radial Wheel

Nylon Radial Wheel Brushes are best used for deburring, surface and light cleaning, adding an edge radius on ferrous and non-ferrous parts. The long trim length is ideal when used on intricate or irregular parts.

- Machine: Bench and Pedestal, Automated CNC, Inline Grinders



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **NYLON**

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #
Radial Wheel with Arbor Hole					
3 x 3/8 x 5/8	3/8	15/16	15,000	12	662528 38842

Crimped Wire Wheel Brushes

Stem-mounted wheel brushes are used on straight shaft, die, and pencil grinders, and drills. Wheel brushes with arbor holes are used on bench and pedestal grinders. Their extra flexibility and lower impact makes these brushes an excellent choice for cleaning irregular surfaces and finer surface finishing, and light to medium duty surface contaminant removal applications. May be used individually or stacked on a shaft.

- Narrow-faced brushes are ideal for general-purpose brushing of uneven or difficult-to-reach surfaces.
- Medium-faced brushes clean larger surface areas and have longer life.



Crimped Wire with Arbor hole – Narrow Face – Steel



TIER: **BETTER** **GOOD** **GOOD**
TRADENAME: **BLUEFIRE** **GEMINI** **GEMINI**
WIRE TYPE: **STEEL** **STEEL** **STAINLESS**

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #
Crimped Wire Wheels Brushes with Arbor Hole – Narrow Face							
1 x 0.008 x 5/16	5/32	3/16	20,000	20		662528 38949	
1 x 0.008 x 5/16	5/32	13/16	20,000	10	699573 70113		
2 x 0.014 x 1/2	3/8	1/2	20,000	10	699573 70114		
2 x 0.014 x 1/2	3/8	1/2	20,000	12		662528 39023	
3 x 0.005 x 1/2	1/4	1	20,000	10	699573 70115		
3 x 0.005 x 1/2	1/4	1	20,000	20			662528 38960
3 x 0.014 x 1/2	5/8	1	20,000	10	699573 70116	662528 39024	
3 x 3/8 x 5/8	3/8	15/16	20,000	10			
6 x 0.014 x 1/2-2	3/4	1-1/8	6,500	5	699366 53306		
6 x 0.014 x 5/8	3/4	1-1/8	6,000	5		662528 39097	
6 x 0.014 x 5/8	3/4	1-7/16	6,000	5		662528 39088	
8 x 0.014 x 5/8	3/4	1-9/16	4,500	5		662528 39099	
8 x 0.014 x 5/8	3/4	1-5/8	4,000	1	699573 70117		
8 x 0.014 x 5/8	3/4	2-1/16	6,000	5		662528 39089	
8 x 0.014 x 1-1/4	5/8	1-1/2	4,000	5		662528 38978	
Crimped Wire Wheels Brushes with Arbor Hole – Medium Face							
6 x 0.014 x 1/2-2	1	1-1/8	6,500	5	699366 53324		
6 x 0.014 x 5/8	1	1-1/8	6,500	5		662528 39098	
8 x 0.014 x 1/2-2	1-1/16	1-5/8	4,500	5	699366 53326		
8 x 0.014 x 5/8	1	1-9/16	4,000	5		662528 39100	
8 x 0.014 x 2	1	1-3/8	4,500	5		662528 39025	
10 x 0.014 x 3/4	1-1/2	2-5/8	4,500	1	699573 70134		
10 x 0.014 x 3/4	1-9/16	2-1/2	3,600	1		662528 39102	
12 x 0.012 x 2	2	2	3,600	1	699573 70135		
12 x 0.012 x 2	2	3-1/4	3,600	1		662528 39006	



Crimped Wire with Threaded Nut – Narrow Face – Steel



TIER: **BETTER** **GOOD**
TRADENAME: **BLUEFIRE** **GEMINI**
WIRE TYPE: **STEEL** **STEEL**

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #
Crimped Wire Wheels Brushes with Threaded Nut – Narrow Face						
4 x 0.014 x 5/8-11	7/16	7/8	15,000	10		662528 39001
Crimped Wire Wheels Brushes with Threaded Nut – Medium Face						
4-1/2 x 0.014 x 5/8-11		1	13,000	6	662533 70278	

Crimped Wire Wheel Brushes *continued*



Crimped Wire with Stem



TIER:	BETTER	BETTER	GOOD	GOOD	GOOD
TRADENAME:	BLUEFIRE	BLUEFIRE	GEMINI	GEMINI	GEMINI
WIRE TYPE:	STEEL	STAINLESS	STEEL	STAINLESS	BRASS

SIZE	FACE WIDTH	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
Crimped Wire Wheels Brushes with Narrow Face - with Stem									
3/4 x 0.005 x 3/16	1/32	3/16	37,000	100			66252839084		
1 x 0.005 x 1/8	1/8	5/16	37,000	100					66252839085
1-1/2 x 0.008 x 1/4	1/4	1/4	25,000	20			66252838962		
1-1/2 x 0.008 x 1/4	3/8	3/8	25,000	12	69957370118				
1-1/2 x 0.0118 x 1/4	7/16	3/8	20,000	12			66252838999		
1-1/2 x 0.014 x 1/4	1/4	1/4	25,000	20			66252838963		
1-1/2 x 0.014 x 1/4	3/8	3/8	25,000	12	69957370120				
2 x 0.006 x 1/4	3/8	7/16	25,000	12	69957370121				
2 x 0.006 x 1/4	3/8	1/2	20,000	20			66252839029		
2 x 0.008 x 1/4	3/8	7/16	25,000	12	69957370122				
2 x 0.008 x 1/4	3/8	7/16	25,000	20			66252838964		
2 x 0.0118 x 1/4	3/8	7/16	25,000	12	69957370124				
2 x 0.0118 x 1/4	3/8	1/2	20,000	20			66252839030		
2 x 0.014 x 1/4	3/8	7/16	25,000	12	69957370123			66252838965	
2 x 0.020 x 1/4	3/8	7/16	25,000	20			66252838966		
2-1/2 x 0.008 x 1/4	7/16	11/16	25,000	10			66252838967		
2-1/2 x 0.008 x 1/4	5/8	5/8	25,000	12	69957370125				
2-1/2 x 0.014 x 1/4	7/16	11/16	25,000	12			66252838968		
2-1/2 x 0.014 x 1/4	5/8	5/8	25,000	12	69957370126				
3 x 0.008 x 1/4	7/16	3/4	25,000	10			66252838969		
3 x 0.008 x 1/4	7/16	3/4	25,000	12				66252838972	
3 x 0.008 x 1/4	1/2	1	20,000	10			66252839092		
3 x 0.008 x 1/4	5/8	5/8	25,000	12	69957370127	69957370128			
3 x 0.0118 x 1/4	1/2	1	20,000	10			66252839093		
3 x 0.0118 x 1/4	5/8	5/8	25,000	12	69957370132				
3 x 0.014 x 1/4	3/8	1/4	20,000	12			66252839000		
3 x 0.014 x 1/4	7/16	3/4	25,000	10			66252838970		
3 x 0.014 x 1/4	7/16	3/4	25,000	12				66252838973	
3 x 0.014 x 1/4	1/2	1	20,000	20				66252839048	
3 x 0.014 x 1/4	5/8	5/8	25,000	12	69957370130	69957370131			
3 x 0.020 x 1/4	7/16	3/4	25,000	12			66252838971		
3 x 0.020 x 1/4	3/8	1	20,000	12			66252839096		
4 x 0.014 x 1/4	1/2	1	25,000	12			66252838974		
4 x 0.014 x 1/4	5/8	5/8	25,000	12	69957370133				



EXPANDED
OFFERING

Clean and deburr recessed areas or inside diameters of tubes and pipes to proper surface finish; rubber and plastic flash removal; paint and rust removal, and mold and tool polishing

END BRUSHES

- Used on CNC, Robotic, die grinders, and drill presses
- Twist knot wire end brushes for more aggressive cutting
- Crimped wire end brushes for lighter brushing action and contoured surfaces



Twist Knot Wire End Brush

Their added wire rigidity makes these brushes the choice for more aggressive cutting.



				TIER:	BETTER	BETTER	GOOD	GOOD
				TRADENAME:	BLUEFIRE	BLUEFIRE	GEMINI	GEMINI
				WIRE TYPE:	STEEL	STAINLESS	STEEL	STAINLESS
SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	
Twist Knot Wire End Brushes – with Stem								
1/2 x 0.006 x 1/4	1-1/8	22,000	20			662528	38876	
1/2 x 0.014 x 1/4	1-1/8	22,000	20			662528	38877	
3/4 x 0.014 x 1/8	7/8	22,000	20			662528	39056	
3/4 x 0.014 x 1/4	7/8	25,000	10		699573	70165		
3/4 x 0.014 x 1/4	7/8	22,000	20			662528	38879	
3/4 x 0.020 x 1/4	7/8	25,000	10	699366	53316*	699573	70166	
3/4 x 0.020 x 1/4	7/8	22,000	20			662528	39057	
3/4 x 0.020 x 1/4	1	22,000	20			662528	39116	
3/4 x 0.020 x 1/4	1-1/8	22,000	20			662528	38878	
1 x 0.006 x 1/4	1-1/8	22,000	20				66252838885	
1 x 0.010 x 1/4	1-1/8	22,000	25				66252838886	
1 x 0.014 x 1/4	7/8	25,000	10	699366	06279*	699573	70167	
1 x 0.014 x 1/4	1	22,000	20			662528	38882	
1 x 0.020 x 1/4	7/8	25,000	10	699366	53310*	699573	70168	
1 x 0.020 x 1/4	1	22,000	20				66252839119	
1 x 0.020 x 1/4	1	22,000	25			662528	39117	

* Bulk Packed Item



Insert Circular Flared Crimped Wire End Brush

The flared end configuration facilitates interior side cleaning and will not harm the bottom of the hole.



				TIER:	BETTER	GOOD
				TRADENAME:	BLUEFIRE	GEMINI
				WIRE TYPE:	STEEL	STEEL
SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #	PART #	
Insert Circular Flared Crimped End Brushes – with Stem						
1-1/2 x 0.006 x 1/4	1/4	25,000	10	699573	70161	
1-1/2 x 0.006 x 1/4	7/8	20,000	12		66252839108	
1-1/2 x 0.020 x 1/4	1/4	25,000	10	699573	70160	
1-1/2 x 0.020 x 1/4	1	15,000	12		66252838898	
2 x 0.010 x 1/4	1-1/8	15,000	10		66252838899	
2 x 0.0104 x 1/4	1/2	25,000	10	699573	70162	
3 x 0.008 x 1/4	7/8	16,000	12		66252839047	
3 x 0.008 x 1/4	1	25,000	10	699573	70163	



Crimped Wire End Brushes

Designed to generate lighter brushing action and reach into contoured surfaces.



SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	TIER:	BETTER	BETTER	GOOD	GOOD
				TRADENAME:	BLUEFIRE	BLUEFIRE	GEMINI	GEMINI
				WIRE TYPE:	STEEL	STAINLESS	STEEL	STAINLESS
PART #	PART #	PART #	PART #					
Crimped Wire End Brushes – with Stem								
1/4 x 0.005 x 1/8	7/16	37,000	12					66252839086
1/2 x 0.005 x 1/4	1	25,000	20					66252838902
1/2 x 0.006 x 1/4	3/8	25,000	20				66252839040	
1/2 x 0.006 x 1/4	1	25,000	20				66252838889	66252839043
1/2 x 0.010 x 1/4	1	25,000	20				66252838890	66252839044
1/2 x 0.014 x 1/4	7/8	25,000	20				66252839042	
1/2 x 0.014 x 1/4	1	25,000	20					66252838888
1/2 x 0.020 x 1/4	3/4	25,000	10	69957370150				
1/2 x 0.020 x 1/4	1	25,000	20				66252838891	
3/4 x 0.006 x 1/4	1	25,000	10			69936606145*		
3/4 x 0.010 x 1/4	3/8	22,000	20				66252839053	
3/4 x 0.014 x 1/4	1	25,000	10	69936653317*				
3/4 x 0.020 x 1/4	7/8	22,000	20				66252839112	
3/4 x 0.020 x 1/4	1	25,000	10	69957370152				
3/4 x 0.020 x 1/4	1	22,000	20				66252838892	
1 x 0.005 x 1/4	1	22,000	20					66252838896
1 x 0.006 x 1/4	1	22,000	25				66252839045	66252838838
1 x 0.006 x 1/4	1-3/16	25,000	10	69957370154	69957370155			
1 x 0.010 x 1/4	3/8	22,000	20				66252839054	
1 x 0.010 x 1/4	1	22,000	20					66252838897
1 x 0.010 x 1/4	1	22,000	25					66252839055
1 x 0.0104 x 1/4	1-3/16	25,000	10			69957370157		
1 x 0.014 x 1/4	3/4	20,000	20				66252839094	
1 x 0.014 x 1/4	1	22,000	20				66252839046	
1 x 0.014 x 1/4	1-3/16	25,000	10	69957370158				
1 x 0.020 x 1/4	7/8	22,000	20				66252839095	
1 x 0.020 x 1/4	1	22,000	20				66262839113	
1 x 0.020 x 1/4	1-3/16	25,000	10	69957370159				
1 x 0.020 x 1/4	1-3/16	25,000	10	69936653309*				
3 x 0.008 x 1/4	1-5/8	25,000	20				66252838900	

* Bulk Packed Item





Encapsulated Hollow Center Crimped Wire End Brush

Their hollow centers effectively allow these brushes to clean around protrusions and also prevent the wires from meshing together. Encapsulating a portion of the wires' length shortens the free wires, increasing the wires' stiffness, thereby creating greater control of the brush.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STEEL**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #
Encapsulated Hollow Center Crimped Wire End Brush – with Stem				
1/2 x 0.010 x 1/4	1	18,000	20	662528 38907



Pencil Crimped Wire End Brush

These brushes are designed to clean counter bores, slots, blind holes, and small crevices; and light spot facing of aluminum or iron sand castings.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STAINLESS**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #
Pencil Crimped Wire End Brush – with Stem				
1/4 x 0.010 x 5/16	3/8	10,000	12	662528 38906



Pilot End Brush

Specially designed to clean around rivet or bolt holes; the pilot guides the brushes.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STEEL**

SIZE	TRIM LENGTH	MAX. RPM	STD. PKG.	PART #
Pilot Crimped Wire End Brush – with Stem				
1/2 x 0.004 x 1/4	3/8	25,000	20	662528 38904

Cleaning, polishing, reaming, finishing and removing debris, burrs, rust, residues, and surface contaminants inside cylindrical items, including tubes, pipes, bottles, smooth-sided and threaded holes, and other industrial components

EXPANDED
OFFERING



TUBE BRUSHES

- Use manually or fastened to portable or fixed machines (including drills, drill presses, and CNC machines)
- Available in single and double stem providing firm support when working internally
- A wide selection of shapes and filament variations to achieve the best results on many different applications

Single Stem, Single Spiral Tube Brush – with Eye Loop

These spiral brushes have a single layer of filament twisted around a stem wire to create additional strength and higher density fill brushes. This spiral configuration ensures consistent and constant abrasive contact with the tube. Formed eye loop at the end of the stem for convenient hand use.



Single Stem, Single Spiral Tube Brush – with Stem

Similar to the single stem, single spiral tube brushes, but without eye loop. These brushes are ideal for complete internal cleaning and deburring of tubes and pipes and intricate area ensuring constant filament to surface contact.



Double Stem, Single Spiral Tube Brush – with Stem

These brushes have two stem wires. This results in a brush with high strength and one with consistent and constant abrasive contact with the tube.

TIER:	GOOD	GOOD	GOOD
TRADENAME:	GEMINI	GEMINI	GEMINI
WIRE TYPE:	STEEL	STAINLESS	BRASS

SIZE	TRIM LENGTH	STD. PKG.	PART #	PART #	PART #
Single Stem, Single Spiral Tube Brush – with Eye Loop					
3/16 x 0.004 x 0.094	5/64	12	66252838913		
3/16 x 0.003 x 0.094	1-1/2	12	66252838822		
1/4 x 0.003 x 0.094	1-1/2	12	66252838823	66252838824	66252838840
1/4 x 0.004 x 0.115	5/64	12	66252838914		
1/4 x 0.006 x 0.115	5/64	12	66252838915		
3/8 x 0.004 x 0.125	2	12		66252838825	66252838826
3/8 x 0.004 x 0.132	1/8	12	66252838916		
3/8 x 0.006 x 0.168	1/8	12	66252838917		
3/8 x 0.006 x 0.168	1-1/2	12		66252838946	
1/2 x 0.008 x 0.221	9/64	12	66252838918		

TIER:	GOOD
TRADENAME:	GEMINI
WIRE TYPE:	STEEL

SIZE	TRIM LENGTH	STD. PKG.	PART #
Single Stem, Single Spiral Tube Brush – with Stem			
7/16 x 0.005 x 0.125	11/64	12	66252838911
1 x 0.010 x 0.250	2-1/2	12	66252839074

TIER:	GOOD
TRADENAME:	GEMINI
WIRE TYPE:	NYLON

SIZE	TRIM LENGTH	STD. PKG.	PART #
Double Stem, Single Spiral Tube Brush – with Stem			
3/4 x 0.040 x 0.238	3/8	12	66252838850



Power Burr, Single Spiral Tube Brush – with Stem

Power burr brushes are used to remove burrs resulting from previous operations. They are designed to remove burrs without creating secondary burrs or leaving sharp edges.



TIER: **GOOD** **GOOD**
TRADENAME: **GEMINI** **GEMINI**
WIRE TYPE: **STEEL** **STAINLESS**

SIZE	TRIM LENGTH	STD. PKG.	PART #	PART #
Power Burr Single Spiral Tube Brushes – with Stem				
1/4 x 0.004 x 0.125	1	12	662528 39061	662528 39081
3/8 x 0.004 x 0.125	1	12	662528 39062	662528 39050
3/8 x 0.005 x 0.125	9/64	12	662528 38910	
1/2 x 0.005 x 0.188	1	12	662528 39063	662528 39051
5/8 x 0.005 x 0.188	1	12	662528 39064	
3/4 x 0.006 x 0.219	1	12	662528 39065	662528 39082
1 x 0.005 x 0.125	15/32	12	662528 38912	
1 x 0.005 x 0.250	1	12	662528 39066	662528 39083



Double Stem, Double Spiral Tube Brush – with Stem

Brush filaments are twisted between two stem wires with two layers of filament bristles. Each layer is perpendicular to the other with a single stem wire in each of the brush's four sections. This configuration ensures consistent and constant abrasive contact with the tube.



TIER: **GOOD** **GOOD** **GOOD**
TRADENAME: **GEMINI** **GEMINI** **GEMINI**
WIRE TYPE: **STEEL** **STAINLESS** **BRASS**

SIZE	BRUSH LENGTH	STD. PKG.	PART #	PART #	PART #
Double Stem, Double Spiral Tube Brush – with Stem					
3/8 x 0.060 x 0.125	1-1/2	12	662528 38827		
1/2 x 0.004 x 0.156	.2	12	662528 38828		
1/2 x 0.004 x 0.187	5/32	12	662528 38919		
1/2 x 0.006 x 0.156	.2	12	662528 39067	662528 38829	
1/2 x 0.006 x 0.187	5/32	12	662528 38920		
5/8 x 0.005 x 0.187	.2	12	662528 39068		
5/8 x 0.006 x 0.208	.2	12	662528 38921		
5/8 x 0.008 x 0.219	.2	12	662528 38831		
5/8 x 0.010 x 0.208	13/64	12	662528 38922	662528 38930	
3/4 x 0.004 x 0.250	2-1/2	12	662528 39072		
3/4 x 0.006 x 0.238	1/4	12	662528 38923		
3/4 x 0.006 x 0.250	2-1/2	12	662528 39069		662528 38832
3/4 x 0.010 x 0.238	1/4	12	662528 38924		
7/8 x 0.004 x 0.250	2-1/2	12	662528 39073		
7/8 x 0.006 x 0.238	2	12	662528 38925		
7/8 x 0.006 x 0.250	2-1/2	12	662528 39070		
1 x 0.006 x 0.238	25/64	12	662528 38926		
1 x 0.006 x 0.250	2-1/2	12	662528 39071		
1 x 0.010 x 0.238	2	12	662528 38927		
1-1/4 x 0.004 x 0.250	2-1/2	12	662528 38833		
1-1/4 x 0.010 x 0.238	1/2	12	662528 38928		
2 x 0.010 x 0.238	7/8	12	662528 38929		



Encapsulated Double Stem, Double Spiral Tube Brush – with Stem

Encapsulating a portion of the wires' length shortens the free wires, increasing their stiffness, thereby creating greater control of the brush and a brush with the highest filament density and highest strength.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STEEL**

SIZE	BRUSH LENGTH	STD. PKG.	PART #
Encapsulated Double Stem, Double Spiral Tube Brush – with Stem			
7/8 x 0.010 x 0.250	2-1/4	20	662528 38948



Flue Double Spiral Tube Brushes – with 1/4" x 2" NPT Pipe Nipple with Stem

These aggressive brushes are designed specifically for efficient pipe and boiler cleaning.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STEEL**

SIZE	TRIM LENGTH	STD. PKG.	PART #
Flue Double Spiral Tube Brushes – with 1/4" x 2" NPT Pipe Nipple – with Stem			
3/4 x 0.010 x 0.238	1/4	12	662528 38931
1 x 0.010 x 0.313	25/64	12	662528 38932
1-1/4 x 0.012 x 0.313	1/2	12	662528 38933
1-3/4 x 0.012 x 0.313	1/2	12	662528 38934
2-1/4 x 0.012 x 0.313	1/2	12	662528 38935
2-3/4 x 0.014 x 0.313	1/2	12	662528 38936



Side-Action Tube Crimped Wire Tube Brushes – with Stem

Their dense side filament configuration creates increased bristle rigidity with minimal flexing, to aggressively clean the tube without changing its geometry or surface finish.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STEEL**

SIZE	TRIM LENGTH	STD. PKG.	PART #
Side-Action (Burr) Crimped Wire Tube Brush – with Stem			
1/4 x 0.003 x 0.094	5/64	12	662528 38908
5/16 x 0.005 x 0.094	9/16	10	662528 38834



Internal Finishing Crimped Wire Tube Brush

This square-trimmed crimped wire brush is used to clean internal surfaces in a single operation because it can simultaneously brush both the sides and bottom of a hole.



TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **STEEL**

SIZE	TRIM LENGTH	FACE WIDTH	STD. PKG.	PART #
Internal Finishing Crimped Wire Tube Brushes – with Stem				
1-1/4 x 0.006 x 0.250	1/2	3/8	10	662528 38945



Micro Abrasive Single Spiral Nylon Tube Brush – with Stem

Micro brushes are ideal for ultra-fine deburring, cleaning, polishing and finishing applications.

SIZE	TRIM LENGTH	STD. PKG.	PART #
Micro Abrasive Single Spiral Nylon Tube Brushes – with Stem			
0.260 x 0.012 x 0.115	1	12	662528 38815
0.325 x 0.012 x 0.121	1	12	662528 38854
33/64 x 0.022 x 0.175	3/16	12	662528 38851

TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **NYLON/
AO 600 GRIT**



Single Spiral Nylon Hand Tube Brush – with Eye Loop

These brushes are made with larger stem wires to give them the strength and rigidity needed for manual cleaning applications.

SIZE	TRIM LENGTH	STD. PKG.	PART #
Single Spiral Nylon Hand Tube Brush – with Eye Loop			
1/4 x 0.005 x 0.094	9/64	12	662528 38937
1/4 x 0.005 x 0.094	2	12	662528 38818
3/8 x 0.005 x 0.094	9/64	12	662528 38938
1/2 x 0.008 x 0.094	3	12	662528 38939
1/2 x 0.010 x 0.125	3	12	662528 38820
3/4 x 0.012 x 0.125	21/64	12	662528 38940
3/4 x 0.012 x 0.125	3	12	662528 38821
1 x 0.010 x 0.156	25/64	12	662528 38941
1 x 0.022 x 0.156	2-1/2	12	662528 38817
1-1/4 x 0.010 x 0.156	1/2	12	662528 38942
1-1/4 x 0.010 x 0.219	1/2	12	662528 38943
2 x 0.010 x 0.219	1/2	12	662528 38944

TIER: **GOOD**
TRADENAME: **GEMINI**
WIRE TYPE: **NYLON**



Hand Brushes

Hand brushes come in a variety of handle and filament shapes and styles for most hand scratching applications. They are favored by many in removing scale, surface coatings, or removing weld debris.

For steel/stainless



HAND BRUSHES

- Long handle and shoe handle brushes are made with a high-carbon, brass-coated steel; stainless steel is made with a 302 stainless.
- Plastic ergonomic handle scratch brush with curved face to access hard-to-reach places. Crimped wire for longer life. Wires are wrapped up and around the metal post so they never come out.
- Narrow brush allows access into tight areas and slots.



				TIER:	BETTER	BETTER	BETTER	BETTER	BETTER	BETTER	BETTER
				TRADENAME:	BLUEFIRE	BLUEFIRE	BLUEFIRE	BLUEFIRE	BLUEFIRE	BLUEFIRE	BLUEFIRE
				WIRE TYPE:	STEEL	STAINLESS	STEEL	STAINLESS	STEEL	STAINLESS	STAINLESS
SIZE	HANDLE TYPE	TRIM LENGTH	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #
Hand Scratch Brushes – With Handle											
3 x 19	Long Handle	1-3/16	12	662528 33948	662528 33950						
4 x 16	Shoe Handle	1-3/16	12			662528 33949	662528 33951				
5 x 10	Plastic Handle	1-1/8	24					662528 33954	662528 33953		
3 x 7	Inspection Brush	1/2	36								662528 33952





When maximum conformability is needed, tough, Norton nylon brushes' flexible nylon filaments embedded with abrasive grain provide exceptional finishing and polishing and eliminate the need for costly and inconsistent hand deburring applications.

Norton nylon brushes are precision-engineered with the highest quality abrasive grains for those markets with the strictest requirements – for easy integration into today's automated machinery, CNC machining centers, transfer lines, robotic cells, and other highly-specialized machinery, as well as hand tools.

Applications:	Deburring, cleaning, finishing, and polishing
Brush Configurations:	Radial wheel brushes, narrow face wheel brushes, disc brushes, end brushes, and twisted brushes
Markets:	Aerospace/aircraft, automotive, construction/utility products, medical, metal finishing, woodworking
Abrasive Grain:	Ceramic Alumina, Silicon Carbide

Why Choose Nylon Abrasive Brushes?

- Abrasive grain cutting points are increased as the grain is exposed and cut equally when pressure is applied to the side or tip of the filament
- Uniform distribution of grain throughout the filaments allows cutting and finishing performance levels to remain consistent throughout the life of the brush – making Norton abrasive brushes ideal for automated applications
- Heat- and stress-resistant filaments prolong brush life and allow for superior conformability to irregular surface shapes
- The grain impregnated filaments act as a flexible file to deburr and radius edge profiles with precision, without gouging or affecting the overall geometry of a part
- The filaments bend at various angles to fit contours, creating a less prominent, more uniform surface finish in comparison to wire wheels or coated abrasive products
- Brush conformability allows usage on variety of complex part shapes without the need for ultra-precise programming and fixturing that is required with other deburring and finishing tools

Currently, all Norton Blaze ceramic alumina nylon abrasive brushes are custom-made to your exact requirements. [The Norton Blaze Nylon Brushes Brochure #8571](#) provides technical information and product availability. Your Norton representative would be pleased to review availability, quotations, and lead-times with you.



the brightest product
solutions from
**A TOTAL SPECTRUM
OF INNOVATION**

For everything from heavy-to-medium stock removal, to fine finishing, to light blending and polishing, abrasive products are available in many shapes, abrasive grains, specialty coatings and backing configurations to meet many application needs.



Coated Abrasives

A coated abrasive product is made up of three basic raw materials: an abrasive grain, the backing onto which the abrasive is applied, and an adhesive bond.

Abrasive Types

Emery (6)

Emery is a dark gray, round-shaped grain which tends to polish rather than abrade a work surface.

- For polishing and cleaning metal only

Garnet (5)

Garnet is reddish brown in color. This natural abrasive is medium hard and relatively sharp, but not as durable as synthetic abrasives.

- For use on wood only
- Particularly good for soft woods such as pine
- Produces an excellent finish

Silicon Carbide (4)

Silicon carbide is the hardest and sharpest of the manufactured abrasives. Because of its extreme sharpness, this bluish-black abrasive grain permits fast stock removal and cool cut.

- Cast iron
- Non-ferrous metals, i.e. brass, aluminum and bronze
- Non-metallics, i.e. glass, rubber, plastic and stone
- Final finish on wood and stainless steel
- Abrasive planing particleboard

Light Brown Aluminum Oxide (2)

Light brown aluminum oxide is a tough, yet sharp synthetic abrasive characterized by cool cut, long life and the ability to break down under pressure, producing new cutting edges.

- Production wood sanding
- Non-ferrous metal finishing



Brown Aluminum Oxide (2, 7)

Brown aluminum oxide is a tough, durable, synthetic abrasive characterized by the long life and wear resistance of its cutting edges. It offers enormous penetrating strength, even at high speeds.

- Ferrous metals
- Aluminum
- Hardwood



Heat-treated Aluminum Oxide (2)

Heat-treated aluminum oxide is a tough but cool cutting abrasive which gives both long life and freeness of cut on a wide range of materials.

- Ferrous metals
- Wood sanding



Zirconia Alumina (8)

Zirconia alumina is an ultra-tough, synthetic abrasive which provides a free, cool cut for high stock removal applications. It is tougher and sharper than aluminum oxide. It has a micro-crystalline structure which allows for controlled breakdown and self-sharpening.

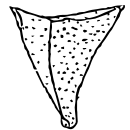
- Heavy-duty snagging and grinding of all ferrous and non-ferrous metals
- Abrasive planing of wood, plywood and particleboard
- Grinding fiberglass, rubber and plastics



Ceramic Alumina (9)

The sub-micron structure of ceramic alumina allows each grain to continually expose sharp cutting points, resulting in a cooler cutting action and an extended life.

- All ferrous/non-ferrous metals, carbon steel and exotic alloys



Backing Types

Backings are the base for the abrasive minerals and, combined with the adhesive bond, support and anchor the abrasive mineral. The backings used in the manufacture of coated abrasives are:

Paper

Due to the fine surface of paper, a consistent finish is produced. Paper weights include *A, B, C, D, E* and *F* weights with *A* being the lightest and most flexible and *F* being the heaviest and least flexible. *A, B, C* and *D* weight papers are used for hand sanding and light mechanical operations in the form of sheets, PSA (pressure sensitive adhesive) and hook and loop discs and sheet rolls. *E* and *F* weight papers are primarily used for more aggressive mechanical operations in the form of belts and discs.

Cloth

Cloth backings used for coated abrasives are identified by weight. Cloth backings are filled or "finished" with a variety of materials (glues or resins) to create various backing characteristics, most notably flexibility. Several cloth types are used: cotton, polyester, polyester/nylon and polyester/cotton blends, and rayon.

There are three basic weights of cloth: J-weight or "jeans" is the lightest and most flexible. X-weight or "drills" is a heavier cloth that ranges in flexibility, strength and durability and is used on the broadest range of applications. Y-weight is a heavyweight drills cloth used on heavy-duty, high stock removal operations.

Fiber

Vulcanized fiber (cotton fibers which are chemically treated and then pressed under temperature and pressure to form a very durable backing) is used exclusively as the backing for resin fiber discs.

Film

Polyester film backing comes in 3 mil. and 5 mil. thicknesses, which have high strength and surface smoothness. They are used primarily in disc and roll applications requiring consistent surface finish, including powertrain applications.

Foam

Primarily used as backing for sponges, finer grit finishing discs, and buffing and polishing pads for cleaning and moist finishing applications.

Mesh

Mesh matrix backing comprised of thousands of tiny holes allowing for maximum dust extraction.

Bond Types

An adhesive bond system is required to secure the abrasive mineral to the backing. All coated abrasive products are made with a two stage bonding process, the *make coat* and the *size coat*.

The *make coat* is the first layer of bond applied to the backing. The make coat provides the adhesive base between the abrasive mineral and the backing.

The *size coat* is the second coat, which is applied over the abrasive mineral and make coat to anchor the abrasive mineral and provide the desired physical strength of the finished product.

Glue, urea resin, and phenolic resin are the three basic bonding agents most commonly used. There are many size coat and make coat combinations, such as *glue over glue, urea over glue, and resin over resin*. *Glue over glue* is the most flexible bond while *resin over resin* bond is moisture-resistant, harder, less flexible, heat-resistant and has superior grain retention.

Coating Types

There are two types of abrasive coatings used in the manufacturing of coated abrasives: *open coat* and *closed coat*.

Open Coat

With an open coat, 50% to 75% of the surface is covered by abrasive grain. There are evenly spaced voids between the particles of grain, helping reduce the effect of loading caused by wood dust or metal particles.



OPEN COAT
(1/3 LESS GRAIN THAN CLOSED)

Closed Coat

With a closed coat, the entire surface is covered with abrasive grain, with no voids between the particles. This is the most typical coating, permitting the greatest degree of stock removal and longest product life.



CLOSED COAT

Super Size Coating

The Super Size coat is an optional final coat and grinding aid applied over the size coat to help maintain low grinding temperatures and prevent loading.

How to Read a Coated Abrasive Specification

The Norton coated abrasive marking system includes both a generic and a technical marking, which identifies the actual components which make up the product. The markings identify the tradename, abrasive type, bond, backing, and any special features. An example would be: Norton Blaze R980P.

R980P				
Backing / Bond	Principal Abrasive	Coating	Random	Modifier
A = Lightweight Paper (A-D wts.) excluding Waterproof	1 = Aluminum Oxide	Odd = Open Coat	Designates different products within the same product group.	Additional description, often indicative of a product upgrade, i.e. "P" = Plus
F = Fiber	2 = Aluminum Oxide	Even = Close Coat		
H = Heavy Paper / Resin Bond (E and F wts.)	3 = Layered Aluminum Oxide			
K = Cloth / Glue Bond (J and X wts.)	4 = Silicon Carbide			
M = Mesh	5 = Garnet			
PB = B-wt. Paper with Resin Bond and Latex	6 = Crocus & Emery			
Q = Various (e.g. Screen-Bak, Film, and Foam)	7 = Aluminum Oxide			
R = Cloth / Resin Bond (H, J, X and Y wts.)	8 = Zirconia Alumina			
T = Waterproof Paper (A, C wts.)	9 = Norton SG Ceramic Alumina			
U = Lightweight Waterproof Paper/ NORaX Engineered Abrasive Resin Bond				

Coated Abrasive Grit Comparison Chart

AVERAGE PARTICLE SIZE IN MICRONS	GRADING SYSTEMS (OTHER THAN EMERY)			EMERY PRODUCTS
	ANSI	FEPA	JIS	
5.0	—	—	—	—
6.0	—	—	3000	—
6.5	1200	—	2500	4/0
8.4	—	P2500	—	—
8.5	—	—	2000	—
9.2	1000	—	—	3/0
10.3	—	P2000	—	—
10.5	—	—	1500	—
12.2	800	—	1200	—
12.6	—	P1500	—	—
15.0	—	—	—	—
15.3	—	P1200	1000	—
16.0	600	—	—	2/0
18.3	—	P1000	800	—
19.7	500	—	—	0
20.0	—	—	—	—
21.8	—	P800	—	—
23.6	400	—	600	—
25.0	—	—	—	—
25.75	—	P600	—	—
28.8	360	—	500	—
30.0	—	P500	—	—
35.0	—	P400	400	—
36.0	320	—	—	—
40.0	—	—	360	—
40.5	—	P360	—	—
44.0	280	—	—	1
45.0	—	—	—	—
46.2	—	P320	320	—
50.0	—	—	—	—
52.5	—	P280	280	—
53.5	240	—	—	—
55.0	—	—	—	—
58.5	—	P240	—	—
60.0	—	—	240	—
64.0	—	—	—	2
65.0	—	P220	220	—
66.0	220	—	—	—
78.0	180	P180	180	—
79.0	—	—	—	3
93.0	150	—	150	—
95.0	—	—	—	FINE
97.0	—	P150	—	—
116.0	120	—	120	—
127.0	—	P120	100	—
136.0	—	—	—	MEDIUM
141.0	100	—	—	—
156.0	—	P100	—	—
189.0	—	—	—	COARSE
192.0	80	—	80	—
197.0	—	P80	—	—
260.0	—	P60	—	—
268.0	60	—	60	—
326.0	—	P50	50	—
341.0	—	—	—	EX. COARSE
351.0	50	—	—	—
412.0	—	P40	40	—
428.0	40	—	—	—
524.0	—	P36	—	—
535.0	36	—	36	—
622.0	—	P30	—	—
638.0	30	—	30	—
715.0	24	—	—	—
740.0	—	P24	24	—
905.0	20	—	—	—
984.0	—	P20	20	—
1320.0	16	—	16	—
1324.0	—	P16	—	—
1764.0	—	P12	—	—
1842.0	12	—	—	—

Coated Abrasive Storage

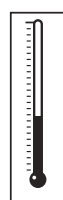
Stored under proper conditions, coated abrasives will retain their efficiency and usefulness over long periods. Improper or inadequate storage can introduce problems of weakened bond, curl, brittleness, and breakage.

Temperature and humidity are the two most important climatic factors influencing coated abrasive performance. Backings and adhesives are sensitive to climatic changes and will gain or lose moisture according to the relative humidity of their surroundings.

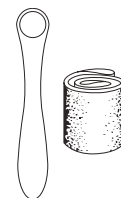
Excessive humidity may cause a softening of some types of adhesive bonds so that the product quickly fills and clogs, or loses its grain during use. Excessive dryness may cause brittleness, reduced flexibility, and distortion of product shapes.

As moisture in the coated abrasive product increases or decreases, dimensional changes can occur. When the backing changes more than the adhesive bond, it causes cupping. High and low humidity can cause concave and convex cupping respectively.

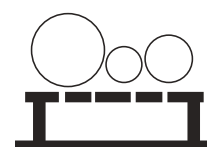
The newer synthetic-backed belts are not affected by moisture. Broad temperature swings will not permanently harm these products either, but cold temperatures will cause a "cold set" condition. Consequently, these products should be allowed to come to room temperature before use.



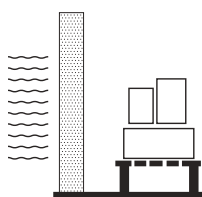
TEMPERATURE/
HUMIDITY



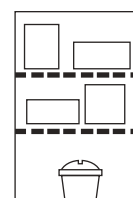
STORE BELTS
PROPERLY



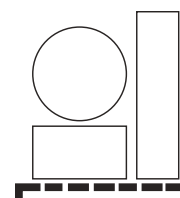
STORE BULK ROLLS
FLAT



KEEP AWAY FROM
HEAT/COLD SOURCES



PRECONDITION
BEFORE USE



KEEP PRODUCTS IN
ORIGINAL PACKAGES

Storage Facilities

The ideal storage (stock) room for coated abrasives would be one in which all the walls are inside partitions, rather than the outside walls of the building.

- Constant levels of humidity and temperature should be maintained. Stockroom temperature should be 60-degrees to 80-degrees F and relative humidity between 35 and 50%.
- Cartons should be kept away from damp or cold walls and floors, where they might absorb moisture.
- Store coated abrasives away from heat sources – steam heated radiators, steam pipes, hot air inlets, heat ducts, or rooms near furnaces or ovens.
- Keep products in original packages. These packages facilitate handling and can be stacked in the most practical and convenient manner.
- Bulk rolls should not be allowed to stand on edge after they have been unpacked. Store flat on shelves or pallets.
- Narrow belts which have been removed from the carton should be rolled up and stored on edge on a clean shelf. Belts may be draped over a large cylinder, such as a gallon can, brake drum, or flanged hanger of the type used for a garden hose. Never hang a belt from a nail – the backing will crease and the abrasive belt might crack. Wide belts should be hung over a tube of at least 4" diameter. Center the belt joint over the tube and add a light weight (such as old packaging tubes) to the bottom loop of the belt to aid in removing set. Condition for 24 hours prior to use.
- For maximum product efficiency, precondition coated abrasive products in a chamber of controlled temperature and humidity before use.

Introduction

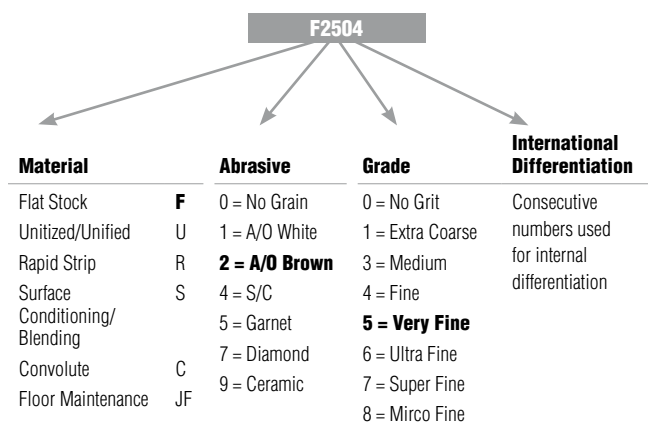
Most Norton Bear-Tex products consist of a non-woven web of nylon fibers impregnated throughout with abrasive grain and bonded with synthetic resins. This design produces a cushioned, three-dimensional material that is extremely pliable and long lasting. The uniform dispersion of abrasive throughout the web provides a continuous supply of new grain as the old grain and fibers wear away during use.

Norton Bear-Tex products, with their open mesh construction, are waterproof, washable, resilient, conformable, non-loading, non-conductive, non-metallic and non-rusting. Non-woven wheels are easily pre-formed to conform to special-shaped work pieces.

Since non-woven products are designed for use where stock removal is not required, they begin where other abrasives leave off. The relatively non-aggressive nature of nylon and grit inherent in the material makes it ideal as a finishing tool. While 60 to 80 grits are considered intermediate sizes in other products, they are considered coarse for non-woven items.

Used wet or dry, Norton Bear-Tex non-woven products offer the following advantages: controlled cut (with little or no stock removal) allows for increased productivity, consistent, uniform finish, ability to automate operations, minimized smearing and reduced operator training. These advantages make our non-woven products an excellent alternative to bristle brushes, set-up wheels, greaseless compounds and steel wool.

Product Identification System



Abrasives

Ceramic alumina, silicon carbide and aluminum oxide abrasives are offered. Ceramic alumina cuts the fastest and is the most cost effective on large-volume applications. Silicon carbide is sharper, cuts faster than aluminum oxide, and produces finer scratch patterns on most surfaces. Aluminum oxide is more durable and tends to last longer. It causes less discoloration on aluminum, and is more aggressive on certain applications such as hardened steel parts. Norton Bear-Tex hand pads are also available in a non-abrasive material.

Grits

Grit refers to the size of the abrasive grain impregnated into the nylon web. The coarser the grit, the more aggressive the cut, the rougher the finish. The finer the grit, the less aggressive the cut and the resulting surface finish will be finer, if all other conditions are equal.

GRIT DESIGNATIONS	GRIT SIZE
Extra Coarse (XC)	50
Coarse (C)	60 – 80
Medium (M)	100 – 150
Fine (F)	180 – 220
Very Fine (VF)	240 – 360
Super Fine (SF)	400
Ultra Fine (UF)	600
Micro Fine (MF)	800 – 1200

Densities

The product "density" refers to the number of fibers which have been compressed into the nylon web material. Under identical conditions, harder density wheels cut faster, last longer and produce finer finishes than softer density wheels. Softer density wheels offer greater conformability and have less tendency to load or burn the work piece.

Fiber Sizing

Several nylon fiber sizes are used in the manufacture of Norton Bear-Tex and Merit web material because the fiber size is a significant factor in the coating process, as each produces distinct cutting characteristics.

Bonding Agents

Waterproof resins are used in the manufacture of Norton Bear-Tex and Merit web material to bond the nylon fibers together and to firmly anchor the abrasive grains throughout the web.

Conventional Finishing Methods Versus Norton Bear-Tex Non-Woven Products

The following chart outlines the advantages achievable when using our products as alternatives to other cleaning, blending, deburring and finishing methods. These products are listed in the sequence of normal preference for the application stated. However, because of the numerous variables, only testing can ensure selection of the most cost-effective product.

CONVENTIONAL FINISHING METHOD	KEY APPLICATION	NORTON/MERIT PRODUCT ALTERNATIVES	ADVANTAGES OF NORTON/MERIT PRODUCT VERSUS ALTERNATE FINISHING METHODS
Bristle Brushes	Cleaning	Rapid Strip, Convolute Wheels, and Rapid Prep Discs	Superior cleaning performance Higher productivity No slurry or compound required More consistent finish Eliminate compound dust
Greaseless Compounds	Finishing	Flap Wheels Convolute Wheels Unified Wheels Rapid Prep Discs	Reduced maintenance No compound, instant set-up Elimination of compound dust More uniform finish More consistent work rate
Set-up Wheels	Blending/ Deburring	Convolute Wheels Unified Wheels XHD Discs Rapid Prep Discs	No break-in time required More consistent cut More uniform finish Maintain geometry Safer, no flying wheel pieces
Steel Wool	Cleaning	Rolls Discs Hand Pads	Faster, longer life Less pressure required Non-rusting, cleaner Safer, no splinters

Getting the Most Out of Norton Bear-Tex Wheels

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

1) Wheel Direction

Convolute, interleaf flap wheels, and conventional flap wheels must always run in the direction indicated by the arrow printed on the side of each wheel. Unified wheels can be run in either direction.

2) Wheel Speed

Wheel speed is an important factor in that it 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.

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

Testing might show that a slower or faster speed is desirable for specific operations. Never exceed the maximum RPM rating of the wheel.

3) Pressure

Light to medium pressure is recommended for most operations.

Flap wheels require much lighter pressure to perform properly than other non-woven wheels; unified wheels can withstand much higher pressures in order to perform deburring jobs. In all cases, avoid excessive pressure which might result in wheel deformation and damage to the work surface.

4) Feed Speed

Low 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.

5) Oscillation

Oscillation may be used to break up scratch lines and produce a more uniform finish. Additionally, an increase in cut might be experienced.

A general starting point for oscillation is 3/8" amplitude at 200 cycles per minute.

6) Lubricants

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

Factors in Wheel Choice

This chart provides a relative comparison of other Norton Bear-Tex wheel variables. It can serve as a useful guide in choosing the most suitable product for a given application. However, as many other factors affect wheel performance, this chart can only be general in nature. The most cost-effective results can always be obtained by wheel testing on the application.

1 Wheel Conformability	MOST CONFORMABLE (SOFT)			LEAST CONFORMABLE (HARD)		
	Flap Wheels	Clean & Finish	Metal Finishing	Rapid Finish GP 7 Density	Rapid Finish GP 8 & 9 Density	Series 4000
2 Wheel Openness	OPEN MESH			CLOSED MESH		
		Clean & Finish	Metal Finishing	Rapid Finish GP 7 Density	Rapid Finish GP 8 & 9 Density	Series 4000
3 Wheel Aggressiveness	MOST AGGRESSIVE			LEAST AGGRESSIVE		
		Metal Finishing		Clean & Finish	Rapid Finish GP	Flap Wheels
4 Finishing Action	COARSER			FINER		
		Metal Finishing	Clean & Finish	Series 4000	Rapid Finish GP Series 4000	Flap Wheels
5 Pressure for Best Results	LIGHTER			HIGHER		
	Flap Wheels	Clean & Finish	Metal Finishing Rapid Finish GP 7 Density	Rapid Finish GP 8 & 9 Density	Series 4000	

* On steel surfaces, silicon carbide wheels will produce a brighter finish than aluminum oxide wheels.

Surface Finish Variables

Changes in any one of many factors can affect the surface finish on the work piece. 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 Grit Size	Coarse	←	→	Very Fine
2 Wheel Grade	Soft	←	→	Hard
3 Wheel Speed	Slow	←	→	Fast
4 Feed Speed	Faster (Long Scratch)	←	→	Slower (Short Scratch)
5 Oscillation	No Oscillation	←	→	Oscillation
6 Lubricants and Compounds	Dry	←	→	Straight Oil
		Water	Soluble Oil	Compounds



The strongest of coated abrasive discs with resin-over-resin construction on heavy-duty fiber backing. Designed for applications ranging from heavy stock removal to surface blending. Used with back-up pads on portable angle grinders.

Applications:

Stock removal, edge chamfering, weld blending, deburring/deflashing, rust removal, cleaning and finishing

Size Range:

4" x 5/8" hole, 4-1/2" – 9-1/8" x 7/8" and 5/8"-11 hole

Grit Range:

16 – 120

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina Blend, and Aluminum Oxide

Product Options:

Conventional, Speed-Change hubs (5/8"-11), and AVOS technology

Accessories:

Air-cooled, smooth-faced, and AVOS back-up pads

Machines Used:



RIGHT ANGLE
GRINDER



VERTICAL SHAFT
PORTABLE GRINDER



Learn the best way to mount a fiber disc on a right angle grinder at <https://nortonsga.us/5sdjv>

Material-to-Product Recommendation Guide

	BEST			BETTER	GOOD
	BlazeX F970	BlazeX F980	Blaze F980	BlueFire F826P	Metal F240
Stainless Steel / Titanium / Super Alloys*		◆	◆	◆	◆
Mild Carbon Steel / Welds	◆			◆	◆
Ferrous Metals / Cast Iron	◆			◆	◆
Brass / Bronze / Aluminum					◆

*Nickel/Cobalt Based – Hastelloy, Inconel, Waspalloy

Application/Grit Recommendation Guide

COARSER (GRINDING)										FINER (FINISHING)	
16	24	30	36	40	50	60	80	100	120		
Stock Removal											
		Edge Chamfering									
			Weld Blending								
				Deburring/Deflashing							
						Rust Removal					
							Cleaning and Finishing				

Cross Reference Guide

	TOTAL PERFORMANCE			INITIAL PRICE	
	BEST		BETTER	GOOD	
NORTON	BlazeX F970	BlazeX F980, Blaze F980	BlueFire F826P	Metal F240	
3M	782C, 982C, 988C	785C, 787C, 985C, 987C	501C	—	
Camel	—	Ceramic	Zirconia	—	
Flexovit	CG	CG+	ZA	—	
GemTex	PMD, Gem Supreme	PMD Supreme, PMD Supreme Plus	Zee-Type, Zee Supreme, Gem Supreme	A-Type	
Hermes	—	CR456	RB414X, RB414X Procut	RB314	
Klingspor	FS964 ACT	FS966	CS565, CS570	CS561	
Metabo	CER	CER	ZA	A/O	
Mirka	—	—	Blue, Gold	Red	
Pearl	Red Line	—	FZ	Silver Line	
Pferd	CO-PMD	CO Cool	Z, Z Cool	A	
United Abrasives/Sait	7S, 7A-S, 7-11	9S, 9-11	3Z, Z, AZX	A/O, 2A	
SIA	4515, 4580	4515, 4560,	4815, 4819	4919, 4961	
Standard	Ceramic	Ceramic Pro	Zirconia	A/O	
VSM	XF760	AF890, AF799, XF885, XF870, XF850	ZF713, ZF714, ZF844	KF708	
Walter	Walter Coolcut XX	Walter Coolcut XX	Walter Topcut	—	
Weiler	—	Tiger Ceramic	Tiger Zirc, Wolverine Zirc	Wolverine A/O	



Best choice for carbon steel and other soft-to-grind materials

BLAZEX F970 CERAMIC ALUMINA

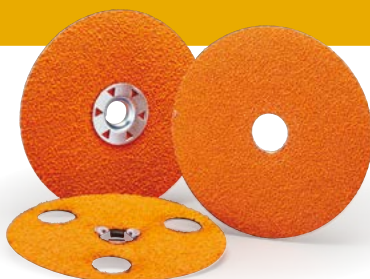
- Improved ceramic alumina micro-fracturing grain constantly exposes sharper grain edges to significantly increase cut rate and life over competitive blended/low-ratio ceramic alumina discs
- Heavier fiber backing for additional strength and tear resistance
- Non-supersized design for cool cutting and long life on carbon steel and other soft-to-grind materials



Best choice for coarse grit beveling, blending, deburring, and stock removal

BLAZEX F980 CERAMIC ALUMINA

- Improved ceramic alumina micro-fracturing grain constantly exposes sharper grain edges to significantly increase cut rate and life over competitive blended/low-ratio ceramic alumina discs
- Strong fiber backing for strength and tear resistance
- Supersized design for stainless steel and hard-to-grind materials



Best choice for stainless steel, titanium, and super alloys

BLAZE F980 CERAMIC ALUMINA

- 100% ceramic alumina micro-fracturing grain constantly exposes sharper grain edges to significantly increase cut rate and life over competitive blended/low-ratio ceramic alumina discs
- Self-lubricating grinding aid treatment delivers the coolest cut on stainless steel, high alloy steels, super alloys, titanium, and other difficult-to-grind materials
- Heavier fiber backing for additional strength and tear resistance



Better choice for stainless, super alloys, steel, cast iron and high-pressure applications

BLUEFIRE F826P ZIRCONIA ALUMINA

- High-performance zirconia alumina abrasive blend provides 15% faster cut and longer life with less power draw than conventional zirconia discs
- Advanced resin bond technology with enhanced grain adhesion for extended life
- Heavier fiber backing for additional strength and tear resistance



Good choice for small jobs, applications where performance is not measured, and price-sensitive operations

METAL F240 ALUMINUM OXIDE

- Versatile, multi-purpose aluminum oxide abrasive provides consistent performance on numerous materials and small jobs
- Full resin bond for strength and durability
- Heavier fiber backing for additional strength and tear resistance; low initial price



BlazeX and BlueFire baling units are economically priced and packaged. A detaching pinch screw and plate allow for quick access to flat fiber discs. Re-seat the plate and screw to keep the remaining discs compressed and flat for that next use or storage.



		BEST		BEST		BEST		BETTER	GOOD
TIER:		BLAZEX F970		BLAZEX F980		BLAZE F980		BLUEFIRE F826P	METAL F240
TRADENAME:		Ceramic Alumina		Ceramic Alumina		Ceramic Alumina		Zirconia Alumina Blend	Aluminum Oxide
ABRASIVE:				Supersize		Supersize			
OTHER:									
SIZE (D x H)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #	PART #
4 x 5/8	24	25							055395 10595
	36	25							055395 10594
	60	25							055395 10592
4-1/2 x 7/8	24	25				699573 98000		662611 38457	666233 53309
	24	75 B						780727 15512	
	36	25	699573 70193	780727 43400				662611 38456	666233 53306
	36	50 V						666233 77276	
	36	100 B	780727 15500						
	50	25	699573 70194		699573 98002		662611 38454	666233 53310	
	50	100 B	780727 15501						
	60	25	699573 70195		699573 98003		662611 38453	666233 53311	
	60	50 V						666233 77278	
	60	100 B	780727 15502						
	80	25	699573 70196		699573 98004		662611 38452	666233 53312	
	80	50 V						666233 77279	
	80	100 B	780727 15503						
	100	25							666233 53313
	120	25				662544 25332			666233 53314
5 x 7/8	16	25							055395 10684
	24	25				699573 98005		662611 38563	666233 57276
	24	75 B						780727 15514	
	36	25	699573 70197	780727 43401				662611 38562	666233 57277
	36	50 V						666233 77283	
	36	100 B	780727 15504					780727 15515	
	50	25	699573 70198		699573 98007		662611 38561	666233 57278	
	50	100 B	780727 15505						
	60	25	699573 70199		699573 98008		662611 38601	666233 57279	
	60	100 B	780727 15506						
	80	25	699573 70200		699573 98009		662611 38600	666233 57280	
	80	100 B	780727 15507						
6 x 7/8	100	25							666233 57281
	120	25				662544 09084			666233 57282
	24	25				662611 60033			
	36	25		662611 60034					
	50	25				662611 60035			
7 x 7/8	80	25				662611 60037			
	16	25							055395 10693
	24	25				699573 98010		662611 38594	666233 57283
	24	75 B						780727 15516	
	36	25	699573 70201	780727 43402				662611 38593	666233 57284
	36	50 V						666233 77287	
	36	100 B	780727 15508					780727 15518	
	50	25	699573 70202		699573 98012		662611 38592	666233 57285	
	50	100 B	780727 15509						
	60	25	699573 70203		699573 98013		662611 38591	666233 57286	
	60	100 B	780727 15510						
	80	25	699573 70204		699573 98014		662611 38590	666233 57287	
	80	100 B	780727 15511						
	100	25							666233 57288
	120	25				662544 11528			666233 57289
9-1/8 x 7/8	24	25				699573 98015		662611 38584	055395 10702
	36	25		699573 98016				662611 38583	055395 10701
	50	25				699573 98017		662611 38582	
	60	25							055395 10699

Note: Fiber discs must be used with back-up pads shown on the last page of this section.

V = Vendible Package. Ideal for vending machines and small jobs. 10 discs/package, 5 packages per standard carton. Order in multiples of 50.

B = Bulk & Baled. Baling Units also available on Page 67.

Speed-Change Fiber Discs

These fiber discs feature Norton quick, tool-free, twist-on and -off Speed-Change fasteners. Discs lock to standard back-up pads with a unique nut design and are easily removed, increasing your productivity with more time to grind.



			TIER: BEST	BEST	BEST	BETTER			
TRADENAME:			BLAZEX F970	BLAZEX F980	BLAZE F980	BLUEFIRE F826P			
ABRASIVE:			Ceramic Alumina	Ceramic Alumina	Ceramic Alumina	Zirconia Alumina Blend			
OTHER:				Supersize	Supersize				
SIZE (D x H)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #			
4-1/2 x 5/8-11	24	25			662610	23269			
	36	25	699573	70205	780727	43403			
	50	25	699573	70206					
	60	25	699573	70207	662610	42247			
	80	25	699573	70208	666233	28529			
5 x 5/8-11	24	25			662544	25336	662611	38797	
	36	25	699573	70209	780727	43404	662611	38796	
	50	25	699573	70210					
	60	25	699573	70211		662611	85803		
	80	25	699573	70212		666233	16697		
7 x 5/8-11	24	25			699573	49782	662611	38819	
	36	25	699573	70213	780727	43405	662611	38818	
	50	25	699573	70214			662611	38817	
	60	25	699573	70215		662610	42249	662611	38816
	80	25	699573	70216		662544	74373		

Note: Speed Change fiber discs must always be used with smooth face back-up pads, see next page for details.

Blaze Fiber Disc Test Kits

- Each kit contains one box of 25 BlazeX F970 (36 grit) fiber discs and one box of 25 Blaze F980 (36 grit) fiber discs. Test them for yourself!



TIER: BEST
TRADENAME: BLAZEX F970 & BLAZE F980 TEST KITS
ABRASIVE: Ceramic Alumina

SIZE	GRIT	STD. PKG.	PART #
4-1/2	36	1	776960 95018
5	36	1	776960 95019
7	36	1	776960 95020

AVOS Fiber Discs

- Patented, see-through design allows interrupted cut which reduces heat up to 30% over standard discs
- The scooped holes create air flow to pull swarf away from grinding zone; cool cutting and extended product life
- 15° back-up pad for full utilization of discs – no gouging
- Quick, tool-free, twist-on and -off Speed-Lok fasteners



		TIER: BEST		BEST		BETTER		
		TRADENAME: BLAZEX F980		BLAZE F980		BLUEFIRE F826P		
		ABRASIVE: Ceramic Alumina		Ceramic Alumina		Zirconia Alumina Blend		
SIZE	GRIT	STD. PKG.	PART #	PART #	PART #	PART #		
4-1/2 Speed-Lok (3 hole)	24	10		662544	68389	662611	29718	
	36	10	662544	68390		662611	29719	
	50	10			662544	68391	662611	29720
	60	10			662544	68392	662611	29721
	80	10			662544	68393	662611	29722
5 Speed-Lok (3 hole)	24	10			662544	68385	662611	26556
	36	10	662544	68386			662611	26557
	50	10			662544	68387	662611	26558
	60	10			662544	68388	662611	26559
	80	10					662611	26560
7 Speed-Lok (6 hole)	24	10			662544	68381	662611	37454
	36	10	662544	68382			662611	37455
	50	10			662544	68383	662611	37456
	60	10			662544	68384		
	80	10					662611	37458

Note: AVOS fiber discs must be used with AVOS Speed-Lok back-up pads, see next page for details.

Fiber Disc Accessories



Fiber Disc Baling Unit

- Places 100 discs on a spindle between two plates
- Locks down with a pinch screw
- Maintains the shape of the discs by maintaining pressure to minimize curl
- User-friendly and reusable



Air-Cooled Standard Back-up Pad

Slotted hub design and curved ribs draw heat away from the grinding zone, reducing disc loading and increasing life. All pads have a 5/8"-11 threaded female hub for mounting. We also offer a no-nose pad for shorter-shafted right angle grinders.



Smooth Face Speed-Change Back-up Pad

Molded rubber back-up pads with a smooth face.

- Hard density pads are for aggressive cutting action
- Medium density pads are for all-purpose applications



AVOS Fiber Disc Back-up Pad

- Patented, see-through design allows interrupted cut which reduces heat up to 30% over standard discs
- The scooped holes create air flow to pull swarf away from grinding zone
- 15° back-up pad for full utilization of discs – no gouging
- Quick, tool-free, twist-on and -off Speed-Lok fasteners

DESCRIPTION	MAX. RPM	STD. PKG.	PART #
Fiber Disc Baling Unit			
5"	—	1	776960 01065
7"	—	1	776960 01066
Rubber Back-up Pads			
Air-Cooled Standard for 7/8 Hole Fiber and Non-Woven Discs			
4" Medium	12,000	5	636425 04918
4-1/2" Medium	11,000	5	636425 02122
5" Medium	10,000	5	636425 43421
7" Hard	8,600	5	636425 43425
7" Medium	8,600	5	636425 43422
9" Hard	6,600	5	636425 43426
9" Medium	6,600	5	636425 43423
<i>Note: Retainer nuts are not included with back-up pads. These must be ordered separately.</i>			
Air-Cooled No-Nose			
4-1/2" Medium	11,000	5	636425 04872
5" Medium	10,000	5	636425 03000
Smooth Face for Fiber and Non-Woven Speed-Change Discs			
4-1/2" Medium	20,000	5	662544 92277
5" Medium	12,000	5	636425 43235
7" Hard	8,600	5	636425 43240
7" Medium	8,600	5	636425 43245
7" Soft	8,600	5	636425 43250
9" Medium	7,000	5	636425 43270
AVOS Speed-Lok Back-up Pads			
AVOS Triangular Speed-Lok Back-up Pads			
4-1/2" x 5/8-11	13,000	5	636425 02985
5" x 3/8-24 Pistol Grip*	20,000	5	636425 03029
5" x 5/8-11	13,000	5	636425 02517
5" x 5/8-11 Thicker	13,000	5	636425 03663
5" x 7/16-20 Pistol Grip*	20,000	5	636425 03030
<i>*Use on air pneumatic and high-speed pistol grip sanders</i>			
AVOS Round Speed-Lok Back-up Pads			
7" x 5/8-11 Hard	8,600	5	636425 04873
Tools			
#103 Retainer Nut	—	10	636425 43463
Spanner Wrench	—	5	636425 43005
66NS Short Retainer Nut	—	10	636425 43461

All fiber disc back-up pads are packed in individual boxes within the shipping carton. Each box can be used in a vending machine.



Flap discs are versatile grinding and finishing tools having four main components: abrasive flaps, flap density (how the flaps are stacked), backing plate shape (flat or conical), backing plate material (fiberglass or plastic). All flap discs have flaps that are overlapped and glued to the backing plate. The flaps wear during use, exposing new abrasive grain. The different variations of the components above provide a variety of application choices ranging from heavy stock removal to blending to finishing. Flap discs are designed for portable grinder applications and can be the preferred choice over depressed center wheels or fiber discs.

Applications:

Grinding, stock removal, edge chamfering/beveling, weld blending, deburring/deflashing, rust removal, blending, cleaning and finishing

Size Range:

4" : 5/8" hole
4-1/2" - 7" : 5/8"-11 discard mount, 7/8" hole, and 2" - 3" quick-change
24 - 120

Grit Range:

Ceramic Alumina, Zirconia Alumina

Abrasive Grain:

Polyester, Cotton/Poly Blend

Abrasive Flaps:

Type 27 Flat and Type 29 Conical

Flap Disc Shape:

Standard or high

Abrasive Flap Density:

Fiberglass and plastic

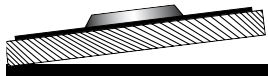
Backing Plate Material:

Machine Used:



RIGHT ANGLE GRINDER

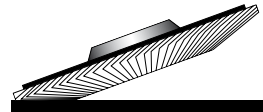
Flap Disc Shapes



GRIND AT FLATTER ANGLES:
0° - 15°

Type 27 Flat – The Best Choice for Finishing

- Used primarily on flat surfaces
- The best choice for blending and smooth finishing



GRIND AT STEEPER ANGLES:
15° - 25°

Type 29 Conical – The Best Choice for Aggressive Stock Removal

- Conical flap discs have angled flaps and may be used on both contoured and edge work
- The angle provides greater surface contact for stock removal on flat surfaces
- The best choice when speed and stock removal are primary considerations

Abrasive Flap Densities



Standard Density

- Excellent for heavy-duty applications and rapid stock removal

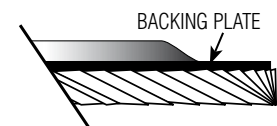


High Density

- Ideal when working on uneven or curved surfaces, as well as finer grit blending

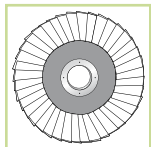
Backing Plate Materials

All flap discs are a combination of abrasive flaps adhered to a rigid backing plate. It is the backing plate that provides stability during operation. There are two main materials used: fiberglass and plastic. The fiberglass backing plate, along with the flap shape, helps to absorb vibration and is consumed during use with no smearing. Fiberglass is the most popular material because of its high strength and light weight. The plastic backing plate offers some additional conformability and is trimmable.



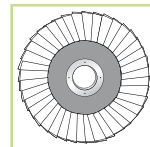
Why Choose Flap Discs?

Flap discs replace both grinding wheels and fiber discs. The same flap disc can be used for applications ranging from stock removal to blending.



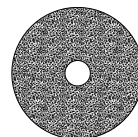
Flap Discs vs. Grinding Wheels

- Faster stock removal
- Smoother finish, no gouging
- Cooler cutting, less glazing
- Lightweight, easier to control
- Less vibration, less operator fatigue
- Reduced noise



Flap Discs vs. Fiber Discs

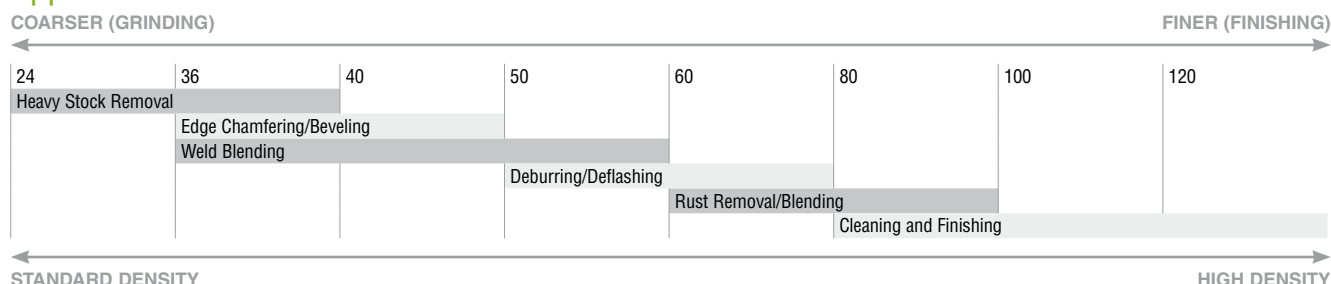
- 20X longer life, reduced abrasive cost
- Fewer disc changes, reduced labor cost
- More consistent finish
- No back-up pad required
- Easier storage, no curling
- Reduced loading
- Use flap discs one grit size coarser than fiber discs, except in 36 grit



Material-to-Product Recommendation Guide

	BEST Blaze R980P	BETTER BlueFire R860	GOOD Metal R828
TYPE 29 FOR STOCK REMOVAL			
Stainless Steel / Titanium / Super Alloys	◆	◆	◆
Mild Carbon Steel / Welds		◆	◆
Ferrous Metals / Cast Iron		◆	◆
Brass / Bronze / Aluminum		◆	
TYPE 27 FOR BLENDING AND FINISHING			
Stainless Steel / Titanium / Super Alloys	◆	◆	◆
Mild Carbon Steel / Welds		◆	◆
Ferrous Metals / Cast Iron		◆	◆
Brass / Bronze / Aluminum		◆	◆

Application/Grit Recommendation Guide



Cross Reference Guide

	TOTAL PERFORMANCE ←		INITIAL PRICE →
	BEST	BETTER	GOOD
NORTON	Blaze R980P	BlueFire R860	Metal R828
3M	747D, 947D, 967A, 969F	546D, 566A, 577F	—
Camel	Ceramic Pro	ZA Pro	ZA
CGW/Pasco	Ceramic	Zirconia	—
DeWalt	XP Ceramic	HP Zirconia	FlexVolt
Flexovit	Zircotex Ceramic	Zircotex, Ziromax, Tornado	—
Garryson	CeramiQ	Zirc+	A/O
GemTex	Ceramic Flaptec	Zirconia Flaptec	—
Hermes	—	FL390	Webrax-AN 701
Klingspor	SMT656	SMT624, SMT626, SMT627, SMT630	—
Metabo	Flexiamant Super Ceramic	Flexiamant Zirconia, Novoflex	—
Mirka	—	—	—
Pearl	Redline Maxidics, Stainlessmax Maxidics	Zirconia Maxidisc, Silver Line Zirconia	Silver Line A/O
Pferd	Polifan Z-SG, Polifan SG-CO	Polifan SG Zirkon, Polifan SG ZA, SGP, PSF Zirc	Polifan PSF A/O
United Abrasives/Sait	Encore Ceramic, Ovation Ceramic	Ovation, Saitlam U	Encore
SIA	—	—	—
Standard	Ceramic Pro, Ceramic	Zirconia HP, Zirconia AP	—
Tyrolit	Cerabond Ceramic, Premium Ceramic	Fastcut, Premium Longlife	Basic, Standard
VSM (Lehigh Valley)	Ceramic	Zirconia	—
Walter	Enduro-Flex Turbo	Enduro-Flex, Enduro-Flex Stainless	Flexsteel
Weiler	Tiger Ceramic, Tiger X, Tiger Saber Tooth	Tiger Paw, Wolverine	Tiger

Best/highest productivity for stainless steel, titanium, and super alloys



BLAZE R980P CERAMIC ALUMINA

- Premium ceramic alumina abrasive grain lasts 50% – 200% longer than many flap discs on stainless steel, cobalt, chrome, inconel, titanium and other hard-to-grind materials
- Y-weight polyester flaps with a supersize grinding aid significantly improve life, grain retention, and fray resistance while providing a cool, noticeably fast cut rate
- High-strength fiberglass back on Type 29 and Type 27 High Density is durable, lightweight, and absorbs vibration; Black, flexible plastic backing plate on Type 27 Quick Trim allows for trimmability of the plate

IMPROVED
VENDIBLE



Better choice for mild carbon steel, and welds

BLUEFIRE R860 ZIRCONIA ALUMINA

- High performance zirconia alumina abrasive for aggressive cut and long life, with up to 30% longer life than competitive zirconia alumina products
- Polyester/cotton flaps with semi-open coat provide improved durability and reduces loading on aluminum
- High-strength fiberglass back on Type 29 and Type 27 High Density is durable, lightweight, and absorbs vibration; blue, flexible plastic backing plate on Type 27 Quick Trim allows for trimmability of the plate
- Vendible 2-disc package is ideal for vending machines, small jobs, or carrying to a job site

Good consistent performance with low initial price



METAL R828 ZIRCONIA ALUMINA

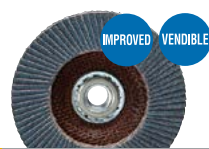
- Durable zirconia grain provides good cut rate and life with consistent finish
- Fiberglass/resin backing plates with high strength, light weight, ability to absorb vibration, and operator comfort
- Good choice for coarse grit blending, deburring, and stock removal

The New Blue and You

with new BlueFire R860

ENHANCED! Proprietary new grain shape and chemistry for faster cutting and longer life on a wide range of materials.





