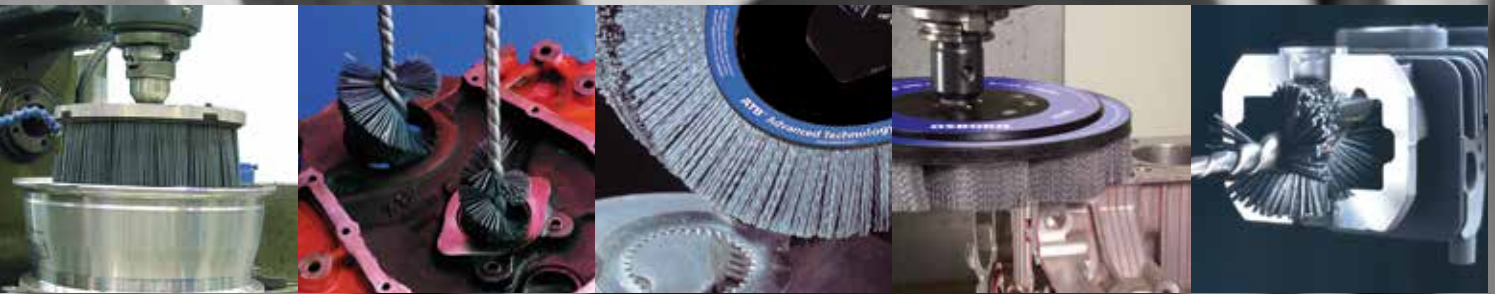




Finish. First.™



ATB - Abrasive Brush Tools

AUTOMOTIVE APPLICATIONS

ATB™ BRUSH TOOL APPLICATIONS

Engine Block

- Camshaft bore
- Crankshaft Bore
- Cylinder Bore
- Oil Galley
- Deck Surface

Transmission

- Housing
- Clutch Plates
- Gears
- Valve Bodies

Engine Parts

- Camshafts
- Connecting Rods
- Crankshafts
- Cylinder Heads
- Pistons

SPECIAL APPLICATIONS

Aerospace

- Turbine Blades
- Wing Spars
- Static Engine Parts



ATB™ BRUSH TOOL APPLICATIONS



Military

- Tanks
- Ordnance

Medical Implants

- Bone Screws
- Cervical Screws
- Bone Broach
- Titanium Knee Joints
- Hips
- Shoulders

TYPICAL APPLICATIONS



Gears



Fineblanking



Aluminum Extrusions



Wheel Finishing

Cutting Tools

- Insert Honing
- Drill Bit Honing

Hydraulics

- Pump Housings
- Manifolds
- Pistons

SPECIAL APPLICATIONS

ATB™ BRUSH TOOL APPLICATIONS

Communications

- Microwave Antennas
- Heat Sinks

Stone & Tile

Commercial Kitchen

- Sinks
- Cookware



Farm/Landscaping

- Tractors
- Lawn Mowers
- Chainsaws



Woodworking



Log Cabins

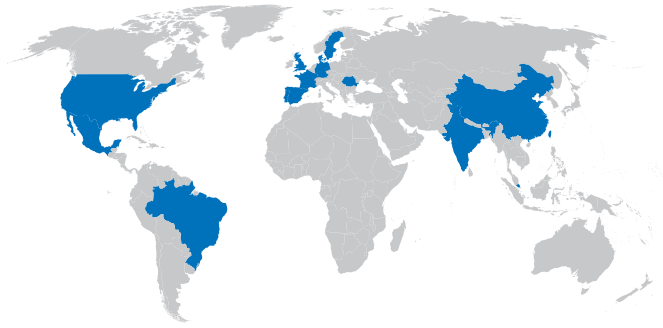
About Osborn

Since Osborn's inception in 1887, success has always been about ensuring that you finish first. Whether it was last century, last week or in the last hour, customers like you need the right solutions and count on us. As the global leader in surface treatment and finishing solutions, we have more patents on products and processes than all other brush companies combined.

Engineering expertise and manufacturing skills are what set the Osborn brand apart. People experienced in surface treatment solutions and finishing tools. Collaborating with customers to achieve optimum results. Matching tough finishing problems with the right solutions when and where you need them.

In addition to more than 10,000 standard products sold in more than 120 countries, we offer local support throughout the world. So, no matter where you or your customers are located, you'll always have access to Osborn application expertise and the industry's best, most practical solutions.

When you start with Osborn, you finish first.



ATB™ Abrasive Filament Brushes

Advanced Technology Brushing (ATB) involves the engineering of abrasive nylon into flexible abrasive tools for today's highly refined finishing processes. Osborn ATB products are made with heat-stabilized nylon filaments impregnated with silicon carbide, aluminum oxide or polycrystalline diamond grit, with grit loading ranges from 10 to 40 percent by weight, and a wide variety of filament choices.

Deburring, Finishing and Cleaning Solutions

No matter what metal finishing issues you encounter, there's an Osborn solution. There are solutions for deburring, finishing and cleaning in the production of automobiles, trucks, motorcycles, off-highway equipment and farm vehicles. And, there are solutions that improve repeatability and cycle times in your OEM applications.

Whether it involves the design of your machinery or the servicing of your production lines, Osborn products will meet your requirements. No other source offers line integrators and machine builders, as well as OEMs and tier suppliers, such flexible local support combined with an extensive global presence.

Custom solutions available too.

If we don't already offer the products your application requires, we will custom-manufacture them to meet your exact requirements.

Take the Osborn Challenge. Compare Osborn products to the ones you're now using. We will demonstrate how ours outperform others in terms of results and productivity.

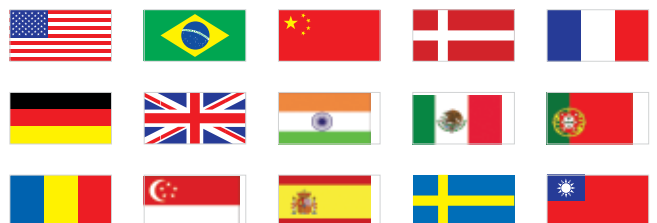


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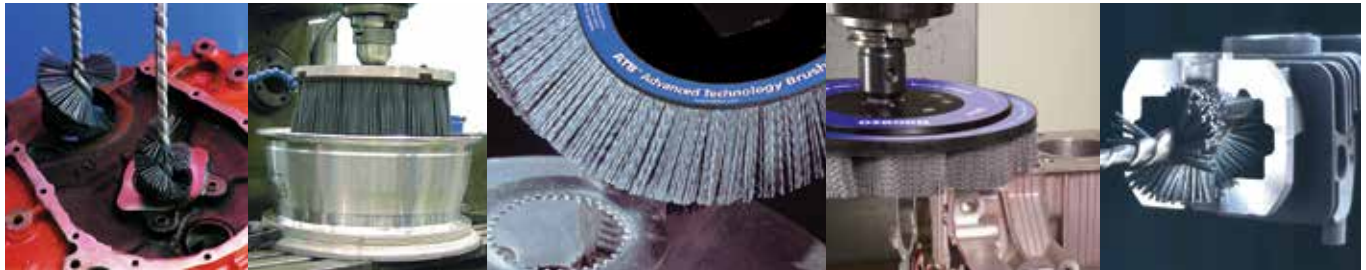
ATB

ATB filaments work like independent flexible files conforming to part contours while abrading edges and surfaces. ATB abrasive tools produce rapid, repeatable results, which decrease process costs and create a cleaner, more efficient, working environment.

These tools are specifically designed for mechanical finishing tasks such as: deburring, sharp edge removal, radiusing, edge contouring, de-fuzzing, surface refinement and conditioning, plateau finishing, blending imperfections,

reduction of surface stresses and micro crack propagation, cleaning, polishing and surface wiping prior to inspection gauging.

Both external and internal surface areas are processed on a wide variety of materials which include but are not limited to: metallics, super alloys, plastics, composites, advanced composites, metal matrix, ceramics, wood, leather, cloth.



ATB NYLON ABRASIVE FILAMENTS

Osborn continues to remain on the leading edge of advanced technology through innovation. Osborn has engineered abrasive nylon into flexible abrasive tools, which are being implemented into today's highly refined finishing processes. Osborn's abrasive tools are designed to adapt with the times as most manual operations are rapidly being replaced by automatic machinery and equipment such as: CNC machine centers, robotics, flexible machining systems, special machinery, and finishing cells.

Osborn's ATB brush tools are made with heat stabilized nylon filaments impregnated with Silicon Carbide, Aluminum Oxide or Polycrystalline Diamond grit. Grit loading ranges from 10-40% by weight, offering a wide variety of filament choices.

ATB Physical Properties

Bend Recovery	80%
Melting Point	210C(410F)
Beam Strength	At 140 F 70% lost
Density	1.29g/cc
Coolant	PH Between 2-9
Absorbtion at 50% RH	1.30%
Absorbtion at 100% RH	2.80%



ATB BRUSH TOOL SELECTION

Tool Style Options:

Osborn produces ATB brushes in six basic configurations.

Wheel Brushes - Wheel brushes are unidirectional finishing tools. The circumferential edge or “face” of this circular style brush performs the work. ATB wheel brushes are ideal for focused area work and are easily adaptable to standard shop equipment, highly specialized machinery, CNC machining centers and robot work cells. Osborn standard wheel brushes are produced in a full range of diameters, with a selection of operating face widths to perform almost any finishing task.



Disc Brushes - Disc brushes are a highly efficient tool for applications in which burred edges are on the same plane. Disc Brushes are multi-directional deburring tools working all part edges uniformly. They are easily adaptable to CNC machine centers, robot cells, and stationary finishing machines.

Cup Brushes - Cup brushes are efficient multi-directional deburring tools working all part edges uniformly. They are primarily used in off hand applications for maximum part coverage.



End Brushes - End brushes are ideal multi-directional tools for confined areas; this style is designed to have the ends of the fill strands do the bulk of the work.

Internal Finishing Brushes - Also known as a “side action” brush, this style is primarily used in CNC machines, portable tools and drill presses for cross hole deburring and fast cleaning and finishing of such inaccessible surfaces as small diameter bores and internally threaded surfaces.



Wide Face Brushes - Wide Face brushes prevent costly build-up and wear on conveyor belts in a variety of manufacturing and processing environments. Outside diameters range from a few inches to over one foot. Standard face widths span from two inches to nearly twenty feet.



ATB BRUSH TOOL SELECTION

Abrasive Media Options:

• **Silicon Carbide** is characterized by a sharp jagged structure, and is the most popular grain choice because of its cost effective, efficient properties. (Color: gray/black. Hardness = 13 [MHOS Scale], Density = 3.25)

• **Aluminum Oxide** is characterized by a rounded structure and produces a finer finish and prevents discoloration on certain alloys such as titanium, aluminum and stainless steel. (Color: tan/brown. Hardness = 12 [MHOS Scale], Density = 3.99)

• **Poly Crystalline Diamond (PCD)** is characterized by a jagged structure. PCD is used to edge hone and radius super hard materials such as CBN and ceramics. (Hardness = 15 [MHOS scale])



Filament Geometry Options:

ATB abrasive tools feature three different filament geometries: round crimped, round straight and rectangular.



Round Crimped



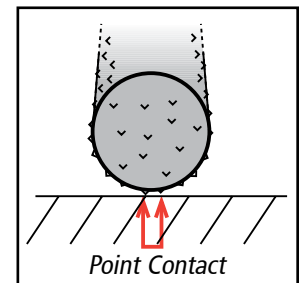
Round Straight



Rectangular

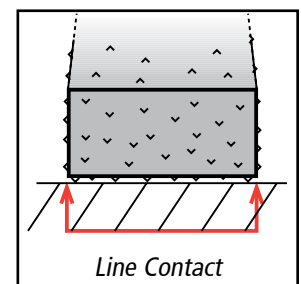
Round Abrasive Nylon Filaments are impregnated with either Silicon Carbide or Aluminum Oxide grit. Grit sizes vary from coarse to very fine. This style is available in crimped or uncrimped form, and is also made in Alumina Silicate and Polycrystalline Diamond super abrasives.

- For general use
- Provides point contact - light to medium application technology
- Fine grit sizes are able to radius small corners
- Uncrimped filaments generate twice the abrasive contact on work surface
- Increased flexibility to conform to irregular surfaces



Abrasive Nylon Rectangular Filaments are impregnated with either Silicon Carbide or Aluminum Oxide and are offered in grit sizes ranging from coarse to fine.

- For high performance work
- Line contact - heavy duty application technology
- Applies approximately 18 times more abrasive on work surface
- Ideal on applications requiring more surface compliance without sacrificing the amount of abrasive in contact with the work surface
- Larger cross section allows the filament to be more rigid and aggressive
- Shorter cycle times
- Ability to remove micro chips and materials
- Excellent performance at lower rotational speeds
- Superior draw file grinding action using sides of extra long filaments



Filament and Grit Size Options:

Smaller filaments with smaller grit size produce a finer finish and offer longer life. Larger filaments are more rigid and apply larger abrasive grit to the work piece with greater force and increased aggression. Grit sizes are available from 46 – 1000.

Crimped filaments offer better part conformability. Rectangular filaments offer higher aggression.

Shapes																	
Sizes	mil.	12	18	22	24	35	40	50	30 x 70	45 x 90							
	mm.	.30	.46	.56	.61	.89	1.02	1.27	.76 x 1.78	1.14 x 2.29							
Grit			SC	SC	SC	SC	SC	SC	SC	SC							
Silicon Carbide (SC)			SC	SC	SC	SC	SC	SC	SC	SC							
Aluminum Oxide (AO)	AO		AO	AO	AO	AO	AO	AO	AO	AO							
Mesh (USA Std.)		600	500	320	120	180	120	80	80 120 180	80 120 180							
									320 600	320 600							
Grit Color Codes																	
	60		80		120		180		240		320		500		600		1000
	white		red		yellow		green		brown		blue		orange		black		purple

ATB brush tools are color coded for easy identification

Trim Length and Density Options:

Trim Length refers to the length of the fill material that extends beyond the brush back or hub. A short trim makes a stiff, fast cutting brush, while a long trim gives the brush added flexibility that enables it to conform to irregular surfaces.

Fill Density is the number of filaments in the brushing surface. High density brushes produce finer surface finishes and are also used in deburring, or when fast cutting is required. Low density brushes offer greater flexibility, which increases its resiliency and ability to reach into confined areas and conform to uneven or contoured surfaces.



Long trim and light density are ideal for applications requiring a high degree of conformability



Short trim and high density are ideal for applications requiring increased aggression and minimal cycle time

ATB BRUSH IMPLEMENTATION

Optimal life and cut will be obtained by finding the proper balance between brush speed (RPM), part penetration, and line speed.

The Maximum Safe Free Speed (MSFS) printed on the brush is not the ideal working speed. In most operations, a lower speed will prove more efficient. Optimal operating speed is typically 50-70% less than the MSFS. Lower speeds and lighter pressure give longer brush life, generate less heat, and require less power.

Where higher brush speeds and pressures are required, it is recommended to use a more aggressive brush tool. This may be done by increasing abrasive grit size, changing filament shape, increasing fill density, decreasing trim length, increasing the brush diameter, and/or slowing line speed.

ATB Disc Brush Operating Parameters																	
Type	Dia. (in)	Brush Speed (RPM)				Penetration (inches)						Feed (in/min)					
		W/Coolant		Dry		Alum		Cast/Mild Steel		SS / Alloy		Alum		Cast/Mild Steel		SS / Alloy	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Max W/Bridge	0.5 to 1	4,300	7,500	3,800	7,000	0.03	0.06	0.03	0.13	0.03	0.18	36	44	24	43	15	33
	1.5 to 2.5	3,200	4,700	2,700	4,000	0.03	0.06	0.03	0.13	0.03	0.18	44	54	32	51	22	40
	3 to 4	2,300	3,000			0.03	0.06	0.03	0.13	0.03	0.18	52	67	42	60	31	48
	5 to 6	1,700	2,000			0.03	0.06	0.03	0.13	0.03	0.18	60	74	48	67	36	54
	7 to 8	1,300	1,500			0.03	0.06	0.03	0.13	0.03	0.18	68	84	56	75	43	61
	9 to 10	1,000	1,200			0.03	0.06	0.03	0.13	0.03	0.18	77	91	61	81	46	64
Max	0.5 to 1	3,000	6,200	2,500	5,000	0.03	0.06	0.03	0.13	0.03	0.18	23	35	17	30	11	24
	1.5 to 2.5	2,500	4,000	2,000	3,500	0.03	0.06	0.03	0.13	0.03	0.18	30	42	24	38	19	29
	3 to 4	2,000	2,700	1,500	2,500	0.03	0.06	0.03	0.13	0.03	0.18	37	50	30	45	22	36
	5 to 6	1,300	1,700	1,000	1,500	0.03	0.06	0.03	0.13	0.03	0.18	44	56	35	50	26	40
	7 to 8	1,000	1,100	850	1,000	0.03	0.06	0.03	0.13	0.03	0.18	50	62	40	56	30	45
	9 to 10	800	1,000	650	750	0.03	0.06	0.03	0.13	0.03	0.18	57	70	47	63	36	51
Turbo	3 to 4	2,600	3,500	2,100	2,800	0.06	0.13	0.06	0.19	0.06	0.25	29	40	24	36	18	28
	5 to 6	1,700	2,100	1,400	1,600	0.06	0.13	0.06	0.19	0.06	0.25	35	44	28	40	21	32
	7 to 8	1,300	1,500	1,000	1,200	0.06	0.13	0.06	0.19	0.06	0.25	40	49	32	44	24	36
	9 to 10	1,000	1,100	850	1,000	0.06	0.13	0.06	0.19	0.06	0.25	45	56	37	50	28	40
	12 to 14	750	900	600	700	0.06	0.13	0.06	0.19	0.06	0.25	51	60	40	54	38	43
Tuftmatic	6	1,500	2,500	1,200	3,000	0.06	0.19	0.06	0.25	0.06	0.25	31	39	25	36	18	28
	8	1,200	1,700	1,000	1,400	0.06	0.19	0.06	0.25	0.06	0.25	36	44	28	39	21	32
	10	900	1,500	750	1,100	0.06	0.19	0.06	0.25	0.06	0.25	40	50	33	45	25	36
	14	650	1,000	550	800	0.06	0.19	0.06	0.25	0.06	0.25	45	54	36	48	34	38

- Rectangular filament should be run at the low end of the recommendation.
- Depth of penetration should be set while the brush tool is rotating at operational speed.
- Precise edge radius can be controlled by adjusting the line speed.
- Slower line speed results in more aggressive brushing action.
- Surface speeds should always be kept below 3500 surface speed per minute wet and 2500 surface speed

Tool Path Considerations:

For consistent results in an automated environment, careful consideration should be given when implementing ATB brush tools.

