



X – SERIES REVERSE OSMOSIS SYSTEMS

The Watermark
of Distinction™



X1 – Series
Tap Water

X2 – Series
Brackish Water

X3 – Series
Sea Water

COMPANY OVERVIEW

In 30 years, AXEON has made its mark on becoming a world leader and preferred partner for the engineering and manufacturing of innovative membrane and filtration systems and components. With our customers at the center of all that we do, we deliver smart solutions and best quality, distinctive products, that are trusted for their reliability and backed by outstanding support. Our dedicated team of professionals go above and beyond to help our customers grow their business with a competitive advantage in their markets. AXEON. The Watermark of Distinction™

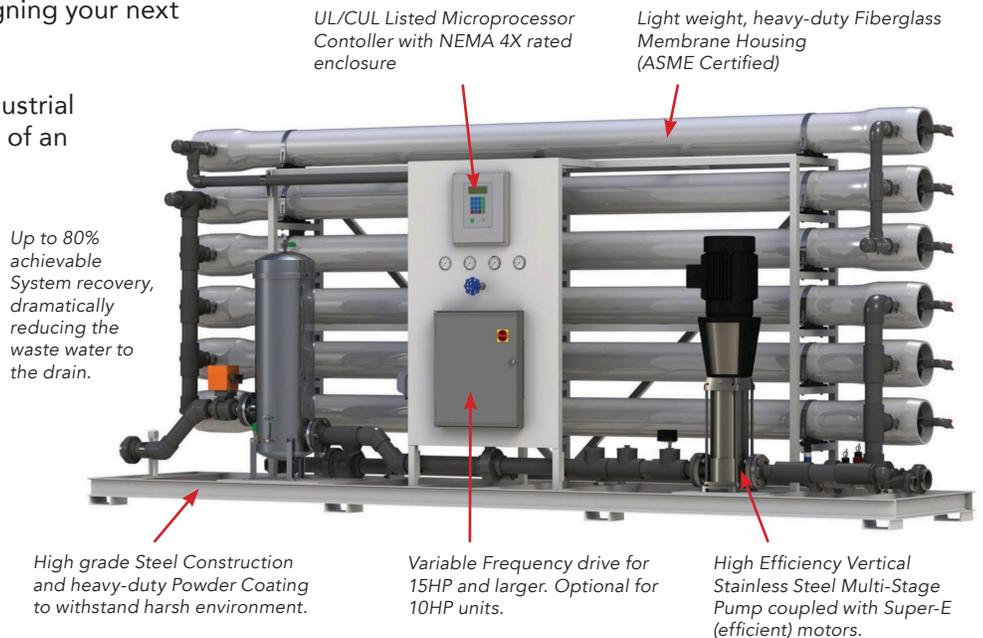
PRODUCT OVERVIEW

AXEON X – Series Membrane Systems utilize reverse osmosis technology to produce high purity water by reducing contaminants such as dissolved minerals, particulates and organic impurities. AXEON X – Series Membrane Systems are engineered using the highest quality components and materials for reliable operation and exceptional performance. Our standard systems are available with product water outputs from 6 – 396 gpm (8,640 – 570,240 gpd).

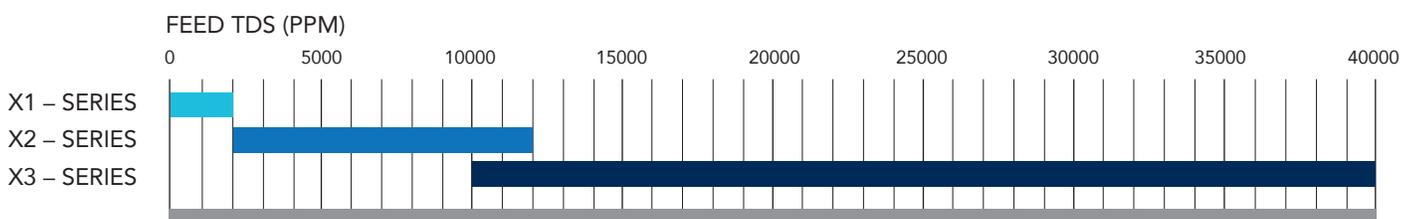
AXEON X – Series Membrane Systems are offered with a variety of options such as pre- and post-treatment equipment, distribution pumps and integrated controls for a complete water treatment solution. AXEON X – Series Membrane Systems are skid mounted, pre-plumbed and pre-wired allowing for quick installation and start up. A variety of membrane types are available including low energy, brackish, sea water and low fouling, nanofiltration and ultrafiltration. Our engineers are available for consultation and to assist you in designing your next water treatment solution.

