



# Advanced Water Treatment Solutions

## EM-VIII Sea Water Filtration

To ensure trouble free operation of seawater desalination systems, membrane manufacturers recommend pre-treatment for the removal of suspended solids to negligible levels for the preservation of the effectiveness and life span of a Reverse Osmosis (RO) installation. A proper selection of pre-treatment for feed water will improve affectivity and extend the life span of the system by preventing or minimizing biofouling, scaling and membrane plugging.

The close spacing of spiral wound membranes results in trapping of suspended solids inside the modules. This is exacerbated by the fact that, RO membranes bear a surface charge which may cause fine solids to be attracted to the membrane surface. Once fouling begins, cleaning of the membranes becomes very difficult and the system may not return to the original performance levels. Cleaning costs, system performance and standstill time are very significant in that situation and generally can be traced back to inadequate pre-filtration.

When sea water filtration is needed for pre-treatment to desalination or other applications, Filtronics will design a simple, proven and cost-effective treatment system based upon influent quality, economics and space management. Filtronics uses only ANSI/NSF Standard 60 and ANSI/NSF Standard 61 compliant media.

**FILTRONICS ELECTROMEDIA® VIII offers a unique and cost effective solution for the removal of suspended solids in sea water**

### **Filtronics Advantages**

- Complete Filtration Solution
- Permanent Filtration Media
- Smallest Footprint in the Industry
- High Filtration Rates
- Microprocessor Controlled for Simplified Operation, Monitoring & Maintenance
- Practical and Cost Effective
- Proven and Adaptable Solutions



As a leader in filtration innovation, Filtronics engineers can determine practical and cost effective solutions to meet your water quality needs.



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## EM-VIII Sea Water Filtration

Electromedia® VIII is a unique permanent media filtration system integrating a special vessel design and proprietary media. Electromedia® VIII filters suspended solids from sea water for a variety of applications including brine water injection, pre-treatment to desalinization, research facilities, and aquariums.

Sea water filtration requires costly and compatible materials that will not rust or corrode. The harsh environment requires effective and reliable performance. Filtronics Electromedia® VIII provides an effective, economical solution to these issues by utilizing sea water resistant alloys and lined and coated carbon steel tanks. Coupled with our Envirowash® backwash reclaim system, you will have a life long system with a reasonable capital cost.

### AUTOMATION

Our standard controls package uses a PLC and graphic display panel for automatic, unattended operation. Automatic filter controls include reset timers for filtration, backwash and purge. Backwash is initiated by time or differential pressure override. Controls are housed in a NEMA 4X or NEMA 12 enclosure.

### STANDARD EQUIPMENT

- Flow range from 20 to 1500 gpm simplex systems. Multiple vessel systems up to 20,000 gpm or more.
- 60 psi pressure tank ASME code, stamped. (Higher ratings available.)
- Filter tanks are carbon steel, with lining on all wetted surfaces.
- Backwash flow controls, air release valves, automatic filter control valves.
- Standard interior fittings: PVC, and/or stainless steel.
- Each tank fitted with 12" X16" access hatches, 6" x 8" hand holes, or manways depending on filter size.

FLOW GPM	VESSEL SIZE	VESSEL DIAMETER IN INCHES	TANK STRAIGHT SIDE	PIPE OUTLET IN INCHES	BACKWASH RATE GPM	TYPICAL BACKWASH VOLUME
10	FV-1	20"	54" Vert.	1.5"	40	160 Gal.
15	FV-2	24"	54" Vert.	2"	60	240 Gal.
25	FV-3	30"	54" Vert.	2.5"	95	380 Gal.
35	FV-4	36"	54" Vert.	3"	140	560 Gal.
50	FV-5	42"	54" Vert.	4"	190	760 Gal.
60	FV-6	48"	54" Vert.	4"	250	1000 Gal.
80	FV-7	54"	54" Vert.	4"	310	1,240 Gal.
95	FV-8	60"	54" Vert.	6"	385	1,540 Gal.
140	FV-9	72"	54" Vert.	6"	560	2,240 Gal.
165	FV-10	78"	60" Vert.	6"	655	2,620 Gal.
200	FH-11	84"	57" Horiz.	8"	800	3,200 Gal.
250	FH-12	84"	75" Horiz.	8"	1000	4,000 Gal.
375	FH-13	84"	123" Horiz.	10"	1500	6,000 Gal.
500	FH-14	84"	170" Horiz.	10"	2000	8,000 Gal.
625	FH-15	84"	218" Horiz.	12"	2500	10,000 Gal.
750	FH-16	84"	264" Horiz.	12"	3000	12,000 Gal.



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