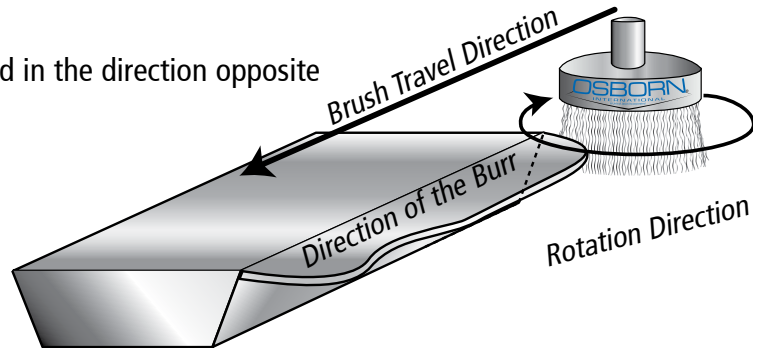
Tool Path:

The brush should start and finish its path completely off the part.



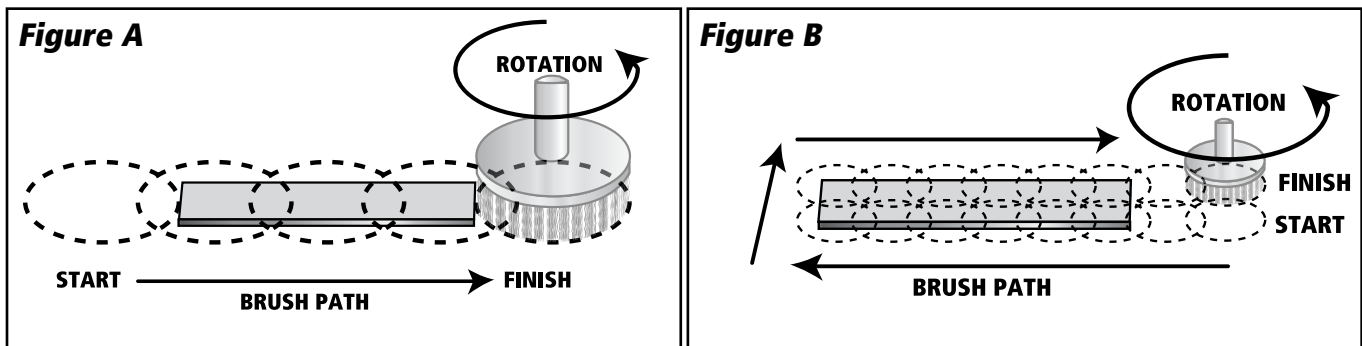
Rotational Direction:

The initial pass of the brush tool should be rotated in the direction opposite of the cutting tool that created the burr.



Part Coverage:

There are two different ways to efficiently finish a part. The ideal (**Figure A**) is to use a brush which is approximately three inches larger than the work piece. If a smaller brush is required due to application restrictions, (**Figure B**) the centerline of the brush tool should be aligned with the targeted edge.



Brush Tool Wear Compensation:

The following are the four most commonly used methods to compensate for brush tool wear.

Automatic Indexing is a technique involving indexing the brush tool in the Z axis after a predetermined number of parts. It is a commonly used technique in CNC machining centers.



Probing is a technique that helps maintain a constant depth of penetration. It is a feature specific to certain machines.

Amperage (Amp) Metering is a technique that consistently monitors the amp reading to maintain consistent pressure. This feature requires the addition of an amp meter to the process.

Manual Indexing is a technique where the operator manually adjusts for the wear on the brush using historical statistical data.



ATB BRUSH IMPLEMENTATION

Coolant:

ATB filaments are designed with heat stabilizers and are able to withstand most applications dry.

However, coolant is always recommended for applications on very thin parts, requiring high penetration, and/or high speeds. Coolant provides an ideal working environment for ATB filaments.



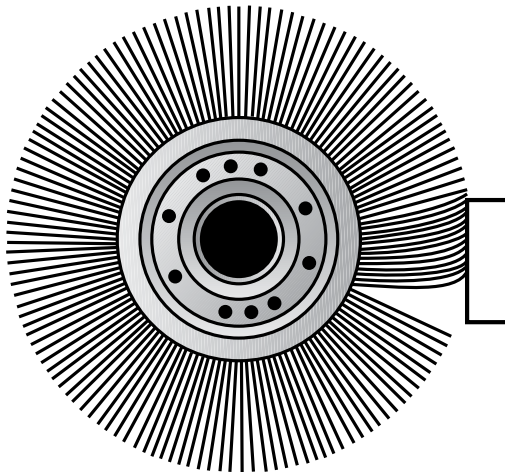
Suggested ATB Wheel Brush Operating Parameters

Diameter	RPM	Penetration
2	4000-6000	0.125
3	3000-4000	0.125
4	2000-3000	0.125
6	1500-2000	0.125
8	1200-1800	0.125
10	1000-1250	0.125
12	800-1000	0.125
14	700-900	0.125

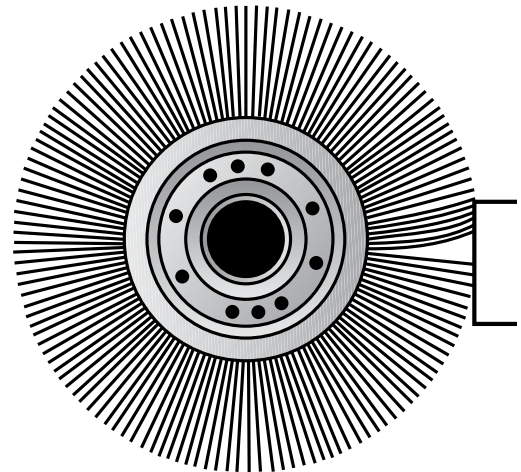
ATB Wheel Brush Penetration

ATB Filaments deburr and radius edges by drawing the filament sides across part edges. Optimum life and cut is obtained by finding the proper balance between brush speed (RPM), part penetration, dwell time, and abrasive grain size.

Correct Penetration



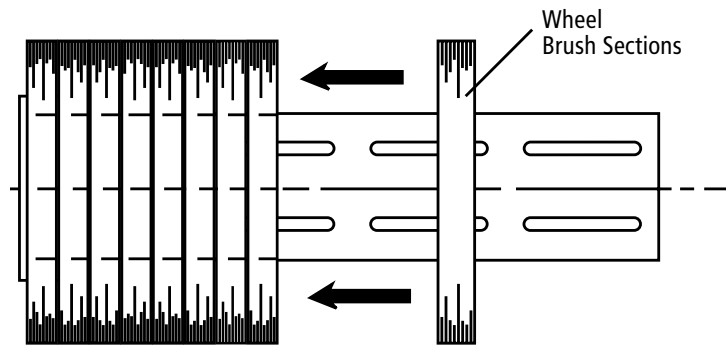
Incorrect Penetration



ENGINEERING INFORMATION

Recommended Horsepower

Diameter	Horse Power	RPM
4"	1/4 HP	3000
6"	1/4 HP	2000
8"	3/4 HP	1800
10"	1 HP	1250
12"	1 HP	1000
14"	1 HP	900



When using multiple brushes on a common shaft multiply Horsepower (HP) with number of brushes (N). (HP x N)

Table of Surface Speed

RPM	1" DIA.	4" DIA.	6" DIA.	8" DIA.	10" DIA.	12" DIA.	13" DIA.	14" DIA.	15" DIA.	16" DIA.
900	235	950	1400	1900	2350	2800	3100	3350	3550	3750
1150	300	1200	1800	2400	3000	3600	3900	4200	4500	4800
1200	315	1250	1900	2500	3200	3800	4100	4400	4700	5000
1500	400	1550	2350	3150	3900	4700	5200	5500	5900	6250
1750	450	1800	2750	3650	4550	5500	6000	6400	6800	7300
2000	525	2100	3100	4200	5200	6300	6800	7300	7800	8400
2400	625	2500	3800	5000	6100	7500	8250	8800	9400	10000
2800	730	2900	4400	5850	7300	8800	9600	10200	11000	11700
3000	785	3100	4700	6300	7800	9400	10250	11000	11800	12500
3200	840	3350	5000	6700	8400	10200	11000	11700	12600	13400
3450	900	3600	5400	7200	9000	11000	11800	12600	13500	
3750	980	3900	5900	7800	9800	11800	12800	13700		
4000	1045	4200	6300	8400	10500	12500	13750			
4500	1180	4700	7200	9400	11800	14100				
5000	1310	5200	7800	10500	13100					
5400	1410	5600	8500	11300						
6000	1570	6300	9400	12500						

* Figures in this table are approximate

(Peripheral Speed in Feet per Minute)

ENGINEERING INFORMATION

English to Metric Conversion

Fraction (Inches)	Decimal (Inches)	Milimeters
1/64	.0156	.40
1/32	.0313	.80
3/64	.0469	1.19
1/8	.125	3.18
9/64	.1406	3.57
5/32	.1563	3.97
11/64	.1719	4.37
3/16	.1875	4.76
13/64	.2031	5.16
7/32	.2188	5.56
15/64	.2344	5.95
1/4	.250	6.35
17/64	.2656	6.75
9/32	.2813	7.15
19/64	.2969	7.54
5/16	.3125	7.94
21/64	.3281	8.33
11/32	.3438	8.73
23/64	.3594	9.13
3/8	.375	9.53
25/64	.3906	9.92
13/32	.4063	10.32
27/64	.4219	10.72
7/16	.4375	11.11
29/64	.4531	11.51
15/32	.4688	11.91
31/64	.4844	12.30
1/2	.500	12.70
33/64	.5156	13.10
17/32	.5313	13.50
35/64	.5469	13.89
9/16	.5625	14.29

Fraction (Inches)	Decimal (Inches)	Milimeters
37/64	.5781	14.68
19/32	.5938	15.08
39/64	.6094	15.48
5/8	.625	15.88
41/64	.6406	16.27
21/32	.6563	16.67
43/64	.6719	17.07
11/16	.6875	17.46
45/64	.7031	17.86
23/32	.7188	18.26
47/64	.7344	18.65
3/4	.750	19.05
49/64	.7656	19.45
25/32	.7813	19.85
51/64	.7969	20.24
13/16	.8125	20.64
53/64	.8281	21.03
27/32	.8438	21.43
55/64	.8594	21.83
7/8	.875	22.23
57/64	.8906	22.62
29/32	.9063	23.02
59/64	.9219	23.42
15/16	.9375	23.81
61/64	.9531	24.21
31/32	.9688	24.61
63/64	.9844	25.00
1	1.0000	25.40
1 1/4	1.250	31.75
1 1/2	1.500	38.10
1 3/4	1.750	44.45

Every effort has been made to incorporate up-to-date and accurate information regarding product specifications. This information Every effort has been made to incorporate up-to-date and accurate information regarding product specifications. This information should be used as a reference only. Osborn International reserves the right to change the product specifications without warning. For specific product information contact Osborn International.

ATB BRUSH TOOL TROUBLESHOOTING

PROBLEM	SOLUTION
Brush not aggressive enough	<ol style="list-style-type: none"> 1. Increase surface speed by increasing OD or RPM 2. Use larger brush diameter 3. Use coarser abrasive filament 4. Decrease feed rate 5. Use shorter trim length and denser brush
Brush too aggressive	<ol style="list-style-type: none"> 1. Reduce surface speed by reducing OD or RPM 2. Increase trim length and use less dense brush 3. Reduce filament diameter 4. Increase feed rate
Finish too rough	<ol style="list-style-type: none"> 1. Use coolant or cutting oil 2. Increase RPM 3. Use finer abrasive filament 4. Use buffing compound
Finish too smooth	<ol style="list-style-type: none"> 1. Increase filament grit size 2. Decrease surface speed 3. Reduce brush fill density
Brushing action not sufficiently uniform	<ol style="list-style-type: none"> 1. Increase trim length and decrease fill density 2. Utilize automated equipment for brushing motion
More action required on edges parallel to brush axis	<ol style="list-style-type: none"> 1. Increase brush RPM 2. Reduce feed rate 3. Dwell brush at the problem area
More action required on edges perpendicular to brush axis	<ol style="list-style-type: none"> 1. Decrease brush RPM 2. Increase feed rate 3. Oscillate brush at the problem area
Smearing/melting of nylon filament	<ol style="list-style-type: none"> 1. Use coolant 2. Reduce RPM 3. Use larger brush diameter

NOTE: Please contact Osborn customer support for any additional questions.



ATB WHEEL BRUSHES

Osborn provides a complete line of ATB Wheel Brushes including narrow and wide face, small ringlocks, and specialty treated configurations. The abrasive nylon filaments eliminate the need for cleaning finished parts. ATB Wheel Brushes are excellent for use on both metallic and non-metallic surfaces.

Osborn's ATB composite hub wheel brushes are engineered to outperform the competition with the highest fill concentration on the market. Our manufacturing process produces a consistent brush face and superior balance for optimal performance.

These brushes are ideal for focused area work and are easily adaptable to standard shop equipment, highly specialized machinery, CNC machining centers, and robot work cells.



ATB™ WHEEL BRUSHES

ATB™ Color Coding System

All Osborn ATB brushes are color coded for easy identification of the grit size.



ATB™ WHEEL BRUSHES

Special ATB Wheel Brush Request Form

Outer Diameter _____

End User _____

Territory _____

Distributor _____

Contact Name _____

Address _____

City _____

State _____

Zip _____

Phone _____

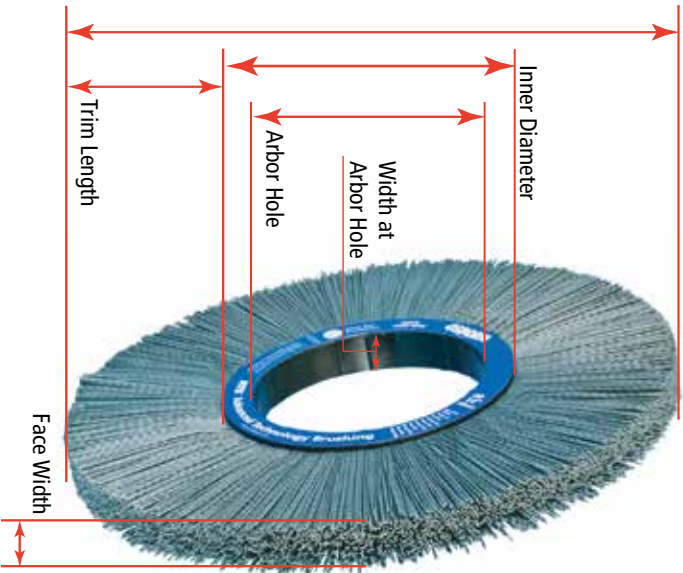
Fax _____

E-Mail _____

Customer Drawing Available: YES NO

YES NO

Date _____



Outer Diameter	Inner Diameter	Arbor Hole	Width at Arbor Hole	Trim Length
Fill Material	Grit	Face Width	RPM	Fill Style

Brush Run in sets YES NO If Yes, How many _____

Equipment Used: _____

Fill Diameter _____

Comp. to Stock Product # _____

Variation _____

Method now being used _____

Desc. if Competitor Brush _____

Price _____

Stock Brushes Tested _____

Result _____

Yearly Potential _____

Order Quantity _____

Application _____

Comments _____

Samples Needed YES NO # of Samples _____



One Keyway Two 180° Keyway Square Hex Round Other

--	--	--	--	--	--



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Brooklyn Heights, OH 44131
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Fax: 216 361 1913
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ATB FASCUT™ WHEEL BRUSHES - AGGRESSIVE

These brushes feature short trim and higher filament density for increased aggression, minimum cycle time and longer brush life.

Applications: Steel Gears, Machine Parts, Stainless Steel, Hardened Alloys, Saw Cut Extrusions, Powder Metal Components



Benefits:

- *Longer brush life*
- *Minimum cycle time*
- *No pre-stressing of filaments*
- *Less filament breakage*
- *Uniform distribution of filaments*
- *No parting line*
- *Balanced for optimal performance*



Adapters for mounting into smaller shafts must be specified and are priced separately. Please refer to page 31 to select the appropriate adapter.

