

Top-Ported Pressure Filter **RF60**



Features and Benefits

- Top-ported high pressure filter
- Offered in pipe, SAE straight thread, flanged and ISO 228 porting
- Available with non-bypass option with high collapse element
- Standard drain plug in bowl for easy servicing
- Various dirt alarm options available

Model No. of filter in photograph is RF608R10P.



**MOBILE
VEHICLES**

30 gpm
115 L/min
6000 psi
415 bar

NF30

NFS30

YF30

DF40

CF40

CFX30

RF60

RFS50

CF60

VF60

KF30

TF50

KF50

KC50

KFH50

MKF50

KC65

Applications

Flow Rating:	Up to 30 gpm (115 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	6000 psi (415 bar)
Min. Yield Pressure:	18,000 psi (1241 bar)
Rated Fatigue Pressure:	2300 psi (159 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 56 psi (3.9 bar) Non-bypassing model has a blocked bypass.
Porting Head:	Steel
Element Case:	Steel
Weight of RF60-8R:	15.75 lbs. (7.2 kg)
Element Change Clearance:	3.0" (75 mm)

Filter Housing Specifications

FOF60-03

NOF30-05

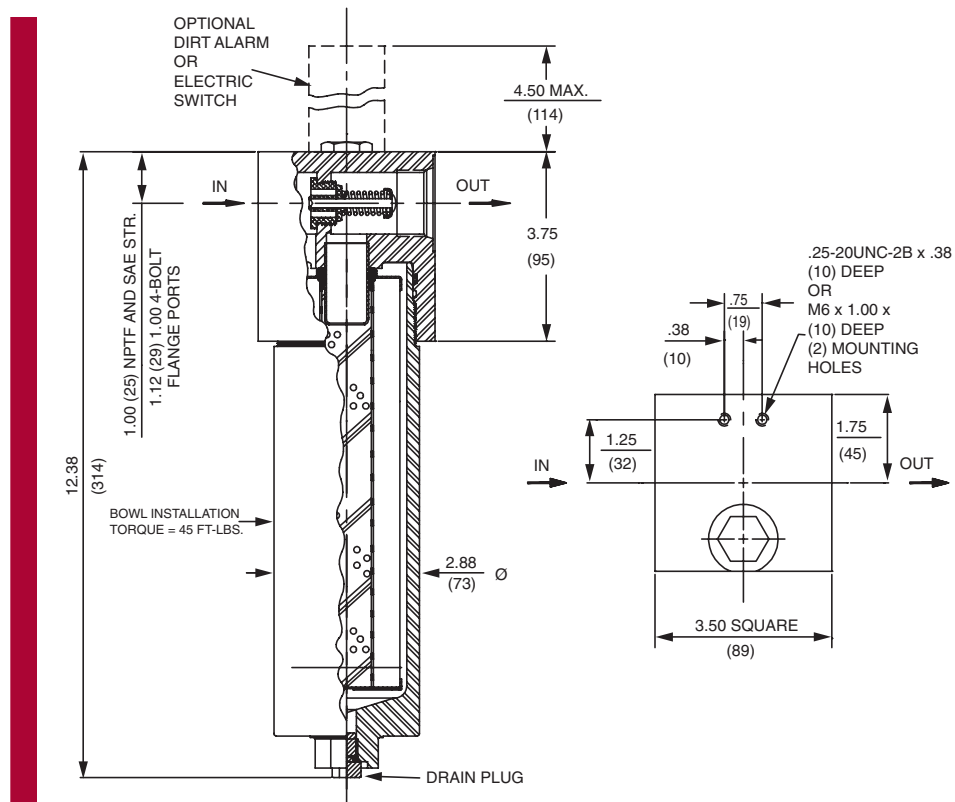
NOF50-760

NMF30

RMF60

Cartridge Elements

RF60 Top-Ported Pressure 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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
8R3	6.8	7.5	10.0	N/A	N/A
8R10	15.5	16.2	18.0	N/A	N/A
8RZ1	<1.0	<1.0	<1.0	<4.0	4.2
8RZ3	<1.0	<1.0	<2.0	<4.0	4.8
8RZ5	2.5	3.0	4.0	4.8	6.3
8RZ10	7.4	8.2	10.0	8.0	10.0
8RZ25	18.0	20.0	22.5	19.0	24.0
8RZX3	<1.0	<1.0	<2.0	4.7	5.8
8RZX10	7.4	8.2	10.0	8.0	9.8

