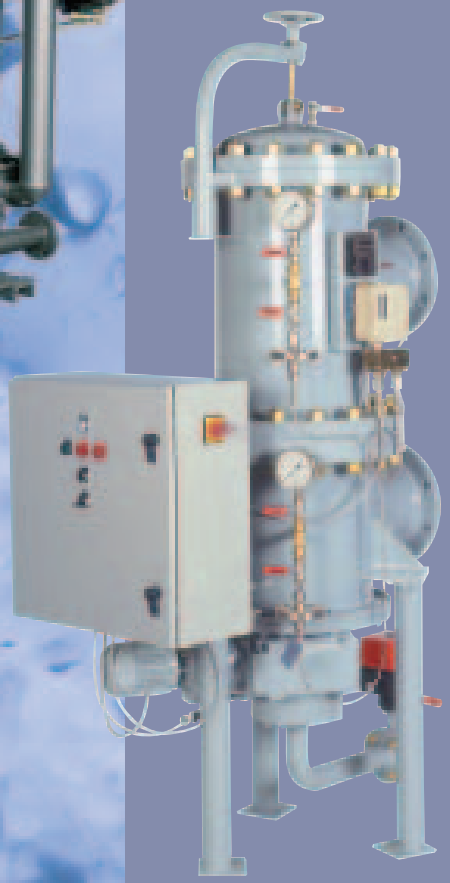
Backwashing/Tubular Filter Systems

EATON

Ronningen-Petter®



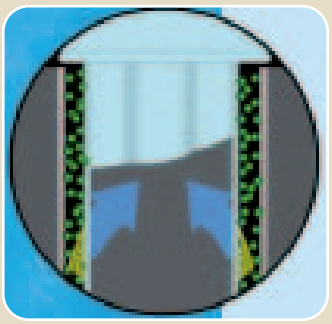
Since 1948, when we introduced the first tubular filters to the papermaking industry, Ronningen-Petter has continued to innovate with backwashing/tubular systems to reduce waste, improve process efficiency, and increase product quality.

Today we offer a full line of backwashing/tubular solutions to meet your specific application demands and business needs. From the high-capacity AFR-Series for high flow in a compact footprint, to our simple single-tube AFC-Series systems for stand-alone applications with low solids loading, there's a Ronningen-Petter solution for any process. All Ronningen-Petter filters are engineered for the best possible performance and value in every application.

An industry-leading family of solutions from Eaton

Barrier filtration and backwash cleaning: the basics

All Ronningen-Petter backwashing/tubular filters operate on a common philosophy of barrier filtration. Filtration media – either stainless steel or a fabric screen supported by a stainless steel backing – selected for its retention and flow properties is located within the filter housing.



Process liquids flow into the housing at the inlet at its base and pass across the filter media from the outside inward. Because of 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), a valve switches one station's flow from the inlet header to the drain header to facilitate reverse flow. Liquid is run in reverse through the system to remove contaminants from the media. Contaminants and cleaning fluid are expelled through the drain header at the base of the unit.

Ronningen-Petter Backwashing/Tubular Advantages

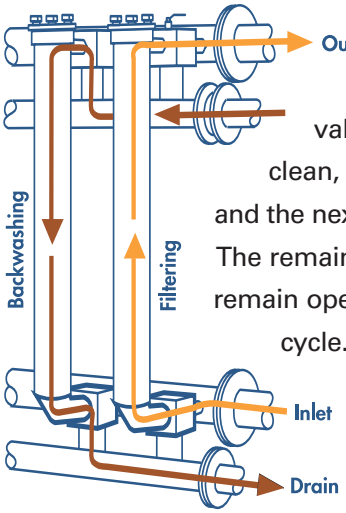
Feature	Benefit
Tight retentions (as low as 1 micron) with high flow rates	Ideal for a wide range of process liquids and parameters
Eliminates the need for disposable media including bags and cartridges	Reduced disposal costs, materials loss, labor, and inventory
Choice of configurations	Available solutions to optimize your system for almost any filtration challenge
Modular scaleable systems	Your system can grow with your application demands
Automated clean-in-place operation	Optimizes cleaning frequency and reduces labor demands
Wide range of operating pressures	Capable of reliable operation and performance up to 1,000 psi (69 bar)

Capture, clean, expel: how Ronningen-Petter systems from Eaton work

Every process is unique – that's why we offer several backwashing/tubular systems in several configurations.

