



**The World's Premier**

# MODULAR INDUSTRIAL WATER TREATMENT SYSTEM



A **CUSTOM** SOLUTION. A **COMPLETE** SOLUTION.

**FINALLY, AN END-TO-END PROCESS WATER SOLUTION FROM A SINGLE SOURCE.**

**Culligan® Industrial Solutions** links your distinct business requirements with a customized approach to meet your needs. Culligan's revolutionary modular platform offers the most complete water treatment solution in the industry. Culligan's 80 years in the industry is the kind of experience you can rely on. We have pioneered the water treatment industry with hundreds of patents to our name and stood the test of time.

# LIKE ANY GREAT SOLUTION, WHETHER IT IS A STANDARD PRODUCT OR CUSTOM SOLUTION, CULLIGAN'S INDUSTRIAL SOLUTION HAS A LOT TO OFFER.

## EFFICIENCY

- A flexible modular treatment solution to help meet your needs
- A Cost-effective design, considering both capital and operating costs
- Our service professional will train your staff on maintenance and operation
- One solution and one provider for your water treatment requirements

## REDUCED OPERATING COSTS AND AN INCREASED ROI

- Reduction of TDS (total dissolved solids) helps extend the life of your equipment
- More efficient equipment means reduced labor and maintenance costs
- Reduce energy consumption per gallon of water treated
- Rigorous testing of each product promotes quality and saves you time and money

## ADVANCED ELECTRONIC CAPABILITIES

- Alarm recognitions / historical operating data logging
- Remote monitoring / Telemetry options
- Programmable Logic Controllers (PLCs)



Culligan custom designed counter current, automatic demineralizer system built for Texas Chemical plant for process and boiler feed water.

## CUSTOM SOLUTIONS.

**Culligan** answers the distinct needs of industrial customers with an individualized approach through on-site surveys, analysis and service. Culligan knows your individual needs cannot change to suit an "off-the-shelf" water treatment system. Whether the solution is our revolutionary modular equipment platform or requires custom built equipment. Culligan's designs will address your particular water treatment concerns within your budget, time frame, and sustainability goals.

- Galvanized/Steel Skidding • Piping Materials: Galvanized, Copper, PVC, CPVC, Stainless Steel
- B31.1 and B31.3 Piping • Multiple membrane Vendor Choices
- Class 1 Division 2 Explosion Proof Controls • Redundant PLC Control Packages
- Main PLC Control Panel with HMI and Ethernet • Containerization
- Certifications: NSF, CSA, ASME Code and CRN



Culligan built this RO to meet a client's rigid refinery specifications, including galvanized skid, B31.3 piping, Class 1 Div. 2 Explosion Proof controls, high temperature operation at 130°F, duplex cartridge filters and duplex feed pumps with Allen Bradley PLC and HMI.



Five skids design, assembled in the field. Includes ASME coded tanks using Omni filter for suspended solid and iron removal, primary and polishing duplex Strong Cation softening, brine silo double contained chemical feed stations (oxygen scavenger, coagulant and resin cleaner), B31.3 piping, A-B main PLC with HMI. Includes pump distribution used for boiler feed at a Steam Assisted Gravity Drainage (SAGD) facility in Western Canada.

# EACH CULLIGAN® INDUSTRIAL SOLUTION MODULE IS CUSTOMIZED TO YOUR SPECIFIC INDUSTRIAL WATER NEEDS.



## PRE-TREATMENT SOLUTIONS.

Includes multi-media filtration, which reduces turbidity, odors, iron, manganese and heavy metals from water. Softening is also used to reduce water hardness, preventing scale and increasing the efficiency of downstream process equipment.

- Filtration • Chemical Treatment • Anti-Scalants • pH Adjustment
- Softening — with brine-reclaim and AquaSensor Technology
- Clarification — Omni Filter (in-line pressure clarification)
- Carbon Filtration



## MEMBRANE SOLUTIONS.

Features micro-, ultra- and nano-filtration, which reduce turbidity, suspended solids, and organic substances. This prepares water for effective disinfection and TDS removal with Reverse Osmosis. In addition, the use of Reverse Osmosis membranes, act as barriers to salts and organic substances including micro-contaminants, pesticides, pyrogens, and some viruses and bacteria. Reverse Osmosis can eliminate the need for chemical regenerants, further reducing costs.

