

FOR WATER, WASTEWATER AND REUSE WATER

A P P L I C A T I O N S

Miller-Leaman's state-of-the-art automatic *Turbo-Disc Filter* sets the standard for water, wastewater, and reuse water applications. The modular design is available in single-pod and multiple pod models. Systems are available with and without pumps, and can be packaged with other filtration products and water treatment equipment. Using a fraction of the backwash water used by other automatic filters, the Turbo-Disc is effective in removing particulate (sand, sediment, etc.) and light fibrous contaminants (i.e. algae) found in surface water and other process water streams.

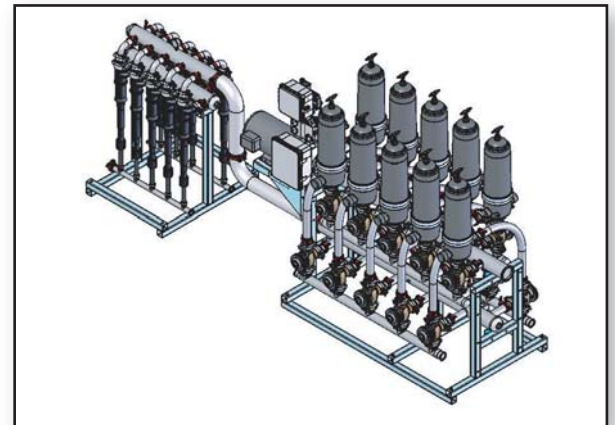
Automatic **turb** **Disc** Filter

Typical Filtration Applications:

- Reclaimed Water
- Stormwater Runoff
- Wastewater
- Pre-filtration for Membranes (MF, UF, etc.)
- Well Water
- Surface Water (ponds, lakes, rivers)
- Process Cooling Water
(cooling tower and chilled water)



*16-Pod, 1,600 GPM Full-Stream System,
complete with Booster Pump*



*Typical Multi-Stage Filtration System.
High Efficiency Separators Combined
with a Turbo-Disc Filter.*

Turnkey Systems Include:

- Automatic Filters / Disc Cartridges
- Stainless Steel Inlet / Outlet / Backwash Manifolds
- Automatic Backwash Valves / Solenoids
- Miller-Leaman *Maxim* Backwash Controller, complete with differential-pressure switch-gauge
- Stainless Steel Frame and Skid Assembly
- Available with or without Pump and/or Booster Pump
- Motor Starter(s)– Single Point Electrical Connection
- Outlet Control Valve (on multiple pod systems only)
- Air-Override Feature (air enhances backwash efficiency)

Optional Equipment:

- Isolation Valves
- Pump Pre-Strainer
- Other Filtration Products (i.e. separators, bag/cartridge filters)
- Water Disinfection Equipment (i.e. UV, Ozone)
- SCADA Compatible Controls
- Air Compressor (if compressed air is not available)



*Dunes Utilities – Reclaimed Water Filter Station.
Filtering Reclaimed Water used for Irrigation.*

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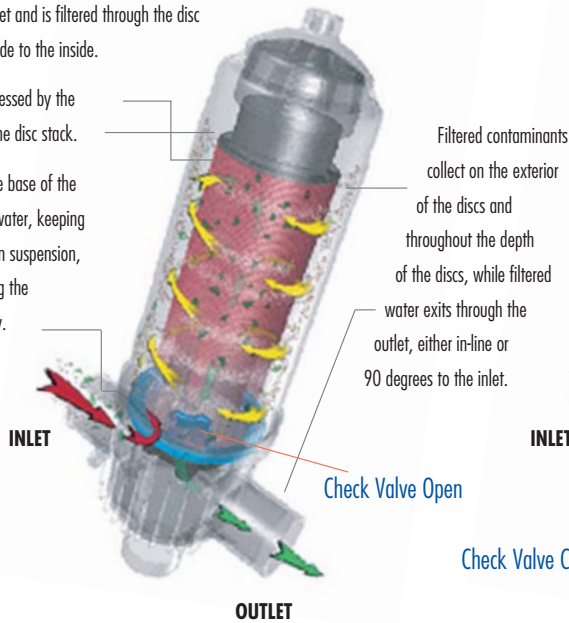
A U T O M A T I C F I L T E R O P E R A T I O N

FILTRATION MODE

Water enters the inlet and is filtered through the disc stack from the outside to the inside.

