QuickDelivery

Schroeder INDUSTRIES

Hydraulic & Lube Filtration

Element Technology

Accessories

Filter Systems

Fuel Filtration

Process Filtration

Schroeder INDUSTRIES

Advanced Fluid Conditioning Solutions®

PROUDLY MANUFACTURED IN THE UNITED STATES

An ISO 9001:2008 Certified Company

Vision Mission Value Quality Statement:

Vision:

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 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 the customers

Leetsdale Facility

Mission Statement:

Partnerships

Innovative products, processes and services to improve performance and efficiency in our industry.

Schroeder Industries Core | Shared Values:

Honesty

Day-to-Day Behaviors:

- Tell the truth at all times, in all matters
- Have open lines of communication and share timely, accurate and thorough information with internal and external customers
- Do not steal and respect each other's and the Company's property

Teamwork

Day-to-Day Behaviors:

- Work as a team
- Cooperate within and between departments
- Coach and mentor; listen and share knowledge, experience and ideas
- Treat others with respect and consideration in all circumstances
- Invest in the development and growth of all team members
- Keep our work areas safe and clean

Leadership

Day-to-Day Behaviors:

- Recognize that we are empowered to act as leaders and participate in the decision making process
- Take responsibility for and have pride in our work
- Set goals and celebrate the efforts and accomplishments of our teammates
- Value our greater community and take leadership roles in our neighborhoods and for the environment

Ingenuity | Innovation

Day-to-Day Behaviors:

- Value innovative thinking and the generation and implementation of new ideas to solve customer (internal & external) problems
- Be flexible and adapt to new ideas and different ways of doing things
- Utilize available resources for new designs and innovations

Quality Policy:

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

Limitations of Liability

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

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

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

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

The products described herein, including without limitation, product features, specifications, design, availability and pricing are subject to change at any time without notice.

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QuickDelivery

Schroeder Industries
Advanced Fluid Conditioning Solutions®

Quick Delivery with market driven lead times is available!

Schroeder Industries is pleased to announce the re-launch of the **Quick Delivery program**, which includes some of Schroeder Industries' most popular parts from multiple product lines.

How Does It Work?

- Schroeder Industries Distributors place purchase orders with Customer Service and specify **"Quick Delivery."** Only Quick Delivery parts can be on the Purchase Order (PO).
- If you need to order a quantity larger than the maximum allowed by this program, you may split the quantity and order the maximum Quick Delivery quantity. The balance can then be ordered via less than standard lead time or other standard methods.
- For this program, all parts purchased by Schroeder Industries Distributors will receive the Quick Delivery discount. For parts ordered outside the Quick Delivery program, (i.e. standard and/or stock orders) the best appropriate discount shall apply. Parts ordered as a less than standard lead time shall receive the appropriate less than standard lead time discount.
- All parts in this program will be available to ship within 5 business days.
- No expedited carrier is required.
- Our less than standard lead time order policy is unaffected by this program.
- Please see our website for a list of all Quick Delivery parts.
- Filters/Elements, Filter Systems, Fuels and Accessories are all a part of the program.
- Schroeder Industries Standard Return Policy applies on all orders.

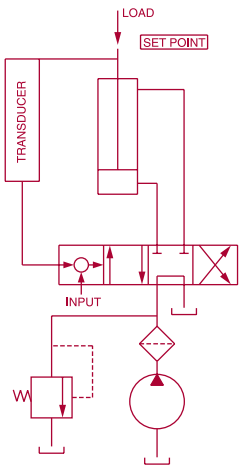


Figure 1(a). Pressure Filtration Circuit

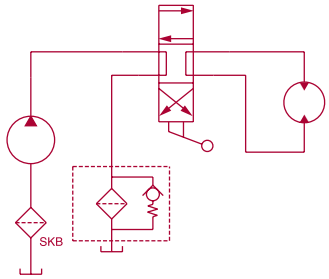


Figure 1(b). Return Line Filtration Circuit

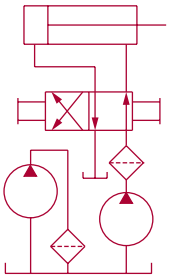


Figure 1(c). Re-circulating Filtration Circuit

Pressure filtration: Pressure filters usually produce the lowest system contamination levels to assure clean fluid for sensitive high-pressure components and provide protection of downstream components in the event of catastrophic failures. Systems with high intermittent return line flows may need only be sized to match the output of the pump, where the return line may require a much larger filter for the higher intermittent flows. See Figure 1(a).

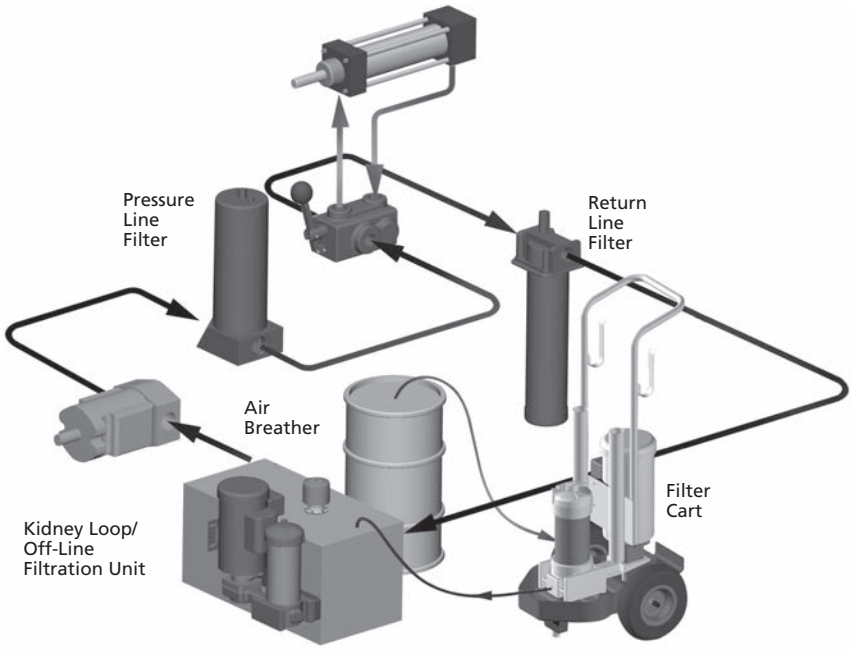
Return line filtration: Return line filters are often considered when initial cost is a major concern. A special concern in applying return line filters is sizing for flow. Large rod cylinders and other components can cause return line flows to be much greater than pump output. Return lines can have substantial pressure surges, which need to be taken into consideration when selecting filters and their locations. See Figure 1(b).

Re-circulating filtration: While usually not recommended as a system's primary filtration (due to the high cost of obtaining adequate flow rates) re-circulating, or off-line, filtration is often used to supplement on-line filters when adequate turnover cannot be obtained with the latter. It is also often an ideal location in which to use a water removal filter. Off-line re-circulating filters normally do not provide adequate turnover flow rates to handle the high contamination loading occasioned by component failures and/or inefficient maintenance practices. See Figure 1(c).

Suction filtration: Micronic suction filters are not recommended for open-loop circuits. The cavitation these filters can cause significantly outweighs any advantage obtained by attempting to clean the fluid in this part of the system. SKB magnetic suction separators are recommended, as they will protect the pump from large and ferrous particles, without the risks of cavitation.

Breather filtration: Efficient filter breathers are required for effective contamination control on non-pressurized reservoirs and should complement the liquid filtration component.

Multiple filtration: For systems incorporating large total fluid volumes, it may be necessary to employ filters in more than one location. Multiple pressure filters, pressure and return line filters, and recirculating filters are examples of multiple filtration applications.



Filter Housing Selection

It is important to keep in mind that all system components have some tolerance for contamination. The key to cost effective contamination control is to maintain the system's cleanliness level at the tolerance level of the most sensitive component. To filter more stringently just adds unnecessary cost. Little, if any, increase in component life or reliability is obtained by further reducing the contamination level. Once the desired cleanliness level (ISO code) is determined, selecting a cost effective filtration system can be readily accomplished.

1. Determining desired cleanliness level

Step 1. Determine the most sensitive component in the system. Then, determine the desired cleanliness level (ISO code) by using Figures 2 and 3 (page 13) or by contacting the manufacturer directly.

Operating pressure levels also have a bearing on cleanliness requirements.

2. Selecting correct medium

Step 2. Using Tables 6 and 7 (page 20, respectively), identify the proper Schroeder filter media to employ.

3. Where to filter

Step 3. Determine where to locate the filters, using the information on the previous page, "Filter Location."

4. Selecting filter housing

Step 4. Refer to the Filter Product Index in the Table of Contents, pages 3-5 and the individual filter catalog pages to select the specific filter housing that will meet the requirements set forth in Steps 2 and 3 above, as well as the pressure and flow parameters at the particular filter's location.

Consideration should also be given to installation convenience for your particular application. Use the selection charts shown on the catalog page to determine the specific filter model number for the desired media at the required flow rate.

5. Selecting filter breather

Step 5. For non-pressurized reservoirs, refer to our Accessories Catalog; L-4329 to select the appropriate filter breather.

6. Contamination control practices

Step 6. Implement the appropriate manufacturing, assembly, and maintenance contamination control procedures. Effective contamination control is achieved through the conscientious use of sound manufacturing and maintenance practices. Some examples are: filtering make-up oil; controlling contamination ingestion during manufacturing, assembly, maintenance, and repair processes; and properly maintaining cylinder wiper seals.

7. Verifying results

Step 7. Check all filtration systems to determine if the results expected are obtained and maintained during system operation, as operating conditions and maintenance practices may not remain constant. Schroeder distributors and field representatives have access to contamination monitoring equipment that can determine the exact cleanliness level (ISO code) of your system on the spot. **Contact your Schroeder distributor or representative for complete details.**

ISO 4406 Code

Cleanliness levels are defined by three numbers divided by slashes (/.) These numbers correspond to 4, 6, and 14 micron, in that order. Each number refers to an ISO Range Code, which is determined by the number of particles for that size (4,6, & 14µm) and larger present in 1 ml of fluid. Each range is double the range below. Refer to Figure 1 to see the actual ranges.

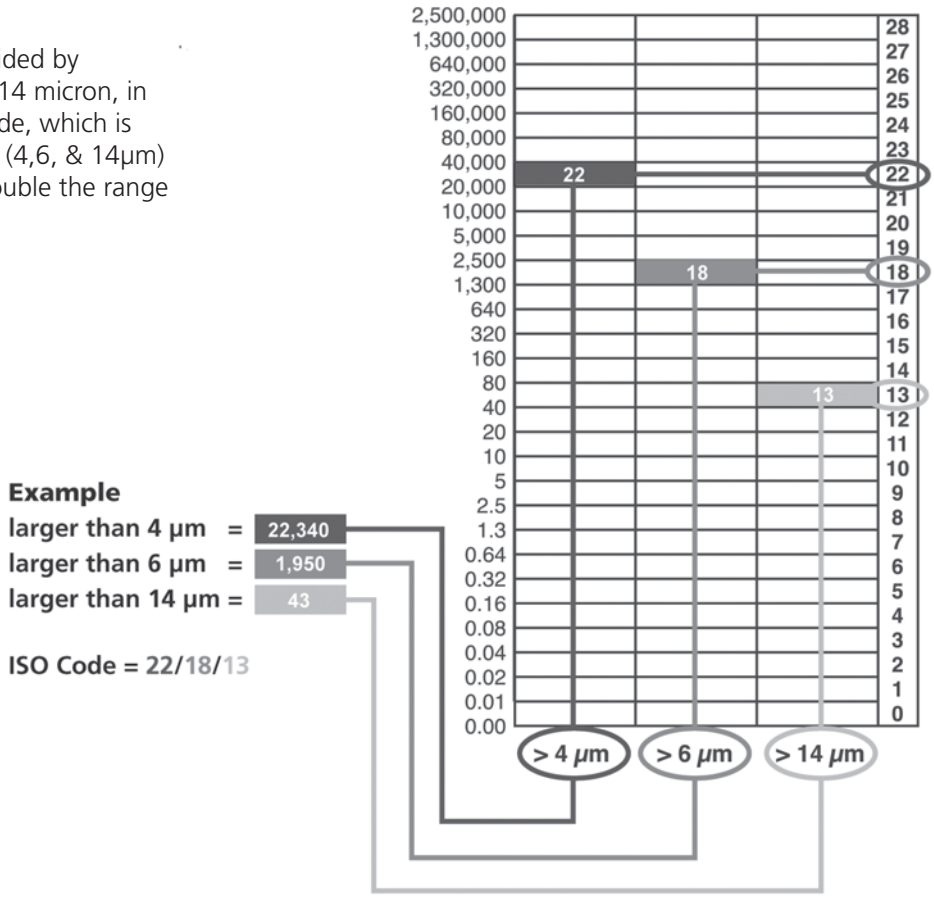


Figure 1. ISO 4406 Codes

Achieving the Appropriate Cleanliness Level in a System

The only way to achieve and maintain the appropriate cleanliness level in a hydraulic or lubrication system,is to implement a comprehensive filtration program. Schroeder offers all of the products that are needed to do just that. They include:

Solid Contamination

- Pressure filters
- Return line filters
- Offline filtration loops
- Oil transfer units for pre-cleaning of new oil
- Portable and online contamination monitors
- Reservoir breathers and filler/breathers

Water Content

- Water content sensors
- Reservoir breathers with silica gel desiccant
- Vacuum dehydration water removal units
- Water removal elements

Fluid Analysis

- Bottle sampling kits
- Complete analysis kits

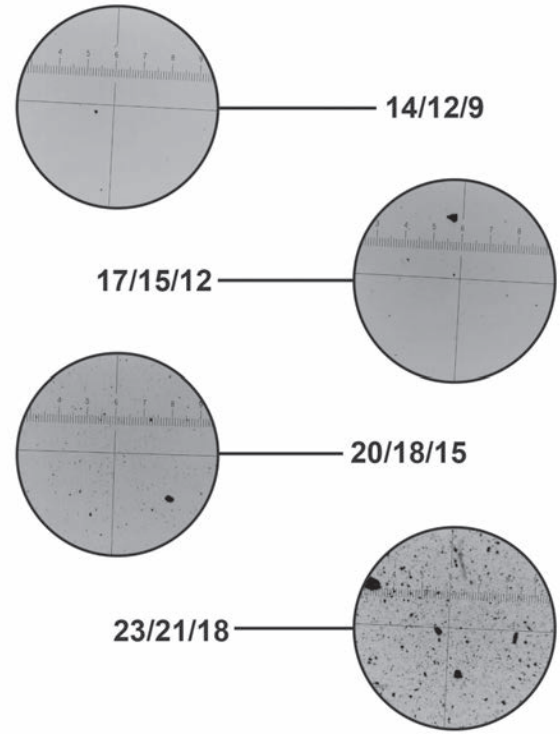


Figure 2. Microscopic Particulate Comparison

ISO Codes

Finding the cleanliness level required by a system:

1. Starting at the left hand column, select the most sensitive component used in the system.
2. Move right to the column that describes the system pressure and conditions.
3. Here you will find the recommended ISO class level, and recommended element micron rating.

	Low/Medium Pressure Under 2000 psi (moderate conditions)		High Pressure 2000 to 2999 psi (low/medium with severe conditions[1])		Very High Pressure 3000 psi and over (high pressure with severe conditions[1])	
	ISO Target Levels	Micron Ratings	ISO Target Levels	Micron Ratings	ISO Target Levels	Micron Ratings
Pumps						
Fixed Gear or Fixed Vane	20/18/15	20	19/17/14	10	18/16/13	5
Fixed Piston	19/17/14	10	18/16/13	5	17/15/12	3
Variable Vane	18/16/13	5	17/15/12	3	N/A	N/A
Variable Piston	18/16/13	5	17/15/12	3	16/14/11	3
Valves						
Check Valve	20/18/15	20	20/18/5	20	19/17/14	10
Directional (solenoid)	20/18/15	20	19/17/14	10	18/16/13	5
Standard Flow Control	20/18/15	20	19/17/14	10	18/16/13	5
Cartridge Valve	19/17/14	10	18/16/13	5	17/15/12	3
Proportional Valve	17/15/12	3	17/15/12	3	16/14/11	3[2]
Servo Valve	16/14/11	3[2]	16/14/11	3[2]	15/13/10	3[2]
Actuators						
Cylinders, Vane Motors, Gear Motors	20/18/15	20	19/17/14	10	18/16/13	5
Piston Motors, Swash Plate Motors	19/17/14	10	18/16/13	5	17/15/12	3
Hydrostatic Drives	16/15/12	3	16/14/11	3[2]	15/13/10	3[2]
Test Stands	15/13/10	3	15/13/10	3[2]	15/13/10	3[2]
Bearings						
Journal Bearings	17/15/12	3	N/A	N/A	N/A	N/A
Industrial Gearboxes	17/15/12	3	N/A	N/A	N/A	N/A
Ball Bearings	15/13/10	3[2]	N/A	N/A	N/A	N/A
Roller Bearings	16/14/11	3[2]	N/A	N/A	N/A	N/A

1. Severe conditions may include high flow surges, pressure spikes, frequent cold starts, extremely heavy duty use, or the presence of water
2. Two or more system filters of the recommended rating may be required to achieve and maintain the desired Target Cleanliness Level

20 gpm
75 L/min
3000 psi
210 bar

Specifications

Pressure Rating:
3000 psi (210 bar)

Element Media:
Excellement® Z-Media®

Ports:
SAE Straight Thread

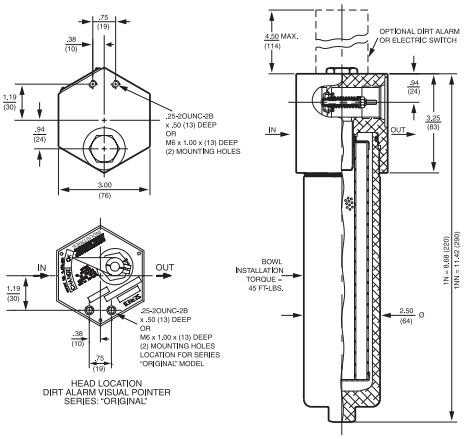
Seal Material:
Buna N

Bypass Valve Cracking Pressure:
Cracking: 40 psi (2.8 bar)

Features

- Top-ported pressure filter
- All aluminum assembly
- Lightweight
- Compact

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
NF301NZ10SD5*	SAE-12	Visual Pop-up	20	10	NZ10	7617925	$291.00
Alternate Elements Available: NZ3 & NZ5**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
NZ3	<1.0	<1.0	<2.0	<4.0	4.8
NZ5	2.5	3.0	4.0	4.8	6.3
NZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
NZ3	12	7628680
NZ5	12	7631436
NZ10	11	7628678

Element Collapse Rating: 150 psid (10 bar) for standard elements
Flow Direction: Outside In

Top-Ported High Pressure Filter | DF40

Specifications

Pressure Rating:

4000 psi (275 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Pop-up indicator

Ports:

SAE-16 only

Seal Material:

Buna N

Bypass Valve Cracking Pressure:

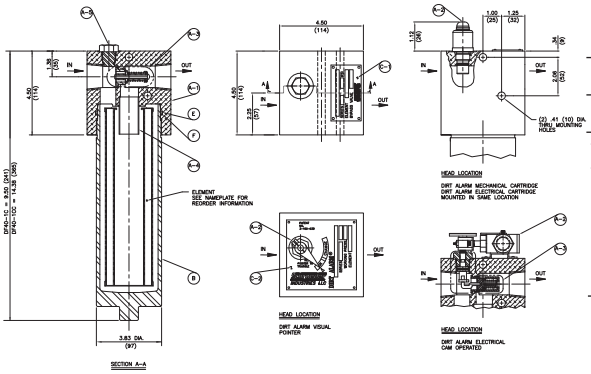
Cracking: 40 psi (3.4 bar)
Full Flow: 57 psi (5.7 bar)

Features

- Top-ported high pressure filter
- Aluminum Porting Head & Steel Element Case
- Thread on bowl with optional drain plug for easy element service
- High cyclic fatigue performance

30 gpm
115 L/min
4000 psi
275 bar

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
DF401CCZ10SD5*	SAE-16	Visual Pop-up	30	10	CCZ10	7608879	$475.00
Alternate elements available: CCZ5, CCZ3**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
CCZ3	<1.0	<1.0	<2.0	<4.0	4.8
CCZ5	2.5	3.0	4.0	4.8	6.3
CCZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
CCZ3	58	7630193
CCZ5	63	7607904
CCZ10	62	7628755

Element Collapse Rating: 150 psid (10 bar) for standard elements

Flow Direction: Outside In

100/150 gpm
380/570 L/min
3000 psi
210 bar

Specifications

Pressure Rating:

3000 psi (210 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Manual reset visual pop-up

Ports:

SAE-24 straight thread

Seal Material:

Buna N

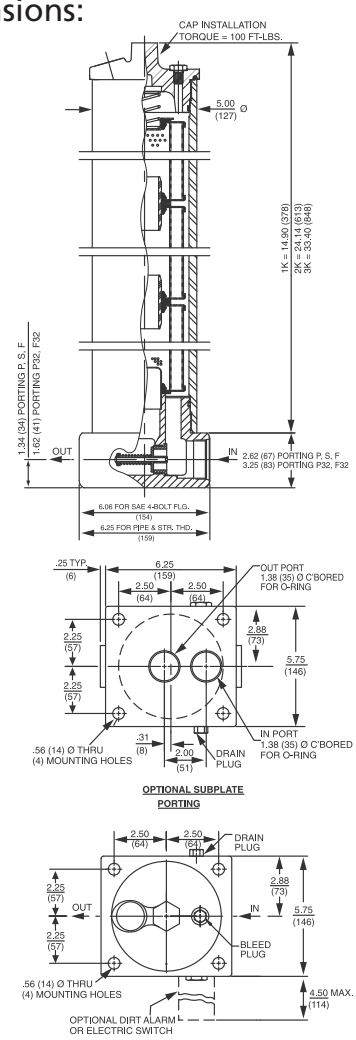
Bypass Valve Cracking Pressure:

Cracking: 40 psi (2.8 bar)
Full Flow: 61 psi (4.2 bar)

Features

- Base-ported pressure filter
- Can be installed in vertical or horizontal position
- Meets HF4 automotive standard
- Element change out from top minimizes oil spillage
- Patented GeoSeal® elements

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
GKF301KGZ10SD5*	SAE-24	Visual Pop-up	120	10	KGZ10	7610452	$695.00
Alternate element options: KG3, KG10, KG25, KGZ1, KGZ3, KGZ5, KGZ25**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
KGZ3	<1.0	<1.0	<2.0	<4.0	4.8
KGZ5	2.5	3.0	4.0	4.8	6.3
KGZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
KGZ3	115	7615023
KGZ5	119	7615026
KGZ10	108	7615018

Element Collapse Rating: 150 psid (10 bar) for standard elements

Flow Direction: Outside In

Element Nominal Dimensions: K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

In-Tank Low Pressure Filter | GZT

40 gpm
150 L/min
100 psi
7 bar

Specifications

Pressure Rating:
100 psi (7 bar)

Element Media:
Excellement® Z-Media®

Clogging Indicator:
Manual reset visual pop-up

Ports:
SAE-16 only

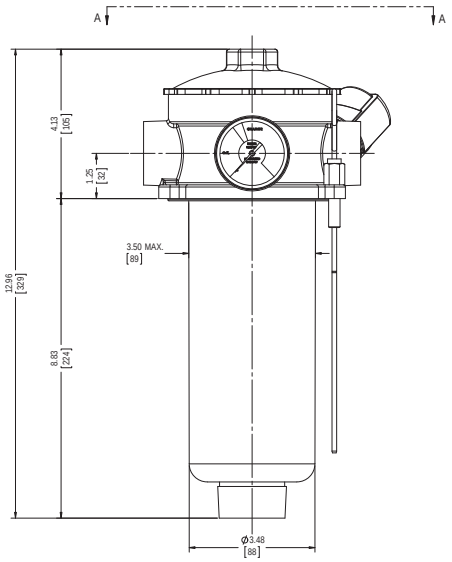
Seal Material:
Buna N

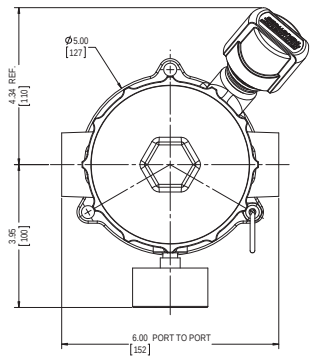
Bypass Valve Cracking Pressure:
Cracking: 25 psi (1.7 bar)

Features

- Low pressure tank-mounted filter
- Available in dual inlet porting
- Various Dirt Alarm® options
- Optional PAB1 breather
- Optional dipstick
- Also available with patented GeoSeal® elements

Dimensions:





SECTION A-A

Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
GZT8GTZZ105Y2*	SAE-16	Visual Pop-up	40	10	8Z10	7627519	$218.00
No Alternate Elements Currently Available**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
8GTZZ10	15.5	16.2	18.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
8GTZZ10	32	7627663

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

Specifications

Pressure Rating:
150 psi (50 bar)