F-Series and AFC-Series

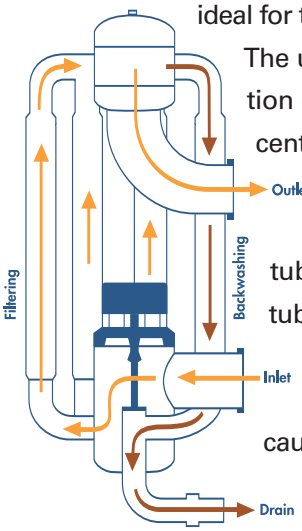
Our flagship tubular systems. During backwash, a single tube is taken off-line from the process flow via a three-way valve. Once an element is clean, it is returned to service and the next element may be cleaned. The remaining elements in the filter remain operational throughout this cycle. F-Series and AFC-Series multiplex units consist of 2-20 individual tubes valved in parallel to common inlet, outlet, and drain headers. AFC-Series units are also available in economical single- and duo-tube configurations, which must be removed from service for manual cleaning.



Note: External backwashing configuration shown.

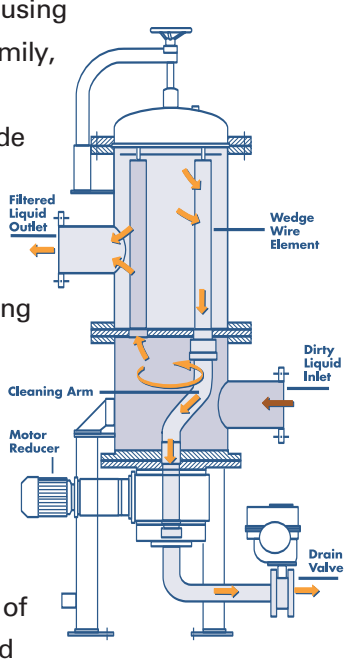
AFR-Series

The simple, space-saving design of the AFR-Series – with only a single moving part – is ideal for the most demanding applications. The unit features a circular configuration of up to 8 tubes surrounding a central cleaning valve. During backwash, a 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 the 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.



VWS-Series

The only multi-element, single-housing filter in the backwashing/tubular family, the VWS-Series offers high-flow capability and is well-suited to code applications. Filter elements are arranged in a circular pattern within a single large housing. At the center of the system is a rotating washing arm. When an element requires cleaning, the washing arm rotates to that element. Much like the AFR-Series, when the drain valve is opened to atmosphere, a vacuum condition occurs, and the position pressure of the unit forces clean process liquid backward through the media and flushes contaminants.



Cake formation increases operational efficiency

While the filtration media provides some of the filtration action, collected contaminants actually further increase efficiency. We call this phenomenon "cake formation." The collected solids (or "cake") trap additional contaminants. The key to making this principle work is timely cleaning – too soon and you lose the benefit, too late and the system flow becomes hindered.

Ronningen-Petter systems come factory pre-set to backwash when the differential pressure from inlet to outlet reaches 15 psi (1 bar) – typically the optimum time to initiate backwashing, although this is adjustable.

AFC-Series

AFC-Series – high-pressure capability and modular flexibility

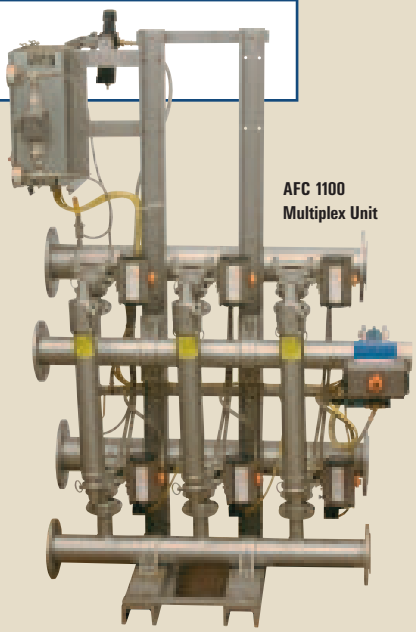
When your application demands high-pressure operation – up to 1,000 psi (69 bar) – and scaleable flexibility, the Ronningen-Petter AFC-Series is optimal. AFC-Series systems are available in single-, duo-, and multiplex configurations to meet your application and business demands.

Multiplex Filters

Multiplex units consist of two or more single filter units valved in parallel to common headers. This configuration enables sequential backwashing of individual elements while the system remains in operation.

