



ADVANCE
BRUSH

PIPELINE

HAND TOOLS CATALOG

n Stringer Bead Brushes

n Pipeliner Wheels

n Pipeliner Files

PFERD Milwaukee Brush Co. is proud to offer a complete line of surface finishing and weld cleaning solutions specifically for the pipeline industry. The quality and scope of our product line is

unsurpassed in the industry. Contact PFERD today for a single-source solution to your pipeline requirements!



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ADVANCE Brushes Offer Unique Advantages

Superior Surface Conditioning

Brushing offers ideal face preparation for oxide removal and cosmetic finishing without the problems associated with chemicals, coated and bonded abrasives.

Non-loading Operation

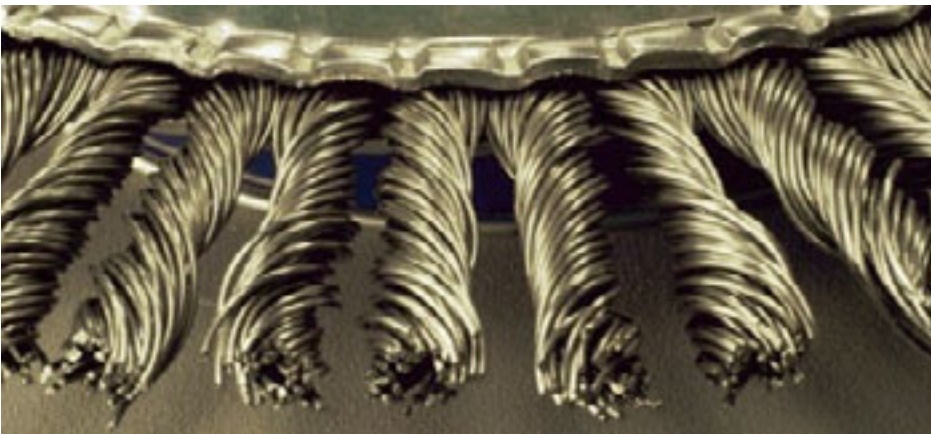
Brushes won't "load up" and lose effectiveness when used to condition, clean or finish soft materials, as occurs with coated, bonded and non-woven abrasives.

More User (And Equipment) Friendly

Brushes do not produce chemical vapors or abrasive dust, which create workplace hazards and reduce equipment life.

Cost-effective, Durable, Long Life Construction

ADVANCE brushes are built with high quality to withstand hours of tough, demanding use. Choose ADVANCE brushes as the logical and economical choice over: abrasive belts, chemicals, tumbling, grinding wheels, filing, sanding, steel wool, sand blasting, non-woven abrasives.



Detail of a WELDCAT™ stringer bead knot wheel featuring COMBITWIST® knot construction. Read more about our COMBITWIST® knot wheels on page 5.



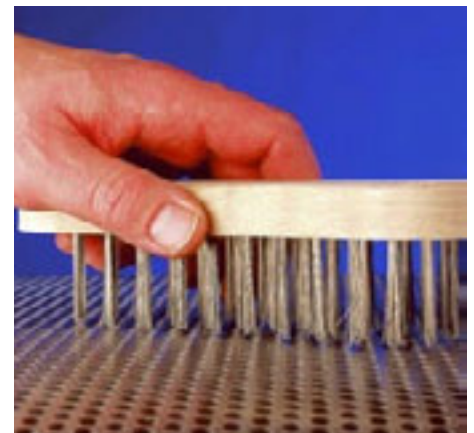
Stringer bead knot wheel used for pipeline weld cleaning/preparation.



Minigrinder crimped cup brush



Minigrinder knot cup brush



Scratch brush

Stringer Bead Twist

IMPROVED!

WELDCAT™ Stringer Bead

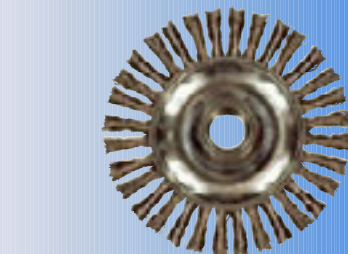


Narrow face for weld cleaning. Root and hot pass weld cleaning to ensure a successful pass of the filler weld.

Brush Dia. (Inches)	Thread Size	Wire Size	No. of Knots	Trim Length	Face Width	MSFS Max RPM	Qty	EDP Number Steel
4	5/8-11	.020	32	3/4	3/16	20,000	10	82186
	M10x1.25	.020					10	82190
	M10x1.50	.020					10	82189
	M14x2.0	.020					10	82191
	1/2-13	.020					10	82187
4-7/8	7/8	.020	38	1-1/16	3/16	15,000	10	82480
	5/8-11	.020	38	1-1/16	3/16	15,000	10	82479
		.020	48				10	82483
	M14x2.0	.020	38	1-1/16	3/16	15,000	10	82481
		.020	48				10	82484
6	5/8-11	.020	40	3/4	3/16	12,500	10	82486
		.020	48				10	82487
		.020	56			10,000	10	82488
	M14x2.0	.020	56				10	82490
		.020	56				10	82498
6-7/8	7/8	.020	72	1-1/8	3/16	9,000	10	82499
	5/8-11	.020	56	1-1/8	3/16	9,000	10	82494
		.020	72				10	82495
	M14x2.0	.020	56	1-1/8	3/16	9,000	10	82497
		.020	72				10	82498

NEW!

COMBITWIST® Stringer Bead



Fastest cutting action. 5-25% more productivity than competitive brushes.

