M-BRAD®
Abrasive Filament Power Brushes

ADVANCE BRUSH

PFERD

TRUST BLUE

- Longer brush life
- Conforms to irregular shapes
- Ideal for deburring and surface conditioning
- More consistent finish

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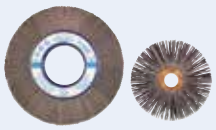
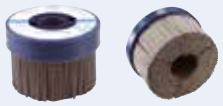
	Wheel Brushes	6-7
	Disc Brushes Disc Brush Drive Arbor	8-10 9
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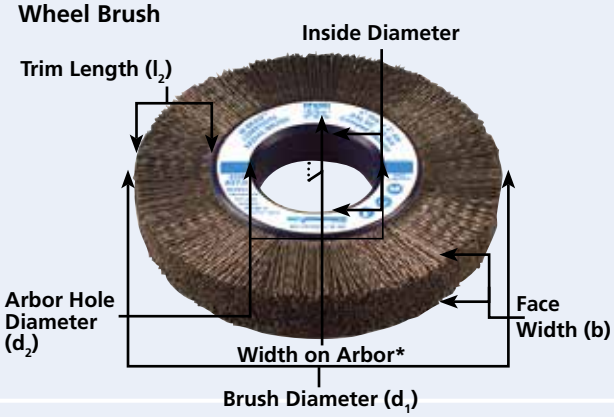
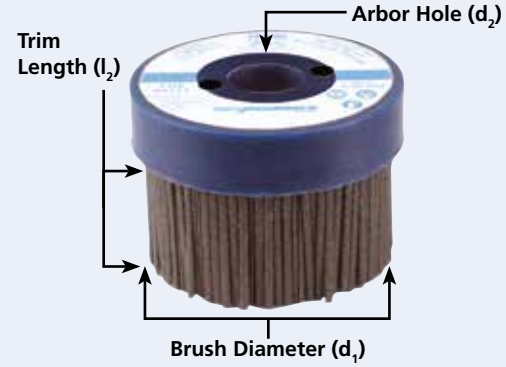
Dimensions

These diagrams demonstrate the method for measuring power brushes and can be used as a reference for selecting the right tool.

Wheel Brush

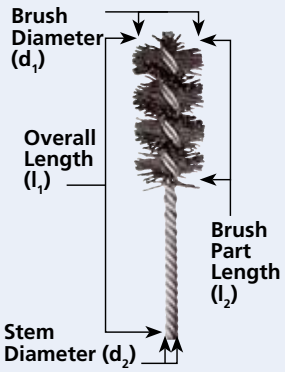


Disc Brush



End Brush

Tube Brush



***Wheel Brush Note:** "Width on Arbor" is not the width at the arbor hole. It is a measurement at the widest point of the faceplates. This is used to calculate the number of brushes that can be gang-mounted on a given length of arbor or shaft.

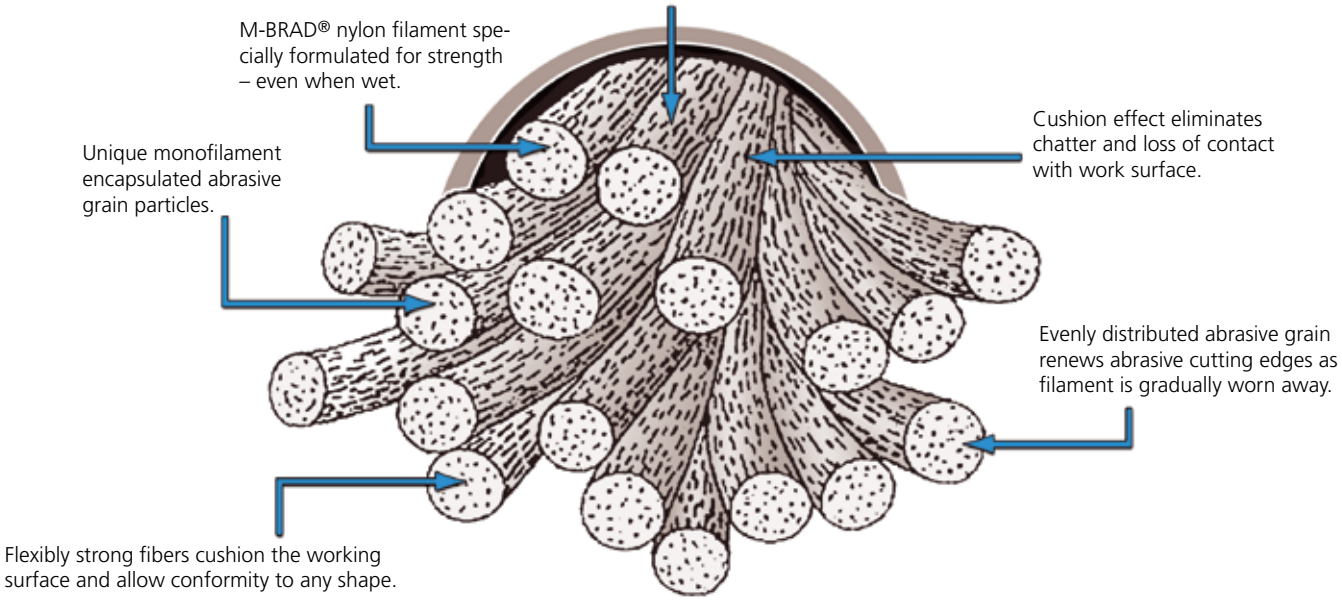
Unique M-BRAD® Filaments

M-BRAD® is a 6.12 nylon monofilament that evenly encapsulates various abrasive grit particles on the surface as well as throughout the nylon filament. The flexibility of strands flowing over, around and into contours makes it uniquely effective if deburring complex parts.

