



World-Class Equipment & Process Expertise

CIX Ion Exchange Systems

RINSEWATER RECYCLING FOR DEIONIZED WATER

Up to 25 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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CIX

The most cost-effective approach available to recycle rinse water & achieve environmental compliance

Benefits

- Low operating cost & low waste volumes
- Water, sewer and treatment costs savings
- In a Duplex design for continuous operation
- Closed loop operation reducing sewer discharge
- Color Touch-screen Human Machine Interface
- Simple to install skid-mounted pre-piped & -wired

Industry Applications

- Electroplating
- Metal Finishing
- Printed Circuit Board
- Electronics Components
- Paint & Powder Coating
- Photographic Processing
- Parts Washing & Phosphating

Process Applications

- Copper Rinse Water Recycling
- Nickel Rinse Water Recycling
- Tin/Lead Rinse Water Recycling
- Chrome Rinse Water Recycling
- Electroless Rinse Recycling
- Selective Metal Scavenging

The **Water Innovations, Inc.** Complete Ion Exchange (CIX) Series is engineered as a comprehensive skid-mounted package for cost effective water purification. CIX Systems are primarily used as closed loop water recycling systems and for the removal of selected metals from waste streams. Small in size but big in performance, CIX Systems include many features that are usually found only on larger, more expensive systems all integrated on a compact skid.

Products That Meet Your Specifications

Standard CIX Systems are available in 3 sizes: 5,10, and 20 gallons per minute. Typical recycling applications have feed water with a TDS concentration of less than 500 mg/l. Standard systems produce pure, deionized water with less than 2 mg/l of TDS. High purity models produce water with a resistivity of greater than 3 Meg-Ohm-cm. Feed water to typical metal scavenging systems has a metal concentration of less than 100 mg/l, but may have a high TDS background. These systems can remove regulated metals to below 1 mg/l or less. Custom-size systems can also be engineered.

System Extras / Options

Water Innovations, Inc. will assist to determine other system needs, such as a waste treatment or neutralization system.

Choices

Different applications have different requirements so we created 3 configurations for Recycling and Metal Scavenging

- Standard Recycling Models (S) include feed pump, duplex carbon filters, duplex bag filters, duplex cation and anion exchangers, DI Water pump, ultra-violet lamp and controls.
- High purity (HP) Recycling Models additionally include duplex cation polisher for higher purity >3Meg-Ohm-cm
- Enhanced Pretreatment (EP) Recycling Models with manual backwashing duplex filters for < 50-mg/l TSS
- Metal Scavenging (MS) Models with or without activated carbon and/or a duplex backwashing multimedia filter.

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. provides both a process and parts warranty and our full support to guarantee your satisfaction.



Countercurrent Regeneration for Lowest Waste Volume

Counter-current chemical feed opposite to service is most efficient using 50% less chemicals & reducing waste 60% while producing high quality deionized water.



Independent Cation & Anion Regenerations Control

Cation and anion loads in process rinsewaters are rarely equal so both Cation and Anion resin vessels are independently regenerated to optimize system capacity, and minimize chemical use & waste volume.

Touch-screen Display

All system variables and set points are displayed on the touch-screen. More than three days of system data are accessible on the screen.

Skid Mounted/Pre-plumbed

Delivered ready-to-install with few connections requiring minimal time and space, & can be easily moved

Premium Quality Resins

Top-quality, long life resins are carefully selected by our engineers to match the specific demands of the application.

Duplex Design for 100% Recycling Operation

Each system uses two tanks of both cation and anion resin. This allows one tank to be in service while the other is in regeneration or on stand by. The twin tank design provides continuous operation even during regeneration.

Double-Duplex Design for Metal Scavenging

Both Lead and Lag resin vessel are in service at all times, even during regenerations providing for 100% redundant metals removal

Ethernet-Accessible

Allows remote system monitoring and control by customer and WI for ongoing support

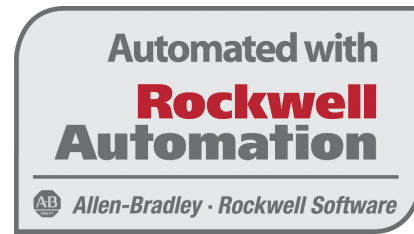
Guarantee

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

CIX Ion Exchange Water Recycling Systems

Each CIX System includes the feed pump, duplex carbon filters, duplex bag filters, duplex cation and anion exchangers, DI Water Supply Pump, ultraviolet lamp sterilizer and controls. High Purity (HP) models also include a duplex cation polisher. Tank sizes are selected separately. Enhanced Pre-treatment (EP) model includes a duplex media pre-filter for waters high in suspended solids (TSS).

Best-In-Class System Controls



System Specifications	500	1000	2000
FLOW (gpm)	5	10	20
EFFLUENT QUALITY			
Standard (uS)	<5	<5	<5
High Purity (M-Ohm-cm)	>3	>3	>3
CAPACITY (KGr)	25	45	90
REGENERATION MODE	COUNTER-CURRENT		
Acid Used (gal.)	2	3.5	3.5
Caustic Used (gal.)	1	1.8	1.8
WASTE VOLUME (gal.) WASTE VOLUME (gal.)	<100	<180	<180
SKID DIMENSIONS (in.) approximate	111" x 45" x 91" or CIX20 -111" x 117" x 91"		

Additional Equipment Packages

Tank Assemblies	for feed water or deionized water storage
Backwater Filter	for suspended solids removal
Neutralizer	for automatic neutralization of treated water
Cation Polisher	for water purity greater than 3 megohm-cm
Evaporators	for reducing regeneration volumes
Point Source Systems	for on-line purification of bath chemistries
Batch Treatment Systems	for treatment of regeneration wastes



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