



# Automatic Self-Cleaning Filters and Strainers



*Powering Business Worldwide*

# Automatic Self-Cleaning Filters and Strainers

Self-cleaning systems help assure continuous flow, simplified maintenance and worry-free operations

- Ideal for a wide range of process liquids and conditions
- Eliminates the need for disposable media and reduces disposal costs, labor, and inventory
- Wide range of operating pressures and capable of reliable operation and performance

## Typical applications

- Model 2596 automatic self-cleaning pipeline strainers are ideal for applications that demand continuous flow and simplified maintenance in industrial, sewage and water treatment, pulp and paper processes.
- Tubular backwashing filters are intended for tight retentions and high flow rates in a wide range of process liquids.
- Permanent media filters with disc cleaning technology are ideal for ultimate reduction in product loss.

**For more than 50 years,** Eaton has led the way with designs that meet the growing and vigorous demands of process and manufacturing industries, utilities, and municipalities around the world.

## 2596, 2" - 8", CAST IRON OR STAINLESS STEEL

Available in 2", 3", 4", 6", and 8" sizes

- Flow rates up to 1,800 gpm
- A broad selection of screen options
- Automatic backwashing for operator-free service and minimal backwash effluent
- Exclusive idL Seal for leak free service
- Modular assembly for easy maintenance
- High-efficiency motor
- ASME Section VIII Div. 1 code stamp is available



Cempeller™ technology improves circular flow—forcing the debris to lay up against the surface of the strainer element in a way that makes backwashing easier and more efficient.



## 2596, 10" - 16", CAST DUCTILE IRON

Available in 10", 12", 14" and 16" sizes

- A broad selection of screen options
- Flow rates up to 6,500 gpm
- Automatic backwashing for operator-free service and minimal backwash effluent
- Exclusive idL Seal for leak free service
- Unitized modular assembly for easy maintenance
- Cast ductile iron construction
- ASME Section VIII Div. 1 code stamp is available.



## 2596, 10" - 60", FABRICATED

Available in 10", 12", 14", 16", 20", 24", 30", 36", 48", and 60" sizes with a broad selection of screen options

- Flow rates up to 35,000 gpm
- Automatic backwashing for operator-free service and minimal backwash effluent
- Exclusive idL Seal for leak free service, (available up to 24" only)
- Unitized modular assembly for easy maintenance
- Fabricated carbon steel construction. Also available in various grades of stainless steel, copper nickel, monel, and other materials.
- Flanged, screwed, or socket weld connections
- ASME Section VIII Div. 1 code stamp is available



## AFC-SERIES, TUBLAR BACKWASHING FILTER

When an application demands high-pressure operation – up to 1,000 psi and scalable flexibility, the Eaton AFC-Series is the optimal choice. Systems are available in single, duo, and multiplex configurations.

- Solids removal from 2 to 1,700 microns
- Flow rates up to 3,000 gpm
- Smooth pipe and nozzle connection transitions to avoid dead spots in the fluid stream and minimize pressure drop
- Numerous automated backwash options for operator-free service and minimal backwash effluent (<2% of system volume)
- 3-way valves on multiplex filters allow fast, frequent sequencing and maximum backwashing cleaning force



## F-SERIES, TUBLAR BACKWASHING FILTER

Eaton's F-Series offers unbeatable performance for liquid filtration that requires unattended operation, maximum uptime and solids removal from 2 to 1,700 µm.

- Flow rates up to 3,000 gpm
- Smooth pipe and nozzle connection transitions to avoid dead spots and minimize pressure drop
- 3-way valves on multiplex filters allow fast, frequent sequencing and maximum backwashing cleaning force
- Isolated top-to-bottom backwash ensures efficient media cleaning
- Numerous automated backwash options for operator-free service and minimal backwash effluent (<2% of system volume)



## AFR-SERIES, TUBULAR BACKWASHING FILTER

The revolutionary Eaton AFR-Series delivers high-flow filtration of water-like liquids at retentions as low as 2 micron in a compact one-square-meter footprint.

- Solids removal from 2 to 1,700 microns
- Flow rates up to 2,000 gpm
- Numerous automated backwash options for operator-free service and minimal backwash effluent (<2% of system volume)
- Smooth pipe and nozzle connection transitions to avoid dead spots to minimize pressure drop
- Isolated top-to-bottom backwash for complete and efficient media cleaning
- Configured with an array of up to eight - 4" or 6" body tubes surrounding a central cleaning valve



## DCF-400, 800, 1600, 3000, DISC CLEANING FILTER

The Eaton DCF-Series are pneumatically driven disc cleaning filters that are ideal for highly viscous, abrasive, or sticky liquids. The DCFs operate at a consistently low differential pressure and deliver simple, reliable operation in which a low initial investment is a key driving factor.

