PROCESS FILTRATION
Product Line Overview

- Easy-to-Control Systems
- Increased Process Reliability
- Reduced Operating Costs
- Lower Maintenance Efforts & Costs
Quality Policy
Continuous improvement in our business to ensure a quality product, shipped on time, without compromise.

Limitations of Liability
The information contained in the catalog (including, but not limited to, specifications, configurations, drawings, photographs, dimensions and packaging) is for descriptive purposes only. Any description of the products contained in this catalog is for the sole purpose of identifying the products and shall not be deemed a warranty that the products shall conform to such description. No representation or warranty is made concerning the information contained in this catalog as to the accuracy or completeness of such information. Schroeder Industries LLC reserves the right to make changes to the products included in this catalog without notice. A copy of our warranty terms and other conditions of sale are available upon request. A placed order constitutes acceptance of Schroeder’s terms and conditions.

Failure, improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

This catalog and other documentation from Schroeder Industries provides product information for consideration by users possessing technical expertise.

It is important that the user analyze all aspects of the specific application and review the current product information in the current catalog. Due to the variety of operating conditions and applications for these products, the user is solely responsible for making the final product selection and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, design, availability and pricing are subject to change at any time without notice.
<table>
<thead>
<tr>
<th>Media Filter:</th>
<th>RMF: Rolling Media Filtration</th>
<th>70/600 (268-2270)</th>
<th>100</th>
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<td>Oil and Gas Products:</td>
<td>PPS: Oil and Gas Products</td>
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<td>Mining Products</td>
<td>LW60: Longwall Filter</td>
<td>6000 (400)</td>
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<td>Process Filtration Worksheet</td>
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Schroeder Industries, an ISO 9001:2015 certified company, focuses on developing filtration and fluid service products for our customers in the fluid power industry, and is proud of our proven track record of providing quality products over the last sixty five years. The designs you see in this catalog are the result of thousands of hours of field testing and laboratory research and decades of experience.

Schroeder was one of the first companies to demonstrate the need for, and benefits of, hydraulic filtration. We pioneered the development of micronic filtration, helping to set performance standards in industrial fluid power systems. As a result, Schroeder is now a leader in filtration and fluid conditioning and the proof of our expertise lies in our broad mix of unsurpassed products. Our mission statement reflects our continuing commitment to excellence:

**Partnerships**

Innovating products, solutions, processes and services to improve performance and efficiency in industry.

We design solutions for industry and for the success of our customers by:

- Optimizing the use of technology with applications
- Using an efficient, timely customized process to fill specific customer needs
- Increasing manufacturing capacity and streamlining operations
- Preserving our reputation for reliability
- Expanding globally to support our customers and stay current with new technologies
- Leveraging and sharing our knowledge to meet challenges openly
- Nurturing a creative, cooperative culture committed to the individual and to providing the best solutions for our customers

Our goal is to be your partner in filtration. Our expertise in filtration technology, superior filter and element technology capabilities and a level of dedication to customer service and product support are the reasons we’re a worldwide leader in Advanced Fluid Conditioning Solutions.™

Committed to providing the best available filter products, Schroeder Industries will show how we meet all of the necessary cleanliness levels at a competitive price. As a cost-effective quality producer, we will work with your purchasing department to supply filtration technology and develop long-range pricing programs that can improve your company’s bottom line.
Introduction to Process Filtration Technology

The keystone product of Schroeder Process Filtration is the RF3 automatic self-cleaning backflush filter. This filter along with bag filters, cartridge filters and custom designed systems allows Schroeder to offer you complete solutions to your process filtration needs.

Our process filters are used to remove solid contamination from fluids and protect the integrity of high grade components that depend on low viscosity water or water-based fluids and emulsions. Schroeder offers high performance filters for all municipal and industrial sectors. Improvements in operational efficiency, reduced downtime, lower maintenance costs and reduced environmental impact can all be expected.

Schroeder's backflush filters come in many sizes to fit a wide range of applications. From pressures of 150 psi to 5,000 psi and flows from 20 gpm to 33,000 gpm, there is a backflush solution for many processes. Backflush filters are either automatic or manually operated. Many are made from stainless steel, but they are also available in carbon steel, with protective coating or from brass. Backflush filters are generally used more for coarse filtration.

Fine filtration can be achieved in many ways. Schroeder offers bag filters and cartridge filters to filter fluids as low as 0.2 micron. Bag, cartridge and rolling media filters offer an economical filtration solution. The elements are disposable and easily changed.

The most important aspects of filter selection include performance, efficiency, system parameters and of course, economic impact. Choosing the proper filter for your specific need is not difficult, but certainly requires some attention and understanding of specific parameters. This catalog was designed to help you find the right filter to meet your needs.
Industries Served

**Agriculture**
Irrigation is critical to the success of the agriculture industry. Filtering irrigation water will extend the life of pumps, pipes, nozzles and headers.

**Automotive Manufacturing**
Better filtration of cutting fluid water emulsions to extend service life and reduce environmental impact. Treatment of the cooling water allows for a cleaner, less abrasive supply.

**Chemical Processing**
Improving the product quality by filtration of process fluids.

**Industrial**
Continuous filtration of cooling water, cutting fluids and other service liquids within the plant increases component reliability and reduced downtime due to service interventions.

**Machine Tool**
Improving the condition of emulsified cutting fluids to extend service life and reduce environmental impact.

**Marine**
Filtration of inlet water used for cooling various components, fire suppression, bilges, ballast and raw stock for potable water generators.

**Mining Technology**
Underground spray water filtration for process consistency and improved reliability of pumps and cutting heads. Treatment of water hydraulics in long-wall applications to increase component life and reduce environmental impact.

**Offshore**
Filtration of inlet water used for cooling various components, fire suppression, bilges and raw stock for potable water generators.

**Paper Industry**
Protecting screen spray nozzles and dynamic shaft seals through efficient filtration to increase efficiency and extend service life.

**Power Generation**
Treatment of inlet cooling water supply for the generators allows for a cleaner, less abrasive supply. Filtration of the water supply to the dynamic “sliding-ring” water seal on the turbine shaft increases service life of the seal.

**Sewage Water and Waste Water Treatment**
Coarse and fine filtration of the water supply and pre-treatment of effluent. In industrial situations, take-off filtration of the clear run water saves valuable potable resources and provides excellent protection of costly membrane systems.

**Steel Making**
Treatment of inlet cooling water supply used for various processes, including rolling mills and furnaces. Nozzles and pumps in descaling operations are protected by thorough filtration of the water.

**Thermal Transfer**
Protection of heat exchangers and radiant devices from becoming clogged with solid contaminants in the transfer fluid.
When considering a Schroeder Process Filter for your application, you can select from three basic designs:

1. Backflush Filters (automatic and manual) – Backflushing filters cover a wide range of flows and filtration ratings. Some are automatic using electronics and pneumatics controlled by a PLC-based panel. Others require an operator to manually back-flush the filter. The elements in each of the backflush filters are reusable.

2. Bag Filter Systems – These filter housings come standard sizes 1, 2, 3 and 4. Size 2 multi-bag housings are available for higher flow applications. The filter bags are disposable and available in many types of felt and mesh. They are suitable for coarse and fine filtration.

3. Cartridge Filter Systems – Cartridge elements utilize depth filtration to increase dirt holding capacity while offering efficient filtration. The elements are well suited for fine filtration. Housings for these elements are available in polypropylene for single cartridges and stainless steel for multiple cartridges.

There are eight (8) main considerations in choosing the proper filter housing:

1. Fluid Compatibility – How will the materials of construction and seals for both the housing and element withstand the process medium?
   Materials of Construction
   a. Housing Construction – Carbon steel, stainless steel, polypropylene, brass and more.
   b. Seals – Buna, EPDM, Viton, Teflon® (a registered trademark of DuPont Dow Elastomers) and more.
   c. Filter Elements – Please see Element Selection Guide and Technical Data Section (page 6) for more detailed information.

2. Pressure Rating – The maximum sustainable working pressure of the system.

3. Pressure Drop (loss) – How important is maintaining pressure rating and heat generation in the system?

4. Process Connection Size – The process piping and specific requirements of the system determine these criteria.

5. Filter Element Options – What is the desired pore size of the element and the requirements of the system (please see Filter Element Selection)?

6. Overall Efficiency – Based on filter element selection.

7. Accessories – Gauges, system monitoring, control panels.

8. Economic Considerations

The model numbering selection chart on each product spread will provide an easy method to fully define the product you need for your specific application.

The information provided in this section is for reference only, and should be used as a guide when selecting the proper filters, elements, materials of construction and determining fluid compatibility. For your specific application, contact Schroeder Industries at www.schroederindustries.com, by phone at 724.318.1100 or fax at 724.318.1200.
Element Selection Guide

**Perforated Plate**
These are standard round-rolled perforated plates, which are welded together at the length side, in contrast to the inline filter elements. The solids remain in the screen basket and can be easily removed. The flow direction is from the inside towards the outside.

**Slotted Tube**
Slotted tubes consist of a spiral profile wire, which is welded with vertical support wires. They can be used for inline or screen baskets, and the flow direction can be either.

**Square Hole Wire Mesh**
This fiber consists of chain wire that is sized according to the support wire. Pore size is determined by the rectangular construction.

**SuperMesh™**
A combination of square hole wire mesh and dutch weave wire mesh.

**Dutch Weave Wire Mesh**
This mesh consists of chain wire woven with wire of different diameters. This element design has a higher mechanical stability than the square hole mesh.

**Bag and Cartridge Filters**
These filters are made from polypropylene, polyester or nylon. They offer high efficiency, high dirt holding capacity and low purchase cost for fine filtration.
Element Selection Guide

The fundamentals of filter element selection will focus upon the type of fluid you are filtering and what filtration level you require.

In some cases, basic filtration is required when coarse materials in the fluid are to be removed. In other instances, extremely fine filtration may be needed for the specific process or equipment within the system.

There are two classes of filter elements:

1. Reusable
2. Disposable

Once again, we set the standard for environmental stewardship with reusable filter elements. When choosing the proper filter element, you now have a choice not only based on filtration requirements, but on the materials of construction and the possibility of environmental impact. As you begin the selection process for filters and filter elements, you will be able to add to your criteria whether a disposable or reusable element suits your application best. Consideration should be given to all of the environmental consequences, and we urge you to contact our application engineers during the selection process.

Reusable Elements

Designed to allow the user to replenish the media through cleaning, these elements utilize metallic media for long-term usage. Reusable elements are easily cleaned. In some cases, “intelligence” is built into the filter housing and through an internal process, the filter performs the cleaning process itself. This feature is the benchmark of the RF3 backflushing products.

Disposable Elements

Our disposable bag and cartridge elements are manufactured from polypropylene, polyester, nylon and other low cost durable materials. They are engineered to offer high dirt holding capacity and high efficiency at an economical price. These elements are reliable and are used for fine filtration.

The graphical representation on the previous page demonstrates five differing element types and their corresponding micronic range. This is critical to selecting the level of cleaning required in your system. It is important to select the medium that is appropriate to your application. There are dangers in both undersizing and oversizing of the element. Selecting a pore size too large can have adverse effects on your process or the equipment you are trying to protect. Selecting a pore size smaller than your requirements will add unnecessary protection and introduce pressure drop and heat that may affect your process. If you are unsure of your specific requirements, please contact our application engineers for assistance. The filter model number selection chart on each product spread will provide an easy method to fully define the product you need for your specific application.
The RF3 Automatic Backflushing Filters are complete filtration systems. These unique products are not only performing the task of filtering low viscosity liquids, but also the cleaning of their array of reusable conical filter elements via PLC controlled mechanism.

Since particles in process fluids have an influence on the quality of the end product and they increase the attrition rate of system components, proper protection through efficient filtration is needed. The RF3 self-cleaning filters provide this protection with uninterrupted operation.

The RF3 automatic self-cleaning filters are used for extracting particulate contaminants. The rugged design and automatic self-cleaning capability give this filter product the ability to make a major contribution to operational reliability, reduction of maintenance costs and overall efficiency in many process systems.

The RF3 filters have a special housing design that incorporates an array of filter elements. The special Slotted Tube and SuperMesh™ elements with pore sizes from 25 to 3000 micron ensure highly effective removal of particulate contamination from the process medium. The adjustable differential pressure switch triggers the self-cleaning function. Each individual filter element is cleaned with filtrate in the reverse flow direction while being totally isolated from the rest of the element array. This is how the RF3 can continue to filter without any interruption of the filtration process during the backflush cycle.

When does the self-cleaning function occur?
As the amount of contamination collected in the elements increases, so does the differential pressure. When the differential pressure reaches the set point, a signal is sent to the PLC inside the control panel, which initiates the backflush cycle. The cleaning cycle can also be started by the adjustable timer located inside the control panel, or by simply pressing the cycle start button located on the front of the control panel.

How does the self-cleaning system operate?
The process starts with the geared motor located on top of the filter positioning the backflush arm beneath the first element to be cleaned. Once in position, the control panel opens the backflush valve, which creates a pressure gradient that reverses the flow of filtrate through this single element. The reverse flow cleans the element of the collected particles. The valve then closes and the motor positions the arm beneath the next element to be cleaned. The backflush cycle is complete when all of the elements in the array have been cleaned.

What about the filter elements?
The conical shaped filter elements used in the RF3 self-cleaning filters are specially designed for isokinetic filtering and backflushing. This tapered design results in an even flow distribution, low pressure drop and a uniform distribution of contaminates inside the elements. The advantages: longer time between backflush cycles, less loss of process fluid and more complete and efficient cleaning of the conical wedge wire elements.

Are there any other unique features?
The PLC control has some benefits that aren’t immediately visible. During the self-cleaning operation, the backflush valve is in position under the element being cleaned for just a few seconds. The backflush valve is opened and closed rapidly, causing a “pulsation” of filtrate through the filter element openings. These pressure surges produce a superior cleaning effect in a shorter time. The result is fewer cleaning cycles, shorter duration and lower consumption of filtrate.
Automatic Backflushing Filters

Some of the RF3 Benefits:

- Excellent price to performance ratio
- High filtration quality
- Low occurrence of service staff intervention
- Low operating cost
- Low maintenance cost
- Continuous operation of process
- High flow rate for maximum performance

- Low pressure drop
- Low energy consumption
- Superior self-cleaning functionality
- Application specific design
- Efficient design / small footprint envelope
- Simple installation
- Maximum use of filtration surfaces for best efficiency

- Patented element design
- 25 to 300 micron filtration

Installation Guidelines

- Minimum inlet pressure of 35 psi
- Maximum 2 psi clean pressure differential between inlet and outlet
- Minimum 25 psi between the outlet and the backflush line (preferably the backflush line goes to atmospheric pressure)

System Installation Diagram

Filter Elements

Industries Served

STEEL MAKING  PULP & PAPER  WASTE WATER TREATMENT  MINING TECHNOLOGY  INDUSTRIAL  POWER GENERATION  MARINE  MACHINE TOOL

SCHROEDER INDUSTRIES | PROCESS FILTRATION  13
### 2.1. STANDARD CONFIGURATIONS

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<thead>
<tr>
<th>Parameter</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1.1 Control Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>• EPT: electro-pneumatic cyclic control</td>
<td>• 2K epoxy paint</td>
</tr>
<tr>
<td>• EU: electrical circulation control (electric only)</td>
<td>• ANSI</td>
</tr>
<tr>
<td>• PT: pneumatic cyclic control with timer function (pneumatic only)</td>
<td>• 2K polyurethane coating</td>
</tr>
<tr>
<td><strong>2.1.2 Connection Voltages</strong></td>
<td></td>
</tr>
<tr>
<td>• 3 x 400V / 50 Hz with or without neutral wire</td>
<td>• rubber lined</td>
</tr>
<tr>
<td>• 3 x 500V / 50 Hz without neutral wire</td>
<td>• ASME Code Design (with or without U-Stamp)</td>
</tr>
<tr>
<td>• 3 x 230V / 50 Hz with or without neutral wire</td>
<td>• ANSI</td>
</tr>
<tr>
<td>• 3 x 415V / 50 Hz without neutral wire</td>
<td>• JIS</td>
</tr>
<tr>
<td>• 3 x 415V / 60 Hz with neutral wire</td>
<td>• Internal Corrosion Protection</td>
</tr>
<tr>
<td>• 3 x 460V / 60 Hz without neutral wire</td>
<td>• Duplex</td>
</tr>
<tr>
<td>• 3 x 440V / 60 Hz without neutral wire</td>
<td>• EPT: electro-pneumatic cyclic control</td>
</tr>
<tr>
<td>• 3 x 525V / 50 Hz without neutral wire</td>
<td>• EU: electrical circulation control (electric only)</td>
</tr>
<tr>
<td>• 3 x 575V / 60 Hz without neutral wire</td>
<td>• PT: pneumatic cyclic control with timer function (pneumatic only)</td>
</tr>
<tr>
<td>• 3 x 690V / 50 Hz without neutral wire</td>
<td>• Internal Corrosion Protection</td>
</tr>
<tr>
<td>• 1 x 230V / 60 Hz</td>
<td>• Duplex</td>
</tr>
<tr>
<td>• 1 x 230V / 60 Hz</td>
<td>• EPT: electro-pneumatic cyclic control</td>
</tr>
<tr>
<td>• 1 x 115 / 60 Hz</td>
<td>• EU: electrical circulation control (electric only)</td>
</tr>
<tr>
<td><strong>2.1.3 Housing Calculation / Flange Connections</strong></td>
<td>• Internal Corrosion Protection</td>
</tr>
<tr>
<td>• AD 2000 / PED 97/23/EC Pressure Equipment Directive</td>
<td>• Duplex</td>
</tr>
<tr>
<td>• DIN flanges</td>
<td>• EPT: electro-pneumatic cyclic control</td>
</tr>
<tr>
<td><strong>2.1.4 Variable Flange Geometry</strong></td>
<td>• EU: electrical circulation control (electric only)</td>
</tr>
<tr>
<td>• Inlet/outlet and backflushing line, rotatable</td>
<td>• Internal Corrosion Protection</td>
</tr>
<tr>
<td><strong>2.1.5 Housing Materials</strong></td>
<td>• Duplex</td>
</tr>
<tr>
<td>• Carbon steel</td>
<td>• EPT: electro-pneumatic cyclic control</td>
</tr>
<tr>
<td>• Cast iron (only for sizes CG and DG)</td>
<td>• EU: electrical circulation control (electric only)</td>
</tr>
<tr>
<td><strong>2.1.6 Material of Internal Parts</strong></td>
<td>• Internal Corrosion Protection</td>
</tr>
<tr>
<td>• Stainless steel</td>
<td>• Duplex</td>
</tr>
<tr>
<td><strong>2.1.7 Material of Elements</strong></td>
<td>• EPT: electro-pneumatic cyclic control</td>
</tr>
<tr>
<td>• Stainless steel</td>
<td>• EU: electrical circulation control (electric only)</td>
</tr>
<tr>
<td><strong>2.1.8 External Corrosion Protection</strong></td>
<td>• Internal Corrosion Protection</td>
</tr>
<tr>
<td>• 2-coat primer (not required for stainless steel housing)</td>
<td>• Duplex</td>
</tr>
</tbody>
</table>

### 2.2 OPTIONAL VERSIONS

There are a range of optional versions available for the AutoFilt® RF3.

<table>
<thead>
<tr>
<th>Option</th>
<th>Available Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Glass flake lining</td>
<td>• Special paints / coatings according to customer specifications</td>
</tr>
<tr>
<td><strong>2.2.1 Control / Electrical Components / Voltage Supply</strong></td>
<td>• ATEX accpordng to Directive 94/9/EC</td>
</tr>
<tr>
<td>• Manual version of the AutoFilt® RF3</td>
<td>• Manufacturer’s test certificates</td>
</tr>
<tr>
<td>• PLC control</td>
<td>• Material certificates 3.1 according to DIN EN 10204</td>
</tr>
<tr>
<td><strong>2.2.2 Housing Manufacture</strong></td>
<td>• Welding procedure specifications (WPS) / Procedure Qualification Record (PQR)</td>
</tr>
<tr>
<td>• Filter without control for integration into customer’s PLC</td>
<td>• Inspection plan</td>
</tr>
</tbody>
</table>

Many others available on request.
Further optional models on request.
Pressure Drop Information Based on Flow Rate and Viscosity

RF3 Flow Curves

Flow Rate (gpm) vs. Pressure drop (psid)
How to Build a Valid Model Number for a RF3:

<table>
<thead>
<tr>
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<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF3</td>
<td>2.5</td>
<td>S</td>
<td>A</td>
<td>NM</td>
<td>E1</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: RF3 2.5  S  A  NM  E1  N

Continued on next page

**BOX 1**
- **Type**: AutoFilt®

**BOX 2**
- **Filter Size**
  - C = 2" (232 psi)
  - F = 4" (145 psi)
  - K = 6" (145 psi)
  - L = 8" (145 psi)
  - M = 10" (145 psi)
  - N = 12" (145 psi)
  - Q = 16" (87 psi)
  - R = 20" (87 psi)
  - S = 24" (87 psi)
  - T = 28" (87 psi)
  - U = 36" (87 psi)

**BOX 3**
- **Pressure Ranges**
  - 1 = 87 psi
  - 2 = 145 psi
  - 3 = 232 psi
  - 4 = 363 psi
  - 5 = 580 psi
  - 6 = 914 psi
  - 7 = 1450 psi

**BOX 4**
- **Design Code**
  - S = HYDAC Standard
  - A = ASME VIII Div. 1
  - U = ASME VIII Div. 1
  - E = EN 13445

**BOX 5**
- **Controller**
  - A = Electro-pneumatic cyclic control
  - B = Electrical circulation control
  - C = Electro-pneumatic circulation control
  - D = Pneumatic cyclic control with timer function
  - M = Manual
  - 0 = Without control, all consumers on terminal strip

**BOX 6**
- **Connection Voltage**
  - 1 = 3 x 400V / N / PE 50Hz
  - 2 = 3 x 400V / X / PE 50Hz
  - 3 = 3 x 500V / X / PE 50Hz
  - 4 = 3 x 230V / N / PE 50Hz
  - 5 = 3 x 230V / X / PE 50Hz
  - 6 = 3 x 415V / X / PE 50Hz
  - 7 = 3 x 415V / N / PE 60Hz
  - 8 = 3 x 460V / X / PE 60Hz
  - 9 = 3 x 440V / X / PE 60Hz
  - A = 3 x 525V / X / PE 60Hz
  - B = 3 x 575V / X / PE 60Hz
  - C = 3 x 690V / X / PE 50Hz
  - D = 1 x 230V / N / PE 50Hz
  - E = 1 x 230V / N / PE 60Hz
  - F = 1 x 115V / N / PE 60Hz
  - G = 3 x 415V / N / PE 50Hz
  - H = 3 x 220V / X / PE 60Hz
  - I = 3 x 380V / X / PE 50Hz
  - K = 3 x 480V / X / PE 60Hz

**BOX 7**
- **Housing Material / Corrosion Protection**
  - N = Carbon steel, primed on the outside (RAL 7040)
  - NM = Carbon steel, primed on the outside (RAL 7040), inside 2-comp. epoxy coating
  - NP = Carbon steel, primed on the outside (RAL 7040), inside 2-comp highly cross-linked polyurethane coating
  - NG = Carbon steel, primed on the outside (RAL 7040), rubber lined inside
  - E1 = Stainless steel 1.4301, 1.4541 or similar (group 304/321)
  - E2 = Stainless steel 1.4571 or similar (group 316)
  - A = “A” also added in case of ANSI flange
  - J = “J” also added in case of JIS flange

**BOX 8**
- **Internals/Element Material**
  - E1 = Stainless steel 1.4301, 1.4541 or similar (group 304/321), filter element stainless steel 1.4435 (group 316)
  - E2 = Stainless steel 1.4571 or similar (group 316), filter element stainless steel 1.4435 (group 316)
  - ES = Stainless steel 1.4571 or similar (group 316), filter element Superduplex (only wedge wire possible)
  - SE = Superduplex, filter element stainless steel 1.4435 (group 316)
  - DE = Duplex, filter element stainless steel 1.4435 (group 316)
  - DS = Duplex, filter element Superduplex (only wedge wire possible)
  - SS = Superduplex, filter element Superduplex (only wedge wire possible)

**BOX 9**
- **Back-Flush Valve**
  - 0 = None
  - N = Flap: housing coated in spheroidal graphite iron, disc stainless steel, seal NBR (only up to pmax ≤ 16 bar!)
  - B = Flap: housing coated in spheroidal graphite iron, disc bronze, seal NBR (only up to pmax ≤ 16 bar!)
  - M = Flap: housing coated in spheroidal graphite iron, disc Superduplex, seal NBR (only up to pmax ≤ 16 bar!)
  - S = Ball valve: ball stainless steel, housing up to a nominal size of 50 mm carbon steel and from a nominal size of 50 mm coated in spheroidal graphite iron, ball seal PTFE (from pmax > 16 bar!)
  - E = Ball valve: ball stainless steel, housing stainless steel, ball seal PTFE (from pmax > 16 bar!)
How to Build a Valid Model Number for a RF3:

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 10</th>
<th>BOX 11</th>
<th>BOX 12</th>
<th>BOX 13</th>
<th>BOX 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>SKS1000</td>
</tr>
</tbody>
</table>

= RF3-2.5N2SA1NME1N5103-SKS1000

BOX 10

Pressure Gauge

0 = None
1 = Differential pressure gauge – aluminum pressure chamber (only up to 25 bar!)
2 = Differential pressure gauge – stainless steel 1.4301 or similar (group 304/321) pressure chamber
3 = Differential pressure gauge – with stainless steel 1.4301 or similar (group 304/321) diaphragm seal
4 = Differential pressure gauge – brass pressure chamber
5 = HDA 4700 stainless steel V2A group
6 = HDA 4300 Duplex

BOX 11

Flange Position

1 = Filter outlet opposite filter inlet (Standard)
2 = Filter outlet offset 90° clockwise to default
3 = Filter outlet offset 180° clockwise to default
4 = Filter outlet offset 270° clockwise to default

BOX 12

Options

0 = None
A = Certificate of conformance CoC 3.1 according to DIN EN 10204 for design, pressure and functional testing
C = Acceptance test certificate 3.1 according to DIN EN 10204 for design, pressure and functional testing incl. material inspection certificates according to EN 10204, 3.1 for pressure-bearing media-contacting housing parts
D = Material inspection certificates according to EN 10204, 3.1 for pressure-bearing media-contacting housing parts
E = Russian equipment pass incl. explanation letter for TRCU 032 / 2013; also declaration of conformity for TRCU 010 / 2011
F = End position switch position indicator for back-flushing valve (micro)
G = End position switch position indicator for back-flushing valve (inductive)
H = RAL 7040 top coat
I = Davit
K = Automatic vent valve
L = PE-UHMW clutch bushing with FKM O-rings
M = M12 x 1 male connector for electrical connections
N = Drinking water approval NSF / ANSI 61-G & 372
P = All seals FKM or FP2000
S = Seawater version
T = Marine / ship version

BOX 13

Modification Number

3 = The latest number will be supplied

BOX 14

Filter Element Set

KS = Conical Wedge wire filter elements (50 - 3000 µm)
KD = Conical SuperMesh filter elements (25/40/60 µm)
SKS = Conical wedge wire filter elements with SuperFlush Coating
SKD = Conical SuperMesh filter elements with SuperFlush Coating

Special number

For special models (number is allocated after technical clarification)
The automatic backflushing filter AutoFilt® RF5 has proven its reliable performance successfully for many years in a wide range of different industries. The new backflushing filter series AutoFilt® RF5 a new budget-priced filter series with a cost-optimized geometry that offers the same reliable filter performance in a variety of applications.

