

PF2

High Pressure In-line Filter Assembly

Ideal for a variety of applications including mobile applications, paper and saw mills, power generation, general industrial machine tools, and automotive manufacturing. With HF2 compatible port-to-port dimension, mounting pattern, and element design to meet the automotive manufacturing standard.

Max Operating Pressure: 4000 psi (275 bar)

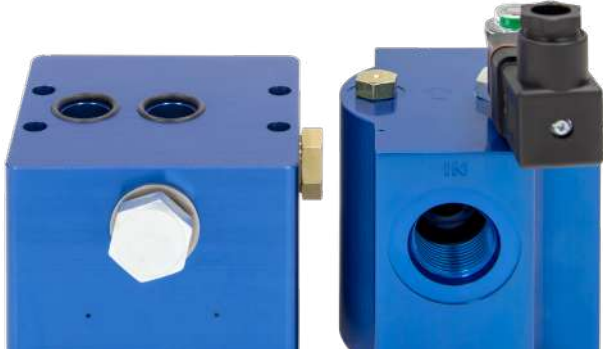


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Elements that go beyond industry standard.

G8 Dualglass and PE glass elements are DFE rated to assure performance even when exposed to the toughest hydraulic systems and provide unmatched particulate capture and retention to remove contamination from your hydraulic and lube oils, for good.



Small size, huge results.

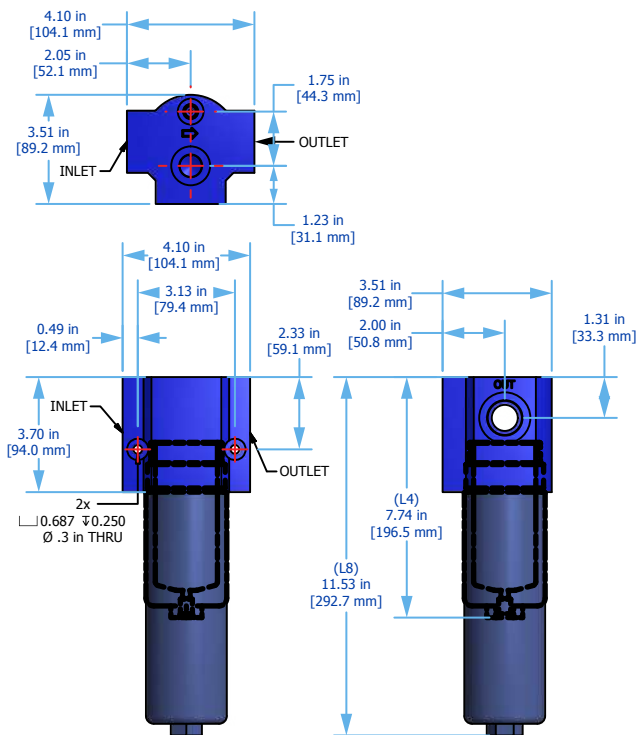
The compact size of PF2 filter assemblies make them the perfect addition directly upstream of your control valves and other sensitive components even in the tightest of spaces. And with two different mounting options to choose from, the incredible versatility of the PF2 makes it ideal for all of your high pressure filter applications.

Works under pressure.

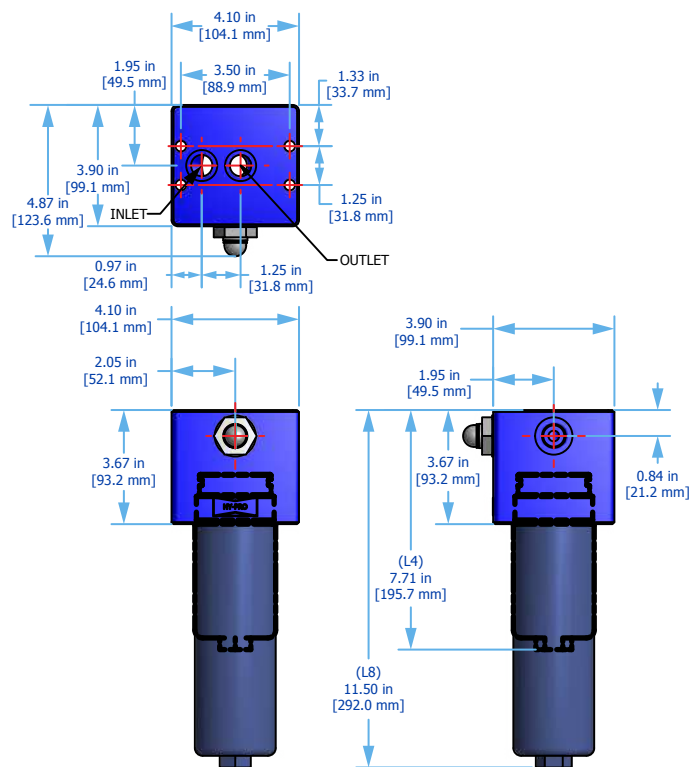
Applications for the PF2 include mobile, general industrial machine tools, paper mills, sawmills, and speed control circuits for power generation systems. So whether you're operating waste haulers, cement mixers, fire trucks, cranes, or CNC routers, you can be sure the PF2 will protect your critical components even when the pressure is on.



