

Challenge Low-energy Consumption and Zero Emissions Driving Force for the Recycling of Resources

ZERO-XS90 Nanofiltration Separation

ZERO-XS 90 is a series of nanofiltration separation membrane element. It is a highly selective fouling resistant nanofiltration membrane product developed for sodium chloride and sodium sulfate of Low energy consumption resource recycling. It is suitable for the selective separation of TDS 35000-70000 ppm high pollution concentrated brine in zero liquid discharge process of chlor-alkali, desulfurization wastewater, remove sodium sulfate from dyeing wastewater.



High Selectivity Separation
High Permeability of Sodium Chloride



New Low Differential Pressure Technology
34mil LD Feed Spacer



Enhanced Component Structure
Stable Operation in High Pressure Environment

Product Features



Applications

- ✓ Selectivity Separation of Zero Liquid Discharge Technology
- ✓ Suitable for chlor-alkali, desulfurization wastewater, Separation of Monovalent and Divalent Salt in Printing and Dyeing Wastewater



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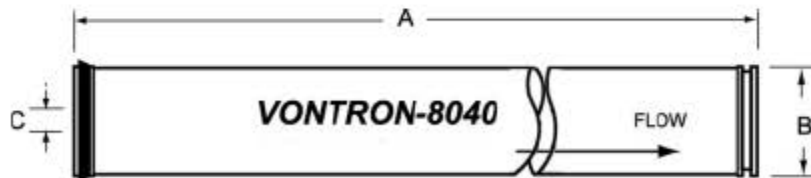
VONTRON ZERO-XS90 Membrane Element

Brief Introduction

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Model	Active Membrane Area ft ² (m ²)	Permeate Flow GPD(m ³ /d)	Stable Rejection %	Feed Spacer Thickness mil
ZERO-XS90	400(37.2)	8300(31.4)	99.0	34
Testing Position	Operating pressure 100psi (0.69MPa)			
	Temperature at 25°C			
	Tested at 2000mg/L MgSO ₄ solution			
	pH 7.0±0.5			
	Recovery rate at 15%			
Operating	Maximum operating pressure		600psi (4.14MPa)	
	Maximum feedwater flow		75gpm (17m ³ /h)	
	Maximum feedwater temperature		45°C	
Limit & Conditions	Maximum feedwater flow SDI ₁₅		5	
	Allowed pH range for feedwater in operation		3~10	
Conditions	Allowed pH range for chemical cleaning		2~11	
	Maximum concentration of free chlorine		<0.1 mg/L	
	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:

- 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 add 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.