High-Pressure Sandwich Filter FOF60-03

Features and Benefits

- Sandwich filter configured for DO3 subplate pattern
- Withstands high pressure surges, high static pressure loads
- 3000 psi collapse elements

12 gpm
45 L/min
6000 psi
415 bar

Model No. of filter in photograph is FOF601FZX303D5.

Applications


INDUSTRIAL


AUTOMOTIVE MANUFACTURING


MACHINE TOOL


MINING TECHNOLOGY

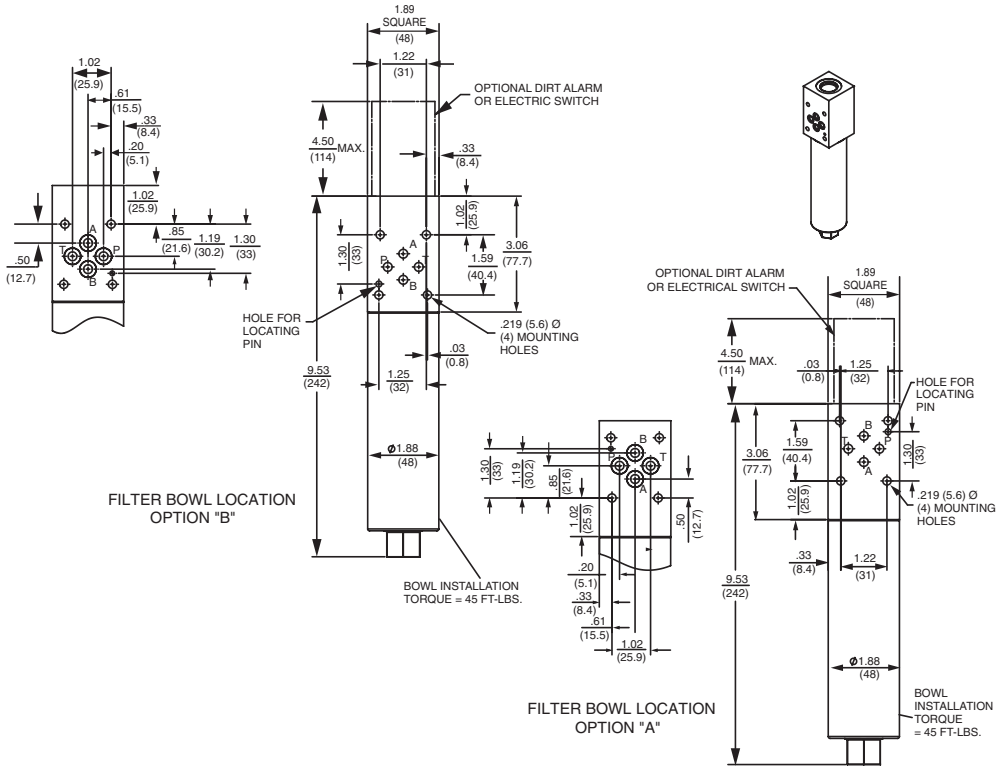

PAPER INDUSTRY


MOBILE VEHICLES

Filter Housing Specifications

Flow Rating:	Up to 12 gpm (45 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	6000 psi (415 bar)
Min. Yield Pressure:	26,000 psi (1790 bar)
Rated Fatigue Pressure:	4000 psi (275 bar)
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Non-Bypass Model:	Available with high collapse elements
Porting Head:	Steel
Element Case:	Steel
Weight:	7.3 lbs. (3.3 kg)
Element Change Clearance:	4.50" (115 mm)

FOF60-03 High-Pressure 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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
FZX3	<1.0	<1.0	<2.0	4.7	5.8
FZX10	7.4	8.2	10.0	8.0	9.8

Dirt Holding Capacity

Element	DHC (gm)
FZX3	3*
FZX10	5.1

*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: 1.25" (30 mm) O.D. x 3.25" (85 mm) long

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Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All Z (synthetic) media
High Water Content	3 and 10 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 6000 psi (415 bar)	Z Media	FZX3	FZX3
		FZX10	FZX10
	Flow	gpm	0 — 12
		(L/min)	0 — 20 — 40 — 45

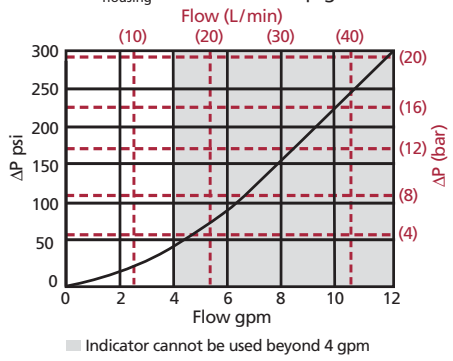
Shown above are the elements most commonly used in this housing.

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

$\Delta P_{housing}$

FOF60-03 $\Delta P_{housing}$ for fluids with sp gr = 0.86:



sp gr = specific gravity

$\Delta P_{element}$

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

El. ΔP factors @ 150 SUS (32 cSt):

FZX3	6.06
FZX10	4.45

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

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

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

Notes

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

Exercise:
Determine ΔP at 4 gpm (19 L/min) for FOF601FZX1003 using 200 SUS (44 cSt) fluid.

Solution:

$\Delta P_{housing}$ = 40.0 psi [2.75 bar]

$\Delta P_{element}$ = 5 x 4.45 x (200÷150) = 29.7 psi
or
= [19 x (4.45 ÷54.9) x (44÷32) = 2.12 bar]

ΔP_{total} = 40.0 + 29.7 = 69.7 psi
or
= [2.75 + 2.12 = 4.87 bar]

FOF60-03 High-Pressure Sandwich Filter

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder FOF60-03:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
FOF60	–	–	–	–	–	–

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
FOF60	– 1	– FZX3	–	– 03	–	– D5	= **FOF601FZX303D5**

BOX 1

Filter Series
FOF60

BOX 2

Number of Elements
1

BOX 3

Element Part Number
FZX3 = F size 3 µ high collapse media
FZX10 = F size 10 µ high collapse media

BOX 4

Seal Material
Omit = Buna N
V = Viton®

BOX 5

Porting
03 = D03 subplate pattern

BOX 6

Filter Bowl Location
A = Bowl adjacent to Port "A"
B = Bowl adjacent to Port "B"
(Refer to drawing on page 108.)

BOX 7

Dirt Alarm® Options	
	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 7. Note dirt alarm cannot be used beyond 4 gpm. Filters ordered without a dirt alarm do not include a machined indicator port, and therefore a dirt alarm cannot be added at a later date.