

NANOFILM Extra Low Pressure Series Elements: 4040

1. Brief Introduction

NXLP (Extra Low Pressure) series are the extra low-pressure aromatic composite membrane elements developed by NANOFILM applicable to desalination of surface water and underground water. It can work under extra low pressure to reach as high permeate flow and salt rejection as regular low-pressure membrane can. It operates under approximately half of the operating pressure of regular low-pressure composite membrane, and enjoys a salt rejection rate of up to 99.0%, which can decrease the* investment costs for such relevant facilities as pump, piping, and container, etc. and the operating cost for the RO system, thus increasing the economic efficiency.

Being suitable for the desalination treatment of those low salt-content water resources not requiring high salt rejection, such as surface water, underground water, tap water and municipal water, etc. which have a salt concentration lower than 1000 ppm, XLP series membrane elements are especially applicable to the second-stage desalination with two-stage RO, and are mainly applied to numerous applications of various scales, such as pure water, boiler water replenishment, foodstuff processing, and pharmaceutical production, etc

2 Specifications and Main Properties of Membrane Elements

Part No.	Average Salt Rejection Rate %	Average Permeate Flow GPD (m ³ /d)	Active Membrane Area ft ² (m ²)
NXLP12-8040	99.0	2500(9.5)	85(7.9)

Testing Conditions:

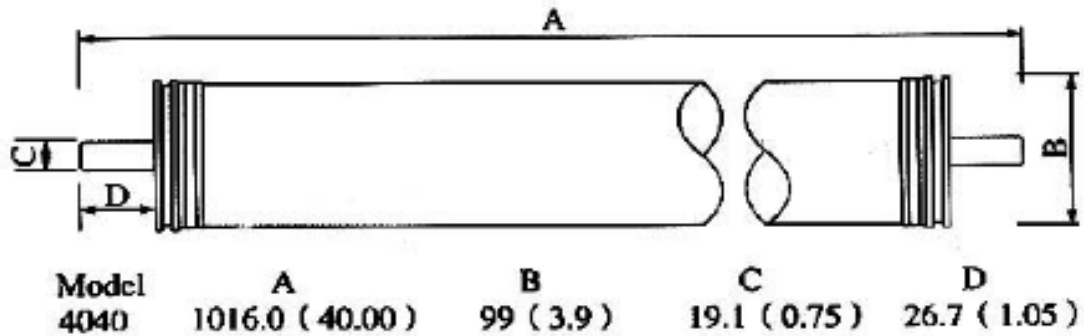
Testing Pressure	100psi (0.69Mpa)
Temperature of Testing Solution	25 °C
Concentration of Testing Solution (NaCl)	1500 ppm
PH Value of Testing Solution	7.5
Recovery Rate of Single Membrane Element	15%

3. Extreme operation Conditions

Max. Operating Pressure	600psi (4.14Mpa)
Max. Feedwater Flow	75gpm (17.0 m ³ /h)
Max. Temperature of Feedwater	45 °C
Max. SDI of Feedwater	5
Free Chlorine Concentration of Feedwater	< 0.1 ppm
PH Value Range of Feedwater as Continuous Operation	3 — 10
PH Value Range of Feedwater as Chemical Cleaning	2 ~ 11
Max. Pressure Difference of Single Membrane Element	15psi(0.1Mpa)

4. Dimensions of Membrane Element

All dimensions are in millimeter (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 assume 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 hydrogensulfite (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 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 customers' specific end uses.

2. Due to technology development and products renovation, products information will be subject to modification without prior notification. Please pay attention to NANOFILM 's latest products information.