Element Media:
Excellement® Z-Media®

Clogging Indicator:
Gauge dial indicator

Ports:
SAE-24 straight thread

Seal Material:
Buna N

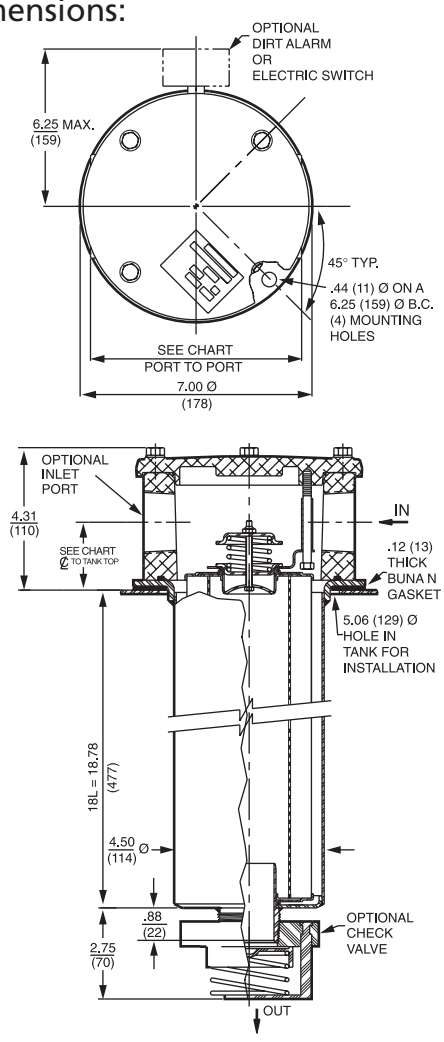
Bypass Valve Cracking Pressure:
25 psi (1.7 bar)

Features

- Low pressure tank-mounted filter
- Multiple inlet-outlet porting options
- Can also be used in return line application (contact factory)
- Offered in SAE straight thread

150 gpm
570 L/min
100 psi
7 bar

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
LRT18LZ10S24S24NY2 (LRT-1820)*	SAE-24	Gauge	150	10	18LZ10	7615959	$379.00
No Alternate Elements Currently Available**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

		Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Media Type	Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
Traditional Excellement® Z-Media®	18LZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Media Type	Element	DHC (gm)	SAP Number
Traditional Excellement® Z-Media®	18LZ10	216	7628580

Element Collapse Rating: 250 psid (17.2 bar) for standard and non-bypassing elements

Flow Direction: Outside In

Tank-Mounted Return Line Filter | GRTB

Specifications

Pressure Rating:

100 psi (7 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Visual Gauge

Ports:

SAE-20 straight thread or 1.25" NPT

Seal Material:

Buna N

Bypass Valve Cracking Pressure:

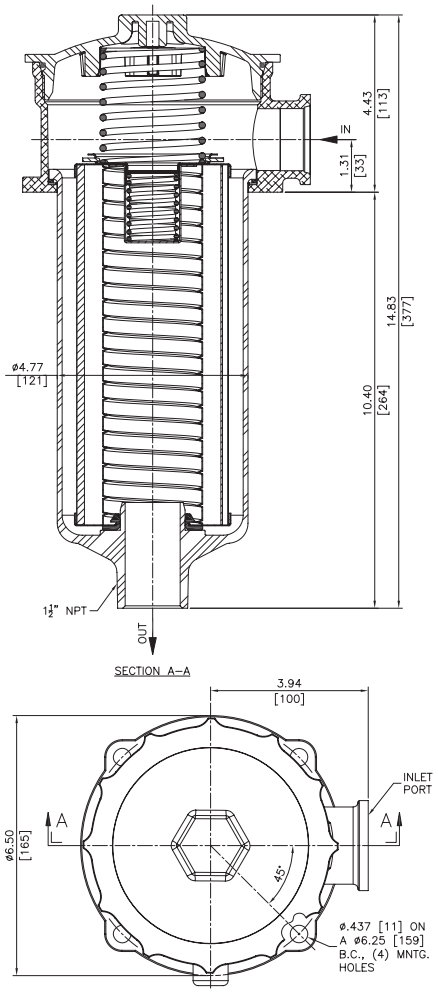
Cracking: 25 psi (1.7 bar)

Features

- Patented GeoSeal® Elements
- Cost optimized for in-tank applications
- Plastic bowl and cap lower cost and minimize weight

100 gpm
380 L/min
100 psi
7 bar

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
GRTB1KBGZ10SY2*	SAE-20	Gauge	100	10	KBGZ10	7610523	$136.00
GRTB1KBGZ10PY2*	1.25" NPT	Gauge	100	10	KBGZ10	7610521	$136.00
Alternate elements available: KBG3, KBG10, KBG25, KBGZ1, KBGZ3, KBGZ5, KBGZ25**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
KBGZ5	2.5	3.0	4.0	4.8	6.3
KBGZ10	7.4	8.2	10.0	8.0	10.0
KBGZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
KBGZ5	119	7613401
KBGZ10	108	7613394
KBGZ25	93	7613397

Element Collapse Rating: 150 psid (10 bar) for standard elements

Flow Direction: Outside In

Element Nominal Dimensions: K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

Specifications

Pressure Rating:

1000 psi (69 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Manual reset visual pop-up

Ports:

SAE-20 straight thread

Seal Material:

Buna N

Bypass Valve Cracking Pressure:

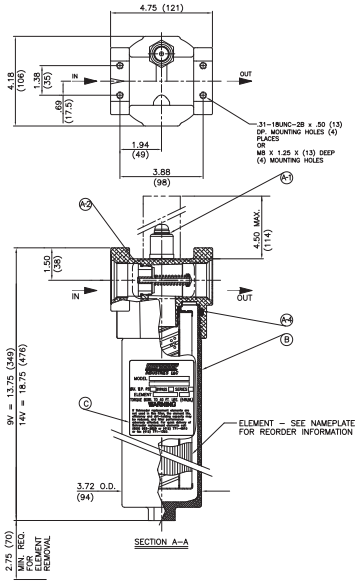
Cracking: 40 psi (2.8 bar) Standard
Full Flow: 57 psi (3.9 bar)

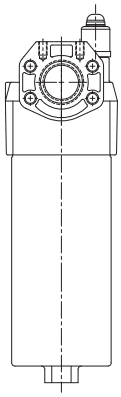
Features

- Durable, compact design
- Quick and easy cartridge element changeouts
- Lightweight at 8 pounds

70 gpm
265 L/min
1000 psi
69 bar

Dimensions:





Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
RLT9VZ10S20D5*	SAE-20	Visual Pop-up	70	10	9VZ10	7631537	$287.00
No Alternate Element Options Currently Available**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	**$\beta_x \geq 75$**	**$\beta_x \geq 100$**	**$\beta_x \geq 200$**	**$\beta_x(c) \geq 200$**	**$\beta_x(c) \geq 1000$**
PVZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
9VZ10	52	7628588

Element Collapse Rating: 150 psid (10 bar)
Flow Direction: Outside In

Specifications

Pressure Rating:

1400 psi (20 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Manual reset visual pop-up

Ports:

SAE-12

Seal Material:

Buna N

Bypass Valve Cracking Pressure:

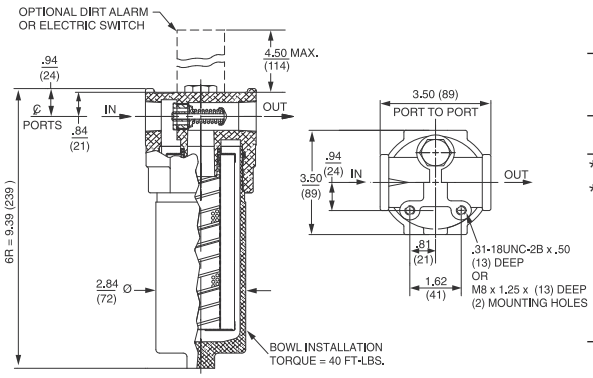
Cracking: 40 psi (2.1 bar) Standard
Full Flow: 55 psi (3.8 bar)

Features

- Smaller, compact version of the RLT
- Quick and easy cartridge element changeouts
- Lightweight at 3 pounds

25 gpm
100 L/min
1400 psi
100 bar

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
SRLT6RZ10S12D5*	SAE-12	Visual Pop-up	25	10	6RZ10	7623046	$229.00
No alternate element options currently available**							

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
6RZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (g)	SAP Number
6RZ10	14	7628583

Element Collapse Rating: 150 psid (10 bar) for standard elements
Flow Direction: Outside In

Specifications

Pressure Rating:

100 psi (7 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Visual Gauge

Ports:

NPT only

Seal Material:

Buna N

Bypass Valve Cracking Pressure:

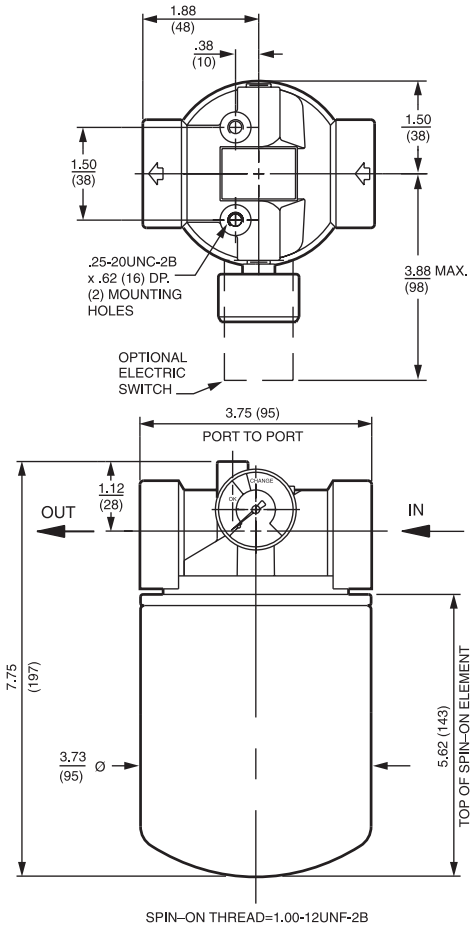
Cracking: 30 psi (2 bar)
Full Flow: 36 psi (2 bar)

Features

- Spin-On with full ported die cast aluminum head for minimal pressure drop
- Small profile for use in limited space
- Same day shipment model available

20 gpm
75 L/min
100 psi
7 bar

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
PAF16PZ10PY2*	.75" NPTF	Visual Gauge	20	10	PZ10	7618905	$88.00
No alternate element options currently available**							

*Same-day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
PZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding Capacity:

Element	DHC (gm)	SAP Number
PZ10	N/A	7628637
Element Collapse Rating:		100 psid (7 bar)
Flow Direction:		Outside In
Element Nominal Dimensions:		3.75" (95 mm) O.D. x 5.5" (140 mm) long

100 gpm
380 L/min
100 psi
7 bar

Specifications

Pressure Rating:

100 psi (7 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Guage dial indicator

Ports:

SAE-24 straight thread

Seal Material:

Buna N

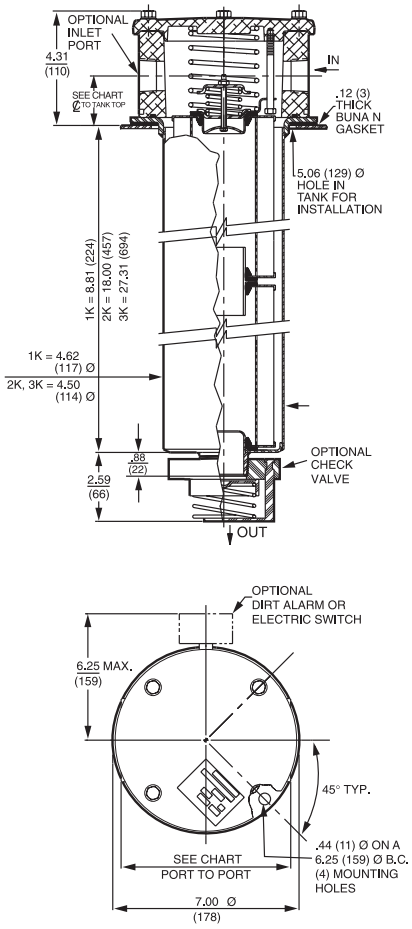
Bypass Valve Cracking Pressure:

Cracking: 40 psi (2.1 bar) Standard
Full Flow: 55 psi (3.8 bar)

Features

- Low pressure tank-mounted filter
- Multiple inlet-outlet porting options
- Can also be used in return line application (contact factory)
- Offered in SAE straight thread
- Patented GeoSeal® elements

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
GRT1KBGZ10S24S24NY2 (GRT-6915)*	SAE-24	Guage	100	10	KBGZ10	7610512	$260.00
GRT1KBGZ10S20NNY2 (GRT-6916)*	SAE-20	Guage	100	10	KBGZ10	7610509	$248.00

Alternate elements available: KBG3, KBG10, KBG25, KBGZ1, KBGZ3, KBGZ5, KBGZ25**

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
KG3	6.8	7.5	10.0	N/A	N/A
KG10	15.5	16.2	18.0	N/A	N/A
KGZ1	<1.0	<1.0	<1.0	<4.0	4.2
KGZ3	<1.0	<1.0	<2.0	<4.0	4.8
KGZ5	2.5	3.0	4.0	4.8	6.3
KGZ10	7.4	8.2	10.0	8.0	10.0
KGZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding Capacity:

Element	DHC (g)	SAP Number	Element	DHC (g)	SAP Number
KG3	54	7615012	KGZ10	44	7615008
KGZ1	112	7615017	KGZ3	115	7615023
KGZ5	119	7615026	KGZ10	108	7615018
KGZ25	93	7615021			

