

# HID Membrane Co., Ltd.

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(Product Pamphlet)

### HID<sup>™</sup> Industrial Membranes – 4040 Sea Water Series

HID<sup>™</sup> Industrial Membrane ranks the best brands in China among TFC RO membrane industry. Each membrane is made of **HID<sup>™</sup>** Brand high quality sheet and goes through stringent manufacturing processes as well as in-house quality inspection & testing before delivery.

**4040** series RO membranes are widely used for filtration of sea water, underground water & brackish water; we well serve the industries including commercial drinking / food water treatment, electronics & chemical works, power plant, etc.

### Main Features:

- HID<sup>™</sup> anti-fouling & high rejection flat sheet (film);
- lower energy costs (low pressure models) and higher productivity;
- high stabilized rejection with realized nominal flux;
- minimize system cost with **HID<sup>™</sup>** RO membrane excellent performance-price ratio;
- stringent in-house inspection & testing control.

Model No.	Feed Spacer	Min. Salt	Stabilized	Permeate	Test	Test water	Effective
	thickness	Rejection	Salt	Flow Rate	Pressure	NaCl	area ft <sup>2</sup>
	(mil)	(%)	Rejection (%)	(GPD)	(PSI)	(PPM)	(m <sup>2</sup> )
SW-4040HF	28	99.6	99.7	1900	800	32800	90 (8.4)

### Performance Specifications:

1. Permeate flow rate and salt rejection is based on testing conditions: 25°C, pH 7.5, 8% recovery.

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

- 3. Active area guaranteed +/- 3%.
- 4. Permeate flow rate of single element varies by +/-15%.

5. Pressure drop of single element (max.): 15psi.

### **Operating Limits:**

Model No.	Maximum Operating Temperature	Maximum Operating Pressure	Feed Water PH Range, continuous operation *	Maximum Feed Water Turbidity	Maximum Feed Water SDI	Chlorine tolerance
SW-4040HF	45°C	1200psig	3-10	1NTU	5	<0.1ppm

\* for short term cleaning (30 min.): 2-12.



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### Membrane Dimensions:



Model No.	A (inch/mm)	B (inch/mm)	<b>C</b> (inch/mm)
SW-4040HF	3.9/99.7	40/1016	0.75/19.1

### **General Information:**

To ensure proper startup of RO water treatment systems is essential to prepare the membranes for operating service and to prevent membrane damage due to overfeeding or hydraulic shock. To follow the proper startup procedure (available with water treatment system guide book) also helps ensure that system operating parameters conform to design specifications so that system water quality and productivity goals can be achieved.

Before initiating system startup procedures, membrane pretreatment, loading of the membrane elements, instrument calibration and other system checks should be completed.

### **Operation Guidelines:**

It is CRITICAL to avoid any abrupt pressure or cross-flow variations on the RO membrane elements during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. During startup, a gradual change from a standstill to operating state is recommended as follows:

- Feed pressure should be increased gradually over a 30-90 second time frame.
- Cross-flow velocity at set operating point should be achieved gradually over 15-30 seconds.
- Permeate obtained from first hour of operation should be discarded.

#### Important Information:

Keep RO membrane elements moist at all times after initial wetting.

If operating limits and guidelines given in this specification are not strictly followed, the limited warranty with supplier will be null and void.

To prevent biological growth during prolonged system shutdowns, it is recommended that RO membrane elements be immersed in a storage solution.

The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements. Avoid static permeate-side backpressure at all times.