



## DOW FILMTEC™ SW30XLE–400i Element

Seawater Reverse Osmosis Element with *iLEC*™ Interlocking Endcaps

### Description

Dow Water & Process Solutions offers various premium seawater reverse osmosis (RO) elements to reduce capital and operation cost of seawater RO systems. DOW FILMTEC™ Elements combine premium membrane performance with automated precision fabrication and maximize system output to exceptional performance.

DOW FILMTEC™ SW30XLE–400i Elements offer a great combination of productivity and rejection. It is an excellent choice for two-pass seawater designs and high TDS brackish water applications. DOW FILMTEC SW30XLE–400i comes with the unique *iLEC*™ Interlocking Endcaps that can help reduce system operating costs and can help reduce the risk of O-ring leaks that cause poor water quality (see Form No. 609-00446 for information on the cost-saving benefits of *iLEC* Interlocking Endcaps). Benefits of the DOW FILMTEC SW30XLE–400i element include:

- High productivity, with active area of 400 ft<sup>2</sup>, helps systems to be designed to deliver low total cost of water by optimizing energy consumption, system productivity and operating flux.
- Can effectively be used in permeate staged seawater desalination systems without impairing the performance of the downstream stage.
- Delivers high performance over the operating lifetime without the use of oxidative post-treatments like many competitive products. This is one reason DOW FILMTEC elements are more durable and may be cleaned more effectively over a wider pH range (1 – 13) than other RO elements.
- Automated, precision fabrication with a greater number of shorter membrane leaves reduces the effect of overall fouling and maximizes element efficiency, helping to lower your cost of operation.

### Product Type

Spiral-wound element with polyamide thin-film composite membrane

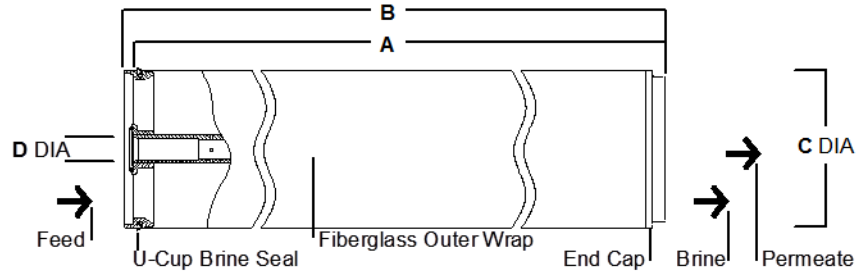
### Product Specifications

DOW FILMTEC™ Element	Active Area		Feed Spacer	Permeate Flow Rate		Stabilized Boron	Stabilized Salt
	(ft <sup>2</sup> )	(m <sup>2</sup> )	Thickness (mil)	(GPD)	(m <sup>3</sup> /d)	Rejection (%)	Rejection (%)
SW30XLE–400i	400	37	28	9,000	34	91.5	99.8

1. The above values are normalized to the following conditions: 32,000 ppm NaCl, 5 ppm boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8, 8% recovery.
2. Permeate flows for individual elements may vary ± 15%.
3. Minimum Salt Rejection is 99.6%.
4. Stabilized salt rejection is generally achieved within 24 – 48 hours of continuous use; depending upon feedwater characteristics and operating conditions.
5. Product specifications may vary slightly as improvements are implemented.
6. Active area guaranteed ± 5%. Active area as stated by Dow Water and Process Solutions is not comparable to the nominal membrane area figure often stated by some element suppliers. Measurement method described in Form No. 609-00434.

7. Specific solute stabilized rejection based on the following test conditions: 32,000 ppm NaCl, 800 psi (15.5 bar), 77°F (25°C), pH 8 and 15% recovery, 5 ppm boron

## Element Dimensions



DOW FILMTEC™ Element	A		B		C		D	
	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
SW30XLE-400i	40.0	1,016	40.5	1,029	7.9	201	1.125 ID	29 ID

1. Refer to Dow Water & Process Solutions Design Guidelines for multiple-element applications. 1 inch = 25.4 mm
2. Element to fit nominal 8-inch (203-mm) I.D. pressure vessel.
3. Individual elements with iLEC™ Interlocking Endcaps measure 40.5 inches (1,029 mm) in length (B). The net length (A) of the elements when connected is 40.0 inches (1,016 mm).

## Operating and Cleaning Limits

Maximum Operating Temperature <sup>a b</sup>	113°F (45°C)
Maximum Operating Pressure <sup>b</sup>	1,200 psig (83 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range, Continuous Operation <sup>a</sup>	2 – 11
pH Range, Short-Term Cleaning (30 min.) <sup>c</sup>	1 – 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance <sup>d</sup>	< 0.1 ppm

<sup>a</sup> Maximum temperature for continuous operation above pH 10 is 95°F (35°C).

<sup>b</sup> Operation at pressures up to 1,200 psig (83 bar) is allowable under certain conditions. Consult your Dow representative for advice on applications above 1,000 psig (69 bar) and/or above 95°F (35°C).

<sup>c</sup> Refer to guidelines in "[Cleaning Procedures](#)" for more information.

<sup>d</sup> 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, Dow Water & Process Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to technical bulletin "[Dechlorinating Feedwater](#)" for more information.

## Additional Important Information

Before use or storage, review these additional resources for important information:

- [Usage Guidelines for DOW FILMTEC™ 8" Elements](#)
- [System Operation: Initial Start-Up](#)
- [Handling, Preservation and Storage](#)

\* Permeate obtained from first hour of operation should be discarded

## Regulatory Note

These membranes may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

## Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support.

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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.

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