

# Filtration Systems

Installation, Operating and Safety Manual  
for Liquid Filter Bags and Housings



*Over-The-Top*<sup>®</sup> Design

# INSTALLATION, OPERATING AND SAFETY MANUAL FOR LIQUID FILTER HOUSINGS AND FILTER BAGS

## Table of Contents

	PAGE
Introduction .....	2
Standard Housing Features and Available Options .....	2
Product Identification .....	3
Component Parts Diagram .....	4
Safety Information .....	6
Installing the Filter Housing .....	7
Installing Filter Media .....	9
Operating Procedures .....	10
Filter Media Removal .....	11
Maintaining your Filter Housing .....	12
Troubleshooting .....	12
Model Number Coding System .....	14
Recommended Spare Parts .....	14
Filter Media .....	20
Terms & Conditions of Sale .....	27
Warranty Information .....	28

## INTRODUCTION

Thank you for selecting *Filtration Systems* equipment for your liquid filtration requirements. Our Liquid Filter Housings and Systems are designed for use with High Performance Filter Bags, Cartridge Filters, or Strainer Baskets. This Installation, Operating & Safety Manual was prepared by professionals at *Filtration Systems* who are concerned with your safety and satisfaction. By familiarizing yourself with this booklet, most of your questions about our products will be answered.

**IF YOU HAVE ANY QUESTIONS, OR NEED OUR ASSISTANCE,  
PLEASE DO NOT HESITATE TO CALL US AT (954) 572-2700.**

## STANDARD HOUSING FEATURES

### ***Over-The-Top***® Design

Built to ASME Code Standards

Investment Cast Lid and Body

Hinged Lid with Handle, Built-in Lid Stop, and Safety Detents

Perforated T-316 S/S Support Basket with Longitudinal Taper

Gauge Ports, Vent Ports, Drain Ports

O-Ring Grooves Machined into Housing Lid (Buna-N standard)

Available in 150psi or 300psi Maximum Working Pressure

### ***Over-The-Top***® Housing Design

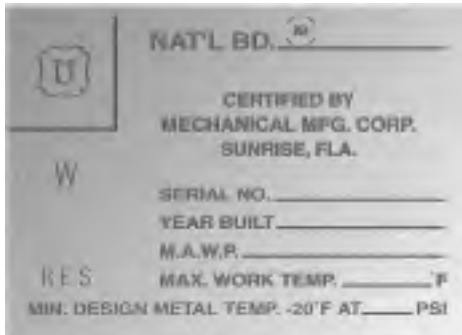
*Over-The-Top* housing design, featured on all *Filtration Systems* vessels, maximizes filtration performance by preventing bypass of unfiltered liquid. When the vessel is closed, the machined face of the lid compresses the top of the *Zero-Bypass*® bag collar, forming an absolute seal. As there is no 'dead-space' between the top of the bag and the housing lid, unfiltered liquid cannot accumulate in the housing, eliminating clean up of the vessel interior during change-out. The used bag, containing filtered solids, is simply removed and replaced with a clean filter bag.

## AVAILABLE OPTIONS

- T-316 S/S Upgrade, Including S/S Hardware
- Modified Flanged, Threaded, or Sanitary Connections
- Sanitary, Four-Position Butterfly Valves
- Low-Profile, Horizontal Outlets
- Interior Polished Finishes, Including 3A Sanitary
- HALAR® Fluoropolymer Lining
- Epoxy Coating, interior, exterior, and stand
- **SAFEsystem**®, **S**afety **A**pparatus **F**ilter **E**nhancement
- Actuated Valves, Electric or Pneumatic
- Mesh & Micron Lined Baskets, S/S
- Perforated Strainer Baskets, S/S
- Cartridge Chambers, S/S
- Two-Piece, S/S Thermal Jackets
- Alternate Outlet Locations
- Additional Ports
- Drain Valves, Vent Valves
- Pressure Gauges
- Assorted O-Ring Materials

# PRODUCT IDENTIFICATION

All *Filtration Systems* Filter Housings are stamped with a unique Serial Number that can be identified by our factory. Nameplates are permanently affixed to the pipe of each filter housing. *Removal of the nameplate voids the product of any warranty and eliminates future identification of the product.*



**ASME Code Nameplate** identifies both the National Board Number and the Serial Number of the vessel. A "U" Stamp indicates that the Vessel has been designed and manufactured in accordance with the guidelines of ASME Code Section 8, Division 1. Limits of safe working pressures and temperatures are designated on the nameplate. *Any repair or modification of a housing with an ASME code plate voids the ASME certification of the housing.*



An **Industrial Grade Nameplate** identifies the Serial Number of the Vessel, as well as the safe limits of working pressure and temperature.

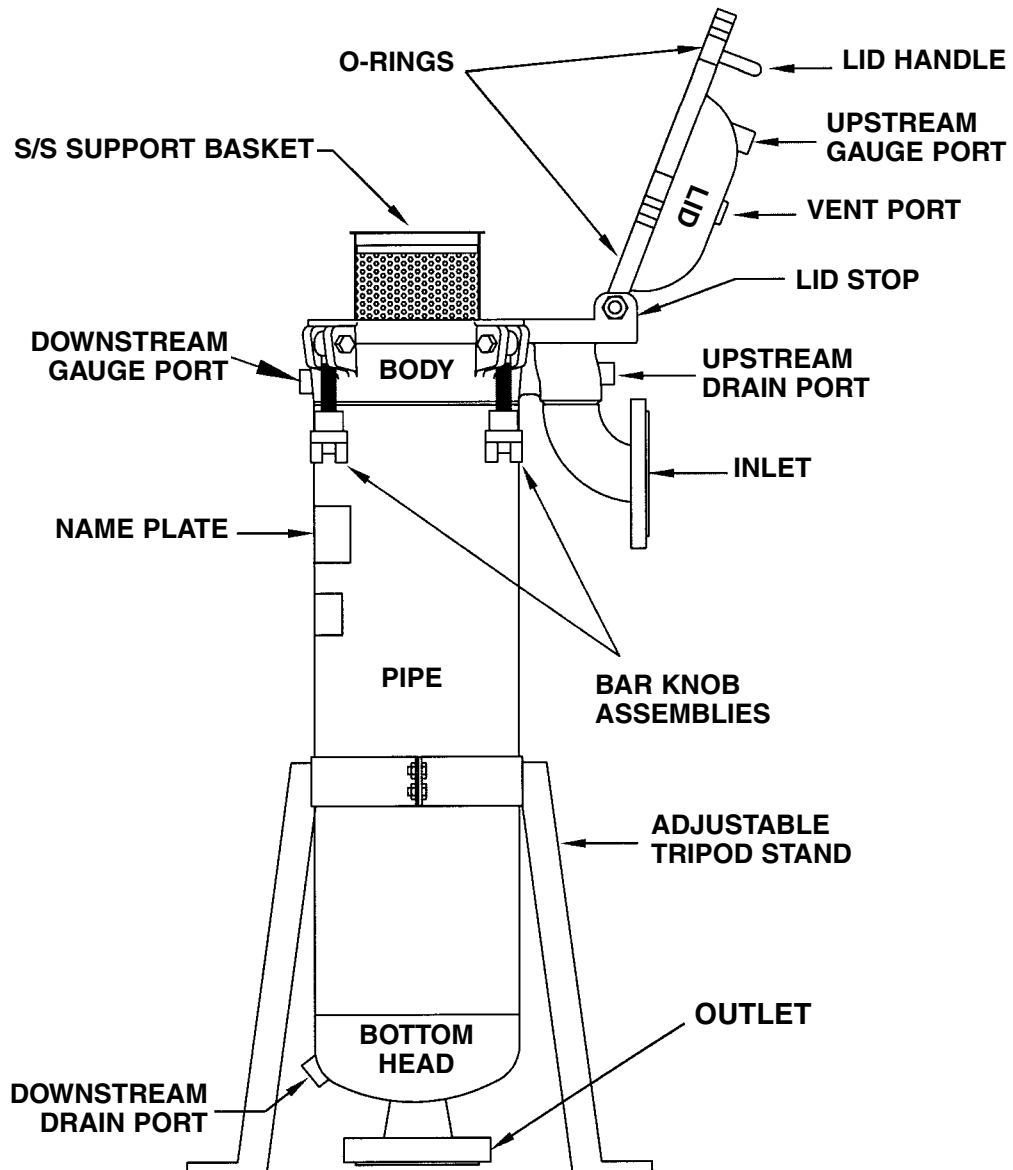


A **3-A Sanitary Symbol Plate** identifies the Vessel as being designed and built in accordance with 3-A Sanitary standards, which establish design and fabrication criteria of product contact surfaces for dairy quality products.



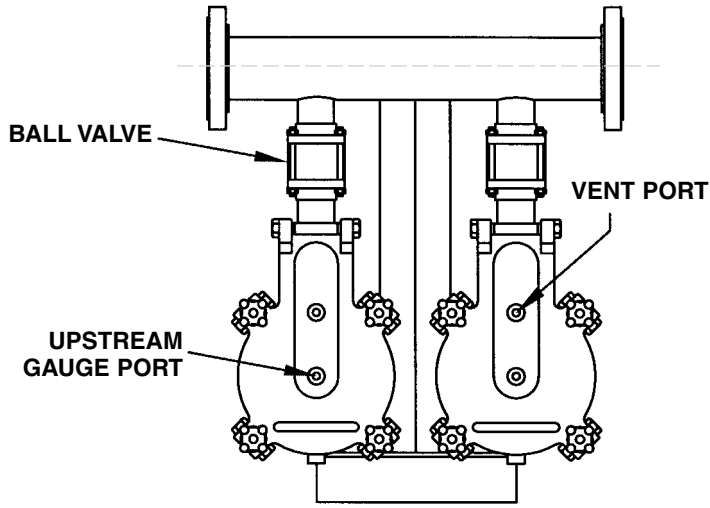
A **CE Plate** identifies the vessel as being designed and built in accordance with the European Pressure Equipment Directive. The Serial Number and limits of safe working pressures and temperatures are designated on the nameplate. Required for participating European member countries only.

