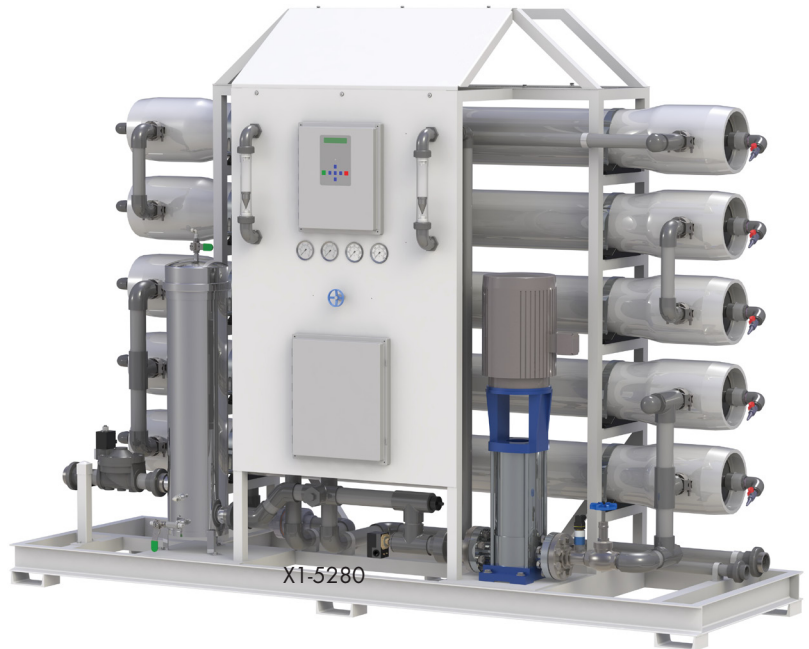


X1-Series Reverse Osmosis Systems

AXEON X1-Series 8" Industrial Reverse Osmosis Systems are designed as a cost-effective solution to the growing demand in industrial water treatment of tap water and well water for a multitude of applications in food & beverage, pharmaceutical, healthcare, microelectronics, power, chemicals, and agriculture.

With models ranging from 25 to 125 gallons per minute (30,000 to 180,000 gallons per day), the smart, clean utilitarian industrial design of the X1-Series allows for convenient installation, user-friendly operation, and ease of maintenance. These skid-mounted, package systems are pre-plumbed and pre-wired on a powder-coated steel frame complete with a preprogrammed computer, TDS probes, and panel-mounted pressure and flow instrumentation allowing for straight forward system monitoring and control.



Featuring robust components selected for enhanced performance, the X1-Series includes a stainless steel vertical multistage pump, stainless steel cartridge filter housing, stainless steel valving, and FRP pressure vessels with stainless steel side ports. The larger models also include VFD motor control of the pump and a motorized feed valve.

The X1-Series systems utilize energy-efficient ultra low energy membranes with 10% greater membrane surface area than standard 8" RO elements thus producing more pure water.

Standard Features

- S-150 Pre-programmed Computer Controller*
- S-200 Pre-programmed Computer Controller w/VFD**
- Permeate and Concentrate Rotometers*
- Permeate and Concentrate Digital Paddle Wheels*
- Pre- and Post-Filter Pressure Gauges
- Pump Pressure and Concentrate Pressure Gauges
- Feed and Permeate TDS
- 8" Ultra Low Energy Elements with 440 SF Membrane
- 300 psig FRP vessels w/Stainless Steel Side Ports
- Multi-Cartridge Stainless Steel Filter Housing
- 5-Micron Sediment Cartridge Filters
- Vertical Stainless Steel Multistage Pump
- Composite Feed Solenoid Valve*
- Motorized Feed Valve**
- Stainless Steel Globe Throttling Valves
- Low and High Pressure Shut-Off Switches
- Powder-Coated Carbon Steel Frame
- Sch80 PVC Piping
- Permeate Sample Ports
- Chemical Feed Port
- Permeate Sample Ports
- Voltage: 220VAC 3PH 60 HZ

