

F8

Low Pressure Filter High Flow Filter Assembly

Ideal for high viscosity lubricating fluids, high flow hydraulic, and heavily contaminated fuel applications. Drop-in mounting interchange for common pulp and paper industry 8300/8310/8314 filter assemblies.

Max Operating Pressure: 500 psi (34.5 bar)



hyprofiltration.com/F8



Filtration starts with the filter.

Advanced DFE rated filter elements deliver lower operating ISO Codes with high efficiency particulate removal and retention efficiency. With a range of media options down to $\beta_{2.5, [c]} > 1000$ + water absorbing options, you get the perfect element for your application, every time.



Minimize the mess.

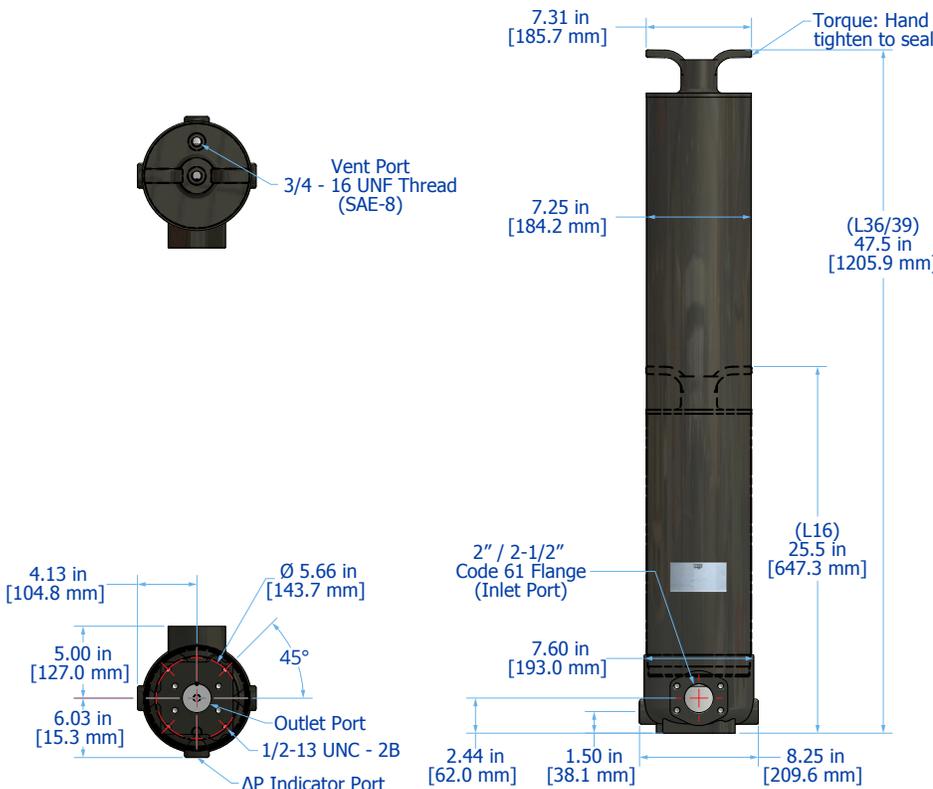
The top loading housing on F8 filter assemblies provide easy and clean access when servicing or changing the element. Accessing the element is as simple as removing the housing cover, meaning you have no heavy bowl to lift and can get back in operation more quickly than ever.

Setting the new (industry) standard.

Designed as a drop-in replacement for industry standard 8300 series filter housings, only the F8 from Hy-Pro gives you the flexibility to choose from numerous DFE rated filter arrangements. Even upgrade your existing 83** series filter elements with the HP107 series to get a new integral bypass valve with every filter.

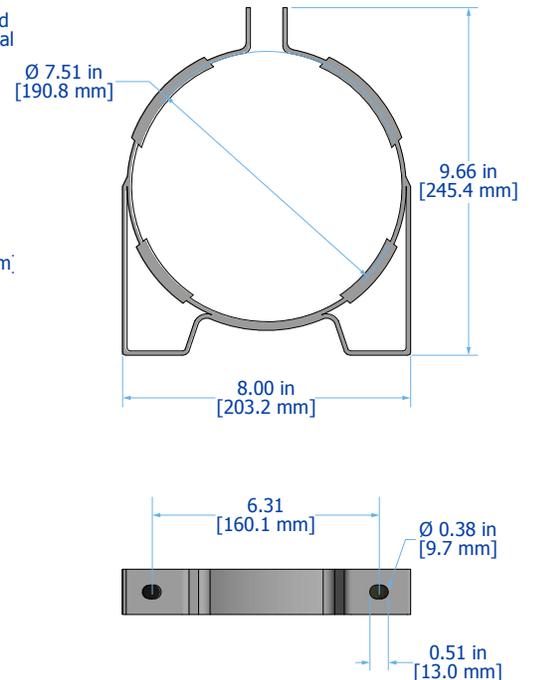


F8 Installation Drawing



F8 Mounting Bracket

(Not to scale)



Filter Assembly Sizing

Filter Assembly Sizing Guidelines

Effective filter sizing requires consideration of flow rate, viscosity (operating and cold start), fluid type and degree of filtration. When properly sized, bypass during cold start can be avoided/minimized and optimum element efficiency and life achieved. The filter assembly differential pressure values provided for sizing differ for each media code, and assume 32 cSt (150 SUS) viscosity and 0.86 fluid specific gravity. Use the following steps to calculate clean element assembly pressure drop.

