Model NANO9-2540

Ultra Low Energy, Excellent Ion Selective - Nanofiltration Element

**Type**
- Configuration: Spiral Wound
- Membrane Polymer: Composite Polyamide
- Brine Spacer Material: Polypropylene

**Specifications**
- Permeate Flow:
  - $\text{MgSO}_4$: 680 gpd (2,6 m³/d)
  - NaCl: 850 gpd (3,2 m³/d)
- Stabilized Salt Rejection:
  - $\text{MgSO}_4$: >97%
  - NaCl: 89 - 95%
- Nominal Membrane Area: 28 ft² (2,6 m²)

**Test Conditions**
(After 30 min of operation)
- Solution:
  - $\text{MgSO}_4$: 2000 ppm
  - NaCl: 500 ppm
- Applied Pressure: 70 psi (4,8 bar)
- Operating Temperature: 77 °F (25 °C)
- Permeate Recovery: 10%
- pH Range: 6,5 - 7,0

**Dimensions**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D&lt;sub&gt;F&lt;/sub&gt;</th>
<th>D&lt;sub&gt;C&lt;/sub&gt;</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Length</td>
<td>ATD Diameter</td>
<td>Connection Diameter</td>
<td>Core Tube Extension</td>
<td>Concentrate Side</td>
<td></td>
</tr>
<tr>
<td>40.0 inches (1016 mm)</td>
<td>2.4 inches (61 mm)</td>
<td>0.75 inches (19,1 mm)</td>
<td>1.2 inches (30,5 mm)</td>
<td>1.2 inches (30,5 mm)</td>
<td>4 lbs (1,8 Kg)</td>
</tr>
</tbody>
</table>

**Maximum Operating Limits**

<table>
<thead>
<tr>
<th>Operating Pressure Drop</th>
<th>Temperature</th>
<th>Feed Flow</th>
<th>Chlorine Concentration</th>
<th>Feedwater SDI (15min)</th>
<th>Feedwater Turbidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberglassed</td>
<td>Tape Wrapped</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 psi (41,4 bar)</td>
<td>300 psi (20,7 bar)</td>
<td>113 °F (45 °C)</td>
<td>10 psi (0,7 bar)</td>
<td>6 gpm (23 lpm)</td>
<td>&lt;0,1 ppm</td>
</tr>
</tbody>
</table>

**Other Operating Limits**

<table>
<thead>
<tr>
<th>Feedwater pH</th>
<th>Minimum ratio of concentrate to permeate flow for any element</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,0 ÷ 10,0</td>
<td>5:1</td>
</tr>
</tbody>
</table>

The limitations shown in Operating Limits are for general use. The values may be more conservative for specific projects to ensure the best performance and longest life of the membrane.

Notice: Minimum permeate flow for individual elements 20 percent below listed flow. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium meta-bisulfite.

**Guidelines:**
- Permeate obtained from first hour of operation should be discarded.
- Avoid static permeate-side backpressure at all times.
- These membranes may be subject to drinking water application restrictions in some countries: please check the application status before use and sale.
- For element loading use only glycerine to lubricate o-rings and brine seal.

The customer is fully responsible for the effects of incompatible chemicals on elements. The presence of free chlorine and other oxidizing agents will cause membrane failure, the damage is not covered under warranty. Oltremare believes the information and data contained herein to be accurate and useful. The information and data are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. Oltremare assumes no liability for results obtained or damages incurred through the application of the presented information and data. It is the user's responsibility to determine the appropriateness of Oltremare's products for the user's specific end uses.

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We reserve the right to modify or amend specifications without prior notice.

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