

BIO-CEL L+960H

Submerged MBR Module for Wastewater Treatment

The 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 | UV400T |
| Membrane Polymer | Polyvinylidene fluoride (PVDF) |
| Nominal Pore Size | 0.06 µm |
| Preservative | Glycerine 20 % / Sodium benzoate 3 % |

MODULE SPECIFICATIONS

| | |
|--------------------------|---|
| Housing Material Options | Stainless Steel 1.4301/304 (V2A) On request: SS 1.4571/316Ti (V4A) |
| Drainage Layer | Polyester (PET) |
| Diffusors Material | Membrane hose: Silicone (SI) Support tube: Polypropylene (PP) |
| Nominal Membrane Area | 960 m ² (10333 ft ²) |

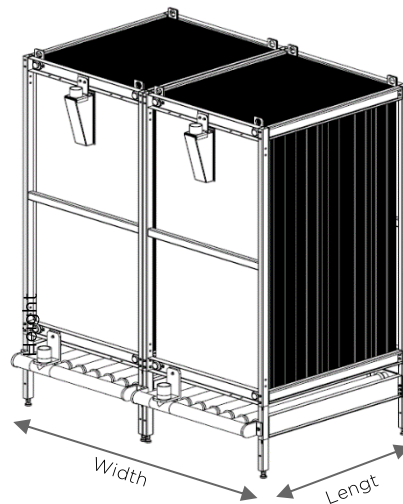
OPERATING PARAMETERS

| | |
|---|-----------------------------------|
| 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) |
| Recommended Air Scour Rate ^a | 180 Nm ³ /h (106 SCFM) |
| Maximum Air Scour Rate ^a | 230 Nm ³ /h (134 SCFM) |
| Diffusors Pressure Loss at Recommended Air Scour Rate | 80 mbar (1.16 psi) |
| Diffusor Total Pressure Loss at Min Water Level | 343 mbar (5 psi) |
| Recommended MLSS in MBR Tank | 8 - 12 g/L |
| Maximum MLSS in MBR Tank ^b | 15 g/l |
| Maximum Particle Size in MBR Tank | 2 mm |
| Total Chlorine Resistance | 1,000,000 ppm•hr |

a) Volumetric flow rate at standard conditions according to DIN ISO 2533:1979-12

b) Is allowed for 5 % of operational time within a period of one month

PHYSICAL DIMENSIONS



| | |
|---|--|
| Dry Weight | 694 kg (1530 lbs) |
| Wet Weight without Solids | 1274 kg (2780 lbs) |
| Maximum Load for Lifting^b | 3000 kg (6614 lbs) |
| Length | 1529 mm (5.0 ft) |
| Width | 2160 mm (7.0 ft) |
| Height | 2731 mm (8.9 ft) |
| Filtration Tank Minimal Water Level | 3025 mm (9.9 ft) |
| Connection for Permeate^c | G 2 ½" BSPP inner thread, Stainless Steel |
| Connection for Aeration^c | DN80 (PN10) Pipe End, Polypropylene (DN80 Flange Adapter available) |

b) Sludge deposit must be removed before lifting unit

c) Adapters available

IMPORTANT INFORMATION

Scope of Supply, Accessories & Spare Parts: Please see BIO-CEL L+960H – Scope of Supply, Accessories and Spare Parts (TDS-WW036).

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 reserves the right to change specifications without prior notification.

Contact

Americas

USA: +1 805 964 8003
sales.mnus@microdyn-nadir.com

Asia

APAC: +65 6457 7533
info.wfs@mann-hummel.com
China: +86 10 8413 9860
waterchina@mann-hummel.com

Europe

Germany: +49 611 7118 7480
Italy: +39 0721 1796201
info.wfs@mann-hummel.com