



# Automatic Self-Cleaning Filters & Strainers

**EATON**

*Powering Business Worldwide*

# Automatic Self-Cleaning Filters & 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, materials loss, 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" - 36" (DN50 - DN900) FABRICATED

Available in 2", 3", 4", 6", 8", 10", 12", 14", 16", 20", 24", 30" and 36" sizes with a broad selection of screen options

- Flow rates up to 7950 m<sup>3</sup>/hr
- 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
- Various modifications (ETO) possible on request
- Design Code AD2000, CE stamp acc. PED is available
- Design code EN13445 or ASME Section VIII Div. 1 code stamp is available on request



## 2596 2" - 8" (DN50-DN200) CAST IRON OR STAINLESS

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

- Flow rates up to 400 m<sup>3</sup>/hr
- 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" (DN250-DN400) CAST DUCTILE IRON

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

- A broad selection of screen options
- Flow rates up to 1475 m<sup>3</sup>/hr
- 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.





## F-SERIES TUBLAR BACKWASHING FILTER

For liquid filtering that requires unattended operation, maximum uptime, and solids removal from 2 to 1,700 microns, the Eaton F-Series delivers unbeatable performance.

- Flow rates up to 680 m<sup>3</sup>/hr
- 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)
- Various modifications (ETO) possible on request
- Design Code AD2000, CE stamp acc. PED is available
- Design code EN13445 or ASME available on request



## 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
- Various modifications (ETO) possible on request
- Design Code AD2000
- CE stamp acc. PED is available
- Design code EN13445 or ASME available on request

## ACF-SERIES TUBLAR BACKWASHING FILTER

When an application demands high-pressure operation – up to 69 bar (1000 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 680 m<sup>3</sup>/hr
- 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



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



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.

## 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 450 m<sup>3</sup>/hr
- 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" (101.8 mm) or 6" (152.4 mm) body tubes surrounding a central cleaning valve



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 1500 gpm.

Our unique circular cleaning disc design (DCF-800/1600 design shown) ensures intimate contact with the screen to thoroughly and uniformly clean the media.



UHMWPE

TEFLON oder KYNAR®

URETHAN®

## MCF MAGNETICALLY-COUPLED FILTER

The MCF filter system features a simplified design that uses only 25 total parts. Get up to 40 m<sup>3</sup>/h 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 (5 minutes only!)
- Continuous operation – even during cleaning cycles
- Design Code AD2000
- CE stamp acc. PED is available



## MCS-500 & 1500 MAGNETICALLY-COUPLED STRAINERS

The MCS-500's and MCS-1500 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. No bags to purchase, change, or landfill
- Design Code AD2000
- CE stamp acc. PED is available

The MCS-1500 is a high-volume system with a flow rate of up to 340 m<sup>3</sup>/h.



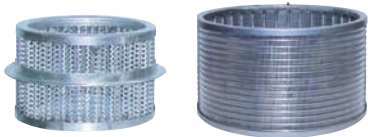
The MCS-500 can process up to 500 GPM at up to 110 m<sup>3</sup>/h



## FILTER AND STRAINER ELEMENTS

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

Both have nonclogging features and are constructed of rugged stainless steel. Retention ratings from 380 microns to 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 wedge-wire 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<sup>®</sup> design features three 1 1/2" diameter tube for 40% greater surface area than single element designs.

Ratings from 2 to 1650 microns are available.

The disc cleaned Model DCF, MCF and MCS require the use of a slotted wedgewire design. Ratings of 15 to 1600 microns are available.

Perforated or wire mesh elements available for special applications



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