

HFX Deionization Systems



**HIGH FLOW DEIONIZERS
FOR INDUSTRIAL APPLICATIONS**



waterinnovations.net



HFX

Deionization Systems

High-purity

Packed Bed Design

**Counter-current
Regeneration**

Feed-forward Control

Low Silica Leakage

Industry Applications

- Metal Finishing
- Printed Circuit Board
- Electronic and Semiconductor Component Manufacturing
- Paint and Powder Coating
- Chemical Manufacturing
- Ceramics Manufacturing
- Glass and Mirror Manufacturing
- Aerosols and Cosmetics
- Photographic Processing
- Laboratories
- Soluble Oils
- Pharmaceutical
- Power Plant Feedwater

Deionization will improve the overall quality of your feedwater. It removes total dissolved solids (TDS) effectively and economically making your water useful for high-purity rinsing, making up critical process chemistries and cleaning surfaces for applying perfect coatings.

BENEFITS

- Extend life of process chemistries
- Decrease waste disposal volume and costs
- Improve product quality
- Increase rinse purity
- Eliminate service exchange bottles
- Can provide an ROI in less than one year
- Available in both Duplex and Simplex designs

Products That Meet Your Specifications

HFX Series systems are available in five standard sizes: 35, 55, 75, 115 and 135 gallons per minute (gpm).

The recommended feedwater TDS concentration is less than 600 mg/liter. (We can also purify feedwater with TDS concentrations above that level – ask us how we can help!)

The HFX Series produce pure deionized water. The conductivity is less than 5 microsiemens, less than 2 mg/l TDS.

System Extras / Options

Water Innovations, Inc. will work with you to determine other system needs, such as a booster pump, a properly-sized neutralization system, DI water storage, repressurization and/or ultraviolet disinfection.

Choices

Different applications have different requirements. That's why we created three designs from which you can choose.

Simplex Systems have single cation and anion resin tanks, the smallest footprint and lowest cost of any of our systems. They require a larger DI storage tank to assure a continuous supply of water during regeneration.

Duplex Systems have two cation and two anion resin tanks, and are available in two configurations, Duplex Series and Duplex Plus Series, each assuring a continuous supply of deionized water.

Duplex Series systems are designed for facilities that have planned shutdowns, allowing infrequent maintenance to occur during those times.

Duplex Plus Series systems are designed for facilities that operate 24 hours a day, seven days per week. Infrequent maintenance can take place with the system in operation. The footprint for Duplex Plus Series systems is slightly larger than Duplex Series systems with the same capacity.

Complete Training and Field Support

Water Innovations, Inc. supplies start-up, training and field support on every system sold. Our systems are backed by responsive, factory-authorized service technicians.

Process and Parts Warranty

Water Innovations, Inc. offers both a process and parts warranty and our full support to guarantee that you get the water quality you expect.

Engineered for efficiency, simplicity and reliability

Simplex System Design

Each system uses one tank of both cation and anion resin, providing continuous operation, except during regeneration.

Duplex System Design

Each system uses two tanks of both cation and anion resin, providing continuous operation, even during regeneration.

Packed Bed, Countercurrent Regeneration

Countercurrent regeneration uses up to 50 percent less chemicals and 50 percent less water than conventional deionization systems, reduces waste and produces superior quality water at lower operating costs.

Patented* Feed Forward Control

A programmable logic controller initiates all regeneration functions, delivering consistent, high quality water automatically. By monitoring the influent water conductivity and flow rate, the system constantly adjusts to changing inlet water conditions. This reduces chemical consumption and waste, while producing high quality water and savings on operating costs.

Application-specific Resins

Each resin is carefully selected by our engineers to match the specific demands of each application.

Skid Mounted / Pre-piped

Completely prepackaged, pre-piped and skid-mounted, **Water Innovations, Inc.** High Purity Deionization Systems require minimal floor space, install quickly and can be easily relocated.