Consistent, gradual cutting action allows precise control. from cosmetic surface preparation on brass or soft aluminum to edge-blending on materials as tough as titanium and carbide.

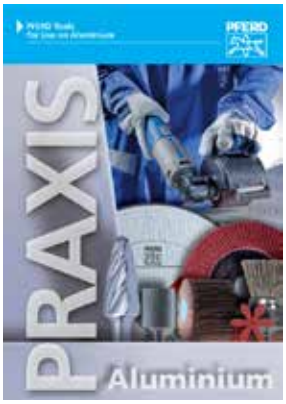
M-BRAD® brushes are ideal for surface conditioning applications on all materials including wood, glass, steel and nickel alloys.

M-BRAD® Abrasive Filaments



Features and Benefits

- PFERD ADVANCE BRUSH offers a full line of high fill density Composite Disc and Wheel brushes for more aggressive brushing
- M-BRAD® filled brushes yield longer tool life than non-woven synthetic abrasive products
- Ceramic Oxide grain (CO) for very aggressive brushing.
- This unique M-BRAD® filament is suitable for both wet and dry applications, although the use of coolant is recommended.
- M-BRAD® won't degrade the dimensions of the workpiece, which reduces scrap and fill welding.



For information on processing aluminum workpieces with M-BRAD® abrasive filament brushes, please see our Aluminum PRAXIS.

Power brushes are designed, tested, manufactured, and inspected to assure quality with a particular concern for safety considerations. To promote safety, users must be aware of potential hazards and their responsibilities for safe and proper operation of power brushes.

Warnings, safety requirements, and product limitations and application suggestions are printed in this catalogue and in other literature, marked on brushes (when feasible), and/or supplied on or in the product container. These warnings and requirements must be observed by all power brush operators. Failure to do so may endanger the brush operator and others in the area of the brushing operation.

Personal Protection

In normal power brushing operations, the material being removed, such as burrs, scale, dirt, weld slag, or other residue, will fly off the brush with considerable force along with the brush filaments, which break off due to fatigue.

The potential of serious injury exists for both the brush operator and others in the work area (possibly 50 feet or more from the brush). To protect against this hazard, operators and others in the area must wear SAFETY GOGGLES WITH SIDE SHIELDS or FULL FACE SHIELDS OVER SAFETY GLASSES WITH SIDE SHIELDS, along with PROTECTIVE CLOTHING such as GLOVES, MASKS, and PROPER FOOTWEAR.

Safety Requirements Summary

1. Protective Goggles: Safety goggles or full face shields worn over safety glasses with side shields MUST BE WORN BY ALL OPERATORS AND OTHERS IN THE AREA OF POWER BRUSH OPERATIONS. Comply with the requirements of ANSI Z87.1 "Occupational Eye and Face Protection".

2. Guards: Keep all machine guards in place.

3. Speeds: Observe all speed restrictions indicated on the brushes, containers, labels, or printed in pertinent literature. "MSFS" means Maximum Safe Free Speed (RPM) – spinning free with no work applied. For reasons of safety, the "MSFS" should not be exceeded under any circumstances.

4. Safety Standards: Comply with the Safety Standards of the American Brush Manufacturers' Association and the American National Standards Institute Standard ANSI B165.1, "Safety Requirements – Power Brushes".

5. Protective Equipment: Appropriate protective clothing and equipment must be used where a possibility of injury exists that can be prevented by such clothing or equipment.

6. Dust Warning: Use of the tools in this catalogue may create dust and other particles. To avoid any risk of adverse health effects, the operator must use appropriate protective measures, including a respirator, during and after tool operation. Refer to our Material Safety Data Sheet (MSDS) for further information regarding the product to be used. Furthermore, additional health hazards may result from dust in the surrounding environment and from dust generated from the work piece material. PROTECTIVE MEASURES FOR THE OPERATOR MUST ADDRESS DUST AND OTHER PARTICULATES ARISING FROM ALL SOURCES. Always use our products in a well-ventilated workspace.

Safety Recommendations


= Wear protective goggles!


= Wear protective gloves!


= Wear dust respirator!


= Observe safety recommendations!

= Read the Material Safety Data Sheets (MSDS) before using any materials!

Warning!

Failure to observe safety precautions may result in injury.

Read All Safety Information and Follow All Instructions on Packaging

You must follow all operator and safety instructions, as well as common safety practices which will reduce the likelihood or severity of physical injury.

Many brush manufacturers mark some safety warnings, recommendations, and usage restrictions directly on the product. It is not always practical to include even the most limited safety information on the brush itself. Therefore, the operator MUST READ and FOLLOW all instructions supplied in or on the product container as well as those marked on the product itself. The operator should also refer to the safety and operating information printed in the brush manufacturer's catalogue and other literature.

Availability of ANSI Standards

In this catalogue, reference is made to these ANSI Standards: ANSI B-165.1, ANSI Z87.1. Copies of these standards are available at public libraries and from the American Brush Manufacturers' Association, 2111 Plum Street, Ste. 274, Aurora, IL 60506, Tel:(630) 631-5217, Fax: (866) 837-8450; or American National Standards Institute, Inc. (ANSI), 1900 Arch Street, Philadelphia, PA 19103 (B165.1 only).

ANSI Standard B 165.1 Arbor Holes

ANSI Standard B165.1-2000 dictates maximum face widths and minimum arbor hole sizes allowable. All brushes listed in this catalogue conform to all ANSI standards.

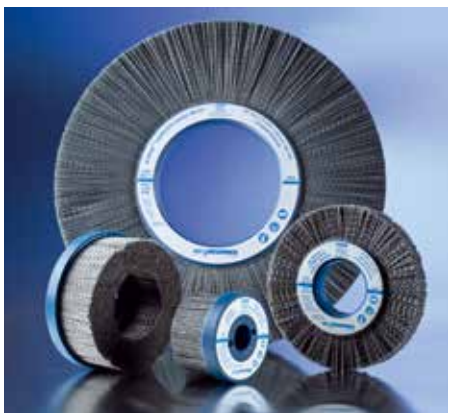
If you require a brush that does not conform to these standards, please contact your distributor for assistance.