	1100	2200	3300
Body Inlet / Outlet Size - in. (mm)	1 (25.4)	2 (50.8)	3 (76.2)
Inlet / Outlet Header Sizes[1] - in. (mm)	3 (76.2)	3 (76.2)	3 (76.2)
	4 (101.8)	4 (101.8)	4 (101.8)
		6 (152.4)	6 (152.4)
		8 (203.2)	8 (203.2)
		10 (254)	10 (254)
		12 (304.8)	12 (304.8)
Screen Length - in. (mm)	18 (457.2)	36 (914.4)	36 (914.4)
Element Styles Available[2] - in. (mm)	2 (50.8) diameter style	3.25 (82.3) diameter single, Tri-cluster, Accuflux - 7	3.25 (82.3) diameter single, Tri-cluster, Accuflux - 7
Body Diameter - in. (mm)	2.875 (73)	4.25 (114.3)	4.25 (114.3)
Pressure Rating[3] - psi (bar)	Standard - 150 psi (10.3 bar) High Pressure - 250 psi (17.2 bar)	High Pressure - 1000 psi (101.3 bar)	Standard - 150 psi (10.3 bar)
Air Requirement (Automated Units)	60-120 psi (4.1-8.3 bar) @ 5 cfm, for sequencing	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 (Automated Units)	110/220 V, 50/60 Hz, single phase	110/220 V, 50/60 Hz, single phase	110/220 V, 50/60 Hz, single phase

[1]Drain header size 3"(76.2). Consult factory for custom sizes.
[2]Consult media availability chart for specific rententions and types available.
[3]Teflon gaskets limit pressure maximum to 80 psi (5.5 bar). AFC 2200 available in 1000 psi (101.3 bar) only.

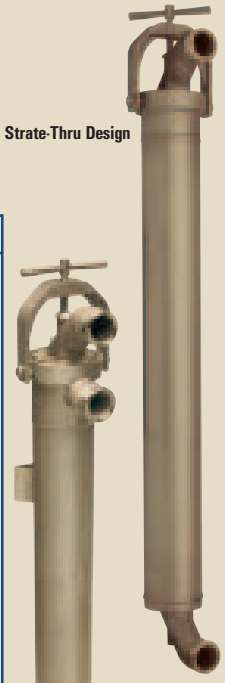


AFC 1100
Multiplex Unit

AFC 2200 Multiplex
High-Pressure Unit

Single Filters

Designed for batch or intermittent service, our single AFC-Series filters are ideal for a wide range of applications. Quick coupling connectors afford easy media access for inspection, cleaning, or replacement. We offer a choice of Strate-Thru and Standard configurations, both with pressure gauge and drain valve options.



Strate-Thru Design

Standard Design

	1100		1500		2200		3300[1]	
Body Inlet/Outlet Size - in. (mm)	1 (25.4)		1.5 (38.1)		2 (50.8)		3 (76.2)	
Body Diameter - in. (mm)	2.875 (73)		3.5 (88.9)		4.5 (114.3)		4.5 (114.3)	
Screen Length - in. (mm)	12 (304.8)		24 (381)		18 (457.2)		18 (457.2)	
	18 (457.2)		36 (914.4)		36 (914.4)		36 (914.4)	
Element Styles Available[2] - in. (mm)	2 (50.8) diameter single		2.25 (57.1) diameter single		3.25 (82.8) diameter single, Tri-Cluster, Accuflux - 7		3.25 (82.8) diameter single, Tri-Cluster, Accuflux - 7	
Pressure Ratings[3] - psi (bar)	Standard - 150 psi (10.3 bar)		Standard - 150 psi (10.3 bar)		Standard - 150 psi (10.3 bar)		Standard - 150 psi (10.3 bar)	
	High Pressure - 250 psi (17.2 bar)		High Pressure - 250 psi (17.2 bar)		High Pressure - 250 psi (17.2 bar) +1,000 psi (101.3 bar)			
Total Volumetric Capacity - model #	1112	1118	1524	1536	2218	2236	3318	3336
- gal. (l)	0.4 (1.5)	0.5 (1.9)	1 (3.8)	1.4 (5.3)	1.3 (4.9)	2.4 (9.1)	1.3 (4.9)	2.4 (9.1)
Single Unit Weight - lbs. (kg)	15 (6.8)	18 (8.2)	25 (11.3)	30 (13.6)	35 (15.9)	40 (18.1)	40 (18.1)	45 (20.4)
Drain Size	Standard	Strate-Thru	Standard	Strate-Thru	Standard	Strate-Thru	Strate-Thru	
- in. (mm)	.75 (19)	.5 (12.7)	.75 (19)	.5 (12.7)	1.25 (31.75)	.5 (12.7)	.5 (12.7)	

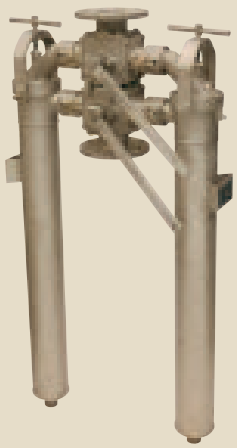
[1]Available in Strate-Thru design only.
[2]Consult media availability chart for specific retentions and types available.
[3]Teflon gaskets limit pressure maximum to 80 psi (5.5 bar).

