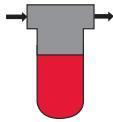


MEDIUM PRESSURE FILTERS

LPFH Series

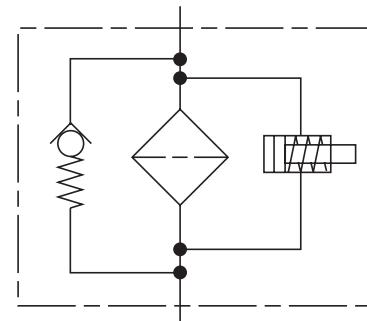
Inline Filters

500 psi • up to 112 gpm



Hydraulic Symbol

A



B

Features

- LPFH filters are manufactured with cast aluminum head and aluminum cold formed bowls.
- Aluminum alloy is water tolerant - anodization is not required for water based fluids (HWBF).
- LPFH filters are a desirable substitute for spin-on filters when dynamic fluid conditions call for the superior durability and leak-proof quality of a well-constructed cartridge filter.
- Quick-response, bypass valves, located in the filter head, protect against high differential pressures caused by cold start-ups, flow surges and pressure spikes. Filters can also be supplied without bypasses.
- The simple inline design minimizes pressure drop and provides the significant benefit of compactness. The use of lightweight materials, makes these filters ideal for mobile equipment applications.
- Integrated retrofit protection.

Applications



Agricultural



Automotive



Construction



Industrial



Steel / Heavy Industry

Technical Specifications

Mounting Method	325 - 425: 5 mounting hole options			
Port Connection	325 - 425	SAE-24, 1 1/2" BSPP		
Flow Direction	Inlet: Side	Outlet: Side		
Construction Materials				
Head	Cast Aluminum			
Bowl	Aluminum Extrusion			
Flow Capacity				
325	87 gpm (325 lpm)			
425	112 gpm (425 lpm)			
Housing Pressure Rating				
Max. Allowable Working Pressure	325 - 425	500 psi (34 bar)		
Fatigue Pressure	325 - 425	500 psi (34 bar) (10^6 cycles)		
Burst Pressure	325 - 425	> 2700 psi (186 bar)		
Element Collapse Pressure Rating				
ON, W/HC	290 psid (20 bar)			
Fluid Temp. Range	-22°F to 212°F (-30°C to 100°C)			
Consult HYDAC for applications operating below -22°F (-30°C)				
Fluid Compatibility				
Compatible with all hydrocarbon based, synthetic, water glycol, oil/water emulsion, and high water based fluids when the appropriate seals are selected				
ΔP Indicator Trip Pressure				
$\Delta P = 29 \text{ psid (2 bar)} - 10\% \text{ (optional)}$				
$\Delta P = 36.25 \text{ psid (2.5 bar)} \text{ (BF indicator)}$				
$\Delta P = 72 \text{ psid (5 bar)} - 10\% \text{ (standard)}$				
Bypass Valve Cracking Pressure				
$\Delta P = 43 \text{ psid (3 bar)} + 10\% \text{ (optional)}$				
$\Delta P = 72 \text{ psid (5 bar)} + 10\% \text{ (optional)}$				
$\Delta P = 87 \text{ psid (6 bar)} + 10\% \text{ (optional)}$				

Model Code

Filter Type	LPFH	ON	325	E	F	3	B	1	.	0	/	12	B6
LPFH ON 325 E F 3 B 1 . 0 / 12 B6													
Element Media	ON = Optimicron® (Low Collapse) BH/HC = Betamicron (High Collapse) W/HC = Wire Mesh												
Size	325, 425												
Operating Pressure	E = 500 psi (35 bar)												
Type of Connection	F = 1 1/2" threaded SAE, BSPP												
Filtration Rating (microns)	1, 3, 5, 10, 15, 20 = ON 25, 74, 149 = W/HC												
Type of ΔP Clogging Indicator	A, B, BM, BF, C, D (Others available upon request, see Clogging Indicators section.)												
Type Number	1												
Modification Number (latest version always supplied)													
Port Configuration	0 = BSPP Ports (G 1 1/2") 12 = SAE Parallel Straight Thread Ports												
Seals	(omit) = Nitrile rubber (NBR) (standard) V = Fluorocarbon elastomer (FKM) EPR = Ethylene propylene rubber (EPR)												
Bypass Valve	(omit) = Without Bypass *See note below (standard) B6 = 87 psid bypass (optional) B3 = 43 psid bypass (optional)												

L24, L48, L110, L220 = Lamp for D-type clogging indicator (LXX, XX = voltage)
 SO263 = Modification of ON & W/HC (Betamicron® Low Collapse) Elements For Phosphate Ester Fluids
 SO155H = Modification of BH4HC (Betamicron® High Collapse) Element For Phosphate Ester Fluids
 T100 = Thermal Lockout on indicator at 100°F (contact HYDAC for B or BM type indicators)
 W = Modification of "W/HC" and "V" elements for use with oil water emulsions (HFA) and water polymer solutions (HFC)
 BFL = BF Clogging indicator on left looking into inlet.
 BFR = BF Clogging indicator on right looking into inlet.
 SFREE = Element specially designed to minimize electrostatic charge generation
 cRUus = Electrical Indicator with underwriter's recognition

*Note: Use 5 bar indicator when filter has no bypass. Replace element when indicator trips.