**COMPONENT PARTS  
OVER-THE-TOP® DESIGN  
INDIVIDUAL FILTER HOUSING**

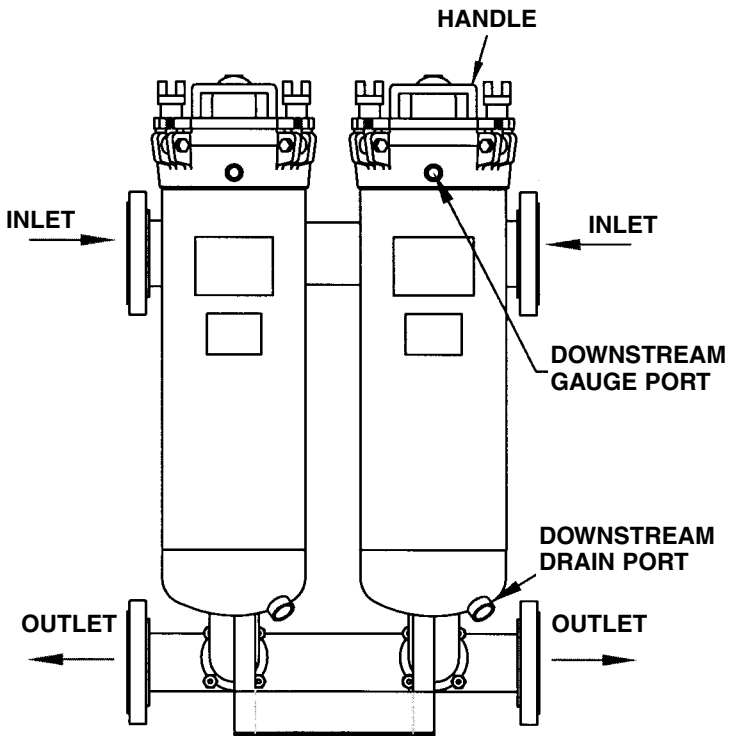


Note: Refer to Product Brochure for specific type of connections and complete specifications.

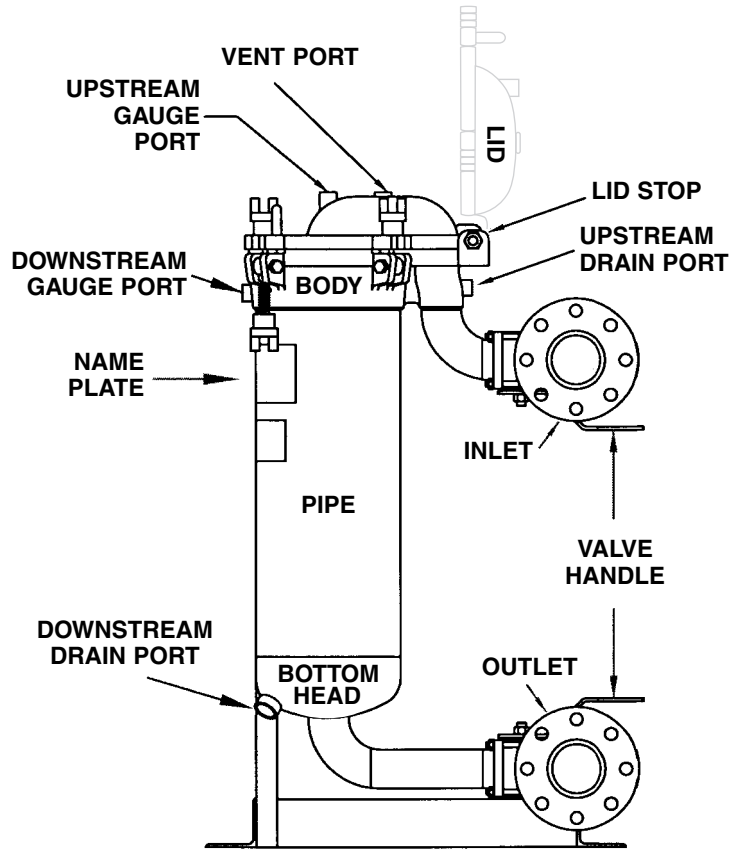
**COMPONENT PARTS  
OVER-THE-TOP® DESIGN  
MULTI-HOUSING FILTER SYSTEM**



TOP VIEW



FRONT VIEW



SIDE VIEW

Note: Refer to Product Brochure for specific type of connections and complete specifications.

## SAFETY INFORMATION

**Filtration Systems Filter Vessels are designed to filter liquids under pressure, in accordance with the temperature and pressure restrictions stamped on the nameplate. The following procedures are mandatory for all users operating our Filter Vessels. Retain this manual, and any product related literature for review by all personnel operating or supervising the operation of this equipment.**

- Follow the Installation, Operating, and Safety Instructions in this Manual.
- Wear protective garments, splash protection, eye protection and respirators, as required.
- Always check chemical and thermal compatibility of Housing Material, O-Rings, Gaskets, and Media with the fluid being filtered. Consult a liquid compatibility guide or ask your local dealer. Fluid compatibility includes all materials in contact with the liquid under elevated pressures and temperatures.
- Before pressurizing a Filter Vessel, always make sure you have fastened the Lid Hardware.
- O-Rings are subject to wear and should be checked each time the Filter Vessel is opened. Replace O-rings prior to pressurization of the Filter Vessel. Be certain that the O-Ring material is both chemically and thermally compatible with the fluid being filtered.
- Always relieve pressure to the system before loosening the Lid Hardware or opening the Vessel Lid.
- In certain operating environments, static electrical charges or sparks may cause combustion or explosion of volatile materials. Properly ground equipment, as required.
- Removing Filter Media from packaging may produce static electrical sparks. To avoid risk of combustion or explosion, never open static packaging in or around areas containing potentially flammable or explosive materials, liquids or gases.
- Disposal of Filter Media: A Filter Bag that has been used with a hazardous liquid may contain residual amounts of this material and should be handled with the same safeguards that would be used in handling hazardous and/or toxic material. Dispose of Media in accordance with Federal, State, and/or Local laws or requirements.

**Improper use of Filter Vessels may result in injury or property damage. Any misuse or modification to our products will void both the manufacturer's warranty as well as the ASME certification of ASME Code Vessels. Safety Information does not by itself eliminate any danger. Information or warnings are not a substitute for proper accident prevention measures.**

### **Lethal Service**

*Filtration Systems* Vessels are not designed for Lethal Service. "Lethal Service" refers to Vessels containing lethal substances, poisonous gases, or liquids of such a nature that a very small amount of the gas or vapor of the liquid (mixed or unmixed) is dangerous to life when inhaled. In addition, substances of this nature that are stored under pressure, or may generate pressure if stored in a closed Vessel, are considered lethal.

# INSTALLING THE FILTER HOUSING

## Unpacking the Equipment

Carefully remove the Housing from carton or pallet and check for damage.

Remove and save all product literature shipped inside the Housing or Support Basket.

Remove protective covers from flanged or sanitary connections.

*Halar*® Lined Housings and Vessels with Interior Polished Finishes are specially wrapped for additional protection. To prevent damage to the surface finish, use care when unpacking.

Confirm that the specifications and flow rate parameters have been checked against operating conditions. Housing flow rates, listed in product brochures, are based on water in a Housing without Filter Media. Actual flow rates are determined by the specific Filter Media, as well as the characteristics of the application.

Do not exceed maximum allowable Pressure or Temperature stamped on the nameplate of the Housing.

Removal of the Nameplate voids the Product Warranty and eliminates future identification of the product.

Welding to the Housing will void the Product Warranty and the Code Status of ASME Housings.

*Halar* is a registered Trademark of Solvay Solexis, Inc.

## Individual Housings & Valved, Individual Housings

Anchor the Tripod Stand to the floor or stable base.

Loosen the bolts on the Tripod Stand and raise or lower the housing as necessary, to accommodate piping requirements.

## Multi-Housing Systems

Place the Frame on a secure, level surface.

If the unit is non-valved, a shut-off Valve should be installed before and after the Filter System, allowing the unit to be shut down during Media change-out. *Valved, modular filter systems allow individual Housings to be isolated for Media change-out so there is no disruption of service.*

Multi-Housing Systems are equipped with two Inlet and two Outlet connections, located on the Inlet (top) and Outlet (bottom) headers. Choose the Inlet and Outlet Site(s) to accommodate space and/or piping requirements. Seal any unused connections with a (user-furnished) blind flange or threaded plug.

# INSTALLING THE FILTER HOUSING, CONTINUED

## General Installation Notes

- The direction of liquid flow is from the Inlet (top) through the Outlet (bottom) of the Housing. Always pump through the Filter Housing. The discharge of the pump should feed the Inlet of the Housing.
- If there is a possibility of backflow to the Housing when the system is turned off, install an outlet valve to protect the filter media.
- Do not pipe to exact Housing dimensions. Pre-pipe to the general area where the system will be installed, then connect from the Housing to the piping. Do not force or bend the Filter Housing out of line when piping.
- Threaded Connections: We recommend the use of a thread sealant.
- Flanged Connections: Confirm that the gaskets used are compatible with the application.
- Clean the Filter Housing(s) before installation.
- Flush the system of any debris that may have resulted from installation.
- All Housings are Hydrostatically Tested (tested with water, under pressure) prior to shipment. Do not test with air or gas.
- Vent Ports, Drain Ports and Gauge Ports are standard on all *Filtration Systems* Housings. Install auxiliary Valves and Gauges in the appropriate ports at this time:

A Vent Valve should be installed in the Vent Port on the Lid(s).

Pressure Gauges, used to monitor differential pressure, should be installed in the Gauge Ports on the Lid and the Filter Vessel Body of each Housing.

Drain Valves should be installed in the Drain Ports on the Bottom Head of the Housing and on the Body for the collection of residual liquid.

- Seal unused Vent, Drain, or Gauge Ports prior to start-up.
- Confirm that the O-Rings have been properly installed in the Lid of each Housing.
- Install a Perforated Support Basket in each Housing. Follow instructions below for INSTALLING FILTER BAGS.
- If the Housing is to be used with a Lined Basket or Strainer, install it with the appropriate sealing gasket.

