



Quality Policy

Continuous improvement in our business to ensure a quality product, shipped on time, without compromise.



Leetsdale Facility

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.

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Corporate Overview



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 micron 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.



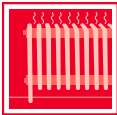
Sewage Water and Waste Water Treatment

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.

Filter Selection

Filter Housing Selection

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.

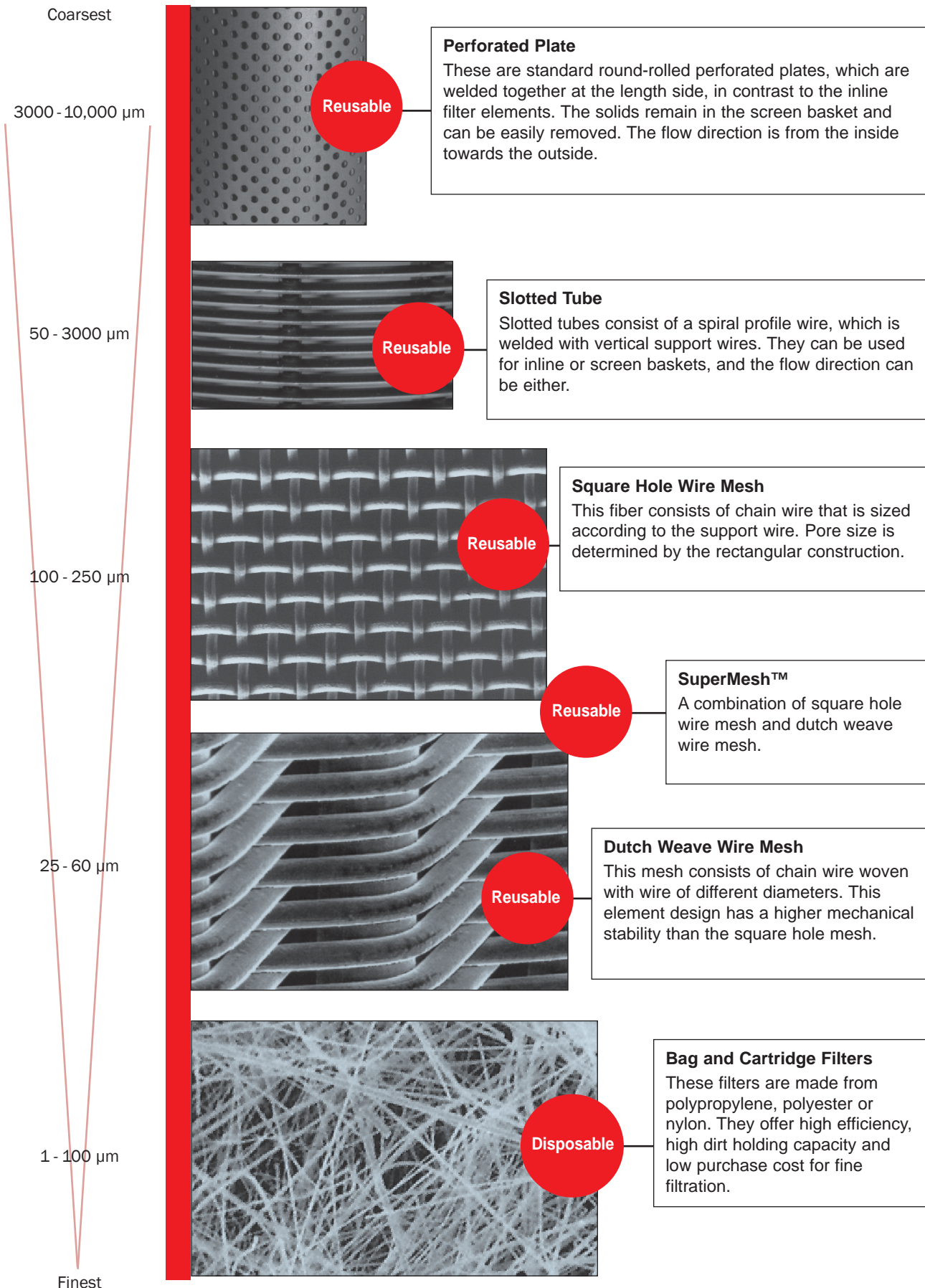
There are eight (8) main considerations in choosing the proper filter housing:

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



Element Selection Guide

Filter Element Selection

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 micron 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.



Section 1: **BACKFLUSHING FILTERS**

Automatic Backflushing Filters



RF3

- Non-stop filtration.
- Virtually maintenance-free filter for continuous operation.

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.

The RF3 filters are a relatively simple mechanical design as illustrated here. Pre-filtered liquid enters the inlet port and exits through the outlet port after passing through the conical element array. The flow direction of the elements is from inside out, and particles are collected on the smooth interior surfaces for easy cleaning. As the level of contamination increases, so does the differential pressure across the filter.

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?

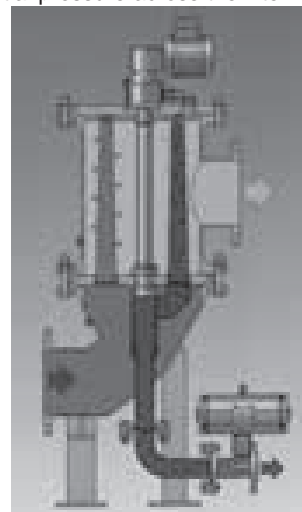
The process starts with the geared motor located on top of the filter positioning the backflush arm beneath the first element to be cleaned. Once in position, the control panel opens the backflush valve, which creates a pressure gradient that reverses the flow of filtrate through this single element. 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 contaminate 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.

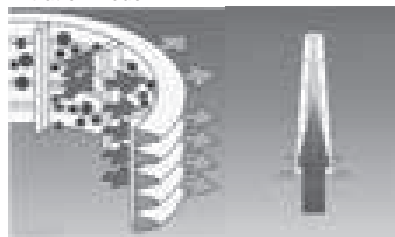
Are there any other unique features?

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.

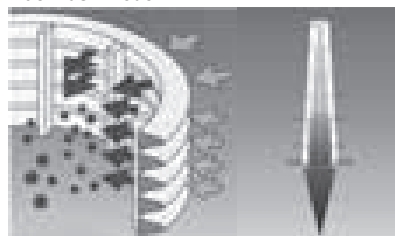


Direction of Flow

Filtration Mode



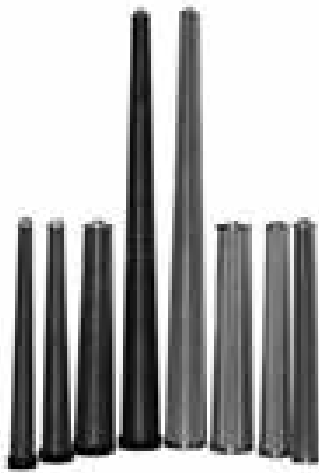
Backflush Mode



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 3000 micron filtration

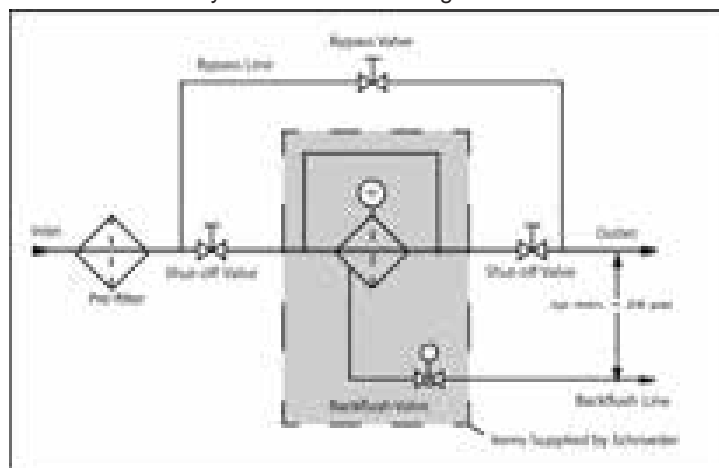


Filter Elements

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



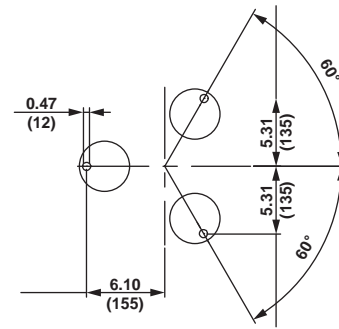
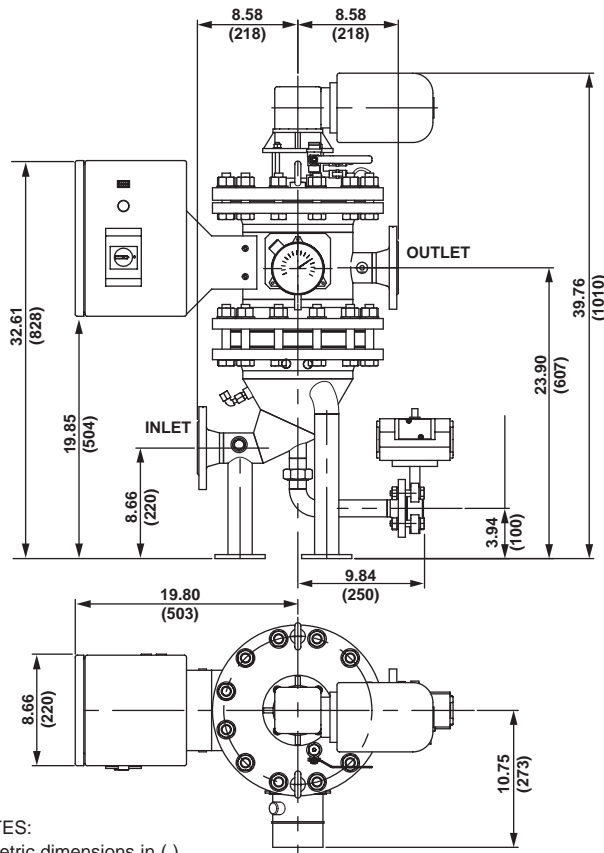
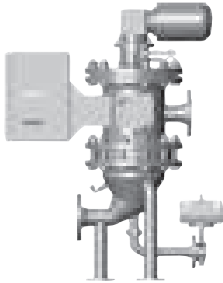
Industries Served

RF3-C

Backflushing Filter AutoFilt® RF3

20-120 gpm
80-470
L/min

150 psi
10 bar



NOTES:

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

Specifications

Flange Size: 2" ANSI

Flow Range: 20-120 gpm (80-470 L/min)

Working Pressure: 150 psi (10 bar)

Max. Working Temperature: 194°F (90°C)

Empty Weight: 266 lbs. (121 kg)

Housing Volume: 4 gallons (15 L)

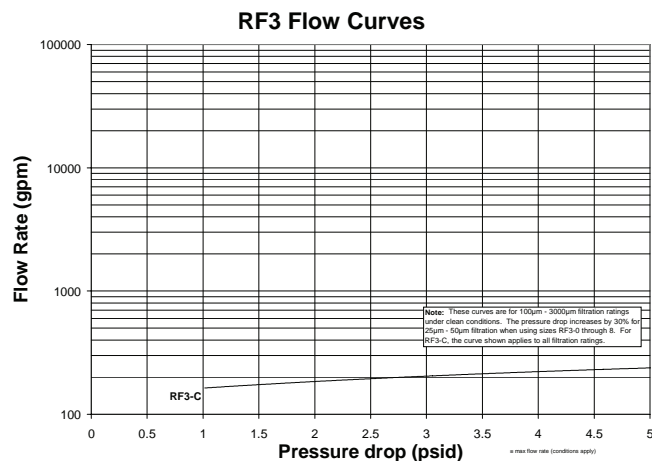
Filter Area: 331 in² (2140 cm²)

No. of Filter Elements: 6

Backflushing Flange Size: 1" ANSI

Backflush Volume: 7 gallons (25L/cycle) Electric-Pneumatic Controls (EPT) 35 gallons (125L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-C

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	C									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	C	EPT8	NMA	N	5	3	2	KS1000	C	ASME

= RF3-C-EPT8-NG-N-5-3-2/ KS1000-C-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	C	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = with ANSI-flanged, add. A at the end	N = Standard Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
C	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection

RF3-C

RF3-0

RF3-1

RF3-2

RF3-2.5

RF3-3

RF3-4

RF3-5

RF3-6

RF3-7

RF3-8

RF5

RF7

RF4-1

RF4-2

RFH-1

RFH-2

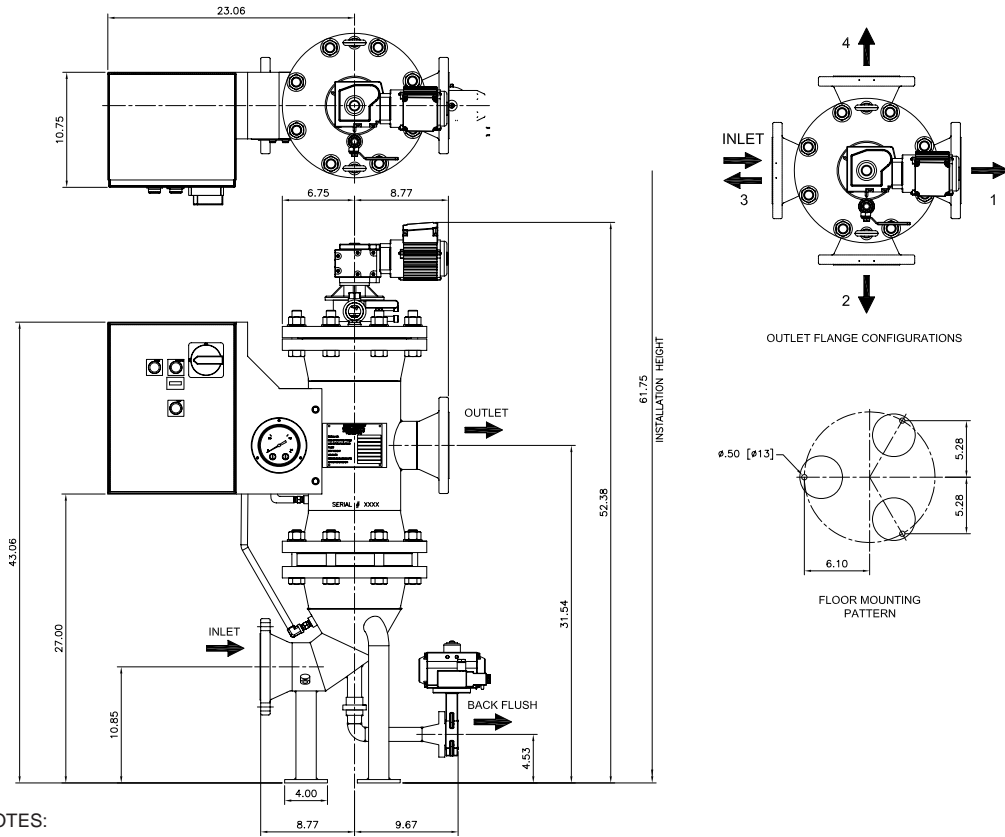
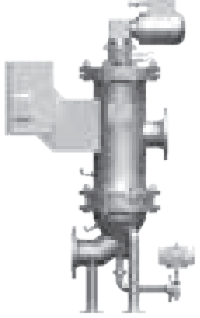
RFH-4

ATF

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.

110-500 gpm
420-1880
L/min

150 psi
10 bar

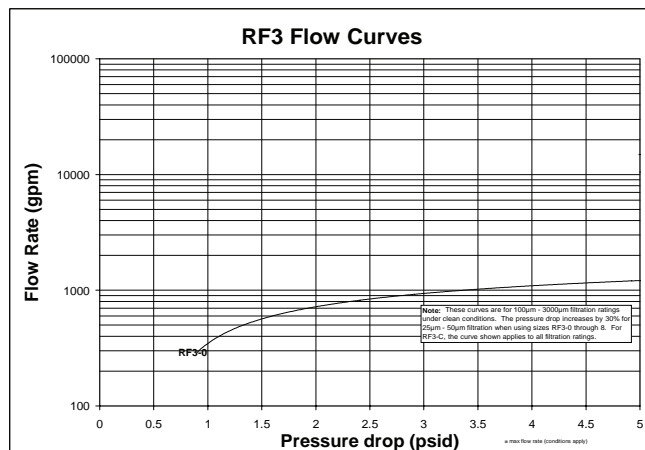


- NOTES:
1. Metric dimensions in ().
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	4"ANSI
Flow Range:	110-500 gpm (420-1800 L/min)
Working Pressure:	150 psi (10 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	320 lbs. (145 kg)
Housing Volume:	7 gallons (25 L)
Filter Area:	590 in. ² (3810 cm ²)
No. of Filter Elements	6
Backflush Flange Size:	1"ANSI
Backflush Volume:	7 gallons (26 L/cycle) Electric-Pneumatic Controls (EPT) 35 gallons (132 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-0

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	0									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	0	EPT8	NG	N	5	3	2	KS1000	0	ASME

= RF3-0-EPT8-NG-N-5-3-2/ KS1000-0-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	0	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = with ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
0	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

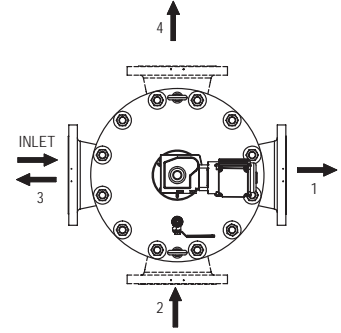
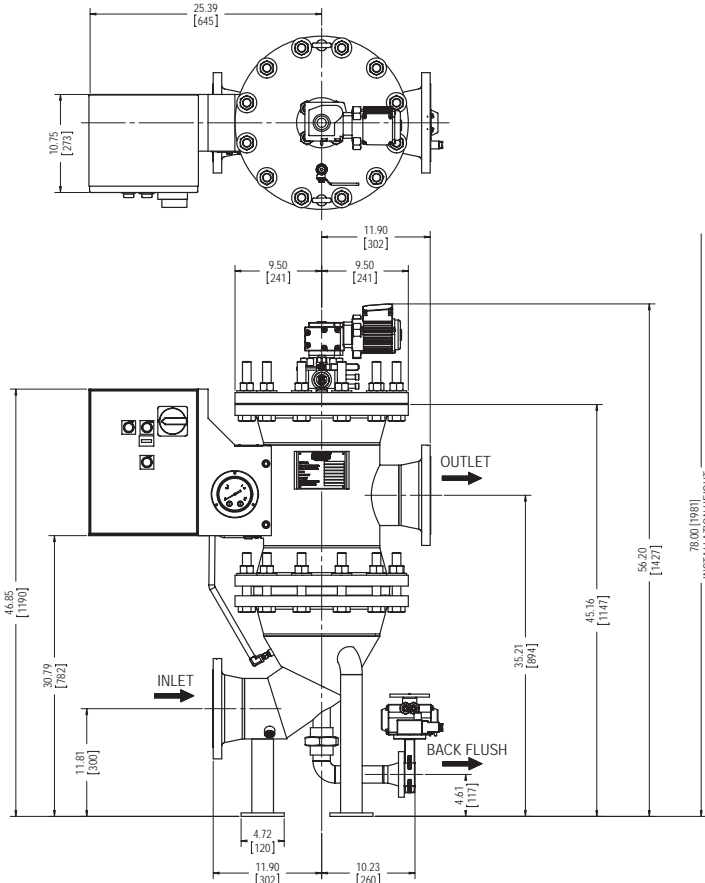
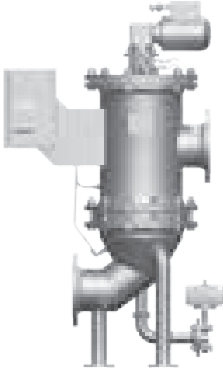
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided.

RF3-1

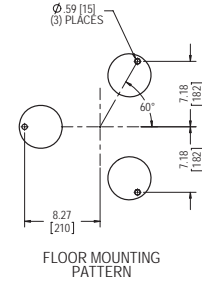
Backflushing Filter AutoFilt® RF3

395-1120
gpm
1500-4235
L/min

150 psi
10 bar



OUTLET FLANGE CONFIGURATIONS



FLOOR MOUNTING PATTERN

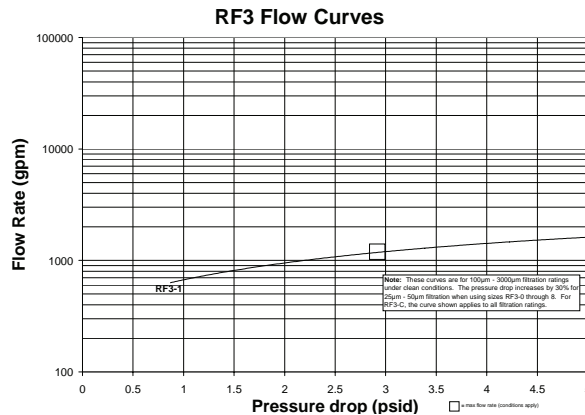
NOTES:

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

Specifications

Flange Size:	6" ANSI
Flow Range:	395-1120 gpm (420-1800 L/min)
Working Pressure:	150 psi (10 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	530 lbs. (240 kg)
Housing Volume:	16 gallons (60 L)
Filter Area:	960 in. ² (6190 cm ²)
No. of Filter Elements	6
Backflush Flange Size:	1 1/2" ANSI
Backflush Volume:	9 gallons (34 L/cycle) Electric-Pneumatic Controls (EPT) 45 gallons (170 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-1

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	1									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	1	EPT8	NG	N	5	3	2	KS1000	1	ASME

= RF3-1-EPT8-NG-N-5-3-2/KS1000-1-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	1	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control + select one below: 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = with ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
1	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1**
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

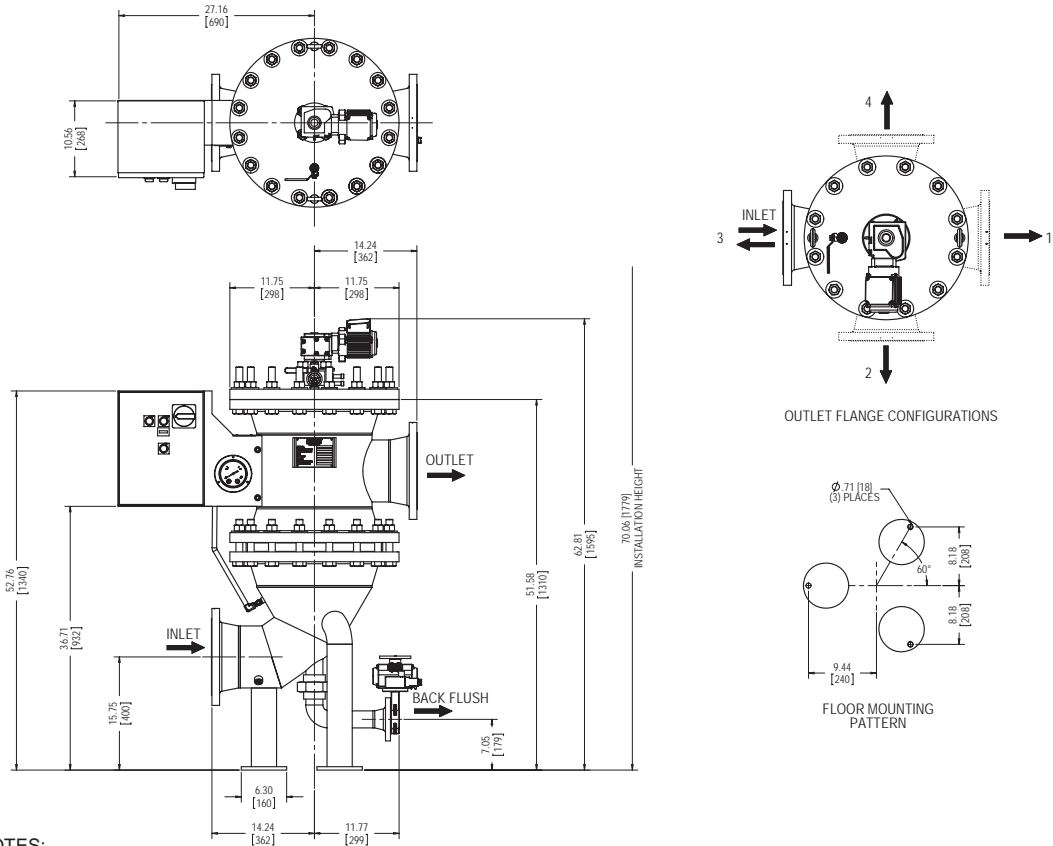
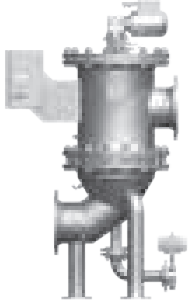
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided.

RF3-2

Backflushing Filter AutoFit® RF3

880-1980
gpm
3335-7500
L/min

150 psi
10 bar

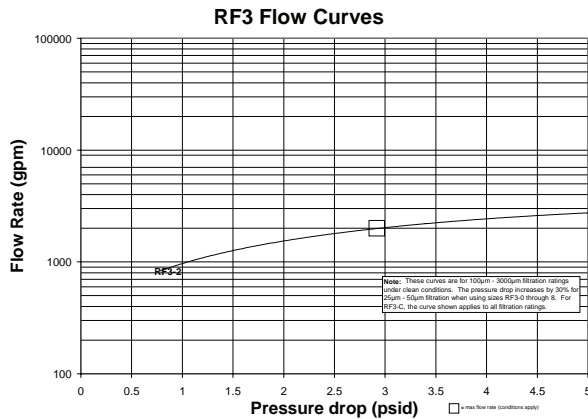


- NOTES:
 1. Metric dimensions in ().
 2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	8" ANSI
Flow Range:	880-1980 gpm (420-1800 L/min)
Working Pressure:	150 psi (10 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	805 lbs. (365 kg)
Housing Volume:	28 gallons (60 L)
Filter Area:	1280 in. ² (8250 cm ²)
No. of Filter Elements	8
Backflush Flange Size:	2" ANSI
Backflush Volume:	13 gallons (50 L/cycle) Electric-Pneumatic Controls (EPT) 65 gallons (246 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-2

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	2									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	2	EPT8	NG	N	5	3	2	KS1000	2	ASME

= RF3-2-EPT8-NG-N-5-3-2/ KS1000-2-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	2	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = with ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
2	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection	RF3-C
	RF3-0
	RF3-1
	RF3-2
	RF3-2.5
	RF3-3
	RF3-4
	RF3-5
	RF3-6
	RF3-7
	RF3-8
	RF5
	RF7
	RF10
	RF4-1
	RF4-2
	RF12
	BTU
	ATF-1
	ATF-2
	ATF-2.5
	ATF-3
	ATF-3.5
	ATF-4
	PLF1
	PLF2
	PVD

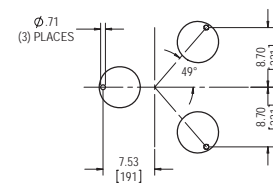
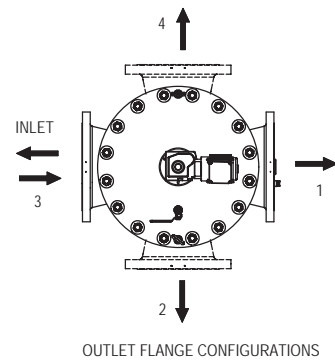
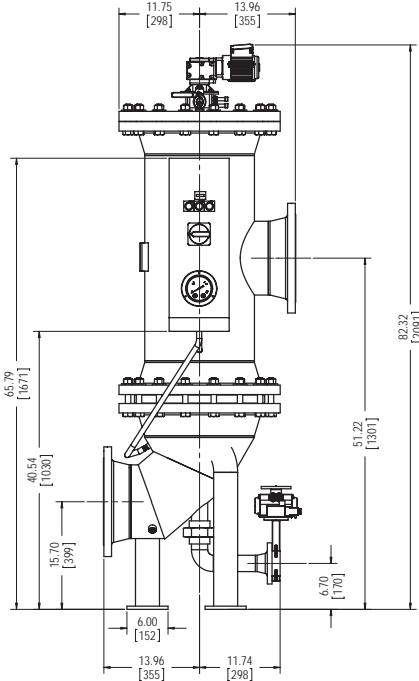
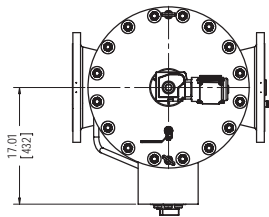
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA.
 note. If ANSI flanges are not specified DIN style will be provided.