Brush Dia. (Inches)	Thread Size	Wire Size	No. of Knots	Trim Length	Face Width	MSFS Max RPM	Qty	EDP Number Steel
4	5/8-11	.020	32	3/4	3/16	20,000	10	82391
4-7/8	5/8-11	.020	48	1-1/16	3/16	15,000	10	82689
6	5/8-11	.020	56	1-1/8	3/16	12,500	10	82694
6-7/8	5/8-11	.020	56	1-1/8	3/16	9,000	10	82700

NEW PRODUCT – COMBITWIST®

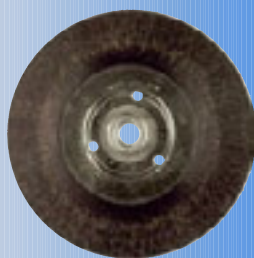
Innovative COMBITWIST® knot design dramatically improves brush performance over conventional products. Knots maintain their form longer, even when used on edges and in corners.



- More Aggressive Brushing
- Longer Brush Life
- Superior Rotational Balance
- Faster Stock Removal
- Reduced Operator Fatigue
- Better Surface Finish

Encapsulated Stringer Bead, Full Cable Twist

Encapsulated Stringer Bead



Ideal for large diameter pipe construction. Extra heavy duty E5 grade resists deflection,

fracture and crumbling, providing a shorter, more aggressive trim length.

Brush Dia. (Inches)	Thread Size	Wire Size	ECAP® Grade	Trim Length	Face Width	MSFS Max RPM	Qty	EDP Number Steel
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Knot Wire

4	5/8-11	.020	E4	7/8	3/16	9,000	10	83511
6-7/8	5/8-11	.020	E4	1-9/16	3/16	9,000	10	83513

Crimped Wire

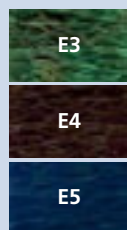
6	5/8-11	.014	E4	1-1/16	3/16	9,000	10	83507
7	5/8-11	.014	E4	1-9/16	3/16	9,000	10	83509
			E5					83517

Encapsulation Guide

Encapsulated products (ECAP®) are composed of a synthetic compound which is molded into the finished wire wheel.

- Increases standard wheel performance by 25% or more.
- ECAP® brush life is up to 100% longer for equivalent service.
- More consistent brushing due to short trim urethane material.
- Reduces long wire breakage and early failure of the working filaments, offering much greater operator safety.

Grade



Encapsulated (ECAP®) Brush Grades Description

E3 Aggressive enough for most applications. Best grade for general use. Green color.

E4 For higher pressure applications and excessive heat. Black color.

E5 Super aggressive, tough cleaning. Blue color.

Full Cable Twist



For the toughest applications, full cable twist wire tufts provide low flex, high impact cleaning action.

Brush Dia. (Inches)	Thread Size	Wire Size	No. of Knots	Trim Length	Face Width	MSFS Max RPM	Qty	EDP Number Steel
4	5/8-11	.020	22	3/4	3/8	15,000	10	82166
	M10x1.25	.020						82172
	M10x1.50	.020						82174
	M14x2.0	.020						82176
	1/2-13	.020						82168
4-1/2	7/8	.020	38	1-1/16	3/16	15,000	10	82452
5	5/8-11	.023	24	3/4	3/8	15,000	10	82474
	M14x2.0	.023					10	82454
6	5/8-11	.023	24	3/4	3/16	12,500	10	82477
		.023	30				10	82478
	M14x2.0	.023	30				10	82459

NEW!

COMBITWIST® Full Cable



Brush Dia. (Inches)	Thread Size	Wire Size	No. of Knots	Trim Length	Face Width	MSFS Max RPM	Qty	EDP Number Steel
4	5/8-11	.014	24	3/4	3/8	15,000	10	82387
5	5/8-11	.023	24	3/4	3/8	15,000	10	82684
6	5/8-11	.023	24	1-1/4	3/8	10,000	10	82687
		.023	30	1-1/4	1/2	10,000	10	82688

Full Cable Twist, COMBITWIST® Double Row

ADVANCE cup brushes are designed for heavy-duty cleaning, deburring, roughening and corrosion removal. Designed for use on production equipment, angle grinders, portable power tools, sander/ polishers, etc. Available in a range of cup diameters and filament knot styles

to properly fit your application requirements, including pipe cleaning, structural steel, weld cleaning, tank car and ship fabrication and nuclear power plant construction. ADVANCE cup brushes offer high removal rates with flexibility, excelling on large flat and curved surfaces.

Full Cable Twist Single Row Knot Cup Brush



Suitable for mounting on production equipment or angle grinders.

Used for deburring and surface cleaning.

Brush Dia. (Inches)	Thread Size	Wire Size	Trim Length	MSFS Max RPM	Qty	EDP Number Steel
Knot Wire - Single Row						
2-3/4	5/8-11	.020	7/8	14,000	5	82220
	1/2-13	.020			5	82222
	M10x1.25	.020			5	82228
	M10x1.50	.020			5	82226
	M14x2.0	.020			5	82230
3-1/2	5/8-11	.020	1-3/8	7,000	1	82538
	M10x1.25	.020	7/8	12,500	1	82240
4	5/8-11	.014	1-1/4	7,000	1	82522
		.023	1-1/4	7,000	1	82523
		.035			1	82524
5	5/8-11	.023	1-3/8	10,000	1	82544
6	5/8-11	.014	1-5/8	6,000	1	82545
		.023	1-5/8	6,000	1	82546
		.035			1	82532

NEW!

COMBITWIST® Double Row Knot Cup Brush



Brush Dia. (Inches)	Thread Size	Wire Size	Trim Length	MSFS Max RPM	Qty	EDP Number Steel
Knot Wire - Double Row						
4	5/8-11	.020	1-3/8	7,000	1	82553
6	5/8-11	.014	1-1/2	6,000	1	82556
		.023	1-1/2	6,000	1	82557
		.035			1	82575

Note: All double-row knot cup brushes feature COMBITWIST® alternating-knot construction.

NEW PRODUCT – COMBITWIST®



COMBITWIST® (For additional product information, see page 4.)

- More Aggressive Brushing
- Superior Rotational Balance
- Reduced Operator Fatigue
- Longer Brush Life
- Faster Stock Removal
- Better Surface Finish

Crimped, Encapsulated

Crimped Cup Brushes



ADVANCE crimped cup brushes provide controlled area cleaning with long life,

increased aggressiveness, uniform brushing action, and reduced wire breakage.

