



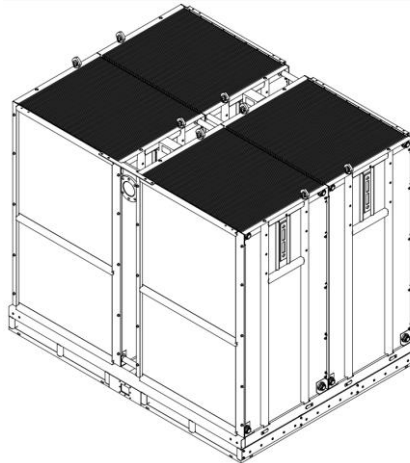
MICRODYN BIO-CEL[®] XL-1

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	Stainless Steel 1.4301/304 (V2A) On request: SS 1.4571/316Ti or 1.4404/316L (V4A)
	Drainage Layer	Polyester (PET)
	Diffusors Material Options	Membrane hose: Polyurethane (PUR) Support tube: Polypropylene (PP)
	Nominal Membrane Area	1920 m ² (20667 ft ²)

PHYSICAL DIMENSIONS



Dry Weight	1900 kg (4188 lb)
Wet Weight without Solids	2900 kg (6393 lb)
Maximum Load for Lifting^a	6000 kg (13228 lb)
Length	2787 mm (9.1 ft)
Width	2100 mm (6.9 ft)
Height	2442 mm (8 ft)
Filtration Tank Minimal Water Level	3500 mm (11.5 ft)
Connection for Aeration & Permeate^b	Special flange; adapters and drawings available

^a Sludge deposit must be removed before lifting unit.

^b For further details see MICRODYN BIO-CEL XL-1 Scope of Supply, Accessories and Spare Parts (TDS-WW005).

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^c	$\leq 460 \text{ Nm}^3/\text{h}$ ($\leq 286 \text{ SCFM}$)
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® XL-1 – Scope of Supply,
Accessories and Spare Parts (TDS-WW005)*.

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)*.

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



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