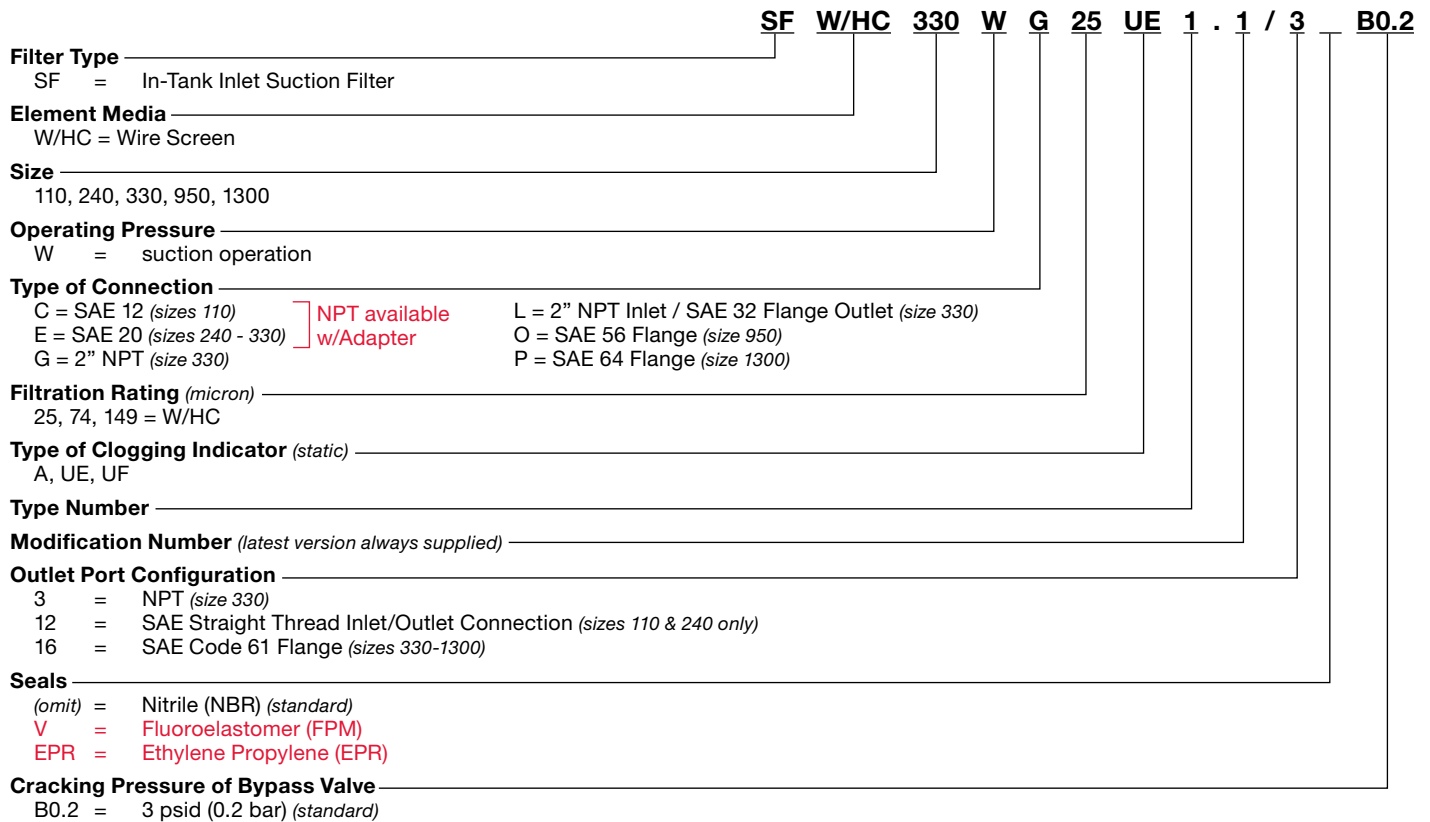
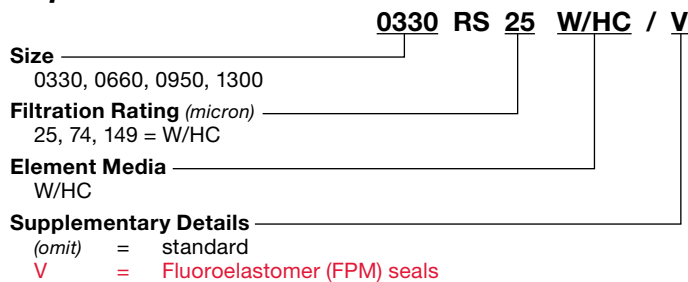


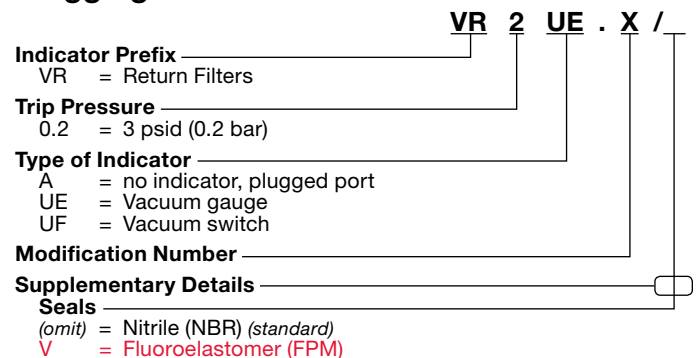
## Model Code



## Replacement Element Model Code



## Clogging Indicator Model Code

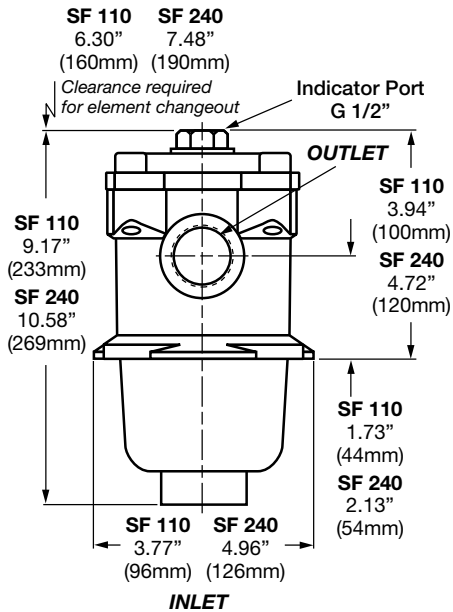


(For additional details and options, see Clogging Indicators section.)

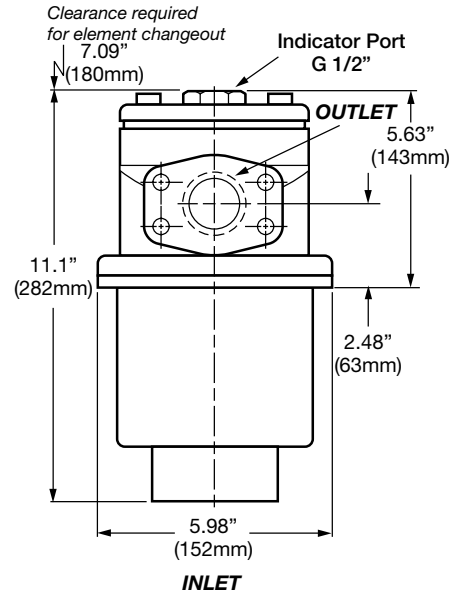
Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability

## Dimensions

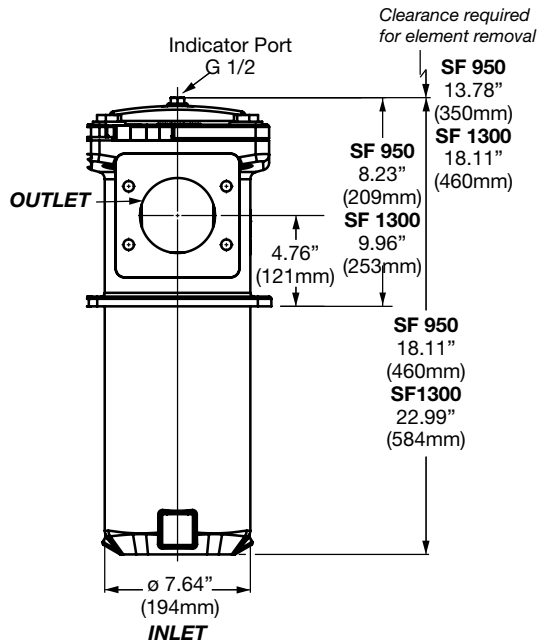
### SF 110 / 240



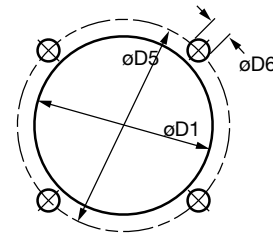
### SF 330



### SF 950 / 1300



### Mounting Pattern



Size	øD1	øD5	øD6
110	3.15" (80mm)	3.94" (100mm)	0.26" (6.5mm)
240	4.17" (106mm)	5.32" (135mm)	0.30" (7.5mm)
330	5.31" (135mm)	6.9" (170mm)	0.35" (9mm)
950/1300	8.19" (208mm)	11.42" (290mm)	0.71" (18mm)

Size	SF 110	SF 240	SF 330	SF 950	SF 1300
Weight (lbs.)	2.0	3.7	7.5	86	94.8

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:

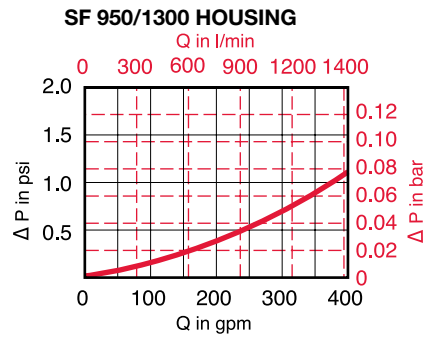
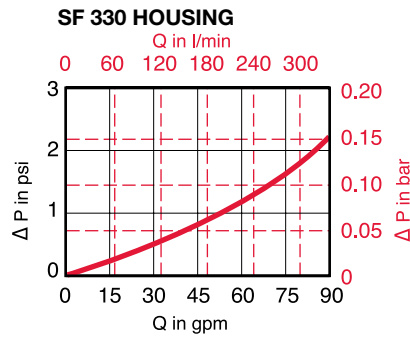
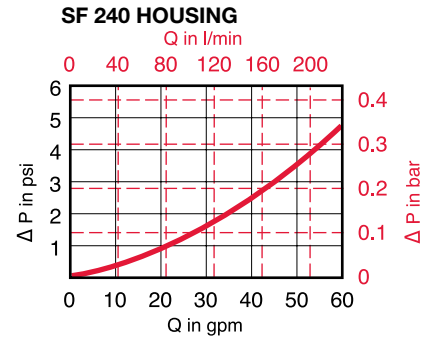
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

### 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

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

(From Tables Below)

Size	W/HC (Wire Screen) 25, 74, 149 μm
0110	0.0285
0240	0.0137
0330	0.0099
0950	0.0033
1300	0.0027

All Element K Factors in psi / gpm.

## LPF Series

### Inline Filters

1000 psi • up to 140 gpm



### Features

- LPF 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) - except LPF 660.
- LPF 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 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.

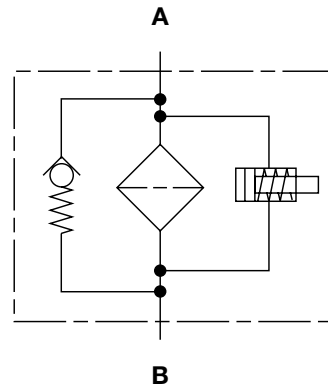


- Sizes 160/240/280
- 2-piece design
- Easier servicability
- Upgraded operating pressure; now 725 psi (50 bar)