Brush Dia. (Inches)	Thread Size	Wire Size	Trim Length	MSFS Max RPM	Qty	EDP Number
Crimped Wire						
2-3/4	5/8-11	.020	7/8"	14,000	5	82243
	1/2-13	.020			5	82244
	M10x1.25	.020			5	82247
	M10x1.50	.020			5	82246
	M14x2.0	.020			5	82248
3-1/2	5/8-11	.014	7/8	12,500	1	82249
		.020			1	82255
4	5/8-11	.014	1-1/4	9,000	1	82510
		.020			1	82511
5	5/8-11	.014	1-1/4	8,000	1	82514
		.020				82515
6	5/8-11	.014	1-3/8	6,000	1	82516
		.020			1	82517

Encapsulated Cup Brushes



Encapsulated cups offer more productive cleaning action due to the short trim effect

of encapsulation. Used for removing weld slags and scale in pipeline fabrication.

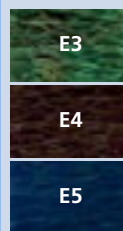
Brush Dia. (Inches)	Thread Size	Wire Size	ECAP® Grade	Trim Length	MSFS Max RPM	Qty	EDP Number
							Steel
3-1/2	5/8-11	.014	E3	7/8	12,000	1	83559
4	5/8-11	.020	E4	1-1/8	7,000	1	83570
6	5/8-11	.020	E5	1-1/4	6,000	1	83574

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- More consistent brushing due to short trim urethane material.
- Reduces long wire breakage and early failure of the working filaments, offering much greater operator safety.

Grade



Encapsulated (ECAP®) Brush Grades Description

E3 Aggressive enough for most applications. Best grade for general use. Green color.

E4 For higher pressure applications and excessive heat. Black color.

E5 Super aggressive, tough cleaning. Blue color.

Welders Toothbrush, Scratch, Dauber, Chip

Welders Toothbrush Wooden Handle



Wire set in wooden block with stainless steel staples.

Wire Rows Wide	Brush Part Length	Fill Material	Block Size l x w	Trim Length	Qty	EDP Number
3x7	1-1/2	Stainless Steel Wire	7-1/2 x 1/2	1/2	36	85055

Welders Toothbrush Plastic Handle



Wire Rows Wide	Brush Part Length	Fill Material	Block Size l x w	Trim Length	Qty	EDP Number
3x7	1-1/2	Stainless Steel Wire	7-1/2 x 1/2	1/2	36	85060

Scratch Brush Curved Handle



General purpose brushing tools for maintenance applications. Removal of rust, paint, scale, dirt and other debris. Cleans metal parts, threads and much more.

Wire Rows	Brush Part Length	Fill Material	Block Size l x w	Trim Length	Qty	EDP Number	
						without scraper	with scraper
3 x 19	6-1/4	Carbon Steel Wire	13-3/4 x 7/8	1-3/16	12	85002	85003

Shoe Handle Hardwood



Effective for cleaning pipe threads and welds. Also for removal of rust, paint, dirt, and debris. Popular in the oil and gas industries.

Wire Rows	Brush Part Length	Fill Material	Block Size l x w	Trim Length	Qty	EDP Number	
						without scraper	with scraper
4 x 16	5	Carbon Steel Wire	10-1/4 x 1-1/8	1-3/16	12	85033	85034

Pipeliner Dauber Brushes



White Tampico brush for hand-applying pipe coatings. Brush head 3-1/2" oval.

Brush Face	Overall Length (Inches)	Fill Material	Block Width	Trim Length	Qty	EDP Number
3-1/2 x 5	17	Tampico	2-9/16	2-1/4	12	85100

White Bristle Chip Brush



High volume/low priced brush for hand-applying pipe coatings, as well as painting, gluing, touch-up, chip removal, parts

cleaning, and other industrial applications. Economy quality white bristle. Wood handles.

Overall Width (Inches)	Thick-ness	Trim Length	Qty	EDP Number
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White Bristle

2	3/8	1-3/4	24	89698
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White Bristle - Double Thick

4	11/16	2-1/2	12	89702
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PFERD grinding wheels, cut-off wheels, and POLIFAN® flap discs are marked with an easy-to-follow color code on all product labels and packaging and in our recommendations for use.

The product line colors - orange, silver and blue - provide initial orientation to users and facilitate the selection of the ideal abrasive.

Orange = Universal Line PSF

For general purpose use in industrial, trade and DIY use.

Silver = High Performance Line SG

Broadest range for professional use in industry and trades.

Blue = Special / Premium Performance Line SGP

Designed for special industrial applications.



ZA 24 R SGP Grinding Wheel



Removing weld beads with POLIFAN® Flap Disc



Thin cut-off wheel



Cut-off wheel



Edge bevelling with a grinding wheel

Depressed Center (Type 27)



PFERD Pipeliner wheels are designed for light grinding and cutting of pipeliner root pass, weld and flame cut grinding, and all facets of

steel and non-ferrous metal production and fabrication.

Aluminum Oxide

General Purpose Steel / Stainless



A-PSF INOX

General purpose pipeliner wheel provides smooth grinding action, fast removal rates and good service life with minimal contact pressure. In addition to providing an aggressive, low cost solution for conventional use, INOX-Rated Pipeliner PSF is an excellent tool for pipe fitters servicing the Nuclear and food industry.

