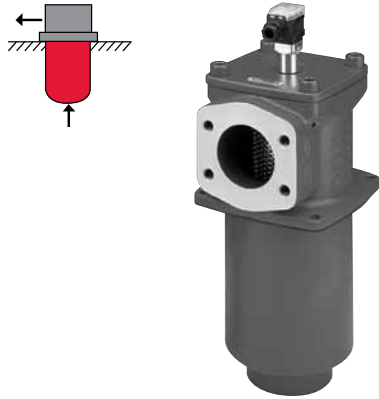
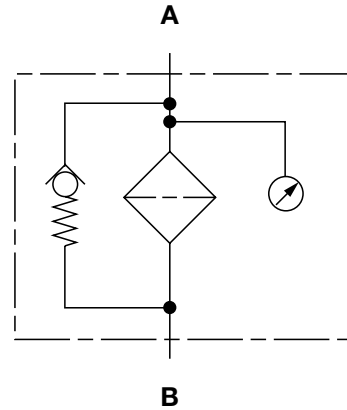


## SF Series In-tank Suction Filters

360 psi • up to 300 gpm



### Hydraulic Symbol



### Features

- Non-welded housing design reduces stress concentrations and prevents fatigue failure.
- Inlet/Outlet port options include NPT port or SAE 4-bolt flange to allow easy installation without costly adapters.
- O-ring seals are used to provide positive, reliable sealing. Choice of O-ring materials (Nitrile, Fluoroelastomer, or Ethylene Propylene) provides compatibility with oil/water emulsions, high water base fluids, and synthetic fluids.
- Bolt-on lid requires minimal clearance for removal.
- A mechanically actuated, electrical, electrical / visual (lamp), or vacuum gauge bypass indicator can be installed.
- Bypass valve with low cracking pressure prevents pump cavitation.

### Technical Details

<b>Mounting Method</b>	4 mounting holes - filter head	
<b>Port Connection</b>	Inlet	Outlet
110	SAE-12	SAE-12
240	SAE-20	SAE-20
330	SAE-20 2" NPT 2" NPT	2" NPT 2" NPT 2" SAE Flange, Code 61
950	3 1/2" SAE Flange, Code 61	3 1/2" SAE Flange, Code 61
1300	4" SAE Flange, Code 61	4" SAE Flange, Code 61
<b>Flow Direction</b>	Inlet: Bottom	Outlet: Side
<b>Construc. Materials</b>	Housing	Lid
SF 110-330	Aluminum	Aluminum
SF 950-1300	Ductile Iron	Ductile iron
<b>Flow Capacity</b>		
110	5 gpm (20 lpm)	
240	20 gpm (80 lpm)	
330	40 gpm (150 lpm)	
950	200 gpm (757 lpm)	
1300	300 gpm (1135 lpm)	
<b>Housing Pressure Rating</b>		
Max. Oper. Press.	360 psi (25 bar)	
Proof Pressure	540 psi (38 bar)	
Fatigue Pressure	360 psi (25 bar) @ 700,000 cycles	
Burst Pressure	110	1080 psi (75 bar)
	240	1230 psi (85 bar)
	330	1440 psi (100 bar)
	950-1300	>1440 psi (100 bar)
<b>Element Collapse Pressure Rating</b>		
W/HC	290 psid (20 bar)	
P/HC	145 psid (10 bar)	
<b>Fluid Temp. Range</b>	-22° to 250°F (-30° to 121°C)	
<b>Fluid Compatability</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 = 3 psi (0.2 bar) -10% (standard)	
<b>Bypass Valve Cracking Pressure</b>	ΔP = 3 psi (0.2 bar) +10% (standard)	

