



Water.  
Process.  
Solutions.

# Ion Exchange Systems



Contamination of existing drinking water sources and more stringent water quality standards are forcing many water utilities to implement treatment technologies to remove contaminants such as nitrate, radionuclides, perchlorate and hexavalent chromium. Many of these contaminants are anionic or cationic in nature and therefore can be removed by ion exchange at a relatively low capital and operating costs compared to other treatment alternatives.

Wigen Water Technologies (WWT) is a leading producer of custom-built ion exchange systems for a wide variety of industrial and municipal applications. WWT's ion exchange systems can be designed to use regenerable ion exchange resins or highly selective single use (non-regenerable) resins. With access to a wide range of premium grade ion exchange resins, we can deliver a system for any ion exchange application.

## Regenerable Applications

Regenerable ion exchange systems can be designed for the selective removal of specific contaminants such as nitrate, arsenic and hardness or for the removal of multiple contaminants such as nitrate, uranium, arsenic and sulfate. WWT can supply complete turnkey ion exchange systems including bulk brine handling equipment.

## Single Use Applications

For the removal of contaminants such as perchlorate, uranium and hexavalent chromium, hazardous liquid waste can be eliminated with the use of highly selective single use anion exchange resins. When the removal capacity of these resins nears exhaustion, the resin is replaced. WWT manufactures single use anion exchange systems, including lead-lag configurations, and can also provide a turnkey service for the safe disposal and replacement of the resins.

## Impurities Commonly Removed

- » Nitrate
- » THM Precursors (total organic carbon, bromide)
- » Perchlorate
- » Chromium (VI)
- » Arsenic
- » Radium
- » Barium
- » Uranium
- » Hardness
- » Sulfate

## Typical System Features

- » Premium Grades of Ion Exchange Resin
- » Stainless, Carbon Steel or Fiberglass Pressure Vessels
- » Epoxy, Rubber or Specialty Linings
- » Full-flow, Non-clogging Distribution Systems
- » Hydraulic, Pneumatic, Electric or Motor Driven Valve Configurations
- » Integrated Process Controls and Instrumentation

## Optional Features

- » ASME Code Pressure Vessels
- » U.L. 508A control panel fabrication
- » Allen-Bradley® PLC/HMI Controls
- » Remote Data Interface via User-Defined Network Protocol
- » Factory Skid Mounting (pre-plumbed, pre-wired and tested)
- » Co-current and Counter-current Polishing Systems
- » Automated Chemical Feed Systems

## Why Wigen?

- ✓ Over 40 years' experience designing and building ion exchange systems for a wide range of water treatment applications.
- ✓ Custom built systems to meet the specific requirements of each individual customer, ensuring optimum performance, reliability and quality.
- ✓ Competitive capital and operating costs.
- ✓ Turnkey services for resin replacement, disposal and off-site regeneration.
- ✓ Expertise in the design and manufacture of a wide range of water treatment technologies ensures WWT will provide the best total treatment solution for its customers.



WATER TECHNOLOGIES

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