- Aluminum Oxide grain
- Fast stock removal, good service life
- **INOX Rated:** Free of iron, sulphur and chlorinated fillers; suitable for use on stainless steel

Wheel Dia.	Thick-ness	PFERD No.	Max RPM	Unthreaded A.H.	EDP	Threaded Hub Thread	EDP
4-1/2	1/8	E 115-4,1 A 46 M PSF-INOX-PIPE	13,300	7/8	63410	10	5/8-11 63414
5	1/8	E 125-4,1 A 24 M PSF-INOX-PIPE	12,200	7/8	63411	10	5/8-11 63415
7	1/8	E 178-4,1 A 24 M PSF-INOX-PIPE	8,600	7/8	63412	10	5/8-11 63416
9	1/8	E 230-4,1 A 24 M PSF-INOX-PIPE	6,600	7/8	63413	10	5/8-11 63417

High Performance Steel



A-SG

High performance pipeliner wheel features long service life for reduced wheel changes, fast grinding and cutting of root pass, and excellent edge-holding characteristics. For use on carbon steel and all ferrous metals.

- Aluminum Oxide grain
- Fast stock removal and long service life
- For steel and all ferrous metals

Wheel Dia.	Thick-ness	PFERD No.	Max RPM	Unthreaded A.H.	EDP	Threaded Hub Thread	EDP
4-1/2	1/8	E 115-4,1 A 24 R SG PIPE	13,300	7/8	63400	10	5/8-11 63405
5	1/8	E 125-4,1 A 24 R SG PIPE	12,200	7/8	63406	10	5/8-11 63407
7	1/8	E 178-4,1 A 24 R SG PIPE	8,600	7/8	63401	10	5/8-11 63403
9	1/8	E 230-4,1 A 24 R SG PIPE	6,600	7/8	63402	10	5/8-11 63404

Zirconia Alumina

High Performance Steel



ZA-SG

Designed for use on high-powered angle grinders on steel pipelines. Provides outstanding stock removal and very long life. Superior edge-holding characteristics.

- Premium Zirconia Alumina grain
- Fast stock removal and long service life
- For steel and all ferrous metals

Wheel Dia.	Thick-ness	PFERD No.	Max RPM	Unthreaded A.H.	EDP	Threaded Hub Thread	EDP
4-1/2	1/8	E 115-4,1 ZA 30 S SG PIPE	13,300	7/8	63251	10	5/8-11 63255
7	1/8	E 178-4,1 ZA 30 S SG PIPE	8,600	7/8	63253	10	5/8-11 63257
9	1/8	E 178-4,1 ZA 30 S SG PIPE	6,600	7/8	63254	10	5/8-11 63258

PSF-ZIRKON, SGP ZIRKON-SPECIAL



for Air and Electric Grinders

General Purpose
Zirconia

PSF-ZIRKON

PFC

General purpose type for multipurpose, demanding grinding applications.

POLIFAN® PSF-Zirkon features aggressive material removal performance and long service life, particularly for edge grinding applications.

- Zirconia Alumina grain
- Fast stock removal, long service life
- **INOX Rated:** Free of iron, sulphur and chlorinated fillers; suitable for use on stainless steel

Diameter (Inches)	PFERD No.	Max. RPM	Grit Size	Unthreaded A.H. EDP	Threaded Hub Thread EDP
Conical (PFC - Type 29)					
4-1/2	PFC 115 Z PSF	13,300	40	7/8 62052 10	5/8-11 62071 10
			60	7/8 62053 10	5/8-11 62072 10
			80	7/8 62054 10	5/8-11 62073 10
5	PFC 125 Z PSF	12,200	40	7/8 63031 10	5/8-11 63035 10
			60	7/8 63032 10	5/8-11 63036 10
			80	7/8 63033 10	5/8-11 63037 10
7	PFC 180 Z PSF	8,500	40	7/8 62062 10	5/8-11 62081 10
			60	7/8 62063 10	5/8-11 62082 10
			80	7/8 62064 10	5/8-11 62083 10

Specialty
Steel / Stainless

SGP-ZIRKON-SPECIAL

PFC

High performance POLIFAN® for demanding grinding applications on surfaces and narrow weld seams. Specialized zirconia material provides high stock removal rate and long service life.

Zirkon-Special POLIFAN® provides a longer service life than conventional zirconia flap discs with reduced risk of thermal overload and glazing.

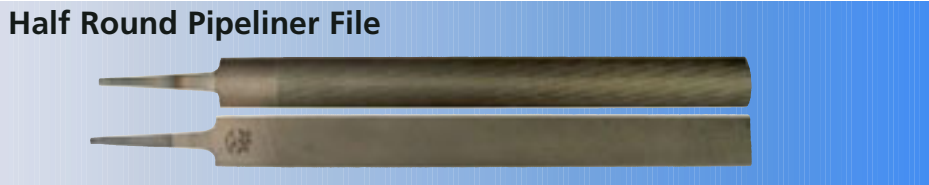
- Specialized Zirconia Alumina grain
- Fast stock removal, extended service life
- **INOX Rated:** Free of iron, sulphur and chlorinated fillers; optimized for use on stainless steel

Diameter (Inches)	PFERD No.	Max. RPM	Grit Size	Unthreaded A.H. EDP	Threaded Hub Thread EDP
Conical (PFC - Type 29)					
4-1/2	PFC 115 Z SGP SPECIAL	13,300	40	7/8 62385 10	5/8-11 62395 10
			60	7/8 62386 10	5/8-11 62396 10
			80	7/8 62387 10	5/8-11 62397 10
5	PFC 125 Z SGP SPECIAL	12,200	40	7/8 62388 10	5/8-11 62398 10
			60	7/8 62389 10	5/8-11 62399 10
			80	7/8 62390 10	5/8-11 62400 10
7	PFC 180 Z SGP SPECIAL	8,500	24	7/8 62391 10	5/8-11 62317 10
			40	7/8 62392 10	5/8-11 62318 10
			60	7/8 62393 10	5/8-11 62319 10
			80	7/8 62394 10	5/8-11 62320 10

POLIFAN® Flap Discs are also available in flat versions (PFF), and in a wide variety of abrasive grains to suit all of your application needs. Consult the full-line PFERD catalog, the PFERD 206 Grinding and Cut-Off catalog, or contact PFERD for further information.

