Non-Bypassing Pressure Filter CFX30

Features and Benefits

- Top-ported non-bypassing pressure filter
- Unique patented 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.

30 gpm
115 L/min
3000 psi
210 bar


INDUSTRIAL


AUTOMOTIVE MANUFACTURING


MACHINE TOOL


MINING TECHNOLOGY

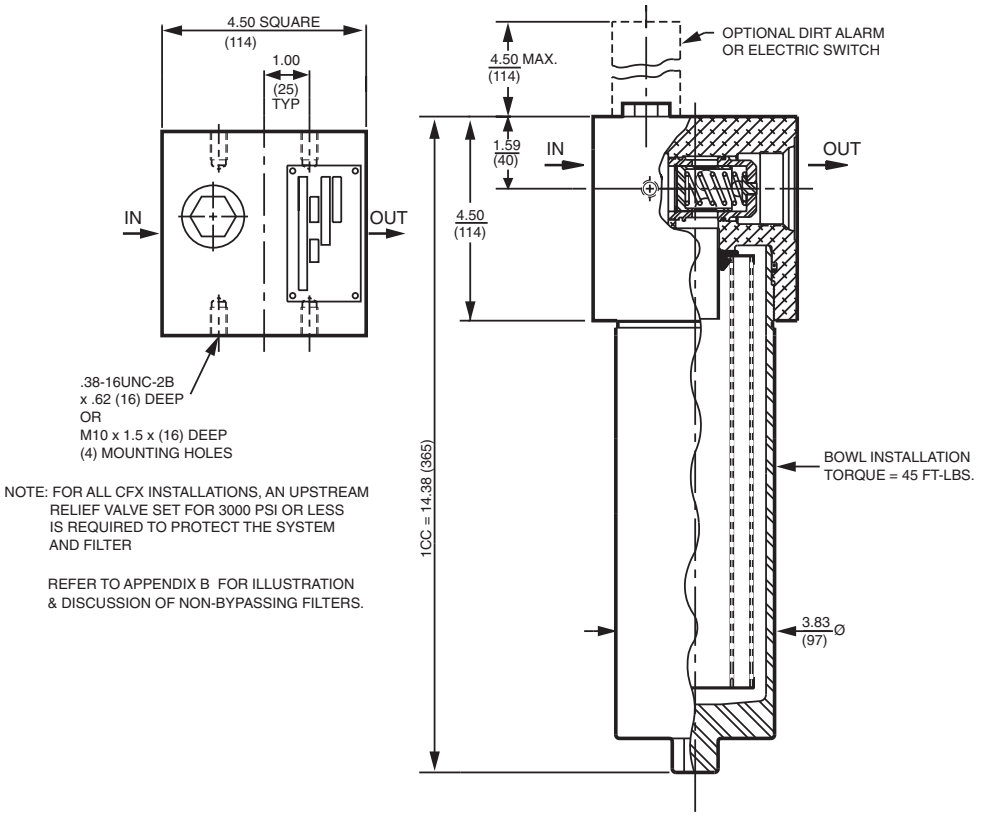

MOBILE VEHICLES

Applications

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)
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

CFX30 Non-Bypassing Pressure Filter



NOTE: FOR ALL CFX INSTALLATIONS, AN UPSTREAM RELIEF VALVE SET FOR 3000 PSI OR LESS IS REQUIRED TO PROTECT THE SYSTEM AND FILTER

REFER TO APPENDIX B FOR ILLUSTRATION & DISCUSSION OF NON-BYPASSING FILTERS.

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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
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	<1.0	<1.0	<2.0	<4.0	4.8
CCZ5	2.5	3.0	4.0	4.8	6.3
CCZ10	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	58
CCZ5	63
CCZ10	62
CCZ25	63

Element Collapse Rating: 150 psid (10 bar) for standard elements
Flow Direction: Outside In
Element Nominal Dimensions: CC: 3.0" (75 mm) O.D. x 9.5" (240 mm) long

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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
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)

Skydrol is a registered trademark of Solutia Inc.

Element Selection
Based on Flow Rate

Pressure	Element Series	Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid. Non bypass with standard elements.
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

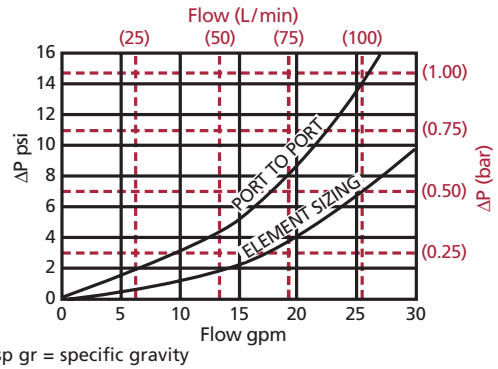
Shown above are the elements most commonly used in this housing.

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

$\Delta P_{housing}$

CFX30 $\Delta P_{housing}$ 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):

	1CC
CC3	.22
CC10	.13
CC25	.03
CCZ1	.35
CCZ3	.20
CCZ5	.19
CCZ10	.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).

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

Notes

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

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.

CFX30 Non-Bypassing Pressure Filter

Filter Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
CFX30 –		–	–	–	–	–

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
CFX30 –	1 –	CZ5 –	–	S –	–	D5	= **CFX301CZ5SD5**

BOX 1

Filter Series
CFX30

BOX 2

Number of Elements
1

BOX 3

Element Part Number	
CC3	= 3 µ E media (cellulose)
CC10	= 10 µ E media (cellulose)
CC25	= 25 µ E media (cellulose)
CCZ1	= 1 µ Excellement® Z media (synthetic)
CCZ3	= 3 µ Excellement Z media (synthetic)
CCZ5	= 5 µ Excellement Z media (synthetic)
CCZ10	= 10 µ Excellement Z media (synthetic)
CCZ25	= 25 µ Excellement Z media (synthetic)
DDM10	= 10 µ M media (reusable metal)

BOX 4

Seal Material
Omit = Buna N
V = Viton®
H = EPR
W = Buna N
H.5 = Skydrol® compatibility

BOX 5

Inlet Port
P = 1¼" NPTF
S = SAE-20
B = ISO 228 G-1¼"

BOX 6

Options
Omit = None
L = Two ¼" NPTF inlet and outlet female test ports
U = Schroeder Check® 7/16"-20 UNF Test Point installation in cap (upstream)

BOX 7

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	MS = Cam operated switch w/ ½" conduit female 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

NOTES:

Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4. E media (cellulose) elements are only available with Buna N seals.

Box 4. 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 5. B porting option supplied with metric mounting holes.