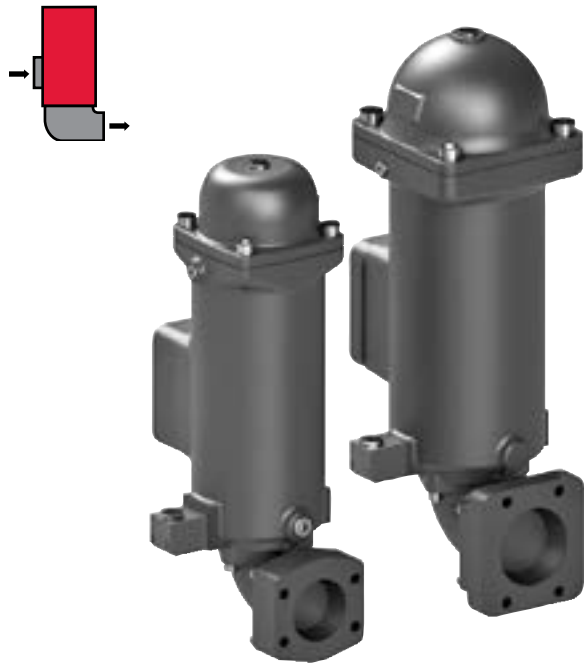


LOW PRESSURE FILTERS

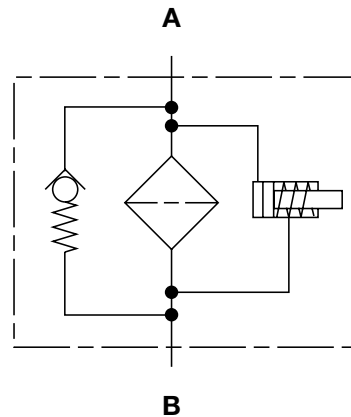
RFL Cast Series

Inline Filters

360 psi • up to 350 gpm



Hydraulic Symbol



Features

- Models 851 and 1301 are made of ductile cast iron and consist of a two part filter housing with bolt-on cast iron lid. The two part construction makes it possible to arrange the inlet and outlet either one above the other on one side or, by turning the base part 180°, on opposite sides of the housing.
- Inlet/outlet ports for models 851 and 1301 comply with SAE 4-bolt flange Code 61 configuration.
- Clogging indicators have no external dynamic seal. High reliability is achieved and magnetic actuation eliminates a leak point.

Note: This filter is configured with anR.... type (return/low pressure) element, so if the filter requires a bypass, the bypass is located in the closed end cap of the cartridge element.

Technical Specifications

Mounting Method	Support by means of pipe clamps
Port Connection	851 3" SAE DN 76 Code 61 Flange 1301 4" SAE DN 102 Code 61 Flange
Flow Direction	Inlet: Side Outlet: Side
Construction Materials	Head, Lid, Elbow Ductile iron
Flow Capacity	851 225 gpm (850 lpm) 1301 343 gpm (1300 lpm)
Housing Pressure Rating	Max. Allowable Working Pressure 360 psi (25 bar) Fatigue Pressure 360 psi (25 bar) Burst Pressure > 1440 psi (100 bar)
Element Collapse Pressure Rating	ON, W/HC 290 psid (20 bar) BN4AM, ECON2, AM, P/HC 145 psid (10 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	$\Delta P = 29$ psid (2 bar) -10% $\Delta P = 72$ psid (5 bar) -10%
Bypass Valve Cracking Pressure	$\Delta P = 43$ psid (3 bar) +10% $\Delta P = 87$ psid (6 bar) +10%

