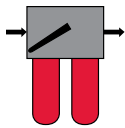
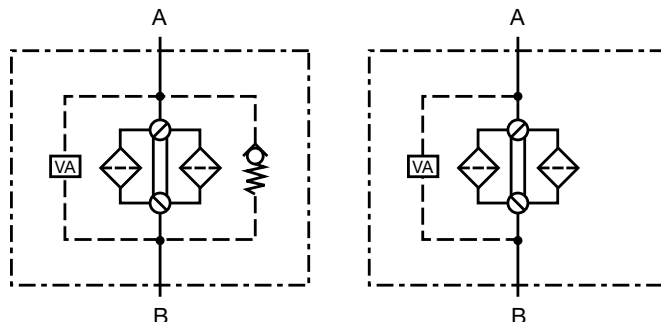


FMND Series Inline Duplex Filters 3000 psi • up to 100 gpm



Hydraulic Symbol



Features

- The FMND filter consists of a ductile iron filter head with built-in change-over valve and three different lengths of screw-in filter bowls.
- The FMND filter can be supplied with or without bypass valve, but includes vent and drain screws, and also a connection for a differential pressure clogging indicator.
- Pressure equalization requirement is achieved by raising the change-over lever prior to switching it to the relevant filter side.
- Fatigue pressure rating = maximum allowable working pressure rating.

Technical Details

Mounting Method	4 mounting holes
Port Connection	SAE-24
Flow Direction	Inlet: Side Outlet: Side
Construction Materials	
Head	Ductile iron
Bowl	Steel
Flow Capacity	
160	42 gpm (160 lpm)
250	66 gpm (250 lpm)
400	100 gpm (400 lpm)
Housing Pressure Rating	
Max. Operating Pressure	3000 psi (207 bar)
Proof Pressure	4500 psi (315 bar)
Fatigue Pressure	3000 psi (210 bar) @ 1 million cycles
Burst Pressure	10,650 psi (735 bar)
Element Collapse Pressure Rating	
BH/HC	3045 psid (210 bar)
BN/HC, W/HC	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	
$\Delta P = 29$ psid (2 bar) -10% (optional)	
$\Delta P = 72$ psid (5 bar) -10% (standard)	
Bypass Valve Cracking Pressure	
$\Delta P = 102$ psid (7 bar) +10%	