Brush	Grit	Fill	Arbor	Face	Trim	Filament	Max	Std	Item No.
Dia.		Dia.	Hole	Width	Length	Shape	RPM	Pk	
* 6	80	45 x 90	2	1	1-1/4	Rectangular	3600	2	40627
* 6	80	0.040	2	1	1-1/4	Round Crimped	3600	2	40621
* 6	120	0.028	2	1	1-1/4	Round Crimped	3600	2	40622
* 6	120	0.040	2	1	1-1/4	Round Crimped	3600	2	40623
* 6	180	0.035	2	1	1-1/4	Round Crimped	3600	2	40624
* 6	320	0.022	2	1	1-1/4	Round Crimped	3600	2	40625
* 6	500	0.018	2	1	1-1/4	Round Crimped	3600	2	40626
8	80	45 x 90	2	1	1-1/4	Rectangular	3600	2	40592
8	80	0.040	2	1	1-1/4	Round Crimped	3600	2	40586
8	120	0.028	2	1	1-1/4	Round Crimped	3600	1	40587
8	120	0.040	2	1	1-1/4	Round Crimped	3600	2	40588
8	180	0.035	2	1	1-1/4	Round Crimped	3600	2	40589
8	320	0.022	2	1	1-1/4	Round Crimped	3600	2	40590
8	500	0.018	2	1	1-1/4	Round Crimped	3600	2	40591
10	80	45 x 90	4-1/4	1	1-1/4	Rectangular	3600	2	40534
10	80	0.040	4-1/4	1	1-1/4	Round Crimped	3600	2	40529
10	120	0.028	4-1/4	1	1-1/4	Round Crimped	3600	2	40530
10	120	0.040	4-1/4	1	1-1/4	Round Crimped	3600	2	40531
10	180	0.035	4-1/4	1	1-1/4	Round Crimped	3600	2	40532
10	320	0.022	4-1/4	1	1-1/4	Round Crimped	3600	2	40533
12	80	45 x 90	5-1/4	1	1-1/4	Rectangular	1800	2	40650
12	80	0.040	5-1/4	1	1-1/4	Round Crimped	1800	2	40645
12	120	0.028	5-1/4	1	1-1/4	Round Crimped	1800	2	40646
12	120	0.040	5-1/4	1	1-1/4	Round Crimped	1800	2	40647
12	180	0.035	5-1/4	1	1-1/4	Round Crimped	1800	2	40648
12	320	0.022	5-1/4	1	1-1/4	Round Crimped	1800	2	40649
12	80	45 x 90	5-1/4	2	1-1/4	Rectangular	1800	2	40661
12	80	0.040	5-1/4	2	1-1/4	Round Crimped	1800	2	40656
12	120	0.028	5-1/4	2	1-1/4	Round Crimped	1800	2	40657
12	120	0.040	5-1/4	2	1-1/4	Round Crimped	1800	2	40658
12	180	0.035	5-1/4	2	1-1/4	Round Crimped	1800	2	40659
12	320	0.028	5-1/4	2	1-1/4	Round Crimped	1800	2	40660
14	80	45 x 90	5-1/4	1	1-1/4	Rectangular	1800	2	40672
14	80	0.040	5-1/4	1	1-1/4	Round Crimped	1800	2	40667
14	120	0.028	5-1/4	1	1-1/4	Round Crimped	1800	2	40668
14	120	0.040	5-1/4	1	1-1/4	Round Crimped	1800	2	40669
14	180	0.035	5-1/4	1	1-1/4	Round Crimped	1800	2	40670
14	320	0.022	5-1/4	1	1-1/4	Round Crimped	1800	2	40671
14	80	45 x 90	5-1/4	2	1-1/4	Rectangular	1800	2	40687
14	80	0.040	5-1/4	2	1-1/4	Round Crimped	1800	2	40682
14	120	0.028	5-1/4	2	1-1/4	Round Crimped	1800	2	40683
14	120	0.040	5-1/4	2	1-1/4	Round Crimped	1800	2	40684
14	180	0.035	5-1/4	2	1-1/4	Round Crimped	1800	2	40685
14	320	0.022	5-1/4	2	1-1/4	Round Crimped	1800	2	40686

* 6 inch size is ideal for both aggressive or flexible.

ATB FASCUT™ WHEEL BRUSHES - FLEXIBLE

These brushes, with long trim and moderate density, are ideal for applications requiring a high degree of conformability.

Applications: Turbine Blades, Indexable Cutting Tool Inserts, Cam Shafts, Gears, Machined Parts, Edge Radiusing



Benefits:

- Longer brush life
- Minimum cycle time
- No pre-stressing of filaments
- Less filament breakage
- Uniform distribution of filaments
- No parting line
- Balanced for optimal performance



Adapters for mounting into smaller shafts must be specified and are priced separately. Please refer to page 31 to select the appropriate adapter.

Brush Dia.	Grit	Fill Dia.	Arbor Hole	Face Width	Trim Length	Fill Shape	Max RPM	Std Pk	Item No.
* 6	80	45 x 90	2	1	1-1/4	Rectangular	3600	2	40627
* 6	80	0.040	2	1	1-1/4	Round Crimped	3600	2	40621
* 6	120	0.028	2	1	1-1/4	Round Crimped	3600	2	40622
* 6	120	0.040	2	1	1-1/4	Round Crimped	3600	2	40623
* 6	180	0.035	2	1	1-1/4	Round Crimped	3600	2	40624
* 6	320	0.022	2	1	1-1/4	Round Crimped	3600	2	40625
* 6	500	0.018	2	1	1-1/4	Round Crimped	3600	2	40626
8	80	45 x 90	1-1/4	1	2-1/4	Rectangular	3600	2	40598
8	80	0.040	1-1/4	1	2-1/4	Round Crimped	3600	2	40594
8	120	0.040	1-1/4	1	2-1/4	Round Crimped	3600	2	40595
8	180	0.035	1-1/4	1	2-1/4	Round Crimped	3600	2	40596
8	320	0.022	1-1/4	1	2-1/4	Round Crimped	3600	2	40597
10	80	45 x 90	2	1	2-1/16	Rectangular	3600	2	40544
10	80	45 x 90	2	1	3	Rectangular	3600	2	40539
10	80	0.040	2	1	2-1/16	Round Crimped	3600	2	40540
10	80	0.040	2	1	3	Round Crimped	3600	2	40535
10	120	0.040	2	1	2-1/16	Round Crimped	3600	2	40541
10	120	0.040	2	1	3	Round Crimped	3600	2	40536
10	180	0.035	2	1	2-1/16	Round Crimped	3600	2	40542
10	180	0.035	2	1	3	Round Crimped	3600	2	40537
10	320	0.022	2	1	2-1/16	Round Crimped	3600	2	40543
10	320	0.022	2	1	3	Round Crimped	3600	2	40538
12	80	45 x 90	4-1/4	1	3	Rectangular	1800	2	40655
12	80	0.040	4-1/4	1	3	Round Crimped	1800	2	40651
12	120	0.040	4-1/4	1	3	Round Crimped	1800	2	40652
12	180	0.035	4-1/4	1	3	Round Crimped	1800	2	40653
12	320	0.022	4-1/4	1	3	Round Crimped	1800	2	40654
12	80	45 x 90	4-1/4	2	3	Rectangular	1800	2	40666
12	80	0.040	4-1/4	2	3	Round Crimped	1800	2	40662
12	120	0.040	4-1/4	2	3	Round Crimped	1800	2	40663
12	180	0.035	4-1/4	2	3	Round Crimped	1800	2	40664
12	320	0.022	4-1/4	2	3	Round Crimped	1800	2	40665
14	80	45 x 90	5-1/4	1	3-5/8	Rectangular	1800	2	40187
14	120	45 x 90	5-1/4	1	3-5/8	Rectangular	1800	2	40188
14	180	45 x 90	5-1/4	1	3-5/8	Rectangular	1800	2	40191
14	320	45 x 90	5-1/4	1	3-5/8	Rectangular	1800	2	40190
14	80	0.040	5-1/4	1	3-5/8	Round Crimped	1800	2	40195
14	120	0.028	5-1/4	1	3-5/8	Round Crimped	1800	1	40158
14	120	0.040	5-1/4	1	3-5/8	Round Crimped	1800	2	40192
14	180	0.035	5-1/4	1	3-5/8	Round Crimped	1800	1	40197
14	320	0.022	5-1/4	1	3-5/8	Round Crimped	1800	2	40194
14	80	45 x 90	5-1/4	2-1/2	3-5/8	Rectangular	1800	2	40170
14	120	45 x 90	5-1/4	2-1/2	3-5/8	Rectangular	1800	2	40171
14	180	45 x 90	5-1/4	2-1/2	3-5/8	Rectangular	1800	2	40172
14	320	45 x 90	5-1/4	2-1/2	3-5/8	Rectangular	1800	2	40173
14	80	0.040	5-1/4	2-1/2	3-5/8	Round Crimped	1800	2	40165
14	120	0.040	5-1/4	2-1/2	3-5/8	Round Crimped	1800	2	40162
14	180	0.035	5-1/4	2-1/2	3-5/8	Round Crimped	1800	2	40163
14	320	0.022	5-1/4	2-1/2	3-5/8	Round Crimped	1800	2	40164

ATB FASCUT™ BRUSHES - FLEXIBLE SINJET™

REPLACEMENT SECTIONS FOR SINJET CARBIDE HONING MACHINES

Osborn's new composite hub wheel is lighter, denser, and more durable than what competitors are offering. They are designed for demanding applications where balance is critical. The composite is impact-resistant to prevent cracking. These wheels can be ganged to produce any face width. A full range of fill materials, diameters, and face widths are available.

Sinjet™



Note: Not recommended for Sinjet IBX-12 machine. Call Osborn for recommendations.

Brush Dia.	Grit	Fill Dia.	Fill Material	Arbor Hole	Face Width	Trim Length	Filament Shape	Max RPM	Std Pk	Item No.
11	80	45 x 90	Silicon Carbide	4-1/4	1	2-1/2	Rectangular	2000	2	40420
11	120	45 x 90	Silicon Carbide	4-1/4	1	2-1/2	Rectangular	2000	2	40421
11	180	45 x 90	Silicon Carbide	4-1/4	1	2-1/2	Rectangular	2000	2	40422
11	320	45 x 90	Silicon Carbide	4-1/4	1	2-1/2	Rectangular	2000	2	40423
11	80	45 x 90	Silicon Carbide	4-1/4	2	2-1/2	Rectangular	2000	2	40400
11	120	45 x 90	Silicon Carbide	4-1/4	2	2-1/2	Rectangular	2000	2	40401
11	180	45 x 90	Silicon Carbide	4-1/4	2	2-1/2	Rectangular	2000	2	40402
11	320	45 x 90	Silicon Carbide	4-1/4	2	2-1/2	Rectangular	2000	2	40403
11	80	0.040	Silicon Carbide	4-1/4	1	2-1/2	Crimped	2000	2	40410
11	120	0.040	Silicon Carbide	4-1/4	1	2-1/2	Crimped	2000	2	40411
11	180	0.035	Silicon Carbide	4-1/4	1	2-1/2	Crimped	2000	2	40412
11	320	0.022	Silicon Carbide	4-1/4	1	2-1/2	Crimped	2000	2	40413
11	80	0.040	Silicon Carbide	4-1/4	2	2-1/2	Crimped	2000	2	40390
11	120	0.040	Silicon Carbide	4-1/4	2	2-1/2	Crimped	2000	2	40391
11	180	0.035	Silicon Carbide	4-1/4	2	2-1/2	Crimped	2000	2	40392
11	320	0.022	Silicon Carbide	4-1/4	2	2-1/2	Crimped	2000	2	40393



Adapters for mounting into smaller shafts must be specified and are priced separately. Please refer to page 31 to select the appropriate adapter.



THE CUTTING EDGE IN PART FINISHING

Whether the production process is fully automated, manual or in-between, significant improvements can be achieved with Sinjet™ finishing machines and Osborn ATB™ Advanced Technology Brushing products.

Sinjet machines provide the benefits of faster cycle times, along with higher consistency, and tighter tolerances. NC controls Sinjet systems for easy integration into existing automated lines. On difficult jobs, the flexibility of these machines allows them to surpass even CNC systems.

All Sinjet products are backed by state-of-the-art engineering support from Osborn. Osborn leads the industry in brush technology applications and will gladly provide assistance for any application — send us your parts for a complete consultation.

ATB MASTER™ WHEEL BRUSHES

These brushes have a wide-face construction which is highly effective on both metallic and non-metallic materials. Since the cutting action does not require the use of a compound, the need to clean finished parts is eliminated. The brushes may be used singly or mounted in multiple for a wider face. Certain styles are available with rectangular filaments.

Applications: Deburring, Edge Breaking, Finishing



Adapters for mounting into smaller shafts must be specified and are priced separately. Please refer to page 31 to select the appropriate adapter.

Brush Dia.	Grit	Fill Material	Arbor Hole	Face Width	Trim Length	Filament Shape	Max RPM	Std Pk	Item No.
3	80	Silicon Carbide	5/8	1/2	5/8	Round Crimped	20000	6	22248
3	120	Silicon Carbide	5/8	1/2	5/8	Round Crimped	20000	6	22249
3	180	Silicon Carbide	5/8	1/2	5/8	Round Crimped	20000	6	22250
3	320	Silicon Carbide	5/8	1/2	5/8	Round Crimped	20000	6	22251
3	80	Silicon Carbide	5/8	7/8	5/8	Round Crimped	20000	6	22252
3	120	Silicon Carbide	5/8	7/8	5/8	Round Crimped	20000	6	22253
3	180	Silicon Carbide	5/8	7/8	5/8	Round Crimped	20000	6	22254
3	320	Silicon Carbide	5/8	7/8	5/8	Round Crimped	20000	6	22255
4	80	Silicon Carbide	5/8	5/8	3/4	Round Crimped	12000	6	22256
4	120	Silicon Carbide	5/8	5/8	3/4	Round Crimped	12000	6	22257
4	180	Silicon Carbide	5/8	5/8	3/4	Round Crimped	12000	6	22258
4	320	Silicon Carbide	5/8	5/8	3/4	Round Crimped	12000	6	22259
4	80	Silicon Carbide	5/8	1/2	1-1/8	Round Crimped	18000	6	22240
4	80	Silicon Carbide	5/8	7/8	1-1/8	Round Crimped	18000	6	22244
6	80	Aluminum Oxide	2	7/8	1-1/16	Rectangular	6000	2	22280
6	120	Aluminum Oxide	2	7/8	1-1/16	Rectangular	6000	2	22281
6	180	Aluminum Oxide	2	7/8	1-1/16	Rectangular	6000	2	22282
6	320	Aluminum Oxide	2	7/8	1-1/16	Rectangular	6000	2	22283
6	80	Silicon Carbide	2	7/8	1-1/16	Rectangular	6000	2	22292
6	120	Silicon Carbide	2	7/8	1-1/16	Rectangular	6000	2	22293
6	180	Silicon Carbide	2	7/8	1-1/16	Rectangular	6000	2	22284
6	320	Silicon Carbide	2	7/8	1-1/16	Rectangular	6000	2	22294
6	80	Silicon Carbide	2	7/8	1-1/16	Round Crimped	6000	2	22285
6	120	Silicon Carbide	2	7/8	1-1/16	Round Crimped	6000	2	22286
6	180	Silicon Carbide	2	7/8	1-1/16	Round Crimped	6000	2	22287
6	320	Silicon Carbide	2	7/8	1-1/16	Round Crimped	6000	2	22288
6	500	Silicon Carbide	2	7/8	1-1/16	Round Crimped	6000	2	22289
8	80	Silicon Carbide	2	7/8	1-1/2	Round Crimped	4500	2	22296
8	120	Silicon Carbide	2	7/8	1-1/2	Round Crimped	4500	2	22297
8	180	Silicon Carbide	2	7/8	1-1/2	Round Crimped	4500	2	22298
8	320	Silicon Carbide	2	7/8	1-1/2	Round Crimped	4500	2	22299
8	500	Silicon Carbide	2	7/8	1-1/2	Round Crimped	4500	2	22300
10	80	Silicon Carbide	2	1	2-1/16	Round Crimped	3600	2	22312
10	120	Silicon Carbide	2	1	2-1/16	Round Crimped	3600	2	22313
10	180	Silicon Carbide	2	1	2-1/16	Round Crimped	3600	2	22314
10	320	Silicon Carbide	2	1	2-1/16	Round Crimped	3600	2	22315
12	80	Silicon Carbide	2	1	2-1/8	Round Crimped	3000	2	22325
12	120	Silicon Carbide	2	1	2-1/8	Round Crimped	3000	2	22326
12	180	Silicon Carbide	2	1	2-1/8	Round Crimped	3000	2	22327
12	320	Silicon Carbide	2	1	2-1/8	Round Crimped	3000	2	22328
14	80	Silicon Carbide	2	1	2-1/8	Round Crimped	2400	2	22333
14	120	Silicon Carbide	2	1	2-1/8	Round Crimped	2400	2	22334
14	180	Silicon Carbide	2	1	2-1/8	Round Crimped	2400	2	22335
14	320	Silicon Carbide	2	1	2-1/8	Round Crimped	2400	2	22336

ATB™ WHEEL BRUSHES



ATB MONARCH™ WHEEL BRUSHES

This narrow face wheel brush features the same abrasive cutting power as our wide face brushes but with a narrower face and longer trim. Rectangular filaments are available in

Applications: Confined Areas and Irregular Shapes, Excellent for Carbide Insert Edge Honing, Piston Ring Grooves, Inside Steel Tanks, Wood Finishing

Brush Dia.	Grit	Fill Material	Arbor Hole	Face Width	Trim Length	Filament Shape	Max RPM	Std Pk	Item No.
6	80	Silicon Carbide	2	1/2	1-5/8	Round Straight	5500	12	20665
6	120	Silicon Carbide	2	1/2	1-5/8	Round Straight	5500	12	20666
6	180	Silicon Carbide	2	1/2	1-5/8	Round Straight	5500	12	20667
6	320	Silicon Carbide	2	1/2	1-5/8	Round Straight	5500	12	20668
6	500	Silicon Carbide	2	1/2	1-5/8	Round Straight	5500	12	20669
8	80	Silicon Carbide	2	1/2	2-5/8	Round Straight	5500	12	20652
8	120	Silicon Carbide	2	1/2	2-5/8	Round Straight	5500	12	20660
8	180	Silicon Carbide	2	1/2	2-5/8	Round Straight	5500	12	20654
8	320	Silicon Carbide	2	1/2	2-5/8	Round Straight	5500	12	20646
8	500	Silicon Carbide	2	1/2	2-5/8	Round Straight	5500	12	20661
11	80	Silicon Carbide	4-1/4	5/8	3	Rectangular	3600	12	20623
11	120	Silicon Carbide	4-1/4	5/8	3	Rectangular	3600	12	20622
11	180	Silicon Carbide	4-1/4	5/8	3	Rectangular	3600	12	20875
11	320	Silicon Carbide	4-1/4	5/8	3	Rectangular	3600	12	20621
12	80	Silicon Carbide	4-1/4	5/8	3-1/2	Round Crimped	3000	12	20735
12	120	Silicon Carbide	4-1/4	5/8	3-1/2	Round Crimped	3000	12	20971
12	180	Silicon Carbide	4-1/4	5/8	3-1/2	Round Crimped	3000	12	20973
12	320	Silicon Carbide	4-1/4	5/8	3-1/2	Round Crimped	3000	12	20736
14	80	Silicon Carbide	5-1/4	5/8	3-7/8	Rectangular	3600	12	20877
14	120	Silicon Carbide	5-1/4	5/8	3-7/8	Rectangular	3600	12	20876
14	180	Silicon Carbide	5-1/4	5/8	3-7/8	Rectangular	3600	12	20624
14	320	Silicon Carbide	5-1/4	5/8	3-7/8	Rectangular	3600	12	20878
14	60	Silicon Carbide	5-1/4	5/8	3-7/8	Round Crimped	3000	12	20891
14	80	Silicon Carbide	5-1/4	5/8	3-7/8	Round Crimped	3000	12	20888
14	120	Silicon Carbide	5-1/4	5/8	3-7/8	Round Crimped	3000	12	20887
14	180	Silicon Carbide	5-1/4	5/8	3-7/8	Round Crimped	3000	12	20886
14	240	Silicon Carbide	5-1/4	5/8	3-7/8	Round Crimped	3000	12	20885
14	320	Silicon Carbide	5-1/4	5/8	3-7/8	Round Crimped	3000	12	20884
22	180	Silicon Carbide	7-1/4	5/8	6-5/8	Rectangular	600	12	20097



Adapters for mounting into smaller shafts must be specified and are priced separately. Please refer to page 31 to select the appropriate adapter.