### Applications



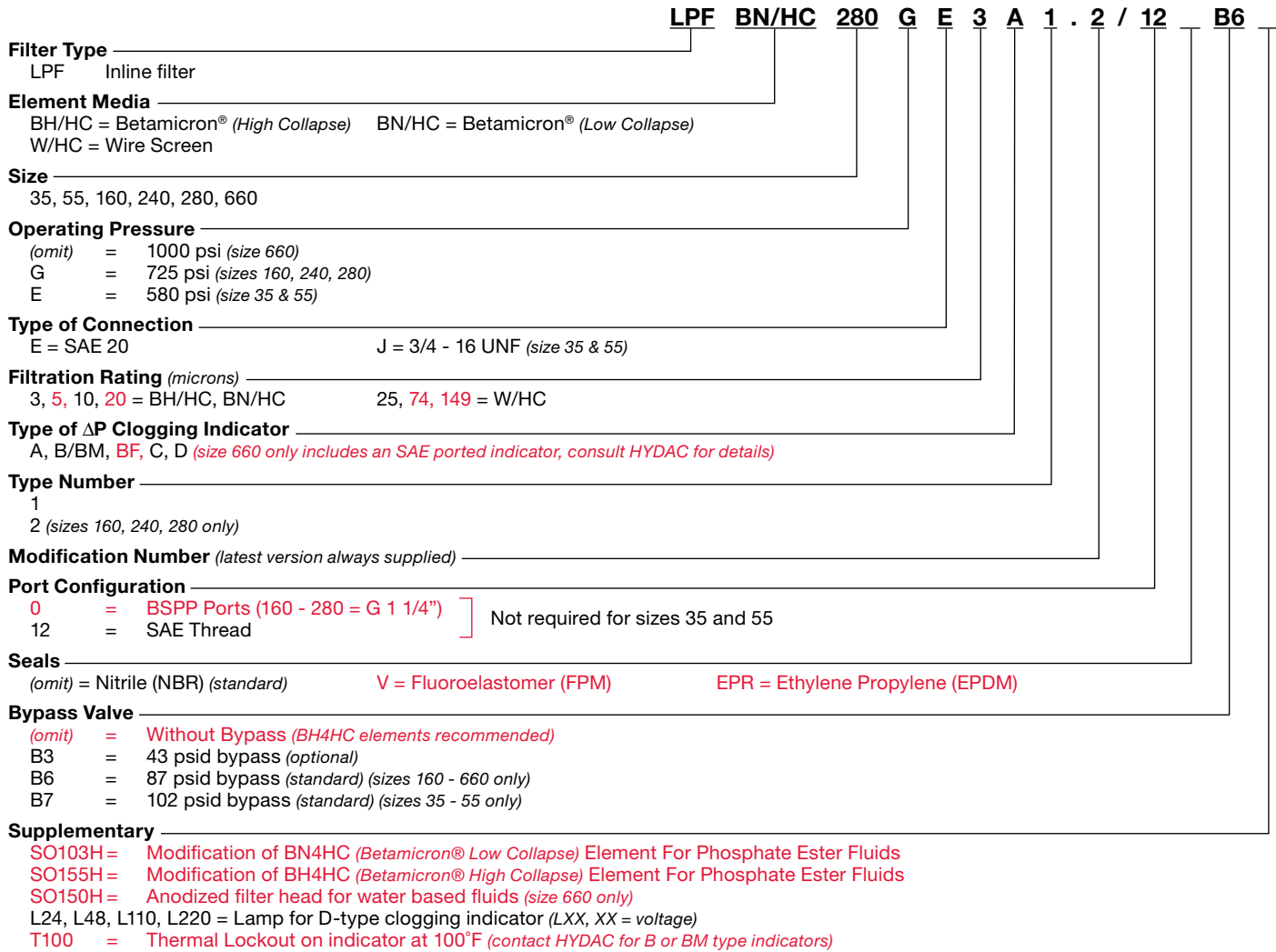
### Hydraulic Symbol



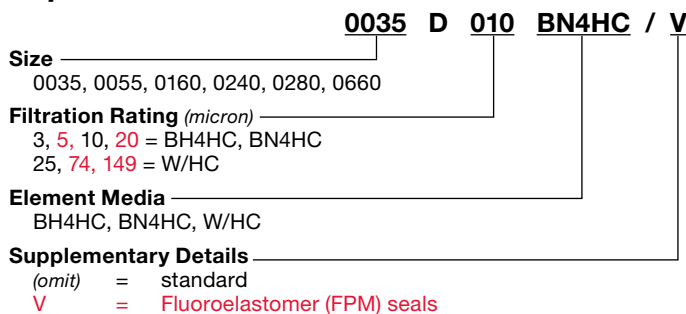
### Technical Details

<b>Mounting Method</b>	35 - 55: 3 mounting holes 160 - 280: 2 mounting holes 660: 4 mounting holes																																					
<b>Port Connection</b>	35 - 55 SAE-8, 1/2" BSPP 160 - 280 SAE-20, 1 1/4" BSPP 660 SAE-24																																					
<b>Flow Direction</b>	Inlet: Side    Outlet: Side																																					
<b>Construction Materials</b>	Head Cast Aluminum Bowl Aluminum Extrusion																																					
<b>Flow Capacity</b>	35 9 gpm (35 lpm) 55 15 gpm (55 lpm) 160 42 gpm (160 lpm) 240 63 gpm (240 lpm) 280 74 gpm (280 lpm) 660 174 gpm (660 lpm)																																					
<b>Housing Pressure Rating</b>	<table border="0"> <tr> <td>Max. Oper. Pressure</td> <td>35 - 55</td> <td>580 psi (40 bar)</td> </tr> <tr> <td></td> <td>160 - 280</td> <td>725 psi (50 bar)</td> </tr> <tr> <td></td> <td>660</td> <td>1000 psi (69 bar)</td> </tr> <tr> <td>Proof Pressure</td> <td>35 - 55</td> <td>870 psi (60 bar)</td> </tr> <tr> <td></td> <td>160 - 280</td> <td>1088 psi (75 bar)</td> </tr> <tr> <td></td> <td>660</td> <td>1500 psi (100 bar)</td> </tr> <tr> <td>Fatigue Pressure</td> <td>35 - 55</td> <td>Contact HYDAC</td> </tr> <tr> <td></td> <td>160 - 280</td> <td>725 psi (50 bar)</td> </tr> <tr> <td></td> <td>660</td> <td>1000 psi (69 bar)</td> </tr> <tr> <td>Burst Pressure</td> <td>35 - 55</td> <td>Contact HYDAC</td> </tr> <tr> <td></td> <td>160 - 280</td> <td>&gt; 3625 psi (200 bar)</td> </tr> <tr> <td></td> <td>660</td> <td>4000 psi (276 bar)</td> </tr> </table>		Max. Oper. Pressure	35 - 55	580 psi (40 bar)		160 - 280	725 psi (50 bar)		660	1000 psi (69 bar)	Proof Pressure	35 - 55	870 psi (60 bar)		160 - 280	1088 psi (75 bar)		660	1500 psi (100 bar)	Fatigue Pressure	35 - 55	Contact HYDAC		160 - 280	725 psi (50 bar)		660	1000 psi (69 bar)	Burst Pressure	35 - 55	Contact HYDAC		160 - 280	> 3625 psi (200 bar)		660	4000 psi (276 bar)
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	160 - 280	> 3625 psi (200 bar)																																				
	660	4000 psi (276 bar)																																				
<b>Element Collapse Pressure Rating</b>	BH/HC, V 3045 psid (210 bar) BN/HC, W/HC 290 psid (20 bar)																																					
<b>Fluid Temp. Range</b>	-22° to 250°F (-30° to 121°C)																																					
<b>Fluid Compatibility</b>	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.																																					
<b>Indicator Trip Pressure</b>	ΔP = 29 psid (2 bar) -10% (optional) ΔP = 72 psid (5 bar) -10% (standard)																																					
<b>Bypass Valve Cracking Pressure</b>	ΔP = 43 psid (3 bar) +10% (optional) ΔP = 87 psid (6 bar) +10% (standard sizes 160 - 660) ΔP = 100 psid (7 bar) +10% (standard sizes 35 / 55)																																					

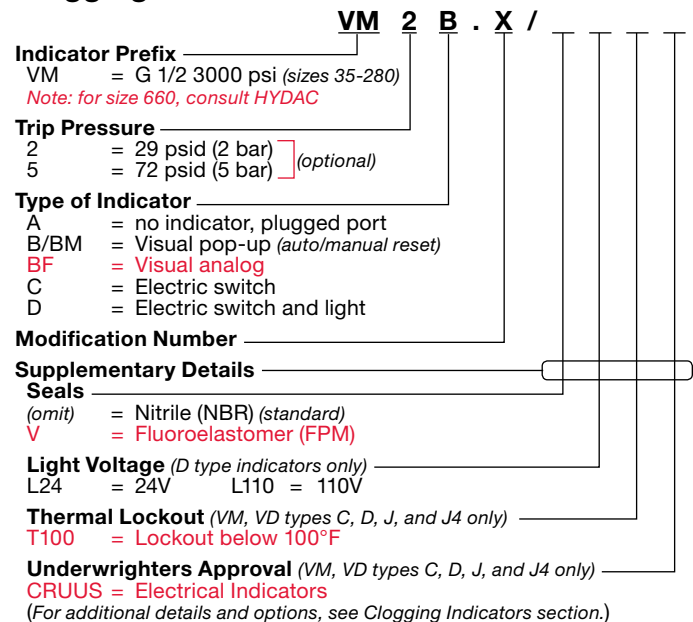
## Model Code



## Replacement Element Model Code



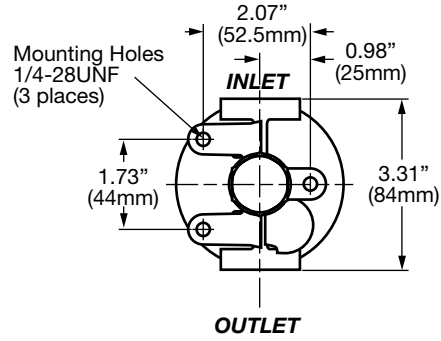
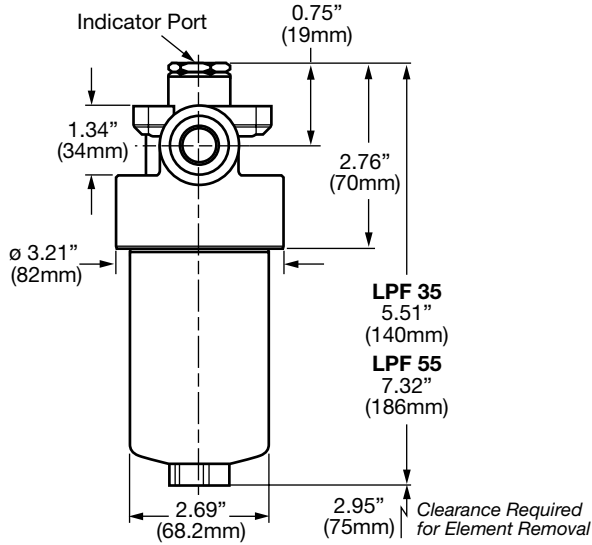
## Clogging Indicator Model Code



