

Self Cleaning Filters

MANUAL & AUTOMATIC



Airpel Series

Self Cleaning Filters – Manual & Automatic

Sizes 20 mm (¾") – 300 mm (12")

Self-cleaning filters are designed specifically to provide efficient filtration for liquids, including those of high viscosity, requiring continuous filtration without interruption to the flow during the cleaning process. There is no operator contact with the process fluid. High quality stainless steel elements are highly effective in removing contaminant particles as small as 25 micron (µm).

The filter is available for either manual or fully automatic electric or pneumatic operation. The range of optional control devices makes it particularly suitable for continuous processes and for service with high contamination levels.

BENEFITS

- No operator contact with liquid during cleaning operation.
- Minimised product loss – during both process production and system cleaning.
- Increased quality output – minimum disruption to product flow.
- Reduced contamination – less possibility of accidents or operator exposure to the fluid.
- Reduced maintenance costs – automated units eliminate manual cleaning.
- Environment friendly – enclosed design with minimal flushing losses.

OPERATION

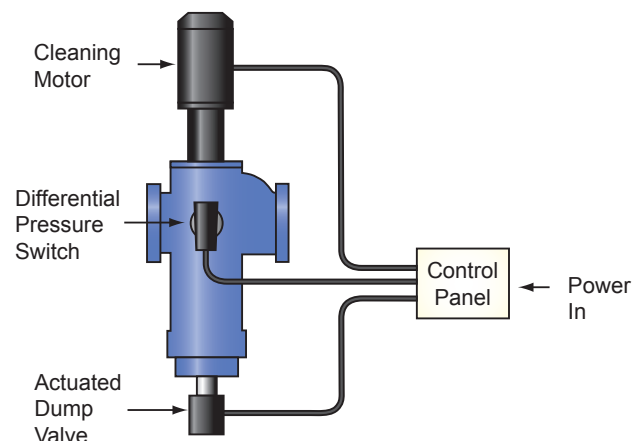
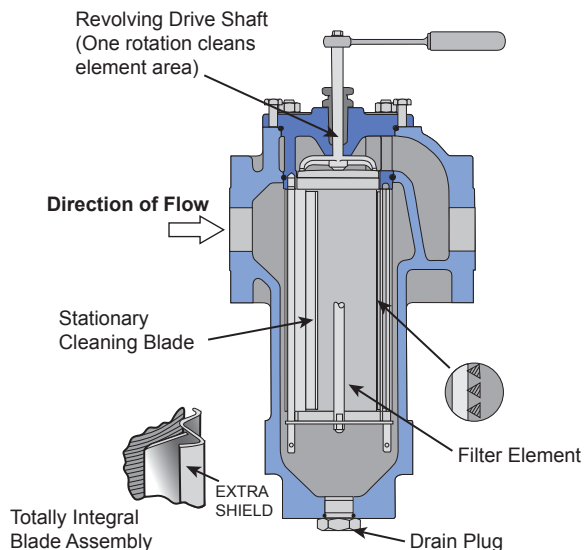
The liquid enters the body and flows through the element from outside to inside. Debris is collected on the outside of the wedge wire or perforated element, which is cleaned without flow interruption by the rotation of the element against the blades. The debris accumulated during rotation is deposited into the bottom of the filter body from where it is periodically discharged, manually or automatically.

TYPICAL APPLICATION

- Adhesives
- Chemicals
- Chocolate
- Cooling Lines
- HVAC Water
- Inks
- Lacquers
- Paints, Stains, Varnishes
- Petrochemicals
- Printing
- Recycling Water
- River & Sea Water
- Wash Water

AUTOMATED SELF CLEANING FILTERS

The Airpel Filtration automated self cleaning filter allows for stand alone, low maintenance processing of liquids. The range can be automated, either electronically or pneumatically, from 32 mm (1¼") and above. The filters can be supplied wired and fully tested, requiring only on site connection to the power source and dump valve connection.