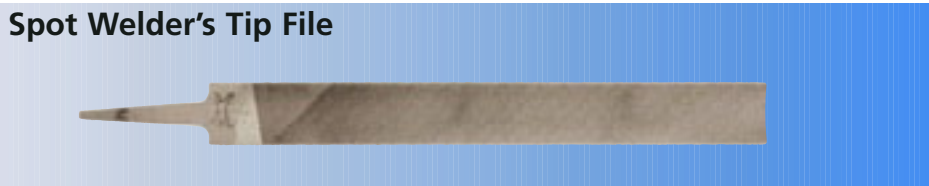
Files, File Handle

Half Round Pipeliner File



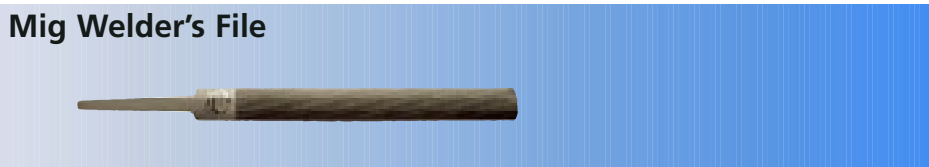
Half Round Pipeliner Files are designed for filing pipeline root pass and welds.

Spot Welder's Tip File



10" Spot Welder's Tip File features a concave surface that is cut to dress spot welder tips. Back is safe (uncut).

Mig Welder's File



4" Mig Welder's File removes slag and dresses the nozzle. Flat surface is uncut to protect the top of the nozzle.

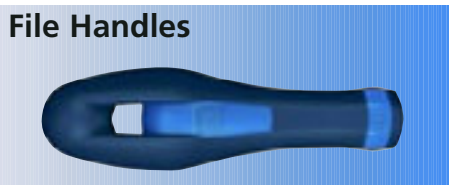
File Type	Approximate Size (l x w x thickness)	Cut	Qty	EDP Number
Pipeline Half Round	14 x 1-3/8 x 11/32	Bastard	5	11155
Pipeline Half Round w/Handle	14 x 1-3/8 x 11/32	Bastard	5	11155H
Spot Welder's Tip File	10 x 1-1/8 x 1/8	Bastard	5	11160
Mig Welder's File	4 x 3/8 x 1/8	Second	10	11165

PFERD file handles are ergonomically designed to fit the contour of the palm of the hand. The natural fit makes it easy to apply the correct pressure when filing.

The air gaps absorb hand moisture, even when contaminated by oil or grease. The fine openings of the surface give a perfect grip control. The handle's octagonal shape also prevents the file from rolling.

For all file lengths and types, only 4 sizes are needed due to the patented tang-retaining chambers. Handles are impact resistant and can be used over and over again.

File Handles



File Length (inches)	Qty	EDP Number
4-6	10	11143
8-10	10	11146
12-16	10	11148

Depressed Center Grinding Wheels (Type 27)



for Air and Electric Grinders

Aluminum Oxide

General Purpose Steel / Stainless Steel



A-PSF INOX

General purpose grinding wheel for use on all metals - steel, stainless and non-ferrous. Smooth grinding action and fast removal rates with minimal contact pressure.

- Aluminum Oxide grain
- Fast stock removal, good service life
- **INOX Rated:** Free of iron, sulphur and chlorinated fillers; suitable for use on stainless steel

Wheel Dia.	Thick-ness	PFERD No.	Max RPM	Unthreaded			Threaded Hub		
				A.H.	EDP		Thread	EDP	
4	1/4	E 100-6 A 24 L PSF INOX	15,300	5/8	61000	10	-	-	
4-1/2	1/4	E 115-7 A 24 L PSF INOX	13,300	7/8	61002	10	5/8-11	61001	10
5	1/4	E 125-7 A 24 L PSF INOX	12,200	7/8	61003	10	5/8-11	61008	10
7	1/4	E 178-7 A 24 L PSF INOX	8,600	7/8	61004	10	5/8-11	61006	10
9	1/4	E 230-7 A 24 L PSF INOX	6,600	7/8	61005	10	5/8-11	61007	10

NEW!

Aluminum Oxide / Zirconia Blend

Premium Performance Steel



ZA R SGP

Blended zirconia and Aluminum Oxide grinding wheel for fast and free cutting performance that outlasts Aluminum Oxide wheels 2 to 1. Aggressive removal rates on all metals from alloys and stainless to gray iron and steel. Economical performance-to-price ratio lowers overall cost.

- Zirconia, Aluminum Oxide blend
- Free cutting, fast removal and twice the life of Aluminum Oxide wheels
- For steel, stainless and all metals

Wheel Dia.	Thick-ness	PFERD No.	Max RPM	Unthreaded			Threaded Hub		
				A.H.	EDP		Thread	EDP	
4	1/4	E 100-6 ZA 24 R SGP	15,300	3/8	61551	10	-	-	-
4	1/4	E 100-6 ZA 24 R SGP	15,300	5/8	61552	10	-	-	-
4-1/2	1/4	E 115-7 ZA 24 R SGP	13,300	7/8	61553	10	5/8-11	61560	10
5	1/4	E 125-7 ZA 24 R SGP	12,200	7/8	61554	10	5/8-11	61561	10
6	1/4	E 150-7 ZA 24 R SGP	10,200	7/8	61555	10	5/8-11	61562	10
7	1/4	E 178-7 ZA 24 R SGP	8,600	7/8	61556	10	5/8-11	61563	10
9	1/4	E 230-7 ZA 24 R SGP	6,600	7/8	61557	10	5/8-11	61564	10

Cones and Plugs

PFERD Cones and Plugs for horizontal and straight grinders are ideal for cleaning welds and castings. They can be used for internal grinding, blending contours, working in con-

finer areas, and grinding and smoothing weld fillets and corners. High performance for grinding and snagging welds and castings on ferrous materials.



Aluminum Oxide

Type 16



A-SG

Type 16 - Curved sides and rounded tip for grinding contours or flat surfaces.

