

Tubular Backwashing Filter

F-Series

Fabricated
Construction

Backwash
Cleaned

Permanent
Media

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.

FEATURES/BENEFITS

- Solids removal from 2 to 1,700 microns
- Single system flow rates up to 3,000 gpm (681 m³/hr)
- Smooth pipe and nozzle connection transitions to avoid dead spots in the fluid stream and minimize pressure drop
- Broad selection of filter media materials and retentions suitable for a wide range of applications
- Proprietary 3-way, full-ported valves allow fast, frequent sequencing and maximum cleaning force during backwashing
- Isolated top-to-bottom backwash flow ensures complete and efficient media cleaning while continuing to deliver filtered product downstream
- Numerous automated backwash options for operator-free service and minimal backwash effluent (<2% of system volume)
- Available ACCUFLUX™ media dramatically increases filter surface area in the same footprint

OPTIONS

- Internal or external backwashing
- Media-cleaning diffusers for more effective cleaning at low operating pressures or volumes
- Drain header trap
- Quick coupler valve connectors for ease of body tube removal
- 304 stainless steel frame material
- ASME code vessels

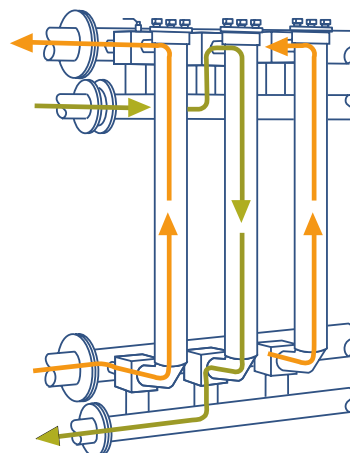
TYPICAL APPLICATIONS

- 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



The key to the F-Series' versatility is its modular design that enables future capacity and configuration flexibility. F-Series systems can include 2 to 24 body tubes on a single framed skid and can be ordered with blank stations to allow low-cost expanded capacity.

The F-Series uses cleanable media. This further reduces life cycle costs and maximizes productivity by eliminating the labor, replacement, and disposal costs of bags and cartridges. Three types of elements are offered: single element with 364 in² of surface area, the Tri-Cluster® with 510 in² of surface area, or the Accuflux® 7 with 791 in² of surface area.



The F-Series features 3-way ball valves, automated cleaning with direct mounted actuators and solenoids, and available blank stations for easy future expansion.

How the F-Series Works

When cleaning is required, triggered by time or pressure differential, a single valve removes the tube to be backwashed from the incoming flow stream. The resulting pressure drop redirects a portion of the clean process flow downward, flushing the contaminants to the drain manifold. When process liquids are very valuable or hazardous, an external backwash configuration, which uses a small amount of cleaning liquid introduced through a separate manifold, is recommended. External backwashing is also recommended when operating pressures are expected to be less than 45 psi (3.1 bar).

External backwash system shown. Secondary header at the top of the unit introduces cleaning fluid, typically water, (green arrows) to loosen and discharge debris to the drain header at the bottom.