ATB RINGLOCK™ WHEEL BRUSHES

This small diameter brush is ideal for cleaning and polishing both ID and OD surfaces. These brushes can be used with portable tools and drill presses.

Applications: Cleaning and Polishing ID and OD Surfaces

Brush Dia.	Grit	Fill Material	Arbor Hole	Face Width	Trim Length	Max RPM	Std Pk	Item No.
1-1/2	120	Silcon Carbide	1/2	1/4	1/4	20000	12	11146
1-1/2	180	Silcon Carbide	1/2	1/4	1/4	20000	12	11147
1-1/2	320	Silcon Carbide	1/2	1/4	1/4	20000	12	11148
2	120	Silcon Carbide	5/8	3/8	7/16	15000	12	11149
2	180	Silcon Carbide	5/8	3/8	7/16	15000	12	11150
2	320	Silcon Carbide	5/8	3/8	7/16	15000	12	11151
2-1/2	120	Silcon Carbide	5/8	3/8	11/16	15000	12	11153
2-1/2	180	Silcon Carbide	5/8	3/8	11/16	15000	12	11154
2-1/2	320	Silcon Carbide	5/8	3/8	11/16	15000	12	11155



ATB CENTERLESS BRUSHES

This brush is designed for use on centerless grinding machines. Changeover from grinding wheel to brush is usually no different than a change from one grinding wheel to another.

This table shows sizes which are the most commonly used styles. Other sizes and fill varieties are available. Contact your Osborn representative for pricing and availability of these and others not listed.



Outer Dia.	Grit	Fill Material	Face Width	Inner Dia.	Std Pk	Item No.
20	80	Silicon Carbide	6	12	1	13803
20	120	Silicon Carbide	6	12	1	13835
20	180	Silicon Carbide	6	12	1	13843
20	320	Silicon Carbide	6	12	1	13839
20	500	Silicon Carbide	6	12	1	13809

Contact your Osborn representative for pricing and availability of Centerless Brushes

ADAPTERS

CENTER PLATES

Used with Airway Flanges.

Used in pairs only with the composite wheel brushes and used individually with other wheel brushes.

Diameter	Arbor Hole	Item No.
3-1/4	1/2	75331
3-1/4	5/8	75332
3-1/4	3/4	75333
3-1/4	1	75334
3-1/4	1-1/4	75335
3-1/4	2	75336
4-1/4	3/4	75339
4-1/4	7/8	75340
4-1/4	1	75341
4-1/4	1-1/4	75342
4-1/4	1-1/2	75343
4-1/4	2	75344
5-1/4	1-1/4	75347
5-1/4	1-1/2	75348*
5-1/4	2	75350**
7-1/4	1-1/4	75353
7-1/4	1-1/2	75354
7-1/4	1-3/4	75355
7-1/4	2	75356



* Double Keyway 3/8" x 3/16"

** Double Keyway 1/2" x 1/4"

AIRWAY FLANGES

Used with Center Plates.

Diameter	Arbor Hole	Item No.
4-1/2	1/2	46140
4-1/2	5/8	46143
4-1/2	3/4	46141
4-1/2	1	46146
4-1/2	1-1/4	46142
4-1/2	2	46147
6	3/4	46159
6	7/8	46158
6	1	46161
6	1-1/4	46160
6	1-1/2	46163
6	2	46164
8	1-1/4	46126
8	1-1/2	46128
8	1-3/4	46127
8	2	46130



SIDE PLATES FOR USE WITH WHEEL STYLE BRUSHES



Used in pairs.

Diameter	Arbor Hole	Item No.
3-1/2	5/8	75086
3-1/2	1-1/4	75087
4	5/8	75088
4	1-1/4	75089
5-1/2	5/8	75090
5-1/2	1-1/4	75091
5-1/2	1-1/2	75092
9-5/8	1-1/4	75093
9-5/8	2	75094

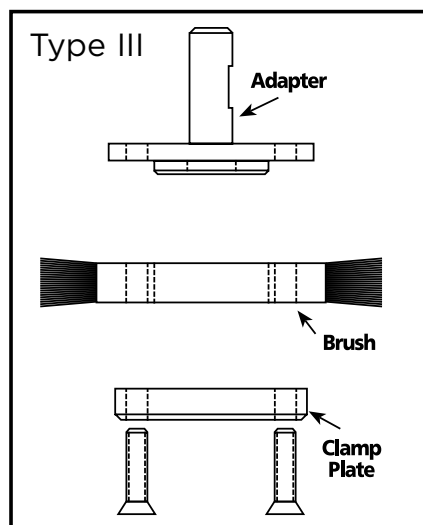
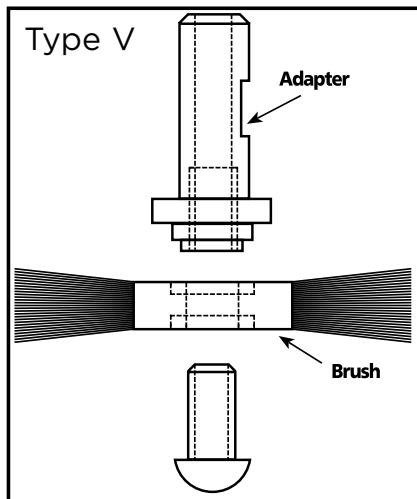
BRUSH DRIVE ARBORS



For brushes up to 3" in diameter only. Designed for use with a single brush only. Not for use with grinding wheels, abrasive discs, buffs, buffing pads, or other non-brush perishable tools.

Diameter	Overall Length	Shank Dia.	Item No.	Clamshell
1/4	1-1/2	3/16	75007	75386
3/8	1-3/4	1/4	75008	75387
1/2	1-3/4	1/4	75009	75388
5/8	1-3/4	1/4	75010	75389

CNC ADAPTERS FOR ATB BRUSHES



Type III brushes include adapter and clamp plate

Brush Dia.	Arbor Hole	Shank Dia.	Description	Adapter Item No.
3	5/8	3/4	Type V	75117
4	5/8	3/4	Type V	75118
6	2	3/4	Type III	75077
8	2	3/4	Type III	75077
9	2	3/4	Type III	75077
10	2	1-1/4	Type III	75080
12	2	1-1/4	Type III	75080
14	2	1-1/4	Type III	75080

METAL ADAPTERS FOR BRUSHES WITH 2" ARBOR HOLE

For use with Osborn wheel brushes. Slip fit adapter.

Adapter Fits AH	Arbor Hole	Item No.	Clamshell
2	1/4	75019	75370
2	3/8	75020	75371
2	1/2	75021	75372
2	5/8	75022	75373
2	3/4	75023	75374
2	7/8	75024	75375
2	1	75025	75376
2	1-1/8	75026	75377
2	1-1/4	75027	75378
2	1-1/2	75028	75379



Used in pairs.

METAL ADAPTERS FOR BRUSHES WITH 1-1/4" ARBOR HOLE

For use with Osborn wheel brushes. Slip fit adapter.

Adapter Fits AH	Arbor Hole	Item No.
1-1/4	1/4	75046
1-1/4	3/8	75047
1-1/4	1/2	75048
1-1/4	5/8	75049
1-1/4	3/4	75050
1-1/4	7/8	75051
1-1/4	1	75052



Used in pairs.

CENTERING BUSHINGS FOR SMALL ID BRUSHES

Adapter Fits AH	Bushing AH	Item No.
3/8	1/4	75058
1/2	1/4	75059
1/2	3/8	75060
5/8	1/4	75063
5/8	3/8	75062
5/8	1/2	75061



Use only one.



ATB DISC BRUSHES

These brushes are perfect for many applications in a variety of industries including automotive, woodworking, cutting tool, aircraft/aerospace, and general industrial use. And our adapters allow them to work easily with existing equipment. Osborn maintains our most popular configurations as standard stock items. A wide variety of specials can be made to order.



ATB™ Color Coding System

All Osborn ATB brushes are color coded for easy identification of the grit size.



Special ATB Disc Brush Request Form

Territory _____

End User _____

Distributor _____

Contact Name _____

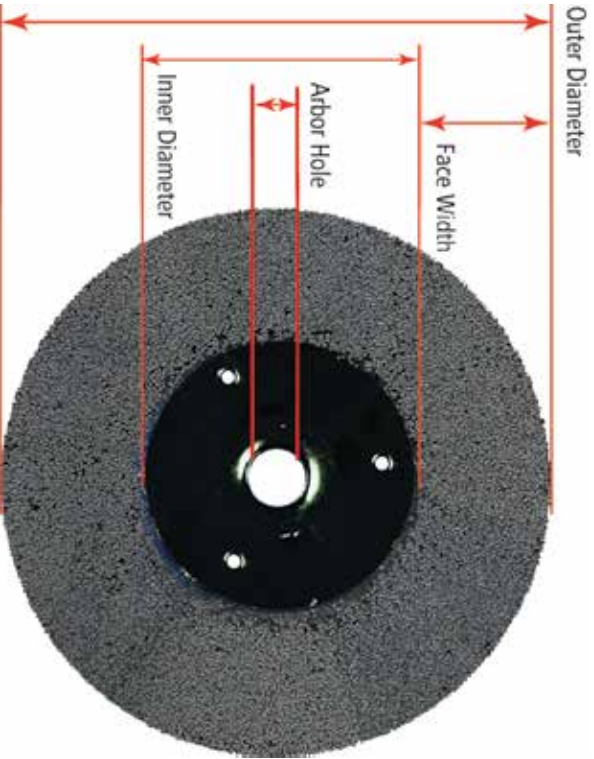
Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Customer Drawing Available: YES NO Date _____



Outer Diameter	Inner Diameter	Brush Style	Trim Length	Face Width

Brush Run in sets YES NO If Yes, How many _____

Equipment Used: _____

Block Material _____ Arbor Hole _____

Drive Pin Location, Number & Size _____

Comp. to Stock Product # _____ Variation _____

Method now being used _____

Desc. if Competitor Brush _____ Price _____

Comments _____



1100 Resource Drive, Suite 1
 Brooklyn Heights, OH 44131
 Phone: 800 720 3358 * 216 361 1900
 Fax: 216 361 1913
 www.osborn.com
 marketsupport@osborn.com

Stock Brushes Tested _____ Result _____

Yearly Potential _____ Order Quantity _____

Application _____

Samples Needed YES NO # of Samples _____

ATB UNI-LOK® BRUSHES

Osborn ATB disc brushes defined a new level of low cost, high quality metal finishing tools upon their introduction. As a result of ongoing advancements, ATB metal finishing tools continue to be the leading choice for in-machine deburring, edge radiusing and surface conditioning applications.

Osborn's new ATB Uni-Lok disc brushes are reliable, high-performance tools that produce consistent quality and cost effective results. These flexible, abrasive tools are selective in nature and preferentially deburr, radius corners and edges without changing critical dimensional tolerances.

The tools are easily integrated into today's automated machinery, CNC machining centers, transfer lines and robotic cells. Repeatable results, high through-put and adaptability to existing plant equipment make ATB metal finishing tools considered one of the most economical deburring methods on the market.

DISC BRUSH CONFIGURATIONS

Osborn maintains three configurations as standard stock options: max density, turbo and standard. We also have the capability of providing customized products for a wide variety of applications. Already have a disc brush adapter? ATB Uni-Lok brushes fit most disc brush adapters. For a limited time, Osborn will replace your old Osborn Disc Brush Adapter with our New Uni-Lok Adapter.



ATB™ Uni-Lok® - Max Density

Osborn's maximum density design delivers maximum aggression for the most demanding applications. These tools are capable of processing large burrs and generating significant edge radii on stainless steel and hardened alloys without altering the part's dimension. Our maximum density allows for minimal cycle time and longer brush life.

Typical applications: Engine Block Housing, Airframe Components, Gears after Machining/Grinding, Die Cast Parts after Machining, Cast Aluminum Automobile Wheels, Blending Tool Marks



ATB™ Uni-Lok® - Turbo

Osborn's unique turbo design draws air into the brush face allowing the brush to run cooler in dry applications. In wet applications, the turbo design allows for better coolant flow. These brushes are capable of handling moderate to severe burrs or where conformability is needed.

Typical applications: Aluminum Engine Housing, Engine Components, Fine Blanked Steel Parts, Pump Housings



ATB™ Uni-Lok® - Tufmatic™

Osborn's Tufmatic design is constructed with a tough polypropylene base and precisely located staple set tufts. This density configuration allows the abrasive filaments to flow evenly and consistently over the most intricate flat faced parts. Osborn's tufmatic design allows for fast, accurate burr removal, precisely controlled edge radiusing and improved surface finishing. These tools are designed to be compatible with Osborn's Uni-Lok adapter system and are effective in both dry and wet applications.