Element Collapse Rating:	150 psid (10 bar) for standard elements
Flow Direction:	Outside In
Element Nominal Dimentions:	K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

100 gpm
380 L/min
300 psi
20 bar

Specifications

Pressure Rating:

300 psi (20 bar)

Element Media:

Excellement® Z-Media®

Clogging Indicator:

Visual pop-up indicator

Ports:

SAE-24 straight thread

Seal Material:

Buna N

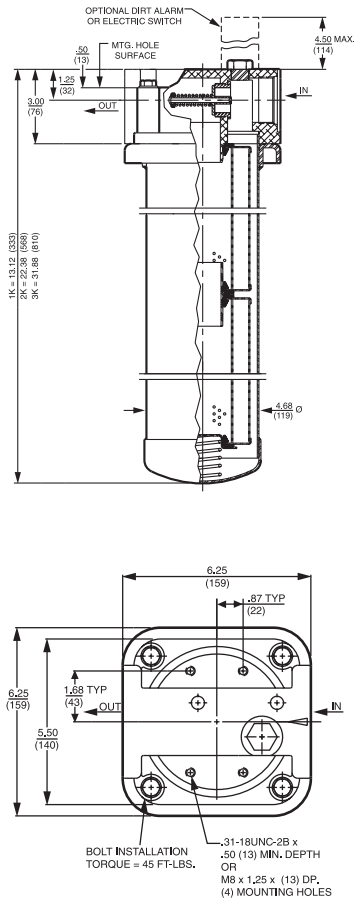
Bypass Valve Cracking Pressure:

Cracking: 30 psi (2 bar)

Features

- Meets HF4 automotive standards
- Offered in SAE straight thread
- Takes the standard Schroeder K-sized element
- Allows consolidation of inventoried replacement elements by using Schroeder K-sized elements
- Patented GeoSeal® elements

Dimensions:



Ordering Information:

Part Number	Port size	Indicator Type	Max Flow gpm	Micron Rating	Element	SAP Number	List Price
GKF31KGZ10SD5*	SAE-24	Visual pop-up indicator	100	10	KGZ10	7610456	$305.00

Alternate Elements Available: KG3, KG25, KGZ1, KGZ3, KGZ5 KGZ25**

*Same day shipment model
**Alternate Elements Options Not Available for Same Day Ship

Element Performance Information:

	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
Element	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
KG3	6.8	7.5	10.0	N/A	N/A
KG10	15.5	16.2	18.0	N/A	N/A
KGZ1	<1.0	<1.0	<1.0	<4.0	4.2
KGZ3	<1.0	<1.0	<2.0	<4.0	4.8
KGZ5	2.5	3.0	4.0	4.8	6.3
KGZ10	7.4	8.2	10.0	8.0	10.0
KGZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding Capacity:

Element	DHC (g)	SAP Number	Element	DHC (g)	SAP Number
KG3	54	7615012	K1G0	44	7615008
KGZ1	112	7615017	KGZ3	115	7615023
KGZ5	119	7615026	KGZ10	108	7615018
KGZ25	93	7615021			

Element Collapse Rating:	150 psid (10 bar) for standard elements
Flow Direction:	Outside In
Element Nominal Dimentions:	K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

GeoSeal®

GeoSeal® | KG or KBG

Features

- GeoSeal® is a patented offering from Schroeder that provides a unique way for OEM's to retain replacement element business and to keep a filter's performance at the level that it was supplied
- GeoSeal® design is available on the K-size element and in the following Schroeder filter series: KF30, KF50, KC50, KC65, MKF50, K9, 2K9, 3K9, KF3, KL3, MLF1, KF5, RT

Ordering Information:

Part Number	Micron Rating	Collapse Rating	SAP Number	List Price
KBGZ10	10	150 PSID	7613394	$44.75
KGZ10	10	150 PSID	7615018	$44.75
KGZ25	5	150 PSID	7615021	$44.75
KGZ3	3	150 PSID	7615023	$51.90
GeoSeal® Element Plastic Connector			7608357	$3.92

Part Number	Description	SAP Number	List Price
KKGZ1V	18" KGZ 1 micron Z-media (Geoseal®) Viton®	7615298	$103.57
KKGZ3V	18" KGZ 3 micron Z-media (Geoseal®) Viton®	7615301	$103.57
KKGZ5V	18" KGZ 5 micron Z-media (Geoseal®) Viton®	7615304	$89.96
KKGZ10V	18" KGZ 10 micron Z-media (Geoseal®) Viton®	7630720	$89.96
KKGZ25V	18" KGZ 25 micron Z-media (Geoseal®) Viton®	7634483	$89.96

Part Number	Description	SAP Number	List Price
27KGZ3	27" KGZ 3 micron Z-Media® (GeoSeal®)	7629165	$163.83
27KGZ5	27" KGZ 5 micron Z-Media® (GeoSeal®)	7629166	$157.83
27KGZ10	27" KGZ 10 micron Z-Media® (GeoSeal®)	7629163	$153.32
27KGZ25	27" KGZ 25 micron Z-Media® (GeoSeal®)	7629164	$153.32
27KGW	27" KG Water Removal (GeoSeal®)	7629161	$89.29

Part Number	Description	SAP Number	List Price
27KGZ3V	27" KGZ 3 micron Z-Media® (GeoSeal®) Viton®	7634473	$179.82
27KGZ5V	27" KGZ 5 micron Z-Media® (GeoSeal®) Viton®	7603035	$173.83
27KGZ10V	27" KGZ 10 micron Z-Media® (GeoSeal®) Viton®	7603028	$169.32
27KGZ25V	27" KGZ 25 micron Z-Media® (GeoSeal®) Viton®	7634474	$169.32
27KGWV	27" KG Water Removal (GeoSeal®) Viton®	7603025	$105.29

BestFit® High Performance Replacement Elements | SBF

Features

- Schroeder manufactures over 1900 Bestfit® Performance Replacement elements
- Schroeder produces all of the technical data to support the sale of these products
- The Bestfit® family consists of standard elements, cartridge and spin-on re Corecentric® coreless repair elements, and the melt-blown and spun-bonded process filtration elements
- We offer the easiest way to determine the Schroeder equivalent of more than 40,000 competitive elements by using the Best Fit Cross Reference
- Additional Element Technology details availabel online at: https://schroederindustries.com/Products/element-technology
- Also available with synthetic and cellulose media (contact factory for additional details)

For more information visit www.schroederindustries.info/crossreference

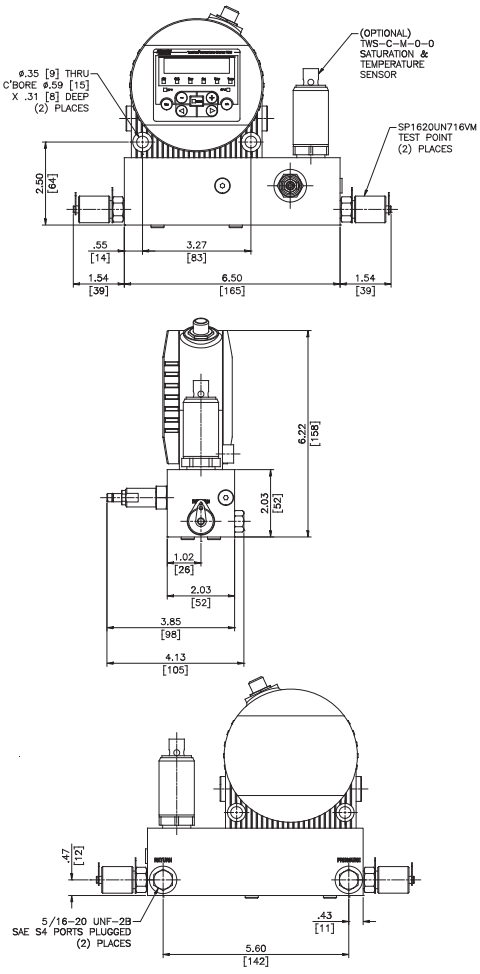
Ordering Information:

Part Number	Micron Rating	Collapse Rating	SAP Number	List Price
SBF-8300-16Z10V	10	150 PSID	7631746	$206.76
SBF-8300-39Z10V	10	150 PSID	7621534	$403.23
SBF-9020-8Z10B	10	150 PSID	7621766	$43.89
SBF-9021-8Z10B	10	150 PSID	7621804	$145.51
SBF-9600-16Z10B	10	150 PSID	7621961	$110.85
SBF-9600-8Z10B	10	150 PSID	7621998	$66.23
SBF-9601-8Z10B	10	150 PSID	7622064	$247.87

Description

The TCM is designed for connection to hydraulic and lubrication lines with pressures up to 3500 psi (241 bar) and viscosities up to 4635 SUS (1000 cSt). The unit requires that a small flow of oil (between 30 mL/min and 500 mL/min) is diverted for measurement purposes.

Dimensions:



Specifications

Measuring Range:
Display ISO ranges between 25/24/23 and 9/8/7
Calibration within the range ISO 13/11/10 to 23/21/18

Contamination Output Code:
Standard: ISO 4406:1999 or SAE AS 4059(D)

Self-Diagnosis:
Continuously with error indication via status LED

Max Pressure:
3500 psi (241 bar) max

Sensor Flow Rate:
30 to 300 ml/min

Permissible Viscosity Range:
0 to 4635 SUS (1 to 1,000 cSt)

Fluid Temp. Range:
32°F to 185°F (0°C to 85°C)

Power Supply Voltage:
9 to 36 VDC residual ripple <10%

Power Consumption:
3 Watt max

Electrical Outputs:
4 to 20 mA Analog
RS485 for communication with FluMoS Light Software

Electrical Specifications:
4 to 20 mA Analog output (max burden 330 Ω)
Limit switching output (Power MOSFET): max. current 1.5A

Ambient Temp. Range:
-22°F to 176°F (-30°C to 80°C)

Storage Temp. Range:
-40°F to 176°F (-40°C to 80°C)

Relative Humidity:
95%, non-condensing max

Seal Material:
Mineral Oil: Viton®

Electrical Safety Class:
III (low voltage protection)

IP Class:
IP67

Features

- Measures particles in three sizes: >4, >6 and >14 digitally displayed
- Display and keypad can be rotated
- ISO or SAE codes can be output in 4-20 mA analog signal
- Compatible with standard mineral fluids

What's Included

- TCM-D-H-A-M (4-20mA only)
- Manifold, TCM-C-3M
- 2 pcs. 4mm 1620 microflex hose (SAP #7612175)
- TWS-C (optional)
- TCM & TWS-C (optional) Power & Communication Cable(s) and 2 test points (p/n 7622704) for installation into hydraulic system
- FluMos software

Ordering Information:

Part Number	Description	SAP Number	List Price
TCM-FC	Sensor w/display, petroleum based fluids, 4-20 mA w/flow control flange	7623773	$2,745.00
TCM-FC-W	Sensor w/display, petroleum based fluids, 4-20 mA w/flow control flange and water sensor without display	7623774	$3,343.00

Description

The TMU is a portable service unit and is designed for measurement of solid particle contamination and water saturation in hydraulic systems. It is designed for temporary operation up to a maximum of 30 minutes followed by a rest period of 10 minutes and is not intended for continuous operation.

Specifications

Self-Diagnosis:
Continuously with error indication via status LED and display

Measured Value:
ISO Code/ SAE Class/ NAS Class/ Saturation level/ Temp.

Measuring Range:
Display from ISO code 25/24/23 to 9/8/7
Calibrate within the range ISO 13/11/10 to 23/21/18
Saturation level 0 to 100%
Temperature -13°F to 212°F (-25°C to 100°C)

Accuracy:
± ½ ISO class in the calibrated range/ ± 2% Full scale max.

Seal Material:
Viton®

Ambient Temp. Range:
32°F to 113°F (0°C to 45°C)

Storage Temp. Range:
-40°F to 176°F (-40°C to 80°C)

IP Class:
IP50 in operation IP67 closed

Operating Pressure:
In: -7.25 to 650 psi (-0.5 to 4.5 bar)
Out: 0 to 7.5 psi (0 to 0.5 bar)

Operating Pressure w/ Adapter for Pressure Lines:
In: 217 to 5000 psi (15 to 345 bar)
Out: 0 to 7.5 psi (0 to 0.5 bar)

Pressure Max.:
5000 psi (345 bar)

Maximum suction Ht.:
39" (1 m)

Permissible Viscosity Range:
46 to 1622 SUS (10 to 350 cSt)

Fluid Temperature Range:
32°F to 158°F (0°C to 70°C)

Power Supply Voltage:
24 VDC ± 20%, residual ripple < 10%

Max. Power/Current Consumption:
100 Watt /4 A

Interface:
Plug connection, 5 pole, male, M12x1 USB

Weight:

Features

- Particulate contamination is detected with an optical measurement cell
- Automatic measurement and display of cleanliness ratings as ISO 4406:1999; SAE AS 4059, and NAS 1638
- Measurement Accuracy +/- 1/2 ISO code
- Supply voltage 100-240VAC 50-60 Hz
- Integrated pump for automatic control of oil flow
- Viscosity range: 46 to 1622 SUS (10 to 350 cSt)
- Pressure stable up to 5000 psi (350 bar) max
- Water saturation (10 - 100%)
- Measures particles in three sizes: >4, >6 and >14 digitally displayed
- FluMos software

Ordering Information:

Part Number	Description	SAP Number	List Price
TMU-1-AS-K	With water sensor, Viton® seals,100-240VAC 50/60 hz,	7624325	$8,325.00

Mobile Filter System | MFDBC Basic Cart

Description

The Schroeder Mobile Filter System - Basic Cart is a compact, self-contained, "light-duty" filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for pre-filtering new fluids, since new fluids often have contamination levels significantly higher than that recommended for most hydraulic systems.

