

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) |

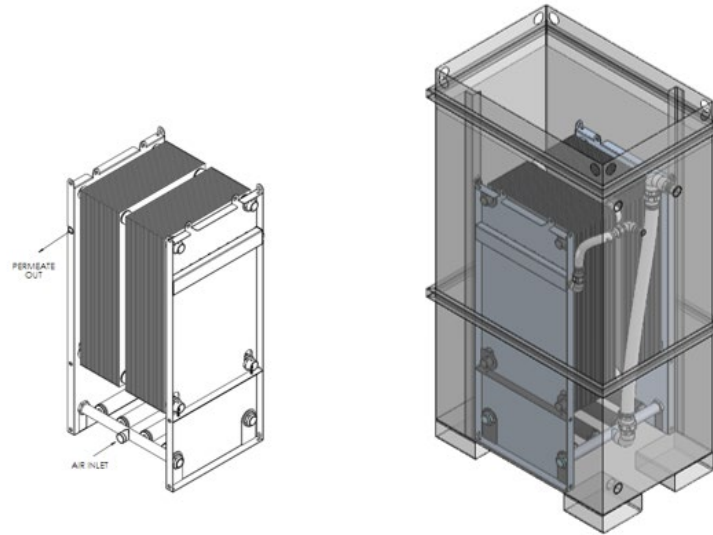
OPERATING PARAMETERS

| | |
|---|---------------------------------|
| 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.

Contact

Europe

Germany: +49 611 962 6001
Italy: +39 0721 1796201
info@microdyn-nadir.com

Americas

USA: +1 805 964 8003
Brazil: +55 11 3378 7500
info@microdyn-nadir.com

Asia

China: +86 592 677 5500
Singapore: +65 6457 7533
infochina@microdyn-nadir.cn