Note:
The maximum face width listed in this table refers to shafts that are supported by one end only, such as angle and bench grinders. It does not apply to shafts that are supported by bearings at both ends.

Wheel Diameter	Minimum Arbor Hole	Maximum Face Width
2	1/4	1/4
3	1/4	1
4	3/8	1
6	1/2	1-1/4
7	5/8	1-1/4
8	5/8	1-1/4
10	3/4	2
12	1	3
14	1-1/4	3
15	1-1/4	3
16	2	3

Prevent Problems Due to Mechanical Failure

Do not allow unsafe conditions to continue. Occasionally, due to worn bearings, a bent spindle, an unusual application, operator abuse or inappropriate use, a brush may fail. A brush which is not received in acceptable condition for trouble-free operation may also fail. Do not use or continue to use a failed brush or one which is functioning improperly (i.e., throwing filaments, out-of-balance, etc.), as this increases the possibility for further brush failure and hazard of injury. The cause of the failure should be evaluated and corrected immediately.



Brushing Equipment Considerations

Brush Size

- Select a brush that can safely fit your specific equipment.

Brush Adapters

- Various adapters and drive arbors are available to help secure brushes safely to machines (pgs 9, 15).

Application Parameters

Brush Speed

- As a good starting point have the brush run at about 3000 SFPM.
- At higher speeds, WHEEL BRUSHES tend to group the filaments therefore making the brush more aggressive.
- At higher speeds, the filaments of disc brushes tend to flare, reducing the over all height of the brush therefore decreasing penetration depth and creating a less aggressive brushing action. It is recommended that the penetration depth be set while the brush is running at the intended operating speed.

Brush Penetration into Workpiece

- Due to the even distribution of abrasive grain throughout the filament a greater degree of interference is recommended when using M-BRAD® brushes.
- A recommended starting depth or interference between brush and work piece should be .060".

Direction of Brush Rotation

- On parts with complex features it is recommended the brush be run in both clockwise and counterclockwise directions.
- The brush filament should approach the workpiece as perpendicularly as possible
- For deburring applications, the initial pass with the brush rotation should be opposite to the direction of the cutting tool rotation that created the burr.

Use of Coolant

- The use of coolant is strongly recommended in cases where the work piece is thin (less than ¼"), where excessive brush penetration is used (more than 1/8"), and in cases where poor thermal conducting materials are processed.
- The use of coolant will generate a better surface finish.
- Under certain application conditions M-BRAD® brush filaments will begin to melt and create nylon "smear" (gray film on work piece).
- If Nylon Smear occurs, apply coolant immediately and continue running the brush normally. The cooler running brush will remove the smear.

Filament Selection

Abrasive Grain and Filament Selection

Grain Type

- For demanding deburring applications on steel, choose coarse, ceramic filled M-BRAD® brushes
- For processing work pieces used in the nuclear or aerospace industries choose ceramic filled brushes.
- For deburring applications on aluminum parts, silicon carbide filled brushes are recommended
- For deburring and surface conditioning applications on plastic parts the best choice is nylon filled wheel brushes.

Filament Type

- For a more aggressive brushing effect, select a brush with a larger filament cross section (choose rectangular vs. round crimped filament)
- For a fine surface finish on a functional part use a small filament diameter brush

Operating Speeds For Wet and Dry M-BRAD® Applications

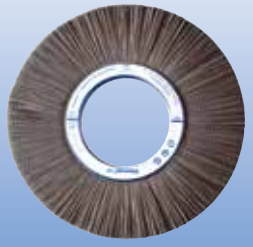
Wheel Dia.	Maximum Speed [RPM]	
	Dry Application	Wet Application
3	3,000	5,500
4	2,000	2,400
6	1,200	1,440
8	1,000	1,200
10	900	1,080
12	800	960
14	700	840

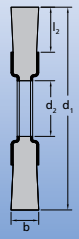
Disc Brush Dia.	Maximum Speed [RPM]	
	Dry Application	Wet Application
3	2,500	3,000
4	2,000	2,400
5	1,600	2,000
6	1,400	1,600
8	1,000	1,200
9	800	1,000
10	300	800

Problems and Solutions

Problem	Solution
Inadequate brushing action	■ Increase brush RPM or use larger brush diameter at same RPM ■ Use brush with shorter trim ■ Select a brush with larger filament size ■ Select a brush with larger abrasive grain size ■ Change the orientation of the brush to the workpiece (brushing action should be perpendicular to the work piece edge) ■ Increase interference between brush and workpiece ■ Decrease coolant pressure onto brush/work piece ■ Decrease feed rate between brush and workpiece ■ Select a brush with ceramic vs silicon carbide filled grain
Excessively strong brushing action	■ Reduce brush RPM, or use a smaller brush diameter at same RPM ■ Reduce contact pressure ■ Use brush with longer trim length ■ Use brush with finer abrasive grain size ■ Select a brush with thinner filament ■ Change the orientation of the brush to the workpiece (make less perpendicular)
Change in workpiece colour (due to heat or nylon smear)	■ Reduce brush RPM ■ Use longer trim length brush running at the same speed ■ Use coolant ■ Use lighter density brush ■ Decrease brush penetration into workpiece
Irregular/coarse surface finish	■ Use brush with wider brush face ■ Increase brush penetration ■ Use larger disc brush diameter ■ Use brush with smaller filament size ■ Use brush with smaller abrasive grain size ■ Make sure that work piece is completely covered by brush ■ Use brush with longer trim
Surface is too smooth	■ Select brush with thicker filament ■ Use brush with shorter trim ■ Use brush with larger abrasive grain size ■ Reduce RPM

Composite Wheels





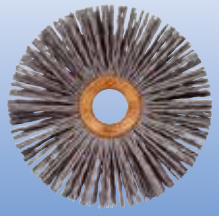
EDP 83771

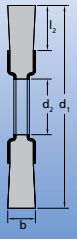
For deburring, honing, edge radiusing, light cleaning, and polishing. Available with Silicon Carbide or Ceramic Oxide grain.

