

Pressure Filters

OFPH03, OFPH05 Series

Flows to 53 L/min (14 USgpm)
Pressures to 310 bar (4,500 psi)

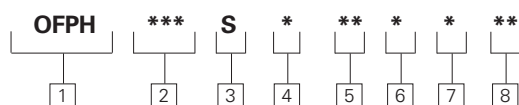


Features and Benefits

- Beta Ratio: $\beta_{X(C)} = 1000$ to ISO 16889
- Designed to comply with ANSI specifications and ISO cleanliness standards
- Visual and electrical indicators with lamp options for system design flexibility
- Poppet type by-pass valve construction
- Wide range of element lengths for maximum design flexibility
- High efficiency replacement elements in standard configurations (H-Pak) to meet Target Cleanliness Levels
- Designed to mount directly underneath D03, D05 and CETOP Valves. The fluid is filtered prior to entering the valve "P" (Pressure) Port

DESIGN SPECIFICATIONS

Rated flow:	Length 3	23 L/min (6 USgpm)
	Length 5	45 L/min (12 USgpm)
	Length 6	53 L/min (14 USgpm)
Fluid Compatibility:	Compatible with most petroleum oil, water glycol, oil-in-water and water-in-oil fluids. Optional seals available for phosphate esters.	
Temp range:	26°C to +121°C (-15°F to +250°F)	
Pressure Rating:	Operating:	310 bar (4500 psi)
	Fatigue:	310 bar (4500 psi)
Material:	Head	Ductile Iron
	Bowl	Carbon Steel
Dry weight: (Approximate)	Length 3	2,3 kg (5.1 lbs)
	Length 5	4,7 kg (10.4 lbs)
	Length 6	5,4 kg (11.9 lbs)



OFPH Series Filter Model Codes

Sample model code:

OFPH031SATNBH03

[1] Filter Series - OFPH

[2] Body Size (D03 or D05) and Assembly Length

mm (inch)

031 - OFPH031 226 (8.9)
051 - OFPH051 254 (10.0)
052 - OFPH052 325 (12.8)

[3] Valve Options

S - Without bypass valve

[4] Port Options

A - Modular stacking,
Bowl Side A
B - Modular stacking,
Bowl Side B

[5] Indicator Options

TN - Visual 7.9 bar (115 psi),
No Connector
JN - No Indicator (plug),
No Connector
TB - Electrical 7.9 bar
(115 psi), Brad Harrison
TJ - Electrical 7.9 bar
(115 psi), Hirschmann
w 24 volt light
TK - Electrical 7.9 bar
(115 psi), Hirschmann
w 115 volt light
TL - Electrical 7.9 bar
(115 psi), Hirschmann
w 230 volt light
TH - Electrical 7.9 bar
(115 psi), Hirschmann

[6] Seals

B - Buna-N
V - Viton-A

[7] Element Series (collapse rating)

H - 207 bar (3000 psi)
X - no element

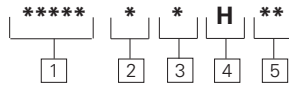
[8] Fluid Cleanliness Rating

Code	Target fluid cleanliness level
03	16/14/12 or better
05	18/16/14 or better
10	20/18/15 or better
20	22/19/16 or better
XX	no element

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OFPH03, OFPH05 Series



V0603, V0604 and V0114 Series Replacement Element Model Codes

Sample model code:

V0603B3H03

1 Element Series

V0603 - For use with OFPH031 series filters

V0604 - For use with OFPH051 series filters

V0114 - For use with OFPH052 series filters

2 Seals

B - Buna-N
V - Viton-A

3 Element Length

3 - OFPH031 (V0603 only)

5 - OFPH051 (V0604 only)

6 - OFPH052 (V0114 only)

4 Element Collapse Pressure

H - 207 bar (3000 psi)

