

# 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)

25 gpm  
**100 L/min**  
 3000 psi  
**210 bar**

NF30

NFS30

**YF30**

CFX30

PLD

DF40

CF40

PF40

RFS50

RF60

CF60

CTF60

VF60

LW60

KF30

TF50

KF50

KC50

MKF50

KC65

NOF30-05

NOF50-760

FOF60-03

NMF30

RMF60

Cartridge Elements

HS60

MHS60

KFH50

Model No. of filter in photograph is YF308YZ10SD5.



INDUSTRIAL



AUTOMOTIVE  
MANUFACTURING



MACHINE  
TOOL



POWER  
GENERATION



CONSTRUCTION



STEEL  
MAKING



PULP & PAPER



AGRICULTURE



MOBILE  
VEHICLES

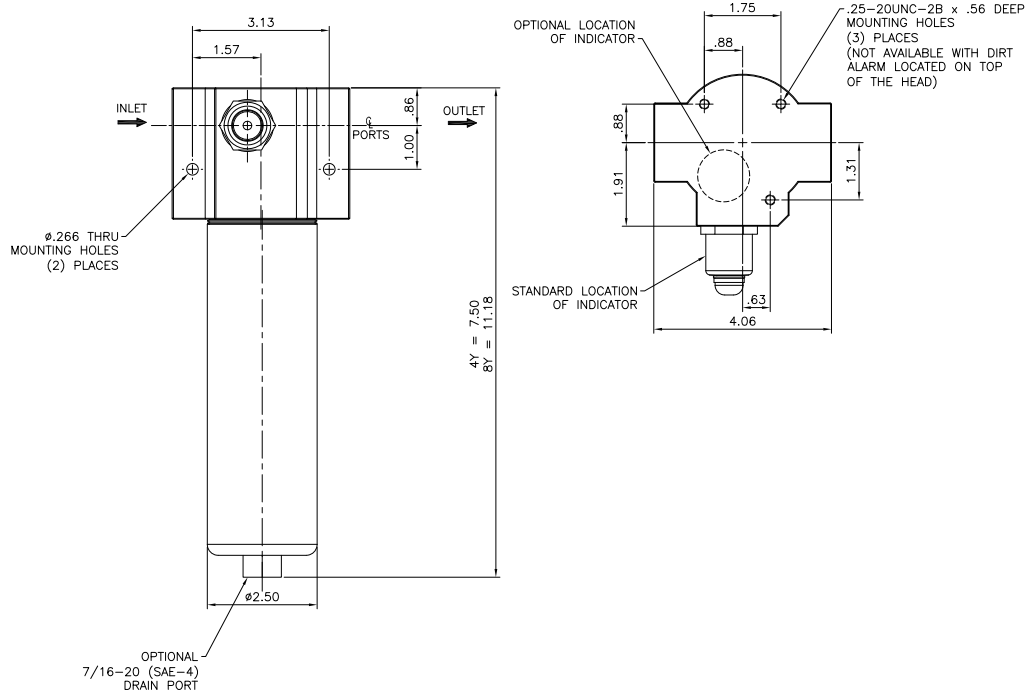


WASTE WATER  
TREATMENT

## Applications

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), per NFPA T2.6.1
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



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: N 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 media (cellulose) and Z-Media® (synthetic)
High Water Content	All Z-Media® (synthetic)
Invert Emulsions	10 and 25 μ Z-Media® (synthetic)
Water Glycols	3, 5, 10 and 25 μ Z-Media® (synthetic)

**Fluid Compatibility**

- NF30
- NFS30
- YF30**
- CFX30
- PLD

Pressure	Series	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 50 psi (3.4 bar) bypass valve.				
		Part No.						
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	0	5	10	15	20	25	
	(L/min)	0	25	50	75	95		

**Element Selection Based on Flow Rate**

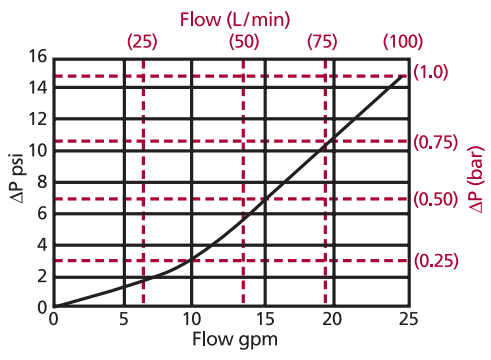
- DF40
- CF40
- PF40
- RFS50
- RF60
- CF60
- CTF60
- VF60
- LW60
- KF30
- TF50
- KF50
- KC50
- MKF50
- KC65
- NOF30-05
- NOF50-760
- FOF60-03
- NMF30
- RMF60
- Cartridge Elements
- HS60
- MHS60
- KFH50

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<sub>housing</sub>**

YF30 ΔP<sub>housing</sub> for fluids with sp gr = 0.86:



**ΔP<sub>element</sub>**

ΔP<sub>element</sub> = flow x element ΔP factor x viscosity factor

El. ΔP factors @ 150 SUS (32 cSt):

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

sp gr = specific gravity

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

Notes

**ΔP<sub>filter</sub> = ΔP<sub>housing</sub> + ΔP<sub>element</sub>**

**Exercise:**

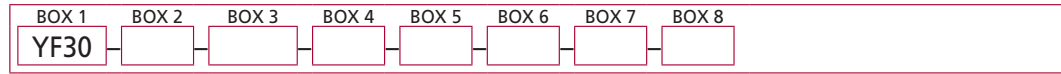
Determine ΔP at 15 gpm (57 L/min) for YF308YZ10SD5 using 200 SUS (44 cSt) fluid.

**Solution:**

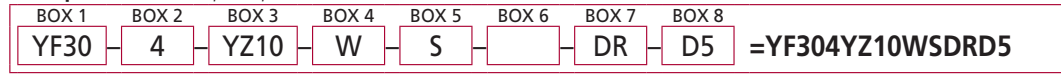
$\Delta P_{\text{housing}} = 7.0 \text{ psi } [.48 \text{ bar}]$   
 $\Delta P_{\text{element}} = 15 \times .38 \times (200 \div 150) = 7.6 \text{ psi}$   
 or  
 $= [57 \times (.38 \div 54.9) \times (44 \div 32) = .54 \text{ bar}]$   
 $\Delta P_{\text{total}} = 7.0 + 7.6 = 14.6 \text{ psi}$   
 or  
 $= [.48 + .54 = 1.02 \text{ bar}]$

## Filter Model Number Selection

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



Example: NOTE: One option per box



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

BOX 6	BOX 7	BOX 8
<b>Dirt Alarm® Location</b>	<b>Optional Bowl Drain</b>	<b>Dirt Alarm® Options</b>
Omit = Side of filter head	Omit = No drain	Omit = None
T = Top of filter head	DR = Drain	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.