Typical applications: Saw Cut Aluminum Extrusions, Heat Sinks, Machined Parts, Powdered Metal Parts, Electronic Aluminum Housings, Stamped Parts, Fineblanked Steel Parts, Robotic Deburring



Brush Dia.	Grit	Filament Dia.	Fill Material	Trim Length	Filament Shape	Max RPM	Std Pk	Max Density Item No.	Turbo Item No.	Adapter
3	80	45x90	Silicon Carbide	1-1/2	Rectangular	4500	1	47020	47080	47200
3	80	.040	Silicon Carbide	1-1/2	Round Crimped	4500	1	47021	47081	
3	120	.028	Silicon Carbide	1-1/2	Round Crimped	4500	1	47022	47082	
3	120	.040	Silicon Carbide	1-1/2	Round Crimped	4500	1	47023	47083	
3	180	.035	Silicon Carbide	1-1/2	Round Crimped	4500	1	47024	47084	
3	320	.022	Silicon Carbide	1-1/2	Round Crimped	4500	1	47025	47085	
4	80	45x90	Silicon Carbide	1-1/2	Rectangular	3500	1	47026	47086	
4	80	.040	Silicon Carbide	1-1/2	Round Crimped	3500	1	47027	47087	
4	120	.028	Silicon Carbide	1-1/2	Round Crimped	3500	1	47028	47088	
4	120	.040	Silicon Carbide	1-1/2	Round Crimped	3500	1	47029	47089	
4	180	.035	Silicon Carbide	1-1/2	Round Crimped	3500	1	47030	47090	
4	320	.022	Silicon Carbide	1-1/2	Round Crimped	3500	1	47031	47091	
5	80	45x90	Silicon Carbide	1-1/2	Rectangular	3000	1	47032	47092	
5	80	.040	Silicon Carbide	1-1/2	Round Crimped	3000	1	47033	47093	
5	120	.028	Silicon Carbide	1-1/2	Round Crimped	3000	1	47034	47094	
5	120	.040	Silicon Carbide	1-1/2	Round Crimped	3000	1	47035	47095	
5	180	.035	Silicon Carbide	1-1/2	Round Crimped	3000	1	47036	47096	
5	320	.022	Silicon Carbide	1-1/2	Round Crimped	3000	1	47037	47097	
6	80	45x90	Silicon Carbide	1-1/2	Rectangular	2500	1	47038	47098	47201
6	80	.040	Silicon Carbide	1-1/2	Round Crimped	2500	1	47039	47099	
6	120	.028	Silicon Carbide	1-1/2	Round Crimped	2500	1	47040	47100	
6	120	.040	Silicon Carbide	1-1/2	Round Crimped	2500	1	47041	47101	
6	180	.035	Silicon Carbide	1-1/2	Round Crimped	2500	1	47042	47102	
6	320	.022	Silicon Carbide	1-1/2	Round Crimped	2500	1	47043	47103	
7	80	45x90	Silicon Carbide	1-1/2	Rectangular	2000	1	47044	47104	
7	80	.040	Silicon Carbide	1-1/2	Round Crimped	2000	1	47045	47105	
7	120	.028	Silicon Carbide	1-1/2	Round Crimped	2000	1	47046	47106	
7	120	.040	Silicon Carbide	1-1/2	Round Crimped	2000	1	47047	47107	
7	180	.035	Silicon Carbide	1-1/2	Round Crimped	2000	1	47048	47108	
7	320	.022	Silicon Carbide	1-1/2	Round Crimped	2000	1	47049	47109	
8	80	45x90	Silicon Carbide	1-1/2	Rectangular	1800	1	47050	47110	47202
8	80	.040	Silicon Carbide	1-1/2	Round Crimped	1800	1	47051	47111	
8	120	.028	Silicon Carbide	1-1/2	Round Crimped	1800	1	47052	47112	
8	120	.040	Silicon Carbide	1-1/2	Round Crimped	1800	1	47053	47113	
8	180	.035	Silicon Carbide	1-1/2	Round Crimped	1800	1	47054	47114	
8	320	.022	Silicon Carbide	1-1/2	Round Crimped	1800	1	47055	47115	
9	80	45x90	Silicon Carbide	1-1/2	Rectangular	1500	1	47056	47116	
9	80	.040	Silicon Carbide	1-1/2	Round Crimped	1500	1	47057	47117	
9	120	.028	Silicon Carbide	1-1/2	Round Crimped	1500	1	47058	47118	
9	120	.040	Silicon Carbide	1-1/2	Round Crimped	1500	1	47059	47119	
9	180	.035	Silicon Carbide	1-1/2	Round Crimped	1500	1	47060	47120	
9	320	.022	Silicon Carbide	1-1/2	Round Crimped	1500	1	47061	47121	
10	80	45x90	Silicon Carbide	1-1/2	Rectangular	1500	1	47062	47122	47203
10	80	.040	Silicon Carbide	1-1/2	Round Crimped	1500	1	47063	47123	
10	120	.028	Silicon Carbide	1-1/2	Round Crimped	1500	1	47064	47124	
10	120	.040	Silicon Carbide	1-1/2	Round Crimped	1500	1	47065	47125	
10	180	.035	Silicon Carbide	1-1/2	Round Crimped	1500	1	47066	47126	
10	320	.022	Silicon Carbide	1-1/2	Round Crimped	1500	1	47067	47127	
12	80	45x90	Silicon Carbide	1-1/2	Rectangular	1340	1	47068	47128	
12	80	.040	Silicon Carbide	1-1/2	Round Crimped	1340	1	47069	47129	
12	120	.028	Silicon Carbide	1-1/2	Round Crimped	1340	1	47070	47130	
12	120	.040	Silicon Carbide	1-1/2	Round Crimped	1340	1	47071	47131	
12	180	.035	Silicon Carbide	1-1/2	Round Crimped	1340	1	47072	47132	
12	320	.022	Silicon Carbide	1-1/2	Round Crimped	1340	1	47073	47133	
14	80	45x90	Silicon Carbide	1-1/2	Rectangular	1200	1	47074	47134	
14	80	.040	Silicon Carbide	1-1/2	Round Crimped	1200	1	47075	47135	
14	120	.028	Silicon Carbide	1-1/2	Round Crimped	1200	1	47076	47136	
14	120	.040	Silicon Carbide	1-1/2	Round Crimped	1200	1	47077	47137	
14	180	.035	Silicon Carbide	1-1/2	Round Crimped	1200	1	47078	47138	
14	320	.022	Silicon Carbide	1-1/2	Round Crimped	1200	1	47079	47139	

Call Customer Service for availability & Quote

* Straight Filaments

ATB™ COMPOSITE DISC BRUSHES



ATB TUFMATIC™ BRUSHES

Osborn's Uni-Lok Tufmatic design is constructed with a tough, polypropylene base and precisely located staple set tufts. This density configuration allows the abrasive filaments to flow evenly and consistently over the most intricate flat faced parts. Osborn's tuftmatic design allows for fast, accurate burr removal, precisely controlled edge radiusing and improved surface finishing. These brushes are designed to be compatible with end deburring machines and stationary finishing machines.

Brush Dia.	Grit	Fill Dia.	Fill Shape	Trim Length	Arbor Hole	Block Height	Max RPM	Item No.
6	80	0.040	Crimped	1	7/8	3/4	3000	47159
6	120	0.040	Crimped	1	7/8	3/4	3000	47160
6	120	0.028	Straight	1	7/8	3/4	3000	47161
6	320	0.022	Crimped	1	7/8	3/4	3000	47163
8	80	0.040	Crimped	1	7/8	3/4	3000	47171
8	120	0.040	Crimped	1	7/8	3/4	3000	47172
8	120	0.028	Straight	1	7/8	3/4	3000	47173
8	320	0.022	Crimped	1	7/8	3/4	3000	47175
10	80	0.040	Crimped	1	7/8	3/4		47183
10	120	0.040	Crimped	1	7/8	3/4	3000	47184
10	120	0.028	Straight	1	7/8	3/4	3000	47185
10	320	0.022	Crimped	1	7/8	3/4	3000	47187
12	80	0.040	Crimped	1	7/8	3/4	1500	47189
12	120	0.040	Crimped	1	7/8	3/4	1500	47190
12	120	0.028	Straight	1	7/8	3/4	1500	47191
12	320	0.022	Crimped	1	7/8	3/4	1500	47193
14	80	0.040	Crimped	1	7/8	3/4	1500	47195
14	120	0.040	Crimped	1	7/8	3/4	1500	47196
14	120	0.028	Straight	1	7/8	3/4	1500	47197
14	320	0.022	Crimped	1	7/8	3/4	1500	47199

Applications: Machined Parts, Powdered Metal Parts, Electronic Aluminum Housings, Stamped Parts, Fineblanked Steel Parts, CNC Machine Center Deburring, Robotic Deburring



ATB ALUMINUM WHEEL FINISHING DISC BRUSHES

A multi-directional deburring tool with long trim length, this flexible brush reaches the crevices located in multi-level planes on aluminum wheels. ATB composite discs can easily be tailored to meet the specifications of your equipment. Simple to operate, the brush is rotated in both clockwise and counterclockwise directions while the wheel is held stationary. Cycle time is approximately 15 seconds in each direction.

Brush Dia.	Grit	Filament Dia.	Fill Material	Arbor Hole	Trim Length	Filament Shape	Max RPM	Std Pk	Item No.
15	120	100 x 170	Silicon Carbide	4-1/2	8-1/2	Rectangular	600	1	40263



Benefits

- Consistent results
- Uniform edge radius
- Shorter cycle time – the process is automated
- Longer life compared to other brush styles
- Ease of use – the brush is customized to fit your machine
- Improved safety
- Less inventory required– same brush can be used on the same size wheels with different aluminum wheel designs

ATB Composite Disc for deburring Aluminum Wheels can easily be customized to fit your machine. Contact us for a free consultation with an Osborn Regional Sales Manager and Application Engineer. They can show you how our technical expertise and high performance products can save you time and money.

ATB UNI-LOK® QUICK CHANGE BRUSHES

The Uni-Lok Quick Change tool is engineered to deliver maximum aggression in a small package. The Uni-Lok Quick Change disc brush is one complete unit and is ready for production right out of the box. These tools are designed for use in CNC machining centers, fully automatic machinery and robot cells.

Applications: Deburring and Edge RADIUSING Space Restricted and Recessed Areas



Note: As a safety precaution, shank must be fully inserted into the chuck or collet and tightened securely.

Brush Dia.	Grit	Fill Dia.	Arbor Hole	Trim Length	Fill Style	Max RPM	Std Pk	Item No.
1-1/2	80	45 x 90	1/4" Stem	1-3/8"	Rectangular	4500	1	47250
1-1/2	80	0.040	1/4" Stem	1-3/8"	Round Crimped	4500	1	47251
1-1/2	120	0.040	1/4" Stem	1-3/8"	Round Crimped	4500	1	47252
1-1/2	120	0.028	1/4" Stem	1-3/8"	Straight	4500	1	47253
1-1/2	320	0.022	1/4" Stem	1-3/8"	Round Crimped	4500	1	47254
2	80	45 x 90	1/4" Stem	1-3/8"	Rectangular	4500	1	47255
2	80	0.040	1/4" Stem	1-3/8"	Round Crimped	4500	1	47256
2	120	0.040	1/4" Stem	1-3/8"	Round Crimped	4500	1	47257
2	120	0.028	1/4" Stem	1-3/8"	Straight	4500	1	47258
2	320	0.022	1/4" Stem	1-3/8"	Round Crimped	4500	1	47259
2-1/2	80	45 x 90	1/4" Stem	1-3/8"	Rectangular	4500	1	47260
2-1/2	80	0.040	1/4" Stem	1-3/8"	Round Crimped	4500	1	47261
2-1/2	120	0.040	1/4" Stem	1-3/8"	Round Crimped	4500	1	47262
2-1/2	120	0.028	1/4" Stem	1-3/8"	Straight	4500	1	47263
2-1/2	320	0.022	1/4" Stem	1-3/8"	Round Crimped	4500	1	47264

ATB UNI-LOK® DISC BRUSH DRIVE ARBORS

The Uni-Lok drive arbor allows coolant to flow-through and features a single point fastening system for quick and easy changeover.



Features a standard 3/4" shaft, 2-1/2" long, with 7/8" diameter shoulder spindle.

Brush Dia.	Drive Hole Size & Location	Backing Plate Dia.	Item No.
3", 4" & 5"	(2) 1/4" Dia. on 1-1/4" bolt circle	3"	47200
6" & 7"	(3) 1/4" Dia. on 3" bolt circle	6"	47201
8" & 9"	(4) 1/4" Dia. on 3" bolt circle	8"	47202
10"	(4) 1/4" Dia. on a 1-5/8" bolt circle	10"	47203
Replacement Coolant Flow-through Kit			47206



Replacement Flow-through Kit

ATB UNI-LOK® BRIDLES

These bridles work with Osborn's ATB Composite Disc brushes to significantly reduce flare. They improve the aggressiveness of the brush for use on heavy-duty applications. Not for use on ATB turbo discs.



Brush Size	Bridle Size Chart					
	Compression	Cross Section	Bridle I.D.	Bridle O.D.	Bridle O.D. on brush	Osborn Part Number
1.50	0.38	0.13	1.13	1.38	1.66	47148
2.00	0.50	0.19	1.50	1.88	2.25	47140
2.50	0.50	0.19	2.00	2.38	2.75	47141
3.00	0.75	0.19	2.25	2.63	3.13	47142
4.00	0.75	0.19	3.25	3.63	4.20	47143
5.00	1.00	0.19	4.00	4.38	5.20	47144
6.00	1.00	0.25	5.00	5.50	6.30	47145
7.00	1.00	0.25	6.00	6.50	7.25	47146
8.00	1.00	0.25	7.00	7.50	8.38	47147

Bridles come in packs of three. For more information and directions, please contact Osborn at marketsupport@osborn.com.



ATB FINEBLANKING BRUSHES

ATB Fineblanking brushes are specially designed for today's stationary finishing machines.

Applications: Machine Surfaces, Stamping, Deburring Fineblanked Steel Parts, Radius Fineblanked Steel Parts, Cut Ends of Aluminium Extrusions and Powdered Metal Components



Brush Dia.	Grit	Fill Dia.	Arbor Hole (mm)	Trim Length (mm)	Block	Fill Shape	Max RPM	Std Pk	Item No.
6	46	0.063	25	25	1	Crimped	3000	16	40335
6	60	0.050	25	25	1	Crimped	3000	16	40336
6	60	0.050	25	36	1	Crimped	3000	12	40327
6	80	0.050	25	28	1	Crimped	3000	16	40339
6	80	0.050	25	36	1	Crimped	3000	12	40328
6	120	0.040	25	25	1	Crimped	3000	16	40341
6	120	0.040	25	36	1	Crimped	3000	12	40329
6	180	0.035	25	25	1	Crimped	3000	16	40325
6	180	0.035	25	36	1	Crimped	3000	12	40330
6	320	0.022	25	25	1	Crimped	3000	16	40326
6	320	0.022	25	36	1	Crimped	3000	12	40331

ATB Fineblanking brushes offer a variety of benefits for your application:

- Higher filament density than standard staple set product
- Fits all European stationary finishing machines including Niederberger, Volbhag and Peter Wolters
- Longer brush life
- Faster cycle times
- Wide range of filament grit sizes and fill densities available



ATB CUP/END BRUSHES

Heavily filled with round nylon filaments. Filaments are impregnated with Silicon Carbide or Aluminum Oxide grit. Ideal for surface finishing and deburring.



ATB™ CUP BRUSHES

ATB™ Color Coding System

All Osborn ATB brushes are color coded for easy identification of the grit size.



Special ATB Cup Brush Request Form

End User _____ Territory _____

Distributor _____

Contact Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Customer Drawing Available: YES NO Date _____

Outer Diameter	Arbor Hole	Trim Length	Arbor Type
Fill Material	Grit	Fill Diameter	RPM
			Fill Style



Equipment Used: _____

Metal Components: _____ Fill Density: _____

Comp. to Stock Product # _____ Variation _____

Method now being used _____

Desc. if Competitor Brush _____ Price _____

Stock Brushes Tested _____

Yearly Potential _____ Order Quantity _____

Application _____

Samples Needed YES NO # of Samples _____

Comments _____

1100 Resource Drive, Suite 1
 Brooklyn Heights, OH 44131
 Phone: 800 720 3358 * 216 361 1900
 Fax: 216 361 1913
 www.osborn.com
 marketsupport@osborn.com



ATB CUP BRUSHES - ROUND TRIM

Applications: Engine Blocks, Cylinder Heads, Exhaust Manifolds, Transmission Housings, Water Pumps and Intake Manifolds, Bulk Heads, Wing Spars, Engine Housings and Components, Hydraulic Valve Bodies, Machine Components, Housings, Gears and Castings

Brush Dia.	Grit	Threaded Arbor Hole	Fill Material	Trim Length	Max RPM	Std Pk	Item No.
4	80	5/8-11 NC	Silicon Carbide	1-1/2	6000	1	32137
4	120	5/8-11 NC	Silicon Carbide	1-1/2	6000	1	32125
4	320	5/8-11 NC	Silicon Carbide	1-1/2	6000	1	32127
6	80	5/8-11 NC	Silicon Carbide	1-1/2	6000	1	32138
6	120	5/8-11 NC	Silicon Carbide	1-1/2	6000	1	32131
6	320	5/8-11 NC	Silicon Carbide	1-1/2	6000	1	32133



ATB CUP BRUSHES - FLAT TRIM

Brush Dia.	Grit	Threaded Arbor Hole	Fill Material	Trim Length	Max RPM	Std Pk	Item No.
4	80	5/8-11 NC	Silicon Carbide	1-1/2	7000	1	32148*
4	120	5/8-11 NC	Aluminum Oxide	1-1/2	7000	1	32149*
6	80	5/8-11 NC	Silicon Carbide	2	7000	1	32132



* Bridled

ATB ROUND TRIM CUP BRUSHES - REDUCED FLARE

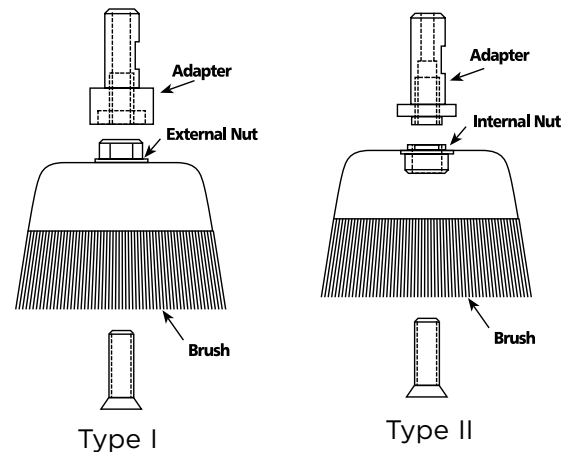
Brush Dia.	Grit	Shank Dia.	Fill Material	Trim Length	Max RPM	Std Pk	Item No.
2-1/2	80	1/4	Silicon Carbide	1	5000	6	32146

Note: As a safety precaution, shank must be fully inserted into the chuck or collet and tightened securely.



