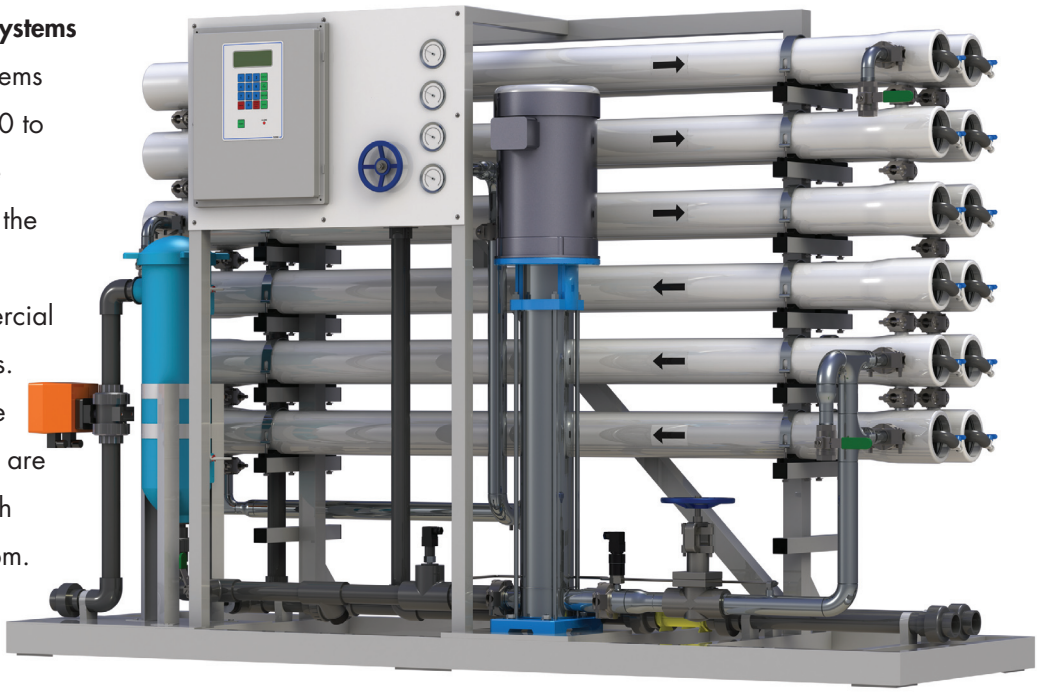
AXEON

M2 – Series Reverse Osmosis Systems

M2 – Series Reverse Osmosis Systems are a line of high capacity systems with flows ranging from 12,000 to 36,000 gallons per day. These systems are ideal for removing the salt content in well water and surface water for use in commercial and light industrial applications. Using an efficient high pressure pump, the M2 – Series systems are engineered for treating brackish water with levels of 10,000 ppm.



M2 – 12240
Reverse Osmosis System

M2 – Series Reverse Osmosis Systems feature a computer controller that has dual TDS monitoring, low pressure monitoring and alarm, pretreatment lockout, and feed flush and tank level input while larger models include an additional digital flow monitor. All models include low energy reverse osmosis membrane elements, motorized feed valve, permeate sample ports and a bag filter housing with a 5 – Micron filter bag.

Some options available for the M2 – Series include permeate flush, permeate divert, variable frequency drive, chemical injection system and clean–in–place system.

Benefits

- Fully Equipped and Customizable
- Skid Mounted
- Components Easily Accessible
- Pre–Plumbed, Wired and Assembled
- Individually Tested and Preserved
- Low Operation and Maintenance Costs
- Easy Maintenance and Servicing
- 20% Less Energy
- 1–Year Limited Warranty