PLC Control and User-Friendly Interface

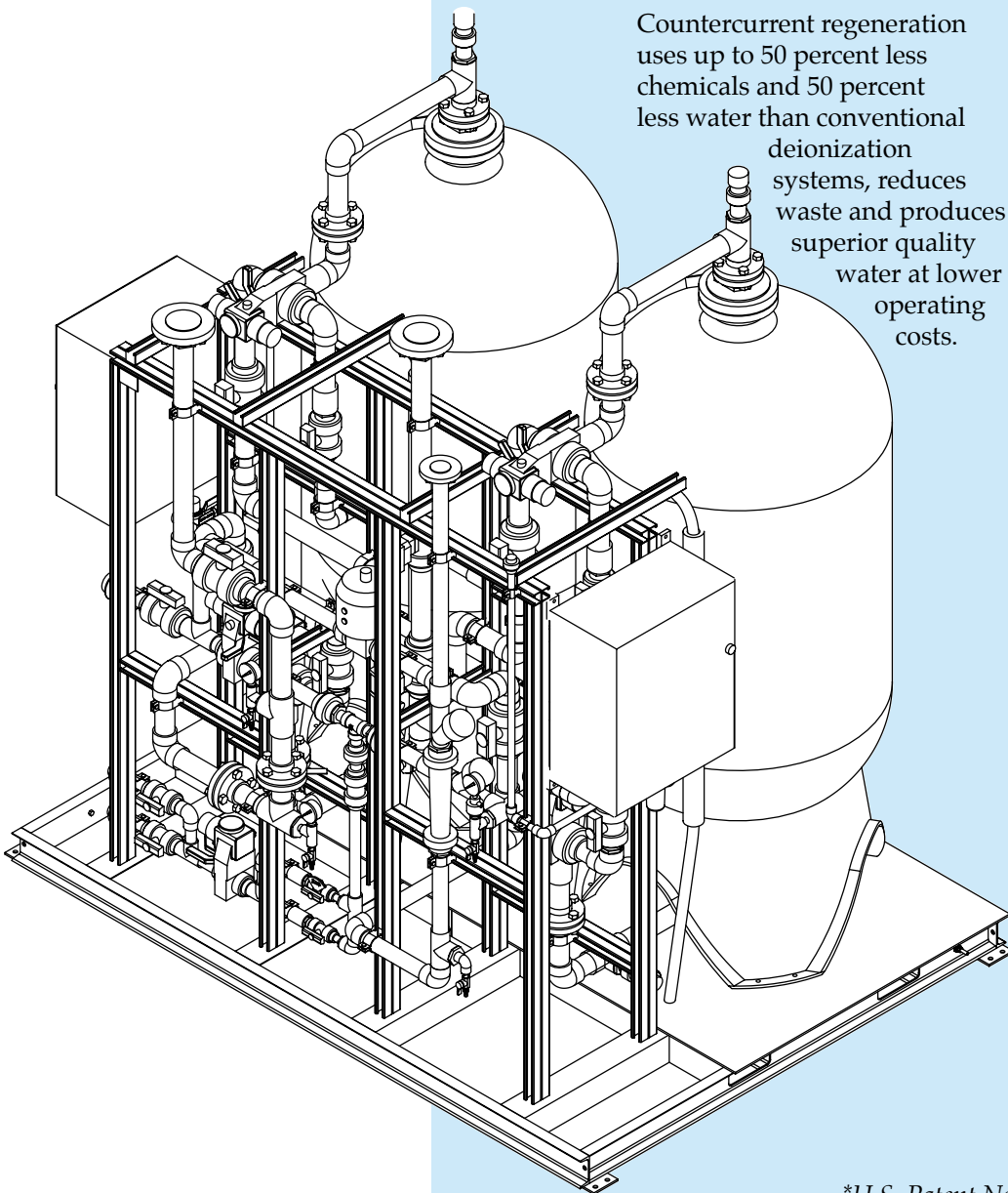
Any system condition that requires operator attention is alarmed and indicated on the panel. System setpoints protected) by the operator without PLC programming.