- Aluminum Oxide grain
- Very fast stock removal and long service life
- For steel and all ferrous metals

Cone Dia.	Length	Thread Size	PFERD No.	Max. RPM	EDP No.	
1-1/2	2-1/2	3/8-24	ECX 3864 A 16 SG3	24,192	61816	10
1-1/2	3	5/8-11	ECX 3876 A 16 SG5	24,192	61820	10
1-3/4	3	5/8-11	ECX 4476 A 16 SG5	20,735	61826	10
2	3	5/8-11	ECX 5176 A 16 SG5	18,144	61829	10
2-3/4	3-1/2	5/8-11	ECX 7089 A 16 SG5	13,200	61837	10

Type 17



A-SG

Type 17 - Tapered, straight sides and square tip for beveling workpiece edges.

- Aluminum Oxide grain
- Very fast stock removal and long service life
- For steel and all ferrous metals

Cone Dia.	Length	Thread Size	PFERD No.	Max. RPM	EDP No.	
1-1/2 x 3/8	2-1/2	3/8-24	ECT 38/1064 A 16 SG3	24,192	61850	10
1-1/2 x 3/8	2-1/2	5/8-11	ECT 38/1064 A 16 SG5	24,192	61851	10
1-1/2 x 1/2	3	3/8-24	ECT 38/1376 A 16 SG3	24,192	61854	10
1-1/2 x 1/2	3	5/8-11	ECT 38/1376 A 16 SG5	24,192	61855	10
2-1/2	3	5/8-11	ECT 64/1376 A 16 SG5	18,144	61859	10

Type 18



A-SG

Type 18 - Straight sides and blunt nose for flat surfaces and inside edges.

- Aluminum Oxide grain
- Very fast stock removal and long service life
- For steel and all ferrous metals

Plug Dia.	Length	Thread Size	PFERD No.	Max. RPM	EDP No.	
1	2	3/8-24	EPS 2550 A 16 SG3	36,287	61883	10
1-1/2	2-1/2	3/8-24	EPS 3864 A 16 SG3	24,192	61884	10
1-1/2	2-1/2	5/8-11	EPS 3864 A 16 SG5	24,192	61885	10
1-1/2	3	3/8-24	EPS 3876 A 16 SG3	24,192	61888	10
1-1/2	3	5/8-11	EPS 3876 A 16 SG5	24,192	61889	10
2	3	5/8-11	EPS 5176 A 16 SG5	18,144	61893	10

Type 18R



A-SG

Type 18R - Straight sides for flat surfaces and round nose for contouring.

- Aluminum Oxide grain
- Very fast stock removal and long service life
- For steel and all ferrous metals

Plug Dia.	Length	Thread Size	PFERD No.	Max. RPM	EDP No.	
1-1/2	2-1/2	3/8-24	EPR 3864 A 16 SG3	24,192	61927	10
1-1/2	2-1/2	5/8-11	EPR 3864 A 16 SG5	24,192	61928	10
1-1/2	3	3/8-24	EPR 3876 A 16 SG3	24,192	61931	10
1-1/2	3	5/8-11	EPR 3876 A 16 SG5	24,192	61932	10
2	3	5/8-11	EPR 5176 A 16 SG5	18,144	61936	10

Thin Cut-Off Wheels (Type 27)



for Air and Electric Grinders

PFERD manufactures a wide selection of high performance thin, depressed center (Type 27) cut-off wheels. PFERD wheels cut faster than conventional wheels, leaving a cleaner cut, with minimal burr.

Thin wheels achieve fast cutting performance by removing less material in the cutting process. As less material is removed, less working pressure is required to make the cut. Engineering and manufacturing experience by PFERD results in superior quality, consistency, and the highest performance level available.

Thin cut-off wheels are ideally suited for thin gauge sheet stock, thin walled tubing and small diameter cross sections. Material should always be cut at a right angle to the work piece. Larger workpieces require thicker PFERD cut-off wheels for improved lateral stability.

PFERD Thin Type 27 wheels are fully reinforced, and conform to U.S. safety standards, and also European safety standards that are more stringent than U.S. requirements.

Thin wheels must never be used for grinding. Improper use of any wheel may result in injury.

Larger workpieces can be cut more efficiently with thicker PFERD cut-off wheels (listed on following pages) for improved lateral stability.


High Performance Steel



A-SG

Thin cut-off wheels for steel, cast iron, and non-ferrous metals with minimal vibration and residual burr.

- Aluminum Oxide grain
- Fast cutting rate and long service life

Wheel Dia.	Thickness	Arbor Hole	PFERD No.	Max. RPM	EDP No.	
4-1/2	.045	7/8	EH 115-1,6 A 46 S SG	13,300	63162	25
5	.045	7/8	EH 125-1,6 A 46 S SG	12,200	63163	25
6	.045	7/8	EH 150-1,6 A 46 S SG	10,200	63164	25
7	.045	7/8	EH 178-1,6 A 46 S SG	8,600	63165	25

Premium Performance Stainless




A-SGP INOX

Superior thin cut-off wheel for maximum performance: smooth, cool, fast cutting action, extremely long service life and smooth, effortless cutting. Optimal for stainless steels and high temperature alloys. with minimal contact pressure.

Also suitable for carbon steel and all ferrous metals.

- Premium Aluminum Oxide grain
- Fast, cool cutting, longest service life
- **INOX Rated:** Free of iron, sulphur and chlorinated fillers for contaminate-free cutting of stainless steel

Wheel Dia.	Thickness	Arbor Hole	PFERD No.	Max. RPM	EDP No.	
4-1/2	.045	7/8	EH 115-1,6 A 46 S SGP INOX	13,300	63172	25
5	.045	7/8	EH 125-1,6 A 46 S SGP INOX	12,200	63173	25
6	.045	7/8	EH 150-1,6 A 46 S SGP INOX	10,200	63174	25
7	.045	7/8	EH 178-1,6 A 46 S SGP INOX	8,600	63175	25

Thin Cut-Off Wheels (Type 1)



for Air and Electric Grinders

PFERD thin cut-off wheels cut faster than conventional wheels, leaving a cleaner cut, with minimal burr.

