SAME DAY SHIPMENT MODEL AVAILABLE!

Top-Ported Pressure Filter NF30

Model No. of filter in photograph is NF301NZ10SD5.

Features and Benefits

- Top-ported pressure filter
- All aluminum assembly
- Available with non-bypass option with high collapse element
- Offered in pipe, SAE straight thread and ISO 228 porting
- Same day shipment model available

20 gpm
75 L/min
3000 psi
210 bar

Applications


INDUSTRIAL


AUTOMOTIVE MANUFACTURING


MACHINE TOOL


MINING TECHNOLOGY


STEEL MAKING


OFFSHORE


MARINE


PAPER INDUSTRY


AGRICULTURE

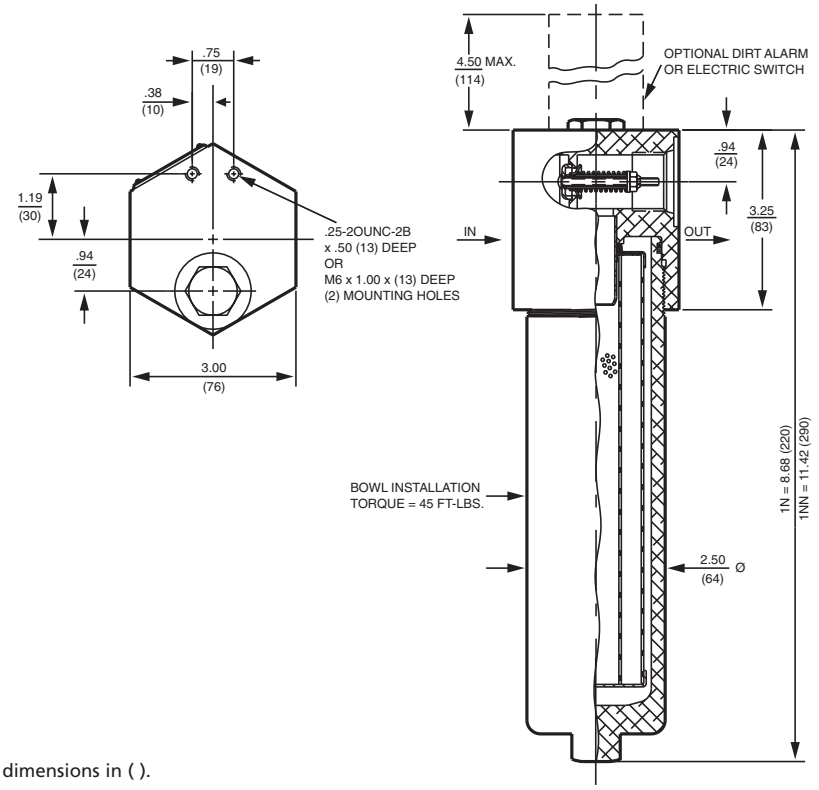

MOBILE VEHICLES

Filter Housing Specifications

Flow Rating:	Up to 20 gpm (75 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	3000 psi (210 bar)
Min. Yield Pressure:	10,000 psi (690 bar)
Rated Fatigue Pressure:	2400 psi (165 bar)
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 85 psi (5.9 bar) Non-bypassing model has a blocked bypass.
Porting Head: Element Case:	Aluminum Aluminum
Weight of NF30-1N: Weight of NF30-1NN:	3.4 lbs. (1.5 kg) 4.4 lbs. (2.0 kg)
Element Change Clearance:	4.50" (115 mm)

NF30 Top-Ported Pressure Filter

SAME DAY SHIPMENT MODEL AVAILABLE!



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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
N3/NN3	6.8	7.5	10.0	N/A	N/A
N10/NN10	15.5	16.2	18.0	N/A	N/A
NZ1/NNZ1	<1.0	<1.0	<1.0	<4.0	4.2
NZ3/NNZ3	<1.0	<1.0	<2.0	<4.0	4.8
NZ5/NNZ5	2.5	3.0	4.0	4.8	6.3
NZ10/NNZ10	7.4	8.2	10.0	8.0	10.0
NZ25/NNZ25	18.0	20.0	22.5	19.0	24.0
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)	Element	DHC (gm)
N3	8	NN3	12
N10	7	NN10	10
NZ1	12	NNZ1	15
NZ3	12	NNZ3	16
NZ5	12	NNZ5	18
NZ10	11	NNZ10	15
NZ25	11	NNZ25	15
		NNZX3	11*
		NNZX10	13*

*Based on 100 psi terminal pressure

Element Collapse Rating: 150 psid (10 bar) for standard elements
3000 psid (210 bar) for high collapse (ZX) versions

Flow Direction: Outside In

Element Nominal Dimensions: N: 1.75" (45 mm) O.D. x 5.25" (135 mm) long
NN: 1.75" (45 mm) O.D. x 8.0" (200 mm) long

Top-Ported Pressure Filter NF30

Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All E (cellulose) and Z (synthetic) media
High Water Content	All Z (synthetic) media
Invert Emulsions	10 and 25 µ Z (synthetic) media
Water Glycols	3, 5, 10 and 25 µ Z (synthetic) media