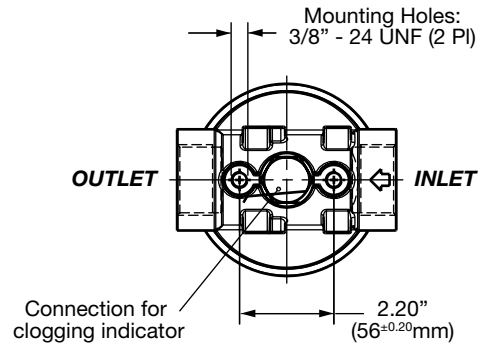
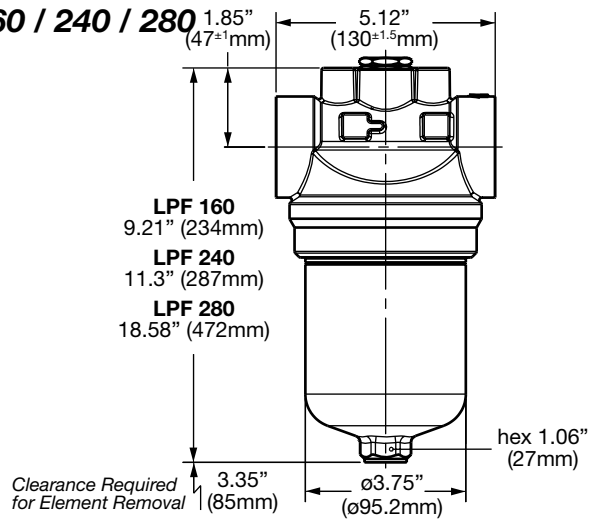
Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability

# HYDAC Medium Pressure Filters

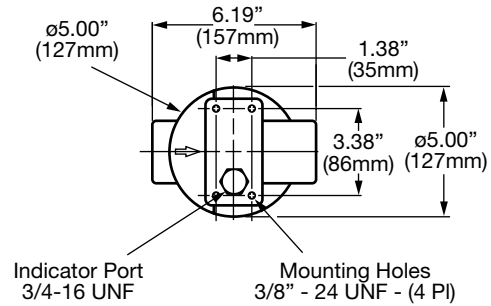
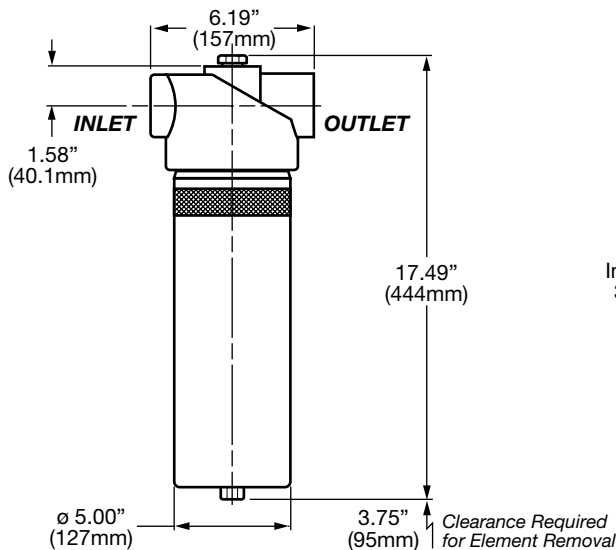
## Dimensions LPF 35 / 55



## LPF 160 / 240 / 280



## LPF 660



Size	35	55	160	240	280	660
Weight (lbs.)	2.2	2.4	5.1	5.5	7.5	11.7

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:

Assembly  $\Delta P$  = Housing  $\Delta P$  + Element  $\Delta P$

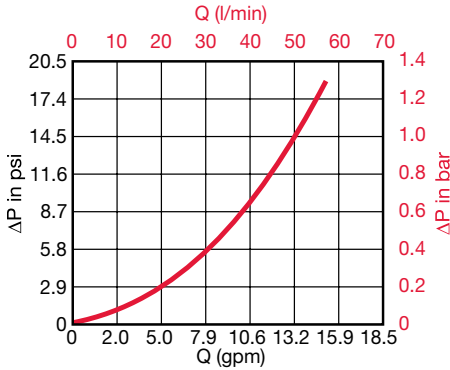
### Housing Curve:

Pressure loss through housing is as follows:

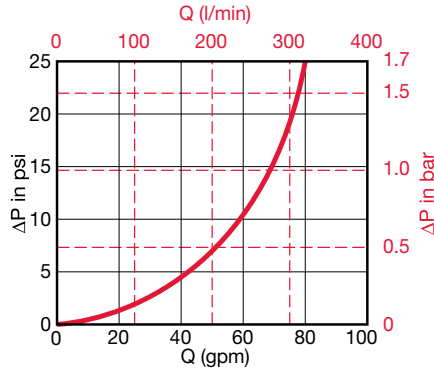
Housing  $\Delta P$  = Housing Curve  $\Delta P \times \frac{\text{Actual Specific Gravity}}{0.86}$

Adjustments must be made for viscosity & specific gravity of the fluid to be used! (see sizing section on page 19)

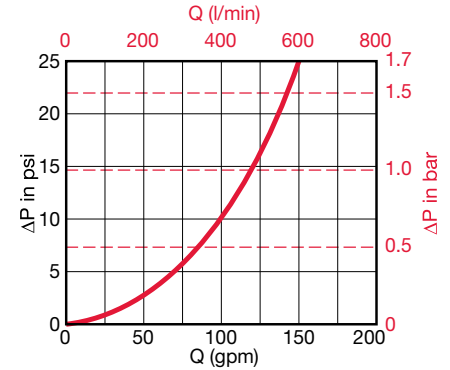
**LPF 35 / 55 Housing**



**LPF 160 / 240 / 280 Housing**



**LPF 660 Housing**



## Element K Factors

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

Size	...D...BN4HC (Betamicon® Low Collapse)			
	3 μm	5 μm	10 μm	20 μm
0035	1.294	1.041	0.811	0.510
0055	0.751	0.603	0.444	0.263
0160	0.718	0.480	0.252	0.193
0240	0.450	0.333	0.196	0.128
0280	0.220	0.171	0.092	0.071
0660	0.136	0.099	0.061	0.044

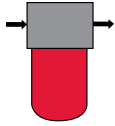
Size	...D...BH4HC (Betamicon® High Collapse)			
	3 μm	5 μm	10 μm	20 μm
0035	-	-	-	-
0055	-	-	-	-
0160	0.919	0.569	0.322	0.240
0240	0.578	0.374	0.214	0.158
0280	0.313	0.184	0.097	0.090
0660	0.179	0.106	0.055	0.049

Size	...D...W/HC (Wire Screen)
	25, 50, 100, 200 μm
0035	-
0055	-
0160	0.016
0240	0.010
0280	0.009
0660	0.004

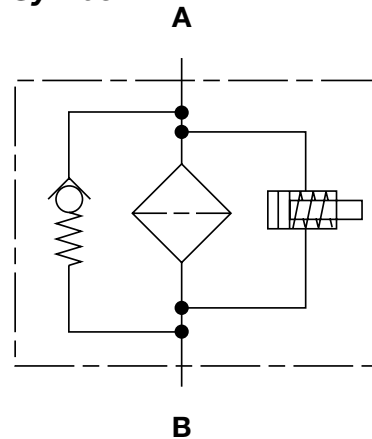
All Element K Factors in psi / gpm.

## LF Series Inline Filters

1500 psi • up to 180 gpm



### Hydraulic Symbol



### Features

- 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).
- Inlet & outlet port options include NPT and SAE straight thread O-ring boss 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.
- Differential Pressure Indicators. HYDAC indicators have no external dynamic seal. This results in a high system reliability due to magnetic actuation, thus eliminating a potential leak point.
- A poppet-type bypass valve (optional) is separate from the main flow path (except LF 60 / 110) to provide positive sealing during normal operation and fast opening during cold starts and flow surges.
- For special finishes and coatings – consult HYDAC for minimum quantities, availability and pricing.

