VONTRON **MASE-SP Membrane Element**

Brief Introduction

Material Separation NF Membrane is primarily used in the separation of monovalent salt and divalent salt, as well as in hardness removal, denitration separation and concentration of liquid, with the molecular weight cutoff covering 200~800 Dal.

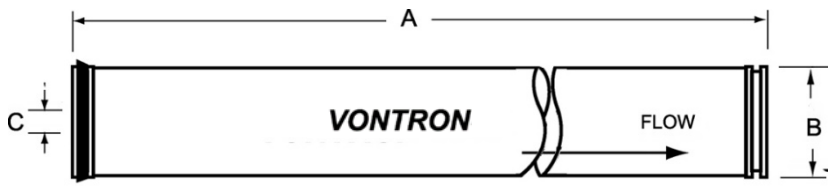
MASE-SP is designed to reject part of the multivalent ions while allowing the permeation of monovalent ions, and is applicable to purification of high-concentrated saline water.

* The use of patented Uarc water distribution endcap ensures more even distribution of hydraulic load on the end surface, thus reducing the accumulation of pollutants.
* The use of brand-new LD (low pressure difference) 34-mil feed channel spacer improves the fouling resistance while reducing the energy consumption.
* The end cap adopts thermal-melt spin welding technology to enhance the structural strength of the membrane element and ensure stable operation of the membrane element under a high pressure difference environment.
* The use of hi-precision spiral-winding technology and low permeate resistance structure decrease the overall fouling rate of membrane element, thus maximizing the working efficiency of membrane element and effectively reducing the operational costs.

Model	Active Membrane Area $ft^2(m^2)$	Permeate Flow $GPD(m^3/d)$	Stable Rejection %
MASE-SP	400（37.2）	12000（45.4）	90

Testing Conditions	Operating pressure 100 psi (0.69Mpa) Temperature at 25℃ Tested in 2000 mg/L $MgSO_4$ solution pH 7.0 ± 0.5 Recovery rate at 15%	
Operation Limits & Conditions	Maximum operating pressure	600psi（4.14Mpa）
	Maximum feedwater flow	75gpm（17 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



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 ±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.