



# Automatic Disc Filter

# Process Filtration



Filter-Concept is keen to deliver highest level of quality product to their customer & with endeavor to that; FCPL has introduced Disc Filters to cater demanding application of various Water and Waste Water with Irrigation requirements. They are very useful for applications where suspended solid load is comparatively high and they have to cater a high flow rate.

Auto clean disc filter works on the principal of pressure difference.

## Design

Auto clean disc filter is a design of filter, in which during required cleaning phase, the outlet flow itself works as cleaning medium. The no. of discs are arranged within supportive core as element. They are compressed with arrangement of a rubber spring from top side.

## Operation

Two positioned three way ball valves are used at inlet of disc filter system. This valve connects inlet and drain of designed disc filter. At the startup of operation, inlet valve and outlet line are being opened. The flow of fluid enters through inlet, passes through the outer surface of discs from flow direction outside to inside. The debris are being collected in grooves of discs. The filtered fluid comes out through inner surface of filter discs. Because of collection of debris on outer surface of disc, the pressure difference is achieved to some value. When the system reaches to specific set differential pressure value, the system comes to back washing stage.

## Backwashing

When the system reaches to a set differential pressure value, the PLC starts to work. The inlet valve is getting closed at system inlet side and being opened at drain port side. Because of presence of diaphragm valve at bottom side of disc filter arrangement, diaphragm valve closes the flow direction from outside to inside of filter discs. Now, the back wash flow from the outlet comes to inner surface of filter disc arrangement. This flow creates pressure on rubber spring, so that it tightens the spring in top direction and filter discs get loosen. This back wash flow generates centrifugal helical effect so the flow squirts out in tangential direction to discs arrangement, which separates and cleans the discs evenly. The debris are being drain out through drain port of system. After the cleaning of discs, the inlet port has been opened and drain port getting closed. Flow direction changes from outside to inside of disc arrangement and discs are pressed again with the help of rubber spring compression. The filter starts filtration.

The filter units come across back washing one by one. When one system is under cleaning, other systems remain in filtration mode. Filtration is not being effected during back washing period.

## Features & Benefits

- » Compact design compare to flow requirement.
- » Uninterrupted filtration process.
- » System takes 5 to 18 sec. to complete the back wash process.
- » Can work with organic impurities.
- » Can be useful for filtration of viscous impurities as well.

## Applications

- » Water & waste water filtration
- » Irrigation
- » Chiller line application
- » Air condensation

| FILTER SIZE                   | 2 "   | 3"                             | 4 "                            |
|-------------------------------|---|--------------------------------|--------------------------------|
| Max. Working Pressure         | 3 - 4 kg/cm <sup>2</sup>                    | 3 - 4.5 kg/cm <sup>2</sup>     | 3 - 4.5 kg/cm <sup>2</sup>     |
| Max. Working Temp.            | 70° C                                       | 70° C                          | 70° C                          |
| Filtration Rating             | 50, 80, 100, 120, 150, 200, 300, 500 Micron |                                |                                |
| Body Material                 | Polypropylene / Nylon<br>(PA6)              | Polypropylene / Nylon<br>(PA6) | Polypropylene / Nylon<br>(PA6) |
| Disc Material                 | Polypropylene                               | Polypropylene                  | Polypropylene                  |
| Size (mm)                     | 610 x 320                                   | 800 x 320                      | 810 x 520                      |
| Available End Connection type | Threaded, Flanged, Victaulic Coupling       |                                |                                |



## Filter Concept Pvt. Ltd.

ISO 9001 : 2008  
ISO 14001: 2004  
OHSAS : 18001 : 2007

CE  
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& Vessel Inspectors 'R' & NB  
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