

## VONTRON TAPU-MS Membrane Element

### Brief Introduction

Organics, microbes, viruses and most of metal ions with two or higher valence can be filtered by Tapurim Series NF element, while sodium, potassium, calcium, magnesium ions, etc. can be retained in the permeated water.

TAPU-MS Model has higher rejection rate of monovalent ions while maintaining a proper rejection rate of organics, which is applicable to the removal of organic and inorganic matters in mid-salinity raw water.

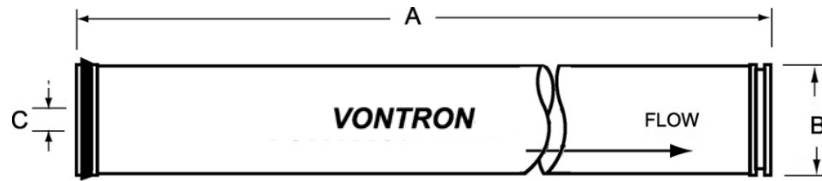
\* This membrane element is developed by utilizing the technology of controllable porosity formation in separation layers, and is designed for waters with middle and high salinity to meet the requirements of healthy drinking water.

\*The use of brand-new LD (low pressure difference) 34-mil feed channel spacer improves the fouling resistance while reducing the energy consumption.

\*The entire series of elements have been officially authorized by “Hygiene Permit for Products Related to Drinking Water Hygiene Safety”, thus ensuring the safety of membrane element application.

Model	Active Membrane	Permeate Flow	Sulfate Removal	TOC Removal
	Area ft <sup>2</sup> (m <sup>2</sup> )	GPD(m <sup>3</sup> /d)	Rate%	Rate%
TAPU-MS	400 (37.2)	9000 (34.1)	95	90
<b>Testing Conditions</b>	Operating pressure 70 psi (0.48Mpa)			
	Temperature at 25°C			
	Tested in mixed solution of NaCl, MgSO <sub>4</sub> and CaCl <sub>2</sub> , pH 7.0 ± 0.5			
	Recovery rate at 15%			
<b>Operation</b>	Maximum operating pressure		600psi (4.14Mpa)	
	Maximum feedwater flow		75gpm (17 m <sup>3</sup> /h)	
	Maximum feedwater temperature		45°C	
	Maximum feedwater flow SDI <sub>15</sub>		5	
<b>Limits &amp; Conditions</b>	Allowed pH range for feedwater in operation		3~10	
	Allowed pH range for chemical cleaning		2~12	
<b>Conditions</b>	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



A/mm(inch)	B/mm(inch)	C/mm(inch)
1016 (40)	201 (7.9)	29 (1.125)

**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.