

Top-Ported Pressure Filter **YF30**



Features and Benefits

- Top-ported pressure filter
- All aluminum assembly
- Meets HF2 automotive standard
- Offered in straight thread porting
- Optional drain plug in bowl for easy servicing
- Available with non-bypass option (contact factory)

Model No. of filter in photograph is YF308YZ10SD5.

25 gpm
100 L/min
3000 psi
210 bar

NF30

NFS30

YF30

DF40

CF40

CFX30

RF60

RFS50

CF60

VF60

KF30

TF50

KF50

KC50

KFH50

MKF50

KC65

Applications



INDUSTRIAL



AUTOMOTIVE
MANUFACTURING



MACHINE
TOOL



POWER
GENERATION



STEEL
MAKING



OFFSHORE



MARINE



PAPER
INDUSTRY



AGRICULTURE



MOBILE
VEHICLES

Flow Rating:	Up to 25 gpm (100 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:	1800 psi (124 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 50 psi (3.4 bar) Non-bypassing model has a blocked bypass.
Porting Head:	Aluminum
Element Case:	Aluminum
Weight of YF30-4Y:	3.75 lbs. (1.70 kg)
Weight of YF30-8Y:	4.25 lbs. (1.93 kg)
Element Change Clearance:	4.50" (115 mm)

Filter Housing Specifications

FOF60-03

NOF30-05

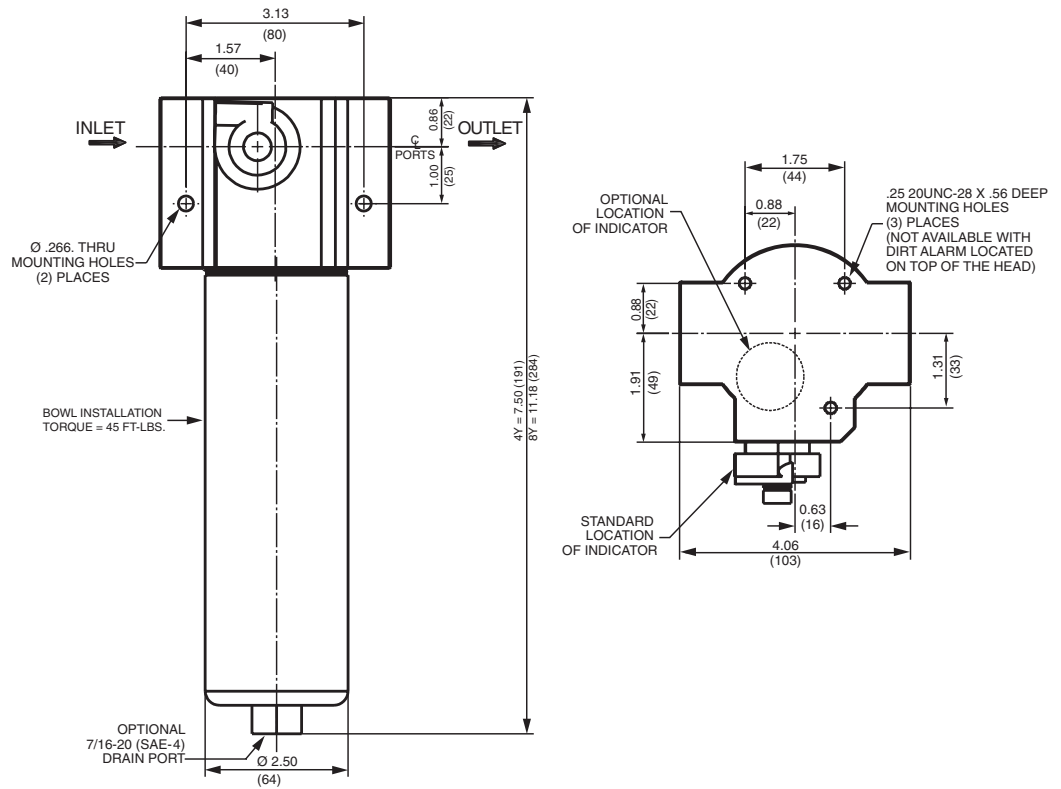
NOF50-760

NMF30

RMF60

Cartridge
Elements

YF30 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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
4YZ1/8YZ1	<1.0	<1.0	<1.0	<4.0	4.2
4YZ3/8YZ3	<1.0	<1.0	<2.0	<4.0	4.8
4YZ5/8YZ5	2.5	3.0	4.0	4.8	6.3
4YZ10/8YZ10	7.4	8.2	10.0	8.0	10.0
4YZ25/8YZ25	18.0	20.0	22.5	19.0	24.0
4YZX5/8YZX5	2.5	3.0	4.0	5.6	7.2
4YZX10/8YZX10	7.4	8.2	10.0	8.0	9.8

