

# XE3-4040 RO MEMBRANES

**AXEON® XE3-4040 RO Membranes** utilize Variable Flow Technology (VFT). VFT gives RO system equipment operators and manufacturers the ability to configure and design a variety of RO systems at their desired operating pressure and flow rates while maximizing salt rejection performance.



## SPECIFICATIONS

Pressure Tested at (psi)	Permeate Flow (GPD)	Nominal Salt Rejection (%)
70	2750	97.5
80	3000	97.7
90	3250	97.9
100	3500	98.0

## ELEMENT DIMENSIONS & OPERATING LIMITS

Maximum Operating Pressure (psi / MPa)	600 / 4.14
Operating Temperature Range (°F / °C)	32-113 / 0-45
Maximum Feed Silt Density Index (SDI <sub>15</sub> )	5.0
Free Chlorine Tolerance (mg/L)	0
pH Range—Continuous Operation	2-11
pH Range—Short-Term Cleaning	1-13
Maximum Element Pressure Drop (psi / MPa)	15 / 0.1

## STANDARD TEST CONDITIONS<sup>A</sup>

Solution (mg/L)	Temperature (°F / °C)	pH	Max Operating Pressure (psi / MPa)	Recovery (%)
500 NaCl	77 / 25	7.5-8.0	100 / 0.69	15

A. Individual flow rate may vary ±20%

## ELEMENT DIMENSIONS AND OPERATING LIMITS

Length (in / mm)	Diameter (in / mm)	Permeate Tube Inner Diameter (in / mm)	Permeate Tube Extension Length (in / mm)
40 / 1016	3.9 / 99	0.75 / 19.1	1.04 / 26.5

Proper start-up of reverse osmosis water treatment systems is essential to prepare the membranes for operating service and to prevent membrane damage due to overfeeding or hydraulic shock. Before initiating system start-up procedures, membrane pretreatment, loading of the membrane elements, instrument calibration and other system checks should be completed. Avoid any abrupt pressure or cross-flow variations on the spiral elements during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. During start-up, a gradual change from a standstill to operating state is recommended as follows:

- Feed pressure should be increased gradually over a 30-60 second time frame.
- Cross-flow velocity at set operating point should be achieved gradually over 15-20 seconds.
- Permeate obtained from first hour of operation should be discarded.
- Maximum pressure drop across an entire pressure vessel (housing) is 15 psi / 1.03 bar.
- Avoid static permeate-side backpressure at all times.

Under certain conditions, the presence of free chlorine, chloramines and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, the manufacturer recommends removing all oxidizing agents by pretreatment prior to membrane exposure. Please contact the manufacturer or your supplier for more information.

Do not use this initial permeate for drinking water or food preparation. Keep elements moist at all times after initial wetting. To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution. Rinse out the preservative before use. For membrane warranty details, please contact the manufacturer or your supplier for more information.

If operating limits and guidelines given in this product specification sheet are not strictly followed, the warranty will be null and void. The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements. Use of any such chemicals or lubricants will void the warranty. These membranes may be subject to drinking water application restrictions in some countries; please check the application status before use and sale. The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

No freedom from infringement of any patent owned by the manufacturer or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, customer is responsible for determining whether products and the information in this document are appropriate for customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. The claims made may not have been approved for use in all countries. The manufacturer assumes no obligation or liability for the information in this document. AXEON reserves the right to update this information periodically for the purposes of quality and accuracy. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

## APPLICATIONS

- Water treatment
- Food service
- Beverages
- Medical
- Hospitality
- Manufacturing
- Hydroponics
- Car washing
- Window washing

## BENEFITS

- Cold water capabilities
- Line pressure operation
- Less inventory requirements
- Substantial cost savings