Engineered Membrane Solutions

Optional Features

- S-200 Computer Controller***
- VFD***
- Programmable Logic Controller (PLC) w/Touch Screen
- Permeate and Concentrate Digital Paddle Wheels***
- Motorized Feed Valve***
- Concentrate Recycle Loop w/Flow Meter
- Permeate Divert
- Permeate Flush
- pH and/or ORP Sensor
- Chemical Feed System
- Chemical Feed Power Outlet
- Clean-in-Place (CIP) Ports

*Standard on Models X1-2280, X1-3280, X1-4280, X1-5280

**Standard on Models X1-3480, X1-4480, X1-5480, X1-6480

***Option available for Models X1-2280, X1-3280, X1-4280, X1-5280. Standard on larger models.

AXEON's Naming Matrix			
X1	3	2	80
X-SERIES MODEL			
X1 Tap Water Model			
HOUSING QUANTITY DESIGNATION			
2	2 Vessels		
3	3 Vessels		
4	4 Vessels		
5	5 Vessels		
6	6 Vessels		
MEMBRANE QUANTITY PER HOUSING			
2	2 Membranes		
4	4 Membranes		
8.0 INCH MEMBRANE DIAMETER			

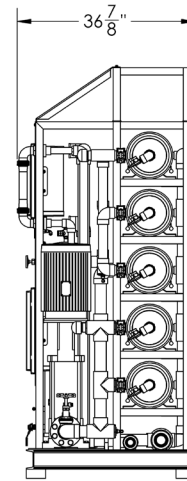
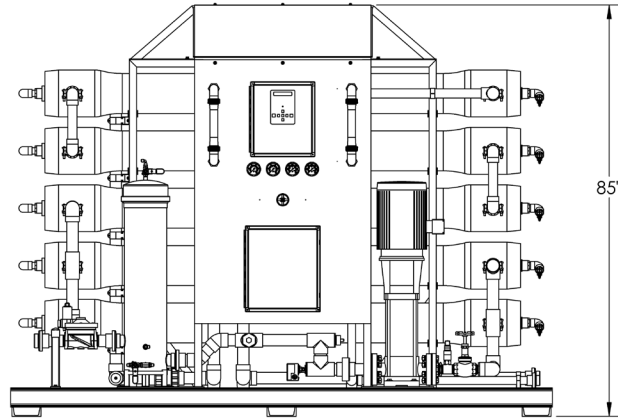
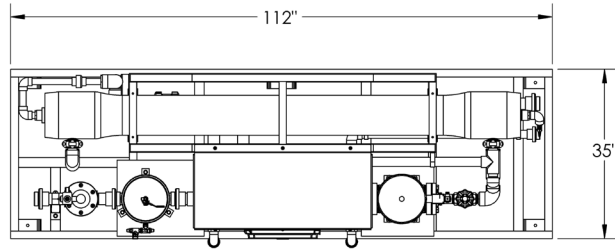
X1-3280
With Optional Concentrate
Recycle Loop