Duo Filters

Ronningen-Petter AFC-Series duo filters consist of two single filter units connected to a pair of 3-way valves for continuous service during cleaning or maintenance. For this reason, duo filters are typically rated at the same capacity as a single. But, for intermittent service applications, the valves can be positioned so that both units operate simultaneously.

Strate-Thru Design

Standard Design



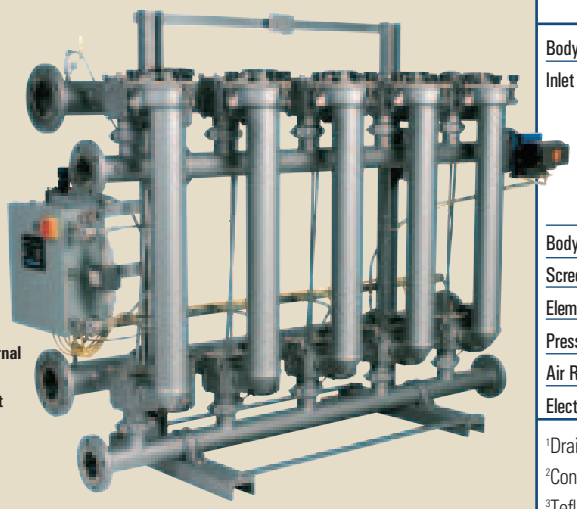
	1100		1500		2200		3300[1]	
Body Inlet/Outlet Size - in. (mm)	1 (25.4)		1.5 (38.1)		2 (50.8)		3 (76.2)	
Body Diameter - in. (mm)	2.875 (73)		3.5 (88.9)		4.5 (114.3)		4.5 (114.3)	
Screen Length - in. (mm)	12 (304.8)		24 (381)		18 (457.2)		18 (457.2)	
	18 (457.2)		36 (914.4)		36 (914.4)		36 (914.4)	
Element Styles Available[2] - in. (mm)	2 (50.8) diameter single		2.25 (57.1) diameter single		3.25 (82.8) diameter single, Tri-Cluster, Accuflux - 7		3.25 (82.8) diameter single, Tri-Cluster, Accuflux - 7	
Pressure Ratings[3] - psi (bar)	Standard -150 psi (10.3 bar) High Pressure - 250 psi (17.2 bar)		Standard -150 psi (10.3 bar) High Pressure - 250 psi (17.2 bar)		Standard -150 psi (10.3 bar) High Pressure[4] - 250 psi (17.2 bar) - 350 psi (24.1 bar) - 740 psi (51.7 bar) - 1000 psi(101.3 bar)		Standard -150 psi (10.3 bar)	
Total Volumetric Capacity - model #	1112	1118	1524	1536	2218	2236	3318	3336
gal. (l)	0.8 (3.0)	1 (3.8)	2 (7.6)	2.8 (10.6)	2.6 (9.8)	4.8 (18.2)	2.6 (9.8)	4.8 (18.2)
Total Unit Weight - lbs. (kg)	80 (36.3)	90 (40.8)	110 (49.9)	125 (56.7)	140 (63.5)	160 (72.6)	180 (81.6)	300 (136.0)
Drain Size[5] - in. (mm)	Standard .75 (19)	Strate-Thru .5 (12.7)	Standard .75 (19)	Strate-Thru .5 (12.7)	Standard 1.25 (31.75)	Strate-Thru .5 (12.7)	Strate - Thru .5 (12.7)	

[1]Available in strate-thru only.
[2]Consult media availability chart for specific retentions and types available.
[3]Teflon gaskets limit pressure maximum to 80 psi (5.5 bar).
[4]350 (24.1 bar), 740 (51.7 bar), and 1000 (101.3 bar) psi available in strate-thru design only. All high pressure units incorporate 2-way ball valves.
[5]Consult factory for optional additional drain sizes.

F-Series

F-Series – robust, modular capability for a wide range of liquids

For continuous high-flow service and solids removal from 1 to 1,700 microns, Ronningen-Petter's F-Series multiplex filter systems are an excellent choice. Standard F-Series systems are rated for 250 psi (17 bar) service and single system flow rates up to 3,000 gpm (681 m^3/hr). F-Series features three-way ball valves, automated cleaning with direct mounted actuators and solenoids, and available blank stations for easy future expansion.