The function of the AutoFilt® RF5 is similar to the AutoFilt® RF3:

The fluid to be filtered flows through the slotted tube filter elements of the backflushing filter, passing from the inside to the outside. Contamination particles then collect on the smooth inside of the filter elements.

As the level of contamination increases, the differential pressure between the contaminated and clean sides of the filter increases. When the differential pressure reaches its pre-set value, backflushing starts automatically.

### Dimensions

<table>
<thead>
<tr>
<th></th>
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<th></th>
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## Backflushing Filter AutoFilt® RF5

### Technical Data

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<tr>
<th>Size</th>
<th>Pressure Rating psi / (bar)</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Back flushing</th>
<th>Filtration Area in² / cm²</th>
<th>Flow Range gpm (L/min.)</th>
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<td>145 (10)</td>
<td>DN 250</td>
<td>DN 200</td>
<td>DN 40</td>
<td>942 (6120)</td>
<td>748-1408 (170-320)</td>
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<td>145 (10)</td>
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<td>DN 40</td>
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<td>1276-1980 (290-450)</td>
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<td>DN 500</td>
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<td>4400-8360 (1000-1900)</td>
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<td>10920 (70980)</td>
<td>6600-12320 (1500-2800)</td>
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<td>DN 900</td>
<td>DN 800</td>
<td>DN 100</td>
<td>18200 (118300)</td>
<td>11440-18480 (2600-4200)</td>
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### How to Build a Valid Model Number for a RF3:

- **BOX 1**: Filter Series
- **BOX 2**: Filter Size
- **BOX 3**: Drive Control / Connecting Voltage
- **BOX 4**: Housing Material & Coating
- **BOX 5**: Shut Off Valve Material
- **BOX 6**: Differential Pressure Gauge
- **BOX 7**: Control Box Position
- **BOX 8**: Modification Number
- **BOX 9**: Element Set
- **BOX 10**: Size of Element Set
- **BOX 11**: Vessel Certification

**Example**: Note: One option per box

RF5  40  EPT8  NMA  N  5  3  2  ES300  40  ASME

= RF3-40-EPT8-NMA-N-5-3-2/ KS1000-40-ASME

**NOTES:**

- Box 3: Needs to have control type and voltage selected ex. EPT8.
- Box 4: can contain two options ex. NMA.
- If ANSI flanges are not specified DIN style will be provided.
The automatic backflushing filter AutoFilt® RF3 has proven its reliable performance successfully for many years in a wide range of different industries. The horizontal backflushing filter AutoFilt® RF7 supplements our backflushing filter family. The AutoFilt® RF7 is a compact model range that is specifically designed for applications with small space and height restrictions.

The working principle and control systems of the AutoFilt® RF7 are identical to those of the AutoFilt® RF3.
### How to Build a Valid Model Number for a RF3:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
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<tr>
<td>Filter Series</td>
<td>Filter Size</td>
<td>Drive Control / Connecting Voltage</td>
<td>Housing Material &amp; Coating</td>
<td>Element Set</td>
<td>Size of Element Set</td>
<td>Vessel Certification</td>
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</tr>
<tr>
<td>RF7</td>
<td>CC</td>
<td>EPT = Electro-pneumatic cyclic control, ( \Delta p ) dependent Electric Control, ( \Delta p ) dependent</td>
<td>N = Standard Steel 1.0038 outside primed</td>
<td>KD25 = Conical SuperMesh\textsuperscript{TM} KS40 = Conical SuperMesh\textsuperscript{TM} KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes</td>
<td>1 = Outlet to right</td>
<td>Omit = Standard Version</td>
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<tr>
<td></td>
<td>OB</td>
<td>EU = Electric Control, ( \Delta p ) dependent</td>
<td>NM = Standard Steel 1.0038 outside primed, inside metallogal painted</td>
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<td>2 = Outlet up</td>
<td>ASME = ASME Version</td>
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<tr>
<td></td>
<td>1B</td>
<td>PT = Pneumatic cyclic control</td>
<td>E = Stainless Steel 1.4571 with ANSI-flanged, additional A at the end</td>
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<td>3 = Outlet to left</td>
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<td>2B</td>
<td>PTZ = Pneumatic cyclic timed control</td>
<td>A =</td>
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<td>A = Backflushing line to left</td>
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<td></td>
<td>2.5</td>
<td>7 = 3X415V/N/PE 60Hz</td>
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<td>3B</td>
<td>8 = 3X460V/XPE 60Hz</td>
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<td>C = Backflushing line to right</td>
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<tr>
<td></td>
<td>4A</td>
<td>9 = 3X440V/XPE 60Hz</td>
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<td>5A</td>
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<td></td>
<td>6A</td>
<td>F = 1X110V/NPE 60Hz</td>
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<td></td>
<td></td>
<td></td>
</tr>
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</tbody>
</table>

**Example:** NOTE: One option per box

**Example:**

- RF7-3B-EPT8-NMA- N-5-3-2/ KS1000-40-ASME

**NOTES:**
- Box 3. Needs to have control type and voltage selected ex. EPT8.
- Box 4. can contain two options ex. NMA.
- If ANSI flanges are not specified DIN style will be provided.
Traditional Automatic Backwash Filters are designed for high pressure applications with medium to lower loads.

**What if pressure is low and contamination is high?**
The new RF10 takes the best features of the RF3 and marries them with JetFlush technology. The operating principle subdivides the backflushing into two phases.

**Phase One:**
Stripping away the contaminant particles

**Phase Two:**
Discharging the contaminant particles

The new generation is dependent on influent pressure only and does not require the additional back pressure of the effluent to influent differential. With a JetFlush reservoir and internally guided JetFlush valves that can seal the upper lip creating an increased “suction” backflush, the RF10 can handle almost all difficult filtration applications.

**Product Advantages:**
- Back-flushing independent of pressure on clean side of filter
- Dependent only on the inlet pressure
- Highly efficient back-flushing with low pressure conditions and long back-flush lines
- With its highly efficient back-flushing, the filter is suitable for high dirt loads and surges in contamination
- Optional davit
- Variable filter isometry

Here is how the JetFlush Technology improves traditional ABF Technology:

**Filtration**
The medium being filtered enters the filter housing via the filter inlet (A) and flows through the filter elements of the back-flushing filter from the inside to the outside (B) and leaves the filter via the filter outlet (C). During the filtration process, the JetFlush reservoir (D) located above the filter elements fills with and stores medium from the contaminated side. As fluid is filtered, particles collect on the inside of the filter elements. As the level of contamination increases, the differential pressure between the contaminated and clean side of the filter increases. When the differential pressure reaches the pre-set trigger point, back-flushing starts automatically.

**Back-Flushing In General**
Automatic back-flushing is triggered:
- When the differential pressure trigger point is exceeded
- By means of a timer
- By pressing the test button

The gear motor (E) rotates the back-flushing arm (F) to the filter element to be cleaned (G). The back-flush valve (H) opens. The pressure drop between the filter inlet (A) and the back-flush line (I), combined with the conical geometry of the filter element, triggers the special JetFlush effect of the AutoFilt® RF10.

The remaining filter elements continue filtering to ensure uninterrupted filtration.
Back-Flushing Phase I
Phase 1 - Stripping away the contamination
In the first phase, unfiltered fluid from the JetFlush reservoir (J1) above flows into the filter element. The conical filter element geometry produces a core flow here, supplied mainly by the JetFlush reservoir. This core flow is supported by the open JetFlush effect, which also draws water from the filtrate side into the inside of the filter element.

Back-Flushing Phase II
Phase 2 - Discharging the contamination
Once the core flow has developed, the JetFlush reservoir located above the filter element is closed (J2).

When the opening at the top of the filter element closes, the second phase is initiated, namely discharging the contamination:

The moving column of fluid draws water from the filtrate side (K) as soon as the fluid supply stops as a result of the filter element closing at the top.

The conical filter element geometry ensures the whole surface of the filter element is now clean and residue-free. The contamination is discharged via the back-flush line (I). After cleaning the filter element, the back-flushing arm rotates to the next filter element to be cleaned; the process is repeated. When the back-flush cycle is finished, the back-flush valve is closed (H).
**Dimensions**

- **gear motor**
- **vent**
- **control**
- **pressure sensor**
- **connection piece for sacrificial anode**
- **optional / depending on version**
- **installation height filter elements**

**Backflushing Filter AutoFilt® RF10**

### Specifications

<table>
<thead>
<tr>
<th>Filter Sizes</th>
<th>10, 20, 23, 25, 30, 35, 40, 50, 60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow Range</strong></td>
<td>2210-12,940 gpm (580-3420 L/min)</td>
</tr>
<tr>
<td><strong>Working Pressure</strong></td>
<td>87 psi (6 bar)</td>
</tr>
<tr>
<td><strong>Max. Working Temperature</strong></td>
<td>131°F (55°C)</td>
</tr>
<tr>
<td><strong>Empty Weight</strong></td>
<td>10 - 624 lbs. (283 kg), 20 - 981 lbs. (445 kg), 23 - 1021 lbs. (463 kg), 25 - 1213 lbs. (550 kg), 30 - 1560 lbs. (725 kg), 35 - 1934 lbs. (877 kg), 40 - 2619 lbs. (1188 kg), 50 - 2985 lbs. (1354 kg), 60 - 5644 lbs. (2560 kg)</td>
</tr>
<tr>
<td><strong>Housing Volume</strong></td>
<td>10 - 10 gallons (36 L), 20 - 25 gallons (95 L), 23 - 35 gallons (131 L), 25 - 42 gallons (160 L), 30 - 80 gallons (304 L), 35 - 119 gallons (452 L), 40 - 163 gallons (616 L), 50 - 235 gallons (891 L), 60 - 393 gallons (1489 L)</td>
</tr>
<tr>
<td><strong>Filter Area</strong></td>
<td>10 - 558 in.² (3,600 cm²), 20 - 1,105 in.² (7,128 cm²), 23 - 1,868 in.² (12,050 cm²), 25 - 2,241 in.² (14,460 cm²), 30 - 3,362 in.² (21,690 cm²), 35 - 4,109 in.² (26,510 cm²), 40 - 6,724 in.² (43,380 cm²), 50 - 8,965 in.² (57,840 cm²), 60 - 14,942 in.² (96,400 cm²)</td>
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<tr>
<td><strong>No. of Filter Elements</strong></td>
<td>Contact Factory</td>
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<tr>
<td><strong>Backflush Flange Size</strong></td>
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<td><strong>Backflush Volume</strong></td>
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### Pressure Drop

**Information Based on Flow Rate and Viscosity**

**RF10 Flow Curves**

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</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>2.5</td>
<td>9</td>
</tr>
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<td>3</td>
<td>11</td>
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<tr>
<td>3.5</td>
<td>13</td>
</tr>
<tr>
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<td>4.5</td>
<td>17</td>
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<tr>
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26 SCHROEDER INDUSTRIES | PROCESS FILTRATION
### Backflushing Filter AutoFilt® RF10

#### Dimensions

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<th>RF10</th>
<th>RF3 — RF3-8</th>
<th>RF5</th>
<th>RF7</th>
<th>RF10</th>
<th>RF4-1</th>
<th>RF4-2</th>
<th>RF4-3</th>
<th>RF12</th>
<th>BTU</th>
<th>ATF-1</th>
<th>ATF-2</th>
<th>ATF-3</th>
<th>ATF-4</th>
<th>PLF1</th>
<th>PVD</th>
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#### Technical Data

<table>
<thead>
<tr>
<th>Size</th>
<th>Pressure Rating psi (bar)</th>
<th>Connection Inlet/Outlet</th>
<th>Connection Backflushing Line</th>
<th>Weight Empty lbs (kg)</th>
<th>Volume Gallons (liters)</th>
<th>Amount of Filter Elements</th>
<th>Filter Area in² (cm²)</th>
<th>Backflushing Amount (liters)</th>
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<tr>
<td>10</td>
<td>87 (6)</td>
<td>DN 100</td>
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<td>558 (3600)</td>
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<td>981 (445)</td>
<td>25 (95)</td>
<td>6</td>
<td>1105 (7128)</td>
<td>330 (1350)</td>
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<td>42 (160)</td>
<td>6</td>
<td>2241 (14460)</td>
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<td>80 (304)</td>
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<td>6724 (43380)</td>
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<td>393 (1489)</td>
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<td>963 (3417)</td>
</tr>
</tbody>
</table>

---

**SCHROEDER INDUSTRIES | PROCESS FILTRATION**
## Backflushing Filter AutoFilt® RF10

### How to Build a Valid Model Number for an RF10:

- **Filter Series**: RF10
- **Filter Size**
  - 10 = DN 100
  - 20 = DN 200
  - 23 = DN 200
  - 25 = DN 250
  - 30 = DN 300
- **Pressure Range**
  - A = PN6
  - B = PN10
- **Type Of Control**
  - 1 = EPP electro-pneumatic control
  - 2 = EPP functional control (triggered by the customer)
  - 3 = Customer-specific version
- **Voltage Supply**
  - 1 = 3 x 400V / N / PE 50Hz
  - 2 = 3 x 400V / x / PE 50Hz
  - 3 = 3 x 500V / x / PE 50Hz
  - 4 = 3 x 415V / x / PE 50Hz
  - 5 = 3 x 415V / N / PE 60Hz
  - 6 = 3 x 460V / x / PE 60Hz
  - 7 = 3 x 440V / x / PE 60Hz
  - 8 = 3 x 525V / x / PE 50Hz
  - 9 = 3 x 575V / x / PE 60Hz
  - Y = Customer-specific version

### Notes:
- Box 1: Min. pressure is -15 psi (-1 bar) and max. pressure is 131 psi (9 bar), 218 psi (15 bar) and 334 psi (23 bar) depending on design pressure.
How to Build a Valid Model Number for a RF10:

<table>
<thead>
<tr>
<th>BOX 18</th>
<th>BOX 19</th>
<th>BOX 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>H</td>
<td>D</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box


**BOX 18** Coating
- **S** = SuperFlush (optional)

**BOX 19** Material
- **H** = Stainless Steel
- **D** = Duplex*
- **S** = Superduplex

**BOX 20** Version
- **D** = Conical wire mesh elements only available in stainless steel AISI 316
- **S** = Conical slotted tube element
The automatic backflushing RF4 filter is a self-cleaning system for removing particles from low viscosity fluids. Its robust construction and automatic backflushing capability make a major contribution to operational reliability and reduce operating and maintenance costs. The slotted tube or SuperMesh™ filter elements with filtration rates from 25 to 1000 µm ensure highly effective separation of contaminating particles from the process medium.

Automatic cleaning starts as soon as the elements become contaminated. The flow of filtrate is not interrupted during the backflushing procedure. Two sizes allow flow rates from 10-60 gpm. The RF4 is available as a fully automatic or purely manual version. Numerous combinations of materials and equipment as well as individually adjustable control parameters allow optimum adaptation of the filter to any application.

**OPERATION OF THE RF4**

Filtration
The fluid to be filtered flows through the slotted tube filter elements of the backflushing filter passing from the inside to the outside. Contamination particles collect on the smooth inside of the filter elements. As the level of the collected contamination increases, the differential pressure between the contaminated and clean sides of the filter increases. When the differential pressure reaches its pre-set value, the backflushing cycle begins.

**Triggering Automatic Backflushing**
Backflushing is triggered automatically when the differential pressure set point is exceeded. As soon as backflushing has been triggered, the filter starts to clean the filter elements.

**Triggering Backflushing on Manual Version**
When the differential pressure set point is reached, the visual clogging alarm indicates to an operator or maintenance personnel that a backflush cycle is needed.

**Backflushing of the Filter Elements – Backflushing Cycle**
The cycle begins with the element plate turning 90°. This brings a clean filter element into filtration, and a contaminated filter element is positioned over the fixed flushing connection.

The backflush valve is opened.
The differential pressure between filtrate side and backflush line causes a small amount of the filtrate to reverse flow through the element to be cleaned. The contamination particles collected on the inside of the filter element are loosened and flushed into the backflush line via the flushing arm. As soon as the “backflushing time per element” has elapsed, the backflushing valve is closed. The backflushing cycle is terminated when all the filter elements have been cleaned. On the RF4 with manual backflushing, the element plate including filter elements, is turned and the backflushing valve is opened by hand. Each filter element is cleaned successively in this manner.

**SPECIAL FEATURES OF THE RF4**

Isokinetic Filtering and Backflushing
The special conical shape and configuration of the filter elements allows for even flow, resulting in low pressure drop and complete cleaning of the elements. The advantage: fewer backflushing cycles and lower loss of backflushing fluid.

Pulse-aided Backflushing
The filter element to be backflushed remains in the flushing position for only a few seconds. Rapid opening of the pneumatic backflushing valve generates a pressure surge in the openings of the filter elements that provides a pulse-aided cleaning effect to the backflushing process.

Low Backflushing Quantities Due to Cyclic Control
The backflush valve opens and closes during backflushing of each filter element, further minimizing the amount of filtrate needed to effectively clean the element.
Water Applications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Max. Flow Rate gpm (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF4-1</td>
<td>32(120)</td>
</tr>
<tr>
<td>RF4-2</td>
<td>60(220)</td>
</tr>
</tbody>
</table>

The flow rate ranges indicated apply to filtration ratings ≥ 100 µm.

Important
The pressure drop curves apply to water and other fluids up to a viscosity of 11 mm²/s.

Cooling Lubricant Applications

<table>
<thead>
<tr>
<th>Material Handling</th>
<th>Type of Machining</th>
<th>Max. Flow Rate gpm (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RF4-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RF4-2</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Cutting</td>
<td>26 (100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53 (200)</td>
</tr>
<tr>
<td>Cast Iron</td>
<td>Cutting</td>
<td>18 (70)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42 (160)</td>
</tr>
<tr>
<td>Carbon Steel</td>
<td>Cutting</td>
<td>21 (80)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48 (180)</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>Cutting</td>
<td>21 (80)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48 (180)</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Grinding</td>
<td>24 (90)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53 (200)</td>
</tr>
<tr>
<td>Cast Iron</td>
<td>Grinding</td>
<td>13 (50)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>37 (140)</td>
</tr>
<tr>
<td>Carbon Steel</td>
<td>Grinding</td>
<td>16 (60)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 (150)</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>Grinding</td>
<td>16 (60)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 (150)</td>
</tr>
</tbody>
</table>
### Specifications

**Process Connection:** G 1" Female

<table>
<thead>
<tr>
<th>Max Flow</th>
<th>32 gpm (120 L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max. Working Pressure:</strong></td>
<td>87 psi (6 bar) or 230 psi (16 bar)</td>
</tr>
<tr>
<td><strong>Max. Working Temperature:</strong></td>
<td>194°F (90°C)</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>29 lbs. (13 kg) or 33 lbs. (15 kg)</td>
</tr>
<tr>
<td><strong>Housing Volume:</strong></td>
<td>0.66 gallons (2.5 L)</td>
</tr>
<tr>
<td><strong>Filter Area:</strong></td>
<td>85 in.² (548 cm²)</td>
</tr>
<tr>
<td><strong>No. of Filter Elements:</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Backflush Connection:</strong></td>
<td>G ½ Female</td>
</tr>
<tr>
<td><strong>Backflush Volume:</strong></td>
<td>1.1 gallons (4 L/cycle)</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.
How to Build a Valid Model Number for a RF4:

RF4
BOX 1
BOX 2
BOX 3
BOX 4
BOX 5
BOX 6
BOX 7
BOX 8
BOX 9
BOX 10
BOX 11

Example: NOTE: One option per box

RF41ET1AAECO216XKMS50

Filter Series
RF4

Size
1 = G1"

Control Type
EPT = Electro-pneumatic cyclic control, (including pneumatic drive)
ET = Electric Control
M = Manual

Voltage Type
0 = Without control, without solenoid valve
1 = Control* and solenoid valve 230 V AC
2 = Control* and solenoid valve 24 V AC
3 = Without control, with solenoid valve 24 V AC
4 = Without control, with solenoid valve 24 V AC

Materials
AA = Aluminum head & bowl
EE = Stainless Steel head

Backflushing Valve
0 = Without backflushing valve
CO = Coaxial valve, brass
KN = Ball valve, nickel plated
KE = Ball valve, nickel plated

Material of Internal Parts
E = Stainless Steel

Differential Pressure Control
0 = Without differential pressure control
1 = Fixed value: 7.3 psi (0.5 bar), Type DS 32 N/O contact
2 = Adjustable: 1.5 psi (0.1 bar) - 14.5 psi (1 bar), Type DS 31, N/O contact

Modification No.
X = Latest version is always supplied

Element Type & Size
KMS = Slotted Tubes, 30 to 1000μm
KMD = SuperMesh™ 25μm, 40μm, 60μm
SKMS = Slotted Tube Superflush 30μm to 1000μm
SKMD = SuperMesh™ Superflush 25μm, 40μm, 60μm

Pressure Range
87 psi (6 bar) (housing fastened with clamp), only for housings in stainless steel design
16 = 230 psi (16 bar) (filter upper section threaded)
RF4-2

Backflushing Filter AutoFilt® RF4

60 gpm
220 L/min

87 psi
6 bar

Or

230 psi
16 bar

NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

<table>
<thead>
<tr>
<th>Process Connection:</th>
<th>G1 1/2&quot; Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Flow:</td>
<td>60 gpm (220 L/min)</td>
</tr>
<tr>
<td>Max. Working Pressure:</td>
<td>87 psi (6 bar) or 230 psi (16 bar)</td>
</tr>
<tr>
<td>Max. Working Temperature:</td>
<td>194°F (90°C)</td>
</tr>
<tr>
<td>Weight:</td>
<td>71 lbs. (32 kg) or 140 lbs. (63 kg)</td>
</tr>
<tr>
<td>Housing Volume:</td>
<td>1.0 gallons (3.7 L)</td>
</tr>
<tr>
<td>Filter Area:</td>
<td>220in.² (1420 cm²)</td>
</tr>
<tr>
<td>No. of Filter Elements:</td>
<td>4</td>
</tr>
<tr>
<td>Backflush Connection:</td>
<td>G3 1/4 Female</td>
</tr>
<tr>
<td>Backflush Volume:</td>
<td>3.4 gallons (13 L/cycle)</td>
</tr>
</tbody>
</table>
### How to Build a Valid Model Number for a RF4:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>RF4</th>
<th>2</th>
<th>ET</th>
<th>1</th>
<th>NN</th>
<th>E</th>
<th>CO</th>
<th>16</th>
<th>X</th>
<th>KMS50</th>
</tr>
</thead>
</table>

= RF42ET1NNECO216XXMS50

### Filter Series

<table>
<thead>
<tr>
<th>BOX 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF4</td>
</tr>
</tbody>
</table>

### Size

<table>
<thead>
<tr>
<th>BOX 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 = G1&quot; 1/2</td>
</tr>
</tbody>
</table>

### Control Type

<table>
<thead>
<tr>
<th>BOX 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electro-pneumatic cyclic, control, (including pneumatic drive) EPT =</td>
</tr>
</tbody>
</table>

### Voltage Type

<table>
<thead>
<tr>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Without control, with solenoid valve</td>
</tr>
</tbody>
</table>

*Supply voltage of control is 110-120 V AC, 60 Hz

### Materials

<table>
<thead>
<tr>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Steel, NN = nickel plated (only RF4-2 230 psi)</td>
</tr>
</tbody>
</table>

### Backflushing Valve

<table>
<thead>
<tr>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Without backflushing valve</td>
</tr>
</tbody>
</table>

### Pressure Range

<table>
<thead>
<tr>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>87 psi (6 bar) (housing fastened with clamp), only for housings in stainless steel design</td>
</tr>
</tbody>
</table>

### Modification No.

<table>
<thead>
<tr>
<th>BOX 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>X = Latest version is always supplied</td>
</tr>
</tbody>
</table>

### Differential Pressure Control

<table>
<thead>
<tr>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Without differential pressure monitoring</td>
</tr>
</tbody>
</table>

### Element Type & Size

<table>
<thead>
<tr>
<th>BOX 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMS = Slotted Tubes, 30 to 1000μm</td>
</tr>
</tbody>
</table>

---

**NOTES:**

Box 5. AA only available for 16 bar. AP only available for 6 bar.
Backflushing Filter AutoFilt® RF4-3

120 gpm
450 L/min
232 psi
16 bar

NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Connection Size:
- Inlet/Outlet: G2"
- Back-flush line: G¾"

Flow Rate \( Q_{\text{max}} \):
450 l/min (120 gpm)

Design Pressure \( p_{\text{max}} \):
16 bar (232 psi)

Design Temperature \( T_{\text{max}} \):
80° C (176°F)

