

MICRODYN BIO-CEL® 208

Scope of Supply

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. This product specification sheet provides details about the standard scope of supply, available accessories and spare parts of MICRODYN BIO-CEL® 208 modules.

BIO-CEL® 208 modules are shipped on wooden pallets. Details for shipment dimensions and container transport see page 2.

Part numbers in the table below are the standard scope of supply; accessories are required for proper installation and operation of the module. See more details about required accessories on page 3.

Part Number	Remarks
00350218	1 pallet with membrane unit; 1 pallet with base frame

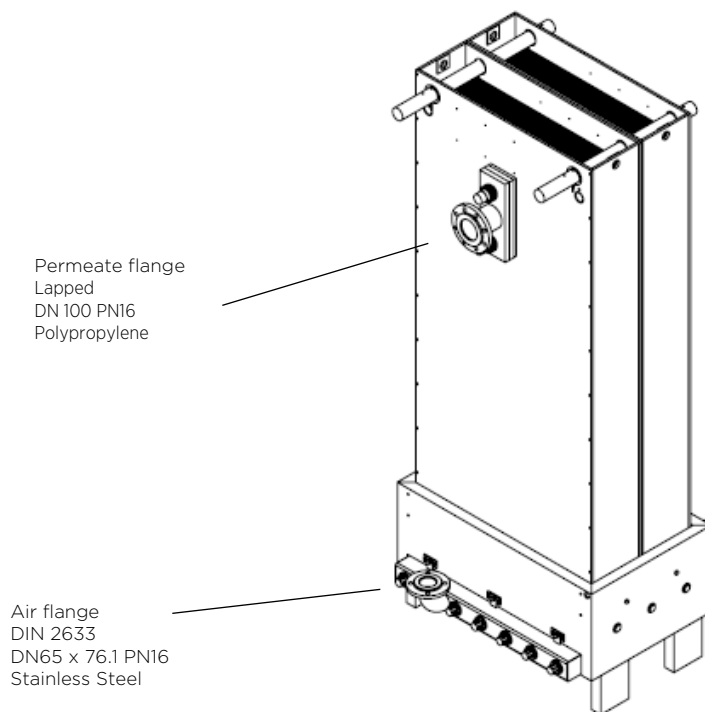


Figure 1. MICRODYN BIO-CEL® 208 scope of supply

Table 1. Wooden pallet shipment dimensions

	length	width	height	weight
BIO-CEL® 208 module	2,400mm (7.9 ft)	950mm (3.1 ft)	1,190mm (3.9 ft)	310 kg (683 lb)
BIO-CEL® 208 aerator frame	1,200mm (3.9 ft)	1,050mm (3.4 ft)	805mm (2.6 ft)	90 kg (198 lb)