RF3-2.5

Backflushing Filter AutoFilt® RF3

1760-2640
gpm
6670-10,000
L/min

150 psi
10 bar



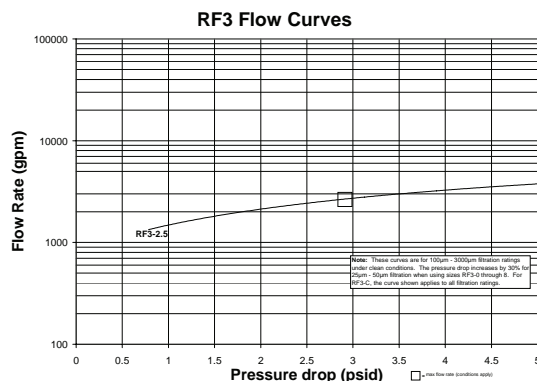
NOTES:

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

Specifications

Flange Size:	10" ANSI
Flow Range:	1760-2640 gpm (6670-10,000 L/min)
Working Pressure:	150 psi (10 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	990 lbs. (450 kg)
Housing Volume:	50 gallons (190 L)
Filter Area:	1940 in. ² (12,500 cm ²)
No. of Filter Elements	6
Backflush Flange Size:	2" ANSI
Backflush Volume:	17 gallons (65 L/cycle) Electric-Pneumatic Controls (EPT) 85 gallons (325 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-2.5

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	2.5									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	2.5	EPT8	NG	N	5	3	2	KS1000	2.5	ASME

= RF3-2.5-EPT8-NG-N-5-3-2 /KS1000-2.5-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	2.5	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
2.5	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5**

- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8

- RF5
- RF7
- RF10
- RF4-1
- RF4-2

- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3

NOTES:

- Box 3. Needs to have control type and voltage selected ex. EPT8. ATF-4
- Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided. PLF1
- PLF2

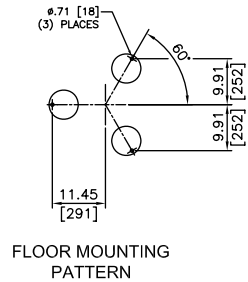
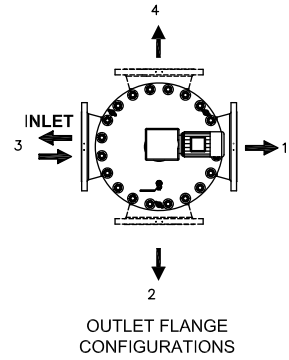
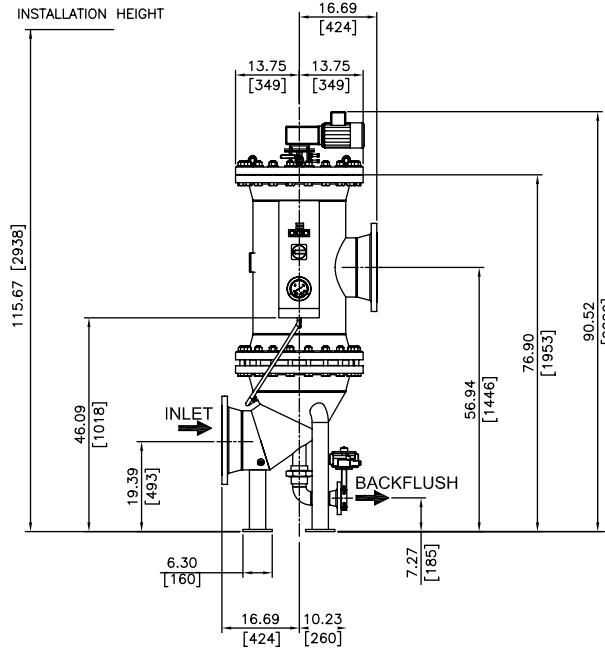
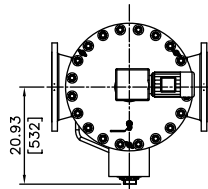
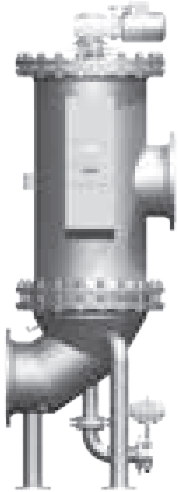
PVD

RF3-3

Backflushing Filter AutoFit® RF3

2420-3790
gpm
9170-14350
L/min

150 psi
10 bar



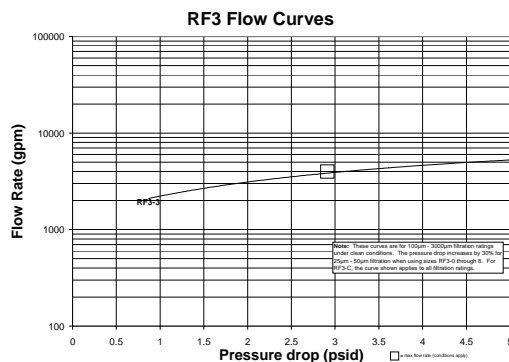
NOTES:

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

Specifications

Flange Size:	12" ANSI
Flow Range:	2420-3790 gpm (9170-14,350 L/min)
Working Pressure:	150 psi (10 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	1260 lbs. (570 kg)
Housing Volume:	74 gallons (280 L)
Filter Area:	2910 in. ² (18,750 cm ²)
No. of Filter Elements	9
Backflush Flange Size:	2.5" ANSI
Backflush Volume:	25 gallons (95 L/cycle) Electric-Pneumatic Controls (EPT) 125 gallons (475 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-3

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	3									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	3	EPT8	NG	N	5	3	2	KS1000	3	ASME

= RF3-3-EPT8-NG-N-5-3-2/ KS1000-3-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	3	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
3	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3**
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

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.

Backflushing Filter AutoFit® RF3

RF3-4

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	4									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	4	EPT8	NG	N	5	3	2	KS1000	4	ASME

= RF3-4-EPT8-NG-N-5-3-2/ KS1000-4-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	4	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
4	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection	
RF3-C	
RF3-0	
RF3-1	
RF3-2	
RF3-2.5	
RF3-3	
RF3-4	
RF3-5	
RF3-6	
RF3-7	
RF3-8	
RF5	
RF7	
RF10	
RF4-1	
RF4-2	
RF12	
BTU	
ATF-1	
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ATF-3	
ATF-3.5	
ATF-4	
PLF1	
PLF2	
PVD	

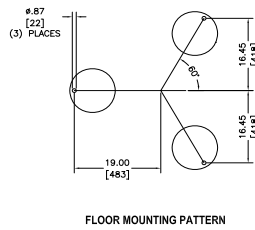
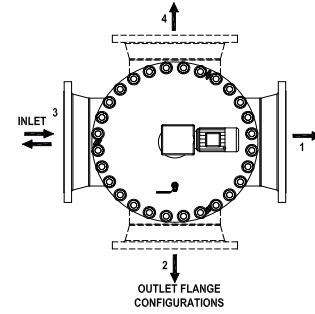
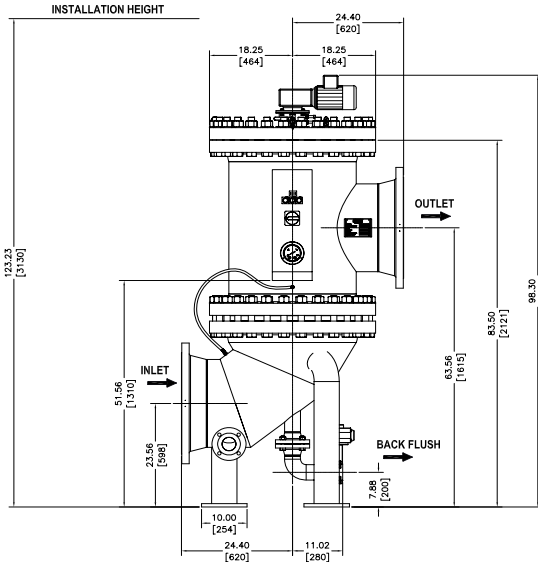
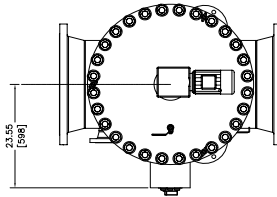
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA.
 note. If ANSI flanges are not specified DIN style will be provided.

RF3-5

Backflushing Filter AutoFilt® RF3

6600-10790
gpm
25,000-
40,850
L/min

87 psi
6 bar



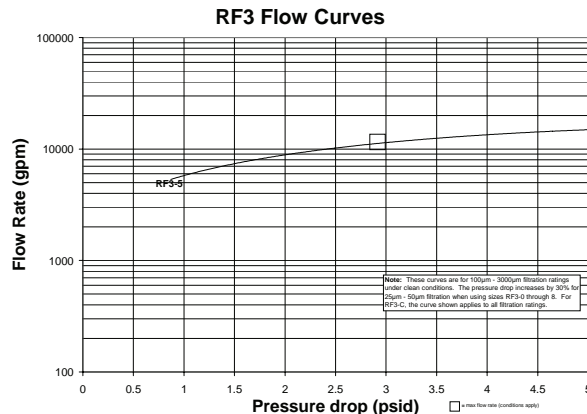
NOTES:

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

Specifications

Flange Size:	20"ANSI
Flow Range:	66000-10,790 gpm (25,000-40,850 L/min)
Working Pressure:	87 psi (6 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	2250 lbs. (10200 kg)
Housing Volume:	168 gallons (635 L)
Filter Area:	8640 in. ² (55,760 cm ²)
No. of Filter Elements	24
Backflush Flange Size:	3"ANSI
Backflush Volume:	82 gallons (310 L/cycle) Electric-Pneumatic Controls (EPT) 410 gallons (1550 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-5

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	5									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	5	EPT8	NG	N	5	3	2	KS1000	5	ASME

= RF3-5-EPT8-NG-N-5-3-2/KS1000-5-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	5	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
5	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection	
RF3-C	
RF3-0	
RF3-1	
RF3-2	
RF3-2.5	
RF3-3	
RF3-4	
RF3-5	
RF3-6	
RF3-7	
RF3-8	
RF5	
RF7	
RF10	
RF4-1	
RF4-2	
RF12	
BTU	
ATF-1	
ATF-2	
ATF-2.5	
ATF-3	
ATF-3.5	
ATF-4	
PLF1	
PLF2	
PVD	

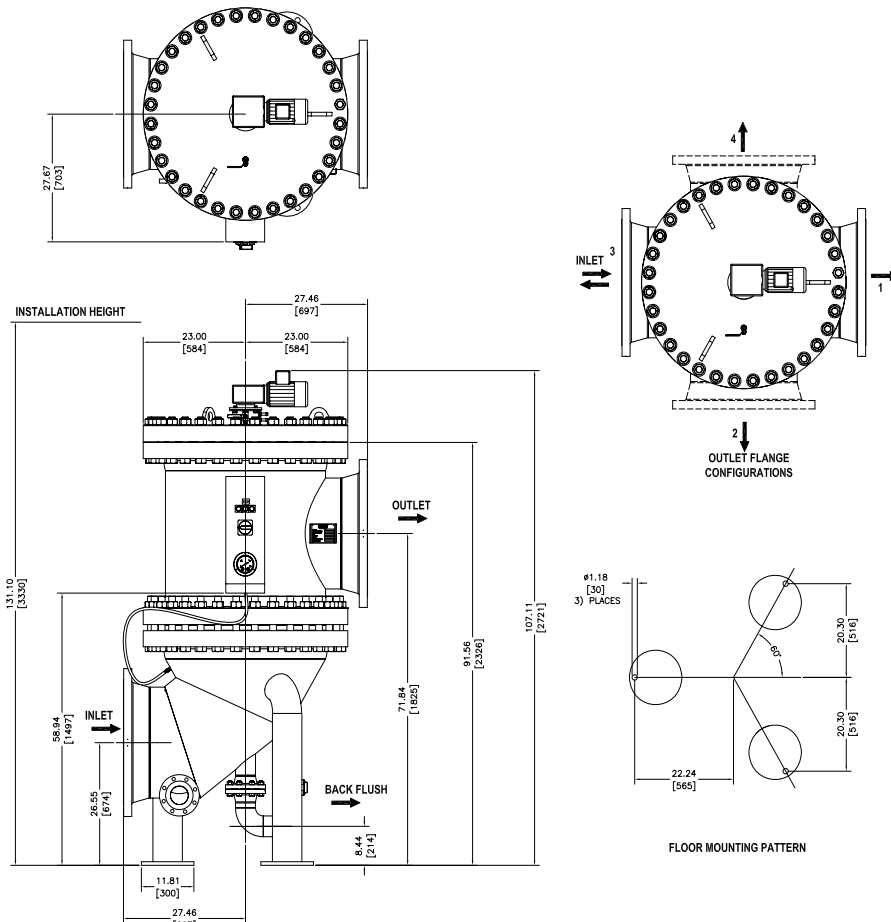
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided.

RF3-6

Backflushing Filter AutoFit® RF3

8810-15,850
gpm
33,350-
60,000
L/min

87 psi
6 bar

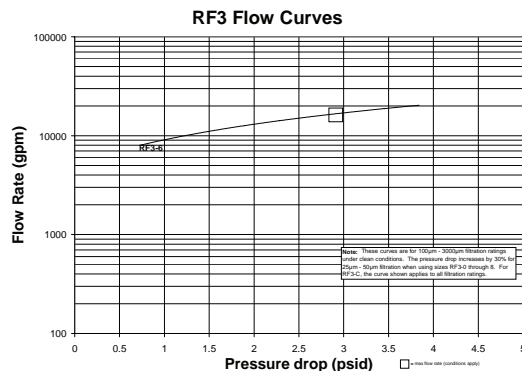


- NOTES:
1. Metric dimensions in ().
 2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	24"ANSI
Flow Range:	8810-15.850 gpm (33,350-60,000 L/min)
Working Pressure:	87 psi (6 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	3550 lbs. (1610 kg)
Housing Volume:	264 gallons (988 L)
Filter Area:	13,810 in. ² (89,100 cm ²)
No. of Filter Elements	40
Backflush Flange Size:	4"ANSI
Backflush Volume:	128 gallons (485 L/cycle) Electric-Pneumatic Controls (EPT) 640 gallons (2425 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-6

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	6									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	6	EPT8	NG	N	5	3	2	KS1000	6	ASME

= RF3-6-EPT8-NG-N-5-3-2/KS1000-6-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	6	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
6	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection	
RF3-C	
RF3-0	
RF3-1	
RF3-2	
RF3-2.5	
RF3-3	
RF3-4	
RF3-5	
RF3-6	
RF3-7	
RF3-8	
RF5	
RF7	
RF10	
RF4-1	
RF4-2	
RF12	
BTU	
ATF-1	
ATF-2	
ATF-2.5	
ATF-3	
ATF-3.5	
ATF-4	
PLF1	
PLF2	
PVD	

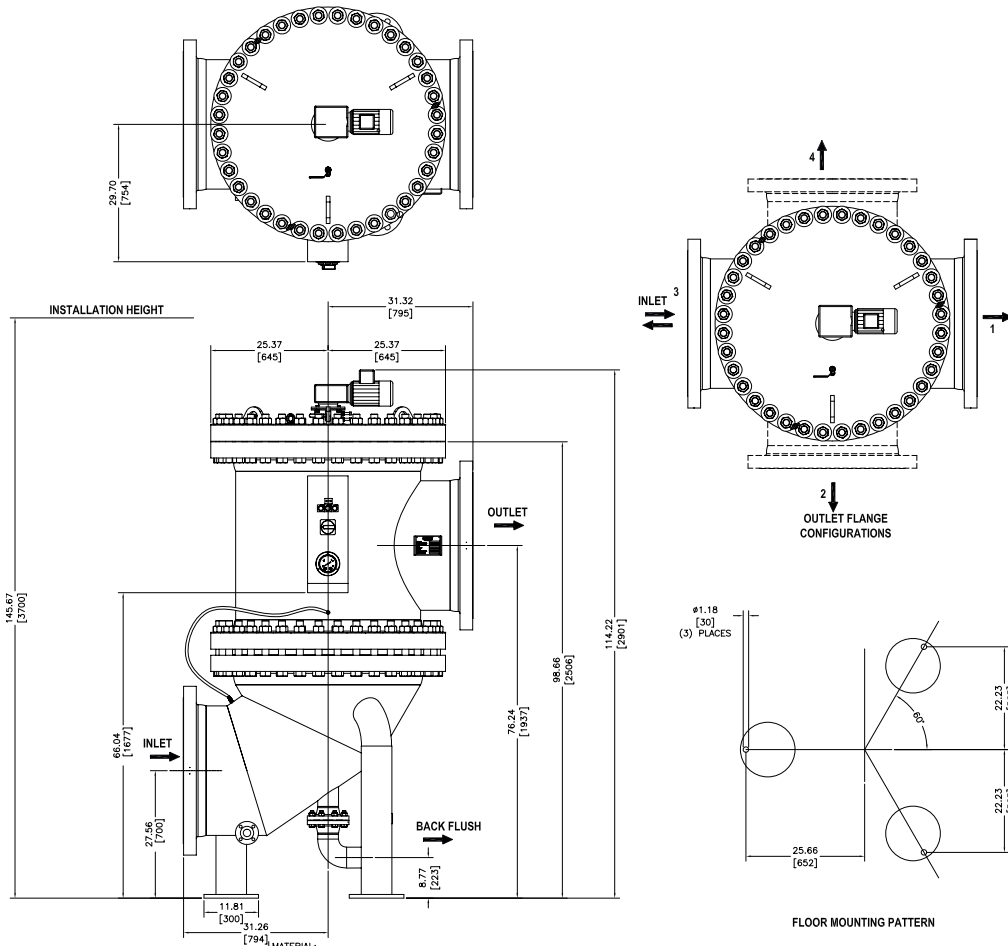
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided.

RF3-7

Backflushing Filter AutoFilt® RF3

13,200-
22,000
gpm
50,000-
83,350
L/min

87 psi
6 bar

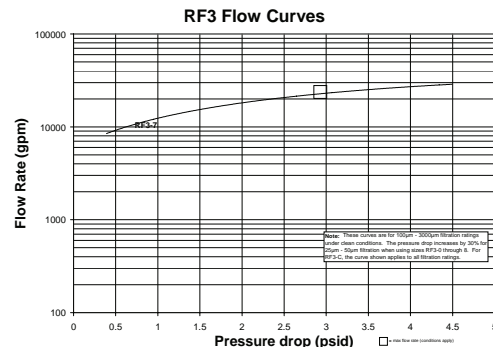


- NOTES:
1. Metric dimensions in ().
 2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	28" ANSI
Flow Range:	13,200-22,000 gpm (50,000-83,350 L/min)
Working Pressure:	87 psi (6 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	4300 lbs. (1950 kg)
Housing Volume:	358 gallons (1355 L)
Filter Area:	16,450 in. ² (106,100 cm ²)
No. of Filter Elements	44
Backflush Flange Size:	4" ANSI
Backflush Volume:	147 gallons (555 L/cycle) Electric-Pneumatic Controls (EPT) 735 gallons (2775 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	7									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	7	EPT8	NG	N	5	3	2	KS1000	7	ASME

= RF3-7-EPT8-NG-N-5-3-2/ KS1000-7-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	7	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
7	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection	RF3-C
	RF3-0
	RF3-1
	RF3-2
	RF3-2.5
	RF3-3
	RF3-4
	RF3-5
	RF3-6
	RF3-7
	RF3-8
	RF5
	RF7
	RF10
	RF4-1
	RF4-2
	RF12
	BTU
	ATF-1
	ATF-2
	ATF-2.5
	ATF-3
	ATF-3.5
	ATF-4
	PLF1
	PLF2
	PVD

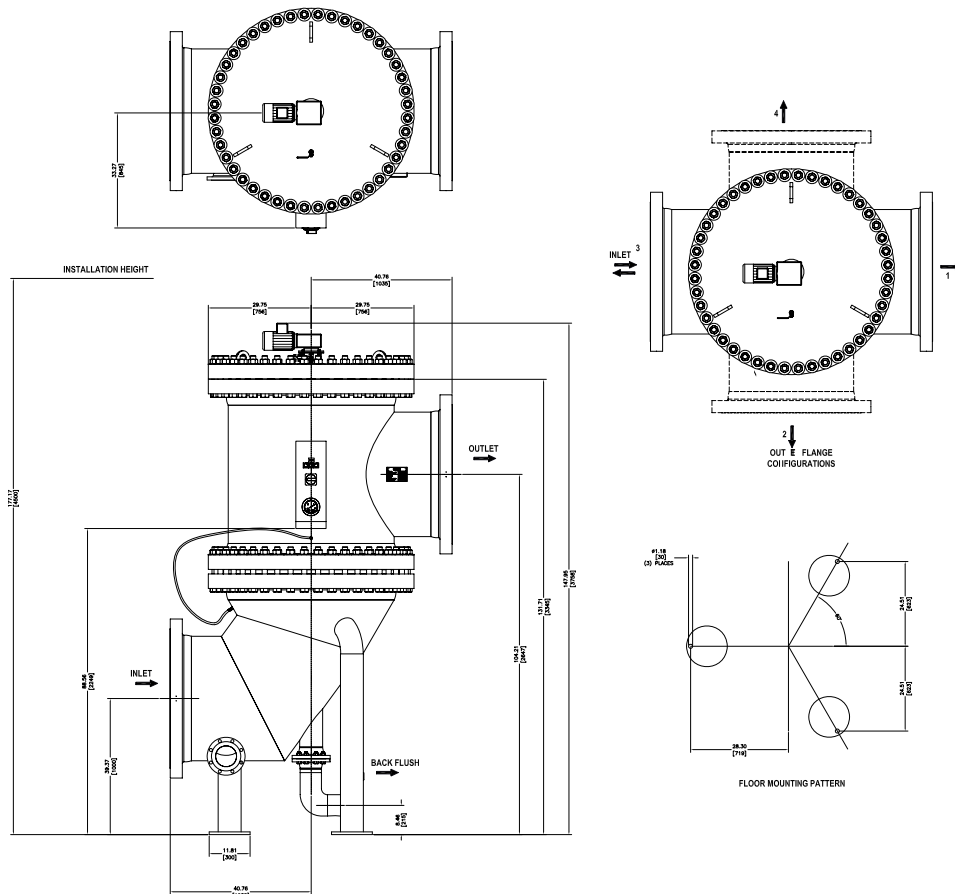
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided.

RF3-8

Backflushing Filter AutoFilt® RF3

19,800-
33,000
gpm
75,000-
125,000
L/min

87 psi
6 bar

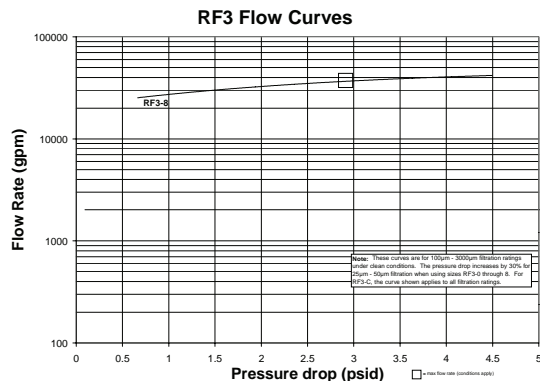


- NOTES:
1. Metric dimensions in ().
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	36" ANSI
Flow Range:	19,800-33,000 gpm (50,000-83,350 L/min)
Working Pressure:	87 psi (6 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	7820 lbs. (3550 kg)
Housing Volume:	716 gallons (2710 L)
Filter Area:	28,000 in. ² (180,700 cm ²)
No. of Filter Elements	54
Backflush Flange Size:	6" ANSI
Backflush Volume:	190 gallons (720 L/cycle) Electric-Pneumatic Controls (EPT) 950 gallons (3600 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFit® RF3

RF3-8

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	8									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	8	EPT8	NG	N	5	3	2	KS1000	8	ASME

= RF3-8-EPT8-NG-N-5-3-2/ KS1000-8-ASME

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF3	8	EPT = Electric pneumatic cycle control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control, Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X110V/N/PE 60Hz	N = Standard Steel 1.0038, outside primed NM = Standard Steel 1.0038, outside primed, inside metallogal painted NG = Standard Steel 1.0038, outside primed, inside rubber coated E = Stainless Steel 1.4571 A = With ANSI-flanged, add. A at the end	N = Standard Steel E = Stainless Steel

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes

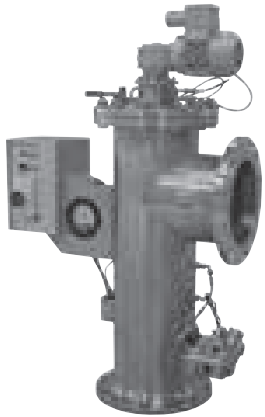
BOX 10	BOX 11
Size of Element Set	Vessel Certification
8	Omit = Standard Version ASME = ASME Version

Filter Model Number Selection	RF3-C
	RF3-0
	RF3-1
	RF3-2
	RF3-2.5
	RF3-3
	RF3-4
	RF3-5
	RF3-6
	RF3-7
	RF3-8
	RF5
	RF7
	RF10
	RF4-1
	RF4-2
	RF12
	BTU
	ATF-1
	ATF-2
	ATF-2.5
	ATF-3
	ATF-3.5
	ATF-4
	PLF1
	PLF2
	PVD

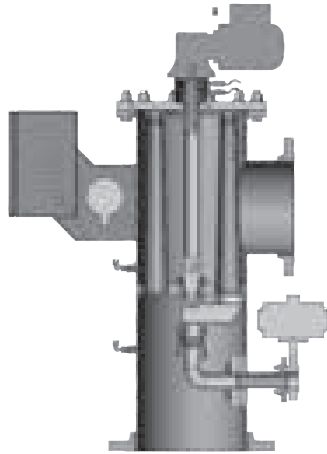
NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided.

748-18,480
gpm
170-4200
L/min

87-150 psi
6-10 bar



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.

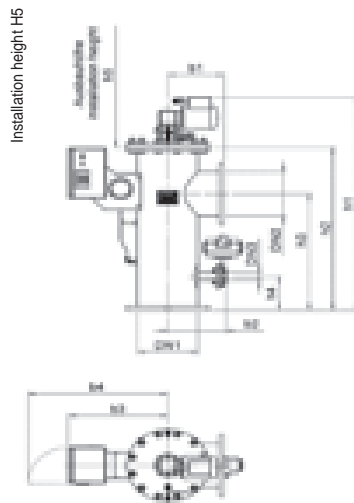


The function of the AutoFilt® RF5 is similar to the AutoFilt® RF3:

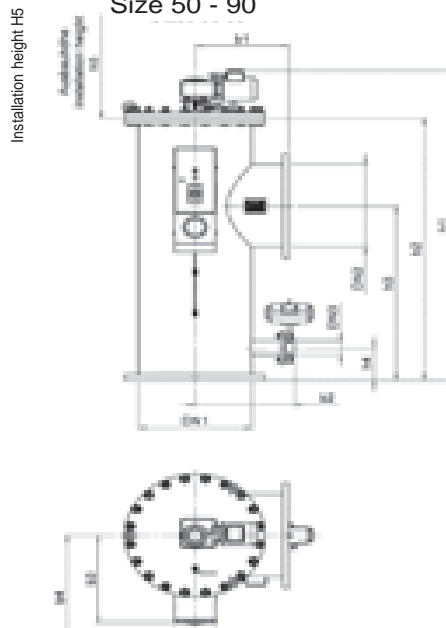
The fluid to be filtered flows through the slotted tube filter elements of the backflushing filter, passing from the inside to the outside. Contamination particles then collect on the smooth inside of the filter elements.

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.

Size 25 - 40



Size 50 - 90



Dimensions

Size	DN1 in (mm)	DN2 in (mm)	DN3 in (mm)	H1 in (mm)	H2 in (mm)	H3 in (mm)	H4 in (mm)	H5 in (mm)	B1 in (mm)	B2 in (mm)	B3 in (mm)	B4 in (mm)
25	9.8 (250)	7.9 (200)	1.6 (40)	47.7 (1212.5)	35.9 (912.5)	24.6 (625)	7.1 (180)	21.7 (550)	11.8 (300)	10.8 (275)	20 (508)	28.7 (728)
30	11.8 (300)	9.8 (250)	1.6 (40)	51.7 (1313.5)	39.4 (1001.5)	28.1 (715)	8.3 (210)	21.7 (550)	11.8 (300)	12.4 (314)	21 (533)	29.6 (753)
40	15.7 (400)	11.8 (300)	2.6 (65)	74.4 (1890.5)	62 (1575.5)	40.6 (1030)	7.1 (180)	41.3 (1050)	14.6 (370)	15 (380)	23 (575)	31.3 (795)
50	19.7 (500)	15.7 (400)	2.6 (65)	74.4 (1888.5)	62.4 (1585.5)	41.3 (1050)	7.5 (190)	41.3 (1050)	17.16 (435)	17.3 (440)	19.1 (485)	27.8 (705)
60	23.6 (600)	19.7 (500)	3.1 (80)	75 (1905.5)	63.3 (1608.5)	42.1 (1070)	7.9 (200)	41.3 (1050)	19.9 (505)	21 (534)	21.3 (540)	29.9 (760)
70	27.6 (700)	23.6 (600)	3.1 (80)	88.1 (2238.5)	74.5 (1903.5)	48.6 (1235)	7.9 (200)	53.1 (1350)	22.4 (570)	22.8 (580)	23.3 (593)	32 (813)
90	35.4 (900)	31.5 (800)	3.9 (100)	91.7 (2328.5)	78.5 (1993.5)	52.2 (1325)	8.9 (225)	53.1 (1350)	27.2 (690)	27.2 (690)	27.5 (698)	36.1 (918)

Backflushing Filter AutoFit® RF5

RF5

Size	Pressure Rating psi / (bar)	Inlet	Outlet	Back flushing	Filtration Area in ² / cm ²	Flow Range gpm (L/min.)
25	145 (10)	DN 250	DN 200	DN 40	942 (6120)	748-1408 (170-320)
30	145 (10)	DN 300	DN 250	DN 40	1255 (8160)	1276-1980 (290-450)
40	87 (6)	DN 400	DN 300	DN 65	2603 (16920)	1760-3302 (6667-12500)
50	87 (6)	DN 500	DN 400	DN 65	3905 (25380)	2860-5280 (650-1200)
60	87 (6)	DN 600	DN 500	DN 80	7809 (50760)	4400-8360 (1000-1900)
70	87 (6)	DN 700	DN 600	DN 80	10920 (70980)	6600-12320 (1500-2800)
90	87 (6)	DN 900	DN 800	DN 100	18200 (118300)	11440-18480 (2600-4200)

How to Build a Valid Model Number for a RF5:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF3	2.5									

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF5	40	EPT8	NMA	N	5	1	2	ES300	40	

= RF5-40-EPT8-NMA-N-5-1-2-ES300-40

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF5	25 30 40 50 60 70 90	EPZ = Electric pneumatic cycle control EZ = Electric control EPT = Electro-pneumatic cyclic control PT = Pneumatic cyclic control PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz 9 = 3X440V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X115V/N/PE 60Hz	N = Standard Steel outside primed NM = Standard Steel outside primed, inside metallogal painted E = Stainless Steel A = With ANSI-flanged, additional A at the end	N = Standard Steel B = Bronze

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Control Box Position	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Control box offset by 90° clockwise to filter outlet 2 = Control box offset by 180° clockwise to filter outlet 3 = Control box offset by 270° clockwise to filter outlet	2 = Latest version supplied by factory	ES200 = 200µ Conical Slotted Tubes ES300 = 300µ Conical Slotted Tubes ES400 = 400µ Conical Slotted Tubes ES500 = 500µ Conical Slotted Tubes ES1000 = 1000µ Conical Slotted Tubes ES1500 = 1500µ Conical Slotted Tubes ES2000 = 2000µ Conical Slotted Tubes ES2500 = 2500µ Conical Slotted Tubes ES3000 = 3000µ Conical Slotted Tubes

BOX 10	BOX 11
Size of Element Set	Vessel Certification
Same as BOX 2 Value	Omit = Standard Version ASME = ASME Version

Technical Data

RF3-C
RF3-0
RF3-1
RF3-2
RF3-2.5
RF3-3
RF3-4

Filter Model Number Selection

RF3-5
RF3-6
RF3-7
RF3-8

RF5

RF7
RF10
RF4-1
RF4-2
RF12

BTU

ATF-1
ATF-2
ATF-2.5
ATF-3

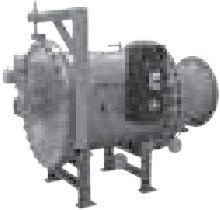
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8. ATF-3.5
ATF-4

Box 4. can contain two options ex. NMA. If ANSI flanges are not specified DIN style will be provided. PLF1
PLF2

PVD

83-33,022
gpm
22-12,501
L/min

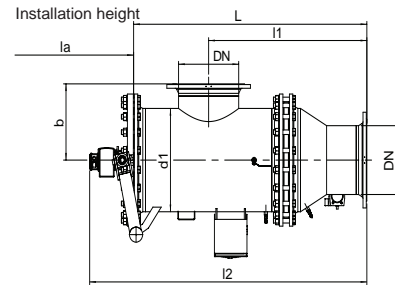
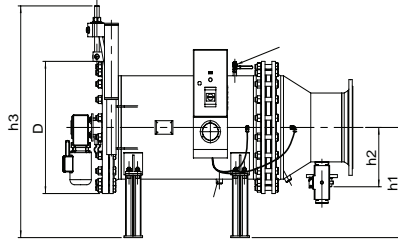
87-232 psi
6-18 bar



Dimensions

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.