*Filtration occurs by capturing particles throughout the depth of the media. As a result, single-use filter media is disposable and cannot be washed or reused.*

## INSTALLING FILTER MEDIA

### Installing Filter Bags

1. **Take the housing "off-line"** (follow the SHUT DOWN PROCEDURES in the OPERATING Section). After draining and venting the Housing, loosen the four Bar Knob Assemblies from the Lid, and lay them back through the slots provided. Open the Vessel Lid using the Lid Handle, and tilt it back completely. Remove the used Filter Bag (follow procedures for FILTER BAG REMOVAL).
2. **Be certain that a Perforated Support Basket is in place.** The use of a Support Basket is mandatory with Filter Bags.
3. **Select the appropriate Accufit® or Ultrafit® Welded Liquid Filter Bag.** Check chemical and thermal compatibility of the Filter Media to be used in an application. Accufit and Ultrafit Welded Liquid Filter Bags have the model number, including the micron rating, embossed on the outside of each Filter Bag.
4. **Remove the Filter Bag from the plastic bag.** Removing Filter Media from packaging may produce static electrical sparks. To avoid risk of combustion or explosion, never open static packaging in or around areas containing potentially flammable or explosive materials, liquids or gases.
5. **Insert the Filter Bag into the Support Basket.** The round bottom of the Filter Bag is designed to conform to the shape of the Support Basket. Be certain that the Filter Bag is fully extended and supported by the Basket, completely and evenly. Push down on the Bag Collar so it sits flush with the top of the flanged lip of the Support Basket.

Note: Our Filter Bags, by design, are longer than the Support Basket. The additional length ensures that the Bag remains fully supported by the Basket during use.

#### **Improper Filter Bag installation can result in Filter Bag breakage.**

To facilitate Filter Bag installation, a **Filter Bag Insert** (sold separately) will eliminate the need for technicians to reach into the Bag during installation.

Alternately, users can be assured that the Filter Bag is properly seated and fully extended by placing a **Filter Bag Restrainer** (sold separately) into the Bag, then installing the Bag (with Restrainer) into the Basket. The Restrainer remains in the Bag during the filtering process to keep it extended and maximize its usable surface area. This accessory can prevent the Bag from "floating" as a result of backpressure.

### Installing Large Diameter Cartridge Filters

1. **Place the Cartridge Chamber into the Housing, in lieu of a Support Basket.** Be certain the appropriate sealing gasket is used and installed properly under the flanged lip of the Cartridge Chamber.
2. **Select the appropriate SEDTEK® Cartridge.** Removing Filter Media from packaging may produce static electrical sparks. To avoid risk of combustion or explosion, never open static packaging in or around areas containing potentially flammable or explosive materials, liquids or gases.
3. **Insert the Cartridge into the Chamber.** Secure the cartridge by pushing down, so the double O-Rings are seated into the machined coupling at the bottom of the Cartridge Chamber.

# OPERATING PROCEDURES

## Lid Sealing Procedure

1. Confirm that the appropriate O-Rings and Filter Media have been installed properly.
2. Close the Lid of the Vessel using the Lid Handle, being careful not to drop it.
3. Bring the four Bar Knob Assemblies up into position. Hand-tighten bolts in a diagonal pattern, then torque to specification in the same manner. **To ensure a secure seal, we recommend 30-50 ft./lbs. of torque on the hold-down bolts.**

## Start Up Procedure

1. Open the Vent Valve.
2. Gradually fill the Vessel with liquid by opening the Inlet Valve slowly. As liquid enters the Vessel, air is allowed to escape through the Vent Valve to prevent an air pocket from forming.
3. At the first sign of liquid immerging through the Vent Valve, immediately close the Vent Valve and open the Outlet Valve, allowing liquid to flow through the Filter Housing. This begins the filtration process.
4. Monitor the Upstream and Downstream pressure with Gauges, when the Filter Vessel is "on-line". The difference between the two readings is known as the "pressure differential", measured across the Filter Bag. Increased upstream pressure indicates "blinding", and the need for Filter Bag replacement. Follow the Filter Bag manufacturer's recommendation for maximum allowable differential pressure.

## Shut Down Procedure

1. Stop the flow of liquid to the Vessel by closing the Inlet Valve.
2. Close the Outlet Valve to isolate the Housing from the liquid flow.
3. Observe the pressure and temperature closely. *Proceed to Step 4 only if the parameters are within safe limits.*
4. The Vessel is still in a pressurized state. Slowly open the Downstream Drain Valve located at the bottom of the Filter Vessel, and capture the liquid in an appropriate container (i.e. suitable for the filtered material that you are evacuating). *Safeguards should be taken to wear protective clothing suitable for the material being handled.*
5. Open the Vent Valve located on the top of the Filter Vessel Lid. This will promote faster gravity drainage when used in conjunction with the Downstream Drain Valve.
6. Open the Inlet Drain Valve located on the Body. If there is any unfiltered residual liquid, collect it in a suitable container.
7. Loosen the four Bar Knob Assemblies from the Lid, and lay them back through the slots provided. Open the Vessel Lid using the Lid Handle, and tilt it back completely. The Media may now be removed for replacement (follow procedures for FILTER MEDIA REMOVAL).

# FILTER MEDIA REMOVAL

**Safeguards should be taken to wear protective clothing suitable for the material being handled.**

Filter Media must be changed at or before the maximum differential pressure, recommended by the manufacturer. If the Filter Media is not changed on a timely basis, it will become "blinded" and will not drain.

## Filter Bag Removal

1. Be certain the liquid has been drained from the Housing and Filter Bag (see SHUT DOWN PROCEDURES).
2. Grasp the Filter Bag Handles and pull the Collar inward to loosen the upper section of the Bag. Twist the Collar in a circular motion to release the cloth that may be embedded in the perforations of the Support Basket.
3. Anchor the Support Basket Flange while pulling the Filter Bag out of the Basket. If the Bag does not come loose easily, twist the Collar in a circular motion when pulling up.

*Filtration occurs by capturing particles throughout the depth of the media. As a result, single-use filter media is disposable and cannot be washed or reused.*

## Large Diameter Filter Cartridge Removal

1. Be certain the liquid has been drained from the Housing, Chamber, and Cartridge (see SHUT DOWN PROCEDURES).
2. When a Cartridge is fully loaded, unfiltered debris will accumulate within the Cartridge Chamber, eliminating the need to clean the Housing during change-out. Do not remove the Cartridge from the Chamber while it is in the Housing.
3. Remove the Chamber and Cartridge from the Housing to minimize spills and exposure.
4. Grasp the built-in Handle on the Cartridge and pull it out of the Chamber.

### **Disposal of Filter Media**

A Filter Bag or Cartridge that has been used with a hazardous liquid may contain residual amounts of this material and should be handled with the same safeguards that would be used in handling any hazardous and/or toxic material. It is the user's responsibility to dispose of all Filter Media in accordance with Federal, State, and/or Local laws or requirements.

## MAINTAINING YOUR FILTER HOUSING

### O-Rings

"O-Rings" are subject to wear and should be checked for dirt, cuts, or swelling each time the Filter Vessel is opened. Replacement of O-Rings should be done prior to pressurization of the Filter Vessel. Be certain that the O-Ring material is both chemically and thermally compatible with the fluid being filtered (see page 18 for replacement O-Rings).

### Hardware

Lid Sealing Hardware should be checked each time the Filter Vessel is opened. Inspect the Eye Bolts for elongation or thread wear, due to excessive tightening. Check all components of the Bar Knob Assembly for corrosion, and replace if necessary (see page 15 for replacement Hardware).

### Ball Valve Maintenance

Filtration Systems Valved Housings are constructed with 2" S/S, Three-Piece, Full-Port Ball Valves, with Teflon Seals and Gaskets. Periodically flush the system to prevent build-up of particulate in the Body of the Valve. Replace worn Seals when necessary (see page 19 for replacement Valves & Seals).

Changing Hardware or Ball Valves may produce sparks. Properly ground equipment as required.

## TROUBLESHOOTING

**Housing Leaks...** All *Filtration Systems* Vessels are hydrostatically tested at our factory to assure the integrity of the Housing. If a Housing leaks:

- Confirm that the O-Rings are in place, and properly installed. Check O-Rings for dirt, cuts, or swelling and replace, if necessary.
- Check the Lid Sealing Procedure; apply the recommended torque pressure and reseal the Housing.
- Make sure that both the Inlet and Outlet Shut-Off Valves are open for filtering.
- Check all threaded connections; use a threading compound product, as required.
- Check plumbing connections.
- Check the Housing Body to determine if it was bent out of line during installation. Apply a straight edge over the machined face of the Housing Body from front to back. The straight edge should sit flush on the Body, without gaps.

### Ball Valves...

- If the Ball Valve is leaking, identify the leak origin and replace the Seals and Packing.
- If the Valve is difficult to open and close, remove the Valve Body and check for obstructions inside the Valve. After removing any debris, replace the body of the Valve.
- Check the Valve Handle for straightness. Our Valves have built-in 'Stops'. If the Handle is bent it will give a false 'Stop' position. The Valve may appear closed, when it remains slightly open. If this occurs, replace the Valve Handle.
- If the Valves don't fully open or close, the 'Stop' or the Handle Slot engaging the Valve Stem, may be misshapen, due to excessive force. Remove the Valve Handle and check the 'Stop' and the Machined Slot for distortion. If either is distorted, replace the Handle.

### Surface Stains...

Stains may occur on stainless steel Housing surfaces, due to either process or atmospheric conditions. If surface staining occurs, it can be easily removed with a clean stainless steel wire brush or an aluminum oxide grinding wheel.

### Abnormally Short Filter Bag Life...

- Check the position of the Filter Bag in the Support Basket. Be certain that the Filter Bag is fully extended and supported by the Basket.
- Check if the Filter Bag has been ripped or torn.
- Excessive flow rates may require the user to increase the number of Filter Bags and Filter Housings operating in parallel. As a general rule, adding a second Filter running in parallel will give you three times the Filter Bag life as a single filter. Reducing the flow rate to a Housing will allow increased loading capacity and promotes longer Filter Bag life.