### Applications



Agricultural



Automotive



Construction



Industrial



Railways



Steel / Heavy Industry

### Technical Details

<b>Mounting Method</b>	4 mounting holes	
<b>Port Connection</b>	30 SAE-8, 1/2" NPT, 1/2" BSPP 60/110 SAE-12, 3/4" NPT, 3/4" BSPP 160/240/280 SAE-20, 1 1/4" NPT, 1 1/4" BSPP 330/660 SAE-24, 1 1/2" NPT, 1 1/2" BSPP	
<b>Flow Direction</b>	Inlet: Side	Outlet: Side
<b>Construction Materials</b>	Head Cast Aluminum Bowl Aluminum Extrusion (sizes 30 - 330) Steel (sizes 280 & 660)	
<b>Flow Capacity</b>	30 8 gpm (30 lpm) 60 16 gpm (60 lpm) 110 29 gpm (110 lpm) 160 42 gpm (160 lpm) 240 63 gpm (240 lpm) 280 74 gpm (280 lpm) 330 84 gpm (330 lpm) 660 174 gpm (660 lpm)	
<b>Housing Pressure Rating</b>	Max. Operating Pressure 1500 psi (100 bar) Proof Pressure 2250 psi (150 bar) Fatigue Pressure 1500 psi (100 bar) Burst Pressure size 30 5510 psi (380bar) sizes 60 - 660 > 6090 psi (420 bar)	
<b>Element Collapse Pressure Rating</b>	BH/HC, V 3045 psid (210 bar) BN/HC, W/HC 290 psid (20 bar)	
<b>Fluid Temperature Range</b>	-22° to 250°F (-30° to 121°C)	
<b>Fluid Compatibility</b>	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.	
<b>Indicator Trip Pressure</b>	ΔP = 29 psid (2 bar) -10% (optional) ΔP = 72 psid (5 bar) -10% (standard)	
<b>Bypass Valve Cracking Pressure</b>	ΔP = 43 psid (3 bar) +10% (optional) ΔP = 87 psid (6 bar) +10% (standard)	



## Model Code

**LF BH/HC 30 I B 3 A 1 . 0 / 3**

**Filter Type** \_\_\_\_\_  
 LF = Inline filter

**Element Media** \_\_\_\_\_  
 BH/HC = Betamicon® (High Collapse)      BN/HC = Betamicon® (Low Collapse)  
 V = Metal Fiber                                  W/HC = Wire Screen

**Size** \_\_\_\_\_  
 30, 60, 110, 160, 240, 280, 330, 660

**Operating Pressure** \_\_\_\_\_  
 I = 1500 PSI (100 bar)

**Type of Connection** \_\_\_\_\_  
 B = SAE-8 (size 30 only)                      E = SAE-20 (sizes 160, 240, & 280 only)  
 C = SAE-12 (sizes 60 & 110 only)        F = SAE-24 (sizes 330 & 660 only)

**Filtration Rating (microns)** \_\_\_\_\_  
 3, 5, 10, 20 = BH/HC, BN/HC              3, 5, 10, 20 = V                                  25, 74, 149 = W/HC

**Type of ΔP Clogging Indicator** \_\_\_\_\_  
 A, B/BM, C, D

**Type Number** \_\_\_\_\_  
 1 = Sizes 30 to 660

**Modification Number (latest version always supplied)** \_\_\_\_\_

**Port Configuration** \_\_\_\_\_  
 0 = BSPP  
 3 = NPT Ports (with adapters)  
 12 = SAE Straight Thread O-Ring Boss Ports

**Seals** \_\_\_\_\_  
 (omit) = Nitrile (NBR) (standard)      V = Fluoroelastomer (FPM)      EPR = Ethylene Propylene (EPDM)

**Bypass Valve** \_\_\_\_\_  
 (omit) = Without Bypass (BH4HC or V elements recommended)  
 B3 = 43PSID Bypass (optional)  
 B6 = 87PSID Bypass (standard)

**Supplementary Details** \_\_\_\_\_  
 SO103H = Modification of BN4HC (Low Collapse) Element For Phosphate Esters  
 SO150H = Head & Bowl Anodized for High Water Based Fluids (HWBF) (sizes 60 & 110 only)  
 SO155H = Modification of BH4HC (High Collapse) Element For Phosphate Esters  
 SO184 = G-1/2 Drain in Bowl Option For Sizes 60 - 280 (comes standard for sizes 330, 660, & 1320)  
 W = Indicator with brass piston (for use with water based fluids)  
 L24, L48, L110, L220 = Lamp for D-type clogging indicator (LXX, XX = voltage)  
 T100 = Indicator Thermal Lockout, 100°F (C and D indicators only)

## Replacement Element Model Code

**0030 D 010 BN4HC / V**

**Size** \_\_\_\_\_  
 0030, 0060, 0110, 0160,  
 0240, 0280, 0330, 0660

**Filtration Rating (micron)** \_\_\_\_\_  
 3, 5, 10, 20 = BH4HC, BN4HC  
 3, 5, 10, 20 = V  
 25, 74, 149 = W/HC

**Element Media** \_\_\_\_\_  
 BH4HC, BN4HC, V, W/HC

**Supplementary Details** \_\_\_\_\_  
 (omit) = standard  
 V = Fluoroelastomer (FPM) seals

## Clogging Indicator Model Code

**VM 2 B . X /**

**Indicator Prefix** \_\_\_\_\_  
 VM = G 1/2 3000 psi

**Trip Pressure** \_\_\_\_\_  
 2 = 29 psid (2 bar)  
 5 = 72 psid (5 bar) (optional)

**Type of Indicator** \_\_\_\_\_  
 A = no indicator, plugged port  
 B/BM = Visual pop-up (auto/manual reset)  
 C = Electric switch  
 D = Electric switch and light