Size	DN in (mm)	DN1 in (mm)	l1 in (mm)	b in (mm)	h1 in (mm)	h2 in (mm)	h3 in (mm)	D in (mm)	d1 in (mm)	L in (mm)	l2 in (mm)	G1 in (mm)	G2 in (mm)	la in (mm)
CC	2 (50)	1 (25)	19.8 (504)	7.9 (200)	14.2 (360)	4.7 (120)	25.6 (650)	13.4 (340)	8.7 (220)	25 (635)	35.1 (892)	G1/4	G1/2	21.7 (550)
0B	3.9 (100)	1 (25)	23.5 (596)	7.9 (200)	15.2 (385)	5.9 (150)	27 (685)	13.4 (340)	8.7 (220)	33.5 (850)	45.9 (1165)	G1/4	G1/2	21.7 (550)
1B	5.9 (150)	1.6 (40)	25.5 (647)	10.6 (270)	17.7 (450)	7.4 (189)	31.7 (805)	17.5 (445)	12.8 (324)	35.4 (900)	47.8 (1215)	G1/4	G3/4	21.7 (550)
2B	7.9 (200)	2 (50)	30.1 (764)	12.8 (325)	19.7 (500)	8.6 (220)	39.4 (1000)	22.2 (565)	16 (406)	40.2 (1020)	52.6 (1335)	G1/4	G3/4	27.6 (700)
2.5B	9.8 (250)	2 (50)	40.3 (1024)	12.8 (325)	19.7 (500)	10.2 (260)	39.4 (1000)	22.2 (565)	16 (406)	58.3 (1480)	69.7 (1770)	G1/4	G3/4	27.6 (700)
3B	11.8 (300)	2.6 (65)	41.02 (1042)	15 (380)	23.2 (590)	11.02 (280)	47.2 (1200)	26.4 (670)	20 (508)	61.02 (1550)	72.8 (1848)	G1/4	G3/4	27.6 (700)
4A	15.7 (400)	3.1 (80)	42.1 (1069)	17.7 (450)	25.6 (650)	13.8 (350)	55.1 (1400)	30.7 (780)	24 (610)	62.05 (1576)	73.7 (1873)	G1/4	G3/4	27.6 (700)
5A	19.7 (500)	3.1 (80)	44.8 (1139)	21.7 (550)	29.5 (750)	14.6 (370)	62 (1575)	35.2 (895)	28 (711)	62.4 (1585)	75.6 (1920)	G1/4	1.5" Flange	27.6 (700)
6A	23.6 (600)	3.9 (100)	45.6 (1159)	24.6 (625)	33.1 (840)	18.7 (475)	68.9 (1750)	43.9 (1115)	36 (914)	66.5 (1690)	80.6 (2046)	G1/4	1.5" Flange	27.6 (700)
7A	27.6 (700)	3.9 (100)	47.2 (1200)	29.5 (750)	35.04 (890)	20.1 (510)	74.8 (1900)	48.4 (1230)	40 (1016)	58.1 (1475)	72 (1830)	G1/4	1.5" Flange	27.6 (700)
8A	3.5 (90)	5.9 (150)	58.0 (1474)	37.4 (950)	43.3 (1100)	24.4 (620)	88.6 (2250)	55.3 (1405)	48.03 (1220)	83.2 (2114)	96.9 (2460)	G1/4	1.5" Flange	27.6 (700)

Technical Data

Size	Pressure Rating psi (bar)	Connection Inlet/Outlet	Connection Backflushing Line	Weight Empty lbs (kg)	Volume Gallons (liters)	Amount of Filter Elements	Filter Area in ² (cm ²)	Backflushing Amount gal (liters)	gpm	Liters/ Minute
CC	230 (16)	2" Flange	1" Flange	286 (130)	4 (15)	6	332 (2140)	6.6 (25)	22-124	83-469
0B	150 (10)	4" Flange	1" Flange	342 (155)	7 (25)	6	590 (3810)	6.6 (25)	110-498	416-1885
1B	150 (10)	6" Flange	1.5" Flange	550 (250)	16 (60)	6	960 (6190)	9.2 (35)	396-1118	1499-4232
2B	150 (10)	8" Flange	2" Flange	825 (375)	28 (105)	8	1279 (8250)	13.2 (50)	880-1981	3331-7498
2.5B	150 (10)	10" Flange	2" Flange	1025 (465)	50 (190)	6	1938 (12500)	17.2 (65)	1761-2641	6666-9997
3B	150 (10)	12" Flange	2.5" Flange	1290 (585)	74 (280)	9	2906 (18750)	25.1 (95)	2421-3786	9164-14331
4A	87 (6)	16" Flange	3" Flange	1705 (775)	112 (425)	18	5813 (37500)	55.5 (210)	3566-7484	13498-28330
5A	87 (6)	20" Flange	3" Flange	2290 (1040)	168 (635)	24	8643 (55760)	82 (310)	6604-10787	24998-40833
6A	87 (6)	24" Flange	4" Flange	3635 (1650)	264 (998)	40	13811 (89100)	128.1 (485)	8805-15850	33330-59998
7A	87 (6)	28" Flange	4" Flange	4410 (2000)	358 (1355)	44	16446 (106100)	147 (555)	13208-22014	49997-83332
8A	87 (6)	36" Flange	6" Flange	7960 (3610)	716 (2710)	54	28009 (180700)	190.2 (720)	19813-33022	75000-125001

Backflushing Filter AutoFit® RF7

RF7

How to Build a Valid Model Number for a RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF7										

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF7	3B	EPT7	NMA	N	5	1A	2	KS100	3B	ASME

= RF7-3B-EPT7-NMA-N-5-1A-2/KS100-3B

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Drive Control / Connecting Voltage	Housing Material and Coating	Shut-Off Valve Material
RF7	CC 0B 1B 2B 2.5B 3B 4A 5A 6A 7A 8A	EPT = Electro-pneumatic cyclic control, Δp dependent EU = Electric control, Δp dependent PT = Pneumatic cyclic control Δp dependent PTZ = Pneumatic cyclic timed control 7 = 3X415V/N/PE 60Hz 8 = 3X460V/X/PE 60Hz B = 3X575V/X/PE 60Hz E = 1X230V/N/PE 60Hz F = 1X115V/N/PE 60Hz	N = Standard Steel 1.0038 outside primed NM = Standard Steel 1.0038 outside primed, inside metallogal painted E = Stainless Steel 1.4571 A = With ANSI-flanged, additional A at the end	N = Butterfly housing SG cast iron coated, washer stainless steel B = Butterfly housing SG cast iron coated, washer bronze

BOX 6	BOX 7	BOX 8	BOX 9
Differential Pressure Gauge	Flange Setting/ Backflushing Line Setting	Modification Number	Element Set
1 = Pressure Chamber, Aluminum 3.258302 2 = Pressure Chamber, Stainless Steel 1.4305 3 = With Chemical Seal Stainless Steel 316TI 5 = HDA 4700 Stainless Steel 6 = HDA 4300 Duplex Stainless Steel	1 = Outlet to right 2 = Outlet up 3 = Outlet to left A = Backflushing line to left B = Backflushing line downwards C = Backflushing line to right	2 = Latest version supplied by factory	KD25 = Conical SuperMesh™ KD40 = Conical SuperMesh™ KS50 = Conical Slotted Tubes KS100 = Conical Slotted Tubes KS200 = Conical Slotted Tubes KS300 = Conical Slotted Tubes KS400 = Conical Slotted Tubes KS500 = Conical Slotted Tubes KS1000 = Conical Slotted Tubes KS1500 = Conical Slotted Tubes KS2000 = Conical Slotted Tubes KS2500 = Conical Slotted Tubes KS3000 = Conical Slotted Tubes
BOX 10	BOX 11		
Size of Element Set	Vessel Certification		
Same as BOX 2 Value (first letter/number only)	Omit = Standard Version ASME = ASME Version		

- Filter Model Number Selection**
- RF3-C
 - RF3-0
 - RF3-1
 - RF3-2
 - RF3-2.5
 - RF3-3
 - RF3-4
 - RF3-5
 - RF3-6
 - RF3-7
 - RF3-8
 - RF5
 - RF7**
 - RF10
 - RF4-1
 - RF4-2
 - RF12
 - BTU
 - ATF-1
 - ATF-2
 - ATF-2.5
 - ATF-3
 - ATF-3.5
 - ATF-4
 - PLF1
 - PLF2
 - PVD

NOTES:
 Box 3. Needs to have control type and voltage selected ex. EPT8.
 Box 4. can contain two options ex. NMA.
 note. If ANSI flanges are not specified DIN style will be provided.

Backflushing Filter AutoFilt® RF10



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.

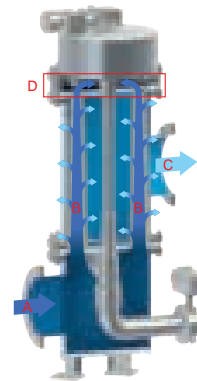
Product Advantages:

- 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.

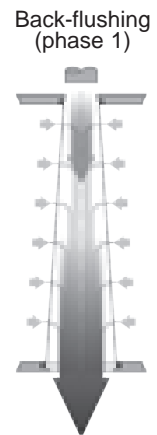
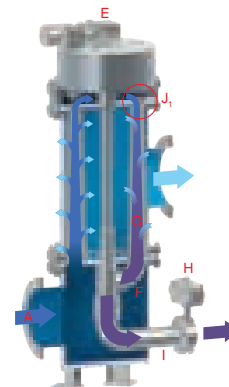


Back-Flushing In General

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.



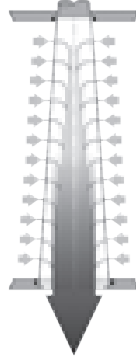
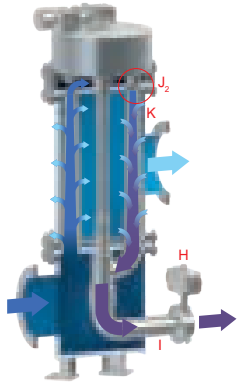
The remaining filter elements continue filtering to ensure uninterrupted filtration.

Backflushing Filter AutoFilt® RF10

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).



STEEL
MAKING



PULP & PAPER



WASTE WATER
TREATMENT



MINING
TECHNOLOGY



INDUSTRIAL



POWER
GENERATION



MARINE

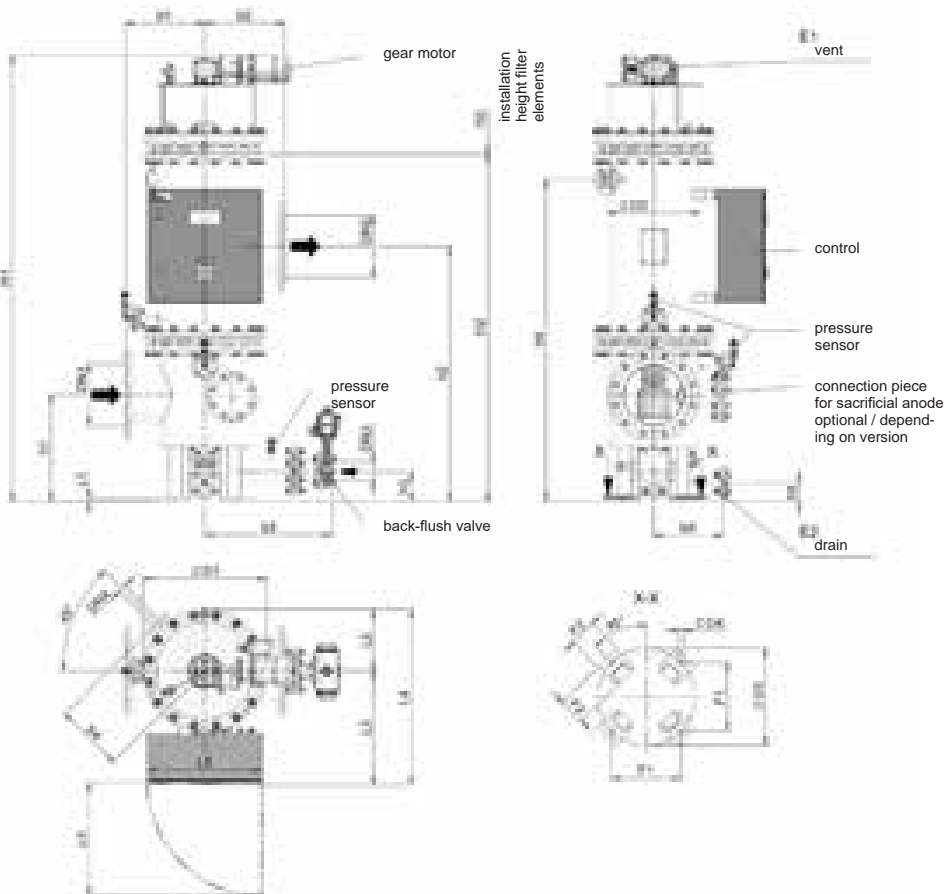


MACHINE
TOOL

Filter Elements

Industries
Served

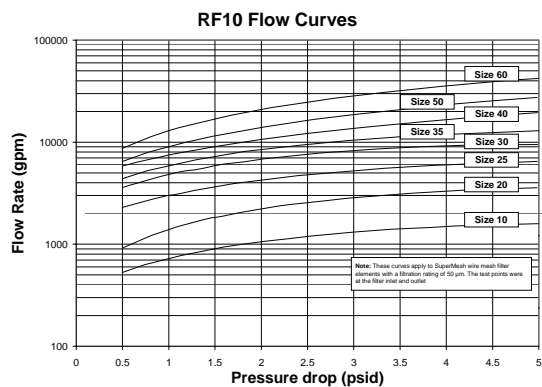
Dimensions



Specifications

Filter Sizes:	10, 20, 23, 25, 30, 35, 40, 50, 60
Flow Range:	2210-12,940 gpm (580-3420 L/min)
Working Pressure:	87 psi (6 bar)
Max. Working Temperature:	131°F (55°C)
Empty Weight:	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)
Housing Volume:	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)
Filter Area:	10 - 558 in. ² (3,600 cm ²), 20 - 1,105 in. ² (7,128 cm ²), 23 - 1,868 in. ² (12,050 cm ²), 25 - 2,241 in. ² (14,460 cm ²), 30 - 3,362 in. ² (21,690 cm ²), 35 - 4,109 in. ² (26,510 cm ²), 40 - 6,724 in. ² (43,380 cm ²), 50 - 8,965 in. ² (57,840 cm ²), 60 - 14,942 in. ² (96,400 cm ²)
No. of Filter Elements	Contact Factory
Backflush Flange Size:	Contact Factory
Backflush Volume:	Contact Factory

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFilt® RF10

RF10

Dimensions

Size	DN1 in (mm)	DN2 in (mm)	DN3 in (mm)	DN4 in (mm)	b1 in (mm)	b2 in (mm)	b3 in (mm)	b4 in (mm)	b5 in (mm)	h1 in (mm)	h2 in (mm)	h3 in (mm)	h4 in (mm)	h5 in (mm)	H1 in (mm)
RF10-10	10 (100)	10 (100)	4 (40)	G3/4	25 (250)	25 (250)	29.8 (298)	-	-	36 (360)	68.7 (687)	16 (160)	71.7 (717)	-	127.4 (1274)
RF10-20	20 (200)	20 (200)	6.5 (65)	2.5 (25)	32 (320)	32 (320)	30.5 (305)	28 (280)	29.5 (295)	42.5 (425)	88.5 (885)	16.1 (161)	100.5 (1005)	7.9 (79)	155.9 (1559)
RF10-23	20 (200)	20 (200)	6.5 (65)	2.5 (25)	32 (320)	32 (320)	30.5 (305)	28 (280)	29.5 (295)	42.5 (425)	110 (1100)	16.1 (161)	134.1 (1341)	7.9 (79)	189.5 (1895)
RF10-25	25 (250)	25 (250)	6.5 (65)	2.5 (25)	35 (350)	35 (350)	30.5 (305)	30 (300)	29.5 (295)	46.2 (462)	111.7 (1117)	13.1 (131)	141.4 (1414)	8.3 (83)	129.7 (1297)
RF10-30	30 (300)	30 (300)	6.5 (65)	2.5 (25)	40 (400)	40 (400)	62.1 (621)	35 (350)	33 (330)	42 (420)	112.6 (1126)	26.6 (266)	8.2 (82)	140.9 (1409)	197.8 (1978)
RF10-35	35 (350)	35 (350)	6.5 (65)	2.5 (25)	45 (450)	45 (450)	63.7 (637)	41 (410)	42 (420)	42 (420)	113.6 (1136)	26.6 (266)	8.2 (82)	XX (1424)	199.2 (1992)
RF10-40	40 (400)	40 (400)	8 (80)	2.5 (25)	52 (520)	52 (520)	73.5 (735)	46 (460)	47 (470)	47 (470)	122.5 (1225)	30 (300)	8.2 (82)	142.4 (1492)	212.5 (2125)
RF10-50	50 (500)	50 (500)	8 (80)	4 (40)	60 (600)	60 (600)	77 (770)	56 (560)	49 (490)	49 (490)	130 (1300)	35 (350)	10.5 (105)	157.6 (1576)	221 (2210)
RF10-60	60 (600)	60 (600)	10 (100)	4 (40)	70 (700)	70 (700)	90 (900)	65 (650)	61 (610)	61 (610)	136 (1360)	33 (330)	19.5 (195)	159 (1590)	227 (2270)

Size	H2 in (mm)	H3 in (mm)	L1 in (mm)	L2 in (mm)	L3 in (mm)	L4 in (mm)	L5 in (mm)	D1 in (mm)	D2 in (mm)	D3 in (mm)	D4 in (mm)	E1 in (mm)	E2 in (mm)	F1 in (mm)	F2 in (mm)
RF10-10	83.7 (837)	35 (350)	1 (10)	18.8 (188)	46 (460)	64.8 (648)	50 (500)	37.5 (375)	27.3 (273)	34 (340)	1.8 (18)	G1/2	G1/2	24 (240)	9 (90)
RF10-20	112.2 (1122)	55 (550)	1.5 (15)	24.5 (245)	51.7 (517)	76.2 (762)	50 (500)	49 (490)	35.56 (355.6)	37 (370)	1.8 (18)	DN25	G1/2	26.9 (269)	12 (120)
RF10-23	145.8 (1458)	70 (700)	1.5 (15)	24.5 (245)	46 (460)	70.5 (705)	50 (500)	49 (490)	35.56 (355.6)	49.6 (496)	1.8 (18)	DN25	G1/2	35.1 (351)	12 (120)
RF10-25	152.3 (1523)	55 (550)	1.5 (15)	27 (270)	47.7 (477)	74.7 (747)	50 (500)	54 (540)	40.64 (406.4)	43 (430)	1.8 (18)	DN25	G1/2	30.4 (304)	12 (120)
RF10-30	153.1 (1531)	70 (700)	1.5 (15)	32.3 (323)	49.7 (497)	82 (820)	50 (500)	64.5 (645)	50.8 (508)	54 (540)	1.8 (18)	G1/2	G1/2	38.2 (382)	15 (150)
RF10-35	154.8 (1548)	70 (700)	1.5 (15)	37.8 (378)	57.6 (576)	95.4 (954)	50 (500)	75.5 (755)	61 (610)	64 (640)	1.8 (18)	G1/2	G1/2	45.3 (453)	15 (150)
RF10-40	161.7 (1617)	70 (700)	1.5 (15)	48.5 (485)	63.2 (632)	111.7 (1117)	50 (500)	86 (860)	71.1 (711)	72.7 (727)	2.7 (27)	G1/2	G1/2	51.4 (514)	15 (150)
RF10-50	170.1 (1701)	70 (700)	2 (20)	54.3 (543)	69.8 (698)	124 (1240)	50 (500)	97.5 (975)	81.3 (813)	86 (860)	3 (30)	G1/2	G1/2	60.8 (608)	20 (200)
RF10-60	175.9 (1759)	70 (700)	2 (20)	64.3 (643)	79.5 (795)	143.8 (1438)	50 (500)	117.5 (1175)	101.6 (1016)	104 (1040)	3.2 (32)	G1/2	G1/2	73.5 (735)	20 (200)

Size	Pressure Rating psi (bar)	Connection Inlet/Outlet	Connection Backflushing Line	Weight Empty lbs (kg)	Volume Gallons (liters)	Amount of Filter Elements	Filter Area in ² (cm ²)	Backflushing Amount gal (liters)
10	87 (6)	DN 100	40	624 (283)	10 (36)	6	558 (3600)	154 (583)
20	87 (6)	DN 200	65	981 (445)	25 (95)	6	1105 (7128)	330 (1250)
23	87 (6)	DN 200	65	1025 (465)	35 (131)	5	1868 (12050)	374 (1417)
25	87 (6)	DN 250	65	1213 (550)	42 (160)	6	2241 (14460)	374 (1417)
30	87 (6)	DN 300	65	1598 (725)	80 (304)	9	3362 (21690)	374 (1417)
35	87 (6)	DN 350	65	1934 (877)	119 (452)	11	4109 (26510)	374 (1417)
40	87 (6)	DN 400	80	2619 (1188)	163 (616)	18	6724 (43380)	639 (2417)
50	87 (6)	DN 500	80	2985 (1354)	235 (891)	24	8965 (57840)	639 (2417)
60	87 (6)	DN 600	100	5644 (2560)	393 (1489)	40	14942 (96400)	903 (3417)

Technical Data

BTU

ATF-1

ATF-2

ATF-2.5

ATF-3

ATF-3.5

ATF-4

PLF1

PLF2

PVD

Filter Model Number Selection

How to Build a Valid Model Number for a RF10:

BOX 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RF10																

Example: NOTE: One option per box

BOX 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
RF10	20	A	1		X	P	J	K	N	B	2	1	H	1	1	0

= RF10-20-A-1-7-X-P-J-K-N-B-2-1-H-1-1-0
N-B-2-1-H-1-1-0
(cont'd on pg. 43)

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Filter Size	Pressure Range	Type Of Control	Voltage Supply
RF10	10 = DN 100 35 = DN 350 20 = DN 200 40 = DN 400 23 = DN 200 50 = DN 500 25 = DN 250 60 = DN 600 30 = DN 300	A = PN6 B = PN10	1 = EPP electro-pneumatic control 2 = EPP functional control (triggered by the customer) 3 = customer-specific version	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 0 = 3 x 575V / x / PE 60Hz Y = customer-specific version

BOX 6	BOX 7	BOX 8
EX Protection	Housing Material	Flange Standard
X = EX protection according to ATEX C = EX protection according to IECEx	N = Carbon steel, external primer (RAL 9006), no corrosion protection, internal M = Carbon steel, external primer (RAL 9006), 2K epoxy paint, internal P = Carbon steel, external primer (RAL 9006), 2K polyurethane paint, internal E = Stainless steel AISI 304 H = Stainless steel AISI 316	A = ANSI F = DIN / EN J = JIS

BOX 9		BOX 10
Nominal Size		Material of back-flush valve: collar
C = DIN / EN 50 / ANSI 2"	M = DIN / EN 250 / ANSI 10" (standard size 25)	N = NBR (standard)
D = DIN / EN 65 / ANSI 2 1/2"	N = DIN / EN 300 / ANSI 12" (standard size 30)	E = EPDM
E = DIN / EN 80 / ANSI 3"	P = DIN/EN 350 / ANSI 14" (standard size 35)	V = FKM (Viton)
F = DIN / EN 100 / ANSI 4" (standard size 10)	Q = DIN / EN 400 / ANSI 16" (standard size 40)	
H = DIN / EN 125 / ANSI 5"	J = DIN / EN 450 / ANSI 18"	
K = DIN / EN 150 / ANSI 6"	R = DIN / EN 500 / ANSI 20" (standard size 50)	
L = DIN / EN 200 / ANSI 8" (standard size 20, 23)	W = DIN / EN 550 / ANSI 22"	
	S = DIN / EN 600 / ANSI 24" (standard size 60)	

BOX 11	BOX 12	BOX 13
Material of back-flush disc	Pressure Transmitter	Flange Position
N = Stainless steel B = Bronze D = Duplex	0 = No pressure transmitter (flange connection on the filter remains) 1 = Pressure transmitter (P-in; P-out and P-rsl) with digital display (type EDS) 2 = Pressure transmitter (P-in; P-out and P-rsl) without digital display on the sensor (type HDA)	1 = Filter outlet opposite filter inlet (standard) 2 = Filter outlet offset by 90° clockwise to standard 3 = Filter outlet offset by 180° clockwise to standard 4 = Filter outlet offset by 270° clockwise to standard

BOX 14	BOX 15	BOX 16	BOX 17
Material of internal parts	Sacrificial Anode	Cover plate lifting device	Modification Number
H = Stainless steel D = Duplex S = Superduplex	0 = No anode 1 = With sacrificial anode 2 = With flange connection, no sacrificial anode	0 = No cover plate lifting device 1 = With cover plate lifting device	X = Determined by manufacturer

NOTES:
Box 12. 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.

Backflushing Filter AutoFilt® RF10

RF10

How to Build a Valid Model Number for an RF10 Filter Element:

BOX 18	BOX 19	BOX 20
S		

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

BOX 18	BOX 19	BOX 20	
S	H	D	= RF10 (cont'd) S-H-D

BOX 18	BOX 19	BOX 20
Coating	Material	Version
S = SuperFlush (optional)	H = Stainless steel D = Duplex* S = Superduplex*	D = Conical wire mesh elements only available in stainless steel AISI 316 S = Conical slotted tube elements

Filter Element Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10**
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD



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

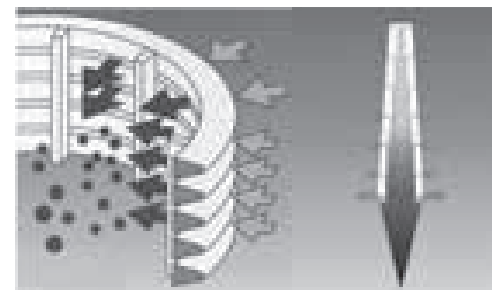
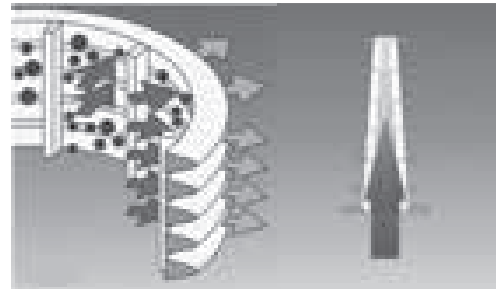
When the differential pressure set point is reached, the visual clogging alarm indicates to an operator or maintenance personnel that a backflush cycle is needed.

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.

Backflushing Filter AutoFilt® RF4

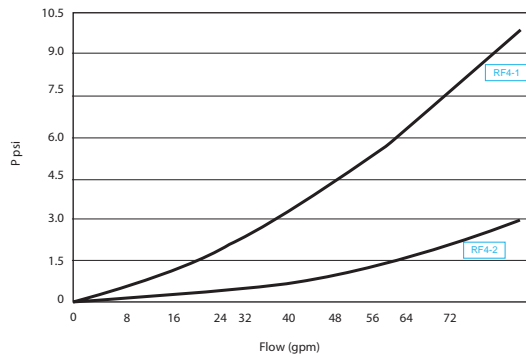
RF4

Water Applications

Fluid	Max. Flow Rate gpm (L/min)	
	RF4-1	RF4-2
Water	32(120)	60(220)

The flow rate ranges indicated apply to filtration ratings $\geq 100 \mu\text{m}$

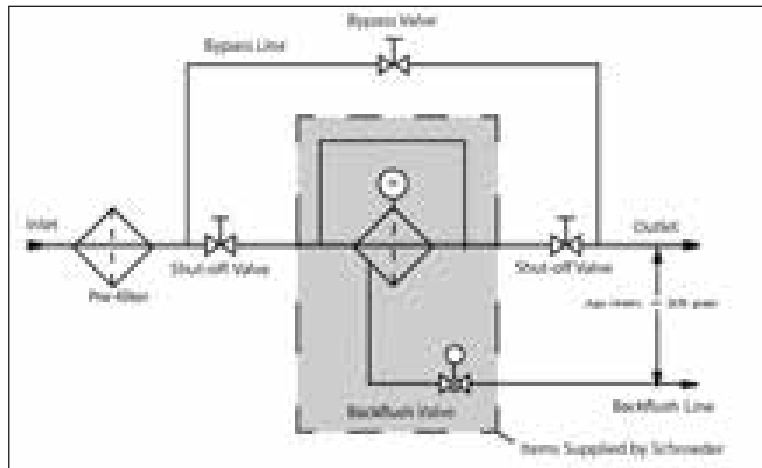
Important
The pressure drop curves apply to water and other fluids up to a viscosity of 11 mm²/s.



