

DMDT Membrane SW8040-400 Product Data Sheet

DMDT Membrane **SW8040HR-400** Element, High Rejection and Active Surface Area for Sea Water Desalination.

Commercial Model: DMDT SW8040-400

Part Number: DMDT-SW-8040-HR-A01

Document No: DMDT-DS-SW-8040-001

Revision: Rev.0.1



• Description of SW8040-400 Element

The **SW-8040-400** is an aromatic polyamide reverse osmosis (RO) element developed by DMDT for sea water desalination. This series of elements have the characteristics of suitable operating pressure, low equipment investment and good desalination performance and stability. These elements are generally suitable for the treatment of sea water and brackish water with high concentration of soluble salts, boiler replenishment water in power plants, wastewater reuse and water with high value-added substances such as food and pharmaceuticals contaminants. It is ideal for:

- RO system supervisors and operational teams
- Installations with stable and optimized pretreatment
- Projects where reliability, durability, and high throughput are critical

• Product Type of SW8040-400

Spiral-wound element with polyamide thin-film composite membrane

• Product Specifications

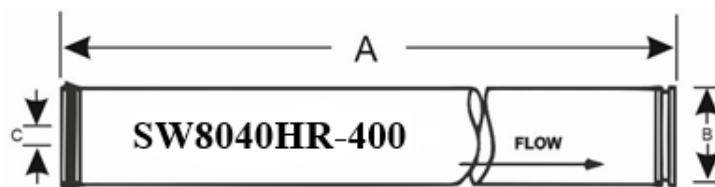
DMDT Membrane Parameter	Active Area		Feed Spacer Thickness	Permeate Flow Rate		Typical Stabilized Salt Rejection
Unit	ft ²	m ²	(mil)	GPD	m ³ /day	(%)
SW8040HR-400	400	37.2	28	7500	28.4	99.8

1. Permeate flow and salt (NaCl) rejection based on the following **standard test conditions**: 32,000 mg/L NaCl solution, 800psi (55.2 bar), 77°F (25°C), pH 8, 8% recovery.

2. Flow rates for individual elements may vary but will be no more than 15% below the value shown.

3. Stabilized salt rejection is generally achieved within 24-48 hours of continuous use; depending upon feedwater characteristics and operating conditions.

• Element Dimensions



	A		B		C	
Unit	mm	in.	mm	in.	mm	in.
SW8040HR-400	1016	40	201	7.9	29	1.125

1 inch = 25.4 mm. Element to fit nominal 8-inch (203-mm) I.D. pressure vessel.

• Operating and Cleaning Limits

Maximum Operating Pressure	1200 psi or 82.8 bar
Maximum Feedwater Flow	75 GPM or 17 m ³ /h
Maximum Operating Temperature	45°C
Maximum Feed Silt Density Index (SDI)	5
pH Range, Continuous Operation	2-11
pH Range, Short-Term Cleaning (30 min.)	1-13
Free Chlorine Tolerance	< 0.1 ppm
Maximum Element Pressure Drop	15 psi or 1 bar

1. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
2. For more information about CIP instruction, refer to **Cleaning Guidelines** in specification sheet.
3. Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, DMDT recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to **Technical Instructions** for more information.

• Additional Important Information

Before use or storage, please review additional resources such as Cleaning Guidelines, Technical Instructions and Checklist of Operating Condition Control for important information.

• Customer Notice

- 1) All data and information provided in this manual have been obtained from long-term experiment by DMDT. We confirm the effective and accuracy of the data. We assume no liability for any consequences of user's failure in abiding 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 (food grade).
- 5) Operate low pressure flushing for 15-25 minutes of first use, high pressure flushing for 60-90 minutes when first use (Permeate flow no less than 50% of designed flow). Discard all the permeate and concentrated water produced during the first one hour after system start-up.
- 6) During storage and operation period, it is strictly prohibited to add any chemicals that may be harmful to membrane elements. In case of any violation in adding chemicals, DMDT assumes no liabilities 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 of our website for any updates of the product.

Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

• Exploded Cutaway Diagram

