

## VONTRON ULP21-4040 Membrane Element

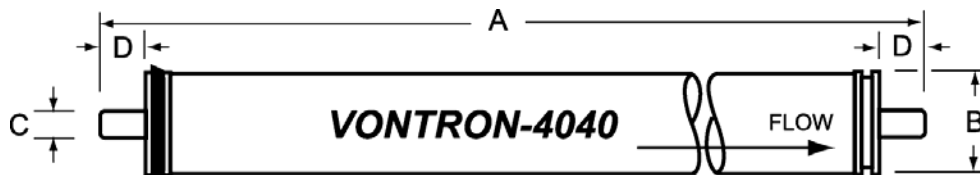
### Brief Introduction

ULP series of ultra low pressure aromatic polyamide RO element is developed by VONTRON for treatment of surface water and underground water. Its operation pressure is about 2/3 of low pressure membrane, and the rejection rate can reach 99.5%. Thus it can reduce the investment cost of related pumps, pipelines, containers and other equipments and the operation cost of reverse osmosis system, improve economic benefits.

ULP series RO element normally suitable for treatment of surface water, underground water and municipal water with TDS is less than 2000 ppm. It is mainly applied in bottle water, drinking water, boiler replenishment water, food processing and pharmaceutical manufacturing industries and other fields.

Model	Active Membrane	Average Permeate	Stable Rejection	Min. Rejection
	Area ft <sup>2</sup> (m <sup>2</sup> )	GPD(m <sup>3</sup> /d)	Rate %	Rate %
ULP21-4040	90 (8.4)	2400 (9.1)	99.0	98.5
<b>Testing Conditions</b>	Testing Pressure		150 psi (1.03MPa)	
	Testing Solution Temperature		25 °C	
	Concentration of Testing Solution (NaCl)		1500ppm	
	pH value of Testing Solution		7.0±0.5	
	Recovery Rate of Single Element		15%	
<b>Operation</b>	Max. Working Pressure		600psi (4.14MPa)	
	Max. Volume of Feed water		16gpm (3.6 m <sup>3</sup> /h)	
	Max. Temperature of Feed water		45°C	
<b>Limits &amp; Conditions</b>	Max. Feed water SDI <sub>15</sub>		5	
	pH Range of Feed water during Continuous Operation		3~10	
<b>Conditions</b>	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)	

**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 initial wetting; 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.