Dirt Holding Capacity

Element	DHC (gm)	Element	DHC (gm)
4YZ1	6.3	8YZ1	12.1
4YZ3	5.1	8YZ3	9.9
4YZ5	6.4	8YZ5	12.4
4YZ10	5.4	8YZ10	10.5
4YZ25	4.9	8YZ25	9.4
4YZX5	4.3	8YZX5	8.9
4YZX10	4.3	8YZX10	8.9

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: 4Y: 1.77" (45 mm) O.D. x 4.50" (114 mm) long
8Y: 1.77" (45 mm) O.D. x 8.21" (209 mm) long

Top-Ported Pressure Filter **YF30**

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

Fluid Compatibility

NF30

NFS30

YF30

DF40

CF40

CFX30

RF60

RFS50

CF60

VF60

KF30

TF50

KF50

KC50

KFH50

MKF50

KC65

FOF60-03

NOF30-05

NOF50-760

NMF30

RMF60

Cartridge Elements

Pressure	Series	Element Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 50 psi (3.4 bar) bypass valve.					
			4YZ1	8YZ1	See DF40 or CF40			
To 3000 psi (210 bar)	Z Media	4YZ1/8YZ1	4YZ1	8YZ1	See DF40 or CF40			
		4YZ3/8YZ3	4YZ3	8YZ3	See DF40 or CF40			
		4YZ5/8YZ5	4YZ5	8YZ5				
		4YZ10/8YZ10	4YZ10		8YZ10			
		4YZ25/8YZ25	4YZ25 & 8YZ25					
Flow	gpm (L/min)	0	5	10	15	20	25	
		0	25	50	75	95		

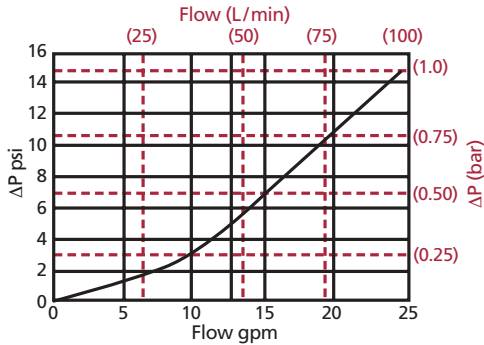
Element Selection Based on Flow Rate

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}

YF30 ΔP_{housing} for fluids with sp gr = 0.86:



sp gr = specific gravity

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

ΔP_{element}

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

El. ΔP factors @ 150 SUS (32 cSt):

4YZ1	2.68	8YZ1	1.38
4YZ3	2.13	8YZ3	1.10
4YZ5	1.44	8YZ5	0.74
4YZ10	0.74	8YZ10	0.38
4YZ25	0.43	8YZ25	0.22
4YZX5	N/A	8YZX5	N/A
4YZX10	N/A	8YZX10	N/A

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

KFH50

MKF50

KC65

FOF60-03

NOF30-05

NOF50-760

NMF30

RMF60

Cartridge Elements

Notes

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

Exercise:

Determine ΔP at 15 gpm (57 L/min) for YF308YZ10SD5 using 200 SUS (44 cSt) fluid.

Solution:

$$\Delta P_{\text{housing}} = 7.0 \text{ psi } [.48 \text{ bar}]$$

$$\begin{aligned} \Delta P_{\text{element}} &= 15 \times .38 \times (200 \div 150) = 7.6 \text{ psi} \\ &\text{or} \\ &= [57 \times (.38 \div 54.9) \times (44 \div 32) = .54 \text{ bar}] \end{aligned}$$

$$\begin{aligned} \Delta P_{\text{total}} &= 7.0 + 7.6 = 14.6 \text{ psi} \\ &\text{or} \\ &= [.48 + .54 = 1.02 \text{ bar}] \end{aligned}$$

YF30 Top-Ported Pressure Filter

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder YF30:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
YF30							

Example: NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
YF30	4	YZ10	W	S		DR	D5

=YF304YZ10WSDRD5

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Filter Series YF30 YFN30 (Non-bypassing: requires ZX high collapse elements)	Element Length (in) 4 8	Element Size and Media YZ1 = Y size 1 μ Excellement® Z media (synthetic) YZ3 = Y size 3 μ Excellement Z media (synthetic) YZ5 = Y size 5 μ Excellement Z media (synthetic) YZ10 = Y size 10 μ Excellement Z media (synthetic) YZ25 = Y size 25 μ Excellement Z media (synthetic) YZX5 = Y size 5 μ Excellement Z media (high collapse center tube) YZX10 = Y size 10 μ Excellement Z media (high collapse center tube)	Seal Material Omit = Buna N W = Buna N V = Viton®	Inlet Port S = SAE-12 O = Subplate (contact factory)

BOX 6	BOX 7	BOX 8
Dirt Alarm Location Omit = Side of filter head T = Top of filter head	Optional Bowl Drain Omit = No drain DR = Drain	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 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 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 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4.
 Example: 4YZ10V

Box 4. For options V and W, all aluminum parts are anodized.
 Viton is a registered trademark of DuPont Dow Elastomers.

Box 8. Standard indicator setting for non-bypassing model is 50 psi unless otherwise specified.