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MODEL SU-620F

Membrane Type	Cross Linked Polyamide Composite
Element Configuration	Spiral Wound

Performance Specification

	NaCl Solution	$MgSO_4$ Solution
Salt Rejection [1,2]	**55.0 %** [3]	**99.0 %**[4]
Product Flow Rate [1,2]	**22.0 m^3/day** (5'810 gpd)	**18.0 m^3/day** (4'760 gpd)[6]

Notes:

[1] Test Conditions

Pressure	3.5 kg/cm^2	(50 psi)
Temperature	25 °C	(77 °F)
Feed Concentration	500 ppm	as NaCl or $MgSO_4$
Brine Flow Rate	80 l/min	(21.1 gpm)
Feed pH	6.5	

[2] Average value for 100 elements after 1 hour operation

[3] 45.0% minimum *

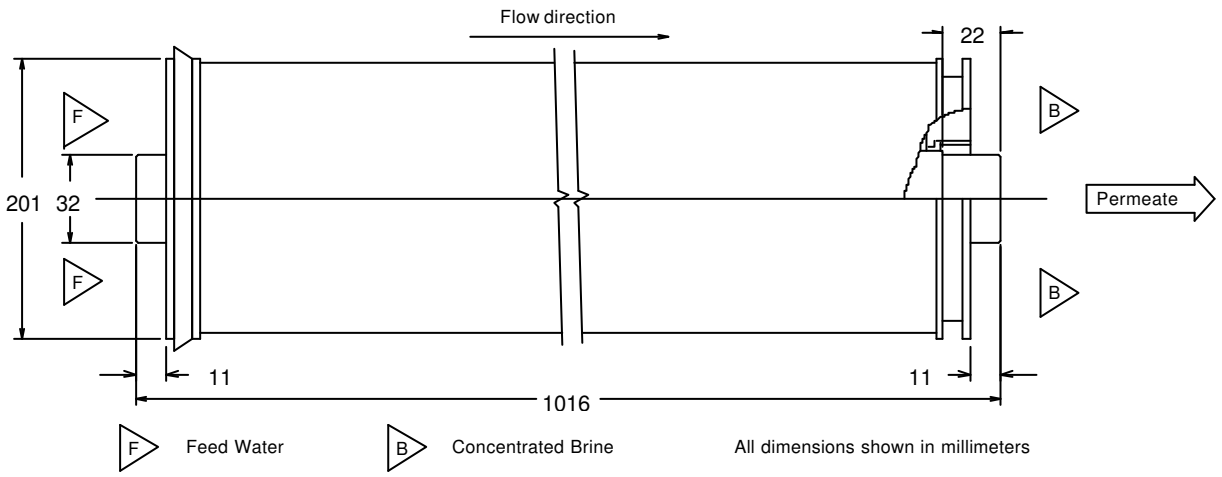
[4] 98.0% minimum

[4] 18 m^3/day (4'760 gpd) minimum *

[6] 16.0 m^3/day (4'230 gpd) minimum

* For any single element

Dimensions:



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Design Conditions

Recommended [1]

Operating Pressure [2,3]	< **10**	**kg/cm²**	(143 psi)
Feedwater Temperature [4]	< **35**	**°C**	(95 °F)
Feedwater Turbidity (SDI_{15}) [2,5]	< **4**		
Feedwater Chlorine Concentration	< **1**	**ppm**	
pH Range, Continuous Operation [6]	**3 - 8**		
pH Range, Chemical Cleaning [7]	**2 - 10**		
Feed Flow Rate per Vessel	< **200**	**l/min**	(52.8 gpm)
Brine Flow Rate per Vessel [8]	> **40**	**l/min**	(10.6 gpm)
Brine/Permeate Flow Ratio [8,9]	> **6**		
Pressure Drop (per Element) [9]	< **1**	**kg/cm²**	(14 psi)
Pressure Drop (per Vessel) [9]	< **2**	**kg/cm²**	(29 psi)

Notes:

1 The recommended design range means safe operational and design conditions under not so much fouling and scaling. If the SU-series elements 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 the local distributor for design guidelines and further information for multi element design.

2 High flux operation (operation under high permeate flow rate per single element) on feedwater turbidity greater than 3 or 4 SDI_{15} 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 15 kg/cm² (214 psi)

4 Maximum 45 °C (113 °F)

5 SDI_{15} = Silt Density Index measured according to ASTM D4189

6 Both feed and brine water must meet this range.

7 Cleaning and sterilization must meet the recommendations in the Technical Bulletins for SU-series elements.

8 Flow ratio of brine to permeate for each single element

9 This figure may be reduced when there is hardly any fouling and scaling

10 Element(s) must be cleaned when pressure drop increases to 1.5 times of the initial value.

* Product flow rate declines 25 - 30% when feedwater contains Chlorine.

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