

2.5 x 40 INCH TAPE WRAP NANOFILTRATION ELEMENT

MODEL TR60-2540

Membrane Type	Cross Linked Polyamide Composite
Element Configuration	Spiral Wound, Tape Wrap

Performance Specification

Salt Rejection avg. ^{1,2}	55.0 %
min. ³	45.0 %
Product Flow Rate ^{1,2}	3'100 l/d (819 gpd)

Notes:

¹ Test Conditions

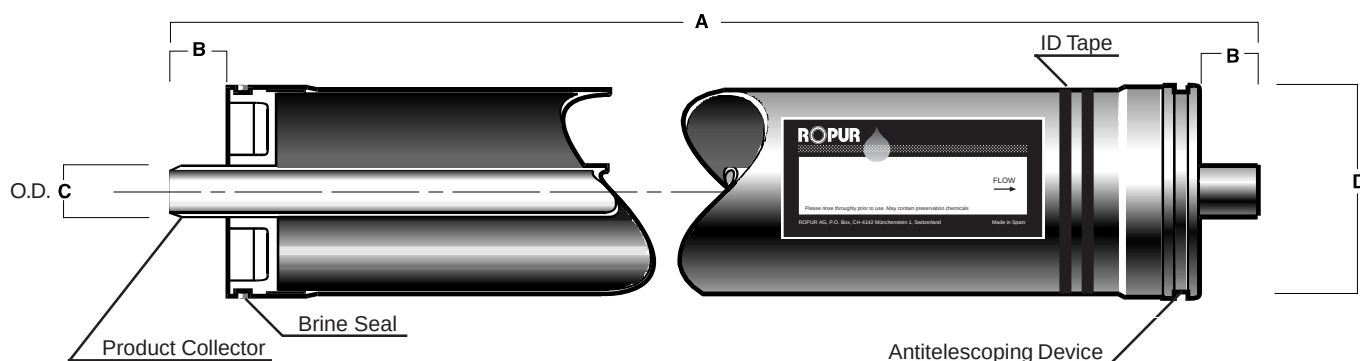
Temperature	25 °C
Feed Solution, Concentration	500 ppm NaCl
Feed Pressure	7.5 bar
Brine : Permeate ratio	5 : 1
Feed pH	7

² Average value for 100 elements after 1 hour operation
Product Flow Rate +/- 15%

³ Minimum Performance data are for any single element

Dimensions:

A = 40.0 inch / 1016 mm	C = 0.75 inch / 19.0 mm
B = 1.19 inch / 30.0 mm	D = 2.40 inch / 61.0 mm



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Design Conditions

Recommended ¹

Operating Pressure ^{2,3}	< 15.0 kg/cm²	(216 psi)
Operating Temperature ⁴	< 35 °C	(95 °F)
Feedwater Turbidity (SDI ₁₅) ^{2,5}	< 5	
Feedwater Chlorine Concentration ¹¹	< 1 ppm	
pH Range, Continuous Operation ⁶	3 - 8	
pH Range, Chemical Cleaning ⁷	2 - 10	
Feed Flow Rate per Vessel	< 2'200 l/h	(10 gpm)
Brine Flow Rate per Vessel ⁹	> 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:

- ¹ 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.
- ² High flux operation (operation under high permeate flow rate per single element) on feedwater turbidity greater than 3 or 4 SDI₁₅ 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 20 kg/cm² (288 psi)
- ⁴ Maximum 35 °C (95 °F)
- ⁵ SDI₁₅ = 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 Bulletin.
- ⁸ Flow ratio of brine to permeate for each single element
- ⁹ This figure may be reduced when there is low possibility of fouling and scaling
- ¹⁰ Element(s) must be cleaned when pressure drop increases to 1.5 times of the initial value.
- ¹¹ < 1'000 ppm·h at < 0.1 ppm Cl₂ in absence of heavy metals in the water. Heavy metals may act as catalyst and increase the oxidizing potential of chlorine.