

when the going gets rough
RELY ON NORTON INNOVATION

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



Choose a Quantum Leap in Technology

Maximum operator comfort – less cutting vibration means reduced hand fatigue. Sharper wheel for fastest cutting action; highest metal removal rate, less pressure, and longest life – for highest productivity.



Performance on Fire

Engineered with a proprietary zirconia grain upgrade, the Norton BlueFire design offers faster removal rate, longer product life, and increased productivity for better performance value.




Conquering Your Toughest Jobs

From foundry, welding, metal fabrication, steel mill to shipyard, master imperfection removal, cleaning, and beveling jobs with our line of strong, aggressive snagging products.

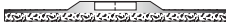


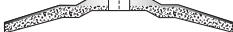

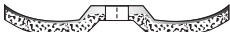



Depressed center wheels may also be referred to as raised hub wheels or by their shape designation of "Type", with Type 27 being the most popular. The depressed center design allows the flange/lock nut to recess within the wheel so that it can be used for various grinding and cutting applications. Depressed 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: 



TYPE-TO-APPLICATION RECOMMENDATION GUIDE

Wheel Type/Thickness	Applications		
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 Highest Productivity; Lowest Total Cost	BETTER Excellent Blend of Performance & price	GOOD Consistent Performance; Low Initial Price
CUTTING			
Mild Carbon / High Tensile Steel	Norton NorZon Plus	Norton BlueFire	Norton Gemini / Norton Metal
Stainless Steel / Alloys	Norton NorZon Plus	Norton BlueFire	Norton Gemini INOX/SS / Norton Metal
Contaminate Free		Norton BlueFire FC/INOX/SS	Norton Gemini INOX/SS
Cast Iron	Norton NorZon Plus		Norton Gemini
Gray Iron			
Aluminum / Bronze / Brass			Norton Gemini Aluminum
Asphalt / Brick / Concrete			Norton Masonry
Fiberglass / Plastic			Norton Masonry
NOTCHING			
Mild Carbon / High Tensile Steel	Norton NorZon Plus	Norton BlueFire	Norton Gemini / Norton Metal
Stainless Steel / Alloys	Norton NorZon Plus	Norton BlueFire	Norton Gemini INOX/SS
Contaminate Free		Norton BlueFire FC/INOX/SS	Norton Gemini INOX/SS
Cast Iron	Norton NorZon Plus	Norton BlueFire Foundry	Norton Gemini
GRINDING			
Mild Carbon / High Tensile Steel	Norton Quantum3/NorZon Plus	Norton BlueFire	Norton Gemini / Norton Metal
Stainless Steel / Alloys	Norton Quantum3	Norton BlueFire INOX/SS	Norton Gemini INOX/SS
Contaminate Free	Norton Quantum3	Norton BlueFire FC/INOX/SS	Norton Gemini INOX/SS
Cast Iron	Norton NorZon Plus	Norton BlueFire Foundry	Norton Gemini
Gray Iron	Norton Quantum3	Norton BlueFire Foundry	Norton Gemini
Aluminum / Bronze / Brass			Norton Gemini Aluminum
Asphalt / Brick / Concrete			Norton Masonry
BLENDING			
Mild Carbon / High Tensile Steel			Norton Gemini Flexible
Stainless Steel / Alloys			Norton Gemini Flexible
Aluminum / Bronze / Brass			Norton Gemini Flexible
Fiberglass / Plastic			Norton Gemini Flexible

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

HOW TO PICK THE RIGHT BOND TYPE

Standard	Unmarked	Where an excellent blend of cut rate and life is needed
Fast Cut	FC	Where fast stock removal is needed, or the application only allows for low-pressure or under-horsepowered grinders
Long Life	LL	Where durability is needed due to severe application, and when horsepower of the grinder allows for heavy pressure
Contaminate Free	INOX/SS	Contain <0.1% iron, sulfur or chlorine for rust-free and corrosion-free results. Will not contaminate stainless steel

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.