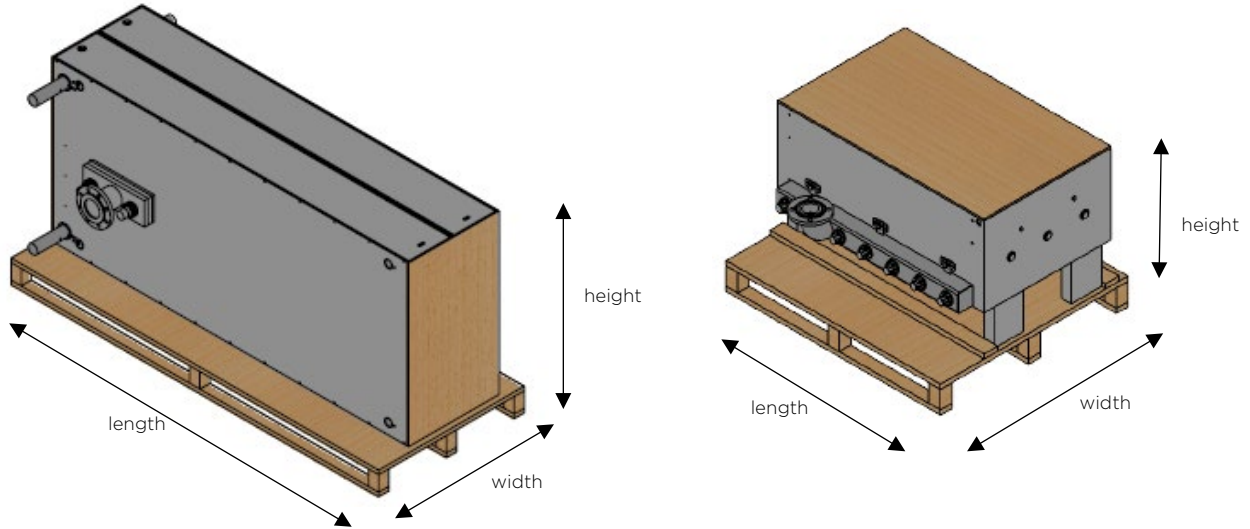


Figure 2. MICRODYN BIO-CEL® 208 in transport packaging

Table 2. standard container inner dimensions

	length	width	height
20 ft container	5,898mm (19.4 ft)	2,350mm (7.7 ft)	2,360mm (7.7 ft)
40 ft container	12,032mm (39.5 ft)	2,350mm (7.7 ft)	2,360mm (7.7 ft)
Door opening	-	2,340mm (7.7 ft)	2,280mm (7.5 ft)

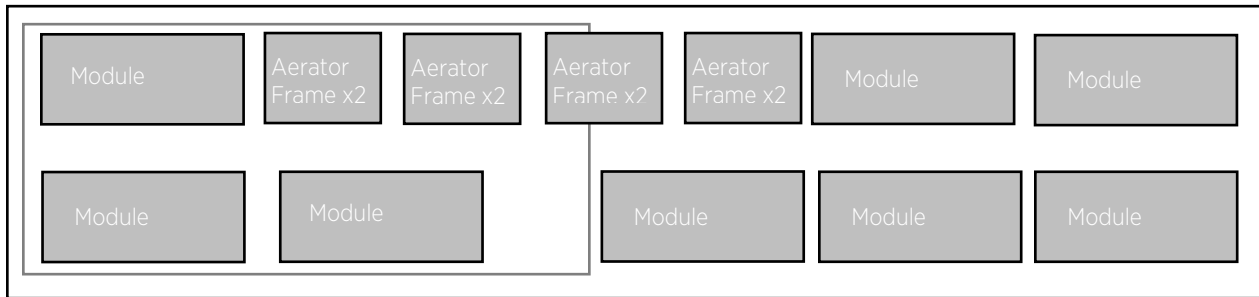


Figure 3. MICRODYN BIO-CEL® 208 arrangement in 20/40 ft container (10 / 21 pcs capacity)

MICRODYN BIO-CEL® 208

Accessories

To ensure proper installation and operation of MICRODYN BIO-CEL® MBR modules, certain accessories are necessary. These accessories are listed in the following table. More detailed information can be found in the BIO-CEL MBR OEM Design Guidelines. The following accessories are mandatory for MICRODYN BIO-CEL® 208 membrane modules:

- Set of legs
- Lifting tool

These accessories can be purchased from MICRODYN-NADIR or produced by a third-party supplier. Details of these required accessories are provided in Figures 4-6. Detailed drawings are available on request.

Position	Part Number	Drawing Numbers	Accessory	Remarks
A1	00350171	-	BIO-CEL® 208/416 Permeate Set	Elbow: PVC DN100, PN16 incl. flat sealing and fastening material (drawings available)
A2	00350001	MN-00700-004-0010	BIO-CEL® 208/416 Feet Ext.Set	200mm PP feet to ensure minimum ground clearance
-	-	-	MICRODYNBIO-CEL 208 Guiding and lifting system	Drawings available on request

