World-Class Equipment & Process Expertise

SIX SCAVENGING ION EXCHANGE

METALS REMOVAL FROM INDUSTRIAL EFFLUENT

From 5 to 140-gpm

SIX20 | Metal Scavenger

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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Metal Scavenging Systems

Highly Efficient and Cost Effective Removal for Soluble Metals in Wastewater

Industry Applications

- Electroplating
- Metal Finishing
- Printed Circuit Board
- Electronics & Semiconductors
- Paint & Powder Coating
- Photographic Processing
- Groundwater Remediation
- Specialty Separations

Process Applications

- Selective Metal Scavenging
- Copper
- Nickel
- Chrome
- Lead
- Cadmium
- Zinc

Water Innovations, Inc. Metal Scavenging Systems, available in high-flow designs with either duplex or triplex vessels or as our CIX-MS systems, ensure metals removal to parts-per-billion levels to meet strict discharge limits. The systems can recover in a potentially re-usable form copper, nickel, chrome, lead, or cadmium. In the chemical industry, other undesirable impurities can be removed from solutions.

BENEFITS

- Decrease waste disposal volume and costs
- Can provide a payback in less than one year
- Available in both Duplex and Triplex designs
- Lower operating costs than conventional treatment
- Resins can be customized to your particular application

Products That Meet Your Specifications

Water Innovations, Inc. Metal Scavenging Systems are available in standard sizes for flow rates from 5 gpm to 140 gpm.

System options

Water Innovations, Inc. will work with you to determine other system needs, such as a lift station or pumps, neutralization system, batch treatment system or evaporation.

Choices

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

- Duplex.This model is used to selectively remove metals from contaminated streams. In this design, the columns are in a lead/lag configuration. During normal operation, the first resin tank in the set is run to exhaustion, while the secondary tank polishes the effluent to ppb levels of heavy metals.
- Triplex.This model has an added resin tank to process high metal concentrations. With added security compared to the duplex system because two tanks are always on line.

The systems, in either the high flow or CIX-MS designs, feature a unique regeneration control sequence to minimize chemical consumption and waste volume.

The optional, acid re-use technology can further reduce wastevolume and chemical usage.

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.

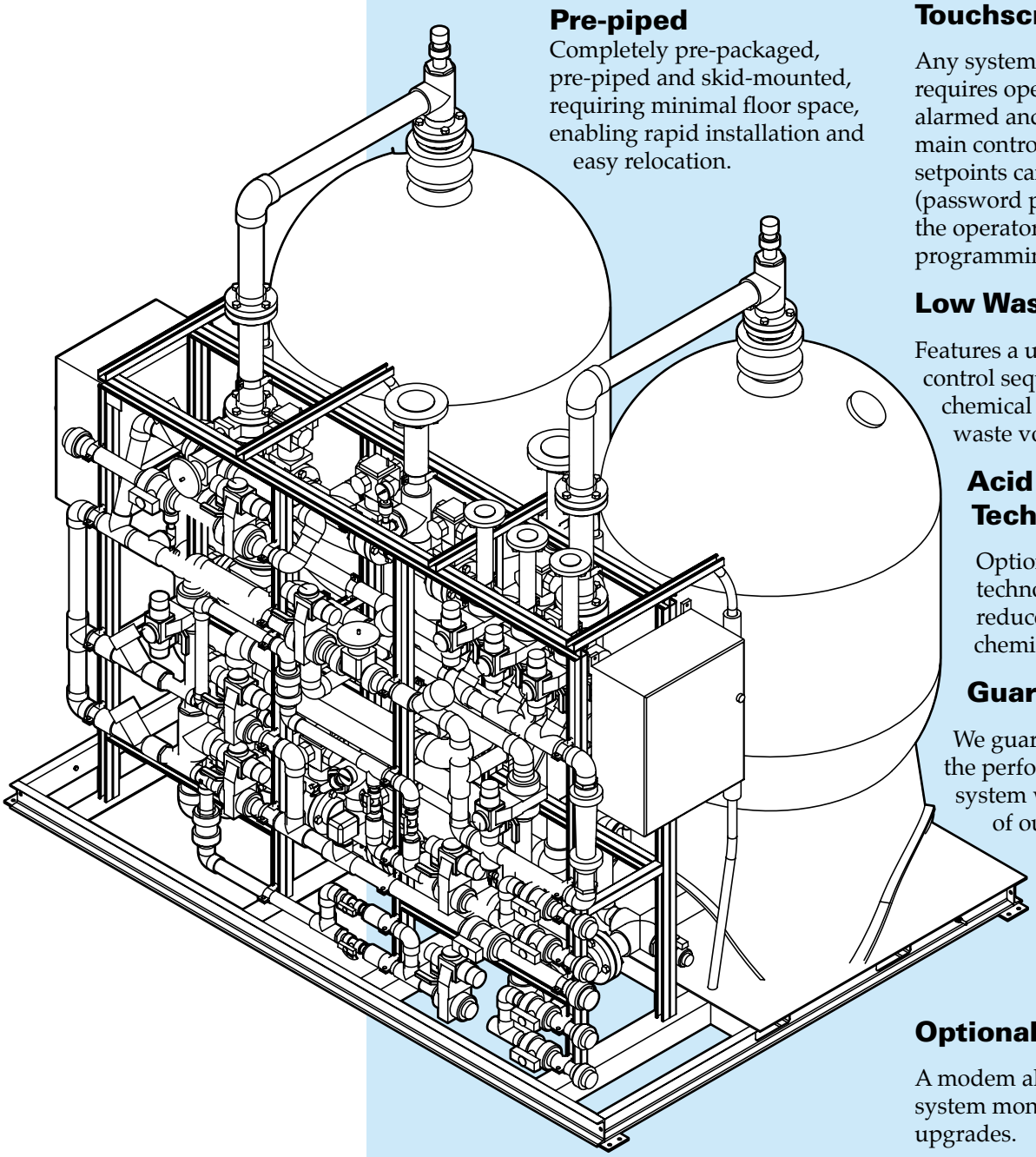
Engineered for efficiency, simplicity and reliability