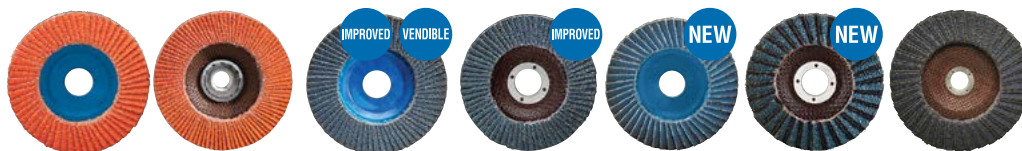
TIER:	BEST	BETTER	GOOD	GOOD
TRADENAME:	BLAZE R980P	BLUEFIRE R860	METAL R828	METAL R828
SHAPE:	Type 29 Conical	Type 29 Conical	Type 29 Conical	Type 29 Conical
FLAP DENSITY:	Standard	Standard	Standard	High
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina
BACKING PLATE:	Fiberglass	Fiberglass	Fiberglass	Fiberglass
OTHER:	Supersize			

SIZE (D x H)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
Type 29 Conical							
4 x 5/8	36	15,300	10		666233 99049		
	40	15,300	10		666233 99050		
	60	15,300	10		666233 99051		
	80	15,300	10		666233 99052		
4-1/2 x 5/8-11	36	13,300	10	662611 83490	662544 61165	662544 19991	
	36	13,300	10 V		666233 41104 2-Pack		
	40	13,300	10	662611 83491	662544 61167	662544 19994	662611 32535
	60	13,300	10	662611 83492	662544 61170	662544 19996	662611 32536
	60	13,300	10 V		666233 41105 2-Pack		
	80	13,300	10	662611 83493	662544 61173	662544 19997	662611 32537
	80	13,300	10 V		666233 41106 2-Pack		
	120	13,300	10			666233 99174	
4-1/2 x 7/8	24	13,300	10		666233 99204		
	36	13,300	10	662611 83486	662544 61155	662544 19963	
	36	13,300	10 V		666233 41107 2-Pack		
	40	13,300	10	662611 83487	662544 61161	662544 19978	662611 32538
	60	13,300	10	662611 83488	662544 61163	662544 19984	662611 32539
	60	13,300	10 V		666233 41108 2-Pack		
	80	13,300	10	662611 83489	662544 61164	662544 19987	662611 32540
	80	13,300	10 V		666233 41109 2-Pack		
5 x 5/8-11	120	13,300	10			666233 99175	
	36	12,000	10		666233 99189		
	40	12,000	10		666233 99190		
	60	12,000	10		666233 99191		
	80	12,000	10		666233 99192		
5 x 7/8	120	12,000	10				
	24	12,000	10		666233 99206		
	36	12,000	10	662611 90001	662544 61174	662544 19998	
	40	12,000	10	662611 90002	662544 61176	662544 20001	
	60	12,000	10	662611 90003	662544 61177	662544 20002	
6 x 5/8-11	80	12,000	10	662611 90004	662544 61178	662544 20003	
	120	12,000	10				
	40	10,200	10			662544 91779	
	60	10,200	10			662544 91780	
	80	10,200	10			662544 91781	
6 x 7/8	24	10,200	10		666233 99066		
	36	10,200	10		666233 99298		
	40	10,200	10		666233 99193	662544 91776	
	60	10,200	10		666233 99194	662544 91777	
	80	10,200	10		666233 99195	662544 91778	
7 x 5/8-11	36	8,600	10	662611 83498	662544 61188	662544 20009	
	40	8,600	10	662611 83499	662544 61190	662544 20010	
	60	8,600	10	662611 83500	662544 61192	662544 20012	
	80	8,600	10	662611 83501	662544 61193	662544 20013	
	120	8,600	10				
7 x 7/8	24	8,600	10		666233 99196		
	36	8,600	10	662611 83494	662544 61180	662544 20004	
	40	8,600	10	662611 83495	662544 61183	662544 20006	
	60	8,600	10	662611 83496	662544 61185	662544 20007	
	80	8,600	10	662611 83497	662544 61186		

V = Vendible package. 2 discs/pack; 5 packs/carton. Order in multiples of 10.

See Portable Tools and Specialties section for mini flap discs.

Flap Discs



TIER:	BEST	BEST	BETTER	BETTER	GOOD	GOOD	GOOD
TRADENAME:	BLAZE R980P	BLAZE R980P	BLUEFIRE R860	BLUEFIRE R860	METAL R828	METAL R828	METAL R828
SHAPE:	Type 27 Flat	Type 27 Flat	Type 27 Flat	Type 27 Flat	Type 27 Flat	Type 27 Flat	Type 27 Flat
FLAP DENSITY:	Standard	High	Standard	High	Standard	High Density	Standard
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina
BACKING PLATE:	Quick Trim Plastic	Fiberglass	Quick Trim Plastic	Fiberglass	Quick Trim Plastic	Fiberglass	Fiberglass
OTHER:	Supersize	Supersize					

SIZE (D x H)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
Type 27 Flat									
4-1/2 x 5/8-11	36	13,300	10		662544 99894	666233 99136		666233 99125	666233 99205
	36	13,300	10 V			666233 41086 2-Pk			
	40	13,300	10	662544 00257	662610 98290	666233 99137	776960 90086	666233 99000	666233 99059
	60	13,300	10	662544 00258	662610 96435	666233 99138	776960 90087	666233 99001	666233 99060
	60	13,300	10 V			666233 41087 2-Pk			
	80	13,300	10	662544 00259	662610 96436	666233 99139	776960 90088	666233 99002	666233 99061
4-1/2 x 7/8	120	13,300	10	662544 00261				666233 99003	
	36	13,300	10	636425 01865	662610 97678	666233 99140	776960 90081	666233 99126	666233 99062
	40	13,300	10	662544 00253	662610 20628	666233 99141	776960 90082	666233 99004	666233 99063
	60	13,300	10	662544 00254	662610 20633	666233 99142	776960 90083	666233 99005	666233 99064
	80	13,300	10	662544 00255	662610 20634	666233 99143	776960 90084	666233 99006	666233 99065
	120	13,300	10	662544 00256			776960 90085	666233 99007	
5 x 5/8-11	36	12,000	10			666233 99144		666233 99127	
	40	12,000	10	776960 90141		666233 99145		666233 99128	
	60	12,000	10	776960 90142		666233 99146		666233 99130	
	80	12,000	10	776960 90143		666233 99147		666233 99131	
	120	12,000	10					666233 99132	
5 x 7/8	36	12,000	10			666233 99148		666233 99133	
	40	12,000	10	662544 00262		666233 99149		666233 99008	666233 99212
	60	12,000	10	662544 00264		666233 99150		666233 99009	666233 99213
	80	12,000	10	662544 00265		666233 99151		666233 99010	
	120	12,000	10	662544 00519				666233 99011	
6 x 5/8-11	40	10,200	10	662611 32128	662611 32145				666233 99219
	60	10,200	10	662611 32129	662611 32146				666233 99220
	80	10,200	10	662611 32130	662611 32147				666233 99221
6 x 7/8	40	10,200	10	662611 32123		666233 99152		666233 99012	666233 99216
	60	10,200	10	662611 32124	662611 32136	666233 99153		666233 99013	666233 99217
	80	10,200	10	662611 32125		666233 99154		666233 99014	
	120	10,200	10					666233 99015	
7 x 5/8-11	36	8,600	10			666233 99155		666233 99134	
	40	8,600	10	662544 61066	662611 32148	666233 99156	776960 90092	666233 99016	
	60	8,600	10	662544 61067	662611 32168	666233 99157	776960 90093	666233 99017	
	80	8,600	10	662544 61068		666233 99158	776960 90094	666233 99018	
	120	8,600	10	662544 61069				666233 99019	
7 x 7/8	36	8,600	10	636425 01866		666233 99159		666233 99135	
	40	8,600	10	662544 61059	662611 32138	666233 99160	776960 90089	666233 99020	
	60	8,600	10	662544 61060	662611 32139	666233 99161	776960 90090	666233 99021	
	80	8,600	10	662544 61061		666233 99162	776960 90091	666233 99022	
	120	8,600	10	662544 61063				666233 99023	

V = Vendible package. Ideal for vending machines & small jobs. 2 Flap Discs/pack, 5 packs/carton. Order in multiples of 10.

See Portable Tools and Specialties section for mini flap discs.

Packaged for retail / walk-in selling / small jobs



BLUEFIRE R860 ZIRCONIA ALUMINA

- Zirconia alumina abrasive for aggressive cut and long life
- Individual hang cards provides product selling points; ships in merchandise display case of small quantities
- Available wire rack (with header card) allows merchandising of 4" and 4-1/2" product three ways: hung on pegboard, mounted on an upright, or placed on a shelf/counter



WIRE RACK (WITH HEADER CARD)
ALLOWS MERCHANDISING OF 4"
AND 4-1/2" PRODUCT THREE WAYS:
HUNG ON PEGBOARD, MOUNTED ON
AN UPRIGHT, OR PLACED ON A
SHELF/COUNTER

TIER:	BETTER
TRADENAME:	BLUEFIRE R860
SHAPE:	Type 29
FLAP DENSITY:	Standard
ABRASIVE:	Zirconia Alumina
BACKING PLATE:	Fiberglass

SIZE (D x H)	GRIT	MAX. RPM	STD. PKG.	PART #
4 x M-10	40	15,300	5	076607 03214
	60	15,300	5	076607 03215
	80	15,300	5	076607 03216
4-1/2 x 5/8-11	40	13,300	5	076607 03211
	60	13,300	5	076607 03212
	80	13,300	5	076607 03213
7 x 5/8-11	40	8,600	5	076607 03205
	60	8,600	5	076607 03206
	80	8,600	5	076607 03207
Wire Rack			1	076607 04157



See Portable Tools and Specialties section for mini flap discs.



Non-woven discs have three components: strong synthetic fiber mesh and quality abrasives, bonded together by a smear-resistant adhesive. Rapid Strip discs have an open web construction that enables aggressive cutting action while maintaining a cool, non-loading surface. Rapid Blend discs have a unitized construction with varying weave – from open to tighter – for deburring and finishing. Rapid Prep discs have a more open weave that excels in surface preparation and cleaning. Each product provides excellent cutting action while improving surface finish.

Applications:

Medium-to-light material removal, deburring, blending, cleaning, finishing, and polishing

Size Range:

4" - 7"

Grit Range:

Extra Coarse, Coarse, Medium, Fine, Very Fine

Abrasive Grain:

Ceramic Alumina, Silicon Carbide, Engineered Aluminum Oxide, Aluminum Oxide

Machine Used:



RIGHT ANGLE
GRINDER



VERTICAL SHAFT
PORTABLE GRINDER



DIE
GRINDER

Material/Application-To-Product Recommendation Guide

Stripping Discs

	BEST Blaze Rapid Strip Ceramic	BETTER Rapid Strip Silicon Carbide
Removing scale and coarse welding marks	◆ XC	◆ XC
Removing coatings, epoxy/glue, paint and other clogging material	◆ XC	◆ XC
Removing rust, oxidation, corrosion and residue	◆ XC	◆ XC
Removing parting lines and seams on fiberglass parts	◆ XC	◆ XC
Removing paint/graffiti from concrete/stone	◆ XC	◆ XC

Deburring, Blending, Finishing Discs

	BEST Vortex Rapid Blend	BETTER Vortex Rapid Prep	BETTER Rapid Blend	BETTER Rapid Prep
Removing weld marks and weld spatter	◆ C		◆ C	
Stainless steel deburring and cleaning	◆ C		◆ C	
Removing small flashings and parting lines	◆ C		◆ C	
Surface preparation before coatings/plating		◆ C		◆ C
Light cleaning		◆ F		◆ F
Cleaning and prepping welds		◆ M		◆ M
Removing blemishes after welding stainless		◆ M		◆ M
Blending and finishing all metal parts	◆ VF		◆ VF	
Creating decorative finishes on stainless steel	◆ VF		◆ VF	
Final finishing and polishing	◆ VF		◆ VF	
Final finishing/polishing where high conformability is needed				◆ VF

XC - Extra Coarse, C - Coarse, M - Medium, F - Fine, VF - Very Fine

Application/Product Recommendation Guide

MOST AGGRESSIVE / LEAST CONFORMABLE

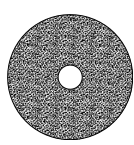
LEAST AGGRESSIVE / MOST CONFORMABLE

	Blaze Rapid Strip	Vortex Rapid Blend A/O Med. Rapid Blend A/O Coarse	Rapid Blend A/O Medium	Rapid Blend S/C Fine	
Depressed Center Discs					
Discs With Back-Up Pad		Vortex Rapid Prep Rapid Prep A/O Coarse	Rapid Prep A/O Medium	Rapid Prep A/O Fine	Rapid Prep Very Fine
Scale Removal	Best Choice				
Stock Removal	Best Choice	Second Choice			
Heavy Deburring	Second Choice	Best Choice			
Light Deburring		Best Choice	Second Choice		
Light Finishing		Second Choice	Best Choice		
Blending			Best Choice	Second Choice	
Finishing			Second Choice	Best Choice	
Polishing				Best Choice	Second Choice

Cross Reference Guide – For All Discs Used on Right Angle Grinders

	STRIPPING (EXTRA COARSE)		SURFACE FINISHING (COARSE – MEDIUM – FINE)		SURFACE PREP (VERY FINE)	
	BEST	BETTER	BEST	BETTER	BEST	BETTER
NORTON	Blaze Rapid Strip	Rapid Strip	Vortex Rapid Blend	Rapid Blend	Vortex Rapid Prep	Rapid Prep
3M	Clean & Strip XT PRO, Clean & Strip XT PRO Extra Cut	Clean & Strip X	Debur and Finish PRO, Cut and Polish	EXL	SE, Duraflex	SC, PD, AI, LS
Bibielle	—	SDR Strip-It/Red	—	BUR Unitized	SCHD	SCLS, SCD, SCSB
Camel	—	EZ Strip Black/Red	—	—	—	—
Flexovit	—	Clean & Strip	—	—	—	—
Hermes	Strip Discs	Webrax	—	—	—	—
Pearl	—	S/C Stripping	—	—	—	Surface Preparation
Pferd	—	Policlean	—	Poliflex PUR	—	—
Sait	—	Sait-Strip	—	Unitized	7S, 8S	3Z
SIA	SiaStrip	—	—	—	6260	6250
Standard	—	Cleaning	700/800/900 Series	700/800/900 Series	FE, GP	FE, GP, RC
Superior	—	Stripping	—	XL Unitized	—	FD, GD, CC
Walter	—	FX Cleaning	—	—	—	Blendex Surface Conditioning

Why Choose Non-Woven Depressed Center Discs?



Non-Woven Right Angle Discs vs. Fiber Discs, Wire Wheels, and Depressed Center Wheels

- Deburring, blending and finishing done with one product to reduce the number of steps
- To provide a controlled, sustained finish
- To prevent undercutting and gouging
- To provide a cooler grinding action to lessen the chance of warping or discoloration
- When loading is an issue with fiberglass, adhesives and soft metals
- For stripping coatings and paint off of hard materials like concrete, cement and stone
- Less vibration and quieter for high operator acceptance
- To provide an alternative to wire brushes



Blaze Your Way to Greatest Productivity

Norton Blaze Rapid Strip Type 27 Depressed Center Discs

Strip/clean Cast Iron, Steels, Aluminum, Fiberglass and Composites

- Open structure; will not load on sticky coatings, adhesives, and soft metals (e.g. aluminum), or snag and shed like a cloth or fiber disc might
- Norton Blaze ceramic alumina grain provides 2X cut rate and life over silicon carbide
- Will not shed on heavily rust-encrusted pieces
- Extremely versatile; use one disc; stiff enough to stand abuse, but soft enough to prevent gouging and rework
- Use on edge for blending weld root forms
- Apply some pressure to strip or remove coatings; lighter pressure finishes like a surface finishing disc
- Fewer safety, ergonomic, and environmental issues due to fewer change-outs, less downtime, and less production waste/landfill scrap



Rapid Strip

Best choice for quick and easy rough cleaning and stripping of all materials



BLAZE RAPID STRIP CERAMIC ALUMINA

- Blaze ceramic grain provides 2X plus faster, consistent rate and life than silicon carbide discs, leaves a thoroughly cleaned surface, ensuring excellent adhesion in subsequent processes such as painting and soldering
- Open web construction for minimal loading; does not shed or snag on rusty pieces; prevents gouging and rework
- Rapid Strip material provides a unique combination of aggressive performance, long life, and improved finish

Better choice for use on a variety of materials, including metal, fiberglass and stone



RAPID STRIP SILICON CARBIDE

- Sharp silicon carbide abrasive provides fast aggressive cutting action
- Advanced resin bond prevents shedding, snagging, gouging, and rework
- Open web construction for minimal loading; great alternative to wire brushes



			TIER: BEST	TIER: BETTER
			BLAZE RAPID STRIP	RAPID STRIP
TRADENAME:			Ceramic Alumina	Silicon Carbide
ABRASIVE:			36-50	36-50
GRIT SIZE:			X-Coarse	X-Coarse
GRADE:			Type 27/Fiberglass	Type 27/Fiberglass
TYPE/BACKING:				
SIZE (D x H)	MAX. RPM	STD. PKG.	PART #	PART #
4-1/2 x 5/8-11	12,000	10	662544 98101	662610 09585
4-1/2 x 7/8	12,000	10	666233 03783	662610 09649
5 x 5/8-11	11,000	10	666233 03915	
5 x 7/8	11,000	10	666233 03916	
7 x 5/8-11	8,000	10	666233 03919	662610 09650
7 x 7/8	8,000	10	666233 03920	662610 09586

Rapid Blend / Rapid Polish

Best choice with revolutionary technology for heavy deburring and finishing



VORTEX RAPID BLEND ALUMINUM OXIDE

- Proprietary engineered Vortex aluminum oxide agglomerated grain performs the medium to fine grit steps of traditional aluminum oxide discs
- Thick nylon web for 2X longer life and faster finishing vs. traditional aluminum oxide discs, with minimal shedding
- Special resin chemistry resists shedding when used on sharp edges, making it ideal for deburring; no smearing

Better choice for surface prep, deburring, blending and removing parting lines, rust, and coatings



RAPID BLEND NEX A/O / S/C

- Premium aluminum oxide or silicon carbide grain for consistent performance
- Uniform construction extends life and maintains part tolerance; prevents cutting and gouging
- Resin formula produces consistent, smear-free finishes

Consistent smear free performance with low entry price



RAPID BLEND ALUMINUM OXIDE

- Premium aluminum oxide grain; engineered for more demanding applications
- Uniform construction maintains part tolerance; prevents cutting and gouging
- Smear-free bond excels at producing light satin finishes



Better choice for finishing to a mirror like shine

RAPID POLISH

- Type 27 disc with premium quality pressed hardened felt for polishing to a mirror like finish
- Use with or without polishing compound
- Soft padding is ideal for final finishing with no vibration

MOST AGGRESSIVE / LEAST CONFORMABLE

LEAST AGGRESSIVE / MOST CONFORMABLE



TIER: **BEST**

TRADENAME: **VORTEX RAPID BLEND**

ABRASIVE: Engineered A/O
GRIT SIZE: 100-120

SPECIFICATION: Vortex 5AM
TYPE/BACKING: Type 27/Fiberglass

BETTER

RAPID BLEND NEX

Aluminum Oxide
150-180

NEX-2AM
Type 27/Fiberglass

BETTER

RAPID BLEND NEX

Aluminum Oxide
220-280

NEX-2AF
Type 27/Fiberglass

BETTER

RAPID BLEND NEX

Silicon Carbide
320-400

NEX-2SF
Type 27/Fiberglass

BETTER

RAPID BLEND

Aluminum Oxide
150-180

High Strength Medium
Type 27/Fiberglass

BETTER

RAPID POLISH

No Abrasive
-

Felt
Type 27/Plastic

SIZE (D x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
4-1/2 x 5/8-11	12,000	10	662544 29243	662610 23947	662610 23946	662610 23943	662610 23949
4-1/2 x 7/8	12,000	10	662544 29268	662610 20548	662610 20547	662610 20546	662610 20549

Rapid Strip Arbor Hole Discs

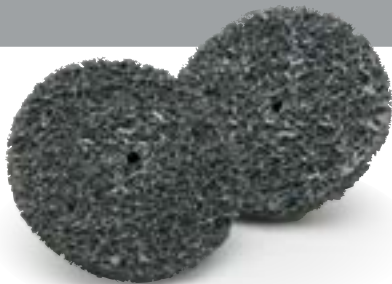
Best choice for removing rust, scale and paint/coatings on a variety of substrates, such as wood, metal and plastics



BLAZE RAPID STRIP CERAMIC ALUMINA

- Norton Blaze ceramic alumina grain provides 2X cut rate, 2X life over silicon carbide products
- Advanced resin bond does not shed on rust-encrusted pieces, and prevents gouging and rework; does not snag when used for deburring
- Leave a thoroughly cleaned surface that ensures excellent adhesion for subsequent processes such as coating, painting and soldering

Better choice for removing coatings on a variety of substrates such as wood metal and plastics



RAPID STRIP SILICON CARBIDE

- Faster cutting, sharp, extra coarse silicon carbide abrasive provides a unique combination of aggressive performance, long life, and improved finish
- Advanced resin bond prevents shedding on rust-encrusted pieces and gouging and rework; does not snag when used for deburring
- Leaves a thoroughly clean surface that ensures excellent adhesion in subsequent processes such as coating, painting and soldering



TIER:	BEST	BETTER
TRADENAME:	BLAZE RAPID STRIP	RAPID STRIP
ABRASIVE:	Ceramic Alumina	Silicon Carbide
GRIT:	Extra Coarse	Extra Coarse

SIZE (D x H)	MAX. RPM	STD. PKG.	PART #	PART #
Arbor Hole				
4 x 1/4	8,000	25	662610 09324	662610 08008
4 x 1/2	8,000	25	666233 04856	662610 07916
6 x 1/4	4,000	15	666233 40171	662610 07988 NS
6 x 1/2	4,000	15	662610 99378	662610 08051

NS Non-Stock, contact your Norton representative for current order quantities and lead times.



FITS HOLE	FOR DISC WIDTH	FOR DISC DIAMETER	SHANK DIAMETER	OVERALL LENGTH	WASHER DIAMETER	STD. PKG.	PART #
Mandrel Assemblies							
1/4	1/2 (Standard)	up to 6	1/4	2-1/2	1-1/2	1	662610 09502
1/2	1/2 (Standard)	Up to 8	1/4	3-1/8	2-1/4	1	662610 59420

Non-Woven Standard Back-up Pad Discs

Rapid Prep
7/8" Center Hole

Best choice for aggressive stock removal and blending in one step



RAPID PREP XHD

- Coarse and Medium discs solve your most aggressive stock removal and blending challenges; remove weld lines, weld spatter, weld discoloration and blend surfaces in a single step
- Improve cut control and surface blending over traditional coated flap discs and fiber discs from our unique combination of a conformable fiber matrix and premium ceramic grain
- XHD Coarse discs for aggressive weld removal and surface blending on steels and Medium discs on softer metals/alloys



TIER: **BEST**
TRADENAME: **RAPID PREP XHD**
ABRASIVE: Ceramic Alumina

SIZE (D x H)	STD. PKG.	PART #
Coarse		
4-1/2 x 7/8	40	662611 70275
5 x 7/8	40	662611 70279
7 x 7/8	25	662611 70280
Medium		
4-1/2 x 7/8	40	662611 70282
5 x 7/8	40	662611 70283
7 x 7/8	25	662611 70284

Note: Max RPM is determined by corresponding back up pad.



Norton Rapid Prep Surface Conditioning Products

The Perfect Abrasive, Coating, and Bond Built into Every Disc and Belt

- Available in premium Vortex aluminum oxide aggregate grain and Norton aluminum oxide grain; ideal for many aerospace, metal and stainless steel fabrication, and MRO applications
- Our proprietary coating method extends life and delivers consistent finishes by creating a thick layer of grain throughout the product; grain does not sit on top of fibers as other competitive products can
- Our new Clean Bond resin system guarantees smear-free finishes, even on high nickel content alloys; will not load on aluminum and soft metals, as competitive products can

**CLEAN
BOND**
TECHNOLOGY

Non-Woven Standard Back-up Pad Discs

Rapid Prep
7/8" Center Hole

Best choice for finishing and blending applications



VORTEX RAPID PREP ALUMINUM OXIDE DISCS

- High-performing, patented Vortex agglomerated aluminum oxide grain provides the cutting power of a coarser grit with the finish of finer grits
- Premium high-loft nylon fiber bonded to a strong nylon scrim backing allows a thick layer of resin bond and grain for extended life and provides added durability and stiffness
- Proprietary Clean Bond resin technology guarantees smear-free finishes even on high nickel content alloys and reduces loading on aluminum and other soft metals

Better choice for high nickel content alloys, aluminum and other soft metals



RAPID PREP ALUMINUM OXIDE

- Quality aluminum oxide abrasive grain coating provides up to 20% higher cut rate and 50% better performance than competitive products
- Premium high-loft nylon fiber bonded to a strong nylon scrim backing allows a thick layer of resin bond and grain for extended life, added durability and stiffness
- Proprietary Clean Bond resin technology guarantees smear-free finishes even on high nickel content alloys and reduces loading on aluminum and other soft metals



		TIER: BEST		BETTER	
		TRADENAME: VORTEX RAPID PREP		RAPID PREP	
		ABRASIVE: Engineered Aluminum Oxide		Aluminum Oxide	
SIZE (D x H)	STD. PKG.	PART #		PART #	
Extra Coarse					
4-1/2 x 7/8	25			666233	26070
5 x 7/8	25	666233	34975		
7 x 7/8	25	666233	41360		
Coarse					
4-1/2 x 7/8	25	666233	34944	662544	73868
5 x 7/8	25	666233	34946	662610	08293
7 x 7/8	25	666233	41362	666233	25138
Medium					
4-1/2 x 7/8	25	666233	33612	666233	25915
5 x 7/8	25	666233	34963	662610	17124
7 x 7/8	25	666233	41364	666233	25919
Fine					
4-1/2 x 7/8	25	666233	33608	666233	25153
5 x 7/8	25	666233	34954 NS	662544	69132
7 x 7/8	25	666233	41366 NS	666233	25897 NS
Very Fine					
4-1/2 x 7/8	25	666233	33616		
5 x 7/8	25			666233	25943
7 x 7/8	25	666233	41368 NS	666233	25959

Additional sizes are available made-to-order, contact your Norton representative for current order quantities and lead times.

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

Note: Max RPM is determined by corresponding back-up pad.

See page 67 for 7/8" Hole Air Cooled Back-up Pads

Rapid Prep

Speed Change 5/8"-11

- These discs feature Norton quick, tool-free, twist-on and -off Speed-Change fasteners. Discs lock to standard back-up pads with a unique nut design and are easily removed, increasing your productivity with more time to grind.
- Rapid Prep XHD are the best choice for aggressive stock removal and blending in one step.



TIER: **BEST**
TRADENAME: **RAPID PREP XHD**
ABRASIVE: Ceramic Alumina

SIZE (D x H)	STD. PKG.	PART #
Coarse		
4-1/2 x 5/8-11	25	662611 70060
5 x 5/8-11	25	662611 70061
7 x 5/8-11	25	662611 70288
Medium		
4-1/2 x 5/8-11	25	662611 70062
5 x 5/8-11	25	662611 70063
7 x 5/8-11	25	662611 70289

Max RPM is determined by corresponding back up pad.



TIER: **BEST** **BETTER**
TRADENAME: **VORTEX RAPID PREP** **RAPID PREP**
ABRASIVE: Engineered Aluminum Oxide Aluminum Oxide

SIZE (D x H)	STD. PKG.	PART #	PART #
Extra Coarse			
4-1/2 x 5/8-11	25	666233 73667	666233 73690
5 x 5/8-11	25	666233 73669	
7 x 5/8-11	25	666233 73670	666233 73692 NS
Coarse			
4-1/2 x 5/8-11	25	666233 73671	666233 73693
5 x 5/8-11	25	666233 73674	662544 98516
7 x 5/8-11	25	666233 73675 NS	662611 92908
Medium			
4-1/2 x 5/8-11	25	666233 73678	666233 08157
5 x 5/8-11	25	666233 73679	666233 73694
7 x 5/8-11	25	666233 73680 NS	662611 92913 NS
Fine			
4-1/2 x 5/8-11	25	666233 73681	
5 x 5/8-11	25	666233 73682	666233 73695
7 x 5/8-11	25	666233 73684 NS	
Very Fine			
5 x 5/8-11	25	666233 73686	666233 73699
7 x 5/8-11	25	666233 73687	666233 73700 NS

Note: Speed Change discs must always be used with smooth face back-up pads.

Max RPM is determined by corresponding back-up pad.

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

AVOS Non-Woven Speed-Lok

- Patented hole design allows for interrupted cut, reducing heat up to 30% over standard surface preparation discs for cooler cutting and longer life
- With complete vision into the grinding zone, operators can grind more accurately with less re-work; scooped holes create air flow to pull loose abrasive and swarf away from work surface grinding zone – resulting in extended disc life
- The 15° angle back-up pad lets you grind at 5° - 15° angle allowing for greater utilization of disc surface and eliminates gouging of workpiece

See page 67 for Speed Change and AVOS Back-up Pads



TIER: **BETTER**
TRADENAME: **RAPID PREP AVOS**
ABRASIVE: Aluminum Oxide

SIZE (DIAMETER)	STD. PKG.	PART #
Coarse		
4-1/2	10	662610 10447
5	10	666233 74818
Medium		
4-1/2	10	662610 10448
5	10	666233 74819
Very Fine		
4-1/2	10	666233 74823
5	10	666233 74824

Note: AVOS discs must be used with AVOS Speed-Lok back-up pads.

Max RPM is determined by corresponding back up pad.

Rapid Prep

Non-Woven Hook and Loop Discs

- Rapid Prep XHD are the best choice for aggressive stock removal and blending in one step.



TIER: **BEST**
TRADENAME: **RAPID PREP XHD**
ABRASIVE: Ceramic Alumina

SIZE (DIAMETER)	STD. PKG.	PART #
Coarse		
4-1/2	40	662611 70179
5	40	662611 70181
7	25	662611 70182
Medium		
4-1/2	40	662611 70183
5	40	662611 70185
7	25	662611 70186

Max RPM is determined by corresponding back-up pad.

Back-up Pads

Hook & Loop Back-up Pads

PAD DIAMETER	SPINDLE OR HOLE SIZE	MAX. RPM	3M EQUIVALENT	STD. PKG.	PART #
Back-up Pads for Non-Woven Hook and Loop Discs					
2	1/4 Steel Shank	23,000	922	5	662610 59352
3	1/4 Steel Shank	20,000	923	5	662610 59354
4	1/4 Steel Shank	18,000	924	5	662610 59356
	5/8-11	13,000	914	5	662610 59304
4-1/2	5/8-11	10,000	9145	5	662610 06948
5	5/16-24 Male	10,000	905	5	662610 59360
	5/8-11	10,000	915	5	662610 59310
6	5/8-11	8,000	916	5	662610 59312
7	5/8-11	6,000	917	5	662610 59368
8	5/8-11	4,500	918	5	662610 59372



TIER: **BEST** **BETTER**
TRADENAME: **VORTEX RAPID PREP** **RAPID PREP**
ABRASIVE: Engineered Aluminum Oxide Aluminum Oxide

SIZE (DIAMETER)	STD. PKG.	PART #	PART #
Extra Coarse			
2	50		662610 17900 NS
3	25	666233 33620 NS	
4-1/2	25	666233 34972	662610 17906
5	25	666233 34974	662610 17215
7	25	666233 34976	662611 92846
Coarse			
2	50	666233 34882	662610 04431*
3	25	666233 34883	662610 55015
4-1/2	25	666233 34943	662610 17806
5	25	666233 34945	662610 04435
7	25	666233 34951	662610 55027
Medium			
2	50	666233 34958	662610 04441
3	25	666233 34956	662610 04442
4-1/2	25	666233 34961	662610 04444
5	25	666233 34962	662610 55022
7	25	666233 34965	662610 17813
Fine			
2	50	666233 33604 NS	666233 25141
3	25	666233 33605	666233 25143 NS
4-1/2	25	666233 33607	666233 25147
5	25	666233 33609	666233 25154
7	25	666233 34955	662611 99465
Very Fine			
2	50	666233 33613 NS	666233 25926
3	25	666233 33614	666233 25934
4-1/2	25	666233 33615	666233 25936
5	25	666233 33617	666233 25941
7	25	666233 34969	662610 19990

Max RPM is determined by corresponding back-up pad.

* Standard Package = 80 for this item.

NS Non-Stock, contact your Norton representative for current order quantities and lead times.





Norton PSA (pressure sensitive adhesive) individual cloth discs are used on four different types of machines and the application changes depending on which machine they are used on.

Applications:

Pneumatic and Electric Dual-Action (DA) and Electric Random Orbital Sanders – for use on contours or flat surfaces for light- to medium-pressure grinding, blending, leveling, and finishing applications.

Size Range:

5" – 24" diameter

Grit Range:

24 – 180

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Aluminum Oxide

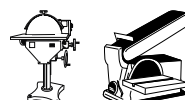
Back-up Pads:

Rubber, with hardness variations for different applications, for portable machines. Steel for stationary disc sanders.

Machine Used:



ORBITAL
SANDER



STATIONARY
DISC SANDERS

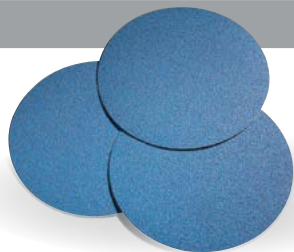
Best choice for all hard-to-grind high alloy steels



BLAZE R980P CERAMIC ALUMINA

- 100% ceramic alumina micro-fracturing grain constantly exposes sharper grain edges to provide fastest cut rate and longest life over competitive blended/low-ratio ceramic alumina discs
- Strong resin bond and heavy-duty Y-weight polyester backing for consistent cut, better grain adhesion, edge-tear resistance, and durability
- Self-lubricating grinding aid treatment delivers the coolest cut on stainless steel, high alloy steels, super alloys, titanium, and other difficult to grind materials

Better choice for grinding and deburring stainless steel



BLUEFIRE R821P ZIRCONIA ALUMINA

- Latest generation of self-sharpening, zirconia alumina abrasive for cooler cut and extended life over aluminum oxide discs
- Heavy-duty Y-weight cotton backing for edge-tear resistance and durability
- Pressure sensitive adhesive makes for easy application and removal

Good choice for general-purpose metalworking



GEMINI R228 ALUMINUM OXIDE

- Premium aluminum oxide abrasive gives an excellent initial cut rate
- Durable X-weight cotton backing makes these discs a good blend of flexibility and life
- The cotton backing provides good resistance to heat

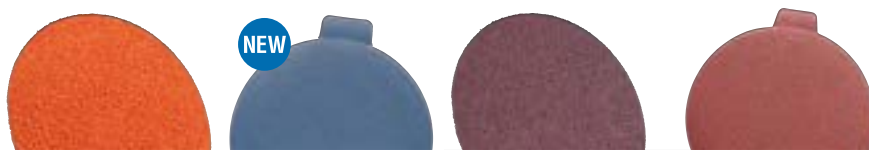
Good option for light- to medium-pressure grinding, blending, leveling and finishing applications



METAL R243 ALUMINUM OXIDE

- Aluminum Oxide grain provides consistent cut for general purpose use
- Improved resin bond system provides longer life
- Flexible J-weight cotton backing for added conformability, tabs allow for easy liner removal

Cloth PSA Discs for Dual-Action and Random Orbital Sanders



			TIER: BEST	BETTER	GOOD	GOOD
			TRADENAME: BLAZE R980P	BLUEFIRE R821P	GEMINI R228	METAL R243
			ABRASIVE: Ceramic Alumina	Zirconia Alumina	Aluminum Oxide	Aluminum Oxide
			ATTACHMENT: PSA Discs	PSA Discs	PSA Discs	PSA Discs
			OTHER: Supersize	Tabbed		Tabbed
SIZE (D)	GRIT	PKG./CASE	PART #	PART #	PART #	PART #
5	36	50/250	662544 61506*	662611 32579	662611 36589	
	40	50/250	662544 61507		662611 36588	
	50	50/250	662544 61508	699573 49352	662611 36587	
	60	50/250	662544 61509	699573 49353	662611 36586	
	80	50/250	662544 61510	662611 35091	662611 36585	699573 39967
	100	50/250			662611 36584	699573 39968
	120	50/250	662544 61512		662611 36583	699573 39969
	150	50/250			662611 36582	699573 39970
6	180	50/250			662611 36581	699573 39971
	60	50/250			662611 36596	
	80	50/250			662611 36595	699573 39973
	100	50/250			662611 36594	699573 39977
	120	50/250			662611 36593	699573 39978
	150	50/250				699573 39979
8	180	50/250			662611 36592	699573 39986
	36	50/250			662611 36350	
	40	50/250			662611 36351	
	50	50/250			662611 36352	
	60	50/250			662611 36576	
	80	50/250			662611 36354	
	120	50/250			662611 36355	

*Pkg./Case: Blaze R980P 5" 36 grit discs = 50/200



Back-up Pads for Cloth PSA Discs

DESCRIPTION	MAX. RPM	STD. PKG.	PART #
Back-up Pads for Cloth PSA Discs			
5 Diameter – Low Profile – Soft	12,000	5	636425 06126
5 Diameter – Low Profile – Medium	12,000	5	636425 06131
5 Diameter – Tapered – Medium	12,000	5	636425 06139
6 Diameter – Low Profile – Soft	10,000	5	636425 06127
6 Diameter – Low Profile – Med	10,000	5	636425 06133
6 Diameter – Tapered – Medium	10,000	5	636425 06141
8 Diameter – Tapered – Medium	6,000	5	636425 43112

Large Diameter Cloth PSA Discs

Used on stationary disc machines for dimensioning and finishing metal workpieces and woodworking. Pressure sensitive adhesive offers fast, convenient mounting. Made without center holes for full-face usage.



TIER:	BEST	BETTER	GOOD
TRADENAME:	BLAZE R980P	BLUEFIRE R821P	GEMINI R228
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Aluminum Oxide
ATTACHMENT:	PSA	PSA	PSA
OTHER:	Supersize		

SIZE (D)	GRIT	PKG./CASE	PART #	PART #	PART #
10	36	25/50			662611 36606
	40	25/50		662611 38314	662611 36604
	50	25/50			662611 36607
	60	25/50		662611 38316	662611 36602
	80	25/50		662611 38317	662611 36601
	100	25/50			662611 36600
12	24	25/50		662611 38318	
	36	25/50	662544 16171	662611 38319	662611 36635
	40	25/50	662544 16172	662611 38320	662611 36630
	50	25/50	662544 16173	662611 38321	662611 36625
	60	25/50	662544 16174	662611 38322	662611 36620
	80	25/50	662544 16175	662611 38323	662611 36615
	100	25/50			662611 36614
	120	25/50	662544 16176		662611 36613
15	36	25/50			662611 36666
	60	25/50			662611 36663
	80	25/50			662611 36662
16	36	25/50			662611 36700
	40	25/50			662611 36685
	50	25/50			662611 36684
	60	25/50		662611 38334	662611 36683
	80	25/50			662611 36701
18	36	25/50			662611 36720
	60	25/50			662611 36696
	80	25/50			662611 36723
20	36	25/50	662544 16165	662611 38343	662611 36710
	40	25/50		662611 38344	662611 36709
	50	25/50	662544 16167		662611 36711
	60	25/50	662544 16168	662611 38346	662611 36712
	80	25/50	662544 16169		662611 36706
	120	25/50	662544 16170		
24	36	10/10			662611 36718
	40	10/10			662611 36717
	50	10/10			662611 36725
	60	10/10			662611 36726
	80	10/10			662611 36727



For use on dual action and random orbital sanders. The industry's highest performing and broadest selection of paper discs in PSA (pressure sensitive adhesive) disc rolls and individual discs, and hook and loop discs.

Applications:

Stripping and preparing primed and painted surfaces for finishing, sanding of plastics, fiberglass and composites, bare wood sanding, light weld blending, preparing and finishing metal, and sanding of all gel coat and body filler compounds.

Size Range:

3" – 8"

Grit Range:

36 – 1500

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Aluminum Oxide, Silicon Carbide

Attachment Systems:

PSA (pressure-sensitive adhesive), hook and loop

Paper Weights:

Heavyweight – E and F; Lightweight – B, C, and D

Vacuum Holes:

See product availability charts

Machine Used:



ORBITAL
SANDER



VERTICAL SHAFT
PORTABLE GRINDER

Material/Application-to-Product Recommendation Guide

	BEST			BETTER		GOOD	
	Heavy-Medium Stock Removal	Light Stock Removal Finishing		Heavy-Medium Stock Removal	Light Stock Removal Finishing	Light Stock Removal Finishing	
	SG H920	Blaze A995	Dry Ice A975	BlueFire H875P	BlueFire H822	A2750P	Gold Reserve A296
Primed, Painted Surfaces		◆	◆	◆		◆	◆
Fiberglass / Composites / Gel Coats		◆	◆	◆		◆	◆
Wood		◆	◆	◆		◆	◆
Metal	◆	◆	◆		◆	◆	◆
Body Fillers / Compounds / Plastics		◆	◆	◆		◆	◆

Application/Grit Recommendation Guide

COARSER (GRINDING)										FINER (FINISHING)									
36	40	60	80	100	120	150	180	220	240	280	320	360	400	500	600	800	1000	1200	1500
Roughing to Intermediate			Intermediate to Finishing							Fine Finishing						Ultra Fine Finishing			

Cross Reference Guide

	TOTAL PERFORMANCE							INITIAL PRICE	
	BEST			BETTER				GOOD	
	F-Weight	D-Weight	B- & C-Weight	F-Weight	E-Weight	B-Weight	B-Weight	C-Weight	
NORTON	SG H920	Blaze A995	Dry Ice A975	BlueFire H822	BlueFire H875P	A275 OP	Durite A475	A290, Gold Reserve A296	
3M	763U	732U, 737U, 755L 775L	334U, 734U, 735U	—	740I, 745I, 750U, 751U, 751I	216U, 255L, 236U, 260L, 334U	405N, 414N, 415U, 426U, 435U	236U, 316U, NX, 216U, 236U	
Hermes	BW114, CR116	CR116	—	BW115, BW184	BW110, VC153	VC154-LL	SF168	VC151-LL, VC152, WA flex 28	
Indasa	—	HT Line	HT Line, RedLine	—	HeavyLine	PlusLine	—	WhiteLine, YellowLine	
Klingspor	PS61	—	PS36	PS21	PS36	PS33, PS73W	PL35, PS14	PS33, PL36	
Mirka	—	—	—	—	Royal CRS. Cut	Q-Silver, Royal Micro	CaratFlex, PolarStar	Bulldog Gold, Basecut	
SIA	—	—	Siaprime 5550, 1958	1820	1820, 1919, 1948	1940, 1944, 1950	1748	1947, 1960	
VSM	—	—	—	—	KP510E, KP709	—	CP131A	KP911	

Heavyweight Paper Discs



Best choice for most demanding stock removal applications

SG H920 CERAMIC ALUMINA

- Durable and friable Norton seeded gel ceramic alumina abrasive ensures fast, aggressive, yet cool cutting action and maximum life
- Strong F-weight paper, synthetically-coated, provides maximum durability and resistance to edge chipping and shedding
- Closed coat and sharp grain make this a premiere product for metal fabricating and blending; ideal for soldered and welded areas



Better choice for aggressive metalworking applications

BLUEFIRE H822 ZIRCONIA ALUMINA

- Patented zirconia alumina abrasive provides 2X-3X life over aluminum oxide products
- Strong F-weight paper, synthetically-coated for excellent durability and chip resistance; pressure sensitive adhesive and linked disc roll format allow easy application, removal, and dispensing
- Non-stearated (no anti-loading agents) for non-contaminating; often required for prime auto and aerospace paint applications



Better choice for soft material and wood applications

BLUEFIRE H875P ZIRCONIA ALUMINA

- Next-generation, self-sharpening zirconia alumina abrasive provides 2-3 times the life of aluminum oxide discs, longer life versus original zirconia alumina discs, improved cut rate, and minimal heat
- Strong E-weight latex/paper backing resists tearing while staying conformable and flexible
- Open coat contributes to minimized loading

Stick & Sand (PSA)
Heavyweight Disc Rolls
Non-Vacuum



				TIER: BEST	BETTER	BETTER
				SG H920	BLUEFIRE H822	BLUEFIRE H875P
				ABRASIVE: Ceramic Alumina	Zirconia Alumina	Zirconia Alumina
				PAPER BACKING WEIGHT: F-Weight	F-Weight	E-Weight
				FASTENING: PSA	PSA	PSA
SIZE (D)	GRIT	ROLLS/STD. PKG.	DISCS/ ROLL	PART #	PART #	PART #
5	60	4	100	662611 49873	662611 37310	
	80	4	100	662611 49872	662611 37309	662611 24977
	100	4	100	662611 49871	662611 37308	
	120	4	100	662611 49870	662611 37307	
6	60	4	100		662611 37323	
	80	4	100	662611 49876	662611 37322	662611 25573
	120	4	100	662611 49874		
8	100	4	50	662611 49879		
	120	4	50		662611 37333	

Refer to the Sanding Accessories section for back-up pads and accessories.

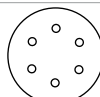
Heavyweight Paper Discs

Stick & Sand (PSA)
Individual Discs
Non-Vacuum and Vacuum



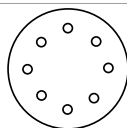
TIER:	BETTER	BETTER
TRADENAME:	BLUEFIRE H875P	BLUEFIRE H875P
ABRASIVE:	Zirconia Alumina	Zirconia Alumina
PAPER BACKING WEIGHT:	E-Weight	E-Weight
FASTENING:	PSA	PSA Vacuum

SIZE (D)	GRIT	PKG./CASE	PART #	PART #
5	36	50/200	662611 25436	
	40	50/200	662611 25307	
	80	50/200	662611 25244	



6" x 6 Hole
Die #3371

6	36	50/200	662611 23575	
	40	50/200	662611 23574	662611 23580
	80	50/200	662611 23573	



8" x 8 Hole
Die #3370

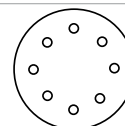
8	36	25/100	662611 23578	662611 23584
	40	25/100	662611 23577	
	80	25/100	662611 23576	662611 23582

Hook & Loop
Individual Discs
Non-Vacuum and Vacuum



TIER:	BEST	BETTER	BETTER
TRADENAME:	SG H920	BLUEFIRE H875P	BLUEFIRE H875P
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina
PAPER BACKING WEIGHT:	F-Weight	E-Weight	E-Weight
FASTENING:	Hook & Loop	Hook & Loop	Hook & Loop
OTHER:			Vacuum

SIZE (D)	GRIT	PKG./CASE	PART #	PART #	PART #
5	40	25/100		662611 25684	
	60	50/250	662611 49864		
	80	50/250	662611 49865	662611 25444*	
	100	50/250	662611 49866		
	120	50/250	662611 49867		
6	36	25/100		662611 23590	
	40	25/100		662611 23589	
	80	25/100		662611 23588	



8" x 8 Hole
Die #3370

8	36	25/100		662611 23593	662611 23598
	40	25/100		662611 23592	
	80	25/100		662611 23591	662611 23596

Packaging Standards: Min. / Std. Pkg. * H875P = 25/100

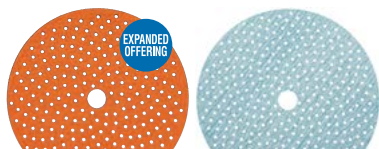
Lightweight Paper Discs

Less dust; more productivity



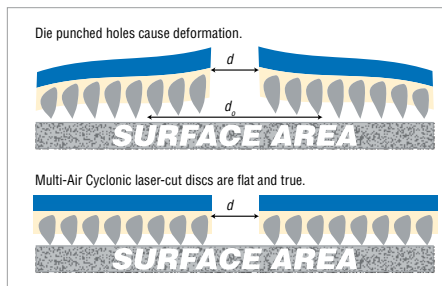
MULTI-AIR CYCLONIC HOOK & LOOP VACUUM

- Multi-Air Cyclonic precision laser-cut, spiral vacuum hole design maximizes dust extraction for cleanest work environment and less potential for contamination, while delivering coolest, fastest, most consistent cut rate, and longest life of any paper disc
- Water-based, non-pigmented stearate No-Fil coating and open coat provide maximum load resistance and no color transfer to work
- Exceptional choice for the most demanding paper disc sanding applications; hook and loop back for easy disc mounting and changing



TIER:	BEST	BEST
TRADENAME:	BLAZE A995 NO-FIL	DRY ICE A975 NO-FIL
ABRASIVE:	Ceramic Alumina	Ceramic Alumina
PAPER BACKING WEIGHT:	C- & D-Weight	B- & C-Weight
FASTENING:	Hook & Loop	Hook & Loop
OTHER:	P-Graded	P-Graded

SIZE (D)	GRIT	PKG/CASE	PART #	PART #
3 x 0	80	50/200		776960 95005
	120	50/200		776960 95006
	150	50/200		776960 95007
	180	50/200		776960 95008
	220	50/200		776960 95009
	240	50/200		776960 95010
	320	50/200		776960 95011
	400	50/200		776960 95012
	500	50/200		776960 95013
	600	50/200		776960 95014
	800	50/200		776960 95015
5 x 11/16 (125mm x 18mm)	1000	50/200		776960 95016
	80	50/200	636425 97500	776960 07745
	120	50/200	636425 97501	776960 07753
	150	50/200	636425 97502	776960 07755
	180	50/200	636425 97503	776960 07756
	220	50/200	636425 97504	776960 07757
	240	50/200		776960 07760
	280	50/200		776960 07762
	320	50/200		776960 07763
	400	50/200		776960 07765
	500	50/200		776960 07768
6 x 11/16 (150mm x 18mm)	600	50/200		776960 07791
	800	50/200		776960 07793
	1000	50/200		776960 07795
	40	25/200	636425 97515	
	80	50/200	636425 97505	776960 07770
	120	50/200	636425 97506	776960 07773
	150	50/200	636425 97507	776960 07774
	180	50/200	636425 97508	776960 07775
	220	50/200	636425 97509	776960 07776
	240	50/200		776960 07777
	280	50/200		776960 07778
	320	50/200	636425 97516	776960 07781
	400	50/200	636425 97517	776960 07784
	500	50/200		776960 07785
	600	50/200		776960 07786
	800	50/200		776960 07787
	1000	50/200		776960 07788



Improved Dust Extraction / Increased Productivity

The upgrade to precise, flat, laser-cut holes instead of die-punched holes, dramatically increases surface area contact allowing Norton Multi-Air Cyclonic discs to improve productivity by 32% versus conventional multi-hole sanding and by 60% versus non-vacuum sanding.

The end result is more holes for dust extraction, more abrasive coverage for a better cut and no deformation – for full surface contact utilizing all the cutting power of the premium ceramic grain.

Refer to the Sanding Accessories section for back-up pads and accessories.

Lightweight Paper Discs



Best choice for the most demanding coarse grit stripping, blending, and sanding applications

BLAZE A995 NO-FIL CERAMIC ALUMINA

- P-graded, next-generation sharper-edged ceramic aluminum oxide abrasive ensures fastest cut rate and longest life of any paper disc
- Unique polyester-reinforced, D-weight latex saturated backing provides maximum tear strength while retaining flexibility
- Water-based, non-pigmented stearate No-Fil coating and open coat provide maximum load resistance and no color transfer to work



Best choice for the most demanding sanding applications

DRYICE A975 NO-FIL CERAMIC ALUMINA

- P-graded seeded-gel ceramic alumina abrasive for fastest cut rate and longest life of any paper disc
- Unique fiber reinforced, flexible B or C-weight latex saturated backing delivers 50% - 60% improvement in tear strength while retaining flexibility
- Water-based, non-pigmented stearate No-Fil coating and open coat provide maximum load resistance and no color transfer to work



Better choice for high-performance dry finishing on all materials

A2750P NO-FIL ALUMINUM OXIDE

- Premium P-graded, heat treated, toughened aluminum oxide abrasive delivers superior life, fast cut rate, consistent finish
- Unique fiber reinforced, flexible B-weight latex saturated backing provides 50% - 60% improvement in tear strength while retaining flexibility
- Water-based, non-pigmented stearate No-Fil coating and open coat provide maximum load resistance and no color transfer to work
- 5" and 6" individual PSA discs in fine grits have a tabbed, white translucent liner to protect the PSA adhesive from airborne contaminants; the tab allows easier removal of the paper liner



Better choice for hard-to-sand surfaces and wood applications

DURITE A475 NO-FIL SILICON CARBIDE

- Sharp and hard, P-graded, silicon carbide abrasive easily penetrates the hardest material and veneers to create finer finishes where finish is critical
- Flexible, B-weight fiber reinforced, latex paper backing provides flexibility and resistance to tearing
- Water-based, non-pigmented stearate No-Fil coating and open coat provide maximum load resistance and no color transfer to work



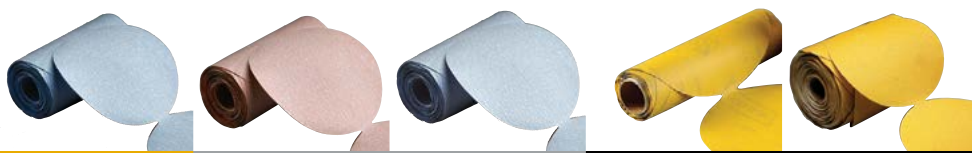
Good choice for sanding a broad range of substrates including primed or painted surfaces, wood, composites, aluminum, and ferrous metals

GOLD RESERVE A296 NO-FIL ALUMINUM OXIDE

- P-graded premium aluminum oxide abrasive produces a quick, cool cut and a more consistent surface finish
- Strong C-weight high latex/paper backing resists tearing while staying conformable and flexible
- Water-based, non-loading (No-Fil) stearate coating minimizes clogging and increases disc life

Lightweight Paper Discs

Stick & Sand (PSA)
Lightweight Disc Rolls
Non-Vacuum



		BEST		BETTER		BETTER		GOOD		GOOD	
TIER:		BEST		BETTER		BETTER		GOOD		GOOD	
TRADENAME:		DRYICE A975 NO-FIL		A2750P NO-FIL		DURITE A475 NO-FIL		GOLD RESERVE A296 NO-FIL		A290 NO-FIL	
ABRASIVE:		Ceramic Alumina		Aluminum Oxide		Silicon Carbide		Aluminum Oxide		Aluminum Oxide	
PAPER BACKING WEIGHT:		B- & C-Weight		B-Weight		B-Weight		C-Weight		C-Weight	
FASTENING:		PSA		PSA		PSA		PSA		PSA	
OTHER:		P-Graded		P-Graded		P-Graded		P-Graded		P-Graded	
SIZE (D)	GRIT	ROLLS/ STD. PKG.	DISCS/ ROLL	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #
3-1/2	80	4	100		66261136376						
	120	4	100		66261136375						
	180	4	100		66261136373						
	220	4	100		66261136372						
	280	4	100		66261136370						
	320	4	100		66261136369						
	400	4	100		66261136368						
5	60	4	100							66261149831	
	80	4	100	66261140502	66261131464*	66254487415	66261183806	66261149830			
	100	4	100	66261140501	66261131463*	66254487417	66261183807	66261149829			
	120	4	100	66261140500	66261131462*	66254487418	66261183808	66261149828			
	150	4	100	66261140499	66261131461*	66254487440	66261183809	66261149827			
	180	4	100	66261140498	66261131460*	66254487441	66261183810	66261149826			
	220	4	100	66261142474	66261131459*	66254487442	66261183811	66261149825			
	240	4	100	66261155380	66261131458*	66254487443		66261149824			
	280	4	100	66261155379	66261131457*			66261149823			
	320	4	100	66261155378	66261131456*	66254487444	66261183813	66261149822			
	400	4	100	66261155377	66261131454*	66261065293	66261183814	66261149821			
	500	4	100		66261131453*						
	600	4	100	66623305608	66261131452*	66254421217					
	800	4	100	66254480230	66261131451*						
6	60	4	100							66261149847	
	80	4	100	66261140512	66261131481*	66254487446	66261183815	66261149842			
	100	4	100	66261140511	66261131480*		66261183816	66261149841			
	120	4	100	66261140510	66261131479*	66254487447	66261183817	66261149840			
	150	4	100	66261140509	66261131478*		66261183818	66261149839			
	180	4	100	66261140508	66261131477*	66254487448	66261183819	66261149838			
	220	4	100	66261148340	66261131476*	66254487449	66261183820	66261149837			
	240	4	100	66261155376	66261131475*		66261183821	66261149836			
	280	4	100		66261131474*			66261149835			
	320	4	100	66261155374	66261131473*	66254487450	66261183822	66261149834			
	400	4	100	66261155373	66261131471*		66261183823	66261149833			
	500	4	100	63642506198	66261131470*						
	600	4	100	63642506199	66261131469*		66261040261				
	800	4	100	63642506200	66261131468*		63642506164				
8	80	4	100		66261131617						
	120	4	100		66261131615						
	150	4	100		66261131614						
	180	4	100		66261131613						
	220	4	100		66261131612						
	320	4	100		66261131609						

* Packaging Standards A275 = 6/100

Refer to the Sanding Accessories section for back-up pads and accessories.

Lightweight Paper Discs

Stick & Sand (PSA)
Lightweight Disc Rolls
Vacuum



TIER: **BETTER**
TRADENAME: **A2750P NO-FIL**
ABRASIVE: Aluminum Oxide
PAPER BACKING WEIGHT: B-Weight
FASTENING: PSA
OTHER: P-Graded





TIER: **GOOD**
TRADENAME: **A290 NO-FIL**
ABRASIVE: Aluminum Oxide
C-Weight
PSA
P-Graded

Stick & Sand (PSA)
Individual Discs
Non-Vacuum



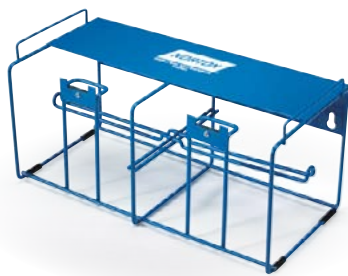
TIER: **BETTER**
TRADENAME: **A2750P NO-FIL**
ABRASIVE: Aluminum Oxide
PAPER BACKING WEIGHT: B-Weight
FASTENING: PSA Tabbed
OTHER: P-Graded

SIZE (D)	GRIT	ROLLS/ STD. PKG.	DISCS/ ROLL	PART #	ROLLS/ STD. PKG.	DISCS/ ROLL	PART #
							
				5" x 5 Hole Die #3329			
5	60				4	100	662611 30266
	80	6	100	662611 31498	4	100	662611 30265
	100	6	100	662611 31497			
	120	6	100	662611 31496	4	100	662611 30263
	150	6	100	662611 31495	4	100	662611 30262
	180	6	100	662611 31494	4	100	662611 30261
	220	6	100	662611 31493	4	100	662611 30260
	240	6	100	662611 31492			
	320	6	100	662611 31490	4	100	662611 30258
	400	6	100	662611 31488			

							
				6" x 6 Hole Die #3333			
6	80	6	100	662611 31515	4	100	662611 30276
	100	6	100	662611 31514	4	100	662611 30275
	120	6	100	662611 31513	4	100	662611 30274
	150	6	100	662611 31512	4	100	662611 30273
	180	6	100	662611 31511	4	100	662611 30272
	220	6	100	662611 31510	4	100	662611 30271
	240	6	100	662611 31509			
	280	6	100	662611 31508			
	320	6	100	662611 31507	4	100	662611 30268
	400	6	100	662611 31505			
	600	6	100	662611 31503			

SIZE (D)	GRIT	MIN./ STD PKG.	PART #
5	1000	100/400	662611 31450
	1200	100/400	662611 31449
6	1000	100/400	662611 31467
	1200	100/400	662611 31466
	1500	100/400	662611 31465

Refer to the Sanding Accessories section for back-up pads and accessories.



PSA Disc Roll Dispenser

- Norton disc roll dispensers feature heavy-duty construction and a rubberized finish to protect your product, as well as the finish on your workpiece
- These versatile dispensers are designed to accommodate any 5" or 6" disc roll or sheet roll
- They can be attached to a wall or stacked for multi-grit or multi-diameter operations
- Discs are individually dispensed and removed from the roll by a cutter bar

DESCRIPTION	STD. PKG.	PART #
PSA Disc Roll Dispenser		
Single Disc Roll Dispenser	1	636425 42772
Double Disc Roll Dispenser (shown)	1	636425 02981

Lightweight Paper Discs

Hook & Loop
Individual Discs
Non-Vacuum



TIER:	BEST	BEST
CAP CODE:	BLAZE A995 NO-FIL	DRY ICE A975 NO-FIL
ABRASIVE:	Ceramic Alumina	Ceramic Alumina
PAPER BACKING WEIGHT:	D-Weight	B- & C-Weight
FASTENING:	Hook & Loop	Hook & Loop
OTHER:	P-Graded	P-Graded

BETTER	BETTER	GOOD	GOOD
A2750P NO-FIL	DURITE A475 NO-FIL	GOLD RESERVE A296 NO-FIL	A290 NO-FIL
Aluminum Oxide	Silicon Carbide	Aluminum Oxide	Aluminum Oxide
B-Weight	B-Weight	C-Weight	C-Weight
Hook & Loop	Hook & Loop	Hook & Loop	Hook & Loop
P-Graded	P-Graded	P-Graded	P-Graded

SIZE (D)	GRIT	PKG/CASE	PART #	PART #	PKG/CASE	PART #	PART #	PART #	PART #
3	80				50/200	662611 31532			
	100				50/200	662611 44926			
	120				50/200	662611 28688			
	150				50/200	662611 40385			
	180				50/200	662611 31528			
	220				50/200	662611 31527			
	240				50/200	662611 31526			
	320				50/200	662611 31524			
	400				50/200	662611 36995			
	500				50/200	662611 31521			
	600				50/200	662611 36996			
	800				50/200	662611 31519			
	1000				50/200	662611 35900			
	1500				50/200	662611 47434			
5	60				100/400				662611 30224
	80	50/200		662611 40522	100/400	662611 31549		666233 77539	662611 49907
	100	50/200		662611 40521	100/400	662611 31548			662611 49906
	120	50/200		662611 40520	100/400	662611 31547		666233 77541	662611 49905
	150	50/200		662611 40519	100/400	662611 31546		666233 77542	662611 49904
	180	50/200		662611 40518	100/400	662611 31545		666233 77543	662611 49903
	220	50/200		662611 49541	100/400	662611 31544		666233 05637	662611 49902
	240	50/200		662611 49540	100/400	662611 31543			
	280				100/400	662611 31542			
	320	50/200		662611 49538	100/400	662611 31541		666233 05638	662611 49900
	400	50/200		662611 49537	100/400	662611 31539	662610 52270	666233 05639	662611 49899
	500	50/200		662544 80233	100/400	662611 31538			
	600				100/400	662611 31537		662611 05390	
	800	50/200		662544 80232	100/400	662611 31536	662610 52267	666233 77544	
	1000				100/400	662611 31535	662610 52254		
	1200				100/400	662611 31534			
	1500				100/400	662611 31533			
6	80	50/200	636425 97510	662611 40532	100/400	662611 31566		636425 06236*	662611 49916
	100	50/200		662611 40531	100/400	662611 31565		636425 06235*	662611 49915
	120	50/200	636425 97511	662611 40530	100/400	662611 31564		636425 06234*	662611 49914
	150	50/200	636425 97512	662611 40529	100/400	662611 31563		636425 06233*	662611 49913
	180	50/200	636425 97513	662611 40528	100/400	662611 31562		636425 06232*	662611 49912
	220	50/200	636425 97514	662611 49546	100/400	662611 31561		636425 06231*	662611 49911
	240				100/400	662611 31560		636425 06225*	
	280				100/400	662611 31559			
	320	50/200		662611 49543	100/400	662611 31558		636425 06230*	662611 49909
	400	50/200		662611 49542	100/400	662611 31556		636425 06229*	662611 49908
	500	50/200		636425 06202	100/400	662611 31555		636425 06228*	
	600	50/200		636425 06203	100/400	662611 31554		636425 06227*	
	800	50/200		636425 06204	100/400	662611 31553		636425 06226*	
	1000	50/200		636425 06375	100/400	662611 31552	662610 52255		
	1200	50/200		636425 06376	100/400	662611 31551			
	1500	50/200		636425 06377	100/400	662611 31550			
8	120				100/400	662611 31662			
	180				100/400	662611 31661			









*Packaging Standards: PKG/CASE A296 = 50/250

Refer to the Sanding Accessories section for back-up pads and accessories.

Lightweight Paper Discs

Hook & Loop
Individual Discs
Vacuum



		TIER: BEST		BETTER		GOOD		GOOD		GOOD	
		CAP CODE: DRY ICE A975 NO-FIL		A2750P NO-FIL		GOLD RESERVE A296 NO-FIL		A290 NO-FIL		A290 NO-FIL	
		ABRASIVE: Ceramic Alumina		Aluminum Oxide		Aluminum Oxide		Aluminum Oxide		Aluminum Oxide	
		PAPER BACKING WEIGHT: B- & C-Weight		B-Weight		B-weight		C-Weight		C-Weight	
		FASTENING: Hook & Loop		Hook & Loop		Hook & Loop		Hook & Loop		Hook & Loop	
		OTHER: P-Graded		P-Graded		P-Graded		P-Graded		P-Graded	
SIZE (D)	GRIT	PKG./CASE	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #
											
		5" x 5 Hole Die #3328		5" x 5 Hole Die #3328		5" x 5 Hole Die #3328		5" x 8 Hole Die #3392			
5	60	100/400						662611 30236*		662611 30245*	
	80	100/400	662611 40517*		662611 31583			662611 30235*		662611 30244*	
	100	100/400			662611 31582			662611 30234*		662611 30243*	
	120	100/400	662611 40515*		662611 31581			662611 30233*		662611 30242*	
	150	100/400			662611 31580			662611 30232*		662611 30241*	
	180	100/400			662611 31579			662611 30231*		662611 30240*	
	220	100/400			662611 31578			662611 30230*		662611 30239*	
	320	100/400			662611 31575			662611 30227*		662611 30238*	
	400	100/400			662611 31573			662611 30226*			
	600	100/400			662611 31571						
											
		6" x 6 Hole Die #3371		6" x 6 Hole Die #3371		6" x 6 Hole Die #3371		6" x 6 Hole Die #3371			
6	80	100/400	662611 40527*		662611 31600		666233 34786*		662611 30255*		
	100	100/400			662611 31599		666233 34787*				
	120	100/400			662611 31598		666233 34788*		662611 30253*		
	150	100/400			662611 31597						
	180	100/400			662611 31596		666233 34790*		662611 30251*		
	220	100/400			662611 31595		666233 34791*		662611 30250*		
	320	100/400			662611 31592		666233 34793*				
	400	100/400			662611 31590		666233 34794*				
	600	100/400			662611 31588		666233 34796*				
	800	100/400			662611 31587		666233 34797*				
	1000	100/400			662611 31586						
	1500	100/400			662611 31584						

Packaging Standards: * A975 Vacuum, A296 Vacuum, A290 Vacuum = 50/200

Refer to the Sanding Accessories section for back-up pads and accessories.



An alternative to traditional perforated paper discs, mesh discs are a multi-functional abrasive, designed with thousands of holes, created by the unique mesh matrix structure. For use with random orbital and rotary sanders, superior performing mesh discs are engineered for maximum dust extraction on composite, automotive, and other fine finishing applications. Norton mesh discs produce superior finishes with virtually dust free sanding.

Applications:
Size Range:
Grit Range:
Machine Used:

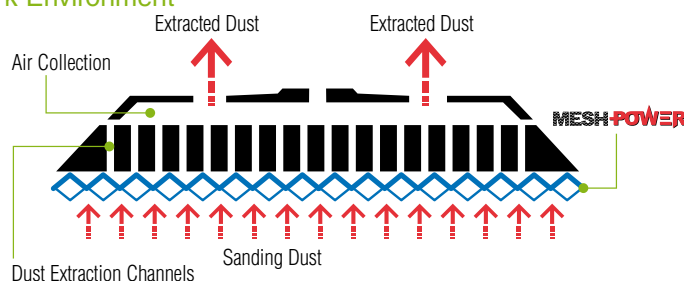
Surface preparation, Sanding, Finishing
5", 6"
80-400



ORBITAL
SANDER

Powerful Dust Extraction Means A Cleaner, Safer Work Environment

We've answered the demands for a cleaner and safer working environment with Norton MeshPower discs. The open construction of the mesh backing allows dust particles to flow freely through the thousands of tiny holes, creating a virtually dust free sanding environment. Better for your health, better for your application and better for your business!



Good choice for sharp cutting along with powerful dust extraction

MESHPower ALUMINUM OXIDE

- Mesh matrix backing with thousands of tiny holes offers powerful dust extraction for a cleaner, healthier working environment
- Norton No-Fil technology prevents clogging and creates a consistent cut throughout the product life
- Self-grip backing with no designated hole pattern is quick and easy to align to any backing pad – just apply and go!

TIER: GOOD			
TRADENAME: MESHPower			
ABRASIVE: Aluminum Oxide			
SIZE (D)	GRIT	PKG./CASE	PART #
5	80	50/200	636425 06451
	120	50/200	636425 06452
	180	50/200	636425 06453
	220	50/200	636425 06454
	240	50/200	636425 06455
	320	50/200	636425 06456
	400	50/200	636425 06457
6	80	50/200	636425 06458
	120	50/200	636425 06459
	180	50/200	636425 06460
	220	50/200	636425 06461
	240	50/200	636425 06462
	320	50/200	636425 06463
	400	50/200	636425 06464

Contact your Norton representative for more information on additional grit sizes.

TECH TIP

Increase performance even further by using the Norton MeshPower discs with the Norton Multi-Air back-up pads - it's the ultimate dust extraction experience!



Finishing Film

For use on random orbital and rotary sanders. The industry's highest performing film and foam finishing discs are engineered for composite, automotive, and other fine finishing applications. Norton microfinishing film discs produce superior finishes dry without sacrificing cut rate while Norton foam finishing discs are used moist to produce a semi-polished surface to reduce buffing time.