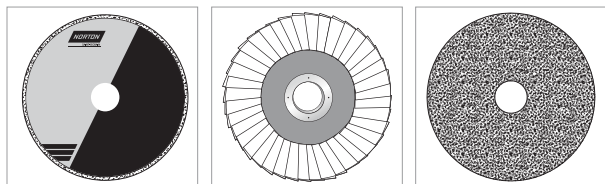


Mini-Mount Hub

Our unique, patented 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

CROSS REFERENCE GUIDES

Type 27/42 RightCut – .040" - 1/16"

	TOTAL PERFORMANCE			INITIAL PRICE			SPECIALITY	
	BEST	BETTER	GOOD				GOOD	
NORTON	NorZon Plus	BlueFire	Gemini INOX/SS	Gemini Long Life	Gemini	Metal	Gemini Aluminum	
Brilliant	—	—	—	Brill-Blade Heavy Duty	Brill-Blade Extra FC	Hornet	—	
Bullard	—	ZA60T	—	TA46T, TA60T TA60U	SGA60U	A46T, A60T Comp.	AL46N	
Camel	—	ZA Quickie Cut	A60-T-BF, WA60R Quickie Cut	Super Quickie Cut	A36-S-BF	—	A46 Quickie Cut	
Flexovit	—	—	—	Razorblade A60SST	Razorblade A24T, 30V, 36T	—	—	
Pearl	—	Redline Max Slimcut	—	Slimcut	—	Slimcut Pro-V, Silverline	—	
Pferd	—	SGP-ZA-Q-INOX	SG-A-R-INOX, SGP-A-S-INOX	SG-A-S, SGP-A-T	—	PSF-A-P	S-G-N-ALU	
Sait	—	Z-tech	XA46R	—	A60S, Saitech	SAIT.M.X	A46N	
Spedecut	—	—	—	—	—	A46, 60 TBXX	—	
Walter	—	—	A-60SS-ZIP	—	A-60-ZIP, A-30-ZIP	—	A-60-ZIP-ALU	

Type 27 and 28 – 1/8" and 1/4"

	TOTAL PERFORMANCE					INITIAL PRICE					SPECIALITY		
	BEST	BETTER	GOOD	BETTER	GOOD						BETTER	GOOD	
NORTON	Quantum3	NorZon Plus LL	NorZon Plus	BlueFire	BlueFire FC/INOX/SS	Gemini XXL	Gemini	Gemini Fast Cut	Gemini SS	Metal	BlueFire Foundry	Gemini ALU	Masonry
3M	Cubitron II	—	—	—	—	High Perform., Green Corps	—	—	—	—	—	—	—
Arc	—	—	—	—	—	—	Predator A24R	—	—	—	—	—	—
Brilliant	—	—	—	—	Brill-Max Z24R	—	Brill-Tex A24UHPXL, A30T	Brill-Tex A24R Super-G	Brill-Tex A30P	Hornet Metal	—	Brill-Tex 30ALU	Brill-Tex C30P, Hornet Concrete
Bullard	—	—	TA24S	ZA24R Competitor	ZA24R	—	A24R	A24N	A46Q	A24R Competitor	—	AL36N	C24R
Camel	—	—	—	—	ZA24T	—	A24R	Ultra A24-N-BF, A24T Super Quickie Cut	WA24S	A24N, R&T Fast Cut	—	*A30N, Fast Cut*	C24R
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	—	Flexon ZA16U	Specialist A24ALU	High Perform. C24/30P
Metabo	M-Calibur	—	—	ZA24T	—	—	A24R & T	A24N	A360	—	—	A36M	C24N
Pearl	—	—	—	—	Z24T	—	Premium Metal A24S, Redline Max A/WA24S	Premium Metal A24R, Redline Max A/WA24R	WA24R, SRT24	Silver Line A24R & S	—	D.A. Series AL24M	Silver Line C24S
Pferd	SG-Elastic Ceramic C024Q	—	—	ZA SGP, ZA T SGP	ZA R SGP, Z-SG	SG-Elastic	A-PS, A-SG	—	A-SG INOX, A-PS INOX	—	—	A-SG ALU	S-SG, Masonry
Sait	The Ultimate Grind	Saitech Ultimate Perform.	Saitech Attacker, Pipeline	Z24R Z-Tech	Stainless	—	A24R, A24Turbo	A24N	XA24Q	A24T	CA24R - Foundry	A46N-ALU	C24N
Tyrolit	—	—	—	ZA24P-BFX	ZA24N-BFX	—	A30S & Q-BFX	A30R-BFX	A30-BF INOX	A30-BF	ZZA24R-BFX	A36N-BFX WA46-BF	C30-BF
Walter	—	—	—	Allsteel XX	Double-X	Allsteel	HP	—	Stainless	—	—	—	—
Weiler	—	—	—	Tiger Zirc	Tiger Inox	Tiger LL	Wolverine A24R	—	—	Wolverine A24N	—	—	—

