

The Lewabrane® spiral wound reverse osmosis (RO) element RO B440 ULP has a highly permeable composite polyamide (PA) membrane. The element is designed for low salinity water operating at ultra low pressure (ULP). The high permeability in combination with the high membrane area are the preferred solution if a compact system with a low energy demand is requested. The elements are characterized by

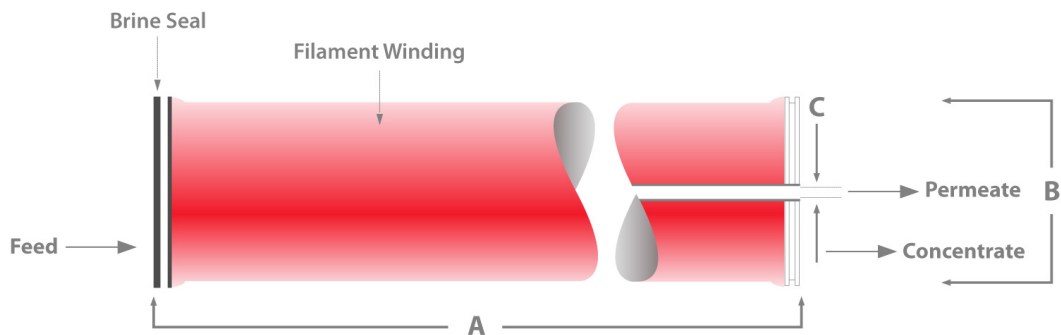
- High rejection of organic compounds
- Low energy demand
- Highest productivity of all Lewabrane RO types

General Information

	Metric units	US units
Permeate flow, ave.	42.6 m ³ /d	11300 gpd
Salt rejection, ave.	99.5 %	99.5 %
Membrane area	40.9 m ²	440 ft ²
Feed spacer thickness	0.7 mm	28 mil

Minimum element performance: 34.1 m³/d (9000 gpd) permeate flow and 99.0% salt rejection.
Element test conditions: applied pressure 7.6 bar (110 psi), NaCl concentration 500 mg/l, temperature 25 °C (77 °F), pH 7 and recovery rate 15%.

Element Dimension



	A (Length)	B (Diameter)	C (ID)
Dimension inches (mm)	40 (1016)	7.9 (201)	1.125 (29)

Application Data

	Metric units	US units
Operating pressure, max.	41 bar	600 psi
Operating temperature, max.	45 °C	113 °F
Feed water SDI, max.	5	5
pH range during operating	2 - 11	2 - 11
pH range during cleaning	1 - 12	1 - 12
Pressure drop per element, max.	1.0 bar	15 psi
Pressure drop per vessel, max.	3.5 bar	50 psi
Chlorine concentration, max.	0.1 ppm	0.1 ppm

Additional Information

- Treat RO Elements with care; do not drop the element.
- Each RO Element is wet tested, preserved in a 1% weight sodium bisulfite solution, and vacuum packed in oxygen barrier bags.
- During storage, avoid freezing and direct sunlight. The temperature should be below 35 °C (95 °F).

After Installation

- Keep the RO Elements wet, and use a compatible preservative for storage duration longer than 7 days.
- During the initial start up, discharge the first permeate to drain for 30 min.
- Permeate back pressure should not exceed feed pressure at any time.
- The RO Elements shall be maintained in a clean condition, unfouled by particulate matter or precipitates or biological growth.
- Consider cleaning, if the pressure drop increases by 20% or water permeability decreases by 10%. Use only chemicals which are compatible with the membrane.
- For additional information consult the Lewabrane® technical information available at www.lpt.lanxess.com.

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This document contains important information and must be read in its entirety.

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