RANGE

Airpel Filtration offer three forms of blade type self cleaning filters: standard range, high pressure range and rotor blade, all working on the same generic principle. Airpel also offer both standard element and high pressure element for very demanding duties. Fabricated units can also be provided, these contain multiple elements and are suitable for larger capacities.



S1
HIGH PRESSURE
Models: 200, 300, 400 and 600 (2" – 6")
Construction: cast
Materials: iron, steel and stainless steel
Working pressures: up to 35 bar
Flow rates: up to 3000 litres/min



S2
STANDARD PRESSURE
Models: 075, 100, 125, 150, 200, 300 and 400 (¾" – 4")
Construction: detachable head and bowl form
Materials: cast iron and stainless steel
Working pressures: up to 14 bar
Flow rates: up to 1500 litres/min



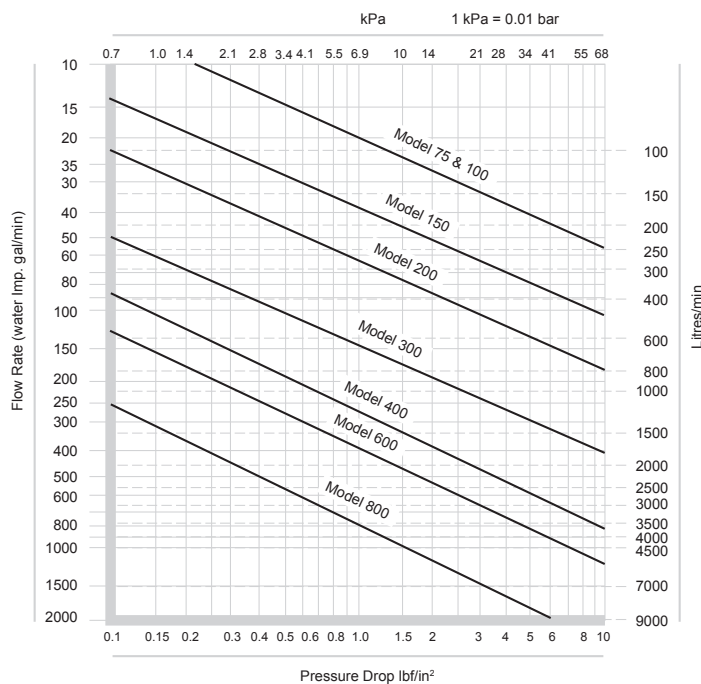
S4
ROTOR BLADE
Model: S4 Rotor Blade
Construction: stainless steel
Materials: stainless steel with stainless steel or plastic blades
Working pressures: up to 14 bar
Flow rates: up to 1000 litres/min



S2
SPECIAL FABRICATED
Models: 800, 1000, 1200 (8" – 12")
Construction: welded
Materials: customer specification
Working pressures: customer specification
Flow rates: up to 18000 litres/min

SIZING CHART / PRESSURE DROP CHART

The chart is for water flowing through a filter without an element. Use the following correction factors for the chosen filtration rating and for liquids of higher viscosity.



CORRECTION FACTORS

Either – multiply the pressure drop for water shown in the chart by the following correction factors to obtain the actual pressure drop. (Water has a viscosity of 1 centistoke at 20°C)

Or – divide the acceptable pressure drop by the necessary correction factor in the table below and then use the chart to determine the filter size and flow rate.

Correction factors for pressure drop

| VISCOSITY CENTISTOKES | FILTRATION RATING | | | | |
|--------------------------|-------------------|--------|--------|--------|-------|
| | 1000 µM | 500 µM | 200 µM | 100 µM | 50 µM |
| 1 | 1 | 1 | 1.1 | 1.2 | 1.45 |
| 50 | 1.4 | 1.8 | 2.1 | 2.3 | 2.5 |
| 230 | 1.70 | 2.5 | 3.0 | 3.35 | 3.75 |
| 370 | 1.8 | 3.0 | 3.4 | 3.8 | 4.3 |
| 860 | 2.6 | 3.7 | 4.2 | 5.0 | 6.0 |

