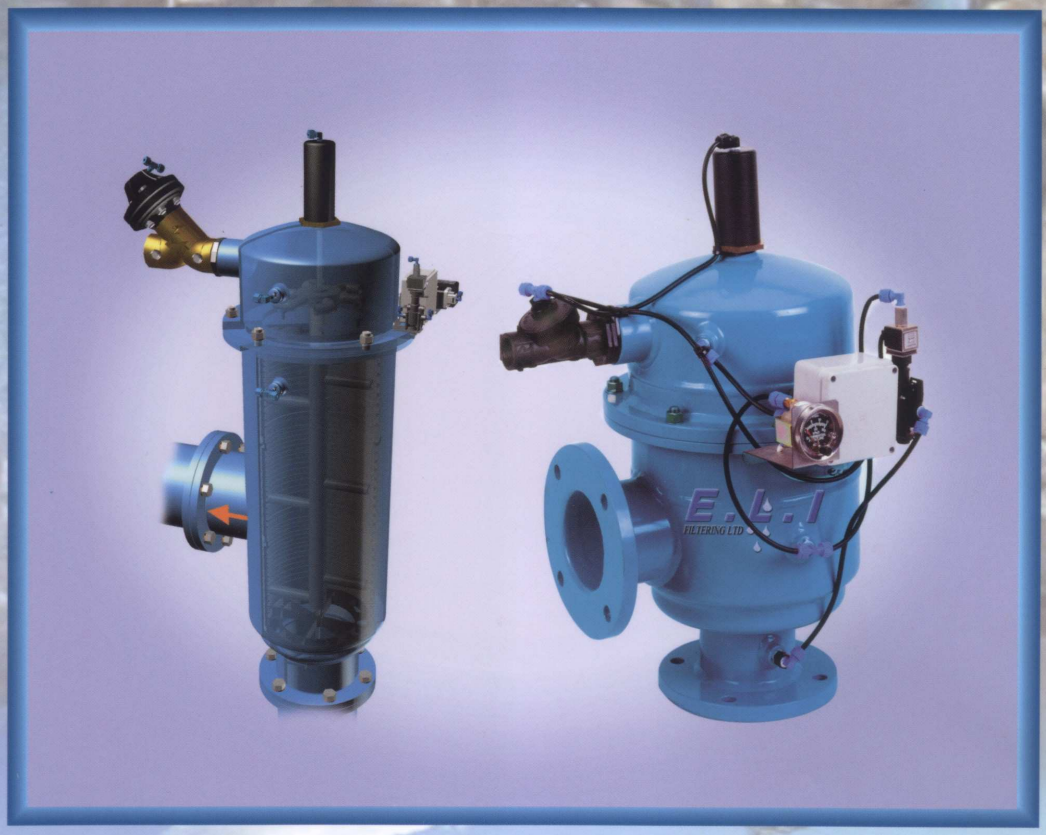
E.L.I.
FILTERING LTD

Bell AF-200 Series
Self-Cleaning Hydraulic Screen Filter



Operation Information for E.L.I AF-200 Series Self-Cleaning Filter

Filtration

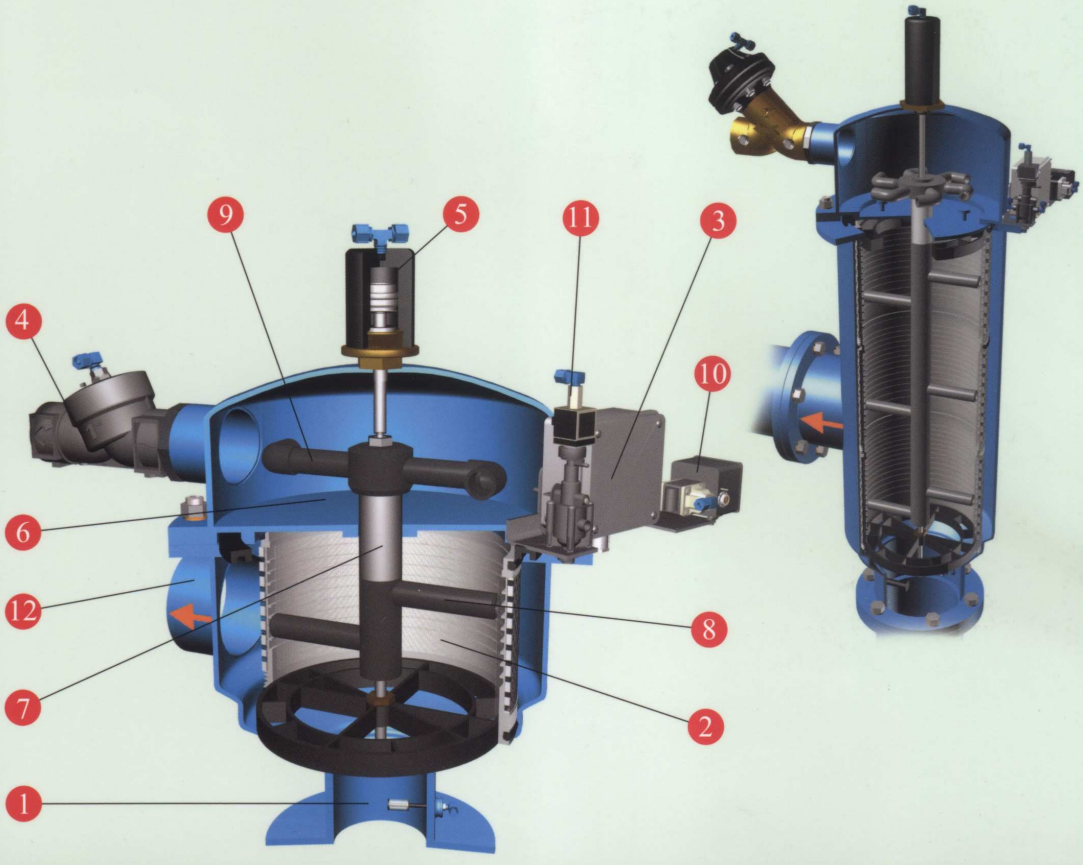
Water enters the filter through the "Inlet" 1. The water then reaches the fine screen 2, which purifies the flow by separating smaller particles from the water. As more water flows through, impurities build up on the fine screen. As impurities on the screen accumulate, a pressure imbalance is built up between the internal section of the fine Screen 2 and its external section.

