Culligan®

# IW REVERSE OSMOSIS SYSTEM


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

# DESIGNED TO MEET THE NEEDS OF THE MOST DEMANDING INDUSTRIAL AND MUNICIPAL APPLICATIONS.

Available in a variety of configurations to cover flow requirements from 22 to 200 GPM with salinity levels up to 3000ppm of TDS. Using an innovative modular design, Culligan® is able to offer the highest quality construction and speedy delivery times at very competitive pricing.

Low-pressure membrane technology can remove over 99% of contaminants such as dissolved minerals, bacteria, and other impurities; producing water suitable for high-purity applications like boiler feed and ingredient water for food and beverage production.

All units are assembled and tested in Culligan's Commercial & Industrial facility in Libertyville, Illinois and shipped skid-mounted for simple installation and easy start-up.

## TOTAL FLEXIBILITY

The IW's configurable design offers nearly a hundred different pre-engineered combinations of features to be built into a perfect RO application solution.


## VALUES & BENEFITS

- The configurator tool can quickly create a RO solution tailored for maximum cost-effectiveness. No extra accessories and instrumentation to drive up project costs.
- The low-energy membranes on the IW require smaller pumps that save on operational costs.
- The Culligan® Global Electronics (GBE) system controllers used on the IW are familiar to hundreds of Culligan® Service Technicians around the world.
- Culligan® offers worldwide technical support for installations and start-ups.
- The IW is built in the USA with a quality guarantee by Culligan®.

## STANDARD FEATURES

- Mounted on a galvanized steel frame with anti-corrosion paint coating.
- Multi-stage high pressure pump with high grade AISI 316 Stainless Steel, dry running protection and low noise / high efficiency IE3 motor.
- Ultra-low pressure, high rejection 8" membranes.
- 5 micron pre-filtration with PVC housing.
- Culligan® Smart Controller automates operation with digital flow meters, pressure transducers and conductivity measurements along with other advanced functionality more commonly found in PLC controls.

# OPTIONS & UPGRADES TO MAXIMIZE PERFORMANCE

## 1 Advanced Instrumentation Options

Monitor every aspect of the units operation with advanced instrumentation.

- Conductivity *
- Inlet REDOX (ORP)
- Inlet and Product pH

## 2 Integrated Permeate Flushing Tank Option

Extend the life of the membranes by flushing them with treated product water each time the unit shuts down or during alarm conditions.

Permeate tank can be dual-purposed for use with the detachable CIP skid option.


## 3 Integrated Chemical Dosing Station

prevent membrane scaling with antiscalant or remove chlorine with sodium bisulfite to protect RO membranes with the integrated dosing station. System has auto-start / stop, and tank level functionality.

## 4 Power & Control Options

Standard Electrical Power Requirements are 460V, 3-ph, 60 Hz., 380-415V/50Hz. and 575V/60Hz. power options available

PLC options includes:

- A-B MicroLogix 1400
- Color touch screen display
- Ethernet communications
- Audible and graphic alarm
- A full suite of instrumentation and controls to program and monitor


* Inlet and product conductivity gauges are included standard with the GBE or PLC controls.

# IW BASE SYSTEM SPECIFICATIONS

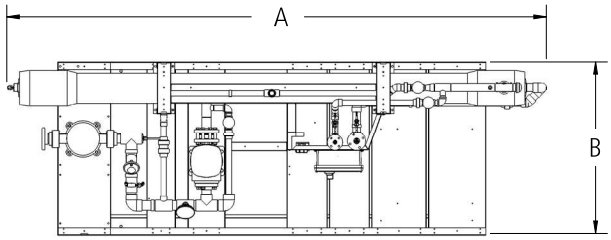
### IW Reverse Osmosis System

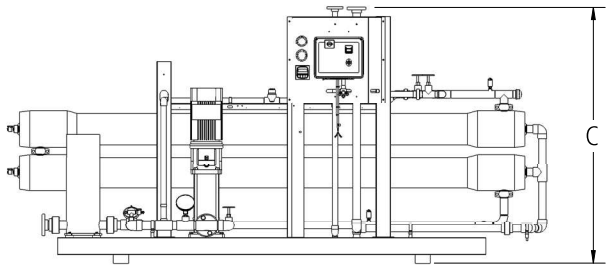
| MODEL | IW - 22 | IW - 35 | IW - 50 | IW - 70 | IW - 100 | IW - 140 | IW - 155 | IW - 200 |
|---|---|---|---|---|---|---|---|---|
| Designed Permeate Flow* (GPM) | 22 | 35 | 53 | 70 | 100 | 141 | 158 | 200 |
| Membrane Quantity | 4 | 6 | 9 | 12 | 18 | 24 | 30 | 36 |
| Vessels x Membranes per stage | 1x4 | 1x3 | 1x3 | 2x6 | 2x6 | 3x6 | 3x6 | 4x6 |
| | | | 1x3 | | | | | |
| | | 1x3 | 1x3 | | 1x6 | 1x6 | 2x6 | 2x6 |
| | | | 1x3 | | | | | |
| Pump Size (HP) 60Hz, SS Housing | 7.5 | 7.5 | 15 | 20 | 20 | 30 | 30 | 40 |
| Connections<br>Feed<br>Product<br>Reject | 1.5″<br>1.5″<br>1″ | 2″<br>1.5″<br>1″ | 2″<br>2″<br>1.5″ | 3″<br>2″<br>1.5″ | 3″<br>2.5″<br>2″ | 3″<br>3″<br>2″ | 3″<br>3″<br>2″ | 3″<br>3″<br>2″ |
| Dimensions (in.) A x B x C | 187 x 47 x 72 | 148 x 47 x 72 | 148 x 47 x 72 | 268 x 47 x 72 | 268 x 47 x 72 | 269 x 47 x 79 | 269 x 47 x 87 | 269 x 62 x 87 |
| Weight (lbs) | 1,400 | 1,550 | 2,000 | 2,800 | 3,000 | 3,500 | 4,000 | 5,000 |

* Flow based on 3 year old RO membranes operating at 75% recovery on properly pretreated feed water of 1500 ppm TDS as NaCl, 68°F (20°C), Silt Density Index (SDI) below 3, and supplying water to atmosphere. Productivity will vary depending on the actual feed water quality and temperature.

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| **Frame** | Epoxy painted galvanized steel |
| **Membrane Elements** | Hydranautics ESPA Max ultra low pressure, high rejection 8" membranes |
| **Membrane Housing** | FRP |
| **Low Pressure Pipe** | Schedule 80 PVC |
| **High Pressure Pipe** | Stainless Steel 316 |
| **Cartridge Filter Housing** | PVC |

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9/17 Part No.34990