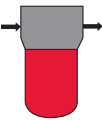


HIGH PRESSURE FILTERS

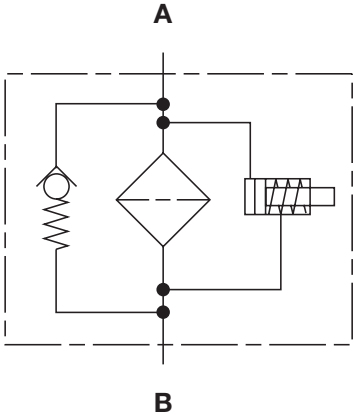
HFM Series

Inline Filters

5800 psi • up to 37 gpm



Hydraulic Symbol



Features

- The HFM filter is available in two sizes comprised of two different bowl and element lengths. The models 75 and 95 provide maximum flow rates of 29 and 37 GPM respectively.
- A quick-response by-pass valve located in the filter head, protects against high differential pressures caused by cold start-ups, flow surges and pressure spikes.
- The high bypass pressure setting (100 psid) minimizes the possibility of contamination due to premature bypassing.
- Filter materials are compatible with all mineral, lubricating oils, and commonly used fire retardant fluids per ISO 2943.
- Fatigue pressure rating equals maximum allowable working pressure rating.
- Wide variety of indicators available with standard setting of 72 psid (5 bar).

Technical Specifications

Mounting Method	3 or 4 mounting holes - filter head
Port Connection	SAE 16, 1" BSPP
Flow Direction	Inlet: Side Outlet: Side (opposite each other)
Construction Materials	Head Ductile iron Bowl Steel
Flow Capacity	75 29 gpm (110 lpm) 95 37 gpm (140 lpm)
Housing Pressure Rating	Max. Allowable Working Pressure 5800 psi (400 bar) Fatigue Pressure Contact HYDAC office Burst Pressure 13,920 psi (960 bar)
Element Collapse Pressure Rating	SN 290 psid (20 bar)
Fluid Temperature Range	14°F to 212°F (-10°C to 100°C) Consult HYDAC for applications below 14°F (-10°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.
Indicator Trip Pressure	$\Delta P = 72 \text{ psid (5 bar) } -10\% \text{ (standard)}$
Bypass Valve Cracking Pressure	$\Delta P = 101.5 \text{ psid (7 bar) } +10\% \text{ (standard)}$

Applications



Agricultural



Automotive



Construction



Gearboxes



Industrial



Commercial
Municipal



Power
Generation

Model Code

		HFM	SN	95	S	K	10	A	1	.	0	/	V	B7
Filter Type	_____													
HFM	= In-Line High Pressure Filter													
Element Media	_____													
SN	= Sustainmicron (<i>Low Collapse</i>)													
Size	_____													
75	= 29 gpm													
95	= 37 gpm													
Operating Pressure	_____													
S	= 5800 psi (400 bar)													
Type of Connection	_____													
J	= 1" threaded (1" BSPP)													
K	= 1" threaded (1 5/16" threaded-12UN)=SAE 16													
Filtration Rating (microns)	_____													
3, 5, 10, 20	= SN													
Type of Clogging Indicator	_____													
A, B, BM, C, D	(Others available upon request, see Clogging Indicators section.)													
Type Number	_____													
1														
Type Modification Number (latest version always supplied)	_____													
Seals	_____													
(omit)	= Nitrile rubber (NBR) (<i>standard</i>)													
V	= Fluorocarbon elastomer (FKM)													
Bypass Valve	_____													
B3.5	= 50.75 psid (3.5 bar) (<i>optional</i>)													
B7	= 101.5 psid (7 bar) (<i>standard</i>)													
Supplementary Details	_____													
SO263	= Modification of elements for Skydrol or HYJET phosphate ester fluids													
W	= "VD..." indicator modified with a brass piston for use with high water based emulsions/solutions (HFA) & (HFC)													
L24, L48, L110, L220	= Lamp for D-type clogging indicator (LXX, XX = voltage)													
LED	= 2 LEDs up to a voltage of 24 Volt													
T100	= Thermal lockout on indicator at 100°F (<i>C and D indicators only</i>)													
SFREE	= Element specially designed to minimize electrostatic charge generation													
cRUus	= Electrical Indicator with underwriter's recognition													
SO376	= Modification of ON and W/HC elements for HFA, HFB, HFC, and HFD flame retardant liquids													
SO882	= Quality Protection Design													