*Filtration occurs by capturing particles throughout the depth of the media. As a result, single-use filter media is disposable and cannot be washed or reused.*

### Bag Breakage... Possible causes of Bag breakage:

*Excessive flow rates or differential pressure*

*Chemical or thermal incompatibility with the Filter Bag*

*Improper Filter Bag installation (i.e. Bag not fully extended in the Basket)*

*Bag floating due to backflow in the system*

*Installation of the Bag before the Housing is fully drained*

*Installation of the Bag without a Support Basket*

- Check for process changes or changes in the liquid being filtered.
- Check chemical and thermal compatibility.
- Check proper Filter Bag installation procedures (see INSTALLING FILTER MEDIA).
- Check to see if the Filter Bag is dirty and "blinded".
- Do not exceed the Manufacturer's recommended maximum temperature or flow rate parameters.
- Do not exceed the Manufacturer's recommendations for maximum allowable differential pressure.
- Be certain that Gauges are accurate and in proper working order.

#### **Particle Characterization Analysis**

*Filtration Systems offers Particle Characterization Studies of liquid samples. Particle Analysis provides meaningful data, useful in specifically identifying filtration requirements for the selection of equipment and Filter Media. Please contact Technical Services Department for details.*

# FILTRATION SYSTEMS LIQUID FILTER HOUSINGS MODEL NUMBER CODING SYSTEM

**CODE STATUS &  
MATERIAL OF CONSTRUCTION**  
**S** = ASME Code (U-Stamp), T-316 S/S  
**C** = ASME Code (U-Stamp), Carbon Steel  
**NS** = Industrial Grade, T-304 Stainless Steel  
**NC** = Industrial Grade, Carbon Steel

**VALVED HOUSING OR SYSTEM**  
*Filtration Systems*  
 Inlet & Outlet Isolation Valves,  
 T-316 S/S  
**V** = Ball Valve, 3-Piece, Full-Port  
**SV** = Sanitary Butterfly Valve

**T-316 S/S UPGRADE**  
 Optional on all Industrial Grade  
 Stainless Steel Housings

**MODIFIED**  
 Modified Equipment,  
 as per quote or requirement.

**NS - 223 - V - 300 - 316 - LP - M**

**Number of Filter Modules**  
**1** = Individual & Valved, Individual  
**2-12** = Modular Systems

**HOUSING SIZE / FILTER BAG SIZE**  
**2** = #2 Size (7" Dia. x 33" Long)  
**1** = #1 Size (7" Dia. x 16" Long)  
**4** = #4 Size (4" Dia. x 14" Long)  
**5** = #5 Size (4" Dia. x 24" Long)  
**3** = 30" Cartridge Housing

**INLET & OUTLET  
CONNECTION SIZE**  
**2** = 2" Connection  
**3** = 3" Connection  
**4** = 4" Connection  
**6** = 6" Connection  
**8** = 8" Connection

R/F ANSI Flanges,  
 NPT, or Sanitary  
 Connections available.

**LOW-PROFILE, HORIZONTAL OUTLET**  
 Optional on all 8" diameter filter vessels.

**300psi PRESSURE RATING**  
 Optional on ASME Code Housings

**OPTIONS**

## RECOMMENDED SPARE PARTS

Record the Model and Serial Number for ease of ordering spare parts.

VESSEL MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER(S) \_\_\_\_\_

YEAR BUILT (ASME CODE VESSELS) \_\_\_\_\_

FILTER BAG MODEL NUMBER AND MICRON RATING \_\_\_\_\_

Spare parts may be ordered from your Distributor or:

**Filtration Systems  
Division of Mechanical Mfg. Corp.**

**10304 NW 50th Street**

**Sunrise, FL 33351**

**Phone: 954-572-2700**

**Fax: 954-572-3401**

**www.filtrationsystems.com**

## Replacement Lid Hardware

MODEL	DESCRIPTION
H-RS-150 * H-RS-150-S/S	Bar Knob Assembly for S/S, ASME Housings -150psi <b>S/S</b> Bar Knob Assembly for S/S, ASME Housings - 150psi
H-RS-300 * H-RS-300-S/S	Bar Knob Assembly for S/S, ASME Housings -300psi <b>S/S</b> Bar Knob Assembly for S/S, ASME Housings - 300psi
H-RC-150 * H-RC-300 *	Bar Knob Assembly for C/S, ASME Housings -150psi Bar Knob Assembly for C/S, ASME Housings -300psi
H-RNS * H-RNS-S/S	Bar Knob Assembly for S/S, Industrial Grade Housings <b>S/S</b> Bar Knob Assembly for S/S, Industrial Grade Housings
H-RNC *	Bar Knob Assembly for C/S, Industrial Grade Housings
H-RNS-141/151 * H-RNC-141/151 * H-RNS-141/151-S/S	Bar Knob Assembly for S/S, Miniature Housings (4" Diameter) Bar Knob Assembly for C/S, Miniature Housings (4" Diameter) <b>S/S</b> Bar Knob Assembly for S/S Miniature Housings
BARKNOBWRENCH	Bar Knob Wrench (for use with all housings) <i>Quickly torques or loosens lid closure hardware</i>

### REPLACEMENT HARDWARE

Replacement hardware is available in Plated Carbon Steel or Stainless Steel (**S/S**) for *Filtration Systems* ASME Code and Industrial Grade vessels.

*Filtration Systems Over-The-Top®* vessels utilize four swing bolt assemblies to secure the lid. Each hardware assembly consists of the following component parts:

**Bar Knob** (Castle Nut)  
**Eye Bolt** (Swing Bolt)  
**Axle Bolt**  
**Axle Nut**

Component parts are not sold separately.

\* SA-193-B7 rod end Eye Bolt, Zinc Plated Carbon Steel.

## Gauges, Drain Valves and Vent Valves

MODEL	DESCRIPTION
H- S/S-GVP-8 H- BRASS-GVP-8	S/S, Gauge/Valve Package for 8" dia. Housings Brass Gauge/Valve Package for 8" dia. Housings
H- S/S-GVP-4 H- BRASS-GVP- 4	S/S, Gauge/Valve Package for 4" dia. Housings Brass, Gauge/Valve Package for 4" dia. Housings
H-S/S GAUGE-100 H-S/S GAUGE-160 H-S/S GAUGE-300	1/4" NPT S/S, 0-100 psi range 1/4" NPT S/S, 0-160 psi range 1/4" NPT S/S, 0-300 psi range
H-S/B GAUGE-100 H-S/B GAUGE-160 H-S/B GAUGE-300	1/4" NPT S/S & Brass, 0-100 psi range 1/4" NPT S/S & Brass, 0-160 psi range 1/4" NPT S/S & Brass, 0-300 psi range
H-1/4 S/S VALVE H-1/2 S/S VALVE H-3/4 S/S VALVE	1/4" T-316 S/S Ball Valve with Threaded Nipple 1/2" T-316 S/S Ball Valve with Threaded Nipple 3/4" T-316 S/S Ball Valve with Threaded Nipple
H-1/4 BRASS VALVE H-1/2 BRASS VALVE H-3/4 BRASS VALVE	1/4" Brass Ball Valve with Threaded Nipple 1/2" Brass Ball Valve with Threaded Nipple 3/4" Brass Ball Valve with Threaded Nipple

### GAUGE/VALVE PACKAGE

Fully equips auxiliary ports on *Filtration Systems* Housings.

Package consists of:

- (2) Pressure Gauges  
(Upstream & Downstream)
- (2) Drain Valves  
(Upstream & Downstream)
- (1) Vent Valve

### GAUGES

T-304 S/S Case, **T-316 S/S Internals**, 2 1/4" Dial, 1/4" NPT Back Center Connection.

T-304 S/S Case, **Brass Internals**, 2 1/4" Dial, 1/4" NPT Back Center Connection.

### AUXILIARY VALVES

All *Filtration Systems* Housings feature a Vent Port in the Lid, a Drain Port at the base of the Filter, and an Upstream Drain Port.

**Vent Port:** 1/4" NPT (all housings)  
**Drain Port:** 3/4" NPT (#1 & #2 Size)  
1/2" NPT (#4 & #5 Size)

**Upstream Drain Port:**  
1/4" NPT (all housings)

## Adjustable Tripod Stands

MODEL	DESCRIPTION
H-S/STAND H-C/STAND	S/S, Adjustable Tripod Stand, for 8" diameter Housings Carbon, Adjustable Tripod Stand, for 8" diameter Housings

### ADJUSTABLE TRIPOD STANDS

Allows the user to raise and lower the Filter Vessel, as required.

For *Filtration Systems* #1 & #2 Size Vessels (**112 & 122**).

## Support Baskets and Accessory Baskets for 8" Diameter Filter Vessels (Models 112 & 122)

MODEL	DESCRIPTION
A-#1PB-316 A-#2PB-316	#1 Size Perforated Support Basket, T-316 S/S #2 Size Perforated Support Basket, T-316 S/S 9/64" diameter holes, staggered pattern; hemispherical bottom
A-#1PB-304 A-#2PB-304	#1 Size Perforated Support Basket, T-304 S/S #2 Size Perforated Support Basket, T-304 S/S 9/64" diameter holes, staggered pattern; hemispherical bottom
A-#1PB-SANITARY A-#2PB-SANITARY	#1 Size, Sanitary Design, Electropolish, Perforated Support Basket #2 Size, Sanitary Design, Electropolish, Perforated Support Basket
A-#1MB A-#2MB	#1 Size Mesh Basket, T-316 S/S #2 Size Mesh Basket, T-316 S/S 8 x 8 mesh; cone-shaped bottom
A-#1CB A-#2CB	#1 Size Canister Basket, T-316 S/S #2 Size Canister Basket, T-316 S/S Holds granular materials, such as activated carbon Solid wall; perforated, hemispherical bottom
A-#1PERF-MLB A-#2PERF-MLB	#1 Size Mesh or Micron Lined Basket, T-316 S/S ** #2 Size Mesh or Micron Lined Basket, T-316 S/S ** Mesh or Micron Choices: Mesh: 20, 30, 40, 50, 60, 70, 80, 100, 150, 200 (Industrial Service) Micron: 40, 90, 160, 250 (Industrial Service)
A-#1SMLB A-#2SMLB	#1 Size, Small Micron Lined Basket, T-316 S/S ** #2 Size, Small Micron Lined Basket, T-316 S/S ** Micron Choices: 5, 10, 15, 25 (Light Duty, Specialty Use)
A-#1STRAINER A-#2STRAINER	#1 Size, Heavy Duty Perforated Strainer Basket, T-304 S/S ** #2 Size, Heavy Duty Perforated Strainer Basket, T-304 S/S ** Hole Size: 1/2", 3/8", 1/4", 3/16", 9/64", 3/32", 1/16", 3/64" Decimal: (.500)(.375)(.250)(.1875)(.1407)(.0938)(.0625)(.0469)
A-#1PREFILTER A-#2PREFILTER	#1 Size Pre-Filter, T-316 S/S- Micron Lined #2 Size Pre-Filter, T-316 S/S- Micron Lined Micron Choices: 90, 160, 250
A-#1RESTRAINER A-#2RESTRAINER	#1 Size Filter Bag Restrainer, T-316 S/S #2 Size Filter Bag Restrainer, T-316 S/S Keeps filter bag properly seated during filtration
A-BAG INSERT	#1 or #2 Size Filter Bag Insert, T-316 S/S (112 or 122) Allows for easy installation of filter bags
A-#1DISPLACER A-#2DISPLACER	#1 Size, Liquid Displacer, T-316 Stainless Steel #2 Size, Liquid Displacer, T-316 Stainless Steel