Know Higher Standards™

AXEON®
WATER TECHNOLOGIES

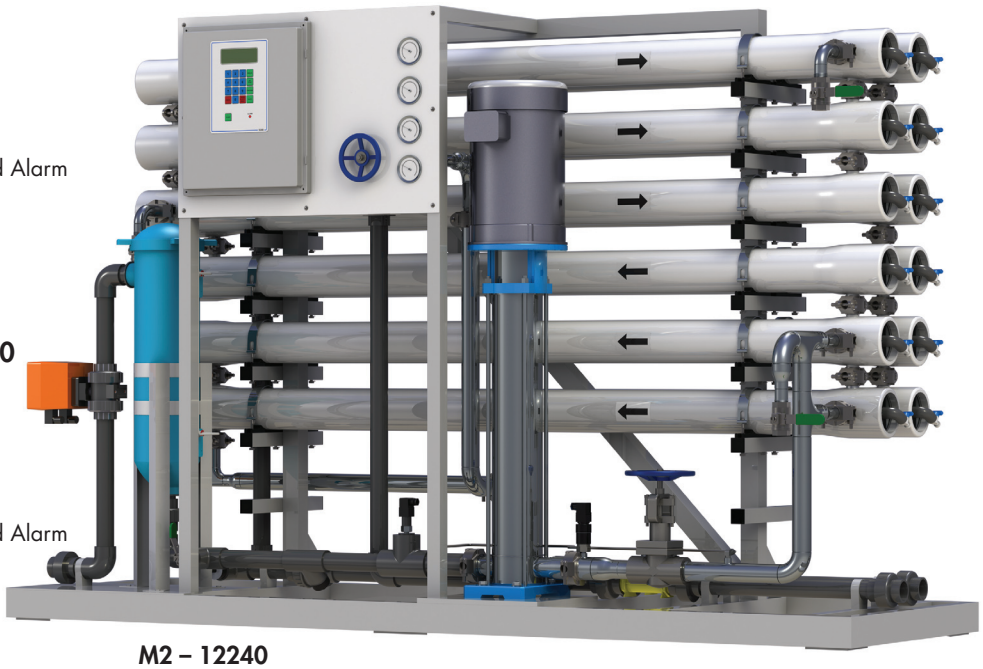
Features

Models: M2 – 4240, M2 – 6240, M2 – 8240

- S – 150 Computer Controller
  - LCD Backlit Display
  - Pre–Treatment Lockout
  - Tank Level Input
  - Low and High Pressure Monitoring and Alarm
  - Dual TDS Monitoring
  - Hour Meter
  - Feed Flush
  - Rejection Percentage

Models: M2 – 10240, M2 – 12240

- S – 200 Computer Controller
  - LCD Backlit Display
  - Pre–Treatment Lockout
  - Tank Level Input
  - Low and High Pressure Monitoring and Alarm
  - Hour Meter
  - Dual TDS Monitoring
  - Feed Flush
  - Digital Flow Meters (2)
  - Rejection Percentage
  - Recovery Percentage



M2 – 12240
Reverse Osmosis System

- AXEON Permeate and Concentrate Flow Meters*
- Stainless Steel Concentrate Globe Valve
- AXEON Pre–Filter 0 – 100 psi Panel Mounted Glycerin Filled Gauges
- AXEON Pump Discharge 0 – 600 psi Panel Mounted Glycerin Filled Stainless Steel Gauges
- AXEON 5 – Micron Filter Bag
- AXEON Bag Filter Housing with Stainless Steel Stand
- Filmtec® LCLE Membrane Elements
- AXEON FRP – Series Membrane Housings – 450 psi
- Vertical Multi–Stage 316L Stainless Steel Booster Pump
- George Fisher® Motorized Valve
- Feed Low Pressure Switch
- Pump High Pressure Switch
- Clean–In–Place (CIP) Ports
- Victaulic® Style Fittings
- Permeate Sample Ports
- High Pressure Stainless Steel Piping and Fittings
- White Powder Coated Aluminum Frame
- Wooden Shipping Crate

Options and Upgrades

- S – 150 Expander Board*
- S – 200 Computer Controller*
- S – 200 pH Monitoring*
- S – 200 ORP Monitoring*
- Variable Frequency Drive**
- Filmtec® LCHR Membrane Elements
- High Pressure Tank Switch
- Hanna® BL 981411 pH Controller*
- Hanna® BL 982411 ORP Controller*
- Chemical Pump Outlet
- Blending Valve
- Permeate Divert Valve
- Pump Pressure Relief Valve**
- Caster Wheels

AXEON Naming Matrix

M2	12	2	40

M-SERIES MODEL

M2	Brackish Water Model

HOUSING QUANTITY DESIGNATION

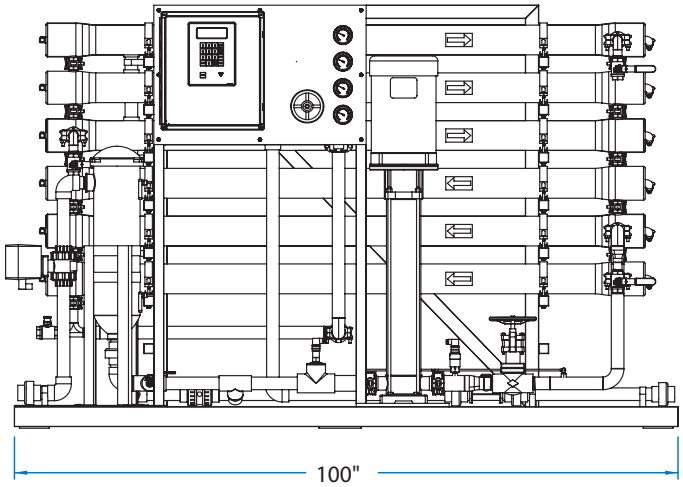
4	4 Vessel
6	6 Vessel
8	8 Vessel
10	10 Vessel
12	12 Vessel