In-Line Mount Installation Drawing



Manifold Mount Installation Drawing



PF2 Specifications

Operating Temperature	Fluid Temperature 30°F to 225°F (0°C to 105°C)	Ambient Temperature -4°F to 140°F (-20C to 60C)
Operating Pressure	4000 psi (275 bar) max	
Flow Fatigue Rating	2000 psi (137 bar)	
Burst Pressure	12,000 psi (827 bar) max	
ΔP Indicator Trigger	35 psid (2.4 bard) for 50 psid (3.4 bard) bypass. 70 psid (4.8 bard) for 90 psid (6.2 bard) bypass. 100 psid (6.9 bard) for no bypass.	

Element Collapse Rating	Normal Collapse 290 psid (20 bard)	High Collapse 3000 psid (206 bard)
Integral Bypass Setting	50 psid (3.4 bard) 90 psid (6.2 bard)	

Materials of Construction	Head Anodized aluminum (grade T6061)	Bowl Anodized aluminum (grade T6061) Bowl drain #4 SAE standard	Element Bypass Valve Nickel plated/Stainless steel	Element End Caps Zinc or Tin coated carbon steel
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Media Description	M G8 Dualglass, our latest generation of DFE rated, high performance glass media for all hydraulic & lubrication fluids. $\beta_{x_{C1}} \geq 4000$	A G8 Dualglass high performance media combined with water removal scrim. $\beta_{x_{C1}} \geq 4000$	SF Dynafuzz stainless steel fiber media $\beta_{x_{C1}} \geq 4000$	W Stainless steel wire mesh media $\beta_{x_{C1}} \geq 2$ ($\beta_x \geq 2$)
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Replacement Elements **To determine replacement elements, use corresponding codes from your assembly part number:**
Filter Element Part Number
 HP2[Collapse Rating Code]L[Length Code] - [Media Selection Code] [Seal Code] **Example**
 HP20L4-12MV

Fluid Compatibility Petroleum and mineral based fluids (standard). For polyol ester, phosphate ester, and other specified synthetic fluids use fluorocarbon seal option or contact factory.

Filter Assembly Sizing¹ Filter assembly clean element ΔP after actual viscosity correction should not exceed 10% of filter assembly bypass setting. For applications with extreme cold start condition contact Hy-Pro for sizing recommendations.

Step 1: Calculate ΔP coefficient for actual viscosity

Using Saybolt Universal Seconds (SUS)		
ΔP Coefficient	=	$\frac{\text{Actual Operating Viscosity}^1 \text{ (SUS)}}{150} \times \frac{\text{Actual Specific Gravity}}{0.86}$

Using Centistokes (cSt)		
ΔP Coefficient	=	$\frac{\text{Actual Operating Viscosity}^1 \text{ (cSt)}}{32} \times \frac{\text{Actual Specific Gravity}}{0.86}$

Step 2: Calculate actual clean filter assembly ΔP at both operating and cold start viscosity