Ordering Note
Please refer to pg 15 for drive arbor adapters.
PFERD Specification Number
RBU SiC

Diameter d_1 [Inches]	Arbor Hole d_2 [Inches]	Trim Length l_2 [Inches]	Face Width b [Inches]	Filament Dimensions, Grit Size and EDP Number					Recom. Speed [RPM]	MSFS Max. [RPM]	Adapter Style	
				Rectangular	Round Crimped							
				.045 x .090 80 Grit	.040 Dia. 80 Grit	.040 Dia. 120 Grit	.022 Dia. 120 Grit	.022 Dia. 320 Grit				
Silicon Carbide Grain												
6	2	1-1/4	1	83721	83720	83722	-	83723	900 - 1,500	3,600	C	1
8	2	1-1/4	1	83727	83726	83728	-	83729	900 - 1,500	3,600	C	1
8	2	2-1/4	1	83733	83732	83734	-	83735	900 - 1,500	3,600	C	1
10	2	1-1/2	1	83739	83738	83740	83742	83741	900 - 1,500	3,600	C	1
10	2	3-1/4	1	83745	83744	83746	-	83747	900 - 1,500	3,600	C	1
12	4-1/4	1-1/2	1	83751	83750	83752	-	83753	500 - 800	1,800	G	1
12	4-1/4	3	1	83757	83756	83758	-	83759	500 - 800	1,800	G	1
14	5-1/4	1-1/2	1	83763	83762	83764	-	83765	500 - 800	1,800	G	1
14	5-1/4	3-5/8	1	83769	83768	83770	-	83771	500 - 800	1,800	G	1
Ceramic Oxide Grain												
6	2	1-1/4	1	-	84165	-	-	-	900 - 1,500	3,600	C	1
8	2	1-1/4	1	-	84169	-	-	-	900 - 1,500	3,600	C	1
10	2	1-1/2	1	-	84173	-	-	-	500 - 800	1,800	C	1
12	4-1/4	1-1/2	1	-	84177	-	-	-	500 - 800	1,800	G	1
14	5-1/4	1-1/2	1	-	84181	-	-	-	500 - 800	1,800	G	1

Small Diameter Copper Centre





EDP 83794

For use as a high-speed brush in small confined areas.

Ordering Note
See page 15 for information on drive arbors.
PFERD Specification Number
RBU SiC

Diameter d_1 [Inches]	Arbor Hole d [Inches]	Trim Length l_2 [Inches]	Face Width b [Inches]	Filament Dimensions, Grit Size and EDP Number				Recom. Speed [RPM]	MSFS Max. [RPM]	Adapter Style	
				.040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 320 Grit	.018 Dia. 500 Grit				
Silicon Carbide Grain											
1-1/2	1/2, 3/8	7/16	3/8	-	83782	-	-	4,000 - 6,000	10,000	F	10
2	1/2, 3/8	1	5/8	83784	-	83785	83786	2,600 - 4,500	10,000	F	10
2-1/2	5/8	11/16	5/8	-	-	83792	-	3,000 - 5,000	10,000	F	10
3	1/2, 3/8	15/16	5/8	83793	83794	83795	-	3,000 - 5,000	10,000	F	10

For deburring, edge radiusing, light cleaning, and polishing.

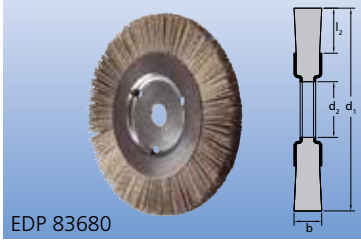
Ordering Note

See page 15 for listing of adapters.

PFERD Specification Number

RBU SiC

Narrow Face



EDP 83680

Diameter d_1 [Inches]	Arbor Hole d_2 [Inches]	Trim Length l_2 [Inches]	Face Width b [Inches]	Filament Dimensions, Grit Size and EDP Number				Recom. Speed [RPM]	MSFS Max. [RPM]	Adapter Style	
				.040 Dia. 80 Grit	.040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 320 Grit				
Silicon Carbide Grain											
3	1/2, 3/8	1/2	1/2	83670	-	83671	83672	3,000 - 5,000	10,000	D	10
4	5/8, 1/2	3/4	3/4	83680	83681	83682	83683	3,000 - 5,000	12,500	D	10

Wide face M-BRAD® wheels contain more fill material than narrow face version, providing faster cycle times and more aggressive deburring.

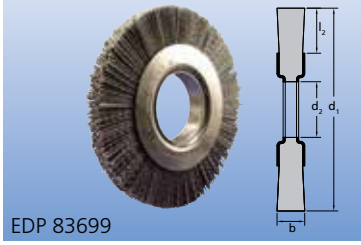
Ordering Note

8" diameter wheels are supplied with adapter set K (EDP 84665). All 8" - 14" diameter wheels have a 2" arbor hole with 1/2" x 1/4" keyways. See page 15 for listing of adapters.

