

## MOUNTED POINTS

MACHINES USED



### CATEGORY DEFINITION

Resin bond, vitrified bond, center lap, and cotton fiber mounted points are available in a wide range of shapes.

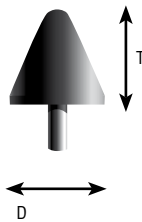
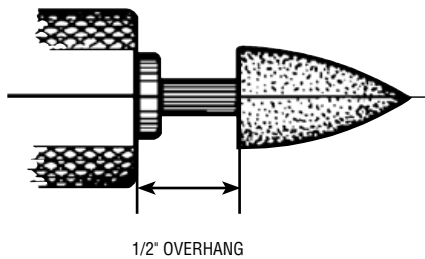
**INDUSTRIES:** Aerospace  
Tool and Die  
Construction  
Metal Fabrication  
Automotive  
Cutlery  
Mold Shops  
Stainless Steel Equipment  
Foundries

**ABRASIVE GRAIN:** Ceramic Alumina, Zirconia Alumina, Zirconia Alumina/Aluminum Oxide Blend, Aluminum Oxide, Silicon Carbide

**SHAPE AVAILABILITY:** A, B, and W



### 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)

### FEATURED PRODUCTS



### COTTON FIBER MOUNTED POINTS

GOOD FOR BLENDING AND POLISHING

#### FEATURES

- 80 grit
- 120 grit

#### BENEFITS

- For most materials
- For polishing and stainless steel applications

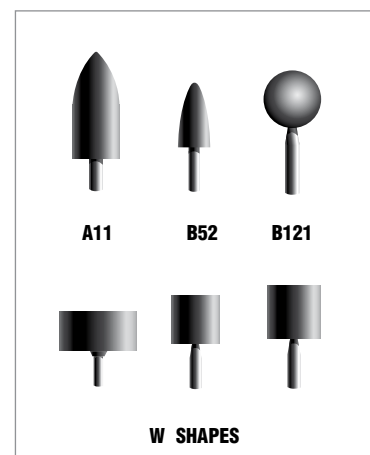
### AVAILABILITY

TIER:	<b>GOOD</b>
BRAND:	Norton
TRADENAME:	<b>COTTON FIBER</b>
ABRASIVE:	Aluminum Oxide

SHAPE	SIZE (D x T)	SPINDLE DIA.†	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #
<b>Cotton Fiber Mounted Points</b>						
A11	7/8 x 2	1/4	19,860	5/25	A80-HBF3	61463622664
B52	3/8 x 3/4	1/8	45,370	5/25	A120-HBF3	61463620242
B121	1/2" Ball	1/8	45,370	5/25	A80-HBF3	61463622657
W163	1/4 x 1/2	1/8	60,000	5/25	A80-HBF3	61463622655
			60,000	5/25	A120-HBF3	61463622656
W176	3/8 x 1/2	1/8	45,370	5/25	A80-HBF3	61463622654
W185	1/2 x 1/2	1/8	34,500	5/25	A80-HBF3	61463622649
W187	1/2 x 1	1/8	20,620	5/25	A80-HBF3	61463622651
W220	1 x 1	1/4	25,500	5/25	A80-HBF3	61463622646

† SPINDLE LENGTH IS 1-1/2"

\* MAXIMUM OPERATING SPEED BASED ON 1/2" OVERHANG



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### NORTON QUANTUM – VITRIFIED BOND MOUNTED POINTS

BEST CHOICE FOR HIGH VOLUME OPERATIONS

**FEATURES**

- Unique, engineered ceramic grain shape and chemistry with proven bond technology

**BENEFITS**

- Ideal for high-volume foundry operations – grinding Inconel and similar alloy turbine blade components
- Minimal loading and heat build-up
- 33% + longer life versus competitive ceramic products
- 30% + higher metal removal rates
- Versatile, optimized for all low-, medium- and high-force applications
- Exceptional productivity and life