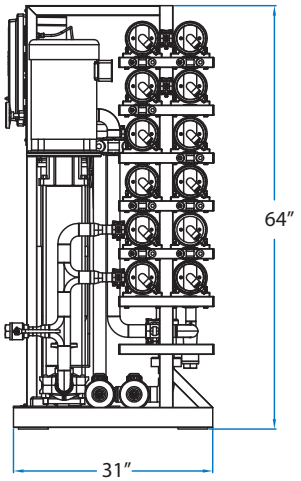
MEMBRANE QUANTITY PER HOUSING

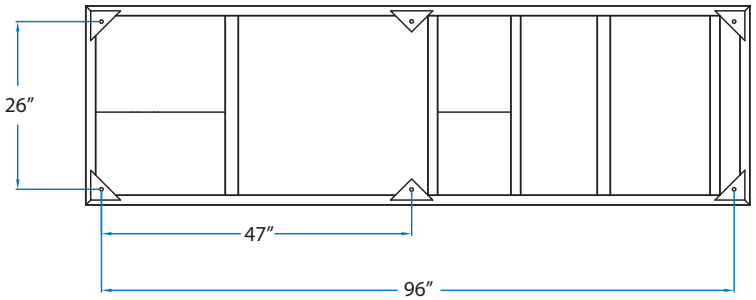
2	2 Membranes

4.0 INCH MEMBRANE DIAMETER

* *Only available on the following models: M1 – 4240, M1 – 6240, M1 – 8240*
** Standard for all 50Hz Systems

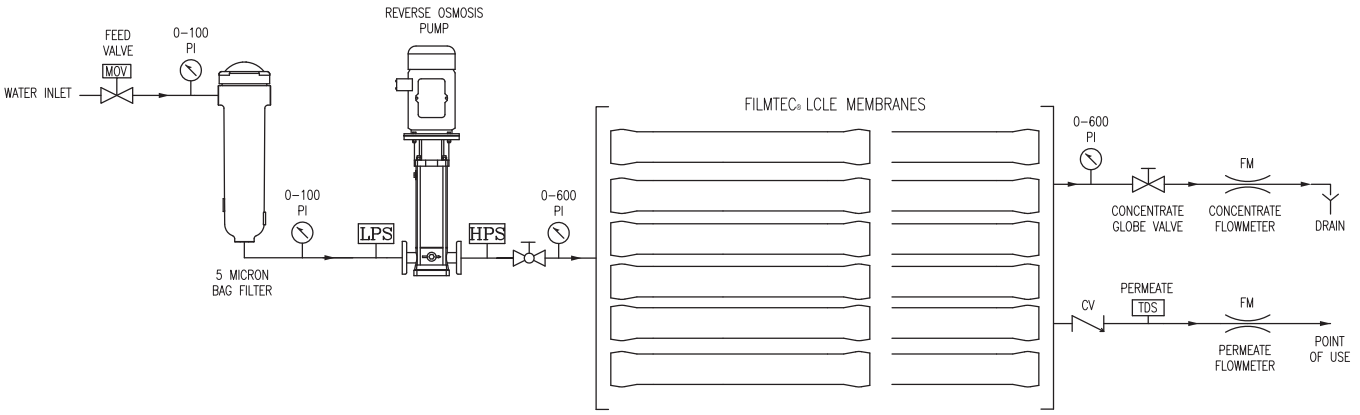






Notes:

1. All dimensions are given in inches.
2. Model M2 – 12240 AXEON model shown.



Array Specifications

Model	Vessel Array	Vessel Size	Vessel Quantity	Membrane Size	Membrane Quantity
M2 – 4240	2:2	4080	4	4040	8
M2 – 6240	2:2:2	4080	6	4040	12
M2 – 8240	3:3:2	4080	8	4040	16
M2 – 10240	3:3:2:2	4080	10	4040	20
M2 – 12240	3:3:2:2:2	4080	12	4040	24

