

SET SERIES FILTERS – MEDIUM PRESSURE

LPFH Set Series

Manifold Cartridge Filters

500 psi • up to 112 gpm



Manifold cavity is only for representation and not HYDAC's scope of supply

Features

- Integrated retrofit protection
- Non-welded housing design reduces stress concentrations and prevents fatigue failure.
- Aluminum alloy is water tolerant - anodization is not required for water based fluids (HWBF).
- O-ring seals are used to provide positive, reliable sealing. Choice of O-ring materials (*nitrile rubber, fluorocarbon elastomer, ethylene propylene rubber*) provides compatibility with petroleum oils, synthetic fluids, water-glycols, oil/water emulsions, and high water based fluids.
- Screw-in bowl requires minimal clearance to remove the element for replacement, and contaminated fluid cannot be washed downstream when element is serviced.
- HYDAC differential Pressure Indicators (*optional*) have no external dynamic seal. This results in a high system reliability due to magnetic actuation, thus eliminating a potential leak point.
- For special finishes and coatings – consult HYDAC for minimum quantities, availability and pricing.

Applications



Agricultural



Automotive



Construction



Industrial



Steel / Heavy Industry

Installation

The LPFH Set Manifold Cartridge Filter is installed into a threaded cavity that is machined in the manifold (*manifold not included - see cavity drawing*). A bushing is provided for proper element installation, as well as a bowl with o-ring seal and back-up ring. An element can be provided as a option. The bushing holds the element in place during filtration operation, and facilitates easy removal for element change out.

More than one SET may be installed in the manifold if required for capacity. A differential pressure clogging indicator, to warn of high upstream pressure (*element clogged*), can be attached to the manifold as well (*cavity drawings for that upon request*). For additional information, contact HYDAC.

Technical Specifications

Mounting Method	Threaded bowl	
Flow Direction	Out-to-in	
Construction Materials	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 (optional)		
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 (optional)		
ΔP = 29 psid (2 bar) -10% (optional)		
ΔP = 36.25 psid (2.5 bar) (BF indicator)		
ΔP = 72 psid (5 bar) -10% (standard)		

Model Code

		LPFH	ON	325	SET	3	W	1	.	0	/	
Filter Type												
LPFH	=	Manifold cartridge filter										
Element Media												
(omit)	=	Without element										
ON	=	Optimicron® (<i>Low Collapse</i>)										
BH/HC	=	Betamicron (High Collapse)										
W/HC	=	Wire Mesh										
Size												
325, 425												
Type of Mounting												
SET	=	Manifold cartridge										
Filtration Rating (<i>microns</i>)												
XX	=	Without element										
1, 3, 5, 10, 15, 20	=	ON										
25, 74, 149	=	W/HC										
Type of ΔP Clogging Indicator												
W	=	Without indicator (<i>Indicators can be installed in manifold, cavity drawing upon request.</i> <i>(For additional details and options, see Clogging Indicators section)</i>)										
Type Number												
1												
Modification Number (<i>latest version always supplied</i>)												
Seals												
(omit)	=	Nitrile rubber (NBR) (<i>standard</i>)										
V	=	Fluorocarbon elastomer (FKM)										
EPR	=	Ethylene propylene rubber (EPR)										
Supplementary Details												
SO263	=	Modification of ON & W/HC (<i>Betamicron® Low Collapse</i>) Elements For Phosphate Ester Fluids										
W	=	Modification of "W/HC" and "V" elements for use with oil water emulsions (HFA) and water polymer solutions (HFC)										
SFREE	=	Element specially designed to minimize electrostatic charge generation										

