Watertiger
Tame Your Water

AXEON

M1 – Series Reverse Osmosis Systems

M1 – Series Reverse Osmosis Systems are designed for overall superior performance, high recovery rates, minimal energy consumption and offer great savings with low maintenance and low operation costs.

The **M1 – Series Reverse Osmosis Systems** range in capacities from 12,000 to 36,000 gallons per day. To achieve higher recovery rates, each base model includes a concentrate recycle loop. These systems can be upgraded with features such as a variable frequency drive, digital instrumentation, a chemical feed system, blending valve and a permeate divert valve.

M1 – 12240
Reverse Osmosis 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 than Standard Membranes
- 1–Year Limited Warranty

Know Higher Standards™

AXEON®
WATER TECHNOLOGIES

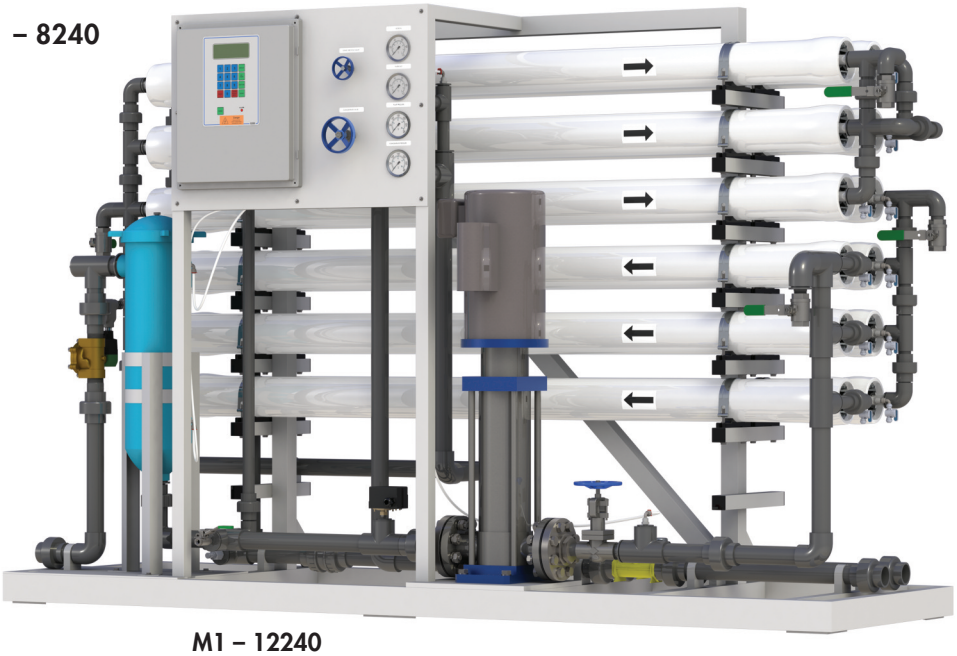
Features

Models: M1 – 4240, M1 – 6240, M1 – 8240

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

Models: M1 – 10240, M1 – 12240

- S – 200 Computer Controller
  - LCD Backlit Display
  - Pre–Treatment Lockout
  - Tank Level Input
  - Low Pressure Monitoring and Alarm
  - Hour Meter
  - Dual TDS Monitoring
  - Feed Flush
  - Digital Flow Meters x 3
  - Rejection Percentage
  - Recovery Percentage



M1 – 12240
Reverse Osmosis System

- AXEON® Permeate and Concentrate Flow Meters*
- AXEON Concentrate Recycle Flow Meter*
- Stainless Steel Concentrate Globe Valve
- AXEON Pre–Filter 0 – 100 psi Panel Mounted Glycerin Filled Gauges
- AXEON Pump Discharge and Concentrate 0 – 300 psi Panel Mounted Glycerin Filled Gauges
- AXEON Bag Filter Housing with Stainless Steel Stand
- AXEON 5 – Micron Filter Bag
- AXEON HF5 – Series Ultra Low Energy Membrane Elements
- AXEON FRP – Series Membrane Housings – 300 psi
- Vertical Multi–Stage Stainless Steel Booster Pump
- Feed Solenoid Valve
- Feed Low Pressure Switch
- Clean–In–Place (CIP) Ports
- Permeate Sample Ports
- White Powder Coated Aluminum Frame
- Wooden Shipping Crate

Options and Upgrades

- S – 150 Expander Board*
- S – 150 Dual TDS Board*
- S – 200 Computer Controller*
- AXEON NF3 – Series Nanofiltration Membrane Elements
- AXEON NF4 – Series Nanofiltration Membrane Elements
- Hanna® BL 982411 ORP Meter*
- Hanna® BL 981411 pH Meter*
- S – 200 ORP Monitoring*
- S – 200 pH Monitoring*
- Chemical Pump Outlet
- Blending Valve
- High Pressure Tank Switch
- Pump Pressure Relief Valve**
- Caster Wheels
- Permeate Divert
- Variable Frequency Drive