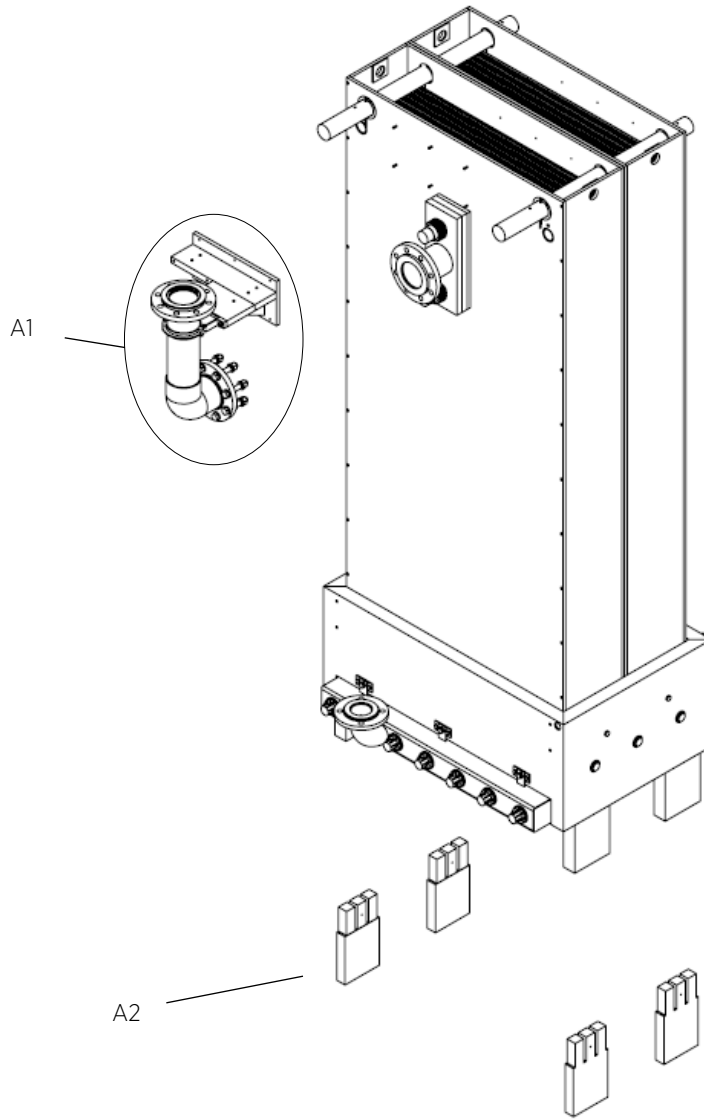


Figure 4. MICRODYN BIO-CEL® 208 exploded drawing of available accessories

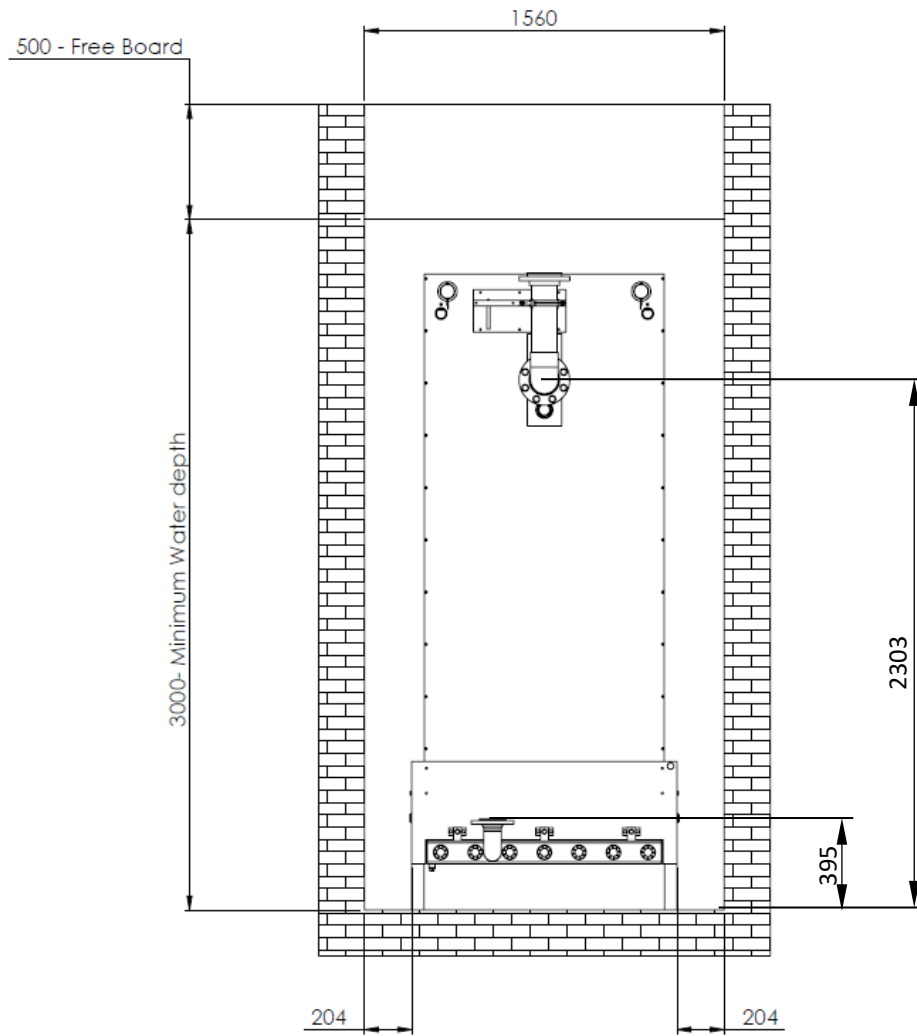


Figure 5. MICRODYN BIO-CEL® 208 with available accessories in standard filtration tank with minimum clearances (connection side view)