EATON

Powering Business Worldwide

F-Series Tubular Backwashing Filter

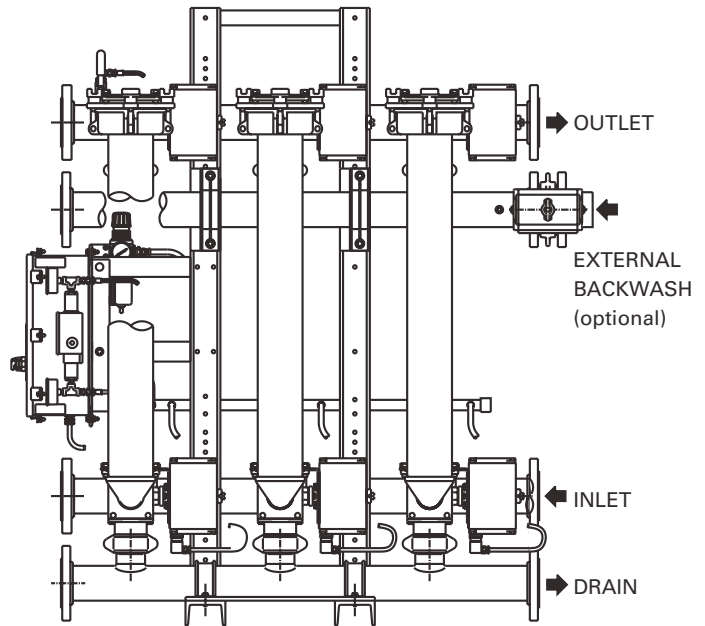
SPECIFICATIONS

Body Inlet/Outlet Size - in (mm)	3 (76.2)
Inlet/Outlet Header Size ¹ - in (mm)	3 (76.2), 4 (101.8), 8 (203.2), 10 (254), 12 (304.8)
Body Diameter - in (mm)	4.5 (114.3)
Screen Length - in (mm)	36 (914.4)
Element Styles Available ²	3.25 (82.8) dia. single, Tri-Cluster, Accuflux-7
Pressure Rating ³ - psi (bar)	250 (17.2)
Temperature - °F (°C)	350 (177) system maximum (determined by screen material and elastomer seals)
Air Requirement-auto units - psi (bar)	60 - 120 (4.1-8.3) @ 5 cfm, for sequencing
Electrical Requirement -	110/220V, 50/60 Hz, single phase
Backwash minimum flow	90 gpm (340 l/min) for single and Tri-Cluster media; 150 gpm (567 l/min) for ACCUFLUX™ media

¹Drain header size 3" (76.2). Consult factory for custom sizes

²Consult media availability chart for specific retentions and types available

³Teflon gaskets limit pressure maximum to 80 psi (5.5 bar). ASME code units are limited to 150 psi (10.3 bar)



3-way ball valves

To ensure positive sealing and maximum flow, our F-Series filters feature the industry's best 3-way ball valves. These important components—designed and manufactured by Eaton exclusively for Eaton systems—were developed specifically for the demands of industrial filtration. Their full-ported design reduces pressure drop and requires no additional linkages for actuation.

Model	Weight (dry) lbs (kg)	Height in (mm)	Footprint w x l in (mm)	Volume gal (l)	Configuration # of Tubes
F202	450 (204)	62 (1575)	28.5 x 45 (725 x 1145)	18 (68)	2
F203	600 (272)	62 (1575)	28.5 x 48 (725 x 1220)	23 (87)	3
F204	750 (340)	62 (1575)	28.5 x 63 (725 x 1600)	30 (114)	4
F205	900 (408)	62 (1575)	28.5 x 78 (725 x 1980)	37 (140)	5
F206	1200 (544)	62 (1575)	28.5 x 93 (725 x 2360)	65 (246)	6
F207	1350 (612)	62 (1575)	28.5 x 108 (725 x 2745)	75 (284)	7
F208	1500 (680)	62 (1575)	28.5 x 123 (725 x 3125)	85 (322)	8
F209	1800 (816)	62 (1575)	28.5 x 138 (725 x 3505)	124 (470)	9
F210	1950 (885)	62 (1575)	28.5 x 153 (725 x 3885)	138 (522)	10
F211	2100 (952)	62 (1575)	28.5 x 168 (725 x 4265)	151 (572)	11
F212	2400 (1089)	62 (1575)	28.5 x 183 (725 x 4650)	165 (625)	12

North America
44 Apple Street
Tinton Falls, NJ 07724
Toll Free: 800 656-3344
(North America only)
Tel: +1 732 212-4700

Europe/Africa/Middle East
Auf der Heide 2
53947 Nettersheim, Germany
Tel: +49 2486 809-0

Friedensstraße 41
68804 Altlußheim, Germany
Tel: +49 6205 2094-0

An den Nahewiesen 24
55450 Langenlonsheim, Germany
Tel: +49 6704 204-0

China
No. 3, Lane 280,
Linhong Road
Changning District, 200335
Shanghai, P.R. China
Tel: +86 21 5200-0099

Singapore
100G Pasir Panjang Road #07-08
Singapore 118523
Tel: +65 6825-1668

Brazil
Av. Ermanno Marchetti, 1435 -
Água Branca, São Paulo - SP,
05038-001, Brasil
Tel: +55 11 3616-8461

**For more information, please
email us at filtration@eaton.com
or visit www.eaton.com/filtration**

© 2019 Eaton. All rights reserved. All trademarks and registered trademarks are the property of their respective owners. All information and recommendations appearing in this brochure concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability for his own use of such products. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Eaton as to the effects of such use or the results to be obtained. Eaton assumes no liability arising out of the use by others of such products. Nor is the information herein to be construed as absolutely complete, since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

US
05-2019



Powering Business Worldwide