Cooling Lubricant Applications

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

Circuit Diagram



STEEL MAKING

PULP & PAPER

WASTE WATER TREATMENT

AUTOMOTIVE MANUFACTURING

INDUSTRIAL

THERMAL TRANSFER

MARINE

MACHINE TOOL

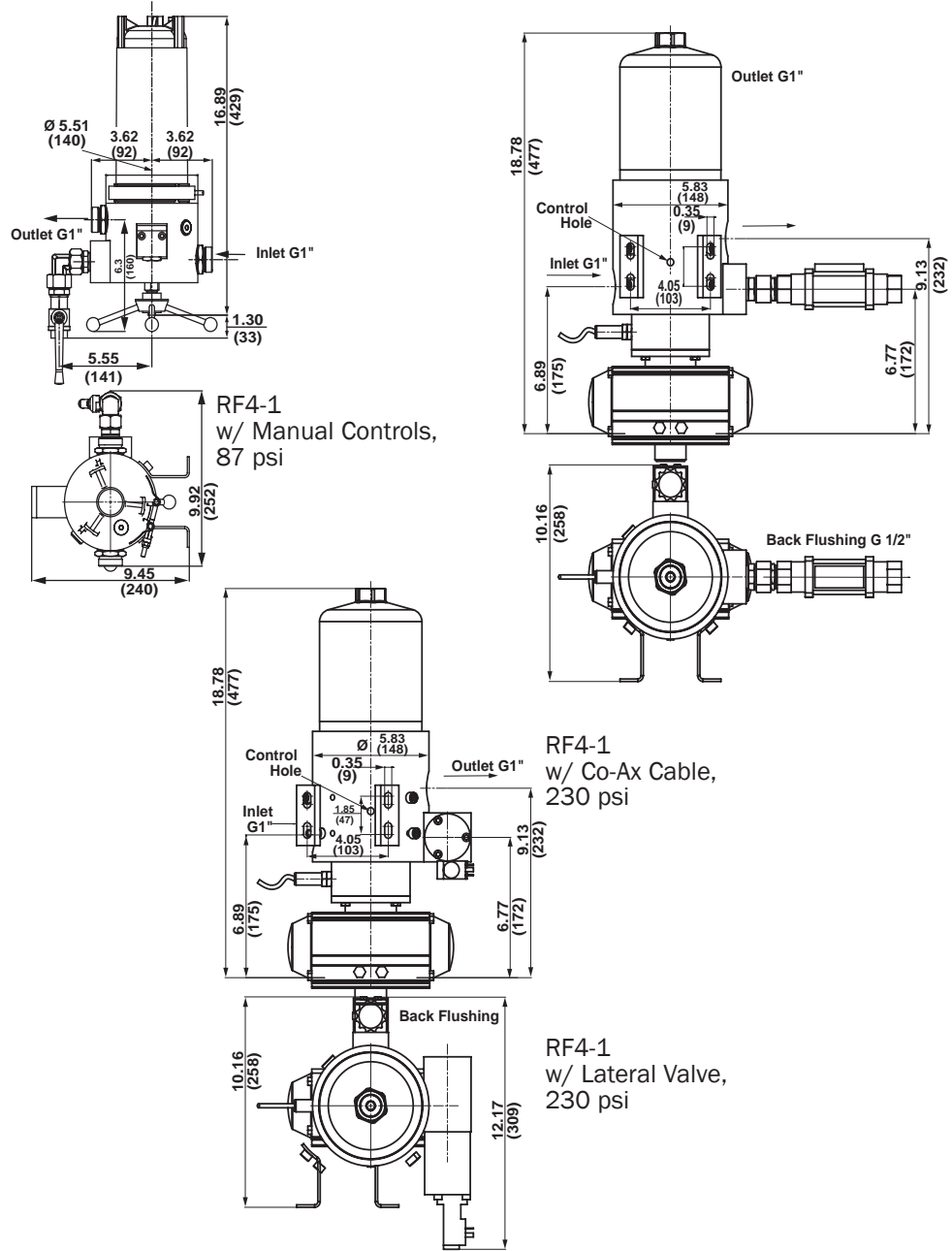
Industries Served

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

32 gpm
120 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

Process Connection:	G 1" Female
Max Flow:	32 gpm (120 L/min)
Max. Working Pressure:	87 psi (6 bar) or 230 psi (16 bar)
Max. Working Temperature:	194°F (90°C)
Weight:	29 lbs. (13 kg) or 33 lbs. (15kg)
Housing Volume:	0.66 gallons (2.5 L)
Filter Area:	85in. ² (548 cm ²)
No. of Filter Elements	4
Backflush Connection:	G½ Female
Backflush Volume:	1.1 gallons (4 L/cycle)

Backflushing Filter AutoFilt® RF4

RF4-1

How to Build a Valid Model Number for a RF4:

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

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF4	1	ET	1	AA	E	CO	2	16	X	KMS50

= RF41ET1AAECO216X KMS50

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Size	Control Type	Voltage Type	Materials
RF4	1 = G1"	EPT = Electro-pneumatic cyclic control, (including pneumatic drive) ET = Electric control M = Manual	0 = Without control, without solenoid valve 1 = With control* and solenoid valve 230 V AC 2 = With control* and solenoid valve 24 V AC 3 = Without control, with solenoid valve 230 V AC 4 = Without control, with solenoid valve 24 V AC Only for ET control: 0C = Without control*, drive 3 x 400 V/N/PE, 60 HZ 1C = With control*, drive 3 x 400 V/N/PE, 60 HZ *Supply voltage of control is 110-120 V AC, 60 Hz	AA = Aluminum head & bowl (only RF4-1, 230 psi) EE = Stainless Steel head and bowl (only RF4-1, 87 psi)

BOX 6	BOX 7	BOX 8	BOX 9	BOX 10
Material of Internal Parts	Backflushing Valve	Differential Pressure Control	Pressure Range	Modification No.
E = Stainless Steel	0 = Without backflushing valve CO = Coaxial valve, brass KN = Ball valve, nickel plated brass (only on M or EPT control models) KE = Ball valve, nickel plated brass (only on M or EPT control models)	0 = Without differential pressure monitoring 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	06 = 87 psi (6 bar) (housing fastened with clamp), only for housings in stainless steel design 16 = 230 psi (16 bar) (filter upper section threaded)	X = Latest version is always supplied

BOX 11
Element Type & Size
KMS = Slotted Tubes, 30 to 1000 µm
KMD = SuperMesh™ 25 µm, 40 µm, 60 µm
SKMS = Slotted Tube Superflush 30 µm to 1000 µm
SKMD = SuperMesh™ Superflush 25 µm, 40 µm, 60 µm

Filter Model Number Selection	
RF3-C	
RF3-0	
RF3-1	
RF3-2	
RF3-2.5	
RF3-3	
RF3-4	
RF3-5	
RF3-6	
RF3-7	
RF3-8	
RF5	
RF7	
RF10	
RF4-1	
RF4-1	
RF12	
BTU	
ATF-1	
ATF-2	
ATF-2.5	
ATF-3	
ATF-3.5	
ATF-4	
PLF1	
PLF2	
PVD	

NOTES:
Box 5. AA only available for 16 bar.
AP only available for 6 bar.

RF4-2

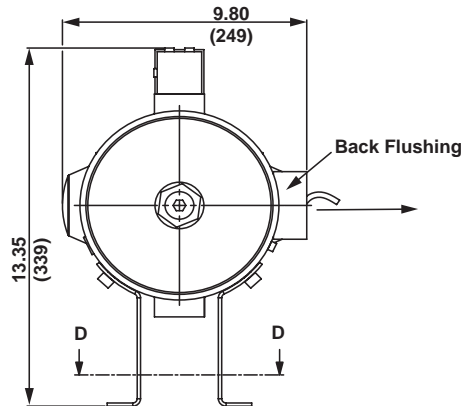
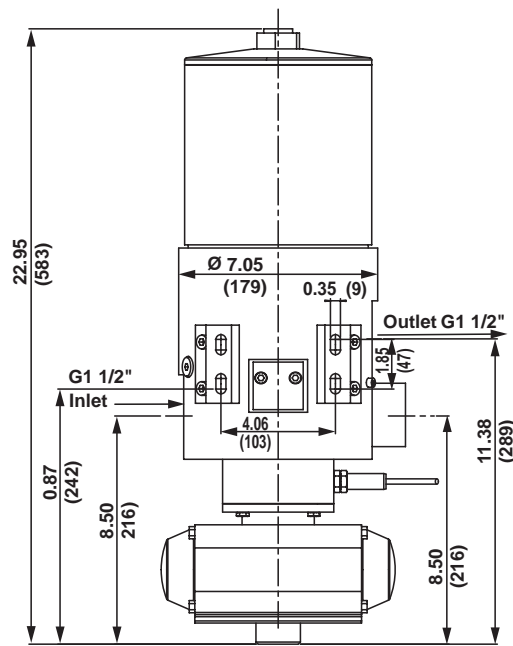
Backflushing Filter AutoFit® RF4

60 gpm
220 L/min

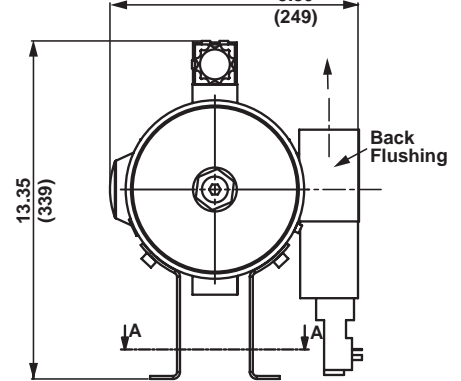
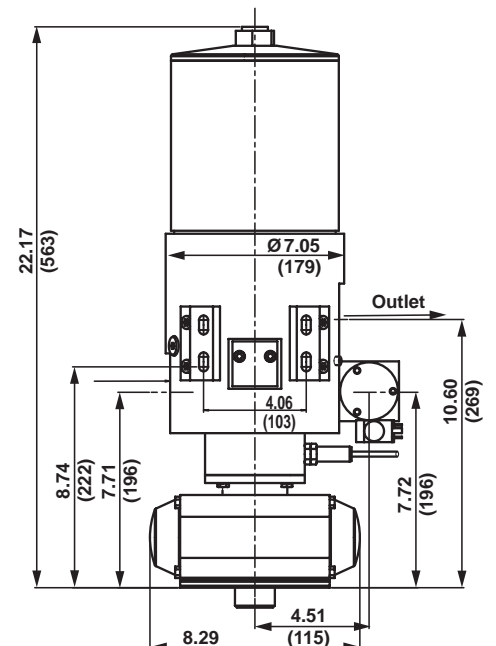
87 psi
6 bar

Or
230 psi

16 bar



RF4-2
w/ Co-Ax Cable,
230 psi



RF4-2
w/ Lateral Valve,
230 psi

NOTES:

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

Specifications

Process Connection:	G1½" Female
Max Flow:	60 gpm (220 L/min)
Max. Working Pressure:	87 psi (6 bar) or 230 psi (16 bar)
Max. Working Temperature:	194°F (90°C)
Weight:	71 lbs. (32 kg) or 140 lbs. (63kg)
Housing Volume:	1.0 gallons (3.7 L)
Filter Area:	220in. ² (1420 cm ²)
No. of Filter Elements	4
Backflush Connection:	G¾ Female
Backflush Volume:	3.4 gallons (13 L/cycle)

Backflushing Filter AutoFit® RF4

RF4-2

How to Build a Valid Model Number for a RF4:

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

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF4	2	ET	1	NN	E	CO	2	16	X	KMS50

= RF42ET1NNECO216X KMS50

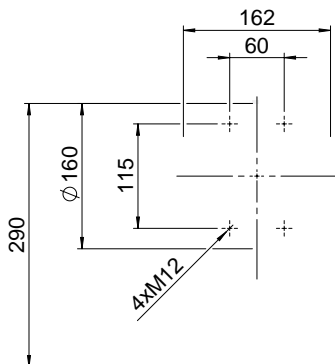
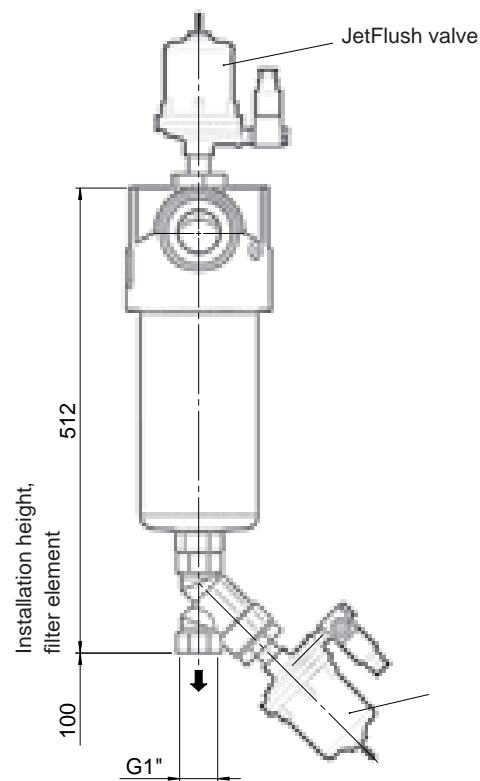
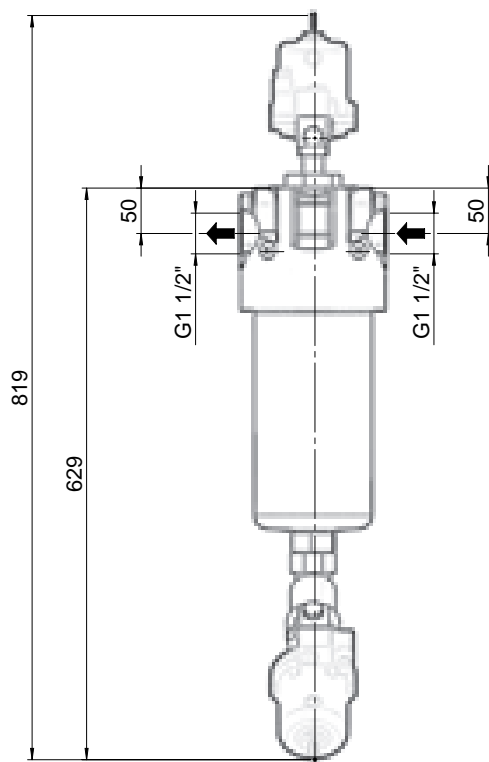
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Size	Control Type	Voltage Type	Materials
RF4	2 = G1 1/2"	EPT = Electro-pneumatic cyclic control, (including pneumatic drive) ET = Electric control M = Manual	0 = Without control, without solenoid valve 1 = With control* and solenoid valve 230 V AC 2 = With control* and solenoid valve 24 V AC 3 = Without control, with solenoid valve 230 V AC 4 = Without control, with solenoid valve 24 V AC Only for ET control: 0C = Without control*, drive 3 x 400 V/N/PE, 60 HZ 1C = With control*, drive 3 x 400 V/N/PE, 60 HZ *Supply voltage of control is 110-120 V AC, 60 Hz	NN = Carbon Steel, nickel plated (only RF4-2 230 psi) EE = Stainless Steel head and bowl (only RF4-2, 87 psi)

BOX 6	BOX 7	BOX 8	BOX 9	BOX 10
Material of Internal Parts	Backflushing Valve	Differential Pressure Control	Pressure Range	Modification No.
E = Stainless Steel	0 = Without backflushing valve CO = Coaxial valve, brass KN = Ball valve, nickel plated brass (only on M or EPT control models) KE = Ball valve, nickel plated brass (only on M or EPT control models)	0 = Without differential pressure monitoring 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	06 = 87 psi (6 bar) (housing fastened with clamp), only for housings in stainless steel design 16 = 230 psi (16 bar) (filter upper section threaded)	X = Latest version is always supplied

BOX 11
Element Type & Size
KMS = Slotted Tubes, 30 to 1000 µm
KMD = SuperMesh™ 25 µm, 40 µm, 60 µm
SKMS = Slotted Tube Superflush 30 µm to 1000 µm
SKMD = SuperMesh™ Superflush 25 µm, 40 µm, 60 µm

Filter Model Number Selection	
RF3-C	
RF3-0	
RF3-1	
RF3-2	
RF3-2.5	
RF3-3	
RF3-4	
RF3-5	
RF3-6	
RF3-7	
RF3-8	
RF5	
RF7	
RF10	
RF4-1	
RF4-2	
RF4-2	
BTU	
ATF-1	
ATF-2	
ATF-2.5	
ATF-3	
ATF-3.5	
ATF-4	
PLF1	
PLF2	
PVD	

NOTES:
Box 5. AA only available for 16 bar.
AP only available for 6 bar.

RF12**Backflushing Filter AutoFit® RF12**21 gpm
80 L/min145 psi
10 bar**NOTES:**

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

Specifications

Process Connection:	G 1/2" Female
Max Flow:	21 gpm (80 L/min)
Max. Working Pressure:	145 psi (10 bar)
Weight:	33 lbs. (15 kg)
Housing Volume:	0.48 gallons (1.8 L)
Filter Area:	55 in. ² (356 cm ²)
No. of Filter Elements	1
Backflush Connection:	G 1" Female
Backflush Volume:	0.79 gallons (3 L/cycle)

Backflushing Filter AutoFilt® RF12

RF12

How to Build a Valid Model Number for a RF12:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
RF12							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
RF12	EP0	1	S	0	10	X	KSD25

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

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Protective Filter	Material	Back-flushing valve
RF12	EP0 = Electropneumatic control without pilot valves EP1 = Electropneumatic control incl. pilot valve 24 VDC Device connector DIN EN 175301-803 / for A (w/o mating connector) 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) EPZ3 = 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 50Hz)	1 = Filter housing: aluminum, internal parts: stainless steel	0 = Without G1" connection CO = Coaxial valve, brass KN = Ball valve, brass, nickel-plated S = Piston control valve, brass

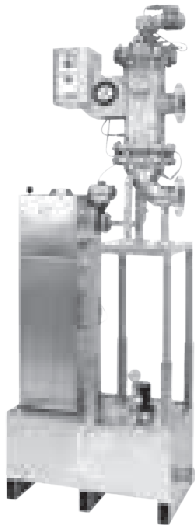
BOX 5	BOX 6	BOX 7	BOX 8
Differential Pressure Monitoring	Pressure Range	Modification Code	Filter Elements/ Filtration Rating
0 = Without differential pressure monitoring 5 = 2x HDA 4700 stainless steel (4 - 20 mA) 7 = Fixed value 0.5 bar. Type GW, n.c. contact	10 = 145 psi (10 bar)	X = The latest version is always supplied	S = Preceded with an additional "S" for SuperFlush non-sticking coating KSS = Wedge wire 30 µm to 1000 µm KSD = SuperMesh wire mesh, sintered, 25 µm / 40 µm / 60 µm; others on request

Filter Model Number Selection

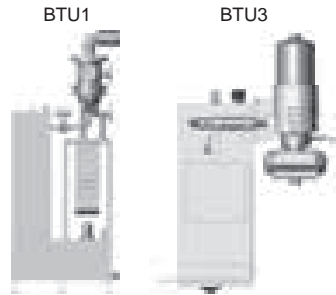
- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- RF12**
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

32-1120
gpm
120-4235
L/min

150 psi
10 bar



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

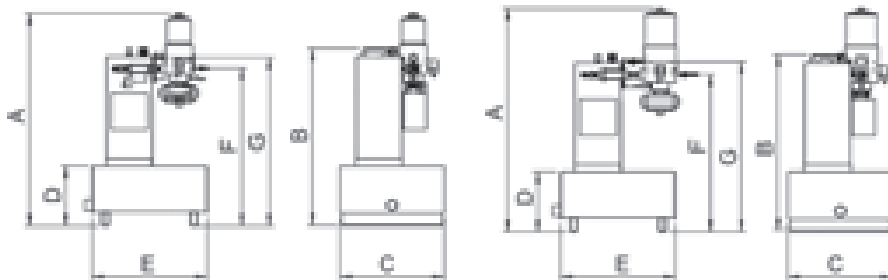
The process twist sieve (PTS) is a component which is fitted downstream from the backflushing filter to filter the backflushed volume. In this way, with the help of the twist sieve, a further filtration process is carried out via the backflushing line.

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.

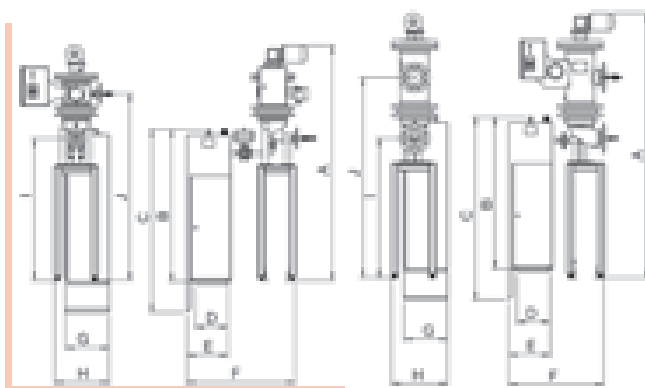
The fluid filtered by the twist sieve or the bag flows back to the buffer tank (BTU1). As soon as the fluid level in the buffer tank reaches the upper switch point of the level gauge (optional), the tank pump (optional) empties the tank.

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 through 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.



Type	A	B	C	D	E	F	G
BTU3 with RF3-CG	1162	972	570	330	626	860	917
BTU3 with RF3-OG	1223	972	570	330	626	860	929



Type	A	B	C	D	E	F	G	H	I	J
BTU3 with RF3-CG	1877	1210	1460	264	332	867	350	437	1130	1488
BTU3 with RF3-OG	2113	1210	1460	264	332	760	350	446	1110	1600

Backflush Treatment Unit



How to Build a Valid Model Number for a BTU:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
BTU1							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
BTU1	80	PP	50	EE	S	T	X	= BTU1-80-P-50-EE-S-T-X

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Unit Type	Filtration Rating	Bag Filter Material	Bag Filter Filtration Rating	Twist Sieve Housing/ Buffer Tank Material
BTU1 = Add-on unit BTU3 = Tank-top unit	25 = D25 40 = D40 60 = D60 80 = D80 100 = D100 150 = D150	PE = Polyester PP = Polypropylene N = Nylon	25 = 25 µm 50 = 50 µm 100 = 100 µm 150 = 150 µm	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	BOX 7	BOX 8
Control Functions	Pump	Modification Number
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	0 = 150 psi (10 bar) T = Return pump in buffer tank (only possible with BTU1)	X = The latest version is always supplied

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- BTU**
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

**AutoFilt®
Model
Number
Selection**

How to Build a Valid Model Number for an AutoFilt® for BTU:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
A							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
A	E	1	E	E	E	2	L	= A-E-1-E-E-E-2-L

BOX 1	BOX 2	BOX 3
AutoFilt®	Control	Voltage
A = RF3-C B = RF3-CG D = RF3-0 E = RF3-0G F = RF3-1 G = RF4-1 H = RF4-2	0 = w/o E = EPT	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)	Materials Of Housing (RF4-1 Only)	Materials Of Housing (RF4-2 Only)
0 = Carbon steel, external primer ("N") 1 = Carbon steel, external primer, internal coating ("NM") 3 = Stainless steel ("E")	AA = Configuration (AAE): aluminum, aluminum, stainless steel EE = Configuration (EEE): stainless steel, stainless steel, stainless steel	NN = Configuration (NNE): carbon steel, carbon steel, stainless steel EE = Configuration (EEE): stainless steel, stainless steel, stainless steel

BOX 5	BOX 6
Materials Of Backflushing Valve	Differential Pressure Gauge
RF3 N = Carbon Steel E = Stainless Steel	RF4 F = Fixed value: 0.5 bar A = Adjustable: 0.1 - 1.0 bar G = GW indicator, N/C
1 = Coaxial Valve 2 = Ball Valve	1 = Pressure Chamber Aluminum 2 = Pressure Chamber Stainless Steel 3 = With chemical seal/ Stainless Steel

BOX 7	BOX 8		
Flange Options (RF3 only)	Filter Elements (RF3)	(RF4-1)	(RF4-2)
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	B = KD25 C = KD40 D = KD60 E = KD80 L = KS50 M = KS100 N = KS150	B = KMD25 C = KMD40 D = KMD60 E = KMD80 L = KMS50 M = KMS100 N = KMS150	B = KND25 C = KND40 D = KND60 E = KND80 L = KNS50 M = KNS100 N = KNS150

Backflush Treatment Unit



How to Build a Valid Model Number for a Process Twist Sieve:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
PTS								

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
PTS	40	250	E	L	2		50	

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

BOX 1	BOX 2	BOX 3	BOX 4
Unit Type	Filtration Rating	Diameter	Housing Material
PTS = Process twist sieve	25 = D25 40 = D40 60 = D60 80 = D80 100 = D100 150 = D150	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)	N = Carbon steel, primed E = Stainless steel

BOX 5	BOX 6	BOX 7	BOX 8
Housing Length	Level Switch	Bag Filter Material	Bag Filtration Rating
K = Short (standard for PTS-180) L = Long (standard for PTS-250/-450)	0 = Without 1 = With level switch stainless steel (only for diameters 250 mm, 450 mm)	PE = Polyester PP = Polypropylene N = Nylon	25 = 25 µm 50 = 50 µm 100 = 100 µm 150 = 150 µm

BOX 9
Modification Number
X = The latest version is always supplied

Process Twist Sieve Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- BTU**
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

Automatic Twist Flow Strainer ATF



ATF

- Perfect pre-filter
- Great for high contamination levels
- Low pressure drop

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.

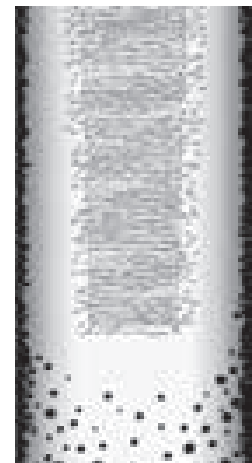
Due to the use of conical slotted tube and sintered wire meshes, a precise selectivity and therefore a constant filtrate quality is ensured – independent of fluctuations in operating pressure or flow rate.

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.



Backflush Mode



Filtration Mode

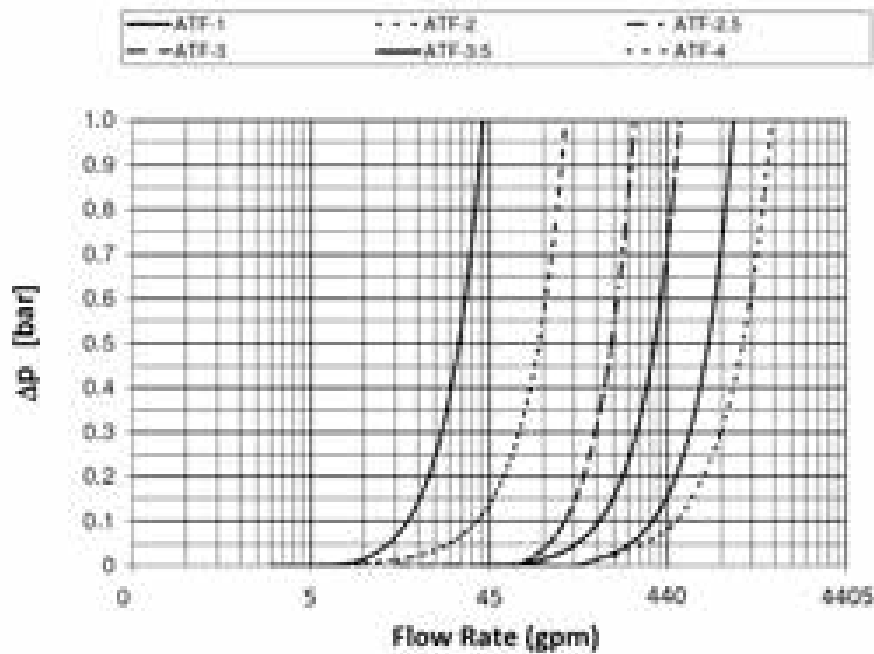
Automatic Twist Flow Strainer ATF

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.



Pressure Drop Graph

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

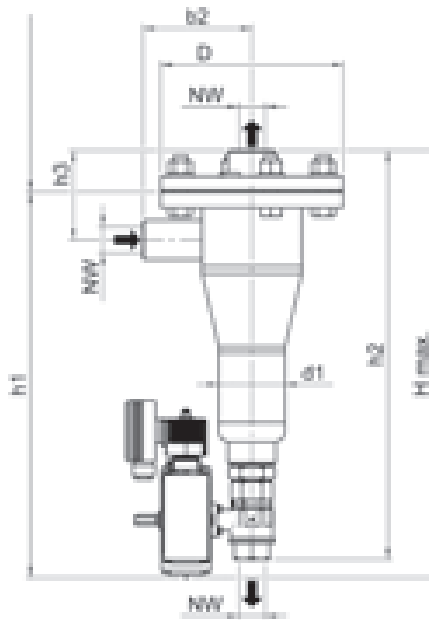
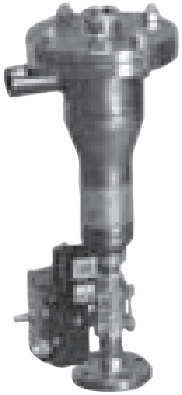
Filter Calculation and Sizing



Industries Served

35 gpm
132 L/min

230 psi
16 bar



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

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

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)

Automatic Twist Flow Strainer ATF-1

ATF

How to Build a Valid Model Number for a ATF-1:

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

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
ATF	1	EPZ	1	E	NN	10	0	X	UKS2	200

= ATF1EPZ1ENN100XUKS2200

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Size	Control Type	Voltage
ATF	1 = Inlet/outlet 1" NPT	0 = No controls/ No valve M = Manual valve EP = Electro-pneumatic discharge valve, without timer control EPZ = Electro-pneumatic discharge valve, with timer control E = Electric discharge valve, without timer control EZ = Electric discharge valve, with timer control	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

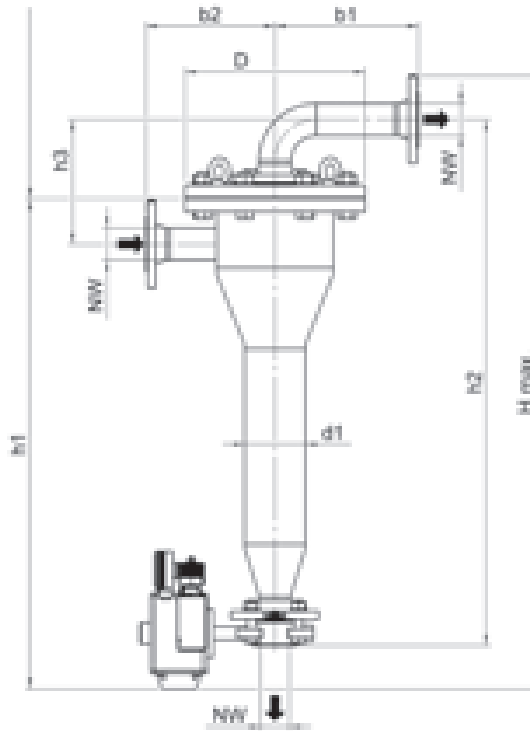
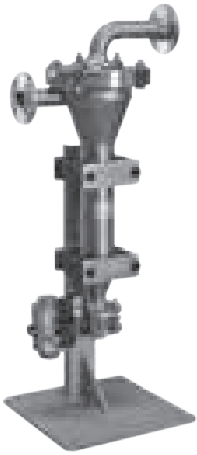
BOX 5	BOX 6	BOX 7	BOX 8
Housing Material	Discharge Valve	Pressure Rating	Accessories
N = Carbon Steel E = Stainless Steel A = for ANSI flanges, also add A J = for JIS flanges, also add J T = NPT thread (size 1 only), also add T P = Internal Coating with 2-K polyurethane paint, also add P	0 = None NN = 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)	10 = 145 psi (10 bar) 16 = 230 psi (16 bar)	0 = none 1 = Base frame (sizes 2, 2.5 and 3 only) 2 = Mounting clips (sizes 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	BOX 10	BOX 11
Modification Number	Element Set	Filtration Rating
X = latest version supplied by factory	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	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

- Filter Model Number Selection
- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1**
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2
- PVD

480 gpm
1816 L/min

230 psi
16 bar



Filter Size	NW in (mm)	H Max. in (mm)	h1 in (mm)	h2 in (mm)	h3 in (mm)	b1 in (mm)	b2 in (mm)	D in (mm)	d1 in (mm)	Installation Height in (mm)
ATF 2	1.97 (50)	45.67 (1160)	36.42 (925)	39.17 (995)	9.25 (235)	10.63 (270)	9.57 (243)	13.39 (340)	4.50 (114.3)	19.69 (500)
ATF 2.5	3.15 (80)	56.50 (1435)	44.88 (1140)	48.62 (1235)	12.40 (315)	8.66 (10.24)	11.02 (280)	15.55 (395)	5.50 (139.7)	25.59 (650)
ATF 3	3.94 (100)	68.90 (1750)	55.12 (1400)	59.06 (1500)	13.78 (350)	10.24 (260)	12.68 (322)	17.52 (445)	8.63 (219.1)	39.37 (1000)

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			
Size:	2	2.5	3
Flow Rate:	20-110 gpm (75-416 L/m)	65-260 gpm (246-984 L/m)	85-480 gpm (321-1816 L/m)
Pressure Rating:	145 or 230 psi (10 or 16 bar)	145 or 230 psi (10 or 16 bar)	145 or 230 psi (10 or 16 bar)
Connections Inlet/Outlet:	2" Flange (DN 50)	3" Flange (DN 80)	4" Flange (DN 100)
Connection Discharge Line:	2" Flange (DN 50)	3" Flange (DN 80)	4" Flange (DN 100)
Filter Area:	55 in ² (360 cm ²)	150 in ² (966 cm ²)	266 in ² (1720 cm ²)
Weight:	132 lbs (60 kg)	297 lbs (135 kg)	440 lbs (200 kg)
Volume:	3.5 gal (13.5 L)	7.4 gal (28 L)	14.5 gal (55 L)

