

## **R Automatic Backwashing Filtration System**

There are many advantages to our Automatic Backwashing Systems.

- Reduces process/system downtime
- Reduces operator exposure
- Reduces maintenance cost
- Reduces waste fluid
- Reduces filter element disposal and replacement cost
- Increases productivity

Self-cleaning filters represent the ideal situation and provide the most productive and labor free solution. Rosedale Products' ABW is unique because our patented technology backwashes with the lowest volume of liquid. This is achieved by using air to create the shear velocity needed to effectively clean the filter with the clean liquid inside each housing chamber.

### **Flexible and Versatile**

Flow rates to several thousand GPM can be easily accommodated. To meet space requirements various configurations are available. Micron ratings from 2 microns are possible in sintered porous metal, wedge wire, and nylon filter bags. Continuous flow is maintained by taking one station off line while the rest continue operating.

### **Single vs Dual Stations**

On systems with flow rates less than 400 GPM our standard is "single station" systems which means each housing is a station. Larger systems use a "dual station" approach which has two housings per station. The two housings share a common manifold which allows a reduction in valves and, during backwash, two housings at a time (1 Dual Station) go off-line for cleaning.



### **Applications**

The ABW is being used in many industries throughout the USA as well as overseas in such places as Argentina, Taiwan, Chile and Venezuela.

**Industries served include:** Automotive - Steel - Petroleum - Chemical - Pharmaceutical - Electronics - Nuclear Power - Superfund Sites - Groundwater & Soil Remediation - Commercial Laundries - Entertainment - Food - Mining -Detergents - Paper

**Applications include:** Cooling Towers - Coolants - Membrane Protection - Sulfuric and other Acids -Harvesting Steroids - Oil Reclamation - Potable & DI Water - Bottling Plants - Food Processing - Recycling - Decorative Ponds

### **Turnkey Systems**

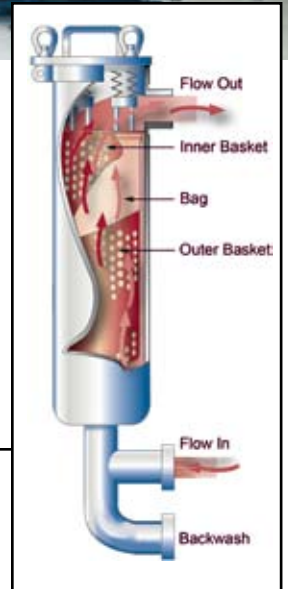
Our systems have included air compressors, pumps, power distribution boxes, motor starters, climate controlled enclosures, heat trace and air dryers, all skid mounted and ready for installation.

A U T O M A T I C B A C K W A S H I N G F I L T E R S Y S T E M



**How It Works**

Fluid is introduced through the bottom of the filter housing. It is then forced through a filter element where the contaminant is captured on the outside surface of the filter. The clean fluid exits through the outlet. A controller monitors the differential pressure across the filter. When enough contaminant collects on the element and the differential pressure reaches a pre-selected point (^P), the backwash sequence is initiated. The backwash is accomplished by automatically shocking the filter with air and forcing the dirty fluid through the waste outlet. There is no introduction of additional fluids to contaminate the process, and the volume of liquid discharged is held to a minimum, reducing disposal costs. When the backwash operation is completed, the system returns on-line, the controller resets itself, and the whole process begins again.



**Media Characteristics**

This information is intended to be used as a general guideline. Since some characteristics are very similar from one media to the next, you should choose the media whose advantages best fit your particular filtration requirements. Consult Rosedale for assistance in selecting the proper media for your application.



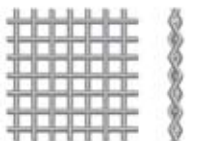
**Wedge Wire (WW)** or slotted, is the most durable of all backwashable media. They are strictly limited to .001" slot or 25 micron as the lowest retention rating. Wedge wire is particularly suited for critical low maintenance applications. As a result of their construction, they are used in many instances where manual cleaning is necessary but might damage other types of media.

MICRON RATING	OPENING (INCH)	% OF OPEN AREA
25	.001	2.1
50	.002	4.2
75	.003	6.1
150	.006	11.5
250	.010	18.0
350	.014	23.0



**Poroplate®** filter media is made from layers of stainless steel wire cloth diffusion-bonded together to form a rigid porous metal laminate structure. Poroplate filter media is corrosion resistant, cleanable, and can withstand high temperature applications up to 800°F. Micron ratings from 2 to 150 are available.

