

## Ospura Industrial RO Elements

### Introduction:

Low Pressure, High Productivity:  
4" Spiral Wound Elements for Brackish Water

Ospura reverse osmosis (RO) 4" elements are some of the finest products in the industry. The state of the art coating line coupled with advanced membrane technology yielded products with highest quality and most stable performance. Ospura elements are uniquely engineered to have a high level of salt rejection with minimum compromise in water flux.

### Description:

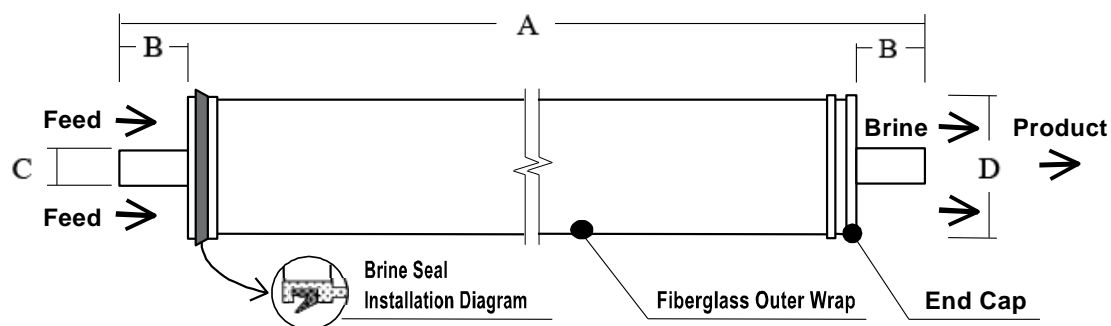
Membrane material: Polyamide thin film composite  
Spirally wound element  
Epoxy-based FRP overwrap  
Low or ultra low pressure application for brackish water treatment

### Specifications:

Model	Permeate Flow GPD(m3/day)	NaCl Rejection	Feed spacer mil(mm)	Test Conditions
<b>BW-4040</b>	2400(9.1)	99.5%	28(0.7)	225psi/2000ppm
<b>ULP-4040</b>	2500(9.5)	99.0%	28(0.7)	150psi/2000ppm

1. All performance data are collected at 25°C(77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

### Element Dimension:



Product	Dimensions – Inches (mm)			
	A	B	C	D
<b>BW- 4040</b>	40.0 (1016)	1.05 (26.7)	0.75 (19)	3.9 (99)
<b>ULP- 4040</b>	40.0 (1016)	1.05 (26.7)	0.75 (19)	3.9 (99)

\* 1 inch=25.4 mm

**Operating Limits  
for Design:**

Maximum Operating Temperature.....	45°C (113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop(single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	3-11
pH Range for Cleaning.....	1.5-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5

**Important  
Operation Notes:**

- It is critical to follow approved start-up procedure to prevent membrane damage due to overfeeding or hydraulic shock. Before initiating system, loading of the RO elements, instrument calibration, membrane pretreatment and other system checks should be conducted.
- Minimize any pressure shock or cross-flow fluctuation on the spiral elements at all times. During start-up, a gradual, incremental change from a standstill to operating state is recommended.
- Maximum pressure drop across an entire pressure vessel (housing) is 50 psi (3.4 bar).
- No static pressure should ever be built up on permeate side.
- Be sure no static permeate-side back pressure build-up.
- Keep elements moist at all times after initial wetting.
- If operating limits and guidelines are not followed, the Limited Warranty will be void.
- In case of prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution to prevent bacteria growth.
- Permeate collected from first hour of operation should be discarded.
- It is customer's responsibility to make sure that the chemicals and lubricants do not have detrimental effects on RO elements.

