

Tubular Backwashing Filter

AFR-Series

Fabricated
Construction

Backwash
Cleaned

Permanent
Media

The revolutionary Eaton AFR-Series delivers high-flow filtration of water-like liquids at retentions as low as 1 micron in a compact one-square-meter footprint.

FEATURES/BENEFITS

- Solids removal from 1 to 1,700 microns
- Flow rates up to 2,000 gpm (454 m³/hr)
- Broad selection of filter media materials and retentions suitable for a wide range of applications
- 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 in the fluid stream and minimize pressure drop
- Isolated top-to-bottom backwash flow for complete and efficient media cleaning while continuing to deliver filtered product downstream
- Available ACCUFLUX™ media dramatically increases filter surface area in the same footprint
- Configured with an array of up to eight - 4" (101.8 mm) or 6" (152.4 mm) body tubes surrounding a central cleaning valve

OPTIONS

- Media-cleaning diffusers for more effective cleaning with low operating pressures or volumes
- Drain header trap
- Isolation butterfly valves for individual body tube removal while filter is in operation
- Hinge-lock quick couplings
- 304 stainless steel frame material

TYPICAL APPLICATIONS

- city water lines • hot condensate • chiller water • fresh water
- whitewater / shower water • cip fluids • papermaking wet end starch • pelletizer water • single and duo tubular filters for a wide range of applications up to 1000 psi and high viscosity applications



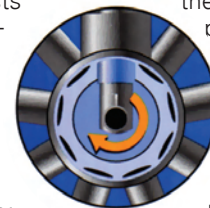
How the AFR-Series Works

A single AFR-Series equals the performance of an in-line filter in only one-fifth the floor space. AFR-Series minimizes the number of moving parts for low-cost operation and long service life. A single rotating flow diverter replaces multiple valves, actuators, linkages, and seals required by other systems.

Like many Eaton filters, the AFR-Series uses cleanable media. This core design philosophy further reduces life cycle costs and maximizes productivity by eliminating labor and disposal costs as well as lost production associated with bags and cartridges.

The AFR-Series uses a circular configuration of up to eight tubular filter housings. Process fluid flows into the housing at the inlet at its base and passes across the filter media from the outside inward. Due to this flow path, contaminants collect on the outside of the filter element slowly forming a cake, removing smaller particles.

During backwash, triggered by time or pressure differential, the flow diverter inside the cleaning valve rotates to the tube to be cleaned. This closes the tube to the incoming process liquid and opens it to the atmosphere (via a drain line). The result causes outlet process liquid to flow in reverse through the element, cleaning it of contaminants and expelling them through the drain at the top of the system.



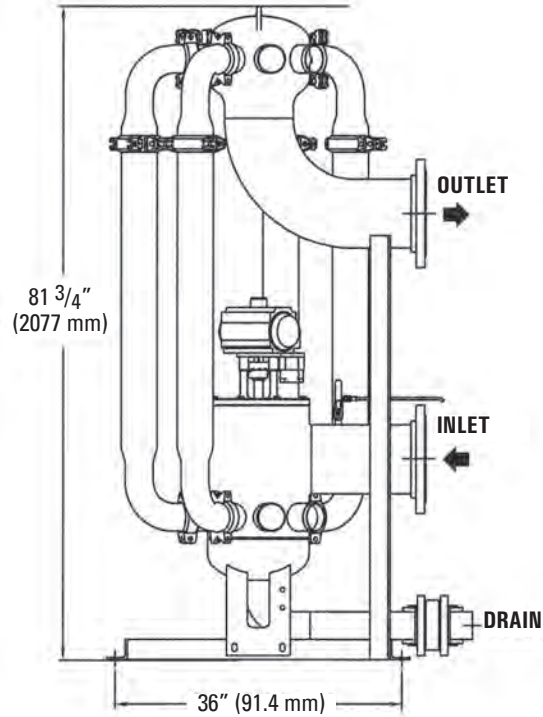
Flow diverter inside the AFR's cleaning valve

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SPECIFICATIONS

- Connection Inlet and Outlet: 8" ANSI or 200 mm DIN flanged. Drain: 3" (80 mm) weld stub
- Process Parameters Temperature: 300°F (149°C) maximum (determined by screen material and elastomer seals). Operating pressure: up to 250 psi (17 bar)
- Elastomer Seals Standard: Buna-N (180°F (82°C) max). Optional: Nordel (230°F (110°C) max); Viton® (300°F (149°C) max)
- Housing/ Wetted Parts Materials Standard: 316 stainless steel. Optional: Wide range available; consult Eaton
- Frame Material Standard: Painted carbon steel. Optional: 304 stainless steel
- Automation Standard: Choice of programmable logic controller (PLC) or semi-automatic. Optional: Wide range available; ask your representative for more information
- Utilities Electrical: 110 or 220 Volt, 50 or 60 Hz, single-phase. Air: 60-120 psi (4.1-8.3 bar) @ 5 cfm. Air must be clean, dry and non-lubricated



	AFR-8-4	AFR-8-6
Body Inlet/Outlet Size - in. (mm)	3 (76.2)	3 (76.2)
Inlet Outlet Header Size ¹ - in. (mm)	8 (203.2)	8 (203.2)
Body Diameter - in. (mm)	4 (101.8)	6 (152.4)
Screen Length - in. (mm)	36 (914.4)	36 (914.4)
Element Styles Available ² - in. (mm)	3.25 (82.8) diameter single, Tri-Cluster, Accuflux-7	5-Cluster, 7-Cluster, Accuflux-15
Pressure Rating - psi (bar)	250 (17.2)	250 (17.2)
Volumetric Capacity	Each body tube = 4 gallons	Each body tube = 4.8 gallons
Single Unit Weight ³ - lbs. (kg)	1,100 (499)	1,300 (590)
Air Requirement	60-120 psi (4.1-8.3 bar) @ 5 cfm for sequencing	60-120 psi (4.1-8.3 bar) @ 5 cfm, for sequencing
Electrical Requirement	110/220 V, 50/60 Hz, single phase	110/220 V, 50/60 Hz, single phase

¹Drain connection is 3" (76.2) weld stub ²Consult media availability chart for specific retentions and types available

³Weights are approximate and assume eight filled stations

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