

Stainless Steel Base-Ported Filter

SSQLF15



Features and Benefits

- In-line version also available
- Element changeout from the top minimizes oil spillage
- Offered with standard Q and QPML deep-pleated coreless elements in 16" and 39" lengths with Viton® seals as the standard
- Offered in pipe, SAE straight thread, and flange porting
- Integral inlet and outlet test points are standard on all models
- Various Dirt Alarm® options
- All stainless steel provides compatibility with water-based fluids

500 gpm
1900 L/min
1500 psi
100 bar

GH

RLT

KF5

SRLT

K9

2K9

3K9

QF5

QF5i

3QF5

QFD2

QFD5

QF15

QLF15

SSQLF15

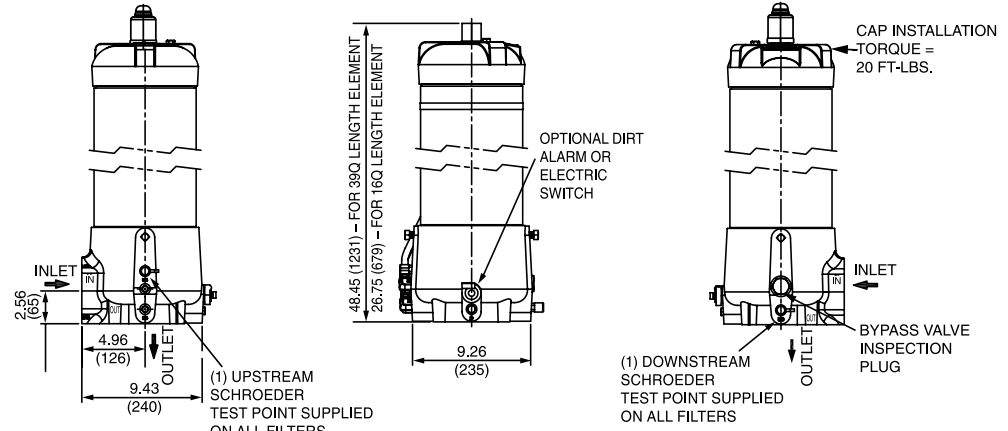
Model No. of filter in photograph is SSQLF1539QZ5F4850D5.

Flow Rating:	Up to 500 gpm (1900 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	1500 psi (100 bar)
Min. Yield Pressure:	4500 psi (310 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	Contact Factory
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 55 psi (4 bar)
Porting Base & Cap:	Stainless Steel
Element Case:	Stainless Steel
Weight of SSQLF15-16Q:	163.0 lbs. (74.0 kg)
Weight of SSQLF15-39Q:	240.0 lbs. (109.0 kg)
Element Change Clearance:	16Q 12.00" (305 mm) 39Q 33.80" (859 mm)

Filter Housing Specifications

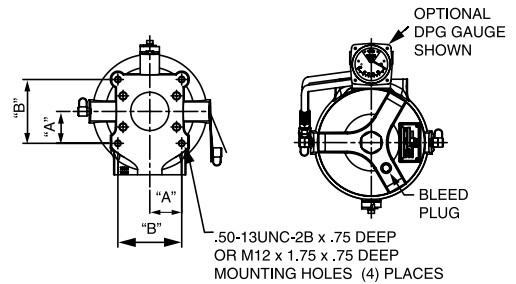
Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All E media (cellulose), Z-Media® and ASP® media (synthetic)
High Water Content	All Z-Media® and ASP® media (synthetic)
Invert Emulsions	10 and 25 µ Z-Media® and 10 µ ASP® media (synthetic)
Water Glycols	3, 5, 10 and 25 µ Z-Media® and all ASP® media (synthetic)
Phosphate Esters	All Z-Media® (synthetic) with H (EPR) seal designation and all ASP® media (synthetic)

Fluid Compatibility



DIMENSIONAL DATA		
PORT SIZE	DIM A	DIM B
1½" (38)	2.00 (51)	4.00 (102)
2" (51)	2.00 (51)	4.00 (102)
2½" (64)	2.00 (51)	4.00 (102)
3" (76)	2.00 (51)	4.00 (102)
3" (4 bolt port only)	2.50 (64)	5.00 (127)

Metric dimensions in ().