The following are just a few of the industrial applications that benefit from the use of an industrial membrane system:

- Boiler Feedwater
- Small Municipalities
- Chemical Manufacturing
- Electronics Manufacturing
- Metal Plating and Finishing
- Ink and Dye Production
- Ice Production Equipment
- Food and Beverage Production
- Bottled Water
- Deionization Pre-Treatment



INDUSTRIAL X – SERIES SYSTEMS



FEATURES OVERVIEW

SKID AND FRAME ASSEMBLY

Membrane systems are manufactured in a skid frame design for ease of installation with minimum floorspace requirements. AXEON X – Series Membrane Systems are constructed of welded structural carbon steel tubing and finished with corrosion resistant epoxy powder coating. Stainless steel fasteners and hardware is standard for added corrosion resistance.

CARTRIDGE PRE-FILTRATION HOUSING

Integrated prefiltration is standard on all systems.

SYSTEM PRESSURE PUMP

Standard pressure pumps are constructed with 304 / 316 stainless steel housings, as well as impeller and diffuser stage assemblies. Pumps are equipped with TEFC motors and wired for 230 / 460 VAC voltage, and rated for full load, continuous duty.

MEMBRANE HOUSINGS

All systems feature membrane housings constructed of fiberglass reinforced polyester (FRP) with 316 stainless steel side–entry feed and concentrate ports. Standard housings have a white polyurethane finish and are NSF61 rated. ASME code–stamping is available on all membrane housings.

INSTRUMENTATION

All systems feature a complete instrumentation package for optimal performance monitoring. Each of the following instruments are panel–mounted and pre–wired:

- Pre– and Post–Cartridge Filter Pressure Gauges
- Pump Concentrate Pressure Gauges
- Reverse Osmosis Inlet Pump Discharge Pressure Switches
- Permeate and Concentrate Electronic Flow Sensors or Rotameters
- Permeate and Feed Conductivity Monitor
- Temperature Sensor
- Pump Run Hour Meter

MEMBRANE ELEMENTS

Standard reverse osmosis membrane elements are high rejection, thin–film composite (TFC) type, in a spiral–wound configuration. Membrane elements are tested and carry a one–year warranty against defects in quality and workmanship.

SYSTEM CONTROLS

Operation of the systems are automatically controlled through a comprehensive microprocessor controller housed in a NEMA – 4X industrial electrical enclosure. The control system also includes a pre–wired motor

starter, operator switches, push–buttons, and status alarm indicator lights. Standard systems include the following isolated alarm conditions:

- Low Inlet Pressure
- High Pump Discharge Pressure
- High TDS

SYSTEM PIPING AND VALVES

All membrane systems are completely pre–plumbed and installation ready. Sch80 PVC is used for all piping and valves under 75 psig operating pressure. Higher pressure piping and valves are constructed of 316 stainless steel for the X2 and X3. The following valves are provided as standard for accurate flow and pressure control and convenient operation:

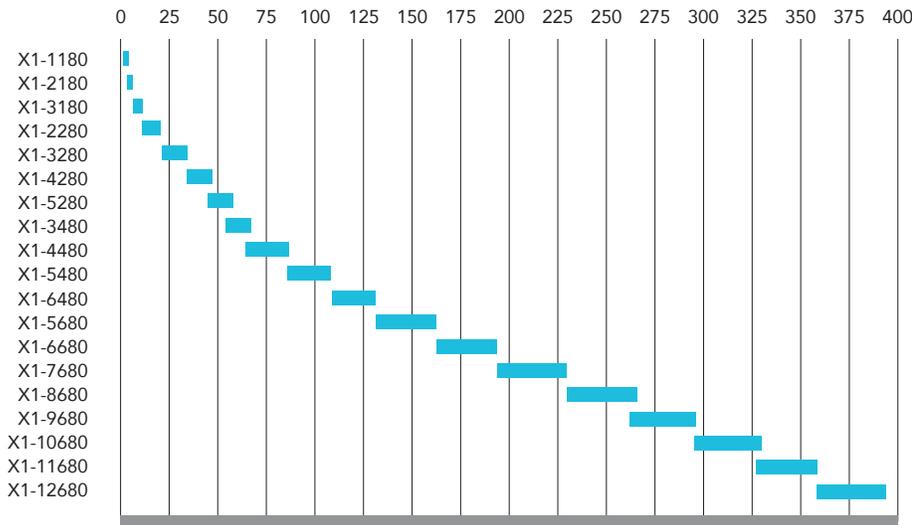
- Automatic Inlet Valve to Prevent Water Flow through the System During Shutdown
- Pressure Pump Discharge Throttle Valve
- Reverse Osmosis Concentrate Valve
- Optional Recirculation Valve
- Automatic System Flush Valve for Prevention of Membrane Fouling and Scale Formation
- Inlet and Sampling Valves
- Individual Membrane Housing Product Sampling Valves
- CIP Ports for Use with Membrane Cleaning System

