

# 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)**



[hyprofiltration.com/](http://hyprofiltration.com/)



## 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.

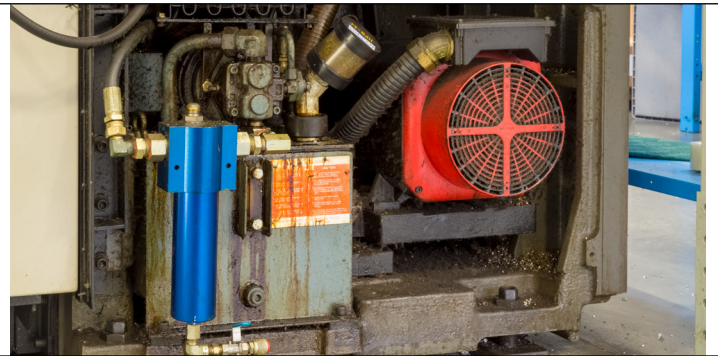


## Small size, huge results.

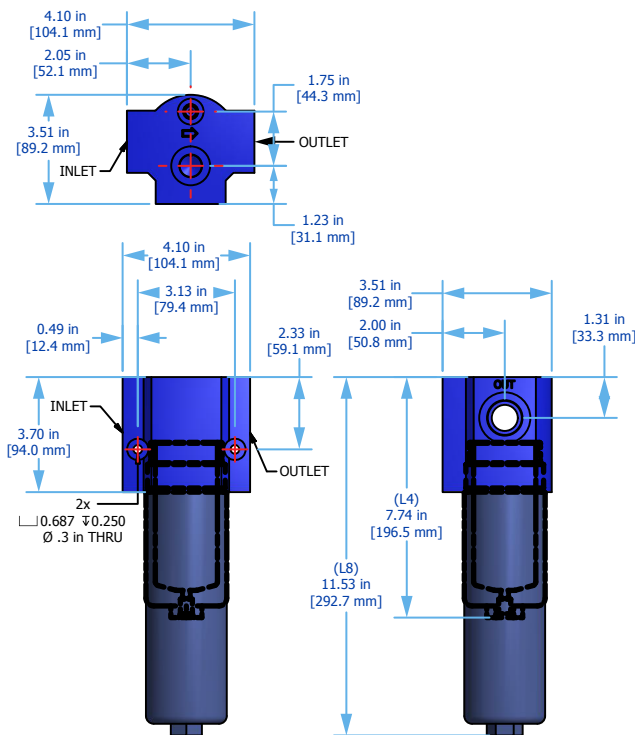
The compact size of PF2 filter assemblies make them the perfect addition directly upstream of your control valves and other sensitive components even in the tightest of spaces. And with two different mounting options to choose from, the incredible versatility of the PF2 makes it ideal for all of your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

## Works under pressure.

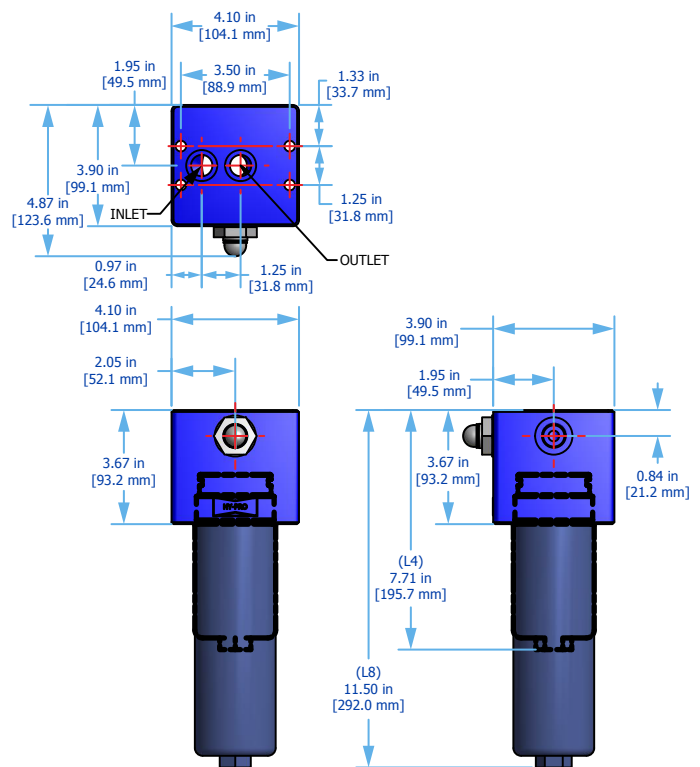
Applications for the PF2 include mobile, general industrial machine tools, paper mills, sawmills, and speed control circuits for power generation systems. So whether you're operating waste haulers, cement mixers, fire trucks, cranes, or CNC routers, you can be sure the PF2 will protect your critical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