### Applications



Agricultural



Automotive



Construction



Gearboxes

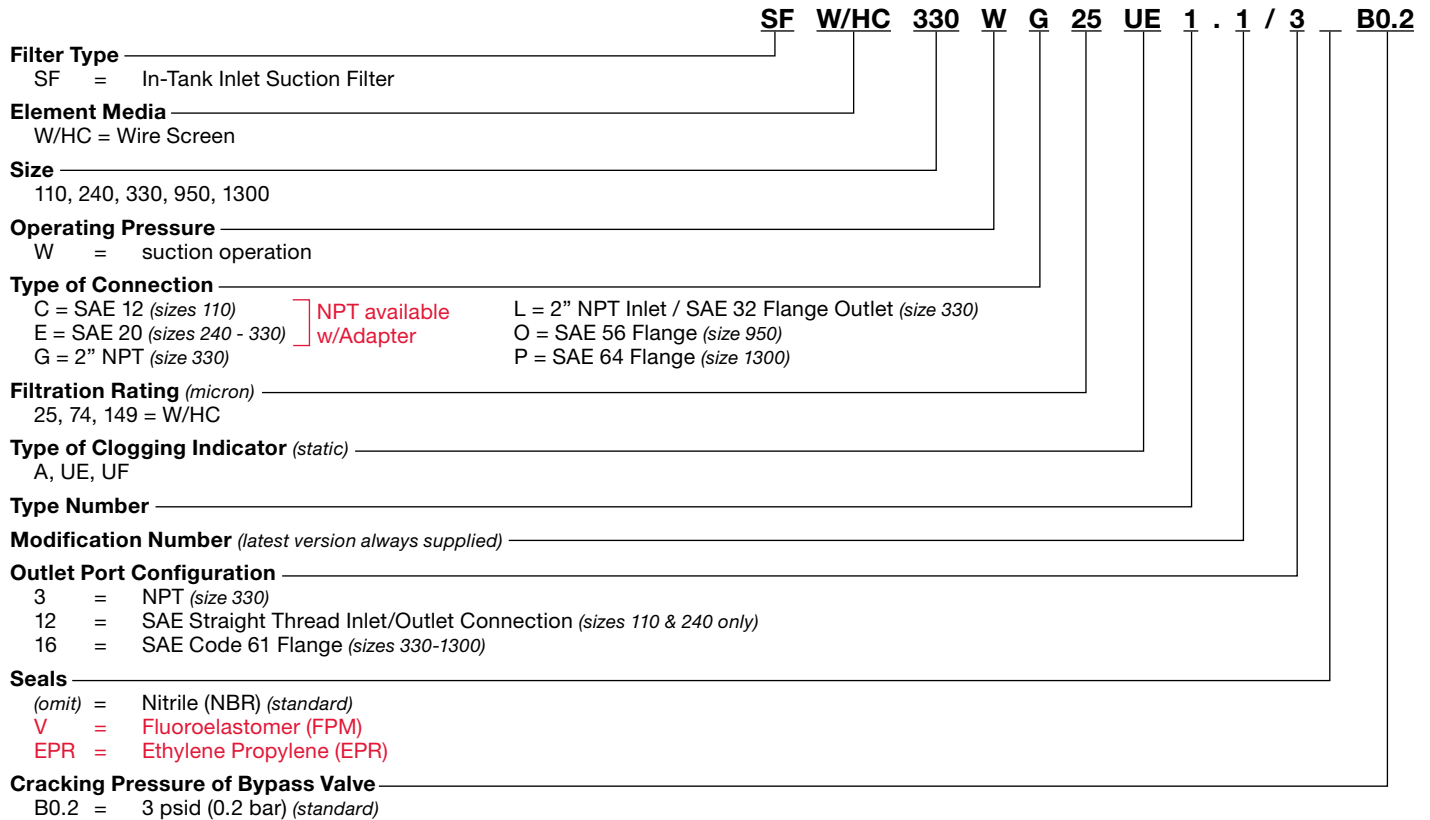


Industrial

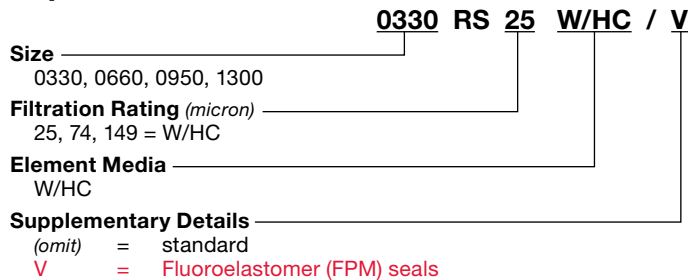


Steel / Heavy Industry

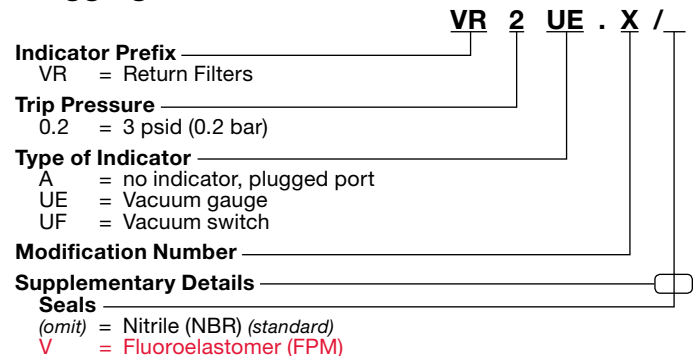
## Model Code



## Replacement Element Model Code



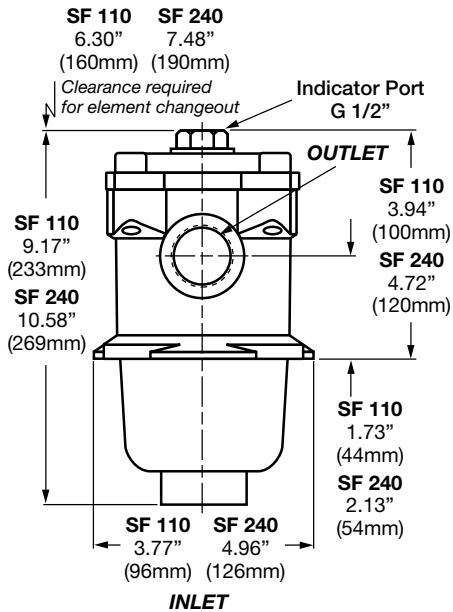
## Clogging Indicator Model Code



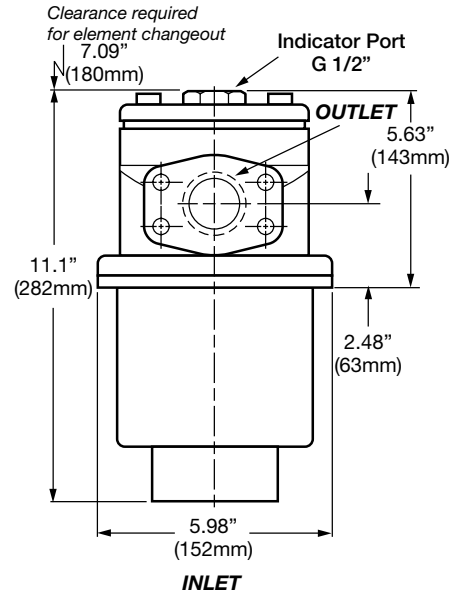
(For additional details and options, see Clogging Indicators section.)