F-Series External Backwashing Multiplex Unit

F-Series

	2200
Body Inlet/Outlet Size - in. (mm)	3 (76.2)
Inlet Outlet Header Sizes[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] - in. (mm)	3.25 (82.8) diameter single, Tri-Cluster, Accuflux - 7
Pressure Rating[3] - psi (bar)	250 psi (17.2 bar)
Air Requirement (Automated Units)	60 - 120 psi (4.1-8.3 bar) @ 5 cfm, for sequencing
Electrical Requirement (Automated Units)	110/220V, 50/60 Hz, single phase

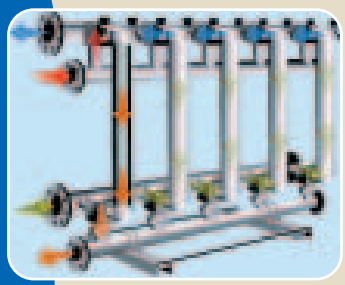
[1]Drain header size 3" (76.2). Consult factory for custom sizes.

[2]Consult media availability chart for specific retentions and types available.

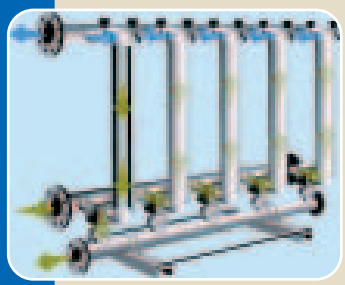
[3]Teflon gaskets limit pressure maximum to 80 psi (5.5 bar). ASME code units are limited to 150 psi (10.3 bar).

Internal and external backwashing configurations

Ronningen-Petter F-Series and AFC-Series tubular multiplex systems are available in both internal and external backwashing configurations. Internal backwashing systems are designed for processes with system pressure greater than or equal to 45 psi (3.1 bar) and low viscosity process liquids. External backwashing systems are designed for applications with high-value process liquids and/or processes with low operating pressures.



An external backwashing system utilizes an additional header at the top of the unit. This header introduces a separate cleaning liquid (typically water) to backwash the filter element to the drain.



With an internal backwashing system, a small amount of clean process liquid flows backward through the tube being cleaned and out the drain header at the unit base.

AFR-Series

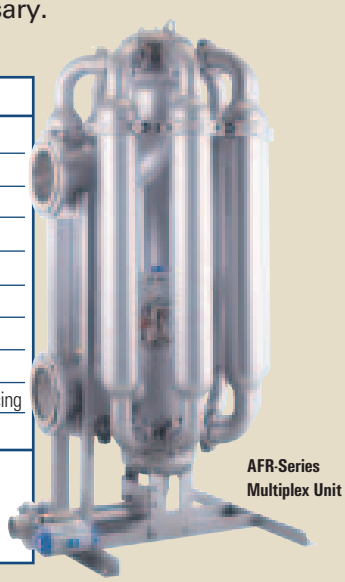
AFR-Series – powerful performance in a compact footprint

The revolutionary Ronningen-Petter AFR-Series can replace an 8-station multiplex tubular system with a single unit in only a one-square-meter footprint. The simplicity of the AFR-Series design also helps to reduce overall system investment demands. Single systems can handle flow rates up to 2,000 gpm (454 m^3/hr) and multiple units can be combined when higher flow rates are necessary.

AFR-Series

	AFR-8-4	AFR-8-6
Body Inlet/Outlet Size - in. (mm)	3 (76.2)	3 (76.2)
Inlet Outlet Header Sizes[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 psi (17.2 bar)	250 psi (17.2 bar)
Volumetric Capacity	Each body tube = 4 gallons	Each body tube = 4.8 gallons
Single Unit Weight[3] - lbs. (kg)	1,100 lbs. (499)	1,300 lbs. (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

[1]Drain connection is 3" (76.2) weld stub.
[2]Consult media availability chart for specific retentions and types available.
[3]Weights are approximate and assume eight filled stations.



AFR-Series Multiplex Unit

VWS-Series

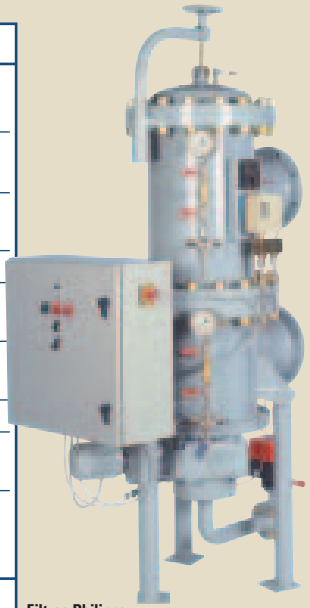
VWS-Series – high flow with a single vessel

The VWS-Series is perfect for high-flow applications on water-like liquids – up to 22,000 gpm (4,997 m^3/hr) – including surface water straining or injection water for drilling applications. Its unique multi-element, single-housing design makes it ideal for code applications and those requiring specialized materials and coatings. Backwashing is based on differential pressure, to minimize unnecessary element cleaning.