Filtration Rating:
25 — 1000 µm

Filter Elements / Filter Area:
- 4 pieces: 1430 cm² (222 in²)
- 6 pieces: 2140 cm² (332 in²)
- 7 pieces: 2500 cm² (388 in²)

Housing Material:
Stainless steel cast 1.4581

Weight:
45 kg (99.2 lbs)
**Backflushing Filter AutoFilt® RF4**

How to Build a Valid Model Number for a RF4:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF4WL = Left Filter Inlet - Standard</td>
<td>2</td>
<td>ET</td>
<td>N</td>
<td>KMS50 = RF42ET1NNECO216XKMS50</td>
</tr>
<tr>
<td>RF4WR = Right Filter Inlet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Filter Type**

<table>
<thead>
<tr>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF4WL = Left Filter Inlet - Standard</td>
<td>EPT: Electro-pneumatic cyclic control</td>
</tr>
<tr>
<td>RF4WR = Right Filter Inlet</td>
<td>EU: Electrical circulation control - Standard</td>
</tr>
</tbody>
</table>

**Size**

<table>
<thead>
<tr>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 = G2^*</td>
</tr>
</tbody>
</table>

**Pressure Ranges**

<table>
<thead>
<tr>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 = 10 bar (only for EU)</td>
</tr>
<tr>
<td>3 = 16 bar (EPT &amp; EU)</td>
</tr>
</tbody>
</table>

**Number of Filter Elements**

<table>
<thead>
<tr>
<th>BOX 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 = 4 pieces</td>
</tr>
<tr>
<td>6 = 6 pieces - Standard</td>
</tr>
<tr>
<td>7 = 7 pieces - only in case of high dirt load</td>
</tr>
</tbody>
</table>

**Control Type**

<table>
<thead>
<tr>
<th>BOX 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = EPT: Electro-pneumatic cyclic control</td>
</tr>
<tr>
<td>B = EU: Electrical circulation control - Standard</td>
</tr>
</tbody>
</table>

**Power Supply Voltage**

<table>
<thead>
<tr>
<th>BOX 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>D = Supply voltage 230VAC 50Hz/60Hz (EPT &amp; EU) - Standard (= Gear motor, control valve or backflush valve unit 24VDC)</td>
</tr>
<tr>
<td>E = Supply voltage 115VAC 60Hz (EU gear motor) (= Gear motor, control valve or backflush valve unit 24VDC)</td>
</tr>
<tr>
<td>F = Supply voltage 24VDC (only for EPT)</td>
</tr>
</tbody>
</table>

**Version**

<table>
<thead>
<tr>
<th>BOX 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Without control, loose cable, cable length 5 meters</td>
</tr>
<tr>
<td>1 = Basic terminal box on filter, actuators &amp; sensors on the terminal strip</td>
</tr>
<tr>
<td>2 = ACU Basic on Filter - Standard</td>
</tr>
<tr>
<td>3 = ACU Basic with 5 meters cable for wall mounting</td>
</tr>
<tr>
<td>4 = ACU (metal control cabinet, with 5 meter cable for wall mounting)</td>
</tr>
</tbody>
</table>

**Differential Pressure Monitoring**

<table>
<thead>
<tr>
<th>BOX 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>S = HDA 4700 Stainless steel V2A (4-20 mA), 2 pieces</td>
</tr>
</tbody>
</table>

**Housing Material / Coating**

<table>
<thead>
<tr>
<th>BOX 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 = Stainless steel 1.4301, 1.4541 or similar (Group 304/321) - Standard</td>
</tr>
<tr>
<td>E2 = Stainless steel 1.4401, 1.4404, 1.4571 or similar (Group 316)</td>
</tr>
</tbody>
</table>

**Inner Parts**

- E1 = Stainless steel 1.4301, 1.4541 or similar (Group 304/321) - Standard
- E2 = Stainless steel 1.4401, 1.4404, 1.4571 or similar (Group 316)

**End Documentation**

- 0 = Standard (Assembly & Operating manual, E plan, Declaration of Incorporation)
- A = Certificate of Conformance CoC + standard
- B = Acceptance test certificate 3.1 according to DIN EN 10204 for design, pressure and function test + standard
- C = Acceptance test certificate 3.1 according to DIN EN 10204 for design, pressure and function test
- D = Material inspection certificates according to EN 10204, 3.1 for pressure-bearing media-contacting housing parts + standard
- E = Russian device pass incl. explanation letter for TRCU 031/2013; additional Declaration of Conformity for TRCU 010/2011 + standard

**Modification Number**

The latest version is always supplied (currently 2)

**Filter Elements / Filtration Rating**

- S = "S" additionally prefixed for SuperFlush
- KNS = Wedge wire 50 µm up to 1000 µm
- KND = SuperMesh 25 µm, 40 µm, 60 µm (3-layer)

**Filtration Ratings:**

- KNS 50 µm, 100 µm, 150 µm, 200 µm, Ratings: 250 µm, 300 µm, 500 µm, 1000 µm
- KND 25 µm, 40 µm, 60 µm

Other filtration ratings available on request
**Backflushing Filter AutoFilt® RF12**

### Specifications

<table>
<thead>
<tr>
<th><strong>Process Connection</strong></th>
<th>G 1(\times) Female</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max Flow</strong></td>
<td>21 gpm (80 L/min)</td>
</tr>
<tr>
<td><strong>Max. Working Pressure</strong></td>
<td>145 psi (10 bar)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>33 lbs. (15 kg)</td>
</tr>
<tr>
<td><strong>Housing Volume</strong></td>
<td>0.48 gallons (1.8 L)</td>
</tr>
<tr>
<td><strong>Filter Area</strong></td>
<td>55 in.(^2) (356 cm(^2))</td>
</tr>
<tr>
<td><strong>No. of Filter Elements</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Backflush Connection</strong></td>
<td>G1(^*) Female</td>
</tr>
<tr>
<td><strong>Backflush Volume</strong></td>
<td>0.79 gallons (3 L/cycle)</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.
### How to Build a Valid Model Number for a RF12:

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Box 2</th>
<th>Box 3</th>
<th>Box 4</th>
<th>Box 5</th>
<th>Box 6</th>
<th>Box 7</th>
<th>Box 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF12</td>
<td>EP0</td>
<td>S</td>
<td>0</td>
<td>10</td>
<td>X</td>
<td>KSD25</td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

```
Box 1: RF12
Box 2: EP0
Box 3: S
Box 4: 0
Box 5: 10
Box 6: X
Box 7: KSD25
```

= RF12-1-EP0-1-S-0-10-X / KSD25

---

**Filter Series**

- **RF12**

**Protective Filter**

- **EP0** = Electropneumatic control without pilot valves
- **EP1** = Electropneumatic control incl. pilot valve
- **EP2** = Electropneumatic control incl. pilot valve 24 VDC Device connector M12x1 (w/o mating connector)
- **EP3** = Electropneumatic control incl. pilot valve 230 VAC Device connector DIN En 175301-803 / form A (w/o mating connector)
- **EP23** = Electropneumatic control incl. pilot valve 230 VAC, with timer control (1 x 230V/N/PE 50 Hz)
- **EPD3** = Electropneumatic control incl. pilot valve 230 VAC, with differential pressure control (1 x 230V/N/PE 50 Hz)

**Material**

1 = Filter housing: aluminum, internal parts: stainless steel

**Back-Flushing Valve**

- **0** = Without G1" connection
- **CO** = Coaxial valve, brass
- **KN** = Ball valve, brass nickel-plated
- **S** = Piston control valve, brass

**Differential Pressure Monitoring**

- **0** = Without differential pressure monitoring
- **5** = 2x HDA 4700 stainless steel (4-20 mA)
- **7** = Fixed value 0.5 bar. Type GW, n.c. contact

**Pressure Range**

10 = 145 psi (10 bar)

**Modification Code**

- **X** = Latest version is always supplied

**Filter Elements / Filtration Rating**

- **S** = Preceded with an additional "S" for SuperFlush non-sticking coating
- **KSS** = Wedge wire 30μm
- **KSS** = SuperMesh wire mesh, sintered, 25 μm / 40 μm / 60 μm; others on request
The AutoFilt® RF14 is a self-cleaning system for extracting particles from low viscosity fluids. Its robust construction and automatic back-flushing capability make a major contribution to operational reliability and reduce operating and maintenance costs. The slotted or SuperMesh baskets in the filter with filtration rates from 10 to 100μm ensure highly effective filtration of contaminating particles from the process medium.

Automatic cleaning starts as soon as the elements become contaminated. The flow of filtrate is not interrupted during the back-flushing procedure. A range of filters of different sizes allow flow rates of up to 15,400 gpm. Numerous combinations of materials and equipment as well as individually adjustable control parameters allow optimum adaptation of the filter to any application.

This type of fully automatic self-cleaning screen filter has been used for decades in applications wherever suspended solids need to be removed from a pressurized water stream. They are used to remove sand, silt and algae from raw water taken from lakes, ponds, rivers and canals. Such filters provide pretreatment before membrane filtration systems for potable water supply. Other installations include pretreatment for reverse osmosis and other desalination systems. Many municipal and industrial wastewater treatment plants use these filters to prepare secondary effluent for reuse in cooling, irrigation and aquifer recharge systems. Applications in steel mills filtering grimy, oily cooling water are common as are those in the automotive and plastics industries. Cement plants and mining operations use this type of filter for removing solids from tailings. They are found on deep-sea oil platforms for filtering flood water and on ships before portable desalination systems and ballast systems.

**Filtration**

A back-flushing cycle is complete once the basket element has been cleaned. Filter continues to filter and forward flow is not impeded by backwash cycle.

**Special Features of the AutoFilt® Isokinetic Filtering and Back-Flushing**

The special configuration of the filter basket elements allows even flow, resulting in low pressure drops and complete cleaning of the elements. The advantage: fewer back-flushing cycles and reduced loss of back-flushing fluid.

**Pulse-aided Back-Flushing** on the control types EPT and PT; the filter basket to be backflushed remains in the flushing position for only a few seconds. Rapid opening of the pneumatic back-flushing valve generates a pressure surge in the filter nozzle openings, providing an additional cleaning effect to the back-flushing process as it cleans the basket as it rotates around the basket area.

**Low Back-Flushing Quantities** due to cyclic control the back-flushing valve opens and closes during back-flushing. The filter, which produces particularly good flow rates, is of a compact construction with high filtration performance and low pressure drops. The RF14 will use less than 0.5% of the forward flow for backwash.

The fluid to be filtered flows through the slotted filter basket element of the back-flushing filter, passing from the inside to the outside. Contamination particles then collect on the smooth inside of the filter basket elements. As the level of contamination increases, the differential pressure between the contaminated and clean sides of the filter increases. When the differential pressure reaches its preset value, back-flushing starts automatically.

**Triggering Automatic Back-Flushing**

Back-flushing is triggered automatically: when the triggering differential pressure is exceeded. **Back-flushing can also be started:**

- By means of an adjustable timer (optional)
- By pressing the TEST key
- As soon as back-flushing has been triggered, the filter starts to clean the filter basket

**Back-Flushing of the Filter Basket Elements - Back-Flushing Cycle**

- The gear motor rotates the nozzles around the interior of the basket
- The back-flushing valve is opened
- The pressure drop between the filtrate side and the back-flushing line rinses a small partial flow of the filtrate in the opposite direction into the filter elements to be cleaned. The contamination particles deposited on the inside of the filter basket element are detached and carried out via the nozzles into the back-flushing line.
After the back-flushing time is complete, the back-flushing valve is closed.
In this way, the nozzles have cleaned all areas of the filter basket.
Initiating the most effective and instantaneous back-flush differential at all areas of the basket filter.

Variable Filter Isometry
The inlet and outlet flanges as well as the back-flushing line can be configured in different positions. This means that the filter can be easily integrated into any plant lay-out.

Ready-to-Operate Unit
The filter control unit and differential pressure measuring line are already connected. Once the filter has been fitted to the pipework, only the auxiliary power supply needs to be connected.

### Specifications

<table>
<thead>
<tr>
<th></th>
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<th>Min. Backwash Volume (gal.)</th>
<th>Min. Flow (gpm)</th>
<th>Max Flow (gpm) w/ Delta Mesh 40 micron</th>
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</table>
### BOX 1 Filter Type
- RF14M = Marine Model
- RF14J = Industry model

### BOX 3 Design Code
- S = HYDAC Standard
- A = ASME VIII Div. 1
- U = ASME VIII Div. 1
- E = EN 13445

### BOX 5 Control Type
- 0 = Without control, with terminal box
- 1 = without terminal box, cable loose
- 2 = EPS Electro-pneumatic control with AutoFilt® ACU
- Y = Customer-specific model

### BOX 7 Connection Voltage
- 1 = 3 x 400V / N / PE 50 Hz
- 2 = 3 x 400V / X / PE 50 Hz
- 3 = 3 x 500V / X / PE 50 Hz
- 4 = 3 x 230V / N / PE 50 Hz
- 5 = 3 x 230V / X / PE 50 Hz
- 6 = 2.5 x 4 * 5 * 6 * 8 * 10 * 12 * 14 * 16 * 20 * 24 * 28 *
- 7 = 3 x 145V / X / PE 50 Hz
- 8 = 3 x 460V / X / PE 60 Hz
- 9 = 3 x 440V / X / PE 60 Hz
- A = 3 x 525V / X / PE 50 Hz
- B = 3 x 575V / X / PE 60 Hz
- C = 3 x 690V / X / PE 50 Hz
- D = 3 x 145V / N / PE 50 Hz
- E = 3 x 220V / X / PE 60 Hz
- F = 3 x 380V / X / PE 50 Hz
- G = 3 x 480V / X / PE 60 Hz
- H = 3 x 480V / X / PE 60 Hz

### BOX 9 Pressure Range
- A = PN 6
- B = PN 10

### BOX 11 Material Back-Flush Valve Unit
- N = Butterfly valve: spheroidal graphite cast iron-coated housing, stainless steel disc and shaft, NBR seal
- B = Butterfly valve: spheroidal graphite cast iron-coated housing, bronze disc and shaft, NBR seal
- M = Butterfly valve: spheroidal graphite cast iron-coated housing, Super-Duplex disc and shaft, NBR seal
- V = Butterfly valve: spheroidal graphite cast iron-coated housing, stainless steel disc and shaft, FKM/FPM seal

### BOX 11 Pressure Transmitter
- 0 = Without pressure transmitter (Pressure measurement connection to the filter is retained)
- 5 = HDA 4700 stainless steel V2A group (not for filter model M - marine)
- 6 = HDA 4300 Duplex

---

*cont. on next page*
How to Build a Valid Model Number for a RF14:

Example: NOTE: One option per box

```
1  H  345P  0  M  H  A  40 = RF14M252FS21XPAN51H345P0MHA40
```

**Flange Position**
- 1 = Filter outlet opposite filter inlet (Standard)
- 2 = Filter outlet offset 90° clockwise to default
- 3 = Filter outlet offset 180° clockwise to default
- 4 = Filter outlet offset 270° clockwise to default

**Internal Parts**
- H = Stainless steel 1.4404 or similar (group 316)
- E = Stainless steel 1.4301, 1.4541 or similar material (group 304/x321)
- D = Duplex
- S = SuperDuplex

**Modification Number**
- 0 = The latest number will be supplied

**Filter Element**
- M = Marine model
- J = Industry model

**Material Type**
- H = Stainless steel 1.4404 or similar (group 316)
- E = Stainless steel 1.4301, 1.4541 or similar material group
- D = Duplex
- S = SuperDuplex

**Options**
- 0 = Without
- 1 = Without integrated protection basket
- 2 = With davit
- 3 = Pressure transmitter in back-flush line
- 4 = Top coat RAL 7040
- 5 = Automatic vent valve (plastic)
- 6 = Automatic vent valve (stainless steel/SuperDuplex)
- 7 = With sacrificial anode (O-ring material made of silicone element, conductive)
- A = Certificate of Conformance CoC
- B = Acceptance test certificate 3.1 acc. to DIN EN 10204 for design, pressure and function test
- C = Acceptance test certificate 3.1 acc. to DIN EN 10204 for design, pressure and function test incl. material cert. acc. to EN 10204, 3.1 for the pressure bearing vessel parts in contact with media
- D = Material products to EN 10204, 3.1 for pressurized vessel parts that come into contact with media
- P = With back-flush pump

**Nominal Filtration Rating**

<table>
<thead>
<tr>
<th>Filtration Ratings</th>
<th>Marine (M)</th>
<th>Industry (J)</th>
<th>Filter Element Type A</th>
<th>Filter Element Type B</th>
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<td>X</td>
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<td>5</td>
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<td>90μm</td>
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<td>X</td>
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</table>

*Model recommendation based on experiences with sea-water and serves only as orientation*

Seal material of filter element without anode is identical to seal material of the butterfly valve

Seal material of filter element with anode is always silicone
The BTU unit with integral backflushing filter is a turnkey automatic filtration unit for watermiscible cooling lubricants, oils or washing water which continuously filters solid particles, such as very fine magnetic and non-magnetic metal particles, corundum, sand particles etc. It provides long-term filtration producing reduced-particle filtrate. The quality of the filtrate is dependent on the separation limit of the filter used.

A BTU unit generally consists of:
- Backflushing filter for the main filtration
- Process twist sieve (PTS) to treat the backflushed volume
- Buffer tank with components (only BTU1)
- Control

The process twist sieve (PTS) is a component which is fitted downstream from the backflushing filter to filter the backflushed volume. In this way, with the help of the twist sieve, a further filtration process is carried out via the backflushing line.

The solid particles from the backflushing volume are collected in a bag filter which is suspended under the twist sieve. When this is full, it is easy to dispose of by pulling open the drawer.

The fluid filtered by the twist sieve or the bag flows back to the buffer tank (BTU1). As soon as the fluid level in the buffer tank reaches the upper switch point of the level gauge (optional), the tank pump (optional) empties the tank.

Due to the short-term pressure shock when backflushing the automatic filter and due to the tangential inlet flow, the fluid is filtered by the wire mesh inside the twist sieve. Approx. 70% of the backflushing volume passes through the twist sieve and is therefore already filtered when it flows into the buffer tank below the filter via the channel on one side of the twist sieve.

The remaining 30% of fluid which is heavily contaminated with particles is forced by the centrifugal force and gravity through an opening in the floor of the twist sieve down into a bag filter. The fluid is filtered though the bag from the inside to the outside. Particles are retained and the cleaned emulsion flows into the buffer tank.

The pressure shock ensures that the wire mesh (TopMesh) is flushed at every backflushing process, i.e. the twist sieve is self-cleaning and practically maintenance-free.
# Backflush Treatment Unit

## How to Build a Valid Model Number for a BTU:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
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<th>BOX 7</th>
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**Example:** NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
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<td>T</td>
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</table>

= BTU1-80-P-50-EE-S-T-X

### BOX 1
- **Unit Type**

<table>
<thead>
<tr>
<th>BTU1 =</th>
<th>Add-on unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTU3 =</td>
<td>Tank-top unit</td>
</tr>
</tbody>
</table>

### BOX 2
- **Filtration Rating**

| 25 = | D25 |
| 40 = | D40 |
| 60 = | D60 |
| 80 = | D80 |
| 100 = | D100 |
| 150 = | D150 |

### BOX 3
- **Bag Filter Material**

| PE = | Polyester |
| PP = | Polypropylene |
| N =  | Nylon |

### BOX 4
- **Bag Filter Filtration Rating**

| 25 = | 25 µm |
| 50 = | 50 µm |
| 100 = | 100 µm |
| 150 = | 150 µm |

### BOX 5
- **Twist Sieve Housing/Buffer Tank Material**

| EE = | Housing and buffer tank: stainless steel |
| EN = | Housing: stainless steel; buffer tank: carbon steel |
| NN = | Housing and buffer tank: carbon steel |
| NE = | Housing: carbon steel; buffer tank: stainless steel |
| EEE = | Housing, buffer tank, filter frame: stainless steel |

### BOX 6
- **Control Functions**

| 0 = | Unit without control function |
| N1 = | Level monitoring of buffer tank |
| N2 = | Level monitoring of bag filter |
| N3 = | Level monitoring of buffer tank and bag filter |
| S =  | Control complete |

### BOX 7
- **Pump**

| 0 = | 150 psi (10 bar) |
| T =  | Return pump in buffer tank (only possible with BTU1) |

### BOX 8
- **Modification Number**

| X = | The latest version is always supplied |
How to Build a Valid Model Number for an AutoFilt® for BTU:

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<thead>
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Example: NOTE: One option per box

=A-E-1-E-E-2-L

### BOX 1
- **AutoFilt®**
  - A = RF3-C
  - B = RF3-CG
  - D = RF3-0
  - E = RF3-0G
  - F = RF3-1
  - G = RF4-1
  - H = RF4-2

### BOX 2
- **Control**
  - 0 = w/o control
  - E = EPT

### BOX 3
- **Voltage**
  - RF3
  - RF4
  - 0 = w/o control
  - 1 = 3x 400 V/N/PE, 50 Hz
  - 2 = 3x 400 V/X/PE, 50 Hz
  - 3 = 3x 500 V/X/PE, 50 Hz
  - 4 = 3x 230 V/N/PE, 50 Hz
  - 5 = 3x 230 V/X/PE, 50 Hz
  - 6 = 3x 415 V/X/PE, 50 Hz
  - 7 = 3x 415 V/N/PE, 50 Hz
  - 8 = 3x 460 V/N/PE, 50 Hz
  - M = with control*; with solenoid valve 230 V AC
  - N = with control*; with solenoid valve 24 V DC
  - O = w/o control*; with solenoid valve 230 V AC
  - P = w/o control; with solenoid valve 24 V DC

### BOX 4
- **Materials Of Housing (RF3 Only)**
  - 0 = Carbon steel, external primer ("N")
  - 1 = Carbon steel, external primer, internal coating ("NM")
  - 3 = Stainless steel ("E")

- **Materials Of Housing (RF4-1 Only)**
  - AA = Configuration (AAE): aluminum, aluminum, stainless steel
  - EE = Configuration (EEE): stainless steel, stainless steel, stainless steel

- **Materials Of Housing (RF4-2 Only)**
  - NN = Configuration (NNE): carbon steel, carbon steel, stainless steel
  - EE = Configuration (EEE): stainless steel, stainless steel, stainless steel

### BOX 5
- **Materials Of Backflushing Valve**
  - N = Carbon Steel
  - E = Stainless Steel
  - 1 = Coaxial Valve
  - 2 = Ball Valve

### BOX 6
- **Differential Pressure Gauge**
  - RF3
  - RF4
  - 1 = Pressure Chamber
    - Aluminum
    - Adjustable: 0.1 - 1.0 bar
  - 2 = Pressure Chamber
    - Stainless Steel
    - Fixed value: 0.5 bar
  - 3 = With chemical seal
    - Stainless Steel
    - G/W indicator, N/C

### BOX 7
- **Flange Options (RF3 only)**
  - 1 = Filter outlet opposite filter inlet (standard) (not for RF3-C)
  - 2 = Filter outlet offset by 90° clockwise to standard
  - 3 = Filter outlet offset by 180° clockwise to standard

### BOX 8
- **Filter Elements (RF3)**
  - B = KD25
  - C = KD40
  - D = KD60
  - E = KD80
  - L = KS50
  - M = KS100
  - N = KS150

- **Filter Elements (RF4-1)**
  - B = KMD25
  - C = KMD40
  - D = KMD60
  - E = KMD80
  - L = KM550
  - M = KM5100
  - N = KM5150

- **Filter Elements (RF4-2)**
  - B = KND25
  - C = KND40
  - D = KND60
  - E = KND80
  - L = KN550
  - M = KN5100
  - N = KN5150
How to Build a Valid Model Number for a Process Twist Sieve:

**Example:** NOTE: One option per box

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= PTS-40-250-E-L-2-50

---

**Box 1**
- **Unit Type**
  - PTS = Process twist sieve

**Box 2**
- **Filtration Rating**
  - 25 = D25
  - 40 = D40
  - 60 = D60
  - 80 = D80
  - 100 = D100
  - 150 = D150

**Box 3**
- **Diameter**
  - 180 = Ø 180 mm (only for RF4, without)
  - 180/1 = Ø 180 mm (only for RF4-1, with bracket)
  - 180/2 = Ø 180 mm (only for RF4-2, with bracket)
  - 250 = Ø 250 mm (only for RF3-C and RF3-0)
  - 450 = Ø 450 mm (only for RF3-1)

**Box 4**
- **Housing Material**
  - N = Carbon steel, primed
  - E = Stainless steel

**Box 5**
- **Housing Length**
  - K = Short (standard for PTS-180)
  - L = Long (standard for PTS-250/-450)

**Box 6**
- **Level Switch**
  - 0 = Without
  - 1 = With level switch stainless steel (only for diameters 250 mm, 450 mm)

**Box 7**
- **Bag Filter Material**
  - PE = Polyester
  - PP = Polypropylene
  - N = Nylon

**Box 8**
- **Bag Filtration Rating**
  - 25 = 25 µm
  - 50 = 50 µm
  - 100 = 100 µm
  - 150 = 150 µm

**Box 9**
- **Modification Number**
  - X = The latest version is always supplied
Automatic Twist Flow Strainer ATF

Automatic Twist Flow Strainer

The Schroeder Automatic Twist Flow Strainer (ATF) is designed for the filtration of solid particles from water or fluids similar to water. With filtration ratings between 200 μm and 3,000 μm, the ATF is particularly well suited for separating suspended solid particles, up to several grams per liter, from low-viscosity fluids. In order to filter higher flow rates, the ATF can be supplied as a skid solution (call factory for details).

Construction and Function

This filter is a hybrid system consisting of a centrifugal separator and an inline filter. The fluid to be cleaned enters the housing tangentially, similar to a centrifugal separator, and accelerates down as a result of the tapered housing. The resulting spiral flow with its centrifugal force carries the coarsest contamination first (its density is obviously higher than that of the fluid) to the inner wall of the housing.

Filtration

When pressed against the filter wall, the higher density particles settle at a higher rate in the lower part of the filter, where they are finally carried out. The remaining smaller, less dense particles are filtered as the fluid passes through the element and exits the filter.

