

## MODEL SUL- G10

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

### Performance Specification

#### NaCl Solution

Salt Rejection <sup>1</sup>

99.5 % <sup>2</sup>

Product Flow Rate <sup>1</sup>

6.5 m<sup>3</sup>/ day ( 1720 gpd )<sup>3</sup>

#### Notes:

1. Test conditions

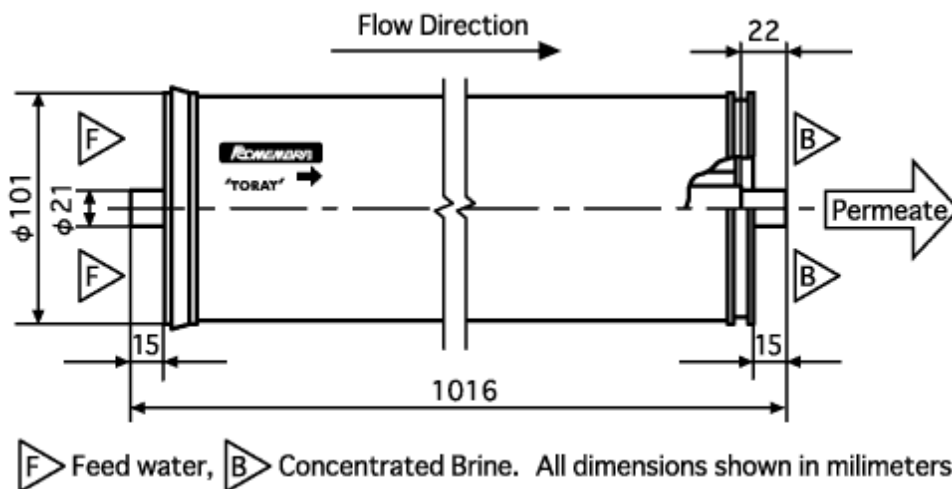
Pressure	0.75 MPa ( 110psi )
Temperature	25° C ( 77° F)
Feed Concentration	500mg/l as NaCl
Brine Flow Rate	20 l / min. ( 5.3gpm)
Feed pH	6.5

2. 99% minimum\*

3. 5.5m<sup>3</sup>/ day ( 1450 gpd ) minimum\*

\*For any single element

#### Dimensions



Membrane Surface Area

Nominal 7m<sup>2</sup>( 75ft )<sup>4</sup>

Notes:4 The membranes area stated above is a nominal value and is not a quaranteed specification.

## **Design Conditions**

	<b>Recommended<sup>1</sup></b>
Feed Water Pressure <sup>2,3</sup>	<b>&lt; 1.0 MPa ( 150 psi)</b>
Feed Water Temperature <sup>4</sup>	<b>&lt; 35°C (95°F)</b>
Feed Water Turbidity ( SDI ) <sup>2,5</sup>	<b>&lt; 4</b>
pH Range, Continuous Operation <sup>6</sup>	<b>3 – 9</b>
pH Range, Chemical Cleaning <sup>7</sup>	<b>2 – 11</b>
Feed Flow Rate per Vessel	<b>&lt; 50 l/min. ( 13 gpm )</b>
Brine Flow Rate per Vessel <sup>9</sup>	<b>&gt; 10 l/min. ( 2.6 gpm)</b>
Brine / Permeate Flow Ratio <sup>8,9</sup>	<b>&gt; 6</b>
Pressure Drop (per Element) <sup>10</sup>	<b>&lt; 0.1 MPa (14 psi)</b>
Pressure Drop (per Vessel) <sup>10</sup>	<b>&lt; 0.2 MPa ( 29 psi )</b>

### **Notes:**

1. The recommended design range means 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 guideline and further information.
2. High flux operation ( operation under high permeate flow rate per single element ) on feedwater 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 Operating Pressure 4.1MPa (600 psi )
4. Maximum Feedwater Temperature 40 ( 104 °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 Flow ratio of brine to permeate of single element.
9. This figure may be reduced 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 guidance is 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.