- Oil and Gas 36 grit mounted points

- Specifically engineered to efficiently grind the carbide matrix material of oilfield drill heads



### NORTON GEMINI – VITRIFIED BOND MOUNTED POINTS

GOOD VALUE FOR GENERAL PURPOSE, SMALL JOB SHOP APPLICATIONS

**FEATURES**

- 38A abrasive
- Diverse shapes and sizes

**BENEFITS**

- Cool cutting, less burn
- Ideal when initial price is the main purchasing consideration

### AVAILABILITY

TIER:	<b>BEST</b>	<b>GOOD</b>
BRAND:	Norton	Norton
TRADENAME:	<b>QUANTUM</b>	<b>GEMINI</b>
ABRASIVE:	Ceramic Alumina	38A

SHAPE	SIZE (D x T)	SPINDLE DIA. †	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #
<b>Vitrified Bond Mounted Points – A Shapes</b>								
A1	3/4 x 2-1/2	1/4	19,800	25/250	Oil & Gas 36	61463686139		
A1	3/4 x 2-1/2	1/4	19,800	5/25	3NQ80	69083149139	38A36-T	61463624374
A1	3/4 x 2-1/2	1/4	19,800	5/25			38A60-P	61463624375
A3	1 x 2-3/4	1/4	16,100	25/250	Oil & Gas 36	61463686138		
A3	1 x 2-3/4	1/4	16,100	5/25	3NQ80	69083160166	38A36-T	61463624377
A3	1 x 2-3/4	1/4	16,100	5/25			38A60-P	61463624378
A4	1-1/4 x 1-1/4	1/4	30,560	5/25			38A60-P	61463624380
A5	3/4 x 1-1/8	1/4	45,000	5/25	3NQ80	69083149140	38A36-T	61463624381
A5	3/4 x 1-1/8	1/4	45,000	5/25			38A60-P	61463624382
A11	7/8 x 2	1/4	19,860	5/25	3NQ80	69083149141	38A36-T	61463624384
A11	7/8 x 2	1/4	19,860	5/25			38A60-P	61463624385
A12	11/16 x 1-1/4	1/4	48,000	5/25	3NQ60	61463677679	38A60-P	61463624388
A13	1-1/8 x 1-1/8	1/4	33,950	5/25			38A60-P	61463624389
A14	11/16 x 7/8	1/4	55,560	5/25			38A60-P	61463624390
A15	1/4 x 1-1/16	1/4	72,750	5/25			38A60-P	61463624391
A21	1 x 1	1/4	34,500	5/25	3NQ80	69083149144	38A60-P	61463624392
A23	3/4 x 1	1/4	39,370	5/25	3NQ80	69083149143	38A60-P	61463624394
A24	1/4 x 3/4	1/4	76,500	5/25			38A60-P	61463624395
A25	1" Ball	1/4	35,620	5/25	3NQ80	61463677680	38A60-P	61463624396
A26	5/8" Ball	1/4	61,120	5/25	3NQ80	69083149145	38A60-P	61463624397
A31	1-3/8 x 1	1/4	27,780	5/25			38A60-P	61463624399
A34	1-1/2 x 3/8	1/4	25,470	5/25			38A60-P	61463624402
A36	1-5/8 x 3/8	1/4	23,520	25/250	Oil & Gas 36	66253145562		
A36	1-5/8 x 3/8	1/4	23,520	5/25	3NQ80	69083149146	38A60-P	61463624404
A37	1-1/4 x 1/4	1/4	30,560	5/25			38A60-P	61463624405
A38	1 x 1	1/4	34,500	5/25	3NQ80	61463677682	38A60-P	61463624406
A39	3/4 x 3/4	1/4	47,250	5/25	3NQ80	69083149147	38A60-P	61463624407
A40	3/4" Ball	1/4	47,250	5/25			38A60-P	61463624408

† STANDARD SPINDLE SIZE IS 1/4" X 1-1/2"