Applications:

Film discs: final dry finishing of primed and painted surfaces, varnishes, composites, and gel coats before buffing

Foam finishing discs: final moist finishing of clear coat, varnishes, composites, and gel coats before buffing

Compounds and buffing pads: removes swirl marks and sand scratches

Size Range:

3", 5" and 6"

Grit Range:

Film Discs: P80-P1500

Foam Discs: P1500, P2000, P3000

Machine Used:



ORBITAL
SANDER



VERTICAL SHAFT
PORTABLE GRINDER



MINI ANGLE SANDER



Best choice for final dry finishing of primed and painted surfaces, varnishes, composites, and gel coats

PURE ICE Q175 A/O FINISHING FILM

- White aluminum oxide grain and patented resin system for better life, cut rate, and finish
- 3 mil polyester film backing for better flexibility and flatness of discs; hook and loop attachment for easy mounting and removal
- Color-coded backprint by grit size



Good choice for dry sanding applications, especially uneven, hard-to-sand surfaces

Q275 NO-FIL A/O FINISHING FILM

- Sharp, P-graded, heat-treated premium aluminum oxide grain ensures faster, yet cooler, cut for a longer life
- 3-mil polyester film backing delivers unmatched durability and tear strength with exceptional flatness for a flawless surface finish and reduced leveling and rework
- Water-based stearated No-Fil coating provides maximum load resistance when sanding dry for extended life

Finishing Foam



Best choice for moist finishing of clear coats, varnishes, composites, and gel coats

ICE Q255 A/O FINISHING FOAM

- Premium, P-graded fine grit aluminum oxide grain
- Conformable, integrated foam backing eliminates pigtailed and costly rework; produces a semi-polished finished that can be quickly buffed out; hook and loop attachment
- Open mesh design distributes pressure evenly for quicker sanding and uniform scratch patterns
- Color coded abrasive face by grit size for easy grit identification



TIER:	BEST	GOOD
TRADENAME:	PURE ICE Q175	Q275 NO-FIL
ABRASIVE:	Aluminum Oxide	Aluminum Oxide
BACKING WEIGHT:	3 mil Polyester Film	3 mil Polyester Film
ATTACHMENT:	Hook and Loop	Hook and Loop
OTHER:	P-Graded	P-Graded

TIER:	BEST
TRADENAME:	ICE Q255
ABRASIVE:	Aluminum Oxide
BACKING WEIGHT:	Foam
ATTACHMENT:	Hook and Loop
OTHER:	P-Graded

SIZE (D)	GRIT	PKG./CASE	COLOR	PART #	PART #	PKG./CASE	COLOR	PART #
3	P800	50/200	Black	776960 88701				
	P1000	50/200	Red	776960 88702				
	P1200	50/200	Green	776960 88703				
	P1500	50/200	Blue	776960 88704		6/24	Blue	636425 06022
	P2000					6/24	Magenta	636425 06021
	P3000					6/24	Green	636425 06020
5	P80	50/200			662611 01614 NS			
	P120	50/200			662611 01613			
	P180	50/200			662611 01610 NS			
	P220	50/200			662611 01609			
	P240	50/200			662611 01608 NS			
	P320	50/200			662611 01607 NS			
	P400	50/200			662611 01606			
	P600	50/200			662611 01604 NS			
	P1200	50/200			662611 01601 NS			
	P80	50/200			662611 01628			
6	P120	50/200			662611 01627			
	P180	50/200			662611 01625 NS			
	P220	50/200			662611 01624			
	P320	50/200			662611 01622			
	P800	50/200	Black	776960 88713	662611 01618			
	P1000	50/200	Red	776960 88714	662611 01617			
	P1200	50/200	Green	776960 88715	662611 01616			
	P1500	50/200	Blue	776960 88716	662611 01615	15/60	Blue	636425 06015
	P2000					15/60	Magenta	636425 06014
	P3000					15/60	Green	636425 06013

NS Non-Stock, contact your Norton representative for current order quantities and lead times.



TIER:	GOOD
TRADENAME:	Q275 NO-FIL
ABRASIVE:	Aluminum Oxide
BACKING WEIGHT:	3 mil Polyester Film
ATTACHMENT:	PSA
OTHER:	P-Graded, Tabbed

SIZE (D)	GRIT	PKG./CASE	PART #
5	P80	50/250	780727 22892 NS
	P120	50/250	780727 22893 NS
	P180	50/250	780727 22894 NS
	P220	50/250	780727 22895 NS
	P240	50/250	780727 22896 NS
	P320	50/250	780727 22898 NS
	P400	50/250	780727 22900 NS
	P500	50/250	780727 22901 NS
	P600	50/250	780727 22902 NS
	P800	50/250	780727 22904 NS
6	P1000	50/250	780727 22905 NS
	P80	50/250	780727 25400 NS
	P120	50/250	780727 25401 NS
	P180	50/250	780727 25404 NS
	P220	50/250	780727 25405 NS
	P240	50/250	780727 25406 NS
	P320	50/250	780727 25408 NS
	P400	50/250	780727 25410 NS
	P500	50/250	780727 25412 NS
	P600	50/250	780727 25413 NS
	P800	50/250	780727 25414 NS
	P1000	50/250	780727 25415 NS

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

Refer to the Sanding Accessories section for back-up pads and accessories.

Multi-Air Foam Interface Pads

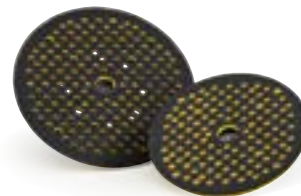
- Designed for use with fine grit Multi-Air Cyclonic hook and loop sanding discs to improve both surface finish and cut rate
- Use with Multi-Air hook and loop disc back-up pads
- Align the interface pad with the Multi-Air back up pad then simply attach the disc to the interface pad because the holes do not have to be lined up
- Ideal for use with new Mesh discs



SIZE (D x T)	DESCRIPTION	STD. PKG.	PART #
Multi-Air Foam Interface Pads with Vacuum Holes			
5 x 1/2	Multi-Air Hook & Loop Interface Pad	8	636425 85864
6 x 1/2	Multi-Air Hook & Loop Interface Pad	12	076607 19359

Multi-Air Hook & Loop Back-up Pads with Vacuum Holes

- Innovative design optimized for maximum air flow and powerful dust extraction
- Pads are engineered with a durable urethane foam, heat-resistant plastic, a molded-in 5/16"-24 spindle, and hooked face
- Holes in the disc do not have to be matched up with the holes in the pad, so changeover is fast and easy
- Ideal for use with new Mesh discs



SIZE (D)	DESCRIPTION	MAX. RPM	STD. PKG.	PART #
Multi-Air Hook & Loop Back-up Pads with Vacuum Holes				
5 (125mm) with 5/16"-24 Shank	Medium-Density Urethane Pad	15,000	5	666233 76000
6 (150mm) with 5/16"-24 Shank	Medium-Density Urethane Pad	15,000	5	636425 06160

Low-Profile Pads for Dual Action / Random Orbital Sanders

- Soft density low-profile pads utilize 1/2" thick foam for fine finish sanding and offer moderate conformability
- Medium low-profile pads have 1/2" thick urethane foam for intermediate and finish sanding
- Available with PSA (pressure sensitive adhesive) or hook and loop faces; both designs are shock resistant and have a fiberglass backing plate with a riveted 5/16"-24 threaded shank for added strength and increased heat resistance
- Available with standard hole patterns for vacuum-assist sanding



SIZE (D)	DESCRIPTION	MAX. RPM	STD. PKG.	PART #
Low Profile Pads for DA/Random Orbital Sanders				
3	Hook & Loop Soft Low-Profile	12,000	10	636425 06128
3-1/4	Hook & Loop Buffing Pad		5	662610 85302
5	PSA Soft Low-Profile	12,000	5	636425 06126
5	PSA Medium Low-Profile	15,000	5	636425 06131
5 x 5 holes	PSA Medium Low-Profile	15,000	5	636425 06132
5	Hook & Loop Soft Low-Profile	12,000	5	636425 06129
5	Hook & Loop Medium Low-Profile	15,000	5	636425 06135
5 x 5 holes	Hook & Loop Medium Low-Profile	15,000	5	636425 06136
6	PSA Soft Low-Profile	12,000	5	636425 06127
6	PSA Medium Low-Profile	15,000	5	636425 06133
6	Hook & Loop Soft Low-Profile	12,000	5	636425 06130
6	Hook & Loop Medium Low-Profile	15,000	5	636425 06137
6 x 6 holes	Hook & Loop Medium Low-Profile	15,000	5	636425 06138
8 x 8 holes, 5 screws	Hook & Loop Medium Low-Profile	1,500	5	636425 43712
8 x 8 holes, 6 screws	Hook & Loop Medium Low-Profile	1,500	5	636425 43714

Packed in individual clamshell

Tapered Pads for Dual Action / Random Orbital Sanders

- Designed with medium density polyurethane foam and a tapered edge for conformability, these pads are firm enough for flat surfaces, yet soft enough for severe curves and contours
- Available with either PSA (vinyl, pressure sensitive adhesive) or hook and loop faces in vacuum or non-vacuum
- The 5" and 6" pads are shock resistant and have a fiberglass backing plate with a riveted 5/16"-24 threaded shank for use on random orbital or dual action sanders
- The 8" pads have a 5/8"-11 threaded female hub



SIZE (D)	DESCRIPTION	MAX. RPM	STD. PKG.	PART #
Tapered Pads for DA/Random Orbital Sanders				
5	PSA Medium Tapered	15,000	5	636425 06139
5 x 5 holes	PSA Medium Tapered	15,000	5	636425 06140
5	Hook & Loop Medium Tapered	15,000	5	636425 06143
5 x 5 holes	Hook & Loop Medium Tapered	15,000	5	636425 06144
6	PSA Medium Tapered	15,000	5	636425 06141
6 x 6 holes	PSA Medium Tapered	15,000	5	636425 06142
6	Hook & Loop Medium Tapered	15,000	5	636425 06145
6 x 6 holes	Hook & Loop Medium Tapered	15,000	5	636425 06146
8	PSA Medium Tapered	6,000	5	636425 43112
8	Hook & Loop Medium Tapered	3,200	5	636425 43704

Packed in individual clamshell

Hook & Loop Foam Interface Pads

- Designed for use with our fine grit hook and loop sanding discs
- Improve both surface finish and cut rate
- Use with hook and loop back-up pads



SIZE (D x T)	DESCRIPTION	STD. PKG.	PART #
Foam Hook & Loop Interface Pads			
3 x 1/2	Interface Pad	10	636425 05457
6 x 1/2	Interface Pad	5	636425 42089
5 x 3.4	Interface Pad	2	636425 02161
6 x 3/4	Interface Pad	2	636425 02162

Half Moon Hand Pad

- The unique half moon pad takes a standard 5" hook and loop disc folded in half, which adheres to the hooks on the pad face
- The straight edge of the pad allows the operator to sand corners, contours, narrow crevices and minute imperfections without over-sanding



SIZE (D)	DESCRIPTION	STD. PKG.	PART #
Half Moon Hand Pad			
5	Hook & Loop	10	636425 02768

Polishing Adapter Pad

- Converts your standard hook and loop pad into a soft polishing pad
- The foam adapter is 3/8" thick and is excellent for fine grits where minimal removal is required
- It is ideal for either flat or contour surfaces



SIZE	DESCRIPTION	MAX. RPM	STD. PKG.	PART #
Polishing Adapter Pad				
5	Hook & Loop Adapter Pad	3,786	10	636425 03121

Ergonomic Hand Sanders

- The ergonomic palm sander is uniquely designed to be user-friendly, with finger indentations for the operator
- It quickly converts standard 5" and 6" hook and loop discs into hand sanders for finishing flat surfaces



SIZE (D)	DESCRIPTION	STD. PKG.	PART #
Ergonomic Hand Sander			
5	Hook & Loop	5	636425 03147
6	Hook & Loop	5	636425 03726

Disc Hand Pads

- Hand pads eliminate finger sanding
- The ultra-thin 3/16" thick pad is composed of a single layer of neoprene foam and is designed for maximum flexibility – producing excellent finishes
- The 1" thick pad is composed of two layers, neoprene and polyester foam, for excellent conformability and softness, resulting in fine finishes
- Each pad has an elastic hand strap to hold it firmly in place
- Available with either PSA (vinyl, pressure sensitive adhesive) faces or hook and loop face



SIZE (D x T)	DESCRIPTION	STD. PKG.	PART #
Disc Hand Pads			
5 x 3/16	Soft Foam PSA	10	636425 03111
5 x 1	Soft Foam PSA	10	636425 02842
5 x 1	Soft Foam Hook & Loop	10	636425 03117

Panel and Adhesive Cleaner

- Removes adhesives, tar, grease, wax, body sealers, undercoating sprays, and silicone from most surfaces
- Aggressive cleaner is safe to use on most paint applications
- Packaged with squirt dispenser
- Use as directed



SIZE/DESCRIPTION	STD. PKG.	PART #
Panel and Adhesive Cleaner		
Quart Can	12	076607 82780

Liquid Ice Extra-Cut Compound

- Water soluble; easy to use and easy to clean up
- Engineered to be used with a selection of 3 pads, depending on the finish required



SIZE	DESCRIPTION	STD. PKG.	STD. CASE	PART #
Quart	Liquid Ice Extra-Cut Compound	1	4	636425 97116

Liquid Ice Clean-up / Detailer Spray

- The spray detailer easily cleans up excess buffing residue and produces paint protection
- Spray it on and wipe off with a Norton Microfiber cloth ("Masking Products" section)



SIZE	DESCRIPTION	STD. PKG.	STD. CASE	PART #
32 oz.	Spray Bottle Clean-up Detailer	1	4	636425 42082

Liquid Ice Ultra-Fine Machine Glaze

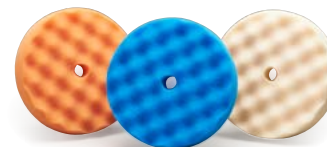
- Use on its own for fine scratch removal or as Step 3 in place of Norton Liquid Ice Extra-Cut Compound to eliminate swirl marks and produce a high gloss finish
- Ideal for dark-colored vehicles



SIZE	DESCRIPTION	STD. PKG.	STD. CASE	PART #
Quart	Liquid Ice Ultra-Fine Machine Glaze	1	4	636425 06092

8" Hook & Loop Buffing/Polishing Waffle Pads

- These pads can be used with Norton Liquid Ice Extra-Cut Compound



SIZE (D)	DESCRIPTION	STD. PKG.	STD. CASE	PART #
8	Orange Waffle Foam pad - Step 1	1	6	636425 06379
8	Blue Waffle Foam Pad - Step 2	1	6	636425 06380
8	White Waffle Foam Pad - Step 3	1	6	636425 06381

8" and 9" Hook & Loop Buffing/Polishing Pads

- These pads can be used with Norton Liquid Ice Extra-Cut Compound following the step numbers



SIZE (D)	DESCRIPTION	STD. PKG.	STD. CASE	PART #
8	Super Cut Wool Pad - Step 1	1	6	636425 42077
9	Blue Cutting Foam Pad - Step 2	1	6	636425 42078
9	White Finishing Foam Pad - Step 3	1	6	636425 42079

3" Hook & Loop Buffing/Polishing Pads

- For small spot repair



SIZE (D)	DESCRIPTION	STD. PKG.	STD. CASE	PART #
3	Super Cut Wool Pad - Step 1	10	40	636425 43832
3	Blue Cutting Foam Pad - Step 2	10	40	636425 05459
3	White Finishing Foam Pad - Step 3	10	40	636425 05460

Hook & Loop Back-up Pads for 8" and 9" Buffing Pads

- Black plastic back-up plate with hook and loop face. Molded-in 5/8"-11 threaded female hub



SIZE (D)	DESCRIPTION	STD. PKG.	STD. CASE	PART #
8 and 9	Hook & Look Back-up Pad	1	3	636425 42080

Black Lambswool Hook & Loop Polishing Pads

- Distributing and applying material evenly and consistently, these dense, durable, lambswool pads are designed to repair clearcoat finishes



SIZE	DESCRIPTION	STD. CASE	PART #
3	Pad with Loop - 3/4" nap	40	636425 03670
4	Pad with Loop - 3/4" nap	250	636425 03671

Please pages 232 - 237 for additional finishing products



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. Non-woven wheels have an open mesh construction that is waterproof, washable, conformable and non-loading.

Non-Woven Convolute wheels are formed by wrapping and bonding web material impregnated with abrasive grain and resin around a center core.

Applications:

- 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

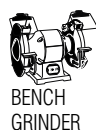
Abrasive Grain:

Aluminum Oxide, Silicon Carbide

Grit Range:

Medium (M), Fine (F), Very Fine (VF)

Machine Used:



Application/Grit Recommendation Guide

NORTON	Rapid Finish GP Convolute Wheels	Metal Finishing Convolute Wheels	Clean & Finish Convolute Wheels	Light Finishing Convolute Wheels
Scale Removal				
Stock Removal	Second Choice			
Heavy Deburring	Second Choice			
Decorative Finishing		Best Choice	Second Choice	
Blending	Best Choice	Second Choice		
Cleaning		Second Choice	Best Choice	
Light Deburring	Second Choice			Best Choice
Light Finishing	Second Choice			Best Choice
Polishing				Best Choice
Buffing				

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. Wheel Speed	Slow ←	→ Fast
2. Feed Speed	Faster (Long Scratch) ←	→ Slower (Short Scratch)
3. Oscillation	No Oscillation ←	→ Oscillation
4. Lubricants	Dry ←	→ Water
		→ Soluble Oil
		→ Compounds
		→ Straight Oil

Non-Woven Marking System

ABRASIVE	SILICON CARBIDE		ALUMINUM OXIDE	
	←		→	
	SHARPER, FINER/BRIGHTER SCRATCH PATTERN		MORE DURABLE, LONGER LASTING, POLISHED FINISH	
GRIT SIZE	XC (50)	C (60-80)	M (100-150)	F (180-220)
	←		→	
	FASTER, AGGRESSIVE CUT, ROUGHER FINISH		REDUCED CUT RATE, FINER FINISH	
DENSITY	2			9
	←		→	
	SOFT, OPEN, CONFORMABLE, LESS BURNING/LOADING		HARDER, MORE DURABLE, FASTER CUTTING, BETTER FINISH	

Cross Reference Guide

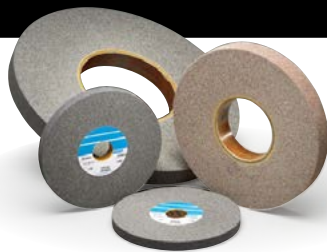
NORTON	BEST	BETTER	BETTER	GOOD	GOOD	GOOD
	Rapid Finish	Series 1000	Metal Finishing	Series 4000	Light Finishing	Clean & Finish
3M	3M EXL, General Purpose	EXL Deburring	Metal Finishing	EX2 & EX3	Light Deburring	Multi Finishing
Standard	General Purpose Plus, Light Deburring	Deburring Convolute	Metal Finishing	GP Plus	LDW	Multi Finishing



See why convolute wheels can be a good choice for centerless and cylindrical grinding in this video.

<https://youtu.be/fLqwBlq6xO8>

Aggressive Deburring



Good choice for heavy deburring applications

SERIES 4000 ALUMINUM OXIDE & SILICON CARBIDE

- High-quality synthetic web provides long life for heavy deburring, edge-breaking, and parting line removal on exotic metals
- Advanced resin bond system ensures free cutting action
- Use both wet and dry

TIER: **GOOD**
TRADENAME: **SERIES 4000**

SIZE (D x T x H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	8 DENSITY PART #	9 DENSITY PART #
6 x 1/2 x 1	S/C	F	6,000	4		6626100 4021
6 x 1 x 1	A/O	M	6,000	3	6626100 4208	
	S/C	F	6,000	3	6626100 4142	6626100 4141
8 x 1 x 3	A/O	M	4,500	3	6626100 4165	
	S/C	F	4,500	3	6626100 4123	6626100 4135
12 x 1 x 5	S/C	F	3,000	2	6626100 4284	6626100 4148
12 x 2 x 5	S/C	F	3,000	1		6626100 4011

General Duty



Best choice for broad range of applications: general deburring, blending, and finishing on all materials including metals, wood, glass

RAPID FINISH GENERAL PURPOSE A/O & S/C

- Eliminate smearing and loading on a wide range of workpieces (from high-nickel-content alloys to aluminum and other soft metals with patent-pending Norton Clean Bond resin technology)
- Increase throughput with a 30% faster finish through new Norton grain/bond configuration, decrease wheel changes with a 10-30% longer life, provided by a new fiber and the high-temperature resin bond
- Ease wheel selection with color-coding wheel to match the primary use (maroon for General Purpose), and fiberglass core to match the abrasive (black for silicon carbide and white for aluminum oxide)

TIER: **BEST**
TRADENAME: **RAPID FINISH GENERAL PURPOSE**

SIZE (D x T x H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	PRODUCT CODE	6 DENSITY PART #	7 DENSITY PART #	8 DENSITY PART #	9 DENSITY PART #
6 x 1/2 x 1	A/O	M	6,000	4	C2315		662611 34177	662611 34178	662611 34179
	S/C	M	6,000	4	C4315				662611 08076
	S/C	F	6,000	4	C4415		662611 33213	662611 06732	662611 12985
6 x 1 x 1	A/O	M	6,000	3	C2315	662611 34180	662611 34181	662611 34182	662611 34183
	A/O	F	6,000	3	C2408	662611 32100	662611 32322	662611 32324	
	S/C	M	6,000	3	C4315		662611 08074	662611 33215	662611 08075
	S/C	F	6,000	3	C4415	662611 14475	662611 19988	636425 77269	636425 81587
	S/C	VF	6,000	3	C4515	662611 31970			
	S/C	VF	6,000	3	C4515				
6 x 2 x 1	A/O	M	6,000	2	C2315		662611 34184		
	S/C	M	6,000	2	C4315		662611 14471		
	S/C	F	6,000	2	C4415		662611 32325		
8 x 1 x 3	S/C	M	4,500	3	C4315		662611 08066	662611 08069	
	S/C	F	4,500	3	C4415	662611 08064	662611 08065	636425 53754	636425 76004
	S/C	VF	4,500	3	C4515				662611 33209
8 x 2 x 3	S/C	M	4,500	2	C4315		662611 14473		
	S/C	F	4,500	2	C4415		662611 14480	662611 14483	662611 14486
	S/C	VF	4,500	2	C4515				662611 33210
10 x 1 x 5	A/O	M	3,600	3	C2315		662611 34185		
	S/C	F	3,600	3	C4415			662611 06554	662611 14488
10 x 2 x 5	S/C	F	3,600	1	C4415			636425 81044	662611 14489
12 x 1 x 5	A/O	M	3,000	2	C2315				662611 34186
	S/C	F	3,000	2	C4415	662611 08053	662611 14481	662611 14484	662611 14074
	S/C	VF	3,000	2	C4515				662611 34187
12 x 2 x 5	S/C	F	3,000	1	C4415		662611 14482	662611 12766	662611 14490

General Duty *continued*



Better choice for general deburring, blending, and final finishing

SERIES 1000 LONG LIFE A/O & S/C

- Offered in variety of web densities: more open, cool-cutting 7 density for light deburring, 8 to 9 density a good starting point for deburring, blending, polishing, and finishing
- Smear- and heat-free resin bond guarantees consistent, high-quality results; uniform grain dispersion and coating clean and condition without gouging or changing dimensions of workpiece
- Conformable and flexible for less operator fatigue

TIER: **BETTER**

TRADENAME: **SERIES 1000 LONG LIFE**

SIZE (D x T x H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	7 DENSITY PART #	8 DENSITY PART #	9 DENSITY PART #
6 x 1/2 x 1	A/O	M	6,000	4	662610 18857		662610 18650
	S/C	M	6,000	4			662610 19540
	S/C	F	6,000	4	662610 18628		662610 55272
6 x 1 x 1	A/O	M	6,000	3	699573 97884	662610 18636	662610 19337
	S/C	M	6,000	3	699573 97882	662610 55250	662610 55371
	S/C	F	6,000	3	662610 55223	662610 55249	662610 18632
8 x 1 x 3	A/O	M	4,500	3	699573 97885	662610 18855	662610 18633
	S/C	M	4,500	3	699573 94610	662610 18673	662610 18997
	S/C	F	4,500	3	662610 18639	662610 18640	662610 18641
12 x 1 x 5	A/O	M	3,000	2	699573 97887		662610 18896
	S/C	M	3,000	2		662610 18786	662610 18908
	S/C	F	3,000	2			662610 18626

Aesthetic Finishing



Better choice for decorative finishing, blending, and final finishing

METAL FINISHING ALUMINUM OXIDE

- Premium, medium grit aluminum oxide grain generates uniform distinct satin and antique finishes
- Dense, very durable web allows these wheels to be used for blending applications; strong resin binder provides resiliency and long life
- Uniform grain dispersion and coating clean and condition without gouging or changing dimensions of workpiece

TIER: **BETTER**

TRADENAME: **METAL FINISHING**

SIZE (D x T x H)	ABRASIVE	GRIT	DENSITY	MAX. RPM	STD. PKG.	PART #
6 x 1 x 1	A/O	M	5	6,000	3	662610 07936
	A/O	M	6	6,000	3	662610 10148
6 x 2 x 1	A/O	M	5	6,000	2	662610 07957
	A/O	M	6	6,000	2	662610 09635
8 x 1 x 3	A/O	M	5	4,500	3	662610 07831
8 x 2 x 3	A/O	M	5	4,500	2	662610 07904
	A/O	M	6	4,500	2	662610 12971
12 x 1 x 5	A/O	M	5	3,000	2	662610 07434
	A/O	M	6	3,000	2	662610 09481
12 x 2 x 5	A/O	M	5	3,000	1	662610 07212
14 x 2 x 8	A/O	M	5	2,550	1	662610 07817

Aesthetic Finishing *continued*

Good choice for light deburring, polishing, and fine finishing applications



LIGHT FINISHING SILICON CARBIDE

- Advanced manufacturing process produces a consistent web and grain distribution for a consistent finish on intricate polishing applications
- Superior form holding for consistent, reliable edge breaking and finishing with minimal wheel dressing and reshaping; less dust and shedding with more uniform wear
- Controlled cut rate prevents "over benching", deburrs and polishes without altering geometry

TIER: **GOOD**

TRADENAME: **LIGHT FINISHING**

SIZE (D x T x H)	ABRASIVE	GRIT	MAX. RPM	6 DENSITY PART #	7 DENSITY PART #	8 DENSITY PART #
6 x 1/2 x 1	S/C	F	6,000	662610 92322	662610 92324	662544 21572
6 x 1 x 1	S/C	F	6,000	662544 03708	662544 03709	662544 21573
8 x 1/2 x 3	S/C	F	4,500	662544 03707	662544 09698	662544 21575
8 x 1 x 3	S/C	F	4,500	662610 95702	662544 09924	662544 21577

All Light Finishing convolute wheels are non-stock. Ask your Norton representative for current lead-times and order quantities.



Good choice for fine finishing with light pressure

CLEAN & FINISH SILICON CARBIDE

- Sharp, more aggressive silicon carbide abrasive leaves a fine/brighter scratch pattern
- Conformable to intricate shapes and contours without changing the workpiece dimension
- Open web construction makes these ideal for low-to moderate-pressure, low speed applications

TIER: **GOOD**

TRADENAME: **CLEAN & FINISH**

SIZE (D x T x H)	ABRASIVE	GRIT	DENSITY	MAX. RPM	STD. PKG.	PART #
4 x 1 x 1	S/C	M	4	4,000	10	662610 58502
		F	4	4,000	10	662610 58501
6 x 1 x 1	S/C	M	4	3,000	4	662610 58507
		F	4	3,000	4	662610 58506
6 x 2 x 1	S/C	M	4	3,000	2	662610 58510
		F	4	3,000	2	662610 58509
6 x 3 x 1	S/C	M	4	3,000	1	662610 58512
6 x 4 x 1	S/C	M	4	3,000	1	662610 58514
8 x 1 x 3	S/C	M	4	2,500	3	662610 58518
8 x 2 x 3	S/C	M	4	2,500	2	662610 58521
8 x 3 x 3	S/C	M	4	2,500	1	662610 58524
8 x 4 x 3	S/C	M	4	2,500	1	662610 58526

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 in many combinations of ID hole reduction

WHEEL CENTER HOLE	BUSHING REDUCES HOLE SIZE TO	FOR WHEEL DIAMETER	STD. PKG.	PART #
1	3/8	4 - 6	1 Pair	662610 80522 NS
	1/2	4 - 6	1 Pair	662610 80523
	5/8	4 - 6	1 Pair	662610 80524
	3/4	4 - 6	1 Pair	662610 80525 NS
	7/8	4 - 6	1 Pair	662610 80526 NS
2	1/2	6	1 Pair	662610 80527 NS
	5/8	6	1 Pair	662610 80528 NS
3	1	6	1 Pair	662610 80529 NS
	1	8	1 Pair	662610 80531
	1-1/4	8	1 Pair	662610 80532
5	1	10 and 12	1 Pair	662610 80533
	1-1/4	10 and 12	1 Pair	662610 80534
	3	10 and 12	1 Pair	662610 80535 NS
8	1-1/4	14	1 Pair	662610 80536 NS

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

TECH TIP

- 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 ANSI B7.1



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 offering 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:

Cleaning and removing imperfections on metal surfaces, cleaning built-up residue, deburring or finishing a variety of surfaces, blending weld seams or creating decorative finishes. Non-woven surface finishing products have excellent versatility.

Abrasive Grain:

Engineered Aluminum Oxide, Aluminum Oxide, Silicon Carbide

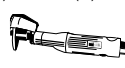
Grit Range:

Extra Coarse (XC), Coarse (C), Medium (M), Fine (F)

Machine Used:



DIE GRINDER



PORTABLE GRINDER



BENCH GRINDER



FLEXIBLE SHAFT GRINDER

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. Wheel Speed	Slow ←	→ Fast
2. Feed Speed	Faster (Long Scratch) ←	→ Slower (Short Scratch)
3. Oscillation	No Oscillation ←	→ Oscillation
4. Lubricants	Dry ←	→ Water ←
		→ Soluble Oil ←
		→ Compounds →

Non-Woven Marking System

ABRASIVE	SILICON CARBIDE	ALUMINUM OXIDE
	←	→
	SHARPER, FINER/BRIGHTER SCRATCH PATTERN	MORE DURABLE, LONGER LASTING, POLISHED FINISH
GRIT SIZE	XC (50)	C (60-80)
	←	→
	FASTER, AGGRESSIVE CUT, ROUGHER FINISH	REDUCED CUT RATE, FINER FINISH
DENSITY	2	9
	←	→
	SOFT, OPEN, CONFORMABLE, LESS BURNING/LOADING	HARDER, MORE DURABLE, FASTER CUTTING, BETTER FINISH

Cross Reference Guide

	BEST	BETTER
NORTON	Vortex Rapid Blend	Rapid Blend NEX
3M	Cut & Polish Unitized, Deburr and Finish PRO	EXL Unitized
Standard	800 & 900 Series	500 - 700 Series

Rapid Blend 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.



Best choice for light weld bead and weld spatter removal, heavy deburring and finishing applications

VORTEX RAPID BLEND ALUMINUM OXIDE

- High-performance, medium grit, engineered aluminum oxide grain and improved resin bond system provide aggressive, fast, stock removal, reduced cycle times, and excellent part quality
- Thick nylon web delivers 2X longer life and faster finishing – with minimal shedding vs competitive wheels
- Controlled porosity ensures cool cutting and improved cut rate

TIER: **BEST**
TRADENAME: **VORTEX RAPID BLEND**
ABRASIVE: Engineered Aluminum Oxide

SIZE (D x T x H)	GRIT SIZE	STD. PKG.	MAX. RPM	3 DENSITY PART #	MAX. RPM	5 DENSITY PART #	MAX. RPM	7 DENSITY PART #	MAX. RPM	9 DENSITY PART #
2 x 1/8 x 1/8	M	60			22,100	662544 25657 NS	22,100	662544 10849 NS		
2 x 1/8 x 1/4	M	60					22,100	662611 191446 NS		
2 x 1/4 x 1/4	M	60	18,000	662544 28456 NS	22,100	662544 33504	22,100	662610 80270		
2 x 1 x 1/4	M	15					22,100	662610 80269 NS		
3 x 1/8 x 1/4	M	40			18,100	662610 93448	18,100	662611 191445		
3 x 1/8 x 3/8	M	40			18,100	662544 33503 NS	18,100	662544 01131 NS		
3 x 1/4 x 1/4	M	40	12,000	662544 28454 NS	18,100	662544 14832	18,100	662611 99696		
3 x 1/4 x 3/8	M	40	12,000	662544 33505 NS	18,100	662544 33506 NS				
3 x 1/2 x 1/4	M	20			18,100	662544 32925	18,100	662610 80267	18,100	662544 33507 NS
3 x 1/2 x 3/8	M	20			18,100	662544 33508	18,100	662610 80266	18,100	662544 20696 NS

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

For Rapid Blend Unified Quick Change discs please see Quick Change disc section.



Better choice for light deburring and blending



RAPID BLEND NEX ALUMINUM OXIDE AND SILICON CARBIDE

- Uniform construction provides extra-long life and holds shape well for less wheel dressing
- Smear free resin binder formula provides smear-free finishes
- A great option for light deburring and blending applications

TIER: **BETTER**

TRADENAME: **RAPID BLEND NEX**

SIZE (D x T x H)	ABRASIVE	GRIT	MAX. RPM	STD. PKG.	2 DENSITY PART #	3 DENSITY PART #	4 DENSITY PART #	6 DENSITY PART #	8 DENSITY PART #
1 x 1 x 3/16	A/O	C	30,000	50					662610 14915
	A/O	M	18,000	50	662610 14891				
	A/O	M	30,000	50				662610 14908	662610 14924
	S/C	F	18,000	50	662610 14883				
	S/C	F	30,000	50				662610 14904	662610 14923
2 x 1/8 x 1/4	A/O	M	22,000	60					662610 14927
2 x 1/4 x 1/4	A/O	M	18,000	60	662610 14892				
	A/O	M	22,000	60					662610 14926
	A/O	F	22,000	60				662610 14901	
	S/C	F	18,000	60	662610 14884				
2 x 1/2 x 1/4	A/O	M	22,000	30					662610 14925
3 x 1/4 x 1/4	A/O	C	18,000	40					662610 14919
	A/O	M	18,000	40				662610 14909	662610 14930
	A/O	F	18,000	40			662610 15565	662610 14902	662610 14902
	S/C	F	12,000	40	662610 14886				
3 x 1/4 x 3/8	A/O	C	18,000	40					662610 14920
	A/O	M	12,000	40	662610 14895				
	A/O	M	18,000	40				662610 14910	662610 14933
	A/O	F	12,000	40			662610 14899		
	S/C	F	12,000	40	662610 14887	662610 16006			
3 x 1/2 x 1/4	A/O	M	12,000	20	662610 14893				
	A/O	M	18,000	20				662610 14928	
	S/C	F	12,000	20	662610 14885				
3 x 1/2 x 3/8	A/O	M	18,000	20					662610 14929
3 x 1 x 3/8	S/C	XC	18,000	10				662610 14914	
6 x 1/2 x 1	A/O	M	7,500	4					662610 14931
6 x 1 x 1	S/C	F	6,000	2	662610 14888				

For Rapid Blend Unified Quick Change discs please see Quick Change disc section.

Assemblies and 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 #
Mandrel Assemblies for Unified Wheels and Discs On Edge								
3/16	1/8 – 1/2	1 – 2	1/4	2	7/16	994	1	662610 09852
1/4 – 5/16	Up to 1/2	Up to 2	1/4	2	5/8	932	1	662610 15146
1/4 – 5/16	Up to 1	Up to 2	1/4	2-1/2	5/8	932	1	662610 59422
	Up to 1	2 – 3	1/4	2-1/2	1	933	1	662610 59421
3/8	Up to 1/2	2 – 4	1/4	2-1/2	1	990	1	662610 09851
1/2	Up to 1	3 – 6	1/4	3-1/8	1-5/8	934	1	662610 09850
Threaded Mandrel for Unified Wheels								
3/16	1 x 1 x 3/16	1/4	1-3/4			948	5	662610 47584



MANDREL ASSEMBLY 662610**59421**



THREADED MANDREL 662610**47584**



MANDREL ASSEMBLY 662610**59422**



Portable file belt sanders have replaced tedious hand filing and sanding. First introduced in pneumatic, they are now also available in electric. Increasingly, tool manufacturers are introducing additional fixtures for additional applications. The belts listed are popular stock sizes, but additional sizes, specifications, backing materials, and edge scallops are available made-to-order.

Applications:

Light weld removal and blending, shape and contour sanding, surface preparation prior to coating and plating, removing cutting tool marks from molds and dies, general clean-up and finishing

Size Range:

1/8" to 1" wide, 12" to 30" long

Grit Range:

40 – 120

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Aluminum Oxide

Machine Used:

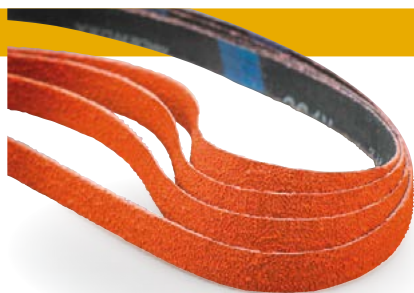

PORTABLE FILE
BELT SANDER

Cross Reference Guide

	BEST	BEST	BETTER	GOOD	GOOD
NORTON	Blaze R980P	RedHeat R983	BlueFire R887D/R823P	Gemini R766	Gemini R283
3M	963G/H, 966F, 967F, 997F, 984F, 784F, 947A	747D, 777F, 778F, 784F, 987F, 977F	577F, 551E	361F, 363F	241E, 244E, 251E, 261E
Hermes	CR456	—	RB48624YX, RB48644Z	RB377XY, SB378	RB530J, RB304J, RB306J
Klingspor	CS610	CS912	CS411X, CS416, CS409	CS412, CS413	CS412
SIA	2515, 2503	—	2800, 2803, 2815, 2829, 2824	—	—
VSM	XK875X, XK885Y, XK880Y	XK870X, XK870X	ZK713X, ZK713T, KK715X	LK719X, KK711X	KK711E
Sait	—	—	AZ-X	1AX, 2AX	LA-X
Sunmght	—	—	—	P656W	—

Material-to-Product Recommendation Guide

	BEST	BEST	BETTER		GOOD	
	Blaze R980P	RedHeat R983	BlueFire R887D	BlueFire R823P	Gemini R766	Gemini R283
Carbon Steel	◆	◆	◆	◆	◆	◆
Stainless Steel / Alloys	◆	◆	◆	◆	◆	
Cast Iron	◆	◆	◆	◆	◆	
Brass / Bronze			◆	◆	◆	
Aluminum			◆	◆	◆	



Best for stainless, cobalt, chrome, inconel, titanium, mild and carbon steel

BLAZE R980P CERAMIC ALUMINA

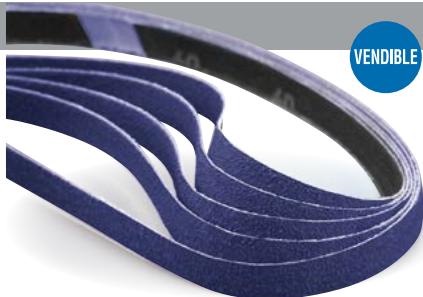
- Next-generation cooler cutting Norton SG ceramic alumina grain lasts 50% to 200% longer on mild and carbon steel, stainless, cobalt, chrome, inconel and titanium with better metal integrity
- Durable Y-weight polyester, waterproof cloth backing for improved grain adhesion, reduced edge-fray, and better body retention, resulting in longer life and product consistency
- Lubricating grinding aid coating means cooler cut, burn-free grinding of heat-sensitive materials, minimized loading, and improved part finish and integrity



Exceptional performance, especially on hard-to-grind alloys

REDHEAT R983 CERAMIC ALUMINA

- Premium ceramic abrasive provides sharp cutting, exceptional life and value, especially on hard-to-grind alloys
- "Supersize" grinding-aid for longer life, cooler cut and minimized loading
- Strong Y-weight polyester, waterproof cloth backing for improved grain adhesion, reduced edge-fray and better body retention, resulting in longer life and product consistency



VENDIBLE

Better choice for stainless and carbon steel

BLUEFIRE R887D/R823P ZIRCONIA ALUMINA

- Strong, self-sharpening zirconia alumina abrasive for fast, aggressive cut and 30% longer life than competitive zirconia belts
- Durable resin bond for excellent grain retention and product life
- Strong Y-weight polyester backing - R887D for heavy-duty stock removal applications; flexible X-weight polyester backing - R823P for moderate- to light-pressure applications



Good choice for difficult-to-grind materials (aluminum, brass, bronze, stainless, carbon steel, titanium, etc.)

GEMINI R766 ALUMINUM OXIDE

- Premium aluminum oxide abrasive blend is ideal when primary purchasing criteria is a good-performing, economically-priced, general-purpose belt
- Y-weight waterproof polyester backing withstands light- to moderately-demanding applications and provides extended life on dry grinding applications
- Resin bond system provides improved edge retention and 30% plus improvement in life versus key competitors



Good choice for stainless and carbon steel applications when initial price is the primary purchasing factor

GEMINI R283 ALUMINUM OXIDE

- P-graded premium aluminum oxide abrasive for consistent, cool cut
- Strong, semi-flexible, smooth X-weight rayon waterproof backing is designed for light- to moderate- pressure applications
- Durable resin coating provides excellent grain retention and product life



TIER:	BEST	BEST	BETTER	GOOD	GOOD
TRADENAME:	BLAZE R980P	REDHEAT R983	BLUEFIRE R887D/R823P	GEMINI R766	GEMINI R283
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Zirconia Alumina	Aluminum Oxide Blend	Aluminum Oxide
BACKING:	Y-Weight Polyester	Y-Weight Polyester	Y- or X-Weight Polyester	Y-Weight Polyester	X-Weight Rayon
OTHER:	Supersize	Supersize			

SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #					
12" Belts												
1/8 x 12	40	50				666233	90000 NS					
	60	50	662544	05345 NS	662544	91522 NS	662610	93029 NS				
	80	50			662544	91523 NS						
	120	50	662544	91519 NS	662544	91524 NS						
1/4 x 12	40	50	662544	91520 NS			666233	90003 NS	662544	91539 NS		
	60	50	662611	96480 NS		780727	58896					
	80	50			662544	91526 NS	780727	82621	666233	90005	780727	66143
	120	50	662610	63632 NS	662544	91527 NS	780727	82622			780727	63175
1/2 x 12	40	50	699573	98018	662544	91528 NS	662544	92522	666233	90006	780727	27557
	50	50	662610	43759	780727	18700			666233	90007 NS	662544	91540 NS
	60	50	699573	98019	780727	18701	780727	28745	666233	90008 NS	780727	27555
	60	25 V					666233	73753				
	80	50	699573	98020	780727	18702	780727	28744	666233	90009	780727	27554
	80	25 V					666233	73754				
	100	50	662610	81180	662544	91529	662544	91534			780727	27553
	120	50	662610	42909	780727	00518 NS	780727	28742			780727	27552
1 x 12	60	50	662610	63641 NS			780727	53073			780727	73813

Additional sizes, grits and scalloped edge belts are available MTO (made-to-order). Contact your Norton representative for availability, order quantities and lead-times.

40 and 50 grit BlueFire belts are furnished in BlueFire R887D (Y-weight Polyester); 60-120 grits are supplied in BlueFire R823P (X-weight Polyester).

Joints - All belts are PG jointed; a butt joint joined with flexible tape for contour grinding.

V = Vendible package. Ideal for vending machines and small jobs. 5 belts per pack / 5 packs per carton. Order in multiples of 25.

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

continued



		TIER: BEST		BEST		BETTER		GOOD		GOOD	
TRADENAME:		BLAZE R980P		REDHEAT R983		BLUEFIRE R887D/R823P		GEMINI R766		GEMINI R283	
ABRASIVE:		Ceramic Alumina		Ceramic Alumina		Zirconia Alumina		Aluminum Oxide Blend		Aluminum Oxide	
BACKING:		Y-Weight Polyester		Y-Weight Polyester		Y- or X-Weight Polyester		Y-Weight Polyester		X-Weight Rayon	
OTHER:		Supersize		Supersize							
SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #
13" Belts											
3/8 x 13	60	50	699573 45359	780727 45459	780727 40295	666233 90011	780727 32112				
	80	50	699573 92150	780727 74916	780727 36062	666233 90012	780727 71323				
18" Belts											
1/8 x 18	40	50	662544 75211								
	60	50	662610 80010		662544 91535 NS	666233 90014 NS					
	80	50	662610 89120	780727 89083	780727 60595 NS	666233 90015 NS					
	120	50	662544 75215	780727 89084	636425 95221 NS						
1/4 x 18	40	50	662610 27923	662611 98953	662544 92525	666233 90016 NS	662544 91543				
	60	50	699573 47249	780727 74684	780727 43583	666233 90017 NS	780727 71000				
	60	25 V			666233 73747						
	80	50	699573 46155	780727 03284	780727 53075		780727 73921				
	80	25 V			666233 73748						
	120	50	662610 85071	780727 85655	780727 73764						
1/2 x 18	40	50	699573 98021	780727 66018	662544 44193	666233 90019	780727 27561				
	60	50	699573 98022	780727 18704	780727 28569	666233 90020	780727 27560				
	60	25 V			666233 73756						
	80	50	699573 98023	780727 18705	780727 28568	666233 90021 NS	780727 27559				
	80	25 V			666233 73757						
	120	50	662610 41384	780727 18706	780727 28567		780727 27558				
3/4 x 18	120	25 V			666233 73758						
	40	50	699573 98027	780727 62476	662544 92526	666233 90022	780727 81797				
	60	50	699573 98028	780727 45691	780727 09590	666233 90023	780727 39966				
	60	25 V			666233 73762						
	80	50	699573 98029	780727 56309	780727 58953	666233 90024	780727 32289				
	80	25 V			666233 73763						
20-1/2" Belts											
3/4 x 20-1/2	40	50	699573 98030	780727 14398	662544 57869	666233 90025	780727 27573				
	50	50	699573 44982	780727 18714	662544 92527	666233 90026 NS	662544 91544				
	60	50	699573 98031	780727 18715	780727 28560	666233 90027 NS	780727 27571				
	60	25 V			666233 73765						
	80	50	699573 98032	780727 18716	780727 28559	666233 90028 NS	780727 27570				
	80	25 V			666233 73766						
	100	50	662610 55516	780727 71151 NS	662610 38911		780727 27569				
	120	50	662610 44755	780727 27380 NS	780727 28557		780727 27575				
24" Belts											
1/4 x 24	40	50	662611 98631	780727 47823	662544 73499 NS		662544 01929 NS				
	60	50	699573 45451	780727 56534	780727 28552	666233 90030 NS	780727 27548				
	60	25 V			666233 73750						
	80	50	636425 96940	780727 18340	780727 67713						
1/2 x 24	120	50	662610 80367	780727 70718	780727 28550						
	40	50	699573 98024	780727 60092	662544 92528	666233 90032	780727 27568				
	50	50	662610 43757	780727 18707	662544 52237	666233 46910 NS	780727 27567				
	60	50	699573 98025	780727 18708	780727 28564	666233 90033	780727 27566				
	60	25 V			666233 73759						
	80	50	699573 98026	780727 18709	780727 28566	666233 90034	780727 27565				
1 x 24	80	25 V			666233 73760						
	100	50	662610 42203	780727 45021	780727 53076		662544 91545				
	120	50	662610 42565	780727 18710	780727 28565		780727 27564				
	40	50	699573 50019	662544 91531 NS							
	50	50	699573 44889 NS	780727 10374 NS			662544 91547 NS				
	60	50	699573 53375 NS								
30" Belts	80	50	699573 45419 NS	780727 72209	780727 76498 NS	666233 34206 NS	662610 85068 NS				
	120	50	662610 85067	662544 91532 NS	780727 30029 NS		662610 85069 NS				
	1 x 30	40	50	662610 53470	662544 78257 NS	666233 90038	662611 89958 NS				
		60	50	699573 45985	780727 28583	666233 90039	662544 91549				
		80	50	699573 46105	780727 64439	780727 28582	666233 90040 NS	780727 27579			
		120	50	662611 93676	780727 81197	780727 66992		780727 27577			

Additional sizes, grits and scalloped edge belts are available MTO (made-to-order). Contact your Norton representative for availability, order quantities and lead-times.

40 and 50 grit BlueFire belts are furnished in BlueFire R887D (Y-weight Polyester); 60-120 grits are supplied in BlueFire R823P (X-weight Polyester).

Joints – All belts are PG jointed; a butt joint joined with flexible tape for contour grinding.

V = Vendible package. Ideal for vending machines and small jobs. 5 belts per pack / 5 packs per carton. Order in multiples of 25. NS Non-Stock, contact your Norton representative.



Portable belts are ideal for all your metal and woodworking applications. Choose 36 – 50 grits for rough/heavy-duty applications, 60 – 100 for intermediate, and 100 – 220 for finishing/polishing applications.

The belts listed are popular stock sizes, but additional sizes, specifications, and backing materials, are available made-to-order.

Applications:

Grinding and finishing all metals, blending welds, sanding and finishing wood, glass seaming, and polishing

Size Range:

3" to 4" wide, 15-1/2" to 24" long

Grit Range:

36 – 220

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Aluminum Oxide

Machine Used:


BELT
SANDER



IN-LINE DRUM
SANDER

Cross Reference Guide

	BEST	BETTER	GOOD
NORTON	RedHeat R983	BlueFire R831	Gemini R215/ Metalite R255
3M	747D, 777F, 778F, 784F, 987F, 977F	577F	240DZ, 340A, 340D
Hermes	—	RB480	RB320
Klingspor	CS912	CS411	LS309XH
Sait	—	Z-H	1A-X, 2A-X, AO-X, LA-X
SIA	—	2800, 2829, 2925	2920, 2928, 2921, 2951, 2925
VSM	XK870X, XK870X	ZK713X	KK504X, KP510E

Material-to-Product Recommendation Guide

	BEST	BETTER	GOOD
	RedHeat R983	Bluefire R831	Gemini R215 Metalite R255
Wood	◆	◆	◆
Carbon Steel / Stainless Steel	◆	◆	◆
Brass / Bronze / Aluminum	◆	◆	◆

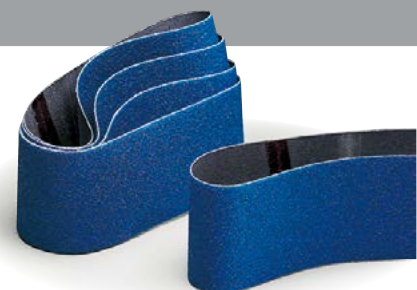
Exceptional performance, especially on hard-to-grind alloys



REDHEAT R983 CERAMIC ALUMINA

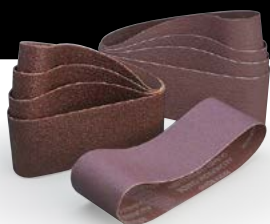
- Premium ceramic abrasive provides sharp cutting, exceptional life and value, especially on hard-to-grind alloys
- "Supersize" grinding-aid for longer life, cooler cut and minimized loading
- Strong Y-weight polyester, waterproof cloth backing for improved grain adhesion, reduced edge-fray and better body retention, resulting in longer life and product consistency

Better choice for stainless steel and wood



BLUEFIRE R831 ZIRCONIA ALUMINA

- Premium, self-sharpening zirconia alumina abrasive provides superior cut on all surfaces, lasts substantially longer, and cuts faster than the next leading competitor in side-by-side comparisons
- Proprietary patented grain technology produces one of the finest scratch patterns in the industry for finer looking finish; open-coat design and strong Y-weight cotton backing for reduced loading and extended life
- Reversible butt splice allows belt to be used in either direction for longer life



Good choice to minimize loading on wood and soft metals - where initial price is the main concern

GEMINI R215 / METALITE R255 ALUMINUM OXIDE

- Premium aluminum oxide abrasive for fast initial cut rate
- Heavy, durable X-weight cotton backing is ideal for heat sensitive applications
- Strong butt joint that allows the belt to be run in either direction

Portable Belts for Belt Sanders

TIER:	BETTER	GOOD
TRADENAME:	BLUEFIRE R831	GEMINI R215
ABRASIVE:	Zirconia Alumina	Aluminum Oxide
BACKING:	Y-Weight Cotton	X-Weight Cotton
JOINT:	Plyweld	Plyweld
GRAIN COATING:	Open Coat	Open Coat
OTHER:		

GOOD	GOOD
GEMINI R215	METALITE R255
Aluminum Oxide	Aluminum Oxide
X-Weight Cotton	X-Weight Cotton
Plyweld	Plyweld
Open Coat	Open Coat
	UPC Bar Coded

SIZE (W x L)	GRIT	PKG./CASE	PART #	PART #	STD. PKG.	PART #	PART #
3 x 18	36				5		780727 80447
	50	5/25*	076607 49259	076607 00964	10		780727 27994
	80	5/25*	076607 49258	076607 00968	10		780727 27993
	120	5/25*	076607 49256	076607 00969	10		780727 27992
3 x 21	36	5/25*	076607 49266	076607 01741			
	40				10		780727 27927
	50	5/25*	076607 49265	076607 01740	10		780727 27926
	60				10	780727 27925	
	80	5/25*	076607 49264	076607 02064	10		780727 27924
	100	5/25*	076607 49263		10		780727 27923
	120	5/25*	076607 49262	076607 02062	10		780727 27922
	220	5/25*		076607 05287			
3 x 24	36	5/25*	076607 49272	076607 01743	5		780727 81847
	40				10		780727 27937
	50	5/25*	076607 49271	076607 01742	10		780727 27936
	60				10	780727 27935	
	80	5/25*		076607 02067	10		780727 27934
	100	5/25*	076607 49269	076607 02066	10		780727 27933
	120	5/25*	076607 49268	076607 02065	10		780727 27932
	180	5/25*	076607 49278	076607 01745	5		780727 80438
4 x 24	36	5/25*			10		780727 27947
	40				10		780727 27946
	50	5/25*	076607 49277	076607 01744	10		
	60				10	780727 27945	
	80	5/25*	076607 49276	076607 02069	10		780727 27944
	100	5/25*			10		780727 27943
	120	5/25*	076607 49274	076607 02068	10		780727 27942
	180	5/25*		076607 05285			

*Job Pack packing standards: 5 belts/Job Pack; 5 Job Packs per case. Order by number of packs, in multiples of 5 packs.

Portable Belts for Pneumatic In-Line Drum Sanders

TIER:	BEST	BETTER	GOOD
TRADENAME:	REDHEAT R983	BLUEFIRE R823P	GEMINI R215
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Aluminum Oxide
BACKING:	Y-Weight Polyester	X-Weight Polyester	X-Weight Cotton
JOINT:	Plyweld	Plyweld	Plyweld
GRAIN COATING:	Closed Coat/Supersize	Closed Coat	Open Coat

SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #
3-1/2 x 15-1/2	36	10	780727 00783		780727 21997
	60	10	780727 18750		780727 22000
	80	10	780727 18751	780727 53074	780727 21995
	120	10	780727 18753		



A broad selection of sizes and grits for most dimensioning, intermediate grinding and polishing applications.

The belts listed are popular stock sizes, but additional sizes, specifications, and backing materials, are available made-to-order.

Applications:

Benchstand and Backstand Belts: grinding and deburring of all metals, heavy stock removal, blending, dimensioning and shaping, polishing.

Centerless, Conveyor and Platen Belts: intermediate grinding stainless and carbon, moderate-pressure applications, dimensioning and finishing.

Size Range:

1" to 10" wide, 36" to 132" long

Grit Range:

24 – 320

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Aluminum Oxide

Machine Used:



BACKSTAND
BELT GRINDER



BENCHSTAND
GRINDER

Cross Reference Guide

	BEST	BEST	BETTER	BETTER	BETTER	GOOD	GOOD
NORTON	Blaze R980P	RedHeat R983	BlueFire R821P	BlueFire R823P	BlueFire R884P	Gemini R766	Gemini R228
3M	963G/H, 966F, 967F, 997F, 984F, 784F, 947A	747D, 777F, 778F, 784F, 987F, 977F	—	551E	561D	361F, 363F	241D, 251D, 341D
Hermes	CR454, CR456	CN464	—	RB486 X, RB346, RB486	RB48024YX, RB48444Z, RB485Z	RB377XY, SB378, RB34MJ	RB320X, HSB
Klingspor	CS610	CS912	CS411X	CS411X, CS416	CS411	CS412, CS413	CS310
SIA	2515, 2503	—	—	—	2820	—	2918, 2928
VSM	XK875X, XK885Y, XK880Y	XK870X, XK870X	—	ZK713X, KK715X	KK716, ZK713T	LK719X, KK711X	KK511X, KK711

Material-to-Product Recommendation Guide

	BEST	BETTER			GOOD	
	Blaze R980P	BlueFire R884P	BlueFire R823P	BlueFire 821P	Gemini R766	Gemini R228
Aluminum		◆	◆		◆	
Cast Iron	◆		◆		◆	
Brass / Bronze		◆	◆		◆	
Die Castings	◆		◆		◆	
Carbon Steel	◆		◆		◆	◆
Glass / Ceramics	◆			◆	◆	
Stainless Steel and Alloys	◆	◆	◆		◆	
Wood		◆			◆	

Grit Selection Recommendation Guide

STOCK REMOVAL	INTERMEDIATE	FINISHING
24 – 50 grit	60 – 100 grit	120 – 320 grit

TECH TIP

Troubleshooting Guide

Problem	Correction	Problem	Correction
Loading	Decrease infeed pressure or belt speed	Belt breakage	Reduce belt tension
Shedding	Reduce applied pressure		Use less aggressive contact wheel
	Use a less aggressive contact wheel		Check tracking mechanism for belts tracking erratically
	Dress contact wheel if worn or damaged		
	Use entire surface of belt		



Best for mild and carbon steel, stainless, cobalt, chrome, inconel, titanium

BLAZE R980P CERAMIC ALUMINA

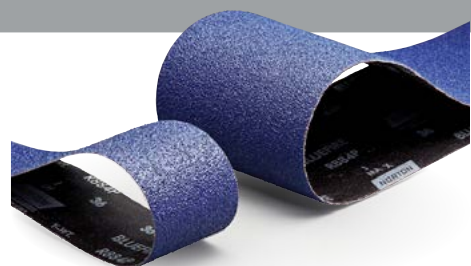
- Next-generation cooler cutting Norton SG ceramic alumina grain lasts 50% to 200% longer on mild and carbon steel, stainless, cobalt, chrome, inconel and titanium with better metal integrity
- Durable Y-weight polyester, waterproof cloth backing for improved grain adhesion, reduced edge-fray, and better body retention, resulting in longer life and product consistency
- Lubricating grinding aid coating means cooler cut, burn-free grinding of heat-sensitive materials, minimized loading, and improved part finish and integrity



Exceptional performance, especially on hard-to-grind alloys

REDHEAT R983 CERAMIC ALUMINA

- Premium ceramic abrasive provides sharp cutting, exceptional life and value, especially on hard-to-grind alloys
- "Supersize" grinding-aid for longer life, cooler cut and minimized loading
- Strong Y-weight polyester, waterproof cloth backing for improved grain adhesion, reduced edge-fray and better body retention, resulting in longer life and product consistency



Better choice for heaviest-pressure applications

BLUEFIRE R821P/R823P/R884P ZIRCONIA ALUMINA

- Strong, self-sharpening zirconia alumina abrasive for fast, aggressive cut and 30% longer life than competitive zirconia belts
- Durable resin bond for excellent grain retention and product life
- R821P Y-weight cotton backing provides durability and even wear on coarser grit stock removal applications;
- R823 has flexible X-weight polyester waterproof backing to excel on light- to moderate-pressure, applications
- R884P has a durable Y-weight polyester waterproof cloth backing that excels on medium- to high pressure applications



Good choice for difficult-to-grind materials (aluminum, brass, bronze, stainless, carbon steel, titanium, etc.)

GEMINI R766 ALUMINUM OXIDE

- Premium aluminum oxide abrasive blend is ideal when primary purchasing criteria is a good-performing, economically-priced, general-purpose belt
- Y-weight waterproof polyester backing withstands light- to moderately-demanding applications and provides extended life on dry grinding applications
- Resin bond system provides improved edge retention and 30% plus improvement in life versus key competitors



Good choice for fine grit metalworking blending and polishing where initial price is the main concern

GEMINI R228 ALUMINUM OXIDE

- Premium aluminum oxide abrasive delivers fast initial cut rate
- Heavy, durable X-weight cotton backing is ideal for heat sensitive applications
- Strong butt joint that allows the belt to be run in either direction

1" to 6" wide, 36" to 72" long



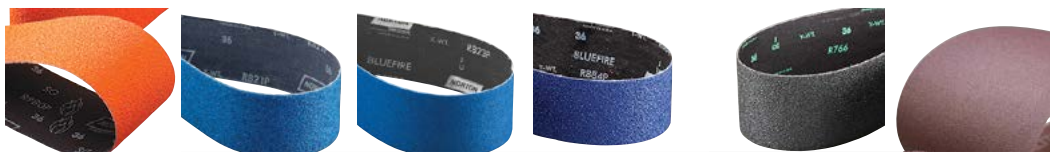
TIER:	BEST	BETTER	BETTER	GOOD	GOOD
TRADENAME:	BLAZE R980P	BLUEFIRE R821P	BLUEFIRE R823P	GEMINI R766	GEMINI R228
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina	Aluminum Oxide Blend	Aluminum Oxide
BACKING:	Y-Weight Polyester	Y-Weight Cotton	X-Weight Polyester	Y-Weight Polyester	X-Weight Cotton
OTHER:	Supersize				

SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
1 x 42	36	50	662544 76825				780727 91710
	40	50	699573 45887 NS	780727 26905			780727 20910
	50	50	662544 76826 NS	780727 26904		666233 90042	780727 20905
	60	50	699573 45486	780727 26903	780727 28596	666233 34502 NS	780727 20900
	80	50	662610 41539	780727 26902	780727 28594	666233 90043 NS	780727 20895
	100	50	662610 43462		780727 28592		780727 20890
	120	50	662610 38660		780727 28590		780727 20885
	150	50			780727 28588		780727 20880
	180	50			780727 28586		780727 20875
	220	50			780727 00001		780727 20871
	240	50					780727 20870
	320	50					780727 20865
							780727 21060
1-1/2 x 60	36	10	699573 45578				
	40	10	636425 95003				
	50	10					780727 87807
	60	10	699573 45631			666233 90045	
	80	10	699573 45579			666233 90046 NS	
	100	10			780727 65077		699573 51736 NS
	120	10	662610 56493 NS		780727 26984		
	220	10			780727 08871 NS		
2 x 48	24	10					780727 26130
	36	10	636425 92057	780727 27103		666233 90047	780727 21255
	40	10	699573 45193	780727 27102		666233 90048 NS	780727 21250
	50	10	699573 46716	780727 27101			780727 21245
	60	10	699573 44423	780727 27100	780727 28621	666233 90050	780727 21240
	80	10	699573 45100	780727 27099	780727 28619	666233 90051	780727 21235
	100	10	662610 52522		780727 28617		780727 21230
	120	10	662610 52520		780727 28615		780727 21225
	150	10			780727 28613		780727 23246
	180	10			780727 28611		780727 21223
	220	10			780727 28609		780727 63677
	320	10					780727 46387
							662610 54787 NS
2 x 60	24	10					780727 01170 NS
	36	10	699573 45196			666233 90052	780727 21300
	40	10	699573 94425	780727 27124			780727 62537
	50	10	699573 46149 NS				780727 21290
	60	10	699573 44901	780727 27122		666233 90055 NS	780727 21285
	80	10	636425 92574	780727 27121		666233 90056 NS	780727 21280
	100	10	662610 52222 NS		662610 82976 NS		780727 21280
	120	10	662610 42738		780727 61958		
	150	10					780727 44018
	180	10			780727 02695		780727 20441
	220	10			780727 06282 NS		780727 44020
	240	10					780727 61862
	320	10					780727 02825
							662610 54787 NS
2 x 72	24	10	662544 33969				780727 21335
	36	10	699573 45460	780727 27147		666233 90057	780727 21332 NS
	40	10	699573 46729	780727 27146		666233 90058 NS	780727 84894
	50	10	699573 44966	780727 27145			780727 21325
	60	10	699573 45157	780727 27144	780727 28645	666233 90060 NS	780727 21320
	80	10	699573 44961	780727 27142	780727 28643	666233 34237 NS	780727 23235
	100	10	662610 41897		662610 25537 NS		780727 21318
	120	10	662610 44095		780727 28639		780727 61973
	150	10			780727 61770 NS		780727 18488
	180	10			780727 63853		780727 65601
	220	10			780727 28633		780727 21308
	320	10					

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

Continued

1" to 6" wide, 36" to 72" long *continued*



TIER:	BEST	BETTER	BETTER	BETTER	GOOD	GOOD
TRADENAME:	BLAZE R980P	BLUEFIRE R821P	BLUEFIRE R823P	BLUEFIRE R884P	GEMINI R766	GEMINI R228
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina	Aluminum Oxide Blend	Aluminum Oxide
BACKING:	Y-Weight Polyester	Y-Weight Cotton	X-Weight Polyester	Y-Weight Polyester	Y-Weight Polyester	X-Weight Cotton
OTHER:	Supersize					

SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
2-1/2 x 48	36	10					666233 90061	780727 21540
	50	10		780727 27213				780727 21530 NS
	60	10					666233 90064	780727 21525
	80	10					666233 90065 NS	780727 21520
2-1/2 x 60	24	10				780727 37759 NS		780727 08296 NS
	36	10	699573 44963	780727 27235			666233 90066 NS	780727 21610
	40	10	699573 46523	780727 27234			666233 90067 NS	780727 21605
	50	10	699573 45300	780727 27233			666233 90068	780727 21600
	60	10	699573 45002	780727 27232	780727 28692	780727 21383 NS	666233 90069 NS	780727 21595
	80	10	699573 46095	780727 27231	780727 28690		666233 90070	780727 21590
	100	10	662610 41380		780727 68991			780727 21585
	120	10			780727 28686			780727 21580
	180	10			780727 28682			780727 21570
	220	10			780727 78217 NS			780727 21565
4 x 36	36	10					666233 90071 NS	780727 22110
	40	10						780727 22105
	50	10		780727 27475			666233 90073	780727 22100
	60	10			780727 28827		666233 90074	780727 22095
	80	10		780727 27473	780727 28825		666233 90075	780727 22090
	100	10			780727 28823			780727 22085
	120	10			780727 28821			780727 22080
	150	10						780727 22079
	180	10						780727 22075
	240	10						780727 22926
4 x 54	320	10						780727 22071
	36	10						780727 22185
	40	10						780727 22180
	50	10					666233 90078 NS	780727 22175
	60	10	662610 63419 NS	780727 27518	780727 25116 NS			780727 22170
	80	10	699573 45139 NS		780727 82996			780727 22165
	100	10						780727 22160
4 x 60	120	10			780727 28847			780727 22155
	150	10						780727 28381 NS
	24	10	662544 61488					780727 72342 NS
	36	10	699573 45298			780727 37955		780727 05189 NS
	40	10	699573 91732					780727 44693
	50	10	699573 46715					780727 61630
	60	10	636425 94485		780727 74790			780727 62861
	80	10	699573 45099		780727 65086			780727 84685
4 x 72	100	10						780727 63161
	120	10	662544 16188		780727 66229			780727 87840
	36	10				780727 25984 NS		
6 x 48	36	10	699573 45143	780727 27698			666233 90081	780727 22590
	40	10		780727 27697			666233 90082	
	50	10		780727 27696			666233 90083 NS	780727 22580
	60	10	699573 44422	780727 27695*	780727 28937*		666233 90084	
	80	10		780727 27694*	780727 28935*		666233 90085	780727 22570
	100	10			780727 28933*			780727 22565
	120	10			780727 28931*			780727 22560
	150	10			780727 70042			780727 22555
	180	10						780727 22550
	220	10						780727 22546
	240	10						780727 22545
	320	10						780727 22543

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

** Std. Pkg. = 20 Belts*

Continued

1" to 6" wide, 36" to 72" long *continued*



TIER:	BEST	BETTER	BETTER	BETTER	GOOD
TRADENAME:	BLAZE R980P	BLUEFIRE R821P	BLUEFIRE R823P	BLUEFIRE R884P	GEMINI R228
ABRASIVE:	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina	Aluminum Oxide
BACKING:	Y-Weight Polyester	Y-Weight Cotton	X-Weight Polyester	Y-Weight Polyester	X-Weight Cotton
OTHER:	Supersize				

SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
6 x 54	60	10				780727 46982 NS	
6 x 60	36	10					780727 22680
	40	10		780727 27762			780727 22679 NS
	60	10	699573 45149	780727 28957 *			780727 22665 *
	80	10			780727 28955		780727 22660 *
	100	10	662544 77452 NS				
	120	10					780727 63882

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

* Std. Pkg. = 20 Belts

Belt Cleaning Stick



- This solid, rubber cleaning stick is designed to remove wood and other non-metallic materials that build up on belt surface during use
- Apply it to the face of the belt, while running, to remove unwanted materials and prolong the overall life of the belt up to 10 times

DESCRIPTION	STD. PKG.	PART #
1-3/8 x 1-3/8 x 6	10	076607 01717

TECH TIP

A light-bodied grease applied to a benchstand belt surface will reduce loading and greatly enhance the belt life and performance when grinding soft, malleable nonferrous materials such as aluminum, brass, bronze and copper.



For non-stock belts, FastTrack Service offers all the benefits of an ISO 9001 quality manufacturer and the advantages of a coated abrasives express belt service. As the industry's leading producer of abrasive material and backings, our FastTrack service offers an extensive range of Norton made-to-order belts including Blaze ceramic alumina, BlueFire zirconia alumina, and versatile aluminum oxide and silicon carbide belts.

Manufacturing Lead-times:

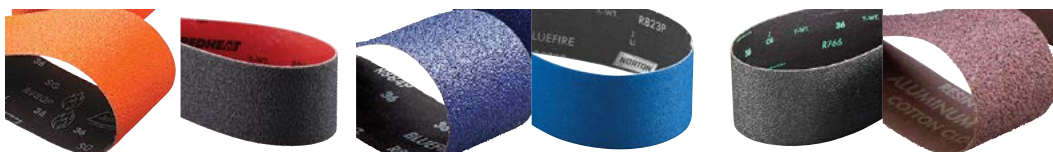
- Narrow belts: (1/2" – 12" wide) two days
- Wide belts (14" – 52" wide) three days

Size Availability:

- Maximum width: 52"
- 1/2" and greater widths; 25" and greater lengths

Please see the FastTrack Service Made-to-Order Belts section of this catalog for complete details.

2" to 10" wide, over 70" long



		TIER:	BEST	BEST	BETTER	BETTER	GOOD	GOOD
		TRADENAME:	BLAZE R980P	REDHEAT R983	BLUEFIRE R884P	BLUEFIRE R823P	GEMINI R766	GEMINI R228
		ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Zirconia Alumina	Zirconia Alumina	Aluminum Oxide Blend	Aluminum Oxide
		BACKING:	Y-Weight Polyester	Y-Weight Polyester	Y-Weight Polyester	X-Weight Polyester	Y-Weight Polyester	X-Weight Cotton
		OTHER:	Supersize	Supersize				
SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
2 x 132	36	10		780727 53086	780727 50016		666233 47337 NS	
	40	10			780727 50015		666233 90089 NS	
	50	10		780727 40771	780727 50013		666233 90090 NS	
	60	10			780727 50011		666233 90091 NS	780727 21445 NS
	80	10		780727 01958	780727 50008		666233 90092 NS	780727 21440
	120	10				780727 28662		
3 x 79	50	10	662610 90276					
	60	10			780727 48280			
3 x 90	36	10	699573 46319					780727 85831
3 x 132	24	10			780727 50140			
	36	10	699573 44710	780727 53087 NS	780727 50138		666233 90093	780727 21900
	36	10			780727 50139			
	40	10	699573 44964	780727 01614 NS				
	50	10	699573 44763 NS	780727 03709	780727 50135			780727 21890
	60	10	699573 44958			780727 28794	666233 90096 NS	780727 21885
	80	10	699573 44764			780727 28792	666233 90097	780727 21880
	100	10				780727 28790		
	120	10				780727 28789		780727 21870
	180	10				780727 28785		780727 21860
4 x 79	36	10		662610 22622				
	40	10			780727 74955			
4 x 100	36	10			780727 68679			
4 x 132	24	10			780727 50289 NS			
	36	10	699573 43852	780727 39662	780727 50287		666233 26093	
	40	10					666233 90098 NS	
	60	10			780727 50281			
	80	10			780727 50279			780727 22385
	120	10						780727 22375
	40	10			780727 25150			
	80	10			780727 38105			
6 x 79	80	10			780727 79322			
	36	10						780727 22795
	50	10						780727 49887
	60	10						780727 22780*
8 x 107	80	10						780727 22775*
	36	10						780727 22840
	40	10						780727 22835
	50	10						780727 22830 NS
	60	10					666233 47345 NS	780727 22825
	80	10					666233 47346	780727 22820

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

* Std. Pkg. = 20 Belts



A small selection of stock products in popular sizes are available for wide belt woodworking and metalworking applications.

Applications:

Metalworking

Metalworking wide belts are used for plate dimensioning, slag grinding, machining, deburring, and other general metalworking applications. They are usually cloth and are closed coat.

Woodworking

Cloth woodworking wide belts are used for rough stock removal and dimensioning. Paper woodworking belts are used to upgrade the finish on furniture and other wood components.