The conical filter element ensures optimum flow characteristics. On one hand it makes possible continual self-cleaning of the filter during operation. While on the other, it makes the pressure drop of the whole filter much lower than compared with a centrifugal separator of a similar size.

Cleaning Procedure

Both the sediment particles and those separated by the filter element finally collect at the bottom of the housing and are discharged periodically from the system by opening the contamination flap. During this cleaning procedure (depending on the installation of the ATF), part of the untreated fluid flow is used for a few seconds to flush the elements and clean the filter. Because partial flow is used, continuous filtration occurs.

In addition, the ATF is an excellent choice for bypass flow applications which are able to do without a partial flow for short periods of time.

Depending on the application and the amount of solid particles, the cleaning function can be adjusted via a timer function.

Special Features of the ATF

The ATF is well suited to high levels of contamination and large fluctuations in the solid particle content of the untreated water.

Due to the use of conical slotted tube and sintered wire meshes, a precise selectivity and therefore a constant filtrate quality is ensured – independent of fluctuations in operating pressure or flow rate.

Due to special flow conditions resulting from the element geometry and their arrangement, the pressure drop on the overall unit is relatively low at < 14.5 psi (1.0 bar).

The pre-filtration of solid particles of a higher density implies that the filter surface area can take a correspondingly higher load and the filter size can therefore be comparatively smaller.

ATF
- Perfect pre-filter
- Great for high contamination levels
- Low pressure drop
Automatic Twist Flow Strainer ATF

The filter elements are cleaned solely by flushing with untreated fluid.

The ATF saves on space in comparison to conventional separating units, such as lamellar separators or sand filters.

Several ATF’s can be integrated into systems, and as a result, can adapt to the required flow rates.

The filter element of the ATF is maintenance-friendly, as it is equipped with a flange cover. On sizes 2 to 4, it is also possible to replace the filter element without needing to open the filter.

The ATF is sized based on the pressure drop curve. A further factor in the calculation is the flow velocity through the inlet flange. It should not exceed 13.12 feet/minute (4 m/s).

In order to be able to size the ATF correctly, the following design data should be available:

- Flow rate
- Type of medium
- Materials / resistance
- Viscosity
- Required filtration rating
- Particulate loading in the fluid
- Solid particle type and density / densities
- Operating pressure
- Operating temperature

![Pressure Drop Graph](image-url)
Automatic Twist Flow Strainer ATF-1

**Specifications**

- **Filtration Rate:** 200-3000 μm slotted tube only
- **Operating Rate:** 32°F - 194°F (0°C - 90°C)
- **Housing Material:** Stainless Steel or Carbon Steel
- **Size:** 1
- **Flow Rate:** 8-35 gpm (30-132 L/m)
- **Pressure Rating:** 230 psi (16 bar)
- **Connections Inlet/Outlet:** 1" NPT (G 1")
- **Connection Discharge Line:** 1" NPT (G 1")
- **Filter Area:** 23 in² (150 cm²)
- **Weight:** 33 lbs (15 kg)
- **Volume:** 0.5 gal (1.8 L)

**Filter Housing Specifications**

<table>
<thead>
<tr>
<th>Filter Size</th>
<th>NW in (mm)</th>
<th>H Max. in (mm)</th>
<th>h1 in (mm)</th>
<th>h2 in (mm)</th>
<th>h3 in (mm)</th>
<th>b2 in (mm)</th>
<th>D in (mm)</th>
<th>d1 in (mm)</th>
<th>Installation Height in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATF 1</td>
<td>0.04 (1)</td>
<td>19.29 (490)</td>
<td>17.52 (445)</td>
<td>18.50 (470)</td>
<td>4.06 (103)</td>
<td>4.92 (125)</td>
<td>8.27 (210)</td>
<td>3.00 (76.1)</td>
<td>13.78 (350)</td>
</tr>
</tbody>
</table>

**Dimensions:**

- 35 gpm
- 132 L/min
- 230 psi
- 16 bar
### How to Build a Valid Model Number for an ATF-1:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:** NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATF</td>
<td>1</td>
<td>EPZ</td>
<td>1</td>
<td>E</td>
<td>NN</td>
<td>10</td>
<td>0</td>
<td>X</td>
<td>UKS2</td>
<td>200</td>
</tr>
</tbody>
</table>

**Model Number:** `ATF1EPZ1ENN100XUKS2200`

### Filter Series
- Box 1: ATF

### Size
- Box 2: 1 = Inlet/Outlet 1" NPT

### Control Type
- Box 3:
  - 0 = No controls/No valves
  - M = Manual valve
  - EP = Electro-pneumatic discharge valve, with timer control
  - EPZ = Electro-pneumatic discharge valve, with timer control
  - E = Electric discharge valve, without timer control
  - EZ = Electric discharge valve, with timer control

### Housing Material
- Box 4:
  - N = Carbon Steel
  - E = Stainless Steel
  - A = for ANSI flanges, also add A
  - J = for JIS flanges, also add J
  - T = NPT thread (size 1 only), also add T
  - P = 2-K polyurethane paint, also add P

### Discharge Valve
- Box 5:
  - 0 = None
  - NN = Butterfly valve, cast housing coated, disc Stainless Steel, cuff BR (not available on size 1)
  - NE = Butterfly valve, cast housing coated, disc Stainless Steel, cuff EPDM (not available on size 1)
  - NV = Butterfly valve, cast housing coated disc Stainless Steel, cuff Viton (not available on size 1)
  - BN = Butterfly valve, cast housing coated, disc Bronze, cuff NBR (not available on size 1)
  - BE = Butterfly valve, cast housing coated, disc Bronze, cuff EPDM (not available on size 1)
  - BV = Butterfly valve, cast housing coated, disc Bronze, cuff Viton (not available on size 1)
  - E = Ball valve Stainless Steel (size 1 only)
  - M = Ball valve brass (size 1 only)

### Pressure Rating
- Box 6:
  - 10 = 145 psi (10 bar)
  - 16 = 230 psi (16 bar)

### Accessories
- Box 7:
  - 0 = None
  - 1 = Base frame (size 2, 2.5 and 3 only)
  - 2 = Mounting clips (size 2, 2.5 and 3 only)
  - 3 = Differential pressure gauge in aluminum
  - 4 = Stainless steel
  - 5 = Differential pressure gauge in brass

### Element Set
- Box 8:
  - UKS1 = Conical Slotted Tube for size 1
  - UKS2 = Conical Slotted Tube for size 2
  - UKS2.5 = Conical Slotted Tube for size 2.5
  - UKS3 = Conical Slotted Tube for size 3
  - UKS3.5 = Conical Slotted Tube for size 3.5
  - UKS4 = Conical Slotted Tube for size 4

### Filtration Rating
- Box 9:
  - 200 = 200 μm (not for size 4)
  - 300 = 300 μm
  - 500 = 500 μm
  - 1000 = 1000 μm
  - 2000 = 2000 μm
  - 3000 = 3000 μm

**SCHROEDER INDUSTRIES | PROCESS FILTRATION**
Automatic Twist Flow Strainer ATF-2, ATF-2.5, ATF-3

Filtration Rate: 200-3000 μm slotted tube only
Operating Rate: 32°F - 194°F (0°C - 90°C)

Housing Material: Stainless Steel or Carbon Steel

<table>
<thead>
<tr>
<th>Size</th>
<th>Filter Area</th>
<th>Weight</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>55 in² (360 cm²)</td>
<td>132 lbs (60 kg)</td>
<td>3.5 gal (13.5 L)</td>
</tr>
<tr>
<td>2.5</td>
<td>150 in² (966 cm²)</td>
<td>297 lbs (135 kg)</td>
<td>7.4 gal (28 L)</td>
</tr>
<tr>
<td>3</td>
<td>266 in² (1720 cm²)</td>
<td>440 lbs (200 kg)</td>
<td>14.5 gal (55 L)</td>
</tr>
</tbody>
</table>
How to Build a Valid Model Number for a ATF-2, ATF-2.5, ATF-3:

**ATF**

**BOX 1**

**Series**

ATF

**BOX 2**

**Size**

2 = Inlet/outlet 2"
2.5 = Inlet/outlet 3"
3 = Inlet/outlet 4"

**BOX 3**

**Control Type**

0 = No controls/No valves
M = Manual valve
EP = Electro-pneumatic discharge valve, with timer control
EPZ = Electro-pneumatic discharge valve, with timer control
E = Electric discharge valve, without timer control
EZ = Electric discharge valve, with timer control

**BOX 4**

**Voltage**

1 = 230 VAC, 60 Hz, Single Phase
2 = 110VAC, 60 Hz, Single Phase
3 = 24VAC, 60 Hz, Single Phase
4 = 24VDC
Omit if no control type specified

**BOX 5**

**Housing Material**

N = Carbon Steel
E = Stainless Steel
A = for ANSI flanges, also add A
J = for JIS flanges, also add J
T = NPT thread (size 1 only), also add T
P = 2-K polyurethane paint, also add P

**BOX 6**

**Discharge Valve**

0 = None
NN = Butterfly valve, cast housing coated, disc Stainless Steel, cuff BR (not available on size 1)
NE = Butterfly valve, cast housing coated, disc Stainless Steel, cuff EPDM (not available on size 1)
NV = Butterfly valve, cast housing coated, disc Stainless Steel, cuff Viton (not available on size 1)
BE = Butterfly valve, cast housing coated, disc Bronze, cuff EPDM (not available on size 1)
BV = Butterfly valve, cast housing coated, disc Bronze, cuff Viton (not available on size 1)
E = Ball valve Stainless Steel (size 1 only)
M = Ball valve brass (size 1 only)

**BOX 7**

**Pressure Rating**

10 = 145 psi (10 bar)
16 = 230 psi (16 bar)

**BOX 8**

**Accessories**

0 = None
1 = Base frame (size 2, 2.5 and 3 only)
2 = Mounting clips (size 2, 2.5 and 3 only)
3 = Differential pressure gauge in aluminum (fitted to customer’s equipment)
4 = Differential pressure gauge in stainless steel (fitted to customer’s equipment)
5 = Differential pressure gauge in brass (fitted to customer’s equipment)

**BOX 9**

**Modification Number**

X = Latest version supplied by factory

**BOX 10**

**Element Set**

UKS1 = Conical Slotted Tube for size 1
UKS2 = Conical Slotted Tube for size 2
UKS2.5 = Conical Slotted Tube for size 2.5
UKS3 = Conical Slotted Tube for size 3
UKS3.5 = Conical Slotted Tube for size 3.5
UKS4 = Conical Slotted Tube for size 4

**BOX 11**

**Filtration Rating**

200 = 200 μm (not for size 4)
300 = 300 μm (not for size 4)
500 = 500 μm
1000 = 1000 μm
2000 = 2000 μm
3000 = 3000 μm
### Automatic Twist Flow Strainer ATF-3.5, ATF-4

**Filtration Rate:** 200-3000 μm slotted tube only

**Operating Rate:** 32°F - 194°F (0°C - 90°C)

**Housing Material:** Stainless Steel or Carbon Steel

<table>
<thead>
<tr>
<th>Filter Size</th>
<th>NW1 in (mm)</th>
<th>NW2 in (mm)</th>
<th>H Max. in (mm)</th>
<th>h1 in (mm)</th>
<th>h2 in (mm)</th>
<th>h3 in (mm)</th>
<th>b1 in (mm)</th>
<th>b2 in (mm)</th>
<th>D in (mm)</th>
<th>d1 in (mm)</th>
<th>Installation Height in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATF 3.5</td>
<td>5.91 (150)</td>
<td>3.94 (100)</td>
<td>88.98 (2260)</td>
<td>70.28 (17.85)</td>
<td>77.95 (1980)</td>
<td>18.82 (478)</td>
<td>11.18 (284)</td>
<td>17.13 (435)</td>
<td>22.24 (565)</td>
<td>10.75 (273)</td>
<td>51.18 (1300)</td>
</tr>
<tr>
<td>ATF 4</td>
<td>7.87 (200)</td>
<td>5.91 (150)</td>
<td>101.77 (2585)</td>
<td>78.94 (2005)</td>
<td>88.19 (2240)</td>
<td>22.91 (582)</td>
<td>14.45 (367)</td>
<td>20.24 (514)</td>
<td>26.38 (670)</td>
<td>12.75 (323.9)</td>
<td>40.06 (1170)</td>
</tr>
</tbody>
</table>

**Filter Housing Specifications**

- **Filtration Rate:** 200-3000 μm slotted tube only
- **Operating Rate:** 32°F - 194°F (0°C - 90°C)
- **Housing Material:** Stainless Steel or Carbon Steel

<table>
<thead>
<tr>
<th>Size</th>
<th>3.5</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rate:</td>
<td>350-965 gpm (1324-3652 L/m)</td>
<td>440-1760 gpm (1665-6662 L/m)</td>
</tr>
<tr>
<td>Pressure Rating:</td>
<td>145 or 230 psi (10 or 16 bar)</td>
<td>145 or 230 psi (10 or 16 bar)</td>
</tr>
<tr>
<td>Connections Inlet/Outlet:</td>
<td>6” Flange (DN 150)</td>
<td>8” Flange (DN 200)</td>
</tr>
<tr>
<td>Connection Discharge Line:</td>
<td>4” Flange (DN 100)</td>
<td>6” Flange (DN 150)</td>
</tr>
<tr>
<td>Filter Area:</td>
<td>540 in² (3500 cm²)</td>
<td>605 in² (3900 cm²)</td>
</tr>
<tr>
<td>Weight:</td>
<td>578 lbs (263 kg)</td>
<td>920 lbs (418 kg)</td>
</tr>
<tr>
<td>Volume:</td>
<td>34 gal (130 L)</td>
<td>60 gal (230 L)</td>
</tr>
</tbody>
</table>
How to Build a Valid Model Number for a ATF-3.5, 4:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATF</td>
<td>3.5</td>
<td>EPZ</td>
<td>1</td>
<td>E</td>
<td>NN</td>
<td>10</td>
<td>0</td>
<td>X</td>
<td>UKS2</td>
<td>200</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

= ATF3.5EPZ1ENN100X-UKS2200

**Filter Series**

- **ATF**

**Size**

- 3.5 = Inlet/outlet 6" ANSI flange
- 4 = Inlet/outlet 8" ANSI flange

**Control Type**

- 0 = No controls/Na valves
- M = Manual valve
- EP = Electro-pneumatic discharge valve, with timer control
- EPZ = Electro-pneumatic discharge valve, with timer control
- E = Electric discharge valve, without timer control
- EZ = Electric discharge valve, with timer control

**Housing Material**

- N = Carbon Steel
- E = Stainless Steel
- A = for ANSI flanges, also add A
- J = for JIS flanges, also add J
- T = NPT thread (size 1 only), also add T
- Internal Coating with 2-K polyurethane paint, also add P

**Voltage**

- 1 = 230 VAC, 60 Hz, Single Phase
- 2 = 110VAC, 60 Hz, Single Phase
- 3 = 24VAC, 60 Hz, Single Phase
- 4 = 24VDC

**Discharge Valve**

- 0 = None
- NN = Butterfly valve, cast housing coated, disc Stainless Steel, cuff BR (not available on size 1)
- NE = Butterfly valve, cast housing coated, disc Stainless Steel, cuff EPDM (not available on size 1)
- NV = Butterfly valve, cast housing coated disc Stainless Steel, cuff Viton (not available on size 1)
- BN = Butterfly valve, cast housing coated, disc Bronze, cuff NBR (not available on size 1)
- BE = Butterfly valve, cast housing coated, disc Bronze, cuff EPDM (not available on size 1)
- BV = Butterfly valve, cast housing coated, disc Bronze, cuff Viton (not available on size 1)
- E = Ball valve Stainless Steel (size 1 only)
- M = Ball valve brass (size 1 only)

**Pressure Rating**

- 10 = 145 psi (10 bar)
- 16 = 230 psi (16 bar)

**Accessories**

- 0 = None
- 1 = Base frame (size 2, 2.5 and 3 only)
- 2 = Mounting clips (size 2, 2.5 and 3 only)
- 3 = Differential pressure gage in aluminum (fitted to customer's equipment)
- 4 = Stainless steel (fitted to customer's equipment)
- 5 = Differential pressure gage in brass (fitted to customer's equipment)

**Filtration Rating**

- 200 = 200 μm (not for size 4)
- 300 = 300 μm (not for size 4)
- 500 = 500 μm
- 1000 = 1000 μm
- 2000 = 2000 μm
- 3000 = 3000 μm
SCHROEDER INDUSTRIES
| PROCESS FILTRATION

**Process Inline Filter**

**Filtration Rate:** 1-90 μm

**Operating Rate:** 32°F - 194°F (0°C - 90°C)

**Housing Material:** Stainless Steel - E1 and E2

**Flow Rate:** 881 gpm (4003 L/min)

**Pressure Rating:** 145 or 230 psi (10 or 16 bar)

**Connections Inlet/Outlet:** 6" Flange (DN 150)

**Connection Discharge Line:** G1" In-Line Version
G1/2" Outlet Version Downward

**Filter Area:** Contact Factory

**Weight:** 132 lbs (60 kg)

**Volume:** 13 gal (50 L)

**Part of the Schroeder Industries 2030 Initiative**

**Filter Housing Specifications**

### Specifications

<table>
<thead>
<tr>
<th>Filter Size</th>
<th>NW1 in (mm)</th>
<th>NW2 in (mm)</th>
<th>H Max. in (mm)</th>
<th>h1 in (mm)</th>
<th>h2 in (mm)</th>
<th>h3 in (mm)</th>
<th>b1 in (mm)</th>
<th>b2 in (mm)</th>
<th>D in (mm)</th>
<th>d1 in (mm)</th>
<th>Installation Height in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-stage</td>
<td>5.91 (150)</td>
<td>3.94 (100)</td>
<td>88.98 (2260)</td>
<td>70.28 (17.85)</td>
<td>77.95 (1980)</td>
<td>18.82 (478)</td>
<td>11.18 (284)</td>
<td>17.13 (435)</td>
<td>22.24 (565)</td>
<td>10.75 (273)</td>
<td>51.18 (1300)</td>
</tr>
<tr>
<td>2-stage</td>
<td>7.87 (200)</td>
<td>5.91 (150)</td>
<td>101.77 (2585)</td>
<td>78.94 (2005)</td>
<td>88.19 (2240)</td>
<td>22.91 (582)</td>
<td>14.45 (367)</td>
<td>20.24 (514)</td>
<td>26.38 (670)</td>
<td>12.75 (323.9)</td>
<td>40.06 (1170)</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Top row represents the 10 bar version | In-line (1-stage). Bottom row represents the 10 bar version | In-line (2-stage)
2. Drawings of the 16 bar versions, both 1-stage and 2-stage, are also available upon request.
How to Build a Valid Model Number for a PLF1:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
<th>BOX 12</th>
<th>BOX 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLF1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
<th>BOX 12</th>
<th>BOX 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLF1</td>
<td>1</td>
<td>2</td>
<td>9HF</td>
<td>V</td>
<td>E1</td>
<td>S</td>
<td>C</td>
<td>E1</td>
<td>10</td>
<td>N</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

=PLF1-129HF-VE1SCE110N10

**Filter Size**
- 1 = High Load Cascade filter elements
- 2 = High Flow filter elements

**Filter Housing Length**
- 1 = Single-Stage
- 2 = Double-Stage

**Element Type**
- 6HF = 6” Filter element diameter High Flow
- 9HF = 9” Filter element diameter High Flow
- 9HLC = 9” filter element diameter

**Housing Material**
- E1 = Stainless Steel 1.4301
- E2 = Stainless Steel 1.4571
- SD = Superduplex
- D = Duplex
- A = w/ ANSI flanges "A" - readjusted additionally
- J = w/ JIS flanges "J" - readjusted additionally

**Connection Code**
- G2 = Thread G2” (size 2 only)
- C = DIN DN 50 / 2” ANSI
- E = DIN DN 80 / 3” ANSI (size 1 only)
- F = DIN DN 100 / 4” ANSI (size 1 only)
- K = DIN DN 150 / 6” ANSI (size 1 only)

**Internal Parts**
- Stainless steel 1.4301 or similar material (group 304)
- Stainless steel 1.4571 or similar material (group 316)
- SD = Superduplex (on request)
- D = Duplex (on request)

**Pressure Ranges**
- 10 = PN 10
- 16 = PN 16

**Seal Material**
- N = NBR
- V = FPM (Viton)
- E = EPDM

**Accessories**
- 0 = w/o
- 1 = w/ visual CI (PVD 2B.1)
- 2 = w/ visual-electric CI (PVD 2D.0/-L24)
- 3 = V01
- 4 = Differential pressure gauge aluminum w/ 2 adjustable switching contacts
- 5 = Differential pressure gauge stainless steel w/ 2 adjustable switching contacts
- 6 = w/ electric CI (PVD 2C.0_)
- 7 = PVL2GW.0/-V-110
- 8 = PVL2GW.0/-V-120

**Optional Fitting**
- 3 = Air-bleed valve made of stainless steel
- 4 = Ball valve for draining
- 5 = Flange
- 6 = Clamp connection
- 7 = Special industrial part washers design (TRA)
- 8 = Including solenoid technology
- 9 = Height adjustable 3 legged base design for PLF1-2-6HF TRA (Option 7)

1 For reservoirs made of stainless steel 1.4571 or similar material (group 316), use NBR or EPDM sealing material preferably.
## Process Inline Filter

**Filter Housing Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtration Rate</td>
<td>1-90 μm</td>
</tr>
<tr>
<td>Operating Rate</td>
<td>Carbon 33°F - 140°F (1°C - 60°C)</td>
</tr>
<tr>
<td></td>
<td>Stainless 33°F - 194°F (1°C - 90°C)</td>
</tr>
<tr>
<td>Housing Material</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td></td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>Flow Rate Q max</td>
<td>5150 gpm (1170 m³/h)</td>
</tr>
<tr>
<td>Pressure Rating</td>
<td>87 or 145 or 230 psi</td>
</tr>
<tr>
<td></td>
<td>(6 or 10 or 16 bar)</td>
</tr>
<tr>
<td>Connections Inlet/Outlet</td>
<td>6&quot; - 16&quot; Flange (150-400 DIN)</td>
</tr>
<tr>
<td>Connection Discharge Line</td>
<td>G1&quot; In-Line Version</td>
</tr>
<tr>
<td></td>
<td>G1/2 Outlet Version Downward</td>
</tr>
<tr>
<td></td>
<td>2&quot; (DN50)</td>
</tr>
<tr>
<td>Filter Area</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>Weight</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>Volume</td>
<td>Up to 350 gal (1330 L)</td>
</tr>
</tbody>
</table>

**NOTES:**
1. The dimensions indicated have ± 10 mm tolerances.
2. Subject to technical modifications.

Contact Factory for Dimensional Drawing.
How to Build a Valid Model Number for a PLF2:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
<th>BOX 10</th>
<th>BOX 11</th>
<th>BOX 12</th>
<th>BOX 13</th>
<th>BOX 14</th>
<th>BOX 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLF2</td>
<td>3</td>
<td>3</td>
<td>6HF</td>
<td>H</td>
<td>E1</td>
<td>S</td>
<td>L</td>
<td>E1</td>
<td>10</td>
<td>C</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>So</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

PLF2-336HF-HE1SL-E1SL-110-C100-So

**Indicators:**

- **Indicator Code**
  - PLF2 = Multi-place filter housing

**Size of Filter**

- 3 = 3 Support Tubes
- 5 = 5 Support Tubes
- 7 = 7 Support Tubes
- 10 = 10 Support Tubes
- 13 = 13 Support Tubes

**Length of Filter Housing**

- 1 = 1-stage (on request)
- 2 = 2-stage (on request)
- 3 = 3-stage

**Filter Element Diameter and Filter Element Type**

- 6HF = 6" filter element diameter HighFlow (HF)

**Filter Alignment**

- H = Horizontal
- V = Vertical (on request)

**Housing Material**

- NP = Carbon steel, 2-comp. PUR internal coating
- V = Carbon steel, 3 mm rubber lining (on request)
- E1 = Stainless steel 1.4301 / 1.4541 or similar (Group 304 / 321)
- E2 = Stainless steel 1.4571 or similar (Group 316)
- SD = Super Duplex (on request)
- D = Duplex (on request)
- A = For ANSI flanges, add suffix "A"
- J = For JIS flanges, add suffix "J"

**Material of Internal Parts**

- E1 = stainless steel 1.4301 or similar (Group 304)
- E2 = stainless steel 1.4571 or similar (Group 316)
- SD = Super Duplex (on request)
- D = Duplex (on request)

**Type of Connection**

- L = DIN DN 200 / 8" ASME
- M = DIN DN 250 / 10" ASME
- N = DIN DN 300 / 12" ASME
- Q = DIN DN 400 / 16" ASME

**Connection Size**

- 3 = 6"
- 5 = 8"
- 7 = 10"
- 10/13 = 12"

**Sealing Material**

- C = Asbestos-free gasket
- N = NBR
- V = FKM (Viton)
- E = EPDM

**Design Code**

- S = HYDAC Standard (AD 2000)
- A = ASME VIII Div. 1 (material and calculation...)
- U = ASME VIII Div. 1 Stamped
- E = EN 13445

**Pressure Ranges**

- 6 = PN 6
- 10 = PN 10
- 16 = PN 16

**Clogging Indicator**

- 0 = Without clogging indicator
- 1 = Visual indicator (PVD 2B.1)
- 2 = Visual-electrical indicator (PVD 2D.0/-L24)
- 3 = V01
- 4 = Differential pressure gauge in aluminum with 2 adjustable switching contacts
- 5 = Differential pressure gauge in stainless steel with 2 adjustable switching contacts
- 6 = Electrical indicator (PVD 2C.0)
- 7 = PVL2GW.0/V-110
- 8 = PVL2GW.0/V-120

**Optional Equipment**

- 1 = Pivoting lid device (only for horizontal variant) / davit (only for vertical variant)
- 2 = Toggle screws
- 3 = Stainless steel air vent ball valve
- 4 = Drain flap DN 50

*Multiple fittings possible, please provide the corresponding number combination*

*For reservoirs made of stainless steel 1.4571 or similar material (group 316), use NBR or EPDM sealing material preferably*
Clogging Indicators for Process Filters

General
The PVD Clogging Indicators for Process Filters are designed to indicate visually and/or electronically when the filter elements must be cleaned or changed. The use of clogging indicators guarantees both the operational safety of the system and the efficient utilization of the filter elements.