VWS-Series

	5LF[1]	7LF	7	9	11	13	16	20	27	34	40
Inlet/Outlet Connection[2] in.	4	6	8	10	10	12	12	14	16	18	20
(mm)	(100)	(150)	(200)	(250)	(250)	(300)	(300)	(350)	(400)	(450)	(500)
Flow[3] gpm	353	794	1,411	1,852	2,271	2,712	3,351	4,189	5,291	7,055	8,600
(m^3/hr)	(80)	(180)	(320)	(420)	(515)	(615)	(760)	(950)	(1,200)	(1,600)	(1,950)
Filtration Surface Area in^2	518	1,051	1,339	1,728	2,117	2,505	3,081	3,859	5,198	6,552	7,704
(cm^2)	(3,341)	(6,780)	(8,638)	(11,148)	(13,658)	(16,161)	(19,877)	(24,896)	(33,535)	(42,270)	(49,703)
Number Filter Elements	5	7	7	9	11	13	16	20	27	34	40
Total Volumetric Capacity gal.	11.2	42	45	45	71.5	103	103	107	158.5	238	255
(l)	(42.4)	(159)	(170)	(170)	(270.6)	(390)	(390)	(405)	(600)	(901)	(965)
Single Unit Weight[4] lbs.	540	948	1,323	1,433	1,543	1,764	1,874	2,204	2,972	4,410	5,070
(kg)	(245)	(430)	(600)	(650)	(700)	(800)	(850)	(1,000)	(1,400)	(2,000)	(2,300)
Pressure Ratings - psi (bar)	35 to 150 psi (2.5 to 10 bar)										
Electrical Requirements (Automated Units)	110/220 V, 50/60 Hz, single phase										
Element Size - in. (mm) Diameter x Length	1.65 (42) x 24.4 (620)	2.36 (60) x 24.4 (620)	Standard: 3 (76) x 24.4 (620)		High Flow: 5 (128) x 31.5 (800)						

[1] LF= Lower flow.
[2] Drain pipe is 2" for VWS 5 LF through VWS 27 and 3" (76.2) for VWS 34 and 40.
[3] Flow rate for clear water at 22 psid (1.5 bar) at 250 micron.
[4] Weights are approximate.



Filtres Philippe VWS-Series Internal Backwashing Unit

What your application demands – not just what's available

Effective filtration operation, solids removal, and efficiency are a complex calculation of housing size, media configuration and style, space demands, and other key variables. You need a filtration specialist with decades of experience – like Ronningen-Petter – to guide you in the selection of the right system for your application and process requirements.

In addition to a full range of system styles, we also offer a broad spectrum of media and options so each system can be quickly and cost-effectively customized to meet your situation. And, if one of our standard systems isn't ideal, we can develop a custom system that exceeds your expectations.

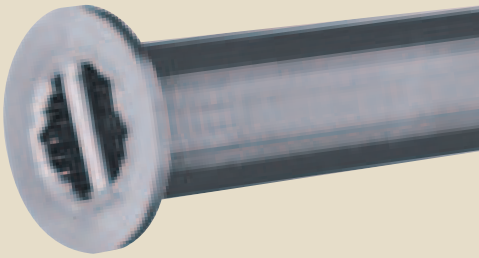
A wealth of filtration media choices

Matching media configuration, retention, and materials to your application is easy when you select a Ronningen-Petter backwashing/tubular filtration system. We offer media choices from compact configurations that pack a large amount of surface area into a small amount of space, to simple strainer-type systems for removing larger contaminants.

	Particle Retention			Type						Percentage of Open Area
Media	Mesh	Inches	Micron	Single	Tri-Cluster	Five Cluster	Seven Cluster	Accuflux 7	Accuflux 15	
WIRE MESH	10	0.065	1650	x	x	x				56%
	20	0.035	890	x	x	x				46%
	30	0.023	585	x	x	x	x		x	41%
	40	0.015	380	x	x	x	x		x	36%
	60	0.009	230	x	x	x	x		x	27%
	80	0.007	180	x	x	x	x			32%
	100	0.0055	140	x	x	x	x		x	30%
	150	0.0046	115	x	x	x	x			37%
	200	0.0033	84	x	x	x				33%
	250	0.0024	60	x	x	x		x	x	36%
	400	0.0018	45	x	x	x		x	x	36%
	700	0.0012	30	x	x	x		x	x	25%
	–	–	20					x	x	–
	–	–	10					x	x	–
	–	–	5					x	x	–
	–	–	2					x	x	–
SLOTTED WEDGE WIRE	10	0.063	1600	x	x	x				50%
	15	0.045	1140	x	x	x				43%
	20	0.035	890	x	x	x				36%
	30	0.024	610	x	x	x	x	x		30%
	40	0.015	380	x	x	x	x	x		20%
	60	0.009	230	x	x	x	x	x		18%
	80	0.007	180	x	x	x				15%
	100	0.006	150	x	x	x	x	x		13%
	120	0.005	125	x	x	x				11%
	150	0.004	100	x	x	x				9%
	200	0.003	75	x	x	x				7%
	325	0.002	50	x	x	x				5%
	–	0.001	25	x	x	x	x	x	x	3.2%
FABRIC MESH	60	0.009	230	x	x	x				Percentage of open area not applicable to fabric media.
	80	0.007	180	x	x	x				
	100	0.0055	140	x	x	x				
	150	0.0046	115	x	x	x				
	250	0.0024	60	x	x	x				
	500	0.0016	40	x	x					
	–	–	25-30	x	x	x				
	–	–	15-20	x	x	x				
	–	–	5-10	x	x	x				
	–	–	1-3	x	x	x				

