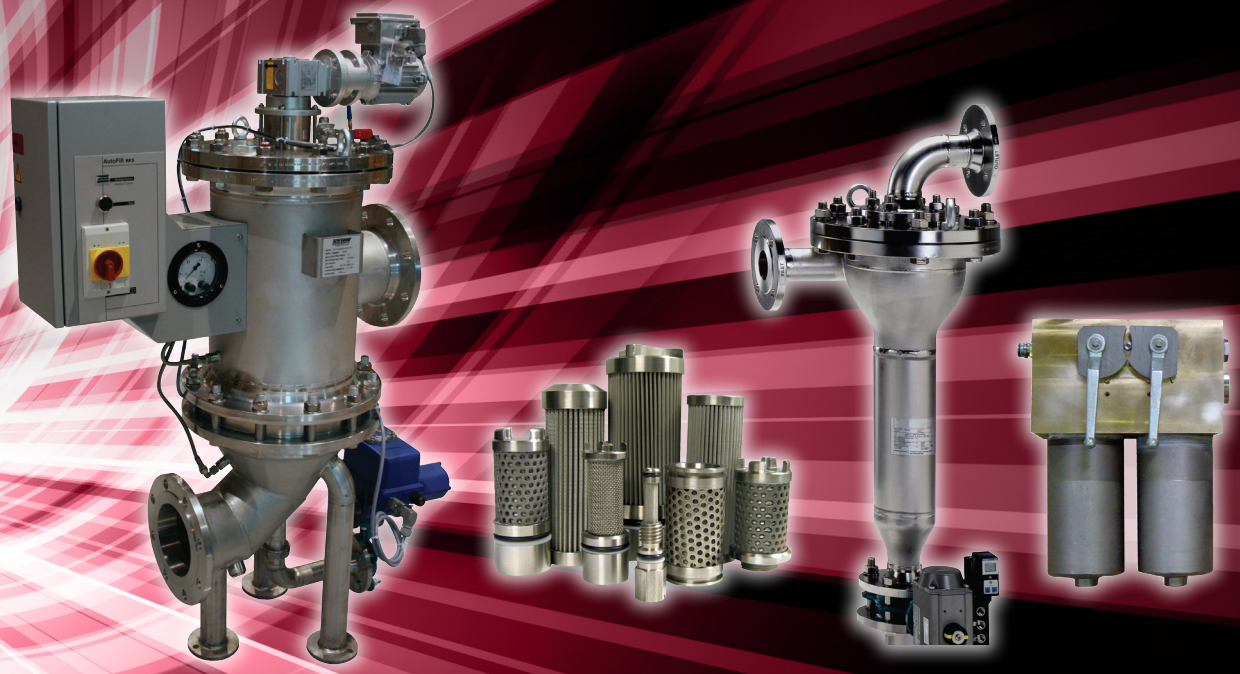
PRODUCTS CATALOG

PROCESS FILTRATION



Schroeder INDUSTRIES

An ISO 9001:2008 Certified Company

www.schroederindustries.com

Schroeder Process Filtration - Table of Contents

Corporate Overview

Schroeder Industries, an ISO 9001:2008 certified company, focuses on developing filtration and fluid service products for our customers in the fluid power industry, and is proud of our proven track record of providing quality products over the last sixty five years. The designs you see in this catalog are the result of thousands of hours of field testing and laboratory research and decades of experience.

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

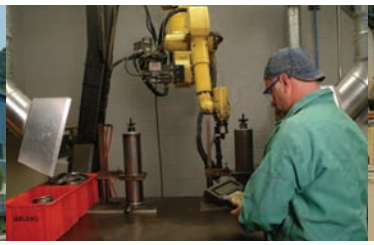
> Partnerships
>
> Innovating products, solutions, processes and services to improve performance and efficiency in industry.

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

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

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

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



Introduction to Process Filtration Technology

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

Our process filters are used to remove solid contamination from fluids and protect the integrity of high grade components that depend on low viscosity water or water-based fluids and emulsions. Schroeder offers high performance filters for all 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 1 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

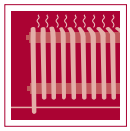
Treatment of inlet cooling water supply for the generators allows for a cleaner, less abrasive supply. Filtration of the water supply to the dynamic “sliding-ring” water seal on the turbine shaft increases service life of the seal.

Sewage and Waste Water Treatment

Coarse 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.

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

Coarsest

3000 - 10,000 µm

50 - 3000 µm

100 - 250 µm

25 - 60 µm

1 - 100 µm

Finest

Reusable

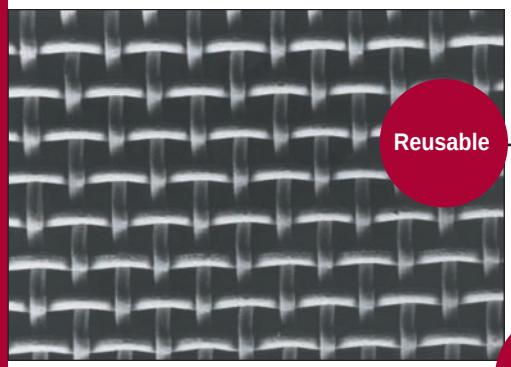
Perforated Plate

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

Reusable

Slotted Tube

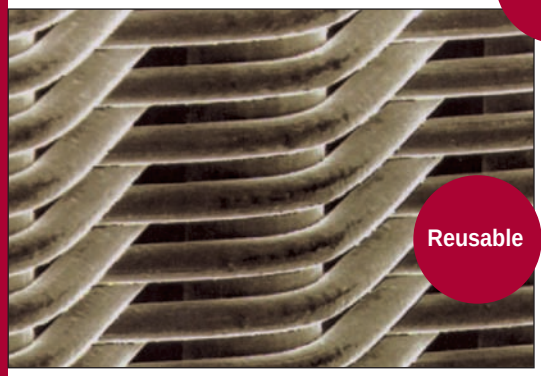
Slotted tubes consist of a spiral profile wire, which is welded with vertical support wires. They can be used for inline or screen baskets, and the flow direction can be either.



Reusable

Square Hole Wire Mesh

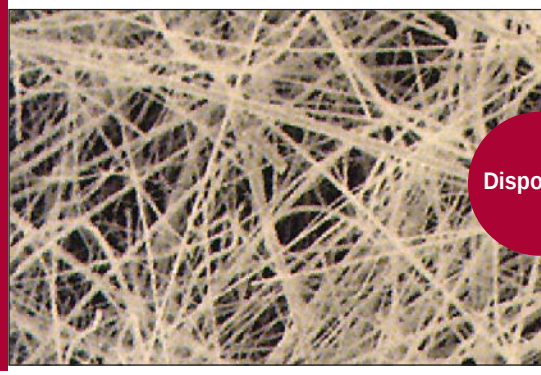
This fiber consists of chain wire that is sized according to the support wire. Pore size is determined by the rectangular construction.



Reusable

Super Mesh

A combination of square hole wire mesh and dutch weave wire mesh.



Reusable

Dutch Weave Wire Mesh

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

Disposable

Bag and Cartridge Filters

These filters are made from polypropylene, polyester or nylon. They offer high efficiency, high dirt holding capacity and low purchase cost for fine filtration.

Element Selection Guide

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 micronic range. This is critical to selecting the level of cleaning required in your system. It is important to select the medium that is appropriate to your application. There are dangers in both undersizing and oversizing of the element. Selecting a pore size too large can have adverse effects on your process or the equipment you are trying to protect. Selecting a pore size smaller than your requirements will ad 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.

Automatic Backflushing Filters

RF3

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

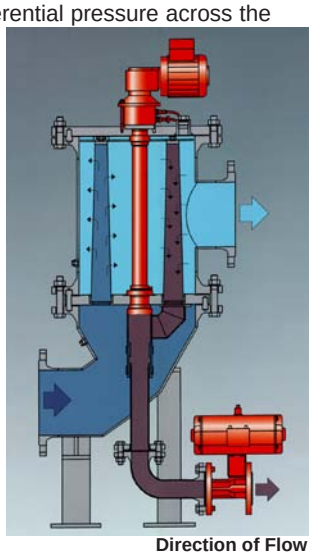
The RF3 Automatic Backflushing Filters are complete filtration systems. These unique products are not only performing the task of filtering low viscosity liquids, but also the cleaning of their array of reusable conical filter elements via PLC controlled mechanism.

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.



Direction of Flow

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.

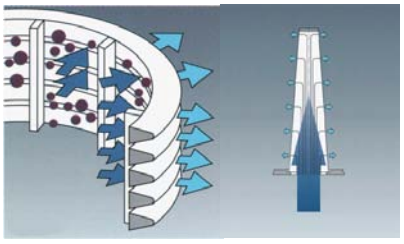
How does the self-cleaning system operate?

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.

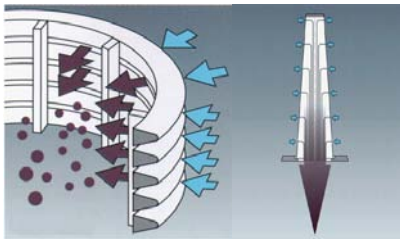
What about the filter elements?

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.

Filtration Mode



Backflush Mode



Are there any other unique features?

The PLC control has some benefits that aren't immediately visible. During the self-cleaning operation, the backflush valve is in position under the element being cleaned for just a few seconds. The backflush valve is opened and closed rapidly, causing a "pulsation" of filtrate through the filter element openings. These pressure surges produce a superior cleaning effect in a shorter time. The result is fewer cleaning cycles, shorter duration and lower consumption of filtrate.

Automatic Backflushing Filters

Some of the RF3 Benefits:

- Excellent price to performance ratio
- High filtration quality
- Low occurrence of service staff intervention
- Low operating cost
- Low maintenance cost
- Continuous operation of process
- High flow rate for maximum performance
- Low pressure drop
- Low energy consumption
- Superior self-cleaning functionality
- Application specific design
- Efficient design / small envelope
- Simple installation
- Maximum use of filtration surfaces for best efficiency

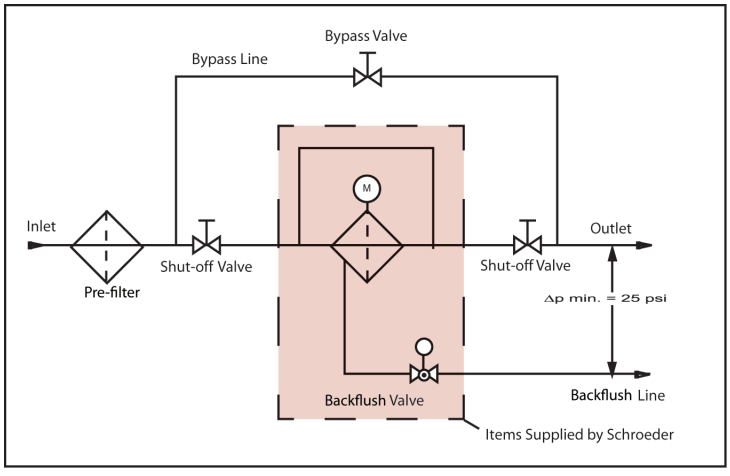
Filter Elements

- Patented element design
- 25 to 3000 micron filtration

Installation Guidelines

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

System Installation Diagram



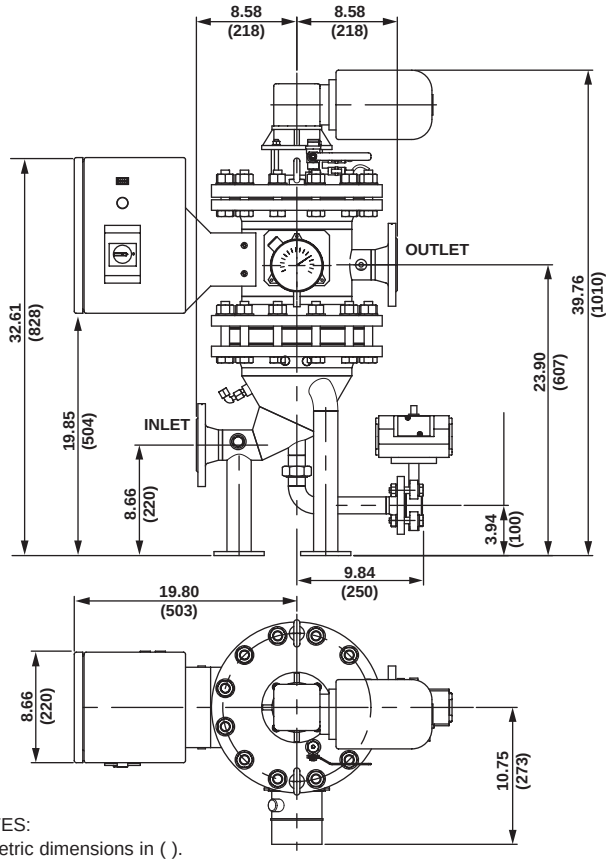
Industries Served

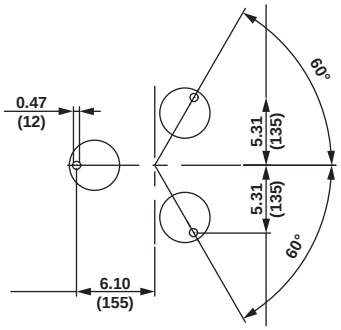
STEEL MAKING | PAPER INDUSTRY | SEWAGE & WASTEWATER TREATMENT | MINING TECHNOLOGY | INDUSTRIAL | POWER GENERATION | MARINE | MACHINE TOOL

RF3-C Backflushing Filter AutoFilt® RF3

20-120 gpm
80-470 L/min

150 psi
10 bar





MOUNTING PATTERN

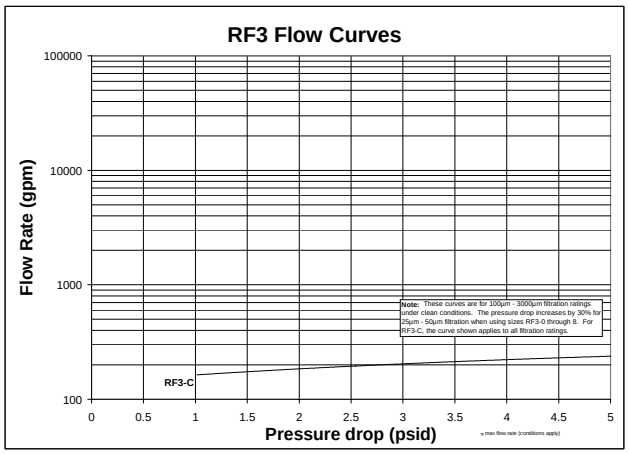
NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	2" ANSI
Flow Range:	20-120 gpm (80-470 L/min)
Working Pressure:	230 psi (16 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	266 lbs. (121 kg)
Housing Volume:	4 gallons (15 L)
Filter Area:	331 in^2 (2140 cm^2)
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 AutoFilt® 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										

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	1	3	0	KS1000	C		= RF3-C-EPT8-NG-N-1-3-0/ KS1000-C-ASME

BOX 1

Filter Series

RF3

BOX 2

Filter / Flange Size

C

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

C

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

Filter Model Number Selection

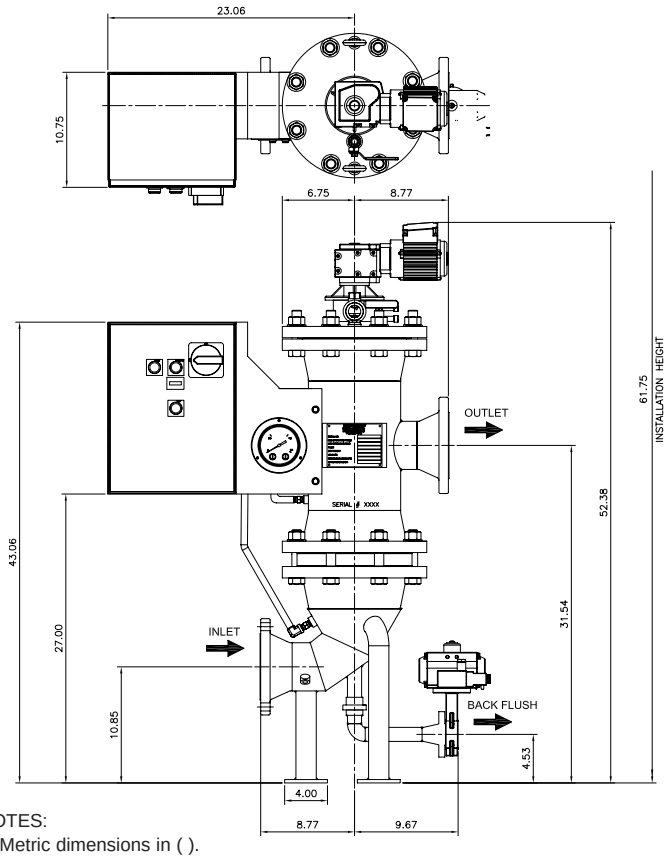
RF3-C
RF3-0
RF3-1
RF3-2
RF3-2.5
RF3-3
RF3-4
RF3-5
RF3-6
RF3-7
RF3-8
RF5
RF7
RF4-1
RF4-2
BWF
RFH-1
RFH-2
RFH-4
ATF

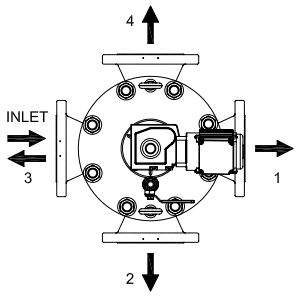
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

RF3-0 Backflushing Filter AutoFilt® RF3

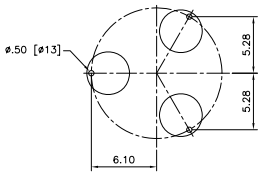
110-500 gpm
420-1880 L/min

150 psi
10bar





OUTLET FLANGE CONFIGURATIONS



FLOOR MOUNTING PATTERN

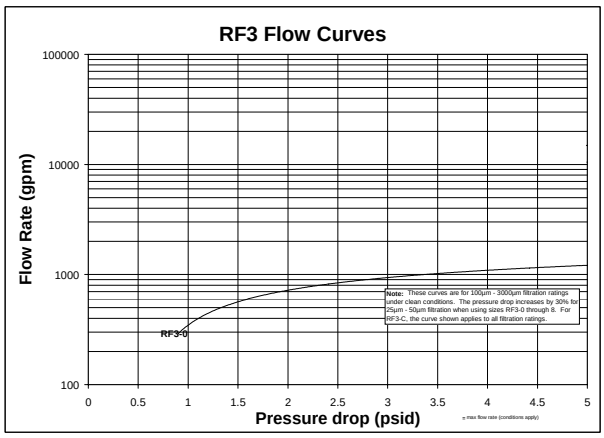
NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	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 AutoFilt® RF3

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										

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	1	3	1	KS1000	0	ASME	= RF3-0-EPT8-NG-N-1-3-0/ KS1000-0-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

0

BOX 3

Drive Control / Connecting Voltage

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Differential Pressure Gauge

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BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

0

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

Filter Model Number Selection

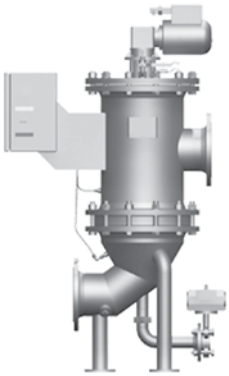
RF3-C
RF3-0
RF3-1
RF3-2
RF3-2.5
RF3-3
RF3-4
RF3-5
RF3-6
RF3-7
RF3-8
RF5
RF7
RF4-1
RF4-2
BWF
RFH-1
RFH-2
RFH-4
ATF

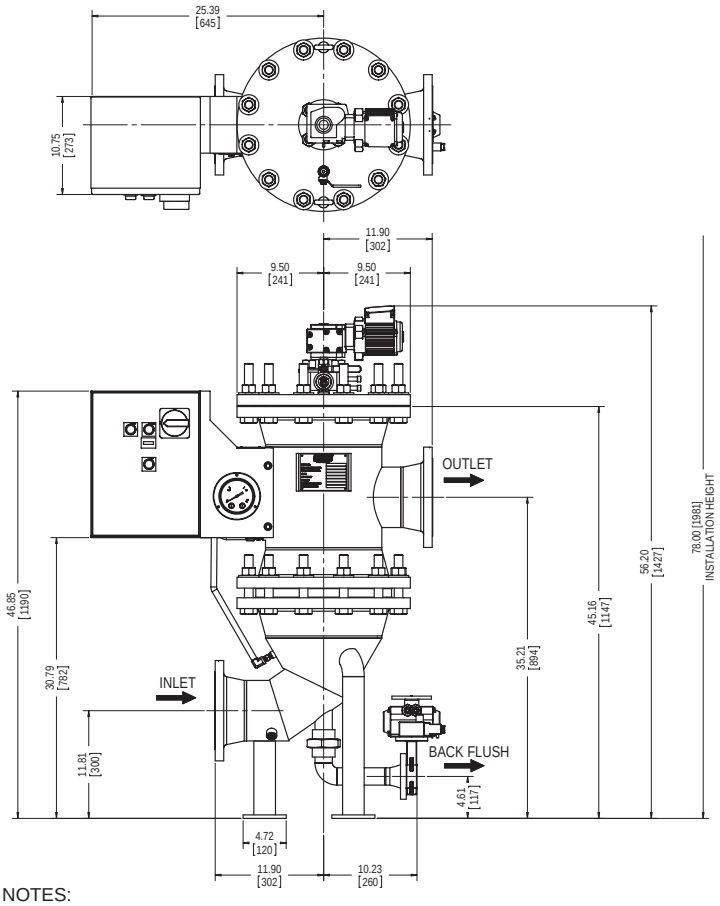
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