**Modification Number** \_\_\_\_\_

**Supplementary Details** \_\_\_\_\_

**Seals** \_\_\_\_\_  
 (omit) = Nitrile (NBR) (standard)  
 V = Fluoroelastomer (FPM)

**Light Voltage (D type indicators only)** \_\_\_\_\_  
 L24 = 24V      L110 = 110V

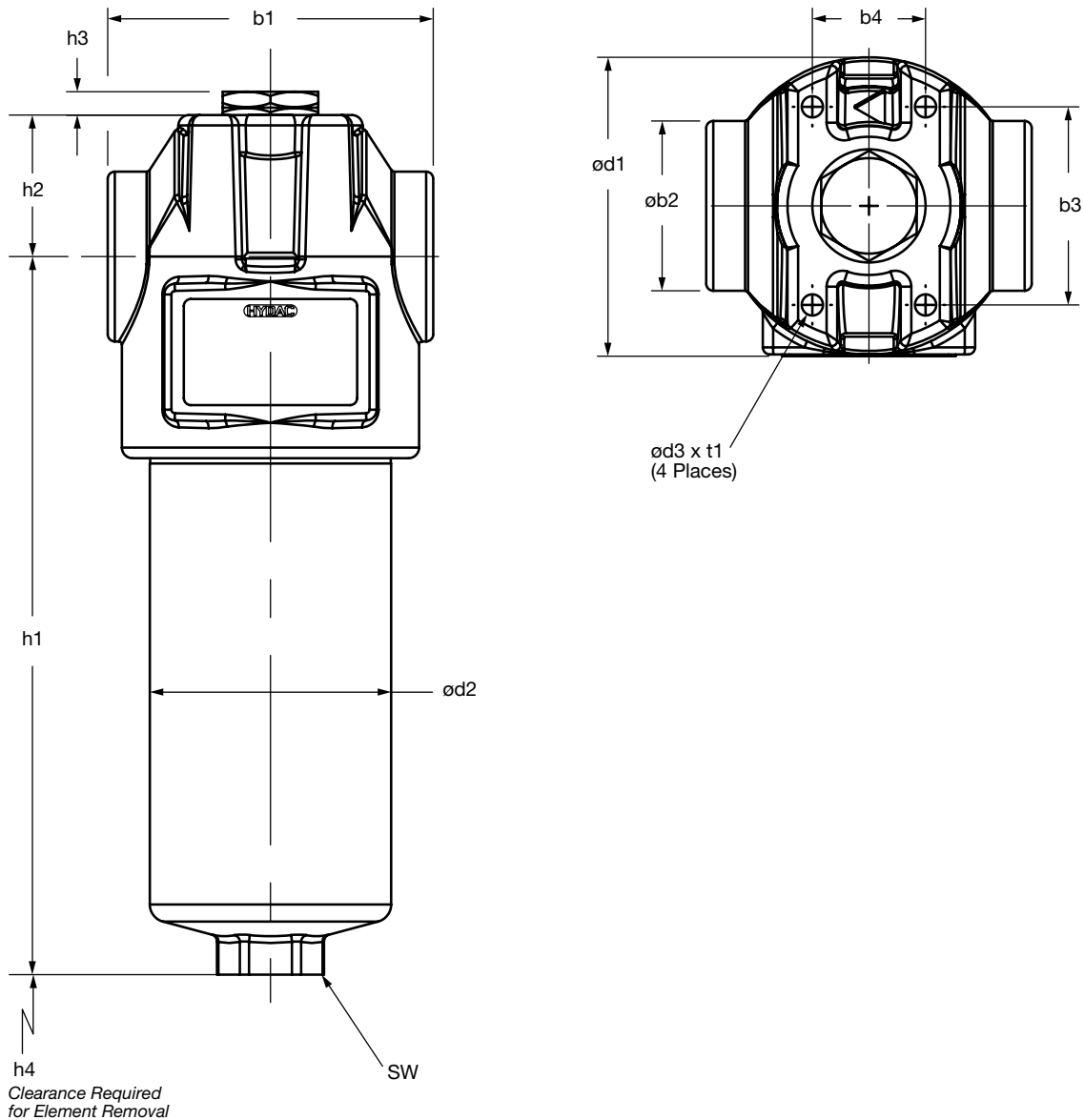
**Thermal Lockout (VM, VD types C, D, J, and J4 only)** \_\_\_\_\_  
 T100 = Lockout below 100°F

**Underwriters Approval (VM, VD types C, D, J, and J4 only)** \_\_\_\_\_  
 CRUUS = Electrical Indicators  
 (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

# HYDAC Medium Pressure Filters

## Dimensions LF 30 - 660



Size	b1	b2	b3	b4	d1	d2	d3	h1	h2	h3	h4	SW	t1
30	2.72" 69mm	1.42" 36mm	1.77" 45mm	1.18" 30mm	2.64" 67mm	2.05" 52mm	10-32UNF-2B	4.94" 125.5mm	1.22" 31mm	0.27" 7.0mm	2.95" 75mm	0.94" 24mm	0.24" 6.0mm
60	3.54" 90mm	1.89" 48mm	2.20" 56mm	1.26" 32mm	3.31" 84mm	2.68" 68mm	1/4-28UNF-2B	5.41" 137.5mm	1.53" 39mm	0.24" 6.0mm	2.95" 75mm	1.06" 27mm	0.35" 9.0mm
110	3.54" 90mm	1.89" 48mm	2.20" 56mm	1.26" 32mm	3.31" 84mm	2.68" 68mm	1/4-28UNF-2B	8.15" 207mm	1.53" 39mm	0.24" 6.0mm	2.95" 75mm	1.06" 27mm	0.35" 9.0mm
160	4.92" 125mm	2.56" 65mm	3.35" 85mm	1.38" 35mm	4.57" 116mm	3.74" 95mm	3/8-24UNF-2B	7.50" 190.5mm	1.81" 46mm	0.24" 6.0mm	3.74" 95mm	1.26" 32mm	0.55" 14mm
240	4.92" 125mm	2.56" 65mm	3.35" 85mm	1.38" 35mm	4.57" 116mm	3.74" 95mm	3/8-24UNF-2B	9.86" 250.5mm	1.81" 46mm	0.24" 6.0mm	3.74" 95mm	1.26" 32mm	0.55" 14mm
280	4.92" 125mm	2.56" 65mm	3.35" 85mm	1.38" 35mm	4.57" 116mm	3.74" 95mm	3/8-24UNF-2B	9.86" 250.5mm	1.81" 46mm	0.24" 6.0mm	3.74" 95mm	1.26" 32mm	0.55" 14mm
330	6.26" 159mm	3.35" 85mm	4.53" 115mm	2.36" 60mm	6.30" 160mm	5.12" 130mm	1/2-20UNF-2B	9.94" 252.5mm	1.97" 50mm	0.24" 6.0mm	4.13" 105mm	1.42" 36mm	0.47" 12mm
660	6.26" 159mm	3.35" 85mm	4.53" 115mm	2.36" 60mm	6.30" 160mm	5.12" 130mm	1/2-20UNF-2B	16.44" 417.5mm	1.97" 50mm	0.24" 6.0mm	4.13" 105mm	1.42" 36mm	0.47" 12mm

Size	30	60	110	160	240	280	330	660
Weight (lbs.)	1.76	3.3	3.96	8.15	9.5	25.6	17.6	38.8

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:

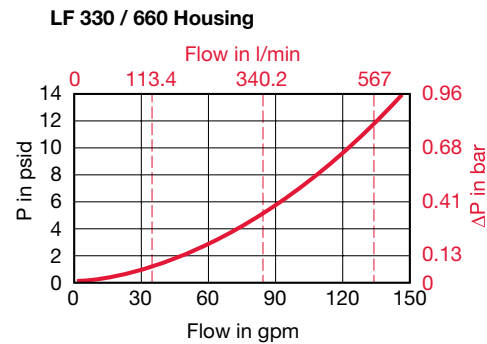
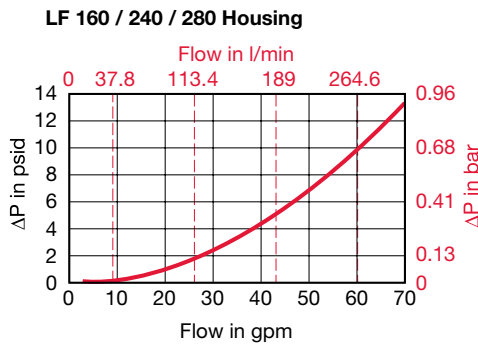
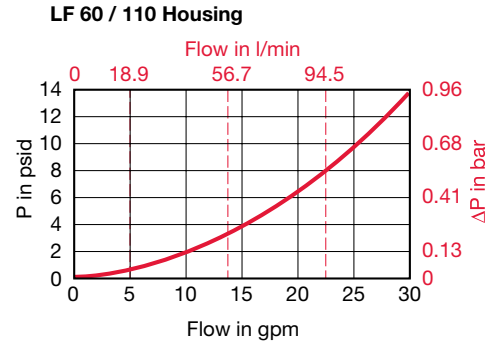
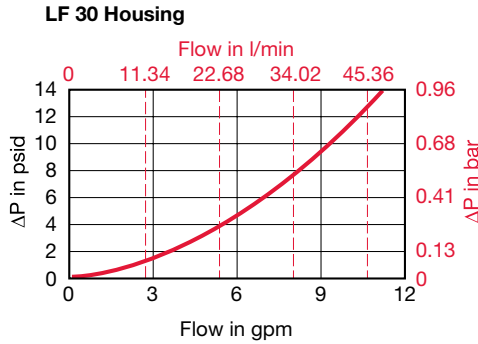
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

### 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

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

(From Tables Below)