Actual Assembly Clean ΔP	=	Flow Rate	X	ΔP Coefficient (from Step 1)	X	Assembly ΔP Factor (from sizing table)
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ΔP Factors ¹	Collapse	Length	Units	Media								
				1M	2M	3M	6M	12M	15M	16M	25M	**W
20	L4		psid/gpm	2.145	N/A	1.810	1.403	1.258	N/A	1.231	1.185	0.213
			bard/lpm	0.039	N/A	0.033	0.026	0.023	N/A	0.022	0.022	0.004
	L8		psid/gpm	1.118	N/A	0.944	0.731	0.656	N/A	0.642	0.618	0.111
			bard/lpm	0.020	N/A	0.017	0.013	0.012	N/A	0.012	0.011	0.002
21	L4		psid/gpm	2.287	1.930	N/A	1.496	N/A	1.341	1.312	1.264	0.228
			bard/lpm	0.042	0.035	N/A	0.027	N/A	0.024	0.024	0.023	0.004
	L8		psid/gpm	1.188	1.003	N/A	0.777	N/A	0.672	0.657	0.647	0.116
			bard/lpm	0.022	0.018	N/A	0.014	N/A	0.012	0.012	0.012	0.002

¹Max flow rates and ΔP factors assume u = 150 SUS, 32 cSt. See filter assembly sizing guideline for viscosity conversion formula on page 22 for viscosity change.

PF2 Part Number Builder

PF2 -

Connection Collapse Length Bypass Indicator Media Seal

Connection	Port Option	Max Flow Rate
	G12 ¹ ¼" G thread (BSPP)	20 gpm (76 lpm) ²
	M12 ¼" Manifold top mount	20 gpm (76 lpm) ²
	S12 ¹ ¼" SAE	20 gpm (76 lpm) ²

Collapse Rating	Option	Description
0 ³	290 psid (20 bard)	normal collapse element
1	3000 psid (206 bard)	high collapse element

Element Length	Option	Description
4	4" (10 cm)	nominal length filter element and housing
8	8" (20 cm)	nominal length filter element and housing

Bypass	Option	Description
3	50 psid (3.4 bard)	bypass
6	90 psid (6.2 bard)	bypass
X	No bypass	

ΔP Indicator	Indicator Options	Thermal Lockout	Surge Control	Reset
D	Visual / Electrical (DIN 43650)	No	No	Auto
S	Visual / Electrical (DIN 43650)	Yes	Yes	Manual
V	Visual	No	No	Auto
X	No indicator (port plugged)	-	-	-
Y	Visual only	Yes	Yes	Manual

Media Selection	G8 Dualglass		G8 Dualglass + water removal	
	1M	$\beta_{3_{[C]}} \geq 4000$	3A ⁵	$\beta_{5_{[C]}} \geq 4000$
2M ⁴	$\beta_{5_{[C]}} \geq 4000$	6A ⁵	$\beta_{7_{[C]}} \geq 4000$	
3M ⁵	$\beta_{5_{[C]}} \geq 4000$	12A ⁵	$\beta_{12_{[C]}} \geq 4000$	
6M	$\beta_{7_{[C]}} \geq 4000$	25A ⁵	$\beta_{22_{[C]}} \geq 4000$	
12M ⁵	$\beta_{12_{[C]}} \geq 4000$			
15M ⁴	$\beta_{12_{[C]}} \geq 4000$			
16M	$\beta_{17_{[C]}} \geq 4000$			
25M	$\beta_{22_{[C]}} \geq 4000$			

DynaFuzz stainless fiber		Stainless wire mesh	
3SF	$\beta_{4_{[C]}} \geq 4000$	10W	10μ nominal
10SF	$\beta_{11_{[C]}} \geq 4000$	25W	25μ nominal
		40W	40μ nominal
		74W	74μ nominal
		149W	149μ nominal

Seals	Option	Description
B	Nitrile (Buna)	
V	Fluorocarbon	
E-WS	EPR seals + stainless steel support mesh	

¹Vent connection standard on G12 and S12 models - #4 SAE.
²Maximum recommended flow rate based on velocity through port and internal flow path. Consult sizing guidelines or consult factory for sizing based on flow rate, viscosity, temperature, filter media selection.
³When chosen, must be paired with Bypass option "4"
⁴Compatible only with High Collapse Rating option "1."
⁵Not available on High Collapse Rating option "1."

For all up to date option details and compatibilities, please reference our Contamination Solutions Price List or contact customer service.

Want to find out more? Get in touch.

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