AFA®

High Performance Water Treatment for Power Generation

AFA® – Pleated Backwashable Filter Elements

Graver's AFA® non-precoatable backwashable condensate polishing septa are engineered to meet the high demands in the utility industry for iron oxide removal and repeated backwashing. A selection of filter media is available in absolute ratings ranging from 1 to over 25 microns to meet the removal requirements of each individual condensate system. Like all the condensate filters from Graver Technologies, a variety of end fittings can be selected to retrofit the elements in existing Powdex® or other condensate filter systems.

$$\text{Beta Ratio} = \frac{\text{Upstream Particle Counts}}{\text{Downstream Particle Counts}}$$

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges

and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters.

Testing was conducted using the multi-pass test method, water at 2.5gpm/10" cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

Filter Specifications		
Media	Polypropylene	
Inner Core	Polypropylene	Polypropylene
End Caps	Polypropylene	Polypropylene
Cage	Polypropylene	Polypropylene
Gaskets/ O-Rings Options	EDM Sulfur Free	
Micron Ratings	1, 3, 5, 10, 25µm	
Other micron rated media available upon request		
DIMENSIONS		
Nominal Lengths	50" (1,270 mm)	60" (1,524 mm)
	70" (1,778 mm)	80" (2,032 mm)
Outside Diameter	2.50" (63.5 mm)	
Inside Diameter	1" (25.4 mm)	
Maximum Operating Temperature	Polypropylene: 180°F (85°C)	
Polypropylene Maximum	130 psid @ 70°F (8.9 bar @ 21°C)	
Collapse Pressure	40 psid @ 180°F (2.8 bar @ 85°C)	

AFA deliver revolutionary features and benefits in easy-to-use formulations

FEATURES

- Absolute micron rating from 1 to 25 µm
- Removal efficiency rated at 99.9%
- High surface area of pleated media
- High dirt holding capacity
- Backwashable media recipe

BENEFITS

- Rugged construction specifically for power plant use
- Fixed pore construction eliminates dirt unloading as differential pressure increases
- Pleat optimization for extended runs between backwashings

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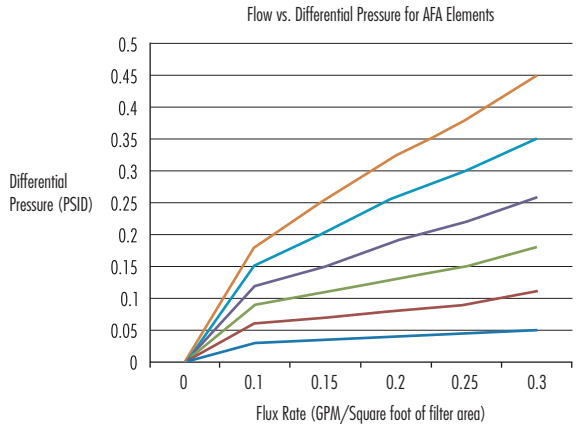
Filter Removal Efficiency			
Beta Ratio	Beta 1,000	Beta 100	Beta 50
Efficiency	99.9%	99%	98%
1 Micron	1	0.6	0.3
3 Microns	3	2	1.5
5 Microns	5	4	3
10 Microns	10	8	7
25 Microns	25	19	15

Flow Rate vs Pressure Drop Per Square Foot of Filter Area Polypropylene Filter @ 70°F (21°C)



Graver Technolgies Worldwide Locations

Superior Products and Global Reach

Graver Technologies designs, develops and manufactures ion exchange technology and products that enable and enhance separation, purification, process filtration and analysis. A Marmon Water/Berkshire Hathaway Company, Graver has a long history of strong corporate support, ion exchange innovation, industry commitment, global reach and world-class capabilities.

Whether you are around the corner or across the globe, Graver Technologies supports customers with superior products and services. Customers worldwide trust our products over competitive offerings; we export about a third of our manufacturing output. Backed by more than half a century of innovation, our ion exchange products treat over 6.5 billion gallons of water daily in more than 38 countries.

In the United States, over 90 percent of nuclear power facilities choose Graver's ion exchange systems, services and products to meet stringent water purity requirements.

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