CNC ADAPTERS FOR ATB CUP BRUSHES

Description		Item No.
TYPE II 5/8-11 ADAPTER	HEAVY DUTY	75074
TYPE II 5/8-11 ADAPTER		75075
TYPE II M14 OR 1/2-13 ADAPTER		75076
TYPE I 5/8-11 ADAPTER		75078
TYPE I 5/8-11 ADAPTER	HEAVY DUTY	75079
TYPE II M10 OR 3/8-11 ADAPTER		75084
TYPE I M14 OR 1/2-13 ADAPTER	HEAVY DUTY	75085
TYPE I M10 OR 3/8-24 ADAPTER	HEAVY DUTY	75096
TYPE I M14 OR 1/2-13 ADAPTER		75097
TYPE I M10 OR 3/8-24 ADAPTER		75098



OE 0407 208

Special ATB End Brush Request Form

Territory _____

End User _____

Distributor _____

Contact Name _____

Address _____

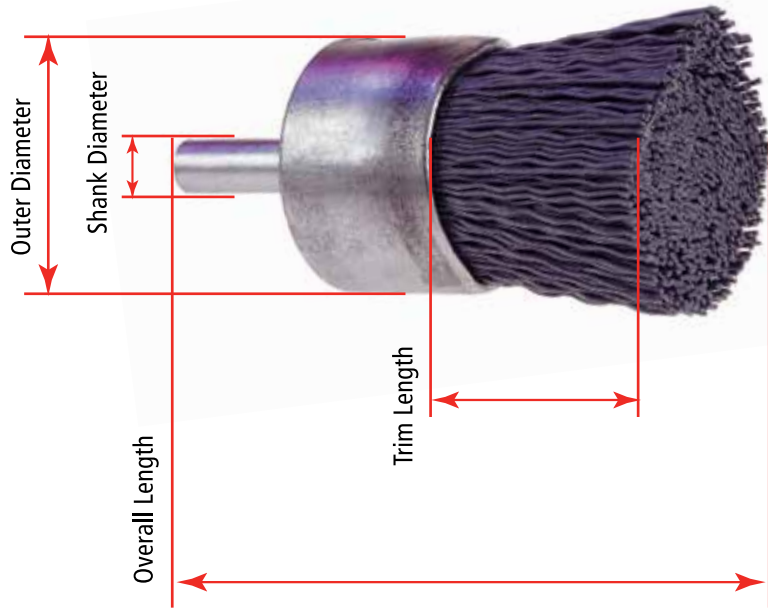
City _____ State _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Customer Drawing Available: YES NO Date _____

Outer Diameter	Shank Diameter	Overall Length	Trim Length	
Fill Material	Grit	Fill Diameter	RPM	Fill Style



Equipment Used: _____

Metal Components: _____

Comp. to Stock Product # _____ Variation _____

Method now being used _____

Desc. if Competitor Brush _____ Price _____

Stock Brushes Tested _____ Result _____

Yearly Potential _____ Order Quantity _____

Application _____

Samples Needed YES NO # of Samples _____

Comments _____

1100 Resource Drive, Suite 1
 Brooklyn Heights, OH 44131
 Phone: 800 720 3358 * 216 361 1900
 Fax: 216 361 1913
 www.osborn.com
 marketsupport@osborn.com



ATB END BRUSHES

ATB end brushes are frequently used for power transmission gear deburring, to fit into tight areas too small for wheels and discs. They are recommended for operations where balance is critical, as in CNC and robotic use. Automated in-process deburring is easy with ATB end brushes; simply use the same paths as the cutting tools, adjusted for proper penetration.

ATB END BRUSHES

Ideal for cleaning and finishing inside diameters, spot facing and recessed areas. Recommended for operations where balance is critical, as in CNC and robotic use. They can also be used on portable air and electric tools. The same style is also available from stock in steel, stainless steel and other metallic and non-metallic fills.

Brush Dia.	Grit	Brush Area Length	Overall Length	Fill Material	Shank Dia.	Trim Length	Max RPM	Std Pk	Item No.
1/2	120	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30285
1/2	320	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30287
1	120	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30293
1	320	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30295



U.S. Patent # 5464275, 5755003

Note: As a safety precaution, shank must be fully inserted into the chuck or collet and tightened securely.

ATB END BRUSHES WITH BRIDLE

Removable plastic bridle keeps filaments from flaring.

Applications: Cleaning & Finishing I.D., Spot Facing, Brushing Recessed Areas

Brush Dia.	Grit	Brush Area Length	Overall Length	Fill Material	Shank Diameter	Trim Length	Max RPM	Std Pk	Item No.
1/2	80	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30296
1/2	120	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30299
3/4	80	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30297
3/4	120	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30300
1	80	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30298
1	120	1	2-3/4	Silicon Carbide	1/4	1	9000	12	30301

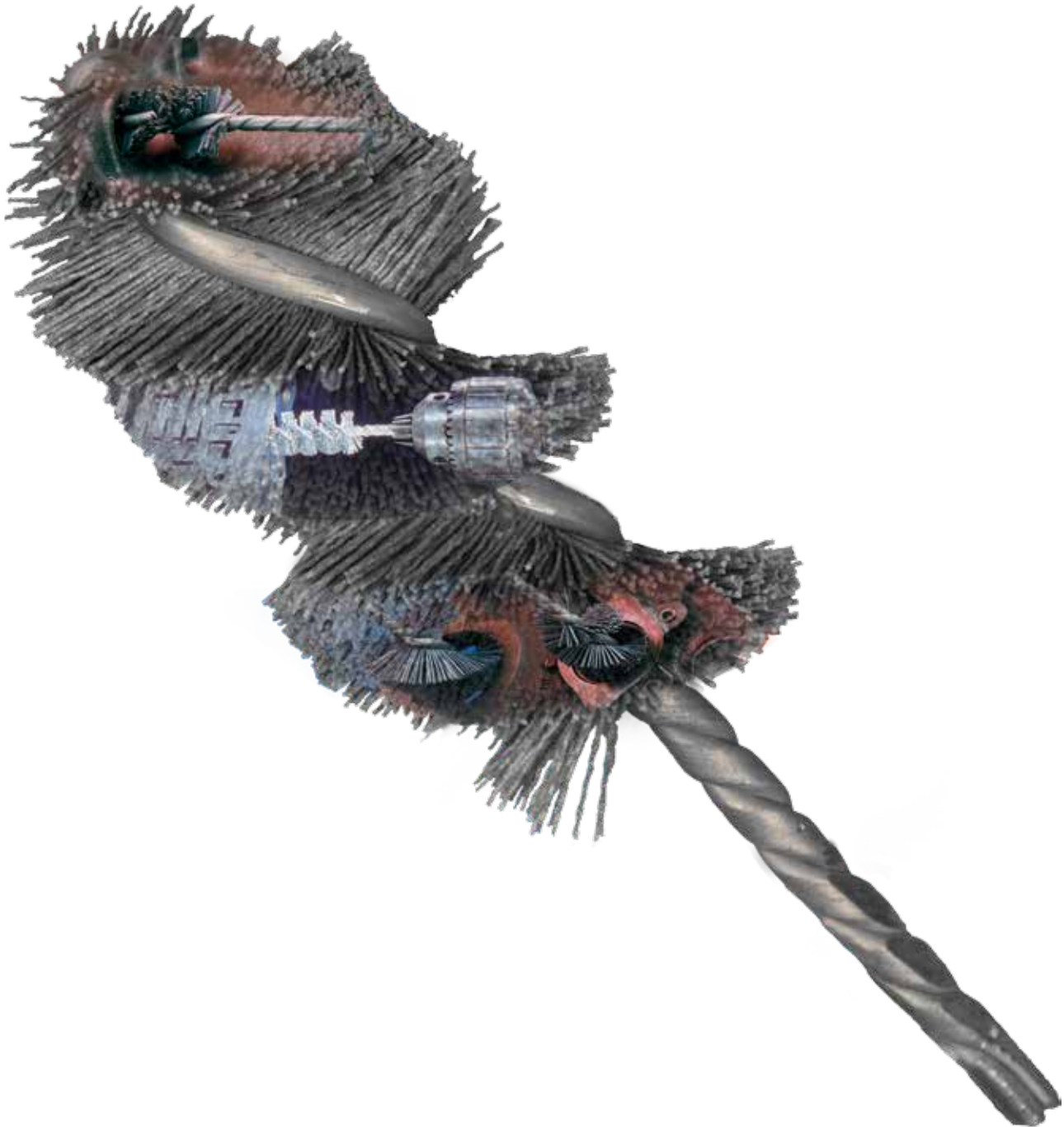


U.S. Patent # 5464275, 5755003

Note: As a safety precaution, shank must be fully inserted into the chuck or collet and tightened securely.

ATB INTERNAL BRUSHES

Ideal in both wet and dry applications, great for automated and manual operations. ATB internal brushes are available in several filament styles allowing you to choose the right brush for your application.



ATB™ Color Coding System

All Osborn ATB brushes are color coded for easy identification of the grit size.



ATB HELITUF™ INTERNAL BRUSHES

Impregnated with durable Silicon Carbide to provide a highly efficient cleaning action on the surface. Designed for long life. Helituf brushes should be used only with suitable



Brush Dia.	Grit	Fill Dia.	Brush Area Length	Overall Length	Fill Material	Stem Dia.	Std Pk	Item No.
3/8	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	36250
3/8	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	36256
1/2	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	36251
1/2	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	36257
5/8	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	36252
5/8	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	36258
3/4	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	36253
3/4	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	36259
1	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	36254
1	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	36260
1-1/4	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	36255
1-1/4	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	36261

U.S. Patent # 5609398, 5599225

HELITUF™ HOLDERS

The holders can be used individually or together to form approximately an 8-1/2" long brush. One end is threaded and the other has a tapered hole. 75003 is externally threaded while 75004 is internally threaded allowing both extension holders to be used together.



Diameter	Overall Length	Item No.
3/16	3-5/8	75003
1/4	3-5/8	75004

ATB SITUFT™ INTERNAL BRUSHES

Impregnated with Silicon Carbide for aggressive and efficient abrasive action across a range of internal cleaning or finishing operations. Siftuft brushes should be used only with

Applications: Cleaning Threads, Drilled Holes and Tubes Where Space is Limited



Brush Dia.	Grit	Fill Dia.	Brush Area Length	Overall Length	Fill Material	Stem Dia.	Std Pk	Item No.
3/8	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	35500
3/8	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	35506
1/2	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	35501
1/2	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	35507
5/8	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	35502
5/8	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	35508
3/4	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	35503
3/4	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	35509
1	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	35504
1	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	35510
1-1/4	120	0.028	1	3-1/2	Silicon Carbide	1/8	12	35505
1-1/4	120	0.040	1	3-1/2	Silicon Carbide	1/8	12	35511

SITUFT™ HOLDERS

Holder 75005 has a 1/4" outer diameter and is 3-3/8" long, with socket setscrew, and wrench, to be used with 3/32" stem. Holder 75006 has a 3/8" outer diameter, with 1/4" shank and is 3-3/8" long with socket setscrew and wrench, to be used with 1/8" stem.

Diameter	Overall Length	Item No.
1/4	3-3/8	75005
3/8	3-3/8	75006



EXTENSION HOLDERS FOR ATB ABRASIVE BRUSH TOOLS

Increase the overall length of Osborn ATB Internal finishing tools. Note: The 1/4" size can be used with Osborn tools having a 1/4" shank.

Overall Length	Stem Dia.	Item No.
6	1/4	75485
12	1/4	75486
16	3/8	75487
16	1/2	75488



ATB TUBE BRUSHES

Made with abrasive grit to provide extra cutting and cleaning action for a variety of applications. Can be used as a hand tool or mounted onto a portable or stationary tool.

Applications: Internal Cleaning, Removal of Small Imperfections, Surface Preparation

Brush Dia.	Grit	Brush Area Length	Overall Length	Fill Material	Stem Dia.	Std Pk	Item No.
3/8	80	2	5	Silicon Carbide	0.187	12	56010
1/2	80	2	5	Silicon Carbide	0.187	12	56011
5/8	80	2	5	Silicon Carbide	0.208	12	56012
5/8	120	2	5	Silicon Carbide	0.208	12	56312
3/4	80	2-1/2	5	Silicon Carbide	0.168	12	56013
1	80	2-1/2	5-1/2	Silicon Carbide	0.238	12	56015
1	120	2-1/2	5-1/2	Silicon Carbide	0.208	12	56315
1-1/4	80	2-1/2	5-1/2	Silicon Carbide	0.238	12	56016
1-1/4	120	2-1/2	5-1/2	Silicon Carbide	0.238	12	56316



ATB HEAVY DUTY INTERNAL DEBURRING TOOLS

The helical brush shape and flexible crimped filaments allow the brush to work in both rotational directions with excellent part conformability. Higher filament concentration for: Heavy Deburring, Minimum Cycle Time, Stainless Steel / Hardened Alloys.

Applications: Cross hole deburring, Edge blending, Edge radiusing, Cam bores, Crankcase bores, 2 Stroke engines, Valve bodies, Pistons, Cleaning threads, Pipe IDs



Brush Dia.	Grit	Brush Area Length	Overall Length	Fill Material	Filament Shape	Stem Dia.	Std Pk	Item No.
1	80	2	4-7/8	Silicon Carbide	Round Crimped	1/4	1	36650
1	120	2	4-7/8	Silicon Carbide	Round Crimped	1/4	1	36651
1-1/4	80	2	4-7/8	Silicon Carbide	Round Crimped	1/4	1	36652
1-1/4	120	2	4-7/8	Silicon Carbide	Round Crimped	1/4	1	36653
1-1/2	80	2-1/2	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36654
1-1/2	120	2-1/2	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36655
1-3/4	80	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36656
1-3/4	120	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36657
2	80	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36658
2	120	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36659
2-1/4	80	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36660
2-1/4	120	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36661
2-1/2	80	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36662
2-1/2	120	3	6-1/4	Silicon Carbide	Round Crimped	3/8	1	36663
3	80	3	9	Silicon Carbide	Round Crimped	1/2	2	36664
3	120	3	9	Silicon Carbide	Round Crimped	1/2	2	36665
3-1/2	80	3	9	Silicon Carbide	Round Crimped	1/2	6	36666
3-1/2	120	3	9	Silicon Carbide	Round Crimped	1/2	6	36667
4	80	4	9	Silicon Carbide	Round Crimped	1/2	2	36668
4	120	4	9	Silicon Carbide	Round Crimped	1/2	2	36669

Operating suggestions:

- Can be used dry or wet
- Chuck brush tool at the stem as close to the filaments as the application will allow
- If extension is required, support the brush by plunging the brush into the bore in the static position and stop the brush prior to exiting the bore
- Run the brush tool in both directions with a complete stroke cycle
- Operational speeds between 600 and 1800 RPM

The high filament concentration and substantial stem make this brush tool ideal for use in semi-automatic and fully automatic machinery, CNC and robotics. The stem comes standard with three flats for use in a standard drill chuck.

Heavy Duty Internals can be customized with adapters. Options include - Threaded shank or straight shank with flat.



ATB™ INTERNAL BRUSHES

ATB RECTANGULAR FILAMENT INTERNAL BRUSHES - ALUMINUM OXIDE

Brush Dia.	Grit	Overall Length	Face Width	Stem Dia.	Std Pk	Industrial Item No.	Hi-Flex Item No.
5/8	120	3-1/2	7/8	1/8	12	36300	
5/8	320	3-1/2	7/8	1/8	12	36301	
1	120	3-5/8	7/8	1/8	12	36302	
1	320	3-5/8	7/8	1/8	12	36303	
1-1/2	120	4-7/8	2	1/4	12	36304	36350
1-1/2	320	4-7/8	2	1/4	12	36305	36351
2	120	4-3/4	2	1/4	12	36306	36352
2	320	4-3/4	2	1/4	12	36307	36353
2-1/2	120	6-1/2	3-1/2	3/8	12	36308	36354
2-1/2	320	6-1/2	3-1/2	3/8	12	36309	36355
3	120	6-1/4	4	3/8	12	36310	36356
3	320	6-1/4	4	3/8	12	36311	36357
3-1/2	120	6-5/8	4	3/8	12	36312	36358
3-1/2	320	6-5/8	4	3/8	12	36313	36359
4	120	6-3/4	4	3/8	12	36314	36360
4	320	6-3/4	4	3/8	12	36315	36361
4-1/2	120	6-1/2	4	3/8	6	36316	36362
4-1/2	320	6-1/2	4	3/8	6	36317	36363
5	120	9-3/4	5	3/8	6		36364
5	120	9-3/4	5	1/2	6	36318	
5	320	9-3/4	5	3/8	6		36365
5	320	9-3/4	5	1/2	6	36319	
5-1/2	120	10	5	3/8	6		36366
5-1/2	120	10	5	1/2	6	36320	
5-1/2	320	10	5	3/8	6		36367
5-1/2	320	10	5	1/2	6	36321	
6	120	9-3/4	6	3/8	1		36368
6	120	9-3/4	6	1/2	1	36322	
6	320	9-3/4	6	3/8	1		36369
6	320	9-3/4	6	1/2	1	36323	
7	120	9-1/4	6	3/8	1		36370
7	120	9-1/4	6	1/2	1	36324	
7	320	9-1/4	6	3/8	1		36371
7	320	9-1/4	6	1/2	1	36325	
8	120	9-3/4	6	3/8	1		36372
8	120	9-3/4	6	1/2	1	36326	
8	320	9-3/4	6	3/8	1		36373
8	320	9-3/4	6	1/2	1	36327	
9	120	9-1/4	6	1/2	1	36328	
9	320	9-1/4	6	1/2	1	36329	
10	120	9-7/8	6	1/2	1	36330	
10	320	9-7/8	6	1/2	1	36331	

Features rectangular nylon strips impregnated with tough Aluminum Oxide which provides a highly efficient side-swiping action across the surface. The Aluminum Oxide ensures a superior finish and prolonged brush life. The Industrial and Hi-Flex tools are suitable for both rotational directions at operational speeds of approximately 600 to 1400 RPM. When increased flexibility is required, we recommend Hi-Flex tools with 50% less fill material than the industrial.

Applications: Deburring and ID Work on Cylinders, Camshaft Bores, and Valve Bodies



U.S. Patent # 5329730, 5609398, 5599225



ATB RECTANGULAR FILAMENT INTERNAL BRUSHES - SILICON CARBIDE

Features tough nylon filaments packed with super-hard Silicon Carbide grit for more aggressive finishing and longer brush life. The extruded nylon monofilament has a flat, rectangular cross-section which brings twice as much of the Silicon Carbide grit in contact with the surface. The brushes are made larger than the nominal diameters to be finished, creating a highly efficient side-swiping action. Their helical brush shape and flexible filaments allow them to be used in both rotational directions for longer work life. These brushes can be used wet or dry at operational speeds of approximately 600 to 1400 RPM.