Type 27 – Flexible 1/8"

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

DEPRESSED CENTER WHEELS

NORTON QUANTUM3 CERAMIC ALUMINA

BEST CHOICE FOR STAINLESS AND CARBON STEEL APPLICATIONS; EFFICIENTLY GRINDS AND CUTS A VARIETY OF MATERIALS FROM ALLOYS TO GRAY IRON

FEATURES & BENEFITS

- 5X–6X the life of aluminum oxide wheels and up to 100 percent increase in performance and life over competitive ceramic alumina wheels from our proprietary formulation of next-generation, uniquely-shaped, 100% ceramic alumina abrasive grain and tough new bond system
- Fastest metal removal rates, with less pressure (because of more uniform grain distribution and adhesion) 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
- Contaminate-free with <0.1% iron, sulfur or chlorine for rust-free results.

NORTON NORZON PLUS C/A AND Z/A BLEND

BEST/HIGH PRODUCTIVITY FOR STEEL, STAINLESS STEEL AND ALL OTHER FERROUS METALS

FEATURES

- Combination of Norton SG ceramic alumina and NorZon (zirconia alumina) with an advanced bond system
- The original All Purpose – lowest total cost and best overall value
- Long Life – longest lasting
- Foundry Snagger
- RightCut wheels for cutting only

BENEFITS

- 50 to 200% better overall performance versus competitive zirconia and ceramic wheels
- Lowest total grinding cost; highest productivity for ceramic/zirconia blended wheels
- Up to 10X the performance of aluminum oxide wheels
- Easy on the operator and equipment
- Best option when the best combination of life, cut rate, and lowest heat generation is primary concern, and able to measure total cost
- Best option when longest possible life is primary concern, rough grinding conditions require wheel durability, using high cycle, high horsepower grinders and lower labor cost are key
- Designed to withstand the most aggressive foundry application
- Noticeably longer life and faster cut rate versus competitive wheels
- Less pressure required for first cut

NORTON BLUEFIRE Z/A AND A/O BLEND

BETTER CHOICE FOR STAINLESS STEEL, CARBON STEEL, ALLOYS AND GRAY IRON

FEATURES

- A blend of R&D advanced chemistry and shaped zirconia alumina abrasive and premium aluminum oxide grain
- Contaminate-free BlueFire FC (FastCut/Inox/SS)
- BlueFire Foundry
- **IMPROVED PERFORMANCE!** RightCut wheels for cutting only

BENEFITS

- 2-3 times the life of aluminum oxide wheels
- Broad utility from light-to heavy-pressure applications, on a wide range of materials
- Excellent performance-to-price ratio for lower total grinding costs
- Contain <0.1% iron, sulfur, or chlorine for rust-free and corrosion-free results; will not contaminate stainless steel
- Zirconia alumina/silicon carbide abrasive blend and an exceptionally strong reinforcement structure
- Versatile choice for aggressive, foundry applications
- Over 50% more life; the true choice for broad versatility and better value, to lower production costs.
- Less pressure required for first cut

