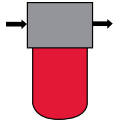


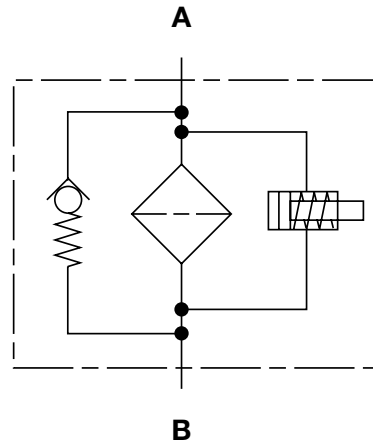
HF3P Series

Inline Filters

6000 psi • up to 120 gpm



Hydraulic Symbol



Features

- Non-welded housing design reduces stress concentrations and prevents fatigue failure.
- Inlet/Outlet port options include SAE straight thread O-ring boss, BSPP and subplate mounting to allow easy installation without costly adapters.
- O-ring seals are used to provide positive, reliable sealing. Choice of O-ring materials (Nitrile, Fluoroelastomer, EPDM) provides compatibility with petroleum oils, synthetic fluids, water-glycols, oil/water emulsions, and high water base fluids.
- Screw-in bowl mounted below the filter head requires minimal clearance to remove the element for replacement, and contaminated fluid cannot be washed downstream when element is serviced.
- Clogging indicators are actuated by differential pressure and have no external dynamic seal. High reliability is achieved and magnetic indicator actuation eliminates a potential leak point.
- A poppet type bypass valve is typically mounted out of the flow path between the inlet and outlet port to provide positive sealing during normal operation and fast response during cold starts and flow surges.
- Fatigue pressure rating equals maximum allowable working pressure rating.

