

VONTRON XLP11-4040 Membrane Element

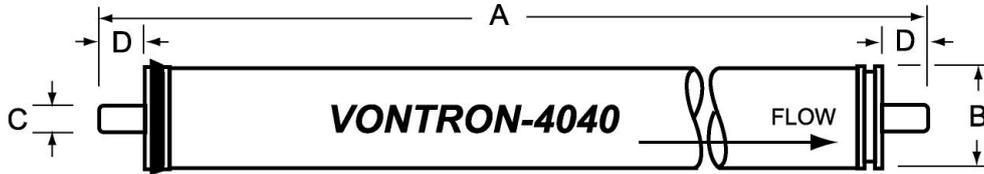
Brief Introduction

Newly developed by Vontron Technology Co., Ltd. XLP series of extremely low pressure aromatic polyamide compound membrane element can work under ultra low pressure to reach as high permeate flow and salt rejection as regular low-pressure membrane element can, and is applicable to desalination of surface water and underground water. It operates under approximately half the operating pressure of regular low-pressure composite membrane, and achieves 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 water sources with low salinity not requiring high salt rejection such as surface water, underground water, tap water and municipal water, which have a salt concentration lower than 1000 ppm, XLP series of membrane element is particularly applicable to the second-pass desalination with two-pass RO system, and is mainly applied to numerous applications of various scales, such as pure water production, boiler water replenishment, foodstuff processing and pharmaceutical production.

Model	Active Membrane	Average Permeate	Stable Rejection	Min. Rejection
	Area ft ² (m ²)	GPD(m ³ /d)	Rate %	Rate %
XLP11-4040	90 (8.4)	2000 (7.6)	98.0	97.5
Testing Conditions	Testing Pressure		100 psi (0.69MPa)	
	Testing Solution Temperature		25 °C	
	Concentration of Testing Solution (NaCl)		500ppm	
	pH value of Testing Solution		7.5	
	Recovery Rate of Single Element		15%	
Operation Limits & Conditions	Max. Working Pressure		600psi (4.14MPa)	
	Max. Volume of Feed water		16gpm (3.6 m ³ /h)	
	Max. Temperature of Feed water		45°C	
	Max. Feed water SDI ₁₅		5	
	pH Range of Feed water during Continuous Operation		3~10	
Conditions	pH Range of Feed Water during Chemical Cleaning		2~12	
	Residual Chlorine Concentration of Feed Water		<0.1ppm	
	Max. Pressure Drop of Single Membrane Element		15psi (0.1MPa)	
	Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes		50psi (0.34MPa)	

Size of Membrane Element: 1.0 inch =25.4 mm



A/mm(inch)	B/mm(inch)	C/mm(inch)	D/mm(inch)
1016.0(40)	99.7(3.9)	19.1(0.75)	26.7(1.05)

Notice:

1. All data and information provided in this manual have been obtained from long-term experiment by Vontron. We confirm the effective and accuracy of the data. Vontron assumes no liability for any aftermath caused by user's failure in abiding by the conditions specified in this manual in use or maintenance of membrane products. It is strongly recommended that the user shall strictly abide the designed use and maintenance requirements and keep relevant records.
2. The permeate value listed in the table is the average value. The permeate flow of single membrane element is tolerance not exceeding $\pm 20\%$ of the nominal value.
3. All wet-type membrane elements have been strictly tested before leaving the factory, and have been treated with 1.0% sodium hydrogen sulfite (10% glycerin antifreeze required in winter) for storage purpose, then sealed with plastic bag in vacuum, and further packed in carton boxes.
4. The membrane used should remain wet after being used; In long term suspension, to prevent the breeding of microbes, soak the membrane elements with protective solution is highly recommended, the solution (prepared with RO filtered water) containing 1.0% sodium hydrogen sulfite (foodstuff-purpose).
5. Operate low pressure flushing for 15-25 minutes of first use, high pressure flushing for 60-90 minutes when first use (Permeate volume no less than 50% of designed volume). Discard all the permeate and condensed water produced during the first one hour after system start-up.
6. During storage time and operation period, it is strictly prohibited to added any chemical medicament that may be harmful to membrane elements. In case of any violation in adding chemical medicament, Vontron assumes no liability for any damages incurred.
7. Along with technical development and product renovation, all information will be subject to modification without prior notification. Please keep notice the website of Vontron for any updates of the product.