



CATEGORY DEFINITION

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



MATERIAL-TO-PRODUCT RECOMMENDATION GUIDE

		BEST HIGHEST PRODUCTIVITY LOWEST TOTAL COST	BETTER EXCELLENT BLEND OF PERFORMANCE & PRICE	GOOD CONSISTENT PERFORMANCE LOW INITIAL PRICE
Iron	Gray Ductile/Malleable Dirty/Scale-covered	NorZon Plus NZ14-R NorZon Plus NZ14-R	BlueFire NV16-Q BlueFire NV16-Q BlueFire NVC16-Q	Gemini 57A16-Q, Metal Gemini 57A16-Q, Metal Gemini 57AC16-Q
Steel	Carbon and Low Alloy Stainless and High Alloy	NorZon Plus NZ16-Q NorZon Plus NZ16-P	BlueFire NV16-Q BlueFire NV16-Q BlueFire NVC16-Q	Gemini 57A16-Q, Metal Gemini 57A16-Q, Metal Gemini 57AC16-Q
Aluminum, Copper, Brass, & Bronze Alloys			BlueFire NVC16-Q	Gemini 57AC16-Q

NOTE: GRADE, GRIT AND ABRASIVE TUNING MAY BE NECESSARY TO OBTAIN OPTIMUM PERFORMANCE

CROSS REFERENCE GUIDE FOR TYPE 01, 06 AND 11

	TOTAL PERFORMANCE ←			INITIAL PRICE →		
	BEST NorZon Plus NZ	BETTER BlueFire NV	BlueFire NVC	GOOD Gemini 57A	Gemini 57AC	Gemini 37C
NORTON						
Brilliant	—	ZA16QB	—	A16QB	—	C16QB
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

FEATURED PRODUCTS



NORTON NORZON PLUS WHEELS, CONES AND PLUGS

BEST CHOICE FOR HEAVY-DUTY STOCK REMOVAL ON HIGH-HORSEPOWER GRINDERS

FEATURES

- NZ Plus (NorZon) – premium zirconia alumina grain

BENEFITS

- Engineered for high-powered machines 10X life, 50% faster grinding versus aluminum oxide products



EXPANDED OFFERING

NORTON BLUEFIRE SNAGGING WHEELS, CONES AND PLUGS

BETTER CHOICE FOR STOCK REMOVAL ON HIGH- AND MEDIUM-HORSEPOWER GRINDERS

FEATURES

- More friable zirconia alumina grain and durable resin bond technologies
- NVC – zirconia alumina/silicon carbide blend

BENEFITS

- Higher metal removal rates, faster, freer-cutting than standard zirconia alumina blends
- Up to 5X the life of aluminum oxide products; better grinding action
- Highly effective on dirty, scale-covered castings



FEATURED PRODUCTS



VENDIBLE

NORTON GEMINI

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

FEATURES

- Quality aluminum oxide

BENEFITS

- Consistent performance at a competitive price



NEW

NORTON METAL/MASONRY

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

FEATURES

- Aluminum oxide abrasive
- Low initial price point

BENEFITS

- Engineered for all steel/ferrous materials
- Best starting specification for end user unable to measure performance

AVAILABILITY

TIER:
TRADENAME:
SHAPE:
ABRASIVE:



BEST

NORTON NORZON PLUS

Type 01

Zirconia Alumina



BETTER

NORTON BLUEFIRE

Type 01

Zirconia Alumina NV
Zirconia Alumina/Silicon Carbide NVC



GOOD

NORTON GEMINI

Type 01

Aluminum Oxide 57A, Silicon Carbide 37C,
Aluminum Oxide/Silicon Carbide 57AC

SIZE (D x T x H)	MAX. RPM	STD. PKG.	SPEC	PART #	SPEC	PART #	SPEC	PART #
Type 01 Straight 								
2-1/2 x 1/2 x 3/8	21,700	20					57A24-R	66243522381
3 x 1/4 x 3/8	20,370	25			NV20-T	66253343872**	57A24-T	66243528831
3 x 3/8 x 3/8	18,080	10					57A24-R	66243522415
3 x 1/2 x 3/8	18,080	10					57A24-P	66243522417
4 x 1/4 x 3/8	15,280	10			NV20-T	66253344098	57A24-R	66243522221
6 x 1 x 5/8	8,000	5	NZ14-Q	66252838075	NV14-R	66253198589	57A16-QS	66252809563
S Webs	8,000	5	NZ14-R	66252837961				
8 x 3/4 x 5/8	6,000	10			NV14-S	66253344347		
S Webs								
8 x 1 x 5/8	6,000	5	NZ16-O	66253030778	NV16-Q	66253198590		
S Webs	6,000	5	NZ16-Q	66253044532				
	6,000	10			NV14-R	66253 344355		
	6,000	10			NV14-T	66253344365		
	6,000	10			NVC16-Q	66253198592		
Type 06 Straight Cup 								
6 x 2 x 5/8-11	6,000	5	NZ16-R	66252838577				
Rim 2" Back 3/4"								
Type 11 Flaring Cup 								
4/3 x 2 x 5/8-11	9,070	10	NZ16-Q	66243530761	NV16-Q	66253198583	57A16-Q	66243510512
Rim 3/4" Back 3/4"								
5/3-3/4 x 2 x 5/8-11	7,260	5			NV16-Q	66253146918	57A16-Q	66252809598
Rim 1" Back 3/4"								
6/4-3/4 x 2 x 5/8-11	6,000	5	NZ16-Q	66252838568	NV16-Q	66253146925	57A16-Q	66252825201
Rim 1" Back 3/4"	6,000	5	NZ16-R	66252838566				
6/4-3/4 x 2 x 5/8-11	6,000	5	NZ16-P	66252830765	NV16-Q	66253198584	37C16-P	66252809609
Rim 1-1/2" Back 3/4"	6,000	5			NVC16-Q	66253146922	57A16-Q	66252809618
	6,000	5					57AC16-Q	66252809608
Type 11 Flaring Cup with Steel Back 								
4/3 x 2 x 5/8-11	9,070	10			NV16-Q	66253146917		
Rim 3/4" Back 3/4"								
5/3-13/16 x 2 x 5/8-11	7,260	10			NV16-Q	66253146920		
Rim 1" Back 3/4"								
6/4-13/16 x 2 x 5/8-11	6,000	5			NV14-R	66253344373	57A16-Q	66252809599
Rim 1-1/2" Back 3/4"	6,000	5			NV16-Q	66253198586	57AC16-Q	66252809600
	6,000	5			NVC16-Q	66253146929		

** STD.PKG. = 50



AVAILABILITY

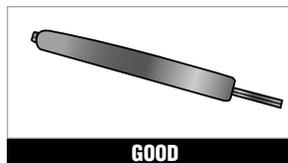


TIER: **BEST** **BETTER** **GOOD** **GOOD**
 TRADENAME: **NORTON NORZON PLUS** **NORTON BLUEFIRE** **NORTON GEMINI** **NORTON METAL**
 ABRASIVE: Zirconia Alumina Zirconia Alumina/Aluminum Oxide Aluminum Oxide Aluminum Oxide

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	66253344376	57A24-R	61463622342	Metal 24	66253349752
1-1/2 x 2-1/2 x 3/8-24 (ME 44436)	24,190	10					57A24-R	61463622349	Metal 24	66253349754
1-1/2 x 3 x 3/8-24 (ME 139029)	24,190	10			NV20-S	66253344377				
1-1/2 x 3 x 5/8-11 (ME 70535)	24,190	10	NZ20-R	61463644231	NV20-S	66253344379	57A24-R	61463622190	Metal 24	66253349757
1-3/4 x 3 x 3/8-24 (ME49226)	20,735	10					57A24-R	61463614503	Metal 24	66253349840
1-3/4 x 3 x 5/8-11 (ME 33432)	20,740	10					57A24-R	61463622195	Metal 24	66253349841
2 x 3 x 5/8-11 (ME 28229)	18,145	10	NZ20-R	61463644232	NV20-S	66253344381	57A24-R	61463622218	Metal 24	66253349846
2-3/4 x 3-1/2 x 5/8-11 (ME 18265)	13,195	10			NV20-S	66253344383	57A24-R	61463622387	Metal 24	66253349855
Type 17 Cones, Square Tip										
1-1/2 / 1/2 x 3 x 3/8-24	24,190	10					57A24-R	61463622194	Metal 24	66253349753
2 / 1/2 x 3 x 5/8-11	18,145	10					57A24-R	61463615722	Metal 24	66253349845
Type 17R Cones, Round Tip										
2 / 3/4 x 3 x 5/8-11 (ME 151373)	18,145	10			NV20-S	66253344384				
Type 18 Plugs, Square Tip										
1-1/2 x 2-1/2 x 3/8-24	24,190	10					57A24-R	61463622217	Metal 24	66253349755
	24,190	1					57A24-R	66253325902		
1-1/2 x 2-1/2 x 5/8-11	24,190	10	NZ20-R	61463644224	NV20-S	66253344385	57A24-R	61463622351		
	24,190	1					57A24-R	66253325905		
1-1/2 x 3 x 5/8-11	24,190	10			NV20-S	66253344386	57A24-R	61463622191	Metal 24	66253349838
	24,190	1					57A24-R	66253325909		
2 x 3 x 5/8-11	18,145	10	NZ20-R	61463644234	NV20-S	66253344387	57A24-R	61463622219	Metal 24	66253349847
	18,145	10			NV24-S	66253344391				
2 x 4 x 5/8-11	18,145	10					57A24-R	61463622366	Metal 24	66253349850
Type 18R Plugs, Round Tip										
1-1/2 x 3 x 3/8-24	24,190	10					57A24-R	61463622192	Metal 24	66253349756
	24,190	1					57A24-R	66253325907		
2 x 3 x 5/8-11	18,145	10			NV20-S	66253344389	57A24-R	61463622220	Metal 24	66253349849