Size Range:

Stock: 25" – 52" wide, 48" to 103" long

Grit Range:

Stock: 36 – 220

Abrasive Grain:

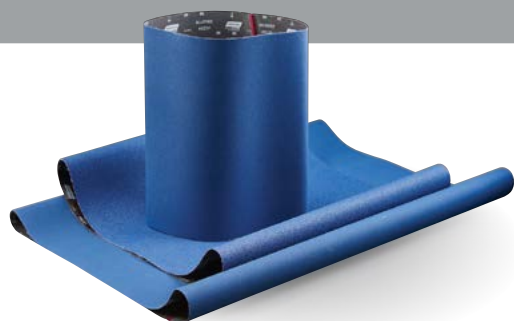
Zirconia Alumina, Aluminum Oxide

Metalworking Cloth Belt Recommendation Guide/Cross Reference

	TOTAL PERFORMANCE						INITIAL PRICE		
	← BETTER			GOOD →					
	H-wt. Polyester	Y-wt. Polyester	H-wt. Polyester	Y-wt. Polyester	X-wt. Polyester	Y-wt. Polyester	X-wt. Polyester	X-wt. Cotton	
NORTON	Blaze R940P	Blaze R980P	BlueFire R840P	BlueFire R887D/R884P	BlueFire R823P	Gemini R766	Gemini R766X	Gemini R228	
3M	966F, 984F, 994F, 997F	963G/H, 966F, 967F, 997F, 984F, 784F, 947A	561F	577F, 561D	551E	361F, 363F	353F, 384F	241D, 251D, 341D	
Ekamant/Uneeda	—	PS991, PS992	PZ628	PZ528, PZ633	XZ677	PA631, PG730, PG830	XA911	XA167	
Hermes	CB441Z	CR456	SB488YR	RB48624YX, RB48644Z, RB48024YX, RB48444Z, RB485Z	RB486	RB377XY, SB378	RB377XY	RB320X, HSB	
Klingspor	—	CS610	CS811	CS409, CS411	CS411X, CS416	CS412, CS413	CS341, CS710	CS310	
SIA	—	2515, 2503	C888DP	2803, 2815, 2829, 2824, 2820	—	—	2820	2918, 2928	
VSM	XK888Z, XK877Z	XK875X, XK885Y, XK880Y	KK717	KK716	ZK713X, ZK713T, KK715X	LK719X, KK711X	LK719X, KK711X	KK511X	

Woodworking Cloth and Paper Belt Recommendation Guide/Cross Reference

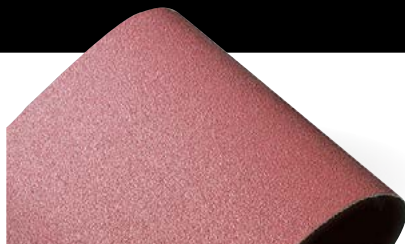
	TOTAL PERFORMANCE						INITIAL PRICE		
	← BETTER			GOOD →					
	Y-wt. Cotton	F-wt. Paper	Y-wt. Cotton	X-wt. Cotton	F-wt. Paper	F-wt. Paper			
NORTON	Dust-Less R963	Dust-Less H975	BlueFire R831	Gemini R215	Dust-Less H295	Dust-Less H275			
3M	960G, 970DZ, 990FZ, 991FZ	966UZ	—	240DZ, 340A, 340D	260UZ	364UZ			
Ekamant/Uneeda	—	—	XZ677	RKX, RKXO	—	ARKFO, EKA1000, EKABlack			
Hermes	—	CB115	RB480	RB320	BW114	BW110, BW114, CB115			
Klingspor	—	—	C409, CS411	LS309XH	PS22	PS29			
SIA	—	—	2803, 2820, 2829	2920, 2928, 2921, 2951	1919	1909, 1918, 1919 CRS, 1993			
VSM	XK760X, XK760Y	XP760	KK713X, KK715X	KK504X, KP510E	KK508E	KP709, KP520, KP508E, KP510E			



Better choice for all metal and wood applications due to the cut rate and life of the proprietary Norton BlueFire grain

BLUEFIRE R884P/R823P ZIRCONIA ALUMINA CLOTH

- Strong, self-sharpening zirconia alumina abrasive for fast, aggressive cut and 30% longer life than competitive zirconia belts
- Durable resin bond for excellent grain retention and product life
- R884P has a durable Y-weight polyester waterproof cloth backing that excels on medium- to high pressure metal applications
- R823 has flexible X-weight polyester waterproof backing to excel on light- to moderate-pressure metal applications



Good choice for abrasive planing and dimensioning of glued-up stock and banded particleboard

GEMINI R215 ALUMINUM OXIDE CLOTH

- Premium aluminum oxide abrasive for fast initial cut rate
- Heavy, durable X-weight cotton backing is ideal for heat sensitive applications
- Strong butt joint that allows the belt to be run in either direction



		TIER: BETTER		TIER: BETTER		TIER: GOOD	
		BLUEFIRE R884P		BLUEFIRE R823P		GEMINI R215	
		Zirconia Alumina		Zirconia Alumina		Aluminum Oxide	
		Y-Weight Polyester Cloth		X-Weight Polyester Cloth		X-Weight Cotton Cloth	
		Plyweld, RR		Plyweld, RR		Plyweld, RR	
SIZE (W x L)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
25 x 48	80	3		69957344781			
25 x 60	80	3		69957328117			
	120	5		69957328115			
25 x 75	120	5		69957344791 NS			
36 x 75	36	2	69957350934				
	60	3	69957350931				
	120	5		69957329014			
37 x 60	180	5		69957344869			
	50	3	69957306219				
	80	3		69957329019		69957325709	
37 x 75	100	5		69957328103		69957325708	
	120	5		69957329018		69957325707	
	150	5		69957328102		69957302955	
	180	5		69957328101			
	220	5		69957328100			
37 x 75	36	2	69957350959				
	50	3	69957305107				
	80	3	69957350955			69957325957	
	100	5				69957323880	
	120	5		69957307358		69957325760	
52 x 75	150	5				69957305737	
	180	5		69957306734			
	120	5		69957313510			

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

Due to the wide varieties of machines and applications, the majority of wide belts are non-stock. Our FastTrack belt service is available on the majority of products with 3-day lead-time on orders up to two cases quantity.

TECH TIP

6" wide belts can be used on machines that normally use 37" wide belts.

FastTrack Service Made-to-Order Belts



For many non-stock belts, our FastTrack belt service offers all the benefits of an ISO 9001 quality manufacturer and the advantages of a coated abrasives express belt service. As the industry leader of abrasive belts, our FastTrack belt service has an extensive range of Norton made-to-order belts including Blaze ceramic alumina, BlueFire zirconia alumina, versatile aluminum oxide, and silicon carbide belts.

Manufacturing lead-time is two days for narrow belts (1/2" – 12" wide) and three days for wide belts (14" – 52" wide). Please see the FastTrack belt service chart below for complete details on availability and lead-time.

FastTrack Availability* and Lead-time Information

WIDTH	GRIT SIZE	MINIMUM ORDER QUANTITY	CASE QUANTITY	MAXIMUM ORDER QUANTITY (EQUALS 2 CASES)	CONVERSION LEAD-TIMES
Narrow Belts					
1/2" through 1"	All	50	200	400	2
Over 1" through 5"	All	10	50	100	2
Over 5" through 9"	All	10	20	40	2
Over 9" through 14"	All	10	10	20	2
Wide Belts					
Over 14" through 20"	All	5	10	20	3
Over 20" through 52"	36 & coarser	2	2	4	3
Over 20" through 52"	40-80	3	3	6	3
Over 20" through 52"	100 & finer	5	5	10	3

* FastTrack belt service applies to belts 25" and greater in length.

How to Place a FastTrack Belt Order

- Check the FastTrack belt availability
- Include a full description of belt: quantity, size, Norton CAP code, and grit size
- Send order electronically, fax, or phone to customer service
- When ordering a belt that does not have an existing part number, please call Customer Service to expedite part number creation

TIER	PRODUCT CAP CODE	SHAPE AVAILABILITY	GRIT SIZE	ABRASIVE GRAIN	BACKING	APPLICATIONS
Metalworking						
Best	R980P	Narrow, Wide	24-120	Blaze Ceramic Alumina	Y-wt. Polyester	Latest-generation Norton SG grain, supersized and designed for high-performance grinding on stainless and other alloys
Best	R984	Narrow, Wide	36-120	SG Ceramic Alumina	Y-wt. Polyester	Norton SG grain for medium-pressure grinding and finishing heat-sensitive alloys
Best	R983	Narrow	P36-P120	Red Heat Ceramic Alumina	Y-wt. Plus	P-graded ceramic alumina abrasive with lubricating supersize coat; engineered for maximum productivity on mild carbon steel, ferrous metal, and cast iron applications
Better	R884P	Narrow, Wide	24, 36-80	BlueFire Zirconia Alumina	Y-wt. Polyester	High-performance zirconia alumina grain designed for medium- to high-pressure grinding
Better	R887D	Narrow, Wide	24, 36-120	BlueFire Zirconia Alumina	Y-wt. Polyester	High-performance zirconia alumina grain, supersized and designed for medium- to high-pressure grinding of heat-sensitive alloys
Better	R823P	Narrow, Wide	60-220	BlueFire Zirconia Alumina	X-wt. Polyester	High-performance zirconia alumina grain on lighter backing designed for light to medium grinding
Good	R766	Narrow	P24-80	Gemini Aluminum Oxide Blend	Y-wt. Polyester	Premium aluminum oxide blend product designed for a variety of applications including soft metals to hard-to-grind stainless and carbon steel
Good	R766X	Narrow, Wide	P60-P400	Gemini Aluminum Oxide Blend	X-wt. Polyester	Quality, P-graded aluminum oxide and broad grit range for stock removal to finer finishing
Good	MX240	Narrow, Wide	P80-P150	Aluminum Oxide	X-wt. Poly/Cotton	P-graded, heat-treated aluminum oxide X-weight cloth with strong, but flexible, cotton/ polyester backing making it an ideal multi-purpose product
Good	R245	Narrow	P80-P240, P320, P400	Aluminum Oxide	J-wt. Polyester	Aluminum oxide on flexible, lightweight polyester backing for moderate- to light- pressure applications on mild steel
Good	KF376	Narrow	P80-P320, P400, P600	Aluminum Oxide	J-wt. Cotton	P-graded, heat-treated aluminum oxide with ceramic coating on a very flexible backing for use wherever flexibility and conformability are needed
Good	R445	Narrow	60-220	Silicon Carbide	X-wt. Polyester	Sharp, silicon carbide grain on medium polyester backing for grinding very hard materials – glass, stone, solid surface
Good	U243	Narrow, Wide to 24"	X80, X65, X45, X30, X22, X16	NORaX Aluminum Oxide	J-wt. Cotton	High-performance, multi-layered NORaX grain on very flexible backing for dry polishing applications
Woodworking						
Best	R963	Narrow, Wide	24-60, P80 100-150	SG Ceramic Alumina	Y-wt. Polyester	Norton SG ceramic alumina grain with anti-static coating for forest product applications (MDF, particleboard, plywood)
Best	R955	Narrow	P36-P120	Red Heat Ceramic Alumina	Y-wt. Cotton	100% ceramic alumina abrasive with Y-weight cloth backing for dimensioning, intermediate sanding of wood
Better	R831	Narrow, Wide	24, 36-120	BlueFire Zirconia Alumina	Y-wt. Cotton	Norton BlueFire open-coat product recommended for dry low-pressure applications or where loading is a problem
Good	R215	Narrow, Wide	50-180	Gemini Aluminum Oxide	X-wt. Cotton	Initial starting specification for woodworking applications where loading is a problem, and initial cost a primary concern
Good	R490	Narrow, Wide	P36-P150	Silicon Carbide	Y-wt. Polyester	Anti-static product for forest product applications (MDF, particle board, plywood) where loading is an issue
Good	R422	Narrow	50-120	Silicon Carbide	X-wt. Cotton	Initial starting specification for woodworking applications where loading is not an issue
Best	H975	Narrow, Wide	60-220	Red Heat Ceramic Alumina	F-wt. Paper	Ceramic alumina grain, antistatic coating, and open coat; the best choice for applications where loading is a problem (soft woods, etc.)
Better	H831	Wide	24,36-120	BlueFire Zirconia Alumina	F-wt. Paper	Durable zirconia alumina grain, antistatic coating, and open coat: the better choice for applications where loading is a problem (soft woods, etc.)
Good	H275B	Narrow, Wide	P60-P220	Aluminum Oxide	F-wt. Paper	Quality aluminum oxide grain, antistatic coating, and open coat make these an economical choice for all heavy-weight paper belt jobs
Better	H475	Narrow, Wide	P120-P400	Onyx Silicon Carbide	F-wt. Paper	Sharp silicon carbide and antistatic coating create finer finishes on hard materials and veneers where finish is critical



Norton non-woven belts are a combination of strong synthetic mesh and quality abrasive, bonded together by a smear-resistant adhesive. The open construction of non-woven material enables aggressive cutting action and improved surface finish while maintaining its non-loading feature.

Watch for new and improved narrow belt and file belt joints.

Applications:

Removing surface defects, light edge burrs, parting lines, flashing, rust, oxides, corrosion, paints, and scale; blending mill marks, tool marks, uneven edges, and applying decorative finishes.

Abrasive Grain:

Ceramic, Engineered Aluminum Oxide, Aluminum Oxide

Grit Range:

Extra Coarse (Black), Coarse (Brown), Medium (Maroon), Fine (Green), Very Fine (Blue)

Machine Used:



PORTABLE FILE
BELT SANDER



BELT
SANDER



IN-LINE DRUM
SANDER



BENCHSTAND
GRINDER



BACKSTAND
BELT GRINDER

Application/Grit Recommendation Guide

	EXTRA COARSE	COARSE	MEDIUM	FINE	VERY FINE
	BEST Choice - Vortex Rapid Prep				
	BETTER Choice - Rapid Prep				
Scale Removal	◆				
Stock Removal		◆			
Heavy Deburring		◆			
Light Deburring			◆		
Light Finishing			◆		
Blending				◆	
Finishing					◆

Flex Key

LF: Low Flex; Highest Density; Stiffest

RF: Regular Flex; Low Stretch

XF: Extra Flexible; Low Stretch; Exceptional Conformability



EXPANDED
OFFERING

Best choice for finishing and blending applications

VORTEX RAPID PREP ALUMINUM OXIDE

- Patented Vortex grain produces the most consistent cutting and finishing action combining the cutting power of a coarser grit with the finish of finer grits
- Premium high-loft nylon fiber bonded to a strong nylon scrim backing allows a uniformly thick layer of resin bond and grain for extended life, durability, and stiffness
- Proprietary Clean Bond resin technology and open coat guarantee smear-free finishes even on high nickel content alloys and minimize loading on aluminum and other soft metals




Better choice for finishing and blending applications

RAPID PREP ALUMINUM OXIDE

- Premium aluminum oxide abrasive grain coating provides up to 20% higher cut rate versus other surface conditioning belts
- Durable nylon fiber bonded to a strong Y-weight polyester backing with extremely low stretch is ideal for applications where low-stretch and durability are necessary
- Proprietary Clean Bond resin technology and open coat guarantee smear-free finishes even on high nickel content alloys and minimize loading on aluminum and other soft metals


File Belts

							
GRIT/COLOR:				COARSE	MEDIUM	FINE	VERY FINE
TIER:				BEST	BEST	BEST	BEST
TRADENAME:				VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP
ABRASIVE:				Ceramic	Ceramic	Ceramic	Ceramic
WIDTH	LENGTH	FLEX	STD. PKG.	PART #	PART #	PART #	PART #
1/4	18	XF	24	662611 58548	662611 58558	662611 58578	662611 58583
1/2	12	XF	24	662611 58547	662611 58555	662611 58577	662611 58582
	18	XF	24	662611 58549	662611 58561	662611 58579	662611 58584
	24	XF	24	662611 58550	662611 58565	662611 58580	662611 58585
3/4	18	XF	12	662611 58552	662611 58576	662611 58581	662611 58586
TIER:				BETTER	BETTER	BETTER	BETTER
TRADENAME:				RAPID PREP	RAPID PREP	RAPID PREP	RAPID PREP
ABRASIVE:				Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
WIDTH	LENGTH	FLEX	STD. PKG.	PART #	PART #	PART #	PART #
1/4	18	XF	24	662610 11420	662610 12524	666233 33424	666233 33511
	24	XF	24	699573 92606	662610 97565	666233 33425	666233 33512
1/2	12	XF	24	662610 03177	662610 06465	666233 18175	662544 99884
	18	XF	24	662610 55309	662610 55310	666233 33426	662610 55311
	24	XF	24	662610 55312	662610 08972	662544 90859	662610 19876
3/4	18	XF	12	662610 02111	662610 15808	662544 90858	662610 03622
	20-1/2	XF	12	662610 83899	662610 03260		666233 33515 NS
1	18	XF	12	662610 07023	662610 17898 NS	666233 33429	666233 33518
	21	XF	12	666233 33412 NS	666233 36005 NS	666233 33430 NS	666233 33519 NS

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

Pump Sleeve Belts




								
GRIT/COLOR:				EXTRA COARSE	COARSE	MEDIUM	FINE	VERY FINE
TIER:				BEST	BEST	BEST	BEST	BEST
TRADENAME:				VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP
ABRASIVE:				Engineered A/O	Engineered A/O	Engineered A/O	Engineered A/O	Engineered A/O
WIDTH	LENGTH	FLEX	STD. PKG.	PART #	PART #	PART #	PART #	PART #
3-1/2	15-1/2	LF	8	666233 33725	666233 35042	666233 35118	666233 33665	666233 35139
3-1/2	15-1/2	RF	8		636425 75499	776960 45732	662611 02432	662611 02436
TIER:				BETTER	BETTER	BETTER	BETTER	BETTER
TRADENAME:				RAPID PREP	RAPID PREP	RAPID PREP	RAPID PREP	RAPID PREP
ABRASIVE:				Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
WIDTH	LENGTH	FLEX	STD. PKG.	PART #	PART #	PART #	PART #	PART #
3-1/2	15-1/2	LF	8	666233 33595	662610 55324	662544 44576	666233 33452	662610 55326



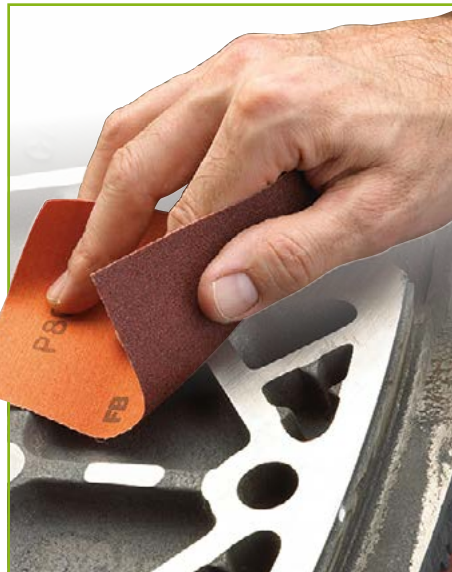
Narrow Belts



									
GRIT/COLOR:					EXTRA COARSE	COARSE	MEDIUM	FINE	VERY FINE
TIER:					BEST	BEST	BEST	BEST	BEST
TRADENAME:					VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP	VORTEX RAPID PREP
ABRASIVE:					Engineered A/O	Engineered A/O	Engineered A/O	Engineered A/O	Engineered A/O
WIDTH	LENGTH	FLEX	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
1	132	RF	8		66623335032	66623335100	66623335080	66261106894	
2	48	RF	10		77696067453	66623335103	66261113853	66261109542	
	60	RF	8		66623333627	63642554551	66623333652	66623333691	
	72	RF	8		66623335036	66623335105	66623333653	66623335134	
	132	RF	6		77696006299	77696006300	77696024093	66623333692	
3	132	RF	4		77696006233	77696006234	66623333664	66623333699	
4	36	RF	6		77696001070	77696001072	66261127506	66623333701	
	72	RF	4		69957370664	69957309696	78072743985	78072743987	
	132	RF	2		66623335044	66623335121	66623333669	66623333703	
6	48	RF	4		66261102442	66623335123	66261102444	66261102435	
TIER: BETTER					BETTER	BETTER	BETTER	BETTER	BETTER
TRADENAME: RAPID PREP					RAPID PREP	RAPID PREP	RAPID PREP	RAPID PREP	RAPID PREP
ABRASIVE: Aluminum Oxide					Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
WIDTH	LENGTH	FLEX	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #
3/4	80	RF	12		66623333411 NS	66623333505	66623333428 NS	66623333516 NS	
1	30	RF	12		66261019801 NS	66623336006 NS	66623333431 NS	66261001972 NS	
	42	RF	12		66261008317	66254441289 NS	66623333432 NS	66623333521 NS	
	60	RF	12					66261055412	
	64	RF	12		66623333414	66623301513 NS	66623333434 NS	66261055413 NS	
	72	RF	12		66261194240	66261006378 NS	66254493830 NS	66261005583	
	132	RF	8		66623314981 NS				
	132	RF	10			66261011414	66254436886	66623333525 NS	
1-1/2	60	RF	8		66623333415 NS	66261007644 NS		66623303624 NS	
2	18-15/16	LF	12			66623333507 NS	66623333436 NS	66623333528	
	34	RF	12		66261063309 NS		66623333437 NS	66623333529 NS	
	48	RF	10		66261006504	66261006648	66623333438	66623333531 NS	
	60	RF	8		66623333416	66261189669	66623333439 NS	66623333532	
	72	RF	8		66261002571 NS	66261007757 NS	66623333440	66261002307	
	132	RF	6				66261069525 NS	66623333533	
2-1/2	60	RF	6		66254429365	66254441491	66623333441 NS	66623333534	
2-3/4	15-1/2	LF	10		66623333417 NS	66623333508 NS		66623333535	
3	10-11/16	LF	12		66261018076 NS	66261067469 NS	66623333443 NS	66623333536 NS	
	18	RF	10	66254428772	66254496043 NS	66254428776 NS	66623333444 NS	66261019836 NS	
	21	RF	10	66623333584	66623333418 NS	66261010870 NS	66623333445 NS	66623333537 NS	
	24	RF	10	66254433359	66623314158 NS		66623333446 NS	66261055593	
	72	RF	6		66623333419 NS	69957396833	66623333447	66261003176 NS	
	80	RF	4		66623333420 NS	66261007149 NS	66623333448 NS	66623333542 NS	
	90	RF	4		66623333421		66623333449 NS	66623333541 NS	
	118	RF	4		66623333422 NS	66623333510 NS	66623333450 NS	66261047121 NS	
	132	RF	4		66254490470	66261055322	66623333451	66623333543 NS	
4	24	RF	8	66623333596	66254495931 NS	66261031667 NS			
	36	RF	6			66261002321 NS	66623333454 NS	66623333546 NS	
	132	RF	2		66261009056	66261006898	66623333455 NS	66623333547	
	168	RF	2		63642576650	66261009174 NS	66623333456 NS	66623333548 NS	
6	48	RF	4		66261055330 NS	66261055331	66623333457	66261055332 NS	

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

If you do not see the Rapid Prep belts you need in our stock offering contact your Norton Representative for made-to-order availability.



Engineered for flexibility and fast cutting, cloth sheets and rolls have a longer life than paper. They tear cleanly and straight without shedding and are packed in a protective dispenser to eliminate waste and damage.

Categories:

Applications:

Size Range:

Grit Range:

Abrasive Grain:

Machine Used:

All purpose, fine finishing, and screen-back

Scouring and light deburring, scale and rust removal, blending and fine sanding, polishing lathe turnings, rolls and cylinders, and blending machine tool marks

Sheets: 9" x 11"

Rolls: 1" x 10 yds., 1-1/2" – 2" x 25 yds., 1" – 4" x 50 yds.

40 – 600, coarse, medium, fine

Aluminum Oxide, Silicon Carbide, Emery



HAND
SANDING



JITTERBUG
SANDER

Cross Reference Guide

NORTON	GOOD Gemini K225	Metal R243	K622 Emery	Screen-Bak Q421
3M	011K	211K, 314D	011K, Emery Cloth	481W, 483W
Hermes	RB317	RB232J	—	GS91350, GS92400
Klingspor	LS309	KL361, LS309	KL371X	—
Sait/United Abrasives	DA-F	EA-F	—	Sait-Screen
SIA	2915	2601, 2915, 2936	1600, 2601	SIA-Screen
VSM	KK114F	KK505J, KK504X	—	—

Application/Starting Recommendation Guide

Durability/Stock Removal	Conformability	Slower Cut	Waterproof
Fast Cut	Excellent Finish	Fine Finish	Load Resistant
Gemini K225	Metal R243	K622 Emery	Screen-Bak Durite Q421

Good choice for general-purpose metal and woodworking applications

GEMINI K225 ALUMINUM OXIDE

- Premium P-graded aluminum oxide abrasive for greater cut rate on general purpose metalworking application
- Flexible J-weight backing for superior conformability to complex surfaces and better finishes
- Advanced full resin bond system for exceptional grain adhesion for longer life

Good choice for small-volume metal and woodworking applications at a low initial price

METAL R243 ALUMINUM OXIDE

- Quality P-graded aluminum oxide abrasive grain delivers fast cut rate and consistent finish on metals
- Smooth, flexible J-weight cotton backing provides superior conformability to complex surfaces and better finishes
- Advanced full resin bond system provides exceptional grain adhesion for longer life on aluminum, fiberglass, composites, hard woods and soft woods

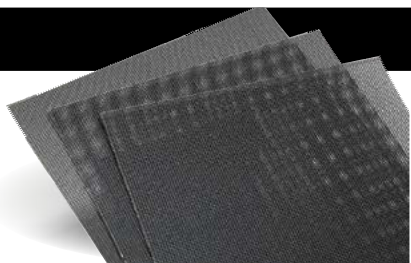
Good choice for removing rust, paint and scale from metal surfaces



K622 EMERY

- Natural emery abrasive for scouring and polishing non-rated metals and utensils
- Abrasive is durabonded onto a flexible cloth backing for durability
- Close coat for the greatest degree of stock removal and longest life

Good choice for sanding softer materials where loading is a major problem such as plastic, copper, brass, plaster, wood, and drywall



SCREEN-BAK Q421 SILICON CARBIDE

- P-graded silicon carbide for excellent cutting and non-loading properties
- Open weave screen for extreme resistance to loading when removing scale, rust and corrosion
- Open mesh design is waterproof and washable, allowing you to rinse and reuse

Cloth and Screen Rolls



TIER:	GOOD	GOOD	GOOD	GOOD	GOOD
TRADENAME:	GEMINI K225	GEMINI K225	GEMINI K225	GEMINI K225	GEMINI K225
ABRASIVE:	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
BACKING:	J-Weight Cotton	J-Weight Cotton	J-Weight Cotton	J-Weight Cotton	J-Weight Cotton
SIZE:	1" x 10 yds	1" x 50 yds	1-1/2" x 50 yds	2" x 50 yds	4" x 50 yds

GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
40	1		66261058716+	66261058715+	66261058714+	
50	1		66261127728+	66261127730+	66261127732+	
60	1		66261127729+	66261127731+	66261127733+	
80	1	66261134298	66261126276	66261126288	66261126299	
100	1	66261134299	66261126275	66261126287	66261126298	
120	1	66261134300	66261126274	66261126286	66261126297	66261127285*
150	1	66261134301	66261126273	66261126285	66261126296	
180	1	66261134302	66261126272	66261126284	66261126295	
220	1		66261126271	66261126283	66261126294	
240	1	66261134303	66261126270	66261126282	66261126293	
280	1		66261126269	66261126281	66261126292	
320	1	66261134304	66261126268	66261126280	66261126291	
400	1		66261126267	66261126279	66261126290	
600	1		66261126266	66261126278	66261126289	

+ 40 - 60 grit, are supplied in durable, but flexible X-weight cotton backing

* Packaging Standards: 4" Roll Std. Pkg.: 6 rolls







TIER:	GOOD	GOOD	GOOD	GOOD	GOOD
TRADENAME:	METAL R243	METAL R243	METAL R243	SCREEN-BAK Q421	SCREEN-BAK Q421
ABRASIVE:	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Silicon Carbide	Silicon Carbide
BACKING:	J-Weight Cotton	J-Weight Cotton	J-Weight Cotton	Mesh	Mesh
SIZE:	1" x 50 yds	1-1/2" x 50 yds	2" x 50 yds	1-1/2" x 25 yds	2" x 25 yds
OTHER:				Waterproof	Waterproof

GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
60	1	66261136178	66261136190	66261136203		
80	1	66261136179	66261136192	66261136204	66261107275*	
100	1	66261136180	66261136194	66261136205		
120	1	66261136181	66261136195	66261136206	66261107270*	66261149811*
150	1	66261136182	66261136196	66261136207		
180	1	66261136186	66261136199	66261136208	66261107265*	
240	1	66261136187	66261136200	66261136209		
320	1	66261136188	66261136201	66261136210		
400	1	66261136189	66261136202	66261136211		

* Packaging Standards: Screen-Bak Q421 Std. Pkg.: 10 rolls

Cloth Sheets

									
TIER:		GOOD		GOOD		GOOD		GOOD	
TRADENAME:		GEMINI K225		METAL R243		K622 EMERY		SCREEN-BAK Q421	
ABRASIVE:		Aluminum Oxide		Aluminum Oxide		Emery		Silicon Carbide	
BACKING:		J-Weight Cotton		J-Weight Cotton		J-Weight Cotton		Mesh	
OTHER:								Waterproof	
SIZE (W x L)	GRIT	PKG./CASE	PART #	PART #	PART #	PKG./CASE	PART #		
9 x 11	40	25/125	662610 58713 +						
	50	25/125	662611 01862 +						
	60	25/125	662611 01861 +						
	80	25/125	662611 26340	662611 79998		25/125	662611 00960		
	100	50/250	662611 26339	662611 81503		25/125	662611 00955		
	120	50/250	662611 26338	662611 81504		25/125	662611 00950		
	150	50/250	662611 26337	662611 81505		25/125	662611 00945		
	180	50/250	662611 26336	662611 80005		25/125	662611 00940		
	220	50/250	662611 26335			25/125	662611 00935		
	240	50/250	662611 26334	662611 81507					
	280	50/250	662611 26333						
	320	50/250	662611 26332	662611 80006		25/125	662611 00920		
	400	50/250	662611 26331	662611 81509		25/125	662611 00915		
	600	50/250	662611 26330						
	Coarse	25/125			076607 01307				
	Medium	50/250			076607 01309				
	Fine	50/250			076607 01308				

+ 40 - 60 grit are supplied in durable, but flexible X-weight cotton backing





Paper sheets and rolls are engineered for optimum performance when sanding metal, wood, composites and painted surfaces. The sheets are packed in protective packaging to eliminate waste and permit easy, neat storage.

Categories:
Applications:

Size Range:
Grit Range:
Abrasive Grain:
Paper Weights:
Machine Used:

All purpose, wood sanding, stearated (non-loading), waterproof, and heavyweight
Light-duty metal sanding, primer sanding, defect removal from painted surfaces, filler sanding, sanding and finishing of composites and fiberglass, bare wood sanding, sanding between sealer coats
Full Sheets, Cut Sheets, File Strips and Rolls
36 – 2500
Ceramic Alumina, Zirconia Alumina, Aluminum Oxide, Silicon Carbide, and Garnet
Heavyweight – E; Lightweight – A through D



HAND
SANDING



JITTERBUG
SANDER



SANDING
BOARD

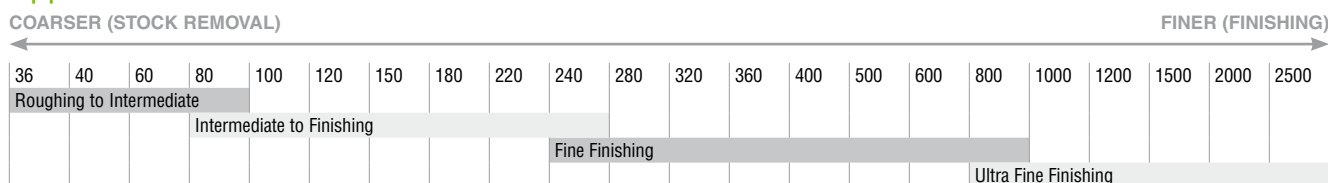
Material-to-Product Recommendation Guide

	BEST						BETTER		GOOD				
	Blaze A995	Dry Ice A975	A2750P	Black Ice T214	Black Ice T401	A259PS	Durite A475	Blue-Bak T414	Gold Reserve A296	PB273	Garnet	TufBak T461	Other
Unfinished Metal	◆	◆	◆						◆	◆			
Primed / Painted Surfaces / Between Coats	◆	◆	◆				◆		◆	◆			
Fiberglass / Composites	◆	◆	◆				◆		◆	◆			
Bare Wood	◆	◆	◆								◆ A511, A513, A514		
Clear Coat Sanding				◆	◆							◆	
Sealer Sanding	◆	◆	◆				◆		◆	◆			
Lacquer Sanding				◆	◆			◆				◆	
Wet Sanding				◆	◆			◆				◆	
Paint Stripping	◆	◆	◆			◆	◆						A290
All Purpose	◆	◆	◆			◆							A212, A213, A211

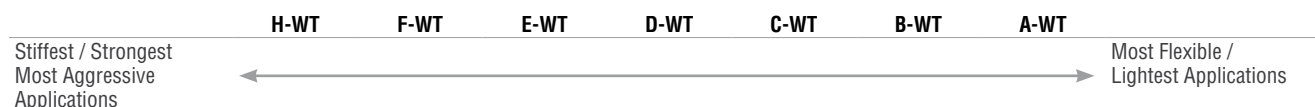
Cross Reference Guide

NORTON	3M	Hermes	Klingspor	Mirka	SIA	VSM
STEARATED (NON-LOADING)						
Blaze A995	732U, 737U, 755L, 775L	CR116	—	—	—	—
Dry Ice A975	334U	—	PS36	—	Siaprime 5550	—
A2750P	216U, 255L, 236U, 260L, 334U	VC154-LL	PS33, PS73W	Q-Silver, Royal Micro	1940, 1944, 1950	—
A259PS	216U, 255L, 236U, 260L, 334U	—	—	—	—	—
Durite A475	405N, 414N, 415U, 426U, 435U	SF168	PL35, PS14	CaratFlex, PolarStar	1748	CP131A
Gold Reserve A296 / PB273	216U, 236U, 316U, 315U, NX	VC154-LL	PS33, PS73W	Q-Silver, Royal Micro, Bulldog Gold	19,401,950	MP10
WATERPROOF						
Blue Ice T214	213Q	WAFlex28	—	—	1913, 1951, 1600	—
Blue Ice T401	401Q, 414Q, 486Q	WSFlex16	PL35	Waterproof (A)	—	CP918A
Blue-Bak T414	413Q	WSFlex 16	PS14	Waterproof (A)	—	CP918A/C
TufBak T461	431Q	WSFlex 18	PS14	—	1727	CP918A/C
ALL PURPOSE/WOOD						
A211	230U, 240N, 346U	—	—	—	—	—
A212	210N	—	PL31	—	—	—
A213	230N	—	PL31	—	—	—
Garnet A511	110N	—	PS10	—	1400	—
Garnet A513	130N	GCAB	—	—	—	—
Garnet A514	140N	GCAB	—	—	—	—
HEAVYWEIGHT PAPER						
BlueFire H875P	740I, 745I, 750U, 751U, 751I	BW110	PS36	Royal CRS. Cut	1820, 1919, 1948	KP510E, KP709

Application/Grit Recommendation Guide



Recommended Backing Weight



Paper Rolls



Best choice for fast cut rate and maximum dust extraction

BLAZE A995 MULTI-AIR CYCLONIC CERAMIC ALUMINA

- P-graded next-generation ceramic aluminum oxide abrasive for fastest cut rate and longest life with innovative spiral hole design to optimize dust extraction
- Proprietary D-weight Polyester-reinforced, flexible latex-saturated backing for 100% improvement in tear strength and edge durability providing longer life in all applications
- Waterbased, non-loading (No-Fil) stearate resists clogging and increases roll life; hook and loop (NorGrip) back for easy mounting and changing



Best choice for the most demanding dry sanding applications

DRYICE A975 CERAMIC ALUMINA

- P-graded, 100% SG ceramic alumina abrasive delivers fastest cut rate and longest life of any paper roll; available in Multi-Air Cyclonic version with laser-cut, spiral, vacuum-hole design to maximizes dust extraction
- Unique fiber reinforced, flexible B-wt. latex saturated paper backing for 50% - 60% improvement in tear strength while retaining flexibility; perforated for easy sizing
- Water-based non-pigmented stearate No-Fil coating provides improved load resistance and no color transfer to work



Better choice for high performance dry sanding applications

A2750P ALUMINUM OXIDE

- Premium P-graded, heat treated, toughened aluminum oxide abrasive delivers superior life, fast cut rate, consistent finish
- Unique fiber reinforced, flexible B-weight latex saturated backing provides 50% - 60% improvement in tear strength while retaining flexibility
- Water-based, non-pigmented stearate No-Fil coating provides maximum load resistance; available in Multi-Air Cyclonic version for maximum dust collection



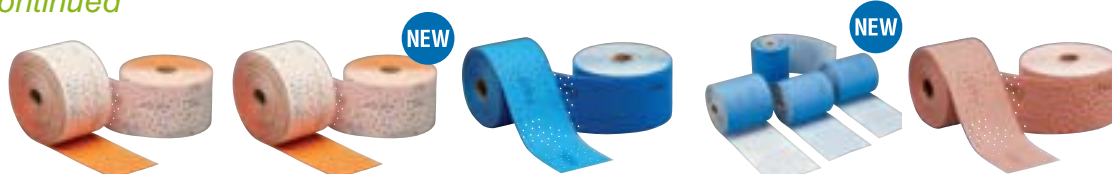
Good choice and value for dry sanding and finishing aluminum, fiberglass, composites, hard woods and soft woods

A296 GOLD ALUMINUM OXIDE

- P-graded premium aluminum oxide abrasive produces a quick, cool cut and a more consistent surface finish
- Strong C-weight paper backing resists tearing while staying conformable and flexible
- Water-based, non-loading No-Fil stearate coating minimizes clogging and increases disc life

Paper Rolls *continued*

Hook and Loop
Paper Rolls
Multi-Air
Cyclonic



TIER:	BEST	BEST	BEST	BEST	BETTER
TRADENAME:	BLAZE A995 NO-FIL MULTI-AIR CYCLONIC	BLAZE A995 NO-FIL MULTI-AIR CYCLONIC	DRY ICE A975 NO-FIL MULTI-AIR CYCLONIC	DRY ICE A975 NO-FIL MULTI-AIR CYCLONIC	A2750P NO-FIL MULTI-AIR CYCLONIC
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Ceramic Alumina	Ceramic Alumina	Aluminum Oxide
BACKING WEIGHT:	D-Weight.	D-Weight.	C- & B-Weight	C-Weight	D-Weight
BACKING ATTACHMENT:	Hook & Loop	Hook & Loop	Hook & Loop	Hook & Loop	Hook & Loop
OTHER:	P-Graded; Perforated	P-Graded; Perforated	P-Graded; Perforated	P-Graded; Perforated	P-Graded; Perforated
SIZE:	2-3/4" x 13 yd	2-3/4" x 9 yd	2-3/4" x 13 yd	4-1/2" x 13 yd	2-3/4" x 13 yd
GRIT	PKG./CASE	PART #	PART #	PART #	PART #
40	1/4		699573 65500		
80	1/4	699573 08899		636425 06113	662611 56064
120	1/4	699573 08900		636425 06114	662611 56065
150	1/4	699573 08901		636425 06117	662611 56066
180	1/4	699573 08902		636425 06118	662611 56067
220	1/4	699573 08903		636425 06119	636425 04663
240	1/4			636425 06120	662611 56068
320	1/4			636425 06121	662611 56070
400	1/4			636425 06122	662611 56071
500	1/4			636425 06123	
600	1/4			636425 06124	

2-3/4" wide hook and loop paper rolls are perforated at 2-3/4" and 4-1/2" wide rolls are perforated every 4-1/2" which allow use on all standard lengths of hand blocks and file boards. Additional grit sizes available, contact your Norton rep for more details.

Hook and Loop
Paper Rolls



TIER:	BEST	
TRADENAME:	DRY ICE A975 NO-FIL	
ABRASIVE:	Ceramic Alumina	
BACKING WEIGHT:	B-Weight.	
BACKING ATTACHMENT:	Hook & Loop	
OTHER:	P-Graded, Perforated	
SIZE:	2-3/4" x 13 yd	
GRIT	PKG./CASE	PART #
80	1/4	636425 06261
120	1/4	636425 06259
150	1/4	636425 06258 NS
180	1/4	636425 06257
220	1/4	636425 06256
320	1/4	636425 06255
400	1/4	666233 29518
500	1/4	666233 29547
600	1/4	666233 29548

2-3/4" wide hook and loop paper rolls are perforated every 2-3/4" which allows use on all standard lengths of hand blocks and file boards.

Additional grit sizes available, contact your Norton rep for more details.

NS Non-Stock, contact your Norton representative for current order quantities and lead times.

Paper Rolls *continued*

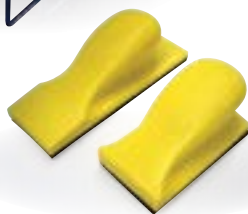
PSA (Pressure Sensitive Adhesive)
Paper Rolls



TIER:	BEST	BEST	BEST	BETTER	BETTER	BETTER	BETTER	GOOD
TRADENAME:	DRY ICE A975 NO-FIL	DRY ICE A975 NO-FIL	DRY ICE A975 NO-FIL	A275 OP NO-FIL	A275 OP NO-FIL	A275 OP NO-FIL	A275 OP NO-FIL	GOLD RESERVE A296 NO-FIL
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Ceramic Alumina	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
BACKING WEIGHT:	C-Weight.	C-Weight.	B-Weight.	B-Weight.	B-Weight.	B-Weight.	B-Weight.	C-Weight
BACKING ATTACHMENT:	PSA	PSA	PSA	PSA	PSA	PSA	PSA	PSA
OTHER:	P-Graded	P-Graded	P-Graded	P-Graded	P-Graded	P-Graded	P-Graded	P-Graded
SIZE:	2-3/4" x 25 yd	2-3/4" x 30 yd	2-3/4" x 45 yd	2-3/4" x 25 yd	2-3/4" x 30 yd	2-3/4" x 45 yd	4-1/2" x 10 yd	2-3/4" x 25 yd
GRIT	PKG./CASE	PART #	PART #	PART #	PART #	PART #	PART #	PART #
80	1/5	662611 49566			662611 31691		662611 31697	636425 06153
100	1/5					662611 31690	662611 31696	
120	1/5		662611 49564			662611 31689	662611 31695	636425 06152
150	1/5			662611 49563			662611 31688	662611 31694
180	1/5			662611 49562			662611 31687	662611 31693
220	1/5			662611 49561			662611 31686	662611 31692
240	1/5						662611 31685	
320	1/5			662611 49558			662611 31683	636425 06148
400	1/5			662611 49557			662611 31681	636425 06147
600	1/5						662611 31679	

Additional attachment options available as non-stock, contact your Norton rep for more details.

Roll Accessories



PSA Roll Dispenser

- Heavy-duty wire dispenser has a vinyl coating to protect the work surface
- Accommodates two 2-3/4" PSA rolls; stackable for multi-grit operations. Attach to wall or mount on cabinet

DESCRIPTION	STD. PKG.	PART #
PSA Roll Dispenser	1	636425 42773

PSA/Hook & Loop Sanding Blocks

- Ergonomically-shaped flexible foam blocks used with 2-3/4" rolls, fit comfortably in your hand
- Firm block produces a truly flat surface
- The soft block is designed for flat surfaces and contours

		BACKING ATTACHMENT: PSA		Hook & Loop
SIZE	DESCRIPTION	STD. PKG.	PART #	PART #
2-3/4 x 5	Soft	5	636425 42090	636425 42092
2-3/4 x 5	Firm	5	636425 42091	636425 42093
2-3/4 x 7-3/4	Soft	5		636425 42095
2-3/4 x 7-3/4	Firm	5	636425 42094	

Paper File Strips

Better choice for soft material applications



BLUEFIRE H875P ZIRCONIA ALUMINA

- Strong zirconia alumina plus abrasive provides 2 - 3 times life over aluminum oxide products
- Strong E-weight paper, synthetically-coated for excellent durability and chip resistance plus superior bond system optimizes grain adhesion and extends product life
- Non-stearated (no anti-loading agents); non-contamination often required for prime auto and aerospace paint applications

Paper File Strips
PSA (Pressure Sensitive Adhesive)
and Non-PSA

TIER:	BEST	BEST	BEST	BEST
TRADENAME:	A2750P NO-FIL	A2750P NO-FIL	A2750P NO-FIL	A2750P NO-FIL
ABRASIVE:	A/O	A/O	A/O	A/O
BACKING WEIGHT:	B-Weight	B-Weight	B-Weight	B-Weight
BACKING ATTACHMENT:	Non-PSA	PSA	Hook/Loop	Hook/Loop Vac
OTHER:	P-Graded	P-Graded	P-Graded	P-Graded

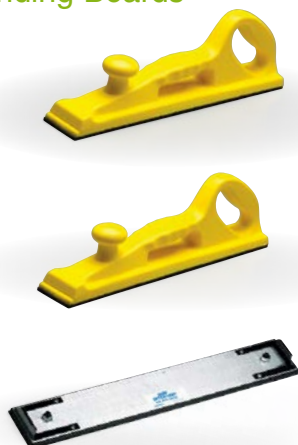
BETTER	BETTER	BETTER
BLUEFIRE H875P	BLUEFIRE H875P	BLUEFIRE H875P
Z/A	Z/A	Z/A
E-Weight	E-Weight	E-Weight
Non-PSA	PSA	Hook/Loop

SIZE (W x L)	GRIT	PKG./ CASE	PART #	PART #	PART #	PART #	PKG./ CASE	PART #	PART #	PKG./ CASE	PART #
2-3/4 x 16	100	50/500				662611	131657				
	120	50/500				662611	131656				
	180	50/500				662611	131654				
2-3/4 x 16-1/2	36						50/250		662611	123610	25/125 662611 123616
	40						50/250		662611	123609	25/125 662611 123615
	80	50/500		662611	131640	662611	131646	50/250	662611	123608	25/125 662611 123614
	100	50/500		662611	131639	662611	131645				
	120	50/500				662611	131644				
	150	50/500		662611	131637	662611	131643				
	180	50/500		662611	131636	662611	131642				
	220	50/500				662611	131641				
2-3/4 x 17-1/2	36						50/250	662611	123622		
	40						50/250	662611	123621		
	80	50/500	662611	131652			50/250	662611	123620		
	100	50/500	662611	131651			50/250	662611	126512		
	120	50/500	662611	131650							
	150	50/500	662611	131649							
	180	50/500	662611	131648			50/250	662611	126511		
	220	50/500	662611	131647							



VACUUM HOLE PATTERN FOR
2-3/4 X 16 FILE STRIPS

Sanding Boards



PSA/Non-PSA Sanding Board

- This sanding board has a cushioned surface
- Spring clips mounted at each end securely hold 2-3/4" x 16-1/2" PSA file strips and 2-3/4" x 17-1/2" non-PSA file strips

Hook and Loop and Non-PSA Sanding Board

- Lightweight, rugged design for easy sanding of plastic fillers
- Spring clips mounted at each end securely hold 2-3/4" x 16-1/2" hook and loop file strips and 2-3/4" x 17-1/2" non-PSA file strips
- Air file shoe eliminates the need for clips. The quick-change backing positively locks and unlocks for fast use.

DESCRIPTION	STD. PKG.	PART #
PSA/Non-PSA File Strip Sanding Board	6	636425 42724
Hook and Loop/Non-PSA File Strip Sanding Board	5	636425 52836
Hook and Loop Air File Shoe	5	636425 52835

Stearated (Non-Loading) 9" x 11" Sheets

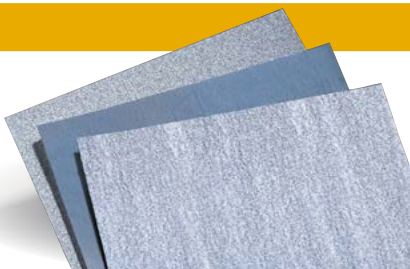
The best choice for sanding painted surfaces, composites, plastics or any material that tends to load



A2750P NO-FIL ALUMINUM OXIDE

- Premium, P-graded, heat-treated aluminum oxide abrasive for consistent surface finish, exceptional performance on all surfaces and coatings
- Unique fiber-reinforced, B-weight latex-saturated backing for 50 - 60 percent improvement in tear strength, exceptional flexibility, can be folded without cracking
- Non-pigmented, water based stearate (anti-clog) coating, open coat for best resistance to clogging and loading during sanding

Best choice for moderate material removal



A259PS NO-FIL ALUMINUM OXIDE

- Premium heat-treated abrasive offers faster cut and long sanding life
- Open coat, non-pigmented, water-based stearate coating prevents color transfer and minimizes loading
- Increased backing weight, fiber-reinforcement and latex saturation offers better grain retention and tear-resistance yet is highly flexible for easy folding and unfolding

The better choice for gel coats, hard composite substrates, abrasion-resistant coatings, and woodworking applications



DURITE A475 NO-FIL SILICON CARBIDE

- P-graded, silicon carbide abrasive for easy penetration of the hardest surfaces
- Water based stearate, non-pigmented, No-Fil coating resists loading for the longest usable product life; no color transfer to work
- Fiber-reinforced, latex paper backing provides flexibility and resistance to tearing

Good choice for fast cuts and an even finish



PB273 NO-FIL ALUMINUM OXIDE

- P-graded, sharp light-brown, aluminum oxide abrasive for fast cut rate, extended life and consistent finish
- Water based non-pigmented stearate provides maximum load resistance and extended life; no dye in coating means no risk of color transfer or finish contamination
- Flexible latex-saturated B-weight backing, with a full resin bond and open coat for improved life

Stearated (Non-Loading) 9" x 11" Sheets *continued*

9 x 11
Paper Sheets



		BEST		BETTER		GOOD	
		A2750P NO-FIL		A259PS NO-FIL		DURITE A475 NO-FIL	
		Aluminum Oxide		Aluminum Oxide		Silicon Carbide	
		B-Weight		C- & B-Weight		B-Weight	
		P-Graded		P-Graded		P-Graded	
SIZE (W x L)	GRIT	PKG./ CASE	PART #	PART #	PART #	PART #	PART #
9 x 11	80	50/250	662611 31634	076607 68174*	662544 87393	666233 11878	
	100	100/500	662611 31633	076607 68173*	662544 87394	666233 11877	
	120	100/500	662611 31632	076607 68172*	662544 87395	666233 11876	
	150	100/500	662611 31631	076607 68171*	662544 87396	666233 11875	
	180	100/500	662611 31630	076607 68168*	662544 87397	666233 11874	
	220	100/500	662611 31629	076607 68167*	662544 87398	666233 11873	
	240	100/500	662611 31628		662544 87399	666233 11879	
	280	100/500	662611 31627				
	320	100/500	662611 31626	076607 68166*	662544 87400	666233 11871	
	400	100/500	662611 31624	076607 68165*		666233 11870	
	500	100/500	662611 31623				
	600	100/500	662611 31622				
	800	100/500	662611 31621				
	1000	100/500	662611 31620				
	1200	100/500	662611 31619				
	1500	100/500	662611 31618				

* Packaging Standards: A259PS Job Packs: 20 sheets per pack / 10 packs per standard package for a total of 200 sheets

Rubber Hand Sanding Blocks

- Resilient rubber blocks that conform well to mild contours and flat surfaces

DESCRIPTION	STD. PKG.	PART #
2-3/4 x 5	5	076607 01889



Waterproof 9" x 11" Sheets

Best choice for superior cut and life in wet applications



BLACK ICE T214 ALUMINUM OXIDE WATERPROOF

- Premium, P-graded, heat-treated aluminum oxide abrasive for ultimate cut and life in wet applications
- Strong resin bond for longer life in wet applications
- High-strength B-weight waterproof latex paper backing is extremely flexible, environmentally stable, and resists humidity-caused curling

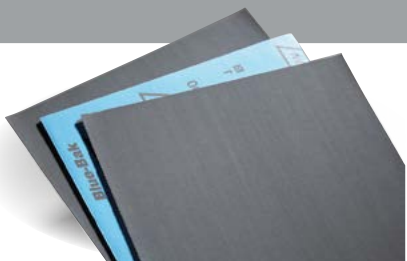
Best choice for superior finish in wet applications



BLACK ICE T401 SILICON CARBIDE WATERPROOF

- Premium, JIS graded ultra-fine silicon carbide abrasive provides the ultimate finish in wet applications
- Strong resin bond for longer life in wet applications
- High-strength B-weight waterproof latex paper backing is extremely flexible, environmentally stable, and resists humidity-caused curling

Better choice for wet finishing applications



BLUE-BAK T414 SILICON CARBIDE

- Sharp, ANSI graded silicon carbide abrasive for exceptional finishes in wet applications
- Strong resin bond for longer life in wet applications
- High-strength B-weight waterproof latex paper backing is extremely flexible, environmentally stable, and resists humidity-caused curling

Good choice for medium material removal in wet applications

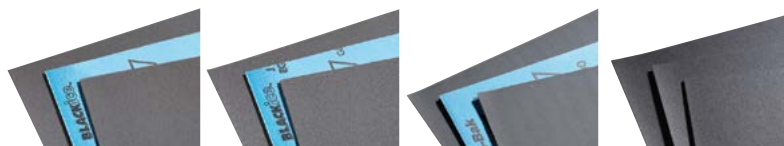


TUFBAK T461 SILICON CARBIDE

- ANSI graded silicon carbide abrasive for fast cutting with excellent finish in wet applications
- Advanced resin bond system for excellent flexibility and abrasive adhesion
- Strong, waterproof C-weight backing is ideal for more aggressive applications while being environmentally stable, resists product curl in humidity

Waterproof 9" x 11" Sheets *continued*

9 x 11
Paper Sheets



		TIER:	BEST	BEST	BETTER	GOOD
		TRADENAME:	BLACK ICE T214	BLACK ICE T401	BLUE-BAK T414	TUFBAK T461
		ABRASIVE:	Aluminum Oxide	Silicon Carbide	Silicon Carbide	Silicon Carbide
		BACKING WEIGHT:	B-Weight	B-Weight	B-Weight	C-Weight
		OTHER:	P-Graded	JIS Graded	ANSI Graded	ANSI Graded
SIZE (W x L)	GRIT	PKG./CASE	PART #	PART #	PART #	PART #
9 x 11	60	50/250				662611 01175
	80	50/250				662611 01170
	100	50/250				662611 01165
	120	50/250				662611 01160
	150	50/250				662611 01155
	180	50/250				662611 01150
	220	50/250	662611 39389		662611 39367	
	240	50/250	662611 39388		662611 39366	662611 30331
	280	50/250			662611 39365	
	320	50/250	662611 39386		662611 39364	662611 30332
	360	50/250			662611 39363	
	400	50/250	662611 39385		662611 39362	662611 30333
	500	50/250	662611 39384		662611 39361	
	600	50/250	662611 39383		662611 39360	662611 30334
	800	50/250	662611 39382			
	1000	50/250		662611 39381		
	1200	50/250		662611 39380		
	1500	50/250		662611 39379		
	2000	50/250		662611 39378		
	2500	50/250		662611 39377		

Waterproof Sanding Blocks – with “Grabbing” Power



Dual Density Wet Sanding Block

- No adhesive required: simply wrap a 5-1/2" x 9" (9" x 11" cut in half) sheet around the block
- The dense side is for more aggressive blocking, while the soft side is for color sanding
- Equalizes sanding pressure for fine grit applications

Holey Block

- No adhesive required: simply wrap a 5-1/2" x 9" (9" x 11" cut in half) sheet around the block
- A rugged, semi-rigid, multi-purpose sanding block engineered for flat to medium curved surfaces
- A tactical hole pattern side provides numerous cutting edges to create a 30% faster cut rate
- The plain side provides firmness and a comfortable, easy-to-hold surface

DESCRIPTION	STD. PKG.	PART #
Wet Sanding Block	12	636425 03728
Holey Block	8	636425 03729

All-Purpose 9" x 11" Paper Sheets



Good choice for your wood, metal or composite sanding projects

A211/A212/A213 ALUMINUM OXIDE

- P-graded, aluminum oxide grain, open-coat provides aggressive, long-lasting cutting action
- Use for dry, general purpose hand sanding on hardwood, metal, and composites
- Available in multiple backing weights: A212 A-weight, A213 C-weight, A211 D-weight



Good choice for use on soft woods such as pine

A513/A511 GARNET

- Natural garnet abrasive is ideal for soft woods, such as pine, and produces an excellent, consistent finish
- Use dry on bare wood prior to coating
- Available in two backing weights: A511 A-wt. and A513 C-wt. for heavy-duty to light-duty hand sanding

9 x 11
Paper Sheets



TIER:	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
TRADENAME:	A211	A213	A212	MULTISAND A213/A212	A513	A511	WOODSAND A513/A511
ABRASIVE:	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Garnet	Garnet	Garnet
BACKING WEIGHT:	D-Weight	C-Weight	A-Weight	D-, C- & A-Weight	D- & C-Weight	A-Weight	D-, C- & A-Weight
OTHER:	P-Graded	P-Graded	P-Graded	P-Graded			

SIZE (W x L)	GRIT	PKG./CASE	PART #	PART #	PART #	PART #	PART #	PART #	PART #	
9 x 11	36	25/125	662611	00335						
	40	25/125	662611	00330						
	50	50/250	662611	00325						
	60	50/250			662611	00320		662611	01560	
	80	50/250			662611	00315		662611	01555	
	100	100/500			662611	00295		662611	01505	
	120	100/500			662611	00290	076607	00353*	662611	01500
	150	100/500			662611	00285	076607	00357*	662611	01495
	180	100/500					076607	00356*	662611	01490
	220	100/500					662611	00245	076607	00355*
Asst+	100/500					076607	00156	076607	00354*	
						076607	00365*		662611	01488
									076607	01579*

* Packaging Standards: Job Packs: 25 sheets per pack / 10 packs per standard package for a total of 250 sheets
+ Assorted contains 6 each of 60, 100, 150 grit and 7 each of 220 grit

3-2/3 x 9
Paper Cut Sheets



TIER:	GOOD	GOOD
TRADENAME:	A290 NO-FIL	A213
ABRASIVE:	Aluminum Oxide	Aluminum Oxide
BACKING WEIGHT:	C-Weight	C-Weight
OTHER:	P-Graded	P-Graded

SIZE (W x L)	GRIT	PKG./CASE	PART #	PART #
3-2/3 x 9	60	100/1000		662611 02925
	80	100/1000	662611 01119	662611 02920
	100	100/1000		662611 02900
	180	100/1000	662611 01124	
	220	100/1000	662611 01123	



Surface finishing rolls are made of a non-woven nylon web impregnated with abrasive grain and resin bond.

Applications:

Light- to heavy-duty cleaning, deburring, blending, polishing, and finishing of metal, wood, composite, plastics, stone, solid surface and painted surfaces.

Abrasive Grain:

Aluminum Oxide, Silicon Carbide

Grit Range:

Medium (M), Fine (F), Very Fine (VF), Ultra Fine (UF), Micro Fine (MF)

Roll Features:

- Economical alternative to cut pads
- Can be cut to specific sizes

Machine Used:



HAND
SANDING



JITTERBUG
SANDER

Application/Grit Recommendation Guide

MORE AGGRESSIVE, ROUGHER FINISH

LESS AGGRESSIVE, FINER FINISH



PRODUCT #:	#740	#644	#747	#635	#851	#777	HIGH STRENGTH
COLOR:	Dark Tan	Maroon	Maroon	Gray	Gray	Maroon	Maroon
DESCRIPTION:	Heavy Duty	GP – Fine	GP Plus – Very Fine	Clean & Finish	General Cleaning	General Purpose	High Strength
ABRASIVE:	A0	A0	A0	SC	SC	A0	A0
GRIT SIZE:	Medium 100 - 150	Fine 180 - 220	Very Fine 240 - 360	Ultra Fine 400 - 600	Very Fine 240 - 360	Very Fine 240 - 360	Medium 100 - 150
STEEL WOOL EQUIVALENT:	4 Extra Coarse	2 Medium Coarse	1 Medium	00 Very Fine	00 Very Fine	1 Medium	4 Extra Coarse
APPLICATIONS:	<ul style="list-style-type: none"> • Smear-free Clean Bond technology • 2X life • Most durable and aggressive cutting pad • Heavy-duty removal <ul style="list-style-type: none"> » rust » oxidation • Deburring 	<ul style="list-style-type: none"> • Cleaning and deburring <ul style="list-style-type: none"> » machinery » metal parts » plastic » solid surface » stone 	<ul style="list-style-type: none"> • Light cleaning, deburring and finishing <ul style="list-style-type: none"> » machinery » metal parts » plastic » solid surface » stone 	<ul style="list-style-type: none"> • Light cleaning and finishing of most surfaces <ul style="list-style-type: none"> » steel, aluminum » denibbing plastic » scuffing acrylics 	<ul style="list-style-type: none"> • Light cleaning and finishing of most surfaces <ul style="list-style-type: none"> » steel, aluminum » denibbing plastic » scuffing acrylics 	<ul style="list-style-type: none"> • Light cleaning, deburring and finishing <ul style="list-style-type: none"> » machinery » metal parts » plastic » solid surface » stone 	<ul style="list-style-type: none"> • Moderate deburring and surface blending

TIER: BEST							BETTER
SIZE (W x L)	COLOR	DESCRIPTION	ABRASIVE	GRIT SIZE	STD. PKG.	PART #	PART #
Non-Woven Rolls							
4" x 30 Ft.	Maroon	High Strength Roll	A/O	M	3	662610 06358 NS	
	Dark Tan	740 Heavy-Duty Roll	A/O	M	3		662610 10081
	Maroon	644 General Purpose Fine Roll	A/O	F	4		662610 58364
	Maroon	777 General Purpose Very Fine Roll	A/O	VF	4	662610 06373	662610 58361
	Maroon	747 General Purpose Plus Roll	A/O	VF	4		662610 51701
	Gray	851 General Cleaning Roll	S/C	VF	4		662610 58360
	Gray	635 Clean & Finish Roll	S/C	UF	5		662610 58357
6" x 30 Ft.	Maroon	High Strength Roll	A/O	M	2	662610 05182	
	Maroon	747 General Purpose Plus Roll	A/O	VF	3		662610 16430
	Maroon	777 General Purpose Very Fine Roll	A/O	VF	3	662610 04281	662610 58376
	Gray	851 General Cleaning Roll	S/C	VF	3		662610 58377
2" x 15 Ft. Handy Roll Pack	Assorted	1 each A/O Fine, A/O VF, SC MF	–	–	1		662610 08108

NS Non-Stock, contact your Norton representative for current order quantities and lead times.



Flexible, abrasive sanding sponges for a wide variety of curved, contoured or flat surface applications on wood, metal, paint, plastic, ceramics and drywall.

Applications:

Light stock removal, sanding sealer and wash-coats, touch-up or repair of primer, sanding contours and intricate shapes, and finishing

Benefits:

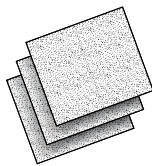
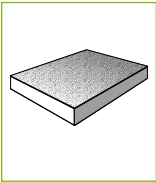
- Can be used wet or dry
- Clog resistant, washable, reusable
- Easy to use, can be folded without cracking
- Conformable
- Generate a consistent surface finish

Machine Used:



HAND
SANDING

Why Choose Abrasive Sponges Versus Conventional Sheets?



Eliminate Clogging

- The combination of flexible foam backing material and abrasive grit adhesion continually releases sanded material
- Any clogging can be washed out

Pressure Control

- Foam backing allows optimum pressure distribution to prevent sanding through surfaces
- Pressure spots are eliminated providing even surface pattern

Adapt to Contours

- Flexible foam allows adaptability to contours, shapes or areas of limited access
- No folding or buckling results in an even pattern without scratching

Surface Finishing Chart – Contour Sponges versus Sheets

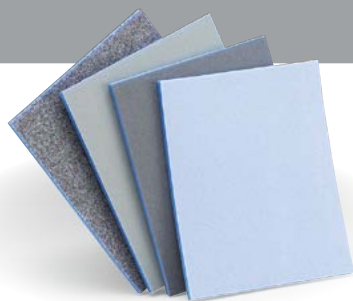
	COARSER ←												FINER →
SHEETS	P150	P180	P220	P280	P320	P400	P500	P600	P800	P1000	P1200	P1500	P2000
SPONGES	Medium 60		Fine 100		Extra Fine 150		Super Fine 180		Ultra Fine 220		Micro Fine 280/320		

Surface Finishing Chart – Sponges versus Sheets

	COARSER ←												FINER →	
SHEETS	P80	P100	P120	P150	P180	P220	P280	P320	P400	P500	P600	P800	P1000	P1200
SPONGES	Extra Coarse 36													
			Coarse 60											
					Medium 80 - 120									
							Fine 120 - 150							
								Very Fine 180 - 220						
													Micro Fine 280 - 320	

Cross Reference Guide

	BETTER	GOOD	GOOD	GOOD	GOOD	GOOD
NORTON	SoftTouch	Contour	Small Area	Profile	Sealer Sanding	Flexible
3M	Softback	Contour	Full Size	High Flexibility	Woodworking	Pro Pads
Hermes	Single Side	—	Four Sided	—	Two Sided	—
Klingspor	—	—	—	—	Foam Sanding Pad	—
SIA	Flat Pad	—	Standard Block	—	Standard Pad	—



For hand-sanding or finishing flat, curved, contoured and hard-to-reach areas on wood, metal, composites, paint and solid surfaces

SOFTTOUCH CONTOUR SPONGES – COATED 1 SIDE

- Superior flexibility
- Premium foam substrate provides for an extremely smooth and uniform sanded surface

SIZE (W x L x T)	GRIT	STD. PKG.	PART #
4-1/2 x 5-1/2 x 3/16	60 Medium	80	076607 03074
	100 Fine	80	076607 03075
	180 Super Fine	80	076607 03076
	220 Ultra Fine	80	076607 03077
	280 Micro Fine	80	076607 03078



Good for sanding small diameters and contours

CONTOUR SPONGES – COATED 1 SIDE

- Thin, flexible; good for sanding small diameters and contours such as ceramics, spindles, turnings and railings

SIZE (W x L x T)	GRIT	STD. PKG.	PART #
4-1/2 x 5-1/2 x 3/16	100 Fine	100	076607 02257
	150 Extra Fine	100	076607 02256
	220 Ultra Fine	100	076607 02255

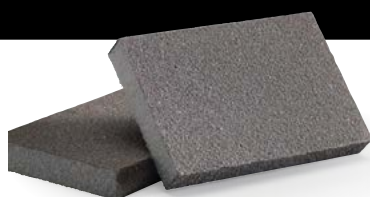


Good for a wide variety of materials and sanding applications where moderate flexibility is needed

SMALL AREA GENERAL PURPOSE SPONGES – COATED 4 SIDES

- Medium to firm density open cell polyurethane foam provides uniform support and moderately aggressive cutting action while generating a smooth surface

SIZE (W x L x T)	GRIT	STD. PKG.	PART #	BULK PKG.	PART #
4 x 2-3/4 x 1	36/80	24	076607 49505	250	076607 04735
	Ex. Coarse/Med	24	076607 49507	250	076607 01875
	80/80	24	076607 49504	250	076607 02600
	Med/Med	24	076607 49504	250	076607 02600
	80/120	24	076607 49504	250	076607 02600
120/120	Med/Fine	24	076607 49506		
	Fine/Fine	24	076607 49506		

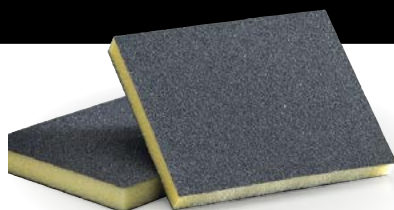


Good for corners and flat surfaces on wood, metal, plastic and paint

PROFILE SPONGES – COATED 3 SIDES

- Ideal for cabinet sanding of raised profile doors

SIZE (W x L x T)	GRIT	STD. PKG.	PART #
4 x 2-3/4 x 1/2	100 Medium	500	636425 36313



Good for sanding primers, sealers and between coats on furniture and cabinets

SEALER SANDING SPONGES – COATED 2 SIDES

- Very flexible; silicon carbide abrasive for sanding primers, sealers and between coats on furniture and cabinets

SIZE (W x L x T)	GRIT	BULK PKG.	PART #
4-3/4 x 3-3/4 x 1/2	36 Extra Coarse	250	636425 02538
	60 Coarse	250	636425 52870
	100 Medium	250	636425 52869
	220 Very Fine	250	636425 52868



Ideal for final sanding of surfaces, primer sanding, and between coats sanding

FLEXIBLE ABRASIVE SPONGES – COATED 1 SIDE

- Best initial price point for abrasive sponges

SIZE (W x L x T)	GRIT	STD. PKG.	PART #	BULK PKG.	PART #
3 x 4 x 1/2	60 Coarse	48	076607 04068	108	076607 01110
	80 Medium	48	076607 04067	108	076607 04070
	100 Medium	48	076607 04066	108	076607 00950
	150 Fine	48	076607 04065	108	076607 00949
	220 Very Fine			108	076607 04069

Non-Woven Hand Pads and Sponges



Surface finishing hand pads are made of a non-woven nylon web impregnated with abrasive grain and resin bond.

Applications:

Light- to heavy-duty cleaning, deburring, blending, polishing, and finishing of metal, wood, composite, plastics, stone, solid surface and painted surfaces.