Applications



Automotive



Gearboxes



Industrial



Power Generation



Pulp & Paper

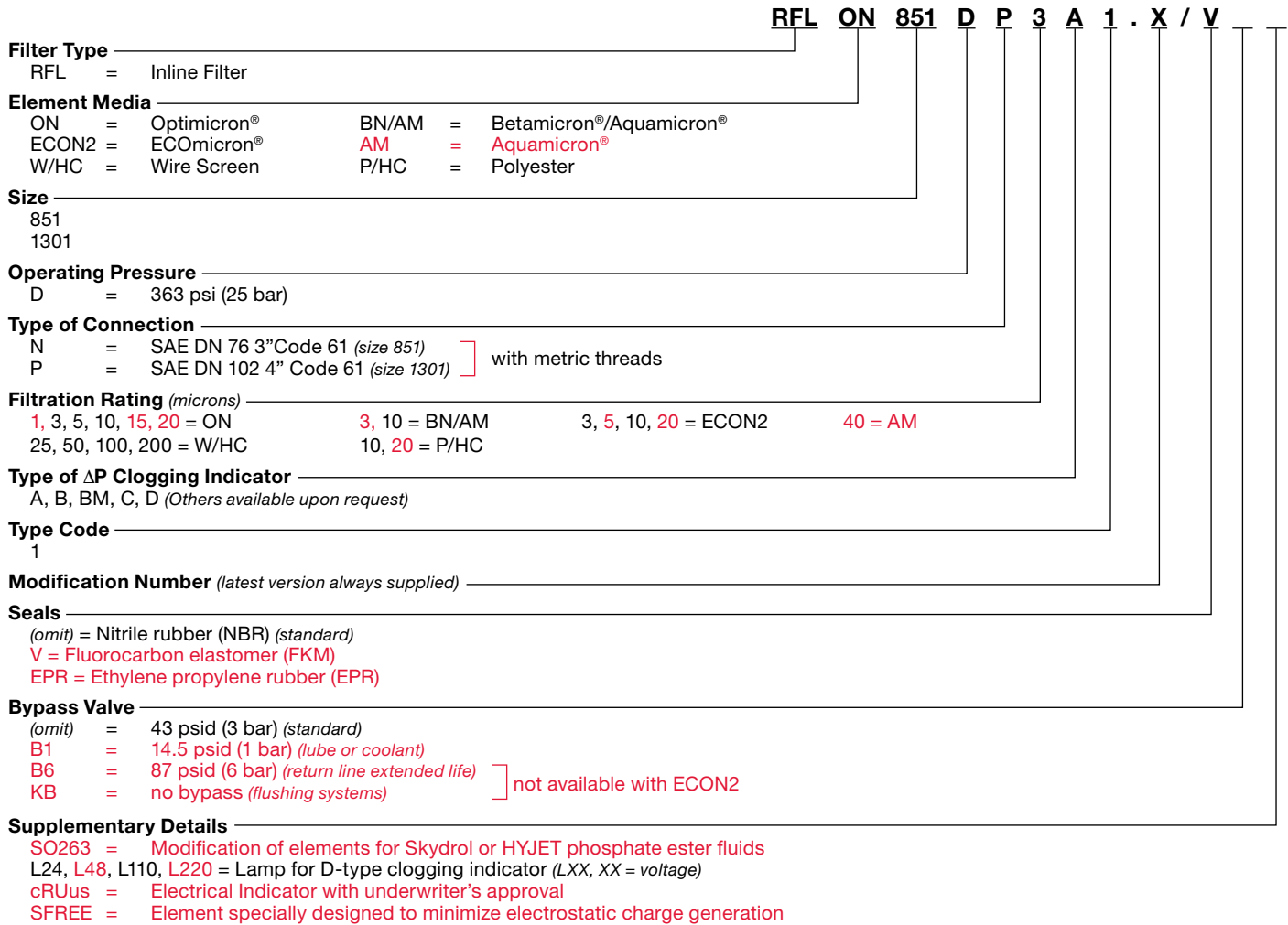


Shipbuilding

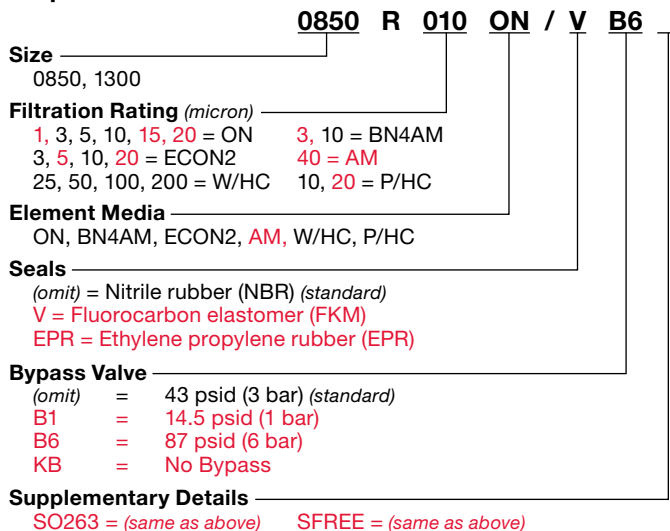


Steel / Heavy Industry

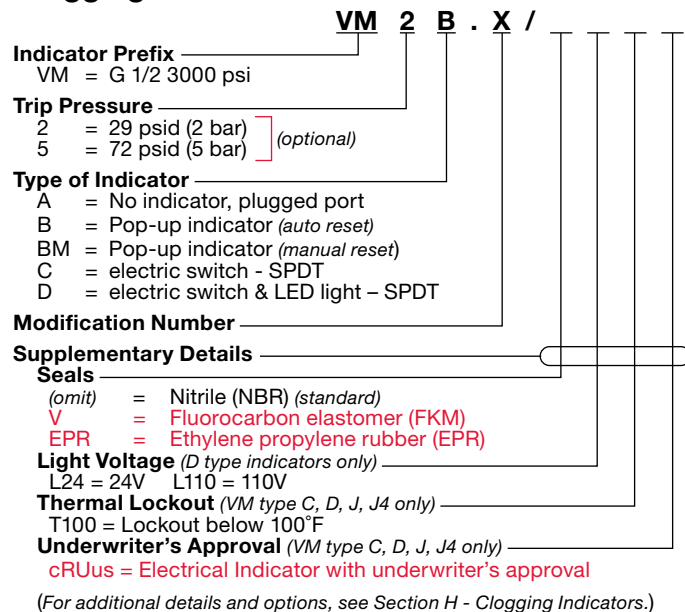
Model Code



Replacement Element Model Code



Clogging Indicator Model Code

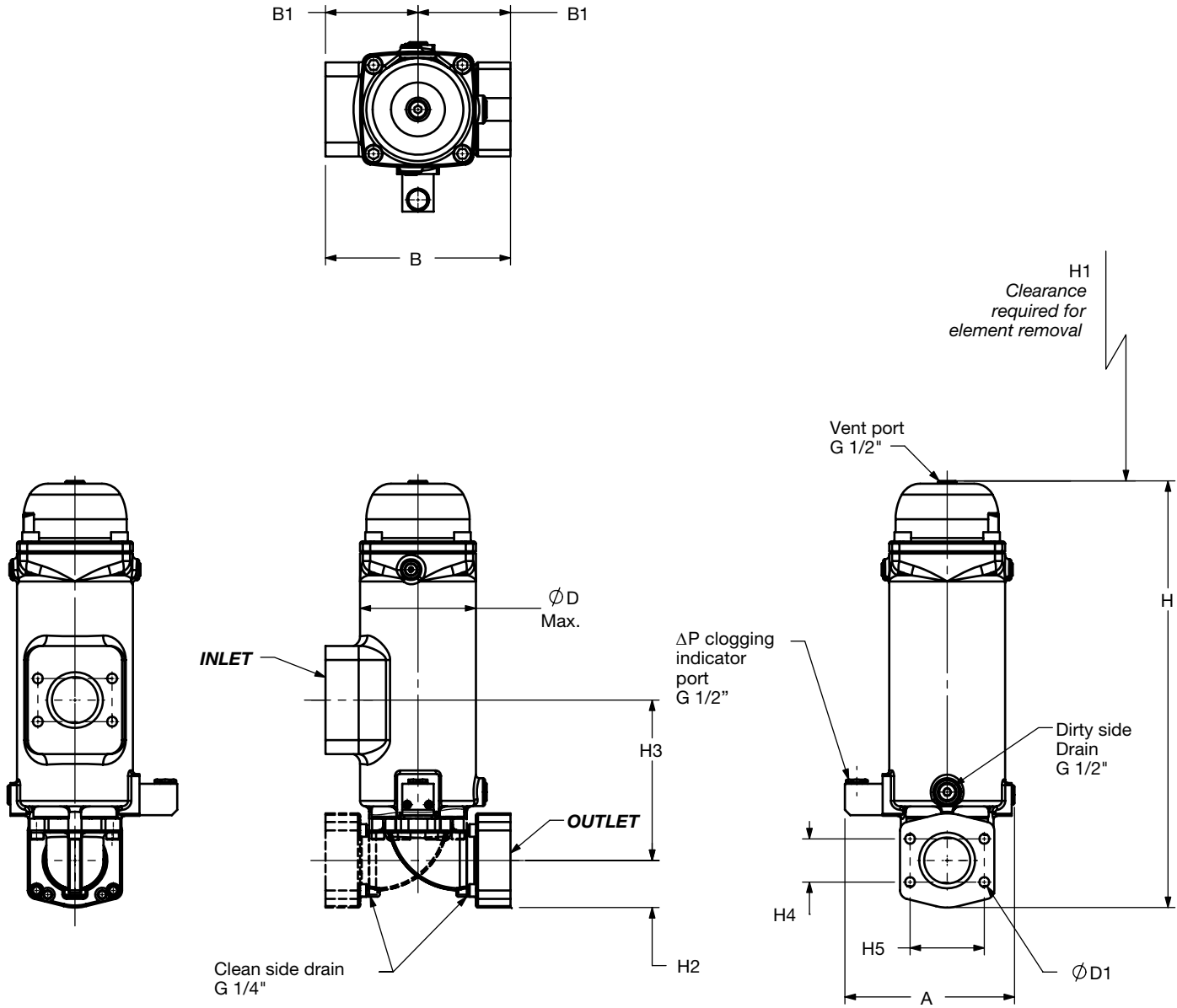


Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability

LOW PRESSURE FILTERS

Dimensions

RFL Cast 851-1301



Size	A	B	B1	H	H1	H2	H3	H4	H5	D	D1	Weight (lbs)
RFL 851	[7.56] 192	[8.78] 266	[5.23] 133	[24.09] 612	[16.54] 420	[2.66] 67.5	[9.05] 230	[2.44] 61.9	[4.19] 106.4	[6.77] 172	M16	84.9