Seals
V (=Viton) or T (=FEP encapsulated)

Construction
Differential pressure indicators are used on all process filters. They react to the pressure differential between the filter inlet and filter outlet, which rises as the level of contamination in the element increases.

Simplest fitting of the differential pressure indicator:
G1/2" cavity
(acc. Schroeder's works standard HN 28-22)

The differential pressure indicator type V01 is piped up separately.

For duplex filter housings, the differential pressure indicators and connected using an adapter block.

Special Indicators
Electrical ATEX indicators:
Optional: electrical indicator for process filters for use in potentially explosive atmospheres subject to the ATEX equipment directive 94/9/EC and the ATEX operator directive 1999/92/EC.

Torque Values - Differential Pressure Indicators
Note: The clogging indicators must only be tightened or adjusted on the spanner flats.

- PVD..B.1: SW27
- PVD..C.0: SW30
- PVD..D.0/L...: SW30
max. torque value: 100 Nm
Clogging Indicators for Process Filters

Type Of Indication: Visual, red/green band
Automatic reset

<table>
<thead>
<tr>
<th>Weight: 110 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cracking Pressure Or Indication Range: 1 bar ± 10% 3 bar ± 10% 1.5 bar ± 10% 5 bar ± 10% 2 bar ± 10% 8 bar ± 10%</td>
</tr>
<tr>
<td>Perm. Operating Pressure: 6092 psi (420 bar)</td>
</tr>
<tr>
<td>Perm. Temperature Range: -20°C to 100°C</td>
</tr>
<tr>
<td>Thread: G 1/2</td>
</tr>
<tr>
<td>Max. Torque Value: 100 Nm</td>
</tr>
<tr>
<td>Switching Type: -</td>
</tr>
<tr>
<td>Max. Switching Voltage: -</td>
</tr>
<tr>
<td>Electrical Connection: -</td>
</tr>
<tr>
<td>Max. Switching Voltage At Resistive Load: -</td>
</tr>
<tr>
<td>Switching Capacity: -</td>
</tr>
<tr>
<td>Protective Class Acc. DIN 40050: -</td>
</tr>
</tbody>
</table>

Type Of Indication: Electrical switch

<table>
<thead>
<tr>
<th>Weight: 220 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cracking Pressure Or Indication Range: 1 bar ± 10% 3 bar ± 10% 1.5 bar ± 10% 5 bar ± 10% 2 bar ± 10% 8 bar ± 10%</td>
</tr>
<tr>
<td>Perm. Operating Pressure: 6092 psi (420 bar)</td>
</tr>
<tr>
<td>Perm. Temperature Range: -20°C to 100°C</td>
</tr>
<tr>
<td>Thread: G 1/2</td>
</tr>
<tr>
<td>Max. Torque Value: 100 Nm</td>
</tr>
<tr>
<td>Switching Type: N/C or N/O (change-over contacts)</td>
</tr>
<tr>
<td>Max. Switching Voltage: 230 V</td>
</tr>
<tr>
<td>Electrical Connection: Male Connection M20x1.5 acc. EN 50262 Female Connector acc. DIN 43650</td>
</tr>
<tr>
<td>Max. Switching Voltage At Resistive Load: 60 W = 100 VA ~</td>
</tr>
<tr>
<td>Switching Capacity: Ohmic 3 A at 24 V = Ohmic 0.03 to 5 A at max. 230 V ~</td>
</tr>
<tr>
<td>Protective Class Acc. DIN 40050: IP 65 (only if the connector is wired and fitted correctly)</td>
</tr>
</tbody>
</table>

Type Of Indication: Visual indicator and electrical switch

<table>
<thead>
<tr>
<th>Weight: 250 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cracking Pressure Or Indication Range: 1 bar ± 10% 3 bar ± 10% 1.5 bar ± 10% 5 bar ± 10% 2 bar ± 10% 8 bar ± 10%</td>
</tr>
<tr>
<td>Perm. Operating Pressure: 6092 psi (420 bar)</td>
</tr>
<tr>
<td>Perm. Temperature Range: -20°C to 100°C</td>
</tr>
<tr>
<td>Thread: G 1/2</td>
</tr>
<tr>
<td>Max. Torque Value: 100 Nm</td>
</tr>
<tr>
<td>Switching Type: N/C or N/O (change-over contacts)</td>
</tr>
<tr>
<td>Max. Switching Voltage: 24, 48, 110, 230 V depending on the light insert</td>
</tr>
<tr>
<td>Electrical Connection: Male Connection M20x1.5 acc. EN 50262 Female Connector acc. DIN 43650</td>
</tr>
<tr>
<td>Max. Switching Voltage At Resistive Load: 60 W = 100 VA ~</td>
</tr>
<tr>
<td>Switching Capacity: Ohmic 3 A at 24 V = Ohmic 0.03 to 5 A at max. 230 V ~</td>
</tr>
<tr>
<td>Protective Class Acc. DIN 40050: IP 65 (only if the connector is wired and fitted correctly)</td>
</tr>
</tbody>
</table>
Clogging Indicators for Process Filters

**Type Of Indication:** Visual/analogue indicator and 1 electrical switching contact at 75% and 100% of the cracking pressure

| Weight: | 650 g |
| Cracking Pressure Or Indication Range: | 0.8 bar ± 10% |
| Perm. Operating Pressure: | 2321 psi (160 bar) |
| Perm. Temperature Range: | -20°C to 100°C |
| Thread: | G 1/4 |
| Max. Torque Value: | - |
| Switching Type: | 75% - N/O contact |
| Max. Switching Voltage: | 250 V |
| Electrical Connection: | Threaded connection M20x1.5 acc. EN 50262 |
| Max. Switching Voltage At Resistive Load: | 75% contact 120 W = 100% contact 120 VA ~ |
| Switching Capacity: | Ohmic 2.5 A at 24 V |
| Protective Class Acc. DIN 40050: | IP 55 |

**Type Of Indication:** 2 microswitches, 1-pole change-over contacts, can be adjusted manually to recommended set values

| Weight: | 1.2 - 3.5 kg |
| Cracking Pressure Or Indication Range: | 0 - 1.6 bar |
| Perm. Operating Pressure: | 363 psi (25 bar), 580 psi (40 bar) on request |
| Perm. Temperature Range: | -10°C to 100°C |
| Thread: | G 1/4 |
| Max. Torque Value: | - |
| Switching Type: | Change-over contacts |
| Max. Switching Voltage: | U~max = 250 V AC U~max = 3- V DC |
| Electrical Connection: | Hard-wired numbered cable, cable connector, 7 pole plug-in connection |
| Max. Switching Voltage At Resistive Load: | Imax = 5 A, Pmax = 250VA, Imax = 0.4 A, Pmax = 10 W |
| Switching Capacity: | - |
| Protective Class Acc. DIN 40050: | IP 55 |
Clogging Indicators for Process Filters

How to Build a Valid Model Number for a BTU:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVD</td>
<td>2</td>
<td>D.</td>
<td>0</td>
<td>-L24</td>
</tr>
</tbody>
</table>

= PVD-2-D.-0/-L24

### BOX 1

**Unit Type**
- **PVD**: Clogging indicator
- **V01**: Clogging indicator

### BOX 2

**Cracking Pressure**
- **0.8**: +0.8 bar (only for V01 indicator)
- **1**: +1 bar (PVD indicator)
- **1.5**: +1.5 bar (PVD indicator)
- **2**: +2 bar (all clogging indicators)
- **3**: +3 bar (PVD indicator)
- **4.3**: +4.3 bar (only for V01 indicator)
- **5**: +5 bar (only for PVD indicator)
- **8**: +8 bar (only for PVD indicator)

### BOX 3

**Clogging Indicator**
- **B.**: Visual indicator with automatic reset
- **C.**: Electrical indicator
- **D.**: Visual/electrical indicator
- **VZ.**: Visual/analogue indicator with 75% and 100% switch contacts

### BOX 4

**Modification Number**
- **0**: All clogging indicators
- **1**: Only B. type

### BOX 5

**Supplementary Details (only PVD)**
- **-L24**: Light with 24 V
- **-L48**: Light with 48 V
- **-L110**: Light with 110 V
- **-L220**: Light with 220 V
Notes Section:
Bag Housings and Elements

Schroeder Process Filtration offers a complete line of bag elements and housings to fit a wide variety of applications. From single bag housings, to high flow multiple bag housings, Schroeder has an economical filtration solution to fit nearly any application.

The disposable bag elements offered by Schroeder Process Filtration come in a wide variety of materials, sizes and styles. Bag styles include: steel ring bags (stainless steel optional) that are sewn into top of bag, and plastic flange bags that have flange sewn at top of bag and draw string. A multitude of options are available - call factory for details. Polyester and polypropylene felt can be used for filtration as low as 1 micron while monofilament and multifilament bags can be used for more coarse filtration. Felt bags are either singed or glazed to prevent fiber migration on the clean side of the filter.

Our bags are made in standard industry sizes from 1 through 12. We also have commercial size bags available with a snap band support ring. The seams on the bags are either sewn or welded depending upon the systems requirements. Welded bags offer:

- No needle holes
- No thread migration
- Strong, even sealing of the material

Schroeder Process Filtration bag housings can handle flows as low as 20 gpm and as high as several thousand gpm. Single bag housings are rated for either 100 psi service or 150 psi. All of our multiple bag housings and duplex bag housings are rated at 150 psi. Multiple bag housings are manufactured to hold 2 bags to 10 bags and more. Housings are made from either carbon steel or electro-polished stainless steel. ASME section VII U-stamped housings are available upon request.

Schroeder Industries has long been known for innovation to meet customer needs. Contact the factory if you have an application that requires special consideration and designs. Multiple housings can be skid mounted with integrated valves, sensors and controls to meet your specific needs.

Our bag systems provide efficient and economical filtration. Some advantages to bag filtration are:

- Positive seal to assure zero fluid bypass
- Quick and easy installation
- Handles provide easy removal from housings
- High dirt holding capacity
- Sturdy construction to prevent bags from failing in operation
- 100% incinerable
Bag Housings and Elements

Typical Products Filtered

- Abrasives
- Adhesives
- Aerosol Products
- Chemicals
- Cleaning Fluids
- Coolants
- Cutting Fluids
- Detergents
- Dyestuffs
- Fabric Coatings
- Food Products
- Industrial Coatings
- Juices
- Lacquers
- Latices
- Liquids of all types
- Paints
- Paper Coatings
- Petroleum Products
- Pigments
- Pharmaceuticals
- Plastisols
- Printing Inks
- Process Water
- Polymer Solutions
- Roller Coatings
- Textile Chemicals
- Vegetable Oils
- Vinegar
- Waxes
- And Many Other Products
**Dimensions BH1 100 psi**

<table>
<thead>
<tr>
<th>Model</th>
<th>Bag Size</th>
<th>A inches (mm)</th>
<th>C inches (mm)</th>
<th>D ø inches (mm)</th>
<th>E inches (mm)</th>
<th>G ø inches (mm)</th>
<th>H inches (mm)</th>
<th>J ø inches (mm)</th>
<th>K ø inches (mm)</th>
<th>L inches (mm)</th>
<th>M inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH1</td>
<td>1</td>
<td>21.65 (550)</td>
<td>29.13 (740)</td>
<td>9.13 (232)</td>
<td>6.93 (176)</td>
<td>6.77 (172)</td>
<td>13.78 (350)</td>
<td>0.39 (10)</td>
<td>12.72 (323)</td>
<td>20.47 (520)</td>
<td>7.48 (190)</td>
</tr>
<tr>
<td>BH1</td>
<td>2</td>
<td>39.56 (1050)</td>
<td>47.04 (1195)</td>
<td>9.13 (232)</td>
<td>6.93 (176)</td>
<td>6.77 (172)</td>
<td>28.74 (730)</td>
<td>0.39 (10)</td>
<td>12.72 (323)</td>
<td>20.47 (520)</td>
<td>7.48 (190)</td>
</tr>
<tr>
<td>BH1</td>
<td>3</td>
<td>14.17 (360)</td>
<td>21.18 (538)</td>
<td>7.08 (180)</td>
<td>5.90 (150)</td>
<td>3.86 (98)</td>
<td>7.87 (200)</td>
<td>0.39 (10)</td>
<td>9.92 (252)</td>
<td>13.78 (350)</td>
<td>7.00 (178)</td>
</tr>
<tr>
<td>BH1</td>
<td>4</td>
<td>19.48 (495)</td>
<td>26.49 (673)</td>
<td>7.08 (180)</td>
<td>5.90 (150)</td>
<td>3.86 (98)</td>
<td>12.20 (310)</td>
<td>0.39 (10)</td>
<td>9.92 (252)</td>
<td>13.78 (350)</td>
<td>7.00 (178)</td>
</tr>
</tbody>
</table>

**Specifications**

- Max. Working Pressure: 100 psi (7 bar)
- Max. Working Temperature: 167°F (75°C)
- Support Leg: Adjustable
- Lid Closure: Threaded Clamp

<table>
<thead>
<tr>
<th>BH1 - 1</th>
<th>BH1 - 2</th>
<th>BH1 - 3</th>
<th>BH1 - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Flow:</td>
<td>90 gpm (333 L/min)</td>
<td>200 gpm (750 L/min)</td>
<td>20 gpm (75 L/min)</td>
</tr>
<tr>
<td>Housing Volume:</td>
<td>7.13 gal (27 L)</td>
<td>12.15 gal (46L)</td>
<td>2.90 gal (11 L)</td>
</tr>
<tr>
<td>Empty Weight:</td>
<td>46 lbs. (21 kg)</td>
<td>57 lbs. (26 kg)</td>
<td>31 lbs. (14 kg)</td>
</tr>
</tbody>
</table>
Single Bag Housings -150 psi

NOTE:
Drawings may change without notice. Contact factory for certified drawings.

<table>
<thead>
<tr>
<th>Model</th>
<th>Bag Size</th>
<th>A inches (mm)</th>
<th>C inches (mm)</th>
<th>D ø inches (mm)</th>
<th>E inches (mm)</th>
<th>G ø inches (mm)</th>
<th>H inches (mm)</th>
<th>J ø inches (mm)</th>
<th>K ø inches (mm)</th>
<th>L inches (mm)</th>
<th>M inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH1</td>
<td>1</td>
<td>21.65 (550)</td>
<td>29.13 (740)</td>
<td>8.50 (216)</td>
<td>6.61 (168)</td>
<td>6.77 (172)</td>
<td>13.78 (350)</td>
<td>0.39 (10)</td>
<td>13.07 (332)</td>
<td>19.84 (504)</td>
<td>2.56 (65)</td>
</tr>
<tr>
<td>BH1</td>
<td>2</td>
<td>36.61 (930)</td>
<td>44.09 (1120)</td>
<td>8.50 (216)</td>
<td>6.61 (168)</td>
<td>6.77 (172)</td>
<td>28.74 (730)</td>
<td>0.39 (10)</td>
<td>13.07 (332)</td>
<td>22.72 (704)</td>
<td>2.56 (65)</td>
</tr>
<tr>
<td>BH1</td>
<td>3</td>
<td>13.78 (350)</td>
<td>19.49 (495)</td>
<td>5.51 (140)</td>
<td>5.32 (135)</td>
<td>3.82 (97)</td>
<td>7.87 (200)</td>
<td>0.39 (10)</td>
<td>8.31 (211)</td>
<td>13.78 (350)</td>
<td>1.58 (40)</td>
</tr>
<tr>
<td>BH1</td>
<td>4</td>
<td>17.72 (450)</td>
<td>23.43 (595)</td>
<td>5.51 (140)</td>
<td>5.32 (135)</td>
<td>3.82 (97)</td>
<td>12.20 (310)</td>
<td>0.39 (10)</td>
<td>8.31 (211)</td>
<td>13.78 (350)</td>
<td>1.58 (40)</td>
</tr>
</tbody>
</table>

Max. Working Pressure: 150 psi (10 bar)
Max. Working Temperature: 167°F (75°C)
Support Leg: Adjustable
Lid Closure: Swing Bolts

<table>
<thead>
<tr>
<th>Model</th>
<th>BH1 - 1</th>
<th>BH1 - 2</th>
<th>BH1 - 3</th>
<th>BH1 - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Flow:</td>
<td>90 gpm (333 L/min)</td>
<td>200 gpm (750 L/min)</td>
<td>20 gpm (75 L/min)</td>
<td>45 gpm (167 L/min)</td>
</tr>
<tr>
<td>Housing Volume:</td>
<td>6.07 gal (23 L)</td>
<td>9.77 gal (37 L)</td>
<td>1.66 gal (6.3 L)</td>
<td>2.06 gal (7.8 L)</td>
</tr>
<tr>
<td>Empty Weight:</td>
<td>75 lbs. (34 kg)</td>
<td>95 lbs. (43 kg)</td>
<td>40 lbs. (18 kg)</td>
<td>46 lbs. (21 kg)</td>
</tr>
</tbody>
</table>
### Single Bag Housings - 100 & 150 psi

How to Build a Valid Model Number for a Single Bag Housing, 100 & 150 psi:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH</td>
<td>1</td>
<td>2</td>
<td>304S</td>
<td>2N</td>
<td>E</td>
<td>0</td>
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</table>

= BH12304S2NE0

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Series</td>
<td># of Bags</td>
<td>Bag Size</td>
<td>Material</td>
<td>Connection</td>
</tr>
<tr>
<td>BH</td>
<td>1</td>
<td>1 = Size 1</td>
<td>304S = 304 Stainless Steel</td>
<td>1N = 1” NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Size 2</td>
<td>316S = 316 Stainless Steel</td>
<td>15 = 1.5” NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Size 3</td>
<td>316L = 316L Stainless Steel</td>
<td>2N = 2” NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = Size 4</td>
<td></td>
<td>2F = 2” Flange</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25 = 2.5” NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25F = 2.5” Flange</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3N = 3” NPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3F = 3” Flange</td>
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</tr>
<tr>
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<td></td>
<td></td>
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<td>4F = 4” Flange</td>
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</table>

<table>
<thead>
<tr>
<th>BOX 6</th>
<th>BOX 7</th>
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</thead>
<tbody>
<tr>
<td>Seal Material</td>
<td>Pressure Rating</td>
</tr>
<tr>
<td>E = EPDM</td>
<td>0 = 100 psi</td>
</tr>
<tr>
<td>S = Silicone</td>
<td>1 = 150 psi</td>
</tr>
<tr>
<td>V = Viton</td>
<td></td>
</tr>
<tr>
<td>W = Teflon</td>
<td></td>
</tr>
<tr>
<td>Encapsulated Viton</td>
<td></td>
</tr>
</tbody>
</table>
**Multi Bag Housings**

**BH1 - BH14**

**296-1981 gpm**

**1500-7500 L/min**

**150 psi**

**10 bar**

**Specifications**

<table>
<thead>
<tr>
<th>Number of Bags</th>
<th>Available Porting (Flange)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>øJ</th>
<th>øK</th>
<th>M</th>
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<tbody>
<tr>
<td>2 3&quot;</td>
<td>4.25</td>
<td>108</td>
<td>4.25</td>
<td>108</td>
<td>56.02</td>
<td>1423</td>
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<td>584</td>
</tr>
<tr>
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<td>5.00</td>
<td>127</td>
<td>5.00</td>
<td>127</td>
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<td>1482</td>
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<td>660</td>
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<tr>
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<td>108</td>
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<td>108</td>
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<td>127</td>
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<td>1544</td>
<td>28.50</td>
<td>724</td>
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<td>108</td>
<td>4.25</td>
<td>108</td>
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<td>698</td>
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<td>5.00</td>
<td>127</td>
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<td>108</td>
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<td>108</td>
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<td>1503</td>
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<td>127</td>
<td>5.00</td>
<td>127</td>
<td>65.43</td>
<td>1662</td>
<td>34.49</td>
<td>876</td>
</tr>
<tr>
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<td>108</td>
<td>4.25</td>
<td>108</td>
<td>61.50</td>
<td>1562</td>
<td>30.04</td>
<td>763</td>
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<td>127</td>
<td>5.00</td>
<td>127</td>
<td>65.43</td>
<td>1662</td>
<td>34.49</td>
<td>876</td>
</tr>
<tr>
<td>6 6&quot;</td>
<td>5.98</td>
<td>152</td>
<td>5.98</td>
<td>152</td>
<td>65.43</td>
<td>1662</td>
<td>34.49</td>
<td>876</td>
</tr>
<tr>
<td>8 3&quot;</td>
<td>4.25</td>
<td>108</td>
<td>4.25</td>
<td>108</td>
<td>70.20</td>
<td>1783</td>
<td>34.02</td>
<td>864</td>
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<tr>
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<td>152</td>
<td>5.98</td>
<td>152</td>
<td>72.52</td>
<td>1842</td>
<td>39.02</td>
<td>991</td>
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<tr>
<td>8 6&quot;</td>
<td>7.24</td>
<td>184</td>
<td>7.24</td>
<td>184</td>
<td>80.63</td>
<td>2048</td>
<td>41.22</td>
<td>1047</td>
</tr>
<tr>
<td>10 6&quot;</td>
<td>5.98</td>
<td>152</td>
<td>5.98</td>
<td>152</td>
<td>79.21</td>
<td>2012</td>
<td>42.99</td>
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<tr>
<td>10 8&quot;</td>
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<td>184</td>
<td>7.24</td>
<td>184</td>
<td>83.19</td>
<td>2113</td>
<td>42.01</td>
<td>1067</td>
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</tbody>
</table>

**Max. Working Pressure:** 150 psi (10 bar)

**Max. Working Temperature:** 167°F (75°C)

**Support Legs:** Fixed

**Lid Closure:** Swing Bolts

**NOTE:**

Drawings may change without notice. Contact factory for certified drawings.
## Multi Bag Housings

<table>
<thead>
<tr>
<th>Number of Bags</th>
<th>Max Flow</th>
<th>Empty Weight</th>
<th>Housing Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GMP L/Min</td>
<td>lbs</td>
<td>kg</td>
</tr>
<tr>
<td>2</td>
<td>396</td>
<td>1500</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>396</td>
<td>1500</td>
<td>225</td>
</tr>
<tr>
<td>3</td>
<td>594</td>
<td>2250</td>
<td>276</td>
</tr>
<tr>
<td></td>
<td>594</td>
<td>2250</td>
<td>287</td>
</tr>
<tr>
<td>4</td>
<td>793</td>
<td>3000</td>
<td>355</td>
</tr>
<tr>
<td></td>
<td>793</td>
<td>3000</td>
<td>373</td>
</tr>
<tr>
<td></td>
<td>793</td>
<td>3000</td>
<td>454</td>
</tr>
<tr>
<td>6</td>
<td>991</td>
<td>3750</td>
<td>437</td>
</tr>
<tr>
<td></td>
<td>1189</td>
<td>4500</td>
<td>445</td>
</tr>
<tr>
<td></td>
<td>1189</td>
<td>4500</td>
<td>454</td>
</tr>
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<td>8</td>
<td>1387</td>
<td>5250</td>
<td>992</td>
</tr>
<tr>
<td></td>
<td>1585</td>
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<td>1014</td>
</tr>
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<td>10</td>
<td>1783</td>
<td>6750</td>
<td>1301</td>
</tr>
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<td></td>
<td>1981</td>
<td>7500</td>
<td>1323</td>
</tr>
<tr>
<td></td>
<td>1981</td>
<td>7500</td>
<td>1576</td>
</tr>
</tbody>
</table>

### How to Build a Valid Model Number for a Multi-Bag Housing, 150 psi:

**BOX 1** | **BOX 2** | **BOX 3** | **BOX 4** | **BOX 5** | **BOX 6** | **BOX 7**
---|---|---|---|---|---|---
BH | 4 | 2 | 304S | 4F | E | 1

**Example:** NOTE: One option per box

```
BH 4 2 304S 4F E 1 = BH42304S4FE1
```

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<td>11</td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>14</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Box 3</th>
<th>Box 4</th>
<th>Box 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bag Size</td>
<td>Material</td>
<td>Connection</td>
</tr>
<tr>
<td>2 = Size 2</td>
<td>304S = 304 Stainless Steel</td>
<td>3F = 3” Flange (2, 3, 4 and 6 bags)</td>
</tr>
<tr>
<td></td>
<td>316S = 316 Stainless Steel</td>
<td>4F = 4” Flange (2, 3, 4, 6 and 8 bags)</td>
</tr>
<tr>
<td></td>
<td>316L = 316L Stainless Steel</td>
<td>6F = 6” Flange (4, 6, 8, and 10 bags)</td>
</tr>
<tr>
<td></td>
<td>Encapsulated Viton</td>
<td>8F = 8” Flange (8 &amp; 10 bags)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10F = 10” Flange (10 bags)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOX 6</th>
<th>BOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal Material</td>
<td>Pressure Rating</td>
</tr>
<tr>
<td>E = EPDM</td>
<td>1 = 150 psi</td>
</tr>
<tr>
<td>S = Silicone</td>
<td></td>
</tr>
<tr>
<td>V = Viton</td>
<td></td>
</tr>
<tr>
<td>W = Teflon</td>
<td></td>
</tr>
</tbody>
</table>
**Duplex Multi Bag Housings**

- **Dimensions**
  - Max. Working Pressure: 150 psi (10 bar)
  - Max. Working Temperature: 167°F (75°C)
  - Support Legs: Adjustable
  - Lid Closure: Swing Bolts

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16 (406)</td>
<td>6 (148)</td>
<td>52 (1310)</td>
<td>60 (1520)</td>
<td>75 (1893)</td>
<td>49 (1250)</td>
<td>20 (516)</td>
<td>Inlet 3 / 150P SORF</td>
<td>Outlet 3 / 150P SORF</td>
<td>Vent .5 / PT F</td>
</tr>
</tbody>
</table>

Filter and Media are sold separately. Additional sizes available - call factory for details.
## Duplex Multi Bag Housings

How to Build a Valid Model Number for a Duplex Bag Housing, 150 psi:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBH</td>
<td>4</td>
<td>2</td>
<td>304S</td>
<td>4F</td>
<td>E</td>
<td>1</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

DBH42304S3FE1

### BOX 1
**Filter Series**
- DBH

### BOX 2
**# of Bags**
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

### BOX 3
**Bag Size**
- 2 = Size 2

### BOX 4
**Material**
- 304S = 304 Stainless Steel
- 316S = 316 Stainless Steel
- 316L = 316L Stainless Steel

### BOX 5
**Connection**
- 3F = 3” Flange (2, 3, 4 and 6 bags)
- 4F = 4” Flange (2, 3, 4, 6 and 8 bags)
- 6F = 6” Flange (4, 6, 8, and 10 bags)
- 8F = 8” Flange (8 & 10 bags)
- 10F = 10” Flange (10 bags)

### BOX 6
**Seal Material**
- E = EPDM
- S = Silicone
- V = Viton
- W = Teflon
- Encapsulated Viton

### BOX
**Pressure Rating**
- 0 = 100 psi
- 1 = 150 psi

Filter and Media are sold separately.
Recommended change-out:
It is recommended that a liquid filter bag be changed out when the differential pressure (∆P) between the upstream and downstream sides reaches 20 - 25 psi. Although this is a rule of thumb, some applications may require change-out at a ∆P well below 20 psi. Under no circumstances should ∆P be allowed to exceed 25 psi.

