High-Pressure Sandwich Filter NOF30-05

Features and Benefits

- Sandwich filter configured for D05 subplate
- Withstands high pressure surges, high static pressure loads
- 3000 psi collapse elements

12 gpm
45 L/min
3000 psi
210 bar

Model No. of filter in photograph is NOF301NNZX305D5.

Applications

AUTOMOTIVE MANUFACTURING

MINING TECHNOLOGY

MACHINE TOOL

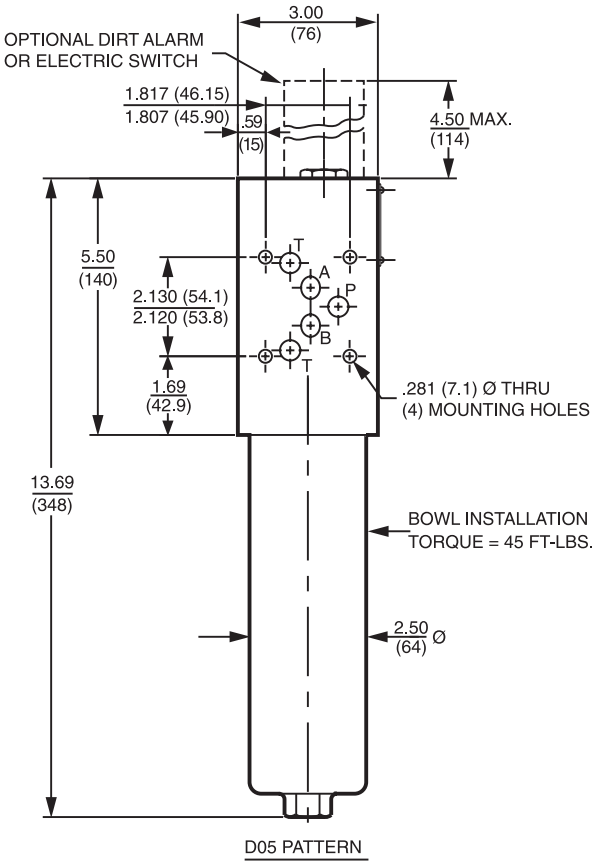
PULP & PAPER

MOBILE VEHICLES

Filter Housing Specifications

Flow Rating:	Up to 12 gpm (45 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	3000 psi (210 bar)
Min. Yield Pressure:	10,000 psi (690 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	Contact Factory
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Non-Bypass Model:	High collapse elements are standard
Porting Head: Element Case:	Aluminum Aluminum
Weight of NOF30-1NN:	6.6 lbs. (3.0 kg)
Element Change Clearance:	4.50" (115 mm)

NOF30-05 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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
NNZX3	<1.0	<1.0	<2.0	4.7	5.8
NNZX10	7.4	8.2	10.0	8.0	9.8

Dirt Holding Capacity

Element	DHC (gm)
NNZX3	11*
NNZX10	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 8.00" (200 mm) long

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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)

Element Selection
Based on Flow Rate

Pressure	Element Series	Element Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid.
To 3000 psi (210 bar)	Z-Media®	NNZX3	1NNZX3
		NNZX10	1NNZX10
		NNZX25	1NNZX25
	Flow	gpm	0 — 12
		(L/min)	0 — 20 — 40 — 45

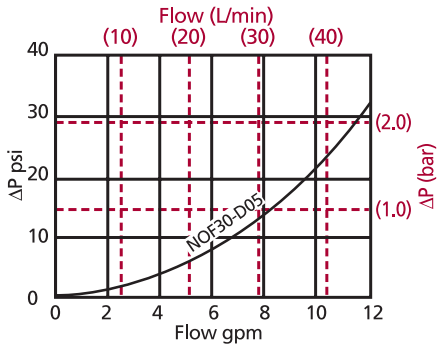
Shown above are the elements most commonly used in this housing.

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

$\Delta P_{housing}$

NOF30-D05 $\Delta P_{housing}$ for fluids with sp gr = 0.86:



$\Delta P_{element}$

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

El. ΔP factors @ 150 SUS (32 cSt):

NNZX3	1.00
NNZX10	.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 NOF301NNZX1005D5 using 150 SUS (32 cSt) fluid.

Solution:

$\Delta P_{housing}$	= 15.0 psi [1.0 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}	= 15.0 + 4.2 = 19.2 psi or = [1.0 + 0.3 = 1.3 bar]

NOF30-05 High-Pressure Sandwich Filter

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder NOF30-05:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
NOF30–						

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
NOF30–	1	NNZX3		05		D5	**= NOF301NNZX305D5**

BOX 1 – Filter Series

NOF30

BOX 2 – Number of Elements

1

BOX 3 – Element Part Number

NNZX3 = NN size 3 µ high collapse media
NNZX10 = NN size 10 µ high collapse media
NNZX25 = NN size 25 µ high collapse media

BOX 4 – Seal Material

Omit = Buna N
V = Viton®
W = Buna N

BOX 5 – Porting

05 = D05 subplate pattern

BOX 6 – Options

Omit = None
90 = Optional indicator setting

BOX 7 – 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. For options V and W, all aluminum parts are anodized. Viton® is a registered trademark of DuPont Dow Elastomers.