PFERD Specification Number

RBU SiC

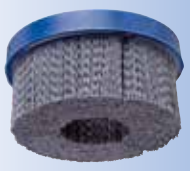
Wide Face

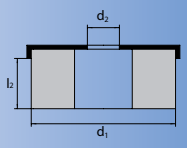


EDP 83699

Diameter d_1 [Inches]	Arbor Hole d_2 [Inches]	Trim Length l_2 [Inches]	Face Width b [Inches]	Filament Dimensions, Grit Size and EDP Number					Recom. Speed [RPM]	MSFS Max. [RPM]	Adapter Style	
				.040 Dia. 80 Grit	.040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 120 Grit	.022 Dia. 320 Grit				
Silicon Carbide Grain												
3	5/8-12	5/8	7/8	83689	83690	83691	-	83692	1,500 - 2,000	5,000	D	1
4	5/8-12	7/8	3/4	83693	83694	83695	-	83696	3,000 - 5,000	12,000	D	1
6	2	1-1/8	7/8	83699	83700	83701	-	83702	1,500 - 2,500	6,000	C	1
8	2	1-1/2	1	83703	83704	83705	-	83706	1,200 - 2,000	4,500	C	1
10	2	1-7/8	1	83707	83708	83709	-	83710	900 - 1,500	3,600	C	1
12	2	2-7/8	1	83711	83712	83713	-	83714	700 - 1,300	3,000	C	1
14	2	2-5/8	1	83715	83716	83717	-	83718	600 - 1,000	2,400	C	1
Ceramic Oxide Grain												
4	5/8-12	7/8	3/4	84210	84211	-	84213	-	3,000 - 5,000	12,000	D	1

Composite Discs, High Density





EDP 84128

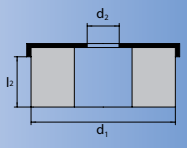
M-BRAD® composite disc brushes are designed for aggressive deburring in CNC and robotic machines.

For deburring, honing, edge radiusing, light cleaning, and polishing.

Ordering Note
See page 9 for information on drive arbors.
PFERD Specification Number
DBU

Diameter d_1 [Inches]	Arbor Hole d_2 [Inches]	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number					Recom. Speed [RPM]	MSFS Max. [RPM]	
			Rectangular	Round Crimped						
			.045 x .090 80 Grit	.040 Dia. 80 Grit	.040 Dia. 120 Grit	.022 Dia. 120 Grit	.022 Dia. 320 Grit			
Silicon Carbide Grain										
3	7/8	1-1/2	84121	84120	84122	84123	84125	1,200 - 2,000	4,500	1
4	7/8	1-1/2	84129	84128	84130	-	84131	900 - 1,500	3,500	1
5	7/8	1-1/2	84135	84134	84136	-	84137	700 - 1,300	3,000	1
6	7/8	1-1/2	84141	84140	84142	-	84143	600 - 1,200	2,500	1
8	7/8	1-1/2	84147	84146	84148	-	84149	500 - 800	1,800	1
9	7/8	1-1/2	83917	-	-	-	-	400 - 700	1,500	1
Ceramic Oxide Grain										
3	7/8	1-1/2	-	84231	84232	-	-	1,200 - 2,000	4,500	1
4	7/8	1-1/2	-	84236	84237	84238	-	900 - 1,500	3,500	1
5	7/8	1-1/2	-	84241	-	-	-	700 - 1,300	3,000	1
6	7/8	1-1/2	-	84246	-	-	-	600 - 1,200	2,500	1

Composite Discs, High Density, Banded



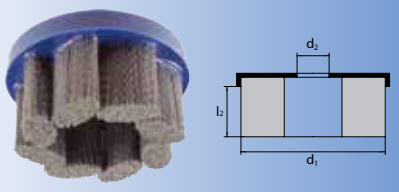
EDP 83929

Banded version reduces filament flare during use. The bridle increases brush aggressiveness for applications where larger burrs need attention.

Ordering Note
See page 9 for information on drive arbors.
PFERD Specification Number
DBU

Diameter d_1 [Inches]	Arbor Hole d_2 [Inches]	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number				Recom. Speed [RPM]	MSFS Max. [RPM]	
			Rectangular	Round Crimped					
			.045 x .090 80 Grit	.040 Dia. 80 Grit	.040 Dia. 120 Grit	.022 Dia. 320 Grit			
Silicon Carbide Grain									
3	7/8	1-1/2	83929	83880	83881	83883	1,200 - 2,000	4,500	1
4	7/8	1-1/2	83933	83888	83889	83891	900 - 1,500	3,500	1

Composite Discs, Round Filament



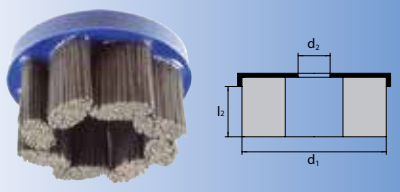
EDP 83955

These M-BRAD® composite disc brushes are ideal for automatic deburring applications where either magnetic conveyors are used, or where workpiece has a small cross section. Tufted style provides better air flow for cool grinding on heat sensitive materials, and reduced friction during the brushing process to keep small parts stationary on automatic applications using conveyors.

Rectangular filament M-BRAD® composite disc brushes offer a more aggressive deburring action than round filament brushes.

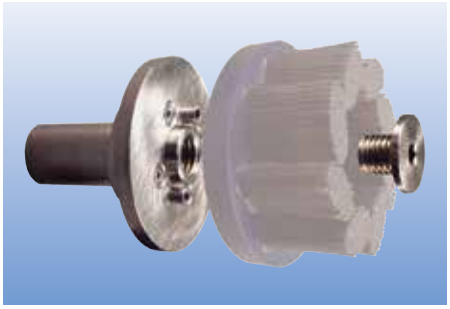
Ordering Note
For information on drive arbors see table below.
PFERD Specification Number
DBU