\* Includes Buna-Gasket Seal

## Stands, Brackets & Accessories for Miniature Housings 4" Diameter Filter Vessels (Models 141 & 151)

MODEL	DESCRIPTION
H-S/STAND-141 H-C/STAND-141	Stainless Steel Stand for NS-141 Carbon Steel Stand for NC-141
H-S/STAND-151 H-C/STAND-151	Stainless Steel Stand for NS-151 Carbon Steel Stand for NC-151
H-S/BRACKET H-C/BRACKET	Stainless Steel Bracket for Miniature Housings <b>(141 or 151)</b> Carbon Steel Bracket for Miniature Housings <b>(141 or 151)</b>
A-#4PB A-#5PB	#4 Size Perforated Support Basket, T-316 S/S #5 Size Perforated Support Basket, T-316 S/S <i>9/64" diameter holes, staggered pattern; hemispherical bottom</i>
A-#4CB A-#5CB	#4 Size Canister Basket with Liquid Diffuser #5 Size Canister Basket with Liquid Diffuser <i>Holds granular materials, such as activated carbon Solid wall; perforated, hemispherical bottom</i>
A-#4PERF-MLB A-#5PERF-MLB	#4 Size Mesh or Micron Lined Basket, T-316 S/S * #5 Size Mesh or Micron Lined Basket, T-316 S/S * Mesh or Micron Choices: Mesh: 20, 30, 40, 50, 60, 70, 80, 100, 150, 200 (Industrial Service) Micron: 5, 10, 15, 25 (Light Duty, Specialty Use) Micron: 40, 90, 160, 250 (Industrial Service)
A-#4STRAINER A-#5STRAINER	#4 Heavy Duty Perforated Strainer Basket, T-304 S/S * #5 Heavy Duty Perforated Strainer Basket, T-304 S/S * Hole Size: 1/2", 3/8", 1/4", 3/16", 9/64", 3/32", 1/16", 3/64" Decimal: (.500)(.375)(.250)(.1875)(.1407)(.0938)(.0625)(.0469)
A-#4/5 BAGINSERT	#4 or #5 Size Filter Bag Insert, T-316 S/S <i>Allows for easy installation of filter bags</i>
A-#4CC A-#5CC	#4 Cartridge Chamber, T-316 S/S (Holds One 10" Cartridge Filter) #5 Cartridge Chamber, T-316 S/S (Holds One 20" Cartridge Filter)
O-CC-GASKET-B4 O-CC-GASKET-T4	Buna Gasket for Miniature Housing Cartridge Chambers <b>(141 or 151)</b> <i>Teflon</i> <sup>®</sup> Gasket for Miniature Housing Cartridge Chambers <b>(141 or 151)</b>

\* Includes Buna-Gasket Seal

## O-Rings and Gaskets

MODEL	DESCRIPTION
<p>O-BUNA O-EPR O-NEOPRENE O-SILICONE O-VITON O-AFLAS O-TEFLON O-TEF/SILICONE O-TEF/VITON</p>	<p style="text-align: center;"><b>Lid O-Rings for Filtration Systems</b> <b>8" Diameter Filter Vessels (112, 122, 110, 120, 130)</b></p> <p>Buna-N O-Rings, 2 per set (standard) Ethylene Propylene/EPDM O-Rings, 2 per set <i>Neoprene</i><sup>®</sup>/Chloroprene O-Rings, 2 per set Silicone O-Rings, 2 per set <i>Viton</i> O-Rings, 2 per set Aflas<sup>®</sup> O-Rings, 2 per set <i>Teflon</i> O-Rings (Solid White), 2 per set <i>Teflon</i> Encapsulated/Silicone O-Rings, 2 per set <i>Teflon</i> Encapsulated/<i>Viton</i> O-Rings, 2 per set</p>
<p>O-BUNA 141/151 O-EPR 141/151 O-NEOP 141/151 O-SIL 141/151 O-VIT 141/151 O-TEF 141/151 O-T/S 141/151 O-T/V 141/151</p>	<p style="text-align: center;"><b>Lid O-Rings for Filtration Systems</b> <b>4" Diameter Filter Vessels (141 or 151)</b></p> <p>Buna-N O-Rings for Miniature Vessels, 2 per set (<i>standard</i>) Ethylene Propylene/EPDM O-Rings for Miniature Vessels, 2 per set <i>Neoprene</i>/Chloroprene O-Rings for Miniature Vessels, 2 per set Silicone O-Rings for Miniature Vessels, 2 per set <i>Viton</i> O-Rings for Miniature Vessels, 2 per set <i>Teflon</i> O-Rings (Solid White) for Miniature Vessels, 2 per set <i>Teflon</i> Encapsulated/Silicone O-Rings for Miniature Vessels, 2 per set <i>Teflon</i> Encapsulated/<i>Viton</i> O-Rings for Miniature Vessels, 2 per set</p>
<p>O-BUNA-GASKET O-EPR-GASKET O-NEO-GASKET O-SIL-GASKET O-VITON-GASKET O-AFLAS-GASKET</p>	<p style="text-align: center;"><b>Basket Flange Sealing Gasket for</b> <b>Filtration Systems #1 &amp; #2 Size Specialty Baskets (112 or 122)</b> <b>(Strainer Baskets &amp; Mesh/ Micron Lined Baskets, SEDTEK Chambers)</b></p> <p>Buna-N Sealing Gasket (<i>standard</i>) Ethylene Propylene/EPDM Sealing Gasket <i>Neoprene</i>/Chloroprene Sealing Gasket Silicone Sealing Gasket <i>Viton</i> Sealing Gasket <i>Aflas</i> Sealing Gasket</p>
<p>O-BUNA-GASKET 141/151 O-TEF-GASKET 141/151</p>	<p style="text-align: center;"><b>Basket Flange Sealing Gasket for</b> <b>Filtration Systems #4 &amp; #5 Size Specialty Baskets (141 or 151)</b> <b>(Strainer Baskets &amp; Mesh/ Micron Lined Baskets)</b></p> <p>Buna-N Sealing Gasket (standard) <i>Teflon</i> Sealing Gasket</p>
<p>O-BUNA-SEDTEK O-EPR-SEDTEK O-NEO-SEDTEK O-SIL-SEDTEK O-VITON-SEDTEK O-AFLAS-SEDTEK</p>	<p style="text-align: center;"><b>SEDTEK<sup>®</sup> Cartridge Double O-Ring Seal</b></p> <p>Buna-N Sealing Gaskets for <i>SEDTEK</i> Cartridge, 2 per set (standard) EPR/EPDM Sealing Gaskets for <i>SEDTEK</i> Cartridge, 2 per set <i>Neoprene</i>/Chloroprene Sealing Gaskets for <i>SEDTEK</i> Cartridge, 2 per set Silicone Sealing Gaskets for <i>SEDTEK</i> Cartridge, 2 per set <i>Viton</i> Sealing Gaskets for <i>SEDTEK</i> Cartridge, 2 per set <i>Aflas</i> Sealing Gaskets for <i>SEDTEK</i> Cartridge, 2 per set</p>

## Replacement Inlet & Outlet Ball Valves

MODEL	DESCRIPTION
BALLVALVE- 2"	2" Ball Valve, T-316 S/S, 3 piece, Full-Port with Teflon Seats & Gaskets
BALLVALVE- 1-1/4"	1-1/4" Ball Valve, T-316 S/S, 3 piece, Full-Port with Teflon Seats & Gaskets
REPAIR KIT- 2"	Replacement Teflon Seats & Gaskets for Filtration Systems 2" Ball Valve
REPAIR KIT- 1-1/4"	Replacement Teflon Seats & Gaskets for Filtration Systems 2" Ball Valve
VALVE HANDLE	Replacement Valve Handle for Filtration Systems' Ball Valves

### BALL VALVES

*Filtration Systems*  
Valved Filter Systems have two Stainless Steel Ball Valves installed on the Inlet and Outlet of each vessel allowing individual housings to be isolated for Media change-out.

## Replacement Housing Lids

MODEL	DESCRIPTION
S-LID	Stainless Steel Replacement Lid for Filtration Systems ASME Code, 8" Diameter Housings, T-316 S/S; Hinge Pin Included
C-LID	Carbon Steel Replacement Lid for Filtration Systems ASME Code, 8" Diameter Housings; Hinge Pin included
NS-LID	Stainless Steel Replacement Lid for Filtration Systems Industrial Grade, 8" Diameter Housings, T-304 S/S; Hinge Pin included
NC-LID	Carbon Steel Replacement Lid for Filtration Systems Industrial Grade, 8" Diameter Housings; Hinge Pin included
NS-LID 4	Stainless Steel Replacement Lid for Filtration Systems Industrial Grade, 4" Diameter Housings, T-316 S/S; Hinge Pin included
NC-LID 4	Carbon Steel Replacement Lid for Filtration Systems Industrial Grade, 4" Diameter Housings; Hinge Pin included

### HOUSING LIDS

To order a replacement Lid, please have the following information available (found on the Housing Nameplate):

Serial Number  
Maximum Pressure Rating  
Maximum Temperature Rating  
Year of Manufacture

Note: Lid Sealing Hardware and O-Rings are sold separately.