\* MAXIMUM OPERATING SPEED BASED ON 1/2" OVERHANG



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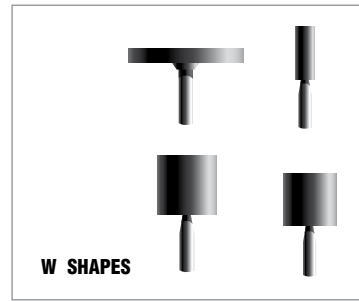
### AVAILABILITY

TIER:	<b>BEST</b>	<b>GOOD</b>
BRAND:	Norton	Norton
TRADENAME:	<b>QUANTUM</b>	<b>GEMINI</b>
ABRASIVE:	Ceramic Alumina	38A

SHAPE	SIZE (D x T)	SPINDLE DIA. †	MAX. RPM*	MIN./STD. PKG.	SPEC	PART #	SPEC	PART #
<b>Vitrified Bond Mounted Points – W Shapes</b>								
W144	1/8 x 1/4	1/8	105,000	5/25			38A60-P	61463624488
W145	1/8 x 3/8	1/8	105,000	5/25			38A60-P	61463624489
W146	1/8 x 1/2	1/8	105,000	5/25			38A60-P	61463624491
W152	3/16 x 1/4	1/8	105,000	5/25			38A60-P	61463624495
W153	3/16 x 3/8	1/8	80,850	5/25			38A60-P	61463624496
W154	3/16 x 1/2	1/8	70,500	5/25	3NQ80	69083149133	38A60-P	61463624497
W160	1/4 x 1/4	1/8	81,370	5/25			38A60-P	61463624501
W162	1/4 x 3/8	1/8	64,800	5/25			38A60-P	61463624503
W163	1/4 x 1/2	1/8	60,000	5/25			38A60-P	61463624504
W164	1/4 x 3/4	1/8	45,900	5/25	3NQ80	69083149135	38A60-P	61463624505
W170	5/16 x 1/2	1/8	52,500	5/25			38A60-P	61463624511
W175	3/8 x 3/8	1/8	54,000	5/25			38A60-P	61463624516
W176	3/8 x 1/2	1/8	45,370	5/25			38A60-P	61463624517
W177	3/8 x 3/4	1/8	33,750	5/25			38A60-P	61463624518
W179	3/8 x 1-1/4	1/8	20,415	25/250	Oil & Gas 36	69083154055		
W185	1/2 x 1/2	1/8	34,500	5/25	3NQ80	69083149137	38A60-P	61463624525
W185	1/2 x 1/2	1/4	61,500	5/25			38A60-P	61463624526
W186	1/2 x 3/4	1/4	51,000	5/25			38A60-P	61463624528
W188	1/2 x 1-1/2	1/4	30,370	5/25			38A60-P	61463624530
W189	1/2 x 2	1/4	24,000	25/250	Oil & Gas 36	61463686137		
W189	1/2 x 2	1/4	24,000	5/25	3NQ80	61463677683	38A60-P	61463624531
W196	5/8 x 1	1/4	35,250	5/25			38A60-P	61463624539
W200	3/4 x 1/8	1/8	50,930	5/25			38A60-P	61463624543
W200	3/4 x 1/8	1/8	50,930	5/25			38A90-Q	61463624544
W204	3/4 x 3/4	1/4	42,750	5/25			38A60-P	61463624549
W205	3/4 x 1	1/4	34,500	5/25			38A60-P	61463624550
W208	3/4 x 2	1/4	18,750	5/25	3NQ80	61463677684	38A60-P	61463624553
W215	1 x 1/8	1/8	38,200	5/25	3NQ80	69083149138	38A60-P	61463624560
W216	1 x 1/4	1/4	38,200	5/25			38A60-P	61463624562
W218	1 x 1/2	1/4	38,200	25/250	Oil & Gas 36	69083154061		
W218	1 x 1/2	1/4	38,200	5/25			38A60-P	61463624564
W220	1 x 1	1/4	25,500	5/25	3NQ80	61463677685	38A60-P	61463624566
W221	1 x 1-1/2	1/4	19,120	5/25			38A60-P	61463624567
W222	1 x 2	1/4	15,900	5/25			38A60-P	61463624569
W230	1-1/4 x 1-1/4	1/4	20,400	5/25			38A60-P	61463624578
W235	1-1/2 x 1/4	1/4	25,470	5/25			38A60-P	61463624583
W236	1-1/2 x 1/2	1/4	25,470	5/25	3NQ80	61463677686	38A60-P	61463624585
W237	1-1/2 x 1	1/4	22,500	5/25			38A60-P	61463624587
W238	1-1/2 x 1-1/2	1/4	15,600	5/25			38A60-P	61463624588
W242	2 x 1	1/4	19,100	5/25	3NQ80	69083149148	38A60-P	61463624592