What is the product that needs to be filtered?
Obtain all the details of the liquid/solid composition. You need to confirm the chemical compatibility to ensure the proper material is used for the bag, retainer type and the housing for the filter bags.

What is the viscosity of the product to be filtered?
Use a flow rate chart to find out the optimum operating parameters.

What is the pH level in order to choose the proper material for the filtration system?
Is the product an acid with a pH of 1-7 or is it Alkaline 7-14?

What type of solids does the product contain?
Are the solids crystalline or gelatinous? Crystalline solids can form a permeable layer on the filter media and gelatinous solids can form an impermeable layer that will cause blinding off of the filter media.

What is the density of the solids?
What is the PPM (parts per million) of the solids?

What is the range of particle size? What size does the customer want to remove and at what efficiency?
The range of particulate size is important in determining which micron rating your filter media should be? Filter bags can be made with nominally rated material or with high efficiency material.

What is the flow rate of the product?
The flow rate is critical information required when determining the size and number of bags required.

Is it a continuous or batch process?
This is important in order to determine the filter bag consumption.

What is the operating pressure of the system?
At what minimum and maximum potential pressure is the system designed to run? What is the acceptable pressure required? Filter bag differential pressure capacity is 20-25 psi.

What is the temperature of the product being filtered?
Temperature has an impact on the viscosity, the filter media and the O-rings. The temperature can even affect the corrosion rate of the housing.

### Sizes Available

<table>
<thead>
<tr>
<th>Size</th>
<th>Sq. Ft</th>
<th>Diameter (in.)</th>
<th>Length (in.)</th>
<th>Bag/Collar/Style</th>
<th>Manufacturers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2.5</td>
<td>7.06</td>
<td>16.5</td>
<td>S</td>
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<tr>
<td>2</td>
<td>5.0</td>
<td>7.06</td>
<td>32.0</td>
<td>SS</td>
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<td>3</td>
<td>0.8</td>
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<td>8.0</td>
<td>DS</td>
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<tr>
<td>4</td>
<td>1.3</td>
<td>4.12</td>
<td>14.0</td>
<td>P</td>
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<tr>
<td>5</td>
<td>1.3</td>
<td>5.5</td>
<td>15.0</td>
<td>S</td>
<td></td>
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<tr>
<td>6</td>
<td>2.0</td>
<td>5.5</td>
<td>21.0</td>
<td>SS</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3.3</td>
<td>5.5</td>
<td>31.0</td>
<td>P</td>
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<tr>
<td>C1</td>
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<td>7.31</td>
<td>16.5</td>
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<td>C2</td>
<td>5.0</td>
<td>7.31</td>
<td>32.0</td>
<td>S</td>
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</tr>
</tbody>
</table>

Technical Information for Liquid Bags Elements
Step 1 The graphs show the $\Delta PB$ produced by a #2 size bag for water, 1 cps @ 77°F (25°C). The pressure drop is determined from the type of bag, the micron rating and flow rate.

Step 2 Correct for bag size from the table below if the size is different than #2 size.

<table>
<thead>
<tr>
<th>Bag Size</th>
<th>Dia X Length</th>
<th>Multiply By</th>
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<tbody>
<tr>
<td>2</td>
<td>7.06 x 32</td>
<td>1.00</td>
</tr>
<tr>
<td>9</td>
<td>5.5 x 32</td>
<td>1.50</td>
</tr>
<tr>
<td>1</td>
<td>7.06 x 16</td>
<td>2.25</td>
</tr>
<tr>
<td>8</td>
<td>5.5 x 21</td>
<td>2.25</td>
</tr>
<tr>
<td>7</td>
<td>5.5 x 15</td>
<td>3.00</td>
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<td>4.15 x 14</td>
<td>4.50</td>
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<tr>
<td>3</td>
<td>4.15 x 8</td>
<td>9.00</td>
</tr>
</tbody>
</table>

Step 3 If the viscosity of the liquid is greater than 1 cps (water @ 77°F (25°C)). Multiply the result from step 2 by the proper correction factor from the chart below.

<table>
<thead>
<tr>
<th>Viscosity (cps)</th>
<th>Correction Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>4.5</td>
</tr>
<tr>
<td>100</td>
<td>8.3</td>
</tr>
<tr>
<td>200</td>
<td>16.6</td>
</tr>
<tr>
<td>400</td>
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<td>800</td>
<td>50.0</td>
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<tr>
<td>1000</td>
<td>56.2</td>
</tr>
<tr>
<td>1500</td>
<td>77.2</td>
</tr>
<tr>
<td>2000</td>
<td>113.6</td>
</tr>
<tr>
<td>4000</td>
<td>161.0</td>
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<tr>
<td>6000</td>
<td>250.0</td>
</tr>
<tr>
<td>8000</td>
<td>325.0</td>
</tr>
<tr>
<td>10000</td>
<td>430.0</td>
</tr>
</tbody>
</table>

The value obtained in step 3, $\Delta PB$ is the clean pressure drop caused by the filter bag.

SUMMARY

System Pressure Drop = $\Delta PS = \Delta PH + \Delta PB$

For new applications, the $\Delta PS$ should be 2.0 psi (0.14 bar) or less. For high contaminant loading applications, this value should be as low as possible. The lower this value is, the more contaminant a bag will hold. For applications with nominal contaminants, this value can go to 3.0 psi (0.21 bar) or more. Consult factory for specific recommendations when the clean $\Delta P$ exceeds 2.0 psi (0.14 bar).
Micron-Rated Bag Elements

How to Build a Valid Model Number for a Micron-Rated Bag Element:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEF</td>
<td>25</td>
<td>S</td>
<td>X1</td>
<td>F</td>
<td>A</td>
</tr>
</tbody>
</table>

= TEF25SX1FA

### Bag Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEF</td>
<td>Polyester Felt</td>
</tr>
<tr>
<td>PPF</td>
<td>Polypropylene Felt</td>
</tr>
<tr>
<td>NOF</td>
<td>Nomex Felt</td>
</tr>
<tr>
<td>PPM</td>
<td>Polypropylene Monofilament Mesh</td>
</tr>
<tr>
<td>NMO</td>
<td>Nylon Monofilament Mesh</td>
</tr>
<tr>
<td>PEM</td>
<td>Polyester Multifilament Mesh</td>
</tr>
<tr>
<td>NMU</td>
<td>Nylon Multifilament Mesh</td>
</tr>
<tr>
<td>TEF</td>
<td>Teflon Felt</td>
</tr>
</tbody>
</table>

### Micron Rating

<table>
<thead>
<tr>
<th>Rating</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>See chart below for available micron ratings</td>
<td></td>
</tr>
</tbody>
</table>

### Cover Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plain, No Cover</td>
</tr>
<tr>
<td>SBP</td>
<td>Spun Bonded Polyester</td>
</tr>
<tr>
<td>PEM</td>
<td>Polyester</td>
</tr>
<tr>
<td>G</td>
<td>Glazed</td>
</tr>
<tr>
<td>S</td>
<td>Singed</td>
</tr>
</tbody>
</table>

### Bag Size

<table>
<thead>
<tr>
<th>Size</th>
<th>Diameter</th>
<th>Length (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.06</td>
<td>16.5</td>
</tr>
<tr>
<td>2</td>
<td>7.06</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>4.12</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>4.12</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>5.5</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>5.5</td>
<td>21</td>
</tr>
<tr>
<td>9</td>
<td>5.5</td>
<td>31</td>
</tr>
<tr>
<td>11</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>C1</td>
<td>7.31</td>
<td>16.5</td>
</tr>
<tr>
<td>C2</td>
<td>7.31</td>
<td>32.5</td>
</tr>
<tr>
<td>X1</td>
<td>4.35</td>
<td>8</td>
</tr>
<tr>
<td>X2</td>
<td>4.35</td>
<td>14</td>
</tr>
<tr>
<td>XO1</td>
<td>6</td>
<td>22</td>
</tr>
</tbody>
</table>

### Collar Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard Galvanized Steel Ring</td>
</tr>
<tr>
<td>SS</td>
<td>Stainless Steel Ring</td>
</tr>
<tr>
<td>DS</td>
<td>Draw String</td>
</tr>
<tr>
<td>P</td>
<td>Plastic Flange</td>
</tr>
<tr>
<td>T</td>
<td>Titanium</td>
</tr>
<tr>
<td>OSS</td>
<td>OSS Flange</td>
</tr>
<tr>
<td>NR</td>
<td>No Ring</td>
</tr>
<tr>
<td>F</td>
<td>Custom</td>
</tr>
</tbody>
</table>

### Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Options</td>
</tr>
<tr>
<td>H</td>
<td>Handles (standard on all flange &amp; ring style bag elements)</td>
</tr>
<tr>
<td>WE</td>
<td>Welded Seams Only Available of PEF &amp; PPF Bags with Plastic Flanges</td>
</tr>
<tr>
<td>EB</td>
<td>Edge Binding</td>
</tr>
<tr>
<td>A</td>
<td>Auto Seams</td>
</tr>
<tr>
<td>TTA</td>
<td>Turn, top stitch, auto seam</td>
</tr>
<tr>
<td>RC</td>
<td>Reverse Collar</td>
</tr>
<tr>
<td>SB</td>
<td>Spun Bond Cover</td>
</tr>
<tr>
<td>MC</td>
<td>Mesh Cover</td>
</tr>
</tbody>
</table>

### Technical Information for Liquid Bag Elements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>257°</td>
</tr>
<tr>
<td>Polypropylene</td>
<td>Good</td>
<td>Excellent</td>
<td>Good</td>
<td>Fair</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>200°</td>
</tr>
<tr>
<td>Nomex</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Poor</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>425°</td>
</tr>
<tr>
<td>Nylon</td>
<td>Poor</td>
<td>Fair</td>
<td>Good</td>
<td>Poor</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>300°</td>
</tr>
</tbody>
</table>

SCHROEDER INDUSTRIES | PROCESS FILTRATION 77
The Polyester Phenolic Treatment (PEPT) design incorporates single or dual layers of fully infused Phenolic Resin treated Polyester Felt for optimum performance. The PEPT’s non-compressible depth fibers are more effective than conventional filters in retaining gel-like particles. Inline cartridges, which accumulate debris on the outside of the element and are more prone to debris falling off during change out, PEPT’s filter bags contain the contaminants securely inside the bag, making filter change-out much cleaner.

The proven gradient density of a dual layer of the PEPT bag coupled with the increased surface area results in enhanced efficiencies and increased filter life. This not only ensures the integrity of the filtration process, it builds an affective pre-filter cake that promotes higher efficiencies without high pressure drop or loss of flow capacity.

Features:
- Micron Ratings from 1 to 100
- Broad chemical compatibility
- Handles on all bags
- Choice of Steel Ring or Plastic Flange
- Excellent removal of gel-like particles
- Disc bottom for ease of installation and fit in basket
Polyester Phenolic Treatment Liquid Filter Bag

How to Build a Valid Model Number for an Absolute Rated (PPA) Bag Element:

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEH</td>
<td>90</td>
<td>P</td>
<td>P2</td>
<td>SS</td>
<td>H</td>
</tr>
</tbody>
</table>

PEH = PEH90PP2SSH

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bag Material</td>
<td>Layers</td>
<td>Micron Rating</td>
<td>Bag Size</td>
</tr>
<tr>
<td>PPT = Polyester Phenolic Treatment Rated</td>
<td>SL = Single Layer</td>
<td>1 = 1 Micron</td>
<td>P1 = 7.06&quot; x 14&quot;</td>
</tr>
<tr>
<td>DL = Double Layer</td>
<td>3 = 3 Micron</td>
<td>P2 = 7.06&quot; x 28&quot;</td>
<td></td>
</tr>
<tr>
<td>H = Handles (standard)</td>
<td>5 = 5 Micron</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P = P Flange</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F = F Flange</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSS = OSS Flange</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S = Galvanized Steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS = Stainless Steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T = Titanium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 = 10 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 = 15 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 = 20 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 = 25 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 = 50 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 = 75 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 = 100 Micron</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SCHROEDER INDUSTRIES | PROCESS FILTRATION 79
Oil Absorbing Bag Elements

Schroeder’s Oil Absorbing Bag Filters (OAB) are a cost-effective solution for removing oil from water while simultaneously filtering as low as 1 micron. The high capacity bag filter is designed with different layers of micro-fibers that not only retain oil, but increase overall efficiency to 95% or greater on microns ranging from 1 to 50. The overall construction of this filter bag has 30 plus square feet of media and can retain 10 pounds or more of oil depending on the micron. These bags are offered in standard bag size 1 or 2.

- Food Processing
- Hydraulic Systems
- Gelatinous Contaminants
- Cutting Oil
- Vacuum Pump
- Parts Washing
- Engine Oil/Transmission Oil
- Natural Gas Sweetening
- Natural Gas Dehydration
- Lubrication Oil

How to Build a Valid Model Number for an Oil Absorbing (OAB) Bag Element:

- BOX 1
- BOX 2
- BOX 3
- BOX 4
- BOX 5

Example: NOTE: One option per box

OAB 2H 1 SS H = OAB2H1SSH

Bag Material
- OAB

Micron Rating
- 1H = 1m High Efficiency
- 2H = 2m High Efficiency
- 5H = 5m High Efficiency
- 10H = 10m High Efficiency
- 25H = 25m High Efficiency
- 50H = 50m High Efficiency

Bag Size
- 1
- 2

Collar Type
- S = Galvanized Steel
- OSS = OSS Flange
- F = F Flange

Options
- H = Handles (Standard)
High Efficiency Bag Elements

High efficiency bag elements are constructed of Polypropylene meltblown microfibers, allowing for very fine particles capture at high efficiencies. All high efficiency filter bags are over 90% efficient at their suggested micron rating. The bag construction makes this filter an easy to use, convenient, high performance alternative to filter cartridges. Maximum flow per bag is 60 gpm.

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Suggested Application Rating</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPH1H</td>
<td>1.0 micron</td>
<td>93.00%</td>
</tr>
<tr>
<td>PPH2H</td>
<td>2.0 micron</td>
<td>94.00%</td>
</tr>
<tr>
<td>PPH5H</td>
<td>5 micron</td>
<td>94.00%</td>
</tr>
<tr>
<td>PPH10H</td>
<td>10 micron</td>
<td>94.00%</td>
</tr>
<tr>
<td>PPH25H</td>
<td>25 micron</td>
<td>97.00%</td>
</tr>
<tr>
<td>PPH50H</td>
<td>50 micron</td>
<td>97.00%</td>
</tr>
</tbody>
</table>

How to Build a Valid Model Number for a High Efficiency (PPH) Bag Element:

Example: NOTE: One option per box

BOX 1  BOX 2  BOX 3  BOX 4  BOX 5
PEH  5H  3  F  H = PEH5H3FH

**Bag Type**

PEH = Polyester High Efficiency

PPH = Polypropylene High Efficiency

**Micron Rating**

1H = 1m High Efficiency

2H = 2m High Efficiency

5H = 5m High Efficiency

10H = 10m High Efficiency

25H = 25m High Efficiency

50H = 50m High Efficiency

**Bag Size**

1

2

**Collar Type**

S = Galvanized Steel

F = F Flange

OSS = OSS Flange

**Options**

H = Handles (standard)
Absolute Rated Bag Elements

The Absolute Rated Bag Elements are constructed of polypropylene meltblown microfibers, allowing for very fine particles capture at high efficiencies. All Absolute Rated filter bags are over 97% efficient at their suggested micron rating. The bag construction makes this filter an easy to use, convenient, high performance alternative to filter cartridges. The filter contains over 30 sq. ft. of usable filter media. This compares with only 4.4 sq. ft. for most filter bags and only .65 sq. ft. for most cartridges. Maximum flow per bag is 40 gpm.

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Suggested Application Rating</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPA1A</td>
<td>1.0 micron</td>
<td>97.00%</td>
</tr>
<tr>
<td>PPA2A</td>
<td>2.0 micron</td>
<td>97.00%</td>
</tr>
<tr>
<td>PPA3A</td>
<td>3.0 micron</td>
<td>97.00%</td>
</tr>
<tr>
<td>PPA5A</td>
<td>5.0 micron</td>
<td>97.00%</td>
</tr>
<tr>
<td>PPA13A</td>
<td>13.0 micron</td>
<td>97.00%</td>
</tr>
<tr>
<td>PPA32A</td>
<td>32.0 micron</td>
<td>97.00%</td>
</tr>
</tbody>
</table>

How to Build a Valid Model Number for an Absolute Rated (PPA) Bag Element:

```
BOX 1  BOX 2  BOX 3  BOX 4  BOX 5  BOX 6
PEH  90  P  P2  SS  H = PEH90PP2SSH
```

Example: NOTE: One option per box

- **BOX 1**: Bag Material
  - PPA = Polypropylene Absolute Rated

- **BOX 2**: Micron Rating
  - 1A = 1m Absolute
  - 2A = 2m Absolute
  - 3A = 3m Absolute
  - 5A = 5m Absolute
  - 13A = 13m Absolute
  - 32A = 32m Absolute
  - 50A = 50m Absolute
  - 75A = 75m Absolute
  - 100A = 100m Absolute

- **BOX 3**: Cover Material
  - P = Plain, No Cover

- **BOX 4**: Bag Size
  - 2

- **BOX 5**: Collar Type
  - SS = Stainless Steel
  - PP = Polypropylene
  - P = P Flange
  - F = F Flange
  - OSS = OSS Flange

- **BOX 6**: Options
  - H = Handles (standard)
Our Bag Type High Flow Filter Cartridges are made of pleated polypropylene depth media and are designed with inside-out flow direction which is correspondent with the bag filter. The cartridges satisfy processes requiring high purity and possess high flow rates and long service life. Innovative push-in flanges enable quick and convenient replacements into most commercial bag filter housings. With advantages of high flow rate and purity, fewer change outs and lower maintenance costs are required.

- Convertible into most commercial bag filter housings, providing cost-saving options without hardware change
- High surface area design provides high flow capacity and longer service life
- Innovative push-in flanges enable quick and convenient change outs
- Inside-out flow effectively traps contaminants inside the elements
- Manufactured by advanced thermal welding techniques, cartridges are free of binders and additives

### Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Media</strong></td>
<td>Polypropylene</td>
</tr>
<tr>
<td><strong>Micron Rating</strong></td>
<td>1, 3, 5, 25 - 100 µm, 200 µm</td>
</tr>
<tr>
<td><strong>Gasket/O-Ring</strong></td>
<td>EPDM, Viton®</td>
</tr>
<tr>
<td><strong>Inside Diameter</strong></td>
<td>3.5” (90mm)</td>
</tr>
<tr>
<td><strong>Outside Diameter</strong></td>
<td>7.25” (184mm)</td>
</tr>
<tr>
<td><strong>Max. Operating Temperature</strong></td>
<td>160°F (70°C)</td>
</tr>
<tr>
<td><strong>Max. Differential Pressure</strong></td>
<td>75 psi at 68°F (5.1 bar at 29°C)</td>
</tr>
<tr>
<td></td>
<td>35 psi at 130°F (2.4 bar at 54°C)</td>
</tr>
<tr>
<td><strong>Recommended Change Out Differential Pressure</strong></td>
<td>35 psi at 130°F (2.4 bar at 54°C)</td>
</tr>
</tbody>
</table>
How to Build a Valid Model Number for a Bag Type High Flow Filter Cartridge:

**BOX 1**

**Unit Type**

**BR** = PP Fiber Pleated Filter Cartridge

**BOX 2**

**Series**

**SH** = Bag Type Series

**BOX 3**

**Micron Rating**

1 = 1 µm
3 = 3 µm
5 = 5 µm
25 = 25 µm
100 = 100 µm
200 = 200 µm

**BOX 4**

**Filter Media**

**P** = Polypropylene

**BOX 5**

**Nominal Length**

1 = Size 1 Bag
2 = Size 2 Bag
40 = 40" Length

**BOX 6**

**Gasket/O-Ring Option**

**E** = EPDM
**V** = Viton®

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR</td>
<td>SH</td>
<td>5</td>
<td>P</td>
<td>2</td>
<td>V</td>
</tr>
</tbody>
</table>

= BR-SH-5-P-2-V

Operating Data

Pressure Drop Information Based on Flow Rate and Viscosity

Gasket/O-Ring Option

Paraffin®
# Schroeder FSI Pall Crossover

<table>
<thead>
<tr>
<th>Product Family</th>
<th>Pall FSI Product</th>
<th>Schroeder Replacement xx = Micron Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felt Filter Bags</td>
<td>PONG PENG</td>
<td>Standard Felt Filter Bags PPFxxG or PEFxxS</td>
</tr>
<tr>
<td></td>
<td>POEX</td>
<td>Double layer felt bags PPFxxG or PEFxxS</td>
</tr>
<tr>
<td></td>
<td>PEEX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BHT</td>
<td>Standard Felt Liquid Bags NFO</td>
</tr>
<tr>
<td>Mesh Filter Bags</td>
<td>NMO</td>
<td>Standard Mesh Filter Bags NMO</td>
</tr>
<tr>
<td></td>
<td>PEM</td>
<td>Standard Mesh Filter Bags PEM</td>
</tr>
<tr>
<td></td>
<td>PMO</td>
<td>Standard Mesh Filter Bags PPM</td>
</tr>
<tr>
<td>Microfiber Filter Bags</td>
<td>POMF</td>
<td>Call for Quote</td>
</tr>
<tr>
<td>Seamless Bags</td>
<td>BOS</td>
<td>Call for Quote</td>
</tr>
<tr>
<td>Cartridges</td>
<td>VOREX (CMMF)</td>
<td>DCE</td>
</tr>
</tbody>
</table>
Cartridge Housings and Elements

Overview
Schroeder has depth filtration cartridges for fine filtration and the housings to fit. Standard cartridges are available in 10, 20, 30 and 40 inch lengths. These meltblown filters come in either a 2.5" or 4.5" diameter. Depth filter cartridges have larger openings towards the outside of the element and smaller openings near the center. This allows for higher dirt holding capacity to lengthen the life of the element.

Most common are the elements with a double open end (DOE). Cartridges with either a 222 o-ring seal or a FIN style are also available. The range of filtration on these elements is from 1 micron up to 100 microns. All of our elements are made from 100% pure polypropylene fibers to ensure high quality. Elements with center tubes for support are also available.

The housings for these elements are available with either a 100% polypropylene head and bowl or in electro-polished stainless steel.

The polypropylene housings accept either the 10" or 20" elements for both 2.5" and 4.5" diameter. The threaded head and bowl allow for quick and easy changing of the elements. Various sizes of NPT ports make installation quick and easy and allow flows up to 40 gpm depending upon the housing size. Because the housings are 100% polypropylene, they are tough and durable. The 2.5" housings are rated up to 125 psi (8.6 bar) at 140°F (60°C) while the 4.5" housings are rated for 100 psi (7.0 bar) at 140°F (60°C).

Stainless steel housings are used for higher flow rates and pressure up to 150 psi (10.0 bar) at 167°F (75°C). These larger housings hold seven elements in a circular array in all four standard lengths. The quick release clamp on the lid allows for easy changing of the elements while providing a tight seal. Each one comes standard with a gauge port in the lid. DOE and 222 style cartridges are accepted by these housings.

Both types of housing are durable, built to last in harsh conditions and have low clean pressure drops.

