

# Non-Bypassing Pressure Filter

# CFX30



## Features and Benefits

- Top-ported non-bypassing pressure filter
- Unique valve eliminates need for high collapse elements
- Offered in pipe, SAE straight thread and ISO 228 porting
- Integral inlet and outlet female test points option available

Model No. of filter in photograph is CFX301CC10S.



INDUSTRIAL



AUTOMOTIVE  
MANUFACTURING



MACHINE  
TOOL



MOBILE  
VEHICLES

**30 gpm**  
**115 L/min**  
**3000 psi**  
**210 bar**

NF30  
NFS30  
YF30  
**CFX30**

PLD  
DF40  
CF40  
PF40  
RFS50  
RF60  
CF60  
CTF60

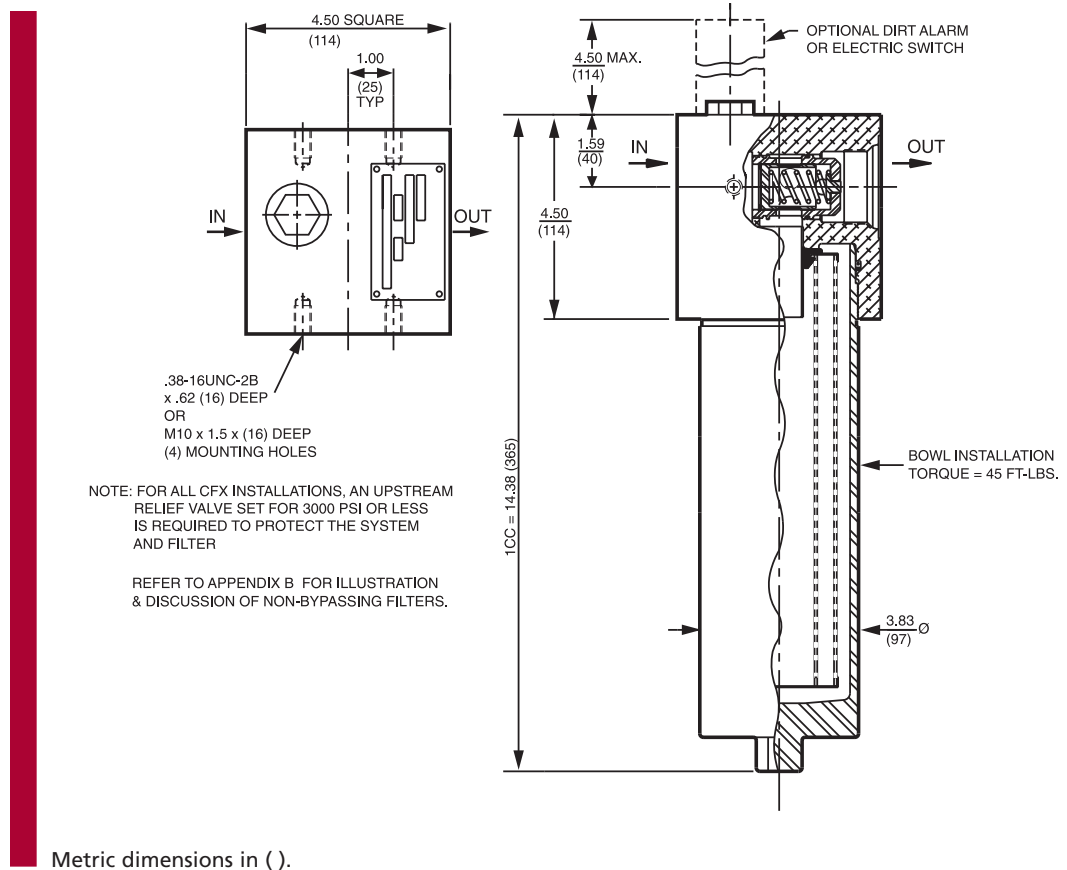
## Applications

VF60  
LW60  
KF30  
TF50  
KF50  
KC50  
MKF50  
KC65  
NOF30-05  
NOF50-760  
FOF60-03

Flow Rating:	Up to 30 gpm (115 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	3000 psi (210 bar)
Min. Yield Pressure:	12,000 psi (828 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	1800 psi (125 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Non-Bypassing
Porting Head:	Aluminum
Element Case:	Steel
Weight of CFX30-1CC:	19.5 lbs. (8.9 kg)
Element Change Clearance:	4.00" (100 mm)

## Filter Housing Specifications

NMF30  
RMF60  
Cartridge Elements  
HS60  
MHS60  
KFH50



## Element Performance Information

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8			Filtration Ratio wrt ISO 16889	
	Using automated particle counter (APC) calibrated per ISO 4402			Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
CC3	6.8	7.5	10.0	N/A	N/A
CC10	15.5	16.2	18.0	N/A	N/A
CCZ1	<1.0	<1.0	<1.0	<4.0	4.2
CCZ3/CAS3/CCAS3	<1.0	<1.0	<2.0	<4.0	4.8
CCZ5/CAS5/CCAS5	2.5	3.0	4.0	4.8	6.3
CCZ10/CAS10/CCAS10	7.4	8.2	10.0	8.0	10.0
CCZ25	18.0	20.0	22.5	19.0	24.0