Automatic Twist Flow Strainer ATF-2, ATF-2.5, ATF-3

ATF

How to Build a Valid Model Number for a ATF-2, 2.5 and 3:

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

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
ATF	2	EPZ	1	E	NN	10	0	X	UKS2	200

= ATF2EPZ1ENN100XUKS2200

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Size	Control Type	Voltage
ATF	2 = Inlet/outlet 2" ANSI flange 2.5 = Inlet/outlet 3" ANSI flange 3 = Inlet/outlet 4" ANSI flange	0 = No controls/ No valve M = Manual valve EP = Electro-pneumatic discharge valve, without timer control EPZ = Electro-pneumatic discharge valve, with timer control E = Electric discharge valve, without timer control EZ = Electric discharge valve, with timer control	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

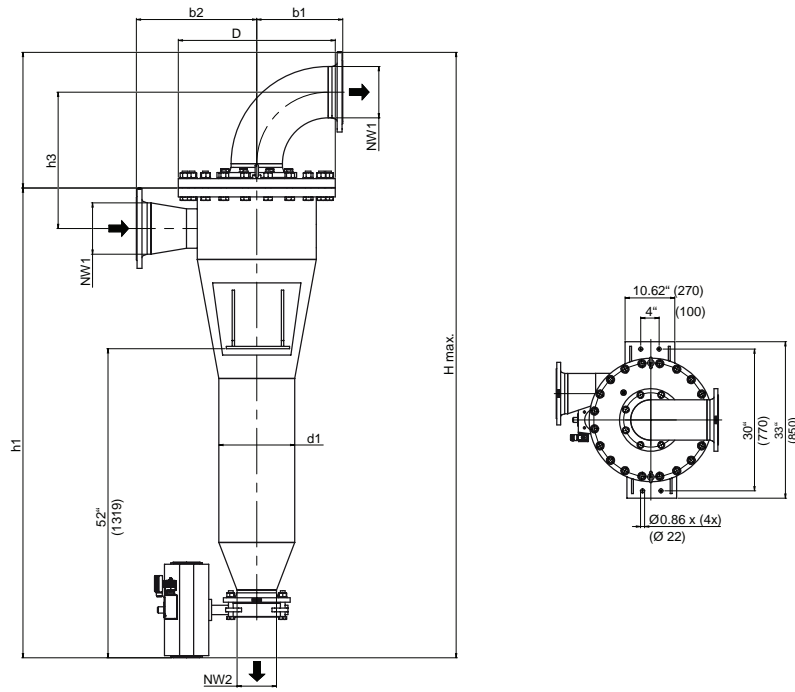
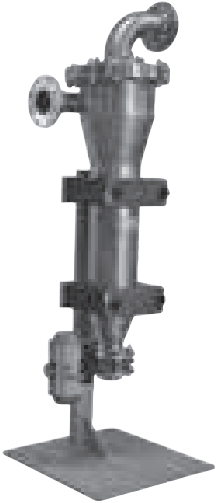
BOX 5	BOX 6	BOX 7	BOX 8
Housing Material	Discharge Valve	Pressure Rating	Accessories
N = Carbon Steel E = Stainless Steel A = for ANSI flanges, also add A J = for JIS flanges, also add J T = NPT thread (size 1 only), also add T P = Internal Coating with 2-K polyurethane paint, also add P	0 = None NN = 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)	10 = 145 psi (10 bar) 16 = 230 psi (16 bar)	0 = none 1 = Base frame (sizes 2, 2.5 and 3 only) 2 = Mounting clips (sizes 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	BOX 10	BOX 11
Modification Number	Element Set	Filtration Rating
X = latest version supplied by factory	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	200 = 200 µm (not for size 4) 300 = 300 µm (not for size 4) 500 = 500 µm 1000 = 1000µm 2000 = 2000µm 3000 = 3000µm

- Filter Model Number Selection**
- RF3-C
 - RF3-0
 - RF3-1
 - RF3-2
 - RF3-2.5
 - RF3-3
 - RF3-4
 - RF3-5
 - RF3-6
 - RF3-7
 - RF3-8
 - RF5
 - RF7
 - RF10
 - RF4-1
 - RF4-2
 - RF12
 - BTU
 - ATF-1
 - ATF-2**
 - ATF-2.5**
 - ATF-3**
 - ATF-3.5
 - ATF-4
 - PLF1
 - PLF2
 - PVD

1760 gpm
6662 L/min

230 psi
16 bar



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

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	
Size:	3.5	4
Flow Rate:	350-965 gpm (1324-3652 L/m)	440-1760 gpm (1665-6662 L/m)
Pressure Rating:	145 or 230 psi (10 or 16 bar)	145 or 230 psi (10 or 16 bar)
Connections Inlet/Outlet:	6" Flange (DN 150)	8" Flange (DN 200)
Connection Discharge Line:	4" Flange (DN 100)	6" Flange (DN 150)
Filter Area:	540 in ² (3500 cm ²)	605 in ² (3900 cm ²)
Weight:	578 lbs (263 kg)	920 lbs (418 kg)
Volume:	34 gal (130 L)	60 gal (230 L)

Automatic Twist Flow Strainer ATF-3.5, ATF-4

ATF

How to Build a Valid Model Number for a ATF-3.5, 4:

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

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
ATF	3.5	EPZ	1	E	NN	10	0	X	UKS2	200

= ATF3.5EPZ1ENN100UKS3.5200

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Size	Control Type	Voltage
ATF	3.5 = Inlet/outlet 6" ANSI flange 4 = Inlet/outlet 8" ANSI flange	0 = No controls / No valve M = Manual valve EP = Electro-pneumatic discharge valve, without timer control EPZ = Electro-pneumatic discharge valve, with timer control E = Electric discharge valve, without timer control EZ = Electric discharge valve, with timer control	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	BOX 6	BOX 7	BOX 8
Housing Material	Discharge Valve	Pressure Rating	Accessories
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 = Internal Coating with 2-K polyurethane paint, also add P	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)	10 = 145 psi (10 bar) 16 = 230 psi (16 bar)	0 = none 1 = Base frame (sizes 2, 2.5 and 3 only) 2 = Mounting clips (sizes 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	BOX 10	BOX 11
Modification Number	Element Set	Filtration Rating
X = latest version supplied by factory	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	200 = 200 µm (not for size 4) 300 = 300 µm (not for size 4) 500 = 500 µm 1000 = 1000µm 2000 = 2000µm 3000 = 3000µm

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5**
- ATF-4**
- PLF1
- PLF2
- PVD

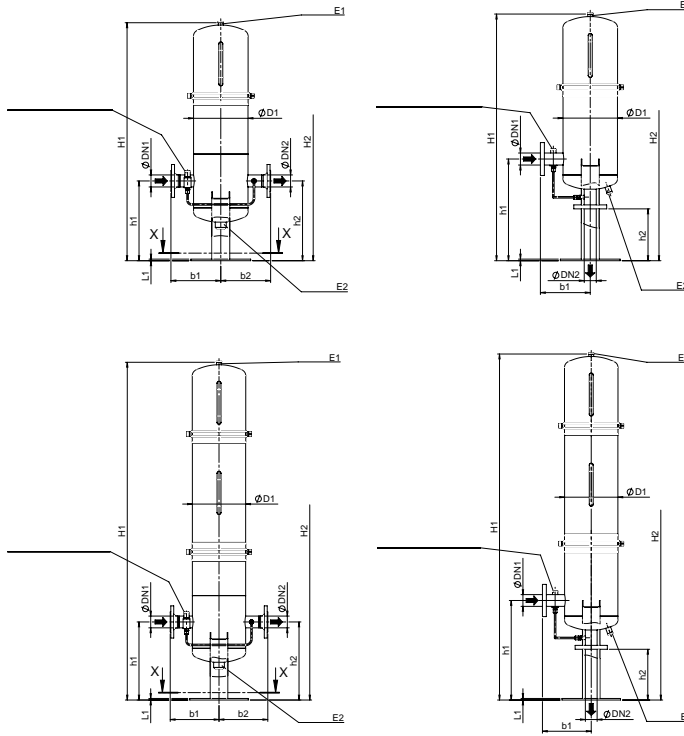
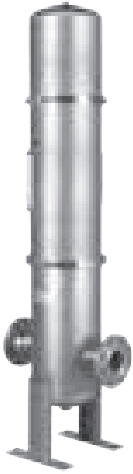
145 psi
10 bar

Or

230 psi
16 bar



Part of the Schroeder Industries 2030 Initiative



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.

Filter Housing Specifications

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

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)

Process Inline Filter

PLF1

How to Build a Valid Model Number for a PLF1:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11	BOX 12	BOX 13
PLF1												

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11	BOX 12	BOX 13
PLF1	1	2	9HF	V	E1	S	C	E1	10	N	1	0

= PLF1.129HFVE 1SCE110N10

<p>BOX 1</p> <p>Filter Series</p> <p>PLF1</p>	<p>BOX 2</p> <p>Filter Size</p> <p>1 = For 9" High Flow or High Load Cascade filter elements 2 = For 6" High Flow filter elements</p>	<p>BOX 3</p> <p>Filter Housing Length</p> <p>1 = single-stage 2 = double-stage</p>	<p>BOX 4</p> <p>Element Type</p> <p>6HF = 6" filter element diameter High Flow 9HF = 9" filter element diameter High Flow 9HLC = 9" filter element diameter High Load Cascade</p>
<p>BOX 5</p> <p>Filter Orientation</p> <p>V = Vertical H = Horizontal</p>	<p>BOX 6</p> <p>Housing Material</p> <p>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</p>	<p>BOX 7</p> <p>Design Code</p> <p>S = Schroeder Standard A = ASME VIII Div. 1 U = ASME VIII Div. 1 stamped E = EN 13445</p>	<p>BOX 8</p> <p>Connection Code</p> <p>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)</p>
<p>BOX 9</p> <p>Internal Parts</p> <p>E1 = Stainless steel 1.4301 or similar material (group 304) E2 = Stainless steel 1.4571 or similar material (group 316) SD = Superduplex (on request) D = Duplex (on request)</p>	<p>BOX 10</p> <p>Pressure Ranges</p> <p>10 = PN 10 16 = PN 16</p>	<p>BOX 11</p> <p>Seal Material</p> <p>N = NBR V = FPM (Viton)¹ E = EPDM</p>	<p>BOX 12</p> <p>Clogging Indicator</p> <p>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</p>
<p>BOX 13</p> <p>Optional Fitting</p> <p>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)</p>			

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

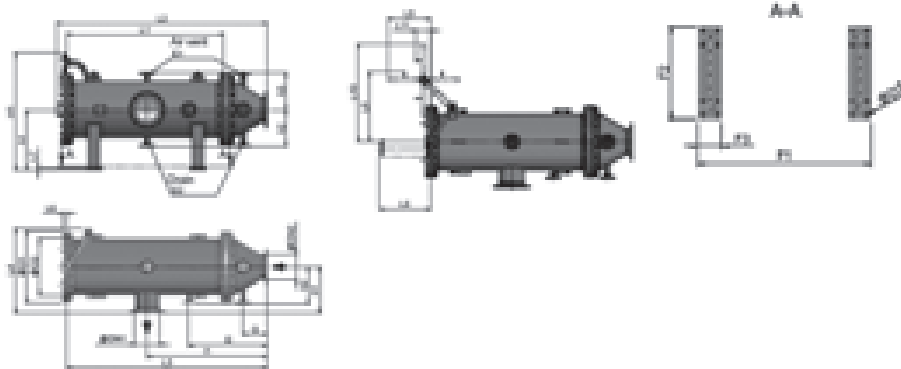
Filter Model Number Selection



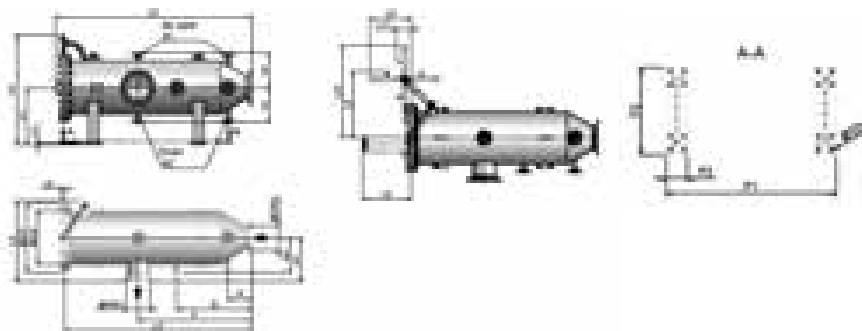
- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1**
- PLF2
- PVD

Max. 232 psi
16 bar

Filter Housing, two-part, carbon steel



Filter Housing, one-part, stainless steel



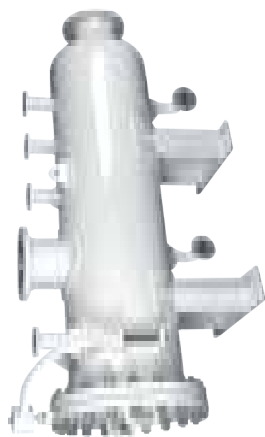
NOTES:

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

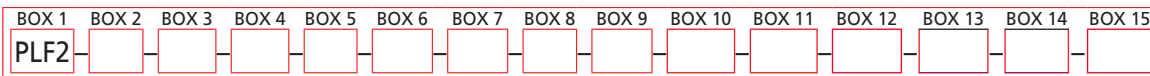
Contact Factory for Dimensional Drawing.

Filter Housing Specifications

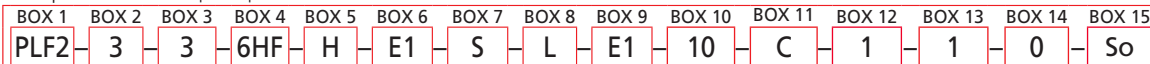
Filtration Rate:	1-90 µm
Operating Rate:	Carbon 33°F - 140°F (1°C - 60°C) Stainless 33°F - 194°F (1°C - 90°C)
Housing Material:	Stainless Steel Carbon Steel
Flow Rate Q max:	5150 gpm (1170 m³/h)
Pressure Rating:	87 or 145 or 230 psi (6 or 10 or 16 bar)
Connections Inlet/Outlet:	6" - 16" Flange (150-400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



How to Build a Valid Model Number for a PLF2:



Example: NOTE: One option per box



PLF2-336HF-HE1SL-E1SLE110-C100-So

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- ATF-3.5
- ATF-4
- PLF1
- PLF2**
- PVD

<p>BOX 1</p> <p>Indicator Code</p> <p>PLF2 = Multiple-place filter housing</p>	<p>BOX 2</p> <p>Size of Filter</p> <p>3 = 3 Support Tubes 5 = 5 Support Tubes 7 = 7 Support Tubes 10 = 10 Support Tubes 13 = 13 Support Tubes</p>	<p>BOX 3</p> <p>Length of Filter Housing</p> <p>1 = 1-stage (on request) 2 = 2-stage (on request) 3 = 3-stage</p>	<p>BOX 4</p> <p>Filter Element Diameter and Filter Element Type</p> <p>6HF = 6" filter element diameter HighFlow (HF)</p>										
<p>BOX 5</p> <p>Filter Alignment</p> <p>H = Horizontal V = Vertical (on request)</p>	<p>BOX 6</p> <p>Housing Material</p> <p>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"</p>		<p>BOX 7</p> <p>Design Code</p> <p>S = HYDAC Standard (AD 2000) ASME VIII Div. 1 (material and calculation...) A = ASME VIII Div. 1 Stamped U = EN 13445 E = EN 13445</p>										
<p>BOX 8</p> <p>Type of Connection</p> <table border="1"> <tr> <th>Connection Size</th> <th>Filter Size</th> </tr> <tr> <td>L = DIN DN 200 / 8" ASME</td> <td>3</td> </tr> <tr> <td>M = DIN DN 250 / 10" ASME</td> <td>5</td> </tr> <tr> <td>N = DIN DN 300 / 12" ASME</td> <td>7</td> </tr> <tr> <td>Q = DIN DN 400 / 16" ASME</td> <td>10/13</td> </tr> </table>		Connection Size	Filter Size	L = DIN DN 200 / 8" ASME	3	M = DIN DN 250 / 10" ASME	5	N = DIN DN 300 / 12" ASME	7	Q = DIN DN 400 / 16" ASME	10/13	<p>BOX 9</p> <p>Material of Internal Parts</p> <p>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)</p>	<p>BOX 10</p> <p>Pressure Ranges</p> <p>6 = PN 6 10 = PN 10 16 = PN 16</p>
Connection Size	Filter Size												
L = DIN DN 200 / 8" ASME	3												
M = DIN DN 250 / 10" ASME	5												
N = DIN DN 300 / 12" ASME	7												
Q = DIN DN 400 / 16" ASME	10/13												
<p>BOX 11</p> <p>Sealing Material</p> <p>C = Asbestos-free gasket N = NBR V = FKM (Viton) E = EPDM</p>	<p>BOX 12</p> <p>Clogging Indicator</p> <p>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</p>		<p>BOX 13</p> <p>Optional Equipment</p> <p>Pivoting lid device (only for 1 = horizontal variant) / davit (only for vertical variant) 2 = Toggle screws 3 = Stainless steel air vent ball valve 4 = Drain flap DN 50</p> <p>(Multiple fittings possible, please provide the corresponding number combination)</p>										
<p>BOX 14</p> <p>Modification Number</p> <p>0</p>	<p>BOX 15</p> <p>Supplementary Details</p> <p>So = Code number for special equipment</p>												

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

0-6092 psi
0-420 bar



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 are 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 According To Filter Type

Type	Filter Types				
	PRFL PRFLD	PRFS PRFSD	PFM PFH	EDF	PMRF PMRFD
PVD ..B	•	•	•	•	•
PVD ..C	•	•	•	•	•
PVD ..D	•	•	•	•	•
V01 ..VZ	•	•	On Request		•
Differential Pressure Gauge	•	•	On Request		•

Clogging Indicators for Process Filters

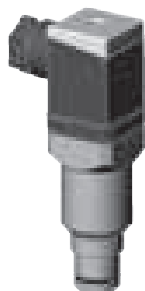
PVD



Type Of Indication:	Visual, red/green band Automatic reset	
Weight:	110 g	
Cracking Pressure Or Indication Range:	1 bar ± 10% 1.5 bar ± 10% 2 bar ± 10%	3 bar ± 10% 5 bar ± 10% 8 bar ± 10%
Perm. Operating Pressure:	6092 psi (420 bar)	
Perm. Temperature Range:	-20°C to 100°C	
Thread:	G 1/2	
Max. Torque Value:	100 Nm	
Switching Type:	-	
Max. Switching Voltage:	-	
Electrical Connection:	-	
Max. Switching Voltage At Resistive Load:	-	
Switching Capacity:	-	
Protective Class Acc. DIN 40050:	-	



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



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

PVD x B.x

RF3-C

RF3-0

RF3-1

RF3-2

RF3-2.5

RF3-3

RF3-4

RF3-5

RF3-6

PVD x C.x

RF3-7

RF3-8

RF5

RF7

RF10

RF4-1

RF4-2

RF12

PVD x
D.x / -L

BTU

ATF-1

ATF-2

ATF-2.5

ATF-3

ATF-3.5

ATF-4

PLF1

PLF2

PVD

V01 x VZ.x



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%
2.0 bar ± 10%
4.3 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
100% - N/C contact

Max. Switching Voltage: 250 V

Electrical Connection: Threaded connection
M20x1.5 acc. EN 50262

Max. Switching Voltage At Resistive Load: 75% contact 100% contact
120 W = 30 W =
120 VA ~ 60 VA ~

Switching Capacity: Ohmic 2.5 A at 24 V
Ohmic 1 A at 250 V

Protective Class Acc. DIN 40050: IP 55

DS11



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
0 - 4 bar on request

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: I_{max} = 5 A, P_{max} = 250VA,
I_{max} = 0.4 A, P_{max} = 10 W

Switching Capacity: -

Protective Class Acc. DIN 40050: IP 55

Clogging Indicators for Process Filters

PVD

How to Build a Valid Model Number for a BTU:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
PVD				

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
PVD	2	D.	0	-L24

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

BOX 1	BOX 2	BOX 3																	
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-L110 = Light with 110 V																			
-L220 = Light with 220 V																			

Filter Model Number Selection

- RF3-C
- RF3-0
- RF3-1
- RF3-2
- RF3-2.5
- RF3-3
- RF3-4
- RF3-5
- RF3-6
- RF3-7
- RF3-8
- RF5
- RF7
- RF10
- RF4-1
- RF4-2
- RF12
- BTU
- ATF-1
- ATF-2
- ATF-2.5
- ATF-3
- PVD**
- ATF-4
- PLF1
- PLF2
- PVD

Section 2: **BAG HOUSING & ELEMENTS**



Bag Housings and Elements



Bag Housing



Welded Bags

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
- Plasticizers
- Platisols
- Printing Inks
- Process Water
- Polymer Solutions
- Roller Coatings
- Textile Chemicals
- Vegetable Oils
- Vinegar
- Waxes
- And Many Other Products



CHEMICAL
PROCESSING



INDUSTRIAL



MACHINE
TOOL



MINING
TECHNOLOGY



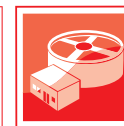
POWER
GENERATION



PULP & PAPER

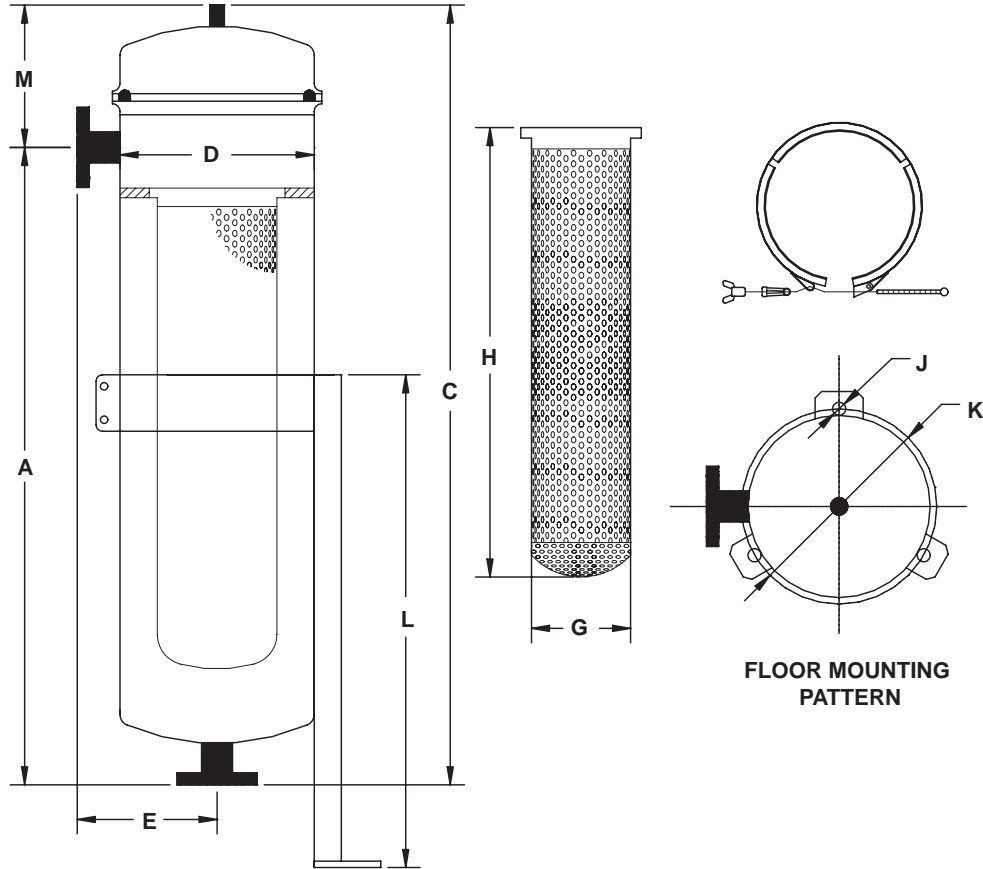


STEEL
MAKING



WASTE WATER
TREATMENT

100 psi
7 bar



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

Dimensions BH1 100 psi

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

Specifications

Max. Working Pressure:	100 psi (7 bar)			
Max. Working Temperature:	167°F (75°C)			
Support Leg:	Adjustable			
Lid Closure:	Threaded Clamp			
	BH1 - 1	BH1 - 2	BH1 - 3	BH1 - 4
Max. Flow:	90 gpm (333 L/min)	200 gpm (750 L/min)	20 gpm (75 L/min)	45 gpm (167 L/min)
Housing Volume:	7.13 gal (27 L)	12.15 gal (46L)	2.90 gal (11 L)	3.70 gal (14 L)
Empty Weight:	46 lbs. (21 kg)	57 lbs. (26 kg)	31 lbs. (14 kg)	33 lbs. (15 kg)

Single Bag Housings -100 psi

BH1

BH1
100 psi

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
BH	1					

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
BH	1	2	304S	2N	E	0	= BH12304S2NE0

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Number of Bags	Bag Size	Material	Connection Size
BH	1	1 2 3 4	304S = 304 Stainless Steel 316S = 316 Stainless Steel 316L = 316L Stainless Steel	1N = 1" NPT 15 = 1.5" NPT 2N = 2" NPT 2F = 2" Flange 25 = 2.5" NPT 25F = 2.5" Flange 3N = 3" NPT 3F = 3" Flange 4N = 4" NPT 4F = 4" Flange
BOX 6	BOX 7			
Seal Material	Pressure Rating			
E = EPDM V = Viton	0 = 100 psi			

Filter Model Number Selection

BH1
150 psi

BH2-
BH10

DBH2-
DBH10

Micron- Rated/
OAB

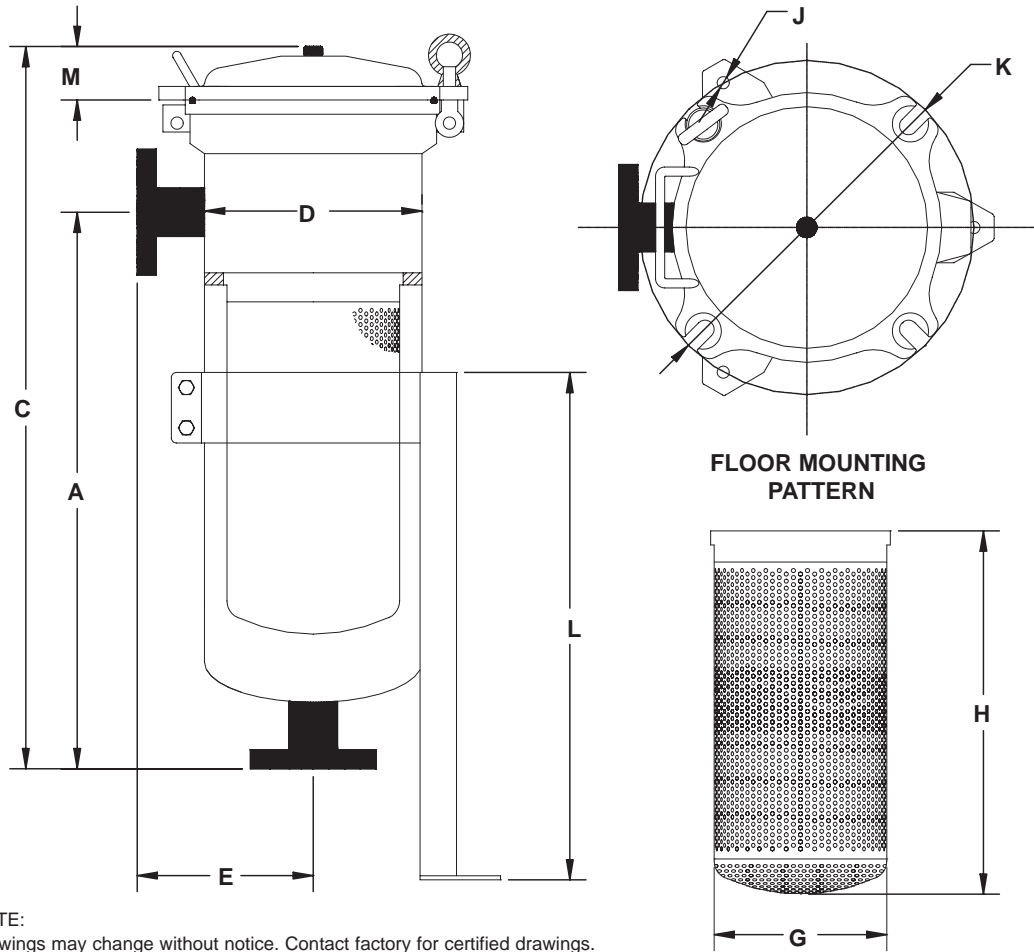
PPH/PPA

BR

BH1

Single Bag housings -150 psi

150 psi
10 bar



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

Dimensions BH1 150 psi

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

Specifications

Max. Working Pressure:	150 psi (10 bar)			
Max. Working Temperature:	167°F (75°C)			
Support Leg:	Adjustable			
Lid Closure:	Swing Bolts			
	BH1 - 1	BH1 - 2	BH1 - 3	BH1 - 4
Max. Flow:	90 gpm (333 L/min)	200 gpm (750 L/min)	20 gpm (75 L/min)	45 gpm (167 L/min)
Housing Volume:	6.07 gal (23 L)	9.77 gal (37 L)	1.66 gal (6.3 L)	2.06 gal (7.8 L)
Empty Weight:	75 lbs. (34 kg)	95 lbs. (43 kg)	40 lbs. (18 kg)	46 lbs. (21 kg)

Single Bag Housings - 150 psi

BH1

BH1
100 psi

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
BH	1					

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
BH	1	2	304S	2N	E	0	= BH12304S2NE1

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Number of Bags	Bag Size	Material	Connection Size
BH	1	1 2 3 4	304S = 304 Stainless Steel 316S = 316 Stainless Steel 316L = 316L Stainless Steel	1N = 1" NPT 15 = 1.5" NPT 2N = 2" NPT 2F = 2" Flange 25 = 2.5" NPT 25F = 2.5" Flange 3N = 3" NPT 3F = 3" Flange 4N = 4" NPT 4F = 4" Flange
BOX 6	BOX 7			
Seal Material	Pressure Rating			
E = EPDM V = Viton	1 = 150 psi			

Filter Model Number Selection

BH1
150 psi

BH2-
BH10

DBH2-
DBH10

Micron- Rated/
OAB

PPH/PPA

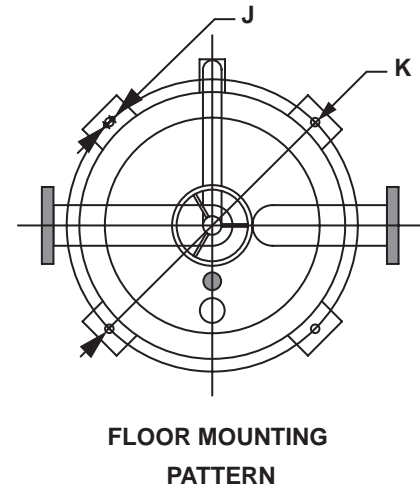
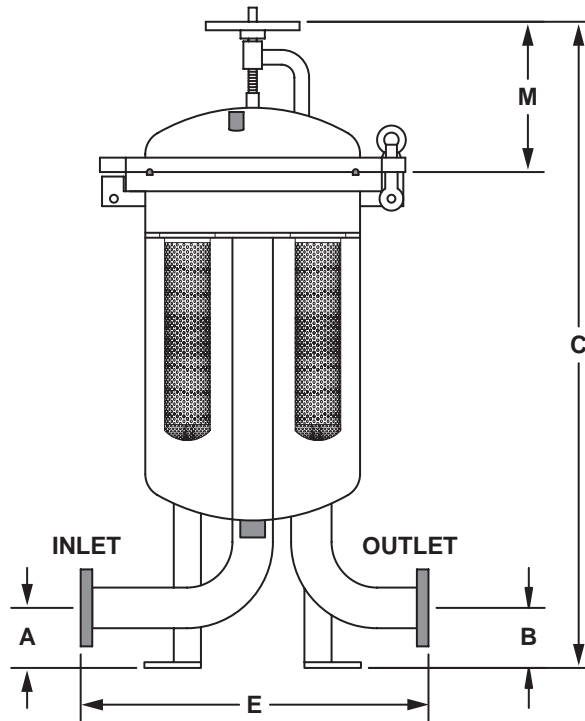
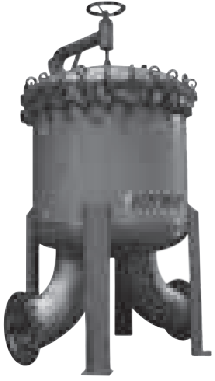
BR

Filter and Media are sold separately.