Specifications

Flow Rating:
10 gpm (37.9 L/min) max

Viscosity Range:
46-1,000 SUS (6-216 cSt)

Hose Pressure Rating:
30 psi (2.0 bar) @ 150°F (65.6°C)
Full vacuum @ 150°F (65.6°C)

Fluid Temperature:
25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting:
Cracking: 25 psi (1.7 bar)

Material:
Element Case: Aluminum

Seal Material:
Buna N

Compatibility:
All petroleum based hydraulic fluid. Contact factory for use with other fluids.

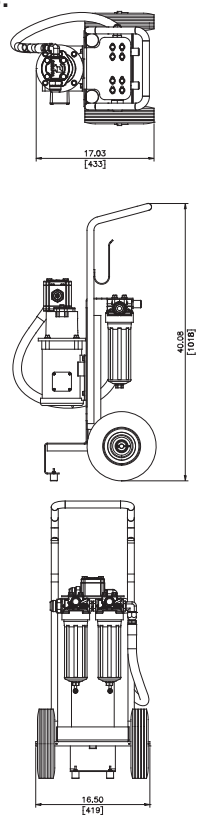
Motor
115 VAC Single phase 1 hp

Weight:
102 lbs. (46.3 kg)

Features

- Compact size, easily transported
- Top-ported filter provides easy element service
- D10 Auto-Reset Indicator indicates when filter elements require a change
- Drip pan catches oil before it falls to the ground
- Hoses and connection tubes included

Dimensions:



Ordering Information:

Part Number	Description	SAP Number	List Price
MFD-BC-1-09-H10-H05	10 and 5 micron elements, 115 volts	7616423	$1,595.00
Replacement Elements	**Description**	**SAP Number**	**List Price**
9GW	Water Removal Element	7604551	$35.36
9GZ3	3-Micron Element	7604564	$43.68
9GZ5	5-Micron Element	7604569	$40.56
9GZ10	10-Micron Element	7604553	$38.48
9GZ25	25-Micron Element	7604559	$38.48

Description

The Schroeder Mobile Filtration System is a compact, self-contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for pre-filtering new fluids, since new fluids often have contamination levels significantly higher than that recommended for most hydraulic systems.

Specifications

Flow Rating:
14 gpm (53.0 L/ min) max

Viscosity Range:
40-1,000 SUS (4-216 cSt)

Hose Pressure Rating:
30 psi (2.0 bar) @ 150°F (65.6°C)
Full vacuum @ 150°F (65.6°C)

Fluid Temperature:
25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting:
Cracking: 30 psi (2 bar)

Material:
Manifold and cap: Cast aluminum
Element case: Steel

Compatibility:
All petroleum based hydraulic fluid. Contact factory for use with other fluids.

Motor:
115 VAC Single phase 1-1/2 hp (14 gpm)

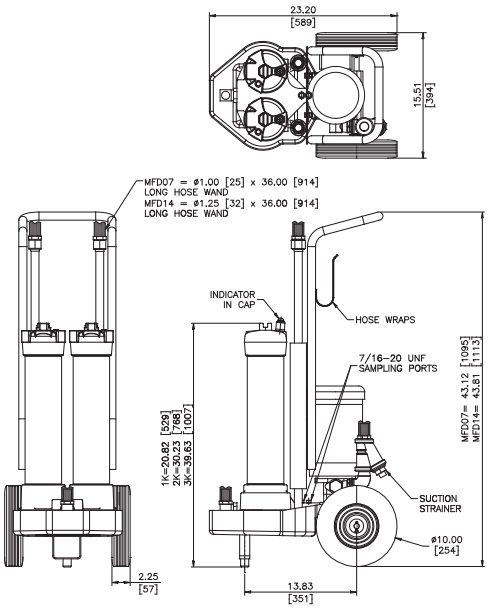
Element Change Clearance:
27.5" (698.5 mm)

Weight:
MFD: 227 lbs (103 kg)

Features

- Modular base eliminates hoses between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- Drip pan catches oil before it falls to the ground
- D5 Dirt Alarm® indicates when filter element needs changed
- Hoses and connection tubes included

Dimensions:



Ordering Information:

Part Number	Description	SAP Number	List Price
MFD-1-27-GXX-B-14	Dual 27" GeoSeal® housings without elements, Buna seals, 115 Volts, 14 GPM. Elements must be ordered as a separate line item.	7616329	$2,431.00
Replacement Elements	**Description**	**SAP Number**	**List Price**
27KGZ3	27" KGZ 3 micron Z-Media® (GeoSeal®)	7629165	$163.83
27KGZ5	27" KGZ 5 micron Z-Media® (GeoSeal®)	7629166	$157.83
27KGZ10	27" KGZ 10 micron Z-Media® (GeoSeal®)	7629163	$153.32
27KGZ25	27" KGZ 25 micron Z-Media® (GeoSeal®)	7629164	$153.32
27KGW	27" KG Water Removal (GeoSeal®)	7629161	$89.29

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

Description

The Filtration Station® (FS) is capable of flushing, filtering, and monitoring ISO cleanliness with user-defined, automatic shutdown features. The FS is designed to transfer fluid through two (2) K9 filters in series for staged particulate or water/particulate removal.

Specifications

Flow Rating:

9 gpm (34 l/min) fixed

Motor:

1.5 HP - 15 amps at 120 volts AC

Viscosity Range:

60-1,000 SUS (10-216 cSt)

Fluid Temperature Range:

-20°F to 150°F (-29°C to 65°C)

Bypass Valve Setting:

Cracking: 30 psi (2 bar) x 2

Compatibility:

All petroleum based hydraulic fluid. Contact factory for use with other fluids.

Element Change Clearance:

8.50" (215 mm) 1K

Weight:

245 lbs (112 kg)

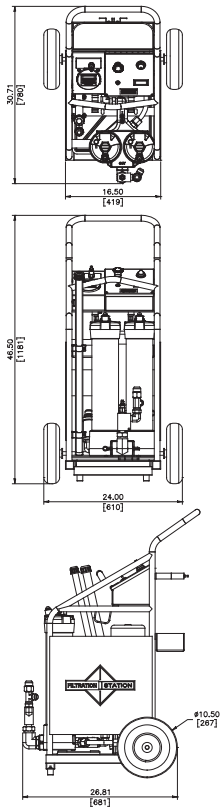
Protection Class:

IP54 (DIN 40050)

Features

- Real time monitoring of ISO cleanliness classes
- Automatic shutdown when user defined ISO codes are reached
- USB port allows the ISO code data to be downloaded for further processing and/or printing
- 30 mesh suction strainer and 230 micron filter are included to protect the particle monitor from clogging
- Water sensor allows real-time water saturation of the fluid to be displayed
- Bypass valve allows cart to be used as a transfer cart
- Single lift point
- Plastic removable drip pan
- Measures particles in three sizes: >4, >6 and >14 digitally displayed
- FluMos Software

Dimensions:



Ordering Information:

Part Number	Description	SAP Number	List Price
FS-A-1-27-G10-G05-V-9-W	Dual 27" elements (10 and 5 micron GeoSeal® elements) Viton® seals, 9 GPM with water sensor, 115 volts	7634421	$11,165.00

Replacement Elements	Description	SAP Number	List Price
27KGZ3V	27" KGZ 3 micron Z-Media® (GeoSeal®) Viton®	7634473	$179.82
27KGZ5V	27" KGZ 5 micron Z-Media® (GeoSeal®) Viton®	7603035	$173.83
27KGZ10V	27" KGZ 10 micron Z-Media® (GeoSeal®) Viton®	7603028	$169.32
27KGZ25V	27" KGZ 25 micron Z-Media® (GeoSeal®) Viton®	7634474	$169.32
27KGWV	27" KG Water Removal (GeoSeal®) Viton®	7603025	$105.29

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

Description

Schroeder's off-line Kidney Loop System is a stationary version of the Mobile Filtration System. It is a compact, self-contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. This off-line system can be used to supplement in-line filters when adequate turnover cannot be achieved in the system. It is also ideal for free water removal.

Specifications

Flow Rating:

14 gpm (53.0 L/min) max

Viscosity Range:

40-1,000 SUS (4-216 cSt)

Fluid Temperature:

25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting:

Cracking: 30 psi (2 bar)

Compatibility:

All petroleum based hydraulic fluid. Contact factory for use with other fluids.

Motor:

115 VAC single phase 1-1/2 hp (14 gpm)

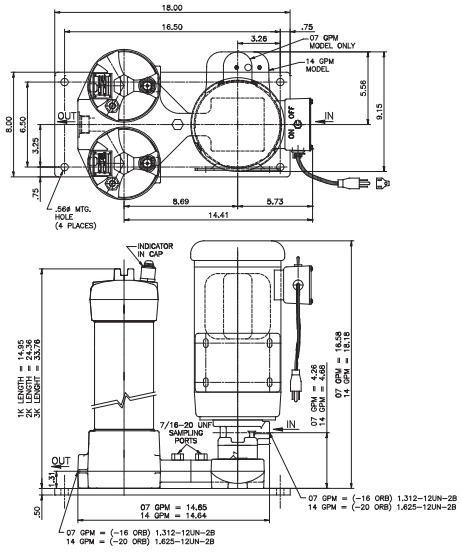
Weight:

KLD-1-27: 161 lb (73.2 kg)

Features

- Modular base eliminates connections between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- Suction strainers to protect pump
- D5 Dirt Alarm® indicates when filter element needs changed
- Two upstream 7/16 – 20 UNF sampling port included on all models

Dimensions:



Ordering Information:

Part Number	Description	SAP Number	List Price
KLD-127-GXX-B-14	Dual 27" GeoSeal® housings without elements, Buna seals, 115 Volts, 14 GPM. Elements ordered as a separate line item	7634422	$1,970.00
Replacement Elements	**Description**	**SAP Number**	**List Price**
27KGZ3	27" KGZ 3 micron Z-Media® (GeoSeal®)	7629165	$163.83
27KGZ5	27" KGZ 5 micron Z-Media® (GeoSeal®)	7629166	$157.83
27KGZ10	27" KGZ 10 micron Z-Media® (GeoSeal®)	7629163	$153.32
27KGZ25	27" KGZ 25 micron Z-Media® (GeoSeal®)	7629164	$153.32
27KGW	27" KG Water Removal (GeoSeal®)	7629161	$89.29

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

Triton Dehydration Station® | Triton-A

Description

Water contamination in hydraulic systems can severely reduce the life of hydraulic systems and fluids. The Triton Dehydration Station® is designed to eliminate 100% of free and up to 90% of dissolved water from small reservoirs, barrels, and gear boxes. Using a patented mass transfer process, the Triton Dehydration Station® efficiently removes water and particulate contamination quickly in all environments.