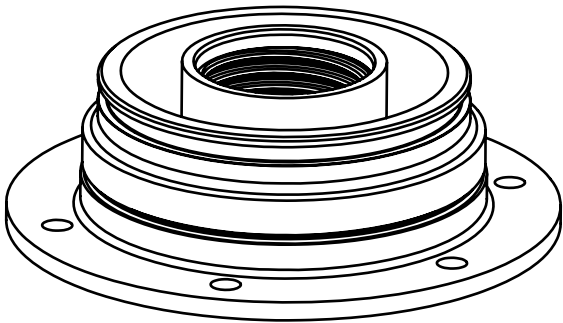
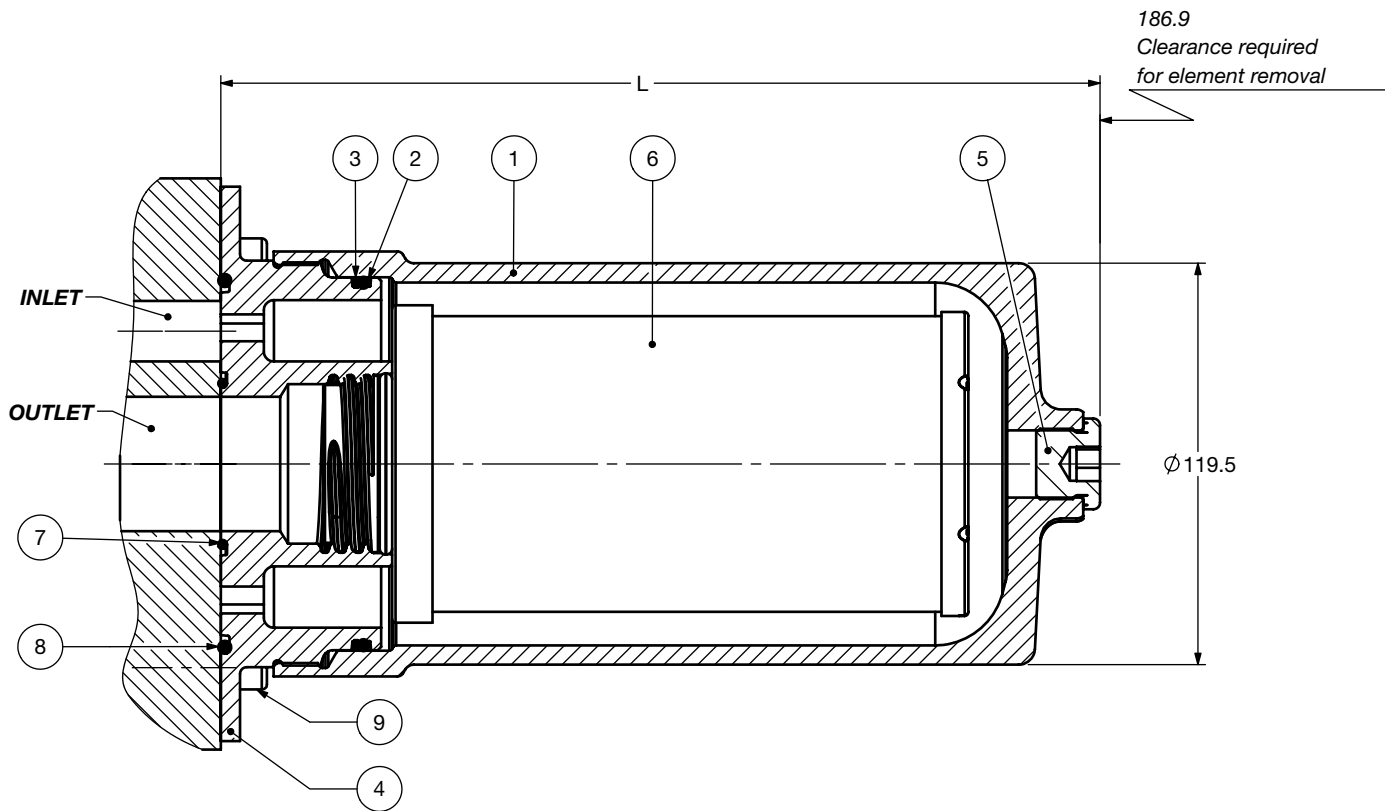
Replacement Element Model Code

			0325	D	003	ON	/	V
Size								
0325, 0425								
Filtration Rating (<i>micron</i>)								
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)						
V	=	Fluorocarbon elastomer (FKM)						
EPR	=	Ethylene propylene rubber (EPR)						
Supplementary Details								
SO263	=	Same as above						
W	=	Same as above						
SFREE	=	Element specially designed to minimize electrostatic charge generation						

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

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Dimensions
LPFH Set 325 / 425



Item No	SET Components
1	Bowl
2	Bowl back-up ring
3	Bowl o-ring
4	Bushing
5	Drain plug
6	Element <i>(optional)</i>
7	Inner seal
8	Outer seal
9	Set screw <i>(not supplied by HYDAC)</i>

