







#### Fischer-Robertson, Inc. 3890 Symmes Road Hamilton, OH 45015 ph 513-860-3445 fx 513-860-4744 www.fischer-robertson.com





# **Baghouse Accessories**

Designed to reduce maintenance, labor, and overall operating costs.





ENGINEERING YOUR SUCCESS.

## Solving Challenges

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Solutions that solve problems in dust collectors and enhance system performance.

Our products are designed to decrease maintenance time and labor costs, while adding value to your system. Our innovative accessories offerings include:

- BHA® Neutralite® conditioning agent
- BHA Neutralite SR (spark retardant)
- BHA Visolite<sup>®</sup> leak detection system
- Conical spring
- BHA Tensionor<sup>®</sup> suspension system

- AC Tensioning Tool
- U-Channel door seal
- Clean-On-Demand
- Photohelic gauge

Tensioning products applied properly in reverse air baghouses can increase filter life.



### **Efficiency Enhancers**

Transfer bulk materials easily with BHA Vacutrans® cleaning system.

The BHA Vacutrans system is an industrial strength tool specifically designed to convert your compressed air supply into a high powered vacuum and material transferring system. The benefits include:

- Easy installation and virtually maintence free
- Extended filter life reduces abrasion
- No manual handling of dust dust flows directly into the collector's hopper, eliminating the need to remove the filters for cleanup

#### Clean-On-Demand Baghouse Control Systems

We have a full line of baghouse control systems designed to achieve maximum ventilation and collection efficiency. By operating the baghouse at a stable and optimum differential pressure, you are not over-or under-cleaning the filters.

#### Benefits of Clean-On-Demand Controls

- Maintains optimum dustcake for filtration efficiency
- Helps protect bag fabric from blinding and bleed-through for better airflow and less emissions
- Less flex cycles on the filters for increased filter life
- Maintains stable ventilation at the process with no pickup of extra material caused by over ventilation or back puffing caused by under ventilation
- Helps lower compressed air consumption and operating costs

#### Standard Clean-On-Demand Controller

- Digital input of pulse time, pulse duration, number of valves
- Low profile Photohelic gauge with high and low differential pressure set points
- NEMA 4 (IP66) enclosure

#### Differential Pressure Transmitter

The air differential pressure transmitter includes a Magnehelic gauge with 4-20 mA output housed in a NEMA 4X enclosure. The Magnehelic gauge gives local differential pressure indication, while the 4-20 mA output gives continuous remote indication of differential pressure.





Installation of timers can enhance baghouse performance.

## Cages

Bag-to-cage fit is critical for proper performance and collection efficiency.

#### Maximize Filter Bag Life

Properly designed cages serve as critical baghouse components for optimum bag performance, durability and longer bag life. Our cages are constructed of the following materials:

- Low carbon steel (bright basic wire)
- Type 304 stainless steel
- Galvanized low carbon steel
- Type 316 stainless steel
- Other specialty materials

Roll band low groove

Straight flange

Roll flange

All bottom pans are welded to the inside of our rigid wire cages Our cages offer the following benefits:

- The top collars and bottom pans are stamped from durable 20 gauge steel, with rounded edges to reduce abrasion.
- The stringer wires in our cages are consistently spaced so that the cage diameter is the same from top to bottom, promoting proper bag-to-cage fit.
- The top collar and bottom pan are attached with the wires welded on the inside, helping to avoid premature bag failure.
- Rings between the stringer wires are welded and polished to reduce burrs and sharp edges. We also use a weld bead at the top and bottom of the cage, allowing a point of contact weld that is much stronger than welding directly to the roll flange or pan.



Cage Top



Two-piece roll flange top is designed for applications with low headroom in clean air plenum to simplify installation and removal.

Roll flange with built-in venturi

Poll band high groove

Roll flange with venturi — The Omni cage top features a detachable top that allows removal of the cage top first. This allows the snapband to be snapped loose from the tubesheet, and the bag and cage body lift out easily.

### **BHA Visolite Leak Detection**

One of the brightest leak detection products available for baghouses — we invented it!

#### Locate Leaks in Your Baghouse Quickly and Easily

The BHA Visolite Leak Detection System reduces the time plant personnel spend identifying tears, holes, and bad seals in bags. BHA Visolite is a lightweight fluorescent powder that is injected into the baghouse. The powder follows the path of least resistance, accumulating around the source of leakage, whether it is a weak area in the filter media or a bad seal. A black light is then used to pinpoint the exact location of air leakage and its severity.

