



## DOW FILMTEC™ SW30HR–380 Element

High Rejection, Seawater Reverse Osmosis Membranes

### Description

DOW FILMTEC™ SW30HR–380 Elements are a premium-grade seawater reverse osmosis element featuring both high active area and high salt rejection to offer the best long-term economics for seawater desalination systems.

- DOW FILMTEC SW30HR–380 delivers high boron rejection to help customers meet World Health Organization (WHO) and other drinking water standards.
- DOW FILMTEC SW30HR–380 elements deliver high performance over their operating lifetime without the use of oxidative post-treatments like many competitive products. This is one reason why DOW FILMTEC elements are more durable and may be cleaned more effectively over a wider pH range than other RO elements.
- Automated, precision fabrication with a greater number of shorter membrane leaves, reduces the overall effect of fouling and maximizes membrane efficiency.

### Product Type

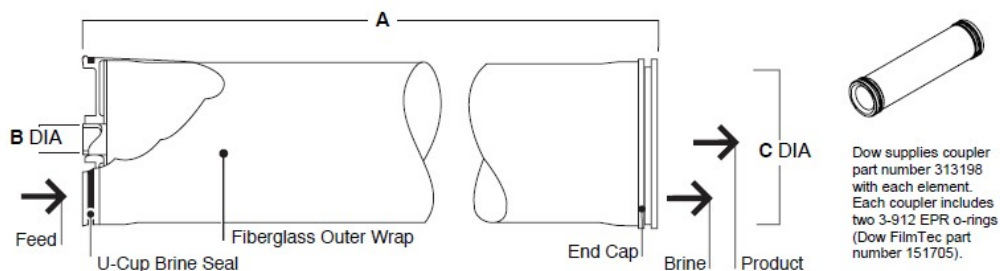
Spiral-wound element with polyamide thin-film composite membrane.

### Product Specifications

| DOW FILMTEC™ Element | Active Area        |                   | Feed Spacer<br>Thickness (mil) | Permeate Flow Rate |                     | Typical<br>Stabilized Salt<br>Rejection (%) | Minimum Salt<br>Rejection (%) |
|----------------------|--------------------|-------------------|--------------------------------|--------------------|---------------------|---------------------------------------------|-------------------------------|
|                      | (ft <sup>2</sup> ) | (m <sup>2</sup> ) |                                | (GPD)              | (m <sup>3</sup> /d) |                                             |                               |
| SW30HR–380           | 380                | 35                | 28-LDP                         | 6,500              | 24.6                | 99.7                                        | 99.65                         |

1. Permeate flow and salt rejection based on the following test conditions: 32,000 ppm NaCl, 800 psi (5.5 MPa), 77°F (25°C), pH 8 and 8% recovery.
2. Permeate flows for individual elements may vary  $\pm$  15%.
3. Stabilized salt rejection is generally achieved within 24 – 48 hours of continuous use; depending upon feedwater characteristics and operating conditions.
4. Sales specifications may vary as design revisions take place.

## Element Dimensions



|                      | A     |       | B        |       | C     |      |
|----------------------|-------|-------|----------|-------|-------|------|
| DOW FILMTEC™ Element | (in.) | (mm)  | (in.)    | (mm)  | (in.) | (mm) |
| SW30HR-380           | 40.0  | 1,016 | 1.125 ID | 29 ID | 7.9   | 201  |

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.

## Operating and Cleaning Limits

|                                                      |                                  |
|------------------------------------------------------|----------------------------------|
| Maximum Operating Temperature <sup>a</sup>           | 113°F (45°C)                     |
| Maximum Operating Pressure                           | 1,000 psig (69 bar) <sup>d</sup> |
| 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>b</sup> | 1 – 13                           |
| Maximum Feed Silt Density Index (SDI)                | SDI 5                            |
| Free Chlorine Tolerance <sup>c</sup>                 | < 0.1 ppm                        |

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

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

<sup>c</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.

<sup>d</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).

## 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](#)

## 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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