- 100% polypropylene construction
- Max operating temperature 167°F (75°C)
- Max pressure drop 46 psi (3.2 bar) @ 68°F (20°C)
- Recommended cartridge replacement at 22 psi (1.5 bar)
- Special lengths and micron ratings available upon request
- 222 o-ring seal, FIN style end caps and center support tubes available upon request

Features

• Four separate layers of density
• Large particles are filtered in outer layer that extends the cartridge life
• Smaller particles are filtered in the inner layer that ensures the filtration efficiency

Industries Served

- CHEMICAL PROCESSING
- INDUSTRIAL
- THERMAL TRANSFER
- POWER GENERATION
- PULP & PAPER
- STEEL MAKING
- WASTE WATER TREATMENT
**SW Series Precision Wound Filter Cartridges**

**Benefits:**
- Wide range of materials to ensure process compatibility
- Variety of sizes and configurations to ensure proper sizing, fit and sealing
- High sediment-holding-capacity for longer time between filter cartridges changes
- Continuous lengths up to 72" (183 cm)
- Technical Support
- Prompt deliveries

**Applications:**
- Potable water
- Process water
- Pre-filtration for membrane/reverse osmosis (RO) systems
- Food and beverage
- Chemicals, acids, bases
- Oils, fuels and solvents
- Plating solutions, electronics, circuit board
- Produced water and waste water; fracking

**Media:**
- Polypropylene
- Cotton
- Acrylic
- Rayon
- Nylon
- Polyester
- Fiberglass

**Cartridge ID:**
- 1.09" (2.8 cm) nominal std.
- 1.22" (3.1 cm) and 1.5" (3.8 cm) optional

**Cartridge OD:**
- 2" (5 cm) to 4½ (11.4 cm)

**Length:**
- 3" (7.6 cm) to 72" (183 cm)
  special lengths available

**Efficiency:**
- 90% nominal; 80% below 3 micron

**Maximum Differential Pressure:**
- 60 PSID (2 bar)

**Recommended Max Change-Out Differential Pressure**
- 30 PSID (2)

**Note:** Please contact factory for data on other media and fluids

**Max Temperature**

<table>
<thead>
<tr>
<th>Media</th>
<th>Polypro Core</th>
<th>Polyester Core</th>
<th>Tin Core</th>
<th>SST Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>180° F</td>
<td>180° F</td>
<td>180° F</td>
<td>180° F</td>
</tr>
<tr>
<td>Cotton</td>
<td>180° F</td>
<td>250° F</td>
<td>250° F</td>
<td>250° F</td>
</tr>
<tr>
<td>Acrylic</td>
<td>180° F</td>
<td>250° F</td>
<td>250° F</td>
<td>250° F</td>
</tr>
<tr>
<td>Rayon</td>
<td>180° F</td>
<td>275° F</td>
<td>275° F</td>
<td>275° F</td>
</tr>
<tr>
<td>Nylon</td>
<td>180° F</td>
<td>275° F</td>
<td>275° F</td>
<td>275° F</td>
</tr>
<tr>
<td>Polyester</td>
<td>180° F</td>
<td>300° F</td>
<td>300° F</td>
<td>300° F</td>
</tr>
<tr>
<td>Fiberglass</td>
<td>180° F</td>
<td>300° F</td>
<td>400° F</td>
<td>750° F</td>
</tr>
</tbody>
</table>

**Pressure Drop vs. Flow Rate**

(Polypropylene, Polyester and Nylon Media)

**Applications:**
- Potable water
- Process water
- Pre-filtration for membrane/reverse osmosis (RO) systems
- Food and beverage
- Chemicals, acids, bases
- Oils, fuels and solvents
- Plating solutions, electronics, circuit board
- Produced water and waste water; fracking
# SW Series Precision Wound Filter Cartridges

## How to Build a Valid Model Number for Cartridge Housings and Elements:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td>D</td>
<td>EC</td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box  

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td>D</td>
<td>EC</td>
<td></td>
</tr>
</tbody>
</table>

### Cartridge Type

- **SW** = Precision Wound Filter Cartridge

### Micron Rating

- 0.5
- 1
- 3
- 5
- 10
- 15
- 20
- 25
- 30
- 50
- 75
- 100
- 125
- 150
- 200

### Filter Media

- 01 = FDA Polypropylene
- 02 = Fibrillated Polypropylene
- 03 = Industrial Polypropylene
- 04 = Natural Cotton + Polyester
- 05 = White Cotton
- 06 = FDA Bleached Cotton
- 09 = Rayon
- 10 = Teflon
- 11 = Nylon
- 13 = Polyester
- 14 = Acrylic
- 15 = Glass Fiber
- 18 = Polyphenylene Sulfide PPS
- 20 = Antimicrobial Polypropylene
- 21 = meta-aramid Conex® (trademark of Teijin)
- 33 = EcoWound™ filter*

### Length (in.)

- 3.75
- 4
- 4.75
- 5
- 6
- 9.75
- 10
- 12
- 12.5
- 19.5
- 20
- 24.5
- 30
- 36
- 40
- 50
- 72

### Options

- **N** = Polyester Core Cover
- **NF** = Acrylic Resin Bonded Glass Nonwoven Core Cover
- **NN** = Nylon Core Cover
- **Y** = Polypropylene Core Cover
- **2SP** = 222 w/ plug
- **2SD** = 222 w/ disc
- **6SP** = 226 w/ plug
- **6SD** = 226 w/ disc
- **6SF** = 226 w/ fin
- **E** = Extended Core
- **EC** = End Caps PVC
- **ECP** = End Caps Polypro
- **P** = Plug In One Hand
- **SPR** = Polypro Spring
Cartridge Housings and Elements

**Media:** Polypropylene

**Material:** 100% Meltblown Micro PP Fiber

**Absolute Micron Ratings:**
- 1μm, 3μm, 5μm, 10μm, 20μm, 25μm, 30μm, 50μm, 75μm, 100μm, 150μm

**Inside Diameter:** 1.1 inch (28 mm)

**Outside Diameter:** 2.5 inch (63 mm)

**Maximum Differential Pressure and Temperature:**
- 58 psi at 68°F (4 bar at 20°C)
- 29 psi at 140°F (2 bar at 60°C)
- 14 psi at 176°F (1 bar at 80°C)

**Element Change Out:** 29 psid (2.1 bar diff)

**Maximum Operating Temperature:** 160°F (70°C)

**Efficiency:** 99.98%

---

**Filter Data**

**ΔP (psi)**

- 1μ: 0.43
- 3μ: 0.28
- 5μ: 0.23
- 10μ: 0.19
- 25μ: 0.14
- 50μ: 0.10
- 100μ: 0.06

---

**Filter and Media are sold separately.**
High Purity/Absolute Pleated Cartridges

Our Pleated Polypropylene Cartridges are designed to hold 6.5 square feet of filtration media, making these a great value. These cartridges are constructed with 100% polypropylene materials and are assembled using the latest thermal bonding equipment. Efficiency Rating is 99.98% (ß5000).

Typical Applications:
- Optimal for DEF Solutions
- Food and Beverage
- Photographic
- Deionized Water
- Reverse Osmosis Membrane
- Process Water
- Fine Chemicals
- Wastewater

Specifications

| Media: Polypropylene  |
| Material: 100% Meltblown Micro PP Fiber  |
| End Caps: Polypropylene  |
| Center Core: Polypropylene  |
| Outer Support Cage: Polypropylene  |
| O-Rings/Gaskets: Buna, Viton®, EPDM  |
| Length: 10 to 40 in. (25.4 to 101.6 cm) nominal  |
| Outside Diameter: 2.70 in. (7.0 cm) nominal  |
| Element Change Out: 35 psi (2.4 bar)  |
| Maximum Operating Temperature: 180°F (82°C)  |
| Efficiency: 99.98%  |

Pressure Drop Information

Based on Flow Rate and Viscosity

Graph showing differential pressure (PSID) against water flow rate (GPM) with various flow rates and viscosities indicated.
High Purity Pleated Polypropylene Cartridges

How to Build a Valid Model Number for a High Purity Pleated Polypropylene Cartridge:

BOX 1  BOX 2  BOX 3  BOX 4  BOX 5  BOX 6  BOX 7
PP  05  40  D  V  T  S

Example: NOTE: One option per box

BOX 1  BOX 2  BOX 3  BOX 4  BOX 5  BOX 6  BOX 7
PP 05 40 D V T S = PP0540DVTS

<table>
<thead>
<tr>
<th>Element</th>
<th>Micron Rating</th>
<th>Length (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP = Pleated polypropylene</td>
<td>S2 = 0.2 μm</td>
<td>10 = 10.0&quot;</td>
</tr>
<tr>
<td>High Efficiency</td>
<td>S45 = 0.45 μm</td>
<td>20 = 20.0&quot;</td>
</tr>
<tr>
<td>PPA = Pleated polypropylene</td>
<td>1 = 1 μm</td>
<td>30 = 30.0&quot;</td>
</tr>
<tr>
<td>Absolute</td>
<td>2 = 2 μm</td>
<td>40 = 40.0&quot;</td>
</tr>
<tr>
<td></td>
<td>5 = 5 μm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 = 10 μm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 = 20 μm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40 = 40 μm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>End Cap Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>B = DOE w/ Gasket and Caps</td>
</tr>
<tr>
<td>C = 222 w/ Spear</td>
</tr>
<tr>
<td>D = 222 w/ Closed Flat Cap</td>
</tr>
<tr>
<td>E = 222 w/ Spring</td>
</tr>
<tr>
<td>F = 226 w/ Closed Flat Cap</td>
</tr>
<tr>
<td>G = 226 w/ Spear</td>
</tr>
<tr>
<td>H = 226 w/ Spring</td>
</tr>
<tr>
<td>J = Polypropylene Extender</td>
</tr>
<tr>
<td>L = Spring</td>
</tr>
<tr>
<td>N = SOE Recessed Cap, internal 213 O-Ring</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>End Caps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 = DOE Flat Gasket</td>
</tr>
<tr>
<td>3 = 222 w/ Fin</td>
</tr>
<tr>
<td>4 = 222 w/ Flat Cap</td>
</tr>
<tr>
<td>5 = 222 w/ Spring</td>
</tr>
<tr>
<td>6 = 226 w/ Fin</td>
</tr>
<tr>
<td>7 = 226 w/ Spring</td>
</tr>
<tr>
<td>8 = 226 w/ Spring</td>
</tr>
<tr>
<td>10 = DOE w/ extended cover</td>
</tr>
<tr>
<td>16 = 213 Internal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>O-Rings</th>
</tr>
</thead>
<tbody>
<tr>
<td>B = Buna</td>
</tr>
<tr>
<td>E = EPDM</td>
</tr>
<tr>
<td>S = Silicone</td>
</tr>
<tr>
<td>V = Viton</td>
</tr>
<tr>
<td>T = Teflon</td>
</tr>
<tr>
<td>Encapsulated Viton</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>I = Stainless Steel</td>
</tr>
<tr>
<td>E = EPDM insert</td>
</tr>
<tr>
<td>S = Silicone HP - Heavy Poly Core</td>
</tr>
</tbody>
</table>
Cartridge Housings and Elements

**Max. Flow Rate:** 5-10 gpm (18.33 to 36.66 L/min)

**Max. Working Pressure:** 100 psi (7 bar)

**Max Temperature:** 167°F (75°C)

**Housing Material:** Polypropylene

**O-Ring Material:** Buna N

**Initial Pressure Drop:** 1 psi at 10 gpm

**Type of Element Accepted:** DOE

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>C inch (mm)</th>
<th>D inch (mm)</th>
<th>E inch (mm)</th>
<th>N3/N4</th>
<th>N5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH1210</td>
<td>15.8 (401.32)</td>
<td>3.5 (88.9)</td>
<td>4.5 (114.3)</td>
<td>¼&quot;</td>
<td>¼&quot;</td>
</tr>
<tr>
<td>CH1220</td>
<td>25.8 (655.32)</td>
<td>3.5 (88.9)</td>
<td>4.5 (114.3)</td>
<td>¼&quot;</td>
<td>¼&quot;</td>
</tr>
<tr>
<td>CH1230</td>
<td>35.8 (909.32)</td>
<td>3.5 (88.9)</td>
<td>4.5 (114.3)</td>
<td>¼&quot;</td>
<td>¼&quot;</td>
</tr>
</tbody>
</table>

**Specifications**

- **Cartridge Housing**
  - 1-5 gpm
  - 3.6-18.33 L/min
  - 125 psi
  - 9 bar

**Note:**
Drawings may change without notice. Contact factory for certified drawings.
Cartridge Housings and Elements

How to Build a Valid Model Number for a Single Cartridge PP Housing 2.5”:

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Box 1
- Filter Series: CH
- # of Cartridges: 1

Box 3
- Cartridge Diameter: 2 = 2" diameter
- Cartridge Length: 10 = 10"  20 = 20"  30 = 30"  40 = 40"

Box 5
- Housing Material: PP = Polypropylene head and bowl
  4 = SUS304
  6 = SUS316

Box 6
- Connection: 04 = 1/2"
  06 = 3/4"
  10 = 1"

Box 7
- O-Ring: B = Buna N
  E = EPDM
  S = Silicone
  V = Viton

Box 8
- Pressure: 1 = 150 psi

Box 9
- Options: N = Flat Bottom
  P = PR Button in Cap
  V = Drain with Plug

CH1210PP04B1V = \text{CH1210PP04B1V}
Cartridge Housings and Elements

CH3-CH7

0-123 gpm
0-467 L/min

100 psi
7 bar

150 psi
10 bar

NOTE: Drawings may change without notice. Contact factory for certified drawings.

Dimensions

<table>
<thead>
<tr>
<th>Cartridge Qty</th>
<th>Length Qty</th>
<th>A inch (mm)</th>
<th>B inch (mm)</th>
<th>C inch (mm)</th>
<th>D øinch (mm)</th>
<th>E inch (mm)</th>
<th>F inch (mm)</th>
<th>J øinch (mm)</th>
<th>K øinch (mm)</th>
<th>M inch (mm)</th>
<th>N3 inch</th>
<th>N4 inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH3220</td>
<td>3</td>
<td>20</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>35.04 (890)</td>
<td>7.09 (180)</td>
<td>11.81 (300)</td>
<td>6.30 (160)</td>
<td>0.35 (9)</td>
<td>9.29 (236)</td>
<td>3.35 (85)</td>
<td>¼</td>
</tr>
<tr>
<td>CH3230</td>
<td>3</td>
<td>30</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>45.08 (1145)</td>
<td>7.09 (180)</td>
<td>11.81 (300)</td>
<td>6.30 (160)</td>
<td>0.35 (9)</td>
<td>9.29 (236)</td>
<td>3.35 (85)</td>
<td>¼</td>
</tr>
<tr>
<td>CH7220</td>
<td>7</td>
<td>20</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>35.04 (890)</td>
<td>9.13 (232)</td>
<td>13.86 (352)</td>
<td>6.30 (160)</td>
<td>0.35 (9)</td>
<td>9.29 (236)</td>
<td>3.35 (85)</td>
<td>¼</td>
</tr>
<tr>
<td>CH7230</td>
<td>7</td>
<td>30</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>45.08 (1145)</td>
<td>9.13 (232)</td>
<td>13.86 (352)</td>
<td>6.30 (160)</td>
<td>0.35 (9)</td>
<td>9.29 (236)</td>
<td>3.35 (85)</td>
<td>¼</td>
</tr>
<tr>
<td>CH7240</td>
<td>7</td>
<td>40</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>55.12 (1400)</td>
<td>9.13 (232)</td>
<td>13.86 (352)</td>
<td>6.30 (160)</td>
<td>0.35 (9)</td>
<td>9.29 (236)</td>
<td>3.35 (85)</td>
<td>¼</td>
</tr>
</tbody>
</table>

Specifications

- Number of Elements per Housing: 3 or 7 Elements, 2" Diameter
- Max. Working Pressure: 100 psi (7 bar)
- Max Temperature: 150°F (75°C)
- Housing Material: Stainless Steel (304 or 316)
- Type of Elements Accepted: DOE (Double Open Ended), -222 O-ring
## Cartridge Housings and Elements

<table>
<thead>
<tr>
<th>Model #</th>
<th>Flow Rate</th>
<th>Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH3220</td>
<td>0-26 gpm (100 l/min)</td>
<td>40 lbs (18kg)</td>
</tr>
<tr>
<td>CH3230</td>
<td>0-40 gpm (150 l/min)</td>
<td>44 lbs (20kg)</td>
</tr>
<tr>
<td>CH7220</td>
<td>0-62 gpm (233 l/min)</td>
<td>55 lbs (25kg)</td>
</tr>
<tr>
<td>CH7230</td>
<td>0-92 gpm (350 l/min)</td>
<td>62 lbs (28kg)</td>
</tr>
<tr>
<td>CH7240</td>
<td>0-123 gpm (467 l/min)</td>
<td>68 lbs (31kg)</td>
</tr>
</tbody>
</table>

### How to Build a Valid Model Number for a Multi-Cartridge Housing, 100 psi:

- **BOX 1:** Filter Series
  - CH
- **BOX 2:** # of Cartridges
  - 3 = 3 pieces
  - 4 = 4 pieces
  - 12 = 12 pieces
- **BOX 3:** Cartridge Diameter
  - 2 = 2" diameter
- **BOX 4:** Cartridge Length
  - 05 = 5"
  - 10 = 10"
  - 20 = 20"
  - 30 = 30"
  - 40 = 40"

### Additional Information:
- **BOX 5:** Housing Material
  - 4 = SUS304
  - 6 = SUS316
  - 7 = SUS316L
- **BOX 6:** Connection
  - 10 = 1"
  - 15 = 1.5"
  - 20 = 2"
  - 25 = 2.5"
  - 30 = 3"
  - 40 = 4"
- **BOX 7:** O-Ring
  - B = Buna N
  - E = EPDM
  - S = Silicone
  - V = Viton
- **BOX 8:** Pressure
  - 0 = 100 psi
  - 1 = 150 psi
- **BOX 9:** Options
  - 1 = Standard Flat Gasket Double Open Ends & 2 - 222 O-ring Fin/Flat
  - 7 = No Bayonet 2-226 O-ring Fin/Flat
  - 9 = 2-226 O-ring Fin/Flat

**NOTE:** Elements must be purchased separately.
Cartridge Housings and Elements

150 psi  
10 bar

Dimensions

<table>
<thead>
<tr>
<th>Cartridge</th>
<th>Qty</th>
<th>Length</th>
<th>A inch (mm)</th>
<th>B inch (mm)</th>
<th>C inch (mm)</th>
<th>D øinch (mm)</th>
<th>E inch (mm)</th>
<th>J øinch (mm)</th>
<th>K øinch (mm)</th>
<th>M inch (mm)</th>
<th>N3 inch</th>
<th>N4 inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH3220</td>
<td>3</td>
<td>20</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>33.19 (843)</td>
<td>7.13 (181)</td>
<td>11.61 (300)</td>
<td>0.35 (9)</td>
<td>10.47 (266)</td>
<td>2.17 (55)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH3230</td>
<td>3</td>
<td>30</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>43.23 (1096)</td>
<td>7.13 (181)</td>
<td>11.61 (300)</td>
<td>0.35 (9)</td>
<td>10.47 (266)</td>
<td>2.17 (55)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH3240</td>
<td>3</td>
<td>40</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>53.27 (1353)</td>
<td>7.13 (181)</td>
<td>11.61 (300)</td>
<td>0.35 (9)</td>
<td>10.47 (266)</td>
<td>2.17 (55)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH7220</td>
<td>7</td>
<td>20</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>33.58 (853)</td>
<td>9.13 (232)</td>
<td>14.09 (358)</td>
<td>0.35 (9)</td>
<td>11.34 (288)</td>
<td>2.56 (65)</td>
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<tr>
<td>CH7230</td>
<td>7</td>
<td>30</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>43.62 (1108)</td>
<td>9.13 (232)</td>
<td>14.09 (358)</td>
<td>0.35 (9)</td>
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<td>2.56 (65)</td>
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<tr>
<td>CH7240</td>
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<td>40</td>
<td>11.02 (280)</td>
<td>4.72 (120)</td>
<td>53.66 (1363)</td>
<td>9.13 (232)</td>
<td>14.09 (358)</td>
<td>0.35 (9)</td>
<td>11.34 (288)</td>
<td>2.56 (65)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications

Number of Elements per Housing: 3 or 12 Elements, 2\* Elements

Max. Working Pressure: 150 psi (10 bar)

Max Temperature: 167°F (75°C)

Housing Material: Stainless Steel (304 or 316)

Type of Elements Accepted: DOE (Double Open Ended), -222 O-ring

NOTE: Drawings may change without notice. Contact factory for certified drawings.
## Cartridge Housings and Elements

<table>
<thead>
<tr>
<th>Model #</th>
<th>Flow Rate</th>
<th>Volume</th>
<th>Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH3220</td>
<td>0-26 gpm (100 l/min)</td>
<td>7.13 gal (27L)</td>
<td>66 lbs (30kg)</td>
</tr>
<tr>
<td>CH3230</td>
<td>0-40 gpm (150 l/min)</td>
<td>9.51 gal (36L)</td>
<td>77 lbs (35kg)</td>
</tr>
<tr>
<td>CH3240</td>
<td>0-53 gpm (200 l/min)</td>
<td>11.88 gal (45L)</td>
<td>88 lbs (40kg)</td>
</tr>
<tr>
<td>CH7220</td>
<td>0-62 gpm (233 l/min)</td>
<td>8.96 gal (34L)</td>
<td>77 lbs (35kg)</td>
</tr>
<tr>
<td>CH7230</td>
<td>0-92 gpm (350 l/min)</td>
<td>11.88 gal (45L)</td>
<td>88 lbs (40kg)</td>
</tr>
<tr>
<td>CH7240</td>
<td>0-123 gpm (467 l/min)</td>
<td>14.52 gal (55L)</td>
<td>101 lbs (46kg)</td>
</tr>
</tbody>
</table>

---

### How to Build a Valid Model Number for a Multi-Cartridge Housing, 100 psi:

**BOX 1**

- **Filter Series**
  - CH

**BOX 2**

- **# of Cartridges**
  - 3 = 3 pieces
  - 4 = 4 pieces
  - Up To
  - 12 = 12 pieces

**BOX 3**

- **Cartridge Diameter**
  - 2 = 2" diameter

**BOX 4**

- **Cartridge Length**
  - 10 = 10"
  - 20 = 20"
  - 30 = 30"
  - 40 = 40"

**BOX 5**

- **Housing Material**
  - 4 = SUS304
  - 6 = SUS316
  - 7 = SUS316L

**BOX 6**

- **Connection**
  - 10 = 1"
  - 15 = 1.5"
  - 20 = 2"
  - 25 = 2.5"
  - 30 = 3"
  - 40 = 4"

**BOX 7**

- **O-Ring**
  - B = Buna N
  - E = EPDM
  - S = Silicone
  - V = Viton

**BOX 8**

- **Pressure**
  - 1 = 150 psi

**BOX 9**

- **Options**
  - 1 = Standard Flat Gasket Double Open Ends & 2 - 222 O-ring Fin/Flat
  - 7 = No Bayonet 2-226 O-ring Fin/Flat
  - 9 = 2-226 O-ring Fin/Flat

---

**NOTE:** elements must be purchased separately.
Cartridge Housings and Elements

Specifications

Number of Elements per Housing: 12, 14, 18, 20, or 24, 2” Diameter

Max. Working Pressure: 150 psi (10 bar)

Max Temperature: 167°F (75°C)

Housing Material: Stainless Steel (304 or 316)

5-40 gpm
18.33-150
L/min
150 psi
10 bar

Dimensions

<table>
<thead>
<tr>
<th>Cartridge Qty</th>
<th>Cartridge Length</th>
<th>Cartridge Qty</th>
<th>Cartridge Length</th>
<th>Cartridge Qty</th>
<th>Cartridge Length</th>
<th>Cartridge Qty</th>
<th>Cartridge Length</th>
<th>Cartridge Qty</th>
<th>Cartridge Length</th>
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</thead>
<tbody>
<tr>
<td>CH12240</td>
<td>12</td>
<td>40</td>
<td>27.56</td>
<td>13.78</td>
<td>68.03</td>
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<td>19.69</td>
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<td></td>
<td>700</td>
<td>(350)</td>
<td>700</td>
<td>(350)</td>
<td>1728</td>
<td>(500)</td>
<td>(14)</td>
<td>410</td>
<td>(153)</td>
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<tr>
<td>CH14240</td>
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<td>700</td>
<td>(350)</td>
<td>1950</td>
<td>(406)</td>
<td>(14)</td>
<td>516</td>
<td>(380)</td>
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<td>CH18240</td>
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<td>40</td>
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<td>76.77</td>
<td>15.98</td>
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<td>1950</td>
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<td>(14)</td>
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<td>(380)</td>
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<td>40</td>
<td>27.56</td>
<td>13.78</td>
<td>76.77</td>
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<td>700</td>
<td>(350)</td>
<td>1950</td>
<td>(406)</td>
<td>(14)</td>
<td>516</td>
<td>(380)</td>
</tr>
<tr>
<td>CH24240</td>
<td>24</td>
<td>40</td>
<td>27.56</td>
<td>13.78</td>
<td>76.97</td>
<td>19.13</td>
<td>27.01</td>
<td>0.55</td>
<td>23.46</td>
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<tr>
<td></td>
<td>700</td>
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<td>700</td>
<td>(350)</td>
<td>1955</td>
<td>(486)</td>
<td>(14)</td>
<td>596</td>
<td>(385)</td>
</tr>
</tbody>
</table>

*Max flow rate is dependent on type of media, particle selection required, fluid viscosity and volume of contamination.
Cartridge Housings and Elements

<table>
<thead>
<tr>
<th>Model #</th>
<th>Flow Rate</th>
<th>Volume</th>
<th>Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH12240</td>
<td>0-200 gpm (755 l / min)</td>
<td>28.00 gal (107L)</td>
<td>187 lbs (85kg)</td>
</tr>
<tr>
<td>CH14240</td>
<td>0-240 gpm (900 l / min)</td>
<td>50.00 gal (198L)</td>
<td>275 lbs (125 kg)</td>
</tr>
<tr>
<td>CH18240</td>
<td>0-310 gpm (1170 l / min)</td>
<td>50.00 gal (198L)</td>
<td>275 lbs (125 kg)</td>
</tr>
<tr>
<td>CH20240</td>
<td>0-350 gpm (1320 l / min)</td>
<td>50.00 gal (198L)</td>
<td>275 lbs (125 kg)</td>
</tr>
<tr>
<td>CH24240</td>
<td>0-415 gpm (1565 l / min)</td>
<td>75.00 gal (286L)</td>
<td>320 lbs (145 kg)</td>
</tr>
</tbody>
</table>

How to Build a Valid Model Number for a Multi-Cartridge Housing:

Example: NOTE: One option per box

CH 4 2 10 6 15 B 0 7 = CH14210615B07

Filter Series
- CH

# of Cartridges
- 13 = 13 pieces
- 14 = 14 pieces
- 15 = 15 pieces
- Up To
- 173 = 173 pieces

Cartridge Diameter
- 2 = 2" diameter

Cartridge Length
- 10 = 10"
- 20 = 20"
- 30 = 30"
- 40 = 40"

Housing Material
- 4 = SUS304
- 6 = SUS316
- 7 = SUS316L

Connection
- 10 = 1"
- 15 = 1.5"
- 20 = 2"
- 25 = 2.5"
- 30 = 3"
- 40 = 4"
- Z = 10"
- 21 = 11"
- Up To
- 25 = 15"

O-Ring
- B = Buna N
- E = EPDM
- S = Silicone
- V = Viton

Pressure
- 1 = 150 psi

Options
- Standard Flat Gasket Double Open Ends & 2-222 O-ring Fin/Flat
- No Bayonet 2-226 O-ring Fin/Flat
- 2-226 O-ring Fin/Flat
The Rolling Media Filter (RMF) provides a highly efficient and reliable means of removing solids from process liquids. This filter is a non pressurized system which is economical and easy to operate. It can handle occasional system upsets or overloads without blinding the filter media.