✓ = VENDIBLE PACKAGE. IDEAL FOR VENDING MACHINES & SMALL JOBS.

AVAILABILITY



TIER: **GOOD**
 BRAND: **NORTON**
 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	61463610314



CATEGORY DEFINITION

Norton snagging wheels maximize your productivity in foundries, welding shops, fabrication facilities, steel mills, and ship yards.

APPLICATIONS:	Removing unwanted metal on castings, removing flaws and cracks, removing gates, risers and parting lines
SIZE RANGE:	24" and 30" diameters in stock; other diameters available as made-to-order
ABRASIVE GRAIN:	Zirconia Alumina, Zirconia Alumina/Silicon Carbide blend, Aluminum Oxide
SHAPE:	Type 01 Straight
REINFORCEMENT:	Strong fiberglass webbing and steel rings for maximum strength

FLOORSTAND SNAGGING WHEEL MATERIAL-TO-PRODUCT RECOMMENDATION GUIDE

Casting Type		BEST HIGHEST PRODUCTIVITY LOWEST TOTAL COST	BETTER EXCELLENT BLEND OF PERFORMANCE & PRICE	GOOD CONSISTENT PERFORMANCE LOW INITIAL PRICE
Iron	Gray	4ZF1434-R5B38S, ZI/25-R, ZI/26-Q	Charger Long Life	Gemini All Purpose
	Ductile / Malleable	4ZF1434-Q5B38S, ZI/25-R, ZI/26-Q	Charger Long Life	Gemini All Purpose
Steel	Carbon and Low Alloy	4NZ1434-R5B38S	Charger Free Cut	Gemini All Purpose
	Stainless and High Alloy	4NZ1634-Q5B38S	Charger Free Cut	Gemini All Purpose

NOTE: GRADE, GRIT AND ABRASIVE TUNING MAY BE NECESSARY TO OBTAIN OPTIMUM PERFORMANCE

SWINGFRAME SNAGGING WHEEL MATERIAL-TO-PRODUCT RECOMMENDATION GUIDE

Casting Type		BEST HIGHEST PRODUCTIVITY LOWEST TOTAL COST	GOOD CONSISTENT PERFORMANCE LOW INITIAL PRICE
Iron	Gray	4ZF1234-R5B38S, ZI/25-R, ZI/26-Q	Gemini All Purpose
	Ductile / Malleable	4ZF1234-R5B38S, ZI/25-R, ZI/26-Q	Gemini All Purpose
Steel	Carbon and Low Alloy	4ZF1434-R5B38S	Gemini All Purpose
	Stainless and High Alloy		Gemini All Purpose
Aluminum Alloy		NZC142-R5B38S	
Copper Alloys / Brass / Bronze		NZC142-R5B38S	