Composite Discs, Rectangular Filament



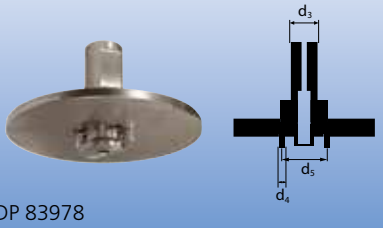
EDP 83972

Diameter d_1 [Inches]	Arbor Hole d_2 [Inches]	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number						Recom. Speed [RPM]	MSFS Max. [RPM]	
			Rectangular	Round Crimped							
			.045 x .090 80 Grit	.045 x .090 120 Grit	.040 Dia. 80 Grit	.040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 320 Grit			
Silicon Carbide Grain											
3	7/8	1-1/2	83966	83967	83941	83942	83943	83944	1,200 - 2,000	4,500	1
4	7/8	1-1/2	83968	83969	83945	83946	83947	83948	900 - 1,500	3,500	1
6	7/8	1-1/2	83970	83971	83949	83950	83951	83952	600 - 1,200	2,500	1
8	7/8	1-1/2	83972	83973	83953	83954	83955	83956	500 - 800	1,800	1
10	7/8	1-1/2	83974	83975	83957	83958	83959	83960	350 - 600	1,340	1



These drive arbors are designed for mounting composite disc brushes on automatic deburring equipment.
PFERD Specification Number
BO

Drive Arbors



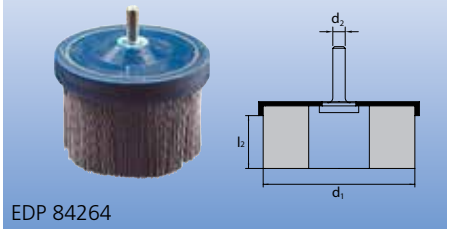
EDP 83978

Shank Diameter d_3 [Inches]	Suitable for Brush Diameter [Inches]	No. of Drive Pins	Drive Pin Dia. d_4 [Inches]	Bolt Circle Dia. d_5 [Inches]	EDP Number	
3/4	3 - 4	2	1/4	1-1/4	83982	1
3/4	5 - 6	2	1/4	1-1/4	83983	1
3/4	7 - 8	3	1/4	3	83984	1
3/4	9 - 10	3	1/4	3	83985	1
1	3 - 4	2	1/4	1-1/4	83978	1
1	5 - 6	2	1/4	1-1/4	83979	1
1	7 - 8	3	1/4	3	83980	1
1	9 - 10	3	1/4	3	83981	1

M-BRAD® Abrasive Filament Power Brushes

Disc Brushes

Composite Mounted Discs



EDP 84264

Ideal for flat surfaces with numerous holes and low projections. Especially effective on aluminum, cast iron, brass, copper and hardened steels.

Recommendation for Use
Suitable for CNC and robotic machines.

PFERD Specification Number
DBU

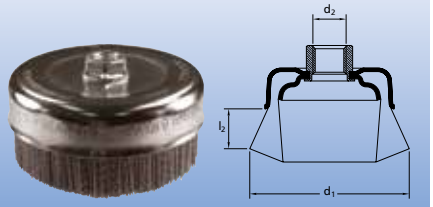
Diameter d_1 [Inches]	Stem Dia. d_2 [Inches]	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number					Recom. Speed [RPM]	MSFS Max. [RPM]	
			Rectangular	Round Crimped						
			.045 x .090 80 Grit	.040 Dia. 80 Grit	.040 Dia. 120 Grit	.022 Dia. 120 Grit	.022 Dia. 320 Grit			
Silicon Carbide Grain										
2	1/4	1-1/2	84250	84251	84252	84253	84254	1,500 - 3,500	5,000	1
2-1/2	1/4	1-1/2	84255	84256	84257	-	84259	1,500 - 3,500	5,000	1
3	1/4	1-1/2	84260	84261	84262	-	84264	1,500 - 3,500	5,000	1
Ceramic Oxide Grain										
2	1/4	1-1/2	-	84270	84271	-	-	1,500 - 3,500	5,000	1
2-1/2	1/4	1-1/2	-	84275	-	84279	-	1,500 - 3,500	5,000	1
3	1/4	1-1/2	-	84280	84281	-	-	1,500 - 3,500	5,000	1

Designed for use on hand-held right-angle tools or stationary machine spindles. Ideal for flat surfaces with numerous holes and low projections. Cup brushes are especially effective on aluminum, cast iron, brass, copper and hardened steels.

Recommendation for Use
Suitable drive systems: stationary machines, variable speed angle grinders.

PFERD Specification Number
TBU SiC

Threaded Cup Brushes



EDP 83821

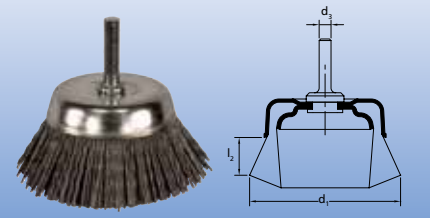
Diameter d_1 [Inches]	Thread Size d_2	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number				Recom. Speed [RPM]	MSFS Max. [RPM]	
			.040 Dia. 80 Grit	.040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 320 Grit			
Silicon Carbide Grain									
3-1/2	5/8-11	1-1/2	-	83810	83811	-	3,000 - 5,000	12,000	1
4	5/8-11	1-1/2	83813	83814	83815	83817	1,500 - 2,500	6,000	1
6	5/8-11	1-1/2	83821	83822	83823	83825	1,500 - 2,000	5,000	1

Cup brushes are especially effective on aluminum, cast iron, brass, copper and hardened steels.

Recommendation for Use
Suitable drive systems: straight grinders, flexible shafts, power drills.

