

MICRODYN RO

High-Rejection

Seawater RO Elements

The MICRODYN reverse osmosis (RO) SWL series of seawater RO membranes is ideal for high-salinity water purification applications. These elements feature our best membrane for upgrading an RO system, offering very high productivity. MICRODYN RO elements are available in standard 4" and 8" spiral-wound designs to meet all your new equipment and direct replacement needs.

MEMBRANE CHARACTERISTICS

Membrane chemistry	Thin-film composite polyamide
Construction	Spiral-wound membrane element with fiberglass outerwrap
Stabilized salt rejection ^a	4040 model: 99.4% 8040 models: 99.75%
Minimum salt rejection ^a	4040 model: 99.2% 8040 models: 99.7%
Stabilized boron rejection ^a	8040 models: 92%

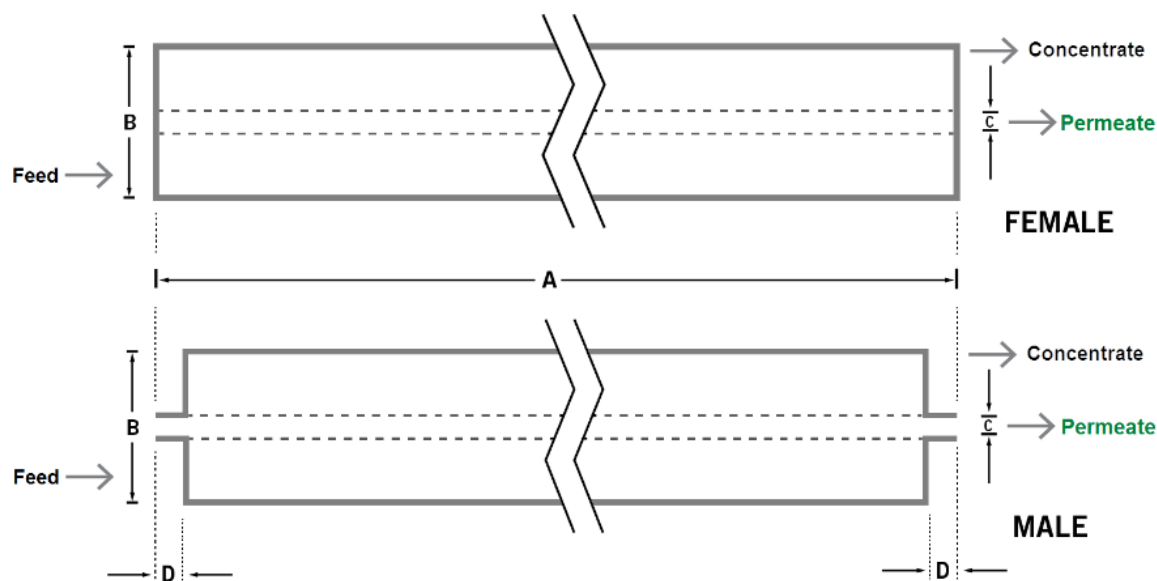
ELEMENT SPECIFICATIONS

Model	4040-SWL	8040-SWL-400/34	8040-SWL-440
Permeate flow in m ³ /d (GPD) ^a	7.4 (1,950)	34.1 (9,000)	37.5 (9,900)
Membrane area in m ² (ft ²) ^b	7.9 (85)	37.2 (400)	40.9 (440)
Spacer thickness in mil	28	34	28

a Test conditions: 32,000 ppm NaCl, 55 bar (800 psi), 25°C (77°F), pH 8.0, 5 ppm of boron, 30 minutes operation. Test condition recovery is 10% for 4" models and 8% for 8" models. Flow rates will be no more than 15% below the values shown. Product specifications may change without notice as design revisions occur.

b All models on this sheet have fiberglass outerwrap and diamond-shaped feed spacers.

PHYSICAL DIMENSIONS



ELEMENT SPECIFICATIONS

Model	4040-SWL	8040-SWL-400/34	8040-SWL-440
Dim. A in mm (in)	1,016 (40.0)	1,016 (40.0)	1,016 (40.0)
Dim. B in mm (in)	99 (3.9)	201 (7.9)	201 (7.9)
Dim. C in mm (in) ^c	19.1 (0.75)	28.6 (1.125)	28.6 (1.125)
Permeate tube ^d	Male	Female	Female
Weight in kg (lb) ^e	4 (9)	16 (36)	17 (37)

^c Diameters for Dimension "C" are as follows: For female elements, "C" is the inner diameter; for male elements, "C" is the outer diameter.

^d Male elements have a protruding permeate tube, indicated as "D" in the diagram. Dimension "D" is 26.7 mm (1.05 in).

^e Shipping weight is dependent on packaging material and quantity shipped.

OPERATING PARAMETERS

Maximum operating pressure	4040 model: 69 bar (1,000 psi); 8040 models: 83 bar (1,200 psi)
Maximum operating temperature	45°C (113°F)
Cleaning pH range ^f	1.0 - 12.0
Chlorine tolerance ^g	< 0.1 ppm
Maximum pressure drop	1 bar (15 psi) per element; 4 bar (60 psi) per housing
Maximum SDI ₁₅	5.0
Maximum turbidity	1 NTU

^f Refer to temperature and pH limits in the [Membrane Cleaning Guide - Water Application Elements \(TSG-C-001\)](#).

^g Pretreatment is recommended for the removal of free chlorine and other oxidizing agents to prevent damage to membranes. Oxidizing agents, such as free chlorine, in contact with polyamide membranes may result in shortened operating life or membrane failure. Such oxidation damage is excluded from warranty. Refer to the [Membrane Operating Guide - Recommendations for Water Purification \(TSG-O-012\)](#).

IMPORTANT INFORMATION

- Start-up:** MANN+HUMMEL Water & Membrane Solutions recommends flushing elements for 30 minutes at low pressure and discarding permeate during the flush prior to operation. For a more detailed start-up procedure, please see the [Element Start-Up Guide - System Start-Up](#) (TSG-O-005).
- Cleaning:** MICRODYN RO membrane elements must be cleaned periodically to ensure proper operation and prevent membrane damage. Please see the [Membrane Cleaning Guide - Water Application Elements](#) (TSG-C 001).
- Storage:** MICRODYN RO membrane elements must be stored appropriately to ensure proper operation and to prevent membrane damage. Please see the Element Storage Guides ([TSG-O-009](#) and [TSG-O-010](#)).

CUSTOMIZABLE SPECIALTY ELEMENTS

MANN+HUMMEL Water & Membrane Solutions offer a full range of membranes and element designs for challenging water and process applications. Technologies include low-fouling RO, submerged ultrafiltration (UF), continuous high temperature, ultra-high pressure, unique sanitary designs, and more. Contact us to customize a product that satisfies your specific requirements.

Contact

Americas

USA: +1 805 964 8003
customerservicemus@mann-hummel.com

Asia

APAC: +65 658 68181
info.wfs@mann-hummel.com
China: +86 512 88931188
waterchina@mann-hummel.com
India: water.india@mann-hummel.com

Europe

Germany: +49 611 7118 7480
Italy: +39 0721 1796201
info.wfs@mann-hummel.com