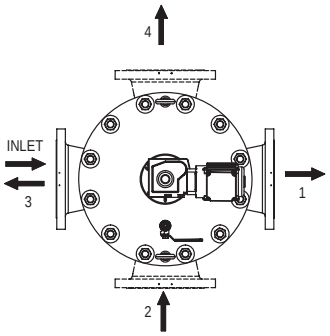
RF3-1 Backflushing Filter AutoFilt® RF3

395-1120 gpm
1500-4235 L/min

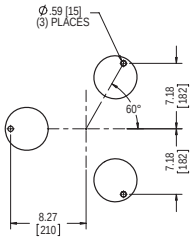
150 psi
10 bar







OUTLET FLANGE CONFIGURATIONS



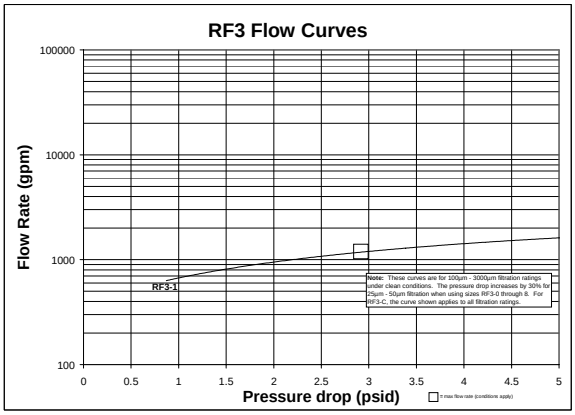
FLOOR MOUNTING PATTERN

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 AutoFilt® RF3

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										

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	1	3	1	KS1000	1	ASME	= RF3-1-EPT8-NG-N-1-3-0/ KS1000-1-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

1

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

1

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

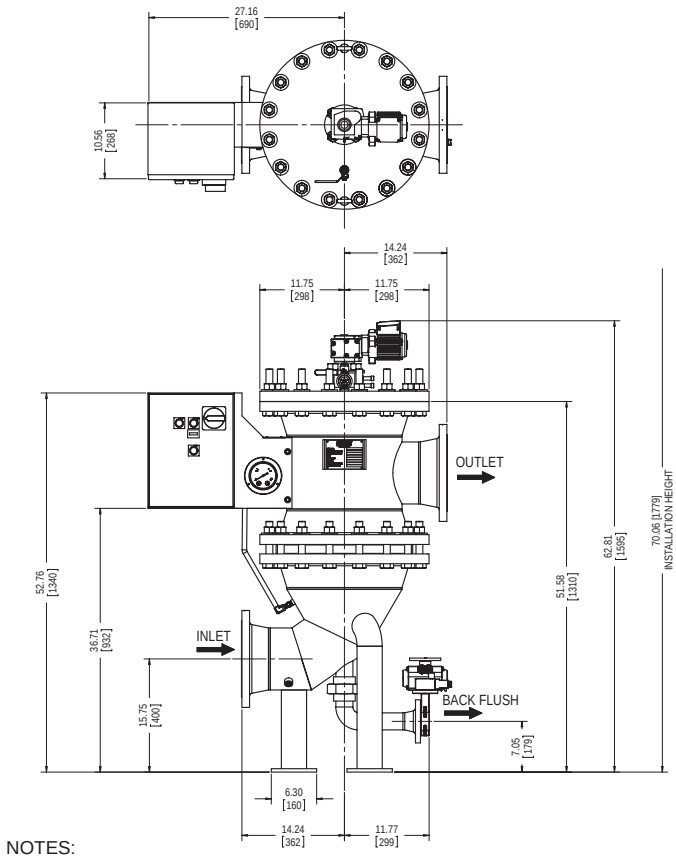
Filter Model Number Selection

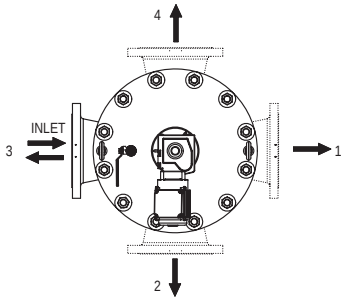
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

RF3-2 Backflushing Filter AutoFilt® RF3

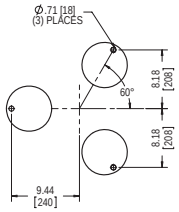
880-1980 gpm
3335-7500 L/min

150 psi
10 bar





OUTLET FLANGE CONFIGURATIONS



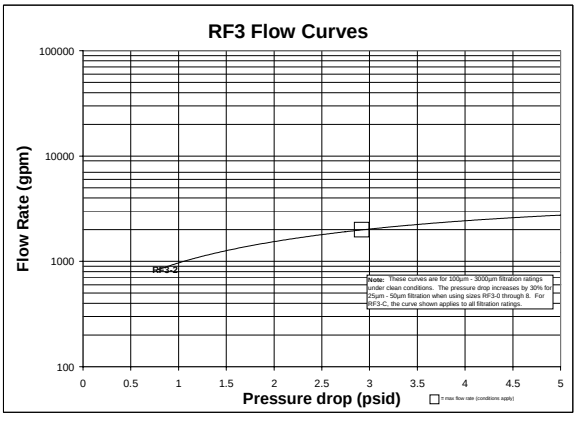
FLOOR MOUNTING PATTERN

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

Specifications

Flange Size:	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 cm²)
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 AutoFilt® RF3

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										

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	1	3	1	KS1000	2	ASME	= RF3-2-EPT8-NG-N-1-3-0/ KS1000-2-ASME

BOX 1 — Filter Series

RF3

BOX 2 — Flange Size

2

BOX 3 — Drive Control / Connecting Voltage

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

BOX 4 — Housing Material and Coating

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, additional A at the end

BOX 5 — Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6 — Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7 — Flange Position

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

BOX 8 — Modification Number

0 = Latest version supplied by factory

BOX 9 — Element Set

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 — Size of Element Set

2

BOX 11 — Vessel Certification

Omit = Standard Version

ASME = ASME Version

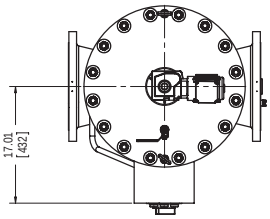
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

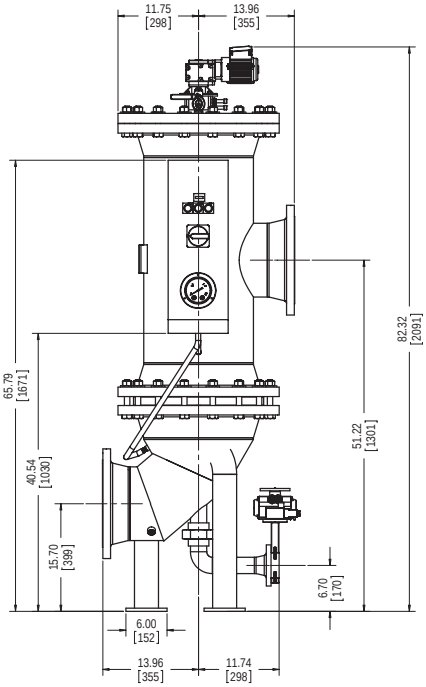
Filter Model Number Selection

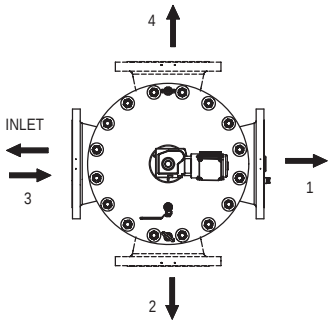
RF3-2.5 Backflushing Filter AutoFilt® RF3

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

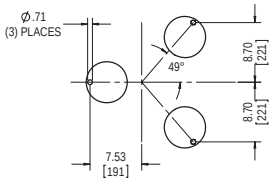
150 psi
10bar







OUTLET FLANGE CONFIGURATIONS

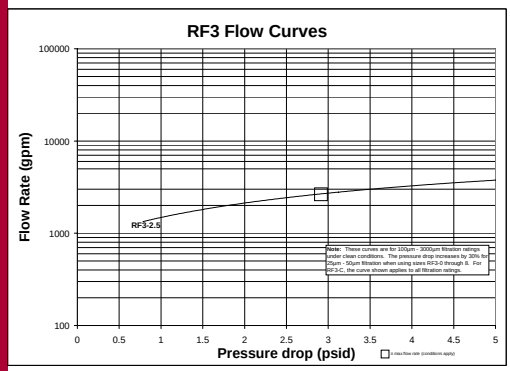


NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

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 AutoFilt® RF3

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										

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	1	3	1	KS1000	2.5	ASME	= RF3-2.5-EPT8-NG-N-1-3-0/ KS1000-2.5-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

2.5

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

2.5

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

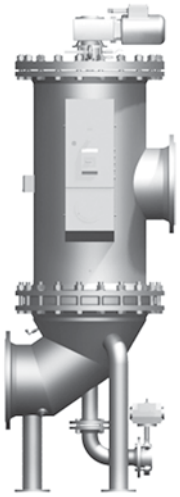
Filter Model Number Selection

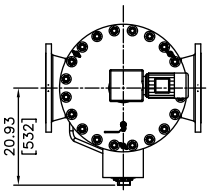
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

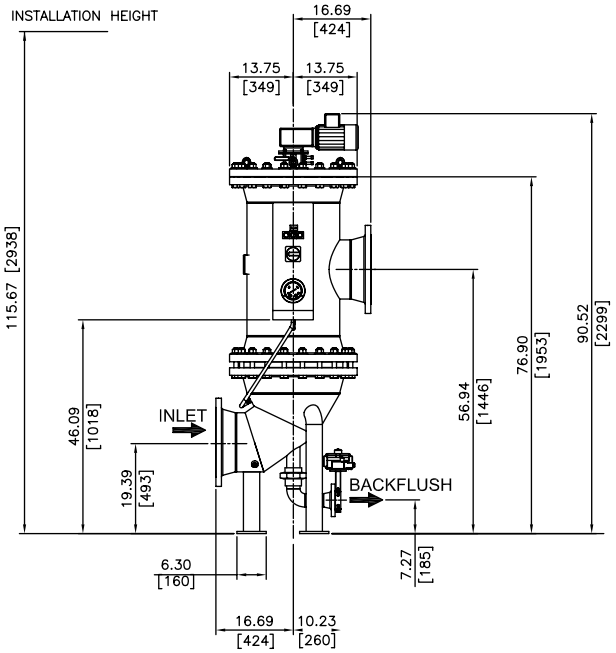
RF3-3 Backflushing Filter AutoFilt® RF3

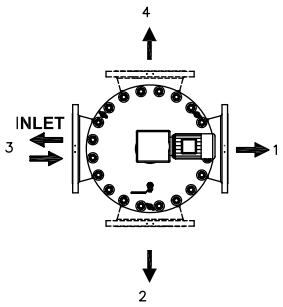
2420-3790 gpm
9170-14350 L/min

150 psi
10 bar

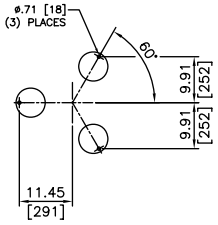








OUTLET FLANGE CONFIGURATIONS



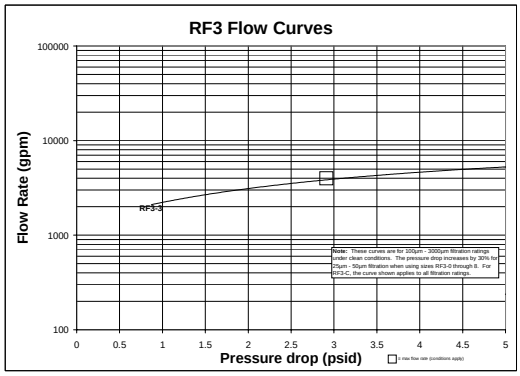
FLOOR MOUNTING PATTERN

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

Specifications

Flange Size:	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 cm²)
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 AutoFilt® RF3

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										

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	1	3	1	KS1000	3	ASME	= RF3-3-EPT8-NG-N-1-3-0/ KS1000-3-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

3

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

3

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

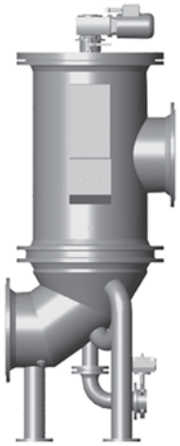
Filter Model Number Selection

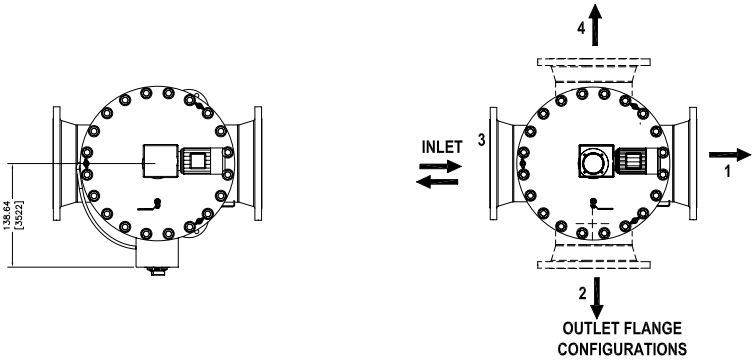
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

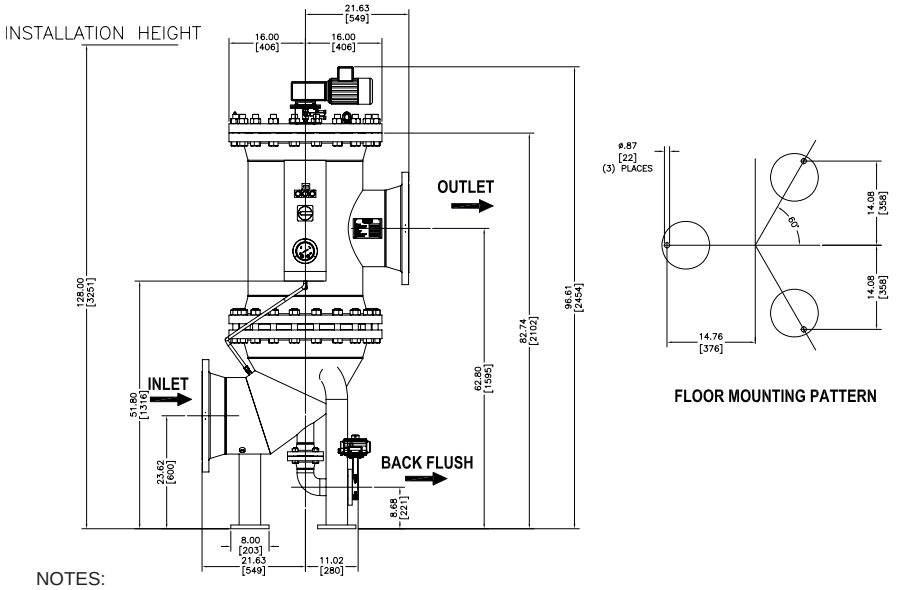
RF3-4 Backflushing Filter AutoFilt® RF3

3570-7490 gpm
13,500-28,300 L/min

87 psi
6 bar





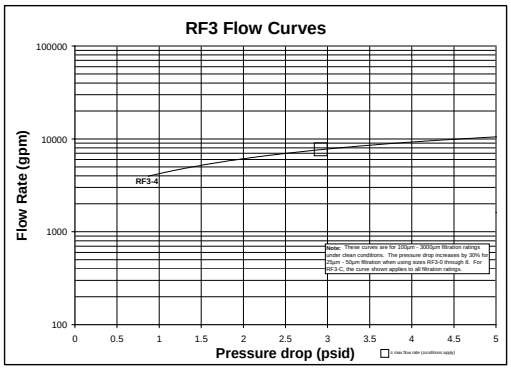


NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

Specifications

Flange Size:	16"ANSI
Flow Range:	3570-7490 gpm (13,500-28,300 L/min)
Working Pressure:	87 psi (6 bar)
Max. Working Temperature:	194°F (90°C)
Empty Weight:	1650 lbs. (750 kg)
Housing Volume:	112 gallons (425 L)
Filter Area:	5810 in.² (37,500 cm²)
No. of Filter Elements	18
Backflush Flange Size:	3"ANSI
Backflush Volume:	55 gallons (210 L/cycle) Electric-Pneumatic Controls (EPT) 275 gallons (1050 L/cycle) All Electric Controls (EU)

Pressure Drop Information Based on Flow Rate and Viscosity



Backflushing Filter AutoFilt® RF3

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										

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	1	3	1	KS1000	4	ASME	= RF3-4-EPT8-NG-N-1-3-0/ KS1000-4-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

4

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

4

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

Filter Model Number Selection

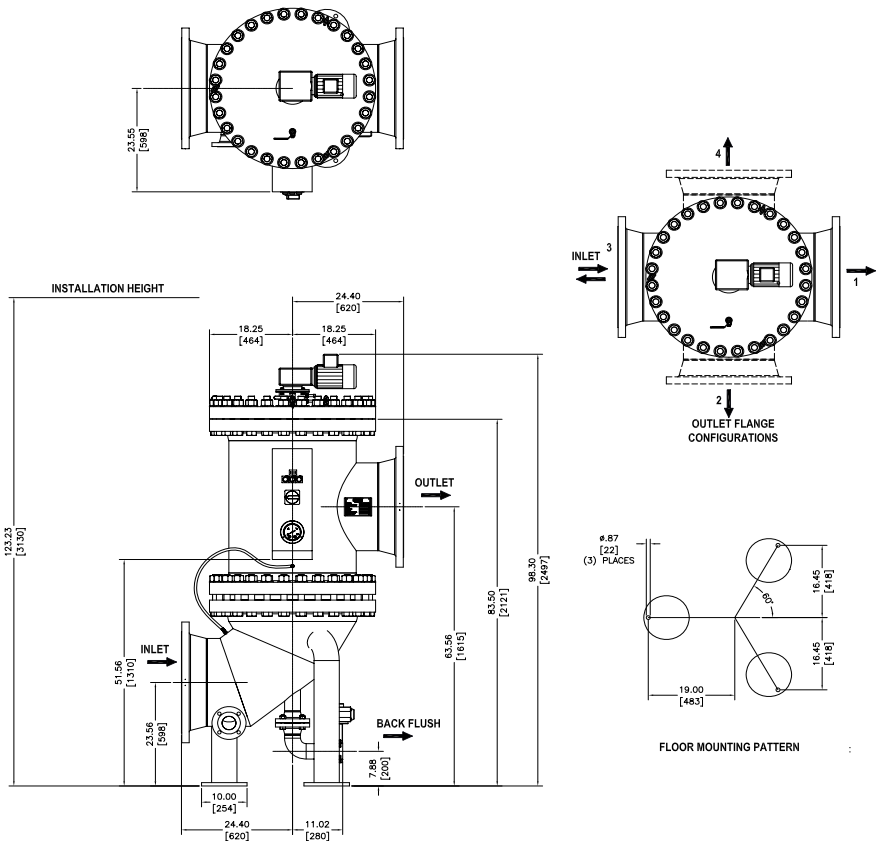
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

RF3-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
BWF
RFH-1
RFH-2
RFH-4
ATF

RF3-5 Backflushing Filter AutoFilt® RF3

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

87 psi
6 bar

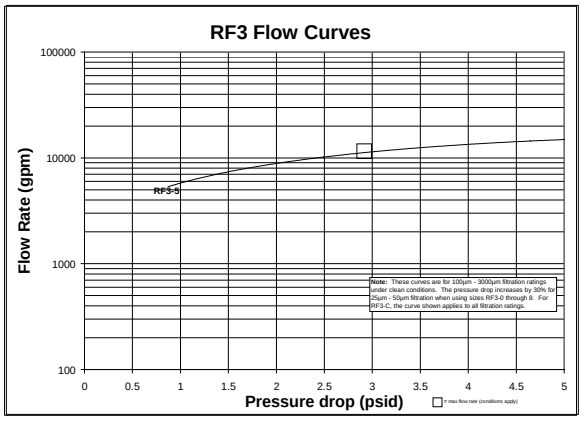


NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact Factory for certified drawings.

