High-Pressure Servo Sandwich Filter NOF50

Model No. of filter in photograph is NOF501SVZX3760.

Features and Benefits

- Localized protection at the servo helps to eliminate downtime and protect critical applications from contamination-related servo valve failures
- Sandwich style 4-bolt design – no additional lines to connect
- Designed to protect these commonly installed servo valves: Moog 761 & 62, Vickers SM4-20 and Parker BD15
- High collapse elements, rated to 3000 psi (210 bar)
- Easily applied to new and existing systems
- All steel construction

15 gpm
57 L/min
5000 psi
345 bar

Filter Housing Specifications

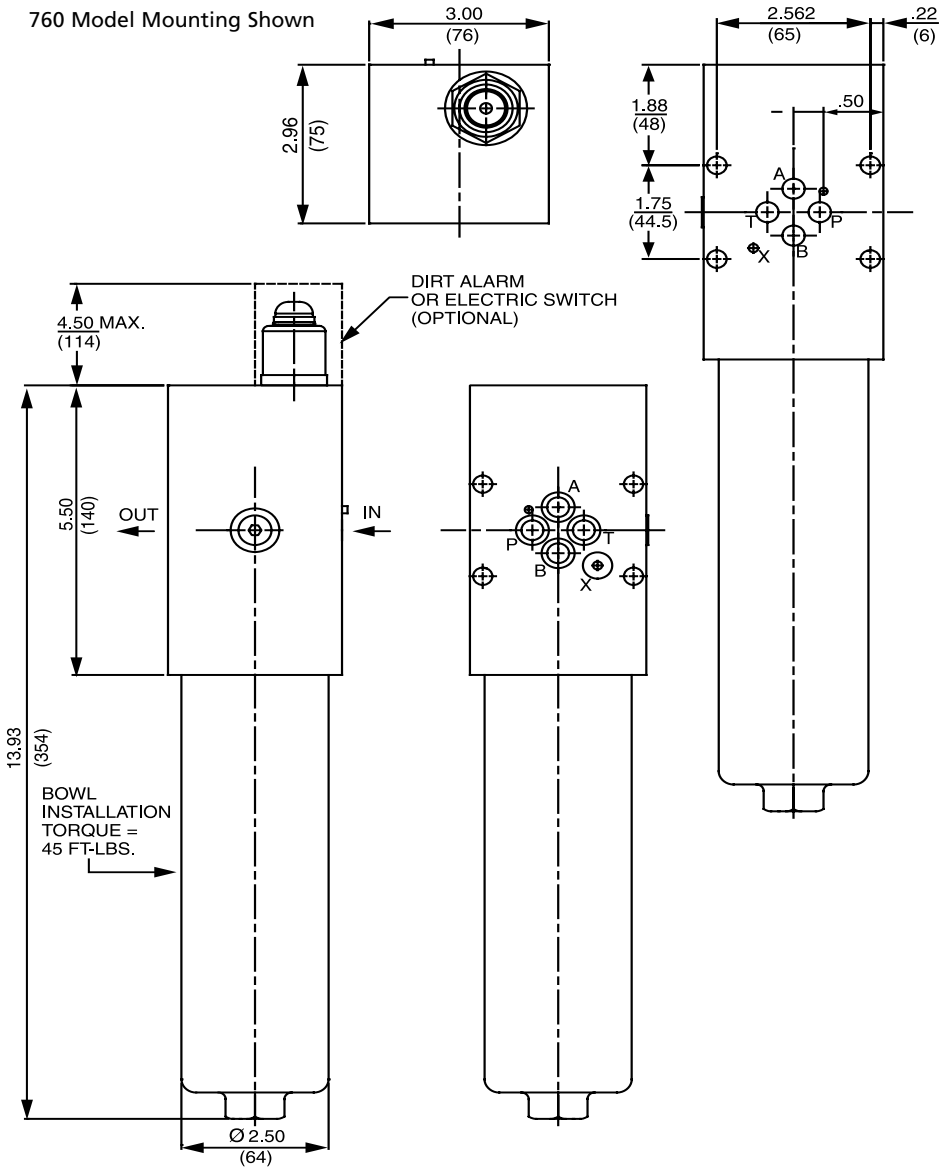
Flow Rating:	Up to 15 gpm (57 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	5000 psi (345 bar)
Min. Yield Pressure:	15,000 psi (1034 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	4000 psi (276 bar) per NFPA T2-6.1 R2-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Non-Bypass Model:	Standard with high collapse elements
Porting Head: Element Case:	Steel Steel
Weight of NOF50-1SV:	17 lb. (7.7 kg)
Element Change Clearance:	4.50" (115 mm)

Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All Z-Media® (synthetic)
High Water Content	3, 10 and 25 µ Z-Media® (synthetic)
Invert Emulsions	10 and 25 µ Z-Media® (synthetic)
Water Glycols	3, 10 and 25 µ Z-Media® (synthetic)

NOF50 High-Pressure Servo Sandwich Filter

760 Model Mounting Shown



Metric dimensions in ( ).
Dimensions shown are inches (millimeters) for general information and overall envelope size only.
For complete dimensions please contact Schroeder Industries to request a certified print.