† STANDARD SPINDLE SIZE IS 1/8" OR 1/4" X 1-1/2"

\* MAXIMUM OPERATING SPEED BASED ON 1/2" OVERHANG



W SHAPES

## TECHtip

- 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



## 50-Piece Mounted Point Kits

- Each kit contains 5 each of 10 of our best selling mounted point shapes and specifications
- The 1/4" spindle kits contain "A"-shaped points that are ideal for general maintenance and metalworking applications
- The 1/8" spindle kits contain "B"-shaped points for light deburring machine parts or finishing/polishing dies
- The "W"-shaped points in all of these kits work well for precision grinding of medium to heavy stock

TIER:	<b>BEST</b>	<b>GOOD</b>
BRAND:	Norton	Norton
TRADE NAME:	<b>QUANTUM</b>	<b>GEMINI</b>

SHAPE	SPINDLE DIA. †	MIN./STD. PKG.	PART #	PART #
<b>Mounted Point Kits</b>				
Assorted	1/4	1	50 piece Premium Norton Quantum 1/4" Spindle Mounted Point Kit contains 5 each of Norton Quantum A1, A5, A11, A21, A23, A26, A36, A39, W242, and A80-HBF3 W220	69083147810
Assorted	1/8	1	50 piece Premium Norton Quantum 1/8" Spindle Mounted Point Kit contains 5 each of Norton Quantum B42, B52, B97, B122, B131, W154, W164, W185, W215, and A80-HBF3 W163	69083147806
Assorted	1/4	1	50 piece Norton Gemini 1/4" Spindle Mounted Point Kit contains 5 each of 38A60-P A1, A5, A11, A21, A23, A26, A36, A39, W242, and A80-HBF3 W220	69083147789
Assorted	1/8	1	50 piece Norton Gemini 1/8" Spindle Mounted Point Kit contains 5 each of 38A60-P B42, B52, B97, B122, B131, W154, W164, W185, W215, and A80-HBF3 W163	69083147669

† STANDARD SPINDLE SIZE IS 1/8" OR 1/4" X 1-1/2"

## 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 ALUMINUM OXIDE	SILICON CARBIDE	ZIRCONIA ALUMINA	COARSE	MEDIUM	FINE	SOFT	MEDIUM	HARD	RELATIVE GRAIN SPACING	Resin = B Shellac = E Plastic = P Rubber = R Vitrified = V	Designates a variation or modification to bond.					
23A	3SGP	39C	4ZF	12	30	80	D	I	Q	2							
25A	3SGR	Crystolon	5ZF	14	36	90	E	J	R	4							
32A	3SGR	Crystolon	5ZF	20	54	120	G	L	T	5							
32AC (blend)	5SG	Masonry	AZ (blend)	24	60	150	H	M	U	6							
38A	BRG	BlueFire			70	220		N	V	8							
48A	SG	Charger						O	Y	12							
53A	SXG	(blend)						P	Z	16							
55A	NorZon Plus	NZ								19							
57A	(blend)	NZC (blend)								25							
U57A	NQ Quantum	NZIII								28							
64A	Targa	NZIV															
86A		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.

