VONTRON **ULP21-4021 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 RO 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 Area $ft^2(m^2)$	Permeate flow GPD(m^3/d)	Stable Rejection Rate %	Feed Spacer Thickness mil
ULP21-4021	36（3.3）	950（3.6）	99.0	28

Testing Position	Operating pressure 150 psi (1.03Mpa) Temperature at 25℃ Tested at 1500mg/L NaCl solution pH 7.0 ± 0.5 Recovery rate at 8%	
Operating Limit & Conditions	Maximum operating pressure	600psi（4.14MPa）
	Maximum feedwater flow	16gpm（3.6 m^3/h）
	Maximum feedwater temperature	45℃
	Maximum feedwater flow SDI_{15}	5
	Allowed pH range for feedwater in operation	3～10
	Allowed pH range for chemical cleaning	2～12
	Maximum concentration of free chlorine	＜0.1ppm
	Maximum pressure drop per element	15psi（0.1MPa）

Size of Membrane Element： 1.0 inch = 25.4 mm

Specification	A/mm (inch)	B/mm (inch)	C/mm (inch)	D/mm (inch)
4021	533.4 (21)	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. 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 ±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.