

## 8" Fouling Resistant Spiral Wound Elements

### Introduction:

Low Pressure, High Productivity:  
8" Fouling Resistant Spiral Wound Elements

Ospura reverse osmosis (RO) 8" 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. The FR type membrane surface is more hydrophilic due to the special treatment. It is specially designed for water treatment against biological and organic fouling. With build-in FR properties, this model of elements allows for effective cleaning, renewing active membrane surface thus extending the service life in the tough water conditions.

### Description:

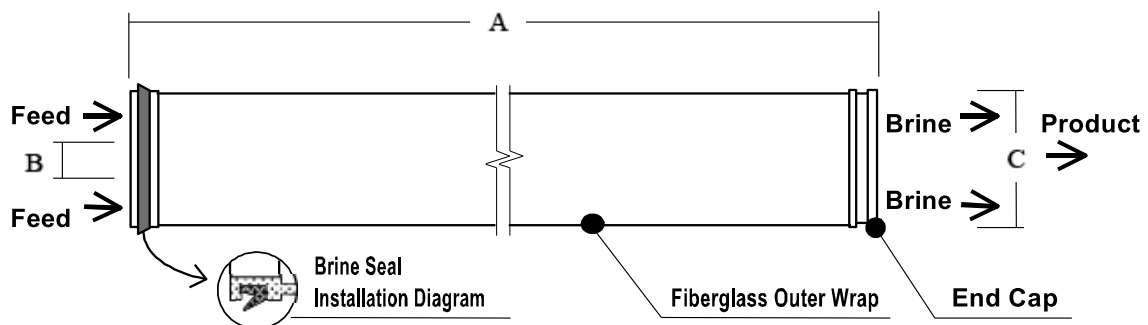
Membrane material: Polyamide thin film composite  
Spirally wound element  
Epoxy-based FRP overwrap  
Used in water treatment of brackish water, surface water, groundwater, municipal water with biological and organic fouling propensity.

### Specifications:

Model	Permeate Flow GPD(m <sup>3</sup> /day)	Active Membrane Area ft <sup>2</sup> (m <sup>2</sup> )	Stabilized Salt Rejection	Feed spacer mil(mm)	Test Conditions
FR-8040-400	10500(40)	400(37)	99.5%	28(0.7)	225psi/2000ppm NaCl
FR-8040-370(34)	9700(37)	370(34)	99.5%	34(0.85)	225psi/2000ppm NaCl

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

### Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
FR-8040-400	40.0 (1016)	1.125 (29)	7.9 (201)
FR-8040-370	40.0 (1016)	1.125 (29)	7.9 (201)

\* 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.
- 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.