MICRON RATING	NOMINAL RATING	ABSOLUTE RATING
10	2µ	10µ
25	10µ	20µ
50	20µ	40µ
75	40µ	70µ
100	100µ	100µ
150	150µ	150µ



**Nylon** monofilament provides exceptional backwash efficiency. It exhibits a wide range of retention ratings. Nylon media should be considered for the filtration ranges of 25-75 microns. Filter bags have a defined cycle life.

MICRON RATING	% OF OPEN AREA
75	43
50	36
25	33

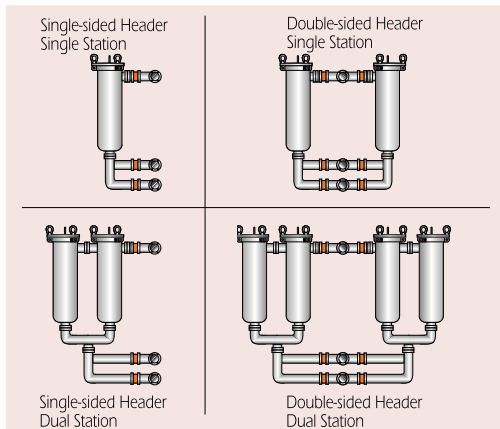
# R How To Order

Build an ordering code as shown in the example

**Example:** **ABW 8 -30-D -2F-1-4 -S-150-S-E- B -B -25-E-C**

	<b>Housing</b>	<b>Options</b>	
<b>AUTO BACKWASHING FILTER</b>	ABW	8 -30-D -2F-1-4 -S-150-S-E-	<b>ASME CODE STAMP</b> C = Code
<b>MODEL NUMBER</b> 8 = 8	8		<b>CONTROL SYSTEM</b> E = Electric
<b>BASKET DEPTH</b> 30-inch (std.) = 30	30		<b>MICRON RATING</b> 10 = 10    100 = 100 25 = 25    150 = 150 50 = 50    250 = 250 75 = 75    350 = 350
<b>STATION TYPE</b> Single = S Dual = D	D		<b>MEDIA</b> WW = Wedge wire PS = Sintered B = Bag style
<b>VALVE SIZE</b> 2-inch 150 class ANSI flange = 2F 3-inch 150 class ANSI flange = 3F 4-inch 150 class ANSI flange = 4F	2F		<b>VALVE SEATS</b> B = Buna-N M = Ethylene propylene T = Teflon® V = Viton®
<b>NUMBER OF STATIONS</b> One = 1 Two = 2 Three = 3 Four = 4 Five = 5 Six = 6 Seven = 7 Eight = 8 Nine = 9 Ten = 10	1		<b>COVER SEAL</b> B = Buna N E = Ethylene Propylene V = Viton® Fluoroelastomer TEV = Teflon® Encapsulated Viton® TSW = Teflon® (solid white)
<b>HEADER PIPE SIZE</b> 2-inch = 2 3-inch = 3 4-inch = 4 6-inch = 6 8-inch = 8 10-inch = 10 12-inch = 12	4		<b>HOUSING MATERIAL</b> C = Carbon Steel S = 304 Stainless Steel S316 = 316 Stainless Steel
			<b>PRESSURE RATING</b> 150 = 150 psi (NPT or flanged)
			<b>HEADER PIPE STYLE</b> S = Single sided D = Double sided

1. Flanges provided with the housing match the pressure rating of the vessel. Housings rated 150 psi have 150 class flanges. ANSI B16.5 Pressure-Temperature rating tables determine flange class for ASME housings.  
2. Higher pressure ratings available. Consult factory.  
3. Filter bags are ordered separately. See pages 134.



## Stations and Headers

Rosedale offers both single and double-sided headers to conform to space restrictions. Header pipes have connections on one or on both sides. Each housing is separately controlled, increasing capacity while maintaining a high-level of control. A station has one set of controls, while accepting either one filter housing per station (a single station), or two housings per station (a dual station). Capacity is again increased, but the number of controls are minimized. By minimizing those controls, great savings are realized. For example, everything else being equal, a single-sided header with three dual-stations accommodates the same six housings and flow as a double-sided header with six single-single stations. However, there are three less controls on the dual-station unit, greatly reducing costs, perhaps as much as \$15,000.