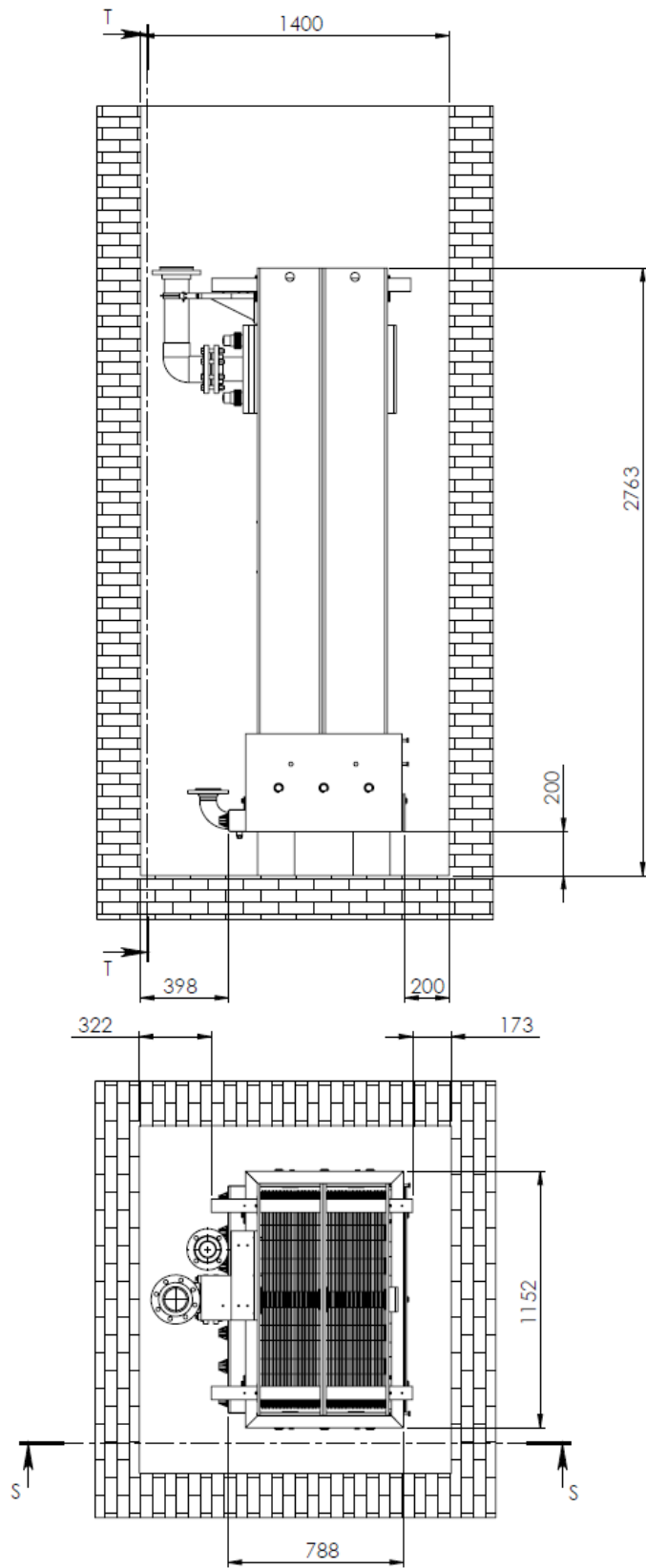


Figure 6. MICRODYN BIO-CEL® 208 with accessories in standard filtration tank with minimum clearances (top and side view)

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Spare Parts

No spare parts are typically required within the first 5 years of operation. If there is a need for spare parts, MICRODYN-NADIR can supply all necessary parts according to the table below and the drawings in Figure 7. For further information see the MICRODYN BIO-CEL® MBR O&M Manual or contact MICRODYN-NADIR.

Position	Part Number	Spare Part	Remarks
S1	On request	BIO-CEL® 208 Preassembled Cassette Unit	1 wooden pallet; incl. Pos. S5 and Pos. S7
S2	On request	BIO-CEL® 208 Base Unit	Diffuser set (Pos. S3) included & assembled
S3a	On request	BIO-CEL® 208 Diffuser Set	7 diffusers + connectors (Polyurethane)
S3b	On request	BIO-CEL® 208 Diffuser Set SIL	7 diffusers + connectors (Silicone)
-	00350072	BIO-CEL® Diffuser Assembly Tool ^a	Torque wrench with special wrench socket
S4	00350175	BIO-CEL® C104 Cassette	Replacement for BIO-CEL® 208/416
S5	On request	BIO-CEL® 208 Permeate connection set 1	Front and rear part incl. steel parts and O-Ring
S6	On request	BIO-CEL® 208 Permeate connection set 2	Rear part only incl. steel parts; necessary to change cassettes and O-Ring
S7	On request	BIO-CEL® 208 Lifting Bars	Incl. steel parts
S8	00350171	BIO-CEL® 208/416 Permeate Pipe Set	Elbow: PVC DN100, PN16 incl. flat sealing and fastening material (drawings available)
-	00350024	BIO-CEL® 208/416 Gasket Set	9xO-ring EPDM, 2xDN100 flat gasket EPDM, 1xDN65 flat gasket EPDM
-	00350008	BIO-CEL® 208/416 Steel Parts	EN 1.4571/ AISI 316Ti

^a A normal torque wrench may be used. Drawings for the special wrench socket are available on request.