Abrasive Grain:

Aluminum Oxide, Silicon Carbide

Grit Range:

Medium (M), Fine (F), Very Fine (VF), Ultra Fine (UF), Micro Fine (MF), Non-Abrasive (-)

Hand Pad Features:

- Flexible; conform to work surface
- Gentle action easily removes flashing or burrs without affecting dimension of workpiece
- Non-loading; constant supply of new cutting edges
- Non-rusting; no workpiece contamination
- Resilient construction; long life, increased productivity; solvent resistant; waterproof

Sponge Pad Features:

- Non-woven material is laminated to a long-lasting sponge for the convenience of 2 pads in one
- Superior replacement for steel wool

Machine Used:



HAND
SANDING



JITTERBUG
SANDER

Application/Grit Recommendation Guide

MORE AGGRESSIVE, ROUGHER FINISH

LESS AGGRESSIVE, FINER FINISH



PRODUCT #:	#740	#746	#644	#747	#796	#635	#748	THIN-FLEX VF	THIN-FLEX UF	THIN-FLEX BP	#456
COLOR:	Dark Tan	Gray	Maroon	Maroon	Green	Gray	Gray	Maroon	Gray	Gold	White
DESCRIPTION:	Heavy Duty	Blending	GP - Fine	GP Plus - Very Fine	Scouring	Clean & Finish	Final Shine	Cleaning	Cleaning	Blend Prep	Cleaning
ABRASIVE:	AO	SC	AO	AO	AO	SC	SC	AO	SC	AO	Non-Abrasive
GRIT SIZE:	Medium 100 - 150	Medium 100 - 150	Fine 180 - 220	Very Fine 240 - 360	Very Fine 240 - 360	Ultra Fine 400 - 600	Micro Fine 800 - 1200	Very Fine 240 - 360	Ultra Fine 400 - 600	Micro-Fine 800 - 1200	Non-Abrasive - - - -
STEEL WOOL EQUIVALENT:	4 Extra Coarse	3 Coarse	2 Medium Coarse	1 Medium	0 Fine	00 Very Fine	00 Very Fine	00 Very Fine	000 Extra Fine	000 Extra Fine	0000 Super Fine
APPLICATIONS:	<ul style="list-style-type: none"> • Smear-free Clean Bond technology • 2X life • Most durable and aggressive cutting pad • Heavy-duty removal » rust » oxidation • Deburring 	<ul style="list-style-type: none"> • Blending and deburring » welds » aluminum » stainless 	<ul style="list-style-type: none"> • Cleaning and deburring » machinery » metal parts » plastic » solid surface » stone 	<ul style="list-style-type: none"> • Light cleaning, deburring and finishing » machinery » metal parts » plastic » solid surface » stone 	<ul style="list-style-type: none"> • Removing stains, marks, rust, corrosion or oxidation from stainless equipment • Light cleaning of metal surfaces 	<ul style="list-style-type: none"> • Light cleaning and finishing of most surfaces » steel, aluminum » denibbing plastic » scuffing acrylics 	<ul style="list-style-type: none"> • Final finishing » final rub on wood » final blend on metal » final finish on plastics and acrylics 	<ul style="list-style-type: none"> • Maximum flexibility for consistent finishes • Cleaning blending, finishing, and deburring in woodwork, metalwork, MRO, and synthetic applications 	<ul style="list-style-type: none"> • Maximum flexibility for consistent finishes • Cleaning blending, finishing, and deburring in woodwork, metalwork, MRO, and synthetic applications 	<ul style="list-style-type: none"> • Fine cleaning • Fine polishing (most surfaces) • Top coat finishing (water-based and solvent) 	<ul style="list-style-type: none"> • Scratch-free cleaning » metal » fiberglass » stone » solid surface » ceramic • Wood » high-lighting » rubbing

Cross Reference Guide

COARSER

FINER

NORTON	#740	#746	#644	#747/847	#796	#635	#748	Thin-Flex VF	Thin Flex UF	#456
3M	7440	7446	64659	7447/8447 Production Hand Pad	96	64660	7448	Multi-Flex Maroon	Multi-Flex Gray	7445
Camel	Tan	—	—	Maroon	Green	—	Grey	—	—	White
Mirka	—	—	—	Maroon/Red VF	—	—	—	Mirlon Total Maroon	Mirlon Total Gray	—
Sait	Brown	—	—	Maroon	Green	—	Gray	—	—	—
SIA	6912 Brown	6712 Grey	—	6912 Maroon	6312 Green	—	—	—	—	—
Standard	HD-Tan AO	—	—	GP-Maroon VF	Green-AO	HP-VF	UF Gray	—	—	Cleaning White

					TIER:	BEST	BETTER
SIZE (W x L)	COLOR	DESCRIPTION	ABRASIVE	GRIT SIZE	STD. PKG.	PART #	PART #
Hand Pads							
4-1/2 x 9	Maroon	Thin Flex Cleaning Pad	A/O	VF	25	666233	98062
	Grey	Thin Flex Cleaning Pad	S/C	UF	25	666233	98063
	Gold	Thin Flex Blend Prep	A/O	MF	25	662611	13519
6 x 9	Dark Tan	740 Heavy-Duty Pad	A/O	Med	40	662610	74000
	Gray	746 Blending Pad	S/C	Med	40		66261074600
	Maroon	777 General Purpose Very Fine Pad	A/O	VF	60		66261077700
	Maroon	747 General Purpose Plus Pad	A/O	VF	60	662610	74700
	Maroon	847 General Purpose Plus Perforated Pad	A/O	VF	60	662610	84700
	Green	796 Scouring Pad	A/O	VF	60		66261079600
	Lt. Green	696 Food Pro Pad	A/O	VF	60		66261069600
	Gray	851 General Cleaning Pad	S/C	VF	40		66261085100
	Gray	635 Clean & Finish Pad	S/C	UF	60		66261063500
	Gray	748 Final Shine Pad	S/C	MF	60		66261074800
	White	456 Cleaning Pad	None	—	60		66261045600
Hand Pad Holder							
3-1/4 x 5-1/2	N/A	Hand Pad Holder			10		66261047583



Hand Pad Holder



THIN and FLEXIBLE: Perfect for Tight Spots

Norton Bear-Tex Thin-Flex High-Performance Hand Pads

- Achieve performance benefits of a coarse and fine grain product in one hand pad; fast cut and definitively better finish than competing pads
- Extremely thin and conformable; ideal for deburring, cleaning, blending, and finishing contoured surfaces and tight spaces
- Special coated web design for superior and constant cutting action without added effort from user
- Versatile; ideal for woodworking, metalworking, maintenance operations, and synthetics fabrication

Rotolo Foam Sanding Pads

Application/Grit Recommendation Guide

COARSER						FINER					
120	150	180	220	240	280	320	400	500	600	800	1000
Cleaning/Repairing			Final Sanding			Feather Edging			Basecoat Sanding		
										Clearcoat Sanding	



The better choice for fine sanding flat and curved surfaces

A2750P NO-FIL ROTOLO FOAM ROLLS

- Premium, P-graded, heat-treated aluminum oxide abrasive for consistent surface finish, exceptional performance on all surfaces and coatings
- Foam backing is perfect for hand sanding primer without leaving finger marks; 50% – 60% improvement in tear strength versus conventional paper rolls; perforated for easy sizing
- Non-pigmented, water-based stearate No-Fil coating, open coat for best resistance to clogging and loading during sanding

TIER: **BETTER**
 TRADENAME: **A2750P ROTOLO**
 ABRASIVE: Aluminum Oxide
 OTHER: P-Graded

SIZE (W x L)	GRIT SIZE	ROLLS/STD. PKG.	PART #
4-1/2" x 82'	120	2	780727 35316
	150	2	780727 57584
	180	2	780727 57599
	220	2	780727 57600
	240	2	780727 57602
	320	2	666233 57606
	400	2	666233 57608
	500	2	666233 57611
	600	2	666233 57612
	800	2	666233 57613
	1000	2	666233 57616



power...
**IN THE PALM OF
YOUR HAND**

Portable Tools and the specialty abrasive products to go along with them. Access hard-to-reach areas with ease with the Norton line of specialty products.



Mini Angle Sander



Put the world right in the palm of your hand with our 2" and 3" Norton Mini Angle Sanders. Small, compact enough to get into those hard-to-reach areas, and powerful enough to finish the job fast and efficiently.

Specifications for:

Weight of tool:

Compressed air:

Maximum permissible operating pressure:

Horsepower:

Free speed:

Air consumption @90psi:

Noise characteristic value in accordance with EN ISO 15744 (ISO 15744):

- A-weighted sound pressure level at workstation 87.3 dB
- A-weighted sound power level 98.3 dB
- Peak C-weighted instantaneous sound pressure level at workstation <130 dB

Measurement uncertainty (Standard):

Vibration value according to EN ISO 28927-3:

Recommended lubrications:

Sanding tool specifications:

2" Mini Angle Air Sander 3" Mini Angle Air Sander

1.6 lbs. (0.742kg)

6.2 bar (90psi)

6.2 bar (90psi)

.45

22,000 rpm

85 liters/min (3 CFM)

1.8 lbs. (0.816kg)

6.2 bar (90psi)

6.2 bar (90psi)

.9

20,000 rpm

116 liters/min (4.1 CFM)

83.2 dB

94.2 dB

<130 dB

3.00 m/s²

0.84 m/s²

Air oil 20#

Pad Size 2" Collet

Collet Chuck 1/4" (6mm)

Surface preparation, grind welds, spot sanding and light-duty finishing applications.

5.92 m/s²

1.09 m/s²

Air oil 20#

Pad size 3" Collet

Collet Chuck 1/4" (6mm)



Put the power right in the palm of your hand with our Mini Angle Sanders

MINI ANGLE SANDERS

- A double-bearing spindle generates superb concentricity, reducing vibrations allowing for longer use and finer finishes
- Finesse your projects by having the ultimate control in both precision and power with the speed regulator
- Get better tool handling along with reduced fatigue with the ergonomic and streamlined non-slip grip

DESCRIPTION	STD. PKG.	PART #
Mini Angle Sanders and Kits		
2" Mini Angle Sander	1	662611 50076
2" Kit Includes:	1	662611 50077
• 1 – 2" Sander		
• 25 – 2" 36 Grit Blaze R980P 3-Ply TR Discs (662611 62318)		
• 50 – 2" Medium Grit Rapid Prep Non-Woven TR Discs (662610 09190)		
• 1 – 2" Medium Density Back-Up Pad (662610 55103)		
3" Mini Angle Air Sander	1	699573 82154
3" Kit Includes:	1	699573 82155
• 1 – 3" Sander		
• 25 – 3" 36 Grit Blaze R980P 3-Ply TR discs (662611 62328)		
• 25 – 3" Medium Grit Rapid Prep Non-Woven TR discs (662610 17522)		
• 1 – 3" Medium Density Back-Up Pad (662610 55105)		





Mini-flap discs are ideal for use in tight spaces. They feature layered flaps which wear away evenly during use exposing new abrasive grain. The lightweight plastic backing helps to absorb vibration. They can help eliminate the conventional 2-step process in grinding edges and removing welds and rust.

Applications:

Grinding, stock removal, edge chamfering/beveling, weld blending, deburring/deflashing, rust removal, blending, cleaning, and finishing in small areas or tight spots.

Size Range:

2" and 3" Quick-Change

Grit Range:

36 – 120

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina

Abrasive Flaps:

Polyester

Attachment:

TR (Type III) and TS (Type II)

Backing Plate Material:

Extra Heavy-Duty Plastic

Machine Used:

MINI ANGLE SANDER

Best choice for beveling, blending, deburring, and stock removal in tight spaces



BLAZE R980P CERAMIC ALUMINA

- Premium ceramic alumina abrasive grain lasts 50% – 200% longer than many flap discs on stainless steel, cobalt, chrome, Inconel, titanium and other hard-to-grind materials
- Flexible, high-strength, plastic backing plates absorb vibration for optimized ergonomics
- Y-weight polyester flaps with a supersize grinding aid significantly improve life, grain retention, and fray resistance while providing a cool, noticeably faster cut rate



Better choice for blending, deburring, and stock removal in tight places

BLUEFIRE R860 ZIRCONIA ALUMINA

- High-performance zirconia alumina abrasive for aggressive cut and long life
- Flexible, high-strength, plastic backing plates absorb vibration for optimized ergonomics
- Polyester flaps for improved durability and minimal loading on aluminum

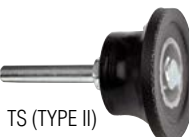


TIER:
TRADENAME:
ABRASIVE:
FLAP:
BACKING MATERIAL:
ATTACHMENT:

BEST	BETTER	BEST	BETTER
BLAZE R980P	BLUEFIRE R860	BLAZE R980P	BLUEFIRE R860
Ceramic Alumina	Zirconia Alumina	Ceramic Alumina	Zirconia Alumina
Polyester	Polyester	Polyester	Polyester
Extra Heavy-Duty Plastic	Extra Heavy-Duty Plastic	Extra Heavy-Duty Plastic	Extra Heavy-Duty Plastic
TR (Type III)	TR (Type III)	TS (Type II)	TS (Type II)



SIZE (D)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #
2	36	10	776960 90145	776960 90165	776960 90155	776960 90175
	40	10	776960 90146	776960 90166	776960 90156	776960 90176
	60	10	776960 90147	776960 90167	776960 90157	776960 90177
	80	10	776960 90148	776960 90168	776960 90158	776960 90178
	120	10	776960 90149	776960 90169	776960 90159	776960 90179
3	36	10	776960 90150	776960 90170	776960 90160	776960 90180
	40	10	776960 90151	776960 90171	776960 90161	776960 90181
	60	10	776960 90152	776960 90172	776960 90162	776960 90182
	80	10	776960 90153	776960 90173	776960 90163	776960 90183
	120	10	776960 90154	776960 90174	776960 90164	776960 90184



DESCRIPTION	MAX. RPM	STD. PKG.	TR (Type III)	TS (Type II)
Mini Flap Disc Back-up Pads				
2" and 3" Medium Density Back Up Pads	30,000	1	088341 64922	088341 68539



Tool-free, twist-on and -off fastening systems make fast work of disc changes to maximize productivity by minimizing downtime.

Applications:

Fiber and NorKut trimmable hard plastic discs: welding, grinding and blending; heavy metal removal; light deburring and finishing

Cloth discs: light- to medium-pressure grinding; blending, leveling and finishing applications; for use on contours or flat surfaces

Size Range:

3/4" – 4" diameter

Grit Range:

24 – 320

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Aluminum Oxide, Silicon Carbide

Backing:

Fiber, cloth, or polymer

Cloth Flex:

3-ply (more aggressive), 2-ply (standard),

Attachment:

Type TS (II), Type TR (III), and Type TP (I)

Back-up Pads:

Rubber with hardness variations for different applications

Machine Used:



MINI ANGLE
SANDER

Coated Abrasive Quick-Change Disc Availability

Fiber



- The most heavy-duty discs with resin over resin construction on heavy-duty vulcanized fiber backing
- Premium grain for applications from heavy stock removal to surface blending

NorKut



- Unique polymer backing resists cracking and breakage and can be cut down up to the 1" core
- Use the cores to grind "pinch" welds and other hard-to-reach areas

Diamond



- Unique, aggressive, diamond grain pattern on a flexible cloth backing

Cloth 3-Ply



- These heavy-duty, 3-ply polyester laminate construction discs are the most aggressive and durable cloth discs on the market

Cloth 2-Ply



- Our standard 2-ply laminate construction creates an aggressive and durable cloth disc for flat surfaces

Quick-Change Attachment Systems and Cross Reference Guide

Each system enables quick, safe disc changes, reducing downtime and operating expenses.

Type TS (Type II)

- Features a turn-on/turn-off style fastener
- Fastener is made of metal



Type TR (Type III)

- Features a roll-on/roll-off style fastener
- Fastener is made of plastic



Type TP (Type I)

- Features a snap-on/snap-off style fastener
- Fastener is made of nylon



NORTON	TS (Type II)	TR (Type III)	TP (Type I)
3M	Roloc TS/TSM	Roloc TR	Roloc TP
Standard	TS (SocAtt)	TR (Lockit)	TP (ClickOn)
Superior	Type S	Type R	–
Arc	Type S	Type R	Type P
Pferd	Type CD	Type CDR	–
Sait	SAIT-LOK	SAIT-LOK-R	–
Camel	Turn On	Roll On	–
Klingspor	QMC	QRC	–
Garryson	Type S	Type R	–

Material/Application-to-Product Recommendation Guide

	BEST	BETTER		GOOD	
	Blaze R980P	BlueFire R887D	BlueFire R860	Merit R766	Merit R422
Stainless Steel / Titanium / Super Alloys	◆	◆		◆	
Mild Carbon Steel / Welds			◆	◆	
Ferrous Metals / Cast Iron			◆	◆	
Brass / Bronze / Aluminum			◆	◆	
Paint / Glue / Adhesive				◆	
Concrete / Stone / Fiberglass					◆

Application/Grit Recommendation Guide

COARSER (GRINDING)						FINER (FINISHING)					
24	36	40	50	60	80	100	120	150	180	240	320
Heavy Stock Removal											
	Medium Stock Removal										
	Edge Chamfering/Beveling										
		Weld Removal									
			Heavy Deburring								
				Blending							
					Light Deburring						
							Cleaning				
									Finishing		

Cross Reference Guide

	TOTAL PERFORMANCE			INITIAL PRICE	
	BEST	BETTER	GOOD		
Abrasive Backing	Ceramic Alumina Fiber BlazeX F970, Blaze F980	Ceramic Alumina Cloth Blaze R980P	Zirconia Alumina Cloth BlueFire R860, R887D	Aluminum Oxide Cloth Merit R766	Silicon Carbide Cloth Merit R422
3M	782C, 785C, 787C, 982C, 985C, 987C, 988C	963G/H, 966F, 967F, 997F, 984F, 784F, 947A	561D	361F, 363F	421A, 441D, 461F
Standard	Ceramic, Ceramic Pro	Ceramic Pro, Ceramic	Zirconia	A/O Extra, A/O Pro	Silicon Carbide
Superior	—	Ceramic G.A.	Premium Zirc	A/O with Grinding Aid	—
Arc	—	—	Zirconia/Y Standard	A/O/X Plus Coolant	—
Pferd	CO, CO Cool	Ceramic	ZA Z	Aluminum Oxide A-Plus, Aluminum Oxide A-INOX-FORTE	Silicon Carbide SiC
Sait	7S,7A, 9S	—	Z	3A	C-W
Camel	Ceramic	—	Zirconia AO	—	—
Klingspor	CS570, FS966	CS610	Alumina Zirconia	—	CS333X
Garryson	—	Ceramic	—	—	—



Best choice for stainless steel, titanium, and super alloys

BLAZEX F980 CERAMIC ALUMINA

- Improved ceramic alumina micro-fracturing grain constantly exposes sharper grain edges to significantly increase cut rate and life over competitive blended/low-ratio ceramic alumina discs
- Strong fiber backing for strength and tear resistance
- Supersized design for stainless steel and hard-to-grind materials



For tough applications and stainless steel

BLAZE F980 CERAMIC ALUMINA FIBER

- 100% ceramic grain constantly exposes sharper edges to deliver highest productivity at lowest overall costs vs. competitive lower-ratio ceramic discs
- Strong fiber backing, heavier and more rigid than conventional cloth discs, adds strength and tear resistance, and allows additional pressure for better results when grinding difficult materials
- Advanced self-lubricating grain treatment provides coolest cut and significantly faster cut rates; excels on hard-to-grind materials like 300 and 400 Series stainless and exotic alloys



Best choice for carbon steel and other soft-to-grind materials

BLAZEX F970 CERAMIC ALUMINA FIBER

- Improved ceramic alumina micro-fracturing grain constantly exposes sharper grain edges to significantly increase cut rate and life over competitive blended/low-ratio ceramic alumina discs
- Heavier fiber backing for additional strength and tear resistance
- Non-supersized design for carbon steel and soft-to-grind materials



TIER:	BEST	BEST	BEST
TRADENAME:	BLAZEX F980	BLAZE F980	BLAZEX F970
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Ceramic Alumina
BACKING:	Fiber – Heavy Duty	Fiber – Heavy Duty	Fiber – Heavy Duty
OTHER:	Supersize	Supersize	–
ATTACHMENT:	TR (Type III)	TR (Type III)	TR (Type III)



SIZE (D)	GRIT	STD. PKG.	PART #
2	24	25	776960 90139
	36	25	662610 58704
	50	25	662610 58705
	60	25	662610 58706
	80	25	662610 58707
3	24	25	776960 90140
	36	25	662610 58708
	50	25	662610 58709
	60	25	662610 58711
	80	25	662610 58712

Quick-Change back-up pads shown at the end of the Quick-Change Disc section.

TECH TIP

Use the new next generation Norton BlazeX F970 fiber quick-change discs for carbon steel jobs.



Best choice for tough applications, titanium, super alloys, and stainless steel (3-ply) or contoured surfaces (2-ply)

BLAZE R980P CERAMIC ALUMINA

- 100% ceramic grain constantly exposes sharper edges to deliver highest productivity at lowest overall costs vs. competitive lower-ratio ceramic discs
- Improved resin bond system maximizes grain retention for longer product life
- Advanced self-lubricating grain treatment provides coolest cut with significantly faster cut rates while minimizing loading on hard-to-grind materials



Better choice for soft metals, wood, stainless steel, and carbon

BLUEFIRE R860 ZIRCONIA ALUMINA

- Premium, versatile, self-sharpening zirconia grain provides aggressive cut and up to 30% longer life versus competitive zirconia discs
- 2-ply polyester backing for improved durability and reducing loading on aluminum
- Durable Y-weight, polyester waterproof backing stands up to demanding applications: high-pressure and hard-to-grind exotic alloys



Better choice for stainless steel, titanium and other exotic alloys

BLUEFIRE R887D ZIRCONIA ALUMINA

- Self-sharpening, zirconia alumina abrasive with supersized grinding aid provides cooler cut, and longer life on hard-to-grind materials
- Durable, Y-weight, 2-ply polyester waterproof blend back stands up to these demanding applications
- Minimized heat build-up allows these discs to outlast conventional aluminum oxide and zirconia alumina discs in many applications



Good choice when initial price is the primary consideration

MERIT R766 ALUMINUM OXIDE

- Versatile aluminum oxide abrasive for aggressive cut and longer life than competitive aluminum oxide discs
- Durable Y-weight 2-ply polyester backing and coating for additional life and faster cut rate on moderately-demanding applications
- Good choice when initial price is the primary purchasing consideration



Good choice for non-ferrous materials

MERIT R422 SILICON CARBIDE

- Sharp, silicon carbide abrasive provides high initial cut and penetration to resist loading on soft metals
- Strong, X-weight, 2-ply cotton backing construction for extended durability and reduced edge wear
- When completion time is important, sharp silicon carbide abrasive gets non-ferrous blending jobs done quickly

Ceramic Alumina Quick-Change Cloth Discs



TIER:	BEST	BEST	BEST	BEST
TRADENAME:	BLAZE R980P	BLAZE R980P	BLAZE R980P	BLAZE R980P
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Ceramic Alumina	Ceramic Alumina
BACKING:	Polyester 3-Ply Heavy-Duty	Polyester 3-Ply Heavy-Duty	Polyester 2-Ply Standard	Polyester 2-Ply Standard
OTHER:	Supersize	Supersize	Supersize	Supersize
ATTACHMENT:	TS (Type II)	TR (Type III)	TS (Type II)	TR (Type III)

SIZE (D)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #
1-1/2	36	100	662611 62307	662611 62308	636425 95401	
	50	100	662611 62309	662611 62310	636425 95446	
	60	100	662611 62311	662611 62312	636425 95447	636425 95468
	80	100	662611 62313	662611 62314	636425 95450	
	120	100	662610 43379	662610 43380	662610 43416	
2	36	25	662611 62317	662611 62318	636425 95452	636425 95470
	50	25	662611 62319	662611 62320	636425 95456	636425 95472
	60	25	662611 62321	662611 62322	636425 95458	636425 95476
	80	25	662611 62323	662611 62324	636425 95459	636425 95478
	100	25	662610 43382	662610 43383	662610 43418	662610 43419
	120	25	662610 43384	662610 43386	662610 43420	662610 43421
3	36	25	662611 62327	662611 62328	636425 95460	636425 95479
	50	25	662611 62329	662611 62330	636425 95462	636425 95480
	60	25	662611 62331	662611 62332	636425 95463	636425 95481
	80	25	662611 62333	662611 62334	636425 95464	636425 95493
	100	25	662610 43389	662610 43390	662610 43422	662610 43423
	120	25	662610 43391	662610 43392	662610 43424	662610 43425

Quick-Change back-up pads shown at the end of the Quick-Change Disc section.



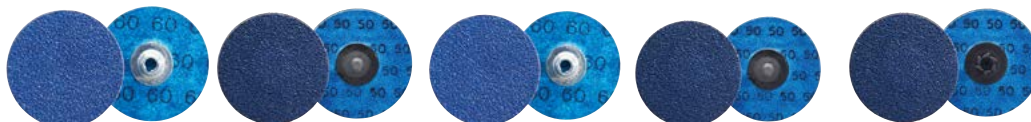
Quick-Change Test Kit “D”

- Part # 088341**165001**
- Includes 150 discs, assorted grits, in 1", 2", and 3" diameters and 3" back-up pads
- Primarily aluminum oxide cloth quick-change discs
- Several zirconia alumina and aluminum oxide FlexEdge discs are included



Zirconia Alumina Quick-Change Cloth Discs

IMPROVED



TIER:	BETTER	BETTER	BETTER	BETTER	BETTER
TRADENAME:	BLUEFIRE R860	BLUEFIRE R860	BLUEFIRE R887D	BLUEFIRE R887D	BLUEFIRE R887D
ABRASIVE:	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina
BACKING:	Polyester 2-Ply Standard	Polyester 2-Ply Standard	Polyester 2-Ply Standard	Polyester 2-Ply Standard	Polyester 2-Ply Standard
OTHER:			Supersize	Supersize	Supersize
ATTACHMENT:	TS (Type II)	TR (Type III)	TS (Type II)	TR (Type III)	TP (Type I)

SIZE (D)	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
1	50	100				08834167095 NS	08834167011 NS
	60	100	66261138608			08834167096 NS	08834167012 NS
	80	100	66261138607			08834167097	08834167013 NS
	120	100				08834167099	08834167015 NS
1-1/2	36	100	66261138624	66261121041			
	50	100				08834167102	08834167018 NS
	60	100	66261138621	66261121043	08834167061	08834167103	08834167019 NS
	80	100	66261138620	66261121044	08834167062	08834167104	
	120	100				08834167106	
2	24	100	66261138638*	66261138672*			
	36	100	66261138637*	66261138671	08834167065	08834167107	08834167023
	40	100			08834167066	08834167108	
	50	100	66261138635*	66261138670*	08834165583	08834167109	08834167025
	60	100	66261138634*	66261121048*	08834167068	08834167110	08834167026
	80	100	66261138633*	66261121049*	08834167069	08834167111	08834167027
	120	100			08834167071	08834167113	08834167029
3	24	50	66261138665*	66261138675*			
	36	50	66261138664*	66261138674*	08834167072	08834167114	08834167030
	40	50			08834167073		
	50	50	66261138662*	66261138673*	08834167074	08834167116	08834167032
	60	50	66261138661*	66261121053*	08834167075	08834167117	08834167033
	80	50	66261138660*	66261121054*	08834167076	08834167118	08834167034
	120	50			08834167078	08834167120	
4	36	50	66261138683*		08834167079		
	50	50	66261138681*				
	60	50	66261137343*				08834167040 NS
	80	50	66261138679*		08834167083 NS		
	120	50			08834167085 NS		

* Standard Package = 25 discs

NS Non-stock, contact your Norton representative for current order quantities and lead-times.

The New Blue and You




with new BlueFire R860

ENHANCED! Proprietary new grain shape and chemistry for faster cutting and longer life on a wide range of materials.



Aluminum Oxide Quick-Change Cloth Discs



TIER:	GOOD	GOOD	GOOD
TRADENAME:	MERIT R766	MERIT R766	MERIT R766
ABRASIVE:	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
BACKING:	Polyester 2-Ply Standard	Polyester 2-Ply Standard	Polyester 2-Ply Standard
ATTACHMENT:	TS (Type II)	TR (Type III)	TP (Type I)
			

SIZE (D)	GRIT	STD. PKG.	PART #	PART #	PART #
3/4	40	100			699573 99739
	50	100	699573 99604		699573 99740
	60	100	699573 99605	699573 99673	699573 99741
	80	100	699573 99606	699573 99674	699573 99742
	100	100	699573 99614	699573 99682	699573 99750
1	40	100			699573 99751
	50	100	699573 99616		699573 99752
	60	100	699573 99617	699573 99685	699573 99753
	80	100	699573 99618	699573 99686	699573 99754
	100	100	699573 99619	699573 99687	699573 99755
	120	100	699573 99620	699573 99688	699573 99756
	180	100	699573 99622	699573 99690	699573 99758
	240	100	699573 99623	699573 99691	699573 99759
	36	100	699573 99626	699573 99694	699573 99762
	40	100	699573 99627	699573 99695	699573 99763
1-1/2	50	100	699573 99628	699573 99696	699573 99764
	60	100	699573 99629	699573 99697	699573 99765
	80	100	699573 99630	699573 99698	699573 99766
	100	100	699573 99631	699573 99699	
	120	100	699573 99632	699573 99700	699573 99768
	150	100			699573 99769
	180	100	699573 99634	699573 99702	699573 99770
	240	100	699573 99635	699573 99703	
	24	100	699573 99637	699573 99705	699573 99773
	36	100	699573 99638	699573 99706	699573 99774
2	40	100	699573 99639	699573 99707	699573 99775
	50	100	699573 99640	699573 99708	699573 99776
	60	100	699573 99641	699573 99709	699573 99777
	80	100	699573 99642	699573 99710	699573 99778
	100	100	699573 99643	699573 99711	699573 99779
	120	100	699573 99644	699573 99712	699573 99780
	150	100	699573 99645	699573 99713	699573 99781
	180	100	699573 99646	699573 99714	699573 99782
	240	100	699573 99647	699573 99715	699573 99783
	320	100	699573 99648	699573 99716	699573 99784
3	24	50	699573 99649	699573 99717	699573 99785
	36	50	699573 99650	699573 99718	699573 99786
	40	50	699573 99651	699573 99719	699573 99787
	50	50	699573 99652	699573 99720	699573 99788
	60	50	699573 99653	699573 99721	699573 99789
	80	50	699573 99654	699573 99722	699573 99790
	100	50	699573 99655	699573 99723	699573 99791
	120	50	699573 99656	699573 99724	699573 99792
	150	50	699573 99657	699573 99725	
	180	50	699573 99658	699573 99726	699573 99794
4	240	50	699573 99659	699573 99727	699573 99795
	320	50	699573 99660	699573 99728	699573 99796
	36	50	699573 99661	699573 99729	
	50	50		699573 99731	
	60	50	699573 99664		699573 99800
	80	50		699573 99733	699573 99801

Quick-Change back-up pads shown at the end of the Quick-Change Disc section.

Quick-Change Discs – Cloth, Specialty

Silicon Carbide Quick-Change Cloth Discs



TIER:	GOOD	GOOD	GOOD
TRADENAME:	MERIT R422	MERIT R422	MERIT R422
ABRASIVE:	Silicon Carbide	Silicon Carbide	Silicon Carbide
BACKING:	Cotton Standard	Cotton Standard	Cotton Standard
ATTACHMENT:	TS (Type II)	TR (Type III)	TP (Type I)



SIZE (D)	GRIT	STD. PKG.	PART #	PART #	PART #
2	40	100	088341 65252 NS	088341 64275 NS	
	60	100	088341 65254	088341 64163 NS	088341 62168 NS
	80	100	088341 65255	088341 66155 NS	088341 62169 NS
	120	100		088341 64837 NS	088341 62171 NS
	180	100	088341 65259 NS	088341 67313 NS	088341 62173 NS
3	40	50	088341 65267 NS	088341 64277 NS	
	60	50		088341 64850 NS	
	80	50		088341 66159 NS	088341 62188 NS
	120	50	088341 65272 NS	088341 66160 NS	088341 62190 NS
	180	50	088341 65274 NS	088341 68177 NS	

NS Non-stock, contact your Norton representative for current order quantities and lead-times.

Quick-Change back-up pads shown at the end of the Quick-Change Disc section.

Specialty Quick-Change Discs

Better choice for hard-to-grind areas where flexibility is not required



NORKUT ZIRCONIA ALUMINA POLYMER

- Durable zirconia alumina grain is resin bonded to a unique polymer backing which resists cracking and breaking; can be trimmed to the 1 Inch core
- Used with a quick change mandrel: 7/16-20 threaded for hand-held pneumatic grinders or 1/4 inch mandrel for automotive drills
- Use for deburring and blending; use the core to grind pinch welds and other hard-to-reach areas

TIER:	BETTER
TRADENAME:	NORKUT
ABRASIVE:	Zirconia Alumina
BACKING:	Extra HD Polymer
ATTACHMENT:	Threaded Hole

SIZE (D)	GRIT	STD. PKG.	PART #
NorKut Discs			
3	24	20	636425 03656
	36	20	636425 03657
	50	20	636425 03658

TIER:	BETTER
ATTACHMENT:	Threaded Hole

SIZE (D)	STD. PKG.	PART #
Mandrels		
7/16-20 Mandrel	5	636425 03659
1/4" Mandrel	5	636425 03660



Non-woven quick-change discs are a combination of strong synthetic mesh and quality abrasives, bonded together by a smear-resistant adhesive. The open construction of the non-woven material enables aggressive cutting action and improved surface finish while maintaining its non-loading feature.

Applications:

Medium-light stock removal, beveling, deburring/deflashing, rust removal, blending, cleaning and finishing, polishing, and decorative finishing

Size Range:

3/4" – 4" diameter

Grit Range:

X-Coarse, Coarse, Medium, Fine, Very Fine, Super Fine

Abrasive Grain:

Ceramic Alumina, Engineered Aluminum Oxide, Aluminum Oxide, Silicon Carbide

Attachment:

Quick-Change Type TR (Type III), Type TS (Type II)

Back-up Pads:

Rubber with hardness variations for different applications

Machine Used:



MINI ANGLE
SANDER

Quick-Change Attachment Systems and Cross Reference Guide

Each system enables quick, tool-free, safe disc changes, reducing downtime and operating expenses.

Type TS (Type II)

- Features a turn-on/turn-off style fastener
- Fastener is made of metal



Type TR (Type III)

- Features a roll-on/roll-off style fastener
- Fastener is made of plastic



NORTON	TS	TR
3M	Roloc TS/TSM	Roloc TR
Standard	TS (SocAtt)	TR (Lockit)
Superior	Type S	Type R
Arc	Type S	Type R
Pferd	Type CD	Type CDR
Sait	SAIT-LOK	SAIT-LOK-R
Camel	Turn On	Roll On
Klingspor	QMC	QRC
Garryson	Type S	Type R

Application/Grit Recommendation Guide

MOST AGGRESSIVE

LEAST AGGRESSIVE

NORTON	Rapid Strip	Vortex Rapid Blend Deburring & Blending	Vortex Rapid Prep	Rapid Prep	HS Buffing, Buffing
Scale Removal	Best Choice				
Stock Removal	Best Choice	Second Choice			
Heavy Deburring	Second Choice	Best Choice			
Light Deburring		Best Choice	Second Choice		
Light Finishing			Best Choice	Second Choice	
Blending			Best Choice	Second Choice	
Cleaning			Second Choice	Best Choice	
Finishing				Best Choice	Second Choice

Cross Reference Guide

	STRIPPING			HEAVY/LIGHT DEBURRING		LIGHT DEBURRING/BLENDING/CLEANING/FINISHING	
	BEST	BETTER	BEST	BETTER	BEST	BETTER	BEST
NORTON	Blaze Rapid Strip	Rapid Strip	Vortex Rapid Blend	Rapid Blend, Deburring & Blending	Vortex Rapid Prep	Rapid Prep	HS Buffing
3M	Clean and Strip XT PRO, Clean and Strip XT PRO Extra Cut	Clean & Strip Clean Strip XT	Deburr and Finish PRO	EXL Unitized	SE	Surf Cond, SL	–
Standard	–	Cleaning Disc	–	500-900 Series Unitized	–	FE, GP, RC	Buff & Blend - HS, Buff & Blend
Fiberal/SIA	–	–	–	–	–	Meteor, Type B & C	–
Superior	–	Type R	–	XL Unitized	–	FD, GD, CC	HS, HD A/O
Arc	–	Arcstrip	–	–	–	Surface Cond	Blend & Finish
Pferd	–	Policlean	–	–	–	Finishing Disc - Hard & Soft	–
Sait	–	SAIT-Strip	–	–	–	HD, GP	Sand-Light Blending
Camel	–	EZ Strip - Black	–	–	–	–	–
Klingspor	–	–	–	–	–	–	–
Garryson	–	–	–	–	–	Surface Cond	–
Bibielle	–	Strip-It Black	–	BUR Unitized	–	DCR	–

Abrasive/Grit/Density Key

ABRASIVE	SILICON CARBIDE			ALUMINUM OXIDE		CERAMIC ALUMINA
	SHARPER, FINER/BRIGHTER SCRATCH PATTERN			MORE DURABLE, LONGER LASTING, POLISHED FINISH		
GRIT SIZE	XC (50)	C (60-80)	M (100-150)	F (180-220)	VF (240-360)	SF (400-600)
	FASTER, AGGRESSIVE CUT, ROUGHER FINISH			REDUCED CUT RATE, FINER FINISH		
DENSITY	2					9
	SOFT, OPEN, CONFORMABLE, LESS BURNING/LOADING			HARDER, MORE DURABLE, FASTER CUTTING, BETTER FINISH		

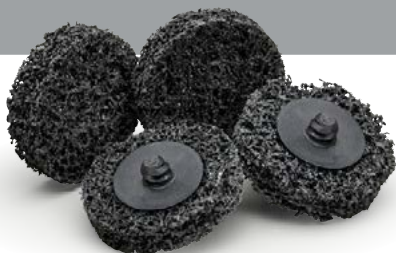
Quick-Change Stripping Discs



Best choice for removing coatings on a variety of substrates, such as wood, metal and plastics

BLAZE RAPID STRIP CERAMIC ALUMINA

- Blaze ceramic grain cuts 2X faster than competitive discs; leaves a thoroughly cleaned surface, ensuring excellent adhesion in subsequent processes such as coating, painting and soldering
- Open web construction for minimal loading; great alternative to wire brushes
- Rapid Strip material provides a unique combination of aggressive performance, long life, and improved finish



Better choice for removing coatings on a variety of substrates, such as wood, metal and plastics

RAPID STRIP SILICON CARBIDE

- Sharp silicon carbide abrasive provides fast aggressive cutting action
- Open web construction for minimal loading; great alternative to wire brushes
- Advanced resin bond prevents shedding, snagging, gouging, and rework



TIER: **BEST**
TRADENAME: **BLAZE RAPID STRIP**
ABRASIVE: Ceramic Alumina
GRADE: XC
ATTACHMENT: TR (Type III)



TIER: **BETTER**
TRADENAME: **RAPID STRIP**
ABRASIVE: Silicon Carbide
GRADE: XC
ATTACHMENT: TR (Type III)



SIZE (DIAMETER)	MAX. RPM	STD. PKG.	PART #	STD. PKG.	PART #
2	15,500	25	666233 03912	10	662610 13402
3	12,000	25	662610 96557	10	662610 13403
4 TR+	8,000	5	666233 03921*	5	662610 16580*

*TR+ attachment show in the group image above

Quick-Change back-up pads shown at the end of this section.

3D Unified Quick-Change Deburring & Blending Discs

Best technology for heavy deburring and finishing



BLAZE RAPID BLEND CERAMIC ALUMINA

- Blaze SG ceramic alumina grain provides quickest cut rate and up to 8X longer life than competitive aluminum oxide discs
- Superior resin chemistry resists shedding when used on sharp edges; ideal for deburring
- Abrasive is distributed throughout the entire disc (top, bottom and side) so all three faces can be used versus competitive discs with one bottom layer of abrasive

Best choice for weld blending, polishing and deburring



VORTEX RAPID BLEND ALUMINUM OXIDE

- Patented Vortex agglomerated aluminum oxide grain provides the cutting power of a coarser grit with the finish of finer grits
- Special resin bond for consistent performance with no smearing
- Abrasive is distributed throughout the entire disc (top, bottom and side) so all three faces can be used versus competitive discs with one bottom layer of abrasive

Better choice for light deburring, blending, and cleaning



RAPID BLEND NEX ALUMINUM OXIDE

- Quality aluminum oxide delivers durability and long life
- Resin formula delivers smear-free finishes
- Abrasive is distributed throughout the entire disc (top, bottom and side) so all three faces can be used – versus competitive discs' one bottom layer of abrasive

TECH TIP

3D Construction

- Rapid Blend 3D construction means the abrasive is distributed throughout the entire disc so all three faces can be used.



It is the user's responsibility to refer to and comply with ANSI B7.1



See it in action
<https://youtu.be/1leKVqIToyU>

3D Unified Quick-Change Deburring & Blending Discs

3D Unified Quick-Change Deburring & Blending TS Discs



TIER:	BEST	BEST
TRADENAME:	BLAZE RAPID BLEND	VORTEX RAPID BLEND
ABRASIVE:	Ceramic Alumina	Engineered Aluminum Oxide
ATTACHMENT:	TS (Type II)	TS (Type II)

SIZE (D x T)	ABRASIVE	GRIT	DENSITY	MAX. RPM	STD. PKG.	PART #	PART #
1 x 1/4	Ceramic Alumina	XC	1	35,000	100	666233 13920	
1-1/2 x 1/4	Ceramic Alumina	XC	1	35,000	80	666233 13922 NS	
2 x 1/4	Ceramic Alumina	XC	1	22,000	25	666233 13925	
	Aluminum Oxide	M	1	22,000	25		662544 97070
3 x 1/4	Ceramic Alumina	XC	1	15,000	25	666233 13931	
	Aluminum Oxide	M	1	15,000	25		662544 97069

NS Non-stock, contact your Norton representative for current order quantities and lead-times.

3D Unified Quick-Change Deburring & Blending TR Discs



TIER:	BEST	BEST	BETTER
TRADENAME:	BLAZE RAPID BLEND	VORTEX RAPID BLEND	RAPID BLEND NEX
ABRASIVE:	Ceramic Alumina	Engineered Aluminum Oxide	Aluminum Oxide
ATTACHMENT:	TR (Type III)	TR (Type III)	TR (Type III)

SIZE (D x T)	ABR.	GRIT	DENSITY	MAX. RPM	STD. PKG.	PART #	PART #	PART #
1 x 1/4	Ceramic Alumina	XC	1	35,000	100	666233 13919		
1-1/2 x 1/4	Ceramic Alumina	XC	1	35,000	80	666233 13921 NS		
2 x 1/8	Aluminum Oxide	M	4-6	22,000	60		662544 25632 NS	
	Aluminum Oxide	M	7-9	22,000	60		662544 33509 NS	
2 x 3/16	Aluminum Oxide	M	2-3	22,000	60		662544 28236 NS	
2 x 1/4	Ceramic Alumina	XC	1	22,000	25	666233 13923		
	Aluminum Oxide	C	7-9	22,000	60			662610 14921
	Aluminum Oxide	M	1	22,000	25		662544 97067	
	Aluminum Oxide	M	2-3	22,000	60		662544 28237	662610 14897
	Aluminum Oxide	M	4-6	22,000	60		662544 13660	662610 14911
	Aluminum Oxide	M	7-9	22,000	60		662544 33510	662610 14935
	Silicon Carbide	F	2	22,000	60			662610 14889
	Silicon Carbide	F	3	22,000	60			662610 17306
3 x 1/8	Aluminum Oxide	M	4-6	15,000	40		662610 93556	
	Aluminum Oxide	M	7-9	15,000	40		662610 90909	
3 x 3/16	Aluminum Oxide	M	7-9	15,000	40		662544 28239 NS	
3 x 1/4	Ceramic Alumina	XC	1	15,000	25	666233 13930		
	Aluminum Oxide	C	7-9	15,000	40			662610 14922
	Aluminum Oxide	M	1	15,000	25		662544 97068	
	Aluminum Oxide	M	2-3	15,000	40		662544 28238	662610 14898
	Aluminum Oxide	M	4-6	15,000	40		662544 13661	662610 14912
	Aluminum Oxide	M	7-9	15,000	40		662544 06395	662610 14936
	Aluminum Oxide	F	4-6	15,000	40			662610 15419
	Silicon Carbide	F	2	15,000	40			662610 14890
	Silicon Carbide	F	3	15,000	40			662610 16005

NS Non-stock, contact your Norton representative for current order quantities and lead-times.

For unified wheels with arbor holes or spindle mounts, see the Non-woven Unified Wheel section.
Quick-Change back-up pads shown at the end of this section.

Quick-Change Surface Preparation Discs

Best choice for aggressive stock removal and blending in one step



RAPID PREP XHD

- Coarse and Medium discs solve your most aggressive stock removal and blending challenges, remove weld lines, weld spatter, weld discoloration and blend surfaces in a single step
- Improve cut control and surface blending over traditional coated discs with our unique combination of a conformable fiber matrix and premium ceramic grain
- XHD Coarse discs for aggressive weld removal and surface blending on steels and Medium discs on softer metals/ alloys

TIER: **BEST**
 TRADENAME: **RAPID PREP XHD**
 ABRASIVE: Ceramic Alumina
 ATTACHMENT: TR (Type III)



SIZE (DIAMETER)	MAX. RPM	STD. PKG.	PART #
Coarse			
2	20,000	50	662611 70271
3	18,000	25	662611 70273
4	12,000	25	662611 70274
Medium			
2	20,000	50	662611 70285
3	18,000	25	662611 70286
4	12,000	25	662611 70287



**CLEAN
BOND**
TECHNOLOGY

Quick-Change Surface Preparation Discs

Best choice for finishing and blending applications



VORTEX RAPID PREP





- Proprietary engineered Vortex aluminum oxide abrasive grain and coating method combine maximum cutting speed with the consistent finish of finer grits to reduce process times by 50+% by combining multiple grit sequences to 1 step
- Premium high-loft nylon fiber bonded to a strong nylon scrim backing allows a thick layer of resin bond and grain for extended life and provides added durability and stiffness
- Proprietary Clean Bond resin technology guarantees smear-free finishes even on high nickel content alloys and reduces loading on aluminum and other soft metals

Better choice for finishing and blending applications



RAPID PREP ALUMINUM OXIDE

- Quality aluminum oxide abrasive grain coating provides up to 20% higher cut rate and 50% better performance than competitive products
- Thick layer of grain throughout the product extends life; grain does not sit on top of fibers as it does with other competitive products
- Proprietary Clean Bond resin technology guarantees smear-free finishes even on high nickel content alloys and reduces loading on aluminum and other soft metals

TIER:	BEST	BETTER	BEST	BETTER
TRADENAME:	VORTEX RAPID PREP	RAPID PREP	VORTEX RAPID PREP	RAPID PREP
ABRASIVE:	Engineered A/O	Aluminum Oxide	Engineered A/O	Aluminum Oxide
ATTACHMENT:	TR (Type III)	TR (Type III)	TS (Type II)	TS (Type II)
				

SIZE (DIAM.)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
Extra Coarse						
3/4	25,000	50	666233 25001	666233 40002	666233 35324	
1	25,000	50	666233 25004		666233 25003	666233 40006
1-1/2	20,000	50	666233 25007	666233 40011	666233 25006	666233 40010
2	20,000	50	666233 35326	662610 16373	666233 35325	662610 17819
3	18,000	25	666233 35327	662610 16994	666233 25010	662610 17818
4	12,000	25	666233 35329	662610 16374		
Coarse						
3/4	25,000	50	666233 25013	666233 40021	666233 35410	662610 95015
1	25,000	50	666233 25015	666233 40023	666233 35537	662610 24310
1-1/2	20,000	50	666233 35411	662610 47579	666233 25017	666233 40026
2	20,000	50	666233 35414		666233 35413	662610 09183
3	18,000	25	666233 35417	662610 09194	666233 35416	662610 09186
4	12,000	25	666233 35419	662610 08822		
Medium						
3/4	25,000	50	666233 25020	666233 40032	666233 35420	662544 28059
1	25,000	50	666233 35422	662544 82331	666233 35421	662544 82327
1-1/2	20,000	50	666233 35424	662544 82332	666233 35423	662544 82328
2	20,000	50	666233 35427	662610 09190*	666233 35426	662610 09182
3	18,000	25	666233 35430	662610 17522	666233 35429	662610 09185
4	12,000	25	666233 35432	662610 08821		662610 55350
Fine						
3/4	25,000	50	666233 25026	666233 40058	666233 25025	
1	25,000	50	666233 25029	666233 40064	666233 25028	666233 40062
1-1/2	20,000	50	666233 25032	666233 40070 NS	666233 25031	666233 40068
2	20,000	50	666233 25035	666233 40077	666233 25034	666233 40074
3	18,000	25	666233 25038	666233 40085	666233 25037	666233 40082
4	12,000	25	666233 25041	666233 40092		
Very Fine						
3/4	25,000	50	666233 25044	666233 40044	666233 25043	666233 40042
1	25,000	50	666233 25047	662544 82339	666233 25046	662544 82335
1-1/2	20,000	50	666233 25050	662544 82340	666233 25049	662544 82336
2	20,000	50	666233 35433	662610 09189*	666233 25052	662544 82337
3	18,000	25	666233 35437	662610 09192	666233 35436	662610 09184
4	12,000	25		666233 40053		
Super Fine						
2	20,000	50		662610 91459		
3	18,000	25		662610 91460		

* 25 per standard package.

NS Non-stock, contact your Norton representative for current order quantities and lead-times.

Quick-Change Buffing/Polishing Discs

Best choice for light removal of paint or rust



HIGH STRENGTH BUFFING DISCS





- Aluminum oxide grain delivers a combination of consistent cut rate and uniform finish
- Tough yet conformable high-strength discs are smear-proof and resist tearing on burrs and sharp edges
- Our strongest non-woven buffing and polishing disc

Good choice for light removal of rust, coatings or oxidation



MERIT BUFFING/POLISHING DISCS

- This aluminum oxide grain and resin bond combination produce a smooth cut rate and smear-free, uniform finish
- Non-woven nylon fibers are laminated to tough yet conformable nylon backing that resists tearing on burrs and sharp edges
- Designed for light removal of coatings oxidation or rust without affecting the base product

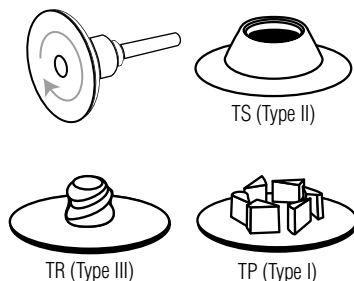
TIER:	BEST	BEST	GOOD	GOOD
TRADENAME:	HIGH-STRENGTH	HIGH-STRENGTH	MERIT BUFFING/POLISHING	MERIT BUFFING/POLISHING
ABRASIVE:	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
BACKING:			Nylon Laminated	Nylon Laminated
ATTACHMENT:	TR (Type III)	TS (Type II)	TR (Type III)	TS (Type II)
				

SIZE (D)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
1-1/2	M	20,000	100			088341 66368	088341 66392
	F	20,000	100			088341 66369	
2	C	18,000	50			088341 61649	088341 66394
	M	18,000	50	088341 64064	088341 64244 NS	088341 66303	088341 66395
	F	18,000	50			088341 66304	088341 66396
	VF	18,000	50	088341 63987 NS	088341 64245 NS	088341 66305	088341 66405
3	C	12,000	25			088341 61651	088341 66397
	M	12,000	25	088341 64065	088341 64252 NS	088341 66308	088341 66398
	F	12,000	25			088341 66309	088341 66399
	VF	12,000	25	088341 63559 NS	088341 64255 NS	088341 66310	088341 66403

NS Non-stock, contact your Norton representative for current order quantities and lead times.

Quick-Change Back-up Pads

- Hard density pads are for aggressive cutting action
- Medium density pads are for all-purpose applications
- Soft density pads are used for contours and fine finishing work



SIZE (DIAMETER)	DENSITY	MAX. RPM	STD. PKG.	TS (TYPE II)	TR (TYPE III)	TP (TYPE I)
Quick-Change Back-up Pads						
9/16		40,000	1	66261054014 NS		66261054013 NS
3/4	Medium	40,000	1	08834164206	08834164038	08834164001
1	Medium	40,000	1	08834164651	08834164037	08834164002
1-1/2	Hard	30,000	1	08834164622		08834163996 NS
	Medium	30,000	1	08834164146	08834161174	08834164003
2	Hard	30,000	1	08834164624	08834164643	08834163997
	Medium	30,000	1	08834164198	08834164922	08834164004
	Soft	30,000	1	08834161625	08834164641	08834163949 NS
3	Hard	20,000	1	08834161626	08834164036	08834163998
	Medium	20,000	1	08834164113	08834164949	08834164005
	Soft	20,000	1	08834164626	08834164644 NS	08834163948 NS
4	Medium	15,000	1	08834164135	08834164655	
4 TR+	Medium	8,000	1		63642555106	
Vendible Quick-Change Back-up Pads						
2	Medium	30,000	5	66623341082	66623341083	
3	Medium	20,000	5		66623341085	

All Quick-Change back-up pads have a 1/4" solid steel shank.

NS Non-stock. Contact your Norton representative for current order quantities and lead times.

Vendible back-up pad Std. Pkg. Qty: 1 pad per pack; 5 packs per carton. Order in multiples of 5.

Replacement Medium Density Rubber Pads for Quick-Change TP (Type I) Back-up Pads

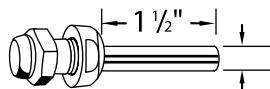
- When the rubber pad has worn away, but the steel components of your quick-change back-up are still serviceable, order these replacement rubber pads.

SIZE (D)	MODEL #	STD. PKG.	PART #
Quick-Change Replacement Rubber Back-up Pads			
3/4	RR75	1	08834164008 NS
1	RR10	1	08834164009 NS
4	RR40	1	08834164013 NS

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

Replacement Assemblies and Shanks for Quick-Change Back-up Pad

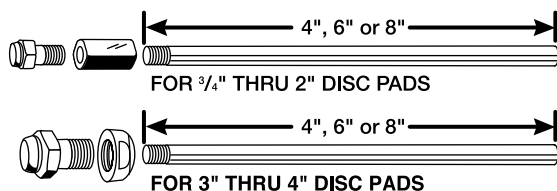
- Assemblies replace all the steel components of a quick-change back-up pad. This shank replaces the screw-in 1/4" solid steel shank only.



DESCRIPTION	STD. PKG.	PART #
Replacement Mandrels and Nut Assembly		
TP (Type I) Assembly RMN3 for 3 - 4	1	08834164016 NS
TS (Type II) & TR (Type III) Replacement 1/4" Shank	1	08834164303

NS Non-stock. Ask your Norton representative for current order quantities and lead-times

Extension Mandrels and Assembly

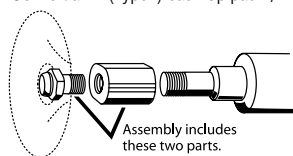


DIAMETER	MODEL #	LENGTH	STD. PKG.	PART #
Extension Mandrels and Assembly - TP (Type I)				
3/4 - 2	EMN-14	4	1	08834164017 NS
3/4 - 2	EMN-16	6	1	08834164018 NS
3/4 - 2	EMN-18	8	1	08834164019 NS
3 - 4	EMN-34	4	1	08834164020 NS
3 - 4	EMN-36	6	1	08834164026 NS
3 - 4	EMN-38	8	1	08834164021 NS

All extension mandrels are non-stock, Contact your Norton representative for current order quantities and lead times.

MNA-1 Pad Adapters

- Convert a TP (Type I) back-up pad 1/4" diameter solid shank to a threaded shank

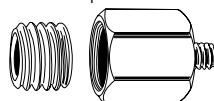


DISC DIAMETER	MODEL NO.	STD. PKG.	PART #
MNA-1 Pad Adapters - TP (Type I)			
3/4 - 2	MNA 1/4-20 THD.	1	08834161176 NS
3/4 - 2	MNA 3/8-24	1	08834164055 NS
3/4 - 2	MNA 5/8-11	1	08834163001 NS
3 - 4	MNA 1/4-20	1	08834163002 NS
3 - 4	MNA 3/8-24	1	08834164041 NS
3 - 4	MNA 5/8-11	1	08834164028 NS

All pad adapters are non-stock. Contact your Norton representative for current order quantities and lead-times.

MNA-23 Pad Adapters

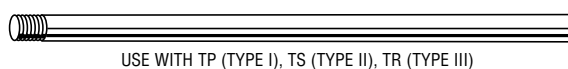
- For use on a right angle grinder: convert TS (Type II) and TR (Type III) back-up pad 1/4" diameter solid shanks to threaded shanks.
- The larger 5/8"-11 adapter (for 4-1/2" discs) is used alone to convert to a 5/8"-11 thread.
- The 3/8"-24 insert (for 4" discs) is screwed into the 5/8"-11 adapter to create a 3/8"-24 thread adapter.



DISC DIAMETER	MODEL #	STD. PKG.	PART #
MNA-23 Pad Adapters - TS (Type II) and TR (type III)			
3/4 - 4	MNA-23 3/8"-24 and 5/8"-11 THD.	1	08834162764 NS

NS Non-stock. Ask your Norton representative for current order quantities and lead-times

1/4" Diameter Extension Mandrel



USE WITH TP (TYPE I), TS (TYPE II), TR (TYPE III)

MODEL NO.	LENGTH	STD. PKG.	PART #
1/4" Diameter Extension Mandrel 1/4-20 Thread			
EM-144	4	1	08834154185
EM-146	6	1	08834154186
EM-148	8	1	08834154187



Our new Norton pneumatic die grinder quickly and comfortably accomplishes many portable applications without changing machines – including jobs for abrasive specialties (cartridge and spiral rolls...), small diameter flap wheels, mounted points, and carbide burrs.

Weight of tool:	1.4 lbs.
Compressed air:	6.2 bar (90psi)
Maximum permissible operating pressure:	6.2 bar (90psi)
Recommended operating pressure:	6.2 bar (90psi)
Horsepower:	0.9HP
Free speed:	25,000 rpm
Air consumption @90psi:	85 l/min (3 CFM)
Noise characteristic value in accordance with EN ISO 15744 (ISO 15744):	
• A-weighted sound pressure level at workstation	87.3 dB
• A-weighted sound power level	98.3 dB
• Peak C-weighted instantaneous sound pressure level at workstation	< 130 dB
• Measurement uncertainty (Standard)	3 dB
Vibration value according to EN ISO 28927-12:	3.00 m/s ²
Measurement uncertainty (Standard):	0.84 m/s ²
Recommended lubrications:	Air drill oil 20#
Sanding tool specifications:	Pad Size 2" Collet Chuck 1/8" (3 mm) and 1/4" (6 mm)
Applications and suitability:	Final surface finishing, chamfering, deburring of architectural millwork, sheet metal and surface prep, zinc casting, aluminum products, injection molds, etc.; general sanding and polishing.

Put the power right in the palm of your hand with our die grinder



PNEUMATIC DIE GRINDER

- Comfortable during prolonged use thanks to vibration-limiting technology, ergonomic design, and streamlined non-slip grip
- Adaptable to the needs of each job with speed regulation and two collet inserts in 1/8" and 1/4"
- Compatible with many accessories including cartridge rolls, spiral rolls, square pads, cross pads, overlap slotted discs, flap wheels, mounted points and carbide burrs

DESCRIPTION	STD. PKG.	PART #
Norton Pneumatic Die Grinder		
Single Die Grinder with 1/8" and 1/4" collets	1	699573 08000
Die Grinder Kit*	1	699573 08001
Kit includes:		
1 die grinder with 1/8" and 1/4" collets		
100 – 3/8" x 1-1/2" x 1/8", 80 grit Metal R228 cartridge rolls (088341 80232)		
1- M9 cartridge roll mandrel (088341 81209)		
10 – 1" x 1" x 1/4" shank, 60 grit Blaze R920 flap wheels (662611 51170)		
5 – 1" x 1" W220, 1/4" x 1-1/2" spindle Gemini 38A60-P mounted points (614636 24566)		
1 – 1/2" x 1" SF5 Double-Cut carbide burr (699573 08021)		



Learn more about how to safely and effectively use a die grinder on our Youtube page
<https://nortonsga.us/44yj2> or visit <http://nortonsga.us/diegrinder>



Cartridge rolls are strips of abrasive cloth rolled and glued to form a solid shape that is designed to break down during use and reveal the next layer of abrasive. A valuable abrasive tool for reaching into corners, where larger diameter tools cannot work

Applications:

Used on inside surfaces and inside corners where other abrasive shapes cannot reach. Typically these are used on high-speed air grinders and are always mounted on a mandrel. Ideal for flash removal, polishing or removing machine tool marks, and edge breaking.

Stock Shapes:

Cartridge rolls, half-glued

Grit Range:

36 - 320

Abrasive Grain:

Ceramic Alumina, Aluminum Oxide

Backing:

X-weight cotton, X-weight poly-cotton

Construction:

All cartridge roll part numbers shown are resin bond, half-glued.

Quarter and full glue are also available for quotation as made-to-order products.

Maximum RPM:

1/8" to 1/2" - 23,000

5/8" to 1" - 18,000

1" to 1-1/2" - 15,000

Machine Used:



Application/Grit Recommendation Guide

← COARSER (GRINDING)

FINER (FINISHING) →

36	40	50	60	80	120	180	240	320
Blending Out Heavy Machine Marks								
Removing Heavy Burrs								
Applying Heavy Scratch Pattern								
Removing Flash/Parting Lines								
Removing Rust/Scale/Pit Marks								
		Preparing Metal for Painting						
		Blending Out Medium Machine Marks						
			Blending Metal Surfaces					
			Applying Light Scratch Pattern					
						Fine Blending and Cleaning		
							Metal Finishing and Polishing	



Best choice for hard-to-grind materials including super alloys (cobalt, inconel, and titanium) and stainless steel

BLAZE R920 CERAMIC ALUMINA

- Premium ceramic alumina abrasive grain provides greatest productivity with significantly faster cut rates; resists wear resulting in 50% - 300% longer life; supersized for cool cutting
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Constructed of rolled and half-glued abrasive strips that break down to expose next layer of abrasive



Better choice for accessing tight areas and where long life & fast cut are required

PINK R928 CERAMIC ALUMINA

- Excellent option for reaching into corners and small areas, ceramic grain provides better performance than aluminum oxide or zirconia alumina alternatives
- Improved resin bond system provides longer life; supersized for cool cutting
- Versatile X-weight poly cotton backing for flexibility and life



Good starting specification for flash removal, polishing, or removing machine tool marks and edge breaking on all types of metal

MERIT R228 ALUMINUM OXIDE

- Quality aluminum oxide abrasive delivers long life
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Constructed of rolled and half-glued abrasive strips that break down to expose next layer of abrasive



TIER:	BEST	BETTER
TRADENAME:	BLAZE R920	PINK R928
ABRASIVE:	Ceramic Alumina	Ceramic Alumina
OTHER:	Supersize	Supersize

SIZE (D x L x H)	GRIT	STD. PKG.	PART #	PART #
1/4 x 1-1/2 x 1/8 Use M-9 Mandrel	60	100	662611 94384	699573 39765
	80	100	662611 94394	699573 39766
	120	100	662611 94397	699573 39767
3/8 x 1-1/2 x 1/8 Use M-9 Mandrel	60	100	662611 94392	699573 39768
	80	100	662611 94395	699573 39769
	120	100	662611 94398	699573 39770
1/2 x 1-1/2 x 1/8 Use M-9 Mandrel	60	100	662611 94393	699573 39771
	80	100	662611 94396	699573 39772
	120	100	662611 94399	699573 39774



TIER:	GOOD
TRADENAME:	MERIT R228
ABRASIVE:	Aluminum Oxide

SIZE (D x L x H)	GRIT	STD. PKG.	PART #
3/16 x 3/4 x 3/32	80	100	088341 80005
3/16 x 1 x 3/32 Use M-2E Mandrel	60	100	088341 80023
	80	100	088341 80024
	100	100	088341 80025
	120	100	088341 80026
	150	100	088341 80027
	180	100	088341 80028
	240	100	088341 80030
1/4 x 3/4 x 1/8 Use M-3 or M-7 Mandrel	60	100	088341 80042
	80	100	088341 80043
1/4 x 1 x 1/8 Use M-4 or M-8 Mandrel	50	100	088341 80060
	60	100	088341 80061
	80	100	088341 80062
	100	100	088341 80063
	120	100	088341 80064
	150	100	088341 80065
	180	100	088341 80066
	320	100	088341 80070
1/4 x 1-1/2 x 1/8 Use M-9 Mandrel	50	100	088341 80079
	60	100	088341 80080
	80	100	088341 80081
	100	100	088341 80082
	120	100	088341 80083
	150	100	088341 80084
	180	100	088341 80085
	320	100	088341 80089
1/4 x 2 x 1/8 Use M-10 Mandrel	80	100	088341 80100
	120	100	088341 80102
5/16 x 1 x 1/8 Use M-4 or M-8 Mandrel	80	100	088341 80138
	120	100	088341 80140
5/16 x 1-1/2 x 1/8 Use M-9 Mandrel	80	100	088341 80157

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Continued



TIER:	GOOD
TRADENAME:	MERIT R228
ABRASIVE:	Aluminum Oxide

SIZE (D x L x H)	GRIT	STD. PKG.	PART #
3/8 x 3/4 x 1/8 Use M-7 Mandrel	120	100	088341 80197
3/8 x 1 x 1/8 Use M-8 Mandrel	60	100	088341 80213
	80	100	088341 80214
	100	100	088341 80215
	120	100	088341 80216
	150	100	088341 80217
	180	100	088341 80218
	240	100	088341 80220
3/8 x 1-1/2 x 1/8 Use M-9 Mandrel	36	100	088341 80228
	40	100	088341 80229
	50	100	088341 80230
	60	100	088341 80231
	80	100	088341 80232
	100	100	088341 80233
	120	100	088341 80234
	180	100	088341 80236
	240	100	088341 80238
	320	100	088341 80240
3/8 x 2 x 1/8 Use M-10 Mandrel	60	100	088341 80250
	80	100	088341 80251
	120	100	088341 80253
1/2 x 3/4 x 1/8 Use M-7 Mandrel	80	100	088341 80270
1/2 x 1 x 1/8 Use M-8 Mandrel	50	100	088341 80287
	60	100	088341 80288
	80	100	088341 80289
	100	100	088341 80290
	120	100	088341 80291
	150	100	088341 80292
	180	100	088341 80293
	240	100	088341 80295

Continued

Refer to the back of this section for mandrels.



TIER: **GOOD**
TRADENAME: **MERIT R228**
ABRASIVE: Aluminum Oxide

SIZE (D x L x H)	GRIT	STD. PKG.	PART #
1/2 x 1-1/2 x 1/8 Use M-9 Mandrel	40	100	088341 80305
	50	100	088341 80306
	60	100	088341 80307
	80	100	088341 80308
	100	100	088341 80309
	120	100	088341 80310
	150	100	088341 80311
	180	100	088341 80312
1/2 x 2 x 1/8 Use M-10 Mandrel	240	100	088341 80314
	320	100	088341 80316
	60	100	088341 80326
	80	100	088341 80327
	120	100	088341 80329
	60	100	088341 80350
	80	100	088341 80653
	120	100	088341 80338
1/2 x 2 x 1/4 Use M-22 Mandrel	80	100	088341 80351
5/8 x 1 x 3/16 Use M-15 Mandrel	80	100	088341 80364
5/8 x 1-1/2 x 1/8 Use M-9 Mandrel	60	100	088341 80275
	80	100	088341 80789
	120	100	088341 80394
5/8 x 1-1/2 x 3/16 Use M-16 Mandrel	60	100	088341 80382
	80	100	088341 80383
5/8 x 2 x 1/8 Use M-10 Mandrel	60	100	088341 82505
	80	100	088341 81080
5/8 x 2 x 3/16 Use M-10 Mandrel	50	100	088341 80400
	60	100	088341 80401
	80	100	088341 80402
3/4 x 1 x 1/8 Use M-8 Mandrel	80	100	088341 80469
	120	100	088341 81543
3/4 x 1 x 3/16 Use M-15 Mandrel	80	100	088341 80459
	120	100	088341 80461

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Continued



TIER: **GOOD**
TRADENAME: **MERIT R228**
ABRASIVE: Aluminum Oxide

SIZE (D x L x H)	GRIT	STD. PKG.	PART #
3/4 x 1-1/2 x 1/8 Use M-9 Mandrel	60	100	088341 80490
	80	100	088341 80527
	120	100	088341 80487
3/4 x 1-1/2 x 3/16 Use M-16 Mandrel	36	100	088341 80474
	50	100	088341 80476
	60	100	088341 80477
	80	100	088341 80478
	120	100	088341 80480
3/4 x 1-1/2 x 1/4 100/box 400/case Use M-21 Mandrel	180	100	088341 80482
	60	100	088341 80489
	80	100	088341 80358
	120	100	088341 80488
3/4 x 2 x 1/8 Use M-10 Mandrel	150	100	088341 82807
	60	100	088341 80791
3/4 x 2 x 3/16 Use M-17 Mandrel	60	100	088341 80494
	60	100	088341 80496
	80	100	088341 80497
	100	100	088341 80498
3/4 x 2 x 1/4 Use M-22 Mandrel	120	100	088341 80499
	60	100	088341 80506
	80	100	088341 81297
	100	100	088341 80509
1 x 1-1/2 x 1/8 Use M-9 Mandrel	120	100	088341 80507
	80	100	088341 80584
1 x 1-1/2 x 1/4 Use M-21 Mandrel	60	100	088341 80587
	80	100	088341 80583
1 x 2 x 3/16 Use M-17 Mandrel	60	100	088341 80591
	80	100	088341 80592
1 x 2 x 1/4 Use M-22 Mandrel	60	100	088341 80603
	80	100	088341 80606

Refer to the back of this section for mandrels.



Spiral rolls are strips of abrasive cloth rolled and glued to form a solid shape that is designed to break down during use and reveal the next layer of abrasive.

Applications:

Used on inside surfaces and inside corners where other abrasive shapes cannot reach. Typically these are used on high-speed air grinders and are always mounted on a mandrel. Ideal for flash removal, polishing, or removing machine tool marks, and edge breaking.

Shapes:

Full taper (all stock part numbers), half taper, and sidewall taper

Grit Range:

36 - 240

Abrasive Grain:

Ceramic Alumina, Aluminum Oxide

Backing:

X-weight cotton, X-weight poly cotton

Construction:

All spiral roll part numbers shown are full tapered, resin bond, half glued

Half-tapered and sidewall-tapered are available for quotation as made-to-order products

Quarter and full glue are also available for quotation as made-to-order products

Maximum RPM:

1/8" to 1/2" - 23,000

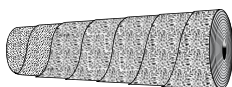
5/8" to 1" - 18,000

1" to 1-1/2" - 15,000

Machine Used:



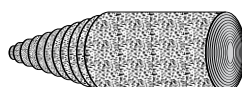
DIE GRINDER



Full Taper

- Especially useful for grinding/polishing of channels, fillets and radii, and deburring small holes
- Full taper used when the area to be finished is hard to reach with a full cartridge roll
- The tapered roll conforms to smaller areas
- Fits into irregular concaves, contours, channels

All part numbers shown are full tapered



Half Taper

- Used when the area to be finished is not narrow but a beginning point on the roll is needed
- The portion of the roll that is not tapered is then used to finish off the sides

Available for quotation as made-to-order products



Sidewall Taper

- The portion of the roll that is tapered guides the roll down to the area to be finished
- The sidewall then finishes off the sides

Available for quotation as made-to-order products

Application/Grit Recommendation Guide

COARSER (GRINDING)

FINER (FINISHING)

36	40	50	60	80	120	180	240	320
Blending Out Heavy Machine Marks								
Removing Heavy Burrs								
Applying Heavy Scratch Pattern								
Removing Flash/Parting Lines								
Removing Rust/Scale/Pit Marks								
		Preparing Metal for Painting						
		Blending Out Medium Machine Marks						
				Blending Metal Surfaces				
				Applying Light Scratch Pattern				
						Fine Blending and Cleaning		
							Metal Finishing and Polishing	



Best choice for hard-to-grind materials including super alloys (cobalt, inconel, and titanium) and stainless steel

BLAZE R920 CERAMIC ALUMINA

- See significantly faster, cooler, burn-free results on the toughest jobs from the premium, sharp, longest-lasting ceramic abrasive grains and advanced grinding aid lubricant; supersized for cool cutting
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Full taper construction consisting of rolled and half-glued abrasive strips that break down to expose next layer of abrasive



Better choice for accessing tight areas and where long life and fast cut are required

PINK R928 CERAMIC ALUMINA

- Excellent option for reaching into corners and small areas, ceramic grain provides better performance than aluminum oxide or zirconia alumina alternatives
- Improved resin bond system provides longer life; supersized for fast cutting
- Versatile X-weight poly cotton backing for flexibility and life



Good choice for cooler grinding/polishing of channels, fillets and radii, and deburring small holes at a low initial price

MERIT R228 ALUMINUM OXIDE

- Quality aluminum oxide abrasive delivers long life
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Full taper construction consisting of rolled and half-glued abrasive strips that break down to expose next layer of abrasive





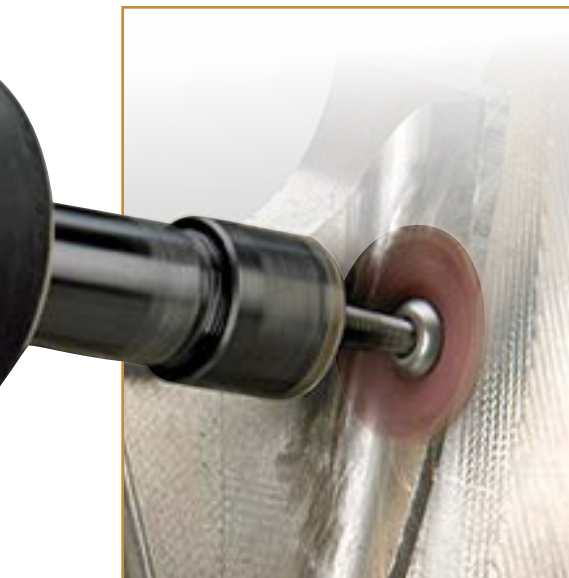
TIER:	BEST	BETTER	GOOD
TRADENAME:	BLAZE R920	PINK R928	MERIT R228
ABRASIVE:	Ceramic Alumina	Ceramic Alumina	Aluminum Oxide
OTHER:	Supersize	Supersize	

SIZE (D x L x H)	GRIT	STD. PKG.	PART #	PART #	PART #
3/8 x 1 x 1/8	60	100			088341 81714
Use M-8 Mandrel	80	100			088341 81715
	120	100			088341 81717
3/8 x 1-1/2 x 1/8	60	100	662611 94481	699573 39775	088341 81724
Use M-9 Mandrel	80	100	662611 94490	699573 39785	088341 81708
	120	100	662611 94491	699573 39787	088341 81727
	180	100			088341 81709
1/2 x 1 x 1/8	60	100			088341 81734
Use M-8 Mandrel	80	100			088341 81735
	120	100			088341 81737
1/2 x 1-1/2 x 1/8	50	100			088341 81743
Use M-9 Mandrel	60	100	662611 94484	699573 39790	088341 81744
	80	100	662611 94492	699573 39791	088341 81745
	100	100			088341 81746
	120	100	662611 94495	699573 39792	088341 81747
	180	100			088341 81749
	240	100			088341 81750
1/2 x 2 x 1/8	60	100			088341 81754
Use M-10 Mandrel	80	100			088341 81755
	120	100			088341 81757
5/8 x 1-1/2 x 1/8	100	100			088341 81776
Use M-9 Mandrel	120	100			088341 81777
5/8 x 1-1/2 x 3/16	80	100			088341 81444
Use M-16 Mandrel					
3/4 x 1-1/2 x 1/8	60	100			088341 81286
Use M-9 Mandrel	80	100			088341 80886
3/4 x 1-1/2 x 3/16	60	100			088341 81808
Use M-16 Mandrel	80	100			088341 81809
	120	100			088341 81811
3/4 x 2 x 3/16	60	100			088341 81820
Use M-17 Mandrel					
1 x 1-1/2 x 1/8	60	100		699573 39790	088341 81240
Use M-9 Mandrel					
1 x 2 x 3/16	60	100			088341 81878
Use M-17 Mandrel	80	100			088341 81879

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Refer to the back of this section for mandrels.