Applications



Automotive



Construction



Industrial



Railways

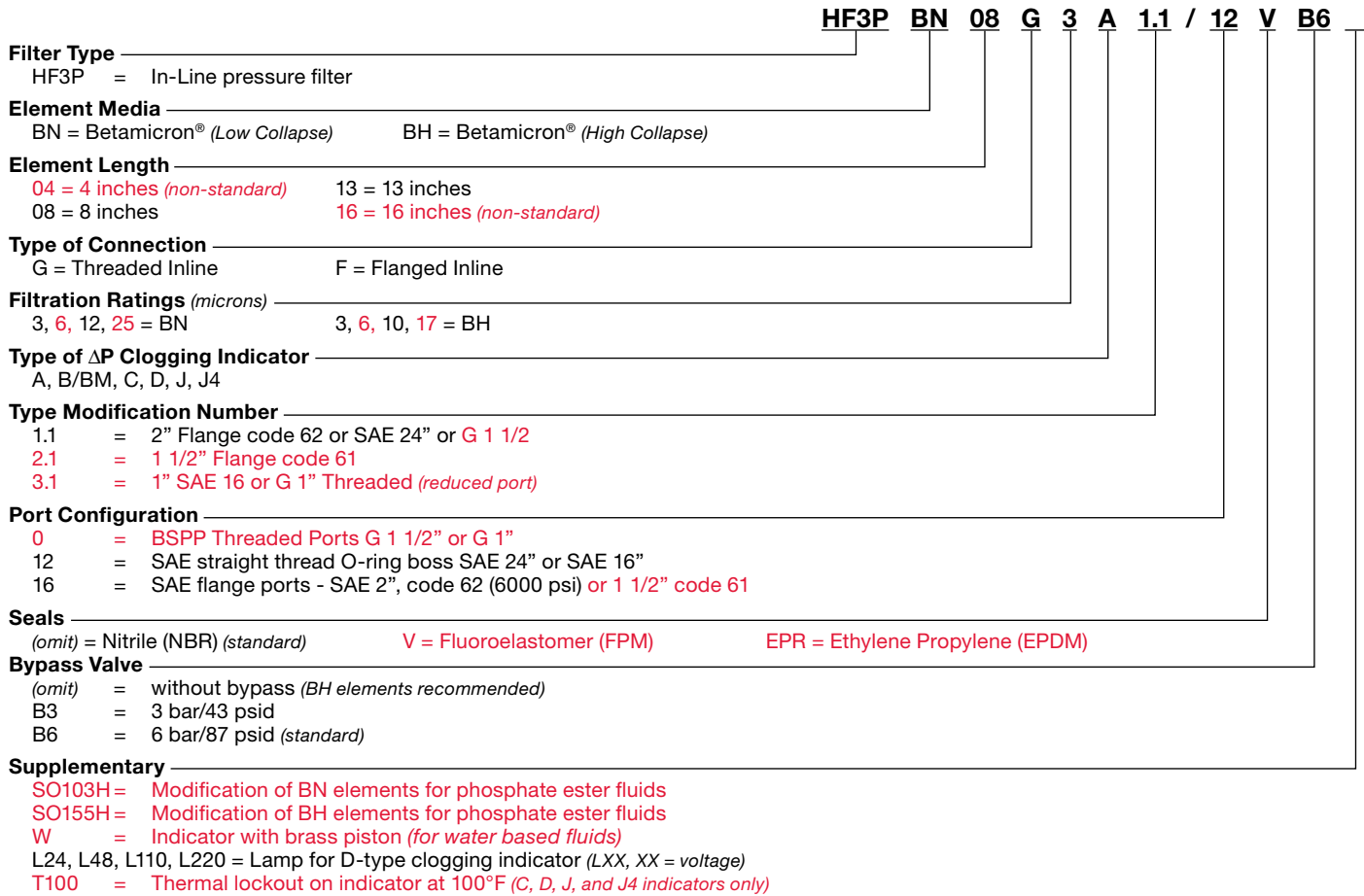


Steel / Heavy Industry

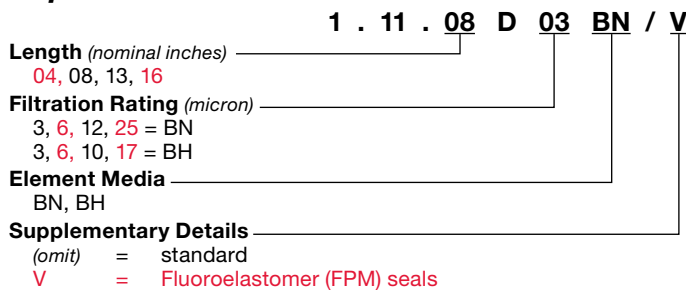
Technical Details

Mounting Method	4 mounting holes	
Port Connection	SAE-16, SAE-24, 1" BSPP, 1 1/2" BSPP, 1 1/2" SAE Flange Code 61, 2" SAE Flange Code 62	
Flow Direction	Inlet: Side	Outlet: Side
Construction Materials		
Head	Ductile iron	
Bowl	Steel	
Housing (size 16)	Steel	
Cap (size 16)	Ductile iron	
Flow Capacity		
4"	28 gpm (106 lpm)	
8"	55 gpm (208 lpm)	
13"	91 gpm (344 lpm)	
16"	120 gpm (454 lpm)	
Housing Pressure Rating		
Max. Operating Pressure	6000 psi (420 bar)	
Proof Pressure	9000 psi (610 bar)	
Fatigue Pressure	6000 psi (420 bar) @ 1 million cycles	
Burst Pressure	15,080 psi (1040 bar)	
Element Collapse Pressure Rating		
BH	3045 psid (210 bar)	
BN	290 psid (20 bar)	
Fluid Temperature Range	-22° to 250°F (-30° to 121°C)	
Fluid Compatibility		
Compatible with all petroleum oils and synthetic fluids rated for use with Fluoroelastomer or Ethylene Propylene seals. Contact HYDAC for information on special housing and element constructions available for use with water glycols, oil/water emulsions, and HWBF.		
Indicator Trip Pressure		
ΔP = 29 psid (2 bar) -10% (optional)		
ΔP = 72 psid (5 bar) -10% (standard)		
ΔP = 116 psid (8 bar) -10% (optional on bypass)		
Bypass Valve Cracking Pressure		
ΔP = 43 psid (3 bar) +10% (optional)		
ΔP = 87 psid (6 bar) +10% (standard)		
Non Bypass Available		

