



## Scrapper Mechanism Self Cleaning Filter\*

Designer-Manufacturer-Exporter-Supplier



\* Patent Pending



### Scraper Mechanism Self Cleaning Filter

Scraper Mechanism Self Cleaning Filters are widely used for continuous filtration requirement without any replacement of Filter Consumables and without Exposure of operators. Scraper Mechanism Self Cleaning is used for preliminary filtration following the principle of differential pressure. It is used for applications where back washing medium is not available. In other words, Scraper Mechanism Self Cleaning Filter is used where in one cannot introduce any additional substance for back washing.

## Construction

Scrapper mechanism type self-cleaning filter is constructed of filter housings, filter elements, drain valve, geared motor, scrapper and control panel. Filter housings can be offered in various materials of construction such as various grades of stainless steel, carbon steel and alloy metal. Filter elements can be offered with wedge wire, sintered multi-layer wire mesh & plain wire mesh. They are selected based on the requirement of filtration quality.

For 100 microns and more, normally it is recommended to use wedge wire element. From 2 microns to 100 microns, it is advisable to use sintered multi-layer wire mesh and plain wire mesh, depending upon the application requirement.

In addition, it has a scrapper mechanism which is operated by a geared motor. This limit also consist of bottom drain valve for easy removal of collected debris. Control panels can be offered with FLP (flame proof) and non-FLP, depending upon the process requirement.

## Operation

The medium to be cleaned is guided into the filter by inlet, which passes from inside to outside through the cartridge gap. After filtration, the filtered fluid exits the filter housing through outlet, opposite to the inlet connection and the bigger solids are separated on the surface of filter element. When it runs for a certain time, the cartridge gap gets plugged up by impurities and meanwhile the differential pressure reaches its pre-set value. Then control panel inspects the signal and sends out the indication. The gear motor drives the scraper and the particles or agglomerates are skimmed from the surface, thereby keeping the function of cartridge/element well and keeping the cartridge gap clean.

When the impurities at the bottom of the filter increases, the drain valve opens up and the impurities are emptied successfully, which makes the system pressure achieve normality. Because of well-set position and optimum scraping angle, the rotational scraper drains off the impurities from the filter with the help of the gear motor. This avoids the burden of taking apart the cartridge and washing it, which results into successful filtration of the medium. The scraper system contains stator, PTFE scraper and spring, which are designed for automatic cleaning, and especially for the reasonable spring pressure, maximally reducing the cartridge's abrasion.

## Features & Benefits

- Because of automatic continuous on-line filtration, the filtration process becomes smooth.
- The gear motor runs against the spring actuated scraper and the concentrated solids are drained off by the system, thereby keeping the function of the cartridge well.
- Control panel function means differential-pressure cleaning, scheduling of cleaning process and manual cleaning. The differential-pressure is an important parameter for operation and can be connected with the central control room through PLC [Optional].
- Validated by practice, this filtration process is highly effective and using the wedge cartridge, it can be easily cleaned with less abrasion.
- In many fields, this filter can replace the traditional filters like sand filters, Filter press etc

## Applications

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| <ul style="list-style-type: none"><li>• Paint &amp; Inks</li><li>• Surface water removal</li><li>• Solvents</li><li>• Boiler backwater</li><li>• Chemicals</li><li>• Domestic water supply</li><li>• Reverse osmosis [Pre Filtration]</li><li>• Glycol</li><li>• softening</li><li>• Automobile</li><li>• Desalination</li></ul> | <ul style="list-style-type: none"><li>• Landscape water</li><li>• Adhesive</li><li>• Green spray</li><li>• Lubricants</li><li>• Agriculture irrigation</li><li>• Cooling water</li><li>• Ion exchange</li><li>• Reclaimed water</li><li>• Oil field</li><li>• Ground water water</li></ul> |
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## Technical Specification

### Flow Rate

Capacity: Up to 2000 m<sup>3</sup>/hr & more

### Material of Construction

- SS 316L, SS 316, SS 304, Super Duplex, Duplex Stainless steel 220, CARBON STEEL (ALL GRADE), MILD STEEL, ALLOY METALS,

### Gasket / O Ring Material

- Neoprene, Nitrile, Silicone, Viton, Buna N, EPDM, PTFE, Spiral Wound, CAF

### End Connections Available

- NPT / BSP Threaded
- Flanged Table E / Table F
- ANSI B 16.5 Flanged
- DIN Standard
- Tri Clover Adaptors
- SMS /Dairy End Connection



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## Filter Concept Pvt. Ltd.

(An ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 Certified Company)

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