Square & Cross Pads, Overlap Slotted Discs



Square pads, cross pads and overlap slotted discs are all used on high-speed pneumatic tools for deburring, blending, cleaning, and polishing applications. All of these abrasive specialties are designed for applications in small, tight, hard-to-access locations on parts that are being finished.

Benefits:

Variety of shapes and sizes to fit application and part geometry
Shapes provide flexibility for the application, while eliminating aggressiveness of the sanding action
Cross pads allow visibility of the surface while sanding, to ensure correct amount of material is removed

Grit Range:

50 – 180

Abrasive Grain:

Ceramic Alumina, Aluminum Oxide

Backing:

X-weight cotton, X-weight poly-cotton

Construction

Standard quick-change eyelet for easy mounting and removal on quick-change mandrel minimizes downtime; Mandrel use increases range and versatility

Maximum RPM:

1" Diameter – 25,000 3" Diameter – 12,000 to 14,000
1-1/2" to 2" Diameter – 18,000 to 23,000 4" Diameter – 8,000 to 12,000
2-1/2" Diameter – 14,000 to 18,000 5" to 6" Diameter – 5,500 to 7,500

Machine Used:



DIE GRINDER

Application/Grit Recommendation Guide

COARSER (GRINDING)

FINER (FINISHING)

50	60	80	100	120	150	180
Light Stock Removal						
	Edge Chamfering/Beveling					
	Blending					
		Deburring/Deflashing				
				Cleaning		
					Finishing	

Best choice for hard-to-grind materials including super alloys (cobalt, inconel, and titanium) and stainless steel



BLAZE R920 CERAMIC ALUMINA

- See significantly faster, cooler, burn-free results on the toughest jobs from the sharp, longest-lasting ceramic abrasive grains and advanced supersize grinding aid for cool cutting
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Corners wear down consistently, exposing fresh abrasive; as these become round, they become less aggressive and run even smoother, with less stock removal – to retain workpiece shape

Better choice for accessing tight areas and where long life & fast cut are required



PINK R928 CERAMIC ALUMINA

- Excellent option for reaching into corners and small areas, ceramic grain provides better performance than aluminum oxide and zirconia alternatives
- Improved resin bond system provides longer life; supersized for cool cutting
- Versatile X-weight poly cotton backing for flexibility and life

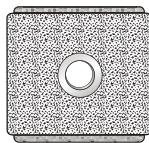
Good for most ID deburring and polishing applications



MERIT R228 ALUMINUM OXIDE

- Versatile, quality aluminum oxide abrasive grain ensures good cut rate
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Corners wear down consistently, exposing fresh abrasive; as these become round, they become less aggressive and run even smoother, with less stock removal – to retain workpiece shape

Square & Cross Pads, Overlap Slotted Discs



Square Pads

- Corners wear down consistently exposing fresh abrasive; the pad becomes round for less aggressive stock removal
- Grind almost as fast as hard wheels, but are much smoother and easier to control
- For quick blending of channels, fillets, corners, or spotting flat surfaces

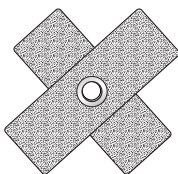


			TIER: BEST		BETTER		GOOD	
			TRADENAME: BLAZE R920		PINK R928		MERIT R228	
			ABRASIVE: Ceramic Alumina		Ceramic Alumina		Aluminum Oxide	
			OTHER: Supersize		Supersize			
SIZE (L x W x T)	EYELET	GRIT	STD. PKG.	PART #	PART #	PART #	PART #	PART #
1 x 1 x 6 Ply	8-32	80	100				088341	84826
1 x 1 x 8 Ply		80	100				088341	84124
1-1/2 x 1-1/2 x 1/2	1/4-20	60	100				088341	84463
		80	100				088341	84125
2 x 2 x 1/2	1/4-20	60	100	662611 94520	699573 40138			
		80	100	662611 94552	699573 40139		088341	84397
		120	100	662611 94554	699573 40141			
2 x 2 x 3/4	1/4-20	80	100				088341	84394
3 x 3 x 1/4	1/4-20	60	100	662611 94531	699573 40142			
		80	100	662611 94555	699573 40143			
		120	100	662611 94556	699573 40144			
3 x 3 x 1/2	1/4-20	50	100				088341	82152
		60	100	662611 94528	699573 40146		088341	82057
		80	100	662611 94557	699573 40147		088341	84336

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Refer to the back of this section for mandrels.

Square & Cross Pads, Overlap Slotted Discs



Cross Pads

- The shape of cross pads enables you to see through to the contact area, and provides greater flexibility than square pads to conform to variable internal diameters
- Used for close-tolerance polishing of small radii and channels, deburring, and finishing of bell-mouth configurations
- All pads are furnished with standard quick-change eyelet, as listed
- Plain hole sizes must be specified and are available for quotation as made-to-order products



					TIER: BEST	BETTER	GOOD
					TRADENAME: BLAZE R920	PINK R928	MERIT R228
					ABRASIVE: Ceramic Alumina	Ceramic Alumina	Aluminum Oxide
					OTHER: Supersize	Supersize	
SIZE (L x W x T)	PLY	EYELET	GRIT	STD. PKG.	PART #	PART #	PART #
3/4 x 3/4 x 3/8	8	3-48	80	100			088341 85578
1 x 1 x 3/8	8	3-48	60	100			088341 84943
			80	100			088341 85519
			100	100			088341 84195
			120	100			088341 85164
1-1/2 x 1-1/2 x 1/2	8	8-32	60	100	662611 94496	699573 39793	088341 84258
			80	100	662611 94508	699573 39794	088341 84465
			100	100			088341 82196
			120	100	662611 94511	699573 39804	088341 82148
2 x 2 x 1/2	8	8-32	60	100			088341 82156
			80	100			088341 82157
			120	100			088341 82132
2 x 2 x 3/4	8	8-32	60	100	662611 94502	699573 39806	088341 84128
			80	100	662611 94513	699573 40133	088341 84194
			120	100	662611 94516	699573 40134	
2-1/4 x 2-1/4 x 1/2	8	8-32	80	100			088341 84402
2-1/2 x 2-1/2 x 3/4	8	8-32	80	100			088341 84206
3 x 3 x 1	8	1/4-20	60	100	662611 94504		088341 82135
			80	100	662611 94549		088341 84119
			120	100	662611 94551		088341 84116
3 x 3 x 1	8	1/4-20	60	100		699573 40135	
			80	100		699573 40136*	088341 82140
			120	100		699573 40137	
3 x 3 x 1-1/2	10	1/4-20	80	100			088341 82184
4 x 4 x 1	8	1/4-20	60	100			088341 84142
			80	100			088341 84135
			120	100			088341 84377
4 x 4 x 1-1/2	8	1/4-20	80	100			088341 84129

* Pink R928 3 x 3 x 1 are 8 ply.

Ceramic Alumina and Alumina Oxide cross pads are also available upon request as made-to-order products.

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Refer to the back of this section for mandrels.

Square & Cross Pads, Overlap Slotted Discs



Overlap Slotted Discs



Overlap Slotted Discs

- Used for deburring and polishing radii, holes and cylinder walls
- Our "2 to a set" configuration cuts on the inward motion only
- The "4 to a set" configuration, assembled back to back, cuts on both the inward and outward motions
- All discs are furnished with standard quick-change eyelet
- Plain hole sizes must be specified and are available for quotation as made-to-order products



		TIER: BEST		GOOD	
TRADENAME:		BLAZE R920		MERIT R228	
ABRASIVE:		Ceramic Alumina		Aluminum Oxide	
OTHER:		Supersize, 2 Per Set		2 Per Set	
DIA.	EYELET	GRIT	STD. PKG.	PART #	PART #
1	8-32	60	100		088341 84346
		80	100		088341 84019
		100	100		088341 84224
		120	100		088341 84151
1-1/4	8-32	60	100		088341 84270
		80	100		088341 84065
		100	100		088341 84291
		120	100		088341 84084
1-1/2	8-32	60	100	662611 95051	088341 84066
		80	100	662611 95368	088341 84079
		100	100		088341 84279
		120	100	662611 95367	088341 86035
1-3/4	8-32	60	100		088341 84655
		80	100		088341 84042
2	8-32	60	100	662611 95054	
		80	100	662611 95055	088341 84076
		100	100		088341 84145
		120	100	662611 95056	
2-1/2	8-32	80	100		088341 84444
3	1/4-20	60	100	662611 95057	088341 84041
		80	100	662611 95058	088341 84077
		100	100		088341 84082
		120	100		088341 84344
4	1/4-20	60	100		088341 84000
		120	100		088341 85155
4-1/2	1/4-20	100	100		088341 84431

All overlap slotted discs are available (made-to-order) reinforced with a fiber washer

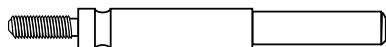
Ceramic Alumina and Alumina Oxide overlap slotted discs are also available upon request as made-to-order products.

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Quick-Change Mandrels for Overlap Slotted Discs, Square and Cross Pads

CROSS PAD SIZE DIA.	SQUARE PAD SIZE DIA.	OVERALL LENGTH	MODEL NO.	THD. SIZE	PART #
1/4, 3/8, and 1/2 wide		2-1/2	MM48-4	3-48	088341 83162
3/4, 1 wide	Up thru 1-1/2 sq. x 1/2 thick 2 sq. x 1/4 or 3/8 thick	3	MM32-4	8-32	088341 83163
		4	MM-32-4-4	8-32	088341 21680
		6	MM-32-4-6	8-32	088341 21681
All pads 2-1/2 x 1-1/2 and larger	2 sq. x 1/4 or 1/2 thick and larger	3	MM20-4	1/4-20	088341 83164

For overlap slotted discs, choose a mandrel with the same thread size as the disc



QUICK-CHANGE MANDREL



EXTENDED MANDREL



Best product for blending and polishing contours when smooth running is a primary concern. Used for finishing hard-to-reach areas, removing parting lines, imperfections, and burrs on all surfaces.

Benefits:

Spiral construction avoids shadow marks and provides smooth, chatter-free cutting action. Achieves close tolerances when finishing curved, contoured, and hard-to-reach areas. Fast cutting and removes toughest metal. Bands are easily removed and replaced.

Grit Range:

24 - 320

Abrasive Grain:

Ceramic Alumina, Aluminum Oxide

Backing:

X-weight cotton

Other:

Use with rubber expanding drum

Machine Used:



DIE GRINDER

Application/Grit Recommendation Guide

COARSER (GRINDING)					FINER (FINISHING)				
24	36	40	50	60	80	120	180	240	320
Heavy Stock Removal									
	Blending Out Heavy Machine Marks								
	Removing Heavy Burrs								
	Applying Heavy Scratch Pattern								
	Removing Flash/Parting Lines								
	Removing Rust/Scale/Pit Marks								
			Preparing Metal for Painting						
			Blending Out Medium Machine Marks						
					Blending Metal Surfaces				
					Applying Light Scratch Pattern				
							Fine Blending and Cleaning		
								Metal Finishing and Polishing	



Best choice for hard-to-grind materials including super alloys (cobalt, inconel, and titanium) and stainless steel

BLAZE R920 CERAMIC ALUMINA

- See significantly faster, cooler, burn-free results on the toughest jobs from the next-generation of sharp, longest-lasting ceramic abrasive grains and advanced grinding aid lubricant
- Advanced, full resin bond system designed to promote exceptional grain retention for additional product life
- X-weight cotton backing and spiral construction avoid shadow marks and provide smooth, chatter-free cutting action



Good starting specification for all types of metal

MERIT R228 ALUMINUM OXIDE

- Tough and durable quality aluminum oxide abrasive removes tough metal
- X-weight cotton backing and spiral construction avoid shadow marks and provide smooth, chatter-free cutting action
- Achieves close tolerances on curved, contoured, and hard-to-reach areas



TIER: **BEST**
TRADENAME: **BLAZE R920**
ABRASIVE: Ceramic Alumina
OTHER: Supersize

SIZE (D x W)	GRIT	STD. PKG.	PART #
1/2 x 1	40	100	662611 46012
	80	100	662611 46014
3/4 x 1	60	100	662611 46017
	80	100	662611 46018
	120	100	662611 46019
1 x 1	40	100	662611 46020
	60	100	662611 46021
	80	100	662611 46022
	120	100	662611 46023
1-1/2 x 1-1/2	40	100	662611 46024
	60	100	662611 46025
	80	100	662611 46026
	120	100	662611 46027
2 x 2	40	100	662611 46028
	60	100	662611 46029
	80	100	662611 46030
	120	100	662611 46031
3 x 3	40	50	662611 46032
	60	50	662611 46033
	80	50	662611 46034
	120	50	662611 46035



TIER: **GOOD**
TRADENAME: **MERIT R228**
ABRASIVE: Aluminum Oxide

SIZE (D x W)	GRIT	STOCK PKG. QTY.	NON-STOCK MOQ	PART #
3/8 x 1	80	100/box	300	088341 96645
1/2 x 1/2	50	100/box	300	088341 96228
	80	100/box	300	088341 96179
	100	100/box	300	088341 96189
	120	100/box	300	088341 96069
1/2 x 1	180	100/box	300	088341 96209
	36	100/box	300	088341 96591
	60	100/box	300	088341 96212
1/2 x 2	80	100/box	300	088341 96215
	50	100/box	200	088341 96548
3/4 x 3/4	80	100/box	200	088341 96669
	60	100/box	300	088341 96168
3/4 x 1	80	100/box	300	088341 96161
	36	100/box	300	088341 96261
3/4 x 1-1/2	50	100/box	300	088341 96515
	60	100/box	300	088341 96070
	80	100/box	300	088341 96071
	120	100/box	300	088341 96219
3/4 x 2	24	100/box	300	088341 96596
	60	100/box	300	088341 96554
	80	100/box	300	088341 96249
3/4 x 2	80	100/box	200	088341 96756



TIER: **GOOD**
TRADENAME: **MERIT R228**
ABRASIVE: Aluminum Oxide

SIZE (D x W)	GRIT	STOCK PKG. QTY.	NON-STOCK MOQ	PART #
1 x 1	36	100/box	300	088341 96072
	40	100/box	300	088341 96073
	50	100/box	300	088341 96184
	60	100/box	300	088341 96075
	80	100/box	300	088341 96074
	120	100/box	300	088341 96177
1 x 1-1/2	36	100/box	200	088341 96525
1 x 2	80	100/box	200	088341 96268
	100	100/box	200	088341 96750
1 x 3	36	100/box	100	088341 96665
	50	100/box	100	088341 97688
	60	100/box	100	088341 96676
	80	100/box	100	088341 96195
1-1/2 x 1-1/2	120	100/box	100	088341 96197
	36	100/box	200	088341 96164
	50	100/box	200	088341 96176
	60	100/box	200	088341 96091
	80	100/box	200	088341 96165

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Continued



TIER: **GOOD**
TRADENAME: **MERIT R228**
ABRASIVE: Aluminum Oxide

SIZE (D x W)	GRIT	STOCK PKG. QTY.	NON-STOCK MOQ	PART #
1-1/2 x 2	60	100/box	200	088341 96067
	80	100/box	200	088341 96533
1-1/2 x 3	36	100/box	100	088341 97063
	60	100/box	100	088341 96703
	80	100/box	100	088341 96809
	120	100/box	100	088341 96343
	180	100/box	100	088341 97869
2 x 1	80	100/box	200	088341 96166
	120	100/box	200	088341 96595
2 x 2	36	100/box	200	088341 96110
	60	100/box	200	088341 96173
2 x 3	50	100/box	100	088341 96152
	60	100/box	100	088341 96175
	80	100/box	100	088341 96198
2-1/4 x 3	36	100/box	100	088341 97140
	50	100/box	100	088341 96620
	80	100/box	100	088341 96270
	120	100/box	100	088341 96729
	150	100/box	100	088341 95857



TIER: **GOOD**
TRADENAME: **MERIT R228**
ABRASIVE: Aluminum Oxide

SIZE (D x W)	GRIT	STOCK PKG. QTY.	NON-STOCK MOQ	PART #
3 x 2	40	100/box	100	088341 96090
	50	100/box	100	088341 96264
	60	100/box	100	088341 96530
	80	100/box	100	088341 96265
3 x 3	120	100/box	100	088341 96531
	24	100/box	100	088341 96256
	36	100/box	100	088341 96262
	50	100/box	100	088341 96253
	60	100/box	100	088341 96188
	80	100/box	100	088341 96159
	100	100/box	100	088341 96250
	150	100/box	100	088341 96452
	180	100/box	100	088341 96131
	320	100/box	100	088341 97968

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Expanding Rubber Drums

Spiral Bands are easily removed and replaced on the rubber expanding drum.



TIER: **GOOD**
TRADENAME: **RUBBER EXPANDING DRUMS**

DRUM DIAMETER	WIDTH	SHANK DIAMETER	MAX. RPM	STD. PKG.	PART #
1/4	1/2	1/8	30,000	1	088341 96030
3/8	1/2	1/4	30,000	1	088341 96944 NS
3/8	1	1/8	18,000	1	088341 96011 NS
1/2	1/2	1/4	30,000	1	088341 96904
1/2	1	1/4	15,000	1	088341 96906
1/2	1-1/2	1/4	12,000	1	088341 96907
1/2	2	1/4	10,000	1	088341 96908
3/4	1/2	1/4	27,000	1	088341 96909 NS
3/4	3/4	1/4	24,000	1	088341 96910 NS
3/4	1	1/4	17,000	1	088341 96911
3/4	1-1/2	1/4	10,000	1	088341 96912
3/4	2	1/4	10,000	1	088341 96913

NS Non-stock, contact your Norton representative for current order quantities and lead-times.



TIER: **GOOD**
TRADENAME: **RUBBER EXPANDING DRUMS**

DRUM DIAMETER	WIDTH	SHANK DIAMETER	MAX. RPM	STD. PKG.	PART #
1	1/2	1/4	20,000	1	088341 96914 NS
1	1	1/4	18,000	1	088341 96916
1	1-1/2	1/4	10,000	1	088341 96917
1	2	1/4	8,000	1	088341 96918
1-1/2	1	1/4	12,000	1	088341 96921
1-1/2	1-1/2	1/4	10,000	1	088341 96922
1-1/2	2	1/4	8,000	1	088341 96923
2	1	1/4	11,000	1	088341 96926
2	1-1/2	1/4	8,000	1	088341 96927
2	2	1/4	6,000	1	088341 96928
3	1	3/8	3,000	1	088341 96929 NS
3	2	3/8	3,000	1	088341 96930 NS
3	3	3/8	3,000	1	088341 96931



Tapered cone points are strips of abrasive cloth rolled and glued to form a solid shape that is designed to break down during use and reveal the next layer of abrasive. Tapered cone points are similar to cartridge rolls but their shape lends greater accessibility to many difficult-to-reach work areas. They are used for deburring holes and in close tolerance work areas.

Applications:

Used on inside surfaces and inside corners where other abrasive shapes cannot reach. Typically these are used on high-speed air grinders and are always mounted on a mandrel. Ideal for flash removal, polishing, or removing machine tool marks, and edge breaking.

Grit Range:

50 - 320

Abrasive Grain:

Aluminum Oxide

Backing:

X-weight cotton

Construction:

Popular sizes and mandrels are listed, with additional sizes available upon request as made-to-order products

Ceramic alumina and silicon carbide cone points are available upon request as made-to-order products

Maximum RPM:

1/8" to 1/2" – 23,000

5/8" to 1" – 18,000

1" to 1-1/2" – 15,000

Machine Used:



DIE GRINDER

Application/Grit Recommendation Guide

COARSER (GRINDING)

FINER (FINISHING)

36	40	50	60	80	120	180	240	320
Blending Out Heavy Machine Marks								
Removing Heavy Burrs								
Applying Heavy Scratch Pattern								
Removing Flash/Parting Lines								
Removing Rust/Scale/Pit Marks								
		Preparing Metal for Painting						
		Blending Out Medium Machine Marks						
			Blending Metal Surfaces					
			Applying Light Scratch Pattern					
						Fine Blending and Cleaning		
							Metal Finishing and Polishing	

Good starting specification for flash removal, polishing, or removing machine tool marks and edge breaking on all types of metal in difficult-to-reach work areas

MERIT R228 ALUMINUM OXIDE TAPERED CONE POINTS

- Quality aluminum oxide abrasive delivers long life
- X-weight cotton cloth provides extended durability, conformability, and superior wear resistance; strong resin bond system provides good grain retention and life
- Full taper construction consisting of rolled and half-glued abrasive strips that break down to expose next layer of abrasive



TIER: GOOD			
TRADENAME: MERIT R228			
ABRASIVE: Aluminum Oxide			
SIZE (D x L x H)	GRIT	STD. PKG.	PART #
3/16 x 1 x 2-1/2° Use K-110 Mandrel	50	500	088341 86892
	60	500	088341 86893
	80	500	088341 80918
	100	500	088341 82197
	120	500	088341 82199
	150	500	088341 82200
	180	500	088341 86894
	240	500	088341 86895
	320	500	088341 82855

Continued

TIER: GOOD			
TRADENAME: MERIT R228			
ABRASIVE: Aluminum Oxide			
SIZE (D x L x H)	GRIT	STD. PKG.	PART #
5/16 x 1-1/2 x 5° Use B-20 Mandrel	80	500	088341 80873
	100	500	088341 82043
	120	500	088341 82717
	150	500	088341 86890
	180	500	088341 82535
	240	500	088341 82044
	320	500	088341 82537

Refer to next page for mandrels.

Cartridge and Spiral Roll Mandrels

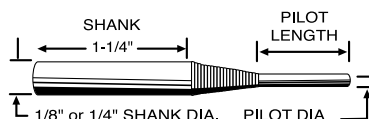
MODEL #	PILOT DIA.	PILOT LENGTH	SHANK DIA.	SHANK LENGTH	OVERALL LENGTH	PART #
Cartridge and Spiral Roll Mandrels						
M-2E	3/32	3/4	1/4	1	3	088341 83799 NS
M-2	3/32	1	1/8	1	3	088341 81202
M-3	1/8	1/2	1/8	1	2-1/2	088341 81203
M-4	1/8	3/4	1/8	1	2-1/2	088341 81204
M-5	1/8	1	1/8	1	2-3/4	088341 81205
M-6	1/8	1-1/2	1/8	1	2-1/2	088341 81206 NS
M-7	1/8	1/2	1/4	1-1/4	2-1/4	088341 81207
M-8	1/8	3/4	1/4	1-1/4	2-1/2	088341 81208
M-9	1/8	1	1/4	1-1/4	2-3/4	088341 81209
M-10	1/8	1-1/2	1/4	1-1/4	3-1/4	088341 81210
M-11	1/8	2	1/4	1-1/4	4	088341 81211 NS
M-12	3/16	1/2	1/8	1-1/4	2-1/4	088341 81212 NS
M-13	3/16	3/4	1/8	1-1/4	2-1/2	088341 81213 NS
M-14	3/16	1/2	1/4	1-1/4	2-1/2	088341 81214 NS
M-15	3/16	3/4	1/4	1-1/4	2-3/4	088341 81215 NS
M-16	3/16	1	1/4	1-1/4	3	088341 81216
M-17	3/16	1-1/2	1/4	1-1/4	3-1/2	088341 81217
M-18	3/16	2	1/4	1-1/4	4	088341 81218
M-19	1/4	1/2	1/4	1-1/4	2-1/2	088341 81219 NS
M-20	1/4	3/4	1/4	1-1/4	2-3/4	088341 81220 NS
M-21	1/4	1	1/4	1-1/4	3	088341 81221
M-22	1/4	1-1/2	1/4	1-1/4	3-1/2	088341 81222
M-23	1/4	2	1/4	1-1/4	4	088341 81223 NS
M-24	5/16	3/4	1/4	1-1/4	2-3/4	088341 81224 NS
M-25	5/16	1	1/4	1-1/4	3	088341 81225 NS
M-26	5/16	1-1/2	1/4	1-1/4	3-1/2	088341 81226 NS
M-27	5/16	2	1/4	1-1/4	4	088341 81227 NS

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

Standard Package = 1

Recommended Pilot Length for Mandrels

3/4 Roll Length	Use 1/2 Pilot
1 Roll Length	Use 3/4 Pilot
1-1/2 Roll Length	Use 1 Pilot
2 Roll Length	Use 1-1/2 Pilot



Extra Shank Length Mandrels for Cartridge Rolls and Spiral Rolls

MODEL #	SHANK LENGTH	OVERALL LENGTH	PART #
Extras Shank Length Mandrels			
M-8-4	4	5-1/4	088341 80116
M-8-6	6	7-1/4	088341 80122
M-9-2.5	2-1/2	4	088341 80096
M-9-3	3	4-1/2	088341 80129
M-9-4	4	5-1/2	088341 80074 NS
M-9-6	6	7-1/2	088341 80131
M-10-4	1-3/4	4	088341 80092 NS
M-10-6	3-3/4	6	088341 80145

All Extra Shank Length mandrels are 1/4" diameter

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

Standard Package = 1

Tapered Cone Point Mandrels

DESCRIPTION	SHANK	PART #
Cone Point Mandrels		
A-10	1/4	088341 81300
B-20	1/4	088341 81301
C-30	1/4	088341 81302
D-40	1/4	088341 81303
E-50	1/4	088341 81304
F-60	1/4	088341 81305
G-70	1/4	088341 81306
I-90	1/4	088341 81308
K-110	1/8	088341 81310

Standard Package = 1



These test kits feature the most popular range and sizes of our coated specialty products in convenient kit formats. Ideal for small job shops, or for travelling to a job site. Our cartridge roll kits are great when you need a small quantity, but a wide range of grits and sizes



Ceramic Alumina Cartridge Roll Test Kit

- Part # 662610**66726**
- Kit includes a variety of our ceramic alumina cartridge rolls, spiral rolls and mandrels in popular sizes and grits.



Aluminum Oxide Cartridge Roll Test Kit "CR"

- Part # 088341**181061**
- Includes over 120 pieces of our most popular sizes, grits and shapes with their appropriate mandrels.



General Purpose Test Kit "GP"

- Part # 088341**169025**
- Includes samples of various abrasive specialties. One of these kits could be worth the cost of the entire kit by solving your problems in deburring, polishing and grinding.



Porting Test Kit "APK-MO"

- Part # 088341**169032**
- The samples in this kit highlight specialties for general metal and wood working polishing and finishing applications.



Cross Buffs

Best choice for blending, cleaning and polishing



CROSS BUFFS

- Unique design is tough yet conformable to intricate shapes and contours without changing the workpiece dimension
- Premium aluminum oxide grain for excellent cutting and finishing
- Firm durable web for high resistance to tearing on burrs and sharp edges

TIER: **BEST**

TRADENAME: **HIGH STRENGTH**

ABRASIVE: Aluminum Oxide

ATTACHMENT: 8-32 Eyelet

SIZE (D x W)	GRIT	PLY	STD. PKG.	PART #
1-1/2 x 1/2	Medium	2	100	088341 89306 NS
	Very Fine	2	100	088341 89307 NS
1-1/2 x 1/2	Medium	2	100	088341 89308
	Very Fine	3	100	088341 89309 NS

8-32 eyelets: Attach to MM32-4 mandrel. Part No. 088341**83163** (See description at end of Overlap Slotted Disc Section)

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

Surface Preparation Stars

The perfect item for ID work



MERIT SURFACE PREPARATION STARS

- Star shape design is tough yet conformable to intricate shapes and contours without changing the workpiece dimension
- Premium aluminum oxide grain for excellent cutting and finishing
- Firm durable web for high resistance to tearing on burrs and sharp edges

TIER: **GOOD**

TRADENAME: **MERIT SURFACE PREP**

ABRASIVE: Aluminum Oxide

ATTACHMENT: 1/4-20 Eyelet

SIZE (D x EYELET)	GRIT	STD. PKG.	PART #
1-1/2 x 1/4-20	C	100	088341 85923
	M	100	088341 85924 NS
	VF	100	088341 85925
2 x 1/4-20	C	100	088341 85926 NS
	M	100	088341 85927 NS
	VF	100	088341 85928 NS
3 x 1/4-20	C	100	088341 85929 NS
	M	100	088341 85678 NS
	VF	100	088341 85931 NS
4 x 1/4-20	C	100	088341 85932 NS
	M	100	088341 85933 NS
	VF	100	088341 85934 NS

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

1/4-20 eyelets attach to MM20-4 mandrel, Part # 088341**83164** (See description at end of Overlap Slotted Disc Section.)

Non-Woven 1/4" Steel Shank Disc Wheels

Best choice for all of your tough stripping needs on all kinds of surfaces



BLAZE RAPID STRIP DISCS

- Ceramic alumina grain provides 2X cut rate, 2X life over silicon carbide products
- Advanced resin bond does not shed on rust-encrusted pieces, and prevents gouging and rework; does not snag when used for deburring
- Leave a thoroughly cleaned surface that ensures excellent adhesion for subsequent processes such as coating, painting and soldering

Good choice for light deburring and finishing



MERIT DISC WHEELS

- Durable, longer lasting aluminum oxide abrasive leaves a more polished finish
- Discs are ganged together to form a wheel that is tough yet conformable to intricate shapes and contours without changing the workpiece dimension
- These wheels are mounted on a 1/4 inch steel mandrel embedded in a strong epoxy core



TIER: **BEST**

TRADENAME: **BLAZE RAPID STRIP**

ABRASIVE: Ceramic Alumina

SIZE (D x 1/4 SHANK)	GRIT	PLY	MAX. RPM	STD. PKG.	PART #
4	Extra Coarse	1 Ply	8,000	5	776960 05713 NS
4	Extra Coarse	2 Ply	8,000	5	666233 75051 NS

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.



TIER: **GOOD**

TRADENAME: **MERIT**

ABRASIVE: Aluminum Oxide

SIZE (D x 1/4 SHANK)	GRIT	PLY	MAX. RPM	STD. PKG.	PART #
2	Medium	2 Ply	12,000	10	088341 31551
2	Medium	4 Ply	12,000	10	088341 31554
3	Medium	2 Ply	8,000	10	088341 31558
	Very Fine	3 Ply	8,000	10	088341 31560
3	Medium	4 Ply	8,000	10	088341 31496
	Fine	5 Ply	8,000	10	088341 31557
	Very Fine	5 Ply	8,000	10	088341 31497
4	Fine	3 Ply	6,000	10	088341 31562 NS
4	Medium	4 Ply	6,000	10	088341 31564
5	Medium	2 Ply	4,000	10	088341 31567 NS
5	Medium	4 Ply	4,000	10	088341 31570
	Fine	5 Ply	4,000	10	088341 31571 NS

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

Disc wheels are constructed by number of plies.



Flap wheels are an ideal choice for a wide variety of blending, deburring and finishing applications common in the metal fabrication, welding and polishing industries. Flap wheels are conformable to intricate shapes and contours. Designed to deliver a consistent finish with a uniform rate of cut, flap wheels wear away, continually exposing fresh abrasives.

Applications:

Used for a wide range of metal fabrication and welding applications including stock removal, blending, deburring, cleaning, finishing, and polishing

Size Range:

Flap wheels with mounted steel shanks: 3/8" - 3" diameter

Flap wheels with mounted 1/4"-20 thread: 1" - 3" diameter

Flap wheels with arbor holes: 3" - 16" diameter

Grit Range:

40 - 320

Abrasive Grain:

Ceramic Alumina, Aluminum Oxide Blend, Aluminum Oxide

Machine Used:



DIE
GRINDER



BENCH
GRINDER



PEDESTAL
GRINDER

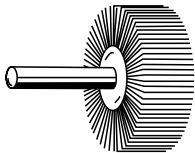


PORTABLE
GRINDER

Shape Recommendation Guide

Shape

Description/Application



Flap Wheels with Mounted Steel Shanks

Wheels are designed with a 1/8" or 1/4" steel shank as an integral part of each wheel. These shanks run through the wheel creating better balance, a reduction of chatter, and reduced operator fatigue. They also permit quick changes on air tools when using other abrasive products.



Flap Wheels with Mounted 1/4"-20 Thread

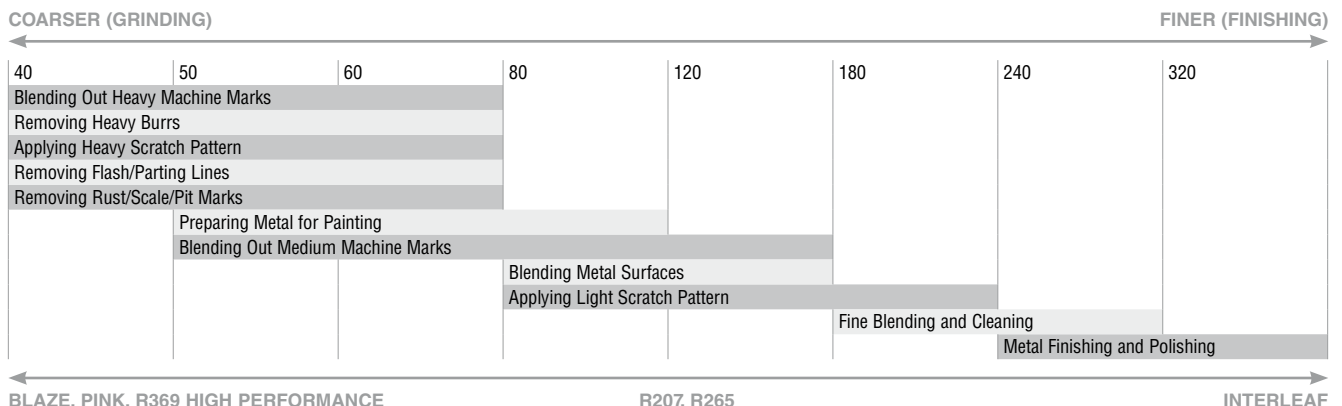
Wheels are designed with a 1/4"-20 thread and flange as an integral part of the wheel. These threads facilitate the quickest changes on air tools using flap wheels exclusively, as there are no special tools needed to change the flap wheel. Also allow extended reach with accessory mandrels.



Flap Wheels with Arbor Holes

For use on larger portable and fixed-base tools where the wheel must fit on an existing arbor.

Application/Grit Recommendation Guide



See Non-Woven Flap Wheel section for Interleaf Flap Wheels

Best choice for hard-to-grind materials, including superalloys (cobalt, inconel, and titanium) and stainless steel



BLAZE R920 CERAMIC ALUMINA

- See significantly faster, cooler, burn-free results on the toughest jobs from the next-generation of sharp, longest-lasting ceramic abrasive grains and advanced grinding aid lubricant
- X-weight cotton flaps provide conformability and even wear
- Advanced self-lubricating grain treatment reduces heat on hard-to-grind materials

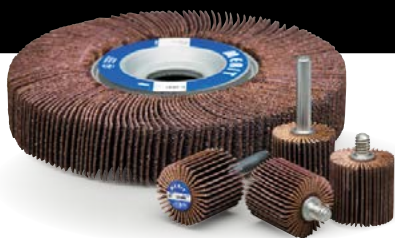
Better choice for blending, deburring and finishing on a wide range of materials



PINK R928 CERAMIC ALUMINA

- Ceramic grain provides better performance than zirconia alternatives
- Improved resin bond system provides longer life
- Versatile X-weight poly cotton backing for flexibility and life

Good choice for more durable flap wheel applications where aggressive cut and superior life are required



MERIT R369 HIGH PERFORMANCE A/O BLEND

- Long-lasting premium aluminum oxide blend with 2 to 3 times longer life
- Delivers an excellent cut rate on finishing operations
- Heavy cotton blended flaps provide extended durability, conformability, and superior wear resistance

Good choice for more flexible flap wheel applications where finish is required



MERIT R207 ALUMINUM OXIDE

- Solid-performing aluminum oxide abrasive delivers uniform stock removal and long life
- Heavy X-weight cotton flaps provide conformability and even wear
- Good general purpose starting specification for small deburring and cleaning jobs

Good choice when initial price is a key purchasing criteria



MERIT R265 ALUMINUM OXIDE

- Quality aluminum oxide abrasive provides good cut rate and life
- Heavy cotton flaps provide extended durability, conformability, and superior wear resistance
- Designed for all-purpose use where price is the major consideration

Flap Wheel Test Kits

Mini 1/4"-20 Thread Test Kit "CQ"

- Part # 088341**38001**
- Includes ten, 1" to 3" diameter, 1/4"-20 thread mini flap wheels
- Each kit includes a 1/4"-20 QC-4 quick-change adapter

Mini 1/4" Steel Shank Test Kit "CMM"

- Part # 088341**38004**
- Includes ten wheels, 1" to 3" diameter in various grits
- The flap wheels are mounted on a 1/4" diameter hardened steel shank

Micro Mini 1/8" Steel Shank Test Kit "MMC"

- Part # 088341**31493**
- Includes 5 wheels, 3/8" to 1-3/16" in diameter
- The flap wheels are mounted on a 1/8" diameter hardened steel shank
- Ideal for fast polishing and light deburring of holes or grooves





Micro-Mini Flap Wheels with 1/8" Mounted Steel Shanks

- The smallest flap wheels, ranging from 3/8" to 1-3/16" diameter, mounted on a 1/8" diameter steel shank
- Provide fast polishing and light deburring of internal workpieces with holes or grooves as small as 1/2"



TIER: **GOOD**
TRADENAME: **MERIT R369**
ABRASIVE: Premium Aluminum Oxide
BACKING: Y-Weight Cotton

SIZE (D x W x SK.)	GRIT	MAX. RPM	STD. PKG.	PART #
3/8 x 3/8 x 1/8	60	40,000	10	088341 37470
	80	40,000	10	088341 37471
	120	40,000	10	088341 37472
	180	40,000	10	088341 37473
	240	40,000	10	088341 37474
5/8 x 5/8 x 1/8	320	40,000	10	088341 37475
	60	37,000	10	088341 37480
	80	37,000	10	088341 37481
	120	37,000	10	088341 37482
	180	37,000	10	088341 37483
5/8 x 3/4 x 1/8	240	37,000	10	088341 37484
	320	37,000	10	088341 37485
	80	37,000	10	088341 37541
	120	37,000	10	088341 37542
	180	37,000	10	088341 37543
3/4 x 3/16 x 1/8	240	37,000	10	088341 37544
	320	37,000	10	088341 37545
	60	35,000	10	088341 37550
	80	35,000	10	088341 37551
	120	35,000	10	088341 37552
3/4 x 3/8 x 1/8	180	35,000	10	088341 37553
	240	35,000	10	088341 37554
	320	35,000	10	088341 37555
	60	35,000	10	088341 37560
	80	35,000	10	088341 37561
3/4 x 1/2 x 1/8	120	35,000	10	088341 37562
	180	35,000	10	088341 37563
	240	35,000	10	088341 37564
	320	35,000	10	088341 37565
	60	35,000	10	088341 37570
	80	35,000	10	088341 37571
	120	35,000	10	088341 37572
	180	35,000	10	088341 37573
	240	35,000	10	088341 37574
	320	35,000	10	088341 37575



TIER: **GOOD**
TRADENAME: **MERIT R369**
ABRASIVE: Premium Aluminum Oxide
BACKING: Y-Weight Cotton

SIZE (D x W x SK.)	GRIT	MAX. RPM	STD. PKG.	PART #
3/4 x 5/8 x 1/8	60	35,000	10	088341 37580
	80	35,000	10	088341 37581
	120	35,000	10	088341 37582
	180	35,000	10	088341 37583
	240	35,000	10	088341 37584
3/4 x 3/4 x 1/8	320	35,000	10	088341 37585
	60	35,000	10	088341 37590
	80	35,000	10	088341 37591
	120	35,000	10	088341 37592
	240	35,000	10	088341 37594
1-3/16 x 1/8 x 1/8	320	35,000	10	088341 37595
	80	30,000	10	088341 37491
	120	35,000	10	088341 37492
	180	35,000	10	088341 37493
1-3/16 x 3/16 x 1/8	320	35,000	10	088341 37495
	60	30,000	10	088341 37508
	80	35,000	10	088341 37501
	120	35,000	10	088341 37502
1-3/16 x 3/8 x 1/8	180	35,000	10	088341 37503
	240	35,000	10	088341 37504
	320	35,000	10	088341 37505
	80	30,000	10	088341 37511
	120	35,000	10	088341 37512
	180	35,000	10	088341 37513
	240	35,000	10	088341 37514
	320	35,000	10	088341 37515

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Micro-Mini Test Kit "MMC"

- Part # 088341**131493**
- Includes five wheels, 3/8" to 1-3/16" diameter in various grits, mounted on a 1/8" diameter hardened steel shank
- The "MMC" kit is ideal for fast polishing and light deburring of internal holes or grooves as small as 1/2"



Mini Flap Wheels with 1/4" Mounted Steel Shanks

- Small flap wheels, ranging from 1" to 3" diameter, mounted on a 1/4" diameter steel shank
- Very durable, long-lasting mini flap wheels for demanding, heavy stock removal applications



		TIER: BEST		BETTER		GOOD		GOOD		GOOD	
		TRADENAME: BLAZE R920		PINK R928		MERIT R369		MERIT R207		MERIT R265	
		ABRASIVE: Ceramic Alumina		Ceramic Alumina		Premium Aluminum Oxide		Aluminum Oxide		Aluminum Oxide	
		BACKING: X-Weight Cotton		X-Weight Poly/Cotton		Y-Weight Cotton		X-Weight Cotton		X-Weight Cotton	
SIZE (D x W x SK.)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #	PART #	PART #	PART #
1 x 1/2 x 1/4	80	30,000	10							088341 49801	
	120	30,000	10							088341 49802	
1 x 5/8 x 1/4	40	30,000	10			088341 137105					
	60	30,000	10			088341 137100		636425 02576			
	80	30,000	10			088341 137101		636425 02577			
	120	30,000	10			088341 137102		636425 02578			
	180	30,000	10			088341 131536					
	240	30,000	10			088341 137104					
1 x 1 x 1/4	40	30,000	10		699573 39701	088341 131259				088341 49803	
	60	30,000	10	662611 151170	699573 39702	088341 137310		636425 02580		088341 49804	
	80	30,000	10	662611 151171	699573 39703	088341 137311		636425 02581		088341 49805	
	120	30,000	10	662611 151172	699573 39704	088341 137312		636425 02582		088341 49806	
	180	30,000	10			088341 137313				088341 49807	
	240	30,000	10			088341 137114					
	320	30,000	10			088341 137315					
1-3/8 x 5/8 x 1/4	60	30,000	10			088341 137320					
	80	30,000	10			088341 137321					
	120	30,000	10			088341 137322					
	180	30,000	10			088341 137323					
	240	30,000	10			088341 137324					
1-1/2 x 1/2 x 1/4	60	25,000	10							088341 49810	
	80	25,000	10							088341 49811	
1-1/2 x 1 x 1/4	40	25,000	10			088341 135140					
	60	25,000	10			088341 137340		636425 02592		088341 49816	
	80	25,000	10			088341 137141		636425 02593		088341 49817	
	120	25,000	10			088341 137142		636425 02594		088341 49818	
	180	25,000	10			088341 137343					
	240	25,000	10			088341 132101					
1-1/2 x 1-1/2 x 1/4	40	25,000	10			088341 130642					
	60	25,000	10			088341 130643					
	80	25,000	10			088341 130644					
	120	25,000	10			088341 130641					
	180	25,000	10			088341 130695					
2 x 1/2 x 1/4	60	25,000	10							088341 49821	
	80	25,000	10							088341 49822	
	120	25,000	10							088341 49823	
2 x 3/4 x 1/4	40	25,000	10			088341 137158					
	60	25,000	10			088341 137160					
	80	25,000	10			088341 137161					
	120	25,000	10			088341 137162					
	180	25,000	10			088341 137163					

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

Continued

Mini Flap Wheels with 1/4" Mounted Steel Shanks *continued*



				TIER: BEST	BETTER	GOOD	GOOD	GOOD
				TRADENAME: BLAZE R920	PINK R928	MERIT R369	MERIT R207	MERIT R265
				ABRASIVE: Ceramic Alumina	Ceramic Alumina	Premium Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
				BACKING: X-Weight Cotton	X-Weight Poly/Cotton	Y-Weight Cotton	X-Weight Cotton	X-Weight Cotton
SIZE (D x W x SK.)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
2 x 1 x 1/4	40	25,000	10		699573 39705	088341 37377		088341 49824
	60	25,000	10	662611 51173	699573 39706	088341 37370	636425 02600	088341 49825
	80	25,000	10	662611 51174	699573 39711	088341 37371	636425 02601	088341 49826
	120	25,000	10	662611 51175	699573 39712	088341 37372	636425 02602	088341 49827
	180	25,000	10			088341 37373		088341 49828
	240	25,000	10			088341 37374		
	320	25,000	10			088341 37375		
2 x 1-1/2 x 1/4	40	25,000	10			088341 37183		
	60	25,000	10			088341 37380		
	80	25,000	10			088341 37381		
	120	25,000	10			088341 37382		
2-1/2 x 1 x 1/4	180	25,000	10			088341 37383		
	40	20,000	10			088341 37408		
	60	20,000	10			088341 37410	636425 02608	
	80	20,000	10			088341 37411	636425 02609	
	120	20,000	10			088341 37412	636425 02610	
	180	20,000	10			088341 37413		
2-1/2 x 1-1/2 x 1/4	240	20,000	10			088341 37633		
	320	20,000	10			088341 37415		
	60	20,000	10			088341 37420		
	80	20,000	10			088341 37421		
3 x 1/2 x 1/4	120	20,000	10			088341 37422		
	60	20,000	10				636425 02612	088341 49834
	80	20,000	10				636425 02613	088341 49835
3 x 3/4 x 1/4	120	20,000	10				636425 02614	
	60	20,000	10			088341 37440		
3 x 1 x 1/4	80	20,000	10			088341 37441		
	40	20,000	10		699573 39713	088341 37456		088341 49836
3 x 2 x 1/4	60	20,000	10	662611 51176	699573 39714	088341 37450	636425 02620	088341 49837
	80	20,000	10	662611 51177	699573 39715	088341 37451	636425 02621	088341 49838
	120	20,000	10	662611 51178	699573 39716	088341 37252	636425 02622	088341 49839
	180	20,000	10			088341 37253		088341 49840
	240	20,000	10			088341 35339		
	320	20,000	10			088341 35341		
3 x 2 x 1/4	40	12,000	10			088341 37460		
	60	12,000	10			088341 37260		
	80	12,000	10			088341 37261		
	120	12,000	10			088341 37262		
	180	12,000	10			088341 37263		

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead times.



Mini 1/4" Steel Shank Test Kit "CMM"

- Part # 088341**38004**
- Includes ten wheels, 1" to 3" diameter in various grits mounted on a 1/4" diameter hardened steel shank

Mini Flap Wheels with 1/4"-20 Thread

- Mini flap wheels ranging from 1" to 3" diameter, mounted on a 14-20 thread that allows you to quickly spin the wheels on and off with no tools
- Designed for polishing and finishing intricate surfaces; cost-effective replacement for brushes, rubber points, and felt bobs



TIER:	BETTER	GOOD	GOOD
TRADENAME:	PINK R928	MERIT R369	MERIT R207
ABRASIVE:	Ceramic Alumina	Premium Aluminum Oxide	Aluminum Oxide
BACKING:	X-Weight Poly/Cotton	Y-Weight Cotton	X-Weight Cotton

SIZE (D x W x THD.)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #
1 x 5/8 x 1/4-20	60	30,000	10		088341 31001	636425 02624
	80	30,000	10		088341 31002	636425 02625
	120	30,000	10		088341 31003	636425 02626
1 x 1 x 1/4-20	40	30,000	10	699573 39718	088341 31027	
	60	30,000	10	699573 39719	088341 31008	636425 02628
	80	30,000	10	699573 39720	088341 31009	636425 02629
	120	30,000	10	699573 39721	088341 31010	636425 02630
	180	30,000	10		088341 31011	
	240	30,000	10		088341 31012	
	320	30,000	10		088341 31013	
1-3/8 x 5/8 x 1/4-20	60	30,000	10		088341 32001	636425 02632
	80	30,000	10		088341 32002	636425 02633
	120	30,000	10		088341 32003	636425 02634
1-5/8 x 1 x 1/4-20	40	25,000	10		088341 32051	
	60	25,000	10		088341 32015	636425 02638
	80	25,000	10		088341 32016	636425 02639
	120	25,000	10		088341 32017	636425 02640
	180	25,000	10		088341 32018	
2 x 1/2 x 1/4-20	80	25,000	10		088341 32020	
	120	25,000	10			636425 02643
2 x 3/4 x 1/4-20	60	25,000	10			636425 02644
	80	25,000	10		088341 33008	
	120	25,000	10		088341 33009	
	180	25,000	10		088341 33010	
2 x 1 x 1/4-20	40	25,000	10	699573 39722	088341 33011	
	60	25,000	10	699573 39723	088341 33044	
	80	25,000	10	699573 39725	088341 33015	636425 02646
	120	25,000	10	699573 39735	088341 33016	636425 02647
	180	25,000	10	699573 39736	088341 33017	636425 02648
	240	25,000	10		088341 33018	
	320	25,000	10		088341 33019	
2 x 1-1/2 x 1/4-20	60	25,000	10		088341 33020	
	80	25,000	10		088341 35201	
	120	25,000	10		088341 35202	
2-1/2 x 1 x 1/4-20	40	20,000	10		088341 35203	
	60	20,000	10		088341 34061	
	80	20,000	10		088341 34022	636425 02654
	120	20,000	10		088341 34023	
3 x 1/2 x 1/4-20	80	20,000	10		088341 34024	
	120	20,000	10			636425 02659
3 x 3/4 x 1/4-20	80	20,000	10			636425 02660
	120	20,000	10		088341 35009	
3 x 1 x 1/4-20	40	20,000	10	699573 39737	088341 35010	
	60	20,000	10	699573 39738	088341 35230	
	80	20,000	10	699573 39739	088341 35015	636425 02664
	120	20,000	10	699573 39740	088341 35016	636425 02665
	180	20,000	10		088341 35017	636425 02666
	240	20,000	10		088341 35018	

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.
For adapters for flap wheels with 1/4"-20 thread, see the end of this section



3" – 8" Flap Wheels with Arbor Holes

- Flap wheels ranging from 3" to 8" diameter with arbor holes
- Heavy cotton backing and premium abrasive grains combine to provide superior life with aggressive cut on a wide range of polishing and finishing applications



		TIER: GOOD		TIER: GOOD	
		TRADE NAME: MERIT R369		TRADE NAME: MERIT R207	
		ABRASIVE: Premium Aluminum Oxide		ABRASIVE: Aluminum Oxide	
		BACKING: Y-Weight Cotton		BACKING: X-Weight Cotton	
SIZE (D x W x H)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #
3 x 2 x 3/8	60	12,000	10	088341 35050	
	80	12,000	10	088341 35051	
	120	12,000	10	088341 35052	
3-1/2 x 1 x 5/8	40	12,000	10	088341 22001	
	60	12,000	10	088341 22003	
	80	12,000	10	088341 22004	
	120	12,000	10	088341 22006	
	180	12,000	10	088341 22007	
	240	12,000	10	088341 22008	
	320	12,000	10	088341 22009	
3-1/2 x 1-1/2 x 5/8	40	12,000	10	088341 22011	
	60	12,000	10	088341 22013	
	80	12,000	10	088341 22014	
	120	12,000	10	088341 22016	
	180	12,000	10	088341 22018	
	320	12,000	10	088341 22020	
3-1/2 x 2 x 5/8	40	12,000	10	088341 22022	
	60	12,000	10	088341 22024	
	80	12,000	10	088341 22025	
	120	12,000	10	088341 22027	
	180	12,000	10	088341 22028	
4 x 1 x 5/8	40	12,000	10	088341 22032	
	60	12,000	10	088341 22034	636425 02673
	80	12,000	10	088341 22035	636425 02674
	120	12,000	10	088341 22037	636425 02675
	180	12,000	10	088341 22038	
	240	12,000	10	088341 22039	
4 x 1-1/2 x 5/8	320	12,000	10	088341 22040	
	40	12,000	10	088341 22042	
	60	12,000	10	088341 22044	
	80	12,000	10	088341 22045	
	120	12,000	10	088341 22047	
4 x 2 x 5/8	240	12,000	10	088341 22050	
	40	12,000	10	088341 22053	
	60	12,000	10	088341 22055	
	80	12,000	10	088341 22056	
	120	12,000	10	088341 22058	
	180	12,000	10	088341 22059	
	240	12,000	10	088341 22060	
	320	12,000	10	088341 22061	

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

For flap wheel with arbor hole adapters and bushings, see the end of this section.

Continued

3" – 8" Flap Wheels with Arbor Holes *continued*



				TIER: BEST	GOOD	GOOD	GOOD
				TRADENAME: BLAZE R920	MERIT R369	MERIT R207	MERIT R265
				ABRASIVE: Ceramic Alumina	Premium Aluminum Oxide	Aluminum Oxide	Aluminum Oxide
				BACKING: X-Weight Cotton	Y-Weight Cotton	X-Weight Cotton	X-Weight Cotton
SIZE (D x W x H)	GRIT	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #
5 x 1-1/2 x 5/8	40	12,000	10		088341 22063		
	60	12,000	10		088341 22065		
	80	12,000	10		088341 22066		
	120	12,000	10		088341 22068		
	180	12,000	10		088341 22070		
	240	12,000	10		088341 22071		
	320	12,000	10		088341 22072		
6 x 1/2 x 1	40	6,000	10		088341 23001		
	60	6,000	10		088341 23003		
	120	6,000	10		088341 23005		
	150	6,000	10		088341 22198		
	180	6,000	10		088341 23006		
6 x 1 x 1	40	6,000	5		088341 23009		088341 20167
	50	6,000	5				088341 20168
	60	6,000	5	662611 46104	088341 23011	636425 02680	088341 20169
	80	6,000	5	662611 46105	088341 23012	636425 02681	088341 20170
	100	6,000	5				088341 20171
	120	6,000	5	662611 46106	088341 23014	636425 02682	088341 20172
	150	6,000	5		088341 23015		
	180	6,000	5		088341 23016		088341 20174
	240	6,000	5		088341 23017		088341 20176
	320	6,000	5		088341 23018		
6 x 1-1/2 x 1	40	6,000	5		088341 23020		
	60	6,000	5		088341 23022	636425 02686	
	80	6,000	5		088341 23023	636425 02687	
	120	6,000	5		088341 23025		
	180	6,000	5		088341 23027		
	240	6,000	5		088341 23028		
	320	6,000	5		088341 23029		
6 x 2 x 1	40	6,000	5		088341 23031		088341 20189
	60	6,000	5		088341 23033	636425 02691	088341 20191
	80	6,000	5		088341 23034	636425 02692	088341 20192
	100	6,000	5				088341 20198
	120	6,000	5		088341 23036	636425 02694	
	180	6,000	5		088341 23038		088341 20197
	240	6,000	5		088341 23039		088341 20199
	320	6,000	5		088341 23040		
6 x 3 x 1	60	6,000	3		088341 23055		
	80	6,000	3		088341 23056		
	120	6,000	3		088341 23058		
	180	6,000	3		088341 23060		
	240	6,000	3		088341 23061		
8 x 1 x 1	40	4,500	3		088341 23070		
	60	4,500	3		088341 23072		
	80	4,500	3		088341 23073		
	120	4,500	3		088341 23075		
	180	4,500	3		088341 23077		
8 x 2 x 1	40	4,500	3		088341 23092		
	60	4,500	3		088341 23094	636425 02700	
	80	4,500	3		088341 23095	636425 02701	
	120	4,500	3		088341 23097		
	180	4,500	3		088341 23099		
	240	4,500	3		088341 23100		
	320	4,500	3		088341 23101		

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.
For flap wheel with arbor hole adapters and bushings, see the end of this section.

10" – 16" Large Flap Wheels with Arbor Holes

Wide range of applications:

- For polishing/grinding jobs in production work as well as clean-up and maintenance jobs
- Work on metals, plastic, rubber and wood

Easy to operate:

- No adjustments, dressing, or preparation required before or during operation

Fewer rejected parts:

- More forgiving than other abrasive products
- Reduce the possibility of flattening, gouging and surface deformation



TIER: **GOOD**
TRADENAME: **MERIT R369**
ABRASIVE: Premium Aluminum Oxide
BACKING: Y-Weight Cotton

SIZE (D x W x H)	GRIT	MAX. RPM	STD. PKG.	PART #
10 x 1 x 1-3/4	40	4,000	4	088341 22223
	80	4,000	4	088341 24003
	120	4,000	4	088341 24005
	180	4,000	4	088341 24007
	240	4,000	4	088341 22889
10 x 1-1/2 x 1-3/4	320	4,000	4	088341 24009
	60	4,000	4	088341 24022
	80	4,000	4	088341 24023
10 x 2 x 1-3/4	180	4,000	4	088341 24027
	60	4,000	2	088341 24042
	80	4,000	2	088341 24043
10 x 3 x 1-3/4	120	4,000	2	088341 24045
	180	4,000	2	088341 24047
	60	4,000	2	088341 24077
12 x 1 x 1-3/4	80	4,000	2	088341 22316
	180	4,000	2	088341 22132
	60	3,000	4	088341 24085
12 x 2 x 1-3/4	80	3,000	4	088341 22349
	120	3,000	4	088341 22311
	180	3,000	4	088341 22315
12 x 4 x 1-3/4	40	3,000	2	088341 22248
	60	3,000	2	088341 22250
	120	3,000	2	088341 22269
	150	3,000	2	088341 22270
	180	3,000	2	088341 22271
	240	3,000	2	088341 22273
	320	3,000	2	088341 22275
	180	2,400	1	088341 20017

TIER: **GOOD**
TRADENAME: **MERIT R369**
ABRASIVE: Premium Aluminum Oxide
BACKING: Y-Weight Cotton

SIZE (D x W x H)	GRIT	MAX. RPM	STD. PKG.	PART #
14 x 1 x 1-3/4	60	2,400	1	088341 20020
	120	2,400	1	088341 20022
14 x 2 x 1-3/4	60	2,400	1	088341 20028
	80	2,400	1	088341 23215
	120	2,400	1	088341 22907
14 x 3 x 1-3/4	240	2,400	1	088341 20032
	120	2,400	1	088341 20035
14 x 4 x 1-3/4	240	2,000	1	088341 20041
	80	2,400	1	088341 20043
16 x 1 x 1-3/4	120	2,400	1	088341 20044
	240	2,400	1	088341 20046
16 x 2 x 1-3/4	60	2,400	1	088341 20047
	120	2,400	1	088341 20050
	180	2,400	1	088341 20051
16 x 3 x 1-3/4	240	2,400	1	088341 20052
	120	2,400	1	088341 20055

Some part numbers are non-stock; contact your Norton representative for status, order quantities and lead-times.

For flap wheel with arbor hole adapters and bushings, see the end of this section.

Adapter and Bushings for Flap Wheels with Arbor Holes

WHEEL DIAMETER	ADAPTERS	PART #
Shank Adapters		
3-1/2	1/4 Shank	088341 25001
3-1/2	3/8 Shank	088341 25007 NS
4-8	1/4 Shank	088341 25003
Threaded Mounting Adapters		
4-8	5/8-11 Thread	088341 25027
Reducing Bushings		
6-8	1 to 3/8	088341 25016 NS
	1 to 1/2	088341 25017
	1 to 5/8	088341 25018 NS
	1 to 3/4	088341 25019 NS
	1 to 7/8	088341 25020 NS
10-16	1 to 5/8	088341 22069 NS

Standard packages = 1 adapter, 1 pair of bushings

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

For additional aluminum reducing bushings see non-woven convolute wheel section



088341**25001**



088341**25007**



088341**25003**



088341**25027**



088341**25016**

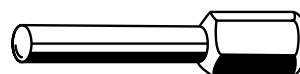
Adapters for 1/4"-20 Thread Mini and Arbor Hole Flap Wheels

MODEL #	DESCRIPTION	PART #
Adapters		
ADAPT C	Fits 3 x 2 x 3/8 arbor flap wheel	088341 37009 NS
MA-100	Fits A.H. Mini Wheel	088341 37007 NS
QC-8	1/8 x 5/8	088341 37002 NS
QC-4	1/4 SK. Dia. x 5/8 SK. L.	088341 37001
QC-44	1/4 x 4	088341 37003
QC-46	1/4 x 6	088341 37004
QC-48	1/4 x 8	088341 37005
QC-T	1/4-20 Thread	088341 37012
QC-T	3/8-24 Thread	088341 37010

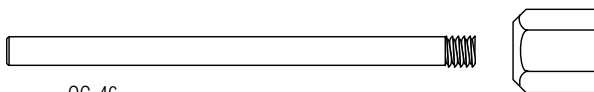
Standard package = 1 adapter

Other thread sizes available for quotation

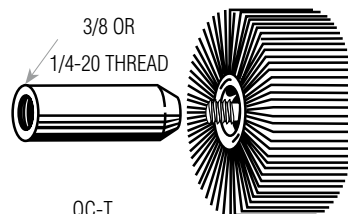
NS Non-stock. Contact your Norton representative for current order quantities and lead-times.



QC-4



QC-46



QC-T

Merit Sand-O-Flex Wheels

With their firm cushioning brushes, Sand-O-Flex's abrasive strips are forced into, around and over corners, hollow and fluted surfaces, and small openings. Pressure is distributed evenly over the surface to prevent loss of detail and the flattening of rounded areas; for sanding metals, woods, plastics, rubber and ceramic.

Sand-O-Flex wheels eliminate the need to hand-sand and are designed to fit most standard equipment. They load quickly and easily by turning the index knob as needed, allowing you to change grit size in minutes. Sand-O-Flex refills are available both scored (for finer, less aggressive work) and unscored. And, with the use of adapters, Sand-O-Flex wheels will fit most electric bench grinders.

Sand-O-Flex Wheel – Model 350-RP

- Diameter: 6-1/2" overall, 4" diameter high-impact plastic body
- 1" wide abrasive strips backed by 8 cushioning brushes
- 1/4" diameter steel shank
- Weight: 9-1/2 oz.
- Maximum operating speed: 2,400 RPM
- Special adapter required for bench grinder use
- Some assembly required

TIER: **GOOD**
TRADENAME: **MERIT SAND-O-FLEX**
ABRASIVE: Aluminum Oxide

MODEL #	GRIT	STD. PKG.	PART #
Sand-O-Flex Wheel			
350-RP		1	088341 11051
<i>Comes assembled with 80 grit A/O resin bond scored refill and brushes</i>			
Sand-O-Flex Accessories			
Replacement Brushes for 350-RP; 8 per set		1 set	088341 13003
Resin Bond Refills			
350-RP SCORED	60	10	088341 11052
	80	10	088341 11053
	100	10	088341 12114
	120	10	088341 11054
	180	10	088341 11057
Glue Bond Refills			
350-RP SCORED	80	10	088341 12054
	100	10	088341 12055
	120	10	088341 12056
350-RP UNSCORED	80	10	088341 12044





Non-woven surface finishing flap wheels are an ideal choice for a wide variety of blending and finishing applications common in the metal fabrication, welding and polishing industries. Flap wheels are conformable to intricate shapes and contours. Designed to deliver a consistent finish with a uniform rate of cut, flap wheels wear away continually exposing fresh abrasives.

There are two types of non woven flap wheels: non-woven only abrasive flaps where finishing is the primary application, and interleaf with alternating cloth and non-woven abrasive flaps (less conformable, more aggressive) for stock removal and finishing. Interleaf flap wheels must always be run in the direction indicated by the arrow.

Applications:

Used for a wide range of metal fabrication and welding applications including blending, deburring, cleaning, finishing, and polishing

Size Range:

Flap wheels with mounted steel shanks: 2" – 4" diameter

Flap wheels with arbor holes: 3" – 12" diameter

Grit Range:

60 – 320

Abrasive Grain:

Aluminum Oxide

Machine Used:



DIE GRINDER



BENCH GRINDER



PEDESTAL GRINDER



PORTABLE GRINDER

Application/Grit Recommendation Guide

COARSER (GRINDING)

FINER (FINISHING)

60	80	120	180	240	320
Preparing Metal for Painting					
Blending Out Medium Machine Marks					
	Blending Metal Surfaces				
	Applying Light Scratch Pattern				
		Fine Blending and Cleaning			
				Metal Finishing and Polishing	

INTERLEAF FLAP WHEEL

NON- WOVEN FLAP WHEEL

Good choice for fine grit cleaning and blending and finishing applications



MERIT INTERLEAF FLAP WHEELS

- Alternating cloth and non-woven flaps make interleaf wheels less conforming and more aggressive than non-woven flap wheels, but less aggressive than all-cloth flap wheels
- Premium aluminum oxide grain with durable resin bond and web that wears away continually exposing fresh abrasives
- Tough yet conformable to intricate shapes and contours without changing the workpiece dimension

Good choice for fine grit light cleaning and finishing

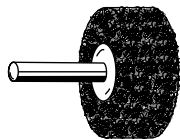


MERIT NON-WOVEN FLAP WHEELS

- Premium aluminum oxide grain with durable resin bond and web that wears away continually exposing fresh abrasives
- Tough yet conformable to intricate shapes and contours without changing the workpiece dimension
- Designed with a steel shank as an integral part of the wheel or with an arbor hole

1/4" Mounted Steel Shanks

Wheels are designed with a 1/4" steel shank as an integral part of each wheel. These shanks run through the wheel creating better balance, a reduction of chatter, and reduced operator fatigue. They also permit quick changes on air tools when using other abrasive products.



SIZE (D x W x SK.)	ABRASIVE	COATED GRIT	NON-WOVEN GRIT	MAX. RPM	STD. PKG.	TIER: GOOD TRADENAME: MERIT INTERLEAF	TIER: GOOD TRADENAME: MERIT NON-WOVEN
						PART #	PART #
2 x 1 x 1/4	A/O	60	Very Fine	12,000	10	08834138122	
	A/O	80	Very Fine	12,000	10	08834138123	
	A/O		Medium	12,000	20		66261189992*
	A/O	120	Very Fine	12,000	10	08834144457	
	A/O	180	Very Fine	12,000	10	08834144458	
	A/O	320	Very Fine	12,000	10	08834144459	69957399202
2 x 1-1/2 x 1/4	A/O	80	Very Fine	12,000	10	08834138125	
	A/O	120	Very Fine	12,000	10	08834138126	
	A/O	320	Very Fine	12,000	10	08834138128 NS	
3 x 1 x 1/4	A/O	60	Very Fine	12,000	10	08834138129	
	A/O	80	Very Fine	12,000	10	08834138130	
	A/O		Medium	12,000	10		08834131921
	A/O	120	Very Fine	12,000	10	08834138118	
	A/O	180	Very Fine	12,000	10	08834138120	
	A/O	320	Very Fine	12,000	10	08834138119	
3 x 2 x 1/4	A/O	120	Very Fine	8,000	10	08834144460	
	A/O	180	Very Fine	8,000	10	08834144461	
4 x 2 x 1/4	A/O	80	Very Fine	12,000	10	08834121115	
	A/O	120	Very Fine	12,000	10	08834120458	

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

*Standard package quantity = 20

Arbor Hole Mounts

For use on larger portable and fixed-base tools where the wheel must fit on an existing arbor.



SIZE (D x W x SK.)	ABRASIVE	COATED GRIT	NON-WOVEN GRIT	MAX. RPM	STD. PKG.	TIER: GOOD TRADENAME: MERIT INTERLEAF	TIER: GOOD TRADENAME: MERIT NON-WOVEN
						PART #	PART #
3 x 2 x 3/8	A/O	60	Very Fine	12,000	10	08834139000 NS	
	A/O	120	Very Fine	12,000	10	08834139001 NS	
	A/O	240	Very Fine	12,000	10	08834139028 NS	
	A/O	320	Very Fine	12,000	10	08834139024 NS	
4 x 2 x 5/8	A/O	60	Very Fine	12,000	10	08834126025 NS	
	A/O	240	Very Fine	12,000	10	08834126014 NS	
	A/O	320	Very Fine	12,000	10	08834126027 NS	
6 x 1 x 1	A/O	120	Very Fine	6,000	10	08834126006 NS	
	A/O	240	Very Fine	6,000	10	08834126030 NS	
6 x 1 x 2	S/C	—	Very Fine	3,000	4		05539512658
6 x 2 x 1	A/O	80	Very Fine	6,000	10	08834126009 NS	
	A/O	180	Very Fine	6,000	10	08834126018 NS	
6 x 3 x 1	A/O	80	Very Fine	6,000	6	08834126055 NS	
8 x 2 x 3	A/O	—	Medium	2,500	2		05539512677 NS
12 x 2 x 5	A/O	—	High Strength	1,900	1		05539562637 NS

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

Refer to Non-Woven
Convolute Wheel
section for Flap Wheel
Reducing Bushings.

Non-Woven High Strength Discs

Applications include rust/oxide or coating removal, pipe ID and OD polishing, casting cleaning, highlighting (antiquing), contaminant removal, removal of handling marks, gasket removal, cleaning and blending of surface imperfections, prepping prior to soldering, removal of filling materials, cleaning angles and odd shapes. Will not stretch or shed. Ganging increases versatility. For use on larger portable and fixed-base tools where the wheel must fit on an existing arbor.

Best choice for light deburring and finishing



HIGH STRENGTH DISCS

- Premium aluminum oxide grain; engineered for more demanding applications
- Tough but flexible web resists tearing on burrs and sharp edges; and conforms to intricate shapes and contours without changing the workpiece dimension; can be ganged together and used as a wheel
- Smear-free bond excels at producing light satin finishes

TIER: **BEST**

TRADENAME: **HIGH STRENGTH**

ABRASIVE: Aluminum Oxide

SIZE (D x H)	GRIT	MAX. RPM	STD. PKG.	PART #
6 x 1/4	VF	4,000	70	662610 07628
6 x 1/2	M	4,000	70	662610 05073
	VF	4,000	70	662610 04980
8 x 1/2	M	3,000	50	662610 05491
	VF	3,000	50	662610 04506
12 x 1-1/4	VF	1,900	25	662610 08723

See page 163 for High Strength quick-change discs.



FITS HOLE	FOR DISC WIDTH	FOR DISC DIAMETER	SHANK DIAMETER	OVERALL LENGTH	WASHER DIAMETER	STD. PKG.	PART #
Mandrel Assemblies For Using Discs On Edge							
1/4	1/2 (Standard)	up to 6	1/4	2-1/2	1-1/2	1	662610 09502
1/2	1/2 (Standard)	Up to 8	1/4	3-1/8	2-1/4	1	662610 59420



Flaps of abrasive cloth are stacked, inserted into a holder, and then attached to a mandrel. The flaps are designed to break down during use and reveal the next layer of abrasive.