Replacement Element Model Code

		0095	D	010	SN	/	V
Size	_____						
0075, 0095							
Filtration Rating (micron)	_____						
3, 5, 10, 20	= SN						
Element Media	_____						
SN	= Sustainmicron						
Seals	_____						
(omit)	= Nitrile rubber (NBR) (<i>standard</i>)						
V	= Fluorocarbon elastomer (FKM)						
Supplementary Details	_____						
SO263	= (<i>same as above</i>)						
SFREE	= (<i>same as above</i>)						
SO376	= (<i>same as above</i>)						
SO882	= (<i>same as above</i>)						

Clogging Indicator Model Code

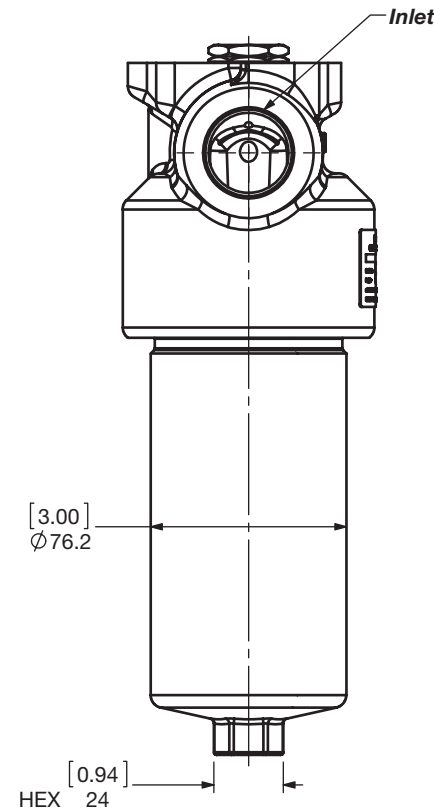
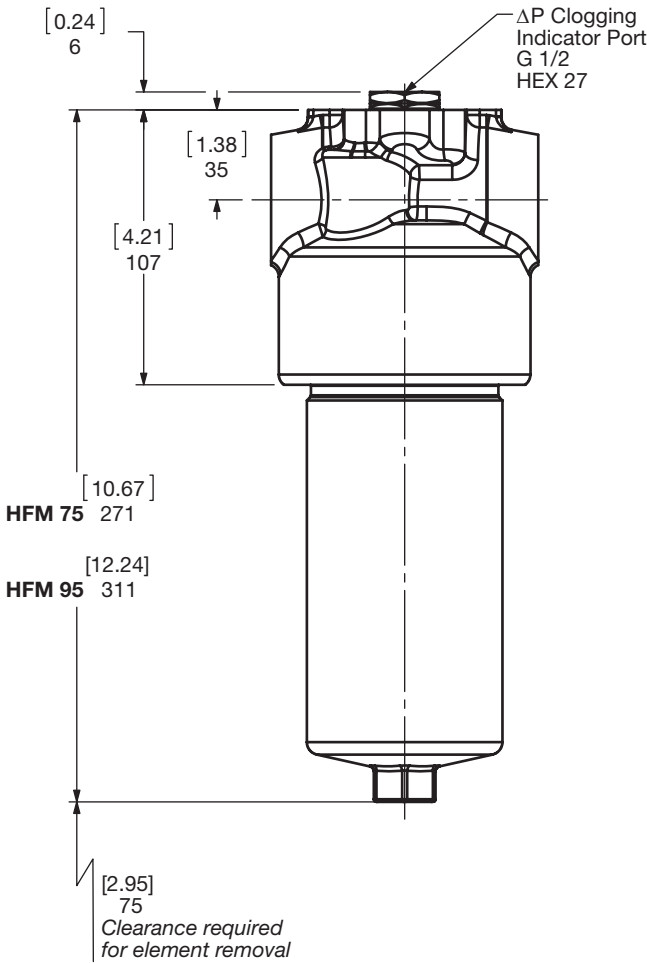
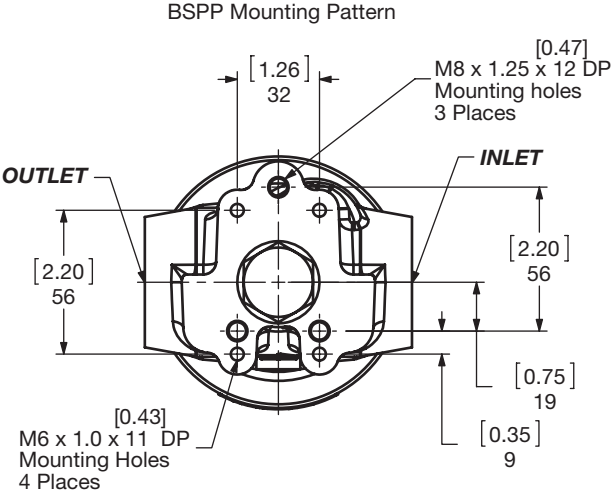
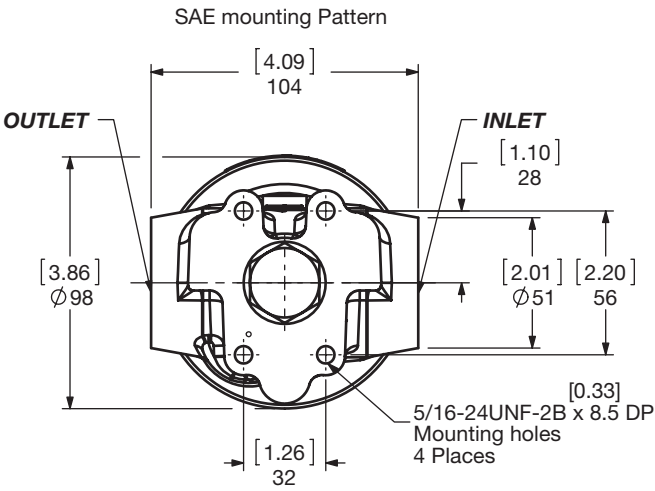
		VD	5	B	.	X	/	V
Indicator Prefix	_____							
VD	= G 1/2 6000 psi							
Trip Pressure	_____							
2	= 29 psid (2 bar) (<i>option</i>)							
5	= 72 psid (5 bar) (<i>standard</i>)							
	<i>Optional 15 psid (1 bar) & 116 psid (8 bar) available upon request</i>							
Type of Indicator	_____							
A	= No indicator, plugged port							
B	= Pop-up indicator (<i>auto reset</i>)							
BM	= Pop-up indicator (<i>manual reset</i>)							
C	= Electric switch - SPDT							
D	= Electric switch and LED light - SPDT							
Modification Number	_____							
Supplementary Details	_____							
Seals	_____							
(omit)	= Nitrile rubber (NBR) (<i>standard</i>)							
V	= Fluorocarbon elastomer (FKM)							
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							
W	= "VD..." indicator modified with a brass piston for use with high water based emulsions/solutions (HFA) & (HFC)							