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 cm²)
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 AutoFilt® RF3

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										

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	1	3	1	KS1000	5	ASME	= RF3-5-EPT8-NG-N-1-3-0/ KS1000-5-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

5

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

5

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

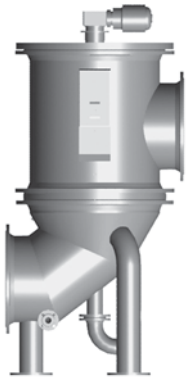
Filter Model Number Selection

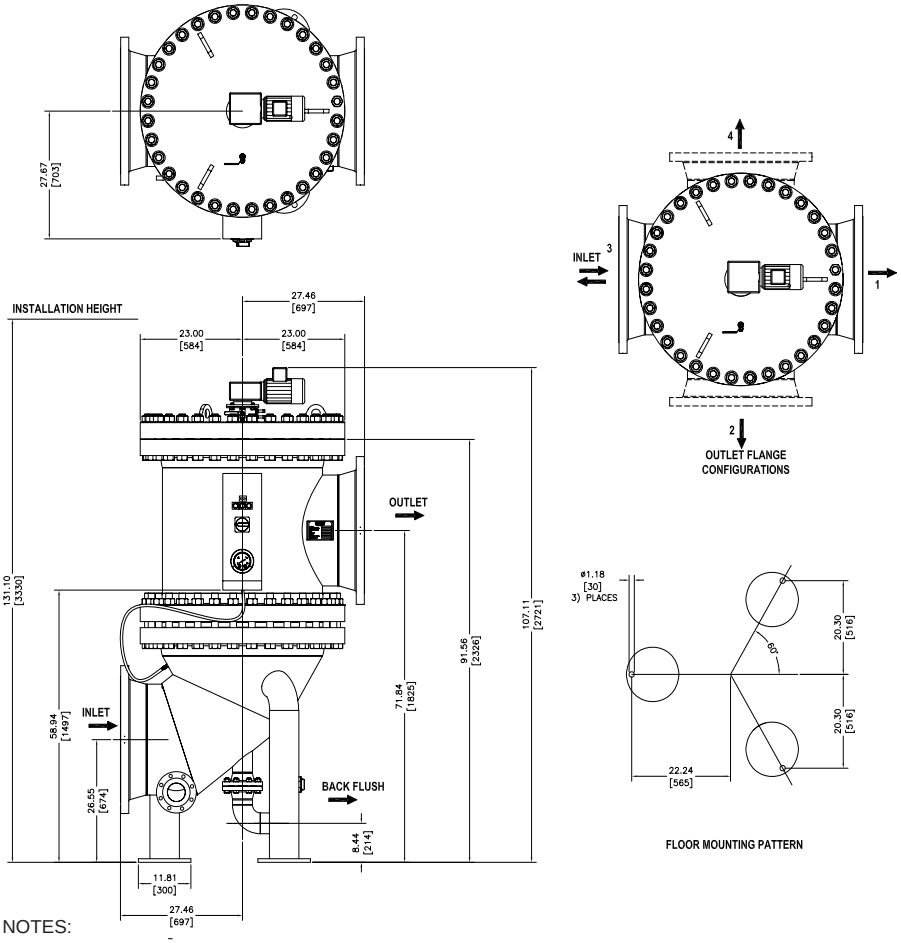
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

RF3-6 Backflushing Filter AutoFilt® RF3

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

87 psi
6 bar



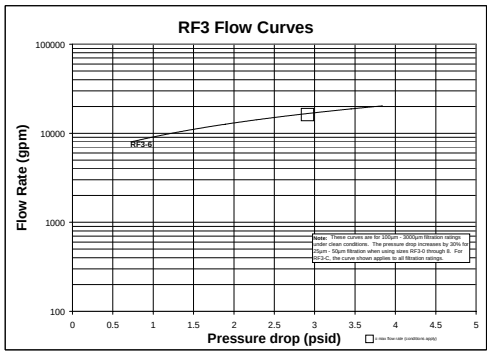


NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

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 cm²)
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 AutoFilt® RF3

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										

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	1	3	1	KS1000	6	ASME	= RF3-6-EPT8-NG-N-1-3-0/ KS1000-6-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

6

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

6

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

Filter Model Number Selection

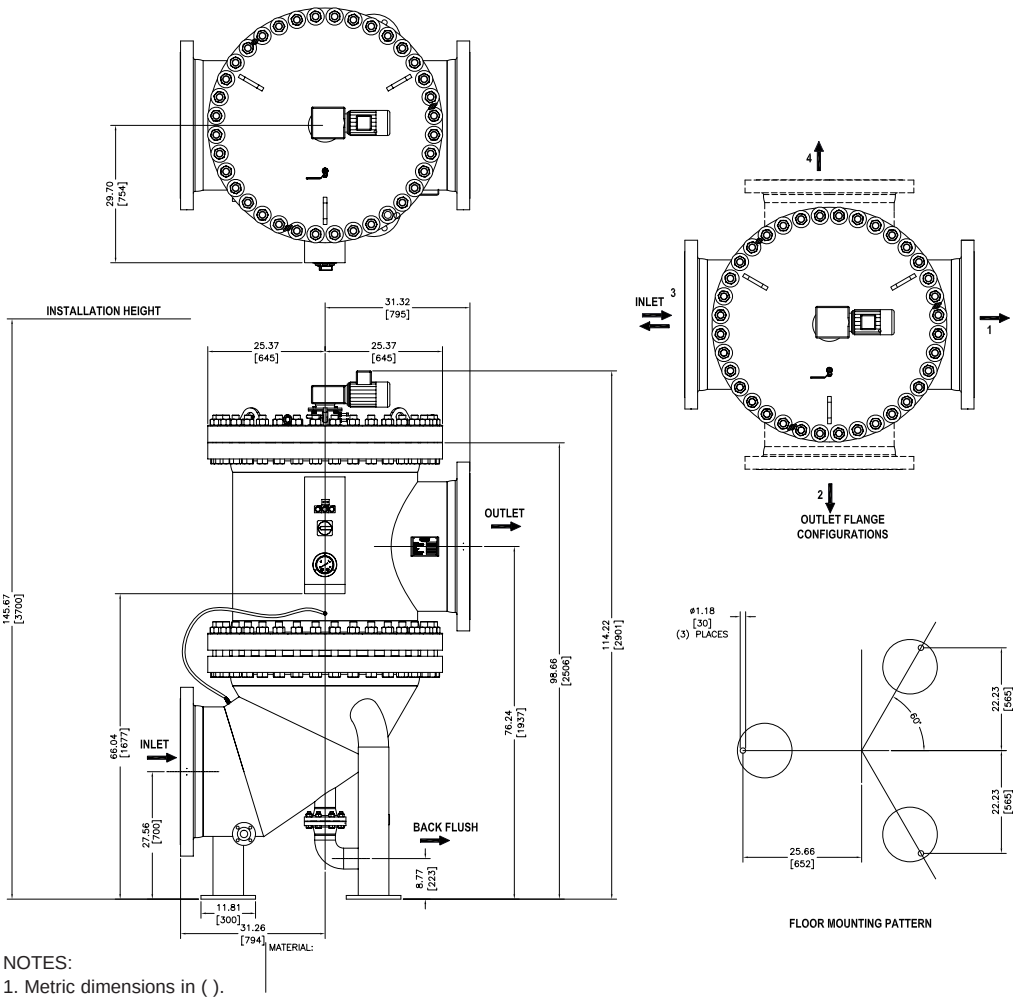
RF3-C
RF3-0
RF3-1
RF3-2
RF3-2.5
RF3-3
RF3-4
RF3-5
RF3-6
RF3-7
RF3-8
RF5
RF7
RF4-1
RF4-2
BWF
RFH-1
RFH-2
RFH-4
ATF

NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. 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

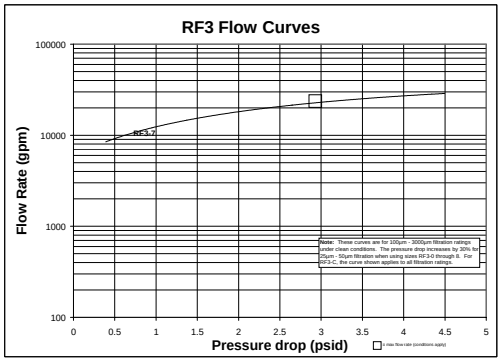


NOTES:
1. Metric dimensions in ( ).
2. Drawings may change without notice. Contact factory for certified drawings.

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



Backflushing Filter AutoFilt® RF3

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										

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	1	3	1	KS1000	7	ASME	= RF3-7-EPT8-NG-N-1-3-0/ KS1000-7-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

7

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

7

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

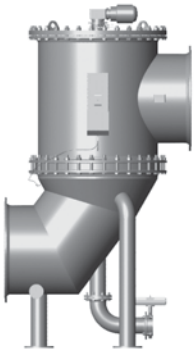
Filter Model Number Selection

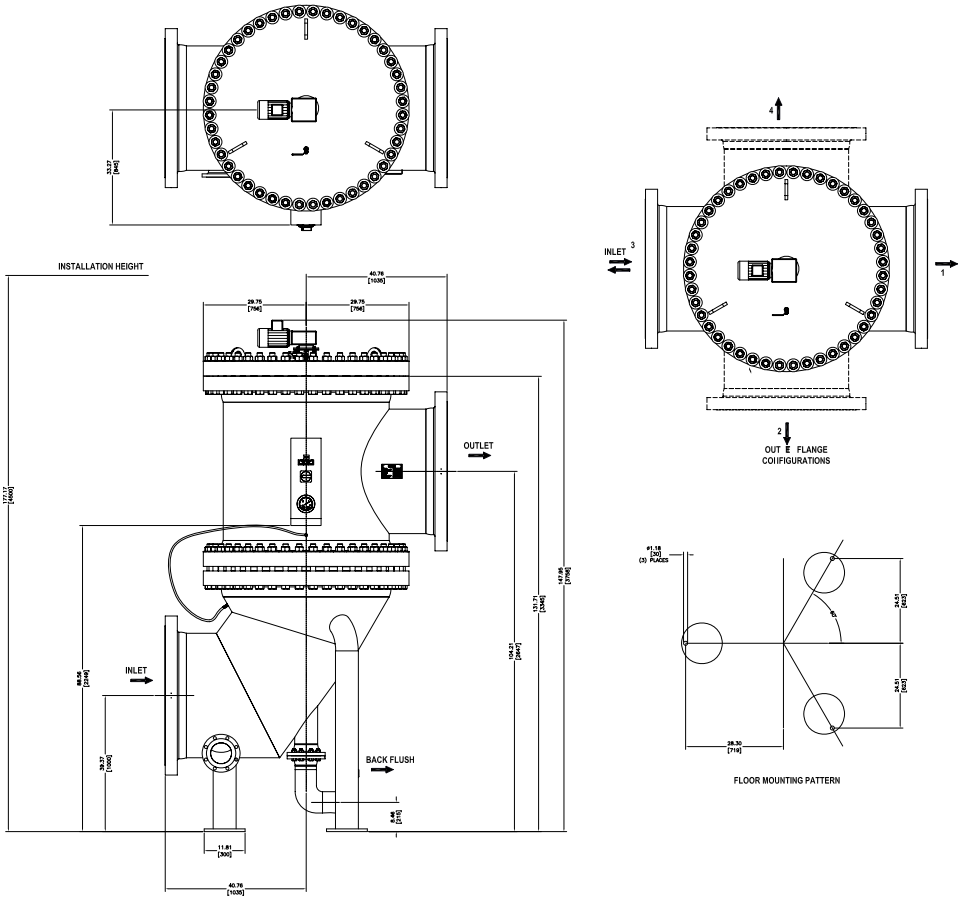
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

RF3-8 Backflushing Filter AutoFilt® RF3

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

87 psi
6 bar



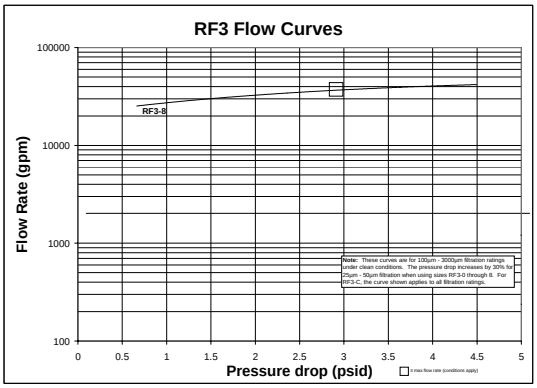


NOTES:
1. Metric dimensions in (-).
2. Drawings may change without notice. Contact factory for certified drawings.

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 AutoFilt® RF3

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										

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	1	3	1	KS1000	8	ASME	= RF3-8-EPT8-NG-N-1-3-0/ KS1000-8-ASME

BOX 1

Filter Series

RF3

BOX 2

Flange Size

8

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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, additional A at the end

BOX 5

Shut-Off Valve Material

N = Standard Steel

E = Stainless Steel

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

3 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

8

BOX 11

Vessel Certification

Omit = Standard Version

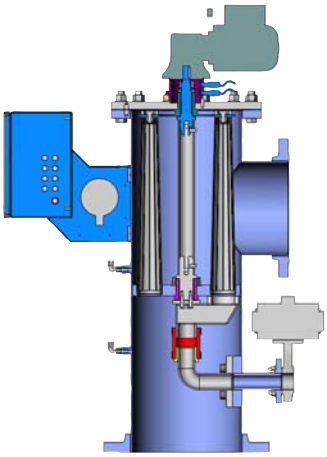
ASME = ASME Version

Filter Model Number Selection

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.

RF5 Backflushing Filters AutoFilt® RF5

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.

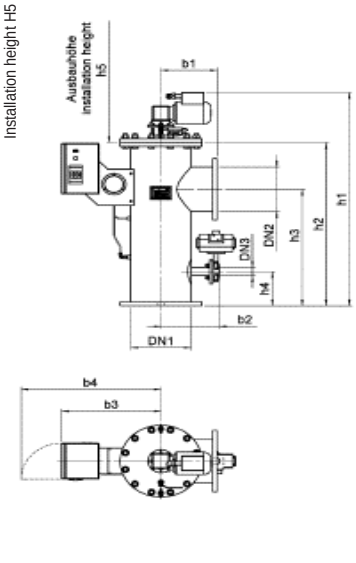


The function of the AutoFilt® RF5 is similar to the AutoFilt® RF3:

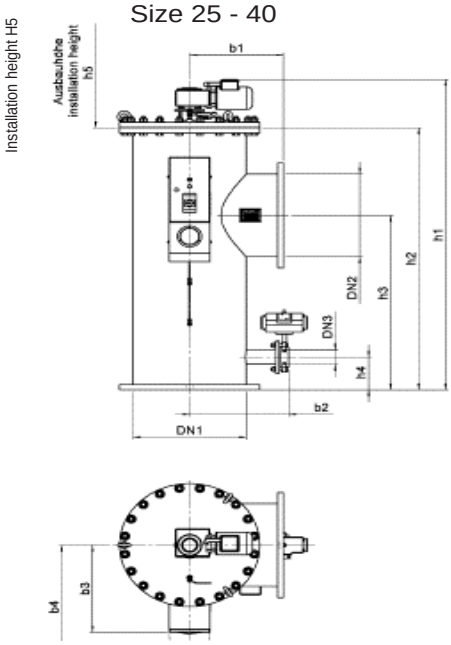
The fluid to be filtered flows through the slotted tube filter elements of the backflushing filter, passing from the inside to the outside. Contamination particles then collect on the smooth inside of the filter elements.

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 50 - 90



Size 25 - 40



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 Filters AutoFilt® RF5

Size	Pressure Rating psi / (bar)	Inlet	Outlet	Back flushing	Filtration Area in² / cm²	Flow Range gpm (L/min.)
25	145 (10)	DN 250	DN 200	DN 40	942 (6120)	748-1408 (170-320)
30	145 (100)	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 RF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
RF5										

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	1	1	0	ES300	40		= RF5-40-EPT8-NMA-N-1-1-0-ES300-40

BOX 1

Filter Series

RF5

BOX 2

Flange Size

25
30
40
50
60
70
90

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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

BOX 5

Shut-Off Valve Material

N = Standard Steel

B = Bronze

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum

2 = Pressure Chamber, Stainless Steel

4 = Pressure Chamber, Brass

BOX 7

Control Box Position

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

Same as BOX 2 Value

BOX 11

Vessel Certification

Omit = Standard Version

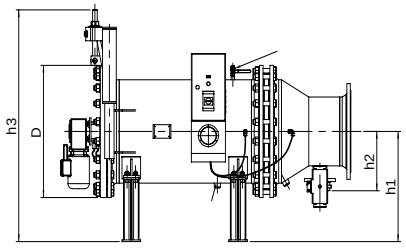
ASME = ASME Version

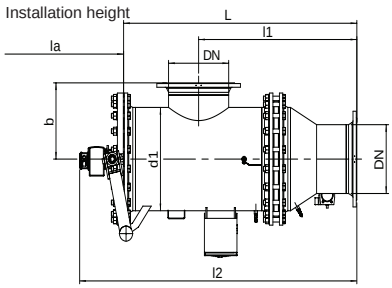
NOTES:
Box 3. Needs to have control type and voltage selected ex. EPT8.
Box 4. can contain two options ex. NMA.
note. If ANSI flanges are not specified DIN style will be provided.

RF7 Backflushing Filters AutoFilt® RF7

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.





Dimensions

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 in² (cm²)	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 Filters AutoFilt® 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	1	1A	0	KS100	3B		= RF7-3B-EPT7-NMA-N-1 -1A-0/KS100-3B

BOX 1

Filter Series

RF7

BOX 2

Flange Size

CC
0B
1B
2B
2.5B
3B
4A
5A
6A
7A
8A

BOX 3

Drive Control / Connecting Voltage

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

BOX 4

Housing Material and Coating

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

BOX 5

Shut-Off Valve Material

N = Butterfly housing SG cast iron coated, washer stainless steel

B = Butterfly housing SG cast iron coated, washer bronze

BOX 6

Differential Pressure Gauge

1 = Pressure Chamber, Aluminum 3.258302

2 = Pressure Chamber, Stainless Steel 1.4305

4 = With Chemical Seal Stainless Steel 315 TI

BOX 7

Flange Setting/ Backflushing Line Setting

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

BOX 8

Modification Number

0 = Latest version supplied by factory

BOX 9

Element Set

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

Size of Element Set

Same as BOX 2 Value (first letter/number only)

BOX 11

Vessel Certification

Omit = Standard Version

ASME = ASME Version

Filter Model Number Selection

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-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
BWF
RFH-1
RFH-2
RFH-4
ATF

RF4 Backflushing Filter AutoFilt® RF4

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

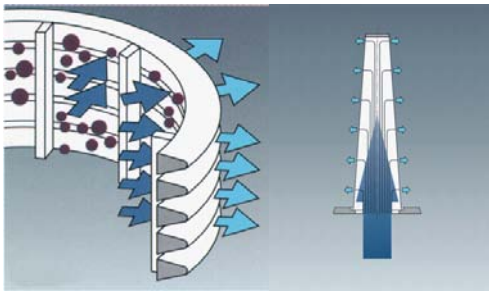
Backflushing is triggered automatically when the differential pressure set point is exceeded. As soon as backflushing has been triggered, the filter starts to clean the filter elements.

Triggering Backflushing on Manual Version

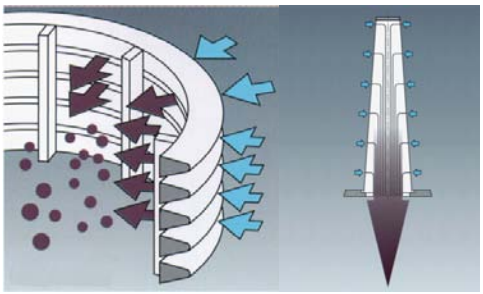
When the differential pressure set point is reached, the visual clogging alarm indicates to an operator or maintenance personnel that a backflush cycle is needed.

Backflushing of the Filter Elements – Backflushing Cycle

The cycle begins with the element plate through 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.

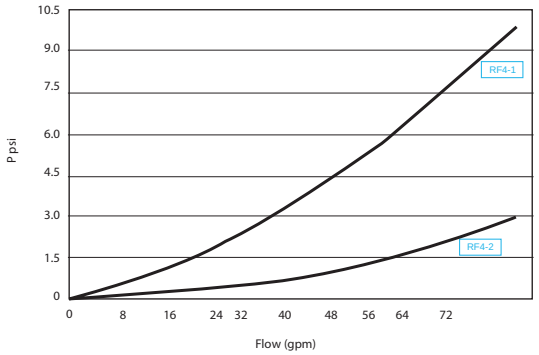
Backflushing Filter AutoFilt® RF4

Water Applications

Fluid	Max. Flow Rate gpm (L/min)	
	RF4-1	RF4-2
Water	32(120)	58(220)

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

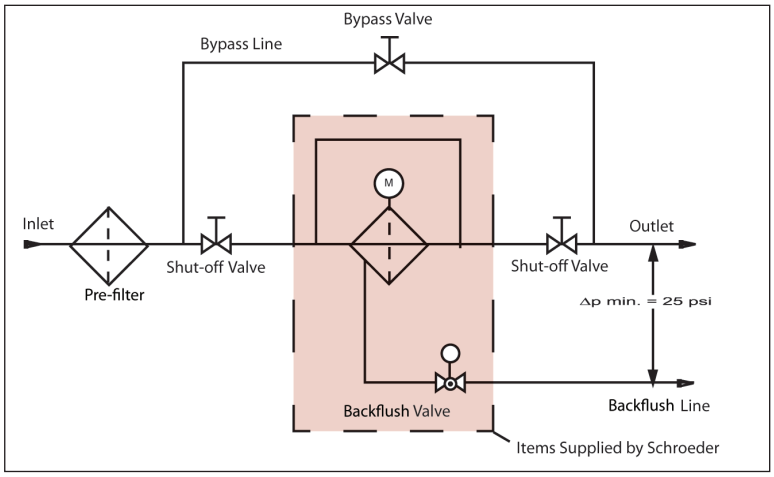
Important
The pressure drop curves apply to water and other fluids up to a viscosity of 11 mm²/s.