Applications: Automated or Manual Deburring, Honing, Edge Contouring, I.D. Work on Cylinders, Camshaft Bores, Valve Bodies, Pistons and Blocks



Brush Dia.	Grit	Fill Size	Brush Area Length	Fill Material	Stem Dia.	Std Pk	Item No.
1	320	30 x 70	2	Silicon Carbide	1/4	2	36394
1-1/4	320	30 x 70	2	Silicon Carbide	1/4	2	36395
1-1/2	320	30 x 70	2-1/2	Silicon Carbide	3/8	2	36396
1-3/4	320	30 x 70	2-1/2	Silicon Carbide	3/8	2	36397
2	320	30 x 70	3	Silicon Carbide	3/8	2	36398
2-1/4	320	30 x 70	3	Silicon Carbide	3/8	2	36399
2-1/2	320	30 x 70	3	Silicon Carbide	3/8	2	36400
3	320	45 x 90	3	Silicon Carbide	1/2	2	36408
3-1/2	320	45 x 90	3	Silicon Carbide	1/2	2	36409
4	320	45 x 90	4	Silicon Carbide	1/2	2	36403
4-1/2	320	45 x 90	4	Silicon Carbide	1/2	2	36404
5	320	45 x 90	5	Silicon Carbide	1/2	2	36405
5-1/2	320	45 x 90	5	Silicon Carbide	1/2	2	36406
6	320	45 x 90	6	Silicon Carbide	1/2	1	36407

U.S. Patent # 5329730, 5609398, 5599225

ATB RECTANGULAR FILAMENT INTERNAL BRUSHES - THERMO FORMED

Offer increased flexibility and are designed for rotation in one direction only at speeds of approximately 600 RPM. These tools are made approximately 20-25% larger than the listed outside diameter to ensure maximum abrasive contact with the work surface. They are also available in Silicon Carbide and other minerals and grit sizes. Special brush diameters, lengths and configurations will be made on request.

Applications: Pipe I.D., Pumps, Engines



Brush Dia.	Grit	Brush Area Length	Overall Length	Fill Material	Stem Dia.	Std Pk	Item No.
5/8	120	7/8	3-1/2	Aluminum Oxide	1/8	12	36450
5/8	320	7/8	3-1/2	Aluminum Oxide	1/8	12	36451
1	120	7/8	3-3/8	Aluminum Oxide	1/8	12	36452
1	320	7/8	3-3/8	Aluminum Oxide	1/8	12	36453
1-1/2	120	1-1/2	4-7/8	Aluminum Oxide	1/4	12	36454
1-1/2	320	1-1/2	4-7/8	Aluminum Oxide	1/4	12	36455
2	120	1-1/2	4-3/4	Aluminum Oxide	1/4	12	36456
2	320	1-1/2	4-3/4	Aluminum Oxide	1/4	12	36457
2-1/2	120	2	6-1/4	Aluminum Oxide	3/8	12	36458
2-1/2	320	2	6-1/4	Aluminum Oxide	3/8	12	36459
3	120	2	6-1/4	Aluminum Oxide	3/8	12	36460
3	320	2	6-1/4	Aluminum Oxide	3/8	12	36461

ATB MICROABRASIVE BRUSHES

Designed for ultra-fine deburring and cleaning of holes produced by micro drilling, but will not alter the diameter or surface finish. On power tools, these brushes use a side-swiping action. They can also be used manually.

Applications: Aircraft & Aerospace, Computer & Electronics, Medical Equipment, Hydraulic Fittings

Brush Dia.	Grit	Brush Area Length	Overall Length	Fill Material	Stem Dia.	For Hole Diameter			Std Pk	Item No.
						Fraction (in.)	Decimal (in.)	Decimal (mm)		
0.030	1000	1/2	4	Alumina Silicate	0.014	1/32	0.031	0.787	12	56400
0.050	500	1/2	4	Silicon Carbide	0.023	3/64	0.047	1.191	12	56404
0.050	1000	1/2	4	Alumina Silicate	0.023	3/64	0.047	1.191	12	56403
0.075	500	3/4	4	Silicon Carbide	0.035	1/16	0.063	1.588	12	56407
0.075	1000	3/4	4	Alumina Silicate	0.035	1/16	0.063	1.588	12	56406
0.090	320	3/4	4	Silicon Carbide	0.043	5/64	0.078	1.984	12	56073
0.090	500	3/4	4	Silicon Carbide	0.043	5/64	0.078	1.984	12	56410
0.090	1000	3/4	4	Alumina Silicate	0.043	5/64	0.078	1.984	12	56409
0.105	320	1	4	Silicon Carbide	0.046	3/32	0.094	2.381	12	56074
0.105	500	1	4	Silicon Carbide	0.046	3/32	0.094	2.381	12	56414
0.105	1000	1	4	Alumina Silicate	0.046	3/32	0.094	2.381	12	56412
0.125	320	1	4	Silicon Carbide	0.067	7/64	0.109	2.778	12	56075
0.125	500	1	4	Silicon Carbide	0.067	7/64	0.109	2.778	12	56417
0.125	1000	1	4	Alumina Silicate	0.067	7/64	0.109	2.778	12	56415
0.135	320	1	4	Silicon Carbide	0.067	1/8	0.125	3.175	12	56076
0.135	500	1	4	Silicon Carbide	0.067	1/8	0.125	3.175	12	56419
0.135	1000	1	4	Alumina Silicate	0.067	1/8	0.125	3.175	12	56418
0.165	320	1	5	Silicon Carbide	0.093	5/32	0.156	3.969	12	56077
0.165	500	1	5	Silicon Carbide	0.093	5/32	0.156	3.969	12	56426
0.165	600	1	5	Aluminum Oxide	0.093	5/32	0.156	3.969	12	56425
0.190	320	1	5	Silicon Carbide	0.093	3/16	0.188	4.763	12	56078
0.190	500	1	5	Silicon Carbide	0.093	3/16	0.188	4.763	12	56428
0.190	600	1	5	Aluminum Oxide	0.093	3/16	0.188	4.763	12	56427
0.260	320	1	5	Silicon Carbide	0.121	1/4	0.250	6.350	12	56079
0.260	500	1	5	Silicon Carbide	0.121	1/4	0.250	6.350	12	56430
0.260	600	1	5	Aluminum Oxide	0.121	1/4	0.250	6.350	12	56429
0.325	320	1	5	Silicon Carbide	0.121	5/16	0.313	7.938	12	56080
0.325	500	1	5	Silicon Carbide	0.121	5/16	0.313	7.938	12	56433
0.325	600	1	5	Aluminum Oxide	0.121	5/16	0.313	7.938	12	56432
0.385	320	1	5	Silicon Carbide	0.154	3/8	0.375	9.525	12	56081
0.385	500	1	5	Silicon Carbide	0.154	3/8	0.375	9.525	12	56437
0.385	600	1	5	Aluminum Oxide	0.154	3/8	0.375	9.525	12	56435
0.515	320	1	5	Silicon Carbide	0.175	1/2	0.500	12.700	12	56082
0.515	500	1	5	Silicon Carbide	0.175	1/2	0.500	12.700	12	56439
0.515	600	1	5	Aluminum Oxide	0.175	1/2	0.500	12.700	12	56438
0.640	320	1	5	Silicon Carbide	0.175	5/8	0.625	15.875	12	56083
0.640	500	1	5	Silicon Carbide	0.175	5/8	0.625	15.875	12	56442
0.640	600	1	5	Aluminum Oxide	0.175	5/8	0.625	15.875	12	56441
0.765	320	1	5	Silicon Carbide	0.228	3/4	0.750	19.050	12	56084
0.765	500	1	5	Silicon Carbide	0.228	3/4	0.750	19.050	12	56446
0.765	600	1	5	Aluminum Oxide	0.228	3/4	0.750	19.050	12	56444
0.890	320	1	5	Silicon Carbide	0.228	7/8	0.875	22.225	12	56085
0.890	500	1	5	Silicon Carbide	0.228	7/8	0.875	22.225	12	56448
0.890	600	1	5	Aluminum Oxide	0.228	7/8	0.875	22.225	12	56447
1.015	320	1	5	Silicon Carbide	0.255	1	1.000	25.400	12	56086
1.015	500	1	5	Silicon Carbide	0.255	1	1.000	25.400	12	56451
1.015	600	1	5	Aluminum Oxide	0.255	1	1.000	25.400	12	56450



ATB™ MICROABRASIVE BRUSHES



ATB MICROABRASIVE BRUSH KITS

Applications: Aircraft & Aerospace, Computer and Electronics, Medical Equipment, Hydraulic Fittings

Grit	Fill Material	Std Pk	Item No.
500	Silicon Carbide	1	56396
500	Silicon Carbide	1	56423
600	Aluminum Oxide	1	56422
1000	Alumina Silicate	1	56395

Note: Please order the item number from the above table to receive the entire kit.

56396

Brush Dia.	Grit	Brush Area Length	Overall Length	Stem Dia.	Kit Contains Item No.
0.050	500	1/2	4	0.023	56404
0.075	500	3/4	4	0.035	56407
0.090	500	3/4	4	0.043	56410
0.105	500	1	4	0.046	56414
0.125	500	1	4	0.067	56417
0.135	500	1	4	0.067	56419

56423: 500 Grit, Silicon Carbide Kit

Brush Dia.	Grit	Brush Area Length	Overall Length	Stem Dia.	Kit Contains Item No.
0.165	500	1	5	0.093	56426
0.190	500	1	5	0.093	56428
0.260	500	1	5	0.121	56430
0.325	500	1	5	0.121	56433
0.385	500	1	5	0.154	56437
0.515	500	1	5	0.175	56439
0.640	500	1	5	0.175	56442
0.765	500	1	5	0.228	56446
0.890	500	1	5	0.228	56448
1.015	500	1	5	0.255	56451

56422: 600 Grit, Aluminum Oxide

Brush Dia.	Grit	Brush Area Length	Overall Length	Stem Dia.	Kit Contains Item No.
0.165	600	1	5	0.093	56425
0.190	600	1	5	0.093	56427
0.260	600	1	5	0.121	56429
0.325	600	1	5	0.121	56432
0.385	600	1	5	0.154	56435
0.515	600	1	5	0.175	56438
0.640	600	1	5	0.175	56441
0.765	600	1	5	0.228	56444
0.890	600	1	5	0.228	56447
1.015	600	1	5	0.255	56450

56395: 1000 Grit, Alumina Silicate

Brush Dia.	Grit	Brush Area Length	Overall Length	Stem Dia.	Kit Contains Item No.
0.030	1000	1/2	4	0.014	56400
0.050	1000	1/2	4	0.023	56403
0.075	1000	3/4	4	0.035	56406
0.090	1000	3/4	4	0.043	56409
0.105	1000	1	4	0.046	56412
0.125	1000	1	4	0.067	56415
0.135	1000	1	4	0.067	56418



ATB MINATURE BRUSHES

Osborn Precision Miniature Nylon Abrasive Brush Tools are designed for ultra-fine deburring, edge contouring, surface conditioning, cleaning and polishing. Can be used on extremely hard materials.

Applications: Aerospace, Aerosystems, Electronics, Molds, Textile, Optics, Medical Equipment, Hydraulics, Computers, Tool & Dies, Jewelry, Other Precision Industries

MINATURE ATB WHEEL BRUSHES

Brush Dia.	Grit	Fill Material	Overall Length	Stem Dia.	Max RPM	Item No.
3/4	600	Aluminum Oxide	1-5/8	1/8	6000	75752
3/4	1000	Alumina Silicate	1-5/8	1/8	6000	75751
1	600	Aluminum Oxide	1-5/8	1/8	6000	75766
1	1000	Alumina Silicate	1-5/8	1/8	6000	75765
1-1/4	600	Aluminum Oxide	1-5/8	1/8	6000	75770
1-1/4	1000	Alumina Silicate	1-5/8	1/8	6000	75769
1-1/2	600	Aluminum Oxide	1-5/8	1/8	6000	75774
1-1/2	1000	Alumina Silicate	1-5/8	1/8	6000	75773



MINATURE ATB CUP BRUSHES

Brush Dia.	Grit	Overall Length	Fill Material	Stem Dia.	Max RPM	Item No.
9/16	600	2-1/8	Aluminum Oxide	1/8	6000	75707
9/16	1000	2-1/8	Alumina Silicate	1/8	6000	75706



MINATURE ATB END BRUSHES

Precision Miniature End styles are small diameter, light duty brushes.

Applications: Ideal for Edge and Surface Blending, Fine Deburring and Surface Finishing, Cleaning Small Holes and Crevices

Brush Dia.	Grit	Overall Length	Fill Material	Stem Dia.	Max RPM	Item No.
3/16	600	1-7/8	Aluminum Oxide	1/8	6000	75693
3/16	1000	1-7/8	Alumina Silicate	1/8	6000	75692
1/4	600	2-1/8	Aluminum Oxide	1/8	6000	75687
1/4	1000	2-1/8	Alumina Silicate	1/8	6000	75686
5/16	600	2-1/8	Aluminum Oxide	1/8	6000	75698
5/16	1000	2-1/8	Alumina Silicate	1/8	6000	75697



NOVOFLEX FLEXIBLE HONING TOOLS

NovoFlex Flexible Honing Tools have round, abrasive beads fastened to the ends of flexible filaments. This self-centering tool will conform to the bore surface providing a consistent, even surface finish over the life of the tool. The ATB NovoFlex Flexible Honing Tool will even provide an “edge break” not possible with conventional honing stones.

Selection:

NovoFlex Flexible Honing Tools are available for hole diameters ranging from 6.4mm to 203mm. Grit is available in Silicon Carbide & Aluminum Oxide in sizes from 60 to 320.



Great On:

- engine bores
- pneumatic and hydraulic bores
- valve and pump housings
- pipes
- connecting rods
- cam bores
- crank bores
- valve bores
- hydraulic cylinders
- stainless steel tubing

Applications:

- honing
- creating cross hatched surface pattern for oil retention
- cylinder port area deburring
- eliminating inside flashing



Instructions:

1. Choose the NovoFlex Flexible Honing Tool for your specific hole size. The actual NovoFlex Tool will be approximately 10% larger than the hole size.
2. Use 10-30 weight oil for honing lubrication, when honing hydraulic brake cylinders, use hydraulic brake fluid as a honing lubricant.
3. Have the NovoFlex Flexible Honing Tool rotating upon entry and removal from the bore.
4. Recommended RPM range for the NovoFlex Tool is 100 to 1200 RPM, based on the brush diameter. Air tools are not recommended.
5. Use 60-120 strokes per minute depending on the RPM. Final stroking may be accelerated to develop a 45 degree cross-hatch angle.
6. Honing time should be approximately 20/45 seconds per bore.
7. Do not use solvents for honing or cleaning.
8. Clean cylinders after honing with warm or hot water and detergent using an Osborn plain nylon brush, and then lightly oil the bore.