Element Selection
Based on Flow Rate

Pressure	Series	Element Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 40 psi (2.8 bar) bypass valve.
To 3000 psi (210 bar)	E Media	N3 & NN3	1N3 | 1NN3 | See DF40
		N10 & NN10	1N10 | 1NN10
		N25	1N25
	Z Media	NZ1 & NNZ1	1NZ1 | 1NNZ1 | See DF40 or YF30
		NZ3 & NNZ3	1NZ3 | 1NNZ3
		NZ5 & NNZ5	1NZ5 | 1NNZ5
		NZ10 & NNZ10	1NZ10 & 1NNZ10
		NZ25 & NNZ25	1NZ25 & 1NNZ25
	Flow	gpm	0 5 10 15 20
		(L/min)	0 25 50 75

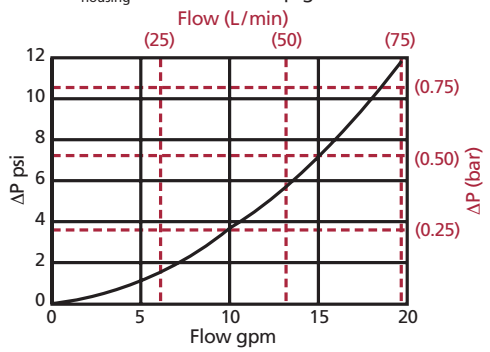
Shown above are the elements most commonly used in this housing.

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

$\Delta P_{housing}$

NF30 $\Delta P_{housing}$ 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):

	1N		1NN
N3	1.10	**NN3**	.77
N10	.17	**NN10**	.13
N25	.10	**NN25**	.07
NZ1	1.43	**NNZ1**	1.23
NZ3	.92	**NNZ3**	.56
NZ5	.71	**NNZ5**	.46
NZ10	.57	**NNZ10**	.35
NZ25	.36	**NNZ25**	.20
		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).

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 15 gpm (57 L/min) for NF301NZ25SMS5 using 200 SUS (44 cSt) fluid.

Solution:

$\Delta P_{housing}$ = 7.0 psi [.50 bar]

$\Delta P_{element}$ = 15 x .36 x (200÷150) = 7.2 psi
or
= [57 x (.36÷54.9) x (44÷32) = .51 bar]

ΔP_{total} = 7.0 + 7.2 = 14.2 psi
or
= [.50 + .51 = 1.01 bar]

NF30 Top-Ported Pressure Filter

SAME DAY SHIPMENT MODEL AVAILABLE!

Filter Model Number Selection

Same Day Shipment Model
See Appendix D for details.

How to Build a Valid Model Number for a Schroeder NF30:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
NF30 –	–	–	–	–	–	–	

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
NF30 –	1 –	NZ5 –	–	S –	–	D5 –	–	= **NF301NZ5SD5**

BOX 1

Filter Series
NF30
NFN30 (Non-bypassing: requires ZX high collapse elements)

BOX 2

Number of Elements
1

BOX 3

Element Part Number		
N Length	NN Length	
N3	NN3	= 3 µ E media (cellulose)
N10	NN10	= 10 µ E media (cellulose)
N25	NN25	= 25 µ E media (cellulose)
NZ1	NNZ1	= 1 µ Excellement® Z media (synthetic)
NZ3	NNZ3	= 3 µ Excellement Z media (synthetic)
NZ5	NNZ5	= 5 µ Excellement Z media (synthetic)
NZ10	NNZ10	= 10 µ Excellement Z media (synthetic)
NZ25	NNZ25	= 25 µ Excellement Z media (synthetic)
NZX3	NNZX3	= 3 µ Excellement Z media (high collapse center tube)
NZX10	NNZX10	= 10 µ Excellement Z media (high collapse center tube)
	NNZX25	= 25 µ Excellement Z media (high collapse center tube)
NM10		= 10 µ M media (reusable metal)
NM60		= 60 µ M media (reusable metal)

BOX 4

Seal Material
Omit = Buna N
V = Viton®
W = Buna N

BOX 5

Porting
B = ISO 228 G-¾"
P = ¾" NPTF
S = SAE-12

BOX 6

Options
Omit = None
X = Blocked bypass (not available with NFN30)

BOX 7

Dirt Alarm® Options	
	Omit = None
Visual	D = Pointer (D available with NF30 only) 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 MS5 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 MS15DC = Electrical, direct current normally open, for DC use only MS15DCNC = Electrical, direct current normally closed, for DC use only 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	MS2 = Cam operated switch w/ 10" pigtail connection 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

BOX 8

Additional Options
Omit = None
G792 = 7/16"-20 UNF drain on housing

NOTES:

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

Box 4. E media (cellulose) elements are only available with Buna N seals.
For options V and W, all aluminum parts are anodized.
Viton is a registered trademark of DuPont Dow Elastomers.

Box 5. B porting option supplied with metric mounting holes.

Box 7. Standard indicator setting for non-bypassing model is 50 psi unless otherwise specified.