Applications



Agricultural



Automotive



Construction



Industrial



Power Generation

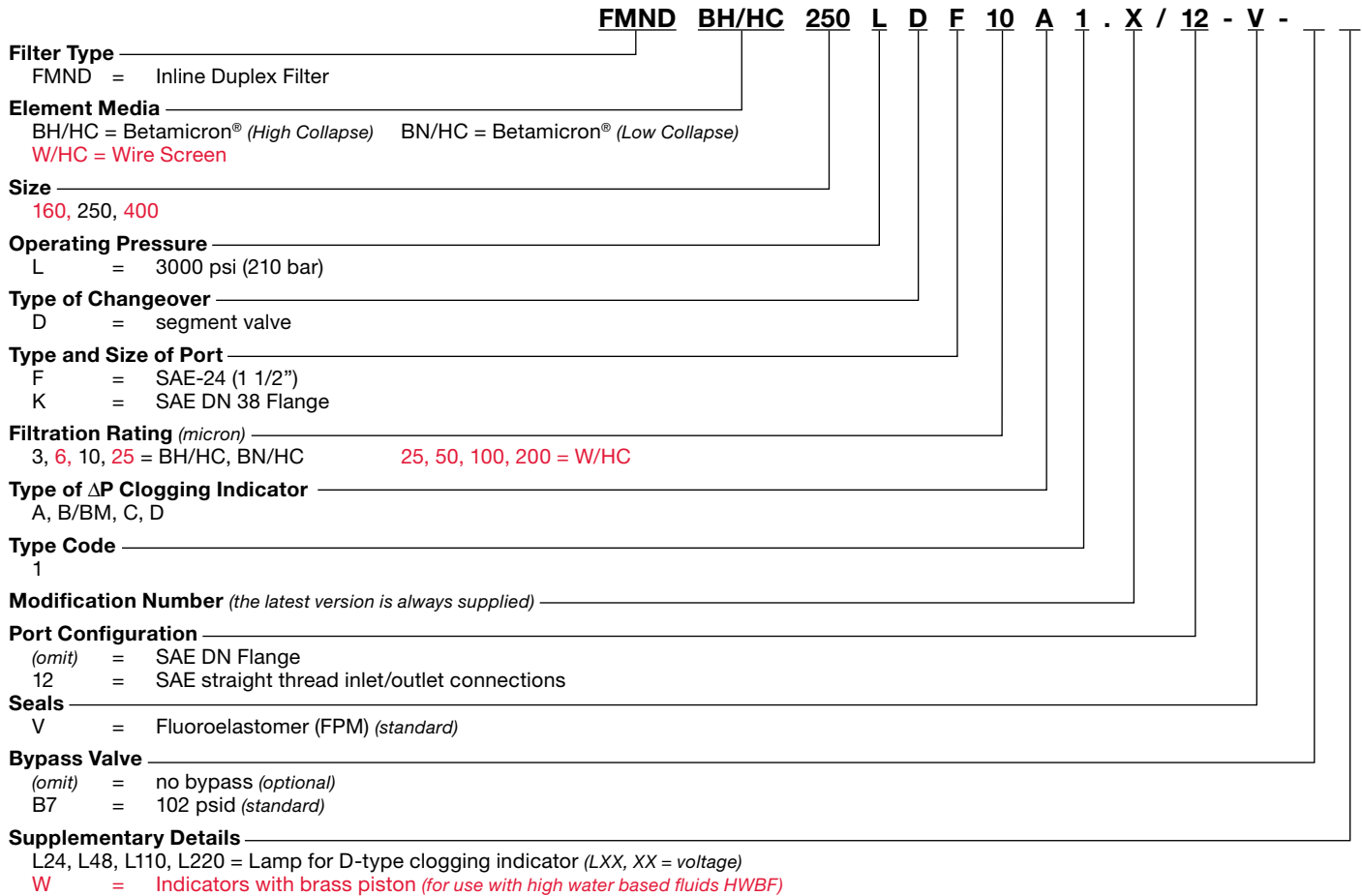


Railways

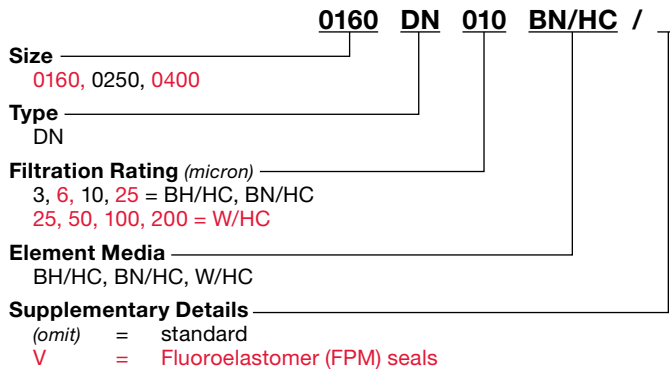


Steel / Heavy Industry

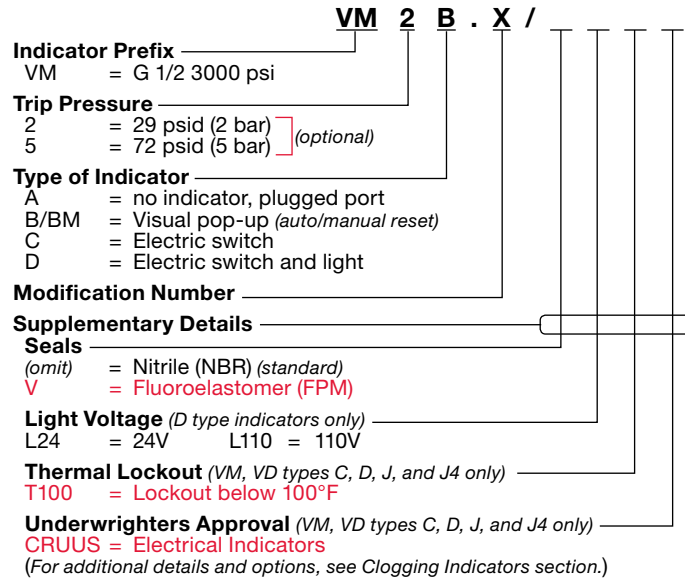
Model Code



Replacement Element Model Code



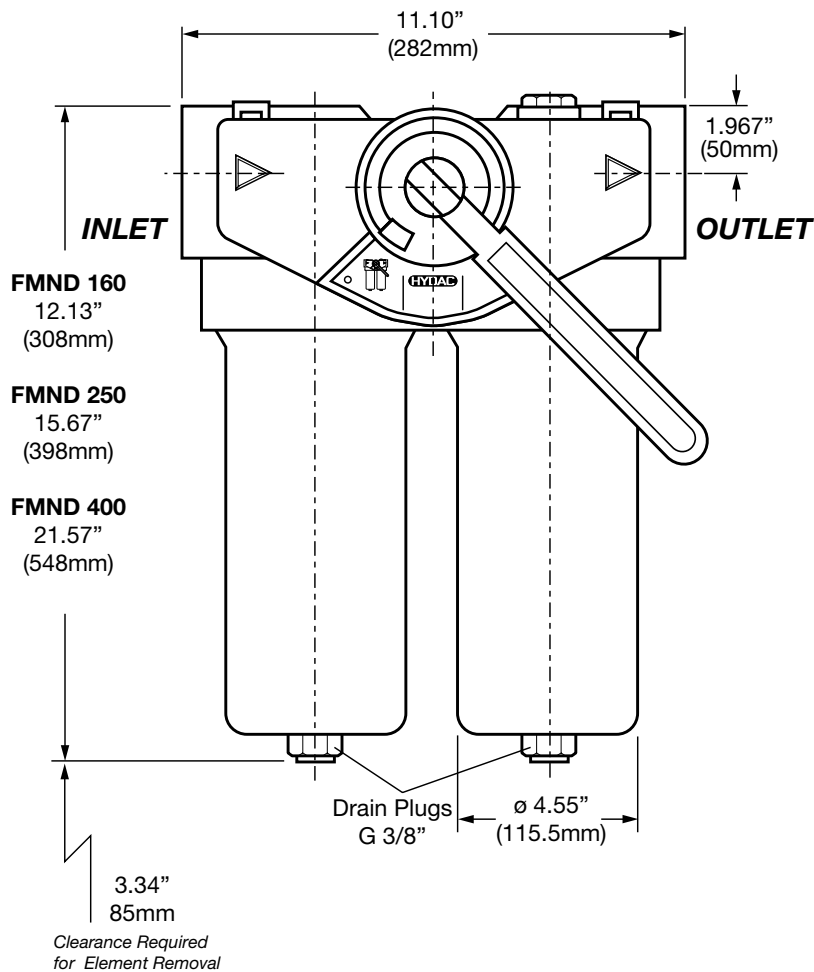
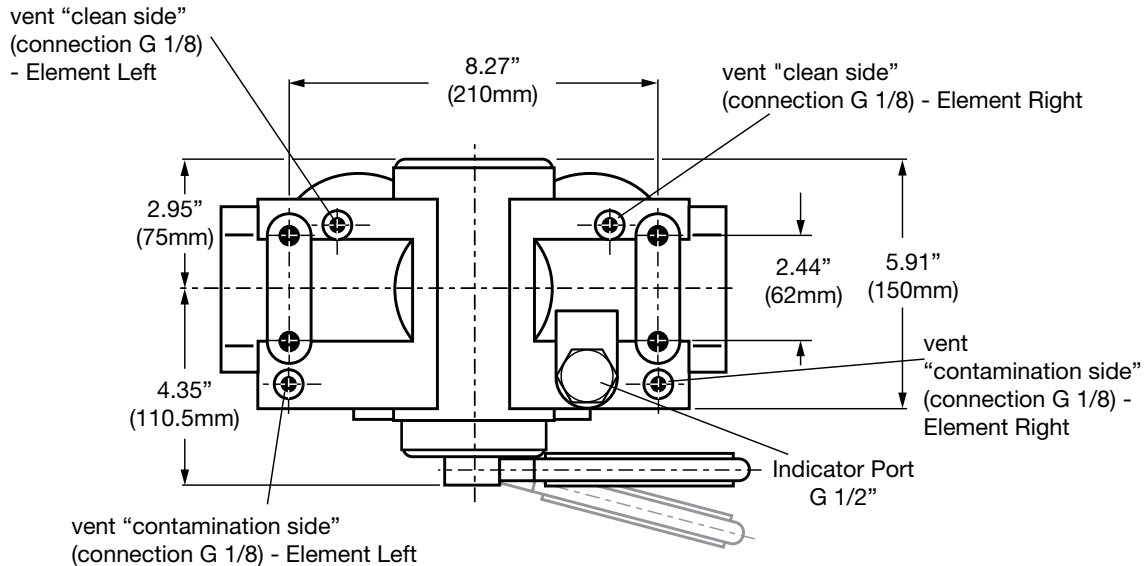
Clogging Indicator Model Code



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

HYDAC Medium Pressure Filters

Dimensions



Size	160	250	400
