



Customer Satisfaction Membrane

CSM RO MEMBRANE, The approved **Reverse Osmosis Membrane** in the world.

CSM HOUSEHOLD RO MEMBRANE

High performance household membrane (Up to 1.8 inch diameter elements)

Product Specifications



These model names are tested and certified under NSF standard 58, material requirement only (excluding RE1810-30)

Model name	Permeate Flow rate gpd (L/day)	Salt Rejection %
RE1810-30	30 (114)	96.0
RE1810-50	50 (189)	96.0
RE1812-35	35 (132)	96.0
RE1812-50	50 (189)	96.0
RE1812-60	60 (227)	96.0
RE1812-80	80 (303)	96.0

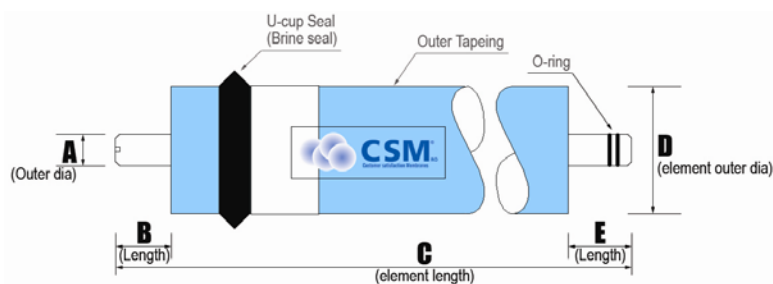
- The stated performance is initial data taken after 30 minutes of operation based on the following conditions; 250 mg/L NaCl solution at 60 psig applied pressure, 15 % recovery, 77 °F (25 °C) and pH 6.5-7.0.
- Dry type elements are vacuum leak tested using the *Sandiego Protocol* so that the performance shall satisfy their specifications.
- Permeate flow rate is based on standard test conditions and may vary depending on feed water quality. Individual element's permeate flow may vary within 15%.
- All wet type elements are vacuum sealed in a polyethylene bag containing 1.0 % SBS (Sodium bisulfite) solution. All dry type elements are sealed in a polyethylene bag without vacuum.

Product Description

Membrane Type : Thin-film Composite
 Membrane Material : PA (Polyamide)
 Membrane Surface Charge : Negative
 Element Configuration : Spiral-Wound, Tape wrapping

Product Dimensions

Model name	A (inch)	B (inch)	C (inch)	D (inch)	E (inch)
RE1810-30	0.67	0.55	10.08	1.77	0.98
RE1810-50	0.67	0.55	10.08	1.77	0.98
RE1812-35	0.67	0.87	11.73	1.77	0.87
RE1812-50	0.67	0.87	11.73	1.77	0.87
RE1812-60	0.67	0.87	11.73	1.77	0.87
RE1812-80	0.67	0.87	11.73	1.77	0.87



1. Outer feature may vary as design revisions take place.

Features

- CSM Household RO membrane has high permeability.
- CSM Household RO membrane can remove most of harmful substances such as Carcinogen, THMs (Trihalomethanes), heavy metal ions, bacteria and virus in drinking water.



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IMPORTANT NOTICE

Elements contain preservative solution, therefore the permeate from the first hour of operation should be discarded.

If the operating conditions in this document are not followed, no warranty of the element is honored.

Conditions for Handling CSM in general

- Customers must keep the element boxes dry at room temperature to prevent them from freezing and damages from heat. If the polyethylene bag is broken, a new protective solution has to be added to the RO membrane element and the element has to be repackaged air-tight to prevent from biological growth.
- Keep elements moist at all times after initial wetting
- Permeate water obtained from first hour of operation should be discarded in order to flush the protective solution in the elements.
- CSM elements should be immersed in a protective solution during storage, shipping or system shutdowns to prevent biological growth and freeze damage. The standard storage solution contains one (1) weight percent sodium bisulfite or sodium metabisulfite (food grade). For short term storage of one week, one (1) weight percent sodium metabisulfite solution is adequate for inhibiting biological growth.
- The customer is fully responsible for the effects of incompatible chemicals on elements. Their use will void the element limited warranty.

Application Data

Operating Limits

- | | |
|------------------------------------|---------------------------------|
| • Max. Operating pressure | 125 psi (0.86 MPa) |
| • Max. Feed flow rate | 2 gpm (0.45 m ³ /hr) |
| • Max. Operating temperature | 113 °F (45 °C) |
| • Operating pH range | 3.0 ~ 10.0 |
| • Max. Turbidity | 1.0 NTU |
| • Max. SDI (15 min) | 5.0 |
| • Max. Free Chlorine concentration | 0.1 mg/L |



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