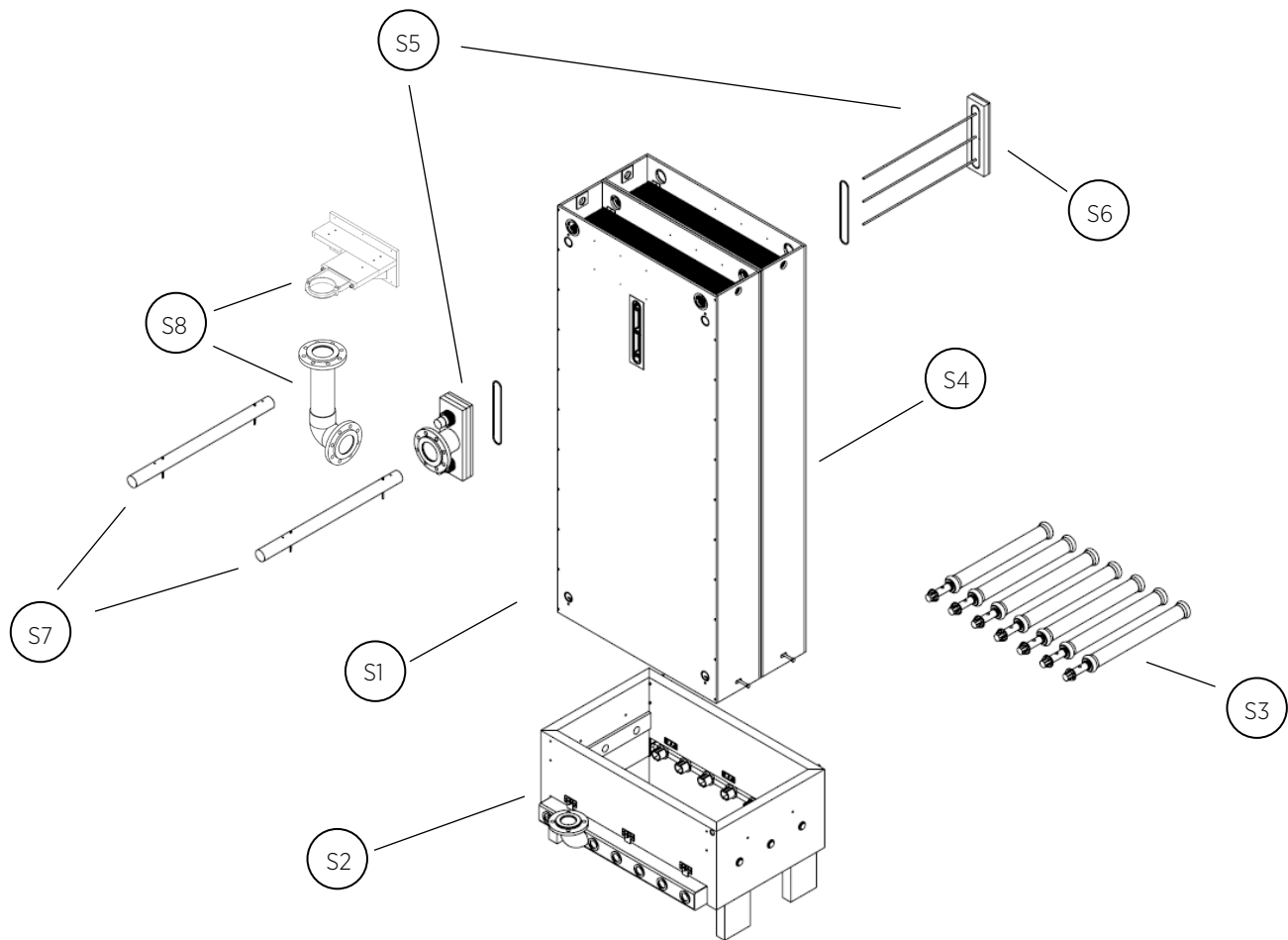


Figure 7. MICRODYN BIO-CEL® 208 exploded drawing showing available spare parts

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