Special ATB Novoflex Flexible Honing Tool Request Form

Territory _____

End User _____

Distributor _____

Contact Name _____

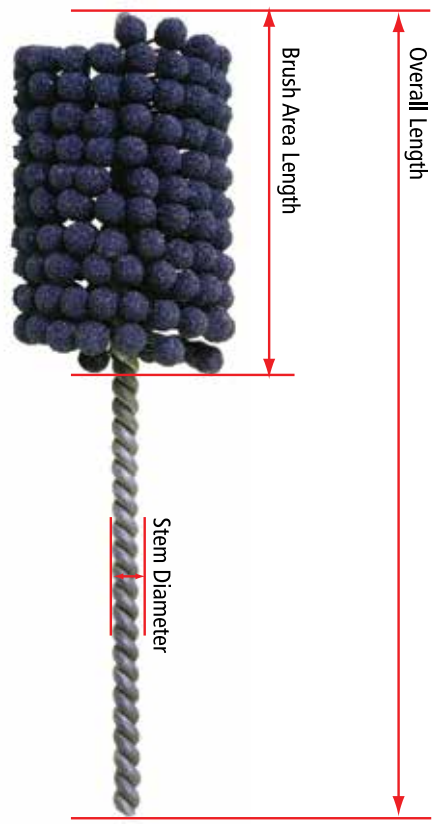
Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Customer Drawing Available: YES NO Date _____



Brush Diameter	Stem Diameter	Overall Length	Brush Area Length
Fill Material	Grit	RPM	Stem Style

Stem Adapter: _____

Equipment Used: _____

Metal Components: _____ Fill Density: _____

Comp. to Stock Product # _____ Variation _____

Method now being used _____ Price _____

Desc. if Competitor Brush _____ Result _____

Stock Brushes Tested _____

Yearly Potential _____ Order Quantity _____

Comments _____

Application _____

Samples Needed YES NO # of Samples _____



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 Brooklyn Heights, OH 44131
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 Fax: 216 361 1913
 www.osborn.com
 marketsupport@osborn.com



ATB NOVOFLEX TOOLS - SMALL DIAMETER

Applications: Brake Cylinders, Hydraulics, Valve Guides



Hole Dia. (mm)	Hole Dia. (in.)	Brush Length (mm)	Overall Length (mm)	Std Pk	120 SC Item No.	180 SC Item No.	240 SC Item No.
6.4	0.250	50	200	12	77246	77248	77250
7.0	0.276	50	200	12	77247	77249	77251
8.0	0.315	50	200	12	77200	77223	77252
9.0	0.354	50	200	12	77201	77224	77253
9.5	0.375	50	200	12	77359	77360	77361
10.0	0.394	60	200	12	77202	77225	77255
11.0	0.433	60	200	12	77203	77226	77256
12.0	0.472	60	200	12	77362	77363	77364
12.7	0.500	60	200	12	77204	77227	77258
13.0	0.512	60	200	12	77205	77228	77377
14.0	0.552	60	200	12	77206	77229	77259
16.0	0.630	60	200	12	77207	77230	77260
18.0	0.709	60	200	12	77208	77231	77261
19.0	0.750	70	200	12	77209	77232	77262
20.0	0.787	70	200	12	77365	77366	77367
22.0	0.875	70	200	12	77210	77233	77264
23.8	0.940	70	200	12	77211	77234	77265
25.4	1.000	70	200	12	77212	77235	77266
26.9	1.060	70	200	12	77213	77236	77257
29.0	1.125	70	200	12	77214	77237	77267
31.8	1.250	70	200	12	77215	77238	77268
35.0	1.375	70	200	12	77216	77239	77269
38.0	1.500	70	200	12	77217	77240	77270
41.0	1.625	70	200	12	77218	77241	77271
45.0	1.750	70	200	12	77368	77369	77370
51.0	2.000	70	200	12	77371	77372	77373
54.0	2.125	70	200	12	77220	77243	77274
57.0	2.250	70	200	12	77221	77244	77275
60.0	2.375	70	200	12	77222	77245	77276
64.0	2.500	70	200	12	77374	77375	77378

ATB NOVOFLEX TOOLS

Applications: Brake Cylinders



Hole Dia. (mm)	Hole Dia. (in.)	Brush Length (mm)	Overall Length (mm)	Std Pk	120 SC Item No.	180 SC Item No.	240 SC Item No.
67	2.625	76	200	6	77296	77300	77278
70	2.750	76	200	6	77297	77301	77279
73	2.875	76	200	6	77298	77302	77280
76	3.000	76	200	6	77299	77303	77281

ATB NOVOFLEX TOOLS - STANDARD DUTY

Applications: Block Cylinders

Hole Dia. (mm)	Hole Dia. (in.)	Brush Length (mm)	Overall Length (mm)	Std Pk	120 SC Item No	180 SC Item No	240 SC Item No
83	3.250	76	343	6	77379	77380	77381
89	3.500	76	343	6	77305	77307	77283
95	3.750	89	343	6	77308	77325	77342
105	4.125	102	343	6	77309	77326	77343
118	4.625	114	343	6	77310	77327	77344



ATB NOVOFLEX TOOLS - HEAVY DUTY

Applications: Block Cylinders, Liners

Hole Dia. (mm)	Hole Dia. (in.)	Brush Length (mm)	Overall Length (mm)	Std Pk	120 SC Item No	180 SC Item No	240 SC Item No
76	3.000	140	343	6	77311	77328	77345
83	3.250	140	343	6	77312	77329	77346
89	3.500	140	343	6	77313	77330	77347
95	3.750	140	343	6	77314	77331	77348
101	4.000	165	343	6	77315	77332	77349
108	4.250	165	343	6	77316	77333	77350
114	4.500	165	343	6	77317	77334	77351
127	5.000	165	457	6	77318	77335	77352
140	5.500	165	457	2	77319	77336	77353
152	6.000	165	457	2	77320	77337	77354
165	6.500	165	457	2	77321	77338	77355
178	7.000	178	457	2	77322	77339	77356
190	7.500	178	457	2	77323	77340	77357
203	8.000	178	457	2	77324	77341	77358



ATB SOFTOOL BRUSHES

U.S. Patent # 5556328, 5527213

Smoother, Cleaner, Improved Performance

Looking for a honing finish that is smoother, cleaner and does not require a lengthy break-in period? You need Osborn Softool with flexible ATB abrasive nylon filaments that remove excess material left on the surface of the bore after honing with conventional methods.



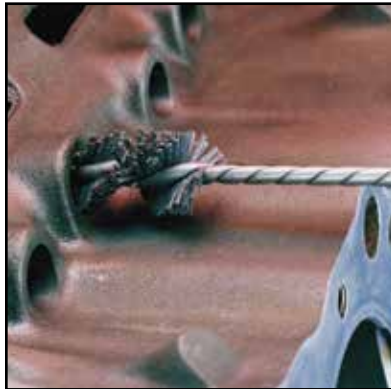
Consistent Results

The performance of the Softool will remain consistent throughout its life as new grit is revealed through the wear of the brush, constantly exposing a gentle yet effective cutting surface.

Using Softool after honing with conventional abrasives or metal diamond stones will improve your finish by:

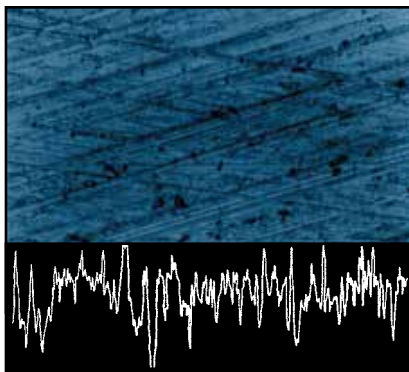
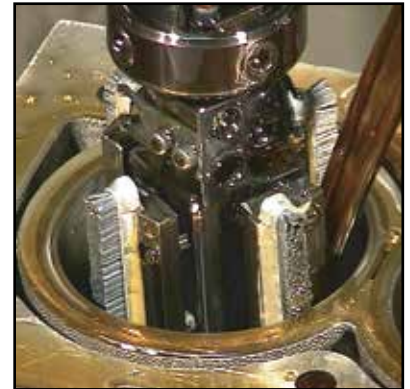
- *reducing peak height to decrease ring break-in period.*
- *improving crosshatch for optimum oil retention and overall reduced oil consumption.*
- *eliminating debris and contaminants from valleys allowing the rings to seat almost immediately.*

Softool honing inserts and internal brushes will effectively improve your finish without changing the geometry or size of the bore!

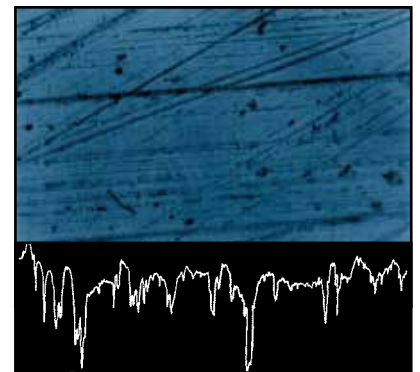


Why is Softool so effective?

Softool has abrasive grit embedded into the flexible filaments. This flexibility allows the abrasive grit to cut without requiring high pressure that tears up the surface of the bore like conventional honing methods.



The surface profile of a cylinder bore honed with a metal bond diamond product (left), and the same bore after being brush honed with Osborn Softool brushes (right).



See the Difference!

See the difference when washing out the bore with hot, soapy water after honing. Debris that once decreased oil efficiency and wore on the ring will be knocked loose by Softool brush honing and washed away!

Please contact your Osborn representative for additional information to order your Softool honing brush.

PCD SUPERABRASIVE BRUSHES

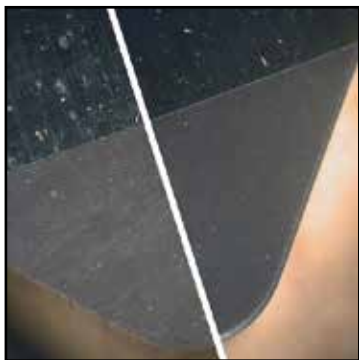
Planetary brush honing - fast, clean and consistent

Osborn ATB Diamond Superabrasives are engineered for today's superhard materials such as CBN, PCD and ceramics. ATB Superabrasives are made with polycrystalline diamond (PCD) impregnated filaments. Superior honing and polishing results can be achieved without the use of diamond paste or slurry.

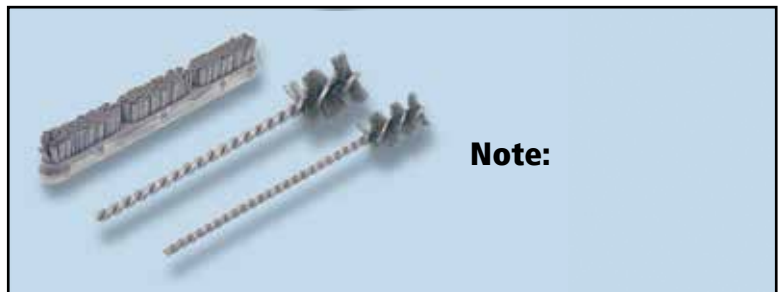


A more efficient production environment

Without the need for diamond paste, ATB Diamond Superabrasives minimize or eliminate the secondary clean up operation. Osborn Superabrasives produce fast, consistent and repeatable honing results, lowering process cost and creating a cleaner, more efficient production environment.



Cutting tool insert before (left) and after (right) planetary honing operation with ATB PCD disc.



Note:

ATB Superabrasive wheel brushes are easily adaptable to both common shop equipment as well as highly specialized machines.

These tools can be used for a variety of polishing, deburring, and edge radiusing applications. Wheel brush tools are ideal for focused area work such as drill honing, polishing and indexable insert honing.

ATB Superabrasives are capable of producing an edge radius of .0005" - .003" on extremely hard materials such as PCD, CBN and ceramics. The degree of hone can be optimized by balancing PCD grain size, brush operating speed and cycle time. Grit sizes include 120, 240, 400, 600, and 1000 grit.



Before Honing



During Honing



After Honing



ATB DIAMOND SUPERABRASIVE WHEELS ALUMINUM HUB

Innovative brushing tools designed for today's most challenging applications.

*Applications: Edge Honing Super Hard Materials
Such as Ceramics, CBN Tungsten Carbide,
Diamond and Glass*



Brush Dia.	Grit	Arbor Hole	Fill Dia.	Trim Length	Face Width	Std Pk	Item No.
6	240	1-1/4	0.040	1	1/4	1	41004
6	400	1-1/4	0.010	1	1/4	1	41002
6	400	1-1/4	0.020	1	1/4	1	41003
6	600	1-1/4	0.010	1	1/4	1	41001
6	600	1-1/4	0.020	1	0.072	1	41005
6	600	1-1/4	0.020	1	0.157	1	41006
6	1000	1-1/4	0.010	1	1/4	1	41000
8	120	1-1/4	0.040	1	1/4	1	41014
8	400	1-1/4	0.010	1	1/4	1	41012
8	400	1-1/4	0.020	1	1/4	1	41013
8	600	1-1/4	0.010	1	1/4	1	41011
8	1000	1-1/4	0.010	1	1/4	1	41010
11	400	4-1/4	0.020	2	1	1	41007

U.S. Patent # 4945687

Recommended wheel brush operating parameters

Optimum life and cut will be obtained by finding the proper balance between brush speed, part penetration and abrasive grain size.

- SPEED - Typical brush speeds range from 1200 to 2400 RPM.
- PENETRATION - Typical part penetration into the face of the brush range from 1/16" to 3/8".

Other applications for ATB Superabrasive wheel brushes can be found in the field of optics, medical implants and aerospace industries.

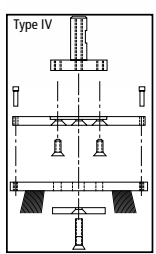
ATB DIAMOND SUPERABRASIVE DISCS COMPOSITE HUB

Applications: Edge Honing Indexable Cutting Tool Inserts



Brush Dia.	Grit	Arbor Hole	Fill Dia.	Trim Length	Std Pk	Item No.
9	400	2.35	0.02	1	1	40252
9	600	2.35	0.01	1	1	40254
9	1000	2.35	0.01	1	1	40253
14	400	5	0.02	1-1/2	1	40251

U.S. Patent # 4945687



Adapters for mounting into smaller shafts must be specified and are priced separately. Please call customer service for more information.

Recommended disc brush operating parameters

- SPEED - Typical brush speeds ranges from 300 to 1500 RPM.
- PENETRATION - Typical part penetration ranges from 1/16" to 1/4".

Disc styles are available in grit sizes from 120 to 1000, with OD from 3" to 18". They are easily adaptable to your existing planetary brush honing and polishing machine with the help of a full line of engineered support plates.

Please contact Osborn Customer Support for Pricing Information.

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Item No	Pg	Item No	Pg	Item No	Pg	Item No	Pg	Item No	Pg	Item No	Pg	Item No	Pg	Item No	Pg	Item No	Pg
11146	28	22280	27	35507	46	36358	49	36665	48	40532	24	40670	24	47039	35		
11147	28	22281	27	35508	46	36359	49	36666	48	40533	24	40671	24	47040	35		
11148	28	22282	27	35509	46	36360	49	36667	48	40534	24	40672	24	47041	35		
11149	28	22283	27	35510	46	36361	49	36668	48	40535	25	40682	24	47042	35		
11150	28	22284	27	35511	46	36362	49	36669	48	40536	25	40683	24	47043	35		
11151	28	22285	27	36250	46	36363	49	40158	25	40537	25	40684	24	47044	35		
11153	28	22286	27	36251	46	36364	49	40162	25	40538	25	40685	24	47045	35		
11154	28	22287	27	36252	46	36365	49	40163	25	40539	25	40686	24	47046	35		
11155	28	22288	27	36253	46	36366	49	40164	25	40540	25	40687	24	47047	35		
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13839	29	22294	27	36257	46	36370	49	40172	25	40544	25	41003	60	47051	35		
13843	29	22296	27	36258	46	36371	49	40173	25	40586	24	41004	60	47052	35		
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20884	28	30297	43	36318	49	36455	50	40336	38	40648	24	46161	29	47074	35		
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22258	27	35505	46	36356	49	36663	48	40530	24	40668	24	47037	35	47094	35		
22259	27	35506	46	36357	49	36664	48	40531	24	40669	24	47038	35	47095	35		



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47096	35	47171	36	56315	47	75046	31	75372	31	77225	56	77301	56	77360	56
47097	35	47172	36	56316	47	75047	31	75373	31	77226	56	77302	56	77361	56
47098	35	47173	36	56395	52	75048	31	75374	31	77227	56	77303	56	77362	56
47099	35	47175	36	56396	52	75049	31	75375	31	77228	56	77305	57	77363	56
47100	35	47183	36	56400	51	75050	31	75376	31	77229	56	77307	57	77364	56
47101	35	47184	36	56403	51	75051	31	75377	31	77230	56	77308	57	77365	56
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47146	37	56081	51	75022	31	75350	29	77217	56	77281	56	77353	57		
47147	37	56082	51	75023	31	75353	29	77218	56	77283	57	77354	57		
47148	37	56083	51	75024	31	75354	29	77220	56	77296	56	77355	57		
47159	36	56084	51	75025	31	75355	29	77221	56	77297	56	77356	57		
47160	36	56085	51	75026	31	75356	29	77222	56	77298	56	77357	57		
47161	36	56086	51	75027	31	75370	31	77223	56	77299	56	77358	57		
47163	36	56312	47	75028	31	75371	31	77224	56	77300	56	77359	56		



Application Sheet for SAMPLE PARTS

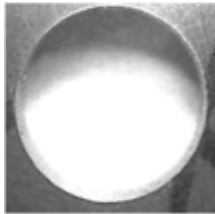
BASIC INFORMATION:

DATE: _____

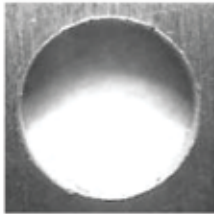
Regional Manager: _____ Territory: _____ Phone Number: _____
 Distributor/Contact: _____ Location: _____ Phone Number: _____
 End user/Contact: _____ Location: _____ Phone Number: _____
 Call/Copy Rep: YES NO Call/Copy Dist: YES NO Call/Copy End User: YES NO
 Application (Description): _____

INDUSTRY (Check One):

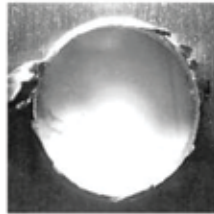
- | | | | | |
|-------------------|---------------------|---------------|-----------------------|-------------|
| Aerospace-Engine | Aerospace-Structure | Auto Body | Auto Chassis | Auto Engine |
| Auto Transmission | Construction | Electronics | Firearms | Food |
| Processing | Freight Transport | Glass | Housewares | Janitorial |
| Material Handling | Medical | Paper | Petroleum | Plumbing |
| Primary Metals | Recreation | Ship Building | Textile | Timber/Wood |
| Tire | Tooling | Welding | Other (Explain) _____ | |

PART DESCRIPTION/NAME: _____**PART MATERIAL:** _____**CLASS OF BURR (Check One):****CLASS ONE**

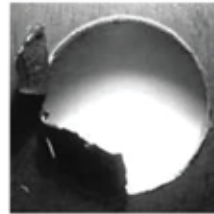
Micro Burrs can only be seen with magnification.

**CLASS TWO**

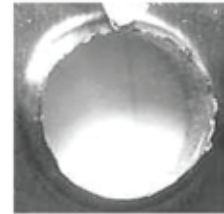
Feather Burrs can be seen without magnification. They can be removed with your fingernail.

**CLASS THREE**

Well attached small burrs are small in nature, but require a lot of force to be removed.

**CLASS FOUR**

Well attached large burrs are large in nature and have a larger attachment point than a CLASS THREE burr.

**CLASS FIVE**

Extruded burrs are very large burrs that extrude from the base material. These burrs need to be preconditioned before brushing.

ADDITIONAL INFORMATION:

Method currently being used: _____ What does the customer currently not like? _____
 Type of equipment: _____ Maximum brush size? _____
 Horsepower: _____ Maximum RPM: _____ Minimum RPM: _____ Variable? YES NO
 Method preferred: _____
 Volume of parts per year: _____ Cycle time desired: _____
 Sample part quantity: _____ Cost of current brush: _____ Current brush life: _____



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