PFERD Specification Number
TBU SiC

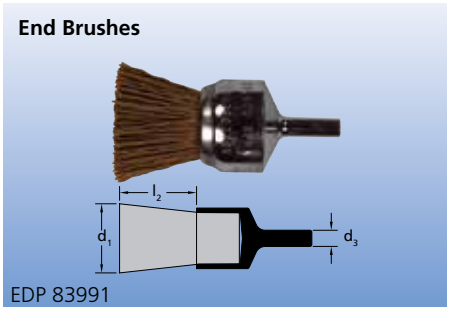
Mounted Cup Brushes



EDP 83832

Diameter d_1 [Inches]	Stem Dia. d_2 [Inches]	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number		Recom. Speed [RPM]	MSFS Max. [RPM]	
			.040 Dia. 120 Grit	.035 Dia. 180 Grit			
Silicon Carbide Grain							
2-3/4	1/4	1-1/4	83829	83830	1,500 - 2,000	5,000	1
3	1/4	1	-	83832	1,500 - 2,000	5,000	1

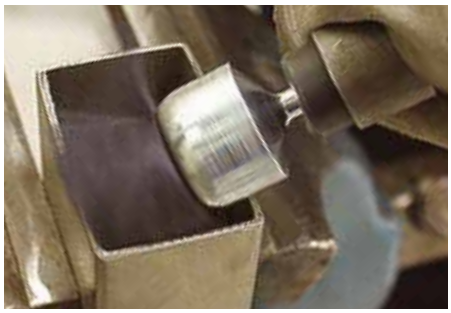
End Brushes



EDP 83991

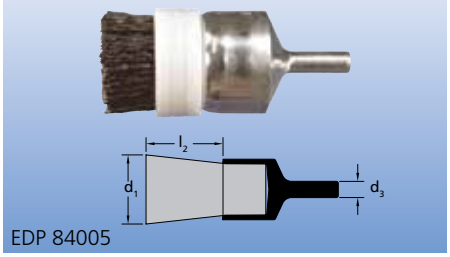
End brushes eliminate burrs left by chamfer drills or cutting tools. Use for cleaning and deburring bottoms and insides of mold cavities, bore holes and irregular small areas.

PFERD Specification Number
PBU



Diameter d_1 [Inches]	Stem Dia. d_2 [Inches]	Trim Length l_2 [Inches]	Filament Dimensions, Grit Size and EDP Number .040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 320 Grit	Recom. Speed [RPM]	MSFS Max. [RPM]	
Silicon Carbide Grain								
1/2	1/4	1	83986	83987	83988	5,200 - 9,000	20,000	10
3/4	1/4	1	83989	83990	83991	5,200 - 9,000	20,000	10
1	1/4	1	83992	83993	83994	5,200 - 9,000	20,000	10

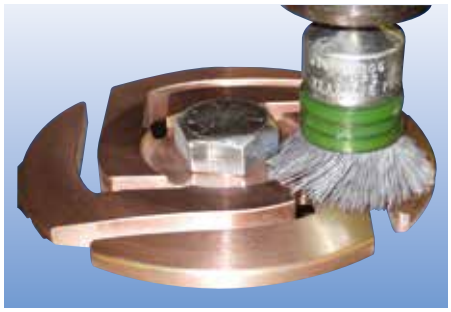
End Brushes - Bridled



EDP 84005

Plastic bridles reduce trim length, increasing aggressiveness and reducing flare.

PFERD Specification Number
PBU



Diameter d_1 [Inches]	Stem Dia. d_2 [Inches]	Trim Length 2 [Inches]	Filament Dimensions, Grit Size and EDP Number .040 Dia. 80 Grit	.040 Dia. 120 Grit	.035 Dia. 180 Grit	.022 Dia. 120 Grit	Recom. Speed [RPM]	MSFS Max. [RPM]	
Silicon Carbide Grain									
1/2	1/4	1	-	83996	83997	-	5,200 - 9,000	20,000	10
3/4	1/4	1	-	84000	-	-	5,200 - 9,000	20,000	10
1	1/4	1	-	84004	84005	-	5,200 - 9,000	20,000	10
Ceramic Oxide Grain									
1	1/4	1	84310	84311	-	84313	5,200 - 9,000	20,000	10

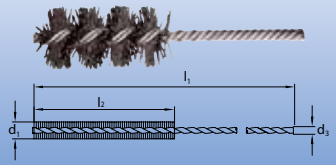
M-BRAD® Abrasive Filament Power Brushes

Tube Brushes

Cutting action is non-destructive to the part and will not alter bore dimensions or disturb delicate surface finishes. Recommended for conditioning internal bore holes or tubes as well as cleaning threads and burrs at cross-holes. Side action removes cross-holes sharp edges and corners, as well as slivers produced when drilling close-tolerance hard metallic and non-metallic parts.

PFERD Specification Number
PBU SiC

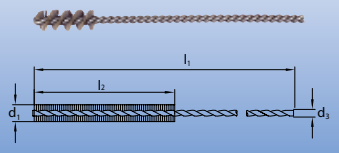
Double Stem, Double Spiral



EDP 84040

Diameter d_1 [Inches]	Stem Dia. d_3 [Inches]	Brush Part Length l_2 [Inches]	Overall Length l_1 [Inches]	Filament Dimensions, Grit Size and EDP Number			
				.040 Dia. 80 Grit	.040 Dia. 120 Grit	.022 Dia. 320 Grit	
Silicon Carbide Grain							
1/4	5/32	2	5	-	-	84011	10
5/16	5/32	2	5	-	-	84012	10
3/8	5/32	2	5	-	-	84013	10
7/16	5/32	2	5	-	-	84014	10
1/2	3/16	2	5	-	-	84018	10
9/16	7/32	2	5	-	-	84019	10
5/8	7/32	2	5	-	-	84022	10
11/16	7/32	2	5	-	-	84023	10
3/4	1/4	2-1/2	5-1/2	84024	84025	84027	10
13/16	1/4	2-1/2	5-1/2	84028	84029	84031	10
7/8	1/4	2-1/2	5-1/2	84032	84033	84035	10
15/16	1/4	2-1/2	5-1/2	84036	84037	84039	10
1	1/4	2-1/2	5-1/2	84040	84041	84043	10
1-1/8	1/4	2-1/2	5-1/2	84044	84045	84048	10
1-1/4	1/4	2-1/2	5-1/2	84049	84050	84053	10
1-1/2	1/4	2-1/2	5-1/2	84054	84055	84057	10
1-3/4	1/4	2-1/2	5-1/2	84059	84060	84062	10
2	1/4	2-1/2	5-1/2	84063	84064	84066	10

Microabrasive



EDP 84077

Effective cleaning action removes sharp cross-hole burrs, metal sliver residues and sharp corners that result from drilling close-tolerance hard metallic and non-metallic parts. Cleaning and very light deburring will not alter critical dimensions or hole geometry.