Replacement Element Model Code

Size	0325	D	003	ON	/	V
0325 D 003 ON / V						
Filtration Rating (micron)	1, 3, 5, 10, 15, 20 = ON 25, 74, 149 = W/HC 3, 5, 10, 20 = BH4HC					
Element Media	ON, BH4HC, W/HC					
Seals	(omit) = Nitrile rubber (NBR) (standard) V = Fluorocarbon elastomer (FKM) EPR = Ethylene propylene rubber (EPR)					

SFREE = Element specially designed to minimize electrostatic charge generation
 SO263 = (same as above)
 SO155H = (same as above)
 W = (same as above)

Clogging Indicator Model Codes

Indicator Prefix	VM	5	B	.	X	/
VM 5 B . X /						
Trip Pressure	2 = 29 psid (2 bar) 2.5 = 36.25 psid (2.5 bar) (BF only) 5 = 72 psid (5 bar)					
Type of Indicator	A = no indicator, plugged port B = Visual pop-up (auto reset) BM = Visual pop-up (manual reset) BF = Visual analog C = Electric switch - SPDT D = Electric switch and LED light - SPDT					
Modification Number						
Supplementary Details						
Seals	(omit) = Nitrile rubber (NBR) (standard) V = Fluorocarbon elastomer (FKM) EPR = Ethylene propylene rubber (EPR)					
Light Voltage (D type indicators only)	L24 = 24V L110 = 110V					
Thermal Lockout (VM, VD types C, D, J, and J4 only)	T100 = Lockout below 100°F					
Underwriters Recognition (VM, VD types C, D, J, and J4 only)	cRUus = Electrical Indicator with underwriter's recognition					

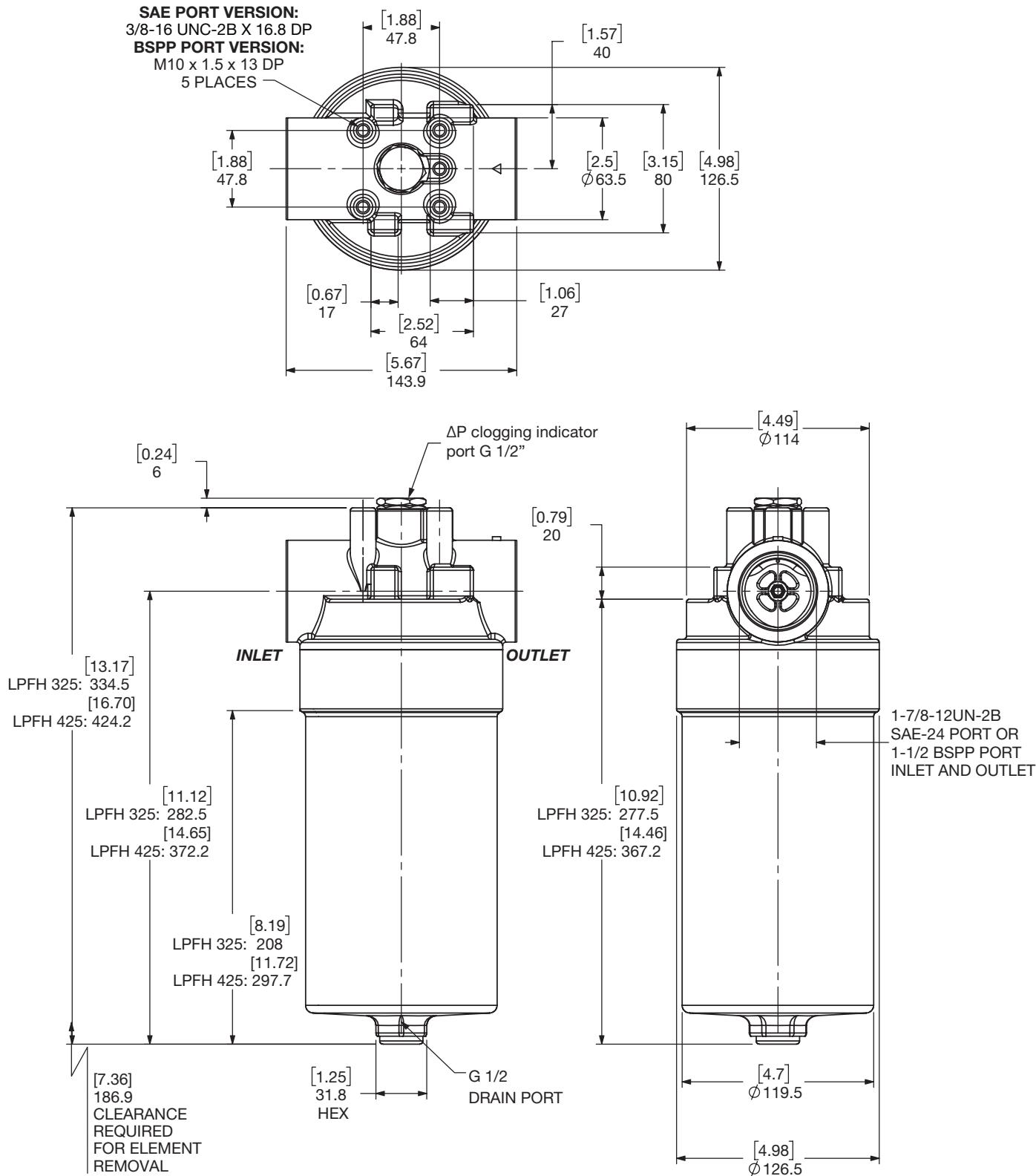
(For additional details and options, see Clogging Indicators section.)

Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability

MEDIUM PRESSURE FILTERS

Dimensions

LPFH 325 / 425



Dimensions are [inches] Millimeters

Size	325	425
Weight (lbs.)	8.0	10.0

Dimensions shown are [inches] millimeters for general information and overall envelope size only. Weights listed include element.
For complete dimensions please contact HYDAC to request a certified print.

Sizing Information

Total pressure loss through the filter is as follows:

Assembly ΔP = Housing ΔP + Element ΔP

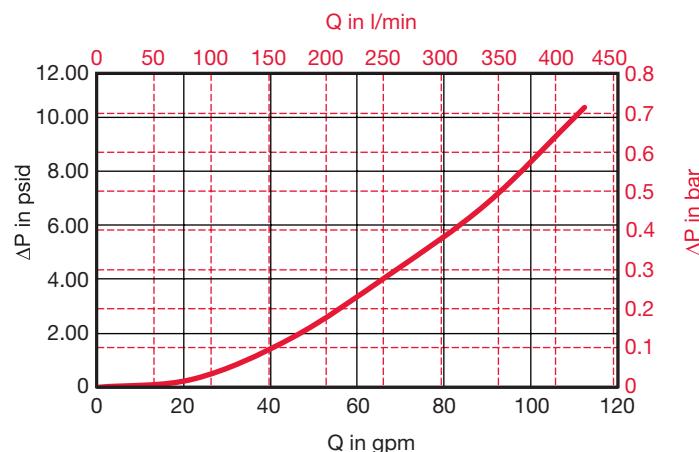
Housing Curve:

Pressure loss through housing is as follows:

$$\text{Housing } \Delta P = \text{Housing Curve } \Delta P \times \frac{\text{Actual Specific Gravity}}{0.86}$$

Adjustments must be made for viscosity & specific gravity of the fluid to be used! (see "Sizing HYDAC Filter Assemblies" in Section B - Overview)

LPFH 325 / 425 Housing



Element K Factors

$$\Delta P_{\text{Elements}} = \text{Elements (K)} \times \text{Flow Factor} \times \text{Flow Rate (gpm)} \times \frac{\text{Actual Viscosity (SUS)}}{141 \text{ SUS}} \times \frac{\text{Actual Specific Gravity}}{0.86}$$

Optimicron	...D...ON					
	1 μm	3 μm	5 μm	10 μm	15 μm	20 μm
0325 D XXX ON	0.444	0.204	0.150	0.081	0.070	0.056
0425 D XXX ON	0.289	0.143	0.104	0.06	0.046	0.038

Wire Mesh	...D...W/HC					
	...D...W/HC Elements 25, 50, 74, 100, 149, 200 μm					
0325 D XXX W/HC	0.011					
0425 D XXX W/HC	0.007					

Betamicron	...D...BH/HC					
	1 μm	3 μm	5 μm	10 μm	15 μm	20 μm
0325 D XXX BH/HC	Consult factory upon request					
0425 D XXX BH/HC	Consult factory upon request					

All Element K Factors in psi / gpm.