## Cartridge Chambers & Chamber Hardware

MODEL	DESCRIPTION
A-10CC A-20CC A-30CC	10" Cartridge Chamber & Hardware, T-316S/S * 20" Cartridge Chamber & Hardware, T-316S/S * 30" Cartridge Chamber & Hardware, T-316S/S *
<b>REPLACEMENT HARDWARE</b>	
H-GUIDEPOST1 H-GUIDEPOST2 H-GUIDEPOST3	10" Guide Post, T-316 S/S ** 20" Guide Post, T-316 S/S ** 30" Guide Post, T-316 S/S **
H-BTMSEATCAP H-SPRINGASSBLY	Bottom Pedestal Seat ** Spring Assembly, Top Seat Cap & Spring **
<b>** (4) required for each Cartridge Chamber</b>	
O-BUNA-GASKET O-EPR-GASKET O-NEO-GASKET O-SIL-GASKET O-VITON-GASKET O-AFLAS-GASKET O-TEF-GASKET	Buna-N Sealing Gasket ( <i>Standard</i> ) Ethylene Propylene/EPDM Sealing Gasket Neoprene/Chloroprene Sealing Gasket Silicone Sealing Gasket Viton® Sealing Gasket Aflas Sealing Gasket Teflon® Sealing Gasket

### CARTRIDGE CHAMBERS

Insertion of the Chamber into any of our Filter Bag Housings converts the Vessel into a cartridge Housing, *without modification of piping or change of liquid flow path*. These removable, positive sealing Chambers hold four standard Cartridge Filters in a "Cluster of Four" arrangement.

Cartridge Chambers are available in three sizes to hold standard 10", 20", and 30" length Cartridge Filters.

Use one 20" Chamber for all Model **122** Housings, one 10" Chamber for all Model **112** Housings, or one 30" Chamber for all Model **130** Housings.

\* Includes Buna-Gasket Seal

## FILTER MEDIA

### **ULTRAFIT® Welded High Performance Liquid Filter Bags**

Absolute Rated, Graded-Density, *Composite Layer Design Technology™*

#### **ULTRAFIT 500**

MODEL	DESCRIPTION
500-P000-P2-EXP	< 1 - 0.5 Micron, Size #2
500-P001-P2-IP	1 Micron, Size #2-IP
500-P002-P2-IP	2 Micron, Size #2-IP
500-P005-P2-IP	5 Micron, Size #2-IP
500-P010-P2-IP	10 Micron, Size #2-IP
500-P025-P2-IP	25 Micron, Size #2-IP
500-P050-P2-IP	50 Micron, Size #2-IP

Order in multiples of 20 pieces (minimum).

#### **ULTRAFIT 100**

MODEL	DESCRIPTION
100-P001-P2-IP	1 Micron, Size #2-IP
100-P002-P2-IP	2 Micron, Size #2-IP
100-P005-P2-IP	5 Micron, Size #2-IP
100-P010-P2-IP	10 Micron, Size #2-IP
100-P025-P2-IP	25 Micron, Size #2-IP
100-P050-P2-IP	50 Micron, Size #2-IP
100-P100-P2-IP	100 Micron, Size #2-IP
100-P200-P2-IP	200 Micron, Size #2-IP

Please order carefully, as filter bags are not returnable.

#### **AVAILABLE SIZES:**

**P2 Size** = 7" Dia. x 33" Long

**P4 Size** = 4" Dia. x 14" Long

**P1 Size** = 7" Dia. x 16" Long

**P5 Size** = 4" Dia. x 24" Long

#### **Ultrafit Welded 500**

For applications demanding both high loading and efficiency, the Ultrafit Welded 500 Filter Bag has the unique ability to effectively filter liquids where particles vary in both size and distribution. The Ultrafit 500 Filter Bag consists of graded-density layers of melt-blown polypropylene, serving as a primary upstream filter. Separately jacketed, this pre-filter collects larger particles, preventing them from prematurely blinding the media below. As fluid progression continues downstream, redundant layers of absolute-rated microfiber capture finer particles, assuring filtration efficiency levels of at least 99% at the micron ratings available.

#### **Ultrafit Welded 100**

The Ultrafit Welded 100 liquid Filter Bag is ideally suited for batch or smaller applications, or as a final filter where the range of particle size is narrower and more consistent. Designed to provide highly efficient liquid filtration for applications requiring consistent levels of purity, this product is superior to either felt Bags or Cartridges. The Ultrafit 100 liquid Filter Bag is constructed of FDA compliant, melt-blown polypropylene microfiber. The use of absolute-rated material achieves 97% filtration efficiency at the micron ratings available. Additional layers of non-woven spunbond are used to jacket the filtering membrane, providing support to the product and minimizing fiber migration downstream. The result is a superior product at an economical price.

#### **Ultrafit Welded 500-EXP**

The Ultrafit 500- EXP filter bag consists of multiple layers of the same micron rating for applications requiring sub-micron filtration. Exponential layers improve capture rates and ensure filtration efficiency levels of at least 99% at the micron ratings available. *Integrated Polymeric Support* is a standard feature of the EXP version of the Ultrafit Welded 500 Filter Bag.

#### **IP - Integrated Polymeric Support™**

IP is a structural layer of polypropylene monofilament ultrasonically laminated to the internal composite of the Ultrafit Welded Liquid Filter Bag. *Integrated Polymeric Support* allows the filter bag to sustain significant differential pressure before change-out is required, without increasing initial pressure drop. Longer run times allow enhanced solids loading. *Integrated Polymeric Support* is a standard feature of the Ultrafit Welded 100, 500 & 800 Series filter bags.

# ULTRAFIT® Welded Sub-Micron Rated High Performance Liquid Filter Bags

Sub-Micron, Absolute Rated, Graded-Density, *Composite Layer Design Technology™*

## ULTRAFIT 800 Series

**P2 SIZE:** 7" Dia. x 33" L

MODEL	MICRON
800-P02-P2-EXP	0.2 Micron Rated
800-P04-P2-IP	0.4 Micron Rated
800-P06-P2-IP	0.6 Micron Rated
800-P08-P2-IP	0.8 Micron Rated

Order in multiples of 20 pieces (minimum).

**P1 SIZE:** 7" Dia. x 16" L

MODEL	MICRON
800-P02-P1-EXP	0.2 Micron Rated
800-P04-P1-IP	0.4 Micron Rated
800-P06-P1-IP	0.6 Micron Rated
800-P08-P1-IP	0.8 Micron Rated

Please order carefully, as filter bags are not returnable.

### AVAILABLE SIZES:

**P2 Size** = 7" Dia. x 33" Long    **P1 Size** = 7" Dia. x 16" Long

### Ultrafit Welded 800

Ideal for high-purity and critical liquid process applications, *Ultrafit* Welded 800 Filter Bags achieve 99.98% efficiency (beta 5000), at ratings less than 1 micron. Filter Bags are individually wrapped for cleanliness, and packaged 20 pieces per case.

### Product Applications

- Micro-filtration for Industrial and Process Liquids
- Pharmaceutical, Biological, Electronic, and Nuclear Applications
- Pre-filtration for Reverse Osmosis Membranes and Expensive Cartridges
- Filtration of Surface Water and Groundwater
- Recycling of Wastewater and Reclaimed Water

### Product Features

- Absolute Rated Performance...*99.98% efficient, down to 0.2 micron*
- Graded-Density, Composite Layer Design...*allows enhanced solids loading*
- Fully Welded Ultrasonic Construction...*eliminates solids bypass*
- Zero-Bypass® Collar...*assures an optimum compression seal*
- Integrated Polymeric Support® ...*provides superior mechanical strength*
- 100% FDA Compliant Materials

*Filtration occurs by capturing particles throughout the depth of the media. As a result, single-use filter media is disposable and cannot be washed or reused.*

**ULTRAFIT® Welded – Nylon Series**  
**High Performance Liquid Filter Bags**  
 Absolute Rated, Composite Layer Design Technology™

**ULTRAFIT NYLON- 500 SERIES**

**P2 SIZE:** 7" Dia. x 33" L

MODEL	DESCRIPTION
500-N07-P2-EXP	< 1 Micron, Size #2
500-N001-P2	1 Micron, Size #2
500-N005-P2	5 Micron, Size #2
500-N010-P2	10 Micron, Size #2
500-N025-P2	25 Micron, Size #2
500-N050-P2	50 Micron, Size #2

Order in multiples of 20 pieces (minimum).

**P1 SIZE:** 7" Dia. x 16" L

MODEL	DESCRIPTION
500-N07-P1-EXP	< 1 Micron, Size #1
500-N001-P1	1 Micron, Size #1
500-N005-P1	5 Micron, Size #1
500-N010-P1	10 Micron, Size #1
500-N025-P1	25 Micron, Size #1
500-N050-P1	50 Micron, Size #1

Please order carefully, as filter bags are not returnable.

**AVAILABLE SIZES:**

**P2 Size** = 7" Dia. x 33" Long

**P1 Size** = 7" Dia. x 16" Long

**Product Features**

- Thermally and Chemically compatible with a broad range of applications where Polypropylene is not suitable
- Suitable for Sanitization, Autoclaving, or in-Situ Steam Sterilization
- No mildew or bacterial effects
- Abrasion resistant
- Ideal for high temperature applications, up to 350°F
- Efficiency Ratings of at least 99.9% (beta 1000) at the micron ratings available.
- Individually wrapped for cleanliness

**Materials of Construction** (100% FDA compliant):

Upstream Jacket: Nylon Web

Filter Material: Melt-blown Nylon 6 Microfiber

Downstream Support Jacket: Nylon Monofilament

Zero-Bypass® Collar: Nylon, 7.125" O.D.

*Filtration occurs by capturing particles throughout the depth of the media. As a result, single-use filter media is disposable and cannot be washed or reused.*

# ULTRAFIT® Welded – AMT™ Series

Antimicrobial Technology (AMT) High Performance Liquid Filter Bags

**P2 SIZE:** 7" Dia. x 33" L

MODEL	DESCRIPTION
AMT-P04-P2-IP	0.4 Micron, Size #2
AMT-P06-P2-IP	0.6 Micron, Size #2
AMT-P08-P2-IP	0.8 Micron, Size #2
AMT-P001-P2-IP	1 Micron, Size #2
AMT-P003-P2-IP	3 Micron, Size #2
AMT-P005-P2-IP	5 Micron, Size #2

Order in multiples of 20 pieces (minimum).

