DuPont™ FilmTec™ elements

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Product Data Sheet | Reverse Osmosis

FilmTec™ TW30 PRO-4040 & TW30 PRO-2540 Element

Tape-Wrapped Large Commercial Elements for Challenging Water Conditions

Key Features

- Delivers consistent water quality and higher rejection and flow than previous generation FilmTec™ TW30 product.
- Based on historical FilmTec™ TW30 industry-standard RO membrane with decades of proven performance.
- Outstanding durability resulting in stable, long-term performance and sustainable water solutions.
- Enhanced fouling protection.
- Dry elements achieve quick stabilization.

Key Applications

- Light industrial and drinking water applications requiring stringent permeate quality.
- Harsh feed water conditions.

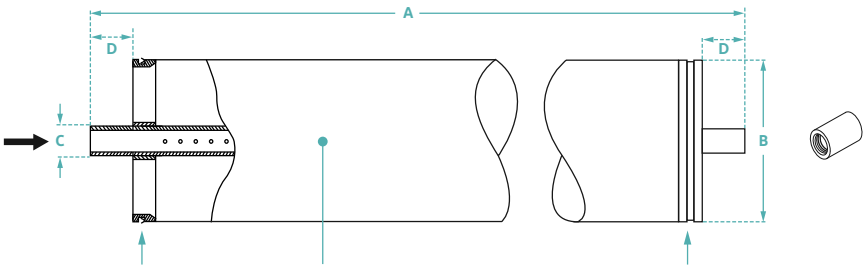


Typical Properties

Product	Part number	Active Area ft² (m²)	Permeate Flow Rate gpd (m³/d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
FilmTec™ TW30 PRO-4040 element	12080472	85 (7.9)	2,600 (9.8)	99.7	99.5
FilmTec™ TW30 PRO-2540 element	12081019	28 (2.6)	1,000 (3.8)	99.7	99.5

1. Permeate flow and salt rejection based on the following standard conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77°F (25°C), pH 8 and 15% recovery.
2. Flow rates for individual elements may vary but will be no more than 20% below the value shown.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



U-Cup Brine Seal | Tape Outer Wrap | End Cap

FilmTec™ coupler part number 89055 is ordered separately for each element. Each coupler includes two 2-210 EPR O-rings (part number 89255).

Dimensions – inches (mm)		
	TW30 PRO-4040	TW30 PRO-2540
A	40.0 (1,016)	40.0 (1,016)
B	3.9 (99)	2.4 (61)
C	0.75 OD (19)	0.75 OD (19)
D	1.05 (27)	1.19 (30.2)

OD = Outer Diameter
1 inch = 25.4 mm

1. For element weight information refer to What is the weight of FilmTec™ elements as delivered? (Form No. 45-D04811-en)
2. For element packaging and shipping information refer to How are FilmTec™ elements packaged and shipped? (Form No. 45-D04811-en)
3. FilmTec™ TW30 PRO-4040 Elements fits nominal 4-inch I.D. pressure vessel, FilmTec™ TW30 PRO-2540 Elements fits nominal 2.5-inch I.D. pressure vessel.

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Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature[1]	113°F (45°C)
Maximum Operating Pressure	600 psi (41 bar)
Maximum Pressure Drop	
Per Element	13 psi (0.9 bar)
Per Pressure Vessel (Maximum 2 Elements)	30 psi (2.1 bar)
pH Range	
Continuous Operation[1]	2 - 11
Short-Term Cleaning (30 min.)[2]	1 - 13
Maximum Feed Flow[3]	
4040 Elements	14 gpm (3.2 m^3/h)
2540 Elements	6 gpm (1.4 m^3/h)
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance[4]	< 0.1 ppm

1. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
2. Refer to FilmTec™ Cleaning Guidelines (Form No. 45-D01696-en).
3. For recommended feed and permeate flow rates, flux and recovery for various feed sources, refer to FilmTec™ Design Guidelines for multiple-element systems of midsize elements (Form No. 45-D01588-en).
4. Oxidation damage is not covered under warranty, DuPont recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater (Form No. 45-D01569-en) for more information.

Important General Information

- Keep elements moist at all times after initial wetting.
- For successful operation of Reverse Osmosis (RO) and Nanofiltration (NF) membrane systems, the operation must follow the guidelines provided in the FilmTec™ Reverse Osmosis / Nanofiltration Elements Operation Excellence and Limiting Conditions Tech Fact (Form No. 45-D04388-en).
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution.
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements.
- Avoid static permeate-side backpressure at all times.
- Permeate obtained from the first hour of operation should be discarded.
- 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.

Please consider good operating practices for the optimal performance of the Reverse Osmosis membrane elements to assure damage free operation:

1. Loading of Pressure Vessels – Preparation & Element Loading (Form No. 45-D01602-en)
2. System Operation, including plant Start-Up Sequence (Form No. 45-D01609-en) and RO & NF Systems Shutdown (Form No. 45-D01613-en)
3. Handling, Preservation, and Storage (Form No. 45-D03716-en)

Full information of plant design, system operation, and troubleshooting is given in the FilmTec™ Reverse Osmosis Membranes Technical Manual (Form No. 45-D01504-en).

Regulatory Note

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

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