WATERINNOVATIONS inc

World-Class Equipment & Process Expertise

WDI Ion Exchange System

High Quality Deionized Water **Up to 15 gpm**

Reverse Osmosis Water Purification Hydrus Water Softening & Filtration Ion Exchange Rinsewater Recycling
Proprietary Precipitation Chemistry Zero-Liquid Discharge Evaporation Batch/Continuous Waste Treatment

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WDI

With Counter-current regeneration and a patented feed forward regeneration control system, the WDI can deliver water quality rivaling a mixed bed system. For applications demanding reliability and quality, the WDI is the solution.

Industry Applications

- Hospitals
- Laboratory
- Paint and Powder Coating
- Photographic Processing
- Electronics Assembly
- General Manufacturing
- Metal Finishing
- Printed Circuit Board
- Car Washes

Process Applications

- Potable Water Purification
- RO Water Polishing
- Parts Washing
- Replacement for Service DI
- Spot-Free Rinsing

FEATURES

- High quality deionized water
- Fully automatic operation
- Simple instrumentation, easy operating procedures
- Superior chemical efficiency
- Minimal regeneration volume
- Corrosion resistant components
- Minimal installation requirements
- Stainless steel frame

Choices

WDI systems can be configured to regenerate according to volume of water processed, outgoing conductivity, or feed-forward loading.

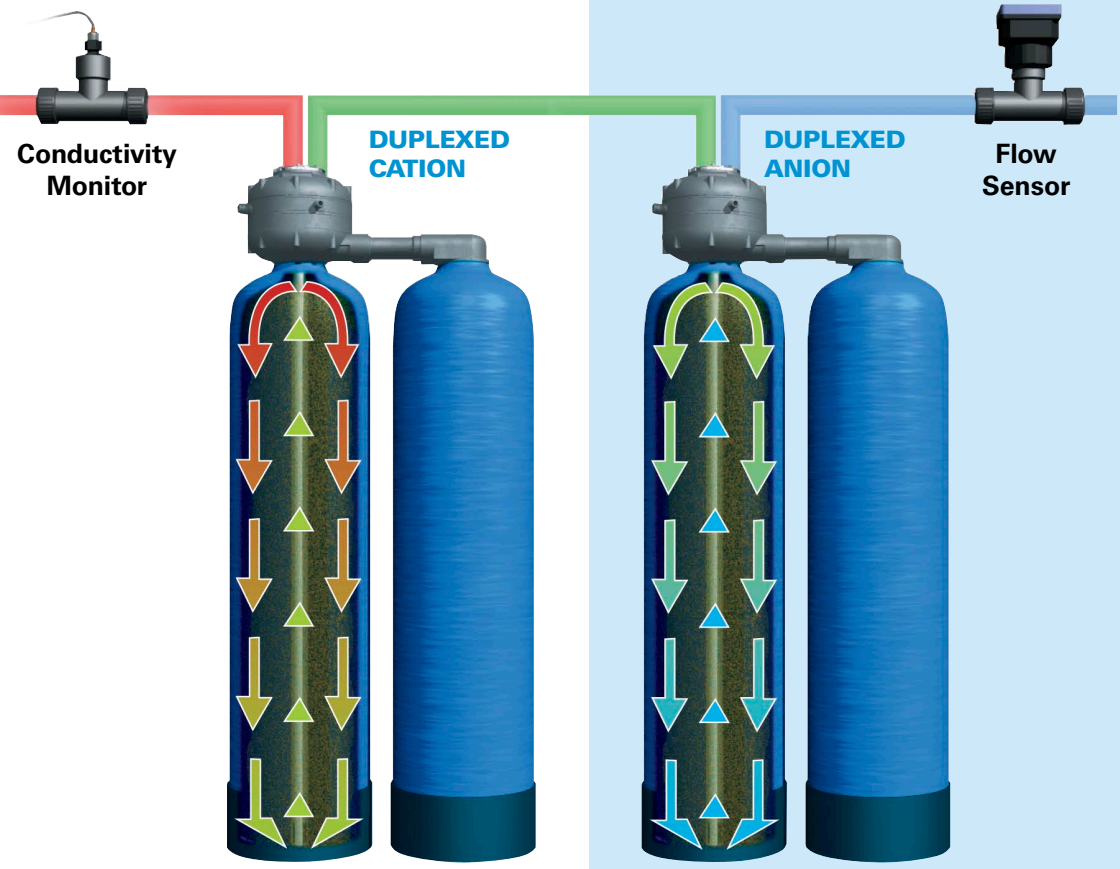
- Volumetric-regenerating WDI systems utilize an internal water meter with control disks geared for the actual dissolved solids in the incoming water. The least sophisticated of the systems, it is unable to account for variations in incoming water quality. Without expensive controls, it is the most economical system and is suitable for less critical applications, and can be provided with a feed pump or designed to operate off city water pressure
- Feed-Back systems additionally include a conductivity meter on the outgoing water which monitors water quality and initiates regeneration once the water quality diminishes to an adjustable set-point. Superior water quality is achieved with this moderately priced unit, which comes standard with a feed pump and requiring an atmospheric incoming water storage tank.
- The Feed-forward regenerating WDI includes PLC controls with conductivity and flow meters for the incoming water to calculate gains loading and to initiate regeneration prior to any decrease in water quality. With a conductivity sensor on the outgoing water line and an automatic purge function, water produced is of consistently high quality with the greatest operating efficiency of the three systems.