Specifications

Dimensions:
44"H x 20"W x 37"D

Dry Mass:
295 lbs (134 kg)

Inlet Connections:
SAE-16

Outlet Connections:
SAE-16

Flow Rate:
90 gallons/hour or 1.5 gpm

Inlet Pressure:
Atmospheric

Outlet Pressure:
to 40 psi (2.76 bar)

Fluid Service Temperature:
40° F to 140°F (4°C to 71°C)

Fluid Viscosity:
70- 1000 SUS (13 - 215 cSt)

Power Supply:
110 VAC, 60 Hz, 12 amp

Attainable Water Content:
< 50 PPM

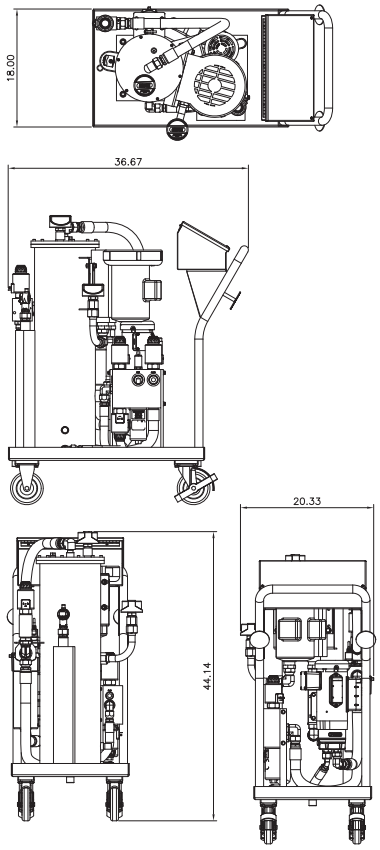
Relative Humidity Display:
Standard, 0-99% Range

Construction:
Base Frame and Vessel: Stainless Steel
Seals: Viton®

Features

- High Dewatering Rates and particulate removal in one system
- Simple Controls; RUN/DRAIN modes
- Reduce fluid recycling cost
- No expensive vacuum pump to service and replace
- Patented mass transfer technology uses ambient air to optimize and control dewatering rates
- Compact, efficient footprint
- Remove free and dissolved water
- Highly effective in low and high humidity elements

Dimensions:



Ordering Information:

Part Number	Description	SAP Number	List Price
TDSAVMAB031	Viton® seals, 1.5 GPM flow, mobile base, 115 Volts, 3 micron element	7623780	$14,550.00
Replacement Elements	**Description**	**SAP Number**	**List Price**
9VZ1V	1 micron Z-Media® Viton®	7604638	$52.62
9VZ3V	3 micron Z-Media® Viton®	7604664	$54.46
9VZ5V	5 micron Z-Media® Viton®	7604673	$52.18
9VZ10V	10 micron Z-Media® Viton®	7628743	$52.18
9VZ25V	25 micron Z-Media® Viton®	7629445	$47.38
ABF-S40*	Air Breather Element	7627888	$31.20

*Breathers are not part of the Quick Delivery Program.

Description

Water contamination in hydraulic systems can severely reduce the life of hydraulic systems and fluids. The Triton Dehydration Station® is designed to eliminate 100% of free and up to 90% of dissolved water. The Triton-E can handle large quantities of oil from sizeable hydraulic reservoirs, lubricating circuits, totes and large gear boxes due to the high flow rate of the unit. Using a patent pending mass transfer process, the Triton Dehydration Station efficiently removes water and particulate contamination quickly in all environments.

Specifications

Dimensions:
32"W x 59"L x 70.25" H

Dry Mass:
1000 lbs (453 kg)

Inlet Connections:
1-1/2" MJIC

Outlet Connections:
1-1/4" MJIC

Flow Rate:
900 gallons/hour (15 gpm)

Inlet Pressure:
Atmospheric

Outlet Pressure:
to 125 psi (8.62 bar)

Fluid Service Temperature:
50° F to 175°F (10°C to 79°C)

Fluid Viscosity:
70-2000 SUS (13 -539 cSt)

Power Supply:
460 V/3/60 Hz, 22.5 amps w/heater

Attainable Water Content:
< 50 PPM

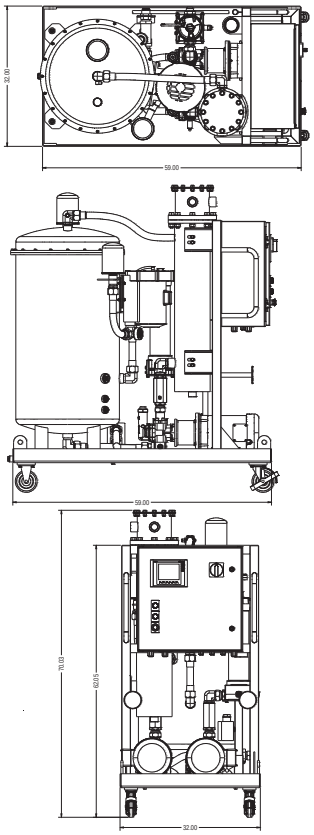
Relative Humidity Display:
Standard, 0-99% Range

Construction:
Base Frame: Carbon Steel
Vessel: Stainless Steel
Seals: Viton®

Features

- High Dewatering Rates and particulate removal in one system
- Simple Controls
- Reduce fluid recycling cost
- No expensive vacuum pump to service and replace
- Patented mass transfer technology uses ambient air to optimize and control dewatering rates
- Compact, efficient footprint
- Automatic air bleed on filter housing
- Remove free and dissolved water
- Highly effective in low and high humidity elements

Dimensions:



Ordering Information:

Part Number	Description	SAP Number	List Price
TDSEVMABG05H	Viton® seals, 15 GPM flow, mobile cart, 460 volts, with heater, 5 micron element	7623790	$40,225.00
Replacement Elements	**Description**	**SAP Number**	**List Price**
KKGZ1V	18" KGZ 1 micron Z-media (Geoseal®) Viton®	7615298	$103.57
KKGZ3V	18" KGZ 3 micron Z-media (Geoseal®) Viton®	7615301	$103.57
KKGZ5V	18" KGZ 5 micron Z-media (Geoseal®) Viton®	7615304	$89.96
KKGZ10V	18" KGZ 10 micron Z-media (Geoseal®) Viton®	7630721	$89.96
KKGZ25V	18" KGZ 25 micron Z-media (Geoseal®) Viton®	7634483	$89.96
MFB-3-M-P20*	Air Breather Element	7627930	$66.56

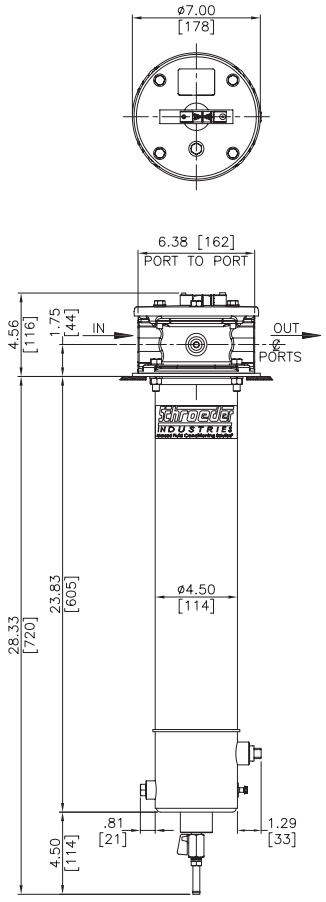
*Breathers are not part of the Quick Delivery Program.

Only GeoSeal® elements are available as part of the Quick Delivery Program. Non-GeoSeal® elements are not part of the Quick Delivery Program.

Description

A revolutionary element designed for the highest single-pass water and particulate removal efficiencies in today's ultra-low sulfur diesel (ULSD) fluids.
Protects expensive Tier 3 and Tier 4 engine components against failures caused by particulate and water transferred from bulk fuel tanks to the vehicle.

Dimensions:



Specifications

Flow Rating:
Up to 16 gpm (60 L/min) for ULSD15

Inlet/Outlet Connection:
1 ½ NPTF Standard

Max. Operating Pressure:
150 psi (10 bar)

Min. Yield Pressure:
450 psi (31 bar)

Rated Fatigue Pressure:
90 psi (6 bar), per NFPA T2.6.1-2005

Temp. Range:
-20°F to 165°F (-29°C to 74°C) standard version

Bypass Indication:
36 psi (2.5 bar) (Lower indication options available)

Bypass Valve Cracking:
40 psi (2.8 bar)

Porting Head/Cap:
Aluminum

Element Bowl:
Steel - Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)

Filter Housing Weight:
15 lbs (6.8 kg) - Base unit without options or element

Element Change Clearance:
With mounting bracket - 18" (457.2 mm) - Access from top (remove cap)

Housing Sump:
32 oz. (0.95 L)

Features

- Patent-pending, three-phase, particulate and fuel/water separation media technology
- A revolutionary element designed for the highest single-pass water and particulate removal efficiencies in today's ultra-low sulfur diesel (ULSD) fluids
- Protects expensive Tier 3 and Tier 4 engine components against failures caused by particulate and water transferred from bulk fuel tanks to the vehicle
- Allows users to achieve or exceed the particulate and water removal specifications of the injection system OEMs
- Previously acceptable industry standard products no longer provide the high-efficiency separation needed in today's ULSD fluids
- Housing design allows for field upgrade of any available option
- Schroeder Anti-Static Pleat Media (ASP®) is standard for all coalescing elements
- Pressure bypass indicator setting at 25 psi, with bypass valve cracking at 40 psi, allows for early indication before by-pass of filter for advanced time for maintenance
- In application >32°F (0°C) complete automation is achievable with fail-safe auto-drain feature using a remote 5 gallon (18L) or 20 gallon (75L) sump with alarm and auto shutdown

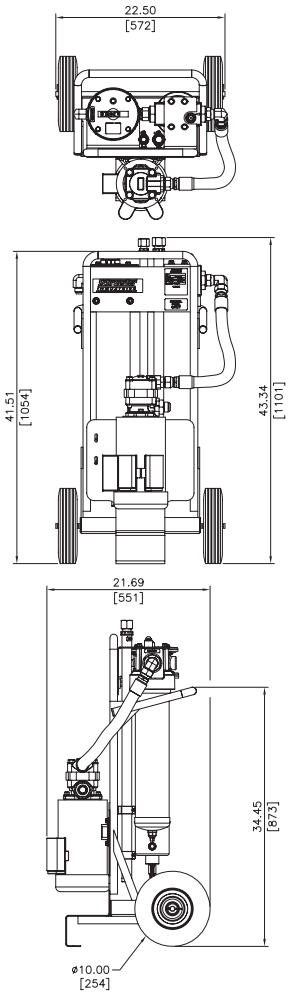
Ordering Information:

Part Number	Description	SAP Number	List Price
ICFVP24LBSEP	ICF Coalescing Filter with Bracket, Sight Glass	7612550	$670.00
Elements (Not included in ICF)	**Description**	**SAP Number**	**List Price**
C184Z5V	Coalescing Element, 5 µm	7628590	$349.00
C184Z7VE	Economy Coalescing Element, 7 µm	7632368	$198.00

Description

The BDFC provides exceptional single-pass or kidney loop diesel particulate filtration and continuous water removal. Both filters combine Schroeder's fully synthetic Excellement® Z-Media® in a particulate pre-filter, the KL3, with our patent-pending coalescing water removal filter, the ICF, to fully protect vital diesel engine components from dirt and water.

Dimensions:



Specifications

Flow Rating:
Up to 14 gpm (53 L/min) for ULSD15 & bio diesel blends

Fluid Temperature Range:
-20°F to 165°F (-29°C to 74°C) Standard

Ambient Environment Temperature Range:
-20°F to 104°F (-29°C to 40°C)

Bypass Indication:
Particulate Filter: 25 psi (1.7 bar)
Coalescing Filter: 36 psi (2.5 bar)

Bypass Valve Cracking:
Particulate Filter: 30 psi (2 bar)
Coalescing Filter: 40 psi (2.8 bar)

Materials of Construction:
Particulate Filter:
Porting Head/Cap: Cast Aluminum
Element Bowl: Element Bowl: Steel
Coalescing Filter:
Porting Head/Cap: Anodized Aluminum
Element Bowl: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)

Weight
131 lbs. (59.4 kg)

Element Change Clearance:
18" (457.2 mm) **(Elements sold with the filter cart)**

Features

- Designed with integrated particulate removal pre-filtration for maximum coalescing filter element life in the downstream housing
- Routine element change only needed on KL3 particulate filter, saving time and money
- Patent-pending, three-phase, particulate and fuel/water separation media technology
- A revolutionary element designed for the highest single-pass water and particulate removal efficiencies in today's ultra-low sulfur diesel (ULSD) fluids
- Pressure indicator setting for the coalescing ICF filter at 36 psi bypass indication, with bypass valve cracking at 40 psi, and for the KL3 particulate filter at 25 psi bypass indication with bypass valve cracking at 30 psi, allows for early indication before by-pass of filter for advanced time for maintenance
- Protects expensive Tier 3 and Tier 4 engine components against failures caused by particulate and water transferred from the bulk fuels tanks to the vehicle
- Allows users to achieve or exceed the particulate and water removal specifications of the injection system OEMs
- Previously acceptable industry standard products no longer provide the high-efficiency separation needed in today's ULSD fluids
- Schroeder Anti-Static Pleat Media (ASP®) is standard for all coalescing elements
- 10' Hoses with 3' wands
- At just 22" wide, cart will fit through standard doorways
- Pump motor is 115VAC with resettable overload and 7' power cord

Ordering Information:

Part Number	Description	SAP Number	List Price
BDFCKKZ3VVMSM	BDFC 14 GPM Filter Cart with 3 µm Particulate, C184Z5V Element, Suction Strainer, Sight Glass	7605364	$4,455.00
Elements (Included with BDFC)	**Description**	**SAP Number**	**List Price**
KKZ3V	Particulate Element, 3 µm	7628760	$103.57
C184Z5V	Coalescing Element, 5 µm	7628590	$349.00

Non-GeoSeal® Elements Are Not Part of the Quick Delivery Program.

Bulk Diesel Fuel Filter Cart | BDC

Description

The BDC provides exceptional single pass or kidney loop diesel particulate filtration and continuous water removal. All 3 filters combine Schroeder's fully synthetic media and patent pending fuel water separation technology.

