MICRODYN RO

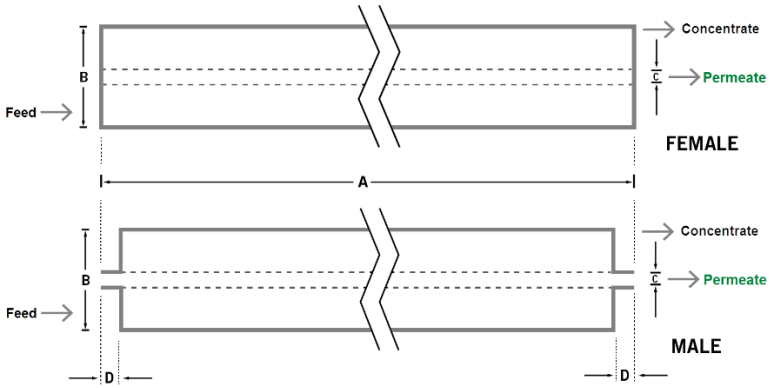
Small Seawater RO Elements

Membrane Chemistry	Thin-Film Composite Polyamide
Construction	Spiral-Wound Membrane Element with Fiberglass Outerwrap
Stabilized Salt Rejection (%)	99.6%
Minimum Salt Rejection (%)	99.4%

ELEMENT SPECIFICATIONS

Model	2540 -SWH
Permeate Flow - m^3/day (GPD)[a]	2.1 (550)
Membrane Area - m^2 (ft^2)[b]	2.6 (28)

PHYSICAL DIMENSIONS



Model	2540-SWH
Dim. A – mm (inches)	1,016 (40.0)
Dim. B – mm (inches)	61 (2.4)
Dim. C – mm (inches)[c]	19.1 (0.75)
Permeate Tube[d]	Male

a Test conditions: 32,000 ppm NaCl, 55 bar (800 psi), 25°C (77°F), 10% recovery, pH 8.0, 30 minutes operation. 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 outer wrap and diamond shaped feed spacers.
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 1.2 in (30.5 mm).
e Shipping weight is dependent on packaging material and quantity shipped.

MICRODYNNADIR
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OPERATING PARAMETERS

Maximum Operating Pressure	69 bar (1,000 psi)
Maximum Operating Temperature	45°C (113°F)
Cleaning pH Range[1]	1.0 – 12.0
Chlorine Tolerance[2]	< 0.1 ppm
Maximum Pressure Drop	0.7 bar (10 psi)
Maximum SDI_{15}	5.0
Maximum Turbidity	1 NTU

1 Refer to temperature and pH limits in Membrane Cleaning Guide - Water Application Elements (TSG-C-001).

2 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 Membrane Operating Guide - Recommendations for Water Purification (TSG-O-012).

IMPORTANT INFORMATION

Start-up: MICRODYN-NADIR 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 Element Start-Up Guide – System Start-Up (TSG-O-005).

Cleaning: MICRODYN RO membrane elements must be cleaned periodically to ensure proper operation and to prevent membrane damage. Please see 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 Element Storage Guides (TSG-O-009 & TSG-O-010).

CUSTOMIZABLE SPECIALTY ELEMENTS

MICRODYN-NADIR offers a full range of membranes and element designs for challenging water and process applications. Technologies include low-fouling RO, submerged UF, continuous high temperature, ultra-high pressure, unique sanitary designs and more. Contact MICRODYN-NADIR to customize a product that satisfies your specific requirements.

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DATE: 07/01/2019

MICRODYNNADIR
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MICRODYN RO
High Rejection
Seawater RO Elements

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

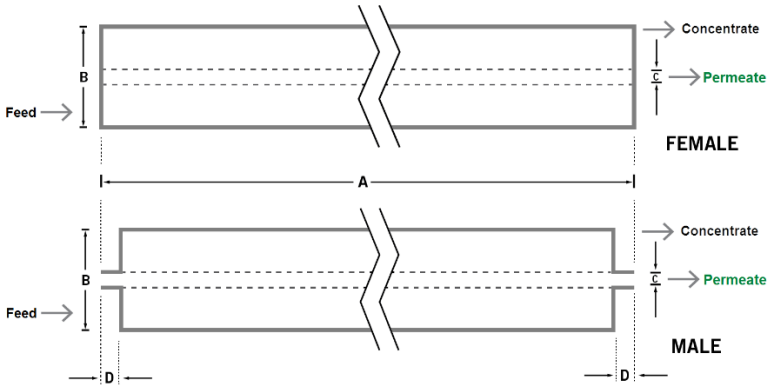
MEMBRANE CHARACTERISTICS

Membrane Chemistry	Thin-Film Composite Polyamide
Construction	Spiral-Wound Membrane Element with Fiberglass Outerwrap
Stabilized Salt Rejection (%)	4040 model: 99.6, 8040 models: 99.82
Minimum Salt Rejection (%)	4040 model: 99.4, 8040 models: 99.7

ELEMENT SPECIFICATIONS

Model	4040-SWH	8040-SWH-400	8040-SWH-440
Permeate Flow - m^3/day (GPD)[a]	6.4 (1,700)	22.7 (6,000)	25.0 (6,600)
Membrane Area - m^2 (ft^2)[b]	7.9 (85)	37.2 (400)	40.9 (440)

PHYSICAL DIMENSIONS



Model	4040-SWH	8040-SWH-400	8040-SWH-440
Dim. A – mm (inches)	1,016 (40.0)	1,016 (40.0)	1,016 (40.0)
Dim. B – mm (inches)	99 (3.9)	201 (7.9)	201 (7.9)
Dim. C – mm (inches)[c]	19.1 (0.75)	28.6 (1.125)	28.6 (1.125)
Permeate Tube[d]	Male	Female	Female
Element Weight – kg (lb)[e]	4 (9)	16 (36)	17 (37)

a Test conditions: 32,000 ppm NaCl, 55 bar (800 psi), 25°C (77°F), pH 8.0, 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 outer wrap and diamond shaped feed spacers.
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 1.05 in (26.7 mm).
e Shipping weight is dependent on packaging material and quantity shipped.

MANN+HUMMEL

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[1]	1.0 – 12.0
Chlorine Tolerance[2]	< 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

1 Refer to temperature and pH limits in Membrane Cleaning Guide - Water Application Elements (TSG-C-001).
2 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 Membrane Operating Guide - Recommendations for Water Purification (TSG-O-012).

IMPORTANT INFORMATION

Start-up: MANN+HUMMEL Water & Fluid 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 Element Start-Up Guide – System Start-Up (TSG-O-005).

Cleaning: MICRODYN RO membrane elements must be cleaned periodically to ensure proper operation and to prevent membrane damage. Please see 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 Element Storage Guides (TSG-O-009 & TSG-O-010).

CUSTOMIZABLE SPECIALTY ELEMENTS

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

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