Cooling Lubricant Applications

Material Handling	Type of Machining	Max. Flow Rate gpm (L/min)	
		RF4-1	RF4-2
Aluminum	Cutting	26 (100)	53 (200)
Cast Iron[1]	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[1]	Grinding	13 (50)	37 (140)
Carbon Steel	Grinding	16 (60)	40 (150)
Stainless Steel	Grinding	16 (60)	40 (150)

Circuit Diagram



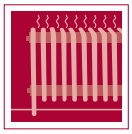

STEEL MAKING


PAPER INDUSTRY


SEWAGE & WASTEWATER TREATMENT


AUTOMOTIVE


INDUSTRIAL


THERMAL TRANSFER


MARINE

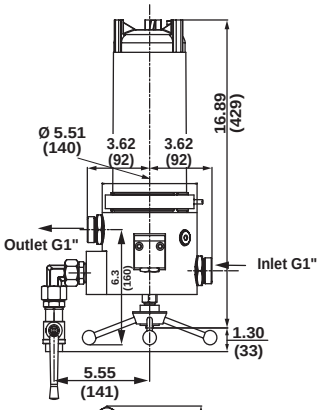

MACHINE TOOL

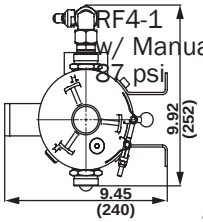
Industries Served

RF4-1 Backflushing Filter AutoFilt® RF4

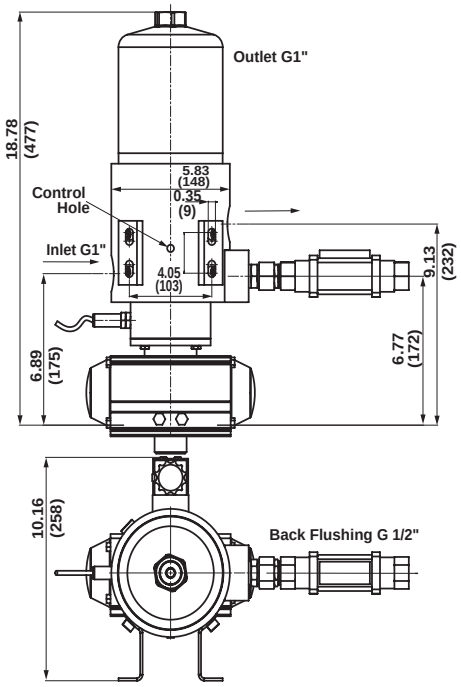
32 gpm
120 L/min

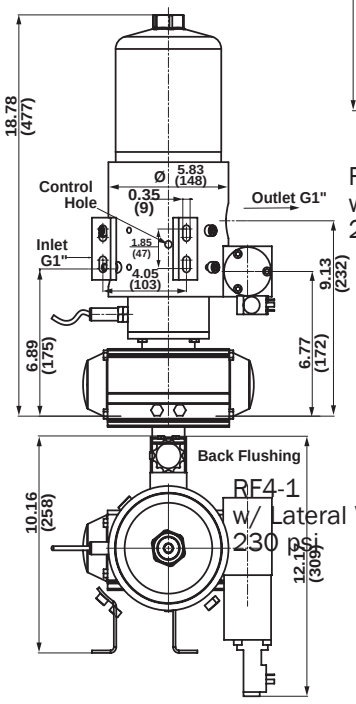
87 psi
6bar
or
230 psi
16 bar





RF4-1
w/ Manual Controls,
87 psi





RF4-1
w/ Co-Ax Cable,
230 psi

RF4-1
w/ Lateral Valve,
230 psi

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

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

Filter Series

RF4

BOX 2

Size

1 = G1"

BOX 3

Control Type

EPT = Electro-pneumatic cyclic control,(including pneumatic drive)

ET = Electric control

M = Manual

BOX 4

Voltage Type

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

BOX 5

Materials

AA = Aluminum head & bowl (only RF4-1, 230 psi)

EE = Stainless Steel head and bowl (only RF4-1, 87 psi)

BOX 6

Material of Internal Parts

E = Stainless Steel

BOX 7

Backflushing Valve

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)

BOX 8

Differential Pressure Control

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

BOX 9

Pressure Range

06 = 87 psi (6 bar) (houseing fastened with clamp), only for housings in stainless steel design

16 = 230 psi (16 bar) (filter upper section threaded)

BOX 10

Modification No.

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

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

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
BWF
RFH-1
RFH-2
RFH-4
ATF

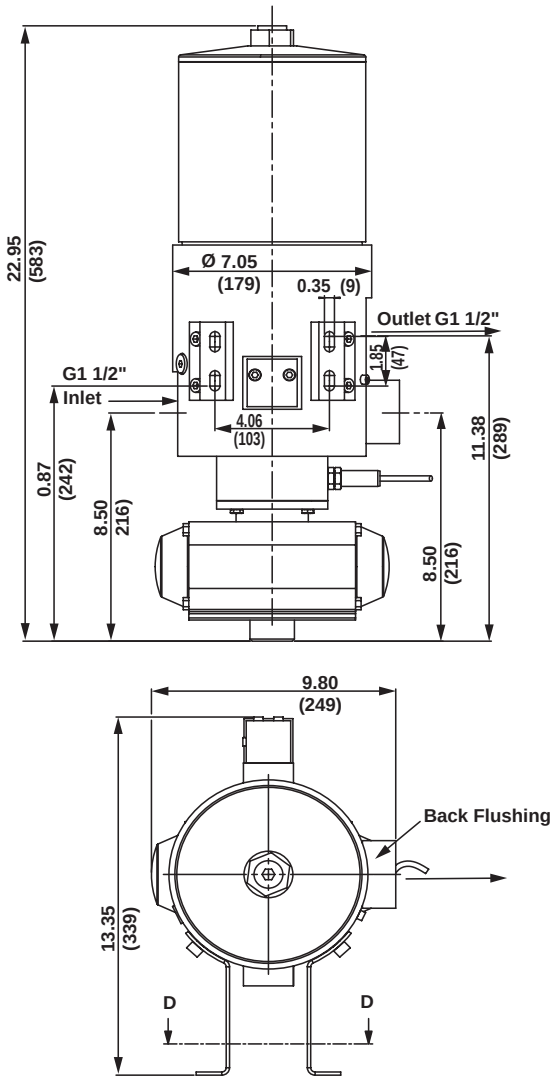
RF4-2 Backflushing Filter AutoFilt® RF4

60 gpm
220 L/min

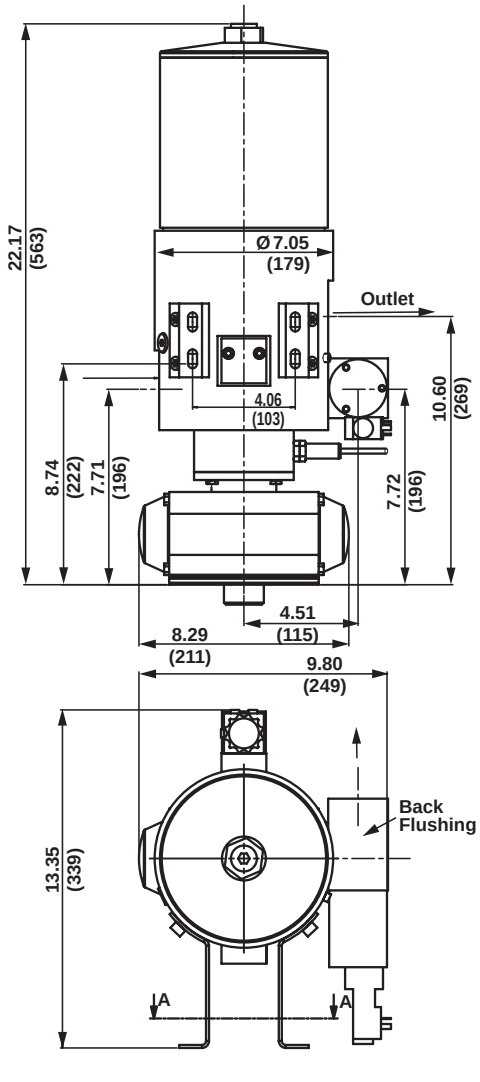
87 psi
6 bar

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 cm²)
No. of Filter Elements	4
Backflush Connection:	G¾ Female
Backflush Volume:	3.4 gallons (13 L/cycle)

Backflushing Filter AutoFilt® RF4

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	NN	E	CO	2	16	X	KMS50	= RF41ET1NNECO216X KMS50

BOX 1

Filter Series

RF4

BOX 2

Size

2 = G1 1/2"

BOX 3

Control Type

EPT = Electro-pneumatic cyclic control,(including pneumatic drive)

ET = Electric control

M = Manual

BOX 4

Voltage Type

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

BOX 5

Materials

NN = Carbon Steel, nickel plated (only RF4-2 230 psi)

EE = Stainless Steel head and bowl (only RF4-2, 87 psi)

BOX 6

Material of Internal Parts

E = Stainless Steel

BOX 7

Backflushing Valve

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)

BOX 8

Differential Pressure Control

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

BOX 9

Pressure Range

06 = 87 psi (6 bar) (houseing fastened with clamp), only for housings in stainless steel design

16 = 230 psi (16 bar) (filter upper section threaded)

BOX 10

Modification No.

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

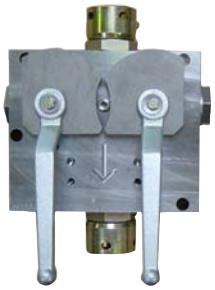
SKMD = SuperMesh Superflush 25 µm, 40 µm, 60 µm

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
RF4-1
RF4-2
BWF
RFH-1
RFH-2
RFH-4
ATF

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

Backflushing High Pressure Filters RFH



Backflushing Filter

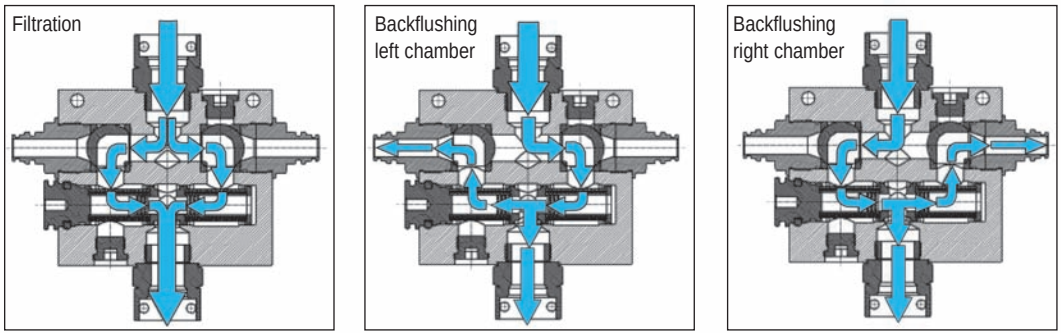
The backflushing high pressure RFH filter is an easy-to-operate backflushing filter for water-based fluids at operating pressures of up to 5076 psi (350 bar). The main application of this filter is to protect shield hydraulics in mining. However, other applications are possible, such as, in the rotary valve hydraulics of pumped storage hydrostations, paint filtration or the protection of high pressure nozzles. Three sizes are available and flow rates of up to 210 gpm (800 L/min) can be achieved.

The backflushing is carried out manually using switch levers. To some extent the filters can also be controlled electrohydraulically or purely hydraulically. Robust filter materials in stainless steel are available, such as slotted tube or multi-layered wire mesh.

Construction and Function

Sizes RFH-1 and RFH-2 consist of stainless steel housing blocks which can be mounted to the supporting structure by means of the bore holes in the corners of the housing.

On the RFH-4, just the filter head is designed as a housing block. In this version, the elements are in two screw-in cylinder bowls. The inlet and outlet connections are opposite each other (inline model). The backflushing ports are on the side. Ensure connection of the backflushing lines to these ports is secure because of the high pressures. A slotted tube or a wire mesh element, which is divided into two filter chambers, is fitted in the filters RFH-1 and RFH-2, respectively. In the RFH-4, two divided elements are fitted. Each filter chamber or each element is backflushed manually by switching a ball valve.



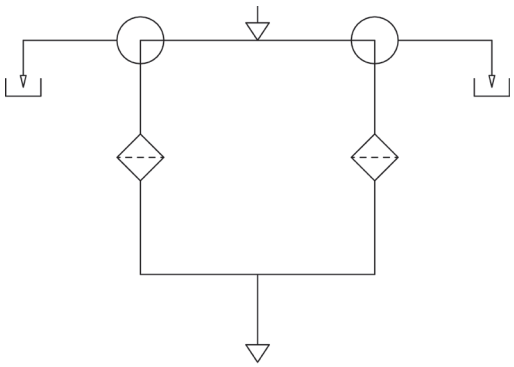
Filtration

The fluid to be filtered flows through both chambers of the filter element from the outside to the inside. The filtrate flows through a T-piece between the two element halves to the outside. Both switch levers indicate the direction of filtration.

Backflushing

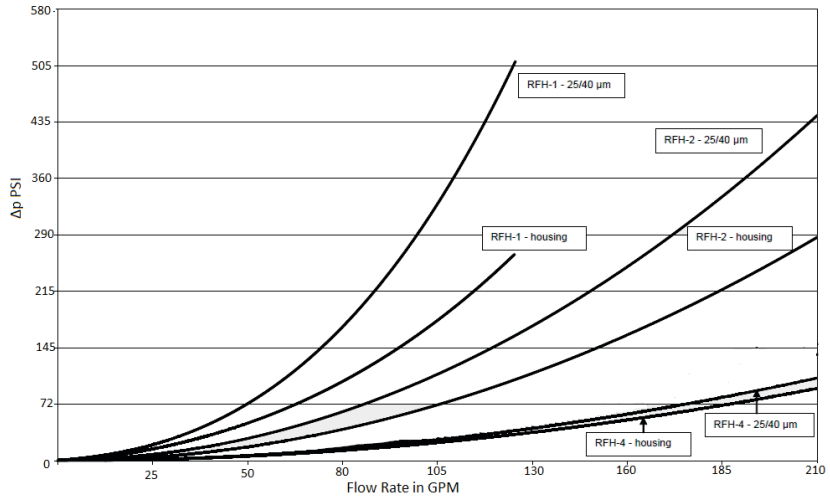
Both filter chambers are back-flushed one after the other using their own filtrate when the relevant lever is switched. When backflushing, the flow is reversed into the relevant element segment and removes the contamination from the surface. During the backflushing process, filtration continues via the other half of the element. The flushing time should be 1 to 2 seconds per element half.

In order to prevent both filter chambers being flushed at the same time, the change-over lever is fitted with a rotating lock mechanism. This prevents any interruption to the flow of filtered fluid as a result of incorrect operation.



Circuit Diagram

Backflushing High Pressure Filters RFH



Filter Calculation / Sizing

- For slotted tube filter inserts of 100 µm and 200 µm, the pressure drop curves apply, similar to the 25 µm and 40 µm wire mesh.
- When using 50 µm slotted tube filter inserts, 30% more pressure drop must be added to the valid curves.
- Please take into account the lower permissible differential pressure of the elements when using slotted tube elements.

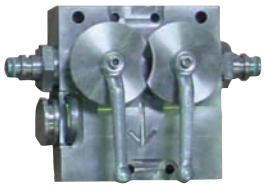
In order to be able to size the filter correctly, the following design data should be available:

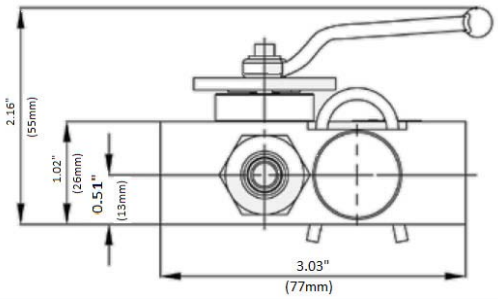
- Flow rate
- Materials
- Required filtration rating
- Type of contamination
- Operating temperature – must be below the boiling point of the medium
- Type of medium
- Viscosity
- Particulate loading in the fluid
- Operating pressure
- Integration of the RFH in the whole system

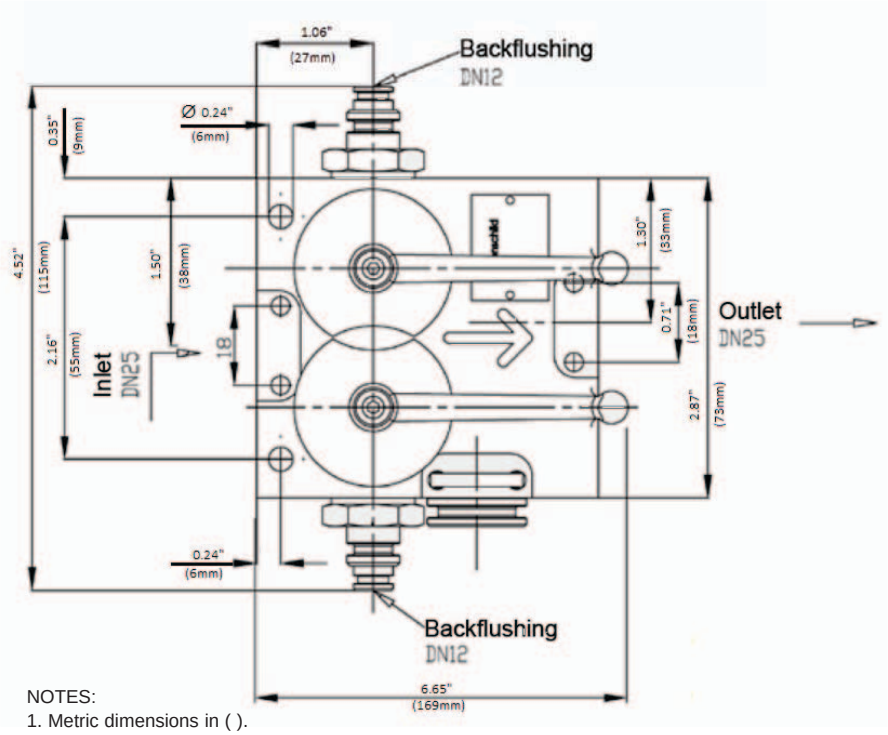
Filter sizes 1 and 2 are designed as a back-up filter for low levels of solid particle contamination. Due to the greater filter area, the RFH-4 is also suitable for higher particle concentrations. As with all backflushing filters, fibers and sticky substances cause problems when backflushing with the filter, too. Use the flow rate curves for water and emulsion applications to calculate the filter. The initial pressure drop for clean elements can be selected between 2 and 72 psi (0.1 and 5 bar) depending on the operating pressure and level of contamination. The shield hydraulics in coal mining represent a special case. For this application, initial differential pressures of up to 362 psi (25 bar) are usual.

RFH-1 Backflushing High Pressure Filter RFH-1

106 gpm
400 L/min







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

Specifications

Max. Flow Rate:	106 gpm (400 L/min)
Max. Operating Pressure:	5076 psi (350 bar)
Inlet/Outlet Connection Size:	SteckO DN25
Max. Differential Pressure:	5076 psi (350 bar)
Max. Operating Temperature:	194°F (90°C)
Weight:	18.7 lbs. (8.5 kg)
Housing Volume:	0.06 gallons (0.25 L)
Backflush Line Connection:	Steck 0 DN 12
Filter Area:	7.75 $in.^2$ (50 cm^2)

Backflushing High Pressure Filter RFH-1

How to Build a Valid Model Number for a RFH:

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	BOX 14	BOX 15	BOX 16
RFH	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	BOX 12	BOX 13	BOX 14	BOX 15	BOX 16	
RFH	1	G	25	M	0	N	1	0	X	RH	1	50	S	N		= RFH1G25M0N10X RH150SN1

BOX 1

Filter Series

RFH

BOX 2

Size (flow)

1 = 105 gpm (400 L/min)

BOX 3

Connection Type

S = Steck-O (staple lock) DN25

G = 1 ISO female G thread

BOX 4

Connection Size

25 = 25mm

BOX 5

Material

M = Brass

E = Stainless Steel

M/E = Brass/ Stainless Steel combination

BOX 6

Special Equipment

0 = no special equipment

BOX 7

Seal Material

N = NBR

V = Viton

BOX 8

Control Type

1= Manual

BOX 9

Supplemental Details

0 = none

1 = ATEX certificate (Ex: M2C Mining)

BOX 10

Modification Number

X = Latest version is always supplied

BOX 11

Element Type

RH = Backflushing high pressure element

BOX 12

Element Size

1

BOX 13

Filtration Rating

Slotted Tube:

50, 100, 200, 500 µm

Wire Mesh:
25, 40, 60 µm

BOX 14

Element Material

D = Wire Mesh

S = Slotted Tube

BOX 15

Element Seal

N = Buna N (standard)

V = Viton

BOX 16

Special Order

SO = Customer Requirements

Note: SO will change to a numeric sequence following receipt of order

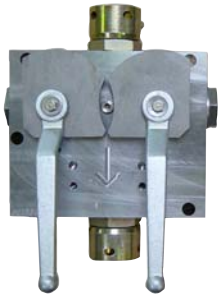
*Shaded selections are preferred order codes that designate shorter lead times.