5 Fluid Cleanliness Rating

03 16/14/12 or better

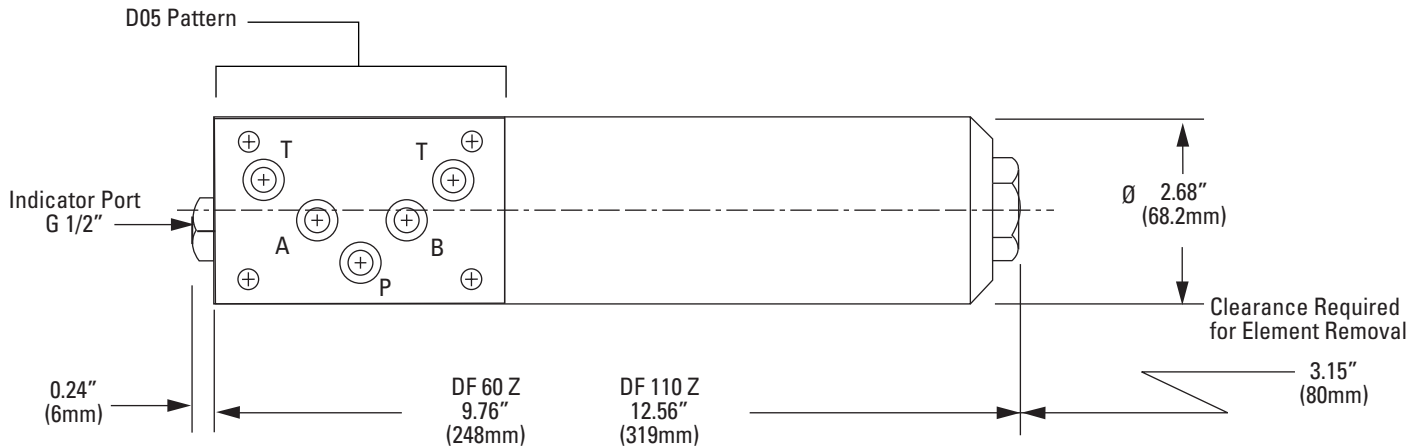
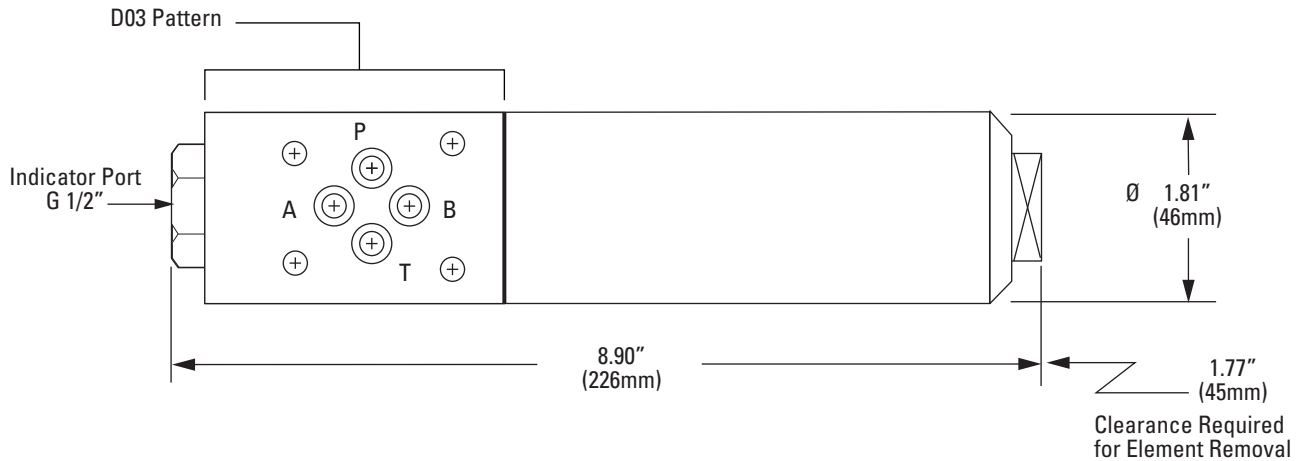
05 18/16/14 or better