#### BHA Visolite Powder-Usage

For every 1,000 ft<sup>2</sup> (93 m<sup>2</sup>) of filter cloth, one pound of Visolite is needed. If you need assistance calculating filter cloth area, contact us and we will help.

#### Three Colors for a Variety of Industries

- Pink all industries
- Orange all industries except those where iron oxide is present
- Green aluminum, cement, and utility industries; good contrasting color for pink and orange

#### Leak Detection Inspection Lights

We offer a variety of black lights to use with the BHA Visolite leak detection powder. Lights that are designed for use in pulse-jet, reverse air and shaker baghouses. Selections include powerful, rechargeable, high intensity UV-A inspection black lights with state-of-the-art, ultra-hi-flux technology available. Cordless, rechargeable and powerful with long life. BHA Visolite glows under the light to reveal air leaks in the baghouse.









## **BHA Neutralite Powder**

Creates a more efficient and porous dustcake.

#### The Importance of Building a Protective Dustcake

For a baghouse to operate efficiently, the fabric filters must capture and release particulate during the cleaning cycle. The effectiveness of this process depends on the development of the dustcake (initial control layer of dust) that protects the fabric interstices. A variety of particle sizes and shapes are needed to produce an efficient and porous dustcake. Particles that are similar shapes and sizes will form a very dense dustcake that restricts airflow.

#### BHA Neutralitevs. Other Precoats/Conditioning Agents

BHA Neutralite consists of microscopic particles that vary dramatically in shape, while most other precoats only have one particle size. Neutralite is also lighter than lime and flyash and will not fall off the bags during cleaning. Don't throw money down the hopper by using precoats that don't work properly in a baghouse application.

Lime	Fly Ash	Diatomaceous Earth	BHA NEUTRALITE
<ul> <li>Alkaline by nature</li> <li>Presence of sulfur can form gypsum, leading to plugging or blinding of filter bag</li> <li>Similar particle size creates dense, compact dustcake</li> </ul>	<ul> <li>Generally abrasive</li> <li>Varying pH from highly acidic to very basic</li> <li>May require pretreatment to alter hazardous material makeup</li> <li>Material is heavy and often falls off bag</li> </ul>	<ul> <li>Typically used for wet filtration applications</li> <li>Introduces moisture and hydrocarbons into the gas stream</li> <li>Moisture binds the diatomaceous earth to the filter surface causing permanent blinding and loss of airflow</li> </ul>	<ul> <li>No detectable free silica content for a safer work environmaent</li> <li>Light density aluminum silicate powder</li> <li>Varied particle size to prevent blinding of filter</li> <li>Works in a variety of applications</li> </ul>
			<ul> <li>Ansorps nyorocarpons</li> </ul>

#### BHA Neutralite SR (Spark Retardant)

If your operation has the potential for hot sparks in the gas stream entering the baghouse, BHA Neutralite SR Powder can help protect your collector. It offers the same benefits as regular Neutralite powder, plus it:

- Provides a protective barrier between the fabric and sparks in the gas stream •
- Helps extinguish sparks before they damage the bag
- Absorbs up to 300% its weight in moisture and 250% its weight . in oil and hydrocarbons to help prevent filter bag damage

Independent testing by the Southern Research Institute showed that BHA Neutralite increased collection efficiency dramatically, while operating at a differential pressure 3 to 4 times lower than operation without an initial dustcake of BHA Neutralite.



By injecting an initial dustcake of BHA Neutralite powder, the fabric is protected from the particulate, while still allowing airflow to pass through the dustcake. The result is lower differential pressures and higher collection efficiency.



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- Absorbs hydrocarbons, moisture, and sparks (BHA Neutralite SR)
- Proven to help lower DP, increase airflow, and lower emissions

### Clamps

#### Protection for your filter investment. When you buy new filters, buy new clamps.

Parker Clamps are Designed to Protect Your Filter Bags and Make Installation Easy

Our clamps increase bag life by decreasing leakage and abrasion. Each clamp is designed specifically to ensure bag sealing and make filter installation simple. We offer a variety of designs and sizes engineered to meet your particular needs. They can be used with raw edge, cord, hem, or sleeve constructed bags and some pleated filter elements.

Our dust collector experts recommend replacing clamps each time you change out your filter elements.