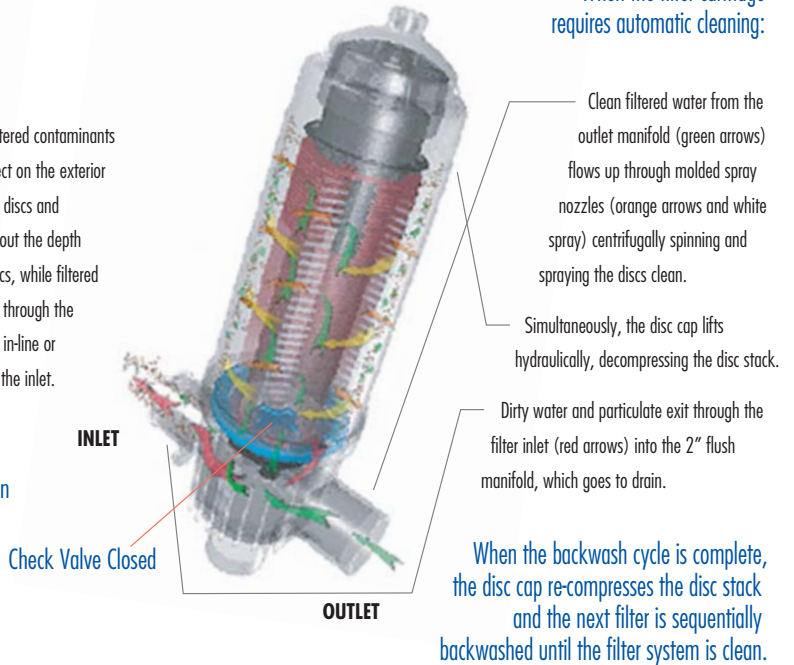
The discs are compressed by the disc cap on top of the disc stack.

The spin plate at the base of the cartridge spins the water, keeping heavier particulate in suspension, therefore minimizing the backwash frequency.



BACKWASH MODE

When the filter cartridge requires automatic cleaning:



When the backwash cycle is complete, the disc cap re-compresses the disc stack and the next filter is sequentially backwashed until the filter system is clean.

T E C H N I C A L D A T A

Flow Rates for a Single Filter Pod*:

Multiple pods are manifolded for higher flow rates.

- 2"/70 GPM Max. Per Filter Pod
- 3"/100 GPM Max. Per Filter Pod

* Maximum flow rates vary greatly depending on water quality, solids loading, and micron size of the disc media.
De-rate flow to 50 GPM (per pod) with 50-micron disc media.

Micron Options Available*:

- 50-micron (≈250 - mesh)
- 100-micron (≈150 - mesh)
- 130-micron (≈120 - mesh)
- 200-micron (≈ 80 - mesh)

* Centrifugal spinning action of heavy particles combined with the caking-effect achieved across the three-dimensional disc media, greatly increases the micron efficiency.

Pressure Rating:

All Systems Rated Up to 125 PSI

Temperature Rating:

All Systems Rated Up to 140°F

Materials of Construction / Technical Information:

- Filter Housings: Polyamide
- Filter Disc Media: Polypropylene
- Gaskets and O-rings: EPDM
- Filter Pod Clamp: Stainless Steel
- Inlet / Outlet / Backwash Manifolds; Frame & Skid Assembly: Type 304 Stainless Steel
- Backwash Valves
 - Bronze (2" filter housings)
 - Cast Iron, Epoxy-Coated (3" filter housings)
- Solenoids: Plastic / Brass

Maxim Backwash Controller – 120-volt/AC

Features:

- Backwash based on Differential-Pressure, Elapsed Time or Manually.
- User Adjustment of Critical Control Functions (i.e. backwash duration, differential-pressure setting, etc.)

Pump(s) & Motor Starter Relay(s) Electrical:

- 460-volt / 3 Phase (standard) – Single Point Electrical

Outlet Control Valve: Cast Iron, Epoxy-Coated (Multiple pod systems only)

Air-Override Feature: 1/4" NPT connection for compressed air

- Air compressor is optional if compressed air is not available

ENGINEERED

TO MEET

YOUR SPECS