The RMF is a fully automatic system that ensures efficient cleaning of any process fluid. It optimizes the amount of media used at the same time. The solids are discharged as a cake for easy handling and disposal.

The liquid to be filtered is pumped or gravity fed into inlet. It is then distributed to the flood box, which slows the velocity and discharges the liquid over the entire width of the filter media. The liquid filters through the media, and the solids are left behind collecting on the filter media surface. The clean liquid is discharged through the outlet into a tank or discharged into an open system.

As the solids are collected on the filter media, the liquid level rises to a preset level. A level sensor initiates an index cycle and fresh media is indexed displacing a portion of the spent media. The media is then discharged to a waste container.

---

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>A (inches)</th>
<th>A (mm)</th>
<th>B (inches)</th>
<th>B (mm)</th>
<th>C (inches)</th>
<th>C (mm)</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMF70</td>
<td>37.00</td>
<td>940</td>
<td>30.00</td>
<td>762</td>
<td>43.25</td>
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<td>71</td>
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<tr>
<td>RMF145</td>
<td>34.25</td>
<td>870</td>
<td>40.00</td>
<td>1016</td>
<td>52.75</td>
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<td>146</td>
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<td>RMF210</td>
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<td>870</td>
<td>52.00</td>
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<td>52.75</td>
<td>1340</td>
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<tr>
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<td>870</td>
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<td>52.75</td>
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<tr>
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<td>41.75</td>
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<td>RMF400</td>
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<td>65.75</td>
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<td>500</td>
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<tr>
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<td>83.00</td>
<td>2108</td>
<td>65.75</td>
<td>1670</td>
<td>600</td>
</tr>
</tbody>
</table>
Rolling Media Filtration

Construction Material: Epoxy coated, Carbon steel
Conveyor Material: 304 stainless steel
Seal Wheels: Aluminum

How to Build a Valid Model Number for a Rolling Media Filtration:

```
BOX 1  BOX 2  BOX 3  BOX 4  BOX 5  BOX 6
RMF  
```
Example: NOTE: One option per box
```
RMF  70  AL  CS  N  C = RMF70ALCSNC
```

Filter Series
RMF

Filter Size
70 = 70 gpm
145 = 145 gpm
210 = 210 gpm
275 = 275 gpm
300 = 300 gpm
350 = 350 gpm
400 = 400 gpm
500 = 500 gpm
600 = 600 gpm

Wheel Material
AL = Aluminum
SS = Stainless Steel

Housing Material
CS = Carbon Steel
SS = Stainless Steel

Wheel Seals
N = Neoprene
T = Teflon

Options
O = None
C = Cover
M = Media Recovery System
D = Contamination Dryer

How to Build a Valid Model Number for a Schroeder RMF Media:

```
BOX 1  BOX 2  BOX 3  BOX 4  BOX 5
RMF  
```
Example: NOTE: One option per box
```
RMF  RM  07  27 = RMFRM0727
```

Filter Series
RMF

Replacement Type
RM = Roll Media

Micron Rating
07 = 7 μm
12 = 12 μm
14 = 14 μm
18 = 18 μm
28 = 28 μm
50 = 50 μm
200 = 200 μm

Roll Width
27 = 27" Wide (BWC 70/145)
39 = 39" Wide (BWC 210/300)
51 = 51" Wide (BWC 400)
60 = 60" Wide (BWC 500)
70 = 70" Wide (BWC 600)
Oil & Gas Products

The Pit Purification Solution (PPS) is a portable unit providing staged filtration for cleaning drill water. All filters are made of coated carbon steel or non-corrosive stainless steel. The operating system is simple. The water to be cleaned passes through a series of filters providing progressively finer filtration. The final filtration is achieved by bag filtration, which can easily be changed to a micron rating of the user’s choice.

The drill water first passes through a twist flow strainer (ATF), which is effective at removing coarse particles through a unique inlet arrangement and housing design that uses a centrifugal separator and an inline filter to separate solids from the fluid. Raw water enters tangentially to create a cyclonic flow. Centrifugal force moves the larger, heavier particles to the housing wall where they are accelerated downward by the decreasing diameter of the housing. While the larger, heavier particles are forced against the outer wall of the housing then down and out of the unit, the lighter, smaller particles can pass through the 200 micron slotted tube element in the center of the housing and move on to the backflushing filter (RF3).

The water then enters a backflushing filter (RF3) that captures solid particulate that are smaller in size. Slotted, conical tube element allows for efficient backwash. The “Wedge Wire” design of the elements provides for a wider opening on the effluent or downstream side of the element. This precludes particles becoming lodged and blinding the element. In the PPS, the RF3 is fitted with 50 micron slotted tube elements. A rotating arm allows a reverse jet of water through the elements to provide a back wash flow to the elements. Because of the way these first two filters operate, they have the added bonus of not requiring the elements to be replaced, and thus can remain functional indefinitely.

Next in line is a duplex bag filter housing, which features an extremely high dirt holding capacity. Filtered water from the RF3 passes to the duplex bag filters. Water passes through a progressively tighter series of bag elements: 25, 15 and 10 micron. Unlike the first two mechanical filters, the bag filters will need to be changed out periodically when they are full or there is indication of pressure drop at the bag housings. From the bag housings, the filtered water is delivered into a storage container for use at the driller’s discretion.

The PPS can also include an optional last filter, the Schroeder Qsize Filter. This filter, which utilizes element cartridges that are 39” in length, is available in several micron ratings, and can provide another level of fine filtration if necessary.
■ Provides a cost-effective means to filter wastewater from drilling operations

■ On-site filtration helps to mitigate costly hauling charges

■ Promotes the closed-loop water reuse concept (protects local resources and offers cost reduction to the drilling industry)
Mining Products

For 65 years, Schroeder Industries has been providing superior filtration solutions to the mining industry. With the addition of the Longwall High Pressure Filter (LW60) and numerous BestFit™ elements for longwall shields and pump cars (MSB and SBF) to its product line, Schroeder is your turnkey filtration supplier for all mining applications.

Detailed product information on the LW60 and the BestFits for lining applications is provided on the following pages. For information on the RF3 backflushing filter, consult Schroeder’s Process Filtration Catalog (L-2728). For information on the WQLF15, QT and QLF15/QF15, please consult Schroeder’s Filtration Products Catalog (L-2520).
Mining Products

Schroeder Industries currently manufactures over 1,800 BestFit™ performance replacement elements. In addition, Schroeder produces all of the technical data to support the sale of these products. The BestFit™ family consists of standard elements, cartridge repair elements and the new SchroederSpun process filtration elements, as well as, mining specific elements. The following products are currently available for the mining industry:

Longwall Pump Car BestFits™

<table>
<thead>
<tr>
<th>Schroeder BestFit™ P/N</th>
<th>Micron Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSB-1394-2050B</td>
<td>50</td>
</tr>
<tr>
<td>MSB-1394-20100B</td>
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<td>SBF-SALL-40Z150B</td>
<td>150</td>
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<td>SBF-SALL-40Z10B</td>
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<tr>
<td>SBF-WS3L-150PSB</td>
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<td>SBF-SALL-250PSB</td>
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</table>

Shield Element BestFits™

<table>
<thead>
<tr>
<th>Schroeder BestFit™ P/N</th>
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<tbody>
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<td>MSB-3185-425B</td>
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<tr>
<td>MSB-10266-5100B</td>
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</tr>
</tbody>
</table>
**Filter Housing Specifications**

- **Flow Rate:** Up to 300 gpm (1135 L/min) for use with 95/5 fluids
- **Max. Operating Pressure:** 6,000 psi (400 bar)
- **Min. Yield Pressure:** 18,000 psi (1240 bar)
- **Rated Fatigue Pressure:** 4500 psi (310 bar)
- **Temp. Range:** -20°F to 225°F (-29°C to 107°C)
- **Bypass Setting:**
  - Cracking: 50 psi (3.4 bar)
  - LWN60 non-bypassing model available with high crush element
- **Porting Cap & Housing Cap:** Steel
- **Element Change Clearance:** 34.0” (864 mm)
- **Weight:** 550 lb (250 kg)

**Element Performance Information**

<table>
<thead>
<tr>
<th>Element</th>
<th>Abs. Rating wrt ISO 16889 Using APC calibrated per ISO 11171 B1 (c) 1000</th>
<th>Dirt Holding Capacity (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>39ZPZ3V</td>
<td>5.1</td>
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<tr>
<td>39ZPZ5V</td>
<td>6.1</td>
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<tr>
<td>39ZPZ10V</td>
<td>12.1</td>
<td>429</td>
</tr>
<tr>
<td>39ZPZ25V</td>
<td>17.7</td>
<td>284</td>
</tr>
</tbody>
</table>

- **Element Collapse Rating:** 150 psi (10 bar)
- **Flow Direction:** Outside In
- **Element Nominal Dimensions:** 50” (127 mm) O.D. x 38” (365 mm) long

**Fluid Compatibility**

- Specifically designed for use with 95/5 fluids in mining longwall applications
Horizontal alignment allows straight-through flow, maximizing efficiency and minimizing pressure drop.

Proprietary synthetic media designed specifically for the mining industry, Excellement®-MD, provides level of filtration not achievable using alternative wire mesh elements because of their lack of absolute ratings.

Two-inch BSPP ports are easily adaptable to Super Stecko fittings commonly used underground.

Stainless steel bypass valve that ensures smooth integration with 95/5 fluid.

Non-bypassing version available with high crush (4500 psid) cleanable metal mesh (25 micron) element.

---

**Longwall Filter**

**Features**

Excellement MD

Mining

Specific Elements

---

**Element Selection Based on Flow Rate**

Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 50 psi (3.4 bar) bypass valve.

<table>
<thead>
<tr>
<th>Pressure</th>
<th>Series</th>
<th>Z Media</th>
<th>Element Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6000 psi</td>
<td>Z Media</td>
<td>39ZPZ3V</td>
<td>39ZPZ5V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>39ZPZ10V</td>
<td>39ZPZ25V</td>
</tr>
</tbody>
</table>

Flow

<table>
<thead>
<tr>
<th>gpm</th>
<th>(L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>150</td>
<td>600</td>
</tr>
<tr>
<td>200</td>
<td>800</td>
</tr>
<tr>
<td>250</td>
<td>1000</td>
</tr>
<tr>
<td>300</td>
<td>1150</td>
</tr>
</tbody>
</table>

**Pressure Drop Information Based on Flow Rate and Viscosity**

\[ \Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}} \]

Exercise:

Determine \( \Delta P \) at 250 gpm (950 L/min) LW6039ZPZ3V3B32 using 150 SUS (32 cSt) fluid.

Solution:

\( \Delta P_{\text{housing}} = 0.7 \text{ psi} [0.05 \text{ bar}] \)

\( \Delta P_{\text{element}} = 250 \times 0.06 \times (150 - 150) = 150 \text{ psi} \)

or

\( \Delta P_{\text{element}} = [250 \times (0.06 - 54.9) \times (32 - 32)] = 1.1 \text{ bar} \)

\( \Delta P_{\text{total}} = 0.7 + 15.0 = 15.7 \text{ psi} \)

or

\( = [0.05 + 1.1] = 1.15 \text{ bar} \)

\( \Delta P = \text{flow} \times \text{element} \times \text{viscosity factor} \)

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

Please note that 95/5 fluid has a lower viscosity than 150 SUS and therefore pressure drops for 95/5 will actually be lower.

---

**Filter Model Number Selection**

<table>
<thead>
<tr>
<th>Filter Series</th>
<th>Element Part Number</th>
<th>Porting</th>
<th>Bypass Setting</th>
<th>Dirt Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td>LW60</td>
<td>39ZPZ3V</td>
<td>B32=ISO 228 G-2&quot; (2-11 BSPP)</td>
<td>(Omit)= 50 psi Cracking 30 = 30 psi cracking</td>
<td>DPG= Differential Pressure Gauge</td>
</tr>
<tr>
<td></td>
<td>39ZPZ5V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>39ZPZ10V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>39ZPZ25V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LWN60</td>
<td>39ZPMX25V</td>
<td>B32=ISO 228 G-2&quot; (2-11 BSPP)</td>
<td>(Omit)= Blocked</td>
<td>DPG= Differential Pressure Gauge</td>
</tr>
</tbody>
</table>
Mining Specific Elements

The multiple layer construction shown below has evolved from comprehensive laboratory testing to provide extended element life and system protection. Each successive layer performs a distinct and necessary function. The outermost layer is designed to maintain element integrity. Beyond this layer, is a spun-bonded scrim, offering coarse filtration and protection for the more delicate filtering layers within. Multiple sheets of fine filtering media follow, providing intricate passageways for the entrapment of dirt particles. When combined, the layers of the Excellement®-MD filter media provide the ideal formulation for filtration performance used in severe mine duty applications. Through the addition of new materials, the strength of our media has been improved when applied in water based fluids. Soak testing in 95/5 fluids proves that Excellement-MD media scrim and wire mesh maintain their integrity. This new media will provide better protection for the valves on the longwall shields and extend the pilot element’s service life in any longwall application.

Additional Performance Information

<table>
<thead>
<tr>
<th>Element</th>
<th>Abs. Rating wrt ISO 16889 Using APC calibrated per ISO 11171 B, (c) 1000</th>
<th>Dirt Holding Capacity (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>39ZPZ3V</td>
<td>5.1</td>
<td>449</td>
</tr>
<tr>
<td>39ZPZ5V</td>
<td>6.1</td>
<td>359</td>
</tr>
<tr>
<td>39ZPZ10V</td>
<td>12.1</td>
<td>429</td>
</tr>
<tr>
<td>39ZPZ25V</td>
<td>17.7</td>
<td>284</td>
</tr>
</tbody>
</table>

Element Collapse Rating: 150 psid (10 bar)

Flow Direction: Outside In

Element Nominal Dimensions: 5.0” (127 mm) O.D. x 38” (965 mm) long

*Elements also used in LW60
**Mining Specific Elements**

**Schroeder Part Number:** MSB-1298-280B (80 μ)

- Max Pressure: 6,000 psi (400 bar)
- Max Differential Pressure: 6,000 psid (400 bar)
- Crush Rating: >6,000 psid
- End Caps: Stainless Steel
- Support Tubes: Stainless Steel
- Metal Mesh: Stainless Steel Wrap
- O-Ring: Buna N
- Back-up Ring: Nylon
- Flow Rating: See Graph
- Filter Rating: 80 micron

*Contact factory for additional filter ratings

**Schroeder Part Number:** MSB-05841-340B (40 μ)

- Max Pressure: 6,000 psi (400 bar)
- Max Differential Pressure: 6,000 psid (400 bar)
- Crush Rating: >6,000 psid
- End Caps: Stainless Steel
- Support Tubes: Stainless Steel
- Metal Mesh: Stainless Steel
- O-Ring: Buna N
- Flow Rating: See Graph
- Filter Rating: 40 micron

*Contact factory for additional filter ratings
Mining Specific Elements

Schroeder Part Numbers: MSB-3077-525B (25 µ), MSB-3077-540B (40 µ), MSB-1330-325B (25 µ), MSB-1330-340B (40 µ), MSB-1330-380B (80 µ) & MSB-1330-100B (100 µ).

Specifications

Max Pressure: 5,000 psi (350 bar)
Max Flow Rate: 40 gpm (150 L/min)
Filter Rating: 25/40 Micron
End Caps: Stainless Steel
Support Tubes: Stainless Steel
Metal Mesh: Stainless Steel Pleated
O-Ring: Buna N
Back-up Ring: Nylon

Max Pressure: 6,000 psi (400 bar)
Max Differential Pressure: 5000 psid (350 bar)
Max Flow Rate: 48 gpm (180 L/min)
Filter Rating: 25/40/80/100 Micron
End Caps: Stainless Steel
Support Tubes: Stainless Steel
Metal Mesh: Stainless Steel Wrap
O-Ring: Buna N
Back-Up Ring: Nylon
Support Ring: Stainless Steel

*Contact factory for additional filter ratings

Pressure Drop

Schroeder Part Numbers: MSB-3077-525B (25 µ), MSB-3077-540B (40 µ), MSB-1330-325B (25 µ), MSB-1330-340B (40 µ), MSB-1330-380B (80 µ) & MSB-1330-100B (100 µ).
Mining Specific Elements

Schroeder Part Number: MSB-3060-340B (40 μ)

Specifications

- Micron Rating: 40 micron
- Max Pressure: 4,500 psi (310 bar)
- Max Differential Pressure: 4,000 psid (310 bar)
- Crush Rating: >4500 psid
- End caps: Stainless Steel
- Support Tubes: Stainless Steel
- Metal Mesh: Stainless Steel
- O-Ring: Buna N
- Flow Rating: See Graph
- Filter Rating: 40 micron

*Contact factory for additional filter ratings

Schroeder Part Number: MSB-3176-225B (25 μ)

Specifications

- Max Pressure: 5,000 psi (350 bar)
- Max Differential Pressure: 5,000 psid (350 bar)
- Competition fails at: 1500 psid (103 bar)
- Max Flow Rate: 0.5 gpm (2 L/min)
- Filter Rating: 25 Micron
- Body: Stainless Steel
- Metal Mesh: Stainless Steel Wrap
- O-Ring: Buna N
- Back-Up Ring: Nylon

*Contact factory for additional filter ratings
Mining Specific Elements

Schroeder Part Numbers: SBF-WS3L-150PSB (150 μm) & SBF-WE3L-Z10B (10 μm)

**Specifications**

- **Micron Rating:**
  - SBF-WS3L-150PSB: 150μm
  - SBF-WE3L-Z10B: 10μm

- **Collapse Rating:** 150 psid (min)

- **End Cap:** Anodized Aluminum

- **Outer Support Tube:** Stainless Steel

- **Filter Media:**
  - SBF-WS3L-150PSB: 150μm synthetic
  - SBF-WE3L-Z10B: 150μm synthetic

- **O-Ring:** Buna N

*Contact factory for additional filter ratings

Schroeder Part Number: SBF - SALL - 40Z150B & SBF- SALL - 40Z10B

**Specifications**

- **Micron Rating:**
  - SBF-SALL-40Z150B: 150μm
  - SBF-SALL-40Z10B: 10μm

- **Collapse Rating:** Not Rated

- **End Caps:** Anodized Aluminum

- **Support Tube:** None

- **Filter Media:**
  - SBF-SALL-40Z150B: 150μm synthetic
  - SBF-SALL-40Z10B: 10μm synthetic

- **O-Ring:** Buna N

*Contact factory for additional filter ratings
Mining Specific Elements

Schroeder Part Numbers: MSB-3070-225 (25 μ), MSB-3070-240 (40 μ), MSB-3070-280 (80 μ) & MSB-3070-2100 (100 μ)

Specifications

- Max Pressure: 5,000 psi (350 bar)
- Max Differential Pressure: 5,000 psid (350 bar)
- Max Flow Rate: 52 gpm (200/L/min)
- Filter Rating: 25/40/80/100 Micron
- End Caps: Stainless Steel
- Support Tubes: Stainless Steel
- Metal Mesh: Stainless Steel Wrap
- Support Ring: Stainless Steel

*Contact factory for additional filter ratings

Schroeder BestFit™ P/N
- SBF-PF3L-Z12B
- SBF-WE3L-Z60B

Seebach Element P/N
- SA12MB-PF3L-95/5
- SA75FBWE3L-Water

Seebach Filter
- Triple "L" Filter
- Triple "L" Filter

Micron Rating:
- SBF-PF3L-Z12B: 12μm
- SBF-WE3L-Z60B: 60μm

Collapse Rating: 150 psi (min)

End Cap: Anodized Aluminum

Support Tube:
- SBF-PF3L-Z12B: Cold Roll Steel
- SBF-WE3L-Z60B: Stainless Steel

Filter Media:
- SBF-PF3L-Z12B: 12μm synthetic
- SBF-WE3L-Z60B: 150μm synthetic

O-Ring: Buna N

*Contact factory for additional filter ratings
Mining Specific Elements

Schroeder Part Number: MSB-3185-425B (25 μ)

Specifications

Max pressure: 5000 psi (350 bar)
Max Differential Pressure: 5000 psid (350 bar)
Max flow Rate: 105 gpm (400 l/min.)
Filter Rating: 25 micron
Material: Body - Stainless Steel Metal Mesh - Stainless Steel Wrap O-Ring - Buna N Back-Up Ring - Nylon

*Contact factory for additional filter ratings
**Materials of Construction for Housings, Elements and Seals**

**Carbon steel without coating** – General purpose for non-corrosive and non-oxidizing liquids.

**Carbon steel with protective internal coating** – This internal coating protects against UV, abrasion and corrosion, and should be specified for water applications, such as river water, service water, cooling water, clear run water from sewage treatment facilities, etc.

**304 Series stainless steel** – Widely available, good general corrosion resistance, good cryogenic toughness. Excellent formability and weldability.

**316 Series (L and Ti) stainless steel** – Widely available, good general corrosion resistance, good cryogenic toughness. Excellent formability and weldability.


**PTFE / Teflon® (a registered trademark of DuPont Dow Elastomers)** – General-purpose thermoplastic (Polytetrafluoroethylene) for use as a low friction, insulating product that is inert to most chemical substances.

**Buna N / NBR (nitrile)** – General purpose elastomer for use as seal energizer or low-pressure applications, such as hydraulics and pneumatics. Resistant to oils, hydraulic fluids, water fuels, gases, petroleum oils, cold water, silicone greases and oils. Di-ester base lubricants (MIL-L-7808), ethylene glycol base fluids (Hydrolubes) not suited for use in brake fluids. Good abrasion resistance. Good resistance to compression set. High tensile strength. Characteristics: Rubber-like elastomer. Dull, matte finish. Some NBR o-rings have a very shiny surface.

**Silicone** – General-purpose elastomer for use as seal material. Resists water and many chemicals such as some acids, oxidizing chemicals, ammonia and isopropyl alcohol. Note: concentrated acids, alkalines and solvents should not be used with silicone rubber. Characteristics: Soft rubber-like elastomer. High tear and tensile strength, good elongation, excellent flexibility.

**Viton® (a registered trademark of DuPont Dow Elastomers)** – Widely available elastomer for use as seal energizer or low-pressure applications, such as process fluids, hydraulics and pneumatics. Highly resistant to many aggressive fluids, such as fuels and chemicals. Characteristics: Rubber-like elastomer. ISO 9000 registration.

**EPDM (Ethylene Propylene Diene)** – Versatile and widely used synthetic rubber recognized for its resistance to heat, oxidation, weather, and electricity. Compatible with water, acids, alkalies, phosphate esters and many ketones and alcohols.

**Cleaning Reusable Filter Elements** – The cleaning methods for the reusable elements depend upon the type of service and the filter element design. The individual cleaning methods described here can be combined to achieve better results. It is not advisable to attempt most of these cleaning methods without the proper equipment and training. There are competent organizations best suited for this type of work. Upon request, we will provide a cleanliness certificate, including the results of a bubble-point test as well as the clean and fully laden element weights.

**Pyrolysis** – This method is based upon the removal of organic materials imbedded within the element. Organic material is vaporized at high temperature in an oxygen-depleted atmosphere. Exact control of the temperature and oxygen content is required to avoid damage to the element of the possibility of flame generation.

**Vacuum Pyrolysis** – This method is based upon the removal of plastic materials imbedded within the element using a two-step process. Organic material is vaporized at high temperature in an oxygen-depleted atmosphere within a vacuum chamber. In this process the material to be removed is melted into liquid and evacuated via vacuum in the first step, then further heating vaporizes the remaining material in the second step. Exact control of the vacuum, temperature and oxygen content is required to avoid damage to the element of the possibility of flame generation.

**Boil Off** – This method is based upon a process similar to a commercial dishwasher. Constant flowing of a flushing liquid (typically a solvent) at high temperature ensures removal of particles.

**High Pressure Wash** – This method is used mainly for the removal of coarse particles from the filter elements. It can be a manual or automatic process depending on the equipment available. A standard high pressure using water or water-based solvents can be used taking care not to damage the element. The wash direction must be consistent with the flow direction of the element.

**Ultrasonic Cleaning** – This method utilizes an ultrasonic bath, which easily loosens the particles imbedded in the filter element. Using water with a detergent additive, a 20 to 40 Hz frequency is recommended. Solvents other than standard detergents can be used also.
Providing the following information will allow us to determine the most appropriate process filter for your particular application.

Description of Application: (add schematics as needed)

<table>
<thead>
<tr>
<th>Type of Fluid</th>
<th>Flow Rate (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Pressure (psi)</td>
<td>Design Pressure (psi)</td>
</tr>
<tr>
<td>Operating Temperature* (°F)</td>
<td>Design Temperature (°F)</td>
</tr>
<tr>
<td>Filtration Rating (µm)</td>
<td>Viscosity (SUS)</td>
</tr>
<tr>
<td>Dirt Content (mg/l)</td>
<td>Voltage***</td>
</tr>
</tbody>
</table>

Desired Filter (please check)
- Single Filter housing
- Duplex Filter Housing
- Self-Cleaning Filter
- No Preference

Element Type\** (please check)
- Disposable
- Recyclable
- No Preference

Dirt Alarm\** (please check)
- Optical
- Optical Electrical
- No Preference

Material Requirements (if any)

Characterization of Contamination

Pressurized Air Service?\***
- No
- Yes
If yes, please indicate pressure _____ psi

Connection Inlet / Outlet

Required Third Party / Certificate?

Quantity

Comments (Please attach any applicable drawings)

\* Please contact factory if the maximum temperature exceeds the fluid’s boiling point.
\** Not for the Self-Cleaning Filter.
\*** Only needed for the use of a Self-Cleaning Filter.