Cleaning Process

When the difference in pressure (ΔP) reaches the preset value on the differential pressure indicator 10, a series of events is triggered while water continues to flow to the system units. The flushing valve 4 opens, pressure is released from the hydraulic piston 5, and water flows outside. Pressure in the hydraulic motor chamber 6 and the dirt collector 7 is significantly lowered, and the dirt collector nozzles 8 begin a suction process. The water flows through the hydraulic motor 9, which rotates the dirt collector 7 around its axis. The pressure released from the piston and the high pressure inside the filter, cause linear movement of the dirt collector. The combination of the linear movement and rotation significantly cleans the whole internal screen surface. The flushing cycle takes 5 seconds. The flushing valve 4 closes at the end of the cycle and the increased water pressure returns the system to its initial position. The filter is now ready for the next cycle, with clean and filtered water flowing through the "Outlet" 12.

General Description of the Electronic Control System

The electrical system controls the cleaning process through the differential pressure indicator 10, that closes a circuit and triggers the electronic control unit 3 that controls the opening and the closing of the flushing valve 4 via the solenoid valve 11. The flushing cycle, which takes a total of 5 seconds, resumes its operation whenever the difference in pressure reaches the preset pressure value set on the differential pressure indicator. If the difference in pressure remains unchanged after one cycle, another cycle will start after a delay of 25 seconds.



Technical Data

Standard Features

- Minimum operating pressure: 2 bar (30 psi).
- Maximum operating pressure: 10 bar (150 psi).
- Clean filter pressure loss: 0.1 bar (2 psi).
- Maximum water temperature: 65°C (149°F).
- Filtration range: 10-3000 micron.
- Control voltage: 9V DC, 12V DC, 24V AC.
- Flush water consumption (at minimum working pressure):
  Bell 2"- 4": 8 liters (2.11 gallons); Bell 4S"- 8": 25 liters (6.61 gallons).
- Filter housing materials: carbon steel coated with baked on epoxy.
- Available connections: V = Vic. F = Flange .

General Technical Data

Model Number	Conn. Size ØD (Inch)	Screen Area (cm^2)	*Maximum Flow Rate (m^3/h)	**Flushing Flow Rate (m^3/h)	ØD1 (Inch)	X (mm)	Y (mm)	H (mm)	Weight (Kg)
AF-202	2"	1100	30	6	10	177	174	480	24
AF-202S	2"	1630	30	6	10	177	174	625	26
AF-203	3"	1100	40	6	10	192	188	495	25
AF-203S	3"	1630	50	6	10	192	188	640	27
AF-204	4"	1630	80	6	10	220	210	650	28
AF-204S	4"	3100	90	20	10	220	315	890	57
AF-206	6"	4500	130	20	10	220	400	1095	70
AF-208	8"	5780	200	20	16	305	450	1190	130

S =Filter with large filtration area.