BH2 - BH10 Multi Bag Housings

296-1981
gpm
1500-7500
L/min

150 psi
10 bar



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

Multiple Bag Housing Dimensions

Number of Bags	Available Porting (Flange)	A		B		C		E		øJ		øK		M	
		Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
2	3"	4.25	108	4.25	108	56.02	1423	22.99	584	0.55	14	20.31	516	14.57	370
	4"	5.00	127	5.00	127	58.35	1482	25.98	660	0.55	14	20.31	516	14.57	370
3	3"	4.25	108	4.25	108	58.46	1485	27.01	686	0.55	14	24.33	618	16.02	407
	4"	5.00	127	5.00	127	60.79	1544	28.50	724	0.55	14	24.33	618	16.02	407
4	3"	4.25	108	4.25	108	58.78	1493	27.48	698	0.55	14	27.72	704	16.14	410
	4"	5.00	127	5.00	127	61.10	1552	29.02	737	0.55	14	27.72	704	16.14	410
	6"	5.98	152	5.98	152	65.43	1662	34.49	876	0.55	14	29.29	744	16.34	415
6	3"	4.25	108	4.25	108	59.17	1503	28.50	724	0.55	14	29.29	744	16.34	415
	4"	5.00	127	5.00	127	61.50	1562	30.04	763	0.55	14	29.29	744	16.34	415
	6"	5.98	152	5.98	152	65.43	1662	34.49	876	0.55	14	29.29	744	16.34	415
8	4"	5.00	127	5.00	127	70.20	1783	34.02	864	0.55	14	37.87	962	23.27	591
	6"	5.98	152	5.98	152	72.52	1842	39.02	991	0.55	14	37.87	962	21.46	545
	8"	7.24	184	7.24	184	80.63	2048	41.22	1047	0.55	14	37.87	962	25.59	650
10	6"	5.98	152	5.98	152	79.21	2012	42.99	1092	0.55	14	41.89	1064	26.97	685
	8"	7.24	184	7.24	184	83.19	2113	42.01	1067	0.55	14	41.89	1064	26.97	685
	10"	8.50	216	8.50	216	89.25	2267	47.99	1219	0.55	14	47.83	1215	27.95	710

Specifications

Max. Working Pressure: 150 psi (10 bar)

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

Support Legs: Fixed

Lid Closure: Swing Bolts

Multi Bag Housings BH2 - BH10

BH1
100 psi

BH1
150 psi

BH2-
BH10

DBH2-
DBH10

Micron- Rated/
OAB

PPH/PPA

BR

Housing Flow and Volume

Number of Bags	Max Flow		Empty Weight		Housing Volume	
	GMP	L/Min	lbs	kg	Gallons	Liters
2	396	1500	214	97	30.64	116.00
	396	1500	225	102	30.91	117.00
3	594	2250	276	125	49.66	188.00
	594	2250	287	130	49.93	189.00
4	793	3000	355	161	64.46	244.00
	793	3000	373	169	64.72	245.00
	793	3000	454	206	73.70	279.00
6	991	3750	437	198	73.18	277.00
	1189	4500	445	202	73.44	278.00
	1189	4500	454	206	73.70	279.00
8	1387	5250	992	450	129.18	489.00
	1585	6000	992	450	129.71	491.00
	1585	6000	1014	460	130.24	493.00
10	1783	6750	1301	590	174.88	662.00
	1981	7500	1323	600	175.41	664.00
	1981	7500	1576	715	225.60	854.00

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						

Example: NOTE: One option per box

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

= BH42304S4FE1

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	Number of Bags	Bag Size	Material	Connection Size
BH	2 3 4 6 8 10	2	304S = 304 Stainless Steel 316S = 316 Stainless Steel 316L = 316L Stainless Steel	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 and 10 bags) 10F = 10" Flange (10 bags)
BOX 6	BOX 7			
Seal Material	Pressure Rating			
E = EPDM V = Viton	1 = 150 psi			

Filter and Media are sold separately.
Additional sizes available - call factory for details.

Filter Model Number Selection

DBH1 - DBH10

Duplex Multi Bag Housings

792-3962

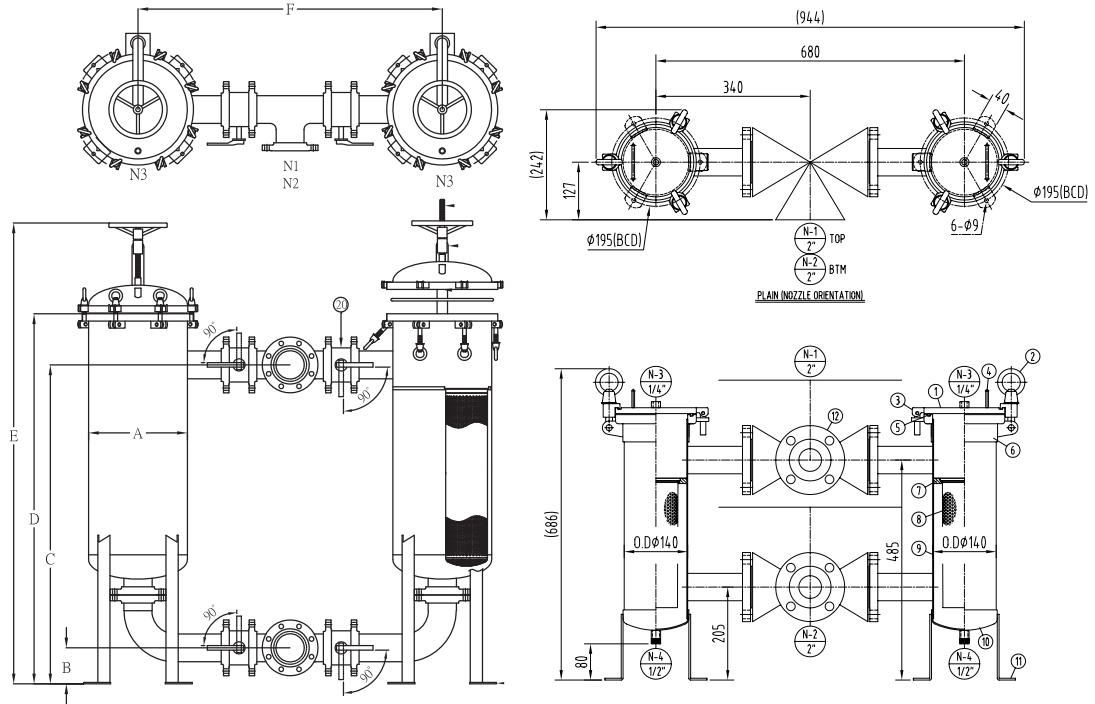
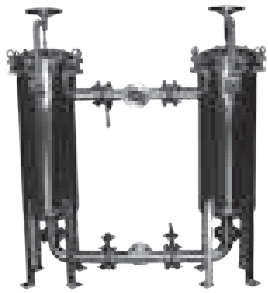
gpm

3000-15,000

L/min

150 psi

10 bar



Dimensions

A Inches (mm)	B Inches (mm)	C Inches (mm)	D Inches (mm)	E Inches (mm)	F Inches (mm)	G Inches (mm)	N1	N2	N3
16 (406)	6 (148)	52 (1310)	60 (1520)	75 (1893)	49 (1250)	20 (516)	Inlet 3 / 150P SORF	Outlet 3 / 150P SORF	Vent .5 / PT F

Specifications

Max. Working Pressure: 150 psi (10 bar)

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

Support Legs: Adjustable

Lid Closure: Swing Bolts

Duplex Multi Bag Housings

DBH1 - DBH10

BH1
100 psi

BH1
150 psi

BH2-
BH10

**DBH1-
DBH10**

Micron- Rated/
OAB

PPH/PPA

BR

**Filter
Model
Number
Selection**

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
DBH						

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
DBH	4	2	304S	4F	E	1	= DBH42304S3FE1

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Number of Bags Per Housing	Bag Size	Material
DBH	1 2 3 4 6 8 10	2	304S = 304 Stainless Steel 316S = 316 Stainless Steel 316L = 316L Stainless Steel

BOX 5	BOX 6	BOX 7
Connection Size	Seal Material	Pressure Rating
2F = 2" Flange (2, 3, 4, and 6 bags) 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 and 10 bags) 10F = 10" Flange (10 bags)	E = EPDM V = Viton	0 = 100 psi 1 = 150 psi

Filter and Media are sold separately.

Bag Element Operating Guidelines

Recommended change-out:

It is recommended that a liquid filter bag be changed out when the differential pressure (ΔP) 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 ΔP well below 20 psi. Under no circumstances should ΔP 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.

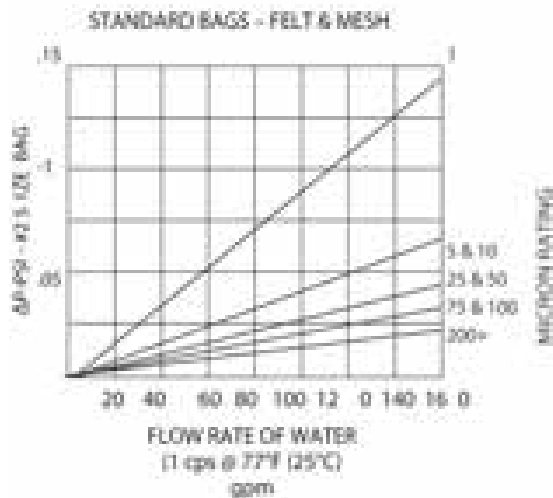
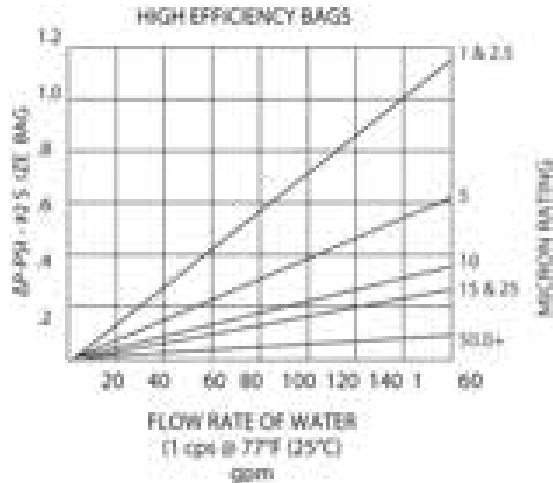
Technical Information for Liquid Bags Elements

Sizes Available				Bag/Collar/Style				Manufacturers					
Size	Sq. Ft.	Diameter (in.)	Length (in.)	S	SS	DS	P	FSI	AFF	GAF	Strainrite	Rosedale	Commercial
1	2.5	7.06	16.5	•	•	•	•	•	•	•	•	•	
2	5.0	7.06	32.0	•	•	•	•	•	•	•	•	•	
3	0.8	4.12	8.0	•	•	•	•	•				•	
4	1.3	4.12	14.0	•	•	•	•	•				•	
7	1.3	5.5	15.0	•	•	•						•	
8	2.0	5.5	21.0	•	•	•						•	
9	3.3	5.5	31.0	•	•	•						•	
C1	2.5	7.31	16.5			•							•
C2	5.0	7.31	32.5			•							•

Bag Elements

Filter Bag Pressure Drop PB

Step 1 The graphs show the ΔPB 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.

Bag Size	Dia X Length	Multiply By
2	7.06 x 32	1.00
9	5.5 x 32	1.50
1	7.06 x 16	2.25
8	5.5 x 21	2.25
7	5.5 x 15	3.00
4	4.15 x 14	4.50
3	4.15 x 8	9.00

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.

Viscosity (cps)	Correction Factor
50	4.5
100	8.3
200	16.6
400	27.7
800	50.0
1000	56.2
1500	77.2
2000	113.6
4000	161.0
6000	250.0
8000	325.0
10000	430.0

The value obtained in step 3, ΔPB is the clean pressure drop caused by the filter bag.

SUMMARY

$$\text{System Pressure Drop} = \Delta PS = \Delta PH + \Delta PB$$

For new applications, the ΔPS 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 ΔP exceeds 2.0 psi (0.14 bar).

Micron-Rated Bag Elements

Micron-Rated Bag Elements

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
PEF	100	P	2	S	0	= PEF100P2S0

BOX 1	BOX 2	BOX 3	BOX 4																																				
Bag Material PEF = Polyester Felt PPF = Polypropylene Felt NOF = Nomex Felt PPM = Polypropylene Monofilament Mesh NMO = Nylon Monofilament Mesh PEM = Polyester Multifilament Mesh NMU = Nylon Multifilament Mesh	Micron Rating See chart below for available micron ratings	Cover Material P = Plain, No Cover SBP = Spun Bonded Polyester PEM = Polyester Multifilament Mesh	Bag Size <table border="1"> <thead> <tr> <th></th> <th>Diameter</th> <th>Length</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>32.0</td></tr> <tr><td>3</td><td>4.12</td><td>8.0</td></tr> <tr><td>4</td><td>4.12</td><td>14.0</td></tr> <tr><td>7</td><td>5.50</td><td>15.0</td></tr> <tr><td>8</td><td>5.50</td><td>21.0</td></tr> <tr><td>9</td><td>5.50</td><td>31.0</td></tr> <tr><td>11</td><td>8.00</td><td>16.0</td></tr> <tr><td>12</td><td>8.00</td><td>30.0</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> </tbody> </table>		Diameter	Length	1	7.06	16.5	2	7.06	32.0	3	4.12	8.0	4	4.12	14.0	7	5.50	15.0	8	5.50	21.0	9	5.50	31.0	11	8.00	16.0	12	8.00	30.0	C1	7.31	16.5	C2	7.31	32.5
	Diameter	Length																																					
1	7.06	16.5																																					
2	7.06	32.0																																					
3	4.12	8.0																																					
4	4.12	14.0																																					
7	5.50	15.0																																					
8	5.50	21.0																																					
9	5.50	31.0																																					
11	8.00	16.0																																					
12	8.00	30.0																																					
C1	7.31	16.5																																					
C2	7.31	32.5																																					

BOX 5	BOX 6
Collar Type S = Standard Galvanized Steel Ring SS = Stainless Steel Ring DS = Draw String P = Plastic Flange	Options 0 = No Options H = Handles (standard on all flange & ring style bag elements) W = Welded Seams Only Available on PEF & PPF Bags with Plastic Flanges

Construction	Fibers		1	3	5	10	15	25	50	75	100	125	150	175	200	250	300	400	600	800	1k	
Felt	Polyester	PEF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Polypropylene	PPF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Nomex	NOF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Monofilament	Polypropylene	PPM									•	•	•	•	•	•	•	•	•	•	•	•
Mesh	Nylon	NMO		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Multifilament	Polyester	PEM									•	•	•	•	•	•	•	•	•	•	•	•
	Nylon	NMU									•	•	•	•	•	•	•	•	•	•	•	•

Technical Information for Liquid Bag Elements

Compatibility & Temperature

Medias	Mineral Acids	Organic Acids	Alkalies	Oxidizing Acids	Animal Vegetable Perro-Oils	Organic Solvents	Miro Organisms	Temp. Limits (°F)
Polyester	Good	Good	Good	Good	Excellent	Excellent	Excellent	257°
Polypropylene	Good	Excellent	Good	Fair	Excellent	Good	Excellent	200°
Nomex	Fair	Fair	Good	Poor	Excellent	Excellent	Excellent	425°
Nylon	Poor	Fair	Good	Poor	Excellent	Excellent	Excellent	300°

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
OAB				

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
OAB	2H	1	SS	H

= OAB2H1SSH

BOX 1	BOX 2	BOX 3																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th style="background-color: #e91e63; color: white;">Bag Material</th></tr> <tr><td style="text-align: center;">OAB</td></tr> </table>	Bag Material	OAB	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th style="background-color: #e91e63; color: white;">Micron Rating</th></tr> <tr><td>1H = 1m High Efficiency</td></tr> <tr><td>2H = 2m High Efficiency</td></tr> <tr><td>5H = 5m High Efficiency</td></tr> <tr><td>10H = 10m High Efficiency</td></tr> <tr><td>25H = 25m High Efficiency</td></tr> <tr><td>50H = 50m High Efficiency</td></tr> </table>	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	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th colspan="3" style="background-color: #e91e63; color: white;">Bag Size</th></tr> <tr> <th></th> <th>Diameter</th> <th>Length (in)</th> </tr> <tr> <td>1=</td> <td style="text-align: center;">7.06</td> <td style="text-align: center;">16.5</td> </tr> <tr> <td>2=</td> <td style="text-align: center;">7.06</td> <td style="text-align: center;">32.0</td> </tr> </table>	Bag Size				Diameter	Length (in)	1=	7.06	16.5	2=	7.06	32.0
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																							
	Diameter	Length (in)																					
1=	7.06	16.5																					
2=	7.06	32.0																					
BOX 4	BOX 5																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th style="background-color: #e91e63; color: white;">Micron Rating</th></tr> <tr><td>SS = Stainless Steel Ring</td></tr> <tr><td>P = Plastic Flange</td></tr> </table>	Micron Rating	SS = Stainless Steel Ring	P = Plastic Flange	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th style="background-color: #e91e63; color: white;">Options</th></tr> <tr><td>H = Handles (Standard)</td></tr> </table>	Options	H = Handles (Standard)																	
Micron Rating																							
SS = Stainless Steel Ring																							
P = Plastic Flange																							
Options																							
H = Handles (Standard)																							

Materials of Construction

BH1
100 psi

Efficiency

BH1
150 psi

BH2-
BH10

DBH2-
DBH10

Micron-Rated/OAB

PPH/PPA

BR

Model Code

High Efficiency Bag Elements

Materials of Construction

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.

Product Number:	PPH1H	PPH3H	PPH5H	PPH10H	PPH25H
Dirt Holding Capacity grams of AC Test Dust Loaded to 35 psi at 12 gpm	74	150	160	175	195
Oil Holding Capacity grams of Mineral Oil at Saturation	528	657	690	726	798

Efficiency

Product Number	Suggested Application Rating	Efficiency
PPH1H	1.0 micron	93.00%
PPH2H	2.0 micron	94.00%
PPH5H	5 micron	94.00%
PPH10H	10 micron	94.00%
PPH25H	25 micron	97.00%
PPH50H	50 micron	97.00%

Model Code

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
PPH					

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
PPH	1H	P	2	SS	H

= PPH1HP2SSH

BOX 1	BOX 2	BOX 3									
Bag Material	Micron Rating	Cover Material									
PPH = Polypropylene High Efficiency	1H = 1m High Efficiency 2H = 2m High Efficiency 5H = 5m High Efficiency 10H = 10m High Efficiency 25H = 25m High Efficiency 50H = 50m High Efficiency	P = Plain No Cover									
BOX 4	BOX 5	BOX 6									
Bag Size	Collar Type	Options									
<table border="1"> <thead> <tr> <th></th> <th>Diameter</th> <th>Length</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>32.0</td> </tr> </tbody> </table>		Diameter	Length	1=	7.06	16.5	2=	7.06	32.0	SS = Stainless Steel Ring P = Plastic Flange	H = Handles (standard)
	Diameter	Length									
1=	7.06	16.5									
2=	7.06	32.0									

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.

BH1
100 psi
BH1
150 psi

Product Number:	PPA3A	PPA5A	PPA13A	PPA32A
Dirt Holding Capacity grams of AC Test Dust Loaded to 35 psi at 12 gpm	225	275	525	625
Oil Holding Capacity grams of Mineral Oil at Saturation	1000	1250	2300	2500

BH2-
BH10
DBH2-
DBH10

Product Number	Suggested Application Rating	Efficiency
PPA1A	1.0 micron	97.00%
PPA2A	2.0 micron	97.00%
PPA3A	3.0 micron	97.00%
PPA5A	5.0 micron	97.00%
PPA13A	13.0 micron	97.00%
PPA32A	32.0 micron	97.00%

Micron- Rated/
OAB

Efficiency

PPH/PPA

BR

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
PPA					

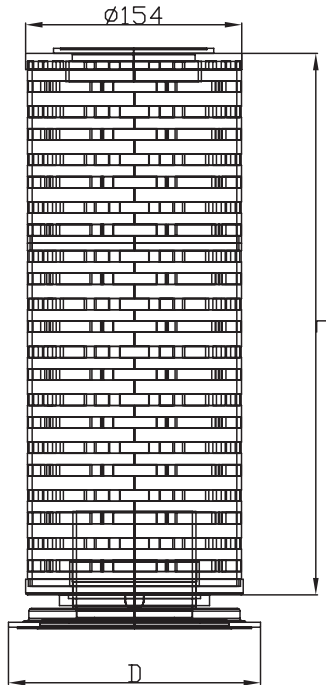
Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
PPA	3A	P	2	SS	H

= PPA3AP2SSH

Model Code

BOX 1	BOX 2	BOX 3						
Bag Material PPA = Polypropylene Absolute Rated	Micron Rating 1A = 1m Absolute 2A = 2m Absolute 3A = 3m Absolute 5A = 5m Absolute 13A = 13m Absolute 32A = 32m Absolute	Cover Material P = Plain No Cover						
BOX 4	BOX 5	BOX 6						
Bag Size <table border="1"> <thead> <tr> <th></th> <th>Diameter</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>2=</td> <td>7.06</td> <td>32.0</td> </tr> </tbody> </table>		Diameter	Length	2=	7.06	32.0	Collar Type SS = Stainless Steel Ring	Options H = Handles (Stainless Steel only)
	Diameter	Length						
2=	7.06	32.0						



L:
 16"=370
 32"=634
 D:
 1# Flange =183mm
 2# Flange =177mm

Description

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

Media:	Polypropylene
Micron Rating:	1, 3, 5, 25 - 100 µm, 200 µm
Gasket/O-Ring:	EPDM, Viton®
Inside Diameter:	3.5" (90mm)
Outside Diameter:	7.25" (184mm)

Operating Data

Max. Operating Temperature:	160°F (70°C)
Max. Differential Pressure:	75 psi at 68°F (5.1 bar at 29°C) 35 psi at 130°F (2.4 bar at 54°C)
Recommended Change Out Differential Pressure:	35 psi at 130°F (2.4 bar at 54°C)

Bag Type High Flow Filter Cartridges

BR

BH1
100 psi

Filter Model Number Selection

BH1
150 psi

BH2-
BH10

DBH2-
DBH10

Micron- Rated/
OAB

PPH/PPA

BR

How to Build a Valid Model Number for a Bag Type High Flow Filter Cartridge:

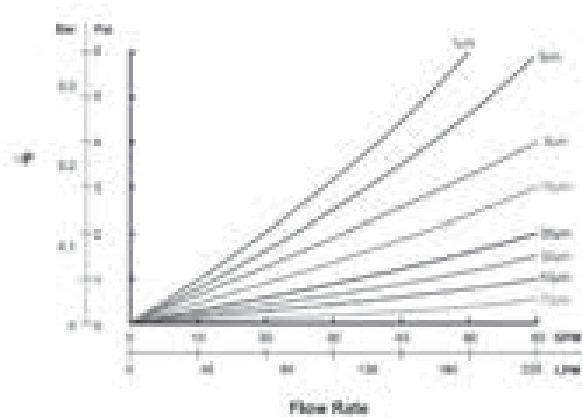
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
BR					

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
BR	SH	5	P	2	V	= BR-SH-5-P-2-V

BOX 1	BOX 2	BOX 3	BOX 4
Unit Type	Series	Micron Rating	Filter Media
BR = PP Fiber Pleated Filter Cartridge	SH = Bag Type Series	1 = 1 µm 3 = 3 µm 5 = 5 µm 25 = 25 µm 100 = 100 µm 200 = 200 µm	P = Polypropylene

BOX 5	BOX 6
Nominal Length	Gasket/O-Ring Option
1 = Size 1 Bag 2 = Size 2 Bag 40 = 40" Length	E = EPDM V = Viton®



Pressure Drop Information Based on Flow Rate and Viscosity

Section 3:

CARTIDGE HOUSING & FILTERS



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.

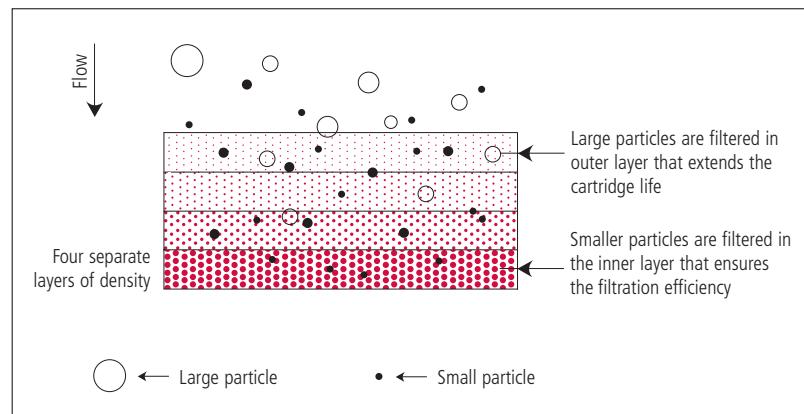
The polypropylene housings accept either the 10" or 20" elements for both 2.5" and 4.5" diameter. The threaded head and bowl allow for quick and easy changing of the elements. Various sizes of NPT ports make installation quick and easy and allow flows up to 40 gpm depending upon the housing size. Because 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.

Features

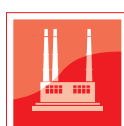
- 100% polypropylene construction
- Max operating temperature 167°F (75°C)
- Max pressure drop 46 psi (3.2 bar) @ 68°F (20°C)
- Recommended cartridge replacement at 22 psi (1.5 bar)
- Special lengths and micron ratings available upon request
- 222 o-ring seal, FIN style end caps and center support tubes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



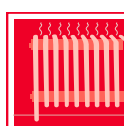
Industries Served



CHEMICAL
PROCESSING



INDUSTRIAL



THERMAL
TRANSFER



POWER
GENERATION



PULP & PAPER



STEEL
MAKING



WASTE WATER
TREATMENT

Cartridge Housings and Elements



How to Build a Valid Model Number for an Economical (DCE) Element:

BOX 1	BOX 2	BOX 3	BOX 4
DCE			

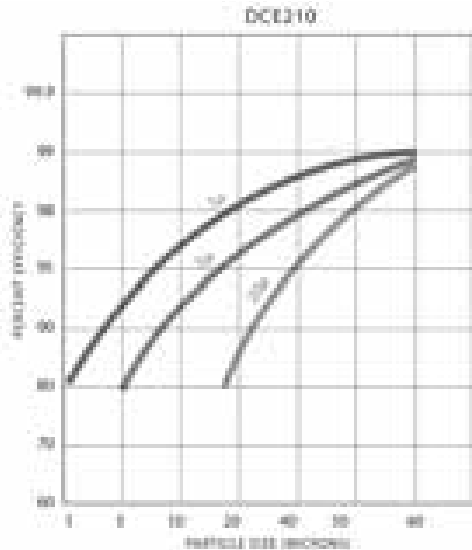
Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4
DCE	2	10	25

= DCE21025

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Element Size	Element Length	Micron Rating
DCE	2 = 2.5" OD 4 = 4.5" OD	5 = 4-7/8" (2.5" OD only) 10 = 9-7/8" 20 = 20" 30 = 30" (2.5" OD only) 40 = 40" (2.5" OD only)	01 = 1 μm 05 = 5 μm 10 = 10 μm 20 = 20 μm 25 = 25 μm 50 = 50 μm 75 = 75 μm 100 = 100 μm 150 = 150 μm

Filter and Media are sold separately.



Filter Model Number Selection

DCE

PP

ACE

CH1

CH3 -CH7

CH12-CH24

RMF

Filter Data

High Purity Pleated Polypropylene Cartridges

35 psi
2.4 bar

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% (β5000).



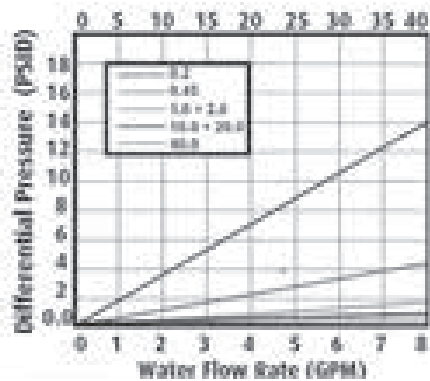
Typical Applications:

- Optimal for DEF Solutions
- Food and Beverage
- Photographic
- Deionized Water
- Reverse Osmosis Membrane
- Prefiltration
- 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



High Purity Pleated Polypropylene Cartridges

PP

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
PP					

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
PP	05	40	D	V	I	= PP0540DVI

BOX 1	BOX 2	BOX 3	BOX 4
Unit Type	Pore Size	Length	End Cap Code
PP	S2 = 0.2 S45 = 0.45 01 = 1.0 02 = 2.0 05 = 5.0 10 = 10.0 20 = 20.0 40 = 40.0	10 = 10 (25.4 cm) 20 = 20 (50.8 cm) 30 = 30 (76.2 cm) 40 = 40 (101.6 cm)	B = DOE w/ Gasket and Caps C = 222 w/ Spear D = 222 w/ Closed Flat Cap E = 222 w/ Spring F = 226 w/ Closed Flat Cap G = 226 w/ Spear H = 226 w/ Spring J = Polypropylene Extender L = Spring N = SOE Recessed Cap, internal 213 O-Ring

BOX 5	BOX 6
O-Rings/Gaskets	Adders
B = Buna E = EPDM S = Silicone V = Viton® T = Teflon® Encapsulated Viton	I = SS Insert HP = Heavy Pole Core

Filter
Model
Number
Selection

DCE

PP

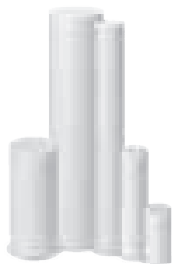
ACE

CH1

CH3 -CH7

CH12-CH24

RMF



The Schroeder Process meltblown cartridge filters utilize depth filtration to achieve the highest level of filtration. The tightly controlled manufacturing process ensures consistent reliability for optimal filter performance. Their 100% polypropylene construction makes these elements versatile and suitable in a wide range of process applications.

