



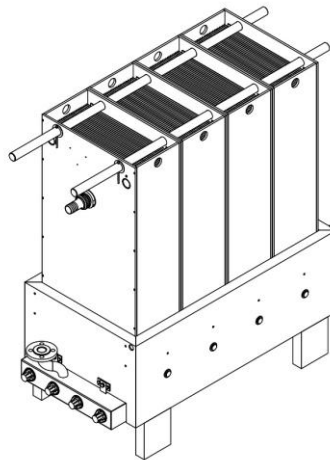
MICRODYN BIO-CEL® 104

Submerged MBR Module for Wastewater Treatment

The MICRODYN BIO-CEL® MBR series is ideal for biological wastewater treatment in industrial and municipal applications. BIO-CEL MBR combines the benefits of traditional hollow fiber and plate and frame configurations without any of their inherent disadvantages. The module has an extremely high packing density due to the thin and self-supporting membrane sheets and the laminate offers a self-healing mechanism.

| | | | |
|---------------------------------|-----------------------------------|---|--------------------|
| 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 | Polyvinyl chloride (PVC), Polyethylene (PE) | |
| | Drainage Layer | Polyester (PET) | |
| | Diffusors Material Options | Membrane hose: | Polyurethane (PUR) |
| | | Support tube: | Polypropylene (PP) |
| | Nominal Membrane Area | 104 m ² (1120 ft ²) | |

PHYSICAL DIMENSIONS



| | |
|---|---|
| Dry Weight | 260 kg (574 lb) |
| Wet Weight without Solids | 330 kg (728 lb) |
| Maximum Load for Lifting^a | 850 kg (1874 lb) |
| Length | 1600 mm (5.3 ft) |
| Width | 702 mm (2.3 ft) |
| Height | 1563 mm (5.1 ft) |
| Filtration Tank Minimal Water Level | 1750 mm (5.8 ft) |
| Connection for Permeate | Hose Nozzle PVC, for hose inner diameter 40 mm |
| Connection for Aeration | Flange DIN 2633 – Type C Series1 (ISO), PN16, DN32 x 42.2 |

^a Sludge deposit must be removed before lifting unit.

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) |
| Air Scour Rate in V_N^b | $\leq 60 \text{ Nm}^3/\text{h}$ ($\leq 37 \text{ SCFM}$) |
| Recommended MLSS in MBR Tank | Up to 12 g/L |
| Maximum Particle Size in MBR Tank | 2 mm |
| Total Chlorine Resistance | 500,000 ppm•hr |

IMPORTANT INFORMATION

**Scope of Supply,
Accessories & Spare Parts:** Please see *MICRODYN BIO-CEL® 104 – Scope of Supply,
Accessories and Spare Parts (TDS-WW008)*.

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

^b V_N is the volumetric flow rate at standard conditions according to DIN ISO 2533:1979-12.



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