- Elimination or reduction in disposable filter media for reduced operator handling inventory costs and landfill waste
- Reduction in product loss, more thorough contaminant purge in a highly concentrated waste stream
- Reduction or elimination of operator intervention for safer operation
- Virtually maintenance free, near 100% uptime
- Compact design, lower capital cost to fit most installations
- Stainless steel screens from 15 micron slots to 1/4" perforations to handle a wide range of filtration needs
- Available with UHMWPE, Urethane, Teflon, or Kynar® cleaning discs

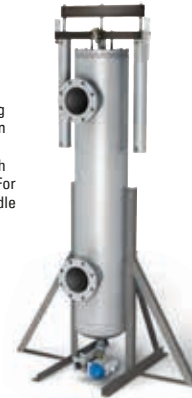


DCF-800 - One actuator delivers simple, reliable operation with water-like liquids. Ideal where a low initial investment is a key driving factor

DCF-3000 - This dual cleaning disc and twin actuator design is ideal for highly viscous, abrasive or sticky liquids with flow rates of up to 500 gpm. For water-like liquids, it can handle flow rates up to 1,500 gpm.



Our unique circular cleaning disc design (MCF design shown) ensures intimate contact with the screen to thoroughly and uniformly clean the media.



DCF-1600 - Two actuators isolate the actuation mechanism from the filtrate with a bridged system. The benefit is a long operating life in challenging conditions.



## DCF-2000, DISC CLEANING FILTER

Eaton's DCF-2000 motor driven filter addresses the challenges of the paper making industry. Filters 48-72% solids coatings at 75 micron retention—believed to be the tightest in the industry

- Continuously removes contaminants from the coating and efficiently evacuates collected contaminants while operating at a low, constant differential pressure
- Mechanically cleaned media eliminates replacement media cost and the expense and hazard of waste disposal
- Increased profitability—improves system efficiency, reduces paper-breaks and associated downtime
- Multiplex configurations available and valved to a common tapered header for high-flow applications



## MCF-824, MAGNETICALLY-COUPLED FILTER

The MCF-824 filter system features a simplified design that uses only 25 total parts. Get up to 200 gpm throughput with virtually no downtime with this magnetically coupled self-cleaning filter. This technology allows for quick and easy access for maintenance, reduces potential leaks while providing a long service life.

- Permanent media retains valuable product otherwise lost by media changeout
- Simple design with very few wear parts - for reduced spare parts stocking needs
- No external shaft or drive seals - eliminates all associated leakage
- Cleanable permanent media eliminates downtime and disposal requirements
- Easy no-tools access for routine maintenance and service
- Continuous operation - even during cleaning cycles



## MCS-500 & 1500, MAGNETICALLY-COUPLED STRAINERS

The MCS-500's magnetically coupled actuation eliminates the need for dynamic seals. This technology provides quick and easy access for maintenance, reduces potential leaks, and requires few moving parts while providing a long service life.

- No dynamic seals
- Minimal purge for low waste operation
- Easy in-line installation
- Continuous 24/7 operation
- Maintenance-friendly design means lower labor costs
- Eco-friendly
- 316 stainless steel vessel

The MCS-1500 is a high-volume system with a flow rate of up to 1500 GPM.



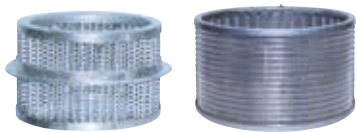
The MCS-500 can process up to 500 gpm



## FILTER AND STRAINER ELEMENTS

2596 strainers have the option of using the economical convoluted element screen or the DuraWedge® element constructed from V-shaped profile wire.

Both have nonclogging features and are constructed of rugged stainless steel. Retention ratings from 380 microns to  $\frac{3}{16}$ " openings are available.



There are many options available for tubular backwash filters. A wire mesh or fabric over a stainless steel backing are two cost effective solutions. A high-strength slotted wedgewire element is suitable for more abrasive applications.

The most efficient way to achieve a low flux rate is to increase active filter surface area. This has been achieved with Eaton's AccuFlux® media elements featuring ultra-high surface area, clustered element designs. AccuFlux elements are available with 7 or 15 individual, replaceable filter tubes.

An economical TRI-CLUSTER® design features three  $1\frac{1}{2}$ " diameter tube for 40% greater surface area than single element designs.

Ratings from 2 to 1,650 microns are available.



The disc cleaned Model DCF, MCF and MCS require the use of a slotted wedgewire design. Ratings of 15 to 1,600 microns are available.

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