Element Performance Information & Dirt Holding Capacity

	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	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
SVZX3	<1.0	<1.0	<2.0	4.7	5.8
SVZX10	7.4	8.2	10.0	8.0	9.7

Element	DHC (gm)
SVZX3	11*
SVZX10	13*

*Based on 100 psi terminal pressure

Element Collapse Rating: 3000 psid (210 bar) for high collapse (ZX) versions

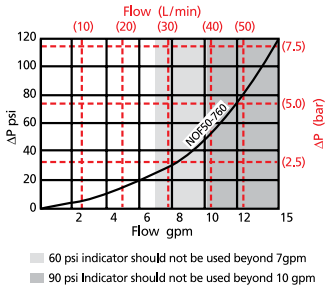
Flow Direction: Outside In

Element Nominal Dimensions: 1.75" (45 mm) O.D. x 8.0" (200 mm) long

Pressure Drop Information
Based on Flow Rate and Viscosity

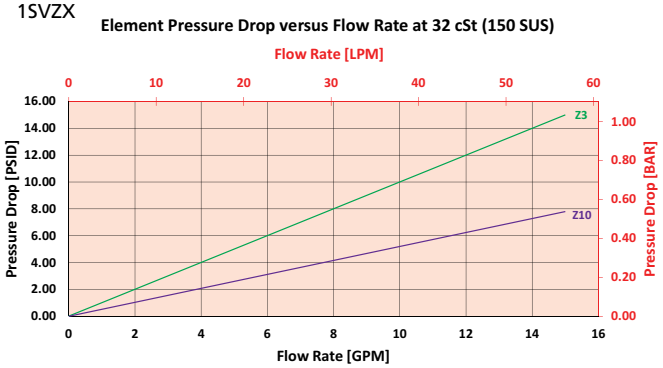
$\Delta P_{housing}$

NOF50 $\Delta P_{housing}$ for fluids with sp gr (specific gravity) = 0.86:



$\Delta P_{element}$

1SVZX



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

Exercise:

Determine ΔP_{filter} at 5 gpm (19 L/min) for NOF501SVZX10760D5 using 160 SUS (34 cSt) fluid.

Use the housing pressure curve to determine $\Delta P_{housing}$ at 5 gpm. In this case, $\Delta P_{housing}$ is 15 psi (1 bar) on the graph for the NOF30 housing.

Use the element pressure curve to determine $\Delta P_{element}$ at 5 gpm. In this case, $\Delta P_{element}$ is 3 psi (.21 bar) according to the graph for the SVZX10 element.

Because the viscosity in this sample is 160 SUS (34 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 $\Delta P_{housing}$ with the true element pressure differential, ($\Delta P_{element} * V_f$). The $\Delta P_{element}$ from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:

$\Delta P_{housing}$ = 15 psi [1 bar] | $\Delta P_{element}$ = 3 psi [.21 bar]

V_f = 160 SUS (34 cSt) / 150 SUS (32 cSt) = 1.1

ΔP_{filter} = 15 psi + (3 psi * 1.1) = 18.3 psi

OR

ΔP_{filter} = 1 bar + (.21 bar * 1.1) = 1.2 bar

NOF50 High-Pressure Servo Sandwich Filter

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder NOF50:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
NOF50 –		–		–		–	

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
NOF50 –	1 –	SVZX3 –		760 –			D5	**= NOF501SVZX3760D5**

BOX 1 – Filter Series

NOF50

BOX 2 – Number of Elements

1

BOX 3 – Element Part Number

SVZX3 = S size 3 µ high collapse media
SVZX10 = S size 10 µ high collapse media
SVZX25 = S size 25 µ high collapse media

BOX 4 – Seal Material

Omit = Buna N
V = Viton®

BOX 5 – Porting

760 = Moog servo configuration
761 = Moog servo configuration

BOX 6 – Options

Omit = 60 psid
90 = 90 psid

BOX 7 – Optional Test Point

Omit = None
U = Series 1215 7/16"-20 UNF Schroeder Check Test Point installation

BOX 8 – Dirt Alarm® Options

None	Omit = None
Visual	D5 = Visual pop-up
Visual with Thermal Lockout	D8 = Visual w/ thermal lockout
Electrical	MS5 = Electrical w/ 12 in. 18 gauge 4-conductor cable MS5LC = Low current MS MS10 = Electrical w/ DIN connector (male end only) MS10LC = Low current MS10 MS11 = Electrical w/ 12 ft. 4-conductor wire MS12 = Electrical w/ 5 pin Brad Harrison connector (male end only) MS12LC = Low current MS12 MS16 = Electrical w/ weather-packed sealed connector MS16LC = Low current MS16 MS17LC = Electrical w/ 4 pin Brad Harrison male connector
Electrical with Thermal Lockout	MS5T = MS5 (see above) w/ thermal lockout MS5LCT = Low current MS5T MS10T = MS10 (see above) w/ thermal lockout MS10LCT = Low current MS10T MS12T = MS12 (see above) w/ thermal lockout MS12LCT = Low current MS12T MS16T = MS16 (see above) w/ thermal lockout MS16LCT = Low current MS16T MS17LCT = Low current MS17T
Electrical Visual	MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)
Electrical Visual with Thermal Lockout	MS13DCT = MS13 (see above), direct current, w/ thermal lockout MS13DCLCT = Low current MS13DCT MS14DCT = MS14 (see above), direct current, w/ thermal lockout MS14DCLCT = Low current MS14DCT

NOTES:

Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4.

Box 4. Viton® is a registered trademark of DuPont Dow Elastomers.

Box 6. Please note indicator flow limitations on pressure drop graph, previous page.