High-Pressure Servo Sandwich Filter NOF50-760

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 760 & 62, Vickers SM4-20 and Parker BD15
- High collapse elements, rated to 3000 psi (210 bar)
- SchroederCheck™ sampling point available for testing purposes
- Easily applied to new and existing systems
- All steel construction

15 gpm
57 L/min
5000 psi
345 bar

Model No. of filter in photograph is NOF501SVZX3760D5.

Applications


INDUSTRIAL


AUTOMOTIVE MANUFACTURING


MACHINE TOOL


POWER GENERATION


STEEL MAKING

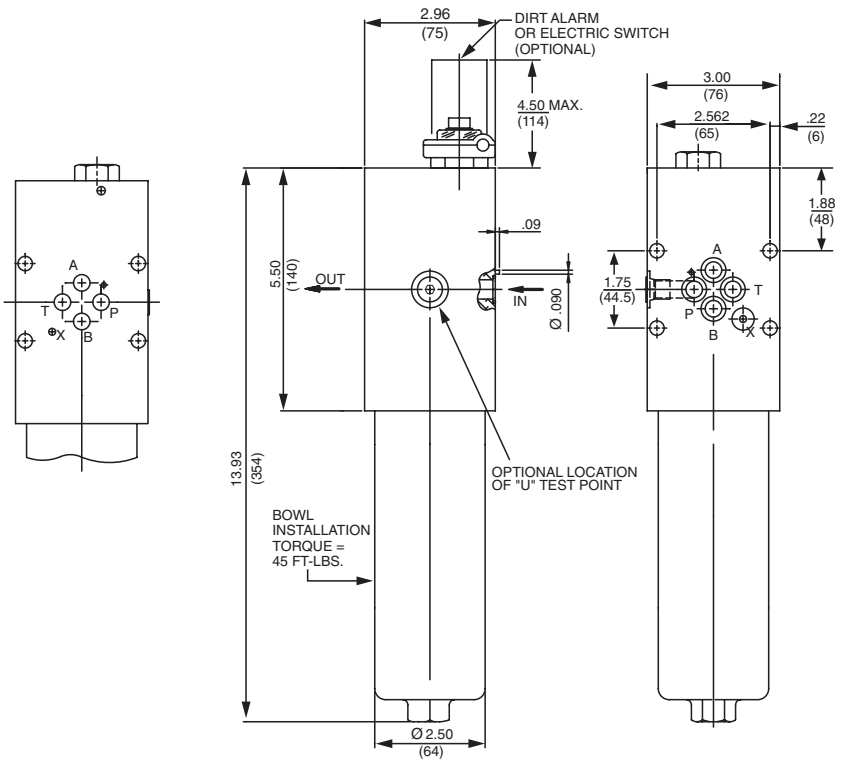

PAPER INDUSTRY


MOBILE VEHICLES

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)
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)

NOF50-760 High-Pressure Servo Sandwich Filter



Metric dimensions in ( ).

Element Performance Information

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
SVZX3	<1.0	<1.0	<2.0	4.7	5.8
SVZX10	7.4	8.2	10.0	8.0	9.7

Dirt Holding Capacity

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

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Fluid Compatibility

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

Element Selection
Based on Flow Rate

Pressure	Element Series	Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid.
To 5000 psi (345 bar)	Z Media	SVZX3	1SVZX3
		SVZX10	1SVZX10
		SVZX25	1SVZX25
	Flow	gpm	0 — 15
		(L/min)	0 — 57

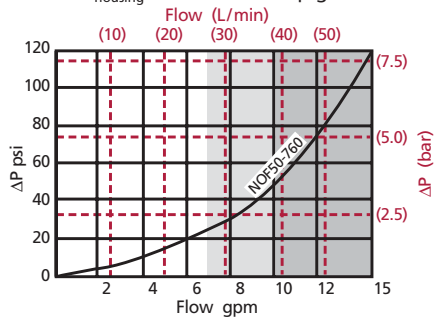
Shown above are the elements most commonly used in this housing.

Note: *Contact factory regarding use of E Media in High Water Content, Invert Emulsion and Water Glycol Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.*

Pressure Drop Information
Based on Flow Rate and Viscosity

$\Delta P_{housing}$ (760 Porting)

NOF50-760 $\Delta P_{housing}$ for fluids with sp gr = 0.86:



60 psi indicator should not be used beyond 7gpm

90 psi Indicator should not be used beyond 10 gpm

$\Delta P_{element}$

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

El. ΔP factors @ 150 SUS (32 cSt):

SVZX3	1.00
SVZX10	.52

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

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

sp gr = specific gravity

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

Notes

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

Exercise:
Determine ΔP at 8 gpm (30 L/min) for NOF501SVZX1076090D5 using 150 SUS (32 cSt) fluid.

Solution:

$\Delta P_{housing}$ = 30.0 psi [2.1 bar]

$\Delta P_{element}$ = 8 x 0.52 x (150÷150) = 4.2 psi
or
= [30 x (0.52 ÷54.9) x (32÷32) = 0.3 bar]

ΔP_{total} = 30.0 + 4.2 = 34.2 psi
or
= [2.1 + 0.3 = 2.4 bar]

NOF50-760 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 -	SVX3 -	-	760 -	-	-	D5	= **NOF501SVX3760D5**

BOX 1 — Filter Series

Filter Series
NOF50

BOX 2 — Number of Elements

Number of Elements
1

BOX 3 — Element Part Number

Element Part Number
SVX3 = S size 3 µ high collapse media
SVX10 = S size 10 µ high collapse media
SVX25 = S size 25 µ high collapse media

BOX 4 — Seal Material

Seal Material
Omit = Buna N
V = Viton®

BOX 5 — Porting

Porting
760 = Moog servo configuration

BOX 6 — Indicator Setting

Indicator Setting
Omit = 60 psid
90 = 90 psid

BOX 7 — Optional Test Point

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

BOX 8 — Dirt Alarm® Options

	Omit = None
Visual	D5 = Visual pop-up (60 psid indicator setting)
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.