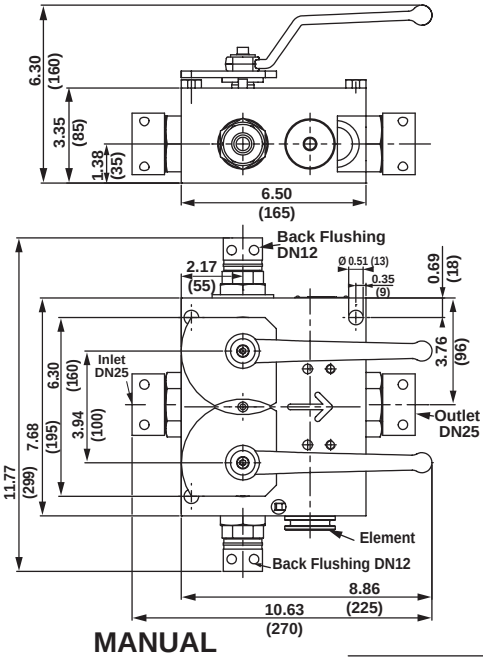
Filter Model Number Selection

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
BWF
RFH-1
RFH-2
RFH-4
ATF

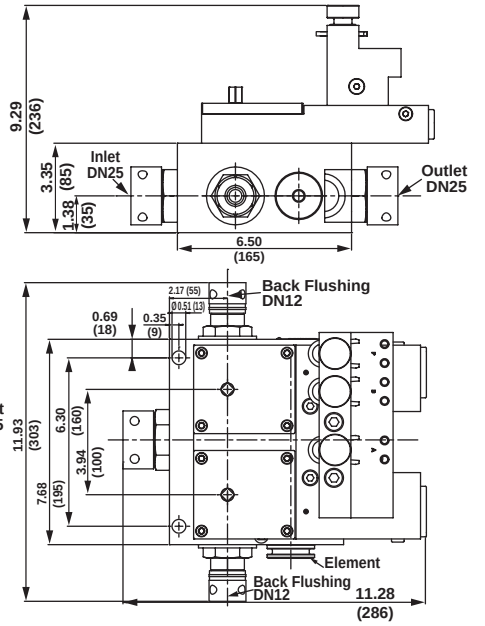
RFH-2 Backflushing High Pressure Filters RFH-2

158 gpm
600 L/min

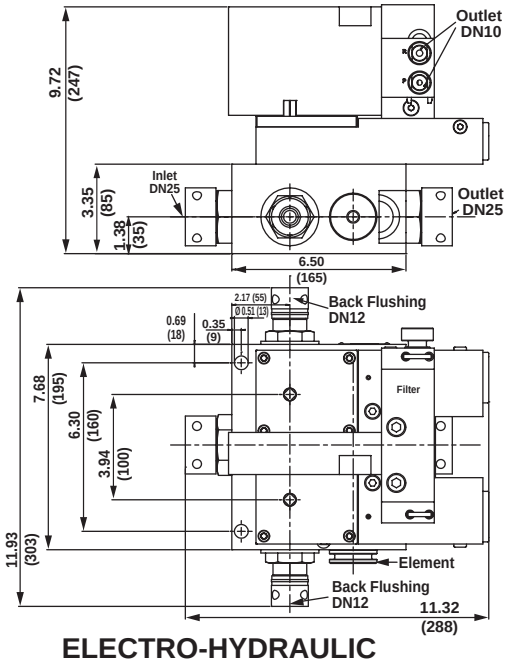




MANUAL



HYDRAULIC



ELECTRO-HYDRAULIC

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

Specifications

Max. Flow Rate:	158 gpm (600 L/min)
Max. Operating Pressure:	5076 psi (350 bar)
Control Pressure:	2175-5076 psi (150-350 bar) Automatic Only
Inlet/Outlet Connection Size:	SteckO DN25
Max. Differential Pressure:	5076 psi (350 bar)
Max. Operating Temperature:	194°F (90°C)
Weight:	Manual: 45 lbs. (20.5 kg) Automatic: 84 lbs. (38 kg)
Housing Volume:	0.11 gallons (0.42 L)
Backflush Line Connection:	Steck O DN 12
Control Pressure Connection:	Steck O DN 10
Filter Area:	12.4 $in.^2$ (80 cm^2)

Backflushing High Pressure Filter RFH-2

How to Build a Valid Model Number for a RFH:

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	BOX 14	BOX 15	BOX 16
RFH	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	BOX 12	BOX 13	BOX 14	BOX 15	BOX 16	
RFH	2	G	25	M	0	N	1	0	X	RH	2	50	S	N		= RFH2G25M0N10X RH250SN

BOX 1

Filter Series

RFH

BOX 2

Size (flow)

2 = 160 gpm (600 L/min)

BOX 3

Connection Type

S = Steck-O (staple lock)

G = 1 ISO female G thread

BOX 4

Connection Size

25 = 25mm

BOX 5

Material

M = Brass

E = Stainless Steel

M/E = Brass/ Stainless Steel combination

BOX 6

Special Equipment

0 = no special equipment

BOX 7

Seal Material

N = NBR

V = Viton

BOX 8

Control Type

1 = Manual

2 = Hydraulic Actuator

3 = Electro-Hydraulic Actuator

BOX 9

Supplemental Details

0 = none

1 = ATEX certificate (Ex: M2C Mining)

BOX 10

Modification Number

X = Latest version is always supplied

BOX 11

Element Type

RH = Backflushing high pressure element

BOX 12

Element Size

2

BOX 13

Filtration Rating

Slotted Tube:

50, 100, 200, 500 µm

Wire Mesh:
25, 40, 60 µm

BOX 14

Element Material

D = Wire Mesh

S = Slotted Tube

BOX 15

Element Seal

N = Buna N (standard)

V = Viton

BOX 16

Special Order

SO = Customer Requirements

Note: SO will change to a numeric sequence following receipt of order

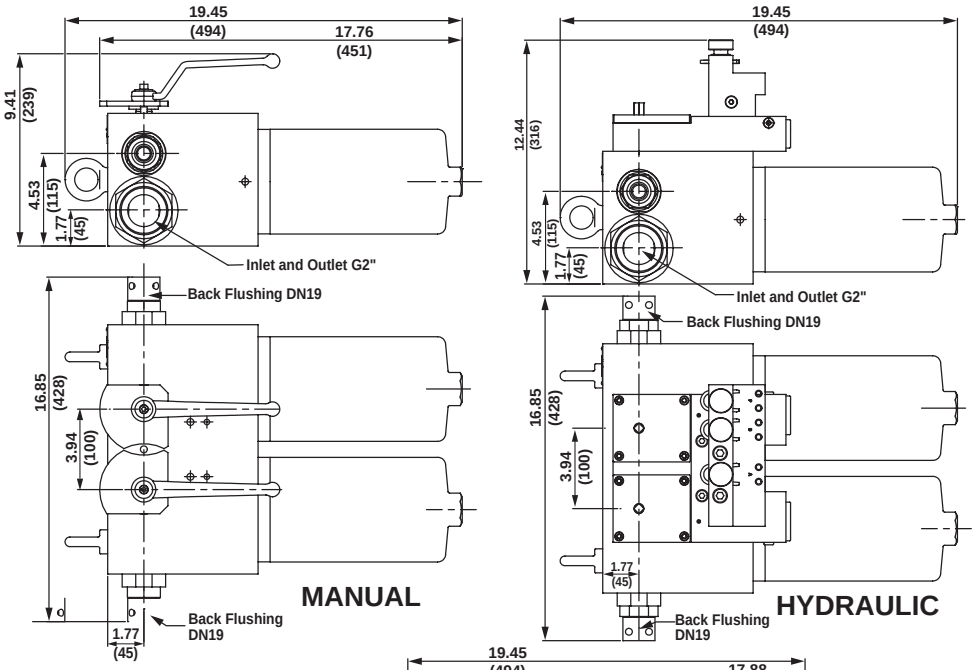
*Shaded selections are preferred order codes that designate shorter lead times.

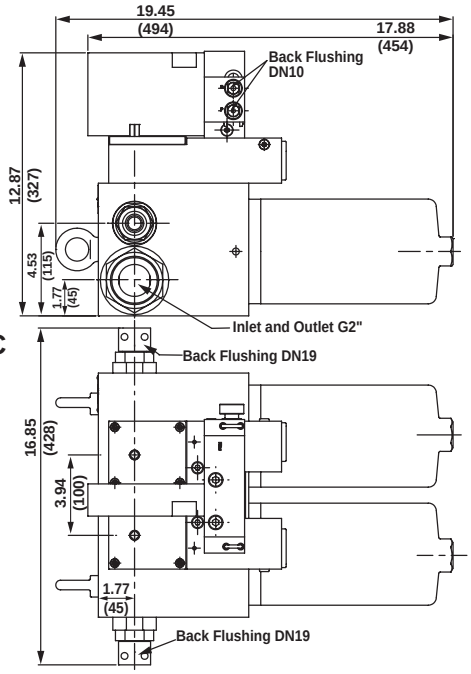
Filter Model Number Selection

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
BWF
RFH-1
RFH-2
RFH-4
ATF

RFH-4 Backflushing High Pressure Filters RFH-4

211 gpm
800 L/min





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

Specifications

Max. Flow Rate:	211 gpm (800 L/min)
Max. Operating Pressure:	Manual: 5076 psi (350 bar) Automatic: 2900 psi (200 bar)
Control Pressure:	2176-5076 psi (150-350 bar)
Inlet/Outlet Connection Size:	SteckO DN50
Max. Differential Pressure:	5076 psi (350 bar)
Max. Operating Temperature:	194°F (90°C)
Weight:	Stainless Steel: 210 lbs. (95 kg) Brass: 247 lbs. (112 kg)
Housing Volume:	1.1 gallons (4.2 L)
Backflush Line Connection:	Steck O DN 19
Control Pressure Connection:	Steck O DN 10
Filter Area:	170 in.^{2} (1094 cm^2)

Backflushing High Pressure Filter RFH-4

How to Build a Valid Model Number for a RFH:

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	BOX 14	BOX 15	BOX 16	BOX 17
RFH	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	BOX 12	BOX 13	BOX 14	BOX 15	BOX 16	BOX 17	
RFH	4	G	50	M	1	N	1	0	X	RH	4	50	S	N	1		= RFH4G50M1N10 XRH450SN1

BOX 1

Filter Series

RFH

BOX 2

Size (flow)

4 = 210 gpm (800 L/min)

BOX 3

Connection Type

S = Steck-O (staple lock)

G = 2 ISO female G thread

BOX 4

Connection Size

50 = 50mm

BOX 5

Material

M = Brass

E = Stainless Steel

M/E = Brass/ Stainless Steel combination

BOX 6

Special Equipment

0 = no special equipment

1 = 2 press gauges (0-8700 psi)

2 = 2 press gauges (0-8700 psi) & protective guard

BOX 7

Seal Material

N = NBR

V = Viton

BOX 8

Control Type

1 = Manual

2 = Hydraulic Actuator

3 = Electro-Hydraulic Actuator

BOX 9

Supplemental Details

0 = none

1 = ATEX certificate (Ex: M2C Mining)

BOX 10

Modification Number

X = Latest version is always supplied

BOX 11

Element Type

RH = Backflushing high pressure element

BOX 12

Element Size

4

BOX 13

Filtration Rating

Slotted Tube:

50, 100, 200, 500 µm

Wire Mesh:
25, 40, 60 µm

BOX 14

Element Material

D = Wire Mesh

S = Slotted Tube

BOX 15

Element Seal

0 = without

N = Buna N (standard)

V = Viton

BOX 16

Bowl Mounting

1 - Threading
2 - Quick Disconnect

BOX 17

Special Order

SO = Customer Requirements

Note: SO will change to a numeric sequence following receipt of order

*Shaded selections are preferred order codes that designate shorter lead times.

Filter Model Number Selection

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 particles settle at a higher density 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.

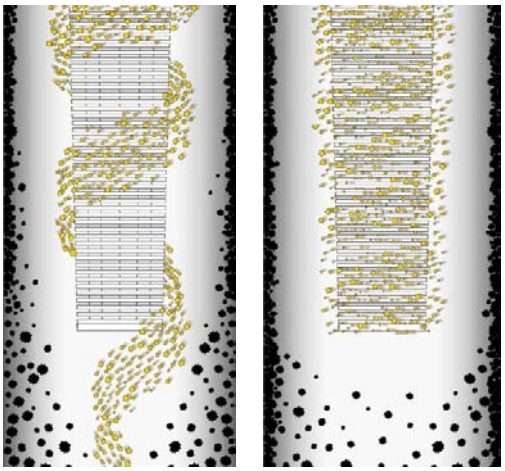
The conical filter element ensures optimum flow characteristics. On one hand it makes possible continual self-cleaning of the filter during operation. While on the other, it makes the pressure drop of the whole filter much lower than compared with a centrifugal separator of a similar size.

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.



Backflush Mode | Filtration Mode

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.

Automatic Twist Flow Strainer ATF

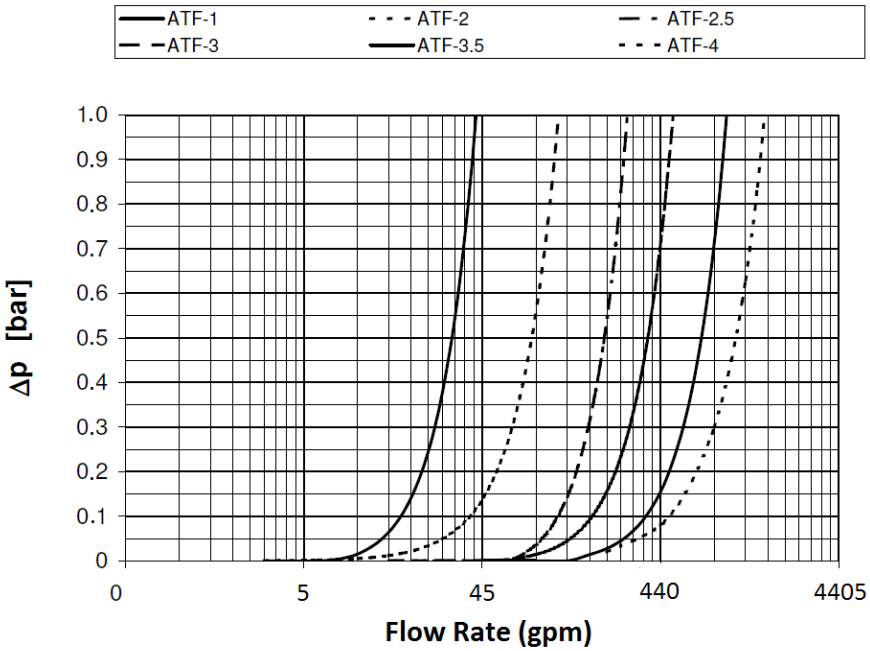
The filter elements are cleaned solely by flushing with untreated fluid.

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



Filter Calculation and Sizing

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

Industries Served

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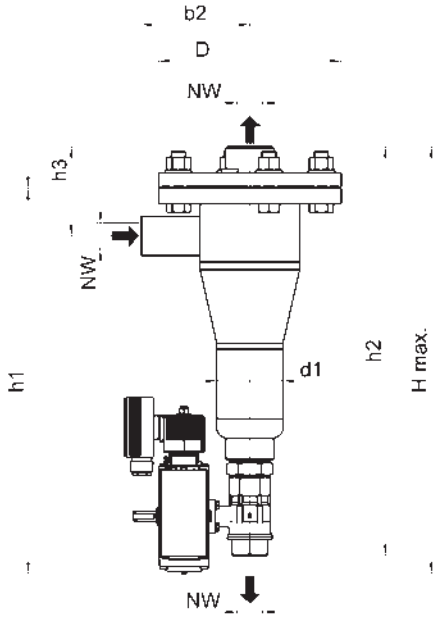
ATF Automatic Twist Flow Strainer ATF-1

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:	**35 gpm (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

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

Filter Series

ATF

BOX 2

Size

1 = Inlet/outlet 1" NPT

BOX 3

Control Type

0 = No controls
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

BOX 4

Voltage

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

BOX 5

Housing Material

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

BOX 6

Discharge Valve

0 = None
NN = Butterfly valve, cast housing coated, disc Stainless Steel, cuff BR (not available on size 1)
NE = Butterfly valve, cast housing coated, disc Stainless Steel, cuff EPDM (not available on size 1)
NV = Butterfly valve, cast housing coated, disc Stainless Steel, cuff Viton (not available on size 1)
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)

BOX 7

Pressure Rating

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

BOX 8

Accessories

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

Modification Number

X = latest version supplied by factory

BOX 10

Element Set

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

BOX 11

Filtration Rating

200 = 200 µm (not for size 4)
300 = 300 µm (not for size 4)
500 = 500 µm
1000 = 1000µm
2000 = 2000µm
3000 = 3000µm

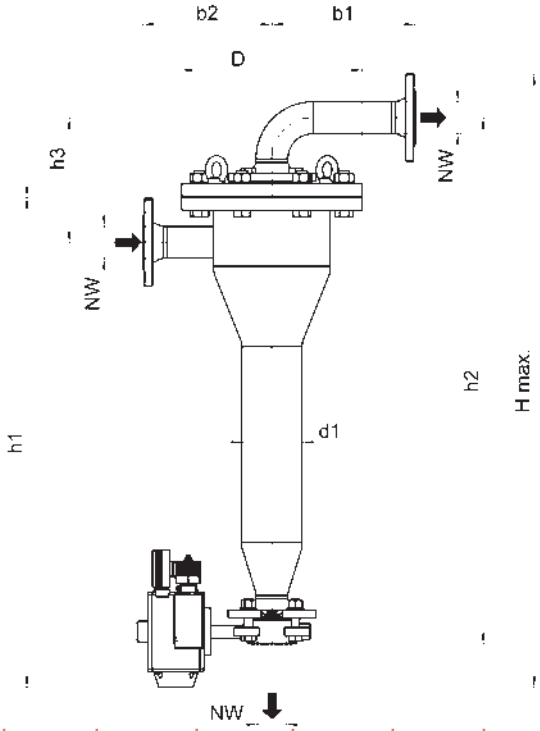
Filter Model Number Selection

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
RF4-1
RF4-2
BWF
RFH-1
RFH-2
RFH-4
ATF

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

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:	**110 gpm (416 L/m)**	**260 gpm (984 L/m)**	**480 gpm (3652 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 in² (360 cm²)**	**150 in² (966 cm²)**	**266 in² (1720 cm²)**
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

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

Filter Series

ATF

BOX 2

Size

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

BOX 3

Control Type

0 = No controls
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

BOX 4

Voltage

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

BOX 5

Housing Material

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

BOX 6

Discharge Valve

0 = None
NN = Butterfly valve, cast housing coated, disc Stainless Steel, cuff BR (not available on size 1)
NE = Butterfly valve, cast housing coated, disc Stainless Steel, cuff EPDM (not available on size 1)
NV = Butterfly valve, cast housing coated, disc Stainless Steel, cuff Viton (not available on size 1)
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)

BOX 7

Pressure Rating

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

BOX 8

Accessories

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

Modification Number

X = latest version supplied by factory

BOX 10

Element Set

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

BOX 11

Filtration Rating

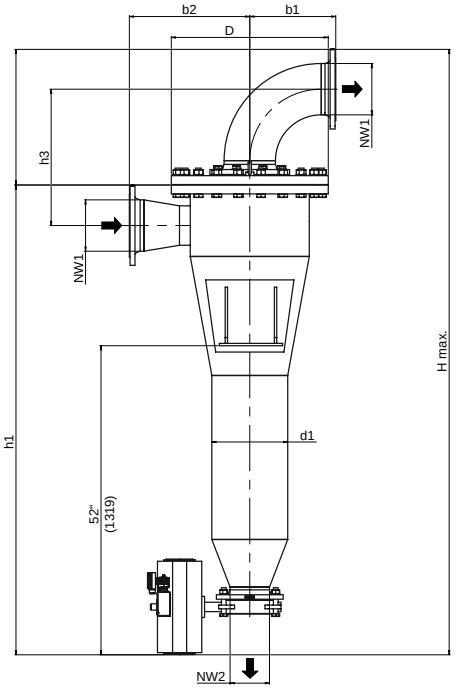
200 = 200 µm (not for size 4)
300 = 300 µm (not for size 4)
500 = 500 µm
1000 = 1000µm
2000 = 2000µm
3000 = 3000µm

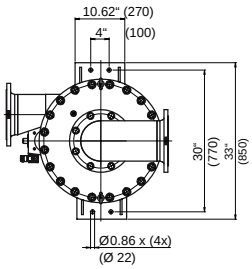
Filter Model Number Selection

ATF Automatic Twist Flow Strainer ATF-3.5, ATF-4

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:	**965 gpm (3652 L/m)**	**1760 gpm (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 in² (3500 cm²)**	**605 in² (3900 cm²)**
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

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	= ATF3.5EPZ1ENN100XUKS3.5200

BOX 1

Filter Series

ATF

BOX 2

Size

3.5 = Inlet/outlet 6" ANSI flange

4 = Inlet/outlet 8" ANSI flange

BOX 3

Control Type

0 = No controls

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

BOX 4

Voltage

1 = 230 VAC, 60 Hz, Single Phase

2 = 110VAC, 60 Hz, Single Phase

3 = 24VAC, 60 Hz, Single Phase

4 = 24VDC

BOX 5

Housing Material

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

BOX 6

Discharge Valve

0 = None
NN = Butterfly valve, cast housing coated, disc Stainless Steel, cuff BR (not available on size 1)
NE = Butterfly valve, cast housing coated, disc Stainless Steel, cuff EPDM (not available on size 1)
NV = Butterfly valve, cast housing coated, disc Stainless Steel, cuff Viton (not available on size 1)
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)

BOX 7

Pressure Rating

10 = 145 psi (10 bar)

16 = 230 psi (16 bar)

BOX 8

Accessories

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

Modification Number

X = latest version supplied by factory

BOX 10

Element Set

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

BOX 11

Filtration Rating

200 = 200 µm (not for size 4)
300 = 300 µm (not for size 4)
500 = 500 µm
1000 = 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
RF4-1
RF4-2
BWF
RFH-1
RFH-2
RFH-4
ATF

