



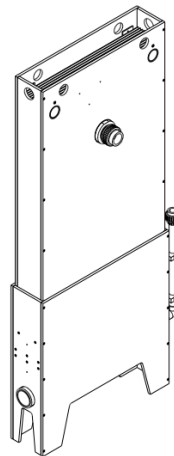
MICRODYN BIO-CEL[®] XS-1

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	Polyvinyl chloride
	Drainage Layer	Polyester (PET)
	Diffusors Material Options	Membrane hose: Polyurethane (PUR) Support tube: Polypropylene (PP)
	Nominal Membrane Area	10 m ² (108 ft ²)

PHYSICAL DIMENSIONS



Dry Weight	45 kg (99 lb)
Wet Weight without Solids	55 kg (121 lb)
Maximum Load for Lifting^a	100 kg (220 lb)
Length	280 mm (0.9 ft)
Width	747 mm (2.5 ft)
Height	1515 mm (5 ft)
Filtration Tank Minimal Water Level	1670 mm (5.5 ft)
Connection for Permeate	DN32, loose joint
Connection for Aeration	DN20, loose joint

^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	$\leq 6 \text{ Nm}^3/\text{h}$ ($\leq 4 \text{ SCFM}$)
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

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.



**MICRODYN
NADIR**

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A MANN + HUMMEL Company

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