## Dimensions

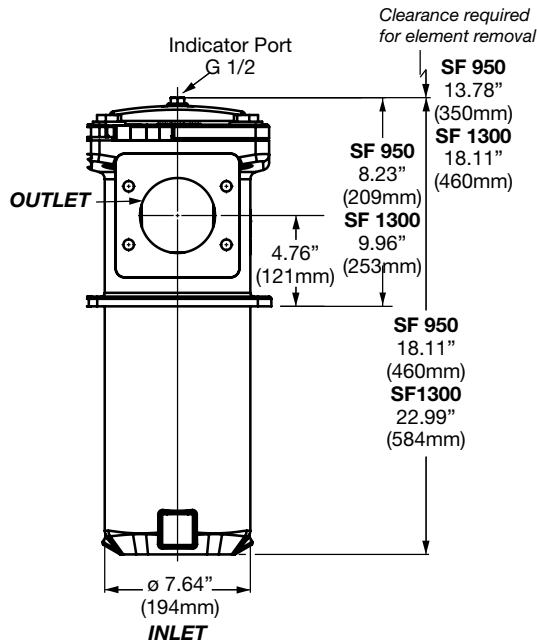
### SF 110 / 240



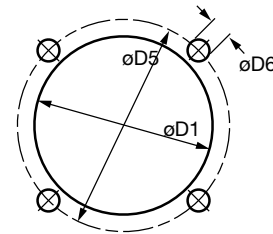
### SF 330



### 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:

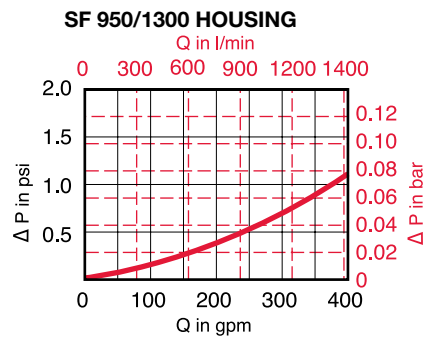
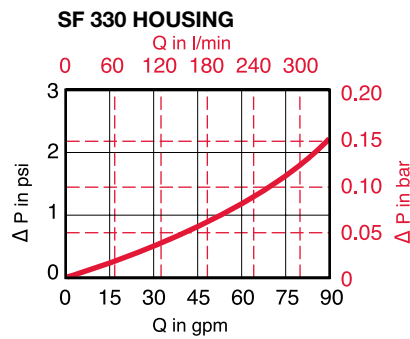
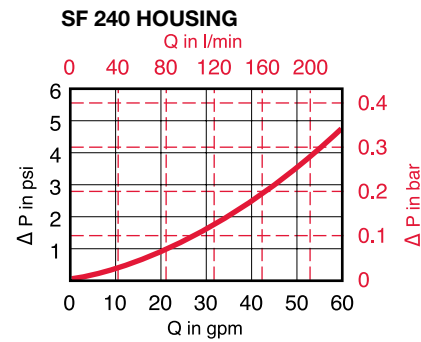
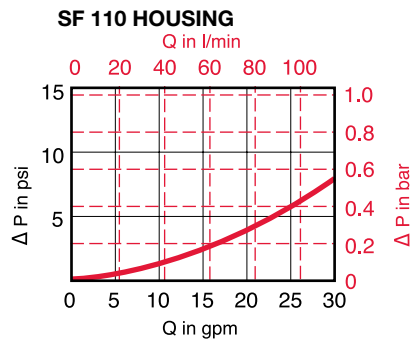
$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

### 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.