

NANOFILM Brackish Water Low Pressure Series Membrane Elements: 4040

1. Brief Introduction

NLP (Low Pressure) series are the aromatic composite membrane elements developed by NANOFILM. Applicable to brackish water desalination. It enjoys the properties of low-pressure operation; high permeate flow and excellent desalination. Furthermore, it enjoys the high properties of eliminating the soluble salt, TOC and SiO₂, and is especially applicable to the manufacture of high-purity water for electronic industry and electric power industry.

Being suitable for the desalination treatment of those water resources with salt concentration lower than 8000 ppm, such as surface water, underground water and municipal water, etc., LP series membrane elements are mainly applicable to various industrial water, such as industry-purpose pure water, boiler water replenishment in power plant, and can also applied to such brackish water applications as treatment of high-concentration salty wastewater and production of beverage-purpose water.

2. Specifications and Properties of Membrane Element

Part No.	Average Salt Rejection Rate %	Average Permeate Flow GPD (m ³ /d)	Active Membrane Area ft ² (m ²)
NLP11-4040	99.0	2800(10.6)	85(7.9)
NLP21-4040	99.5	2400(9.1)	85(7.9)
NLP31-4040	99.7	2200(8.3)	85(7.9)

Testing Conditions: Testing Pressure 225psi (1.55Mpa)
 Temperature of Testing Solution 25 °C
 Concentration of Testing Solution (NaCl) 2000 ppm
 PH Value of Testing Solution 7.5
 Recovery Rate of Single Membrane Element 15%

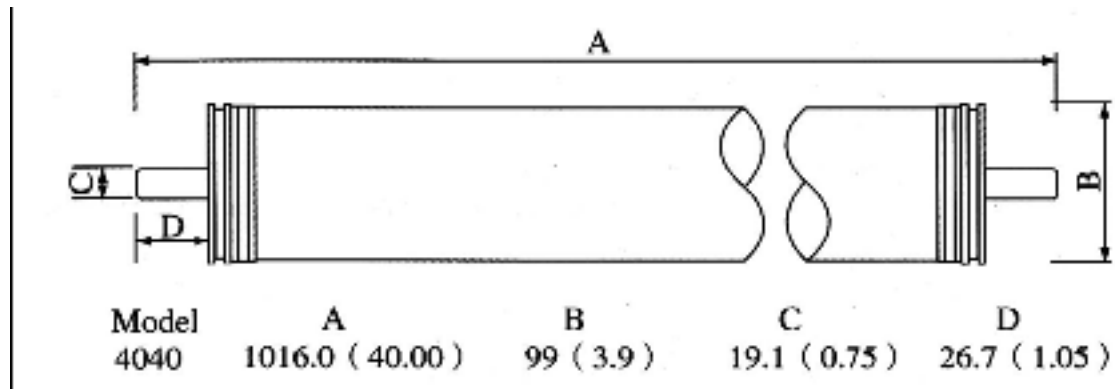
3. Extreme operation Conditions

Max. Operating Pressure	600psi (4.14Mpa)
Max. Feed water Flow	16gpm (3.6 m ³ /h)
Max. Temperature of Feed water	45 °C
Max. SDI of Feed water	5
Free Chlorine Concentration of Feed water	< 0.1ppm
PH Value Range of Feed water as Continuous Operation	3 — 10

PH Value Range of Feed water as Chemical Cleaning	2-11
Max. Pressure difference of Single Membrane Element	15psi(0.1Mpa)

4. Dimensions of the Element

All dimensions are in millimetre (inch).



5. Important Information

1. For any recommended design scope, please refer to the latest edition of technology manual and design guide prepared by NANOFILM, or consult experts proficient in membrane technology. In case the customer fails to follow the operating conditions as specified in this manual, NANOFILM. Will assumes no liability for all results.
2. The permeate flow listed in the table is the average value. The permeate flow of single membrane element is with a tolerance of $\pm 15\%$.
3. Before leaving the factory, all membrane elements will have been strictly tested, and have been treated for storage with the solution of 1.0% sodium hydrogen sulfite (an antifreeze solution of 10% propanediol will further added in winter), then packed in vacuum, and outer packing is carton. In order to prevent the breeding of microbes during short-time storage, transportation and system standby, we recommend you to soak the membrane elements with the protective solution (prepared with RO permeate water) containing 1.0% sodium hydrogen sulfite (foodstuff-purpose).
4. Discard RO product water produced during the first one hour after system start-up.
5. During storage time and run time, it is strictly prohibited to add any chemical medicament, which may be harmful to membrane elements, In case of any violation in using this kind of chemical medicament, NANOFILM assumes no liability for all results.

Notice :

1. All data and information provided in this manual have been obtained from long-time experiment by NANOFILM. We believe the data and information contained herein to be accurate and effective. However, since the conditions and methods for use of our products are beyond our control, NANOFILM, Ltd. assumes no liability for all results obtained or damages incurred through the application of the presented data and information. Regardless of separate use or working with other products, it is strongly recommended that the users shall carry out experiment to determine the safety of NANOFILM's products and their applicability to customer's specific end uses.
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