



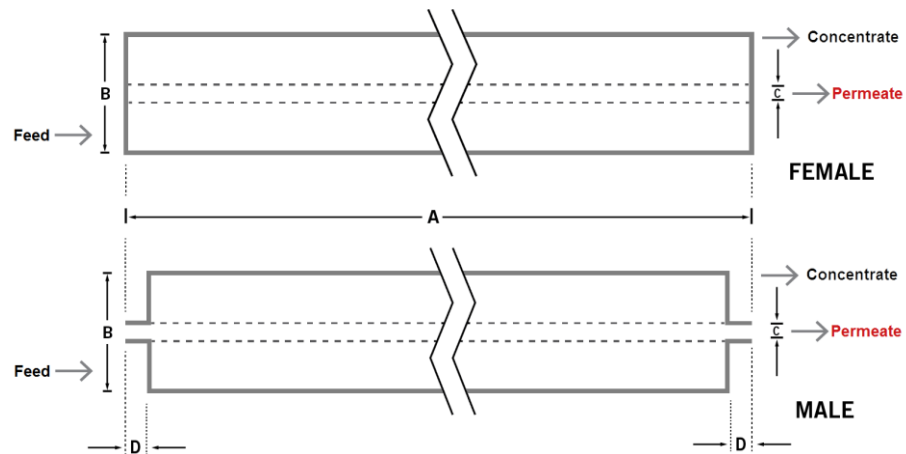
MICRODYN RO

Low Energy Brackish Water RO Elements

The MICRODYN RO series of low energy RO membranes is ideal for water purification applications where reduced energy consumption is required. These elements feature our low energy membrane for directly replacing competitive RO products and operate at low pressure conditions. 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 (%)	99.3		
	Minimum Salt Rejection (%)	98.8		
ELEMENT SPECIFICATIONS	Model	4040-LE	8040-LE-400	8040-LE-440
	Permeate Flow – m³/d (GPD)^a	8.3 (2,200)	40.0 (10,550)	43.9 (11,550)
	Membrane Area – m² (ft²)^b	7.9 (85)	37.2 (400)	40.9 (440)

PHYSICAL DIMENSIONS



Model	4040-LE	8040-LE-400	8040-LE-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: 1,500 ppm NaCl, 10.3 bar (150 psi), 25°C (77°F), 15% 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 25.4 mm (1.0 in).

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

OPERATING PARAMETERS

Maximum Operating Pressure	41 bar (600 psi)
Maximum Operating Temperature	45°C (113°F)
Cleaning pH Range¹	1.0 – 12.0
Chlorine Tolerance²	< 0.1 ppm
Maximum Pressure Drop	1 bar (15 psi) per element 4 bar (60 psi) per housing
Maximum SDI₁₅	5.0
Maximum Turbidity	1.0 NTU

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 <i>Element Start-Up Guide – System Start-Up</i> (TSG-O-005).
Cleaning:	MICRODYN RO membrane elements must be cleaned periodically to ensure proper operation and to prevent membrane damage. Please see <i>Membrane Cleaning Guide – Water Application Elements</i> (TSG-C-001).
Storage:	MICRODYN RO membrane elements must be stored appropriately to ensure proper operation and to prevent membrane damage. Please see <i>Element Storage Guides</i> (TSG-O-009 & TSG-O-010).

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).



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