AXEON Naming Matrix

M1	12	2	40

M-SERIES MODEL

M1	Tap Water Model

HOUSING QUANTITY DESIGNATION

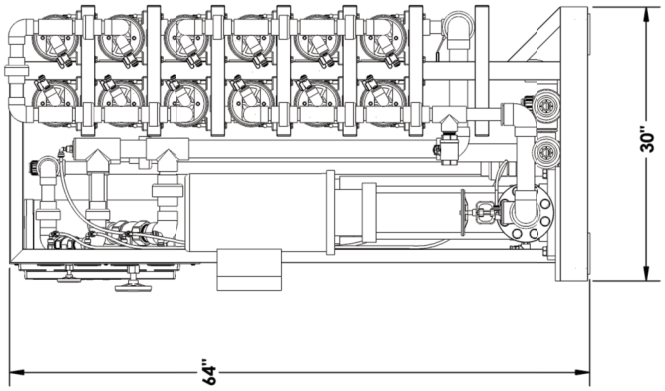
4	4 Vessel
6	6 Vessel
8	8 Vessel
10	10 Vessel
12	12 Vessel

MEMBRANE QUANTITY PER HOUSING ø

2	2 Membranes

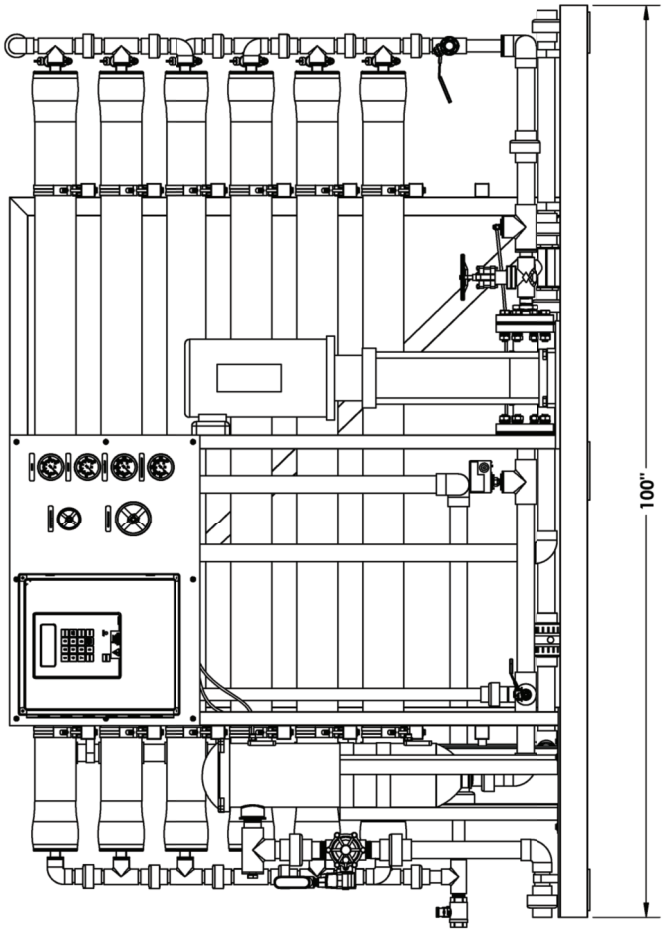
4.0 INCH MEMBRANE DIAMETER

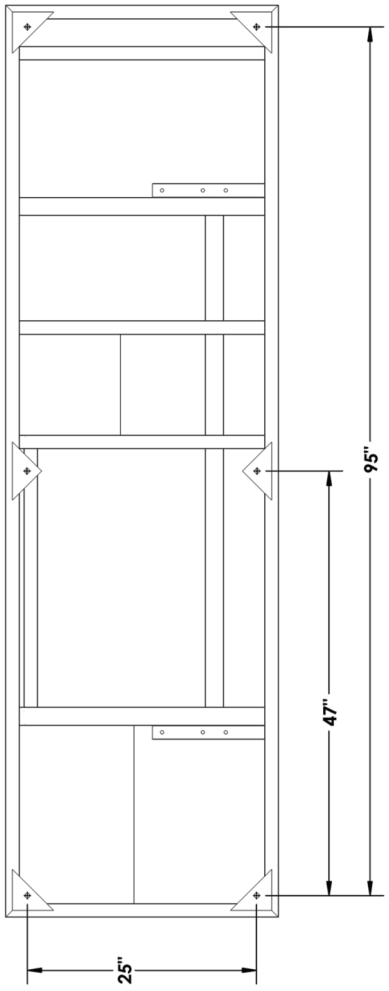
* *Only available on the following models: M1 – 4240, M1 – 6240, M1 – 8240*
** Standard for all 50Hz Systems