The graded density make up of these elements increases the surface area of the elements by allowing use of all the media, not just the surface. Larger particles are captured near the less dense exterior of the element while smaller particles pass to the inner part of the element where they are trapped. This allows for higher dirt holding capacity and longer element life.

Specifications

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%

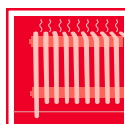
Industries Served



CHEMICAL PROCESSING



INDUSTRIAL



THERMAL TRANSFER



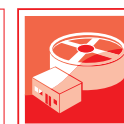
POWER GENERATION



PULP & PAPER



STEEL MAKING



WASTE WATER TREATMENT

Cartridge Housings and Elements



How to Build a Valid Model Number for an Absolute (ACE) Element:

BOX 1	BOX 2	BOX 3	BOX 4
ACE			

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4
ACE	2	10	25

= ACE21025

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Element Size	Element Length	Micron Rating
ACE	2 = 2.5" OD	10 = 9 - 7/8" 20 = 20" 30 = 30" 40 = 40"	01 = 1 μm 03 = 3 μm 05 = 5 μm 10 = 10 μm 20 = 20 μm 25 = 25 μm 30 = 30 μm 50 = 50 μm 75 = 75 μm 100 = 100 μm 150 = 150 μm

Filter Model Number Selection

DCE

PP

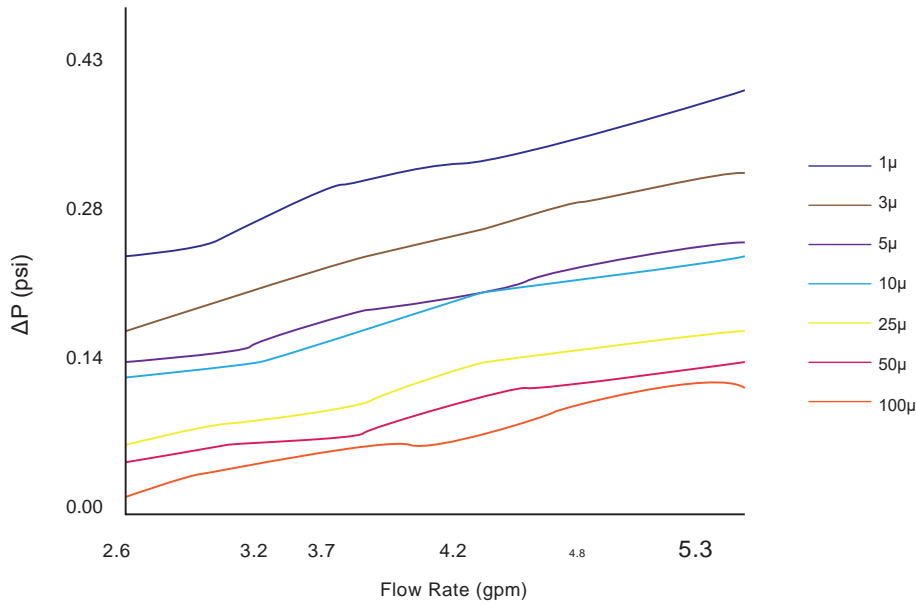
ACE

CH1

CH3 -CH7

CH12-CH24

RMF



Filter Data

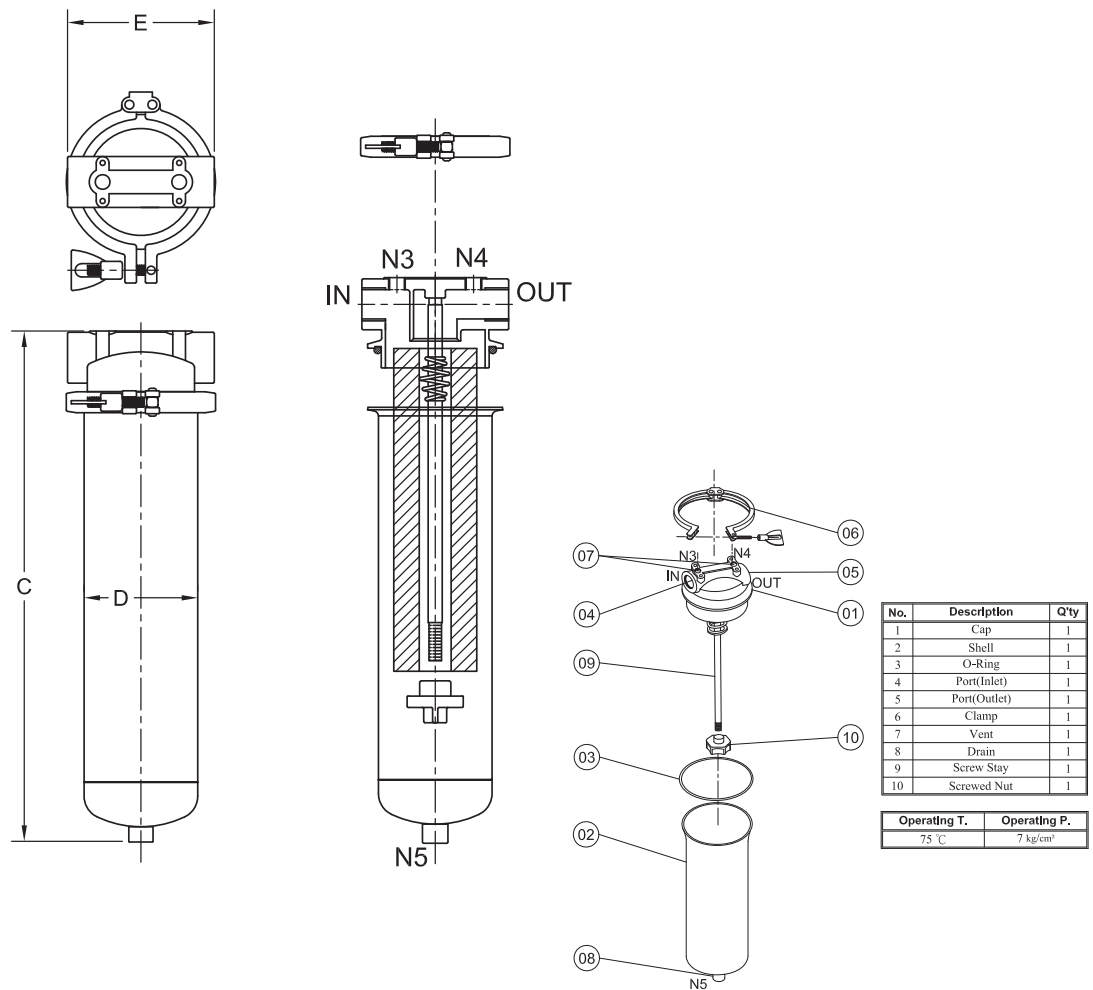
CH1

Cartridge Housings and Elements

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.

Dimensions

Model	C inch (mm)	D inch (mm)	E inch (mm)	N3/N4	N5
CH1210	15.8 (401.32)	3.5 (88.9)	4.5 (114.3)	¼"	¼"
CH1220	25.8 (655.32)	3.5 (88.9)	4.5 (114.3)	¼"	¼"
CH1230	35.8 (909.32)	3.5 (88.9)	4.5 (114.3)	¼"	¼"

Specifications

	CH12
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

Cartridge Housings and Elements

CH1

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
CH	1							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
CH	1	2	10	PP	34	B	0	0

= CH1210PP34B00

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	No. of Cartridges per Housing	Cartridge Diameter	Cartridge Length	Housing Material
CH	1	2 = 2.5" diameter	10 = 10" 20 = 20" 30 = 30"	PP = Polypropylene head and bowl
BOX 6	BOX 7	BOX 8	BOX 9	
Connection Size	Seal Material	Pressure Rating	Pressure Relief Button	
34 = 3/4" NPT	B = Buna N	0 = 125 psi	0 = No PR Button P = PR Button in Cap	

Filter Model Number Selection

DCE

PP

ACE

CH1

CH3 -CH7

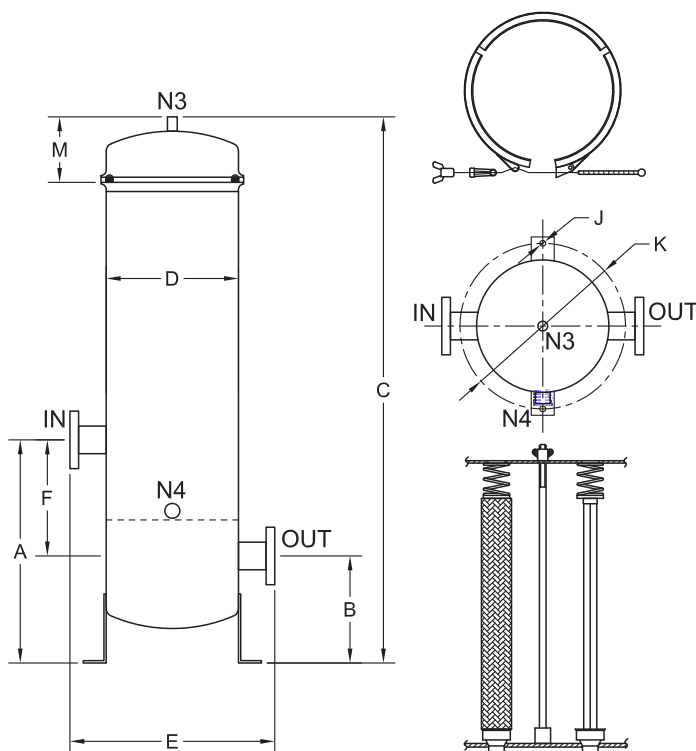
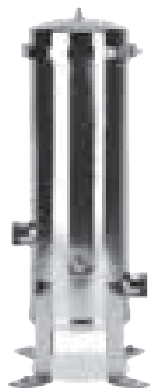
CH12-CH24

RMF

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

	Cartridge		A inch (mm)	B inch (mm)	C inch (mm)	D øinch (mm)	E inch (mm)	F inch (mm)	J øinch (mm)	K øinch (mm)	M inch (mm)	N3 inch	N4 inch
	Qty	Length											
CH3220	3	20	11.02 (280)	4.72 (120)	35.04 (890)	7.09 (180)	11.81 (300)	6.30 (160)	0.35 (9)	9.29 (236)	3.35 (85)	¼	¾
CH3230	3	30	11.02 (280)	4.72 (120)	45.08 (1145)	7.09 (180)	11.81 (300)	6.30 (160)	0.35 (9)	9.29 (236)	3.35 (85)	¼	¾
CH7220	7	20	11.02 (280)	4.72 (120)	35.04 (890)	9.13 (232)	13.86 (352)	6.30 (160)	0.35 (9)	9.29 (236)	3.35 (85)	¼	¾
CH7230	7	30	11.02 (280)	4.72 (120)	45.08 (1145)	9.13 (232)	13.86 (352)	6.30 (160)	0.35 (9)	9.29 (236)	3.35 (85)	¼	¾
CH7240	7	40	11.02 (280)	4.72 (120)	55.12 (1400)	9.13 (232)	13.86 (352)	6.30 (160)	0.35 (9)	9.29 (236)	3.35 (85)	¼	¾

Specifications

Number of Elements per Housing: 3 or 7 Elements, 2" Diameter

Max. Working Pressure: 100 psi (7 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

Cartridge Housings and Elements

CH3-CH7

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

Flow Rate and Weight

DCE

PP

ACE

CH1

CH3-CH7

CH12-CH24

RMF

Filter Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
CH							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
CH	7	2	40	304S	2N	E	0

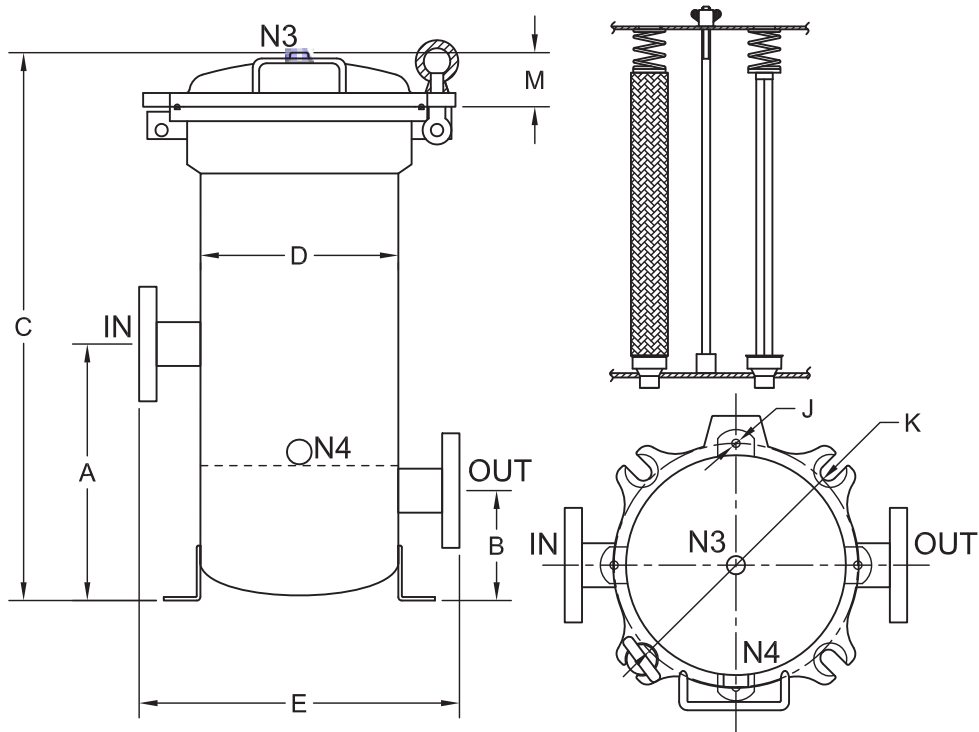
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BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series CH	No. of Cartridges per Housing 3 7	Cartridge Diameter 2 = 2" diameter	Cartridge Length 20 = 20" 30 = 30" 40 = 40"	Housing Material 304S = 304 Stainless Steel 316S = 316 Stainless Steel

BOX 6	BOX 7	BOX 8
Connection Size 2N = 2" NPT 2F = 2" Flange 4F = 4" Flange	Seal Material E = EPDM V = Viton	Pressure Rating 0 = 100 psi

NOTE: Elements must be purchased separately.

150 psi
10 bar



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

Dimensions

	Cartridge		A inch (mm)	B inch (mm)	C inch (mm)	D øinch (mm)	E inch (mm)	J øinch (mm)	K øinch (mm)	M inch (mm)	N3 inch	N4 inch
	Qty	Length										
CH3220	3	20	11.02 (280)	4.72 (120)	33.19 (843)	7.13 (181)	11.81 (300)	0.35 (9)	10.47 (266)	2.17 (55)	¼	¾
CH3230	3	30	11.02 (280)	4.72 (120)	43.23 (1098)	7.13 (181)	11.81 (300)	0.35 (9)	10.47 (266)	2.17 (55)	¼	¾
CH3240	3	40	11.02 (280)	4.72 (120)	53.27 (1353)	7.13 (181)	11.81 (300)	0.35 (9)	10.47 (266)	2.17 (55)	¼	¾
CH7220	7	20	11.02 (280)	4.72 (120)	33.58 (853)	9.13 (232)	14.09 (358)	0.35 (9)	11.34 (288)	2.56 (65)	¼	¾
CH7230	7	30	11.02 (280)	4.72 (120)	43.62 (1108)	9.13 (232)	14.09 (358)	0.35 (9)	11.34 (288)	2.56 (65)	¼	¾
CH7240	7	40	11.02 (280)	4.72 (120)	53.66 (1363)	9.13 (232)	14.09 (358)	0.35 (9)	11.34 (288)	2.56 (65)	¼	¾

Specifications

Number of Elements per Housing: 3 or 7 Elements, 2" Diameter

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

Cartridge Housings and Elements

CH3-CH7

Model #	Flow Rate	Volume	Dry Weight
CH3220	0-26 gpm (100 l / min)	7.13 gal (27L)	66 lbs (30kg)
CH3230	0-40 gpm (150 l / min)	9.51 gal (36L)	77 lbs (35kg)
CH3240	0-53 gpm (200 l / min)	11.88 gal (45L)	88 lbs (40kg)
CH7220	0-62 gpm (233 l / min)	8.98 gal (34L)	77 lbs (35kg)
CH7230	0-92 gpm (350 l / min)	11.88 gal (45L)	88 lbs (40kg)
CH7240	0-123 gpm (467 l / min)	14.52 gal (55L)	101 lbs (46kg)

Flow Rate
Volume
and Weight

DCE
PP
ACE
CH1

CH3-CH7

CH12-CH24

RMF

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
CH							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
CH	7	2	40	304S	2N	E	0

= CH7240304S2NE0

Filter
Model
Number
Selection

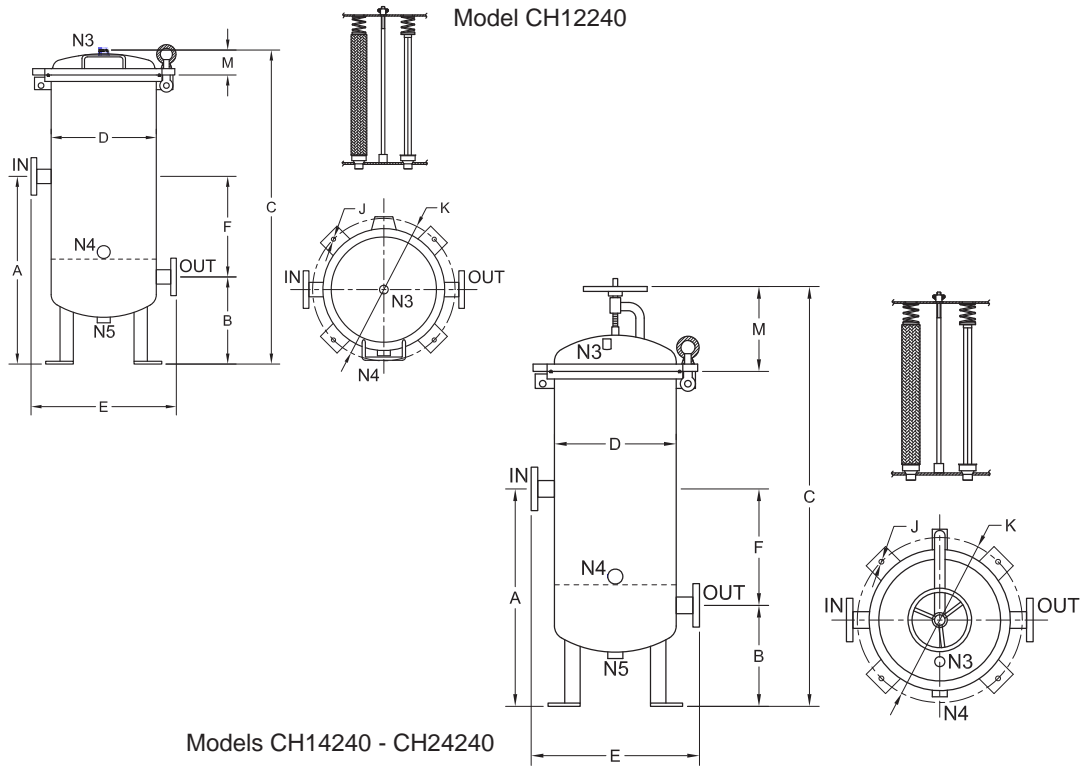
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	No. of Cartridges per Housing	Cartridge Diameter	Cartridge Length	Housing Material
CH	3 7	2 = 2" diameter	20 = 20" 30 = 30" 40 = 40"	304S = 304 Stainless Steel 316S = 316 Stainless Steel

BOX 6	BOX 7	BOX 8
Connection Size	Seal Material	Pressure Rating
2N = 2" NPT 2F = 2" Flange	E = EPDM V = Viton	1 = 150 psi

NOTE: elements must be purchased separately.

5-40 gpm
18.33-150
L/min

150 psi
10 bar



Dimensions

	Cartridge		A inch (mm)	B inch (mm)	C inch (mm)	D øinch (mm)	E inch (mm)	J øinch (mm)	K øinch (mm)	M inch (mm)	N3 inch	N4 inch
	Qty	Length										
CH12240	12	40	27.56 (700)	13.78 (350)	68.03 (1728)	12.01 (305)	19.69 (500)	0.55 (14)	16.14 (410)	6.02 (153)	½	1
CH14240	14	40	27.56 (700)	13.78 (350)	76.77 (1950)	15.98 (406)	23.86 (606)	0.55 (14)	20.31 (516)	14.96 (380)	½	1
CH18240	18	40	27.56 (700)	13.78 (350)	76.77 (1950)	15.98 (406)	23.86 (606)	0.55 (14)	20.31 (516)	14.96 (380)	½	1
CH20240	20	40	27.56 (700)	13.78 (350)	76.77 (1950)	15.98 (406)	23.86 (606)	0.55 (14)	20.31 (516)	14.96 (380)	½	1
CH24240	24	40	27.56 (700)	13.78 (350)	76.97 (1955)	19.13 (486)	27.01 (686)	0.55 (14)	23.46 (596)	15.16 (385)	½	1

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)

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

Cartridge Housings and Elements CH12-CH24

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

Flow Rate
Volume
and Weight

DCE

PP

ACE

CH1

CH3 -CH7

CH12-CH24

RMF

Filter
Model
Number
Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
CH							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
CH	18	2	40	304S	2F	E	1

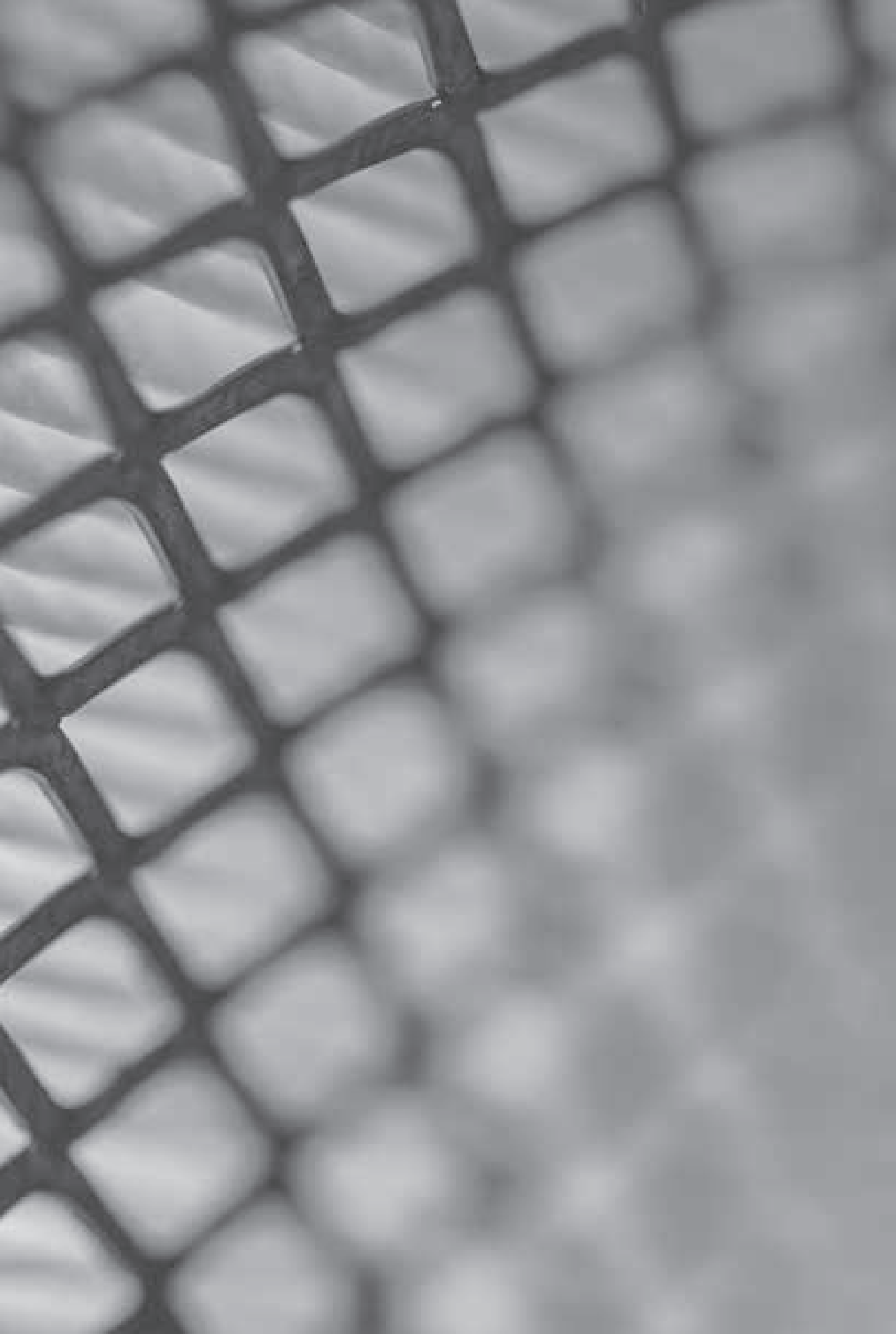
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BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series	No. of Cartridges per Housing	Cartridge Diameter	Cartridge Length	Housing Material
CH	12 14 18 20 24	2 = 2" diameter	40 = 40"	304S = 304 Stainless Steel 316S = 316 Stainless Steel

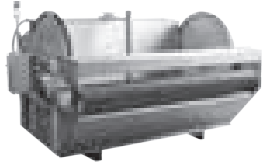
BOX 6	BOX 7	BOX 8
Connection Size	Seal Material	Pressure Rating
2F = 2" Flange (not available with 24 cartridges) 4F = 4" Flange	E = EPDM V = Viton	1 = 150 psi

Section 4:

MEDIA FILTER



70-600 gpm
268-2270
L/min

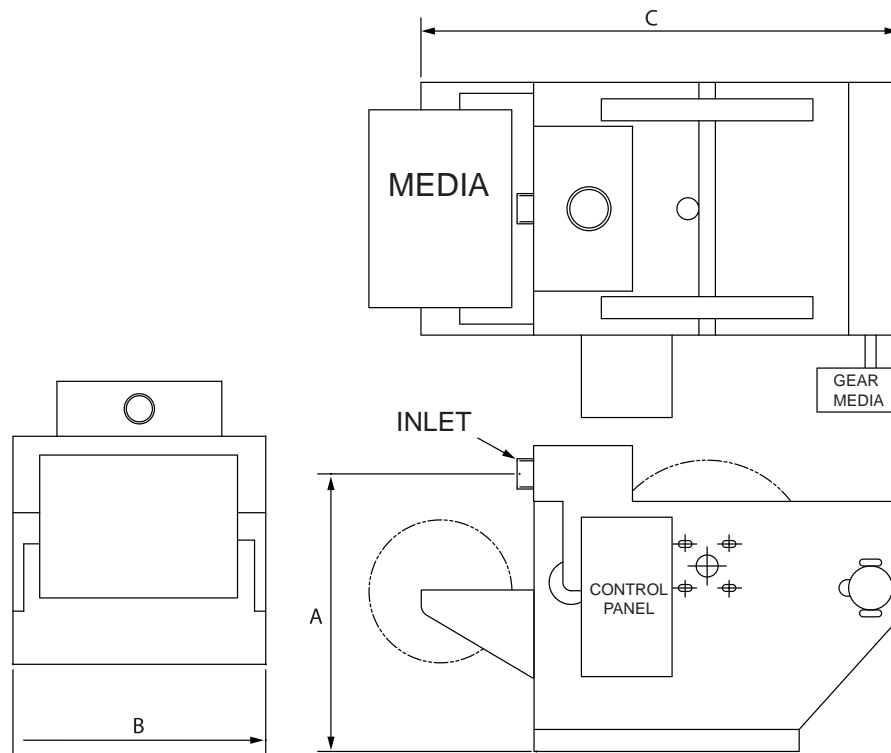


The Rolling Media Filter (RMF) provides a highly efficient and reliable means of removing solids from process liquids. This filter is a non pressurized system which is economical and easy to operate. It can handle occasional system upsets or overloads without blinding the filter media.