Weight (lbs.)	94.6	97.4	100.5

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:

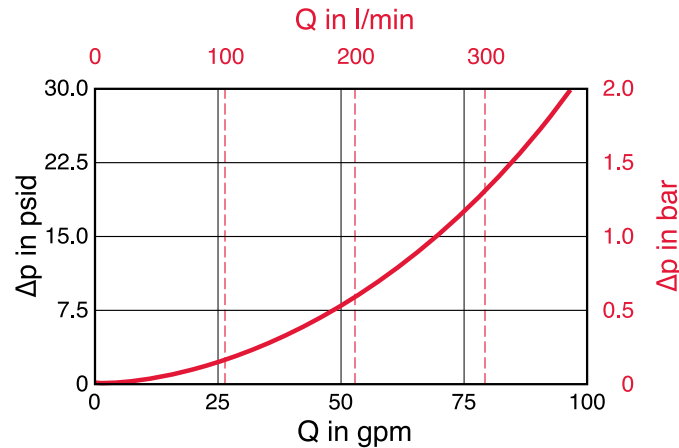
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

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	...DN...BN/HC			
	3 μm	6 μm	10 μm	25 μm
0160	0.439	0.306	0.202	0.143
0250	0.275	0.178	0.111	0.091
0400	0.178	0.110	0.073	0.055

Size	...DN...BH/HC			
	3 μm	6 μm	10 μm	25 μm
0160	0.439	0.274	0.219	0.143
0250	0.292	0.183	0.151	0.107
0400	0.256	0.162	0.146	0.092

All Element K Factors in psi / gpm.