	Clamp	Description
1	Worm Gear/ Latch Combination Clamp	<ul> <li>Designed with a worm gear connection for tightening upon installation</li> <li>Designed with a latch assembly for quick removal</li> <li>Constructed of 300 series stainless steel and has a 9/16-inch (1.43 cm) band width</li> </ul>
2	Quick Release Clamp	<ul> <li>Swivel action locking of the screw to the band makes installation simple</li> <li>Reduces downtime required during bag changeouts</li> <li>Band and housing are constructed of 300 series stainless steel with no spot welds, reducing the possibility of rupture under stress</li> <li>Clamp housing conforms to the round shape of the band, providing a stronger interlock</li> </ul>
3	Worm Gear Clamp	<ul> <li>Specifically designed with lower housing to be used in areas where room is restricted</li> <li>Easy to tighten, which ensures a leak-resistant closure</li> </ul>
4	T-Bolt Band Clamp	<ul> <li>Used in high torque/clamp pressure applications where ordinary hose clamps fail</li> <li>Available in general purpose and quick release styles depending on the application</li> <li>More sealing pressure for bottom load collectors collecting fine particulate</li> </ul>
5	Tool-Less Clamp	<ul> <li>Designed for easy attachment to Norblo style bags</li> <li>No tools required for installation or removal</li> <li>Has a 6-inch (15.24 cm) diameter and 1/2 inch (1.27 cm) band width</li> </ul>
6	Lined Clamp	<ul> <li>Designed for our patented BHA PulsePleat<sup>*</sup> filter elements</li> <li>Constructed of 316 stainless steel</li> <li>The liner protects the filters from extruding or shearing through the band notches on the clamp as it is tightened</li> </ul>

## Tensioning

Provides proper support to filter bags.

#### Tensioning is Critical to Reverse Air Baghouse Operation

Improper tensioning is one of the main causes of bag failure in reverse air baghouses. Excessive tensioning causes harmful stress on the fabric yarns and sewing threads and also prohibits movement necessary for dustcake release. The assemblies are available in chrome silicon steel for moderately elevated temperatures or 17-7 PH stainless steel for high temperature applications.

#### Conical Spring

Unlike a linear spring, the conical spring becomes harder to compress as heavier loads are applied. In this manner, it acts as a shock absorber, preventing the fabric from total collapse while under the reverse air cycle. It also reduces any "popping" effect on the bags when returning to service.

#### I-Bolt and Double Draw Bar Assembly Benefits

- Hitch-pin design allows for ease of maintenance when re-tensioning
- Easy adjustment and installation reduces labor
- Prevents bag-to-bag abrasion
- Features a patented cup washer centering the spring on the bolt, which resists spring buckling and abrasion
- Provides non-linear compressibility, supporting both the bag and dustcake, allowing fabric the necessary movement to clean while preventing bag collapse
- Provides the required pre-load and travel for proper tensioning

#### **Tensionor Suspension System**

- Prevents abrasion
- Easily installed without the use of hand tools
- Helps reduce fan horsepower requirements due to lower pressure across filters
- Increases filter bag life by minimizing flex fatigue and abrasion at bottom of filter

#### AC Tensioning Tool System

A precision tensioning device used with our I-bolt and double drawbar tensioning assemblies providing accurate, consistent bag tension significantly faster than conventional methods.

#### Additional Tensioning Products

Pre-Loaded Rod and Drawbar Assembly is designed for use in tight spaces. The TRAP Control System is designed to reduce bottom bag abrasion in shaker baghouses. It features a self-cleaning torsion spring and anti-collapse rings. Hanging Assemblies include Tubehook, Double-D Hanger, and Strap Clip hanging assemblies, available in both carbon and stainless steel.



I-Bolt Assemblies



Tensionor Suspension System



AC Tensioning Tool

### Valves/Valve Kits

#### Improve your baghouse cleaning system.

#### The Efficiency of Your Pulse-Jet Cleaning System Relies

#### on Proper Valve Operation

Diaphragm and solenoid valves work together for efficient operation of the baghouse cleaning system.

- For extremely corrosive applications, valves can be coated in a variety of finishes
- Integral solenoid valves are mounted directly on the diaphragm valve
- Remote solenoids are mounted in a separate NEMA enclosure
- Valves available for high volume/low pressure applications



Inside view of double diaphragm valve.



Diaphragm valve kit includes:

- Diaphragm
- Spring

#### Solenoid valve kit includes:

- Plunger Assembly
- O-Rings
- Hardware
- Retaining Clip
- Clip Retainer

### **Door Seal/Access Doors**

Help prevent outside air from leaking into the system.

#### Avoid Corrosion, Emissions, and Production Loss by Keeping

#### Access Doors Sealed Properly

A door seal is one of the most overlooked issues in dust collector maintenance. If your doors are not sealed properly, many problems can occur within your system, including:

- Corrosion of doors and walls
- Fugitive emissions
- Production losses
- Maintenance problems
- Reduction of airflow across filters due to condensation and blinding

#### Need an Access Door for Your Dust Collector?

All our doors are custom-manufactured to suit your needs. Many are preassembled, and are on-the-shelf. Other, less-common styles are assembled and welded using jigs to ensure a precise fit for your unit.