RFL 1301	[8.78] 223	[11.26] 286	[5.63] 143	[27.99] 711	[19.69] 500	[3.05] 77.5	[9.84] 250	[3.06] 77.8	[5.13] 130.2	[8.66] 220	M16	122.4

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:

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

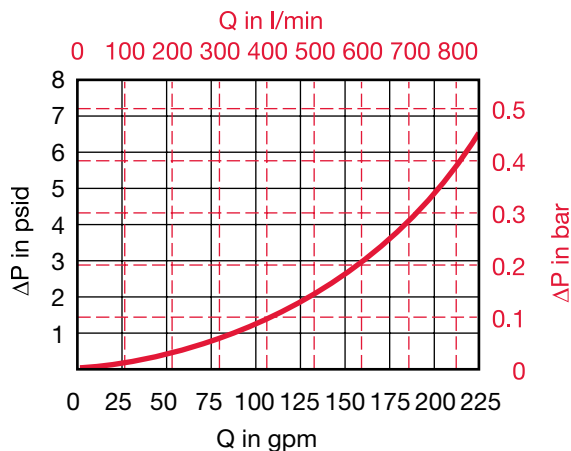
Housing Curve:

Pressure loss through housing is as follows:

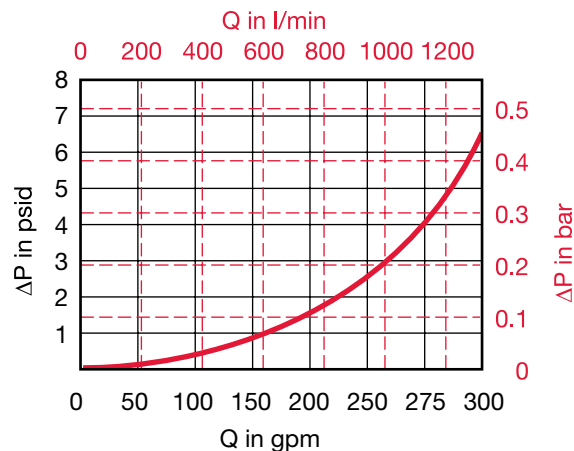
$$\text{Housing } \Delta P = \text{Housing Curve } \Delta P \times \frac{\text{Actual Specific Gravity}}{0.86}$$

Adjustments must be made for viscosity & specific gravity of the fluid to be used! (see "Sizing HYDAC Filter Assemblies" in Section B - Overview)

RFL 851 HOUSING



RFL 1301 HOUSING



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	...R...ON					
Size	1 μm	3 μm	5 μm	10 μm	15 μm	20 μm
0850 R XXX ON	0.152	0.072	0.055	0.032	0.024	0.02
1300 R XXX ON	0.094	0.04	0.032	0.019	0.018	0.012

ECOMICRON	...R...ECON2			
Size	3 μm	5 μm	10 μm	20 μm
0850 R XXX ECON2	0.082	0.055	0.038	0.022
1300 R XXX ECON2	0.044	0.033	0.022	0.016

Betamicron/Aquamicon	...R...BN4AM	
Size	3 μm	10 μm
0850 R XXX BN4AM	0.154	0.049
1300 R XXX BN4AM	0.088	0.033

Aquamicon	...R...AM
Size	40 μm
0850 R 040 AM	0.040
1300 R 040 AM	0.026

Wire Screen	...R...W/HC
Size	25, 50, 100, 200 μm
0850 R XXX W/HC	0.003
1300 R XXX W/HC	0.002

Polyester	...R...P/HC	
Size	10 μm	20 μm
0850 R XXX P/HC	0.007	0.003
1300 R XXX P/HC	0.004	0.002

All Element K Factors in psi / gpm.