X1-6480

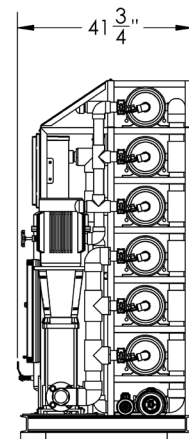
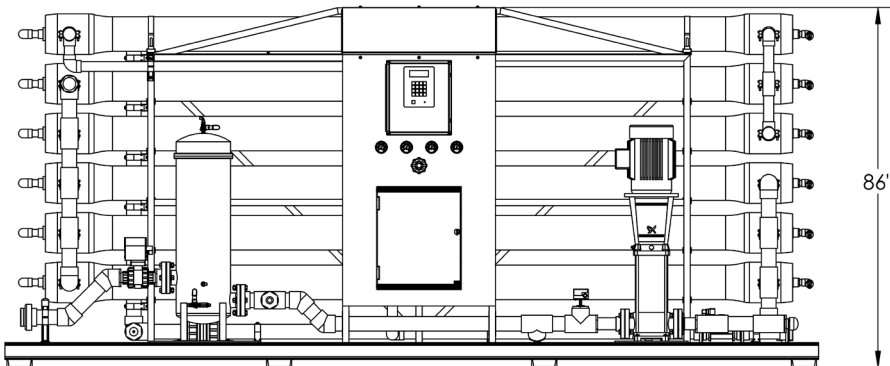
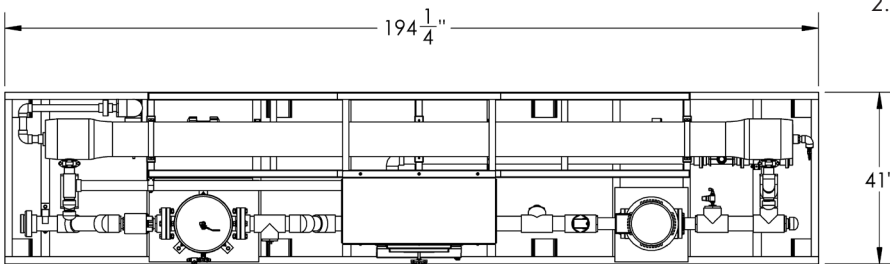
Notes:

1. All dimensions are given in feet
2. Dimensions given for X1-2280 through X1-5280. (X1-5280 pictured)



Notes:

1. All dimensions are given in feet
2. Dimensions given for X1-3480 through X1-6480. (X1-6480 pictured)



AXEON X1-Series Reverse Osmosis Systems

Models	X1-2280	X1-3280	X1-4280	X1-5280	X1-3480	X1-4480	X1-5480	X1-6480
Design								
System Capacity (gpd / m ³ /hr)	28,800 / 131	43,200 / 109	57,600 / 163	75,000 / 218	90,000 / 284	120,000 / 341	150,000 / 568	180,000 / 682
Configuration	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass
Feed Water Source (ppm)	TDS < 2,000	TDS < 2,000	TDS < 2,000	TDS < 2,000	TDS < 2,000	TDS < 2,000	TDS < 2,000	TDS < 2,000
Standard Recovery Rate**	60%	70%	75%	70%	75%	75%	75%	75%
Recovery with Concentrate Recycle**	80%	80%	80%	80%	80%	80%	80%	80%
Rejection and Flow Rates								
Nominal Salt Rejection	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%
Permeate Flow* (gpm / lpm)	20 / 75.6	30 / 113.4	40 / 151.2	50 / 189.0	60 / 226.8	80 / 302.4	100 / 378.0	125 / 472.5
Minimum Concentrate Flow (gpm / lpm)	14 / 53	14 / 53	14 / 53	14 / 53	14 / 53	14 / 53	14 / 53	14 / 53
Connections								
Feed (in)	2 FNPT	2 FNPT	2 FNPT	2 FNPT	3 FNPT	3 FNPT	3 FNPT	3 FNPT
Permeate (in)	1 1/2 FNPT	1 1/2 FNPT	2 FNPT	2 FNPT	2 FNPT	2 FNPT	3 FNPT	3 FNPT
Concentrate (in)	1 1/4 FNPT	1 1/4 FNPT	1 1/4 FNPT	1 1/4 FNPT	1 1/2 FNPT	1 1/2 FNPT	2 FNPT	2 FNPT
Clean-in-Place Port (in)	1 1/2 FNPT	1 1/2 FNPT	1 1/2 FNPT	1 1/2 FNPT	1 1/2 FNPT	1 1/2 FNPT	2 FNPT	2 FNPT
Chemical Feed Port (in)	1/2 NPT	1/2 NPT	1/2 NPT	1/2 NPT	1/2 NPT	1/2 NPT	1/2 NPT	1/2 NPT
Membranes								
Membranes Per Vessel	2	2	2	2	4	4	4	4
Membrane Quantity	4	6	8	10	12	16	20	24
Membrane Size	8040	8040	8040	8040	8040	8040	8040	8040
Vessels								
Vessel Array	1:1	1:1:1	1:1:1:1	2:1:1:1	2:1	2:1:1	3:1:1	3:2:1
Vessel Quantity	2	3	4	5	3	4	5	6
Pumps								
Pump Type	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump	Vertical Multistage Centrifugal Pump
Motor (HP / kw)	10 / 7.5	10 / 7.5	10 / 7.5	10 / 7.5	15 / 11	15 / 11	20 / 15	20 / 15
Electrical								
Standard Voltage***	220V, 60Hz, 3Ph, 19.5A	220V, 60Hz, 3Ph, 19.5A	220V, 60Hz, 3Ph, 19.5A	220V, 60Hz, 3Ph, 37.5A	220V, 60Hz, 3Ph, 37.5A	220V, 60Hz, 3Ph, 37.5A	220V, 60Hz, 3Ph, 46A	220V, 60Hz, 3Ph, 46A
System Dimensions**								
L x W x H (in / cm)	112 x 35 x 85 / 284 x 89 x 216	112 x 35 x 85 / 284 x 89 x 216	112 x 35 x 85 / 284 x 89 x 216	112 x 35 x 85 / 284 x 89 x 216	194 x 41 x 85 / 493 x 104 x 216	194 x 41 x 85 / 493 x 104 x 216	194 x 41 x 85 / 493 x 104 x 216	194 x 41 x 85 / 493 x 104 x 216
Weight (lb / kg)	1850 / 839	2200 / 998	2350 / 1066	2500 / 1134	3900 / 1769	4150 / 1882	4400 / 1996	4600 / 2087