Size	...D...BN4HC (Betamicon® Low Collapse)			
	3 μm	5 μm	10 μm	20 μm
0030	3.504	2.374	1.251	0.618
0060	1.582	1.116	0.723	0.433
0110	0.819	0.585	0.361	0.205
0160	0.718	0.480	0.252	0.193
0240	0.450	0.333	0.196	0.128
0280	0.220	0.171	0.092	0.071
0330	0.294	0.215	0.163	0.095
0660	0.136	0.099	0.061	0.044

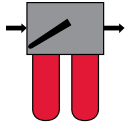
Size	...D...BH4HC (Betamicon® High Collapse)			
	3 μm	5 μm	10 μm	20 μm
0030	5.000	2.780	1.989	1.042
0060	3.210	1.785	0.993	0.669
0110	1.394	0.819	0.488	0.307
0160	0.919	0.569	0.322	0.240
0240	0.578	0.374	0.214	0.158
0280	0.313	0.184	0.097	0.090
0330	0.422	0.244	0.154	0.108
0660	0.179	0.106	0.055	0.049

Size	...D...V Elements			
	3 μm	5 μm	10 μm	20 μm
0030	1.011	0.740	0.411	0.200
0060	0.877	0.511	0.296	0.183
0110	0.452	0.304	0.182	0.118
0160	0.251	0.177	0.123	0.079
0240	0.169	0.137	0.093	0.062
0280	0.126	0.093	0.064	0.041
0330	0.121	0.097	0.065	0.043
0660	0.063	0.050	0.034	0.021

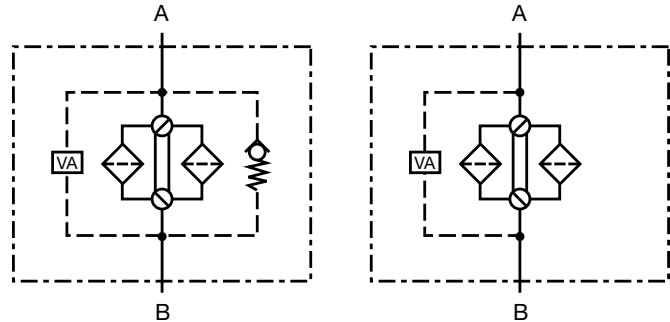
Size	...D...W/HC Elements			
	25, 50, 74, 100, 149, 200 μm			
0030	0.166			
0060	0.042			
0110	0.023			
0160	0.016			
0240	0.010			
0280	0.009			
0330	0.008			
0660	0.004			

All Element K Factors in psi / gpm.

## 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

<b>Mounting Method</b>	4 mounting holes
<b>Port Connection</b>	SAE-24
<b>Flow Direction</b>	Inlet: Side      Outlet: Side
<b>Construction Materials</b>	
Head	Ductile iron
Bowl	Steel
<b>Flow Capacity</b>	
160	42 gpm (160 lpm)
250	66 gpm (250 lpm)
400	100 gpm (400 lpm)
<b>Housing Pressure Rating</b>	
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)
<b>Element Collapse Pressure Rating</b>	
BH/HC	3045 psid (210 bar)
BN/HC, W/HC	290 psid (20 bar)
<b>Fluid Temperature Range</b>	-22° to 250°F (-30° to 121°C)
<b>Fluid Compatibility</b>	
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.	
<b>Indicator Trip Pressure</b>	
$\Delta P = 29 \text{ psid (2 bar) } -10\% \text{ (optional)}$	
$\Delta P = 72 \text{ psid (5 bar) } -10\% \text{ (standard)}$	
<b>Bypass Valve Cracking Pressure</b>	
$\Delta P = 102 \text{ psid (7 bar) } +10\%$	