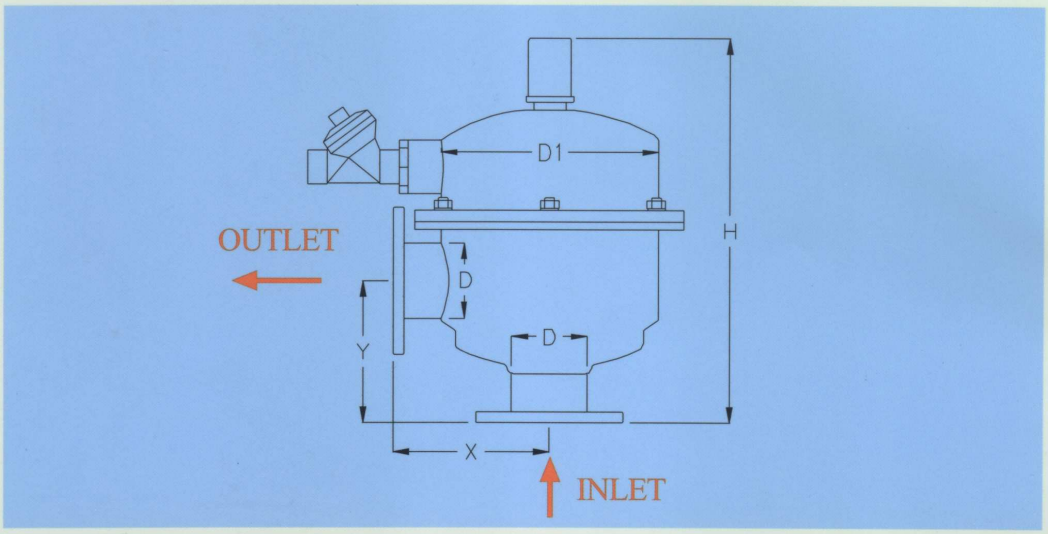
* Flow rate data is for high quality water at filtration grade of 120 micron.

** Flushing flow rate data is for minimum operational pressure (2 bar / 30 psi).

Filtration Grade Conversion Table

Micron	10	25	30	40	50	80	100	120	150	200	400	800	1500	3000
Mesh	1500	650	550	400	300	200	150	120	100	80	40	20	10	5

Flow rate is dependent on water quality and filtration grade



Special Options and Features:

- High Temperature Range: Withstands temperatures of up to 95° C (203° F).
- Anti Frost: Special control system for cold climate conditions.
- Available Controls: Electronic, timer, air-actuated, computerized and custom designed.
- Special Coating: Prevents deterioration from exposure to salt/sea water.
- Construction materials: Stainless steel 304 or 316 and titanium .

Sectors Served:

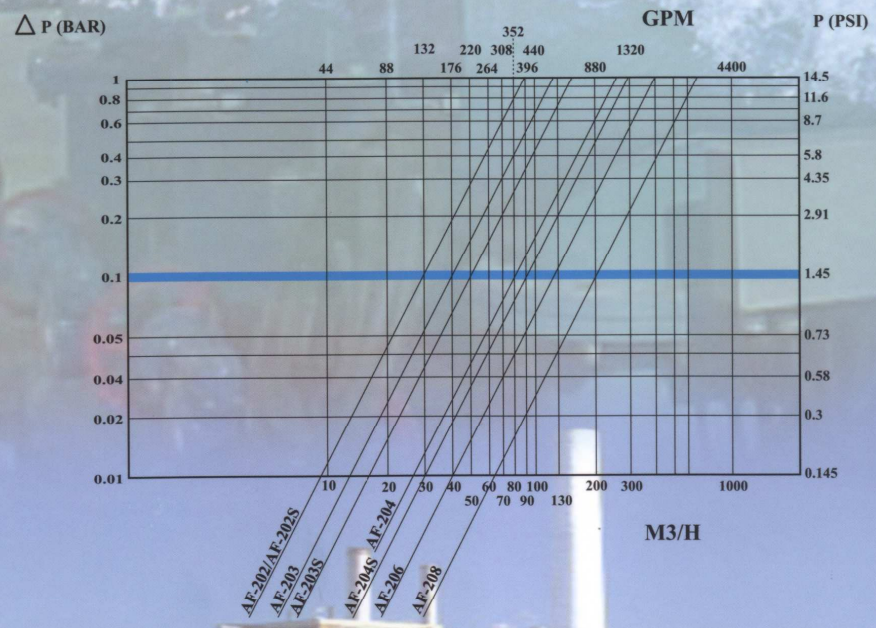
The **E.L.I AF-200 Series Self-Cleaning Hydraulic Screen Filter** is used in a wide range of applications in the Industrial, Infra - structural, Municipal, Commercial and Agricultural Sectors.The main industries include:steel mills,petroleum,plastics,chemicals,electronics, textile, paper mills, food, beverage and power stations.

Typical Applications:

- Cooling towers.
- Heat exchange protection.
- Ion exchange protection.
- Industrial wastewater recycling.
- Effluent polishing.
- Water supply.
- Filtration for micro irrigation.

The **E.L.I AF-200 Series Self-Cleaning Hydraulic Screen Filter** is used in agriculture as main and secondary filtration for sprinklers, drip irrigation, mini and micro sprinkler systems, as well as for water distribution applications.

Pressure Loss At 120 Micron



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