- Micro-filtration • Ultra-filtration • Nano-filtration • Reverse Osmosis
- Membrane degassification



## DEIONIZATION SOLUTIONS.

Features a charged ion exchange resin, which reduces mineral ions from water, given a wide variety of water quality. The result is polished water that is free of salts, eliminating the accumulation of scale.

- Separate-Bed • Mixed-Bed • Auto-deionizers
- Portable Exchange Deionization (PEDI) • Continuous Electro Deionization (CEDI)



## STORAGE SOLUTIONS.

Offers purified water storage. These storage solutions allow our customers to store water for peak demand conditions. Customers can size equipment based on average water usage, which helps reduce capital costs.

- 250 - 20,000 Gallons in Stainless Steel, FRP or Polypropylene



## DISTRIBUTION SOLUTIONS.

Offers delivery options, as well as further treatment of water, depending on your water quality requirements.

- Re-pressurization • Sanitization • Sub-Micron filters
- Distribution Systems • Re-circulation Systems
- Disinfection Systems — UV, Ozone, or Chlorination



## WE ASK THE RIGHT QUESTIONS SO YOU GET THE RIGHT SOLUTION.

The Culligan Industrial Solutions process begins with a Culligan professional working with you to identify your specific water quality needs. By understanding these needs we can customize a system that gives you everything you require and nothing you don't – saving you money and helping you increase your return on investment (ROI). At Culligan, we take pride in working closely with our customers so we can provide comprehensive industrial water treatment solutions.

## WE HAVE THE RIGHT SOLUTION FOR YOUR INDUSTRY'S NEEDS.

### REFINERIES & CHEMICAL PROCESSING

Culligan solutions are highly integrated, customizable systems designed to meet the requirements of refinery and chemical processing. A Culligan system is a cost-effective way to improve overall onsite water management using ion-exchange systems, pre-treatment, de-alkalization, de-ionization and membranes. These modules may help improve the cycles of concentration in cooling towers and boilers, and reduce blowdown and make-up water requirements. Every custom solution considers opportunities for wastewater minimization.

### OIL & GAS

Cutting-edge water technology for oil and gas operations facilities can increase profitability through reverse osmosis or ultra-soft water for SAGD boilers, oil platform drinking water systems amine production, wastewater discharge for regulatory compliance and water re-use and wastewater minimization. Revolutionary, modular designs allow Culligan systems to be fully customized to meet ultra-soft water requirements for oil field steam generators. From permanent installations to containerize mobile systems

to move across drilling sites, Culligan can customize systems to your water, process, and installation requirements. Culligan's customized system can result in substantial improvements in maintenance costs, equipment lifespan, and ROI.

### FOOD & BEVERAGE

Whether it's ingredient water, preparation water, process water, utility water or wastewater minimization, we have the diverse experience to understand your specific Food & Beverage water treatment needs.

### ENERGY & POWER

A Culligan customized water treatment solution will provide the water quality needed whether it is a combined cycle, cogeneration gas turbine or a fossil plant to ensure optimum performance from your boiler and cooling tower systems. Pressurized clarification can remove suspended solids from utility surface water and prevent heat exchanger fouling. Reverse osmosis and demineralizer systems will reduce dissolved solids and minimize deposits.

### OTHER MARKETS SERVED

- Agriculture
- Automotive
- Bio-Pharmaceutical
- Dairies
- Electronics
- Government
- Hospitals/Healthcare
- Laboratories
- Manufacturing
- Marine
- Military
- Municipalities
- Plating/Coating
- Pulp/Paper
- Textile
- Universities



[www.culliganmatrixsolutions.com](http://www.culliganmatrixsolutions.com)

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## Place your industrial water treatment needs in the hands of a global leader.

For 80 years, Culligan has made better water. Our global network, comprised of 800+ dealers and international licensees in over 90 countries, is dedicated to addressing your water-related problems. As a worldwide leader in water treatment, our sales representatives and service technicians are familiar with the local water conditions in your area. Being global and local position us to deliver customized solutions to commercial and industrial water issues that affect your business and your bottom line.

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