*Product flow and recovery rates are based on feedwater conditions of 2000 ppm TDS at 77oF. Treatment ability of the RO system is dependent on feed water quality. Higher TDS and/or lower temperatures will reduce product flow. An AXEON Applications Engineer can rate the units for these other feed water conditions.

**A concentrate recycle loop is available as an option to increase recovery to 75 to 80% (if suitable to feed water conditions).

***Other voltage options are available.

Operating Limits

Design Temperature (°F / °C)	77 / 25	Maximum Free Chlorine (ppm)	0
Maximum Feed Temperature (°F / °C)	85 / 29	Design TDS (ppm)	2,000
Minimum Feed Temperature (°F / °C) ^	50 / 10	Maximum TDS (ppm) ^	3,000
Maximum Ambient Temperature (°F / °C)	120 / 48.9	Maximum Hardness (gpg) ^^^	0
Minimum Ambient Temperature (°F / °C)	40 / 4.4	Maximum pH - Continuous	11
Maximum Pump Inlet Pressure (psi / bar)	85 / 5.9	Minimum pH - Continuous	3
Minimum Pump Inlet Pressure (psi / bar)	45 / 3.1	Maximum pH - Cleaning 30 Min.	12
Maximum Pump Pressure (psi / bar)	230 / 16	Minimum pH - Cleaning 30 Min.	2
Maximum SDI Rating (SDI) ^^	< 3	Maximum Turbidity (NTU) ^^	Up to 1

^Product flow and recovery rates are based on feedwater conditions of 2000 ppm TDS at 77oF. Treatment ability of the RO system is dependent on feed water quality. Higher TDS and/or lower temperatures will reduce product flow. An AXEON Applications Engineer can rate the units for these other feed water conditions.

^^Appropriate filtration must be installed in order to prevent premature membrane fouling.

^^^Scale prevention measures must be taken to prolong membrane life.



MKTF-373-A

P: 800-320-4074 • W: www.axeonwater.com
 F: 800-609-0829 • E: sales@axeonwater.com
 40980 County Center Drive, Suite 100, Temecula, CA 92591

AXEON is a registered trademark of AXEON Water Technologies.



7/15 ©2015 AXEON Water Technologies