MODEL SU-710 Small system RO element for brackish water

Membrane Type	Cross Linked Fully Aromatic Polyamide Composite
Element Configuration	Spiral Wound

Performance Specification

	NaCl Solution
Salt Rejection [1]	**99.4 %**[2]
Product Flow Rate [1]	**6.5m³ day** (1700 gpd)[3]

Notes :

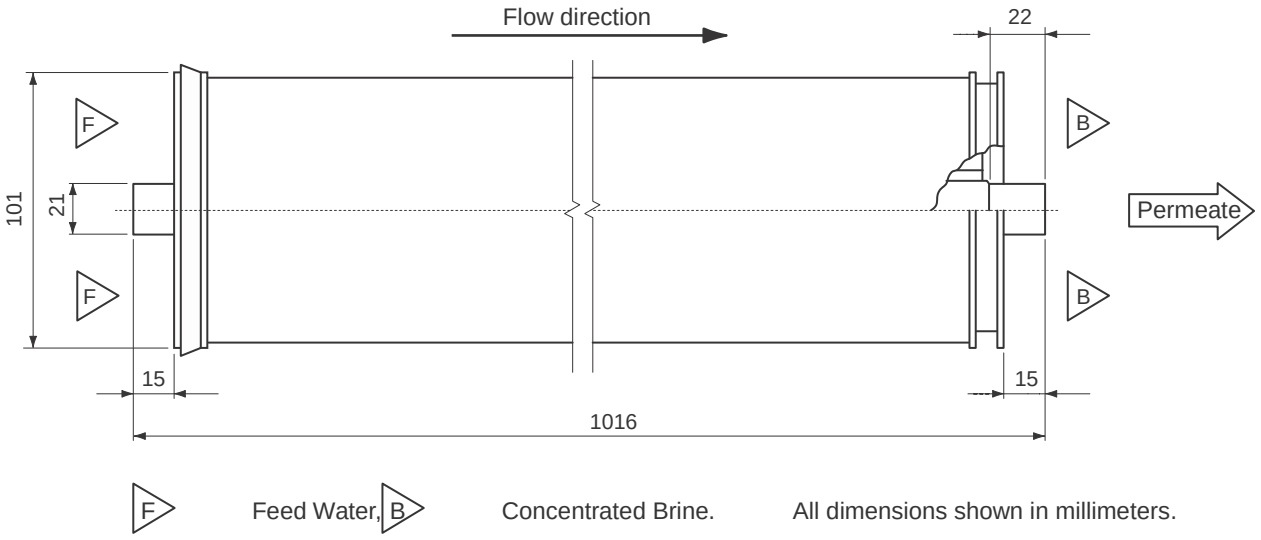
1. Test Conditions

Feed Water Pressure	1.5	MPa	(220 psi)
Feed Water Temperature	25	C	(77 F)
Feed Water Concentration	1500	mg/ℓ	as NaCl
Brine Flow Rate	20	ℓ/min.	(5.3 gpm)
Feed Water pH	6.5		

2. 99.0 % minimum*
3. 5.5 m³/day (1450 gpd) minimum*

*For any single element

Dimensions



F Feed Water, B Concentrated Brine. All dimensions shown in millimeters.

Membrane Surface Area[5] **Nominal 7m² (75 ft²)**

Notes:5 The membranes area stated above is a nominal value and is not a guaranteed specification.

Design Conditions

	Recommended [1]
Feed Water Pressure [2,3]	**2.0 MPa** (290 psi)
Feed Water Temperature [4]	**35 C** (95 F)
Feed Water Turbidity (SDI) [2,5]	**4**
Feed Water pH Range, Continuous Operation [6]	**3 9**
Feed Water pH Range, Chemical Cleaning [7]	**2 10**
Feed Flow Rate per Vessel	**50 ℓ /min.** (13 gpm)
Brine Flow Rate per Vessel [9]	**10 ℓ /min.** (2.6 gpm)
Brine/Permeate Flow Ratio [8,9]	**6**
Pressure Drop (per Element) [10]	**0.10 MPa** (14 psi)
Pressure Drop (per Vessel) [10]	**0.20 MPa** (29 psi)

Notes:

1. The recommended design range is operational and design conditions under not so much fouling and scaling. If the SU-series element are operated outside of the recommended design range, the effective membrane life may be reduced. Refer to the Toray technical bulletin, or contact Toray or local distributor for design guidelines and further information.
2. High flux operation (operation under high permeate flow rate per single element) on feed water turbidity greater than 3 or 4 SDI generally results in frequent cleaning requirements. Operating pressure should be selected to maintain the flux rate, or permeate flow rate per single element.
3. Maximum Feed Water Pressure 4.1 MPa (600 psi)
4. Maximum Feed Water Temperature 45 C (113 F)
5. SDI = Silt Density Index measured according to ASTM D4189.
6. Feed and brine water must meet these range.
7. Cleaning chemicals shall be followed to Toray's technical bulletins.
8. Ratio at last element.
9. This figure is reducible when there is less possibility of fouling and scaling.
10. Element(s) must be cleaned when pressure drop increases up to 1.5 times of initial value.

* Sterilization must follow guidances in Toray's technical bulletin.

We accept no responsibility for results obtained by the application of this information or the safety or suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes.^