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.



Various Product Sizes

Provide from two to 15 gallons (8 to 57 liters) of high quality deionized water per minute.

Automatic System Operation

Minimizes operator maintenance and hands-on adjustments.

Ergonomic Design

Places status lamps, pressure gauges, sample taps and isolation valves in a central location for easy operator interface.

Space-Saving Design

Uses skid mounted components to minimizespace requirements.

Modular Design

Allows easy system expansion by adding another DI module.

Countercurrent Regeneration

Maximizes chemical efficiency and product quality while minimizing regeneration costs.

Automatic Purge

Assures only high purity water will be provided to your operation.

Chemical Monitor

Automatically shuts system down if chemical supply is not sufficient.

Multiple System Configurations

Provide product water qualities from 50,000 ohm/cm to 10,000,000 ohm/cm.

Various Automation Levels

Match product designs to your needs.

Volumetric Meter Design

Initiates a regeneration after a preset amount of water has been processed.

Feed Forward Design

Optimizes system performance.

Feed Back Design

Regeneration once product water falls below a predetermined quality.

Various Power Configurations

Accommodate international installations.

Guarantee

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

U.S. Patent Numbers 4,427,549; 5,069,779

WDI Ion Exchange Deionized Water System

Each WDI System includes a feed pump, simplex bag filter, duplex cation and anion exchangers, and controls. Tank sizes are selected based upon flow requirements. An Inlet conductivity and flow meter control feed-forward regenerations with feed-back regenerations triggered based upon operator-adjustable outlet water quality.

Best-In-Class System Controls

Automated with Rockwell Automation
Allen-Bradley · Rockwell Software

TYPICAL WDI SYSTEM SPECIFICATIONS

FLOW	2 to 15 gallons per minute
EFFLUENT QUALITY	less than 5 uS/cm
INFLUENT	450 mg/l maximum TDS
INCOMING WATER FEED	City Water or from atmospheric tank
REGENERATION CONTROLS	volumetric, feed-back, or feed-forward
RESIN TYPE	strong acid and base monosphere gel
INLET PRE-FILTER	5 micron cartridge filter
ACID PER REGENERATION/WASTE	3.1 Gal 30% HCl/75 gallons
CAUSTIC PER REGENERATION/WASTE	1.8 Gal 50% NaOH/85 gallons
CAPACITY	47,500 grains
SKID DIMENSIONS / WEIGHTS	36"W X 46" L x 86" H/900 lbs

Accessories

Carbon Filtration	removes chlorine to improve product water quality
Storage and Repressurization	provide constant deionized water supply & pressure
Neutralization System	for automatic neutralization of treated water
Chemical Fume Suppression	for water purity greater than 3 megohm-cm

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