10 20/18/15 or better

20 22/19/16 or better

Housing Dimensions - D03 Pattern

mm (inch)



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Flow versus pressure drop:

150 SUS (32 cSt) oil with specific gravity of ≤ 0.9

OFPH Filter Elements Flow Data

'K' factor - bar/lpm (psi/gpm)

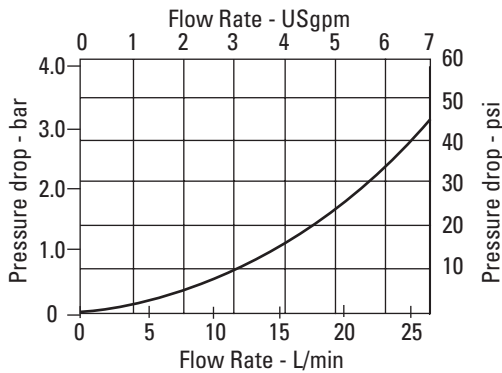
ELEMENT TYPE / SIZE		MICRON RATING			
		03	05	10	25
H - pak	3	0.075 (4.466)	0.067 (3.978)	0.053 (3.096)	0.031 (1.795)
	5	0.059 (3.210)	0.033 (1.784)	0.018 (0.993)	0.023 (1.227)
	6	0.025 (1.394)	0.015 (0.818)	0.009 (0.488)	0.010 (0.563)

Note: For flow in gpm, use the values inside the brackets.

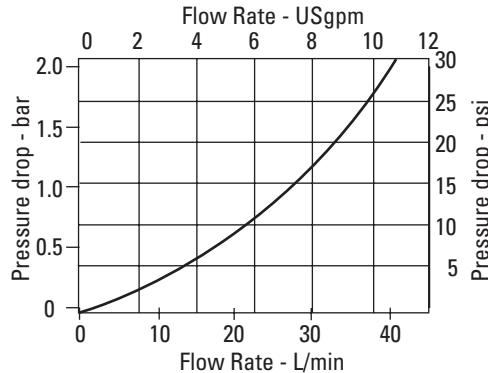
Note: The values for bar/lpm have been rounded to the third decimal.

Housing Flow Data

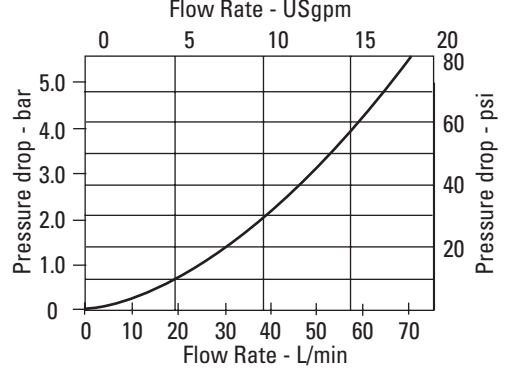
OFPH031



OFPH051



OFPH052



Sample ΔP Calculation :

OFPH031SAATNBHC05 - Filter assembly having '3' length filter element with micron rating code '05' at 20 L/min flow rate using a hydraulic fluid at 46 cSt viscosity & specific gravity (sp.gr.)0.8

ΔP Assembly	=	ΔP Housing	+	ΔP Element
	=	Housing factor from graph $\times \text{sp.gr.}(\text{actual})/0.9$	+	Flow Rate (Lpm) \times Element 'K' factor (bar/lpm) \times [actual cSt / 32] \times [Sp.Gr(actual) / 0.9]
	=	1.6 \times 0.8/0.9	+	20 \times 0.067 \times 46/32 \times 0.8/0.9
	=	1.400	+	1.7
	=	3.1 bar		