Bag Housings and Elements

Bag Housing

Welded Bags

Schroeder Process Filtratrion 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

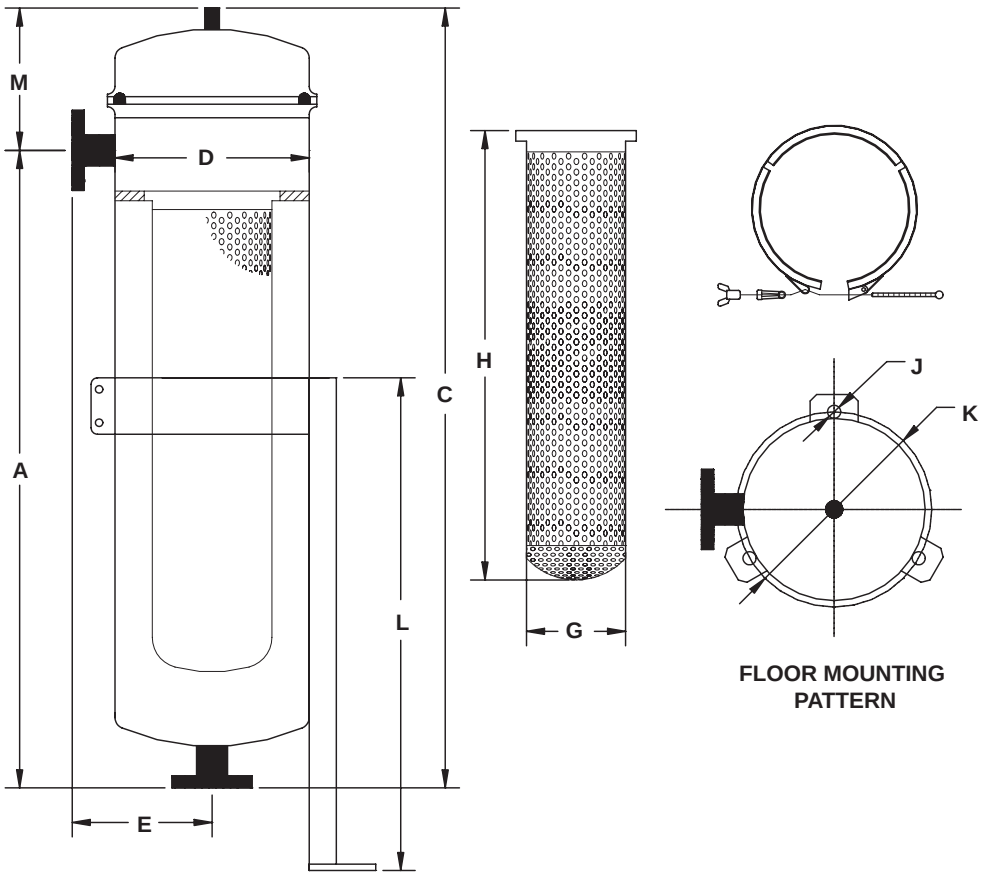
Typical Products Filtered

- 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
- Plastisols
- 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 | PAPER INDUSTRY | STEEL MAKING | SEWAGE AND WASTE WATER TREATMENT

BH1 Single Bag Housings - 100 psi

100 psi
7bar



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

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						

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

Filter Series
BH

BOX 2

Number of Bags
1

BOX 3

Bag Size
1
2
3
4

BOX 4

Material	
304S =	304 Stainless Steel
316S =	316 Stainless Steel

BOX 5

Connection Size
1N = 1" NPT
15 = 1.5" NPT
2N = 2" NPT
2F = 2" Flange
25 = 2.5" NPT
3N = 3" NPT
3F = 3" Flange
4N = 4" NPT
4F = 4" Flange

BOX 6

Seal Material
E = EPDM
V = Viton

BOX 7

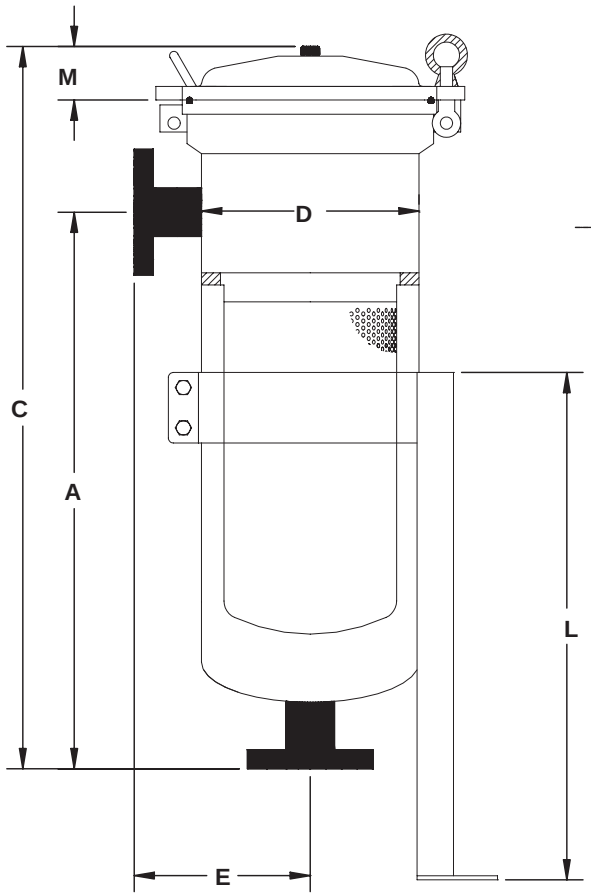
Pressure Rating
0 = 100 psi

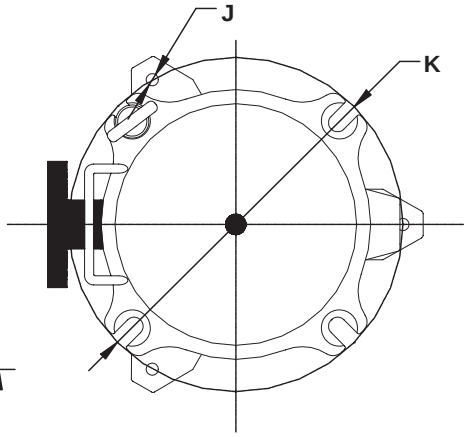
*Shaded selections are preferred order codes that designate shorter lead times.

Filter Model Number Selection

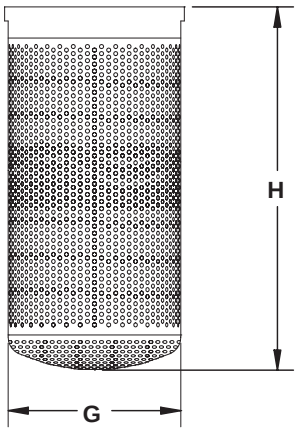
BH1 Single Bag Housings -150 psi

150 psi
10 bar





FLOOR MOUNTING PATTERN



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

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	1	= BH12304S2NE1

BOX 1

Filter Series
BH

BOX 2

Number of Bags
1

BOX 3

Bag Size
1
2
3
4

BOX 4

Material
304S = 304 Stainless Steel
316S = 316 Stainless Steel
316L = 316L Stainless Steel

BOX 5

Connection Size
1N = 1" NPT
15 = 1.5" NPT
2N = 2" NPT
2F = 2" Flange
25 = 2.5" NPT
3N = 3" NPT
3F = 3" Flange
4N = 4" NPT
4F = 4" Flange

BOX 6

Seal Material
E = EPDM
V = Viton

BOX 7

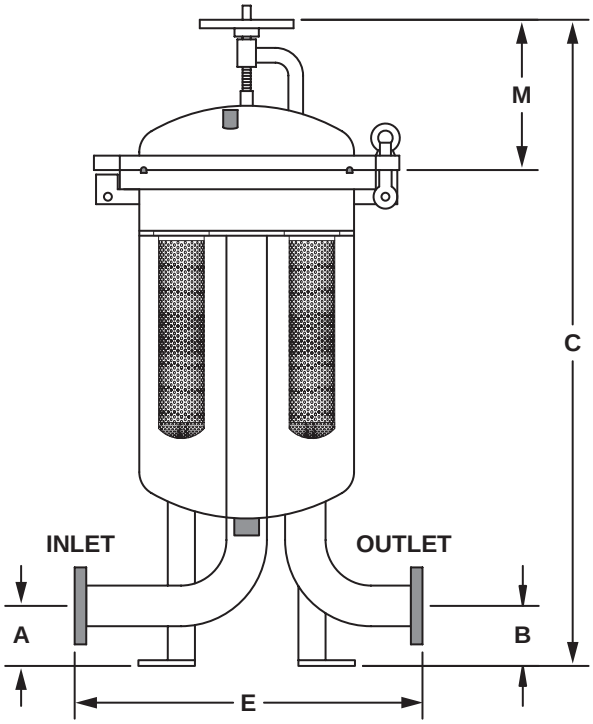
Pressure Rating
1 = 150 psi

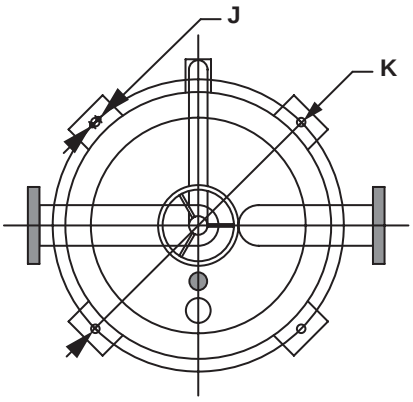
*Shaded selections are preferred order codes that designate shorter lead times.
Filter and Media are sold separately.

Filter Model Number Selection

BH2 - BH10 Multi Bag Housings

150 psi
10 bar





FLOOR MOUNTING PATTERN

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

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

Housing Flow and Volume

BH1 100 psi
BH1 150 psi
BH2-BH10
DBH2-DBH10
Micron- Rated/ OAB
PPH/PPA

Filter Model Number Selection

How to Build a Valid Model Number for a Mulit-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

Filter Series
BH

BOX 2

Number of Bags
2
3
4
6
8
10

BOX 3

Bag Size
2

BOX 4

Material
304S = 304 Stainless Steel
316S = 316 Stainless Steel
316L = 316L Stainless Steel

BOX 5

Connection Size
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

Seal Material
E = EPDM
V = Viton

BOX 7

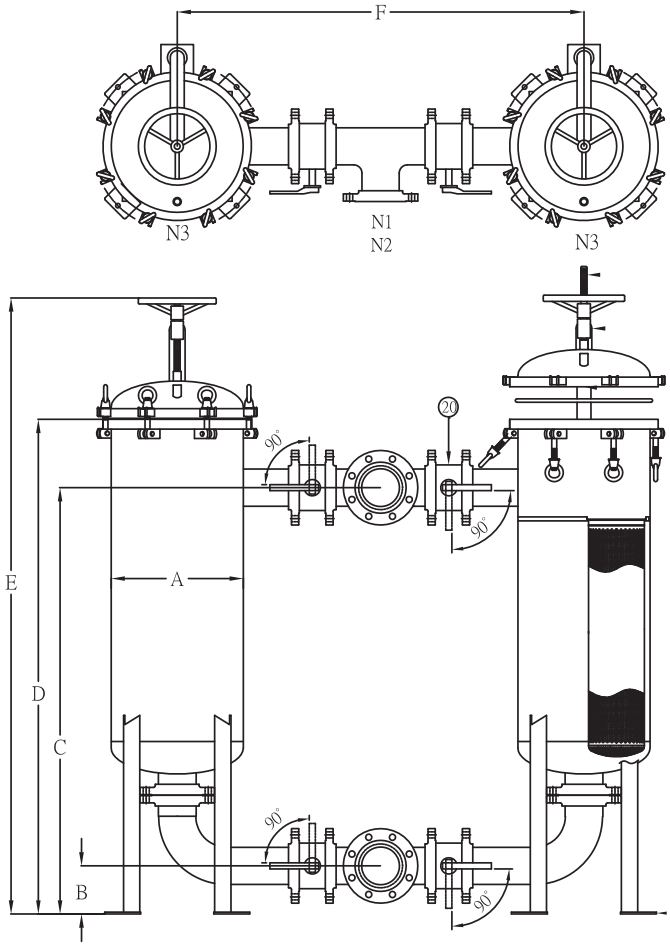
Pressure Rating
1 = 150 psi

*Shaded selections are preferred order codes that designate shorter lead times.
Filter and Media are sold separately.
Additional sizes available - call factory for details.

DBH2 - DBH10

Duplex Multi Bag Housings

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:	Fixed
Lid Closure:	Swing Bolts

Duplex Multi Bag Housings

DBH2 - DBH10

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

Filter Series
DBH

BOX 2

Number of Bags Per Housing
2
3
4
6
8
10

BOX 3

Bag Size
2

BOX 4

Material
304S = 304 Stainless Steel
316S = 316 Stainless Steel
316L = 316L Stainless Steel

BOX 5

Connection Size
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

Seal Material
E = EPDM
V = Viton

BOX 7

Pressure Rating
1 = 150 psi

*Shaded selections are preferred order codes that designate shorter lead times.
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

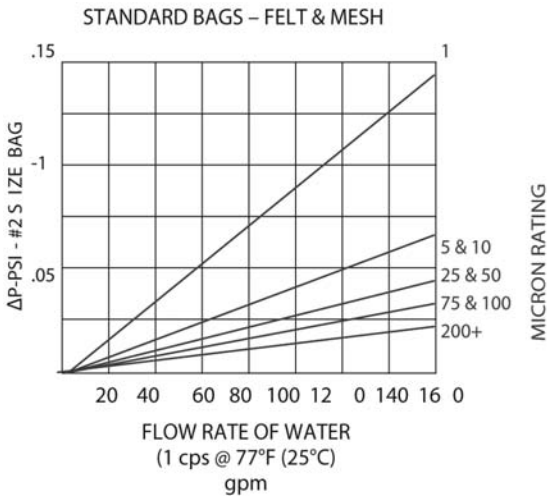
Sizes Available

				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			•							•

* Shaded selections are preferred order codes that designate shorter lead times.

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

System Pressure Drop = ΔPS = ΔPH + ΔPB

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

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

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

BOX 2

Micron Rating

See chart below for available micron ratings

BOX 3

Cover Material

- P = Plain, No Cover
- PEM = Polyester Multifilament Mesh
- MM = Muslin Mesh
- SBN = Spun Bonded Nylon
- NMU = Nylon Multifilament Mesh

BOX 4

Bag Size

	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

Collar Type

- S = Standard Steel Ring
- SS = Stainless Steel Ring
- DS = Draw String
- P = Plastic Flange

BOX 6

Options

- 0 = No Options
- H = Handles
- W = Welded Seams

Only available on plastice flange bags

Construction	Fibers		1	3	5	10	15	25	50	75	100	125	150	175	200	250	300	400	600	800	1000
Felt	Polyester	PEF	•	•	•	•	•	•	•	•	•		•		•						
	Polypropylene	PPF	•	•	•	•		•	•		•		•								
	Nomex	NOF	•		•	•		•	•		•				•						
Monofilament	Polypropylene	PPM														•		•			
Mesh	Nylon	NMO			•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Multifilament	Polyester	PEM									•		•		•	•	•	•	•	•	•
Mesh	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
- Gelantinous 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 a OAB:

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

Bag Material
OAB

BOX 2

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

BOX 3

Bag Size		
	Diameter	Length (in)
1=	7.06	16.5
2=	7.06	32.0

BOX 4

Micron Rating
SS = Stainless Steel Ring
P = Plastic Flange

BOX 5

Options
H = Handles (Standard)

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 PPH:

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

Bag Material
PPH = Polypropylene High Efficiency

BOX 2

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

BOX 3

Cover Material
P = Plain No Cover

BOX 4

Bag Size		
	Diameter	Length
1=	7.06	16.5
2=	7.06	32.0

BOX 5

Collar Type
SS = Stainless Steel Ring
P = Plastic Flange

BOX 6

Options
H = Handles (standard)

Absolute Rated Bag Elements

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

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

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%

How to Build a Valid Model Number for a PPA:

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

BOX 1

Bag Material
PPA = Polypropylene Absolute Rated

BOX 2

Micron Rating
1A = 1m Absolute
2A = 2m Absolute
3A = 3m Absolute
5A = 5m Absolute
13A = 13m Absolute
32A = 32m Absolute

BOX 3

Cover Material
P = Plain No Cover

BOX 4

Bag Size		
	Diameter	Length
2=	7.06	32.0

BOX 5

Collar Type
SS = Stainless Steel Ring

BOX 6

Options
H = Handles (Stainless Steel only)

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.

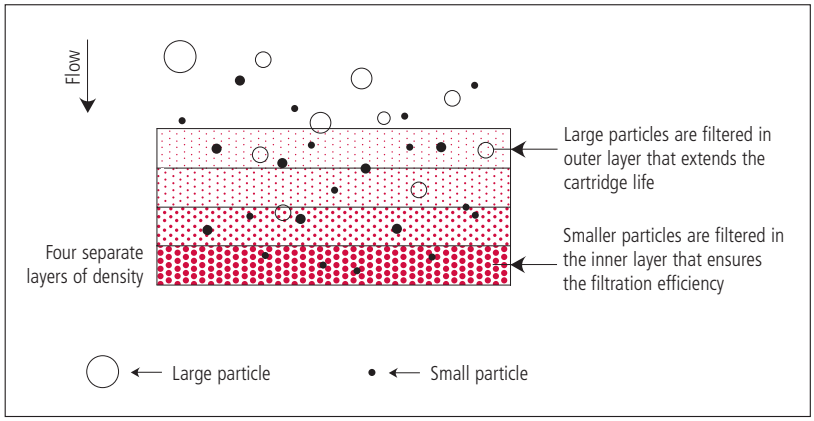
The polypropylene housings accept either the 10" or 20" elements for both 2.5" and 4.5" diameter. The threaded head and bowl allow for quick and easy changing of the elements. Various sizes of NPT ports make installation quick and easy and allow flows up to 40 gpm depending upon the housing size. Because 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 140°F (60°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

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Cartridge Housings and Elements

How to Build a Valid Model Number for a 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

Filter Series
DCE

BOX 2

Element Size
2 = 2.5" OD
4 = 4.5" OD

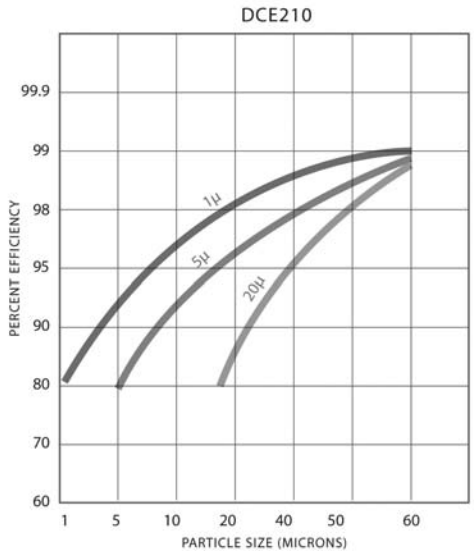
BOX 3

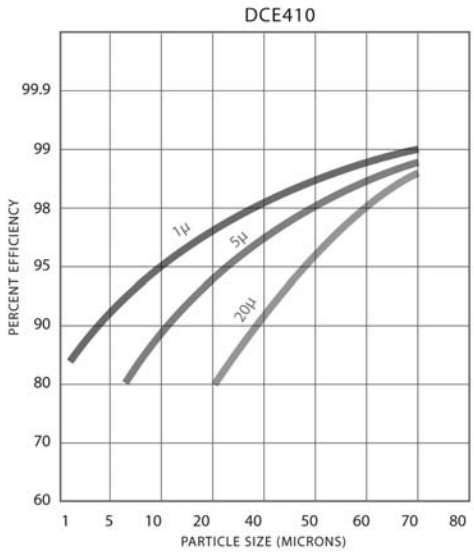
Element Length
5 = 4-7/8" (2.5" OD only)
10 = 9-7/8"
20 = 20"
30 = 30" (2.5" OD only)
40 = 40" (2.5" OD only)

BOX 4

Micron Rating
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.