**P1 SIZE:** 7" Dia. x 16" L

MODEL	DESCRIPTION
AMT-P04-P1-IP	0.4 Micron, Size #1
AMT-P06-P1-IP	0.6 Micron, Size #1
AMT-P08-P1-IP	0.8 Micron, Size #1
AMT-P001-P1-IP	1 Micron, Size #1
AMT-P003-P1-IP	3 Micron, Size #1
AMT-P005-P1-IP	5 Micron, Size #1

Please order carefully, as filter bags are not returnable.

#### AVAILABLE SIZES:

**P2 Size** = 7" Dia. x 33" Long

**P1 Size** = 7" Dia. x 16" Long

**P4 Size** = 4" Dia. x 14" Long

**P5 Size** = 4" Dia. x 24" Long

#### Standard Features and Materials of Construction

- Multi-Layer, High Performance Liquid Filter Bag
- Graded Density, *Composite Layer Design Technology*™
- Antimicrobial Agent incorporated into the final filtering layers of the Bag
- 99.98% efficiency ratings (beta 5000)
- Materials of construction: 100% FDA Compliant Polypropylene
- Single-use, disposable Filter Bag

#### Benefits of Antimicrobial Technology

- Antimicrobial agent inhibits the growth of broad spectrum bacteria, fungi, protozoa, and yeast on the treated layers
- Antimicrobial agent lasts the life of the filter
- Non-Toxic and insoluble in water

#### What are some uses for Ultrafit Welded-AMT Series High Performance Filter Bags?

When properly installed in a Filtration Systems Over-The-Top® design housing, Ultrafit Welded-AMT Series filter bags are useful in filtering many types of liquids, including water, transformer cooling oil, synthetic oil, lubricants, paints, and other water-based liquids, when prevention of fluid contamination during the filtering process is important to the final product.

#### Why is Antimicrobial Protection important for my filtering process?

Microorganisms can contaminate liquids causing spoilage, odor, degradation, and reduced shelf life of products. Other effects of contamination may include changes in viscosity or pH, discoloration, gassing during processing, or swelling of finished product containers. During the filtering process the formation of biofilms may inhibit liquid flow, contaminate or corrode process piping, and affect heat exchange.

#### How does Antimicrobial Technology work?

Antimicrobial additives disrupt the metabolic function of thin walled, aerobic and anaerobic microorganisms, inhibiting their ability to function, grow, and reproduce on the filter media.

#### How is the Antimicrobial agent built into the media?

The antimicrobial agent is incorporated into the polymeric voids of the polypropylene fiber, without affecting the physical properties of the fiber. The submicron-sized particles migrate to the surface of the fiber, where they become an integral part of the microfibril. Since it is part of the fiber, not a surface coating, it will not wash or wear out. The antimicrobial agent is insoluble in water and lasts the life of the filter.

#### Is it safe?

Antimicrobial agents only attack thin-walled cells. Human and animal cells are thick-walled, and are therefore impermeable to the antibacterial additive. The antimicrobial agent, Triclosan (Chlorinated Phenoxy Compound), is registered with the EPA as a safe, non-toxic product.

NOTE: The *Ultrafit* Welded- AMT Filter Bag does not protect users or others against food-borne (or disease causing) bacteria. Mechanical Manufacturing Corporation, Filtration Systems Division is not making any health claims for this product.

*Two new filter products, designed for demanding, high purity liquid filtration applications have been developed offering superb flow, robust solids loading, minimal differential pressure, and absolute micron retention – all essential requirements for maximizing results....*

## ***Accufit Welded NMO Series – Surface Loading Trap Filter***

### ***Ultrafit Welded HCT Hybrid Composite Technology® – Absolute-rated Embedment***

#### ***Accufit Welded NMO Series – Surface Loading Trap Filters***

Specifically manufactured for high solids loading and strength; excellent for high purity chemical and water, pharmaceutical, food, edible or high purity synthetic oils, bio-fuels and cosmetic use; superb quality filtering incorporates convenience, cleanliness and productivity. These filters are available in quad, six, eight, or ten-wall laminated plies, are non-fiber shedding and can handle elevated temperatures (in 100% Nylon). Graded-density and/or redundant layer composites of (N6) FDA Compliant, Nylon Monofilament are ultrasonically laminated and formed, and use a non-bypassing sealing collar with removal handles. Disposable media is precision rated to micron specification.

The filter media loads on the surface of the filter, trapping particles in its many tortuous grid paths. Useful for high-flow and strength, without significant increased differential pressure imposed from the filter. It is the opposite of a depth filter – one that loads particulate on the surface of the filtering layers – not in them. As such, when finished, it will hold large amounts of solids - and still drain liquid, as it is highly porous. One of the unique features of this filter is that it may be “tweaked” as necessary to accommodate a wide array of liquid filtering conditions – e.g. ~ greater throughput, tighter micron retention, etc.

#### ***Ultrafit Welded HCT Hybrid Composite Technology – Absolute-rated Embedment***

Surface loading and depth filtration are blended together, integrating the best qualities of each to capture large amounts of suspended solids with enhanced flow rates and exacting results. Absolute-rated filter media is laminated between two thin-wall highly porous substrate layers, positioned inside the filter as a core or membrane.

*Accufit* Welded NMO Series serves as the platform for this design, supporting the absolute-rated depth embedment integrated into the filter structure. Additional products are currently being developed with embedment technology integrating other materials, such as granular activated carbon.

Engineered laminated composites offer many unique product configurations, all of which are non-fiber shedding and rapidly produced for shipment. Absolute-rated depth embedments are currently available in Polypropylene and Nylon in the following micron ratings 1,2,5,10,25,50,100 and 200. (97%+ absolute-rated) All versions are manufactured with 100% FDA compliant materials.

# ACCUFIT® Welded - IP Liquid Filter Bags

IP Series - *Integrated Polymeric Support*®  
Polypropylene Felt Liquid Filter Bags

**P2 SIZE:** 7" Dia. x 33" L

MODEL	DESCRIPTION
P-001-P2-IP	1 Micron, Size #2-IP
P-005-P2-IP	5 Micron, Size #2-IP
P-010-P2-IP	10 Micron, Size #2-IP
P-025-P2-IP	25 Micron, Size #2-IP
P-050-P2-IP	50 Micron, Size #2-IP
P-100-P2-IP	100 Micron, Size #2-IP
P-200-P2-IP	200 Micron, Size #2-IP

**P1 SIZE:** 7" Dia. x 16" L

MODEL	DESCRIPTION
P-001-P1-IP	1 Micron, Size #1-IP
P-005-P1-IP	5 Micron, Size #1-IP
P-010-P1-IP	10 Micron, Size #1-IP
P-025-P1-IP	25 Micron, Size #1-IP
P-050-P1-IP	50 Micron, Size #1-IP
P-100-P1-IP	100 Micron, Size #1-IP
P-200-P1-IP	200 Micron, Size #1-IP

## Accufit Welded IP Series- Integrated Polymeric Support®

- Materials of Construction - 100% Polypropylene:
  - Needle Felt Filter Media
  - Monofilament Support Layer
  - Non Woven Spun Bond Jacket
  - Zero-Bypass® Collar
- Nominally rated solids retention
- Each Bag individually wrapped for cleanliness
- Sustains temperatures up to 180°F

**P4 SIZE:** 4" Dia. x 14" L

MODEL	DESCRIPTION
P-001-P4-IP	1 Micron, Size #4-IP
P-005-P4-IP	5 Micron, Size #4-IP
P-010-P4-IP	10 Micron, Size #4-IP
P-025-P4-IP	25 Micron, Size #4-IP
P-050-P4-IP	50 Micron, Size #4-IP
P-100-P4-IP	100 Micron, Size #4-IP
P-200-P4-IP	200 Micron, Size #4-IP

**P5 SIZE:** 4" Dia. x 24" L

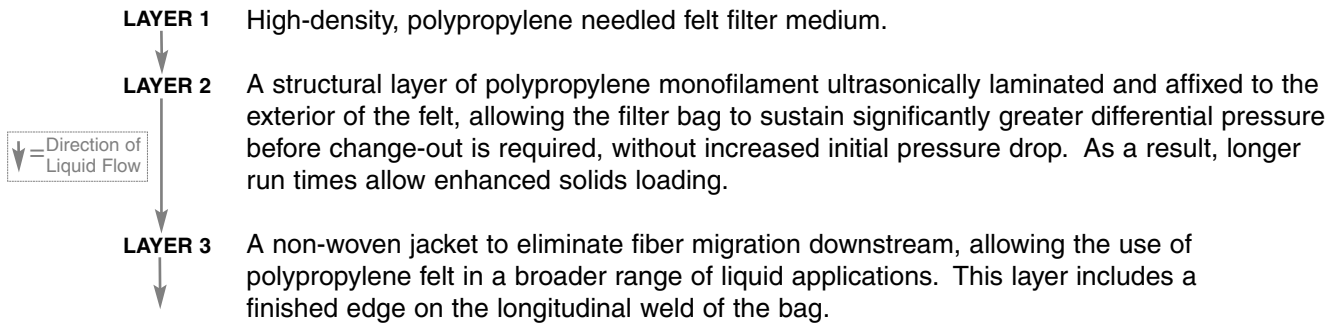
MODEL	DESCRIPTION
P-001-P5-IP	1 Micron, Size #5-IP
P-005-P5-IP	5 Micron, Size #5-IP
P-010-P5-IP	10 Micron, Size #5-IP
P-025-P5-IP	25 Micron, Size #5-IP
P-050-P5-IP	50 Micron, Size #5-IP
P-100-P5-IP	100 Micron, Size #5-IP
P-200-P5-IP	200 Micron, Size #5-IP

The **IP Jacket** contains a structural layer of polypropylene monofilament which is ultrasonically laminated to the exterior of the polypropylene needled felt, to enhance its strength. Compared to standard felt filter bags, under similar field conditions, the **IP Support Jacket** results in:

- Increased Flow Rates by 40%
- Longer Run Times
- Enhanced Solids Loading
- Sustains 50% greater differential pressure before change-out is required
- Elimination of fiber migration downstream

Accufit **IP** Series Filter Bags are packaged 50 pieces per case (minimum). Please order carefully, as filter bags are not returnable.