Element Performance Information & Dirt Holding Capacity

Element		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	
		$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
16Q	Z1/CLQFZ1/PMLZ1	<1.0	<1.0	<1.0	<4.0	4.2
	Z3/CLQFZ3/PMLZ3	<1.0	<1.0	<2.0	<4.0	4.8
	Z5/CLQFZ5/PMLZ5	2.5	3.0	4.0	4.8	6.3
	Z10/CLQFZ10/PMLZ10	7.4	8.2	10.0	8.0	10.0
	Z25/CLQFZ25/PMLZ25	18.0	20.0	22.5	19.0	24.0
39Q	Z1/CLQFZ1/PMLZ1	<1.0	<1.0	<1.0	<4.0	4.2
	Z3/CLQFZ3/PMLZ3	<1.0	<1.0	<2.0	<4.0	4.8
	Z5/CLQFZ5/PMLZ5	2.5	3.0	4.0	4.8	6.3
	Z10/CLQFZ10/PMLZ10	7.4	8.2	10.0	8.0	10.0
	Z25/CLQFZ25/PMLZ25	18.0	20.0	22.5	19.0	24.0

Element	DHC (gm)	Element	DHC (gm)
16Q	Z1	PMLZ1	307
	Z3	PMLZ3	315
	Z5	PMLZ5	364
	Z10	PMLZ10	330
	Z25	PMLZ25	299
39Q	Z1	PMLZ1	1485
	Z3	PMLZ3	1525
	Z5	PMLZ5	1235
	Z10	PMLZ10	1432
	Z25	PMLZ25	1299

Element Collapse Rating: Q and QPML: 150 psid (10 bar)

Flow Direction: Outside In

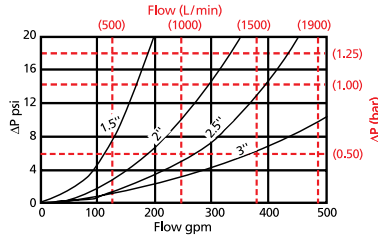
Element Nominal Dimensions: 16Q: 6.0" (150 mm) O.D. x 16.85" (430 mm) long
 16QPML: 6.0" (150 mm) O.D. x 16.00" (405 mm) long
 39Q: 6.0" (150 mm) O.D. x 38.70" (985 mm) long
 39QPML: 6.0" (150 mm) O.D. x 37.80" (960 mm) long

Stainless Steel Base-Ported Filter

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

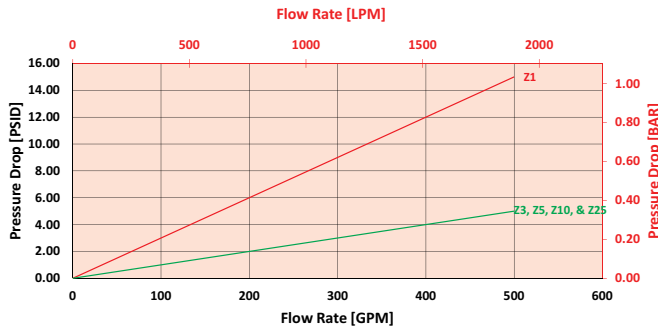
SSQLF15 $\Delta P_{\text{housing}}$ for fluids with sp gr (specific gravity) = 0.86:



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

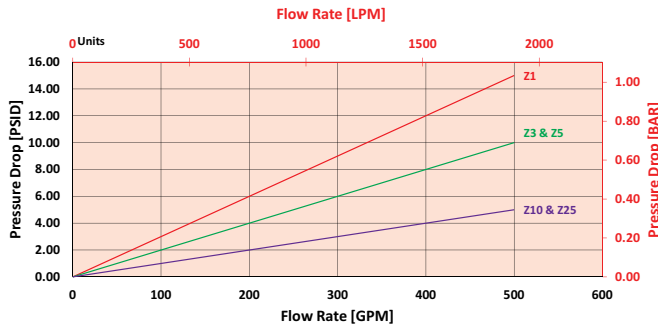
39QZ

Element Pressure Drop versus Flow Rate at 32 cSt (150 SUS)



39QPMLZ

Element Pressure Drop versus Flow Rate at 32 cSt (150 SUS)



$$\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + (\Delta P_{\text{element}} * V_f)$$

Exercise:

Determine ΔP_{filter} at 200 gpm (758 L/min) for SSQLF1516QZ3P48D9C using 100 SUS (21.3 cSt) fluid.

Use the housing pressure curve to determine $\Delta P_{\text{housing}}$ at 200 gpm. In this case, $\Delta P_{\text{housing}}$ is 2 psi (.14 bar) on the graph for the SSQLF housing.

Use the element pressure curve to determine $\Delta P_{\text{element}}$ at 200 gpm. In this case, $\Delta P_{\text{element}}$ is 7 psi (.48 bar) according to the graph for the 16QZ3 element.

Because the viscosity in this sample is 100 SUS (21.3 cSt), we determine the **Viscosity Factor (V_f)** by dividing the **Operating Fluid Viscosity** with the **Standard Viscosity** of 150 SUS (32 cSt). To best determine your Operating Fluid Viscosity, please reference the chart in Appendix D.