To create an interleaf bore polisher, cloth flaps are mixed with non-woven flaps.

Applications:

For deburring, sizing, cleaning and polishing the interior diameters of cylinders, tubes and hydraulic fittings. Flaps adjust automatically to inside diameter, polishing the entire surface area with each pass.

Bore polishers are self-centering, so they apply equal pressure to full wall of inside diameter. Spring action design gives faster inside diameter cleaning, deburring and polishing to cylinders, deep bores and tubes.

Interleafed bore polishers are designed to polish and finish in one easy application. The abrasive flaps cut, while the non-woven flaps apply a fine finish.

Grit Range:

60 - 240

Abrasive Grain:

Aluminum Oxide

Application-to-Product Shape Recommendation Guide

Shape

Solid Flaps

B-3 Series



Application

- For 5/8" to 1" interior diameter bores
- 3 abrasive packs 1-1/2" wide, bonded to hub
- Use with QC-5 mandrel Part # 088341**54182**

Solid Flaps

B-4 Series



- For 1" to 4" interior diameter bores
- 4 abrasive packs 1-1/2" wide, bonded to hub
- Use with BPM-4 mandrel Part # 088341**54183**

Solid Flaps

B-8 Series



- For 2" to 5-7/8" interior diameter bores
- 8 abrasive packs 1-1/2" wide, bonded to hub
- Use with BPM-8 mandrel Part # 088341**54184**

Scored Flaps



Available upon request as made-to-order products.

Interleaf



Cloth flaps are mixed with non-woven flaps. Interleaf bore polishers do double duty. Designed to polish and finish in one easy application, they are the ideal choice when close tolerances must be maintained, while giving an interior a polished finish.

Application/Grit Recommendation Guide

COARSER (MATERIAL REMOVAL)

FINER (FINISHING)

60	80	120	180	240
Blending Out Medium Machine Marks				
Sizing Cylinders				
	Deburring Cylinders			
	Blending Metal Surfaces			
	Cleaning Cylinders			
	Applying Light Scratch Pattern			
			Fine Blending and Cleaning	
			Metal Finishing and Polishing	

SOLID FLAP

SCORED

INTERLEAF

Aluminum Oxide Bore Polishers

TIER: **GOOD**
 TRADENAME: **MERIT R369**
 ABRASIVE: Aluminum Oxide
 BACKING: Y-weight Cotton/Poly

DESCRIPTION	GRIT	MAX. RPM	STD. PKG.	PART #
Bore Polishers – Solid Flap B-3 and B-4 Series				
B-305 Fits ID 5/8 to 1	60	25,000	10	088341 54190
	80	25,000	10	088341 54191
	120	25,000	10	088341 54193
	180	25,000	10	088341 54195
	240	25,000	10	088341 54197
B-405 Fits ID 1 to 1-1/2	60	22,000	10	088341 54091
	80	22,000	10	088341 54092
	120	22,000	10	088341 54093
	180	22,000	10	088341 54094
B-410 Fits ID 1-1/2 to 2	60	20,000	10	088341 54100
	80	20,000	10	088341 54101
	120	20,000	10	088341 54102
	180	20,000	10	088341 54103
	240	20,000	10	088341 54104
B-415 Fits ID 2-1/8 to 2-1/2	60	16,000	10	088341 54109
	80	16,000	10	088341 54110
	120	16,000	10	088341 54111
	180	16,000	10	088341 54112
B-420 Fits ID 2-1/2 to 3	60	15,000	10	088341 54118
	80	15,000	10	088341 54119
	120	15,000	10	088341 54120
	180	15,000	10	088341 54121
B-425 Fits ID 3-1/8 to 4	60	10,000	10	088341 54127
	80	10,000	10	088341 54128
	120	10,000	10	088341 54129
	180	10,000	10	088341 54130

NS Non-stock. Contact your Norton representative for current order quantities and lead-times.

TIER: **GOOD**
 TRADENAME: **MERIT R369**
 ABRASIVE: Aluminum Oxide
 BACKING: Y-weight Cotton/Poly

DESCRIPTION	GRIT	MAX. RPM	STD. PKG.	PART #
Bore Polishers – Solid Flap B-8 Series				
B-810 Fits ID 2 to 2-1/2	60	16,000	10	088341 54136
	80	16,000	10	088341 54137
	120	16,000	10	088341 54138
	180	16,000	10	088341 54139 NS
	240	16,000	10	088341 54140 NS
B-815 Fits ID 2-5/8 to 3	60	15,000	10	088341 54145
	80	15,000	10	088341 54146
	120	15,000	10	088341 54147
	180	15,000	10	088341 54148 NS
B-820 Fits ID 3-1/8 to 4	60	10,000	10	088341 54149 NS
	80	10,000	10	088341 54154
	120	10,000	10	088341 54155
	180	10,000	10	088341 54156
B-825 Fits ID 4-1/4 to 5-1/4	60	8,000	10	088341 54157
	80	8,000	10	088341 54158 NS
	120	8,000	10	088341 54163
	180	8,000	10	088341 54164
B-830 Fits ID 5-1/4 to 5-7/8	60	8,000	10	088341 54165
	80	8,000	10	088341 54166
	120	8,000	10	088341 54167
	180	8,000	10	088341 54172
B-830 Fits ID 5-1/4 to 5-7/8	60	8,000	10	088341 54173
	80	8,000	10	088341 54174
	120	8,000	10	088341 54175
	240	8,000	10	088341 54176

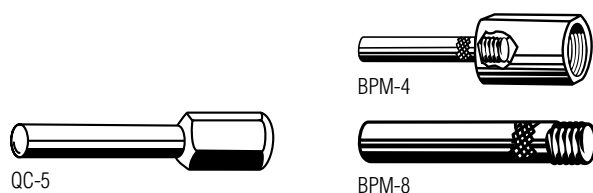
Bore Polishers – Scored Flaps

Available on request as made-to-order products

Bore Polishers – Interleaf

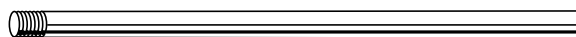
DESCRIPTION	GRIT	MAX. RPM	STD. PKG.	PART #
B-405 Interleaf	80	22,000	10	088341 50271
Fits ID 1 to 1-1/2	180	22,000	10	088341 50273

Mandrels for Bore Polishers



DESCRIPTION	MODEL NO.	THREAD	STD. PKG.	PART #
For B-3 Series	QC-5	5/16-18	1	088341 54182
For B-4 Series	BPM-4	1/2-20	1	088341 54183
For B-8 Series	BPM-8	1/4-20	1	088341 54184

Extension Mandrels for Bore Polishers



DIAMETER x LENGTH	MODEL NO.	THREAD	STD. PKG.	PART #
1/4 x 4	EM-144	1/4-20	1	088341 54185
1/4 x 6	EM-146	1/4-20	1	088341 54186
1/4 x 8	EM-148	1/4-20	1	088341 54187

To extend a B-4 series bore polisher, attach the adapter piece of the BPM-4 mandrel to the bore polisher, then attach the desired length extension mandrel above to the BPM-4 adapter piece. To extend a B-8 series bore polisher, attach the desired length extension mandrel above directly to the bore polisher.

Bore Polisher Test Kit “BP”

- Part # 088341**54181**
- Contains ten bore polishers and two mini 1/4"-20 thread flap wheels in assorted sizes and grits for finishing 1" to 5" interior diameters, and mandrel for 1/4" chuck.





Our double-cut style carbide burrs have stronger tooth formulation and numerous cutting edges to outperform other double-cut carbide burrs with better stock removal, granular chip break, and longer life.

Pair up these long-lasting burrs with our pneumatic die grinder to quickly and comfortably accomplish many portable applications on one machine – including jobs using specialties, small diameter flap wheels, and mounted points.

Applications:

Deburring, medium-to-light surface cleaning and stock removal, weld removal and prep, chamfering

Shapes:

A, B, C, D, E, F, G, H, L, M

Shank Diameter:

1/4"

Machine Used:

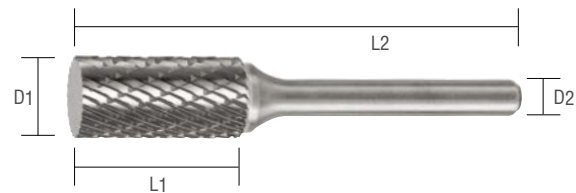


DIE GRINDER

Understanding the Product

Burr Dimensions

D1	L1	D2	L2
HEAD DIAMETER	HEAD LENGTH	SHANK DIAMETER	OVERALL BURR LENGTH (OL)



TECH TIP

Each carbide burr is packed individually in a clear, protective plastic case with Norton-blue end-caps. Each burr is marked with the burr head diameter and length for easy identification.



Double cut burrs are a popular choice because of their universal cutting style

DOUBLE CUT CARBIDE BURRS

- Hard tungsten carbide burrs with strong tooth formulations and numerous cutting edges for extended life and less changeover downtime versus other cutting tools
- Higher stock removal, and smaller, granular chip-break on hard-to-grind workpieces versus other carbide burrs
- Perform well at higher temperatures and can be used longer than high-speed steel tools – even if your operation generates some heat



Designed for use on aluminum and non-ferrous metals

SINGLE CUT CARBIDE BURRS

- Single spiral carbide burrs make deburring aluminum and non-ferrous materials an ease
- Extra sharp edges and fast debris removal keeps you on task for better production
- Perform well at higher temperatures and can be used longer than high-speed steel tools

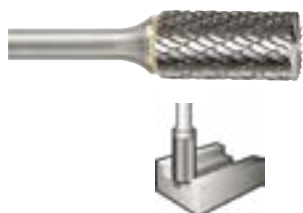
Carbide Burrs for Standard Metal Removal



SA Cylindrical without End Cut

The ends of these burrs are flat, with no cutting edges and are used for contour finishing and to get into right-angled corners.

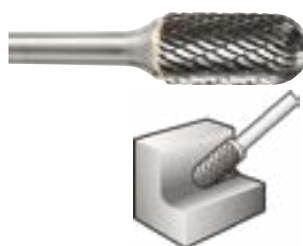
SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SA1	25,000	1/4"	3/4"	2"	1	699573 08002
SA2	25,000	5/16"	3/4"	2-1/2"	1	699573 08003
SA3	25,000	3/8"	3/4"	2-1/2"	1	699573 08004
SA5	25,000	1/2"	1"	2-3/4"	1	699573 08005
SA5	25,000	1/2"	1"	6"	1	699573 60674



SB Cylindrical with End Cut

The cutting edge at the end of the burr makes these burrs a good choice for contour finishing.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SB3	25,000	3/8	3/4	2-1/2	1	699573 08006
SB5	25,000	1/2	1	2-3/4	1	699573 08007
SB6	25,000	5/8	1	2-3/4	1	699573 08008



SC Ball-Nosed Cylindrical

Use these round-nosed burrs for smoother operation and better tool control.

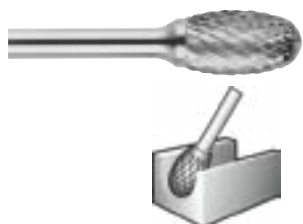
SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SC1	25,000	1/4	3/4	2	1	699573 08009
SC2	25,000	5/16	3/4	2-1/2	1	699573 08010
SC3	25,000	3/8	3/4	2-1/2	1	699573 08011
SC5	25,000	1/2	1	2-3/4	1	699573 08012
SC5	25,000	1/2	1	6	1	699573 60679
SC5	25,000	1/2	1	12	1	699573 60905
SC6	25,000	5/8	1	2-3/4	1	699573 08013



SD Ball Shape

Use these carbide burrs to create a concave and to hollow out a workpiece.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SD1	25,000	1/4	1/4	2	1	699573 08014
SD2	25,000	5/16	1/4	2	1	699573 08015
SD3	25,000	3/8	5/16	2-1/8	1	699573 08016
SD5	25,000	1/2	7/16	2-3/16	1	699573 08017



SE Oval Shape

Use the oval-shaped carbide burrs for good reach and round head for shaping.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SE3	25,000	3/8	5/8	6	1	699573 40158



SF Ball-Nosed Tree

Designed to round off edges and make concave cuts.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SF1	25,000	1/4	3/4	2	1	699573 08018
SF2	25,000	5/16	3/4	2-1/2	1	699573 08019
SF3	25,000	3/8	3/4	2-1/2	1	699573 08020
SF3	25,000	3/8	3/4	6	1	699573 60689
SF5	25,000	1/2	1	2-3/4	1	699573 08021
SF5	25,000	1/2	1	6	1	699573 60691
SF5	25,000	1/2	1	12	1	699573 60904
SF6	25,000	5/8	1	2-3/4	1	699573 08022

Carbide Burrs for Standard Metal Removal



SG

Tree with Taper

The taper allows access to hard-to-reach areas, such as angled contours.

SUB-SHAPE	MAX.-RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SG1	25,000	1/4	3/4	2	1	699573 08023
SG3	25,000	3/8	3/4	2-1/2	1	699573 08025
SG5	25,000	1/2	1	2-3/4	1	699573 08026
SG5	25,000	1/2	1	6	1	699573 60712
SG6	25,000	5/8	1	2-3/4	1	699573 08027



SH

Flame Shape

Great for channel working and shaping due to its long fluted sides and rounded head.

SUB-SHAPE	MAX.-RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SH5	25,000	1/2	1-1/4	6	1	699573 66822



SL

Ball-Nosed Cone

This cone shape is excellent for imparting fine finishes.

SUB-SHAPE	MAX.-RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SL2	25,000	5/16	7/8	2-3/4	1	699573 08028
SL3	25,000	3/8	1 3/16	2-15/16	1	699573 08029
SL4	25,000	1/2	1 3/16	3	1	699573 08030
SL4	25,000	1/2	1-3/16	6	1	699573 60720
SL5	25,000	1/2	1	6	1	699573 66823



SM

Pointed Cone

Ideal for rounded edges or reaching difficult, tight areas.

SUB-SHAPE	MAX.-RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SM4	25,000	3/8	5/8	6	1	699573 66824
SM5	25,000	1/2	7/8	6	1	699573 60767



Carbide Burr Kit



SUB-SHAPE	MIN/STD PKG QTY	PART #
Carbide Burr Kit*	1	699573 08060

* Kit Includes one each of: SA5 (699573**08005**), SF3 (699573**08020**), SF5 (699573**08021**), SG5 (699573**08026**), and SL4 (699573**08030**)

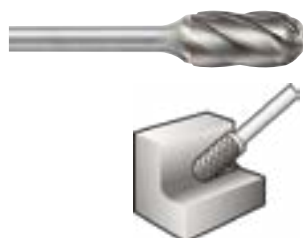
Carbide Burrs for Aluminum and Non-Ferrous Materials



SA Cylindrical without End Cut

The ends of these burrs are flat, with no cutting edges and are used for contour finishing and to get into right-angled corners.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SA3 NF	25,000	3/8	3/4	2-1/2	1	699573 40148
SA5 NF	25,000	1/2	1	2-3/4	1	699573 40149



SC Ball-Nosed Cylindrical

Use these round-nosed burrs for smoother operation and better tool control.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SC3 NF	25,000	3/8	3/4	2-3/4	1	699573 40150



SD Ball Shape

Use these carbide burrs to create a concave and to hollow out a workpiece.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SD3 NF	25,000	3/8	5/16	2-1/8	1	699573 66820



SF Ball-Nosed Tree

Designed to round off edges and make concave cuts.

SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SF1 NF	25,000	1/4	3/4	2	1	699573 40153
SF3 NF	25,000	3/8	3/4	2-1/2	1	699573 40154
SF5 NF	25,000	1/2	1	2-3/4	1	699573 60647



SL Ball-Nosed Cone

This cone shape is excellent for imparting fine finishes.

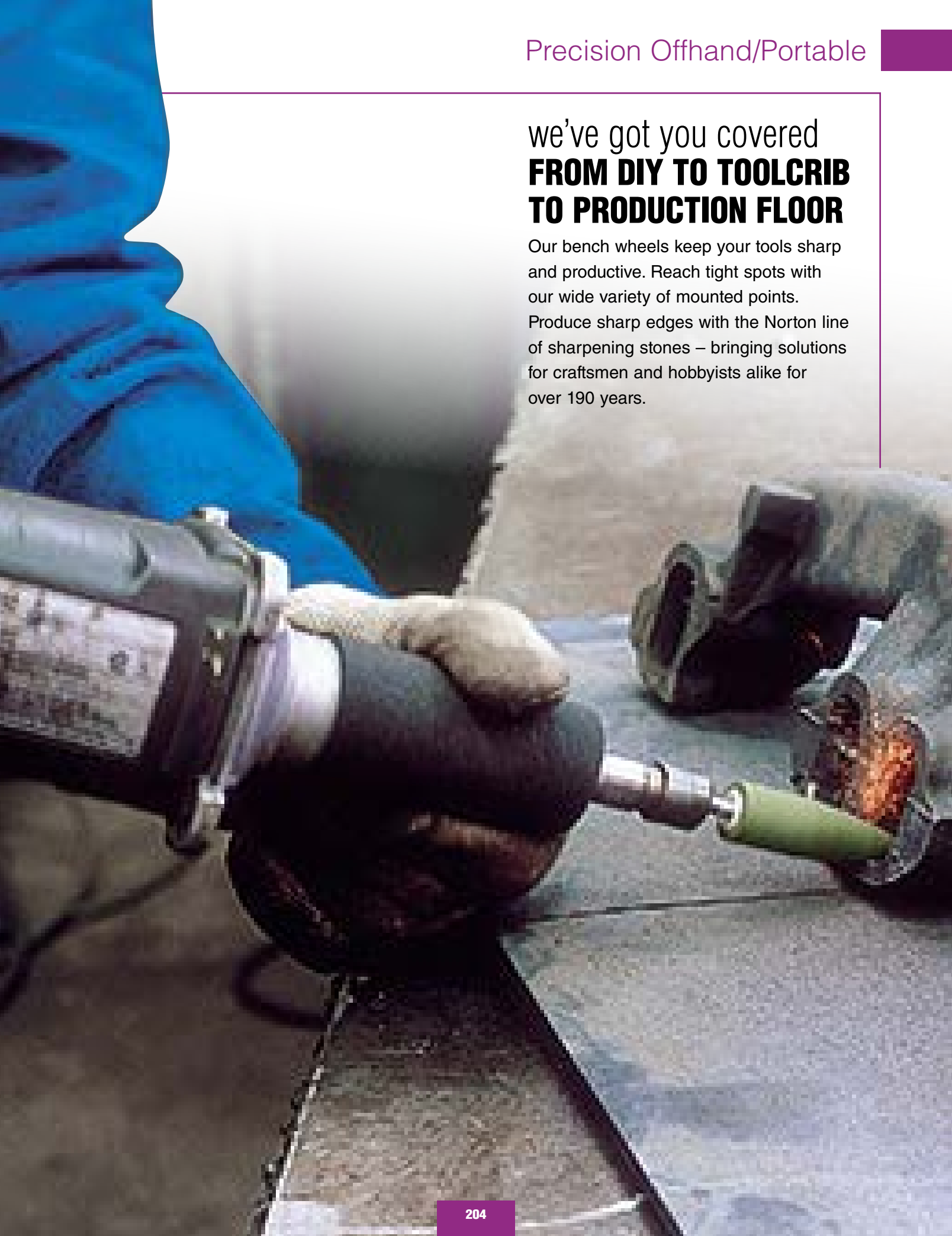
SUB-SHAPE	MAX. RPM	D1	L1	L2	MIN/STD PKG QTY	PART #
SL4 NF	25,000	1/2	1-1/4	6	1	699573 60651



we've got you covered
**FROM DIY TO TOOLCRIB
TO PRODUCTION FLOOR**

Our bench wheels keep your tools sharp and productive. Reach tight spots with our wide variety of mounted points.

Produce sharp edges with the Norton line of sharpening stones – bringing solutions for craftsmen and hobbyists alike for over 190 years.



How to Read an Abrasive Product Specification

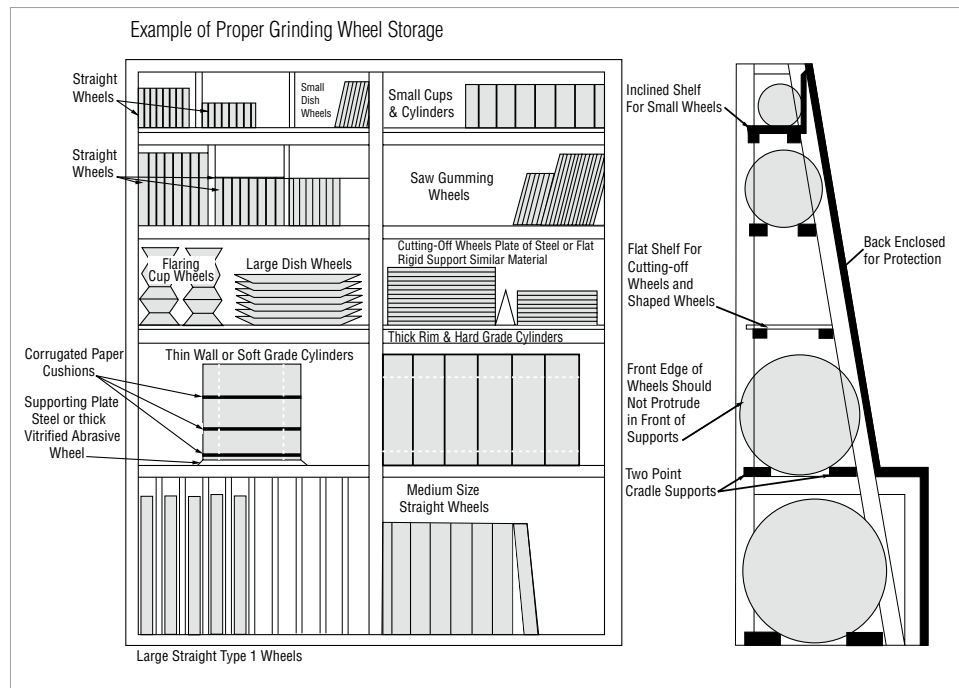
Conventional Grinding Wheels												
32A 46 I 8 V BE												
Abrasive				Grit Size			Grade			Structure	Bond Type	Norton Symbol
Aluminum Oxide	Ceramic	Silicon Carbide	Zirconia Alumina	Coarse	Medium	Fine	Soft	Medium	Hard	Relative grain spacing	Resin = B	Designates a variation or modification to bond.
23A	Oxide	37C	4NZ	12	30	80	D	I	Q	Dense	Shellac = E	
25A	3SGP	39C	4ZF	14	36	90	E	J	R		Plastic = P	
32A	3SGR	Crystolon	5ZF	16	46	100	F	K	S		Rubber = R	
32AC (blend)	5SG	Masonry	AZ (blend)	20	54	120	G	L	T		Vitrified = V	
38A	BRG		BlueFire	24	60	150	H	M	u			
48A	SG		Charger (blend)		70	220		N	V			
53A	SXG							O	Y			
55A	NorZon Plus (blend)		NZ					P	Z			
57A	NQ (Quantum)		NZC (blend)									
U57A	NQN (Quantum Prime)		NZIII									
64A			NZIV									
86A	Targa		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.





The Norton bench and pedestal wheel line consists of numerous wheel diameters and arbor sizes, abrasive types and grit sizes. Our offering answers all metal removal, deburring, shaping and sharpening needs: white aluminum oxide for high-speed tool steels, brown aluminum oxide for carbon steel, and silicon carbide for non-ferrous metals and carbide tooling.

Applications:

Offhand deburring and sharpening of parts and tools

Size Range:

5" – 18"

Grit Range:

24 – 150

Abrasive Types:

Premium Ceramic Alumina, Aluminum Oxide, Silicon Carbide

Bushings:

Telescopic arbor bushings to fit all popular grinders are packaged with the wheel

Machine Used:



BENCH
GRINDER



PEDESTAL
GRINDER

Application/Grit Recommendation Guide

COARSER (GRINDING)				FINER (FINISHING)		
24	36	46	60	80	100	150
Heavy Stock Removal		Medium Stock Removal	Light Stock Removal	Deburring/Shaping	Sharpening	Final Finishing

TECH TIP

- Unsecured machines can move, causing grinding breakage and injury. Fixed-based bench and pedestal grinders **MUST** be secured.
- Do not grind wood, plastic, or any other non-metallic material on a bench or pedestal grinder.
- All bench and pedestal wheels must be dressed to prevent loading. Loading can cause excessive heat, damage to the workpiece, and wheel breakage. Dressing exposes new cutting edges and provides chip clearance.
- Recommended starting dressing stick: 1" x 1" x 6" 37C24-SVK Part # 614636**10462**



It is the user's responsibility to refer to and comply with ANSI B7.1

iGrind App

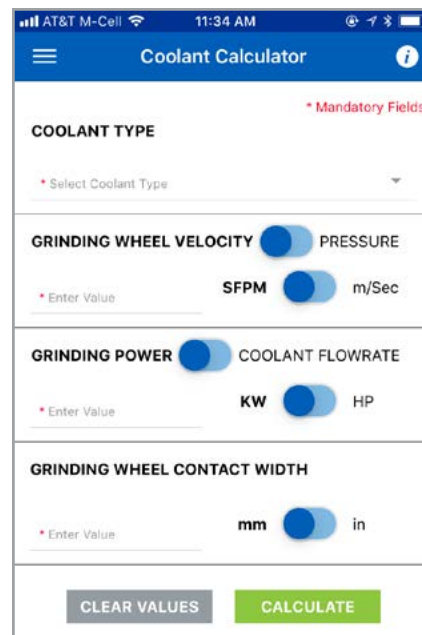
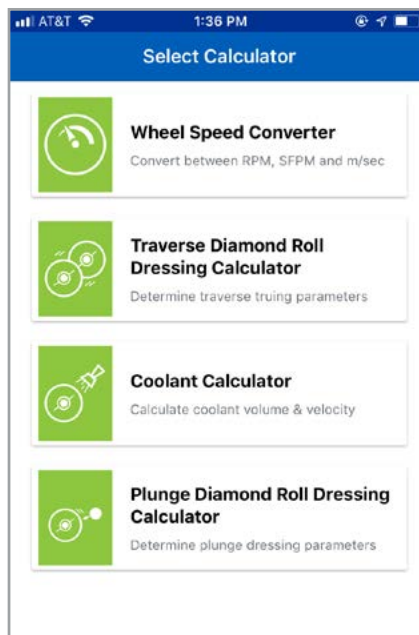
Created by Norton engineers and updated based on feedback from you, the Norton iGrind app features calculators and conversion tools designed to help optimize your grinding processes.

With Norton iGrind, you can calculate the starting parameters for traverse or plunge truing your grinding wheel, determine the ideal setup for delivering coolant to the grinding zone, and convert wheel speeds between RPM, SFPM (Surface Feet Per Minute), and M/Sec to ensure a safe grinding operation.

<https://www.nortonabrasives.com/en-us/igrind>

App Features:

- Wheel Speed Converter
- Traverse Diamond Roll Dressing Calculator
- Coolant Calculator
- Plunge Diamond Roll Dressing Calculator
- Stationary Tool Dressing Calculator





Best choice for deburring and tool sharpening on bench and pedestal grinders

PREMIUM CERAMIC ALUMINA 3SG

- Type O1 straight wheel with ceramic alumina grain has fast cut, minimal burn, and long wheel life
- High performance bond for versatility and exceptional form holding
- Especially great for hollow grinding of plane blades and chisels; telescoping bushings to fit popular arbor hole sizes



Better choice for light metal removal and sharpening of high-speed tool steels (55 Rc and higher)

PREMIUM WHITE ALUMINUM OXIDE

- Type O1 straight wheel with premium white aluminum oxide for maximum cut rate and cool grinding action on hardened or high-speed tool steels
- Vitrified bond for superb shape holding and resistance to wear
- Better choice for deburring and tool sharpening on bench and pedestal grinders; telescoping bushings to fit popular arbor hole sizes



Better choice for light to medium stock removal

57A ALUMINUM OXIDE

- Type O1 straight wheel, the better choice for the end-user that needs a specific grit size and hardness for engineered applications
- Vitrified bond for superb shape holding and resistance to wear
- Excellent choice for deburring and tool sharpening on bench and pedestal grinders



Better choice for medium grit and grade for light to medium stock removal on carbide tooling and non-ferrous materials

39C SILICON CARBIDE

- Type O1 straight wheel with sharp, green silicon carbide; use for performance applications on carbide tooling and non-ferrous materials
- Vitrified bond for superb shape holding and resistance to wear
- Excellent choice for deburring and tool sharpening on bench and pedestal grinders



Good choice for all general-purpose bench and pedestal applications

GEMINI ALUMINUM OXIDE

- Type O1 straight wheel with quality, aluminum oxide for general purpose bench and pedestal grinder applications on steel
- Vitrified bond for superb shape holding and resistance to wear
- Good choice for deburring and tool sharpening on bench and pedestal grinders; telescoping bushings to fit popular arbor hole sizes



Good choice for all general-purpose bench and pedestal applications on non-ferrous materials and carbide tooling

GEMINI SILICON CARBIDE

- Type O1 straight wheel with sharp, green silicon carbide for general-purpose applications on carbide tooling and non-ferrous materials
- Vitrified bond for superb shape holding and resistance to wear
- Available in many sizes and coarse to fine grits; for sharpening to fine shaping applications



			TIER: BEST		BETTER		BETTER	
			TRADENAME: PREMIUM CERAMIC ALUMINA		PREMIUM ALUMINUM OXIDE		57A	
			ABRASIVE: 3SG Ceramic Alumina		White Aluminum Oxide		Brown Aluminum Oxide	
SIZE (D x T x H)	MAX. RPM	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #
6 x 3/4 x 1	4,140*	1/5	3SG-46K	076607 05411	Medium 60	076607 88246		
	4,140*	1/5	3SG-60I	076607 04684	Fine 100	076607 88247		
	4,140*	1/5	3SG-80K	076607 05412	Very Fine 150	076607 88248		
	4,140*	1/5	3SG-100I	076607 04682				
6 x 1 x 1	4,140*	1/5	3SG-46K	076607 05413	Medium 60	076607 88261		
	4,140*	1/5	3SG-80K	076607 05414	Fine 100	076607 88262		
	4,140	1/5			Very Fine 150	076607 88263		
8 x 1 x 1	3,600	1/5			Medium 60	076607 88281		
	3,600	1/5	3SG-46K	076607 05421	Fine 100	076607 88282		
	3,600	1/5	3SG-60I	076607 04659	Very Fine 150	076607 88283		
	3,600	1/5	3SG-80K	076607 05422				
	3,600	1/5	3SG-100I	076607 04657				
10 x 1 x 1-1/4	2,485	1/5					57A46-MVBE	662531 16274
	2,485	1/5					57A60-MVBE	662531 16273
10 x 1-1/2 x 1-1/4	2,485	1/5					57A46-MVBE	662531 16280
12 x 1 x 1-1/4	2,070	1/5					57A46-MVBE	662532 20947
12 x 2 x 1-1/2	2,070	1/4					57A30-MVBE	662532 20951
	2,070	1/4					57A36-QVBE	662532 20952
	2,070	1/4					57A46-MVBE	662532 20953
	2,070	1/4					57A60-MVBE	662532 20955
14 x 2 x 1-1/2	1,800	1/3					57A24-QVBE	662533 19972
	1,800	1/3					57A36-QVBE	662533 19973
	1,800	1/3					57A46-MVBE	662533 19974
14 x 2-1/2 x 1-1/2	1,800	1/2					57A24-QVBE	662533 19976
	1,800	1/2					57A46-MVBE	662533 19975
14 x 3 x 1-1/2	1,800	1/2					57A36-QVBE	662533 19977
18 x 3 x 1-1/2	1,275	1/2					57A24-QVBE	662534 62610

* Max. RPM for Premium Ceramic Alumina Wheels is 5,410

Bench and Pedestal Wheel Arbor Bushings

WHEEL DIAMETER	WHEEL CENTER HOLE	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
5", 6", 7"	1"	•	•	•	•		
8"	1"		•	•	•		
10"	1-1/4"			•	•	•	
12" x 2"	1-1/4"					•	
12" and 14"	1-1/2"					•	•

These size bushings shipped free of charge with your wheel order.



SIZE (D x T x H)	MAX. RPM	MIN./STD. PKG.	SPEC	PART #	MIN./STD. PKG.	SPEC	PART #	MIN./STD. PKG.	SPEC	PART #
5 x 1/2 x 1	4,965	1/5	Medium 60/80	076607 88202						
	4,965	1/5	Fine 100/120	076607 88201						
5 x 3/4 x 1	4,965	1/5	Medium 60/80	076607 88210						
	4,965	1/5	Fine 100/120	076607 88205						
5 x 1 x 1	4,965	1/5	Medium 60/80	076607 88225						
6 x 1/2 x 1	4,140	1/5	Coarse 36/46	662528 36132				1/5	Medium 60	662528 36571
	4,140	1/5	Medium 60/80	662528 36131				1/5	Fine 80	662528 36572
	4,140	1/5	Fine 100/120	662528 36133				1/5	Extra Fine 120	662528 36573
6 x 3/4 x 1	4,140	1/5	Coarse 36/46	076607 88245				1/5	Medium 60	662528 37190
	4,140	1/5	Medium 60/80	076607 88240				1/5	Fine 80	662528 37191
	4,140	1/5	Fine 100/120	076607 88235				1/5	Extra Fine 120	662528 37192
6 x 1 x 1	4,140	1/5	Coarse 36/46	076607 88260				1/5	Medium 60	662528 37187
	4,140	1/5	Medium 60/80	076607 88255				1/5	Fine 80	662528 37193
	4,140	1/5	Fine 100/120	076607 88250				1/5	Extra Fine 120	662528 37194
7 x 1 x 1	3,600	1/5	Coarse 36/46	076607 88275				1/5	Medium 60	662529 42300
	3,600	1/5	Medium 60/80	076607 88270				1/5	Fine 80	662529 42301
	3,600	1/5	Fine 100/120	076607 88265				1/5	Extra Fine 120	662529 42302
8 x 3/4 x 1	3,600	1/5	Coarse 36/46	076607 88278						
	3,600	1/5	Medium 60/80	076607 88277						
	3,600	1/5	Fine 100/120	662530 42317						
8 x 1 x 1	3,600	1/5	Very Coarse 24	662530 44454				1/5	Medium 60	662530 44087
	3,600	1/5	Coarse 36/46	076607 88286				1/5	Fine 80	662530 44534
	3,600	1/5	Medium 60/80	076607 88285				1/5	Extra Fine 120	662530 44535
	3,600	1/5	Fine 100/120	076607 88280						
10 x 1 x 1-1/4	2,485	1/2	Very Coarse 24	662531 60788	1/5	39C60-IVMT	662531 16262	1/2	Medium 60	662531 44536
	2,485	1/2	Coarse 36/46	076607 88295				1/2	Fine 80	662531 60366
	2,485	1/2	Medium 60/80	076607 88290						
	2,485	1/2	Fine 100/120	662531 60350						
10 x 1-1/4 x 1-1/4	2,485	1/2	Coarse 36/46	662531 61250						
	2,485	1/2	Medium 60/80	662531 61251						
10 x 1-1/2 x 1-1/4	2,485	1/2	Coarse 36/46	662531 61393	1/5	39C60-IVMT	662531 16265			
	2,485	1/2	Medium 60/80	662531 61395						
12 x 1-1/2 x 1-1/2	2,070	1/2	Coarse 36/46	662532 63052						
	2,070	1/2	Medium 60/80	662532 63053						
12 x 2 x 1-1/4	2,070							1/2	Medium 60	662532 63359
	2,070							1/2	Fine 80	662532 63360
12 x 2 x 1-1/2	2,070	1/2	Very Coarse 24	662532 63054						
	2,070	1/2	Coarse 36/46	662532 63055						
	2,070	1/2	Medium 60/80	662532 63056	1/4	39C60-KVMT	662532 20942			
14 x 2 x 1-1/2	1,800				1/3	37C24-RVK	662533 19967			
	1,800				1/3	39C60-JVMT	662533 19968			

Bench and Pedestal Wheel Arbor Bushings

WHEEL DIAMETER	WHEEL CENTER HOLE	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
5", 6", 7"	1"	•	•	•	•		
8"	1"		•	•	•		
10"	1-1/4"			•	•	•	
12" x 2"	1-1/4"					•	
12" and 14"	1-1/2"					•	•

These size bushings shipped free of charge with your wheel order.



Resin bond, vitrified bond, center lap, and cotton fiber mounted points are available in a wide range of shapes.

Industries:

Aerospace
Tool and Die
Construction
Metal Fabrication
Automotive
Cutlery
Mold Shops
Stainless Steel Equipment
Foundries

Abrasive Grain:

Ceramic Alumina, Zirconia Alumina, Zirconia Alumina / Aluminum Oxide Blend, Aluminum Oxide

Shape Availability:

A, B, and W

Machine Used:

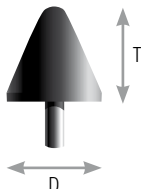
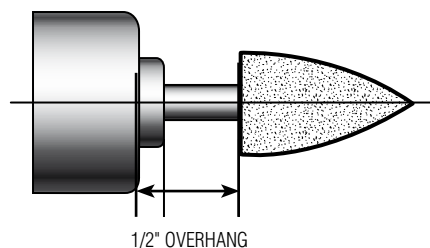


DIE AND
PENCIL
GRINDER



HORIZONTAL/
STRAIGHT SHAFT
PORTABLE GRINDER

Measurement Guide



Description of Overhang

Overhang is the distance between the grinder chuck and the abrasive on the spindle. The larger the overhang, the lower the maximum safe operating speed.

Size

Measured by diameter (D) x thickness (T)

Cotton Fiber



Good for blending and polishing

COTTON FIBER ALUMINUM OXIDE - RESIN BOND

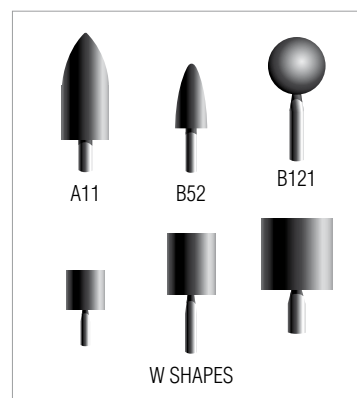
- Aluminum oxide grain provides an excellent blend of cut rate and life
- The cotton fibers ensure smooth, chatter-free grinding
- Designed for blending and polishing in one step; use 80 grit for most materials and 120 for polishing and stainless steel applications

TIER: **GOOD**
TRADENAME: **COTTON FIBER**
ABRASIVE: Aluminum Oxide

SHAPE	SIZE (D x T)	SPINDLE DIA. †	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #
Cotton Fiber Mounted Points						
A11	7/8 x 2	1/4	19,860	5/25	A80-HBF3	614636 22664
B52	3/8 x 3/4	1/8	45,370	5/25	A120-HBF3	614636 20242
B121	1/2" Ball	1/8	45,370	5/25	A80-HBF3	614636 22657
W163	1/4 x 1/2	1/8	60,000	5/25	A80-HBF3	614636 22655
			60,000	5/25	A120-HBF3	614636 22656
W176	3/8 x 1/2	1/8	45,370	5/25	A80-HBF3	614636 22654
W185	1/2 x 1/2	1/8	34,500	5/25	A80-HBF3	614636 22649
W187	1/2 x 1	1/8	20,620	5/25	A80-HBF3	614636 22651
W220	1 x 1	1/4	25,500	5/25	A80-HBF3	614636 22646

† Spindle length is 1-1/2"

* Maximum RPM valid to 1/2" overhang. See package insert for other overhangs.



Center Lap



Better for Excell-O center lap and similar machines

CENTER LAP ALUMINUM OXIDE - VITRIFIED BOND

- Specially formulated wheel treatment provides added lubricity to the wheel, minimizing risk of metallurgical damage
- The larger diameter spindle ensures minimal deflection and rigid support
- Precise dimensional tolerances ensure accurate location of part centers

TIER: **BETTER**
TRADENAME: **CENTER LAP**
ABRASIVE: Aluminum Oxide

SHAPE	SIZE (D x T)	SPINDLE DIA.†	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #
Center Lap Mounted Points						
—	1/2 x 2**	1/2	65,000	5/25	A80-VVM	614636 21421
—	1 x 2**	1/2	15,900	5/25	A80-VVM	614636 22926

† Spindle length is 1-1/4"

* Maximum RPM valid to 1/2" overhang. See package insert for other overhangs.

** Pointed 60°

TECH TIP

Dress the center lap mounted points frequently to ensure accurate and smooth center holes.



It is the user's responsibility to refer to and comply with ANSI B7.1

Resin Bond



Best choice for fast stock removal

NORZON ZIRCONIA ALUMINA – RESIN BOND

- Zirconia alumina abrasive blend for 2X faster cut rate than standard aluminum oxide
- Strong grain and specially formulated organic bond provide 4X greater life than aluminum oxide points, while reducing vibration and wheel chatter
- Ideal for removing parting lines, fins and small risers from castings, and smoothing and blending of welded areas



Better choice for fast stock removal and long life

CHARGER Z/A & A/O BLEND – RESIN BOND

- Durable zirconia alumina and aluminum oxide abrasive blend delivers 35% faster cut rate than standard aluminum oxide; an aggressive, free cut, and more parts cleaned in less time to substantially increase productivity
- Specially formulated organic bond provides 2X greater life than standard resin bonds while reducing vibration and wheel chatter
- Better choice for removing parting lines, fins and small risers from castings, and smoothing and blending welded areas
- Charger mounted point pre-packed in small packages are ideal for vending machines, pegboards, small jobs, and carrying to job site

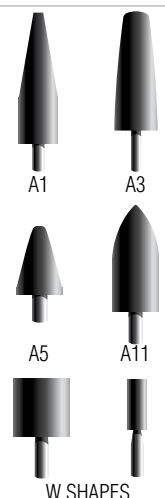
TIER: **BEST**
TRADENAME: **NORZON**
ABRASIVE: Zirconia Alumina

SHAPE	SIZE (D x T)	SPINDLE DIA.†	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #
Resin Bond Mounted Points								
A1	3/4 x 2-1/2	1/4	19,800	5/25	NZ24-UBXR1	614636 16457	Charger	614636 16458
A3	1 x 2-3/4	1/4	16,100	5/25	NZ24-UBXR1	614636 16459	Charger	614636 16460
A5	3/4 x 1-1/8	1/4	45,000	5/25			Charger	614636 16462 NS
A11	7/8 x 2	1/4	19,860	5/25	NZ24-UBXR1	614636 16463	Charger	614636 16464
W189	1/2 x 2	1/4	24,000	5/25	NZ24-UBXR1	614636 16465	Charger	614636 16466
W197	5/8 x 2	1/4	21,000	5/25	NZ24-UBXR1	614636 16467		
W207	3/4 x 1-1/2	1/4	24,000	5/25			Charger	614636 16470
W208	3/4 x 2	1/4	18,750	5/25	NZ24-UBXR1	614636 16471		
W220	1 x 1	1/4	25,500	5/25	NZ24-UBXR1	614636 17520	Charger	614636 17521
			25,500	5 V				
W221	1 x 1-1/2	1/4	19,120	5/25	NZ24-UBXR1	614636 16473	Charger	614636 16474
W222	1 x 2	1/4	15,900	5/25	NZ24-UBXR1	614636 16475	Charger	614636 16476

† Spindle length is 1-1/2"

* Maximum RPM valid to 1/2" overhang. See package insert for other overhangs.

NS Non-stock; contact your Norton representative for current order quantities and lead times.



Vitrified Bond



Best choice for high volume operations

QUANTUM CERAMIC ALUMINA – VITRIFIED BOND

- Quantum grain with unique, engineered ceramic grain and shape, specifically developed for high-volume, high-speed alloy grinding operations
- Minimal loading and heat build-up; provide up to 33% longer life and 37% better metal removal rates versus other ceramic points
- Versatile; optimized for all low-, medium-, and high-force vitrified applications
- Oil and Gas 36 grit mounted points; specifically engineered to efficiently grind the carbide matrix material of oil field drill heads



Better medium grit option for blending and deburring

PINK ALUMINUM OXIDE – VITRIFIED BOND

- Sharp versatile 86A aluminum oxide grain is free cutting and resists burn
- Excellent form holding compared to more friable white aluminum oxides
- Medium grit for blending and deburring



Good value for general purpose, small job shop applications

GEMINI ALUMINUM OXIDE – VITRIFIED BOND

- 38A abrasive is designed to be cool cutting to minimize burn
- High temperature vitrified bond maximizes form holding and life
- Wide grit range for stock removal, blending/deburring, and finishing/polishing

TECH TIP

- For best mounted point performance, always run the mounted point at the maximum allowable speed according to ANSI B7.1. Refer to the speed chart included in each shipment for proper operating speeds.
- Use "A" shapes for medium- to heavy-duty blending.
- Use "B" shapes for light deburring and finishing/polishing.
- Use "W" shapes for offhand and precision grinding of medium to heavy stock.
- Use 36 grit and coarser for rough grinding.
- Use 60 and 90 grits for imparting fine finishes or when grinding on narrow surfaces.



It is the user's responsibility to refer to and comply with ANSI B7.1



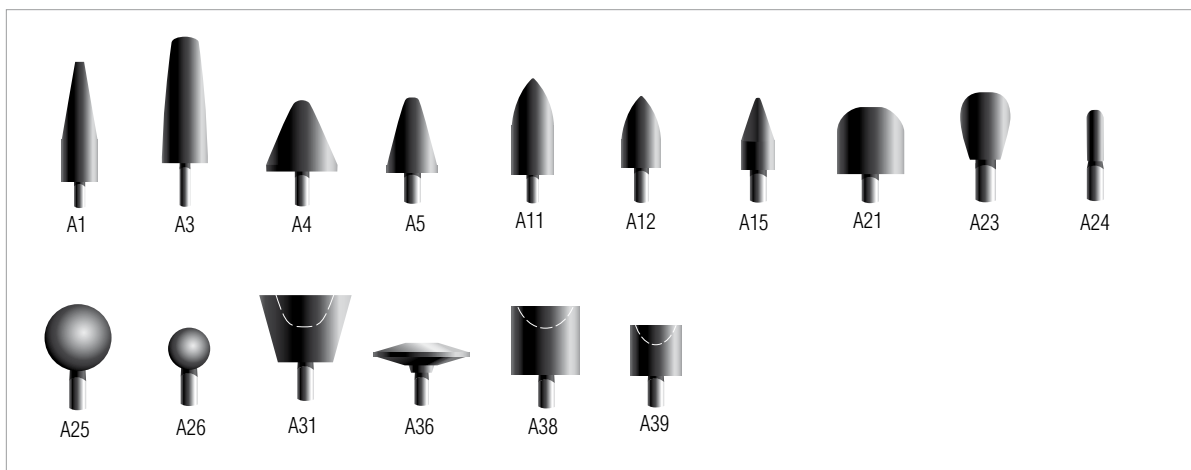
Vitrified Bond

TIER:	BEST	BETTER	GOOD
TRADENAME:	QUANTUM	PINK	GEMINI
ABRASIVE:	Ceramic Alumina	86A Aluminum Oxide	38A Aluminum Oxide

SHAPE	SIZE (D x T)	SPINDLE DIA. †	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #
Vitrified Bond Mounted Points – A Shapes										
A1	3/4 x 2-1/2	1/4	19,800	25/250	Oil & Gas 36	614636 86139				
A1	3/4 x 2-1/2	1/4	19,800	5/25	3NQ80	690831 49139	86A80-S	690786 45335	38A36-T	614636 24374
A1	3/4 x 2-1/2	1/4	19,800	5/25					38A60-P	614636 24375
A3	1 x 2-3/4	1/4	16,100	25/250	Oil & Gas 36	614636 86138				
A3	1 x 2-3/4	1/4	16,100	5/25			86A80-S	690786 45333	38A36-T	614636 24377
A3	1 x 2-3/4	1/4	16,100	5/25					38A60-P	614636 24378
A4	1-1/4 x 1-1/4	1/4	30,560	5/25					38A60-P	614636 24380
A5	3/4 x 1-1/8	1/4	45,000	5/25			86A80-S	690786 45339	38A36-T	614636 24381
A5	3/4 x 1-1/8	1/4	45,000	5/25					38A60-P	614636 24382
A11	7/8 x 2	1/4	19,860	5/25	3NQ80	690831 49141			38A36-T	614636 24384
A11	7/8 x 2	1/4	19,860	5/25			86A80-S	690786 45336	38A60-P	614636 24385
A12	11/16 x 1-1/4	1/4	48,000	5/25			86A80-S	690786 45344	38A60-P	614636 24388
A15	1/4 x 1-1/16	1/4	72,750	5/25					38A60-P	614636 24391
A21	1 x 1	1/4	34,500	5/25					38A60-P	614636 24392
A23	3/4 x 1	1/4	39,370	5/25					38A60-P	614636 24394
A24	1/4 x 3/4	1/4	76,500	5/25					38A60-P	614636 24395
A25	1" Ball	1/4	35,620	5/25			86A80-S	690786 45341	38A60-P	614636 24396
A26	5/8" Ball	1/4	61,120	5/25					38A60-P	614636 24397
A31	1-3/8 x 1	1/4	27,780	5/25					38A60-P	614636 24399
A36	1-5/8 x 3/8	1/4	23,520	25/250	Oil & Gas 36	662531 45562				
A36	1-5/8 x 3/8	1/4	23,520	5/25					38A60-P	614636 24404
A38	1 x 1	1/4	34,500	5/25			86A80-S	690786 45345	38A60-P	614636 24406
A39	3/4 x 3/4	1/4	47,250	5/25					38A60-P	614636 24407

† Standard spindle size is 1/4" x 1-1/2"

* Maximum RPM valid to 1/2" overhang. See package insert for other overhangs.



Vitrified Bond

TIER:	BEST	BETTER	GOOD
TRADENAME:	QUANTUM	PINK	GEMINI
ABRASIVE:	Ceramic Alumina	86A Aluminum Oxide	38A Aluminum Oxide

SHAPE	SIZE (D x T)	SPINDLE DIA. †	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #
Vitrified Bond Mounted Points – B Shapes										
B42	1/2 X 3/4	1/8	33,570	5/25					38A60-P	614636 24412
B44	7/32 x 3/8	1/8	68,400	5/25					38A60-P	614636 24414
B52	3/8 x 3/4	1/8	45,370	5/25			86A80-S	690786 45334	38A60-P	614636 24420
B52	3/8 x 3/4	1/4	81,000	5/25					38A60-P	614636 24419
B52	3/8 x 3/4	1/8	45,370	5/25					38A90-Q	614636 24422
B53	5/16 x 5/8	1/8	60,000	5/25			86A80-S	690786 45340	38A60-P	614636 24423
B55	1/8 x 1/4	1/8	105,000	5/25					38A60-P	614636 24425
B81	3/4 x 3/16	1/8	50,930	5/25			86A80-S	690786 45347		
B97	1/8 x 3/8	1/8	105,000	5/25	3NQ80	690831 49048	86A80-S	690786 45337	38A60-P	614636 24451
B121	1/2" Ball	1/8	45,370	5/25			86A80-S	690786 45338	38A60-P	614636 24466
B122	3/8" Ball	1/8	61,650	5/25	3NQ80	690831 49050	86A80-S	690786 45360	38A60-P	614636 24470
B123	3/16" Ball	1/8	104,250	5/25					38A60-P	614636 24472
B124	1/8" Ball	1/8	105,000	5/25					38A90-Q	614636 24474
B135	1/4 x 1/2	1/8	60,000	5/25			86A80-S	690786 45342	38A60-P	614636 24484

† Spindle size is 1/8" or 1/4" x 1-1/2"

* Maximum RPM valid to 1/2" overhang. See package insert for other overhangs.



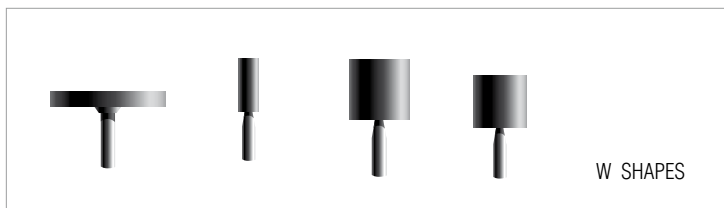
Vitrified Bond

TIER:	BEST	GOOD	GOOD
TRADENAME:	QUANTUM	PINK	GEMINI
ABRASIVE:	Ceramic Alumina	86A Aluminum Oxide	38A Aluminum Oxide

SHAPE	SIZE (D x T)	SPINDLE DIA. †	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #
Vitrified Bond Mounted Points – W Shapes										
W144	1/8 x 1/4	1/8	105,000	5/25					38A60-P	614636 24488
W154	3/16 x 1/2	1/8	70,500	5/25	3NQ80	690831 49133			38A60-P	614636 24497
W163	1/4 x 1/2	1/8	60,000	5/25			86A80-S	690786 45346	38A60-P	614636 24504
W164	1/4 x 3/4	1/8	45,900	5/25					38A60-P	614636 24505
W176	3/8 x 1/2	1/8	45,370	5/25					38A60-P	614636 24517
W177	3/8 x 3/4	1/8	33,750	5/25			86A80-S	690786 45355	38A60-P	614636 24518
W179	3/8 x 1-1/4	1/4	20,415	25/250	Oil & Gas 36	690831 54055				
W185	1/2 x 1/2	1/8	34,500	5/25	3NQ80	690831 49137			38A60-P	614636 24525
W185	1/2 x 1/2	1/4	61,500	5/25			86A80-S	690786 45354		
W188	1/2 x 1-1/2	1/4	30,370	5/25					38A60-P	614636 24530
W189	1/2 x 2	1/4	24,000	25/250	Oil & Gas 36	614636 86137				
W189	1/2 x 2	1/4	24,000	5/25					38A60-P	614636 24531
W200	3/4 x 1/8	1/8	50,930	5/25			86A80-S	690786 45356	38A60-P	614636 24543
W204	3/4 x 3/4	1/4	42,750	5/25					38A60-P	614636 24549
W205	3/4 x 1	1/4	34,500	5/25					38A60-P	614636 24550
W208	3/4 x 2	1/4	18,750	5/25					38A60-P	614636 24553
W215	1 x 1/8	1/8	38,200	5/25					38A60-P	614636 24560
W218	1 x 1/2	1/4	38,200	5/25					38A60-P	614636 24564
W220	1 x 1	1/4	25,500	5/25			86A80-S	690786 45359	38A60-P	614636 24566
W222	1 x 2	1/4	15,900	5/25					38A60-P	614636 24569
W230	1-1/4 x 1-1/4	1/4	20,400	5/25					38A60-P	614636 24578
W235	1-1/2 x 1/4	1/4	25,470	5/25			86A80-S	690786 45343	38A60-P	614636 24583
W236	1-1/2 x 1/2	1/4	25,470	5/25					38A60-P	614636 24585
W237	1-1/2 x 1	1/4	22,500	5/25					38A60-P	614636 24587
W238	1-1/2 x 1-1/2	1/4	15,600	5/25					38A60-P	614636 24588
W242	2 x 1	1/4	19,100	5/25					38A60-P	614636 24592

† Spindle size is 1/8" or 1/4" x 1-1/2"

* Maximum RPM valid to 1/2" overhang. See package insert for other overhangs.





Since 1823, Norton stones have lead the marketplace with conventional and diamond benchstones, waterstones, sharpening systems, files, slips and specialty stones for industrial, commercial and DIY sharpening applications. Our comprehensive line of sharpening and finishing products is the industry's broadest line with premier performance and quality.

Applications:

Deburring, dimensioning, sharpening, honing

Grit Range:

Coarse, Medium, Fine, Extra Fine, Ultra Fine

Abrasive Types:

Aluminum Oxide (India), Silicon Carbide (Crystolon), Arkansas (Soft and Hard Translucent), and Diamond

Machine Used:



HAND SHARPENING

Better choice for economical solution for general sharpening and finishing with one stone



COMBINATION GRIT ABRASIVE BENCHSTONES

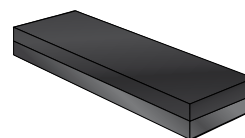
- **Crystolon Combination**
Coarse and fine grit sharp-cutting silicon carbide abrasive surfaces for general sharpening (to moderate tolerances) when the speed of sharpening is more important than the fineness of the cutting edges. Gray in color.
- **India Combination**
Coarse and fine grit aluminum oxide abrasive surfaces produce strong, keen, long-lasting edges on quality tools. Orange/brown in color.
- **Crystolon/India Combination**
Fast-sharpening, medium grit silicon carbide (Crystolon) and fine aluminum oxide (India) abrasive surfaces for keen, long-lasting edges on quality tools. Crystolon side is dark gray in color, India side is orange.
- **Giant Combination Stones**
11-1/2" and 12" bench oil stones are used to sharpen large edge tools with long sweeping strokes.

Application-to-Product Recommendation Guide

	FAST CUT STOCK REMOVAL	INITIAL SHARPENING	FINAL SHARPENING	HONING	SHARPEST EDGE
Grit Size	Coarse	Medium	Fine	Extra Fine	Ultra Fine
Abrasive	Crystolon	Crystolon	India	Soft Arkansas	Hard Arkansas
Product/Color	Grey	Grey	Orange	Milky White	Translucent

TIER: BETTER				
SIZE (L x W x H)	QTY./CASE	SPEC.	PRODUCT #	PART #
Combination Grit Benchstones – Crystolon (Silicon Carbide)				
4 x 1 Round	5	Coarse/Fine	JB64	614636 85435
4 x 1-3/4 x 5/8	5	Coarse/Fine	JB134	614636 85440
5 x 2 x 3/4	5	Coarse/Fine	JB45	614636 85445
6 x 2 x 1	5	Coarse/Fine with Anniversary Box	JB6	614636 85450
8 x 2 x 1	5	Coarse/Fine with Anniversary Box	JB8	614636 85455
11-1/2 x 2-1/2 x 1	2	Coarse/Fine	JUM3	614636 85840
12 x 2-1/2 x 1-1/2	2	Coarse/Fine	JUM4	614636 85855
Combination Grit Benchstones – India (Aluminum Oxide)				
4 x 1 Round	5	Coarse/Fine	IB64	614636 85545
4 x 1-3/4 x 5/8	5	Coarse/Fine	IB134	614636 85550
5 x 2 x 3/4	5	Coarse/Fine	IB45	614636 85555
6 x 2 x 1	5	Coarse/Fine with Anniversary Box	IB6	614636 85560
8 x 2 x 1	5	Coarse/Fine with Anniversary Box	IB8	614636 85565
11-1/2 x 2-1/2 x 1	2	Coarse/Fine	IM2	614636 85851
Combination Grit Benchstones – Crystolon/India				
6 x 2 x 1	5	Medium/Fine	IC6	614636 85643
11-1/2 x 2 x 1	2	Medium/Fine	IC11	614636 87239

These benchstones are packed in individual boxes within a case. Order in multiples of stones/case.



Specialty Stones



Better choice for specific sharpening or deburring applications

SPECIALTY STONES

- Norton continues to offer specialty stones with optimum specifications and unique shapes that conform to, and quickly sharpen, specific tools

Large Specialty Stones

Tradesmen's Utility Stones

Used for sharpening trimming knives and as an abrasive file in many different industries. The JT910 does not have a handle, while the JT920 and JT930 have wooden handles.

Sickle and Scythe Stones

These silicon carbide stones quickly produce a fast-cutting edge on sickles, scythes, and brush hooks. These stones are most frequently chosen where the speed of sharpening is the primary consideration.

Utility File

A long wedge-shaped stone with four flat sides designed for sharpening coarse cutting edges on cutting implements and edged garden tools. Wooden handles make them easy to use. They will outlast and out-sharpen metal files.

TIER: BETTER				
SIZE	QTY./CASE	SPEC.	PRODUCT #	PART #
Tradesmen's Utility Stones – Crystolon (Silicon Carbide)				
10 x 1-1/4 x 3/4	10	Medium	JT910	614636 87665
14-3/4 Overall (with Handle)	10	Coarse/Fine	JT930	614636 87675
	10	Medium	JT920	614636 87670
Sickle and Scythe Stones				
10 x 1-1/4 x 3/4 Crystolon (Silicon Carbide)	10	Coarse	TJ3	614636 87731
10 x 1-5/16 x 3/4 India (Aluminum Oxide)	10	Coarse	TD1	614636 87715
Utility File – Crystolon (Silicon Carbide)				
14 Overall (w/ Handle)	10	Coarse	JD2	614636 87750

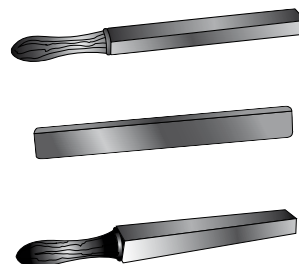
All Large Specialty Stones are bulk packed.

Specialty Stones for Machine Tools

Machine Knife Stone

Crystolon (silicon carbide) machine knife stones offer both coarse and fine sides for sharpening and honing paper and cloth-cutting knives and planer knives on the machine. The groove around the middle of the stone protects fingers and provides a secure hold.

TIER: BETTER				
SIZE	QTY./CASE	SPEC.	PRODUCT #	PART #
Machine Knife Stone – Crystolon (Silicon Carbide)				
4 Diam. x 1-1/2" Thick	5	Coarse/Fine	JB74	614636 87570



Sharpening Stone Oil



Better choice for improving sharpening stone performance

SHARPENING STONE OIL

- Highly refined lubricating oil which is specifically formulated for sharpening stone use
- Will not load or "gum-up" sharpening stones, meets U.S. Pharmacopoeia standards for mineral oil purity; may be used around food preparation operations
- Equally ideal for all lubricating jobs

TIER: BETTER				
SIZE	QTY./CASE	SPEC.	PRODUCT #	PART #
Sharpening Stone Oil				
4-1/2 oz.	20	Oil	XB1	614636 87760
1 Pint	20	Oil	XB5	614636 87770
1 Quart	5	Oil	XB2	614636 87775
1 Gallon	4	Oil	XB6	662534 57631

TECH TIP

- All oil stones are porous in nature; oil is required to keep the pores open and working efficiently
- Use Norton oil to optimize the performance of Crystolon, India and Arkansas stones
- While sharpening knives, blades and tools, be careful to keep fingers away from sharp edges

Instructional Videos

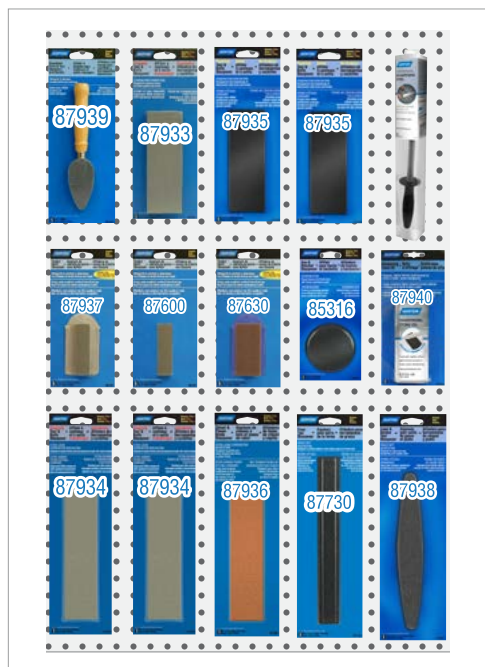


Find the latest instructional sharpening stone videos on our youtube channel at <https://nortonsga.us/kb542>

Ideal for sales training and end-user self-study. Learn to efficiently use these sharpening products to maintain tools at peak performance and prolong their life – to make all your sharpening, honing, etc. applications easier.

Retail Packaged Sharpening Products

Our retail-packaged line brings Norton quality to your distributor showroom, vending machine, tool crib, and your tool box. Each stone is specifically designed for a popular sharpening application and packaged to sell or carry to the job site.



		TIER:	BETTER
SIZE (L x W x H)	SPEC.	QTY./CASE	PART #
Axe and Hatchet Sharpener			
3 x 5/8 round	Coarse/Fine Crystolon (Silicon Carbide)	10	076607 85316
Pocket Knife Sharpener			
3 x 7/8 x 3/8	Fine Crystolon (Silicon Carbide)	5	076607 87600
3 x 7/8 x 3/8 with case	Medium India (Aluminum Oxide)	5	076607 87937
3 x 1-1/2 x 1/2 with case	Coarse/Fine India (Aluminum Oxide)	5	076607 87630
Economy Tool & Knife Benchstone			
6 x 2 x 3/4	Coarse/Fine Crystolon (Silicon Carbide)	5	076607 87933
8 x 2 x 3/4	Coarse/Fine India (Aluminum Oxide)	10	076607 87934
8 x 2 x 1	Coarse/Fine India (Aluminum Oxide)	10	614636 85755
High Quality Tool & Knife Benchstone			
6 x 2 x 3/4	Coarse/Fine Crystolon (Silicon Carbide)	5	076607 87935
Chisel & Planer Blade Sharpener			
8 x 2 x 3/4	Coarse/Fine India (Aluminum Oxide)	10	076607 87936
Household Knife & Tool Sharpener			
7-1/2	Fine Crystolon (Silicon Carbide)	5	076607 87939
Farm Tool Sharpener			
10 x 1-1/4 x 3/4	Coarse Crystolon (Silicon Carbide)	10	076607 87730
Lawn & Garden Tool Sharpener			
9-1/2 x 1-3/8 x 1/2	Medium Crystolon (Silicon Carbide)	10	076607 87938
Sharpening Stone Oil			
4-1/2 oz.	Oil	5	076607 87940
Sharpening Steel			
1/2 x 10	Round file with rubber handle	8	662532 40433
Vitrified Dressing Stick			
1 x 1 x 6	Medium Silicon Carbide	5	076607 10466



Knife and Scissor Sharpener

The knife and scissor mechanical sharpener is a quick and portable tool for hundreds of sharpening applications.

SPECIFICATION	QTY./CASE	PART #
Knife and Scissor Sharpener		
Carbide. Case contains 4 each of red, green, and yellow.	12	076607 87520



Non-Slip Silicon Sharpening Stone Mat

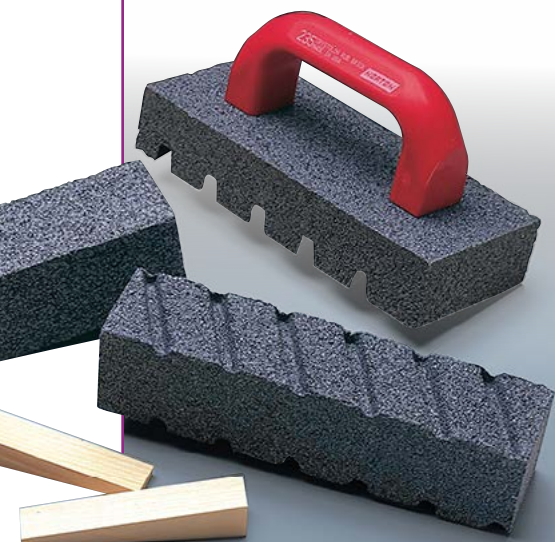
This thin and flexible 8" x 14" mat is large enough to handle all conventionally-sized sharpening stones. A textured surface keeps the mat firmly in place during use. Ideal for use with stones sold without a non-skid base. It can also be used in conjunction with stone holders to keep them extra secure.

Can be rolled or folded for compact storage. Easily cleaned with soap and water.

SPECIFICATION	QTY./CASE	PART #
Non-Slip Silicon Sharpening Stone Mat		
8 x 14	25	690786 48467

Norton Professional Sharpening Products and Dressing Sticks

See the "Norton Professional Sharpening Products and Dressing Sticks Catalog #200" on www.nortonabrasives.com to view the complete list and descriptions of our many sharpening products.



Hard silicon carbide rubbing bricks are used for heavy-duty applications such as rubbing floors, cleaning and scouring castings, rubbing down concrete, and removing mold marks.

Applications:

Floor Rubbing Bricks – are used to rub down concrete and remove mold marks. These are designed to fit the chucks of common concrete floor grinding equipment. Reusable wooden wedges anchor the bricks to the equipment chucks.

Plain Hand Rubbing Bricks – are the choice of mechanics and foundry workers for dressing grinding wheels and cleaning or scouring castings.

Fluted Hand Rubbing Bricks – are used by masons and stone workers for rubbing down concrete and removing mold marks. The diagonal flutes provide sharp edges, a clean shearing action, and carry away debris.

Fluted Hand Rubbing Bricks with Handle – make quick work of removing mold marks and rubbing down concrete. The firmly attached handle reduces fatigue and facilitates overhead, wall, and floor work.

Griddle Bricks – quickly clean away carbon build-up and other residue on your grill without leaving fibers, which grill brushes often do.

Grit Range:

Abrasive Type:

Machine Used:

6 – 120

Silicon Carbide



HAND SANDING



ELECTRIC
FLOOR STRIPPER



SIZE (L x W x H)	QTY./ CASE	SPEC.	ABRASIVE	PART #
Plain Floor Rubbing Bricks with Wooden Wedges				
4 x 2 x 2	6	C6-R	Silicon Carbide	614636 53292
	6	C10-R	Silicon Carbide	614636 53293
	6	C24-R	Silicon Carbide	614636 53294
	6	C80-R	Silicon Carbide	614636 53295

SIZE (L x W x H)	QTY./ CASE	PART #
Wooden Wedges		
	6	614636 85297

SIZE (L x W x H)	QTY./ CASE	SPEC.	ABRASIVE	PRODUCT #	PART #
Plain Hand Rubbing Bricks					
8 x 2 x 2	5	C24	Silicon Carbide	BP28	614636 87830

SIZE (L x W x H)	QTY./ CASE	SPEC.	ABRASIVE	PRODUCT #	PART #
Fluted Hand Rubbing Bricks					
6 x 2 x 2	5	C20	Silicon Carbide	BF26	614636 87840
8 x 2 x 2	5	C20	Silicon Carbide	BF28	614636 87845

SIZE (L x W x H)	QTY./ CASE	SPEC.	ABRASIVE	PRODUCT #	PART #
Fluted Hand Rubbing Bricks with Handle					
6 x 3 x 1	5	C20	Silicon Carbide	BFH6	614636 87800
8 x 3-1/2 x 1-1/2	5	C20	Silicon Carbide	235	614636 87795

SIZE (L x W x H)	QTY./ CASE	SPEC.	ABRASIVE	PART #
Griddle Brick				
4-1/2 x 3 x 2	5	Medium	Alundum	614636 87870

the Norton Clipper brand **HITS THE PAVEMENT**

The leader for diamond blades, tools, and light machines for construction and cutting materials is
"Redefining Jobsite Muscle – Rugged. Reliable. Affordable."





With faster cut rates, constant depth of cut, and less downtime, Norton Clipper diamond blades are the choice of professionals versus conventional abrasive blades. Norton Clipper diamond blades are available for high-speed saws, portable hand-held saws, and walk-behind saws. For the full offering of diamond blades, see the Norton Clipper Construction Products Catalog #7719.

Applications: Cutting concrete, stone, tile, and other building materials
Size Range: 4" – 18"
Thickness Range: .080" – .375"
Segment Height Range: .210" – .550"
Abrasive Grain: Diamond
Mounting Options: 1"/20mm universal arbor, 7/8"-5/8"-20mm, DM-7/8"-5/8", 5/8"-11
Shape: Type 01
Machines Used:



HIGH-SPEED GAS
OR ELECTRIC SAW



CIRCULAR
SAW



RIGHT-ANGLE
GRINDER



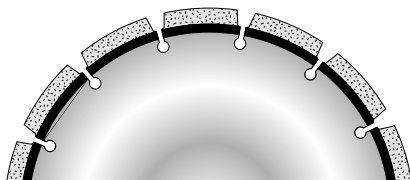
WALK-BEHIND
SAW



MASONRY
SAW

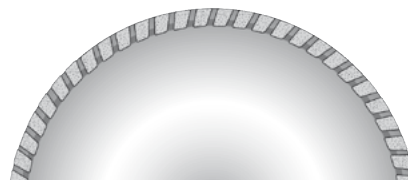
Diamond Blade Rim Types

There are three main diamond blade rim types: segmented, turbo, and continuous rim.