Thin cut-off wheels are ideally suited for thin gauge sheet stock, thin walled tubing and small diameter cross sections. Material should always be cut at a right angle to the work piece. Larger workpieces require thicker PFERD cut-off wheels for improved lateral stability.

PFERD Thin Type 1 wheels are fully reinforced, and conform to U.S. safety standards as well as European safety standards that are more stringent than U.S. requirements.

Usage Tip:

- .040 recommended for use on sheet stock gauges 19 and higher.
- .045 recommended for use on sheet stock gauges 14-18.

General Purpose Steel



A-PSF

General Purpose for fast cutting on carbon steel and ferrous metals.

- Aluminum Oxide grain
- Very fast cutting rate, good service life

Wheel Dia.	Thickness	Arbor Hole	PFERD No.	Max. RPM	EDP No.	
.040 Thickness (1mm)						
4	.040	5/8	EHT 100-1,0 A 60 P PSF	15,200	69940	25
4-1/2	.040	7/8	EHT 115-1,0 A 60 P PSF	13,300	69945	25
5	.040	7/8	EHT 125-1,0 A 60 P PSF	12,200	69950	25
6	.040	7/8	EHT 150-1,0 A 60 P PSF	10,200	69960	25
7	.040	7/8	EHT 180-1,0 A 60 P PSF	8,600	69970	25
.045 Thickness (1.6mm) NEW!						
4	.045	5/8	EHT 100-1,6 A 46 P PSF	15,200	69944	25
4-1/2	.045	7/8	EHT 115-1,6 A 46 P PSF	13,300	69949	25
5	.045	7/8	EHT 125-1,6 A 46 P PSF	12,200	69954	25
6	.045	7/8	EHT 150-1,6 A 46 P PSF	10,200	69964	25
7	.045	7/8	EHT 180-1,6 A 46 P PSF	8,600	69974	25

Premium Performance Stainless



A-SGP INOX

Premium cut-off wheels for stainless steel. Offers fast, smooth, effortless cool cutting performance and extremely long service life.

- Premium Aluminum Oxide grain
- Fastest cutting rate, longest service life
- **INOX Rated:** Free of iron, sulphur and chlorinated fillers for contaminate-free cutting of stainless steel

Wheel Dia.	Thickness	Arbor Hole	PFERD No.	Max. RPM	EDP No.	
.040 Thickness (1mm)						
4	.040	5/8	EHT 100-1,0 A 60 T SGP INOX	15,200	69842	25
4-1/2	.040	7/8	EHT 115-1,0 A 60 T SGP INOX	13,300	69845	25
5	.040	7/8	EHT 125-1,0 A 60 T SGP INOX	12,200	69855	25
6	.040	7/8	EHT 150-1,0 A 60 T SGP INOX	10,200	69862	25
.045 Thickness (1.6mm)						
4	.045	5/8	EHT 100-1,6 A 46 S SGP INOX	15,200	69844	25
4-1/2	.045	7/8	EHT 115-1,6 A 46 S SGP INOX	13,300	69846	25
5	.045	7/8	EHT 125-1,6 A 46 S SGP INOX	12,200	69857	25
6	.045	7/8	EHT 150-1,6 A 46 S SGP INOX	10,200	69865	25
7	.045	7/8	EHT 178-1,6 A 46 S SGP INOX	8,600	69872	25

Speeds, Dimensions, Safety Information

Maximum Operating Speed

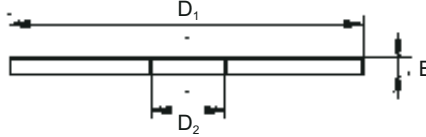
The maximum operating speed (m/s) is shown on the product labels and product packs by a color bar in accordance with the specifications of EN 12413. The maximum permissible r.p.m. specification applies to the nominal diameter of the tools.

Max. Operating Speed	Color Bar
50 m/s	blue
63 m/s	yellow
80 m/s	red
100 m/s	green

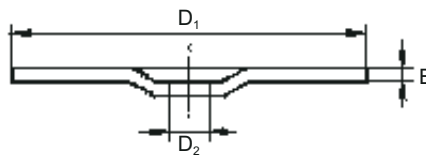
Dimensions

The diameter (D_1), thickness (B) and center hole dimension (D_2) are indicated as represented in the following diagrams:

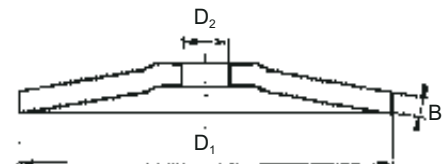
Flat (Type 1)



Depressed center (Type 27)



Depressed center – Saucer (Type 28)



Safety Recommendations



= Wear protective goggles!



= Wear ear protectors!



= Observe safety recommendations!



= Wear protective gloves!



= Wear dust respirators!



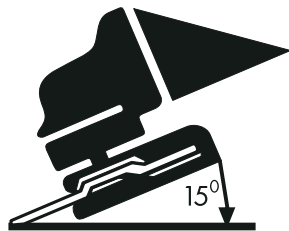
= Not approved for wet grinding!



= Not approved for free-hand and hand-held operation!



= Not approved for side grinding!

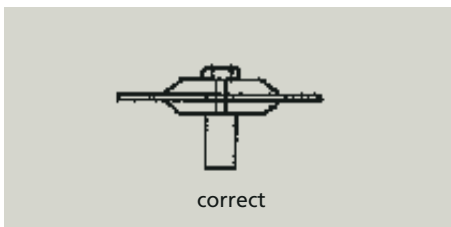


Note: Maintain a minimum grinding angle of at least 15° (Do not use flat).

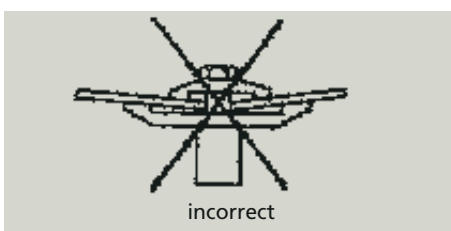
Mounting System

Never use flanges of different diameter.