PFERD Specification Number
PBU

Diameter d_1 [Inches]	Stem Dia. d_3 [Inches]	Brush Part Length l_2 [Inches]	Overall Length l_1 [Inches]	For Hole Diameters [Inches]	[Decimal]	[mm]	EDP Number	
500 Grit Aluminum Silicate Filament								
.030	.015	1/2	4	1/32	0.031	0.787	84071	10
.050	.022	1/2	4	3/64	0.047	1.191	84072	10
.075	.033	3/4	4	1/16	0.063	1.588	84073	10
.090	.041	3/4	4	5/64	0.078	1.984	84074	10
.105	.041	1	4	3/32	0.094	2.381	84075	10
.125	.064	1	4	7/64	0.109	2.778	84076	10
.135	.075	1	4	1/8	0.125	3.175	84077	10
600 Grit Aluminum Oxide Filament								
.165	.087	1	5	5/32	0.156	3.962	84078	10
.190	.087	1	5	3/16	0.188	4.763	84079	10
.260	.115	1	5	1/4	0.250	6.350	84080	10
.325	.115	1	5	5/16	0.313	7.938	84081	10
.385	.147	1	5	3/8	0.375	9.525	84082	10
.515	.168	1	5	1/2	0.500	12.700	84083	10
.640	.168	1	5	5/8	0.625	15.870	84084	10

For mounting wheel brushes up to 3" in diameter.

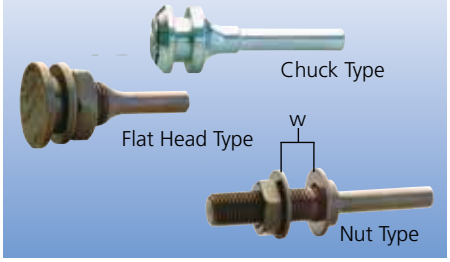
Chuck Type
Countersunk head tightening-screw fits into a recessed flange washer for locking power. Allows brushes to reach edges without interference from arbor overhang. Change brush without removing arbor from collet. Unthreaded shoulder.

Flat Head Type
Brush mounts between a single washer and the flat head. Locked in place with a reverse-threaded nut. Allows the brush to be close to the workpiece. Threaded shoulder.

Nut Type
Nut can be removed to replace worn brush while arbor stem remains in chuck.

PFERD Specification Number
BO

Drive Arbors for Wheel Brushes



Fits Brush ID	Mounting Width w	Shank Dia.	Head/Washer Dia.	Overall Length	EDP Number	
Chuck Type						
1/4	3/16 to 3/8	1/4	9/16	2-1/8	84650	5
3/8	3/16 to 3/8	1/4	11/16	2-1/8	84651	5
1/2	3/16 to 3/8	1/4	3/4	2-1/8	84652	5
Flat Head Type						
3/8	0 - 1/2	1/4	3/4	1-5/8	84654	5
1/2	0 - 1/2	1/4	15/16	1-3/4	84655	5
1/2, 5/8	1/8 - 1/2	1/4	15/16	1-7/8	84656	5
Nut Type						
1/4	Up to 7/8	1/4	5/8	2-5/8	84657	5
3/8	Up to 7/8	1/4	3/4	2-5/8	84658	5
1/2	Up to 1/4	1/4	7/8	1-3/4	84659	5

Style	Brush Type	Fits Brush Arbor Hole [Inches]	Brush Keyways	Adapter I.D. [Inches]	Keyways in Adapter	EDP Number		Brush Adapters
A	Crimped Narrow Face Narrow Face M-BRAD	1-1/4	1/4 x 1/8 (2)	1/2	1/8 x 3/32 (2)	84605	1 pr.	
		1-1/4	1/4 x 1/8 (2)	5/8	3/16 x 1/8 (2)	84606	1 pr.	
		1-1/4	1/4 x 1/8 (2)	3/4	3/16 x 1/8 (2)	84607	1 pr.	
		1-1/4	1/4 x 1/8 (2)	7/8	3/16 x 1/8 (2)	84608	1 pr.	
		1-1/4	1/4 x 1/8 (2)	1	1/4 x 5/32 (2)	84609	1 pr.	
C	Crimped Medium Face Crimped Wide Face M-BRAD Composite Wheels	2	None	1/2	None	84628	1 pr.	
		2	None	5/8	None	84629	1 pr.	
		2	None	3/4	None	84630	1 pr.	
		2	None	7/8	None	84631	1 pr.	
		2	None	1	None	84632	1 pr.	
		2	None	1-1/4	None	84633	1 pr.	
		2	None	1-1/2	None	84634	1 pr.	
F	Small Diameter Copper Centre Wheels (5/32" Thickness)	5/8	None	1/2	None	84636	10 pcs.	
		5/8	None	3/8	None	84637	10 pcs.	
		5/8	None	1/4	None	84638	10 pcs.	
		1/2	None	3/8	None	84639	10 pcs.	
		1/2	None	1/4	None	84640	10 pcs.	
		3/8	None	1/4	None	84641	10 pcs.	
G	Composite Wheel Brush	4-1/4	None	2	1/2 x 1/4 (2)	84670	1 pcs.	
		5-1/4	None	2	1/2 x 1/4 (2)	84671	1 pcs.	

Subject to technical modifications.

09/2014

817 403

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