Specifications

Flow Rating:
Up to 25 gpm (95 L/min) for ULSD15 & bio diesel blends

Fluid Temperature Range:
-20°F to 165°F (-29°C to 74°C) Standard

Ambient Environment Temperature Range:
-20°F to 104°F (-29°C to 40°C) Standard

Bypass Indication:

Particulate Filter: 15 psi (1.03 bar)
Coalescing Filter: 25 psi (1.7 bar)

Bypass Valve Cracking:

Particulate Filter: 20 psi (1.37 bar)
Coalescing Filter: 30 psi (2 bar)

Materials of Construction:
Porting Base: Anodized Aluminum
Element Bowl: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)
Cap: Plated Steel
Bag Housing: Stainless
Particulate Filter Housing: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)
Coalescing Filter Housing: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)

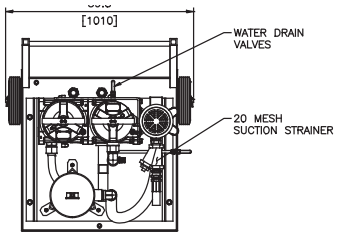
Weight
785 lbs. (356 kg)

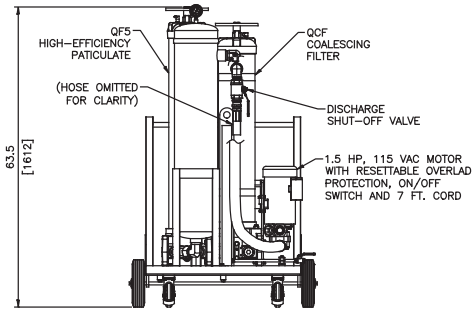
Element Change Clearance:
33.8" (858 mm)

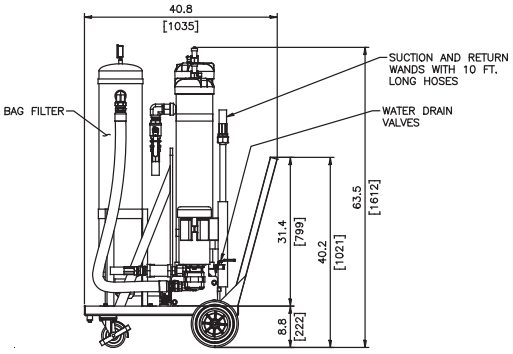
Features

- Great for kidney loop clean-up of highly contaminated reservoirs and single pass transfer
- Incorporates a bag element pre-filter down to 5 micron, for gross removal of microbial bloom contamination and rust
- Fuel and water separation media technology in a three-phase element construction for high efficiency, single-pass removal of emulsified and free-water in Ultra-low Sulfur Diesel (ULSD) and blends
- Designed because prior generation coalescing products no longer provide high-efficiency separation in ULSD and Biofuels
- 10' Hoses with 3' wand ends
- Pump motor is 115VAC with resettable overload and 7' power cord
- Helps protect expensive, vital engine components against failures caused by water contaminated fuel
- Manual water drains and up and downstream test points

Dimensions:







Ordering Information:

Part Number	Description	SAP Number	List Price
BDC39QPMLZ3VAVM	BDC 25 GPM Filter Cart with 5 µm Bag, 3 µm Particulate, C396Z5V Element, Manual Drain	7605354	$13,950.00
Elements (Included in BDC)	**Description**	**SAP Number**	**List Price**
PEF5P2PH	Bag Element, 5 µm	7618973	$7.62
39QPML-Z3V	Particulate Element, 3 µm	7603320	$547.23
C396Z5V	Coalescing Element, 5 µm	7628638	$1,170.00

Non-GeoSeal® Elements Are Not Part of the Quick Delivery Program.

Description

Mobile machines and commercial vehicles are subject to the toughest working conditions. To ensure smooth running of vehicles, and to protect both the engine and the drive system from damage, optimum diesel fuel conditioning is particularly important. Schroeder Fuel Filtration On-Board Diesel Coalescing filter offers a modern cartridge filter system design available in two configurations, in order to protect equipment operators from failures, breakdowns and expensive service interventions.

Specifications

Flow Rating:
HDP-BC: Up to 160 gpm (600 L/min)
HDP-HT: Up to 160 gpm (600 L/min)

Operating Pressure:
14.5 psia, (<1 bar) suction side application

Temp. Range:
HDP-BC: -40°F to 194°F (-40°C to 90°C)
HDP-HT: -4°F to 194°F (-20°C to 90°C)

Nominal Voltage:
24V DC (12V DC is optional for heater or water sensor)

Rated Power fuel Preheating:
300W

Weight
340 BC: 5.1 lbs (2.3 kg)
600 BC: 6.8 lbs (3.1 kg)
600 HT: 9.4 lbs (4.25 kg)

Water Separation Efficiency:
>95% to ISO CD 16332

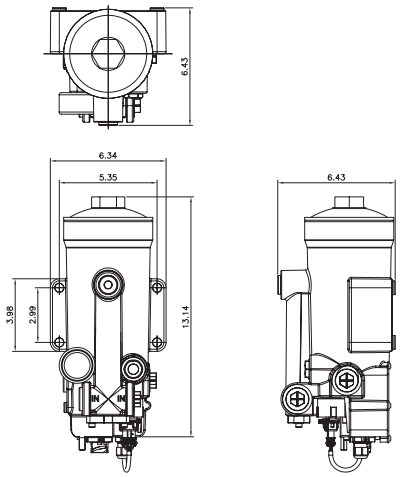
Connection Size:
340 BC: M22 x 1.5
600 BC: M27 x 2.0
600 HT: G 3/4" (BSPP)

Features

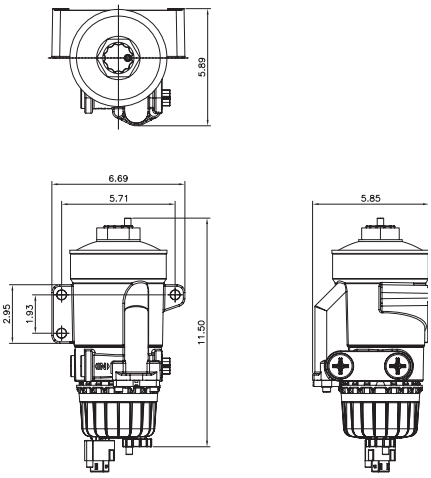
- HDP-BC: Manual water drain
- HPD-HT: Automatic water drain
- Optional fuel pre-heater and water sensor
- Small envelope size offers greater flexibility in mounting locations
- Low investment cost due the economical design
- Long service life of the element yields low operating costs
- Seamless installation due to the plug and play approach
- Easy adaption to the on-board power supply
- Unsurpassed water removal for ULSD

Dimensions:

HDP-HT



HDP-BC



Ordering Information:

Part Number	Description	SAP Number	List Price
HDP KF1 340 BC1 10 W 1.1	HDP 90 GPH Manual Water Drain Fuel/Water Separator, 10 µm Particulate Removal	1299132	$231.00
HDP KF1 600 BC1 10 W 1.1	HDP 160 GPH Manual Water Drain Fuel/Water Separator, 10 µm Particulate Removal	1304744	$249.00
HDP KF1 600 HT1 10 A 1.1 /-AS1	HDP 160 GPH Automatic Water Drain Fuel/Water Separator, 10 µm Particulate Removal	1313769	$1,105.00
Replacement Elements:	**Description**	**SAP Number**	**List Price**
0340 BC1 007 KF1	Replacement Element, 7 µm Particulate & Coalescing for 90 GPH Manual Drain Housing	1303845	$68.00
0340 BC1 010 KF1	Replacement Element, 10 µm Particulate & Coalescing for 90 GPH Manual Drain Housing	1299837	$72.00
0340 BC1 030 KF1	Replacement Element, 30 µm Particulate & Coalescing for 90 GPH Manual Drain Housing	1310954	$78.00
0600 BC1 007 KF1	Replacement Element, 7 µm Particulate & Coalescing for 160 GPH Manual Drain Housing	1304958	$74.00
0600 BC1 010 KF1	Replacement Element, 10 µm Particulate & Coalescing for 160 GPH Manual Drain Housing	1304959	$82.00
0600 BC1 030 KF1	Replacement Element, 30 µm Particulate & Coalescing for 160 GPH Manual Drain Housing	1304960	$89.00
0600 HT1 007 KF1	Replacement Element, 7 µm Particulate & Coalescing for 160 GPH Automatic Drain Housing	1303618	$74.00
0600 HT1 010 KF1	Replacement Element, 10 µm Particulate & Coalescing for 160 GPH Automatic Drain Housing	1299319	$82.00
0600 HT1 030 KF1	Replacement Element, 30 µm Particulate & Coalescing for 160 GPH Automatic Drain Housing	1306051	$89.00

Diesel Fuel Quality Analysis Kits

Fuel analysis can identify potential causes for fuel filter plugging, smoking, loss of power, poor injector performance, malfunctioning throttle position sensors and sticking valves. Testing also confirms a diesel fuel's sulfur content, biodiesel content and compliance with manufacturer specifications and standards for cleanliness that could affect equipment warranty requirements.

Schroeder Industries offers Diesel Fuel Quality Analysis Kits.

All packages include:
- A pre-paid testing form
- The required number of fuel containers for desired test

Contamination Tests	SAP Number: 02098006	Includes	Sample Amount
Identifies contamination from external sources - oil, biological growth, water, sediment		ICP	2mL
		Flash Point	200mL
Identifies contamination to be the result of a change in the fuel's physical properties - low thermal stability may require use of an asphaltene conditioner		Thermal Stability	120mL
		Water and Sediment	200mL
		Bacteria, Fungi, Mold	120mL
Cleanliness Tests	**SAP Number: 02098008**	**Includes**	**Sample Amount**
Identifies water contamination - can lead to smoking, biological growth and corrosion		Karl Fischer	10mL
		Particle Count	80mL
Identifies particulate contamination - can result in extreme wear in high pressure fuel systems which may cause premature injector failure			

Ordering Information:

Part Number	Description	SAP Number	List Price
Cleanliness Test	Fuel Test Kit - Particle Count & Karl Fischer	2098008	$42.00
Contamination Test	Fuel Test Kit - ICP, Flash Point, Thermal Stability, Water & Sediment, Bacteria-Fungi-Mold	2098006	$227.00

1. General Terms

Schroeder Industries: For all purposes hereof, "Schroeder Industries" shall mean, collectively, Schroeder Industries CORP., and Schroeder Industries both Pennsylvania corporations.
Buyer: For all purposes hereof, "Buyer" shall mean the direct purchaser of the Goods.
Goods: These TERMS AND CONDITIONS OF SALE ("Sale Terms") shall apply to any and all sales of goods ("Goods") by Schroeder Industries.
Payment Terms: All payments shall be due and payable within thirty (30) days of the invoice date. Any amounts payable to Schroeder Industries hereunder, which are not paid within thirty (30) days of the invoice date shall thereafter bear interest at the rate of one and one-half percent (1.5%) per month or the maximum amount permitted by law, whichever is less. Interest on overdue amounts shall be calculated from the original payment due date.
Delivery And Packing: All delivery dates are approximate and are subject to change and extension as Schroeder Industries shall deem necessary and all Goods shall be packaged as separately agreed to by the parties.
Ex-Works: Except as otherwise agreed, delivery of all Goods shall be"Ex-Works" at Schroeder Industries's designated facility. Buyer shall be solely responsible for all transportation costs, insurance and risk of loss.
Routing: Each purchase order shall specify Buyer's preferred routing. Buyer will be solely responsible for all freight charges. Buyer will pay all freight charges in accordance with the terms of Buyer's designated freight carrier, including without limitation, any advance payments required by Buyer's designated freight carrier. Returned Goods (Warranty Claim): See Section 2 of these Sale Terms for the return of Goods resulting from a warranty claim.
Cancellations: Buyer shall not be permitted to cancel any purchase orders submitted to Schroeder Industries except as follows: (1) Schroeder Industries, in its sole discretion, provides prior written approval of the cancellation to Buyer; and (2) Buyer pays a cancellation charge of at least 25% of the original purchase price of the canceled Goods (as determined by Schroeder Industries, in its sole discretion).
Warranty and Liability: Please refer to the "Schroeder Industries Limited Warranty and Limitation of Liability" and the "Schroeder Industries Intellectual Property Terms and Conditions", respectively Section 2 and Section 3 of these Sales Terms.
Limitation of Actions: Any action for any loss or damage with respect to the Goods or services covered hereunder must be commenced by Buyer within one year after Buyer's cause of action has accrued.
Material Costs: If raw material costs increase by more than ten percent (10%), Schroeder Industries reserves the right to deliver notice of such cost increase to Buyer and to renegotiate the product sales prices within a thirty (30) day period from the date of such notice; provided that in the event that Schroeder Industries and Buyer do not agree on the renegotiated sales price within such thirty (30) day period, Schroeder Industries shall have the right to cancel the applicable purchase order(s) and be released from any and all obligations and liabilities under such purchase order(s), including without limitation any obligation to manufacture, deliver and supply the Goods referenced therein, without penalty, payment, premium or other obligation or liability of any kind.
Taxes: Schroeder Industries's prices for the Goods do not include any sales, use, excise, or any other taxes, or any other charges imposed by federal, state, local or foreign governments on the manufacture, sale, shipment, import, export or use of the Goods or service (other than income taxes) all of which shall be paid by Buyer unless Buyer provides to Schroeder Industries a tax-exemption certificate acceptable to the relevant taxing authorities. Buyer shall defend, indemnify and hold Schroeder Industries harmless from and against all liabilities for such taxes or charges and all attorney's fees or costs incurred by Schroeder Industries in connection there with.