Guarantee

We guarantee, in writing, the performance of every system we sell, assuring you of our total commitment to reliable water treatment.

Modem

Allows for remote system monitoring and program upgrades.



*U.S. Patent Nos. 5,069,779 and 5,022,994

Systems Specifications

Each system includes on separate epoxy-coated steel (or optional stainless steel) frames, bag filters with redundant capacity, Hydrus automatic backwashing carbon filters, cation exchanger, and anion exchanger. System controls utilize PLC and touch screen for system operation and historical data monitoring.

Flow Rates (gpm)		Simplex	Duplex	Duplex + Series
35	No. of Bag Filters	2	2	2
	Carbon Tank Size	30" x 72"	24" x 65"	24" x 65"
	No. of Carbon Tanks	1	2	2
	Total Carbon Volume	10 ft. ³	12 ft. ³	12 ft. ³
	Resin Tank size	24" x 72"	24" x 72"	24" x 72"
	No. of Resin Tanks	2	4	4
	Total Resin Tank	28 ft. ³	56 ft. ³	56 ft. ³
	Approx. Space Required	9' x 10' x 10' H	9.5' x 15.5' x 10' H	12' x 19.5' x 10' H
55	No. of Bag Filters	2	2	2
	Carbon Tank Size	36" x 72"	30" x 72"	30" x 72"
	No. of Carbon Tanks	1	2	2
	Total Carbon Volume	14 ft. ³	20 ft. ³	20 ft. ³
	Resin Tank size	30" x 72"	30" x 72"	30" x 72"
	No. of Resin Tanks	2	4	4
	Total Resin Tank	44 ft. ³	88 ft. ³	88 ft. ³
	Approx. Space Required	9' x 10' x 10' H	9.5' x 15.5' x 10' H	12' x 20.5' x 10' H
75	No. of Bag Filters	2	4	4
	Carbon Tank Size	30" x 72"	36" x 72"	36" x 72"
	No. of Carbon Tanks	2	2	2
	Total Carbon Volume	20 ft. ³	28 ft. ³	28 ft. ³
	Resin Tank size	36" x 72"	36" x 72"	36" x 72"
	No. of Resin Tanks	2	4	4
	Total Resin Tank	62 ft. ³	124 ft. ³	124 ft. ³
	Approx. Space Required	10' x 13' x 10' H	13' x 19' x 10' H	14' x 23' x 10' H
115	No. of Bag Filters	2	4	4
	Carbon Tank Size	36" x 72"	36" x 72"	36" x 72"
	No. of Carbon Tanks	2	3	3
	Total Carbon Volume	28 ft. ³	42 ft. ³	42 ft. ³
	Resin Tank size	42" x 72"	42" x 72"	42" x 72"
	No. of Resin Tanks	2	4	4
	Total Resin Tank	80 ft. ³	160 ft. ³	160 ft. ³
	Approx. Space Required	11' x 13' x 10' H	13' x 19' x 10' H	14' x 23' x 10' H
135	No. of Bag Filters	Not Available	Not Available	4
	Carbon Tank Size			36" x 72"
	No. of Carbon Tanks			3
	Total Carbon Volume			42 ft. ³
	Resin Tank size			48" x 72"
	No. of Resin Tanks			4
	Total Resin Tank			220 ft. ³
	Approx. Space Required			14' x 23' x 10' H

Additional Equipment Packages

Storage Tank	for deionized water storage
Repressurization Pump	for transfer of deionized water
Submicron Filtration	for low particle count water
Backwashing Filter	for suspended solids removal
Neutralizer	for automatic neutralization of regenerants
Cation Polisher	for water purity greater than 3 megohm-cm
Ultraviolet Sterilization	for biological control of process water
Chemical Reuse Option	saves up to 30% of chemical costs
Monitoring and Data Logging	for SPC and ISO records