DEPRESSED CENTER WHEELS

NORTON GEMINI ALUMINUM OXIDE

GOOD CHOICE FOR STEEL AND FERROUS METALS AS WELL AS SPECIALTY APPLICATIONS IN ALUMINUM AND FOUNDRIES

FEATURES

- Quality aluminum oxide
- Gemini Contaminate Free **INOX/SS**
- 1/8" and 1/4" thick Gemini XXL grinding wheels
- .040 and .045 ultra-thin Gemini RightCut wheels for cutting only
- Gemini Aluminum wheels

BENEFITS

- Consistent performance at a competitive price
- Contain <0.1% iron, sulphur or chlorine for rust-free and corrosion-free results; will not contaminate stainless steel
- Fastest 100% aluminum oxide grinding wheels in the market today
- 50% more life and metal removal than standard aluminum oxide wheels
- Best on hard-grade carbon steel applications, weld repairs, flashing, and any job that requires a quick turnaround
- Precise cutting; very stable, with a narrow pass
- Up to 70% longer life and 20% faster cut rate than standard aluminum oxide wheels – for substantial savings
- Require less pressure, providing increased operator comfort
- Grind aluminum and soft metals without loading
- Contain no wax or rubber fillers



NORTON METAL / NORTON MASONRY

GOOD CHOICE FOR STEEL/FERROUS METAL AND MASONRY APPLICATIONS WITH LOW INITIAL PRICE

FEATURES

- Low initial price point
- Metal – aluminum oxide
- Masonry – sharp silicon carbide

BENEFITS

- Ideal for small-volume jobs where performance need not be measured
- Engineered for all steel/ferrous materials
- Engineered for all masonry materials such as concrete, brick and asphalt



NORTON DIALAST DIAMOND WHEELS

BEST FOR METAL PLATE, PIPE, TUBING, CAST IRON, CARBON AND MILD STEEL, FOUNDRY AND WELDING APPLICATIONS, AND CERAMICS

FEATURES

- A combination of high-quality diamond and advanced brazed single-layer bonding technology
- Environmentally friendly grinding

BENEFITS

- Extra-long life versus conventional abrasives or other vacuum-brazed diamond tools
- Retains the 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
- Generate minimal dust for less clean-up and safer working conditions



DEPRESSED CENTER WHEEL DESCRIPTION CODES

BLANK = All Purpose FC = Fast Cut HD = Heavy Duty INOX/SS = Contaminant Free LL = Long Life 1-2-3 = Cutting/Notching/Grinding
 ■ = Aluminum ■ = Foundry ■ = Masonry ■ = Stainless ■ = Steel / Metal



Less Body Stress, Shorter Work Days, and Bigger Pay Days!

- Let Norton Quantum3 wheels take a bite out of your daily grind so you can focus on your off hours
 - Our R & D engineers met all your challenges with a proprietary, highest-performing formulation of uniquely-shaped, 100% ceramic alumina grain and a tough new resin bond
1. Less Grinding Time with a sharper wheel for highest metal removal and reduced pressure from faster cutting action
 2. Less Downtime, Waste, and Cost with longer wheel life using fewer wheels
 3. Operator Comfort with reduced hand fatigue from less cutting vibration

Try These New Wheels On Our Norton No Risk Test Policy – Because Right Choices Matter



TIER:	BEST	BEST	BETTER	GOOD	GOOD
TRADENAME:	NORTON QUANTUM3	NORTON NORZON PLUS	NORTON BLUEFIRE	NORTON GEMINI	NORTON METAL OR NORTON MASONRY
SHAPE:	Type 27	Type 27	Type 27	Type 27	Type 27
ABRASIVE:	Ceramic Alumina	Ceramic Alumina/ Zirconia Alumina	Zirconia Alumina/ Aluminum Oxide	Aluminum Oxide	Aluminum Oxide – Metal Silicon Carbide – Masonry
MATERIAL:	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL	STAINLESS STEEL/METAL MASONRY