NOTE: GRADE, GRIT AND ABRASIVE TUNING MAY BE NECESSARY TO OBTAIN OPTIMUM PERFORMANCE

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	SUGGESTED CORRECTION
Poor stock removal	Insufficient pressure applied Wheel too coarse or hard Inadequate abrasive	Increase pressure to use all available power Use finer grit and/or softer grade wheel Try NorZon, 4ZF, or ZI/25 specification
Grinding costs too high	Wheel acting too soft Low performance specification	Use harder and/or coarser wheel Try NorZon or ZI products
Wheel loading or glazing	Grade too hard Grit too coarse Dirty, scale-covered parts	Try softer grade Try finer grit Try NZC wheels
Wheels "dusty"	Wheel too soft	Try harder grade
Wheel doesn't hold corner or wheel spalling	Wheel too coarse Wheel too soft	Use finer grit and/or 2 grit combination Use harder grade
Burning the workpiece	Wheel too hard Wheel glazed or loaded Grinding pressure too low Grinding pressure too high	Use softer grade Dress the wheel face Increase grinding force Reduce grinding force
Surface finish too rough	Wheel too coarse Wheel speed too slow Worn machine bearings	Try finer grit or try ZI/26 specification Try higher speed machine (Do not exceed maximum operating speed of wheel) Rebuild machine
Vibration	Wheel worn out of round Faulty flanges Bent machine spindle Worn machine bearings	Try truing the wheel Check flanges for flatness and burrs (see ANSI B7.1) Check spindle run-out Rebuild machine
Wheel stalls or slows	Grinding force too high Wheel too hard Machine power too low	Reduce pressure or contact area Use softer grade wheel Replace machine with higher power grinder

FEATURED PRODUCTS

4ZF, 4NZ, ZI, AND NZC WHEELS

BEST CHOICE FOR DEMANDING APPLICATIONS

FEATURES

- 4ZF – for long life
- 4NZ – for sharpness
- ZI – zirconia grain stays sharper, longer
- NZC – zirconia alumina and silicon carbide blend

BENEFITS

- Engineered for high-pressure, heavy-duty, snagging operations, particularly on iron
- Exceptional wheel life
- Developed for low- to medium-pressure operations, especially on steel and steel castings
- Exceptionally high cut rate
- The most operator-friendly wheels
- The choice for iron castings: ZI/25 for tough metal removal, ZI/26 for finer surface finish
- Ideal for dirty, scale-covered castings

CHARGER WHEELS

BETTER CHOICE FOR STRONG PERFORMANCE TO PRICE RATIO

FEATURES

- Strong zirconia alumina abrasive

BENEFITS

- Very good cut rate and life

5ZF AND GEMINI WHEELS

GOOD CHOICE FOR NUMEROUS SMALL JOBS

FEATURES

- Gemini – versatile aluminum oxide formulation
- Low initial price
- 5ZF – zirconia alumina

BENEFITS

- Works well with a variety of machines, horsepower, and operations
- The choice for initial-price-conscious end-users
- Ideal for lower horsepower or low-pressure applications

AVAILABILITY

SIZE (D x T x H)	MAX. RPM	TIER: STD. PKG.	BEST		BETTER		GOOD	
			SPEC.	PART #	SPEC.	PART #	SPEC.	PART #
Type 01 Straight								
24 x 3 x 12	1,990	1	4ZF1234-R5B38S	69083166310			5ZF14-QS	69083166858
HS Steel Rings with Fine Centers, S Webs	1,990	1	ZI/25-R	66253119637			Gemini All Purp.	69083167173
30 x 2 x 12	1,595	1	4NZ1634-Q5B38S	69210421412	Charger Free Cut Charger Long Life	69210421417 69210421418	5ZF14-R	69210467105
HS Steel Rings with Fine Centers, S Webs	1,595	1	4ZF1434-R5B38S	69210466458			Gemini All Purp.	69210417463
	1,595	1	4ZF1634-Q5B38S	69210466460				
	1,595	1	ZI/25-R	66253119636				
	1,595	1	ZI/26-Q	66253119638				
	1,595	1	NZC142-R5B38S	69210421414				

FOR YOUR SAFETY: ALL FLOORSTAND AND SWINGFRAME WHEELS HAVE STRONG FINE CENTERS, STEEL RINGS AND HIGH-STRENGTH FIBERGLASS REINFORCEMENT CONSTRUCTION.

TECHtip

- Always ensure proper mounting of floorstand and swingframe wheels by mounting with arrow down as marked on wheel
- Always use safety guard
- Always run wheel for 1 minute before grinding
- For optimum performance, ensure adequate air pressure and air volume when using pneumatic machines
- Use constant surface foot per minute machines for highest efficiency
- Do not overdress the wheel face
- Avoid loading or glazing by changing the contact angle
- Use pressure assist whenever possible to obtain maximum cut rate



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