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

	A		B		C		Flow Rate
	inches	mm	inches	mm	inches	mm	
RMF70	37.00	940	30.00	762	43.25	1099	71
RMF145	34.25	870	40.00	1016	52.75	1340	146
RMF210	34.25	870	52.00	1321	52.75	1340	212
RMF275	34.25	870	64.00	1626	52.75	1340	275
RMF300	41.75	1060	52.00	1321	65.75	1670	300
RMF350	34.25	870	73.00	1854	52.75	1340	350
RMF400	41.75	1060	83.00	1626	65.75	1670	400
RMF500	41.75	1060	73.00	1854	65.75	1670	500
RMF600	41.75	1060	83.00	2108	65.75	1670	600

Rolling Media Filtration

RMF

Construction Material: Epoxy coated, Carbon steel

Conveyor Material: 304 stainless steel

Seal Wheels: Aluminum

Specifications DCE

PP

ACE

CH1

CH3 -CH7

CH12-CH24

Filter Model Number Selection

RMF

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
RMF					

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
RMF	70	AL	CS	N	C	= RMF70ALCSNC

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
Filter Series	Size	Wheel Material	Housing Material	Wheel Seals	Options
RMF	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	AL Aluminum SS Stainless Steel	CS Carbon Steel SS Stainless Steel	N Neoprene T Teflon	O None C Cover M Media Recovery System D Contamination Dryer

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

BOX 1	BOX 2	BOX 3	BOX 4
RMF			

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	
RMF	RM	07	27	= RMFRM0727

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Replacement Type	Micron Rating	Roll Width
RMF	RM Roll Media	07 7 µm 12 12 µm 14 14 µm 18 18 µm 28 28 µm 50 50 µm 200 200 µm	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)

Replacement Parts for RMF

Section 5:

OIL AND GAS PRODUCTS



Pit Purification Solutions

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)

Features

Section 6:

MINING PRODUCTS



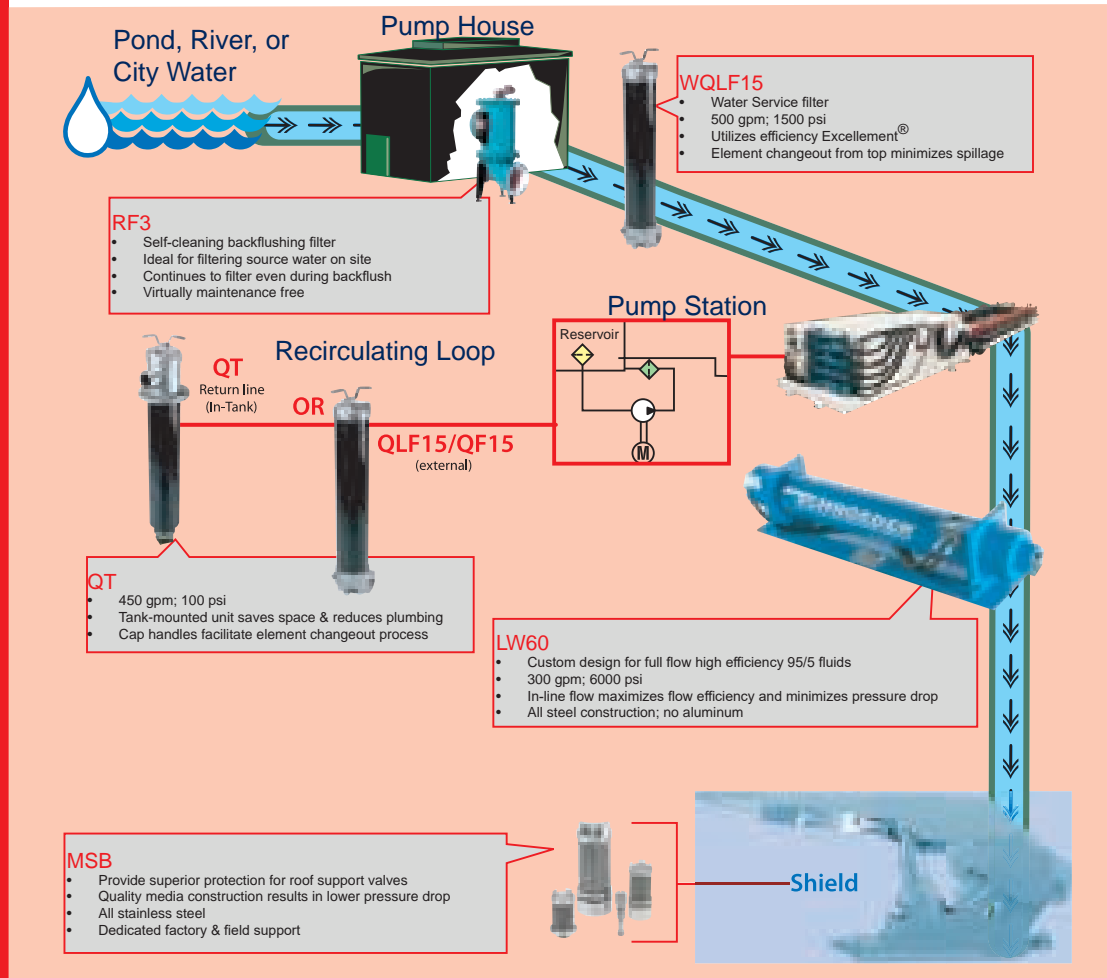
Mining Products

Introduction

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).

Turnkey Filtration



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™

Schroeder BestFit™ P/N	Micron Rating
MSB-1394-2050B	50
MSB-1394-20100B	100
MSB-1394-20200B	200
SBF-SALL-40Z150B	150
SBF-SALL-40Z10B	10
SBF-WS3L-150PSB	150
SBF-WS3L-M150B	150
SBF-PF3L-Z12B	12
SBF-WE3L-Z60B	60
SBF-SALL-100PSB	100
SBF-SALL-250PSB	250

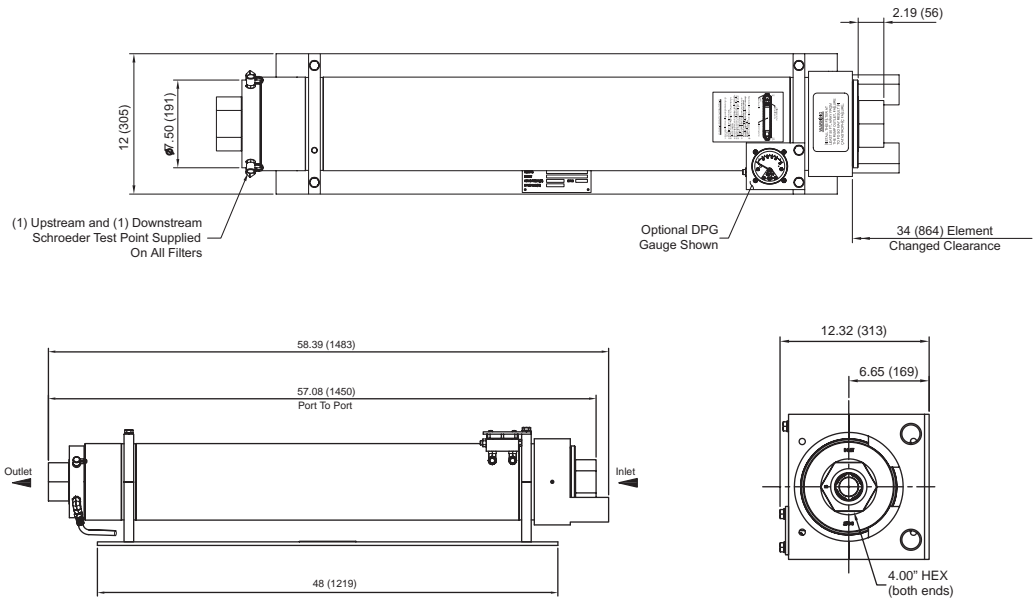
Shield Element BestFits™

Schroeder BestFit™ P/N	Micron Rating
MSB-05841-340B	40
MSB-1298-280B	80
MSB-1330-3100B	100
MSB-1330-325B	25
MSB-1330-340B	40
MSB-1330-380B	80
MSB-3060-340B	40
MSB-3070-2100	100
MSB-3070-225	25
MSB-3070-240	40
MSB-3070-280	80
MSB-3077-525B	25
MSB-3077-540B	40
MSB-3176-225B	25
MSB-3185-425B	25
MSB-10266-5100B	100

LW60

Longwall Filter

300 gpm
1135 L/min
6000 psi
400 bar



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

Element	Abs. Rating wrt ISO 16889 Using APC calibrated per ISO 11171 B _x (c) 1000	Dirt Holding Capacity (gm)
39ZPZ3V	5.1	449
39ZPZ5V	6.1	359
39ZPZ10V	12.1	429
39ZPZ25V	17.7	284

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

Features

LW60

Excellement MD

Mining
Specific
Elements

Pressure	Series	Element	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 50 psi (3.4 bar) bypass valve.					
		Part No.						
6000 psi	Z Media	39ZPZ3V						
		39ZPZ5V						
		39ZPZ10V						
		39ZPZ25V						
Flow	gpm	0	100	150	200	250	300	
	(L/min)	0	400	600	800	1000	1150	

Element Selection Based on Flow Rate

$$\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$$

Exercise:

Determine ΔP at 250 gpm (950 L/min) LW6039ZPZ3VB32 using 150 SUS (32 cSt) fluid.

Solution:

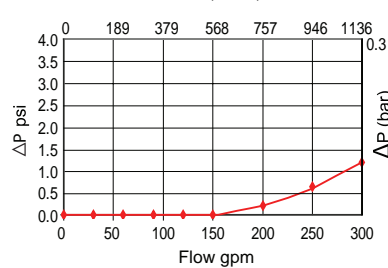
$$\Delta P_{\text{housing}} = 0.7 \text{ psi } [0.05 \text{ bar}]$$

$$\begin{aligned} \Delta P_{\text{element}} &= 250 \times .06 \times (150 \div 150) = 15.0 \text{ psi} \\ &\text{or} \\ &= [950 \times (.06 \div 54.9) \times (32 \div 32) = 1.1 \text{ bar}] \end{aligned}$$

$$\begin{aligned} \Delta P_{\text{total}} &= 0.7 + 15.0 = 15.7 \text{ psi} \\ &\text{or} \\ &= [0.05 + 1.1 = 1.15 \text{ bar}] \end{aligned}$$

$$\Delta P_{\text{housing}}$$

LW60 $\Delta P_{\text{housing}}$ for fluids with sp gr = 0.86:
Flow (L/min)



sp gr = specific gravity

$$\Delta P_{\text{element}}$$

$$\Delta P_{\text{element}} = \text{flow} \times \text{element } \Delta P \text{ factor} \times \text{viscosity factor}$$

El. ΔP factors @ 150 SUS (32 cSt):

39ZPZ3V	.06
39ZPZ5V	.05
39ZPZ10V	.04
39ZPZ25V	.01

If working in units of bars & L/min, divide above factor by 54.9.

Viscosity factor:
Divide viscosity by 150 SUS (32 cSt).

Pressure Drop Information Based on Flow Rate and Viscosity

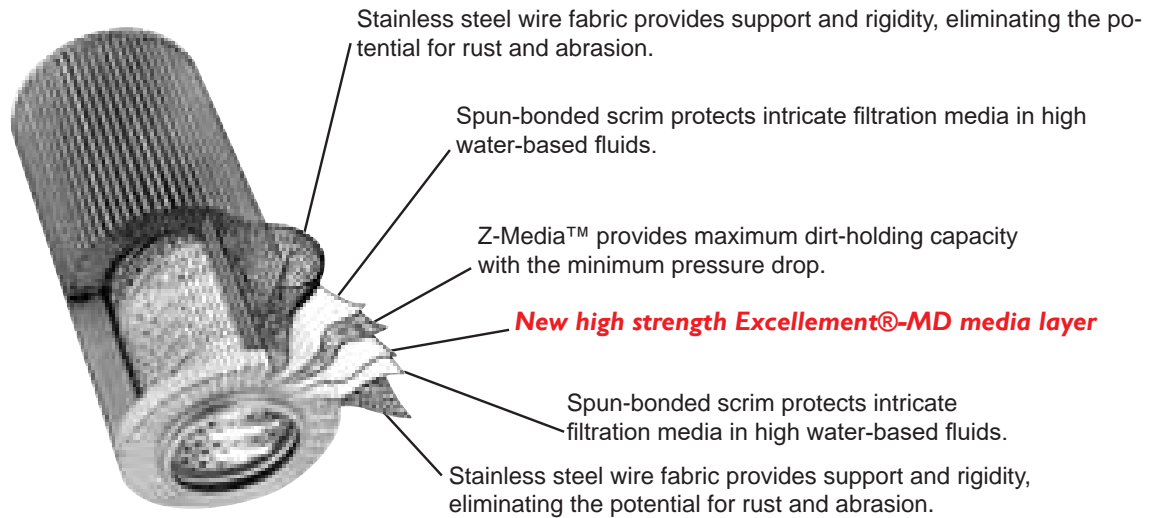
Sizing of elements should be based on element flow information provided in the Element Selection chart above. Please note that 95/5 fluid has a lower viscosity than 150 SUS and therefore pressure drops for 95/5 will actually be lower.

Filter Series	Element Part Number	Porting	Bypass Setting	Dirt Alarm
LW60	39ZPZ3V 39ZPZ5V 39ZPZ10V 39ZPZ25V	B32=ISO 228 G-2" (2-11 BSPP)	(Omit)= 50 psi Cracking 30 = 30 psi cracking	DPG= Differential Pressure Gauge
LWN60	39ZPMX25V	B32=ISO 228 G-2" (2-11 BSPP)	(Omit)= Blocked	DPG= Differential Pressure Gauge

Filter Model Number Selection

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.



Element Performance Information

Element	Abs. Rating wrt ISO 16889 Using APC calibrated per ISO 11171 B _x (c) 1000	Dirt Holding Capacity (gm)
39ZPZ3V	5.1	449
39ZPZ5V	6.1	359
39ZPZ10V	12.1	429
39ZPZ25V	17.7	284

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

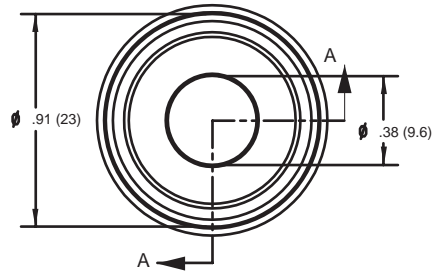
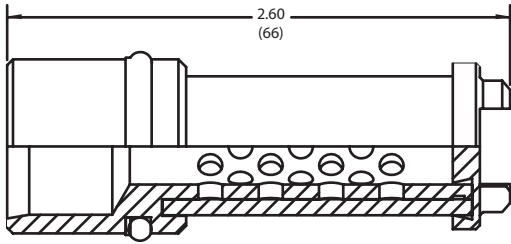
*Elements also used in LW60

Mining Specific Elements

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

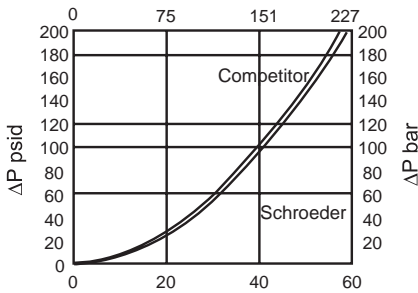
LW60

Excellement MD



Mining Specific Elements

Pressure Drop

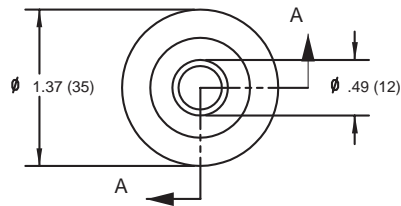
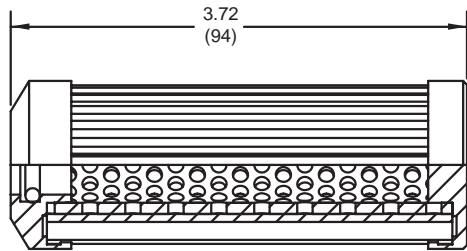


*Contact factory for additional filter ratings

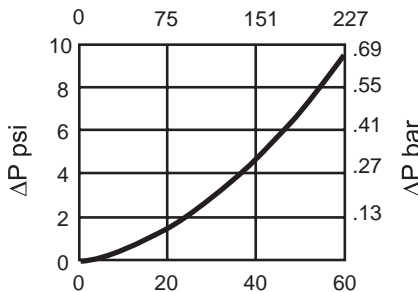
Max Pressure:	6,000 psi (400 bar)
Max Differential Pressure:	6,000 psid (400 bar)
Crush Rating:	> 6,000 psid
End Caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel Wrap
O-Ring:	Buna N
Back-up Ring:	Nylon
Flow Rating:	See Graph
Filter Rating:	80 micron

Specifications

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



Pressure Drop

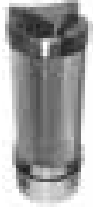


*Contact factory for additional filter ratings

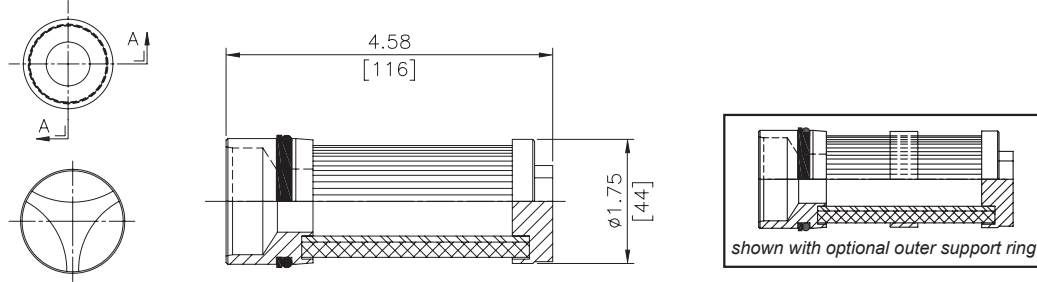
Max Pressure:	6,000 psi (400 bar)
Max Differential Pressure:	6,000 psid (400 bar)
Crush Rating:	>6,000 psid
End caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel
O-Ring:	Buna N
Flow Rating:	See Graph
Filter Rating:	40 micron

Specifications

Mining Specific Elements



Schroeder Part Numbers: MSB-3077-525B (25 μ) & MSB-3077-540B (40 μ)

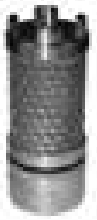
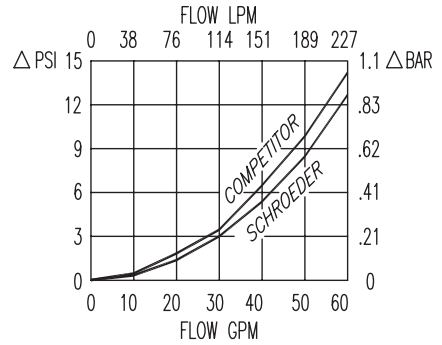


Specifications

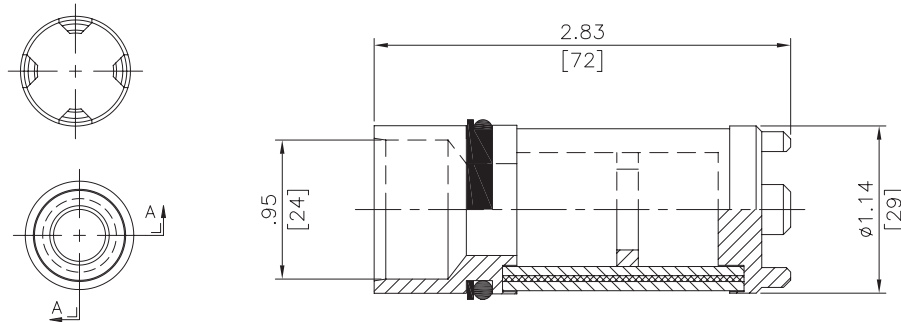
Max Pressure:	5,000 psi (350 bar)
Max Flow Rate:	40 gpm (150 L/min)
Filter Rating:	25/40 Micron
End caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel Pleated
O-Ring:	Buna N
Back-up Ring:	Nylon

*Contact factory for additional filter ratings

Pressure Drop



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

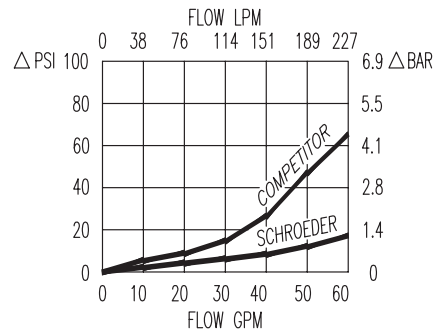


Specifications

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

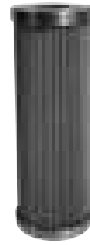
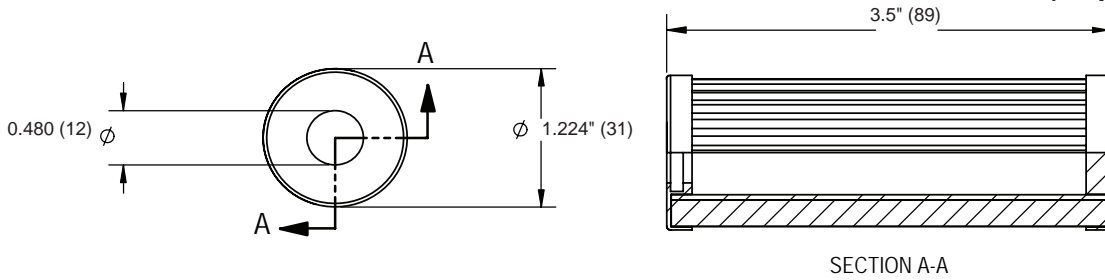
*Contact factory for additional filter ratings

Pressure Drop



Mining Specific Elements

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

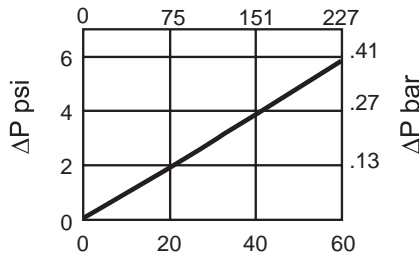


LW60

Excellement MD

**Mining
Specific
Elements**

Pressure Drop

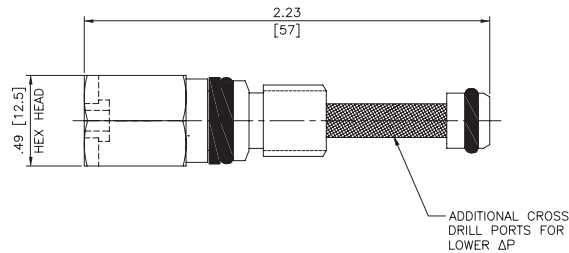
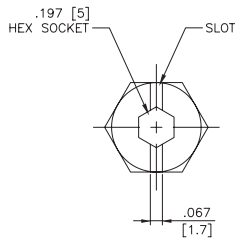


Micron Rating:	40 micron
Max Pressure:	4,500 psi (310 bar)
Max Differential Pressure:	4,000 psid (310 bar)
Crush Rating:	>4500 psid
End caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel
O-Ring:	Buna N
Flow Rating:	See Graph
Filter Rating:	40 micron

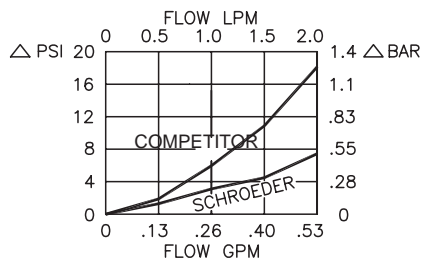
*Contact factory for additional filter ratings

Specifications

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



Pressure Drop



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

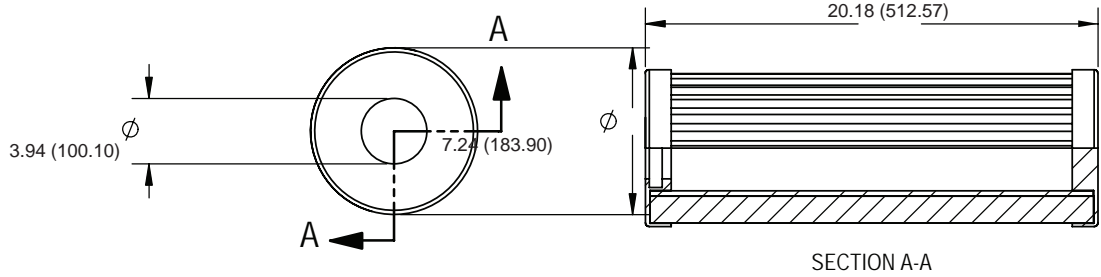
*Contact factory for additional filter ratings

Specifications

Mining Specific Elements



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



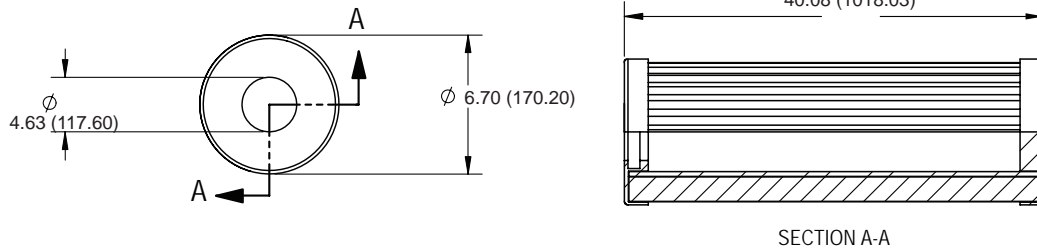
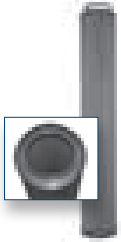
Specifications

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

Schroeder BestFit™ P/N
SBF-PF3L-Z12B
SBF-WE3L-Z60B
SBF-WS3L-Z10B
Seebach Element P/N
SA12MB-PF3L-95/5
SA75FBWE3L-Water
SA12MB-WS3LP-95/5
Seebach Filter
Triple "L" Filter
Triple "L" Filter
Triple "L" Filter

*Contact factory for additional filter ratings

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



Specifications

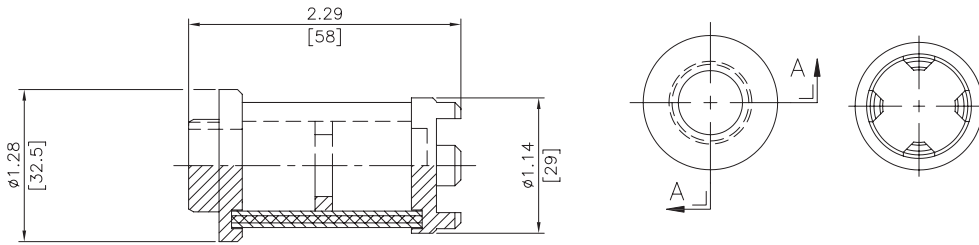
Micron Rating:	SBF-SALL-40Z150B: 150µm SBF-SALL-40Z10B: 10µm
Collapse Rating:	Not Rated
End Caps:	Anodized Aluminum
Support Tube:	None
Filter Media:	SBF-SALL-40Z150B: 150µm synthetic SBF-SALL-40Z10B: 10µm synthetic
O-Ring:	Buna N

Schroeder BestFit™ P/N
SBF-SALL-40Z150B
SBF-SALL-40Z10B
Seebach Element P/N
SALL40FB-150-Water
SALL40G010-95/5
Seebach Filter
2UC3230-000
2UC3230-000

*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)

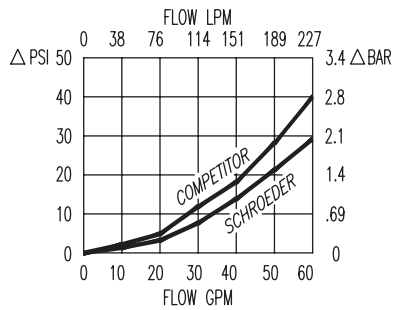


LW60

Excellement MD

Mining Specific Elements

Pressure Drop

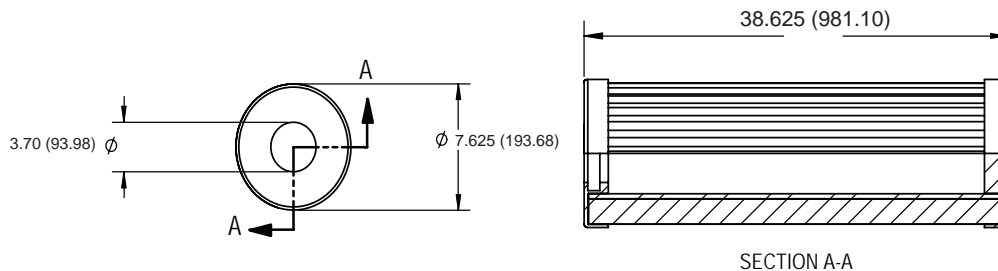


Max Pressure:	5,000 psi (350 bar)
Max Differential Pressure:	5,000 psid (350 bar)
Max Flow Rate:	52 gpm (200/L/min)
Filter Rating:	25/40/80/100 Micron
End Caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel Wrap
Support Ring:	Stainless Steel

*Contact factory for additional filter ratings

Specifications

Schroeder Part Numbers: SBF-PF3L-Z12B (12 μm) & SBF-WE3L-Z60B (60 μm)



Specifications

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 psid (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

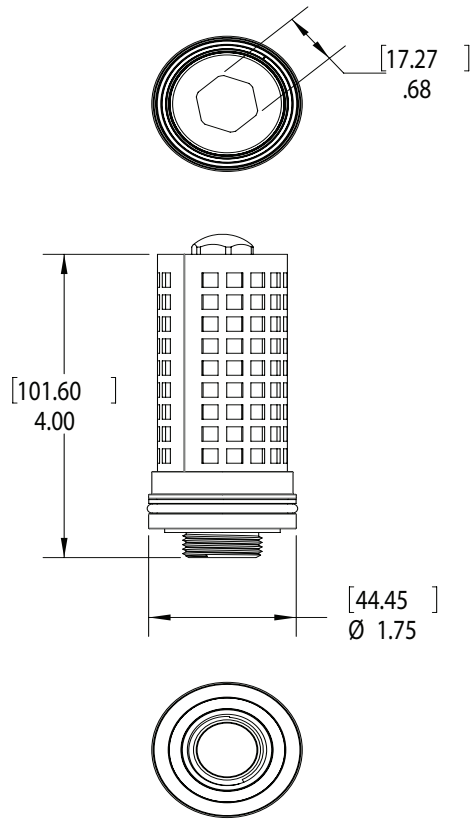
Z

*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.

Polyamide (filter element end caps) – General-purpose polymer (amide) for use in 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: Stable plastic. Dull, matte finish.

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.

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. Schroeder Industries presents the information in this medium in good faith, and it is believed to be accurate and correct. No representations or warranties as to the completeness or accuracy of the information are made by Schroeder. The persons receiving or using this information must make their own determinations as to intended use, purpose and application. Schroeder will assume no responsibility for damages or be held liable for any misuse or misapplication based upon the data within this medium. For your specific application, contact Schroeder Industries at www.schroederpure.com by phone at 724.318.1100 or fax at 724.318.1200.

Process Filtration Worksheet

Company _____

Contact Name _____

Department _____

Contact Title _____

Street _____

City, State, Zip _____

Phone _____ Fax _____

Date _____ E-mail _____

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) _____

Type of Fluid _____ Flow Rate _____ gpm

Operating Pressure _____ psi Design Pressure _____ psi

Operating Temperature* _____ °F Design Temperature _____ °F

Filtration Rating _____ μm Viscosity _____ SUS

Dirt Content _____ mg/l Voltage*** _____

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.

Reference List

H. Werries, "Einfluss von Fremdpartikeln in Walzlagern und Maßnahmen zu ihrer Vermeidung", University of Hanover, 1992

R.W. Park, Moog Australia Pty Ltd., *Contamination Control - A Hydraulic OEM Perspective*, Monash University, Australia, 1997

Fluid Power University of Bath, GB *Total Cleanliness Control in Hydraulic Systems*

ISO 4405:1991 Hydraulic fluid power - Fluid contamination - Determination of particulate contamination by the gravimetric method

ISO 4406: 1999 Hydraulic fluid power - Fluids - Code for defining the level of contamination of solid particles

ISO 4406: 1987 Hydraulic fluid power - Fluids - Methods for coding level of contamination by solid particles

CETOP - RP 94 H - Determination of solid particulates in hydraulic fluids using an automatic particle counter employing the light extinction principle

ISO 4407:1991 Hydraulic fluid power - Fluid contamination - Determination of particulate contamination by the counting method using a microscope

ISO 11171:1999 Hydraulic fluid power - Calibration of liquid automatic particle counters

ISO 4402:1991 Hydraulic fluid power - Calibration of automatic count instruments for particles suspended in liquids - Method using classified AC Fine Test Dust contaminant

NAS 1638: Cleanliness requirements of parts used in hydraulic systems
Acdelco - Steering, USA, *Remanufacturing Process - Cleanliness*, www.acdelco.com, 2001

University of Würzburg, Fluid Mechanics lecture

Carosso, Nancy- NASA - USA, Contamination Engineering Design, www.de.ksc.nasa/dedev/labs/cml_lab/CONTMON_DESIGN.html #1.1

Hydraulic & Lube Filtration

Accessories

Filter Systems

Fuel Filtration

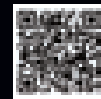
Process Filtration

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