

# BIO-CEL® EASY

## Submerged MBR Module for Wastewater Treatment

BIO-CEL® EASY is a small but mighty MBR system built for customers whose water treatment needs fall into the 10 – 100 m<sup>3</sup>/d ‘sweet spot’ for the modules. This simple and efficient MBR module is easy to design, assemble, connect, move, and expand in any customer facility. The BIO-CEL® EASY module fits perfectly in the filtration tank: BIO-CEL® EASY TANK. The perfect pair of tank and module(s) ensures a plug-and-play experience.

### MEMBRANE CHARACTERISTICS

<b>Membrane</b>	NADIR® UP150
<b>Membrane Polymer</b>	Polyethersulfone (PES)
<b>Nominal Pore Size</b>	0.04 µm
<b>Preservative</b>	Glycerine 20 % / Sodium benzoate 3 %

### MODULE SPECIFICATIONS

<b>Housing Material Options</b>	Stainless Steel 1.4301/304 (V2A)
<b>Drainage Layer</b>	Polyester (PET)
<b>Diffusors Material Options</b>	Membrane hose: EPDM
<b>Nominal Membrane Area</b>	50 m <sup>2</sup> (538 ft <sup>2</sup> )

### OPERATING PARAMETERS

<b>pH Range</b>	2.0 – 11.0
<b>Temperature Range</b>	5 – 40°C (41 – 104°F)
<b>Maximum TMP during Filtration</b>	- 400 mbar (-5.8 psi)
<b>Maximum TMP during Regular Backwash</b>	+150 mbar (+2.2 psi)
<b>Flow Rate Municipal<sup>a</sup></b>	1,000 L/h
<b>Flow Rate Industrial<sup>a</sup></b>	500 L/h
<b>Recommended Air Scour Rate<sup>b</sup></b>	32 Nm <sup>3</sup> /h (19 SCFM)
<b>Recommended MLSS in MBR Tank</b>	8 - 12 g/L
<b>Maximum MLSS in MBR Tank</b>	15 g/L
<b>Maximum Particle Size in MBR Tank</b>	2 mm
<b>Total Chlorine Resistance</b>	1,000,000 ppm•hr

a Flowrate at 20°C water temperature, depending on wastewater quality. Please contact MICRODYN-NADIR for more information.

b Volumetric flow rate at standard conditions according to DIN ISO 2533:1979-12.

**PHYSICAL DIMENSIONS**



	Module	Tank
<b>Length</b>	674 mm (2.2 ft)	1,066 mm (3.5 ft)
<b>Width</b>	590 mm (1.9 ft)	706 mm (2.3 ft)
<b>Height</b>	1,351 mm (4.4 ft)	2,036 mm (6.6 ft)
<b>Dry Weight</b>	95 kg (209 lb)	210 kg (463 lb)
<b>Wet Weight without Solids</b>	125 kg (275 lb)	N.A.
<b>Maximum Load for Lifting<sup>c</sup></b>	330 kg (727 lb)	N.A.
<b>Filtration Tank Minimal Water Level</b>	1,633 mm (5.3 ft)	N.A.
<b>Water Level</b>	N.A.	1,650 mm (5.4 ft)
<b>Connection for Permeate</b>	¾" G	¾" G
<b>Connection for Aeration</b>	1 ½" G	1 ½" G
<b>Connection for Sludge Recirculation</b>	N.A.	1 ½"

<sup>c</sup> Sludge deposit must be removed before lifting unit

**IMPORTANT INFORMATION**

**Scope of Supply, Accessories & Spare Parts:**

Please see BIO-CEL® EASY – Scope of Supply, Accessories and Spare Parts (TDS-WW029).

**Storage & Handling:**

BIO-CEL® MBR modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see BIO-CEL® MBR – Storage Conditions (TB-WW002).

MICRODYN-NADIR reserves the right to change specifications without prior notification.

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