

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 m³/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

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

MODULE SPECIFICATIONS

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

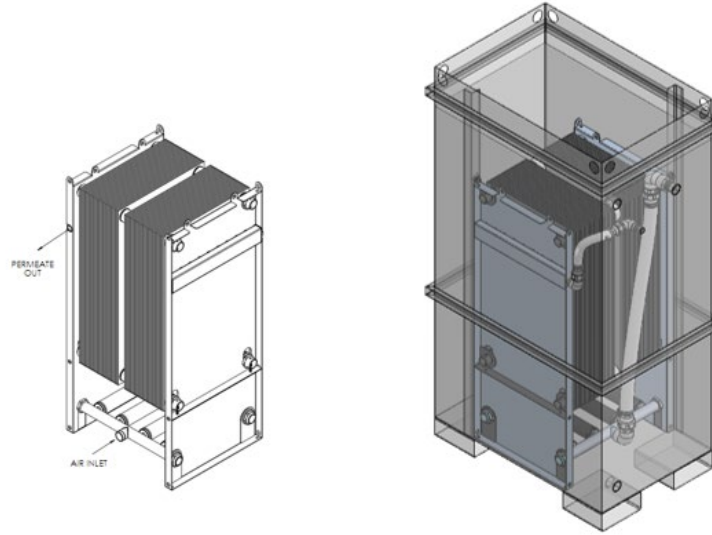
OPERATING PARAMETERS

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

a Flowrate at 20°C water temperature, depending on wastewater quality. Please Contact us for more information.

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

PHYSICAL DIMENSIONS



	Module	Tank
Length	682 mm (2.2 ft)	1126mm (3.7ft)
Width	590 mm (1.9 ft)	766 mm (2.5ft)
Height	1428 mm (4.7ft)	2,036 mm (6.6 ft)
Dry Weight	110kg (243lb)	246 kg (542lb)
Wet Weight without Solids	140kg (309lb)	N.A.
Maximum Load for Lifting^c	330 kg (727 lb)	N.A.
Filtration Tank Minimal Water Level	1651 mm (5.4 ft)	N.A.
Water Level	N.A.	1651 mm (5.4 ft)
Connection for Permeate	¾" G (inner thread)	¾" G (inner thread)
Connection for Aeration	1 ½" G (outer thread)	1 ½" G (inner thread)
Connection for Sludge Recirculation	N.A.	1 ½" (inner thread)

^c 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).

MANN+HUMMEL Water & Fluid Solutions reserves the right to change specifications without prior notification.

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