Two flanges clamping a grinding tool must always have the same outside diameter and support area (according to EN 68, ASA 1788.1, ANSI B 7.1).



correct



incorrect

WARNING!

Improper use may cause property damage or serious injuries. Comply with A.N.S.I. Safety Code B7.1 and O.S.H.A. regulations. Use Safety Goggles and machine guards.

Grinding Wheel Safety

DO:

1. Always handle and store wheels in a careful manner.
2. Always visually inspect all wheels before mounting for possible damage in transit. Resinoid can only be checked visually for possible damage.
3. Always check maximum operating speed established for wheel against machine speed.
4. Always check flanges for equal and correct diameter.
5. Always use a machine guard covering at least one-half of the grinding wheel.
6. Always allow newly mounted wheels to run at operating speed, with guard in place, for at least one minute before grinding.
7. Always wear protective goggles or other eye-wear when grinding.

DON'T

1. Don't use a wheel that has been dropped. The impact may result in breakage.
2. Don't force a wheel onto the machine or alter the size of the arbor hole. Don't use a wheel that fits the arbor too loosely. If the wheel doesn't fit the machine, get one that fits correctly.
3. Don't exceed maximum operating speed established for the wheel.
4. Don't use mounting flanges which are warped, nicked, sprung, or which are not clean.
5. Don't tighten the mounting nut excessively. On multiple screw mountings, 15-foot pounds per screw is usually enough.
6. Don't grind on the edge of the wheel unless the wheel is specifically designed for that purpose.
7. Don't start the machine unless all guards are in place.
8. Don't stand directly in front of a grinding wheel when a grinder is started.
9. Don't grind material for which the wheel is not designed.
10. Don't use relieved or recessed flanges with threaded hole cup wheels, cones or plugs.



PFERD is an oSa founding member

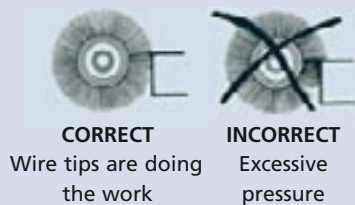
Together with other manufacturers, PFERD has undertaken voluntarily to produce quality tools conforming to the most exacting safety standards.

oSa member companies manufacture to the most stringent specifications worldwide and are committed to continuous product safety and quality monitoring. PFERD tools carry the oSa mark.

Operating Procedures

Maximum Performance Recommendations

Pressure: Avoid excessive pressure when using a power brush. Excessive pressure causes overbending of the filaments and heat build-up resulting in filament breakage, rapid dulling, and reduced brush life. Instead of greater pressure on a brush, it is suggested that you try: (1) a brush with a more aggressive cutting action (increased wire size, decreased filament length, change to a different brush type, i.e., knot type instead of crimped wire type), or (2) higher speed (increased R.P.M., increased brush diameter.) **IMPORTANT NOTE:** Never exceed the recommended MAXIMUM SAFE FREE SPEED R.P.M. (MSFS) rating of the brush.



Apply work to brush, or vice versa, in such a way that as much of the brush face as possible is in full contact with the work. Applying the work to the side or edge of the brushing tool will result in wire breakage and shorten brush life.

Brush diameter; wire size: Whenever feasible use the largest diameter brush that will fit the equipment being used. We recommend using as fine a wire as will perform the job satisfactorily as this usually results in longer brush life. Greater wire fatigue and breakage is more likely to occur when coarser wire is used.

WARNING



Failure to observe safety precautions may result in injury.

ANSI Standard B165.1 Arbor Holes

ANSI Standard B165.1-2000 dictates maximum face widths and minimum arbor hole sizes allowable. All brushes listed in this catalog 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

Technical Reference Tables

Proper operating speed is critical to achieve optimal brush efficiency and desired finish results. The proper speed may be selected by choosing the application from the "Recommended Surface Speed" table. This determines the optimal Surface Feet per Minute (SFM). Locate the nearest equivalent in the "Brush Speeds" table based on the diameter of the brush in use. This determines the proper operating speed for your application.

Brush Speeds in Surface Feet per Minute (SFM)										
RPM	Diameter (Inches)									
	2	3	4	6	8	10	12	14	15	16
1200	625	950	1250	1900	2500	3200	3800	4400	4700	5000
1750	900	1375	1800	2750	3650	4550	5500	6400	6800	7300
2000	1050	1550	2100	3100	4200	5200	6300	7300	7800	8400
3000	1550	2350	3100	4700	6300	7800	9400	11,000	11,800	13,400
3750	1950	2950	3900	5900	7800	9800	11,800	13,700		
4500	2350	3600	4700	7200	9400	11,800	14,100			
5000	2600	3900	5200	7800	10,500	13,100				
5400	2800	4250	5600	8500	11,300					
6000	3150	4700	6300	9400						
10,000	5250	7850	10,500							
15,000	7850	11,775	15,750							
20,000	10,450	15,700	21,950							

$SFM = \pi \text{ Diameter (Inches)} \times \frac{RPM}{12}$

Recommended Surface Speeds for Wire Brushing Applications													
Application	Surface Feet Per Minute (SFM)												
	4,500	5,000	5,500	6,000	6,500	7,000	7,500	8,000	8,500	9,000	10,000	10,500	
Burr Removal													
Edge Blending													
Scale Removal													
Surface Polishing													
Weld Cleaning													

The Complete PFERD Range

Catalog 201



Machinist's Files,
Sharpening Files,
Rasps and
Precision Files

Catalog 204



Coated and
Non-Woven
Abrasive Specialties

Catalog 202



Tungsten-Carbide Burs

Catalog 206



Grinding and
Cut-Off Wheels

Catalog 203



Mounted Points

Catalog 208



ADVANCE
Brand Power and
Maintenance
Brushes