Application-specific Resins

Every system uses top quality, long lasting ion exchange resins. Based on years of experience with similar systems, our engineers carefully select the best resin to match the specific demands of each application.

Skid-Mounted / Pre-piped

Completely pre-packaged, pre-piped and skid-mounted, requiring minimal floor space, enabling rapid installation and easy relocation.



Multiple Tank Design

Each system uses two or three tanks.This allows at least one tank to be in service while the others are in regeneration or on standby.This provides continuous operation even during regeneration or when performing minor service.

PLC Control and Touchscreen Interface

Any system condition that requires operator attention is alarmed and indicated on the main control panel. System setpoints can be adjusted (password protected) by the operator without PLC programming.

Low Waste Volume

Features a unique regeneration control sequence to minimize chemical consumption and waste volume.

Acid Re-use Technology

Optional acid re-use technology can further reduce waste volume and chemical usage.

Guarantee

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

Optional

A modem allows for remote system monitoring and program upgrades.

HFX Ion Exchange Water Recycling Systems

Best-In-Class System Controls

Automated with Rockwell Automation
Allen-Bradley · Rockwell Software

SIX HIGH FLOW SYSTEM SPECIFICATIONS

FLOW RATE	SYSTEM CONFIGURATION	FEED TANK SIZE	NO. OF BAG FILTERS	RESIN TANK SIZE	NO. OF RESIN TANKS	TOTAL RESIN VOLUME	CONFIGURATION	ACID REUSE	APPROX. SPACE REQUIREMENT
35 gpm	Duplex	1000 gallons	2	24" x 72"	2	28 ft.3	Lead / Lag	Optional	14.5' x 22'
35 gpm	Triplex	1000 gallons	2	24" x 72"	3	42 ft.3	Lead / Lag	Optional	14.5' x 24'
50 gpm	Duplex	1400 gallons	2	30" x 72"	2	48 ft.3	Lead / Lag	Optional	14.5' x 22'
50 gpm	Triplex	1400 gallons	2	30" x 72"	3	72 ft.3	Lead / Lag	Optional	14.5' x 24'
65 gpm	Duplex	2000 gallons	2	36" x 72"	2	64 ft.3	Lead / Lag	Optional	17' x 22'
65 gpm	Triplex	2000 gallons	2	36" x 72"	3	96 ft.3	Lead / Lag	Optional	17' x 24'
100 gpm	Duplex	3000 gallons	4	42" x 72"	2	80 ft.3	Lead / Lag	Optional	17' x 24'
100 gpm	Triplex	3000 gallons	4	42" x 72"	3	120 ft.3	Lead / Lag	Optional	17' x 26'
140 gpm	Duplex	4050 gallons	4	48" x 72"	2	112 ft.3	Lead / Lag	Optional	17' x 25'
140 gpm	Triplex	4050 gallons	4	48" x 72"	3	168 ft.3	Lead / Lag	Optional	17' x 27.5'

CIX-MS LOW FLOW SYSTEM SPECIFICATIONS

Each CIX Metal Scavenging System includes the feed pump, duplex carbon filters, duplex bag filters, a lead duplex cation exchanger, a lag duplex cation exchanger, and controls, including pH adjustment for the feed tank (selected separately). Enhanced Pretreatment Models also include a duplex, automatic backwashing filter.

FLOW (gpm)	5	10	20
INLET METAL (mg/L)	<100	<100	<100
OUTLET METAL (mg/L)	<1		
SYSTEM CAPACITY (grams)	550	1200	2400
REGENERATION MODE	COUNTER-CURRENT		
Acid Used (gal.)	2.5	4.5	4.5
Caustic Used (gal.)	0.3	0.5	0.5
WASTE VOLUME (gal.) WASTE VOLUME (gal.)	<35	<60	<60
SKID DIMENSIONS (in.) approximate	104" x 36" x 80"H		

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