Notes:

1. All dimensions are given in inches.
2. Model M1– 12240 AXEON model shown.





Array Specifications

Model	Vessel Array	Vessel Size	Vessel Quantity	Membrane Size	Membrane Quantity
M1 – 4240	2:2	4080	4	4040	8
M1 – 6240	2:2:2	4080	6	4040	12
M1 – 8240	3:3:2	4080	8	4040	16
M1 – 10240	3:3:2:2	4080	10	4040	20
M1 – 12240	3:3:2:2:2	4080	12	4040	24

AXEON M1 – Series Reverse Osmosis Systems

Product Specifications					
Models	**M1 – 4240**	**M1 – 6240**	**M1 – 8240**	**M1 – 10240**	**M1 – 12240**
Design					
Configuration	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass
Feedwater Source†	TDS <2,000 ppm	TDS <2,000 ppm	TDS <2,000 ppm	TDS <2,000 ppm	TDS <2,000 ppm
Standard Recovery Rate %	50 – 75	50 – 75	50 – 75	50 – 75	60 – 75
Rejection and Flow Rates†††					
Nominal Salt Rejection %	98.5	98.5	98.5	98.5	98.5
Permeate Flow (gpm / lpm)	8.30 / 31.42	12.50 / 47.32	16.70 / 63.22	20.80 / 78.74	25.00 / 94.63
Minimum Feed Flow (gpm / lpm)	14.30 / 54.00	18.50 / 70.00	22.70 / 85.93	26.80 / 101.45	31.00 / 117.35
Maximum Feed Flow (gpm / lpm)	28.00 / 106.00	28.00 / 106.00	42.00 / 159.00	42.00 / 159.00	42.00 / 159.00
Minimum Concentrate Flow (gpm / lpm)	6.00 / 22.70	6.00 / 22.70	6.00 / 22.70	6.00 / 22.70	6.00 / 22.70
Connections					
Feed (in)	1.5 FNPT	1.5 FNPT	1.5 FNPT	1.5 FNPT	1.5 FNPT
Permeate (in)	1 FNPT	1 FNPT	1 FNPT	1.5 FNPT	1.5 FNPT
Concentrate (in)	1 FNPT	1 FNPT	1 FNPT	1.5 FNPT	1.5 FNPT
CIP (in)	1 FNPT	1 FNPT	1 FNPT	1 FNPT	1 FNPT
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	3	3	5	7.5	7.5
RPM @ 60 Hz	3450	3450	3450	3450	3450
RPM @ 50 Hz	2900	2900	2900	2900	2900
System Electrical					
Standard Voltage + Amp Draw	220V, 60Hz, 3PH, 9A**	220V, 60Hz, 3PH, 9A**	220V, 60Hz, 3PH, 14.2A**	220V, 60Hz, 3PH, 19.5A**	220V, 60Hz, 3PH, 19.5A**
Voltage Options + Amp Draw	220V, 50Hz, 3PH, 10.6A** 460V, 60Hz, 3PH, 5A**	220V, 50Hz, 3PH, 10.6A** 460V, 60Hz, 3PH, 5A**	220V, 50Hz, 3PH, 16.1A** 460V, 60Hz, 3PH, 7A**	220V, 50Hz, 3PH, 22.9A** 460V, 60Hz, 3PH, 9.7A**	220V, 50Hz, 3PH, 22.9A** 460V, 60Hz, 3PH, 9.7A**
Systems Dimensions					
Approximate Dimensions* L x W x H (in / cm)	31 x 100 x 64 / 78.74 x 254 x 162.56	31 x 100 x 64 / 78.74 x 254 x 162.56	31 x 100 x 64 / 78.74 x 254 x 162.56	31 x 100 x 64 / 78.74 x 254 x 162.56	31 x 100 x 64 / 78.74 x 254 x 162.56
Approximate Weight (lbs / kg)	1060 / 480.81	1150 / 476.27	1260 / 571.53	1350 / 612.35	1450 / 657.71

Test Parameters: 550 TDS Filtered (5 – Micron), Dechlorinated, Municipal Feedwater, 65 psi / 4.50 bar Feed Pressure, 80 psi / 5.5 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 / 5	Maximum Free Chlorine (ppm)	0
Maximum Ambient Temperature (°F / °C)	120 / 49	Maximum TDS (ppm)	2000
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)	200 / 14	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.

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(604) 630-1114