## In-Line Mount Installation Drawing



## Manifold Mount Installation Drawing



# PF2 Specifications

Operating Temperature	<b>Fluid Temperature</b> 30°F to 225°F (0°C to 105°C)	<b>Ambient Temperature</b> -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	<b>Normal Collapse</b> 290 psid (20 bard)	<b>High Collapse</b> 3000 psid (206 bard)										
Integral Bypass Setting	50 psid (3.4 bard) 90 psid (6.2 bard)											
Materials of Construction	<b>Head</b> Anodized aluminum (grade T6061)	<b>Bowl</b> Anodized aluminum (grade T6061) Bowl drain #4 SAE standard	<b>Element Bypass Valve</b> Nickel plated/Stainless steel	<b>Element End Caps</b> Zinc or Tin coated carbon steel								
Media Description	<b>M</b> G8 Dualglass, our latest generation of DFE rated, high performance glass media for all hydraulic & lubrication fluids. $\beta_{x_{C1}} \geq 4000$	<b>A</b> G8 Dualglass high performance media combined with water removal scrim. $\beta_{x_{C1}} \geq 4000$	<b>SF</b> Dynafuzz stainless steel fiber media $\beta_{x_{C1}} \geq 4000$	<b>W</b> Stainless steel wire mesh media $\beta_{x_{C1}} \geq 2$ ( $\beta_x \geq 2$ )								
Replacement Elements	To determine replacement elements, use corresponding codes from your assembly part number: <b>Filter Element Part Number</b> HP2[Collapse Rating Code]L[Length Code] - [Media Selection Code] [Seal Code]			<b>Example</b> 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 Sizing <sup>1</sup>	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.											
	<b>Step 1: Calculate ΔP coefficient for actual viscosity</b>											
	<b>Using Saybolt Universal Seconds (SUS)</b> $\Delta P \text{ Coefficient} = \frac{\text{Actual Operating Viscosity}^1 \text{ (SUS)}}{150} \times \frac{\text{Actual Specific Gravity}}{0.86}$		or	<b>Using Centistokes (cSt)</b> $\Delta P \text{ Coefficient} = \frac{\text{Actual Operating Viscosity}^1 \text{ (cSt)}}{32} \times \frac{\text{Actual Specific Gravity}}{0.86}$								
	<b>Step 2: Calculate actual clean filter assembly ΔP at both operating and cold start viscosity</b>											
	Actual Assembly Clean ΔP = Flow Rate X ΔP Coefficient (from Step 1) X Assembly ΔP Factor (from sizing table)											
ΔP Factors <sup>1</sup>	<b>Collapse</b>	<b>Length</b>	<b>Units</b>	<b>Media</b>								
				<b>1M</b>	<b>2M</b>	<b>3M</b>	<b>6M</b>	<b>12M</b>	<b>15M</b>	<b>16M</b>	<b>25M</b>	<b>**W</b>
	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

<sup>1</sup>Max 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
	<b>G12</b> <sup>1</sup> ¼" G thread (BSPP)	20 gpm (76 lpm) <sup>2</sup>
	<b>M12</b> ¼" Manifold top mount	20 gpm (76 lpm) <sup>2</sup>
	<b>S12</b> <sup>1</sup> ¼" SAE	20 gpm (76 lpm) <sup>2</sup>

Collapse Rating	Option	Description
<b>0</b> <sup>3</sup>	290 psid (20 bard)	normal collapse element
<b>1</b>	3000 psid (206 bard)	high collapse element

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

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

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

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

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

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

<sup>1</sup>Vent connection standard on G12 and S12 models - #4 SAE.  
<sup>2</sup>Maximum 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.  
<sup>3</sup>When chosen, must be paired with Bypass option "4".  
<sup>4</sup>Compatible only with High Collapse Rating option "1".  
<sup>5</sup>Not 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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