Size	L
325	262
425	352

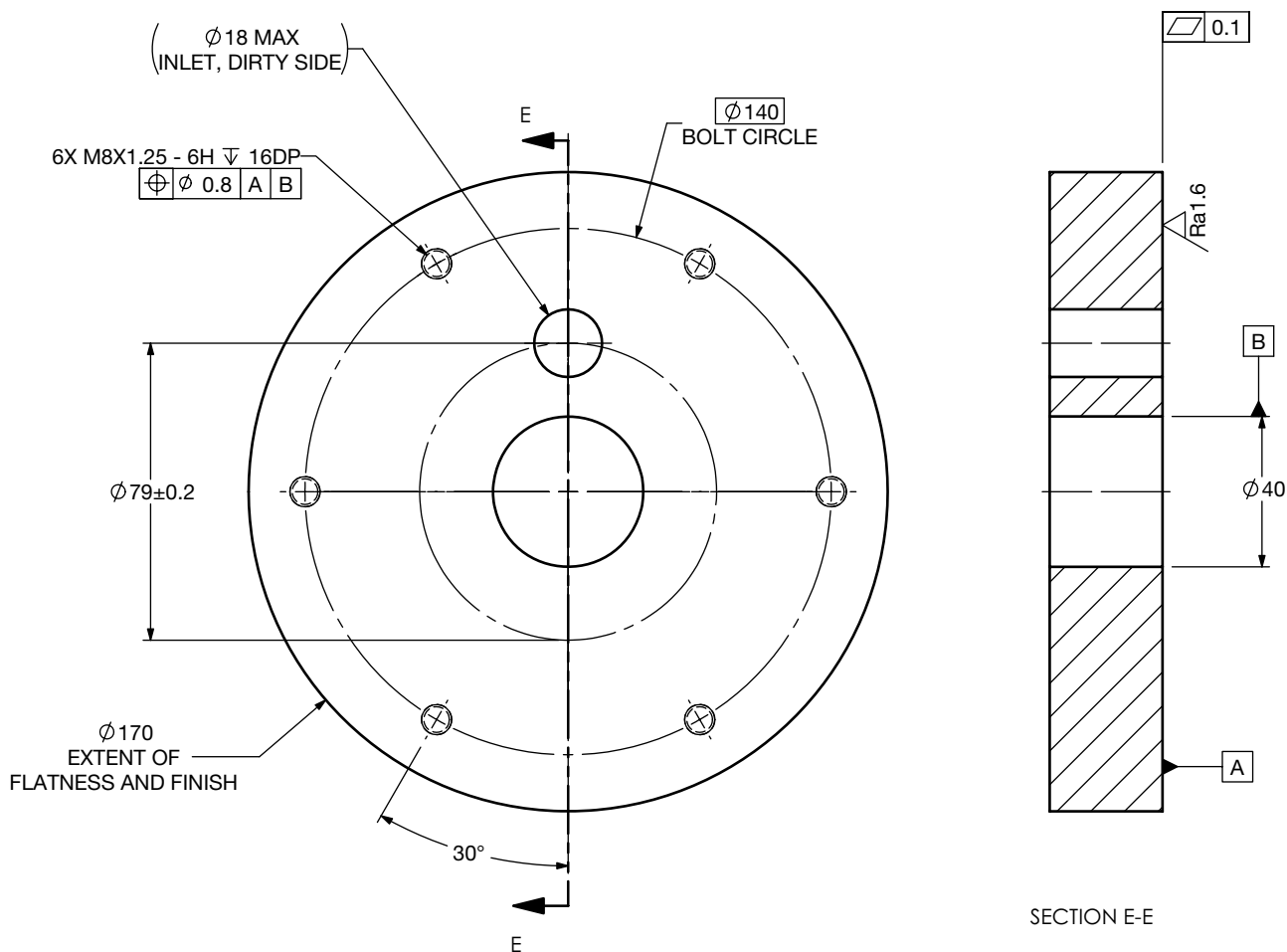
Unspecified Tolerances

From	0.5	3	6	30	120
To	3	6	30	120	400
	±0.1	±0.1	±0.2	±0.3	±0.5

Size	325	425
Weight (lbs.)	6.5	7.9

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.

Customer Manifold Machining LPFH Set 325 / 425



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.