

info@lenntech.com Tel. +31-152-610-900 www.lenntech.com Fax. +31-152-616-289

# 4 x 14 INCH TAPE WRAP BRACKISH ELEMENTS

## Model TR70-4014-HF & TRH-4014

Membrane Type Crosslinked Aromatic Polyamide, Negative Charge

Element Configuration Spiral Wound, Tape Wrap

## **Performance Specification**

	TR70-4014-HF	TRH-4014
	High Flow	Low Pressure, High Flow
Salt Rejection avg. <sup>1,2</sup>	99.4 %	99.0 %
Product Flow Rate <sup>1,2</sup>	<b>2900 l/d</b> (765 gpd)	<b>2400 l/d</b> (635 gpd)
	Testconditions: A	Testconditions: B

<u>B</u> 25

°C

Notes:	
<sup>1</sup> Test Conditions	<u>A</u>
Temperature	25

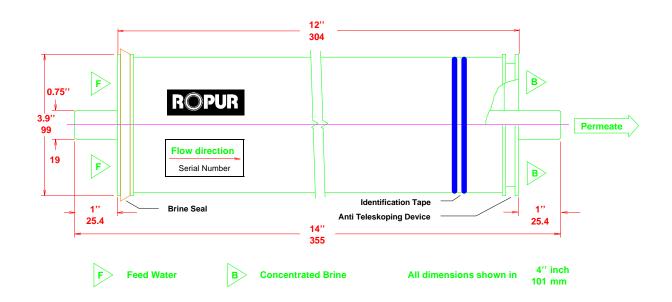
Feed Solution, Concentration 1500 500 ppm NaCl Feed Pressure 15 7.5 bar

Brine : Permeate ratio 5 : 1 5 : 1 Feed pH 6.5 - 7.5 6.5 - 7.5

Average value for 100 elements after 1 hour operation Product Flow Rate +/- 15% Salt Rejection minimum 98 %

<sup>3</sup> Minimum Performance data are for any single element

#### **Dimensions:**





## **Design Conditions**

### Recommended 1

Operating Pressure 2,3 Operating Temperature 4	< 15.0 < 35	•	(216 psi) (95 °F)
Feedwater Turbidity (SDI <sub>15</sub> ) <sup>2,5</sup>	< 5		
Feedwater Chlorine Concentration	0	ppm	
pH Range, Continuous Operation 6	3 - 11		
pH Range, Chemical Cleaning <sup>7</sup>	3 - 11		
Feed Flow Rate per Vessel	< 2'200	l/h	(10 gpm)
Brine Flow Rate per Vessel <sup>9</sup>	> 600	l/h	(2.6 gpm)
Brine/Permeate Flow Ratio 8,	5 : 1		
Pressure Drop (per Element) 10	0.5	kg/cm²	(7 psi)
Pressure Drop (per Vessel) 10	1.0	kg/cm²	(14 psi)

#### Notes:

- The recommended design range means safe operational and design conditions under not so much fouling and scaling. If the TR-series elements are operated outside of the recommended design range, the effective membrane life may be reduced.
- <sup>2</sup> High flux operation (operation under high permeate flow rate per single element) on feedwater turbidity greater than 3 or 4 SDI<sub>15</sub> generally results in frequent cleaning requirements. Operating pressure should be selected to maintain the flux rate, or permeate flow rate per single element.
- <sup>3</sup> Maximum 20 kg/cm<sup>2</sup> (288 psi)
- <sup>4</sup> Maximum 35 °C (95 °F)
- 5 SDI<sub>15</sub> = Silt Density Index measured according to ASTM D4189
- <sup>6</sup> Both feed and brine water must meet this range.
- <sup>7</sup> Cleaning and sterilization must meet the recommendations in the Technical Bulletin.
- 8 Flow ratio of brine to permeate for each single element
- <sup>9</sup> This figure may be reduced when there is low possibility of fouling and scaling
- <sup>10</sup> Element(s) must be cleaned when pressure drop increases to 1.5 times of the initial value.