Dirt Holding Capacity

Element	DHC (gm)
8R3	6
8R10	7
8RZ1	33
8RZ3	26
8RZ5	51
8RZ10	29
8RZ25	30
8RZX3	N/A
8RZX10	N/A

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: 2.18" (55 mm) O.D. x 8.15" (206 mm) long

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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
Phosphate Esters	All Z (synthetic) media with H (EPR) seal designation
Skydrol®	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)

Fluid Compatibility	
	NF30
	NFS30
	YF30
	DF40

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Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 40 psi (2.8 bar) bypass valve.					
	Series	Part No.						
To 6000 psi (415 bar)	E Media	8R3	8R3			See CF60		
		8R10	8R10			See CF60		
	Z Media	8RZ1	8RZ1		See CF60			
		8RZ3	8RZ3		See CF60			
		8RZ5	8RZ5		See CF60			
		8RZ10	8RZ10					
		8RZ25	8RZ25					
Flow	gpm	0	10	15	20	25	30	
	(L/min)	0	50	75	100	115		

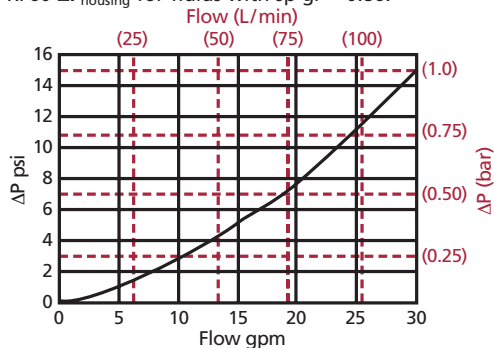
Element Selection Based on Flow Rate	
	CF40
	CFX30
	RF60
	RF550
	CF60
	VF60

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.

ΔP_{housing}

RF60 ΔP_{housing} for fluids with sp gr = 0.86:



sp gr = specific gravity

ΔP_{element}

ΔP_{element} = flow x element ΔP factor x viscosity factor

El. ΔP factors @ 150 SUS (32 cSt):

8R3	.35
8R10	.30
8RZ1	.87
8RZ3	.43
8RZ5	.39
8RZ10	.36
8RZ25	.11
8RZX3	NA
8RZX10	NA

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

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

Pressure Drop Information

Based on Flow Rate and Viscosity

	KF30
	TF50
	KF50
	KC50
	KFH50
	MKF50
	KC65

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

Notes

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

Exercise:

Determine ΔP at 15 gpm (57 L/min) for RF608R10SD5 using 200 SUS (44 cSt) fluid.

Solution:

$$\Delta P_{\text{housing}} = 5.0 \text{ psi } [.35 \text{ bar}]$$

$$\begin{aligned} \Delta P_{\text{element}} &= 15 \times .30 \times (200 \div 150) = 6.0 \text{ psi} \\ &\text{or} \\ &= [57 \times (.30 \div 54.9) \times (44 \div 32)] = .41 \text{ bar} \end{aligned}$$

$$\begin{aligned} \Delta P_{\text{total}} &= 5.0 + 6.0 = 11.0 \text{ psi} \\ &\text{or} \\ &= [.38 + .41] = .79 \text{ bar} \end{aligned}$$

	FOF60-03
	NOF30-05
	NOF50-760
	NMF30
	RMF60
	Cartridge Elements