Media

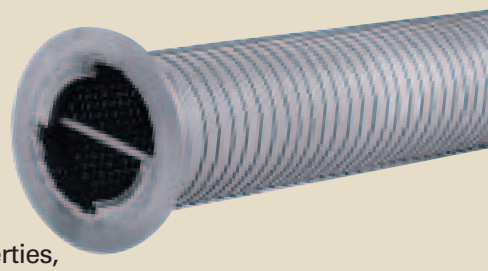
In addition to three types of media materials, our F-Series and AFR-Series systems are available with two* additional choices of configuration:



- TRI-CLUSTER® - three-tube 1½" diameter media for 40 percent greater surface area than single element designs, with an economical initial investment
- ACCUFLUX® - seven-tube or fifteen-tube media configuration more than doubles surface area, compared to single-element filters of the same size

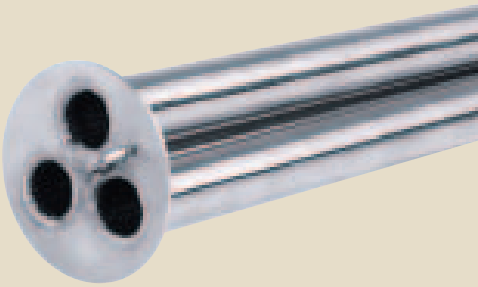
*VWS-Series filter media is offered with a wide range of retentions.

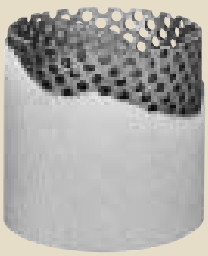
Filter media materials available



Wire mesh: 1,650 – 2 microns

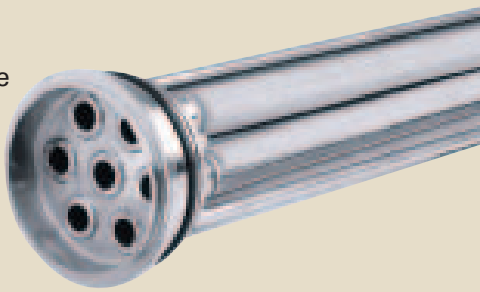
Woven screens made of 316 stainless steel with a 316 stainless steel backing for added strength. Provide maximum open area (for high flows), excellent contaminant release properties, and a long operating life.

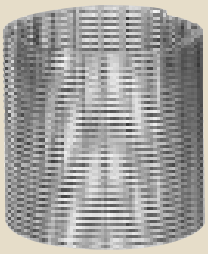




Fabric: 230 – 1 micron

For the finest filtration applications, fabric media deliver reliable contaminant removal down to 1 micron. Fabric screens are supported by a 316 stainless steel backing and are chemically compatible with most process liquids.





Slotted: 1,600 – 25 microns

Manufactured by winding a continuous triangular-shaped wire around a series of vertical support stringers, these media require no backing. Their inherent strength makes them ideal for reliable performance with abrasive slurries or fibrous materials.

We understand the impact your filtration system can have on your process. That's why we offer our backwashing/ tubular systems with several media options and with a full spectrum of standard and optional features.

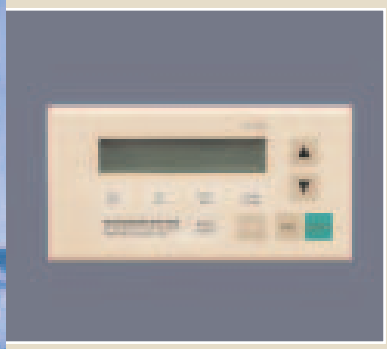
You can custom-configure a system to precisely fit the demands of your application and process. And our experienced team can help seamlessly integrate a filtration solution into your new or existing application for optimum performance.