SIZE (D x T x H)	MAX. RPM	STD. PKG.	PART #	PART #	PART #	PART #	PART #
1/4" – Grinding – Type 27							
3 x 1/4 x 3/8	18,000	25		66252842178		66252842179	
4 x 1/4 x 3/8	15,280	25	66253371180	66252842002	66252843179	66252842018	
4 x 1/4 x 5/8	15,280	25	66253371181	66252842003	66252843177	66252842020 FC	66252842011
	15,280	25				66252842019	66252842010 Masonry
	15,280	25				66252842183 ALU 46	
4-1/2 x 3/16 x 7/8	13,580	25				66252843592	
4-1/2 x 1/4 x 5/8-11	13,580	10	66253370793	66252843326	66252843213	66252843593	66252843605
	13,580	10		66252843327 LL	66252843193 FC/INOX/ss	66252843585 FC	66252843599 Masonry
	13,580	10				66252842032 INOX/SS	
	13,580	10				66252843785 XXL	
	13,580	10				66252842031 ALU 46	
	13,580	40					66252819559
	13,580	10 V		66252829541 2-Pk	66252842162 2-Pk	66252842163 2-Pk	
4-1/2 x 1/4 x 7/8	13,580	25	66253370794	66252843328	66252843214	66252843594	66252843607
	13,580	25			66252843192 FC/INOX/ss	66252843584 FC	66252843600 Masonry
	13,580	25				66252842033 INOX/SS	
	13,580	25				66252843784 XXL	
	13,580	25				66252842034 ALU 46	
	13,580	50					66252836796
	13,580	10 V		66252829540 2-Pk	66252842164 2-Pk	66252842165 2-Pk	
5 x 1/4 x 5/8-11	12,225	10	66253370795	66252843332	66252843217	66252843597	66252843613
	12,225	10		66252843333 LL	66252843197 FC/INOX/ss	66252843787 XXL	
	12,225	10					
5 x 1/4 x 7/8	12,225	25	66253370796	66252843334	66252843218	66252843598	66252843614
	12,225	25			66252843196 FC/INOX/ss	66252843586 FC	
	12,225	25				66252842040 INOX/SS	
	12,225	25				66252843786 XXL	
	12,225	25				66252842039 ALU 46	
	12,225	10 V				66252842172 2-Pk	
6 x 1/4 x 5/8-11	10,185	10	66253370797	66252841920	66252843224	66252832390	
	10,185	10			66252843201 FC/INOX/ss	66252843789 XXL	
6 x 1/4 x 7/8	10,185	20	66253370798	66252809376	66252843203	66252801865	
	10,185	20			66252843200 FC/INOX/ss	66252843788 XXL	
7 x 1/4 x 5/8-11	8,600	10	66253370799	66252917881	66252843235	66252940147 FC	66252912633
	8,600	10		66252835578 LL	66252843185 FC/INOX/ss	66252940148 LL	07660775942 Masonry
	8,600	10				66252843791 XXL	
	8,600	10				66252940514 ALU 24	
	8,600	10				66252940515 ALU 46	
	8,600	25*					07660775940 5-Pk
7 x 1/4 x 7/8	8,600	20	66253370800	66252917880	66252843236	66252940099 FC	
	8,600	20			66252843184 FC/INOX/ss	66252940098 LL	07660775937 Masonry
	8,600	20				66252843790 XXL	
	8,600	20				66252940516 ALU 24	
	8,600	25*					07660775938 5-Pk
9 x 1/4 x 5/8-11	6,600	10	66253370801	66253021634	66252843246	66253049105 FC	
	6,600	10		66252830728 LL	66252843189 FC/INOX/ss	66253049104 LL	
	6,600	10				66252843793 XXL	
	6,600	10				66253049045 ALU 24	
	6,600	25*					07660775938 5-Pk
9 x 1/4 x 7/8	6,600	20	66253370802	66253021633	66252843247	66253049077 FC	
	6,600	20		66253049069	66252843188 FC/INOX/ss	66253048991 LL	
	6,600	20		NorZon III – Rail Grind			
	6,600	20				66252843792 XXL	

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

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