### Applications



Agricultural



Automotive



Construction



Industrial



Power Generation

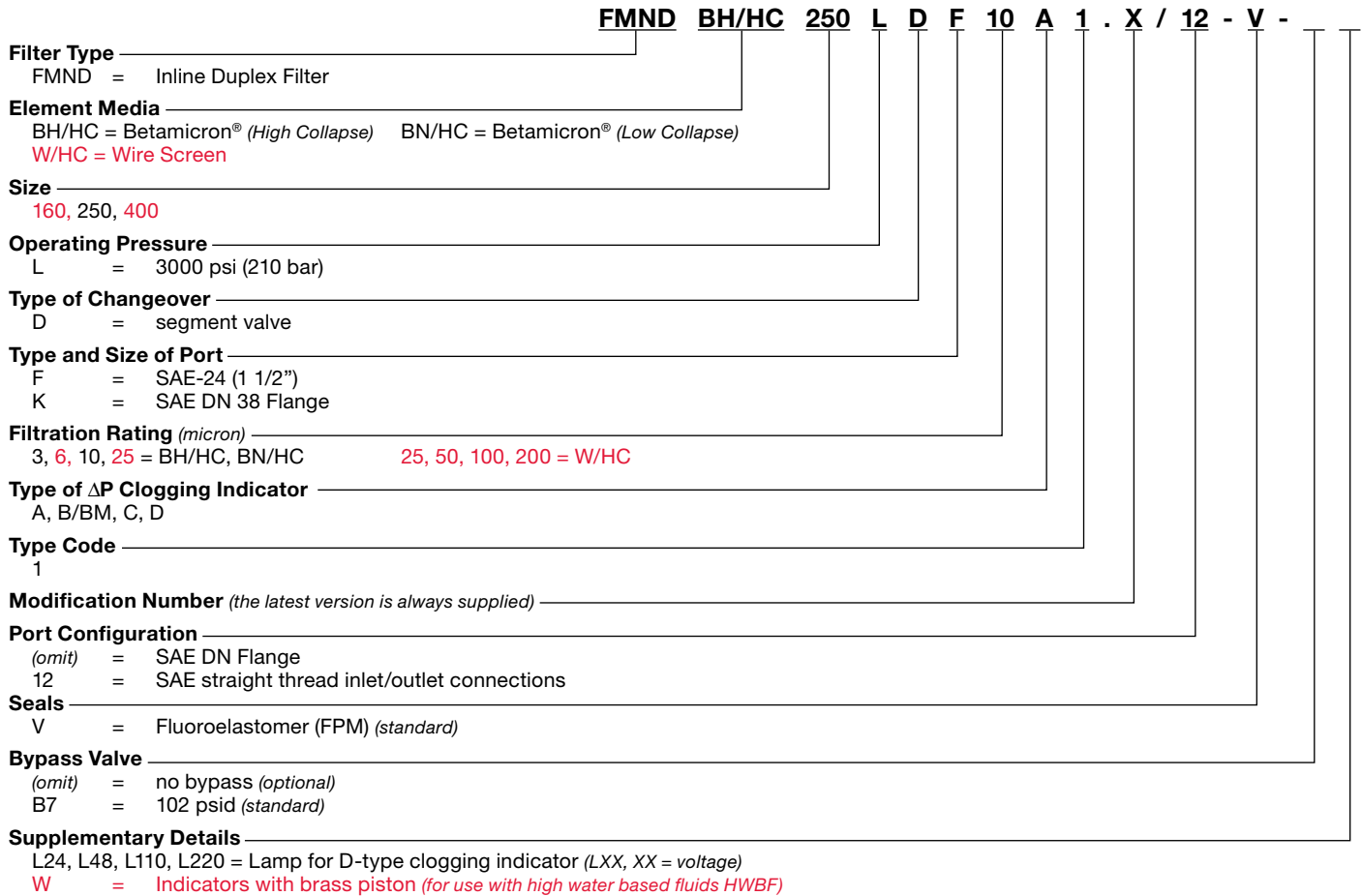


Railways

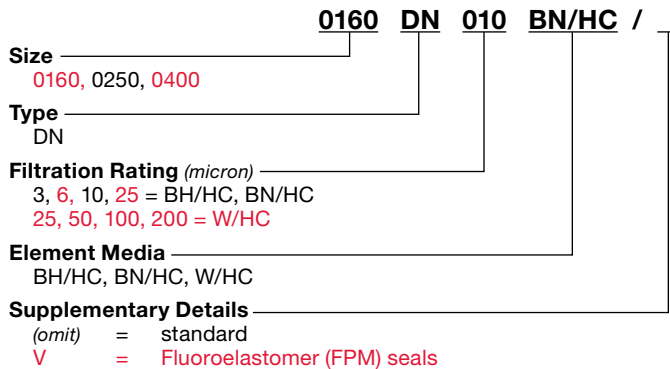


Steel / Heavy Industry

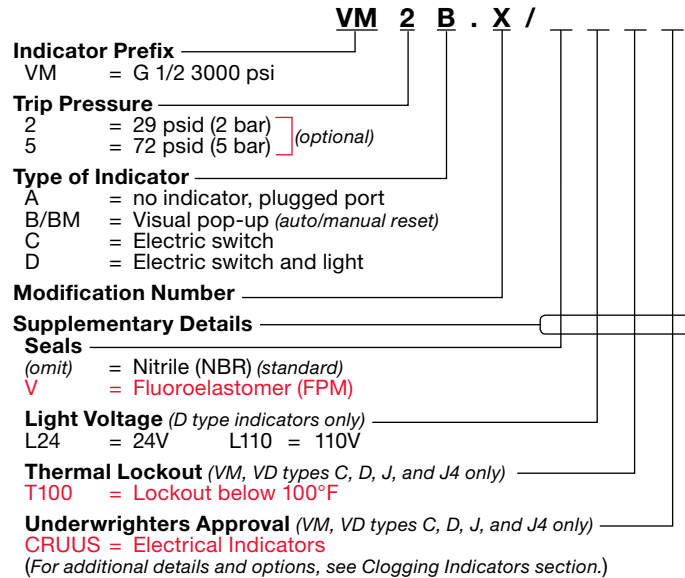
## Model Code



## Replacement Element Model Code



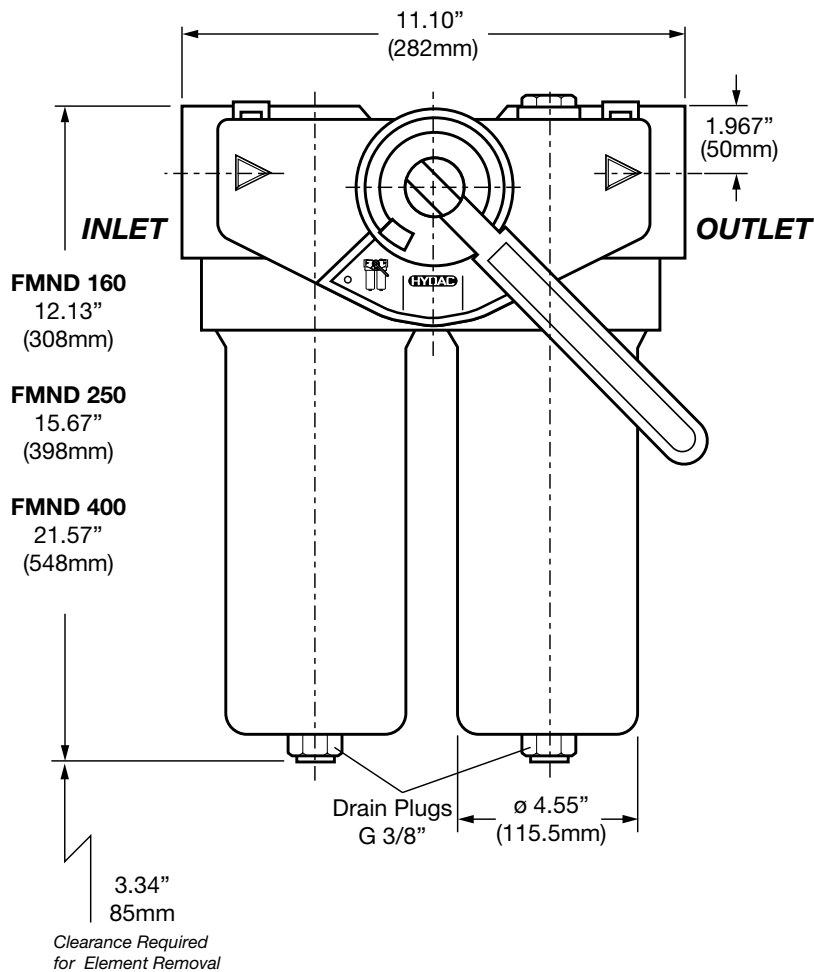
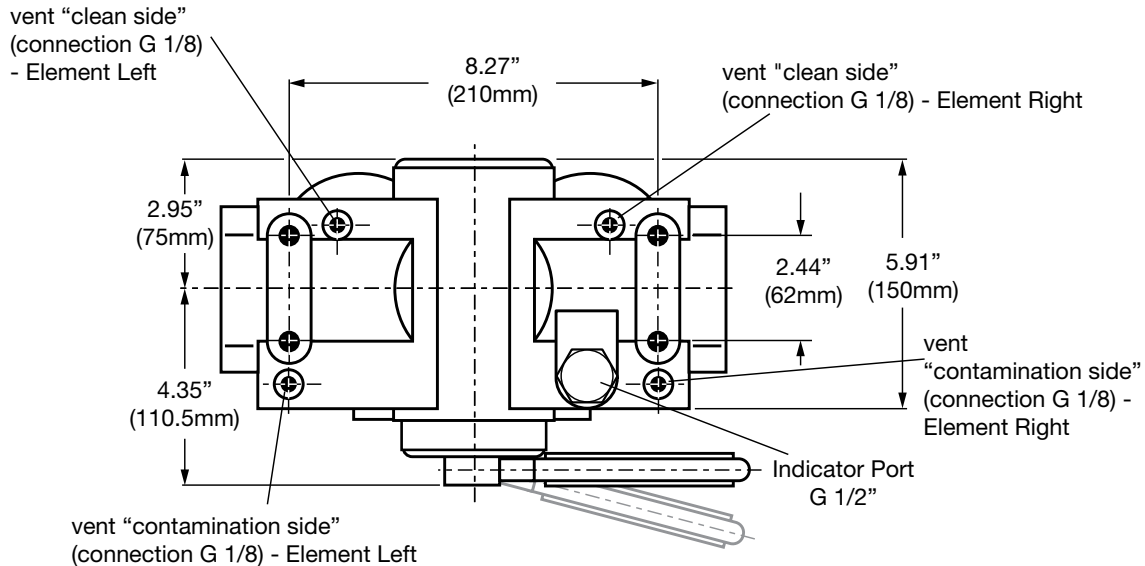
## Clogging Indicator Model Code



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:

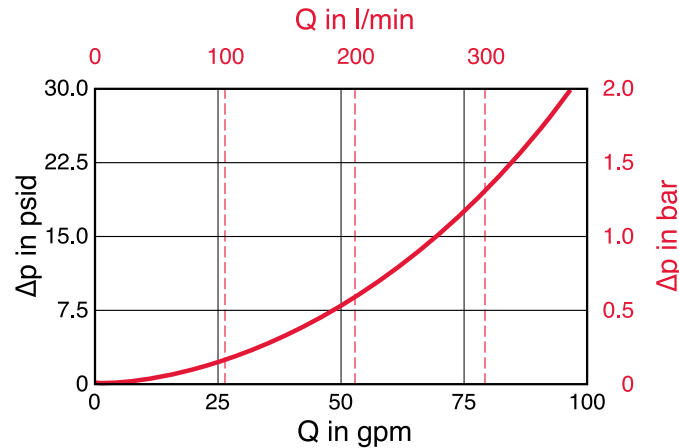
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

### 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.