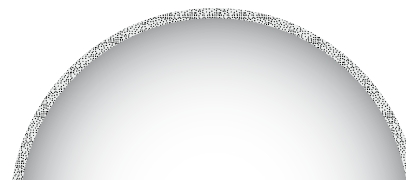
Segmented

- Most aggressive cutting action for general-purpose and masonry applications
- Use when cutting speed and productivity are more important than finish
- Best life, best cut rate, good finish



Turbo

- Aggressive cutting action with a smoother quality of cut than segmented rim blades
- For use on harder materials, such as granite, marble, and stone to reduce chipping
- Better life and cut rate, better finish



Continuous

- Provides the smoothest of cuts
- Best performance when used wet
- Use on porcelain, tile, marble, and other hard materials requiring a high-quality cut
- Good life, good cut rate, best finish

Material / Application-to-Product Recommendation Guide

Icon	Description	Application
	Multi-Purpose, All Materials	Concrete, reinforced concrete, granite, building materials, thin steel sections, angle iron up to 1/2" material thickness, rebar up to no. 5.
	Natural Stone and Tiles	Ceramic and stone tiles, granite, marble, very hard bricks and other very hard and dense materials.
	Reinforced Concrete and Harder Building Materials	Reinforced concrete, hard bricks, limestone, terrazzo, and other hard materials.
	General Purpose and Masonry Building Materials	Blocks, medium-hard building bricks, paving slabs, concrete roof tiles and other medium-hard materials.
	Asphalt	Asphalt, green concrete, asphalt over concrete, abrasive blocks, mortar and other abrasive materials.

Diamond Performance Tiers

	5	Best Best Performance
	4	Better High Performance
	3	Good Good Performance
	2	Value Consistent Performance

TECH TIP

- Never twist or turn a segmented blade in the cut because it may result in segment breakage
- Never use wet blades dry
- Remove dry blades from cut for 10 seconds of each minute of cut to air cool
- Never operate any saw, wet or dry, without the blade guard



It is the user's responsibility to refer to and comply with ANSI B7.1

For Reinforced Concrete and Harder Building Materials

DRY – Segmented Rim  

DUO EVO

The unique shape of the DUO EVO segments optimizes the angle of attack while enhancing the evacuation of the debris. With a new manufacturing process, the DUO EVO segments provide an exceptional cutting speed for optimum performance and increased life up to 20% over the original DUO EVO design.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.590"	6,300	DUOEVO12110	701846 84217
14 x .118 x 1"/20mm	.590"	5,460	DUOEVO14118	701846 84218
16 x .130 x 1"/20mm	.590"	4,500	DUOEVO16125	701846 93356

DUO

Our exclusive design has become a dominant name in the market. The unique dual segment per land technology provides excellent cutting speed with low vibration and high comfort of cut. The exclusive arrow shape gullets not only indicate blade direction, but also assist in fast removal of cutting debris. Maximum general purpose performance when cutting medium to low reinforcement, hard materials.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.393"	6,300	DUO12110	701846 83611
14 x .110 x 1"/20mm	.393"	5,460	DUO14110	701846 83612
14 x .125 x 1"/20mm	.393"	5,460	DUO14125	701846 83613
16 x .125 x 1"/20mm	.393"	4,500	DUO16125	701846 83798



For Asphalt and Abrasive Materials

DRY – Segmented Rim  

DUO ASPHALT

Dry cutting laser-welded blade for asphalt and green concrete. The laser-welded, wear-retardant drop segments extend blade life. Scoop gullets for faster swarf removal increases cut speed. Stroboscopic indicators to control cut depth and show rotation direction.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.590"	6,300	DUOASP12125	701846 84543
14 x .125 x 1"/20mm	.590"	5,460	DUOASP14125	701846 84315
16 x .125 x 1"/20mm	.590"	4,500	DUOASP16125	701846 84544

DUO ABRASIVE

Utilizes the basic characteristics of the original DUO blade and adds a unique segment shape that optimizes the angle of attack while enhancing the evacuation of the particles. The result is an exceptional cutting speed allied with very good performance and life in abrasive materials and concrete block. The bond specification lends additional life when high-speed cutting.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
14 x .110 x 1"/20mm	.327"	5,460	DUOAB14110	701846 84291
14 x .125 x 1"/20mm	.327"	5,460	DUOAB14125	701846 84292



For General-Purpose and Masonry Building Materials

DRY – Segmented Rim  

CLASSIC

The improved bond provides longer life at an economical price in medium-hard materials such as concrete with light to medium reinforcement.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.256"	6,300	COHSGP1220	701846 81383
14 x .110 x 1"/20mm	.256"	5,460	COHSGP1420	701846 81309
14 x .125 x 1"/20mm	.256"	5,460	COHSGP1420P	701846 84268
16 x .125 x 1"/20mm	.256"	4,500	COHSGP1620	701846 40356

VALUPLUS

For value and performance on small- to medium-size jobs. The sintered blade cuts unreinforced soft-to-medium concrete fast on saws up to 13 HP.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.393"	6,300	VPHSGP1220	701846 84180
14 x .110 x 1"/20mm	.393"	5,460	VPHSGP1420	701846 84181
14 x .110 x 1"/20mm	.393"	5,460	VPHSGP1420 20PK	701846 84428



Multi-Purpose, For All Materials

Dry – Segmented Rim  

4X4 MAX CUT



Taking high-speed cutting versatility to an all new level. The same standard features as the 4X4 with its anti-crack gullets and patented depth indicators that not only cool the blade, but also allow the operator to know how deep they are cutting. An all-new bond and diamond specification improves blade life in a wide range of materials while excelling in steel. New segment wear indicators give the operator an idea of remaining blade life.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .118 x 1"/20mm	.472"	6,300	4X4MC12118	701846 45927
14 x .125 x 1"/20mm	.472"	5,460	4X4MC14125	701846 45926

4X4



Multi-purpose laser welded blade for dry cutting a range of construction materials without sacrificing performance or price. Depth of cut is easily controlled with the patented depth-of-cut indicators cut into the steel core. Anti-crack gullets for enhanced safety cutting steel and metal (up to 5mm thick).

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.393"	6,300	4X412110	701846 84548
14 x .118 x 1"/20mm	.393"	5,460	4X414118	701846 84547
16 x .125 x 1"/20mm	.393"	4,500	4X416125	701846 45306

3X3



It's everything expected for high-speed cutting when both performance and price are a factor. The laser welded 3X3 cuts concrete, reinforced concrete, asphalt and abrasive building materials and more. High quality diamond increases the speed of cut on a variety of materials without changing blades. Premium blade characteristics and price point that would normally take multiple sintered blades to achieve.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
12 x .110 x 1"/20mm	.315"	6,300	3X312110	701846 47500
14 x .118 x 1"/20mm	.315"	5,460	3X314118	701846 47499



TECH TIP

High-Speed Hand Saw Blades –
Maximum Blade Cutting Depths and
Recommended Operating Speeds

Note: Diamond blade cutting depths listed are approximate. Actual cutting depth will vary with the exact blade diameter or saw type, or the exact diameter of the blade flanges. Cutting depth will also be reduced if saw components extend below the blade flanges.

BLADE DIAMETER	CUTTING DEPTH	MAXIMUM SPEED (RPM)
12"	4"	6,300
14"	5"	5,460
16"	6"	4,500



It is the user's responsibility to refer to and comply with ANSI B7.1

For Reinforced Concrete and Harder Building Materials

DRY – Crack Chasing



CHARGER

A heavy V-shaped segment designed with a special bond and diamond content for maximum removal of grout, mortar jointing, crack chasing and crack widening. Fast cutting and long life in abrasive materials using portable tools. Highly competitive to others of its kind in the market.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4 x .375 x 7/8-5/8-20mm	.550"	15,000	CGCC0400	701846 83856
7 x .375 x 7/8-5/8-20mm	.550"	8,730	CGCC0700	701846 83859



For Asphalt and Abrasive Materials

Dry – Tuck Pointing



CLASSIC

An economical solution for small to medium tuck pointing jobs. High-quality performance for heavy grout removal or mortar jointing. The heavy-duty wide segment reduces wear in abrasive materials.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4 x .250 x 7/8-5/8	.275"	15,000	CHTUCK0400	701846 81776
4-1/2 x .250 x 7/8-5/8	.275"	13,300	CHTUCK0450	701846 81777
5 x .250 x 7/8-5/8	.275"	12,225	CHTUCK0500	701846 81778
7 x .250 x 7/8-5/8	.275"	8,730	CHTUCK0700	701846 81779
8 x .250 x 7/8-5/8	.275"	7,640	CHTUCK0800	701846 81780



For General-Purpose and Masonry Building Materials

Dry – Segmented Rim



CHARGER

High-performance dry cutting of a variety of materials. The segment specification allows extended life and fast cut for medium to large jobs.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4 x .080 x 7/8-5/8-20mm	.393"	15,000	CGDSEG0400	701846 81505
4-1/2 x .080 x 7/8-5/8-20mm	.393"	13,300	CGDSEG0450	076607 04021
5 x .080 x 7/8-5/8-20mm	.393"	12,225	CGDSEG0500	701846 82851
6 x .080 x 7/8-5/8-20mm	.393"	10,185	CGDSEG0600	701846 83820
7 x .090 x DM-7/8-5/8	.393"	8,730	CGDSEG0700	076607 04020
8 x .090 x DM-7/8-5/8	.393"	7,640	CGDSEG0800	701846 81513
9 x .090 x 7/8-5/8"	.393"	6,600	CGDSEG0900	701846 69483



VALUPLUS

For value and performance on small- to medium-size jobs cutting soft abrasive materials like brick and tile. The sintered rim delivers a quality cut and good life.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4 x .080 x 7/8-5/8-20mm	.315"	15,000	VPSEG0400	701846 84098
4-1/2 x .080 x 7/8-5/8-20mm	.315"	13,300	VPSEG0450	701846 84099
7 x .090 x DM-7/8-5/8	.315"	8,730	VPSEG0700	701846 84100



Dry – Turbo Rim



CHARGER

Combines the characteristics of a standard Charger blade with a turbo rim configuration for cutting hard, dense materials with minimal effort. A better bond and diamond concentration for maximum cutting speed, life and quality of cut.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4 x .080 x 7/8-5/8-20mm	.393"	15,000	CGTURB0400	076607 05475
4-1/2 x .080 x 7/8-5/8-20mm	.393"	13,300	CGTURB0450	076607 04023
5 x .080 x 7/8-5/8-20mm	.393"	12,225	CGTURB0500	701846 82853
7 x .090 x DM-7/8-5/8	.393"	8,730	CGTURB0700	076607 04022
8 x .090 x DM-7/8-5/8	.393"	7,640	CGTURB0800	701846 81512



For Natural Stone and Tiles

Dry – Continuous Rim



CLASSIC

An economical solution for small- to medium-size jobs cutting softer ceramic tile and stone materials with efficient cutting ability.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4 x .080 x 7/8-5/8-20mm	.275"	15,000	CON4DT	076607 02793
4-1/2 x .080 x 7/8-5/8-20mm	.275"	13,300	CON45DT	076607 01194
7 x .090 x DM-7/8-5/8	.275"	8,730	CON7DT	076607 02788



For Reinforced Concrete and Harder Building Materials

WET – Medium Aggregates 

CHARGER

The steel core is designed to keep the cut straight while the .410" segment height prolongs cutting wear. Suitable for cutting medium aggregates with up to 35 HP walk-behind saws.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	POWER	PART #	UPC #
14 x .125 x 1	.410"	4,365	35hp	CGWCMD1412	701846 81366
18 x .125 x 1	.410"	3,395	35hp	CGWCMD1812	701846 81368

CLASSIC

Laser welded blade at an economical price for general purpose cutting of cured concrete, medium-hard aggregate and no steel reinforcement. The bond and diamond combination allow fast cutting action on limited horse powered walk-behind saws.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	POWER	PART #	UPC #
14 x .125 x 1	.327"	4,365	35hp	CHWCGP1412	701846 81359
18 x .125 x 1	.327"	3,395	35hp	CHWCGP1812	701846 81361



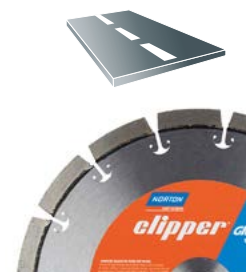
For Asphalt and Abrasive Materials

DRY – Green/Cured Concrete  

GMAX – MULTI-PURPOSE

Designed specifically for our GC55/GC25E down-cut green concrete push saw, the GMAX Multi-Purpose blade is excellent in both green and cured concrete. The unique segment specification and anchor slot gullets allow this blade to be used in a variety of applications with outstanding results.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	POWER	PART #	UPC #
8 x .095 x 7/8-5/8	.393"	7,640	6hp	NXDGRN0895	701846 83758
9 x .110 x 7/8-5/8	.275"	6,600	6hp	EE9110	701846 75125
10 x .110 x 1-7/8-5/8	.275"	6,115	6hp	EE10110	701846 84508



WET – Asphalt 

CHARGER

For large road and construction jobs with saws up to 35 HP. Higher diamond content increases productivity and offers faster cutting and longer life in asphalt and green concrete applications.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	POWER	PART #	UPC #
14 x .125 x 1	.327"	4,365	35hp	CGWASP1412	701846 81478
18 x .125 x 1	.307"	3,395	35hp	CGWASP1812	701846 81479

CLASSIC

An economical choice for fast cutting and good life when performing jobs in a variety of abrasive materials such as green concrete and asphalt on saws up to 35 HP.

SIZE (D x T x H)	SEGMENT HEIGHT	MAX RPM	POWER	PART #	UPC #
14 x .125 x 1	.326"	4,365	35hp	CHWASP1412	701846 81375
18 x .125 x 1	.326"	3,395	35hp	CHWASP1812	701846 81376



TECH TIP

Walk-Behind Saw Blades – Maximum Blade Cutting Depths and Recommended Operating Speeds

Note: Diamond blade cutting depths listed are approximate. Actual cutting depth will vary with the exact blade diameter or saw type, or the exact diameter of the blade flanges. Cutting depth will also be reduced if saw components extend below the blade flanges.


BLADE DIAMETER	CUTTING DEPTH	IDEAL SPEED (RPM)	MAXIMUM SPEED (RPM)
8"	2"	4,536	7,640
9"	2-1/2"	2,640	6,600
10"	3"	2,446	6,115
14"	4-5/8"	2,592	4,365
18"	6-5/8"	2,016	3,395



It is the user's responsibility to refer to and comply with ANSI B7.1



Norton Clipper cup grinders are available in a range of specifications and diameters providing a solution for a number of applications in the building and construction industry. There are many benefits to diamond grinding. It's very fast, low-cost and creates little noise compared to other concrete cutting options. It has become a very popular choice in the commercial construction and DIY home improvement industries.

Applications:	Used on right angle grinders to grind concrete, stone and masonry materials.
Size Range:	4" – 7"
Segment Height Range:	.177", .210"
Abrasive Grain:	Diamond
Mounting Options:	5/8"-11 attachment optimized for all popular angle grinders, 7/8-5/8"-20mm
Options:	Standard – single row or double row available iHD (Infiltrated High-Density) has thicker body, larger ventilation holes for better cooling
Machines Used:	 RIGHT-ANGLE GRINDER

General-Purpose and Masonry Building Materials

Dry – Cup Grinder  

3X3 WITH iHD TECHNOLOGY

The 3X3 cup grinder ensures very high material removal rate, extreme comfort while working without vibrations and a self-sharpening feature. These new iHD cups offer the best finishing and longest life even on softer, more abrasive materials.

SIZE (D x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4	.177"	15,000	3X3CG0400	701846 01763
5	.177"	12,225	3X3CG0500	701846 01766
7	.177"	8,730	3X3CG0700	701846 01769

CHARGER WITH iHD TECHNOLOGY

The Charger cup grinder ensures a high material removal rate and more comfortable work. These new iHD cups provide a better finish and long life on a wide range of materials.

SIZE (D x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4	.177"	15,000	CGCG0400	701846 01762
5	.177"	12,225	CGCG0500	701846 01765
7	.177"	8,730	CGCG0700	701846 01768

CLASSIC WITH iHD TECHNOLOGY

The Classic cup grinder provides efficient material removal rate thanks to the small contact surfaces of the segments. The cups also have flat sides to avoid damaging walls or ceilings during flush grinding.

SIZE (D x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
4	.177"	15,000	CCCG0400	701846 01761
5	.177"	12,225	CCCG0500	701846 01764
7	.177"	8,730	CCCG0700	701846 01767

CLASSIC

Available in a range of sizes and segment designs for optimum performance by life or by speed. Ideal for leveling all types of masonry materials, brick, block, concrete and stone. Strategically placed hole designs help ventilate dust from the surface to extend the life of the cups.

SIZE (D x H)	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
Single Row for Fast Stock Removal				
4 x 7/8-5/8-20mm	.210"	15,000	CHSCPH0400	701846 82585
5 x 7/8-5/8-20mm	.210"	12,225	CHSCPH0500	701846 84035
7 x 7/8-5/8-20mm	.210"	8,730	CHSCPH0700	701846 82594
4	.210"	15,000	CHSCPT0400	701846 82555
5	.210"	12,225	CHSCPT0500	701846 84036
7	.210"	8,730	CHSCPT0700	701846 82593
Double Row for Long Life, Smooth Finish				
4 x 7/8-5/8-20mm	.210"	15,000	CHDCPH0400	701846 82588
5 x 7/8-5/8-20mm	.210"	12,225	CHDCPH0500	701846 84037
7 x 7/8-5/8-20mm	.210"	8,730	CHDCPH0700	701846 82596
4	.210"	15,000	CHDCPT0400	701846 82586
5	.210"	12,225	CHDCPT0500	701846 84038
7	.210"	8,730	CHDCPT0700	701846 82595

Accessories

VACUUM SHROUD KIT

The Vacuum Shroud's design creates a cyclonic affect extracting dust and debris from the work surface into the support vacuum. This prolongs the life of the grinding cup and grinder and provides a smoother surface while decreasing the chance of dust particle inhalation.

DESCRIPTION

Kit includes: one shroud, five different adapter rings to fit most popular right-angle grinders, and one 7" Norton Clipper Classic single row cup wheel

UPC #
701846**41039**





Core bits are cutting tools used to remove a cylindrically shaped piece of material. A core drill is designed to cut a hole and remove a core sample or to drill a hole without leaving material behind. Diamond core bits have diamond cutting tips and are frequently used for drilling in materials such as concrete, stone, and asphalt.

Applications: Used on core drills in materials such as concrete, stone and other hard materials
Size Range: 2" – 10"
Segment Height Range: .254", .393"
Abrasive Grain: Diamond
Mounting Options: 1-1/4"-7 threads
Machines Used:



Reinforced Concrete and Harder Building Materials

WET – Hard Aggregates

PARADIGM					
Premium diamond in the turbo segment permits the core to penetrate quickly and efficiently into the toughest cured concrete, for significantly increased performance. The 14" tube length with 1-1/4"-7 threads fits a wide range of core drill mounting arbors.					
SIZE IN INCHES	SIZE IN MM	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
2	51mm	.490"	2,000	PDBIT0200	701846 01410
2-1/2	64mm	.490"	1,300	PDBIT0250	701846 01411
3	76mm	.490"	1,300	PDBIT 0300	701846 01412
3-1/2	89mm	.490"	1,300	PDBIT0350	701846 01413
4	102mm	.490"	1,000	PDBIT0400	701846 01414
4-1/2	114mm	.490"	800	PDBIT0450	701846 01415
5	127mm	.490"	800	PDBIT0500	701846 01416
6	152mm	.490"	665	PDBIT0600	701846 01417
7	178mm	.490"	600	PDBIT0700	701846 01418
8	203mm	.490"	500	PDBIT0800	701846 01419
10	254mm	.490"	400	PDBIT1000	701846 01706

CLASSIC					
Economical choice for use in harder concrete with heavy reinforcement and masonry materials with good performance.					
SIZE IN INCHES	SIZE IN MM	SEGMENT HEIGHT	MAX RPM	PART #	UPC #
2	51mm	.350"	2,000	CHBIT0200	701846 82762
3	76mm	.350"	1,300	CHBIT0300	701846 82765
4	102mm	.350"	1,000	CHBIT0400	701846 82767
6	152mm	.350"	665	CHBIT0600	701846 82771
8	203mm	.350"	500	CHBIT0800	701846 82773
10	254mm	.350"	400	CHBIT1000	701846 82774



TECH TIP

Core Bits – Minimum and Maximum Recommended Operating Speeds

BIT DIAMETER	MINIMUM RPM	IDEAL SPEED (RPM)	MAXIMUM RPM
1	2,400	3,200	4,000
2	1,200	1,600	2,000
3	800	1,050	1,300
4	600	800	1,000
5	475	640	800
6	400	530	665
7	340	450	600
8	300	400	500
10	240	320	400

Note: For half inch increments, go to the next larger bit diameter.



It is the user's responsibility to refer to and comply with ANSI B7.1



High-Speed Gas Saws

No more pre-mixing oil and fuel – the patented iLube option automatically controls mixing for maximum efficiency, and the saw drops to idle speed when the oil is low – eliminating possible machine damage

Walk-Behind Saws

Proven, robust and functional for ideal user comfort. The professionals' choice for outstanding walk behind cutting performance, wet or dry.

Masonry Saws

Norton introduced the first masonry saw over 70 years ago and they have become the industry standard for masons worldwide.

For the full line of quality Norton Clipper equipment, please contact your local Norton sales representative

High-Speed Gas Saws

CP500 SERIES HIGH-SPEED SAWS

The Norton Clipper CP500 high-speed cut-off saw might be new to the market, but it's destined to be an asset on any crew. It's fully designed with the user in mind to not only cut a smooth, fast track, but it's also fully equipped to handle the everyday performance of any jobsite with unrelenting durability and reliability. Select a standard model or upgrade to the world's first patented automatic lubrication system, Norton Clipper iLube.

The patented iLube option automatically controls mixing of oil and fuel for maximum efficiency. An electronic sensor will indicate a low oil level and adjust the engine to idle to prevent engine damage.

DESCRIPTION	SHAFT RPM	PART #	UPC #
14" Standard High-Speed Cut-Off Saw	4,500	CP514-350	701846 47563
14" iLube High-Speed Cut-Off Saw	4,500	CP514-350i iLube	701846 47565

ACCESSORIES

High-Speed Saw Wheel Kit	005101 09845
High-Speed Saw Tool Kit	005101 09846



Walk-Behind Push Saws



GC55 EARLY ENTRY/GREEN SAW

With a compact, light-weight design backed by the reliable Honda 5HP gasoline engine, the GC55 early entry saw is intended for a variety of applications. From green, cured or decorative concrete cutting to expansion joints, the features of this small push saw are hard to beat in a single saw. The low, wide profile of the frame, along with the front mount blade, contribute to producing a more disciplined cut.

UPC #	MOTOR	WEIGHT	GUARD
701846 30005	Honda GX160	115 lbs	10"



C1318P GASOLINE SAW

The next generation of 13HP saws. The C1318P features shock-absorbing handle bars. The new sleek design of the water tank, with increased capacity and improved securing, adds an additional 1.5 gallons of water over the cut. And, a newly-designed belt tensioning system helps keep the saw cutting true and true. All these features, coupled with the Honda 13HP engine, make the C1318P the premiere choice for rental and service work.

UPC #	MOTOR	WEIGHT	GUARD
701846 42453	Honda GX390	220 lbs	18"



C13PE GASOLINE SAW

Rental equipment has to withstand any and all conditions by user and application. For that reason, the Norton Clipper C13PE suits any rental fleet that both the novice and expert will appreciate to hold-up through tough situations. The 18" blade guard, ride-on water system and quick-release blade guard lock all keep safety in mind while the rugged frame, powerful engine and easy-to-use console makes cutting a breeze.

UPC #	MOTOR	WEIGHT	GUARD
701846 47524	Honda GX390	220 lbs	18"

Large Masonry Saws

BBL BLOCKBUSTER LARGE MASONRY SAWS

Having introduced the first masonry saw over 70 years ago, the Norton Clipper BBL heavy-duty block saws have become the industry standard for masons worldwide. These models are equipped with single-phase electric motors and come with a blade capacity of 14" or 20". Extended water pan and open back frame allow cutting of larger materials. The balanced cutting head makes for effortless cutting depth positioning. Having a rugged all-steel frame design with forklift brackets allows these saws to resist twisting and damage during transport around a job site.

For other sizes and horsepower machines, or for gasoline-powered versions, contact your Norton sales representative.

DESCRIPTION	HP	PART #	UPC #
BBL547 Blockbuster Saw with Baldor electric motor; 14" blade guard capacity	5	BBL547	701846 83211
BBL527 Blockbuster Saw with Baldor electric motor; 20" blade guard capacity	5	BBL527	701846 83150

ACCESSORIES

Electric Water Pump – PE-1	701846 68392
Conveyor Cart Replacement for BBL	003100 07390



Electric Water Pump



Conveyor Cart Replacement



Compact Masonry Saws

BBC BLOCKBUSTER COMPACT MASONRY SAWS

Combines the performance of a full size masonry saw with the convenience of portability. Also available in gas or electric versions, the BBC saws have a rugged jig-welded frame, durable enough for even the heaviest work load. Standard rear wheel dolly design and removable legs make transport and set-up easy.

For other sizes and horsepower machines, or for gasoline-powered versions, contact your Norton sales representative..

DESCRIPTION	HP	PART #	UPC #
BBC157 Blockbuster Saw with Baldor electric motor; 14" blade guard capacity	1.5	BBC157	701846 82488
BBC207 Blockbuster Saw with Baldor electric motor; 14" blade guard capacity	2	BBC207	701846 82501
BBC207 Blockbuster Saw with Baldor electric motor; 20" blade guard capacity	3	BBC307	701846 30011
BBC547 Blockbuster Saw with Honda gasoline motor; 14" blade guard capacity	5.5	BBC547	701846 82175
BBC507 Blockbuster Saw with Honda gasoline motor; 20" blade guard capacity	5.5	BBC507	701846 30012

ACCESSORIES

Electric Water Pump – PE-1	701846 68392
Conveyor Cart Replacement for BBC	003100 07367
Mechanical Water Pump Assembly (water pump not included)	003100 04237
Water Pump Pulley	003100 04669



Mechanical Water Pump Assembly



All saws on this page come equipped with genuine Norton Clipper diamond blades.

Mini Masonry Saws

BBM BLOCKBUSTER MINI MASONRY SAWS

The innovative design of these small masonry saws has been copied many times due to its compact, all-steel unibody construction, giving the best weight-to-strength distribution. A 14" blade capacity and ergonomically-designed, three-position locking, cutting head provides a safe, clear view of the work area. Whether your choice is the 3HP brush motor or the 1.5HP induction motor for heavier commercial use, both come with features such as overload protection, garden hose connection and a channeled-flow water pan to direct dust and slurry away from the operator.

DESCRIPTION	HP	PART #	UPC #
Blockbuster Mini Masonry Saw with AC universal motor; gear drive	3	BBM307	701846 00684
Blockbuster Mini Masonry Saw with Induction motor; belt drive	2	BBM158	701846 26327
ACCESSORIES			
Vacuum Adaptor Kit (includes: back splash, adaptor and hardware)			701846 00753
Wet Kit			701846 00704
Stand			701846 00691



All saws on this page come equipped with genuine Norton Clipper diamond blades.

shine on **EVERY STEP OF THE WAY**

Finishing and masking products to help you finish the job right. Our polishing compounds and surface finishing products along with application accessories are designed to provide the highest level of shine.





Farécla Profile system is both quick and easy to use with a collection of compounds and waxes designed to help you perfect that shine. Farécla Profile system includes cutting and polishing compounds along with application accessories specifically designed to enhance the highest level shine on painted surfaces and wood lacquers. A unique abrasive technology removes sanding marks permanently, avoiding costly reworks. Farécla polishing compounds and surface finishing products are used on a wide variety of substrates and have been used by automotive bodyshops, detailers, boat builders, woodworkers, composite manufacturers and other industrial applications since 1952.

Products:

Liquid Compound, Paste Compound, Wax, Applicator Pads, Microfiber Cloths

Applications:

Marine, Prime Automotive, General Transportation, Solid Surfaces, Instruments and more

Machine Used:



HAND
APPLICATION



PNEUMATIC OR
VARIABLE SPEED BUFFER

Step One – Compounding



For use on all wood lacquers, clear coats and paints

PROFILE ADVANCED PLUS LIQUID COMPOUND

- Offers the highest level of cut and gloss on painted surfaces and wood lacquers
- Unique abrasive technology which contains no fillers or silicones allow operators to see sanding marks from up to P1500 grit permanently removed
- Provides a high shine finish with good depth and clarity

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White colored liquid	Medium	152 g/L	0.95	8 - 9	All wood lacquers, clear coats and paints



For use on clear coats, wood lacquers and painted surfaces

PROFILE ADVANCED LIQUID COMPOUND

- Exceptional liquid compound for use on clear coats, PU lacquers, and painted surfaces providing a permanent scratch-free finish
- Sanding marks from P1500 grit and finer are effortlessly removed with a twisted wool compounding pad or white waffle pad
- Provides a long lasting, powerful cut, with no dusting and minimal splatter

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White liquid	Medium	109.6 g/L	1.37	8 - 9	Clear coats, wood lacquers and painted surfaces



For use on any painted or industrial surface

PROFILE SELECT LIQUID COMPOUND

- A great value, swirl-free, versatile, cutting compound aimed at OEM applications removes P800 grit or finer sanding marks from tooling or production gel coats in a single step
- Used with a wool pad, quickly removes sanding marks up to P1500 on painted surfaces, performs best on a twisted wool compounding pad at high speeds of 2,000-3,500 rpm
- Clean in use, and loads application pads evenly for a fine shine

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White colored liquid	Medium	152 g/L	0.95	8 - 9	Any painted or industrial surface

Step One – Compounding *continued*



For use on marine gel coats, wood, aerospace, caravans, and motorhomes etc.

PROFILE PREMIUM LIQUID COMPOUND

- Ideal for removing sanding marks of P1200 and finer or restoring oxidized and weathered gel coat surfaces
- Works great as a single step on dark colors delivering a high gloss finish
- Use as the first stage of a two-part process where higher gloss and lower swirl is desired

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White thick liquid	High	266g/L	1.15	7 – 8	Marine gel coats, wood, aerospace, caravans, and motorhomes etc.



For use on marine gel coats, wood, aerospace, caravans, and motorhomes etc.

PROFILE PREMIUM COARSE CUT PASTE COMPOUND

- Removes sanding marks up to P800 while leaving you with a high gloss finish
- Easy to apply; with added lubrication it resists drying out in hot conditions or on large working surfaces
- Often used as the sole compound on white gel coats

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White thick liquid	High	0g/L	1.65	10	Marine gel coats, wood, aerospace, caravans, and motorhomes etc.



For use on hard tooling and production gel coats, and solid surfaces

PROFILE EXTRA COARSE CUT PASTE COMPOUND

- Coarse, water-based cutting compound designed for aggressive compounding on tough resins and gel coats
- Removes up to P600 sanding marks; leaves a low level shine in comparison to other compounds
- Suitable for stone, granite and other surfaces

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White colored paste	High	0g/L	1.57	9.6	Hard tooling and production gel coats, and solid surfaces



For use on polyester, acrylic and epoxy resins and gel coats, industrial paint finishes, wood lacquers and solid surfaces

PROFILE 300 RAPID CUT PASTE COMPOUND

- Versatile, mid-range, high gloss, water-based compound capable of removing P1000 or P1200 dry abrasive marks
- Restores gloss and color to virtually any gel coated or painted surface
- Can be used by itself or with other compounds either as a first stage or as a finishing compound

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White colored paste	High	119g/L	1.45	9.8	Polyester, acrylic and epoxy resins and gel coats, industrial paint finishes, wood lacquers and solid surfaces

Step One – Compounding *continued*

Liquid



TRADENAME:		PROFILE ADVANCE PLUS		PROFILE ADVANCE		PROFILE SELECT		PROFILE PREMIUM	
SIZE	ORD. QTY.	PRODUCT #	PART #	PRODUCT #	PART #	PRODUCT #	PART #	PRODUCT #	PART #
1 Litre	6					PRS101	78072700168	PRL101	78072700165
1 Gallon	2	PRA118	78072715148	PRA106	78072709187	PRS106	78072700169	PRL106	78072700166
5 Gallon	1	PRA518	78072729474			PRS506	78072729473		

Paste



TRADENAME:		PROFILE PREMIUM		PROFILE EXTRA-COARSE CUT		PROFILE 300 RAPID CUT	
SIZE	ORD. QTY.	PRODUCT #	PART #	PRODUCT #	PART #	PRODUCT #	PART #
3.5 kg	24	PRP301	78072717217				
3.2 kg	24			PRE301	78072700163	81007	78072718073

Step Two – Finishing

For use on all paint types



PROFILE FINISH LIQUID COMPOUND

- Fine abrasive formulation quickly and permanently removes swirls and holograms
- Restores dull surfaces and enhances color for a high shine finish with good depth clarity
- Ideal economical solution to compounding with low viscosity

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
White colored liquid	Medium	152 g/L	0.95	8 - 9	All paint types



TRADENAME:		PROFILE FINISH			
SIZE	ORD. QTY.	PRODUCT #	PART #	PRODUCT #	PART #
1 Litre	6	PRF101	78072700164		
1 Gallon	2			PRF106	78072717214



Step Three – Protecting



For use on any painted or industrial surface

PROFILE POLYMER WAX

- Quick and easy to use making short work of large surfaces, perfect for use on boats, vans, trucks and planes
- Creates a durable, highly water resistant protective coating which repels many common contaminants; high-gloss finish has excellent evenness and real transparency on dark colors
- Sprayable formulation is perfect for ultra-fast applications due to its low viscosity and drying resistance

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
Pink colored liquid	Low / Medium	131 g/L	0.960	7	Any painted or industrial surface



For use on all paint types

PROFILE UV WAX

- Carnauba based wax incorporating special UV absorbers to give up to 3 month's protection to gel coats and paints exposed to external weathering
- High Carnauba content ensures long-lasting protection against rain and salt water while the UV absorbers protect against exposure to sunlight
- Gives a high-gloss, long-lasting finish on most surfaces; well suited for use on boats, caravans, trains, planes, lacquered wood and UPVC surfaces

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
Pale purple liquid	Medium viscosity	167g/L	0.970	7 (approx.)	All paint types



For use on all paint types and surfaces

PROFILE RAPID DETAILER CLEANER & WAX

- Fast liquid spray wax for that "just waxed" look or a quick clean leaving a high-gloss finish
- Perfect for paintwork, rubber, vinyl, plastic, glass, and chrome
- Won't remove previously applied polishes or waxes aiding continuous protection

Technical Information

APPEARANCE	VISCOSITY	VOC CONTENT	RELATIVE DENSITY	PH	PAINT TYPE COMPLIANCE
Colorless thin liquid	Low viscosity	27g/L	0.990	8 - 9	All paint and surface types



TRADENAME:		PROFILE POLYMER WAX		PROFILE UV WAX		PROFILE RAPID DETAILER CLEANER & WAX	
SIZE	ORD. QTY.	PRODUCT #	PART #	PRODUCT #	PART #	PRODUCT #	PART #
1 Litre	6	PRW101	780727 00171	PRU101	780727 00170		
1 Gallon	2					PRD106	780727 17216



Having the right applicator pad, whether it's a wool, waffle or dimple configuration will help others see the perfection in your work. Multiple choices in size and face to evenly distribute the Farécla compounds and create a reflection others will envy.

Products:

Foam Pads, Waffle Pads, Wool Pads, Buffing Pads, Spot Repair Pads, Micro-Fiber Cloths

Application:

Even distribution of compounds and waxes; polishing

Machine Used:



HAND
APPLICATION



PNEUMATIC OR
VARIABLE SPEED BUFFER

Single-Sided Pads



Single-Sided Pads have a beveled edge design to allow access under trim and improve user control. The recessed back provides accurate alignment for balance and protects against backing plate contact.

SIZE/DESCRIPTION	STD. PKG.	PART #
8 CCS Waffle Foam Pads – Single-Sided		
8 Cutting - White	6	666233 91306
8 Polishing - Black	6	666233 91307
8 Finishing - Blue	6	666233 91308
8 Cutting Wool Pads – Single-Sided		
8 Cutting Wool	6	666233 91315
3.5 CCS Waffle Foam Pads – Single-Sided		
3.5 Cutting - White	6	666233 91319
3.5 Polishing - Black	6	666233 91320
3.5 Finishing - Blue	6	666233 91321
3.5 Cutting Wool Pads – Single-Sided		
3.5 Cutting Wool	6	666233 91318
3.25 CCS Dimple Foam Pad – Single-Sided		
3.25 Cutting and Polishing - Orange	6	662610 85302

Double-Sided Pads



Double-Sided Pads have a highly engineered center plate designed to minimize pad hop or chatter with the perfect amount of flexibility when buffing contours.

SIZE/DESCRIPTION	STD. PKG.	PART #
8 CCS Waffle Foam Pads – Double-Sided		
8 Cutting - White	6	666233 91310
8 Polishing - Black	6	666233 91311
8 Finishing - Blue	6	666233 91312
8 Cutting Wool Pads – Double-Sided		
8 Cutting Wool	6	666233 91309

Spot Repair Pads for Buffing/Polishing



Hook and loop polishing pads for small spot repair

SIZE/DESCRIPTION	STD. PKG.	PART #
Spot Repair Foam Pads		
3 Super Cut Wool Pad	40	636425 43832
3 Blue Cutting Foam Pad	40	636425 05459
3 White Finishing Foam Pad	40	636425 05460
Back-up Pad		
3 Back-up Pad	40	636425 06128

Applicator Pads & Accessories

Buffing Pads and Accessories



G Mop wool pads give a high cut and great finish. Our polish applicator pads are available in sizes to suit a range of rotary polishers, including 3 and 8 with backing plates also available.

SIZE/DESCRIPTION	STD. PKG.	PRODUCT #	PART #
G Mop Series Buffing Pads			
8 G Mop Single-Sided Lambswool Pad	12	GML801	780727 00176
8 G Mop Single-Sided Wool Pad	12	GMW811	780727 00175
8 G Mop Double-Sided Wool Pad	12	GMW816	780727 00174
8 G Mop Single-Sided Red Waffle Pad	6	PRF801	780727 44634
Buffing Pads			
8 Single-Sided Lambswool Pad	6	LPS801	780727 45650
8 Double-Sided Wool Pad	6	10045	780727 45643
8 US Advanced Wool Compounding Pad	6	40012	789727 45649
Accessories for G Mop Series Buffing Pads			
8 Back-up Plate 5/8 thread x 6	6		780727 08721
8 Double-Sided Pad Adapter	6		666233 91313
8 Back-up Plate	6		666233 91314
3.5 Back-up Plate	6		666233 91316
3 and 6 Rotary Extension	6		666233 91317

Micro-Fiber Performance Cloths



A micro-fiber is a single fiber with a thickness less than a human hair that has been split 16 times and woven into various products. The surface area of a micro-fiber product is increased over 15 times, creating millions of spaces between the fibers which trap dirt, grime or liquids, making this product one of the most absorbent materials. These cloths save you labor, time, and additional costs of multiple cleaning products and chemicals.

Cleaning Cloth – Blue: Used for general-purpose wet or dry applications. Works best when sprayed with a light water mist to deep clean.

Dry Tack Cloth – Red: This woven terry cloth has a low profile to resist snagging and help pick up embedded debris.

Polishing Cloth – Yellow: Streak-free cleaning of mirrors, optical lens and highly-polished items.

SIZE	COLOR	STD. PKG.	PART #
Micro-Fiber Cleaning Cloth			
16 x 16	Dark Blue (thick)	20	636425 04402
16 x 16	Light Blue	20	076607 05300
Micro-Fiber Dry Tack Cloth			
16 x 16	Red	20	076607 04025
Micro-Fiber Polishing Cloth			
16 x 16	Yellow	20	076607 05301

TECH TIP

- Use these micro-fiber cloths dry for general cleaning
- To remove spills, stains or grime, lightly dampen the cloth for best results
- All micro-fiber cloths can be used with or without chemicals
- Micro-fiber cloths can be washed up to 300+ times without losing cleaning and trapping abilities
- Clean often for best results



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



Norton masking tapes feature a special solvent-based, rubber adhesive system and strong holding properties. These tapes adhere and release cleanly while providing clean edges on a variety of flat, contoured, and irregular surfaces. Norton sheetings provides superior solvent, paint, and contaminant penetration resistance. Use them during paint preparation and anywhere you need work area protection. Tear-resistant properties allow movement without ripping.

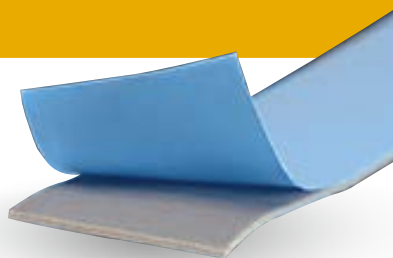
Products:

Machine Used:

Attachment Tape, Masking Tape, Sheetting



HAND
APPLICATION



Best choice for general industrial application replacing permanent fastening systems (rivets, welds and liquid adhesives)

ATTACHMENT TAPE

- Double sided, gray foam tape used in bonding performance for many interior and exterior commercial applications.
- Incredible conformability and application stretching
- Weather degradation resistance from UV and high temperatures
- Outstanding static shear adhesion
- Excellent performance in T-Block and dynamic shear
- Durable adhesion at elevated temperature
- High shock and stress absorption

DESCRIPTION	THICKNESS	1/4" x 108'	1/2" x 108'	3/4" x 108'	7/8" x 108'	1" x 108'	1-1/2" x 108'
Blue Liner							
Gray Double-Sided Acrylic Foam Tape	.043" (1.1mm)	636425 06044	636425 06045	636425 06046	636425 06047	662611 75888	662611 51041
Rolls/Case		40/1	20/1	10/1	10/1	10/1	6/1
DESCRIPTION	THICKNESS	1/4" X 20 YDS	1/2" X 20 YDS	7/8" X 20 YDS			
Red Liner							
Gray Double-Sided Acrylic Foam Tape	.043" (1.1mm)	636425 05620	636425 05621	—	636425 05622	—	—
Rolls/Case		12/1	12/1		12/1		
Adhesion Promoter							
Brush-Top Can - 220ml		636415 05623					
Rolls/Case		12					

Technical Data

Performance tests are run using standard test procedures. The values presented are typical values and should not be used for specification purposes.

THICKNESS in. (mm)	90° PEEL ADHESION ¹ (3-DAY DWELL) lb/in (N/cm)				T-BLOCK ² lb/in (N/cm)	DYNAMIC SHEAR ³ lb/in (N/cm)	STATIC SHEAR ⁴ 7 Days / 1 kg	SERVICE TEMPERATURE
WITHOUT LINER	GLASS	ALUMINUM	S/S	PMMA	ALUMINUM	S/S	S/S	
.043 (1.1)	20 (35)	33 (57)	20 (34)	17 (29)	100 (29)	48 (33)	Pass and Exceeds	-35°F to 200°F (-35°C to 93°C)

¹ Based on ASTM D3330 ² Based on ASTM D897 ³ Based on ASTM D1002 ⁴ Based on ASTM D3654

Better choice for fine line masking needs



FINE LINE BLUE MASKING TAPE

- Masking color separation on plastic (TPO and RIM) automotive fascia, trim, and finished metals in high-temperature OEM bake cycles, aircraft and clean room paint operations
- Thermally-stabilized PVC backing with a rubber-based pressure sensitive adhesive
- Highly conformable, waterproof, and solvent-resistant
- Can be used from 40°F (4.4°C) to 280°F (138°C) without any significant loss of properties; removes cleanly without leaving residues after exposure

It delivers very sharp, clean edges on smooth- to moderately-textured surfaces



BLUE CORE 14-DAY TAPE

- Our paint masking tape has a specially formulated adhesive system that provides optimum low- to medium-tack adhesion and clean removal from a variety of surfaces, for up to 14 days
- Blue Core masking tape can be used indoors or out
- The crepe paper backing is designed to enable easy unrolling and to minimize slivering

TIER:

GOOD

BETTER

TRADENAME:

BLUECORE 14 DAY TAPE

FINE LINE BLUE TAPE

BACKING

Fine Crepe Paper

PVC

ADHESIVE

Synthetic Rubber

Natural Rubber

TENSILE STRENGTH

23 lbs/in (101 N/25mm)

15 lb/in. of width, 65.6N/25mm

ELONGATION AT BREAK

11%

150%

PEEL ADHESION AT 180° ANGLE

23 oz./in. of width, 6.3N/25mm

TOTAL THICKNESS

5.5 mils (0.14mm)

5.4mils (.14mm)

TEMPERATURE

40°F (4.4°C) to 280°F (138°C)

METRIC	IMPERIAL	ROLLS/CASE	PART #	PART #
Blue Core 14-Day Tape				
36mm x 54.8m	1-1/2" x 60 yards	24	076607 21954	
48mm x 54.8m	2" x 60 yards	24	076607 21955	
<i>Bulk packed as individual rolls</i>				
Fine Line Blue Tape				
3.17mm x 32.9m	1/8 inches x 36 yards	360*		662611 82688
6.35mm x 32.9m	1/4 inches x 36 yards	168*		662611 82686
12.7mm x 32.9m	1/2 inches x 36 yards	78*		662611 82685

* Master case quantity

Good multi-purpose choice provides durability and excellent protection



HIGH DENSITY SHEETING (HDPE)

Our multi-purpose painters' plastic sheeting protects virtually any area from sanding dust and paint overspray with ease – even after repositioning. Our High Density Plastic Sheet (HDPE) is designed to be one of the strongest most durable products on the market.

- Resists tearing and solvent bleed-through with light weight .31 mil High Density Polyethylene plastic (HDPE)
- Holds in place as it clings to horizontal or vertical surfaces during taping with its natural electrostatic properties
- Attracts and holds sanding debris for a dust-free finish
- Drapes easily over furniture

SIZE	THICKNESS	COLOR	QTY/PACK	PACKS/CASE	PART #
9' x 400'	.31 mil	Clear	1	1	076607 68142
12' x 400'	.31 mil	Clear	1	1	076607 68143

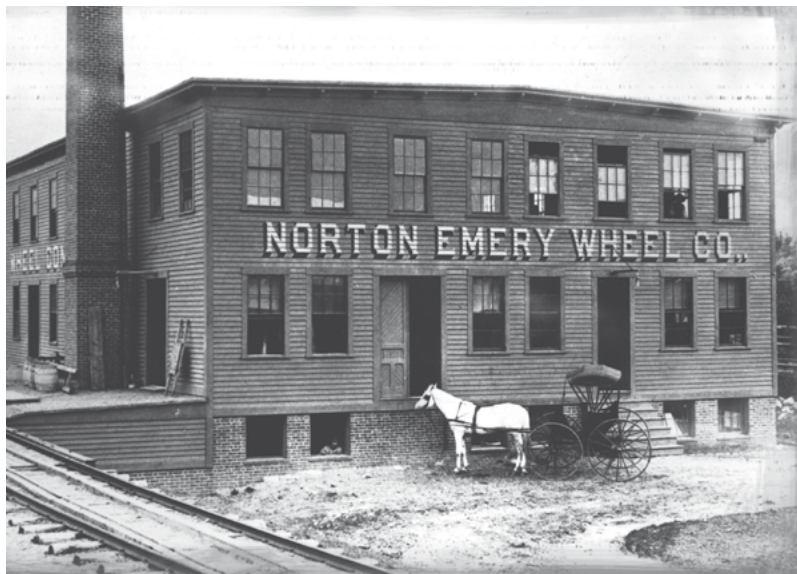
Also available by the pallet.

100 Years of Safety Leadership

The year 2016 marked the 100-year anniversary of the leadership of the former Norton Company in the creation of the first ever safety code for abrasives.

In 1916, following more than a decade of safety research, advocacy, and leadership by the Norton Company (now Norton | Saint-Gobain Abrasives), "The Safety Code for the Use and Care of Abrasive Wheels" was published. This 13-page booklet, containing an unprecedented set of safety device recommendations and procedures, was the spark that changed the entire future of the abrasives industry.

In the 1970s, this code received the ultimate endorsement when selected by OSHA as the basis of new federal regulations concerning abrasive wheel machinery. Today, the ever-evolving "Safety Requirements for the Use, Care and Protection of Abrasive Wheels" (commonly known as the ANSI B7.1 standard) continues to mirror the latest technologies and remains the global authoritative abrasives safety standard.



Breakages/Personal Injury

In the event of on-machine breakage of Norton abrasive products, call your local Norton distributor immediately. Whether involving personal injury or not, the abrasive user should leave the equipment and other evidence undisturbed until a Norton sales representative has been notified and conducts an investigation. Prompt action on the part of abrasive users, distributor, and Norton sales personnel is important to ensure swift determination of the breakage cause and to guard against recurrence.



It is the user's responsibility to refer to and comply with ANSI B7.1 and B7.7 – Contact us for a free copy.



Safety Poster

(Form # 7868-English, 7868-French, 7868-Spanish)

To order this poster for your shop,
<mailto:nortonliterature@saint-gobain.com>

Abrasive Safety References



Safety Information on the Web

Visit our newly updated safety website for safety guides, safety data sheets, videos and lots of additional safety resources. nortonsga.us/safety

UAMA (United Abrasives Manufacturers Association) website at
<http://www.safety.uama.org>







Safety Videos

Watch our videos on: [YouTube.com/NortonAbrasives](https://www.youtube.com/NortonAbrasives)

- Safety, It's The Smart Thing To Do
(Safety information for portable grinding and cutting wheels)
- Foundry Safety
- First in Precision Grinding Safety
- Proper Grinding Wheel Mounting
- Railroad Abrasive Safety
- Coated Abrasive Belt and Disc Safety

UAMA Approved Safety Icons

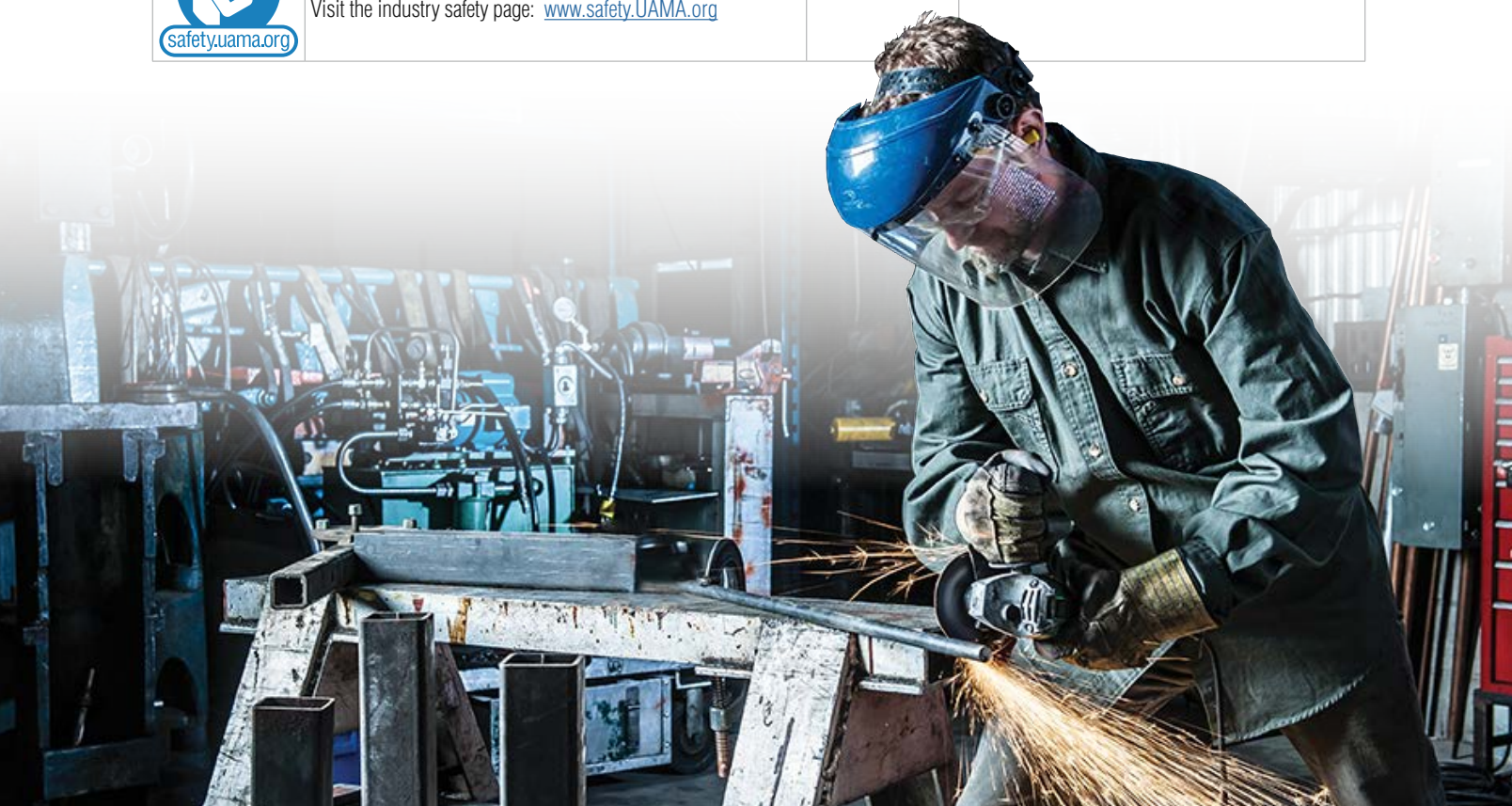
The UAMA has approved a new set of standardized icons to be used throughout the Abrasive industry to convey safety information to the users. Below are the approved icon types and their definitions.

ICON TYPES	EXAMPLE
Safety Icon: A pictorial whose purpose is to relay safety related information to the user.	
Hazard Alert Icon: This type of safety icon conveys information primarily related to the nature of a hazard. It contains a graphical depiction of the hazard drawn within a yellow equilateral triangle.	
Prohibition Icon: This type of safety icon conveys actions that should not be taken. It consists of a red circular band with a 45° diagonal red band from upper left to lower right. The icon contains a black depiction of what should not be done within the red band on a white background.	
Mandatory Action Icon: This type of safety icon conveys actions that should be taken to avoid hazards. It consists of a white image within a solid blue or black circular surround shape.	
Proper Machine Use Icon: This type of icon is designed to show the use of the wheel on a proper machine. The icon can be a bit more realistic to show components such as a safety guard and an auxiliary handle. The recommended angle of use may also be depicted.	

ICON	MEANING	ICON	MEANING
	Improper use may break wheel and cause serious injury or death.		Always use wheel guard for angle grinder.
	No side grinding. Cutting only.		Always use wheel guard for non-portable machine.
	No side grinding. Cutting only		Protect your eyes.
	No cutting. Side grinding only.		Protect your face.
	No cutting. Side grinding only, grouped icon.		Protect your lungs against dust.

UAMA Approved Safety Icons *continued*

ICON	MEANING	ICON	MEANING
	Do not use a damaged wheel.		Protect your hearing.
	Do not use on high-speed gas saws.		Protect your eyes and face.
	Do not use on angle grinders.		Protect your eyes and hearing. Combined icon.
	Do not use on die grinders		Protect your eyes, ears and lungs.
	Warning alert symbol.		Protect your hands.
	Read OSHA and ANSI B7.1.		Use matched diameter, relieved flanges.
	Read OSHA and ANSI B7.1. Visit the industry safety page: www.safety.UAMA.org		



Coated Abrasive Do's and Don'ts

Coated Abrasive Disc and Wheel Safety Do's and Don'ts

Warning



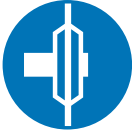




Improper use may cause wheel breakage and serious injury. Comply with ANSI B7.7, OSHA and safety guide provided with the package. Always follow all manufacturer's recommended procedures and safety instructions. Never exceed tool manufacturer's maximum operating speed.

Exposure to DUST generated from workpiece and/or abrasive materials can result in lung damage and/or other physical injury. Use dust capture or local exhaust as stated in the SDS. Wear government-approved respiratory protection and eye and skin protection. Failure to follow this warning can result in serious lung damage and/or physical injury.

Lead Poisoning can develop as a result of inhalation and/or ingestion of the dust generated from sanding any product containing lead, including lead based paint. Lead Poisoning is an illness which can permanently damage the body's physical, neurological and/or reproductive systems. Care must be taken to avoid the inhalation and/or ingestion of dust containing lead

DO'S		DON'TS	
INSPECT / STORAGE / SPEED  		<ul style="list-style-type: none"> DON'T use products that have been dropped or damaged. DON'T use on machines that do not show a MAX RPM speed. 	
MOUNT / GUARD  		<ul style="list-style-type: none"> DO use the wheel guard provided with machine. Position it so it protects the operator and covers the wheel. DO use recommended back up pad or mandrel for the product. DO run wheels ONLY in direction of directional arrow stenciled on wheel and in core (except Unified Wheels, which can be run in either direction). DO run discs/wheels in a protected area for one minute before grinding. DON'T remove or modify any guard. ALWAYS use a proper guard. DON'T use excessive pressure when mounting a wheel. Tighten enough only to hold wheel firmly. 	
PROTECT  		<ul style="list-style-type: none"> DO wear ANSI Z87+ safety glasses and face protection, if required. DO wear safety shoes, arm guards, leather gloves and aprons. DO employ dust controls and/or protective measures appropriate to the material being ground. DON'T use products near bystanders if they are not wearing protective equipment. 	
OPERATE 		<ul style="list-style-type: none"> DO support work-piece firmly. DO hold machine firmly in two hands. DO stop the equipment at once if chattering or vibration occurs during use. Determine cause of the problem and correct before remounting. DO ease the disc into the work piece at a 5-10° angle to the work piece surface. DON'T allow untrained people to handle, store, mount or use discs/wheels. DON'T twist, jam or bend any wheel. DON'T force or bump wheel so that the tool motor stalls. DON'T use discs/wheels in the presence of combustible materials. DON'T use disc/wheel for applications other than for which they were designed. Refer to ANSI B7.7. 	

Portable Grinding Safety Do's and Don'ts

	DO'S	DON'TS
INSPECT / SPEED  	<ul style="list-style-type: none"> DO read all manuals, operating instructions and warnings. DO read SDS for the wheel and workpiece material. DO check all wheels for cracks or other damage before mounting. DO make sure the machine does not exceed the maximum operating speed marked on the wheel. DO store according to ANSI B7.1. 	<ul style="list-style-type: none"> DON'T use wheels that have been dropped or damaged. DON'T use on grinders that do not show a MAX RPM.
MOUNT / GUARD  	<ul style="list-style-type: none"> DO use an ANSI B7.1 wheel guard. Position it so it protects the operator. DO be sure wheel hole or threads fit machine properly and that the flanges are clean, flat, undamaged and the proper type. DO run wheel in a protected area for one minute before grinding. 	<ul style="list-style-type: none"> DON'T remove or modify any guard. ALWAYS use a proper guard. DON'T alter a wheel or force it on to the spindle. DON'T mount more than one wheel on an arbor. DON'T use excessive pressure when mounting a wheel. Tighten enough only to hold wheel firmly.
PROTECT  	<ul style="list-style-type: none"> DO wear ANSI Z87+ safety glasses and face protection, if required. DO wear gloves, hearing and body protection. DO employ dust controls and/or protective measures appropriate to the material being ground. DO comply with OSHA regulations 29 CFR 1926.1153 when working on materials containing crystalline silica such as concrete. 	<ul style="list-style-type: none"> DON'T use wheels near bystanders if they are not wearing protective equipment.
OPERATE 	<ul style="list-style-type: none"> DO support work-piece firmly. DO hold grinder firmly with two hands. 	<ul style="list-style-type: none"> DON'T allow untrained people to handle, store, mount or use wheels. DON'T use grinding wheels or cutting wheels on pistol grip air Sanders. DON'T use any cutting wheel for grinding nor apply side pressure on a cutting wheel. Use for CUTTING ONLY. DON'T use a cutting wheel to cut curves. Cut in straight lines only. DON'T twist, bend or jam any wheel. DON'T force or bump wheel so that the tool motor slows or stalls. DON'T use wheels in the presence of combustible materials. DON'T use wheels for applications other than for which they were designed.

Dangerous Pairing: Die Grinders and Cut-off Wheels

While die grinders and portable cut-off tools may look similar, they are by no means interchangeable. Several crucial differences exist between the two handheld machines.

GUARD

Cut-off wheels must be used on guarded machines for the safety of the operator and bystanders.

SPEED

Cut-off wheels must be used at or below their maximum operating speed, marked clearly on the side of the wheel. Excessive speed can result in breakage and serious personal injury.

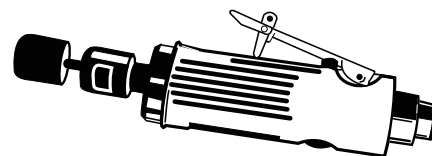
Die grinders often operate above 25,000 rpm and therefore are too fast for abrasive wheels. The speed hazard is increased by the absence of a guard. Portable cut-off tools, however, rotate at speeds compatible with the abrasive wheels for which they are designed. And, their guards prevent use of an oversize wheel.

MOUNTING

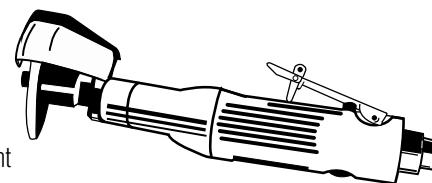
Cut-off wheels must be mounted between proper flanges, as described in the national safety standard for abrasive wheels, ANSI B7.1. Die grinders make use of a collet for mounting

Portable cut-off tools use flanges for mounting, flanges designed according to the ANSI B7.1 safety standard.

Now that you have learned the three crucial differences between die grinders and portable cut-off tools – GUARD, SPEED and MOUNTING – be on watch for the dangerous pairing of cut-off wheels and die grinders, and warn your friends and colleagues of the same.



Die Grinder



Portable Cut-off Tool

Starting a Grinding Wheel / Ring Test



Pistol Grip Air Sander

A Deadly Equation

Pistol Grip Air Sander + Grinding Wheel = Certain Injury!

- Never use a high-speed air sander as a portable grinder
- Use only sanding discs specifically designed for sanders
- Because the speed of these sanders far exceeds the maximum rated speeds for grinding wheels, a potentially lethal wheel breakage might occur

Starting a Grinding Wheel

ANSI's Procedure for Starting an Abrasive Wheel

This article is designed to remind users of the proper procedure when starting a machine with a new abrasive wheel mounted on it, starting a machine after the machine and wheel have been stored for a period of time, or remounting a wheel. ANSI B7.1 requires the following procedure when starting a newly mounted grinding wheel.

9.8 Starting the Wheel (Requirements)

All abrasive wheels shall be run at operating speeds with the safety guard in place or in a protected enclosure for at least one minute before applying work. During this time no one shall stand in front of or in line with the wheel. (See section 4, for safety guard requirements.) This provision shall apply each time one of the following conditions occur: a) a new wheel has been mounted; or b) a used wheel has been remounted.

E 9.8 Starting the Wheel (Explanatory Information)

An abrasive wheel may be damaged in shipment or storage, or the wheel may be subjected to improper, excessive stresses during mounting. Wheels which have been damaged or are under excessive stress, are likely to fracture within the first minute of rotation at operating speed. While this procedure is most important at the time when an abrasive wheel is mounted or remounted, damage may also occur to a wheel during a shut down of the machine on which it is mounted. The user should evaluate the circumstances and length of machine shut down to determine additional times that the operating rule should be followed.

Improper wheel mounting is a major cause of wheel breakages. Always use proper mounting procedures as outlined in ANSI B7.1, machine manufacturer's instructions and those supplied with the abrasive wheel. Be safe, know and follow the rules!



How to Perform a Ring Test on a Grinding Wheel

One method of grinding wheel inspection is called ring testing. OSHA, ANSI and the grinding wheel manufacturers require this method of grinding wheel inspection. It must be performed BEFORE the wheel is mounted on a grinding machine. Ring testing depends on the damping characteristics of a cracked wheel to alter the sound emitted when the wheel is tapped lightly. It is subject to interpretation by the inspector and is primarily applicable to vitrified bonded wheels. To perform the ring test, wheels should be tapped gently with a light nonmetallic implement, such as the handle of a screw driver for light wheels, or a wooden mallet for heavier wheels.

- Tap wheels about 45 degrees each side of the vertical line and about 1" or 2" from the periphery. Rotate the wheel 45 degrees and repeat the test.
- Large and thick wheels may be given the ring test by striking the wheel on the periphery rather than the side of the wheel.
- A sound and undamaged wheel will give a clear tone. If cracked, there will be a dead sound and not a clear ring and the wheel should not be used.
- Wheels must be dry and free of sawdust when applying the ring test, otherwise the sound may be deadened. The ring test is not applicable to certain wheels because of their size, shape or composition.

Wheel Speed Conversion Table

Conversion Table – Wheel Speeds
REVOLUTIONS PER MINUTE FOR VARIOUS DIAMETERS OF GRINDING WHEELS TO GIVE SURFACE SPEED IN FEET PER MINUTE AS INDICATED
(FOR WHEEL MARKING PURPOSES THE CALCULATED RPM FIGURES LISTED BELOW ARE ROUNDED OFF TO THE NEXT 5)

Surface Speed in Feet Per Minute (SFPM)

Diameter of Wheel in Inches	Revolutions Per Minute (RPM)														
	6,500	7,000	7,500	8,000	8,500	9,000	9,500	10,000	12,000	12,500	14,200	16,000	16,500	17,000	20,000
1	24,828	26,737	28,647	30,558	32,467	34,377	36,287	38,196	45,836	47,745	54,240	61,116	63,025	64,935	76,395
2	12,414	13,368	14,328	15,278	16,238	17,188	18,143	19,098	22,918	23,875	27,120	30,558	31,510	32,465	38,195
3	8,276	8,913	9,549	10,186	10,822	11,459	12,096	12,732	15,278	15,915	18,080	20,372	21,010	21,645	25,465
4	6,207	6,685	7,162	7,640	8,116	8,595	9,072	9,549	11,459	11,940	13,560	15,278	15,755	16,235	19,100
5	4,966	5,348	5,730	6,112	6,494	6,876	7,258	7,640	9,168	9,550	10,850	12,224	12,605	12,985	15,280
6	4,138	4,456	4,775	5,092	5,411	5,729	6,048	6,366	7,639	7,960	9,040	10,186	10,505	10,820	12,730
7	3,547	3,820	4,092	4,366	4,638	4,911	5,183	5,456	6,548	6,820	7,750	8,732	9,005	9,275	10,915
8	3,103	3,342	3,580	3,820	4,058	4,297	4,535	4,775	5,729	5,970	6,780	7,640	7,880	8,115	9,550
9	2,758	2,970	3,182	3,396	3,606	3,820	4,032	4,244	5,092	5,305	6,030	6,792	7,000	7,215	8,490
10	2,483	2,674	2,865	3,056	3,247	3,438	3,629	3,820	4,584	4,775	5,425	6,112	6,300	6,495	7,640
12	2,069	2,228	2,386	2,546	2,705	2,864	3,023	3,183	3,820	3,980	4,520	5,092	5,250	5,410	6,365
14	1,773	1,910	2,046	2,182	2,319	2,455	2,592	2,728	3,274	3,410	3,875	4,366	4,500	4,640	5,455
16	1,552	1,672	1,791	1,910	2,029	2,149	2,268	2,387	2,865	2,985	3,390	3,820	3,940	4,060	4,775
18	1,379	1,485	1,591	1,698	1,803	1,910	2,016	2,122	2,546	2,655	3,015	3,396	3,500	3,605	4,245
20	1,241	1,337	1,432	1,528	1,623	1,719	1,814	1,910	2,292	2,390	2,715	3,056	3,150	3,245	3,820
22	1,128	1,215	1,302	1,388	1,476	1,562	1,649	1,736	2,084	2,170	2,465	2,776	2,865	2,950	3,470
24	1,034	1,115	1,194	1,274	1,353	1,433	1,512	1,591	1,910	1,990	2,260	2,546	2,625	2,705	3,185
26	955	1,028	1,101	1,176	1,248	1,322	1,395	1,468	1,762	1,840	2,090	2,352	2,425	2,495	2,940
28	887	955	1,023	1,092	1,159	1,228	1,296	1,364	1,637	1,705	1,940	2,182	2,250	2,320	2,730
30	828	891	955	1,018	1,082	1,146	1,210	1,274	1,528	1,595	1,810	2,056	2,100	2,165	2,545
32	776	836	895	954	1,014	1,074	1,134	1,194	1,432	1,495	1,695	1,910	1,970	2,030	2,385
34	730	786	843	898	955	1,011	1,067	1,124	1,348	1,405	1,595	1,796	1,855	1,910	2,245
36	690	742	795	848	902	954	1,007	1,061	1,273	1,330	1,510	1,698	1,750	1,805	2,120
38	653	704	754	804	854	904	955	1,006	1,206	1,260	1,430	1,608	1,660	1,710	2,010
40	620	669	716	764	812	860	908	956	1,146	1,195	1,355	1,528	1,575	1,625	1,910
42	591	636	682	732	775	818	863	908	1,090	1,140	1,295	1,464	1,500	1,545	1,820

For intermediate diameters not listed use the formula listed in Section 1.2.10 of ANSI B7.1

SFPM = .262 x wheel diameter in inches x RPM.

To convert meters per second (m/s) to SFPM: m/s x 196.85 = SFPM

To convert SFPM to m/s: SFPM/196.85 = m/s.

To convert RPM to SFPM: Wheel Diameter x RPM x 0.262 = SFPM

Silica and What You Need to Know

Background and Health impacts

Silica (SiO₂) is one of the most common minerals in the earth's crust. Glass, beach sand, silicone and granite are all "silica" materials. Products containing silica have been used for thousands of years in building and is a key ingredient in many products we use every day. There are two forms of silica; crystalline and non-crystalline. Crystalline silica is a mineral that occurs in several forms. Quartz, the most common form, is a component of sand, stone, rock concrete, brick, block and mortar. Non-crystalline silica is found in glass, silicon carbide and silicone.

When rocks containing crystalline silica are cut, crushed, ground, drill or used in similar industrial processes, dust particles are produced. These particles are very fine, at least 100 times smaller than ordinary beach sand – known as respirable crystalline silica or RCS. Inhaling very small or respirable crystalline silica particles is most hazardous and may cause multiple diseases such as silicosis, followed in severe cases by lung cancer.

Who is at risk from exposure to crystalline silica?

It is estimated that 2.3 million workers are exposed to crystalline silica on the job. The majority of the workers, about 2 million, are in the construction industry. The hazard exists when specific activities create respirable dust that is released into the air.

The New OSHA Standard

OSHA's recently implemented silica standards for Construction "29 CFR 1926.1153" and General Industry "29 CFR 1910.1053" suggests procedures applicable for work in these environments. This new standard affects all activities that generate silica dust on a jobsite. Trades involving brick, stone, concrete and other materials that are difficult to replace must comply with the standard. This is a change around "process", not specific products.

Impacts on Industry

Industries affected by this regulation include Construction, Glass manufacturing, Pottery products, Structural clay products, Concrete products, Foundries, Cut stone and Stone products, Railroads, Refractory products and Asphalt products manufacturing to name a few. Always read the Safety Data Sheet for the workpiece and abrasive before use.

The Occupational Safety and Health Administration (OSHA) has a number of available resources to help companies understand the general information and requirements to explain the new regulations including:

OSHA's Crystalline Silica Rule: Construction

<https://www.osha.gov/Publications/OSHA3681.pdf>

OSHA Fact Sheet

<https://www.osha.gov/publications/OSHA3682.pdf>

Small Entity Compliance Guide for Respirable Crystalline Silica Standard for Construction

<https://www.osha.gov/publications/OSHA3902.pdf>

Small Entity Compliance Guide for Respirable Crystalline Silica Standard for General Industry and Maritime

<https://www.osha.gov/publications/OSHA3911.pdf>



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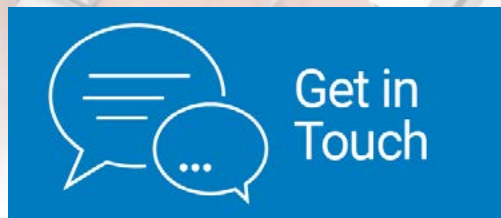
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