(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

HIGH PRESSURE FILTERS

Dimensions HFM 75/95



Size	75	95
Weight (lbs.)	12.4	13.5

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:

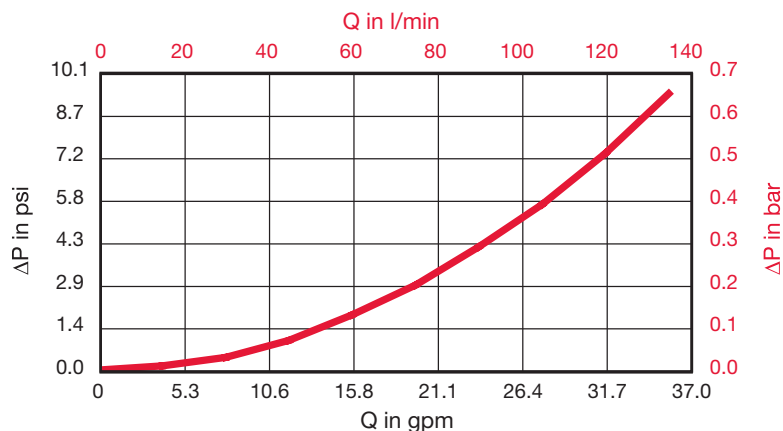
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

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 HYDAC Filter Assemblies" in Section B - Overview)



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)

Sustainmicron	...D...SN (Pressure Elements)			
	3 μm	5 μm	10 μm	20 μm
0075 D XXX SN	0.3946	0.3339	0.1982	0.1188
0095 D XXX SN	0.3102	0.2672	0.1558	0.0934

All Element K Factors in psi / gpm.