AXEON M2 – Series Reverse Osmosis Systems

Product Specifications					
Models	**M2 – 4240**	**M2 – 6240**	**M2 – 8240**	**M2 – 10240**	**M2 – 12240**
Design					
Configuration	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass
Feedwater Source†	TDS <10,000 ppm	TDS <10,000 ppm	TDS <10,000 ppm	TDS <10,000 ppm	TDS <10,000 ppm
Standard Recovery Rate %	40 – 50	40 – 50	40 – 50	30 – 45	46 – 52
Rejection and Flow Rates†††					
Nominal Salt Rejection %	99.2	99.2	99.2	99.2	99.2
Permeate Flow* (gpm / lpm)	8.30 / 31.41	12.50 / 47.31	16.70 / 63.21	20.80 / 78.74	25.00 / 94.63
Minimum Feed Flow (gpm / lpm)	14.30 / 54.13	18.50 / 70.03	22.70 / 85.93	26.80 / 101.45	31.00 / 117.35
Maximum Feed Flow (gpm / lpm)	28 / 106	28 / 106	42 / 159	42 / 159	42 / 159
Minimum Concentrate Flow (gpm / lpm)	6 / 23	6 / 23	6 / 23	6 / 23	6 / 23
Connections					
Feed FNPT (in)	1.5	1.5	1.5	1.5	1.5
Permeate FNPT (in)	1	1	1	1.5	1.5
Concentrate FNPT (in)	1	1	1	1.5	1.5
CIP FNPT (in)	1	1	1	1	1
Membranes					
Membrane(s) Per Vessel	2	2	2	2	2
Membrane Quantity	8	12	16	20	24
Membrane Size	4040	4040	4040	4040	4040
Vessels					
Vessel Array	2:2	2:2:2	3:3:2	3:3:2:2	3:3:2:2:2
Vessel Quantity	4	6	8	10	12
Pumps					
Pump Type	Multi–Stage	Multi–Stage	Multi–Stage	Multi–Stage	Multi–Stage
Motor HP	7.5	7.5	10	10	15
RPM @ 60 Hz	3450	3450	3450	3450	3450
RPM @ 50 Hz	VFD at 60Hz	VFD at 60Hz	VFD at 60Hz	VFD at 60Hz	VFD at 60Hz
System Electrical					
Standard Voltage + Amp Draw	220V, 60Hz, 3PH, 19.5A**	220V, 60Hz, 3PH, 19A**	220V, 60Hz, 3PH, 26.6A**	220V, 60Hz, 3Ph, 26.6A**	220V, 60Hz, 3Ph, 36A**
High Voltage Service + Amp Draw	220V, 50Hz, 3PH, 22.9A** 460V, 60Hz, 3PH, 9.7A**	220V, 50Hz, 3PH, 22.9A** 460V, 60Hz, 3PH, 9.7A**	220V, 50Hz, 3PH, 30.9A** 460V, 60Hz, 3PH, 12.9A**	220V, 50Hz, 3PH, 30.9A** 460V, 60Hz, 3PH, 12.9A**	220V, 50Hz, 3PH, 45A** 460V, 60Hz, 3PH, 18.5A**
Systems Dimensions					
Approximate Dimensions* L x W x H (in / cm)	31 x 100 x 64 / 787.4 x 2540 x 1626	31 x 100 x 64 / 787.4 x 2540 x 1626	31 x 100 x 64 / 787.4 x 2540 x 1626	31 x 100 x 64 / 787.4 x 2540 x 1626	31 x 100 x 64 / 787.4 x 2540 x 1626
Weight lb. (kg)	1260 / 572	1350 / 611	1460 / 662	1550 / 703	1650 / 748

Test Parameters: 10,000 TDS Filtered (5 – Micron), Dechlorinated, Municipal Feedwater, 65 psi / 4.50 bar Feed Pressure, 350 psi / 24.13 bar Operating Pressure, 77°F / 25°C, Recovery as stated, 7.0 pH. Data taken after 60 minutes of operation.

* Does not include operating space requirements.

** Varies with motor manufacturer.

Operating Limits††

Maximum Feed Temperature (°F / °C)	85 / 29	Maximum Turbidity (NTU)	1
Minimum Feed Temperature (°F / °C)	40 / 4	Maximum Free Chlorine (ppm)	0
Maximum Ambient Temperature (°F / °C)	120 / 49	Maximum TDS (ppm)	10,000
Minimum Ambient Temperature (°F / °C)	40 / 4	Maximum Hardness (gpg)	0
Maximum Feed Pressure (psi / bar)	85 / 6	Maximum pH (Continuous)	11
Minimum Feed Pressure (psi / bar)	45 / 3	Minimum pH (Continuous)	2
Maximum Operating Pressure (psi / bar)	400 / 28	Maximum pH (Cleaning 30 Minutes)	13
Maximum Feed Silt Density Index (SDI)	<3	Minimum pH (Cleaning 30 Minutes)	1

† Low temperatures and feedwater quality, such as high TDS levels will significantly affect the systems production capabilities and performance. Computer projections must be run for individual applications which do not meet or exceed minimum and maximum operating limits for such conditions.

†† System pressure is variable due to water conditions. Permeate flow will increase at a higher temperature and will decrease at a lower temperature.

††† Product flow and maximum recovery rates are based on feedwater conditions as stated above. Do not exceed recommended permeate flow.