ACE Cartridge Housings and Elements

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)
Recommended Element Change Out:	29 psid (2.1 bar diff)
Maximum Operating Temperature:	160°F (70°C)
Efficiency:	99.98%

Industries Served


CHEMICAL PROCESSING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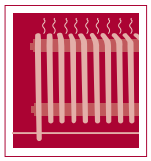
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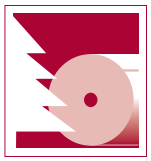
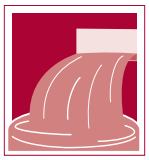
POWER GENERATION


PAPER INDUSTRY


STEEL MAKING


SEWAGE AND WASTEWATER TREATMENT

Cartridge Housings and Elements

ACE

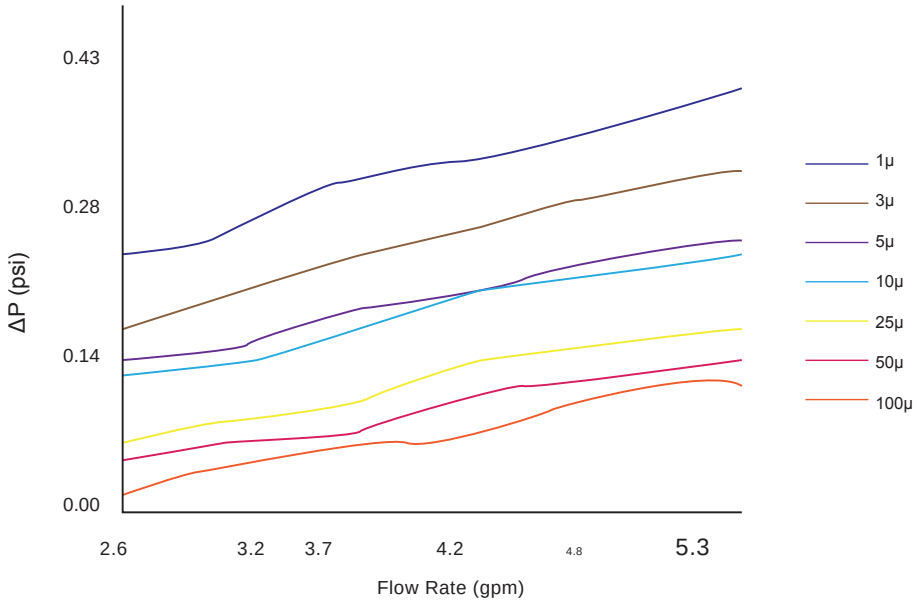
How to Build a Valid Model Number for a Absolute (ACE) Element

BOX 1	BOX 2	BOX 3	BOX 4
ACE			

Example: NOTE: One option per box

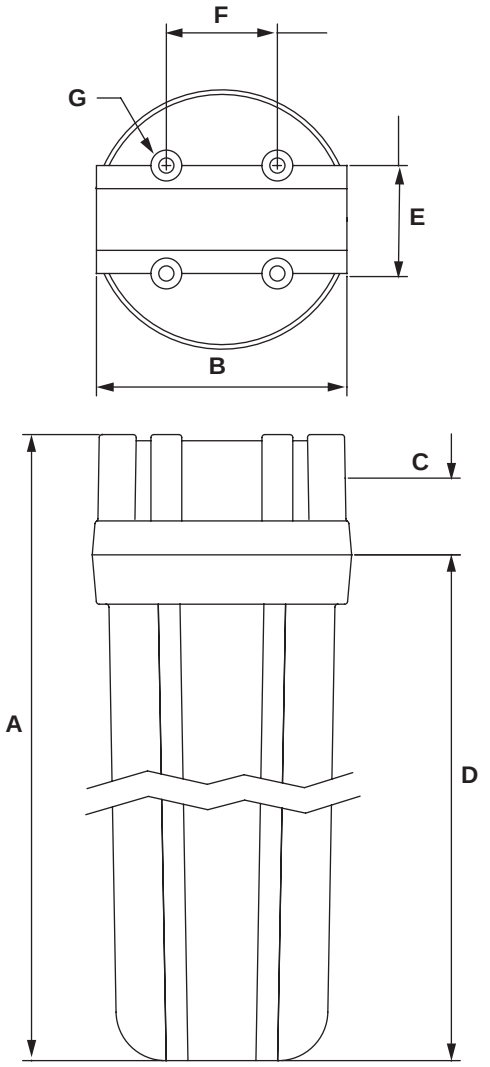
BOX 1	BOX 2	BOX 3	BOX 4	
ACE	2	10	25	= ACE21025

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



CH1 Cartridge Housings and Elements

Cartridge Housing



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

Dimensions

	A inch (mm)	B øinch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	F inch (mm)	G inch (mm)
CH1210	12.36 (314)	5.12 (130)	0.56 (14)	10.47 (266)	2.32 (59)	2.24 (57)	0.19 (5)
CH1220	22.48 (571)	5.12 (130)	0.56 (14)	20.60 (523)	2.32 (59)	2.24 (57)	0.19 (5)
CH1410	13.90 (353)	7.12 (181)	1.88 (48)	11.26 (286)	2.91 (74)	2.91 (74)	0.19 (5)
CH1420	23.78 (604)	7.12 (181)	1.88 (48)	21.26 (540)	2.91 (74)	2.91 (74)	0.19 (5)

Specifications

	CH12	CH14
Max. Flow Rate:	5-10 gpm (18.33 to 36.66 L/min	40 gpm (150 L/min
Max. Working Pressure:	125 psi (8.6 bar)	100 psi (7 bar)
Max Temperature:	140°F (60°C)	140°F (60°C)
Housing Material:	Polypropylene	Polypropylene
O-Ring Material:	Buna N	Buna N
Initial Pressure Drop:	1 psi at 10 gpm	1 psi at 30 gpm
Type of Element Accepted	DOE	DOE

Cartridge Housings and Elements

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								

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 — Filter Series
- CH

BOX 2 — No. of Cartridges per Housing
- 1

BOX 3 — Cartridge Diameter
- 2 = 2.5" diameter

BOX 4 — Cartridge Length
- 10 = 10"
- 20 = 20"

BOX 5 — Housing Material
- PP = Polypropylene head and bowl

BOX 6 — Connection Size
- 34 = 3/4" NPT

BOX 7 — Seal Material
- B = Buna N

BOX 8 — Pressure Rating
- 0 = 125 psi

BOX 9 — Pressure Relief Button
- 0 = No PR Button
- P = PR Button in Cap

How to Build a Valid Model Number for a Single Cartridge PP Housing 4.5″:

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

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	4	10	PP	1N	B	0	0	= CH1410P1NB00

BOX 1 — Filter Series
- CH

BOX 2 — No. of Cartridges per Housing
- 1

BOX 3 — Cartridge Diameter
- 4 = 4.5" diameter

BOX 4 — Cartridge Length
- 10 = 10"
- 20 = 20"

BOX 5 — Housing Material
- PP = Polypropylene head and bowl

BOX 6 — Connection Size
- 1N = 1" NPT
- 15 = 1.5" NPT

BOX 7 — Seal Material
- B = Buna N

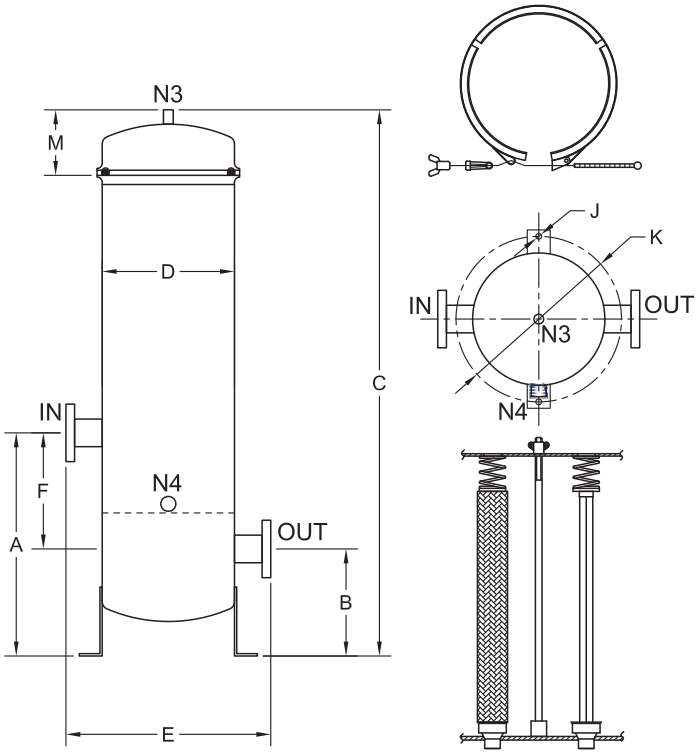
BOX 8 — Pressure Rating
- 0 = 100 psi

BOX 9 — Pressure Relief Button
- 0 = No PR Button
- P = PR Button in Cap

*Shaded selections are preferred order codes that designate shorter lead times.

CH3-CH7 Cartridge Housings and Elements

100 psi
7 bar



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

Dimensions

	Cartridge Qty	Cartridge Length	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
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

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)

Filter Model Number Selection

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

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

BOX 1

Filter Series
CH

BOX 2

No. of Cartridges per Housing
3
7

BOX 3

Cartridge Diameter
2 = 2" diameter

BOX 4

Cartridge Length
20 = 20"
30 = 30"
40 = 40"

BOX 5

Housing Material
304S = 304 Stainless Steel
316S = 316 Stainless Steel

BOX 6

Connection Size
2N = 2" NPT
2F = 2" Flange
4F = 4" Flange

BOX 7

Seal Material
E = EPDM
V = Viton

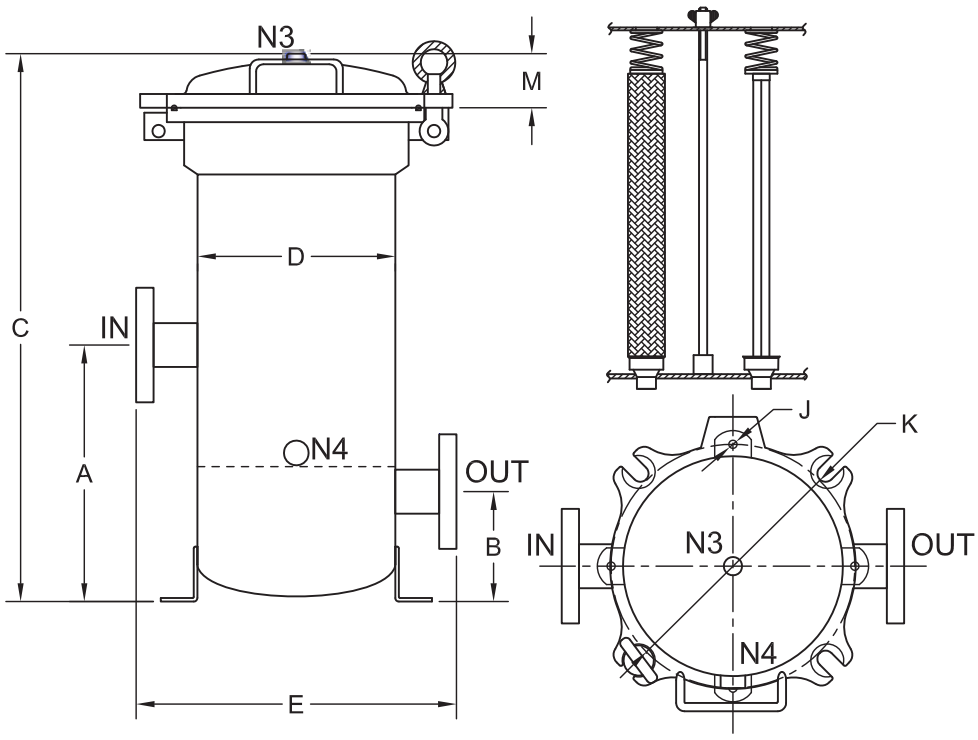
BOX 8

Pressure Rating
0 = 100 psi

NOTE: Elements must be purchased separately.

CH3-CH7 Cartridge Housings and Elements

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

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)

Filter Model Number Selection

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

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	1	= CH7240304S2NE1

BOX 1 — Filter Series

CH

BOX 2 — No. of Cartridges per Housing

3
7

BOX 3 — Cartridge Diameter

2 = 2" diameter

BOX 4 — Cartridge Length

20 = 20"
30 = 30"
40 = 40"

BOX 5 — Housing Material

304S = 304 Stainless Steel
316S = 316 Stainless Steel

BOX 6 — Connection Size

2N = 2" NPT
2F = 2" Flange

BOX 7 — Seal Material

E = EPDM
V = Viton

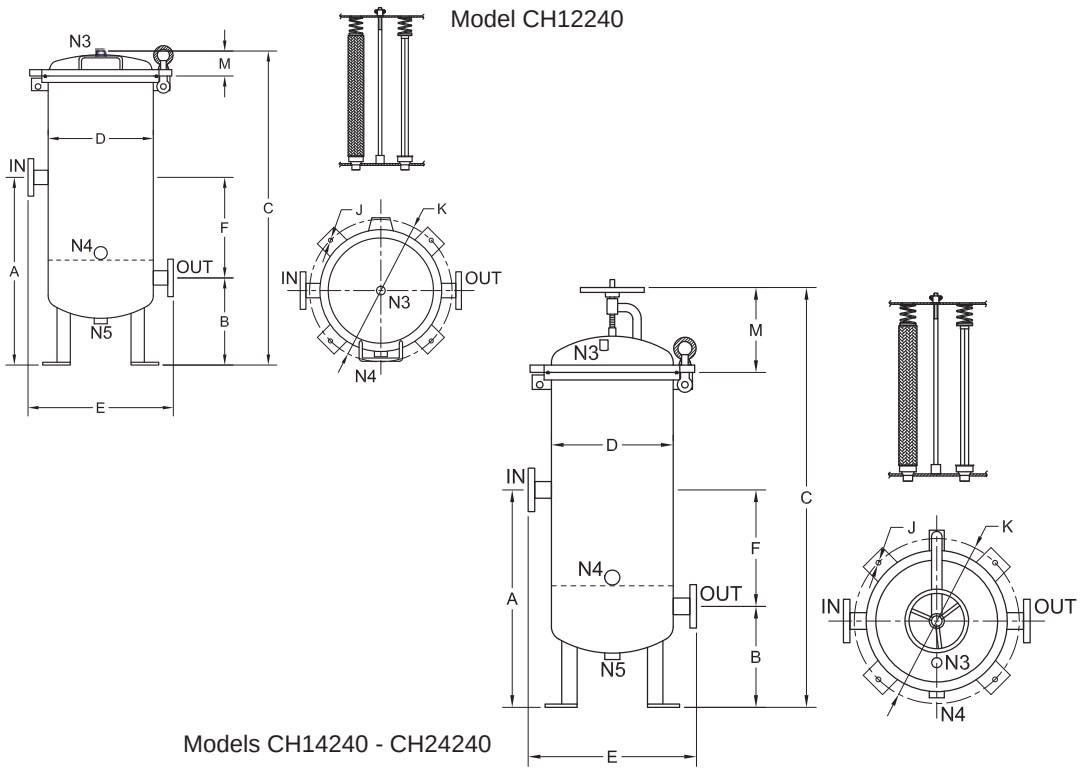
BOX 8 — Pressure Rating

1 = 150 psi

NOTE: elements must be purchased separately.

CH12-CH24 Cartridge Housings and Elements

150 psi
10 bar



Models CH14240 - CH24240

Dimensions

	Cartridge		A	B	C	D	E	J	K	M	N3	N4
	Qty	Length	inch (mm)	inch (mm)	inch (mm)	øinch (mm)	inch (mm)	øinch (mm)	øinch (mm)	inch (mm)	inch	inch
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)

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	= CH18240304S2FE1

BOX 1 — Filter Series

CH

BOX 2 — No. of Cartridges per Housing

12
14
18
20
24

BOX 3 — Cartridge Diameter

2 = 2" diameter

BOX 4 — Cartridge Length

40 = 40"

BOX 5 — Housing Material

304S = 304 Stainless Steel
316S = 316 Stainless Steel

BOX 6 — Connection Size

2F = 2" Flange (not available with 24 cartridges)
4F = 4" Flange

BOX 7 — Seal Material

E = EPDM
V = Viton

BOX 8 — Pressure Rating

1 = 150 psi

RMF Rolling Media Filtration

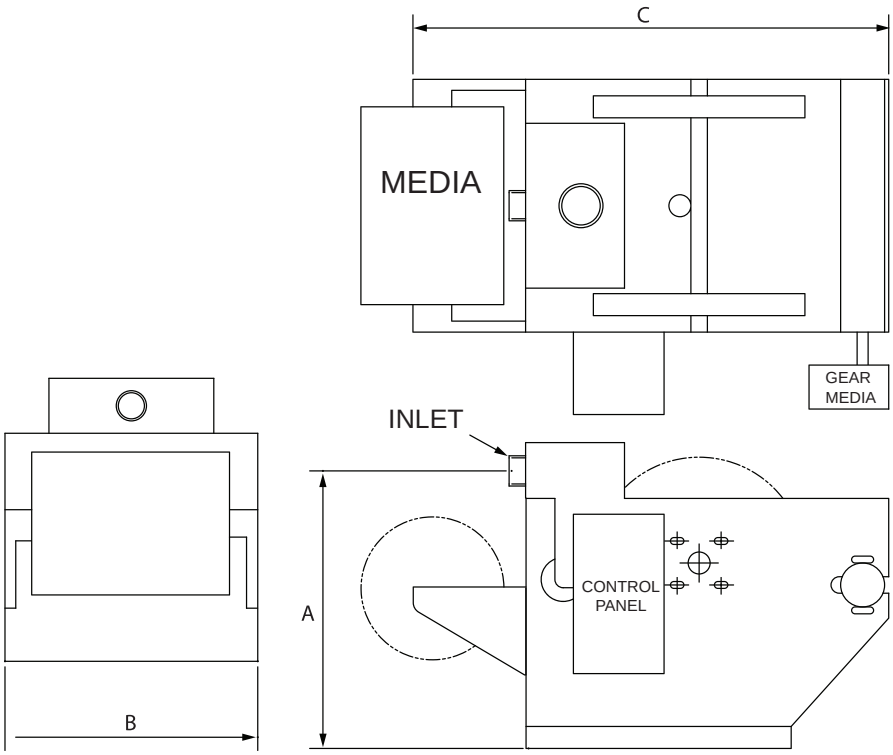
70-600 gpm
268-2270 L/min

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

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

How to Build Box 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

Filter Series
RMF

BOX 2

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

BOX 3

Wheel Material	
AL	Aluminum
SS	Stainless Steel

BOX 4

Housing Material	
CS	Carbon Steel
SS	Stainless Steel

BOX 5

Wheel Seals	
N	Neoprene
T	Teflon

BOX 6

Seal Material	
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

Filter Series
RMF

BOX 2

Replacement Type	
RM	Roll Media

BOX 3

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

BOX 4

Roll Width	
27	27" Wide (BWC 70/145)
39	39" Wide (BWC 210/300)
51	51" Wide (BWC 400)
60	60" Wide (BWC 500)
70	70" Wide (BWC 600)

Specifications DCE
ACE
CH1
CH3 -CH7
CH12-CH24
Filter Model Number Selection RMF
Replacement Parts for RMF

PPS Oil & 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.

Oil & Gas Products

PPS

Features

- Provides a cost-effective means to filter wastewater from drilling operations
- On-site filtration helps to mitigate costly hauling charges
- Promotes the closed-loop water reuse concept (protects local resources and offers cost reduction to the drilling industry)

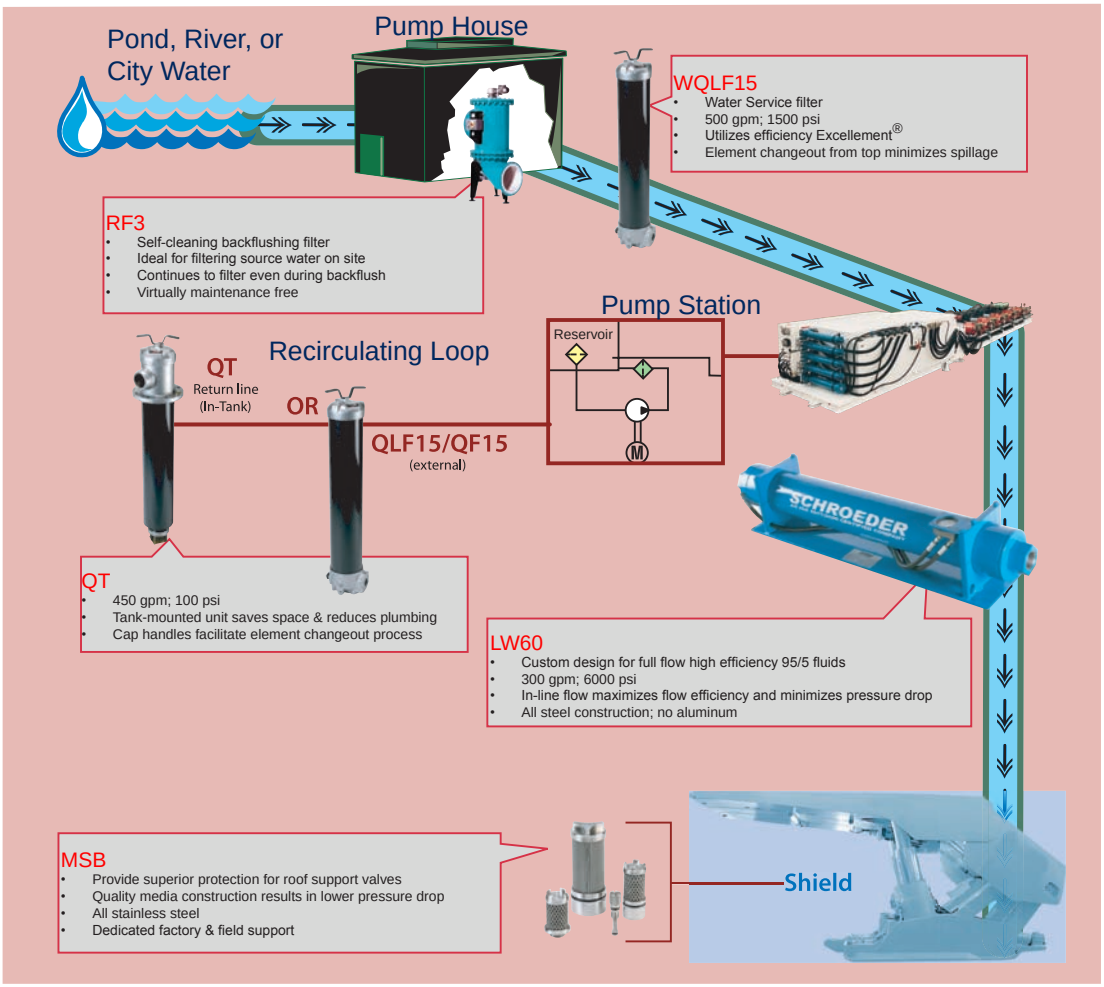
Mining Products

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	Competitor's Filter	L-Sheet #
MSB-1394-2050B		
MSB-1394-20100B		
MSB-1394-20200B		
SBF-SALL-40Z150B	2U3230-000	L-3037
SBF-SALL-40Z1OB	2UC3230-000	L-3037
SBF-WS3L-150PSB	Triple "L" Filter	L-3036
SBF-WS3L-M150B	Triple "L" Filter	L-3036
SBF-PF3L-Z12B	Triple "L" Filter	L-3035
SBF-WE3L-Z60B	Triple "L" Filter	L-3035