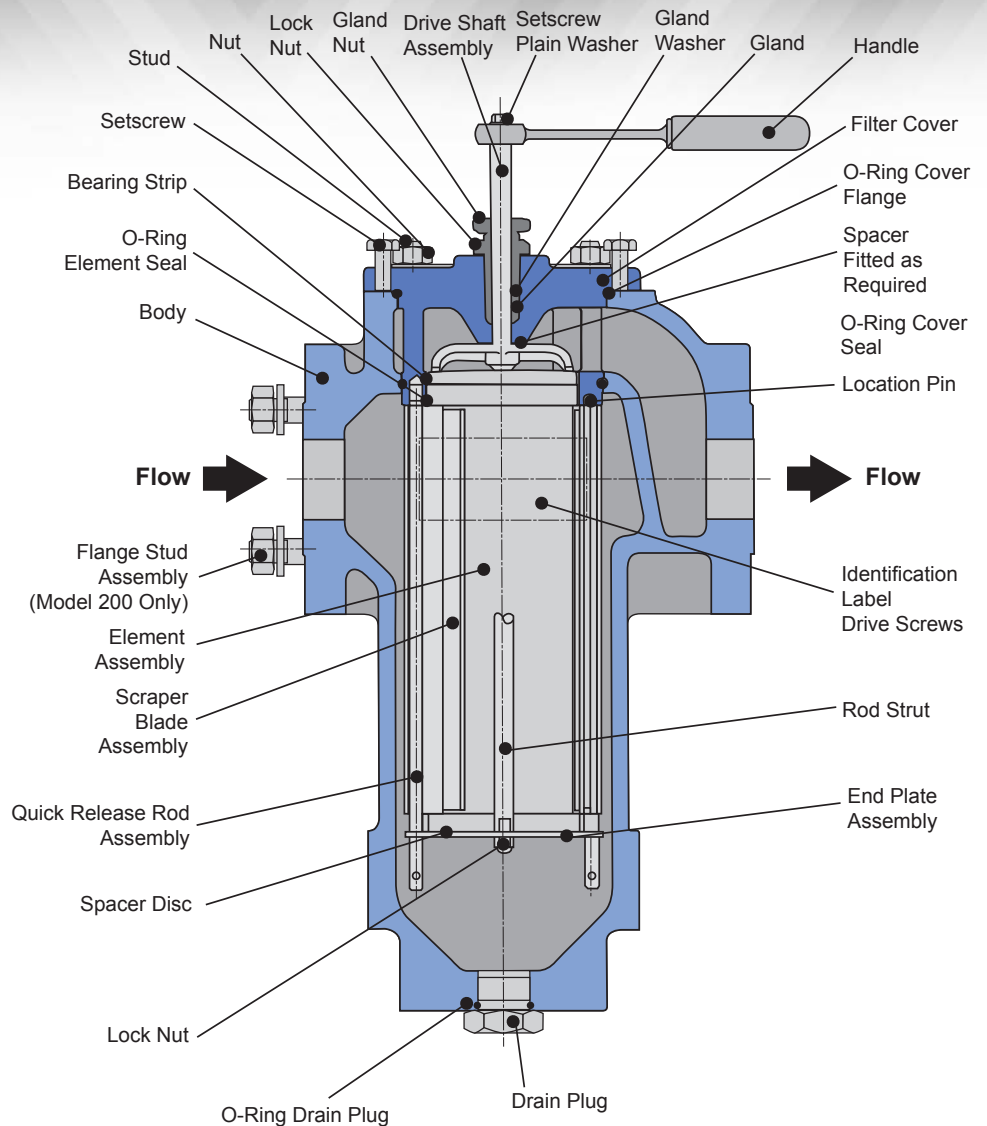
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Manual & Automatic

Sizes 20 mm (3/4") – 300 mm (12")



SPARE PARTS IDENTIFIER



SPX FLOW TECHNOLOGY

Hambridge Road
Newbury, Berkshire, RG14 5TR, UNITED KINGDOM
T: +44 (0) 1635 263915
F: +44 (0) 1635 36006
E: airpel@spx.com

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