AXEON NAMING MATRIX

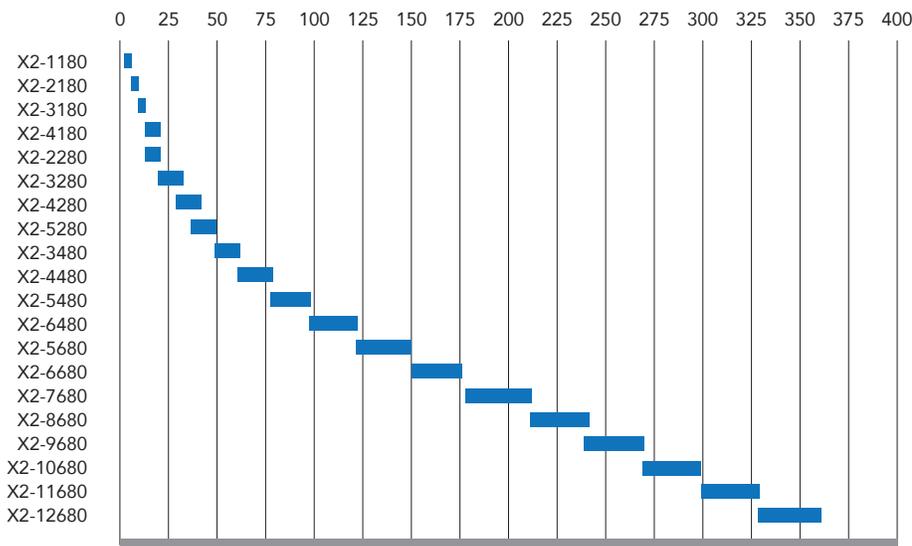
	X1	5	2	80
X – SERIES MODEL				
X1	Tap Water Model			
X2	Brackish Water Model			
X3	Sea Water Model			
HOUSING QUANTITY DESIGNATION				
1	1 Vessel			
2	2 Vessels			
3	3 Vessels			
4	4 Vessels			
5	5 Vessels			
6	6 Vessels			
7	7 Vessels			
8	8 Vessels			
9	9 Vessels			
10	10 Vessels			
11	12 Vessels			
12	12 Vessels			
MEMBRANE QUANTITY PER HOUSING				
1	1 Membrane			
2	2 Membranes			
3	4 Membranes			
4	4 Membranes			
6	6 Membranes			
MEMBRANE SIZE				
80	8.0 Inch Membrane			

AXEON X – SERIES PERMEATE FLOW RATE CHARTS

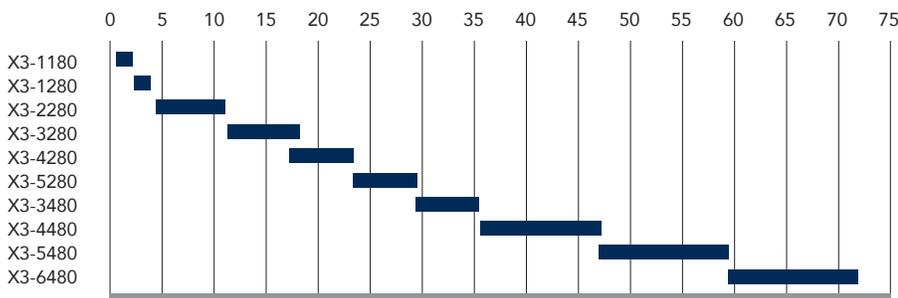
X1 PERMEATE FLOW RATE (GPM)



X2 PERMEATE FLOW RATE (GPM)



X3 PERMEATE FLOW RATE (GPM)



SYSTEMS	PERMEATE FLOW RATE	
	GPM	GPD
X1 – SERIES		
X1 – 1180	6	8,640
X1 – 2180	12	17,280
X1 – 3180	18	25,920
X1 – 2280	22	31,680
X1 – 3280	33	47,520
X1 – 4280	44	63,360
X1 – 5280	55	79,200
X1 – 3480	66	95,040
X1 – 4480	88	126,720
X1 – 5480	110	158,400
X1 – 6480	132	190,080
X1 – 5680	165	237,600
X1 – 6680	198	285,120
X1 – 7680	231	332,640
X1 – 8680	264	380,160
X1 – 9680	297	427,680
X1-10680	330	475,200
X1-11680	363	522,720
X1-12680	396	570,240
X2 – SERIES		
X2 – 1180	5	7,200
X2 – 2180	10	14,400
X2 – 3180	15	21,600
X2 – 4180	20	28,800
X2 – 2280	20	28,800
X2 – 3280	30	43,200
X2 – 4280	40	57,600
X2 – 5280	50	72,000
X2 – 3480	60	86,400
X2 – 4480	80	115,200
X2 – 5480	100	144,000
X2 – 6480	120	172,800
X2 – 5680	150	216,000
X2 – 6680	180	259,200
X2 – 7680	210	302,400
X2 – 8680	240	345,600
X2 – 9680	270	388,800
X2 – 10680	300	432,000
X2 – 11680	330	475,200
X2 – 12680	360	518,400
X3 – SERIES		
X3 – 1180	3	4,320
X3 – 2180	6	8,640
X3 – 2280	12	17,280
X3 – 3280	18	25,920
X3 – 4280	24	34,560
X3 – 5280	30	43,200
X3 – 3480	36	51,840
X3 – 4480	48	69,120
X3 – 5480	60	86,400
X3 – 6480	72	103,680