## Accufit Welded- IP Series Liquid Filter Bags Feature:



## Product Highlights

- **Fully Welded Construction** Ultrasonically welded seams prevent solids, larger than the micron rating of the media, from bypassing the filter bag. Conventional filter bags are sewn, allowing particles to bypass through the needle holes of seams.
- **Zero-Bypass Bag Collar** The *Zero-Bypass* collar provides an optimum compression seal, when used in a Filtration Systems filter vessel. When the filter bag is under elevated pressure, the flanged bag collar prevents bypass of unfiltered liquid.
- **Elevated Filter Bag Handles** A dual handle lift-out, located above the liquid level, eliminates contact with dirt and unfiltered materials and allows quick filter bag removal for replacement.

## **SEDTEK® High-Loading, Liquid Cartridge Filters**

For liquid filtration applications, demanding large dirt-holding capacity, *SEDTEK* Cartridges provide 99.98% efficiency at ratings as low as 1 micron. Our pleat and channel design, large diameter cartridges have greater surface area for higher loading and longer life. *SEDTEK* Cartridges are used with a "Cartridge Chamber", a removable, positive sealing basket that converts our Bag Filter Housings into Cartridge Housings, without modification of existing process piping or change of liquid flow path.

*SEDTEK* Cartridges are 6-inch diameter by 24" or 30" long, and are configured for outside to inside flow. They are available in Polypropylene or Cellulose. The reliable, double O-Ring seal assures proper seating of the Cartridge in the Chamber and eliminates bypass. A built-in handle facilitates Cartridge removal.

After the Cartridge is fully loaded, any unfiltered debris will accumulate within the Cartridge Chamber, not the Housing, eliminating the need to clean the Housing during change-out. When the Cartridge is spent, the chamber and cartridge are removed from the Vessel, minimizing spills and exposure. Each Cartridge Chamber holds one *SEDTEK* Cartridge and is reusable.

### **Filtration Systems unique *SEDTEK* Cartridges provide...**

- Greater Surface Area for Longer Filter Life and Lower Cost
- Superior Solids-Loading Capacity
- Less Frequent Change-Outs
- Increased Productivity with Less Down-Time
- Decreased Labor & Disposal Costs
- Reduced Exposure to Process Liquid

MODEL NUMBER	MICRON RATING	LOADING (Lbs)	MODEL NUMBER	MICRON RATING	LOADING (Lbs)
<b>POLYPROPYLENE (P) SEDTEK 624</b> 6" Dia. x 24" L, Max. Water Flow Rate: 50gpm			<b>CELLULOSE (C) SEDTEK 624</b> 6" Dia. x 24" L, Max. Water Flow Rate: 50gpm		
624-P001	1	9.0	624-C010	10	7.2
624-P003	3	11.4	624-C020	20	8.3
624-P010	10	12.6	624-C040	40	8.6
624-P020	20	13.2	624-C075	75	9.0
624-P040	40	13.8	624-C100	100	9.0
624-P075	75	14.4			
624-P100	100	14.4			
<b>POLYPROPYLENE (P) SEDTEK 630</b> 6" Dia. x 30" L, Max. Water Flow Rate: 65gpm			<b>CELLULOSE (C) SEDTEK 630</b> 6" Dia. x 30" L, Max. Water Flow Rate: 65gpm		
630-P001	1	11.2	630-C010	10	9.0
630-P003	3	14.2	630-C020	20	9.7
630-P010	10	15.7	630-C040	40	11.0
630-P020	20	16.5	630-C075	75	11.0
630-P040	40	17.2	630-C100	100	11.3
630-P075	75	18.0			
630-P100	100	18.0			

Materials of Construction: Polypropylene (FDA Compliant) or Cellulose; Polypropylene Inner Core, Outer Sleeve and End Caps; Stainless Steel Removal Handle; Buna-N O-rings, No Silicone  
 Average Surface Area: (624) 6" x 24" Cartridges 60sq.ft., (630) 6" x 30" Cartridges 75sq.ft.  
 Maximum Operating Temperature: 180°F Polypropylene, 225°F Cellulose  
 Differential Pressure: 1-5psig Initial; Suggested Change-out (P) 35psid/180°F (C) 35psid/225°F

### **CARTRIDGE CHAMBERS:**

**624:** Use in Model 122 Housing with **624 CHAMBER:** 24" *SEDTEK* CARTRIDGE CHAMBER, T-316 S/S  
**630:** Use in Model 130 Housing with **630 CHAMBER:** 30" *SEDTEK* CARTRIDGE CHAMBER, T-316 S/S

## STANDARD TERMS & CONDITIONS OF SALE

### DOMESTIC PAYMENT TERMS

**Open Account Terms are NET 30 DAYS, after credit approval. Until credit has been established, terms are payment by credit card, or advance payment.** We accept Master Card, VISA, and American Express. Accounts are considered delinquent 30 days after due date, and are subject to suspension and collection. If this should occur, the buyer will be responsible for all collection costs, filing fees, and attorney's fees. Venue for such action shall be in Broward County, Florida. ***Filtration Systems reserves the right to limit or extend credit.***

All pricing is in U.S. Dollars, payable in U.S. Funds on a U.S. bank. Sales and shipments within the State of Florida will be subject to Florida Sales Tax. A valid Certificate of Resale must be furnished if no sales tax is to be collected.

### INTERNATIONAL SALES AND TERMS

Orders from outside the United States must be paid IN ADVANCE by Credit Card or T/T Wire. Irrevocable Letters of Credit (L/C) are not accepted. Export order processing or production will commence upon receipt of funds. All shipping arrangements should be made by the buyer, and orders will be shipped FREIGHT COLLECT, via buyer's Freight Forwarder.

**There is a \$50.00 processing fee for export orders (one per shipment). All duties, taxes, documentation, and bank charges are the responsibility of the buyer.**

### ORDER/SHIPMENT POLICIES

**All Purchase Orders must be faxed or mailed to *Filtration Systems* before order will be shipped.**

With over 30 years of industry expertise and proven performance, *Filtration Systems* offers quality products at responsible prices. We continually strive to improve our products through ongoing research and development; therefore, we reserve the right to change specifications without notice.

#### MINIMUM ORDER REQUIREMENTS

- 1. Minimum order for filter bags is one case (see price sheet for case quantities).**
- 2. For all other items, minimum order is \$75.00.**

#### CUSTOM ORDERS

Please consult factory for custom items and/or modifications. Payment for custom items or modified equipment may be required prior to fabrication.

**CUSTOM ITEMS OR MODIFIED EQUIPMENT ARE NOT RETURNABLE.**

### FREIGHT TERMS

**All shipments are FOB Plant, Sunrise, Florida, USA. All shipping charges are the responsibility of the buyer. *Filtration Systems* will NOT prepay airfreight charges. Air shipments will be sent FREIGHT COLLECT.** Please provide account number (FedEx, UPS, etc.) to bill charges. Orders can be drop shipped within the Continental United States only.

### MERCHANDISE RETURNS

**Filter Bags, Cartridge Filters, Baskets, O-Rings, HALAR Coated Vessels and Accessories, Epoxy Coated Vessels, and Custom Items or Modified Equipment are NOT returnable.**

Authorization and the issuance of an RGA Number (Return Goods Authorization Number) MUST be obtained before returning any merchandise. **Returned goods are to be shipped freight prepaid and are subject to a 30% restocking charge.** Outside of carton MUST be labeled with our RGA number. Any item returned without an RGA number or sent with incorrect freight classification number will be refused.

## WARRANTY / LIMITATION OF LIABILITY

### Warranty

*Filtration Systems* warrants its products to be free from defects in workmanship for a period of one year from the date of purchase, when used in accordance with our specific guidelines. Our only obligation and a customer's remedy, subject to our inspection and evaluation, shall be to replace the product or refund the purchase price.

### Limitation of Liability

*Filtration Systems* shall not be held responsible or liable for any loss resulting from the resale, direct or indirect misuse, incidental or consequential damages, arising out of the use of this product. Not all questions or issues may have been addressed in this manual. If you require any additional assistance or technical information, please contact our Customer Service Department.

### Lethal Service

*Filtration Systems* vessels are not designed for lethal service. "Lethal Service" refers to vessels containing lethal substances, poisonous gases or liquids of such a nature that a very small amount of the gas or vapor of the liquid (mixed or unmixed) is dangerous to life when inhaled. In addition, substances of this nature that are stored under pressure, or may generate pressure if stored in a closed vessel, are considered lethal.

### Product Identification

All *Filtration Systems* filter vessels have a unique serial number that can be identified by our factory. Nameplates, specifying both the serial number and maximum allowable pressure and temperature rating are permanently affixed to all housings.

## PRODUCT SPECIFICATIONS / INTELLECTUAL PROPERTY

### Product Specifications

With over 30 years of industry expertise and proven performance, *Filtration Systems* offers quality products at responsible prices. We continually strive to improve our products through ongoing research and development; therefore, we reserve the right to change specifications without notice.

### Intellectual Property

*Filtration Systems* products offer exclusive manufacturing technology. Our company is committed to protecting its patents, trademarks, and proprietary rights from those who would wrongfully use them.

Partial Listing of Registered Trademarks of Mechanical Manufacturing Corporation...

**Over-The-Top®**

**SAFEsystem®**

**Ultrafit®** Welded Liquid Filter Bags

**Accufit®** Welded Liquid Filter Bags

**Zero-Bypass®** Collar

**IP Integrated Polymeric Support®**

**EXP®** Series

**Bullet Bottom®** Basket

**SEDTEK®**

**AMT-Antimicrobial Technology™**

**Composite Layer Design Technology™**

Other Trademarks...

**Halar®** is a registered Trademark of Solvay Solexis, Inc.

**Aflas®** is a registered Trademark of Asahi Glass Co. Ltd.

**Neoprene®, Teflon®, and Viton®** are Registered Trademarks of E.I. Dupont Company

# **Filtration Systems**

*Division of Mechanical Mfg. Corporation  
10304 N.W. 50th Street • Sunrise, FL 33351 USA  
Tel: 954-572-2700 • Fax: 954-572-3401  
[www.filtrationsystems.com](http://www.filtrationsystems.com)*