2. Schroeder Industries Limited Warranty and Limitation of Liability

For the limited purpose of this Limited Warranty and Limitation of Liability, Schroeder Industries both Pennsylvania corporations, are hereinafter referred to collectively as "Schroeder Industries". However, Schroeder Industries provide this Limited Warranty and Limitation of Liability in their individual capacity, on their own behalf and separate from the other corporation. Each corporation is solely responsible for its products and warranty, and any other obligation pursuant to any agreement or otherwise. Schroeder Industries will not be responsible for the obligations of the other company.

For purposes hereof, "Warranty Period" shall mean: the shorter of: (a) eighteen (18) months from the date of Schroeder Industries's shipment of the Goods to the Buyer or (b) twelve (12) months from the date the product is first placed in operation ; provided that with respect to repairs made by Schroeder Industries to Goods or any replacement Goods provided by Schroeder Industries pursuant to the limited warranty set forth herein, the Warranty Period shall be the longer of: (i) any remaining portion of the original Warranty Period applicable to such Goods as set forth above or (ii) three (3) months from the repair date or replacement date.

Schroeder Industries warrants that the Goods shall be free from defects in material and workmanship, under normal use and service, during the Warranty Period.
Schroeder Industries will, at its option, refund the purchase price, repair or replace any product, which under normal conditions proves to be defective in material or workmanship during the Warranty Period. No charge will be made for parts or for labor provided by Schroeder Industries with respect to defects covered by this warranty. However, this warranty does not cover any costs, expenses or damages related to the removal and reinstallation of any Goods, whether or not proven defective.
To obtain protection under this warranty, Buyer must provide Schroeder Industries with immediate written notice of the alleged defect in the Goods along with the purchase receipt or other proof that the Goods are within the Warranty Period.
Schroeder Industries shall have no obligation for any defective Goods unless and until: (1) Schroeder Industries has completed an inspection of the Goods; (2) Schroeder Industries has determined the existence of a defect during the Warranty Period; and (3) Schroeder Industries has issued a RGA # for the return of the Goods. Buyer shall be obligated for all costs, expenses, charges and risk of loss for shipment of the non-conforming product to Schroeder Industries. However, shipping charges will be credited to Buyer if and to the extent that Schroeder Industries accepts the warranty claim.
Specifically excluded from this warranty are any claims arising as a result of improper application, use, neglect, abuse, or unauthorized service of parts or Buyer's failure to comply with all installation, operation and maintenance requirements and specifications set forth in any operating manual for the Goods and other documentation related to the Goods provided to Buyer by Schroeder Industries.
Schroeder Industries and/or any affiliate or related company will not be liable under any circumstances for any consequential, incidental, special, punitive, exemplary or other damages (including, but not limited to, damages resulting from commercial or economic loss) or costs and expenses (including, but not limited to, attorneys' fees and litigation costs), incurred as a result of any claim whether based on breach of warranty or otherwise.
In no event shall Schroeder Industries's liability exceed the cost of repairing or replacing the Goods which give rise to any claim or refunding the purchase price of the Goods which give rise to any claim.
THE WARRANTY SET FORTH HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
Any USE, sale, resale, lease, assignment or other transfer of Goods is expressly subject to THE ABOVE STATED Schroeder Industries LIMITED WARRANTY AND LIMITATION OF LIABILITY.
No attempt to alter, amend or extend this warranty and limitation of liability shall be effective unless in writing and signed by an executive officer of Schroeder Industries.

3. Schroeder Industries Intellectual Property Terms and Conditions

Trademarks: All trademarks, trade names, or other identifying marks (collectively referred to as the "Marks") now or hereafter registered or used by Schroeder Industries are its property and Buyer's use of these Marks must be approved in advance in writing by Schroeder Industries and shall be limited to use on or in connection with Schroeder Industries's products.

Schroeder Industries reserves the right to review, approve or restrict the use of all printed materials bearing any Schroeder Industries Marks. Buyer shall, under no circumstances use any Schroeder Industries Marks as part of a corporate name. If Buyer is required to register under any statute for registration of a fictitious business name bearing any Schroeder Industries Marks, Buyer shall register in a form approved by Schroeder Industries. Any use of any Schroeder Industries Marks shall inure to the benefit of Schroeder Industries.

Copyrights: Any written materials supplied by Schroeder Industries are its property and Buyer's use of these materials must be approved in writing by Schroeder Industries. Schroeder Industries at all times reserves the right to review, approve or inspect the use of all supplied written materials.

Patents: Schroeder Industries, at its sole discretion, may prosecute any infringement of Schroeder Industries patents. In the event that Schroeder Industries elects to prosecute alleged patent infringements, Buyer shall render such assistance to Schroeder Industries as may be reasonably necessary to carry out such prosecution. Furthermore, Buyer shall immediately inform Schroeder Industries of any known infringements of Schroeder Industries's patents and of any and all known or claimed patent infringements relating to Goods supplied or manufactured by Schroeder Industries.

Warranties and Limits of Liabilities: Schroeder Industries MAKES NO WARRANTY WITH RESPECT TO AND SHALL NOT BE LIABLE TO BUYER FOR ANY DAMAGES RELATING TO ANY TRADEMARK, PATENT AND/OR OTHER INTELLECTUAL PROPERTY INFRINGEMENT ARISING FROM: (i) GOODS MANUFACTURED ACCORDING TO BUYER'S DESIGN OR SPECIFICATIONS; AND (ii) USE OF THE GOODS IN CONJUNCTION OR COMBINATION WITH ANY OTHER GOODS NOT FURNISHED BY Schroeder Industries WHERE INFRINGEMENT
WOULD NOT HAVE OCCURRED BUT FOR SUCH USE. With respect to any claimed infringements arising out of (i) or (ii) above, Buyer shall indemnify Schroeder Industries for any and all losses and damages incurred by Schroeder Industries as a result thereof. Schroeder Industries SPECIFICALLY DISCLAIMS ANY LIABILITY WITH RESPECT TO PROCESS PATENTS OF OTHERS INVOLVING THE MANNER IN WHICH THE GOODS MAY BE INSTALLED, APPLIED OR USED.

Where Schroeder Industries Goods are adjudged by a court of competent jurisdiction to infringe upon any trademark, patent or other intellectual property right, or where Schroeder Industries written materials are adjudged to infringe upon any copyright, Schroeder Industries shall have the right to repair, replace or otherwise remove the patent, trademark, copyright or other intellectual property infringement. In such circumstances, Schroeder Industries's liability is limited to the refund of the cost of the Goods or the written materials. In any and all circumstances, Schroeder Industries shall not be responsible for any consequential, incidental, special, punitive, exemplary or other damages.

4. Prohibited Uses of Goods

Without the prior written consent of an authorized Schroeder Industries executive officer, Buyer shall not use, sell, lease, assign or otherwise transfer any Goods , or otherwise permit any Goods to be used, for purposes of, or in connection with, any of the following applications (hereafter "Excluded Applications").

1. Manufacturing, assembling or production of aircraft products including, but not limited to:
    a. Aircraft (including missile or spacecraft), and any ground support or control equipment used therewith;
    b. Any product used in or connected with, or incorporated into aircraft, aircraft parts, aircraft equipment or aircraft accessories including ground handling tools or equipment; and
    c. Any products used at an airport for the purposes of guidance, navigation or direction of aircraft.
2. Nuclear Energy applications including, but not limited to:
    a. Any furnishing of materials, parts or equipment in connection with maintenance, operation or use of any nuclear facility; and
    b. Furnishing products that will be used in any facility that handles, processes, uses, stores, transports or disposes of nuclear material including spent nuclear fuel or waste.

Buyer is encouraged to contact Schroeder Industries to evaluate any potential use of Schroeder Industries Goods for any Excluded Applications. Buyer shall indemnify, defend and hold Schroeder Industries harmless from and against any and all claims and damages incurred as a result of the use of Schroeder Industries Goods for any Excluded Applications unless Buyer receives the prior written approval of a Schroeder Industries executive officer authorizing the use of Goods for any Excluded Applications.

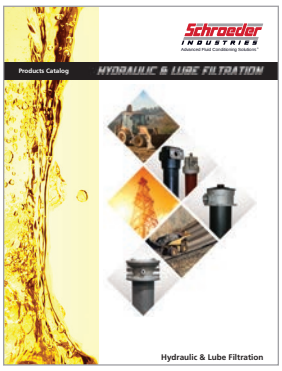
5. Security Agreement: Credit and Collection

To secure payment of all sums due Schroeder Industries hereunder or otherwise, Schroeder Industries shall retain a security interest in the Goods delivered hereunder and this contract shall be deemed a security agreement under the Uniform Commercial Code. Buyer authorizes Schroeder Industries as its attorney to execute and file on Buyer's behalf all documents Schroeder Industries deems necessary to perfect such security interest. Schroeder Industries is relying upon Buyer's representation of solvency and if Schroeder Industries at any time reasonably believes that Buyer is insolvent or that Buyer's credit is impaired, Buyer shall be in material breach hereof and Schroeder Industries may, without liability to Buyer, withhold performance hereunder, change the payment terms and/or repossess Goods heretofore delivered. Title to the Goods covered hereby shall remain in Schroeder Industries until full payment is received. Schroeder Industries may charge Buyer finance, service, or late charges in an amount no greater than allowed by law, and if Buyer fails to make payment when due, Buyer shall be liable to Schroeder Industries for all costs of collection including attorney's fees.

6. End User Responsibility

Except as otherwise provided in these Schroeder Industries Sales Terms, Buyer shall be solely responsible to all end-users of the Goods for any and all claims and actions related to the use of the Goods. Buyer shall indemnify, defend and hold Schroeder Industries harmless from and against any and all such claims and actions.

Notes

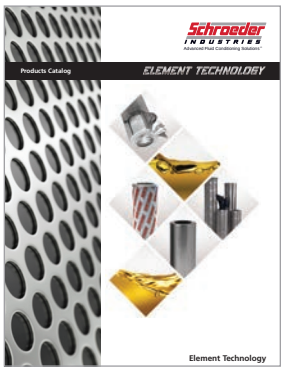


Hydraulic &Lube Filtration | L-2520

- High Pressure Filters (1,500-6,500 psi) / High Pressure Reverse Flow Filters
- Stainless Steel (up to 15,000 psi)
- Medium Pressure Filters (500-1,500 psi)
- Low Pressure Filters (up to 500 psi)
- Suction Filters
- Manifold Cartridge Kits and Filters
- Custom-engineered solutions

Filter Systems | L-2681

- De-Watering and Vacuum Dehydration Units
- Asset Management Filter Carts
- Off-line Mobile and Stationary Skid Systems with multiple power options
- TestMate® Series for condition monitoring
- Trouble Check Plus Fluid Analysis and EasyTest Series
- Particle Counters & Metal Detection
- HTB Hydraulic Test Benches



Element Technology | L-2520

Our exceptional elements are tested to ensure fabrication integrity in the manufacturing process. They are also tested for efficiency and dirt holding capacity in a multi-pass test stand, equipped with in-line particle capabilities, which are calibrated to ISO standards.

Featured types:

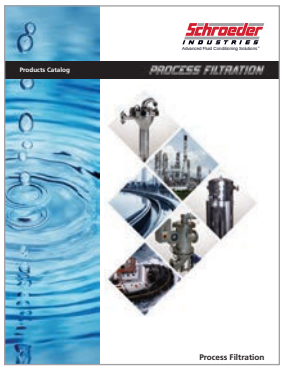
- GeoSeal®
- DirtCatcher®
- BestFit®
- Z-Media®
- ASP® Media
- E-Media
- W-Media
- Private Label Branding

Fuel Filtration | L-2889

- Fuel Filtration, Biofuel Filtration and Pre-Treatment Products
- Dry Wash Purification Systems and Cold Soak Filtration
- Coalescing Filtration
- Final Polishing Systems
- Fuel Quality Control Products
- Bulk Diesel Skids
- On-Board Diesel Filtration
- Custom Fuel Skids

Accessories | L-4329

- Plastic Reservoirs (and Tank Straps) - Custom & Standard
- Ball Valves
- Test Equipment PTF
- Indicators
- Test Points
- Oil Sight Glasses
- Electronic Sensors



Process Filtration | L-2728

- Automatic Backflushing Filters
- Automatic Twist Flow
- Bag Housings and Elements
- Cartridge Housings and Elements
- Rolling Media Filter
- Oil and Gas Products
- Mining Specific Products
- Custom Process Skids

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