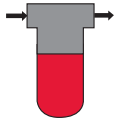


MEDIUM PRESSURE FILTERS

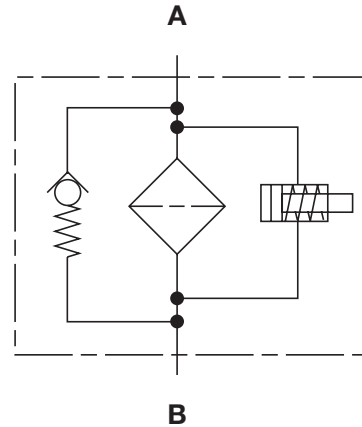
LPFH Series

Inline Filters

500 psi • up to 112 gpm



Hydraulic Symbol



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 Bowl	
	Cast Aluminum 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	ΔP = 29 psid (2 bar) -10% (optional) ΔP = 36.25 psid (2.5 bar) (BF indicator) ΔP = 72 psid (5 bar) -10% (standard)	
Bypass Valve Cracking Pressure	ΔP = 43 psid (3 bar) +10% (optional) ΔP = 72 psid (5 bar) +10% (optional) ΔP = 87 psid (6 bar) +10% (optional)	

Model Code

Filter Type _____ **LPFH** **ON** **325** **E** **F** **3** **B** **1** **.** **0** **/** **12** **B6**
 LPFH Inline filter
Element Media _____
 ON = Optimicron® (Low Collapse) BH/HC = Betamicon (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)
Supplementary Details _____

L24, L48, L110, L220 = Lamp for D-type clogging indicator (LXX, XX = voltage)
 SO263 = Modification of ON & W/HC (Betamicon® Low Collapse) Elements For Phosphate Ester Fluids
 SO155H = Modification of BH4HC (Betamicon® 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, 0425
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)
Supplementary Details _____
 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

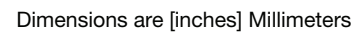
Indicator Prefix _____ **VM** **5** **B** **.** **X** **/**
 VM = G 1/2 3000 psi
 VL = 580 psi (BF only)
Trip Pressure _____
 2 = 29 psid (2 bar)
 2.5 = 36.25 psid (2.5 bar) (BF only)
 5 = 72 psid (5 bar)
Type of Indicator _____
 A = no indicator, plugged port
 B = Visual pop-up (auto reset)
 BM = Visual 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

Dimensions

LPFH 325 / 425



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

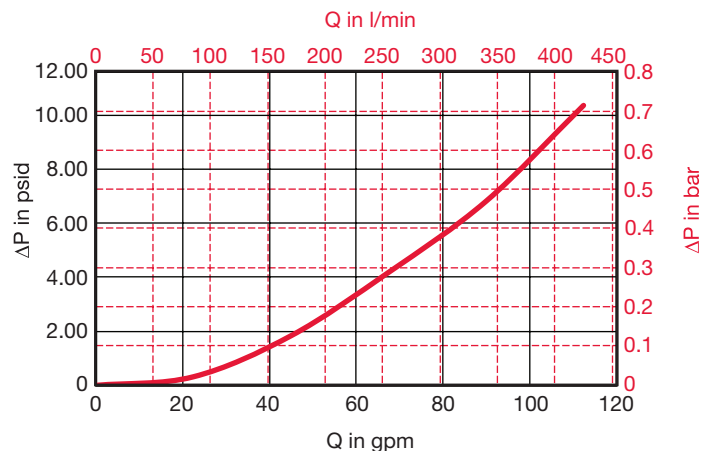
Housing Curve:

Pressure loss through housing is as follows:

Housing ΔP = 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

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

Optimicron	...D...ON					
Size	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	
Size	...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	

Betamicon	...D...BH/HC					
Size	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						

All Element K Factors in psi / gpm.