## Dirt Holding Capacity

Element	DHC (gm)
CC3	30
CC10	25
CCZ1	57
CCZ3/CAS3/CCAS3	58
CCZ5/CAS5/CCAS5	63
CCZ10/CAS10/CCAS10	62
CCZ25	63

Element Collapse Rating: 150 psid (10 bar) for standard elements

Flow Direction: Outside In

Element Nominal CC: 3.0" (75 mm) O.D. x 9.5" (240 mm) long  
Dimensions:

# Non-Bypassing Pressure Filter

# CFX30

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All E Media (cellulose), Z-Media® and ASP Media (synthetic)
High Water Content	All Z-Media® and ASP Media (synthetic)
Invert Emulsions	10 and 25 µ Z-Media® (synthetic), 10 µ ASP Media (synthetic)
Water Glycols	3, 5, 10 and 25 µ Z-Media (synthetic), 3, 5 and 10 µ ASP Media (synthetic)
Phosphate Esters	All Z-Media® and ASP Media (synthetic) with H (EPR) seal designation
Skydrol®	3, 5, 10 and 25 µ Z-Media® (synthetic) 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  
**CFX30**

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Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid. Non bypass with standard elements.					
	Series	Part No.						
To 3000 psi (210 bar)	E Media	CC3	1CC3	See CFN or KFX				
		CC10	1CC10					
		CC25	1CC25					
	Z- Media®	CCZ1	1CCZ1	See CFN or KFX				
		CCZ3	1CCZ3					
		CCZ5	1CCZ5					
		CCZ10	1CCZ10					
		CCZ25	1CCZ25					
Flow	gpm	0	5	10	15	20	25	30
	(L/min)	0	25	50	75	100	115	

**Element Selection Based on Flow Rate**

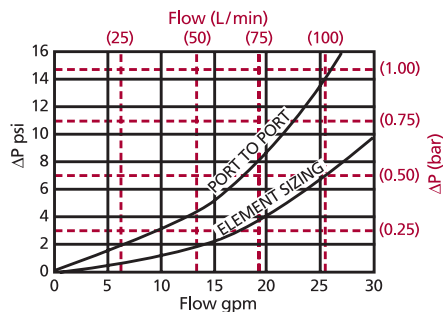
DF40  
CF40  
PF40  
RFS50  
RF60  
CF60  
CTF60  
VF60  
LW60

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>

CFX30 ΔP<sub>housing</sub> 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<sub>element</sub>

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

El. ΔP factors @ 150 SUS (32 cSt):

	1CC
CC3	.22
CC10	.13
CC25	.03
CCZ1	.35
CCZ3/CAS3/CCAS3	.20
CCZ5/CAS5/CCAS5	.19
CCZ10/CAS10/CCAS10	.10
CCZ25	.05

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  
MKF50  
KC65  
NOF30-05  
NOF50-760  
FOF60-03

Notes

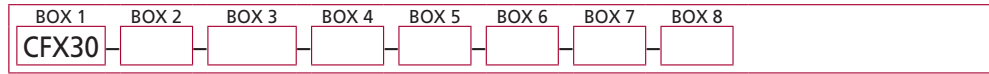
$$\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$$

The ΔP housing curve labeled "Element Sizing" is the pressure drop between the inlet and outlet areas of the filter's bypass valve and should be used for filter sizing. Although "Port to Port" ΔP is not a factor in Element Selection, it should be considered for overall system design.

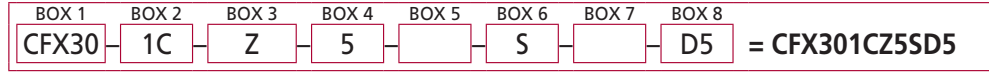
NMF30  
RMF60  
Cartridge Elements  
HS60  
MHS60  
KFH50

## Filter Model Number Selection

### How to Build a Valid Model Number for a Schroeder CFX30:



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3
<b>Filter Series</b>	<b>Number &amp; Size of Elements</b>	<b>Media Type</b>
CFX30	1 D CC	Omit = E Media (cellulose) Z = Excellement® Z-Media® (synthetic) AS = Anti-Stat Media (synthetic) M = Media (reusable metal mesh) D size only

BOX 4	BOX 5	BOX 6
<b>Micron Rating</b>	<b>Seal Material</b>	<b>Porting</b>
1 = 1 Micron (Z, ZW, ZX Media) 3 = 3 Micron (E, Z, ZW, ZX, AS Media) 5 = 5 Micron (Z, ZW, ZX, AS, Media) 10 = 10 Micron (E, M, Z, ZW, ZX, AS, Media) 25 = 25 Micron (E & Z-Media®)	Omit = Buna N V = Viton® W = Buna N H = EPR H.5 = Skydrol® compatibility	S = SAE-20 P = 1¼" NPTF B = ISO 228 G-1¼"

BOX 7	BOX 8
<b>Options</b>	<b>Dirt Alarm® Options</b>
Omit = None L = Two ¼" NPTF inlet and outlet female test points U = Schroeder Check ¼" -20 UNF Test Point installation in cap (upstream)	Omit = None D5 = Visual pop-up 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 identical to contents of Boxes 2, 3, 4 and 5. E media (cellulose) elements are only available with Buna N seals.

Box 5. For options H, V, W, and H.5, all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton® is a registered trademark of DuPont Dow Elastomers. Skydrol® is a registered trademark of Solutia Inc.

Box 6. B porting option supplied with metric mounting holes.