

# LENNTECH

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## **4 x 40 INCH TAPE WRAP BRACKISH ELEMENTS**

## Model TR70-4040-HF & TRH-4040

Membrane Type Crosslinked Aromatic Polyamide, Negative Charge

Element Configuration Spiral Wound, Tape Wrap

## **Performance Specification**

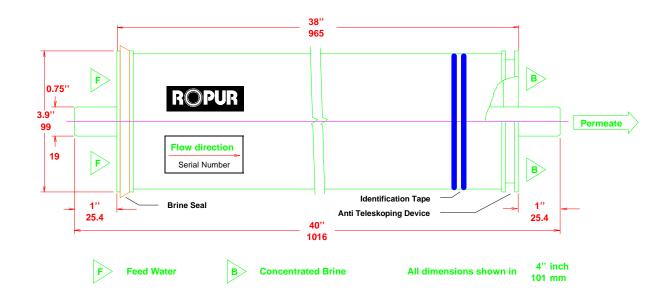
	TR70-4040-HF	TRH-4040	
	High Flow	Low Pressure, High Flow	
Salt Rejection avg. <sup>1,2</sup>	99.4 %	99.0 %	
Product Flow Rate <sup>1,2</sup>	<b>11'900 l/d</b> (3'140 gpd)	10'300 l/d (2'720 gpd)	
	Testconditions: A	Testconditions: B	

#### Notes:

1	Test Conditions	<u>A</u>	<u>B</u>	
	Temperature	25	25	°C
	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	< 15.0	kg/cm²	(216 psi)
Operating Temperature 4	< 35	°C	(95 °F)
Feedwater Turbidity (SDI <sub>15</sub> ) <sup>2,5</sup>	< 5		
Feedwater Chlorine Concentration	0	ppm	
pH Range, Continuous Operation <sup>6</sup>	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:

- <sup>1</sup> 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.
- Maximum 20 kg/cm² (288 psi)
- <sup>4</sup> Maximum 35 °C (95 °F)
- <sup>5</sup> 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.