Calculate ΔP coefficient for actual viscosity

Using Saybolt Universal Seconds (SUS)

$$\Delta P \text{ Coefficient} = \frac{\text{Actual Operating Viscosity}^1 \text{ (SUS)}}{150} \times \frac{\text{Actual Specific Gravity}}{0.86}$$

Using Centistokes (cSt)

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

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

$$\text{Actual Assembly Clean } \Delta P = \text{Flow Rate} \times \frac{\Delta P \text{ Coefficient (from calculation above)}}{\text{Assembly } \Delta P \text{ Factor (from sizing table)}}$$

Sizing recommendations to optimize performance and permit future flexibility

- To avoid or minimize bypass during cold start the actual assembly clean ΔP calculation should be repeated for start-up conditions if cold starts are frequent.
- Actual assembly clean ΔP should not exceed 10% of bypass ΔP gauge/indicator set point at normal operating viscosity.
- If suitable assembly size is approaching the upper limit of the recommended flow rate at the desired degree of filtration consider increasing the assembly to the next larger size if a finer degree of filtration might be preferred in the future. This practice allows the future flexibility to enhance fluid cleanliness without compromising clean ΔP or filter element life.
- Once a suitable filter assembly size is determined consider increasing the assembly to the next larger size to optimize filter element life and avoid bypass during cold start.
- When using water glycol or other specified synthetics we recommend increasing the filter assembly by 1~2 sizes.



F8 Specifications

Dimensions	See Installation Drawings on page 3 for model specific dimensions.								
Operating Temperature	Fluid Temperature				Ambient Temperature				
	30°F to 225°F (0°C to 105°C)				-4°F to 140°F (-20C to 60C)				
Operating Pressure	500 psi (34.5 bar) max								
ΔP Indicator Trigger	15 psi (1 bar): 25 psid bypass								
	35 psi (2.4 bar): 50 psid bypass + non bypass								
Materials of Construction	Head/Lid				Bowl				
	Cast aluminum (anodized)				Industrial coated steel				
Media Description	M	A	W	VTM					
	G8 Dualglass, our latest generation of DFE rated, high performance glass media for all hydraulic & lubrication fluids. $\beta_{x_{[C]}} = 1000$ ($\beta_x = 200$)	G8 Dualglass high performance media combined with water removal scrim. $\beta_{x_{[C]}} = 1000$ ($\beta_x = 200$)	Stainless steel wire mesh media $\beta_{x_{[C]}} = 2$ ($\beta_x = 2$)	$\beta_{0.9_{[C]}} = 1000$ particulate, insoluble oxidation by-product and water removal media					
Replacement Elements	To determine replacement elements, use corresponding codes from your assembly part number:								
	Element Type Code	Filter Element Part Number						Example	
5	HP105L[Length Code] - [Media Selection Code][Seal Code]						HP105L36-6AB		
6	HP106L[Length Code] - [Media Selection Code][Seal Code]						HP106L16-10MV		
7	HP107L[Length Code] - [Media Selection Code][Seal Code]						HP107L36-1MV		
32	HP8310L[Length Code] - [Media Selection Code][Seal Code]						HP8310L16-25AV		
35	HP8310L[Length Code] - [Media Selection Code][Seal Code]						HP8310L39-3MB		
8X	HP8314L[Length Code] - [Media Selection Code][Seal Code]						HP8314L39-25WV		
82	HP8314L[Length Code] - [Media Selection Code][Seal Code]						HP8314L16-12MB		
85	HP8314L[Length Code] - [Media Selection Code][Seal Code]						HP8314L39-16ME-WS		
Fluid Compatibility	Petroleum and mineral based fluids, #2 diesel fuels (standard). For polyol ester, phosphate ester, and other specified synthetic fluids use fluorocarbon seal option or contact factory.								
Filter Sizing ¹	Filter assembly clean element ΔP after actual viscosity correction should not exceed 10% of filter assembly bypass setting. See previous page for filter assembly sizing guidelines & examples. For applications with extreme cold start condition contact Hy-Pro for sizing recommendations.								
ΔP Factors ¹	Length	Units	Media						
			1M	3M	6M	10M	16M	25M	**W
16/18	psid/gpm	bard/lpm	0.0463	0.0391	0.0303	0.0271	0.0266	0.0256	0.0046
			0.0008	0.0007	0.0006	0.0005	0.0005	0.0005	0.0001
36/39	psid/gpm	bard/lpm	0.0324	0.0273	0.0212	0.0190	0.0186	0.0179	0.0032
			0.0006	0.0005	0.0004	0.0003	0.0003	0.0003	0.0001

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