Finally, the overall filter pressure differential, ΔP_{filter} , is calculated by adding $\Delta P_{\text{housing}}$ with the true element pressure differential, $(\Delta P_{\text{element}} * V_f)$. The $\Delta P_{\text{element}}$ from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:

$$\Delta P_{\text{housing}} = 2 \text{ psi } [.14 \text{ bar}] \quad | \quad \Delta P_{\text{element}} = 7 \text{ psi } [.48 \text{ bar}]$$

$$V_f = 100 \text{ SUS } (21.3 \text{ cSt}) / 150 \text{ SUS } (32 \text{ cSt}) = .67$$

$$\Delta P_{\text{filter}} = 2 \text{ psi } + (7 \text{ psi } * .67) = 6.7 \text{ psi}$$

OR

$$\Delta P_{\text{filter}} = .14 \text{ bar } + (.48 \text{ bar } * .67) = .46 \text{ bar}$$

Pressure Drop Information Based on Flow Rate and Viscosity

GH

RLT

KF5

SRLT

K9

2K9

3K9

QF5

QF5i

3QF5

QFD2

QFD5

QF15

QLF15

SSQLF15

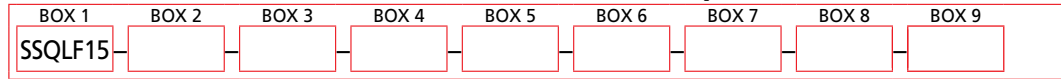
Note:

If your element is not graphed, use the following equation:
 $\Delta P_{\text{element}} = \text{Flow Rate} \times \Delta P_f$
 Plug this variable into the overall pressure drop equation.

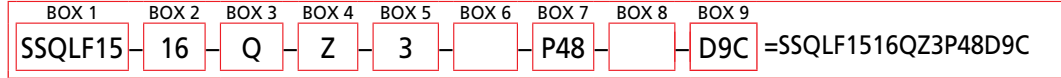
Ele.	ΔP	Ele.	ΔP
16QAS3V	0.04	16QPMLZ1	0.08
16QAS5V	0.04	16QPMLZ3	0.05
16QAS10V	0.03	16QPMLZ5	0.05
16QPMLAS3V	0.05	16QPMLZ10	0.04
16QPMLAS5V	0.05	16QPMLZ25	0.02
16QPMLAS10V	0.04	39QAS3V	0.01
16QZ1	0.09	39QAS5V	0.01
16QZ3	0.04	39QAS10V	0.01
16QZ5	0.04	39QPMLAS3V	0.02
16QZ10	0.03	39QPMLAS5V	0.02
16QZ25	0.01	39QPMLAS10V	0.01

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder SSQLF15:



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Element Length (in)	Element Style	Media Type
SSQLF15	16 39	Q QCLQF QPML	Z = Excellement® Z-Media® (synthetic) AS = Anti-Stat Pleat media (synthetic) M = M media (reusable metal) W = W media (water removal) 150PSV = 150 μ nominal synthetic media with plastic outer wrap

BOX 5	BOX 6	BOX 7
Micron Rating	Housing Seal Material	Porting
1 = 1 μ Z-Media® 3 = 3 μ AS and Z-Media® 5 = 5 μ AS and Z-Media® 10 = 10 μ AS and Z-Media® 25 = 25 μ M and Z-Media® 60 = 60 μ M media 150 = 150 μ M-media or 150 PSV W = water removal media	Omit = Buna N H = EPR V = Viton®	P24 = 1½" NPTF P32 = 2" NPTF P40 = 2½" NPTF P48 = 3" NPTF S32 = SAE-32 B24 = ISO 228 G-1½" B32 = ISO 228 G-2" B40 = ISO 228 G-2½" B48 = ISO 228 G-3" F24 = 1½" SAE 4-bolt flange Code 61 F32 = 2" SAE 4-bolt flange Code 61 F40 = 2½" SAE 4-bolt flange Code 61 F48 = 3" SAE 4-bolt flange Code 61 F24M = 1½" SAE 4-bolt flange Code 61 F32M = 2" SAE 4-bolt flange Code 61 F40M = 2½" SAE 4-bolt flange Code 61 F48M = 3" SAE 4-bolt flange Code 61

BOX 8	BOX 9
Bypass Setting	Dirt Alarm® Options
Omit = 30 psi cracking 50 = 50 psi cracking X = Blocked bypass	Omit = None Visual DPG = Standard differential pressure gauge D9 = Visual pop-up in base (stainless steel) D9C = D9 in cap (stainless steel)

NOTES:

Box 2. Replacement element part numbers are a combination of Boxes 2, 3, 4 and 5 plus the letter V.
Example: 16QZ1V

Box 4. For options W, 150PSV, M25, M60, and M150, Box 3 must equal Q.

Box 6. All elements for this filter are supplied with Viton® seals. Seal designation in Box 6 applies to housing only. Viton® is a registered trademark of DuPont Dow Elastomers.

Box 7. B24, B32 and B40 are supplied with metric mounting holes. F24M, F32M, F40M and F48M are supplied with metric flange mounting holes.

Integral inlet and outlet test points are standard on all models.