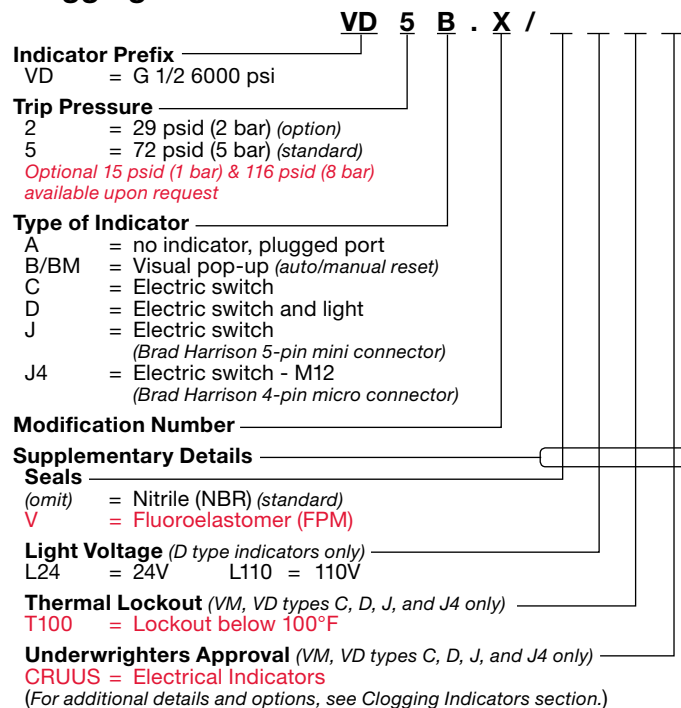
Model Code



Replacement Element Model Code

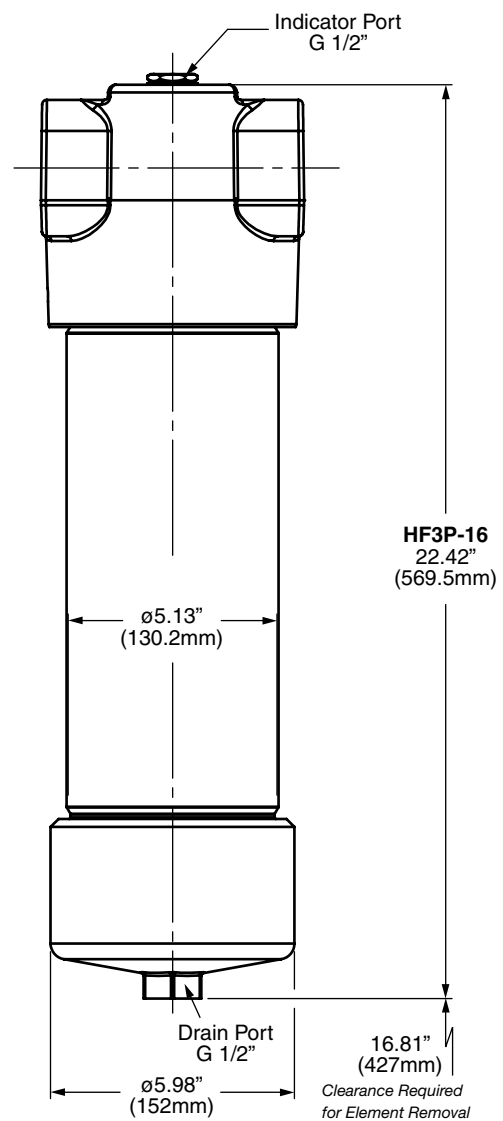
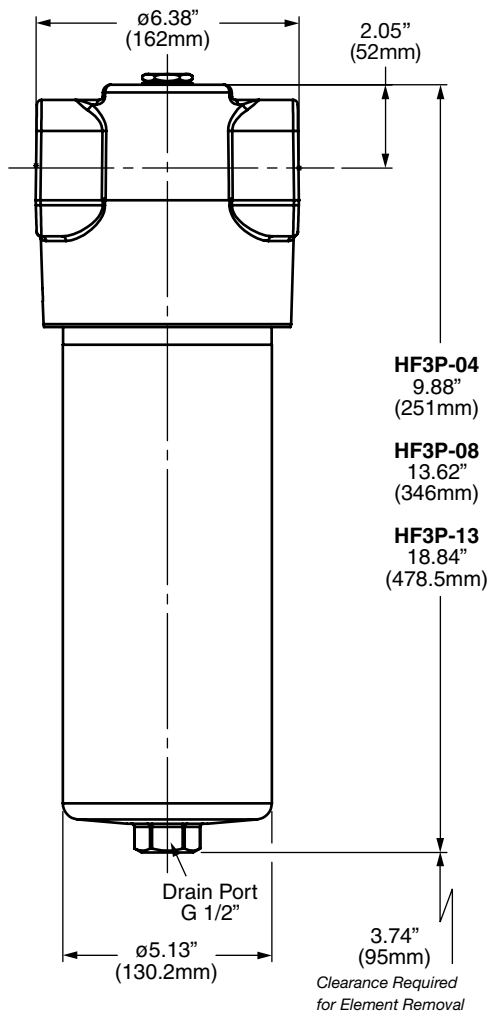
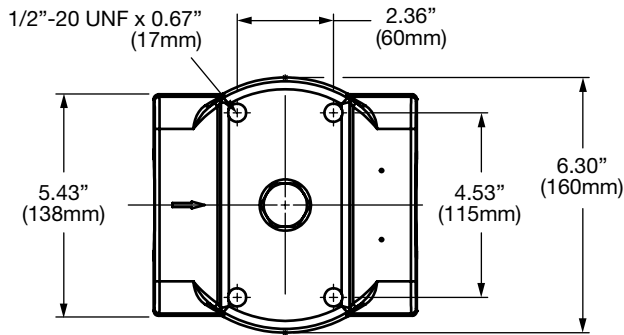


Clogging Indicator Model Code



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

Dimensions



Size	04	08	13	16
Weight (lbs.)	44.8	49.5	62.9	95.7

Dimensions shown are for general information and overall envelope size only. Weights listed are without element. For complete dimensions please contact HYDAC to request a certified print.

Sizing Information

Total pressure loss through the filter is as follows:

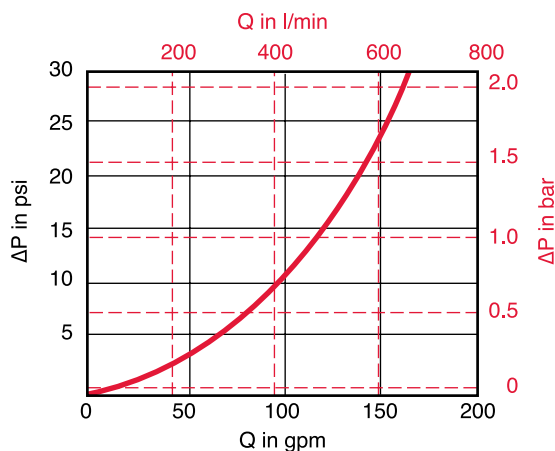
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

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 section on page 19)



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)

Size	1.11.XXD...BN			
	3 μm	6 μm	12 μm	25 μm
04	0.5895	0.4999	0.2664	0.1531
08	0.2886	0.2413	0.1354	0.0761
13	0.1751	0.1464	0.0821	0.0462
16	0.1322	0.1105	0.0620	0.0348

Size	1.11.XXD...BH			
	3 μm	6 μm	10 μm	17 μm
04	0.9366	0.6598	0.4012	0.2104
08	0.4553	0.3208	0.1951	0.1023
13	0.2738	0.1929	0.1173	0.0615
16	0.2060	0.1452	0.0883	0.0463

All Element K Factors in psi / gpm.