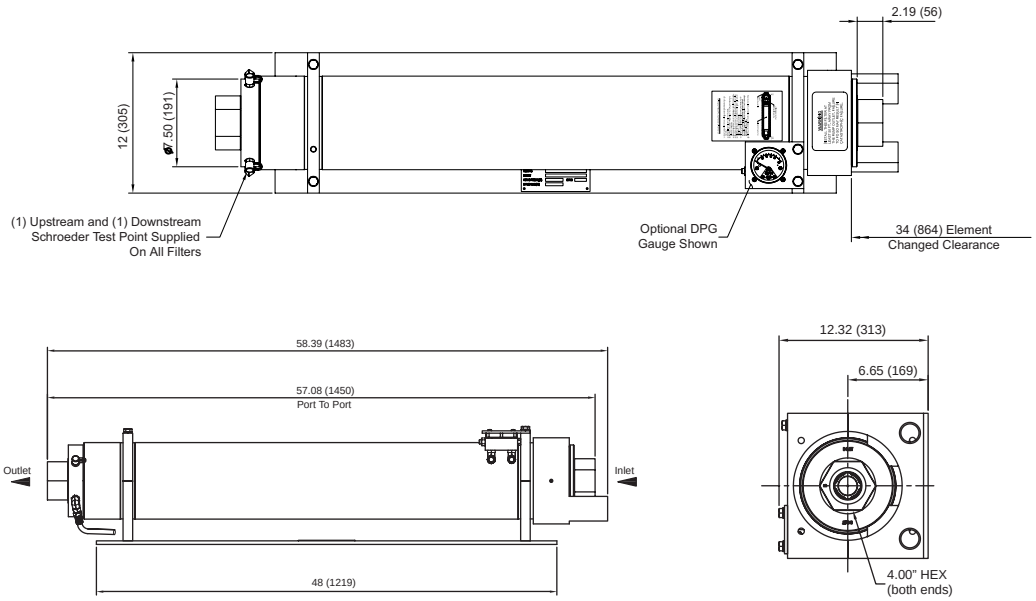
Shield Element BestFits™

Schroeder BestFit™ P/N	Micron Rating	L-Sheet #
MSB-05841-340B	40	L-2782
MSB-1298-280B	80	L-2781
MSB-1330-3100B	100	L-2746
MSB-1330-325B	25	L-2746
MSB-1330-340B	40	L-2746
MSB-1330-380B	80	L-2746
MSB-3060-340B	40	L-2779
MSB-3070-2100	100	L-2747
MSB-3070-225	25	L-2747
MSB-3070-240	40	L-2747
MSB-3070-280	80	L-2747
MSB-3077-525B	25	L-2745
MSB-3077-540B	40	L-2745
MSB-3176-225B	25	L-2744
MSB-3185-425B	25	L-4096

LW60 Longwall Filter

300 gpm
1135 L/min

6,000 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

Features

- Horizontal alignment allows straight-through flow, maximizing efficiency and minimizing pressure drop
- Propriety 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

Element Selection Based on Flow Rate

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

Pressure Drop Information Based on Flow Rate and Viscosity

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

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

Solution:

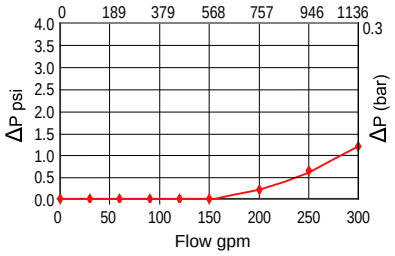
$\Delta P_{housing}$ = 0.7 psi [0.05 bar]

$\Delta P_{element}$ = 250 x .06 x (150 ÷ 150) = 15.0 psi
or
= [950 x (.06 ÷ 54.9) x (32 ÷32) = 1.1 bar]

ΔP_{total} = 0.7 + 15.0 = 15.7 psi
or
= [0.05 + 1 .1 = 1.15 bar]

$\Delta P_{housing}$

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



sp gr = specific gravity

$\Delta P_{element}$

$\Delta P_{element}$ = flow x element ΔP factor x 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).

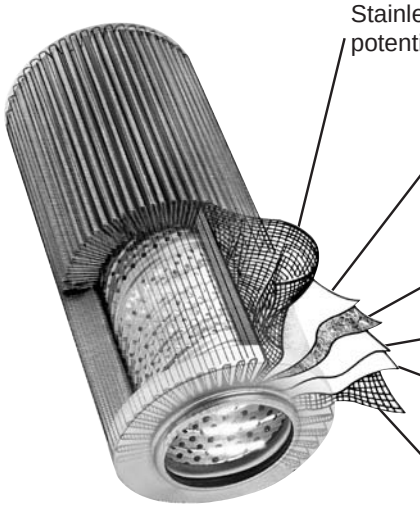
Sizing of elements should be based on element flow information provided in the Element Selection chart above.
Please note that 95/5 fluid has a lower viscosity than 150 SUS and therefore pressure drops for 95/5 will actually be lower.

Filter Model Number Selection

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

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

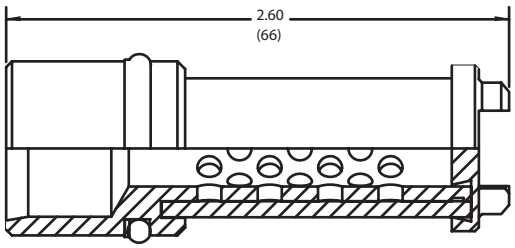
Element	Abs. Rating wrt ISO 16889 Using APC calibrated per ISO 11171 B_x (c) 1000	Dirt Holding Capacity (gm)
39ZPZ3V	5.1	449
39ZPZ5V	6.1	359
39ZPZ10V	12.1	429
39ZPZ25V	17.7	284

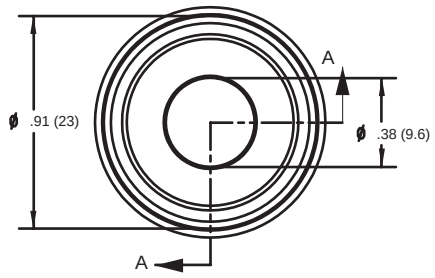
Element Collapse Rating:	**150 psid (10 bar)**
Flow Direction:	Outside In
Element Nominal Dimensions:	5.0" (127 mm) O.D. x 38" (965 mm) long

*Elements also used in LW60

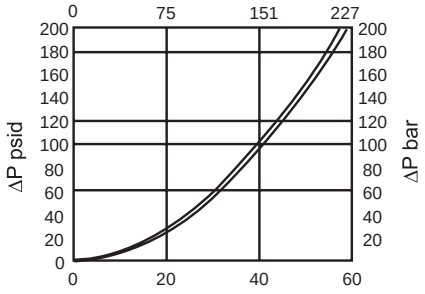
Mining Specific Elements

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





Pressure Drop

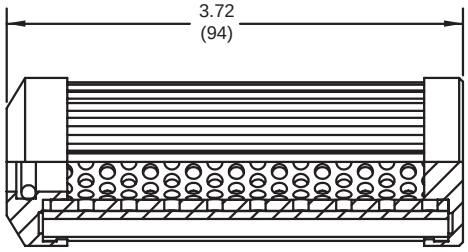


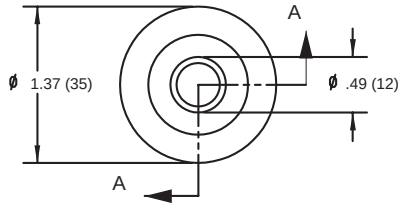
*Contact factory for additional filter ratings

Specifications

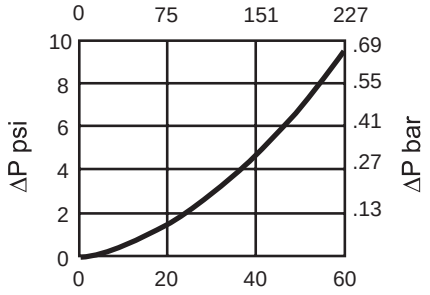
Max Pressure:	6,000 psi (400 bar)
Max Differential Pressure:	6,000 psid (400 bar)
Crush Rating:	>6,000 psid
End Caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel Wrap
O-Ring:	Buna N
Back-up Ring:	Nylon
Flow Rating:	See Graph
Filter Rating:	80 micron

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





Pressure Drop



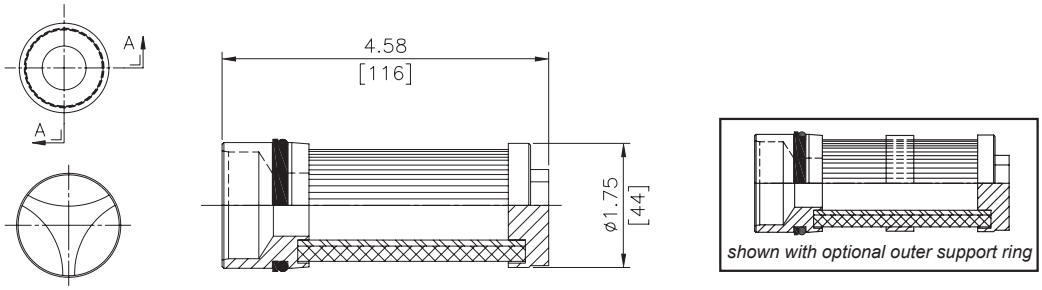
Specifications

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

**Contact factory for additional filter ratings*

Mining Specific Elements

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

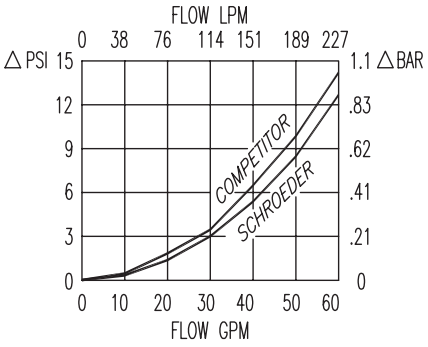


Specifications

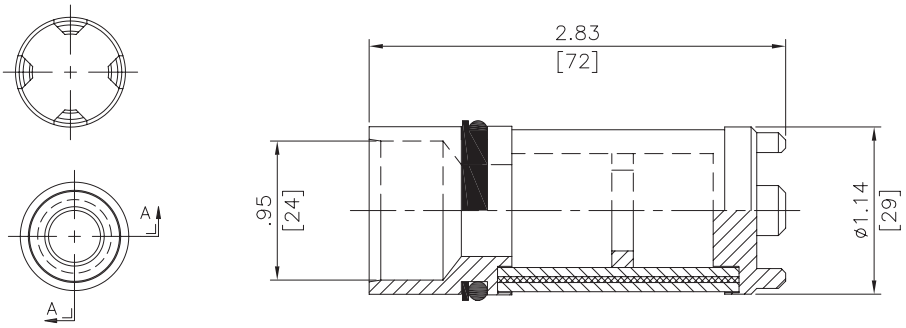
Max Pressure:	5,000 psi (350 bar)
Max Flow Rate:	40 GPM (150 L/min)
Filter Rating:	25/40 Micron
End caps:	Stainless Steel
Support Tubes:	Stainless Steel
Metal Mesh:	Stainless Steel Pleated
O-Ring:	Buna N
Back-up Ring:	Nylon

*Contact factory for additional filter ratings

Pressure Drop



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

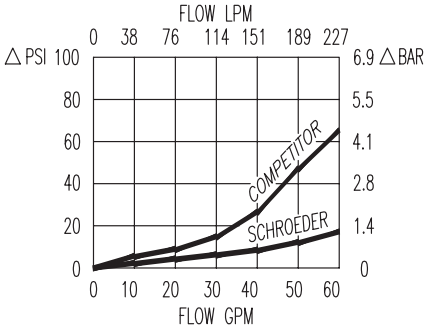


Specifications

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

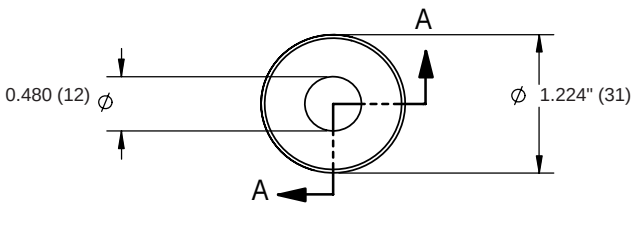
*Contact factory for additional filter ratings

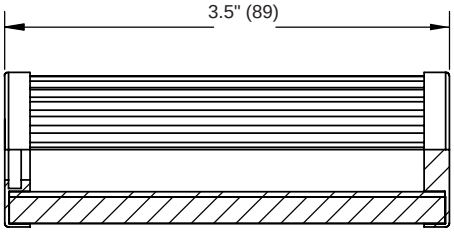
Pressure Drop



Mining Specific Elements

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





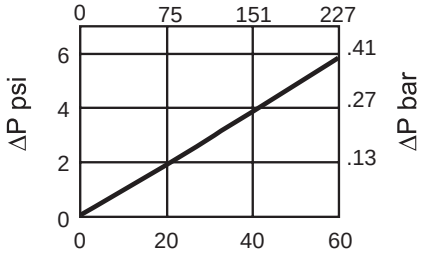
SECTION A-A

LW60

Excellement MD

Mining Specific Elements

Pressure Drop

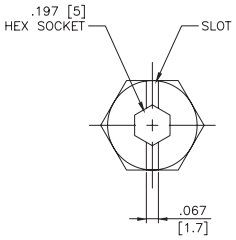


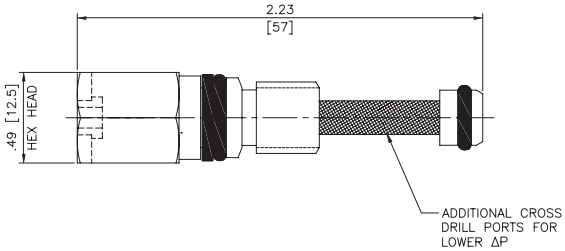
Specifications

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

*Contact factory for additional filter ratings

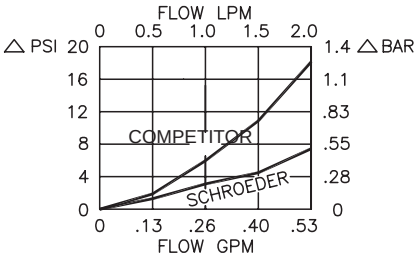
Schroeder Part Number: MSB-3176-225B (25µ)





Specifications

Pressure Drop

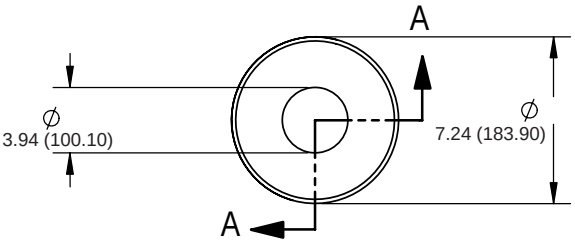


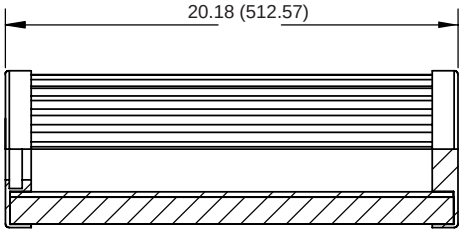
Max Pressure:	5,000 psi (350 bar)
Max Differential Pressure:	5,000 psid (350 bar)
Competition fails at:	1500 psid (103 bar)
Max Flow Rate:	0.5 GPM (2 L/min)
Filter Rating:	25 Micron
Body:	Stainless Steel
Metal Mesh:	Stainless Steel Wrap
O-Ring:	Buna N
Back-Up Ring:	Nylon

*Contact factory for additional filter ratings

Mining Specific Elements

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





SECTION A-A

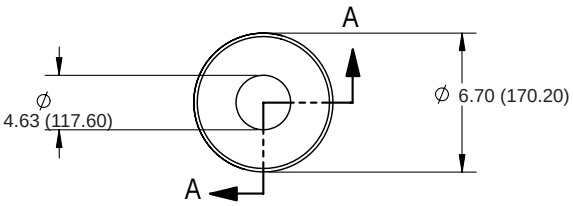
Specifications

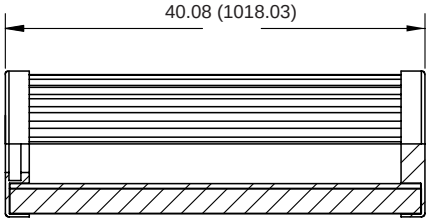
Micron Rating:	SBF-WS3L-150PSB: 150µm SBF-WE3L-Z10B: 10µm
Collapse Rating:	150 psid (min)
End Cap:	Anodized Aluminum
Outer Support Tube:	Stainless Steel
Filter Media:	SBF-WS3L-150PSB: 150µm synthetic SBF-WE3L-Z10B: 150µm synthetic
O-Ring:	Buna N

*Contact factory for additional filter ratings

Schroeder 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

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





SECTION A-A

Specifications

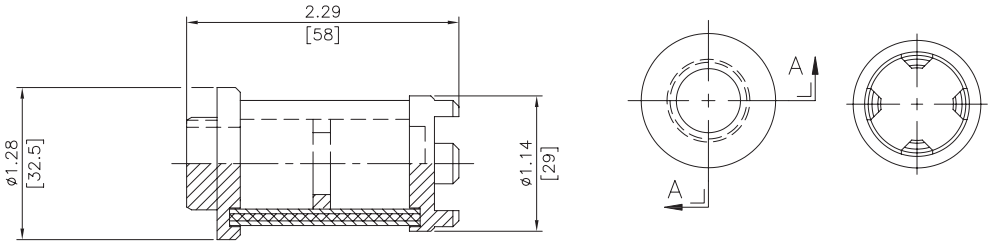
Micron Rating:	SBF-SALL-40Z150B: 150µm SBF-SALL-40Z10B: 10µm
Collapse Rating:	Not Rated
End Caps:	Anodized Aluminum
Support Tube:	None
Filter Media:	SBF-SALL-40Z150B: 150µm synthetic SBF-SALL-40Z10B: 10µm synthetic
O-Ring:	Buna N

*Contact factory for additional filter ratings

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

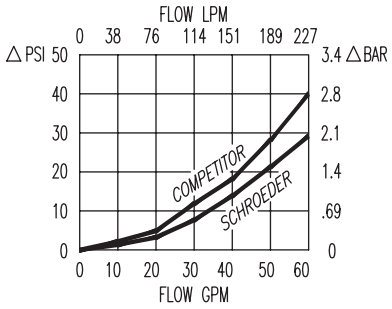
Mining Specific Elements

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



Specifications

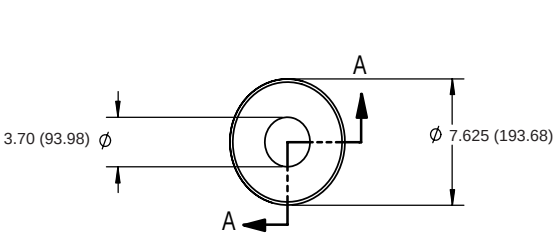
Pressure Drop



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

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



Specifications

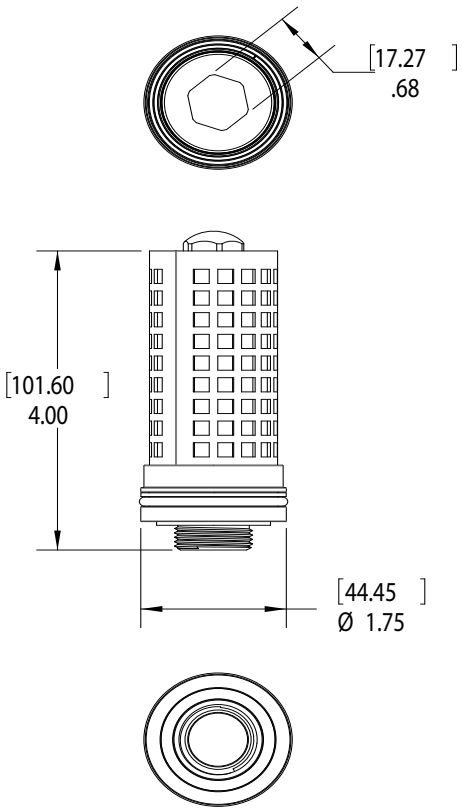
Schroeder BestFit™ P/N
SBF-PF3L-Z12B
SBF-WE3L-Z60B
Seebach Element P/N
SA12MB-PF3L-95/5
SA75FBWE3L-Water
Seebach Filter
Triple "L" Filter
Triple "L" Filter

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

*Contact factory for additional filter ratings

Mining Specific Elements

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



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

Glossary

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 (Polytetrafluoroethelyene) 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.

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.

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