Control options integrate with your plant's infrastructure

The control options for our backwashing/tubular systems are as broad as the applications they serve.

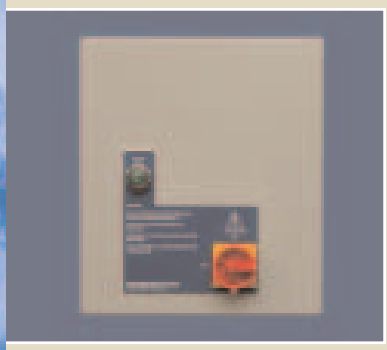
Allen-Bradley MicroLogix

The Allen-Bradley PLC controls the backwash process and includes a PanelView 300 display mounted on the enclosure door (for making timer adjustments). PLC is housed in a NEMA 4 polyester coated carbon steel enclosure mounted to the filter frame. Backwash is initiated by a signal from the supplied differential pressure switch or the interval timer. Automation includes rotary actuators, solenoid valves, differential pressure switch, power light, and disconnect switch.



Siemens S7-200

The Siemens PLC controls the backwash process and includes a display module mounted on the enclosure door (for making timer adjustments). PLC is housed in a NEMA 4 polyester coated carbon steel enclosure mounted to the filter frame. Backwash is initiated by a signal from the supplied differential pressure switch or the interval timer. Automation includes rotary actuators, solenoid valves, differential pressure switch, power light, and disconnect switch.



Semi-Automatic

The semi-automatic design includes rotary actuators, solenoid valves, differential pressure switch and a terminal strip for wiring to the customer's control system. The enclosure is polyester coated carbon steel and is mounted to the filter frame. Includes mode lights and selector switch (run/stop/backwash).

Patented 3-way ball valves

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

Options

System and media sealing

A filtration system that leaks or allows process fluid bypass is not an effective system. Our sealing systems are designed to ensure that even with minimal training, your operators can easily obtain a perfect seal. We also offer a wide range of elastomer materials to meet the temperature, pressure, and chemical properties of your process stream.

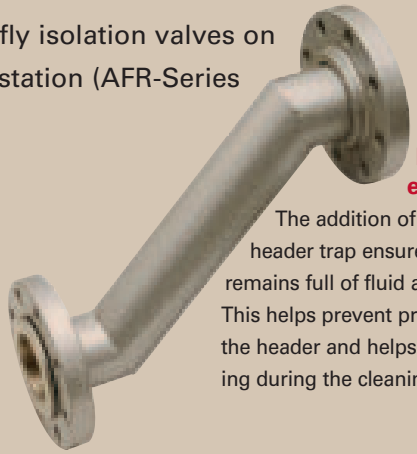
A total process perspective

When you choose Ronningen-Petter as your filtration partner for a backwashing/tubular system, you're choosing an expert. Not just in the science of filtration, but in how it can benefit your manufacturing process as a whole, and even help you meet specific production objectives. We consider not just the filter, but how it integrates into your entire process – and we can advise you on a wide range of impacts a filtration change can offer.

Wide range of available options

Ronningen-Petter backwashing/tubular systems can also be ordered with a wealth of custom options to precisely match your application and business demands. Examples include:

- ASME code vessels
- Electropolished interiors for food-grade applications
- Quick couplers on inlet and outlet of body tubes for easy removal
- Back-to-back station configuration to reduce overall footprint (available on multiplex units with four or more stations)
- Complete 304 or 316 stainless steel construction (for sanitary and other applications)
- Butterfly isolation valves on each station (AFR-Series only)

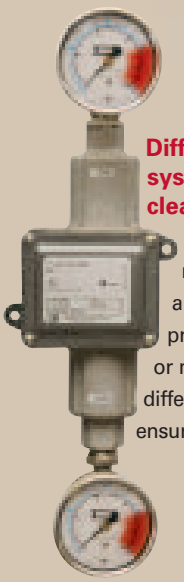


Drain header trap for efficient backwashing

The addition of a simple, optional drain header trap ensures the backwash manifold remains full of fluid after a cleaning cycle. This helps prevent process fluid from drying in the header and helps minimize water-hammering during the cleaning cycle.

Diffusers optimize cleaning

For challenging solids removal, Ronningen-Petter offers two styles of backwash diffusers to effectively distribute backwash flow and ensure removal of all contaminants from the filtration media.



Differential pressure system for optimum cleaning timing

When your application needs to be triggered by a pre-determined differential pressure (as opposed to time or manually), an optional differential pressure sensor ensures precise, reliable control.