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Material	Size	Part No.	Max.Temp.	Specifications	
Solid Silicone U-Channel	3/4 in. (1.9 cm) x 1 in. (2.54 cm) 5/8 in. (1.59 cm) x 7/8 in. (2.22 cm)	821-0003 821-0007	450° F (232° C)	<ul> <li>Excellent high-temp</li> <li>General resistance to oxidizing chemicals, ozone, and alkalies</li> <li>Poor resistance to solvents, oils, concentrated acids, and abrasion</li> </ul>	
Sponge Neoprene	3/16 in. (0.48 cm) x 1/2 in. (1.27 cm) 3/8 in. (0.95 cm) x 1 in. (2.54 cm)	820-0358 820-0359	250° F (121° C)	<ul> <li>Good resilience, abrasion resistant</li> <li>Moderate chemical resistance</li> <li>Generally affected by strong oxidizing acids</li> </ul>	
Sponge Silicone	1/4 in. (0.48 cm) x 1/2 in. (1.27 cm) 3/8 in. (0.95 cm) x 1 in. (2.54 cm)	820-0070 350-0898	450° F (232° C)	<ul> <li>Excellent high-temp</li> <li>General resistance to oxidizing chemicals, ozone, and alkalies</li> <li>Poor resistance to solvents, oils, concentrated acids, and abrasion</li> </ul>	
"Rope" Style Inconel Core*	1 in. (2.54 cm) Bulb	816-0026	600° F	• Excellent high-temp	
"Rope" Style Glass Core	1 in. (2.54 cm) Bulb	816-0022	(310 C)	<ul> <li>General resistance to oxidizing chemicals, ozone, and alkalis</li> <li>Poor resistance to solvents, oils, concentrated</li> </ul>	
"Tadpole" Style Inconel Core*	1/2 in. (1.27 cm) Bulb 1 in. (2.54 cm) Bulb	816-0024 816-0019	600° F (316° C)	acids, and abrasion	
"Rope" Style Zetex	3/4 in. (1.9 cm) square 128 ft. (39.01 m) per roll 1 in. (2.54 cm) square, 86 ft. (26.21 m) per roll	821-0125 821-0102	1500° F (815° C)	<ul> <li>Excellent high-temp</li> <li>Good resistance to most acids, alkalies, and solvents</li> <li>Abrasion resistance</li> <li>Superb tensile strength</li> </ul>	



# BECOME YOUR PLANT'S NEXT FITRATION EXPER

#### Industrial Filtration Baghouse Dust Collection Training

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Get real-world tips from industry experts that can produce an immediate, positive impact on the performance and reliability of your dust collection equipment. We have training that works for your schedule and helps you improve your operation:

- Baghouse maintenance and troubleshooting in-person seminars
- On-site training tailored to your operation
- Principles of baghouse dust collection complimentary webinars series

Learn from the strongest minds in the business. We provide answers, not just products. After nearly 50 years in the filtration business we have in-depth industry and application knowledge. No problem is too big or too small.





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### **Your Complete Resource**

A system-wide approach to optimize your APC system.

#### **Baghouse Accessories**

Access Doors AC Tensioning Tool Bag Cups/Venturis/Thimbles/Clamps Diaphragm/Solenoid Valves/Valve Repair Kits Differential Pressure Monitors and Magnehelic/Photohelic Gauges Door Seal Gauge Line Cleaners - Surge Valve Neutralite Conditioning Agent PureLine<sup>\*</sup> Filter System Tensioning Assemblies Tubesheets/Blowpipes Vacutrans Vacuum Cleaning Systems Visolite Leak Detection System

#### **Baghouse Filters**

BHA Preveil<sup>\*</sup> Expanded PTFE Membrane Filters Cartridges - Paper blends, synthetic and nanofiber media Filter Bags and Cages BHA STS<sup>\*</sup> SpiroTube Filter System BHA PulsePleat<sup>\*</sup> Pleated Filter Elements BHA ThermoPleat<sup>\*</sup> Pleated Filter Elements

#### Acoustic Cleaners

Acoustic Horn Replacement Parts BHA Powerwave<sup>®</sup> Acoustic Cleaning Systems

#### Systems and Services

Technical Services Installations/Refurbishings/Inspections Maintenance Programs Fabric Filter Rebuilds/Conversions/Cleaning System Upgrades Troubleshooting and Maintenance Seminars Blowpipe Design Tubesheet Upgrades

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