

# BIO-CEL® 416

## Scope of Supply, Accessories & Spare Parts

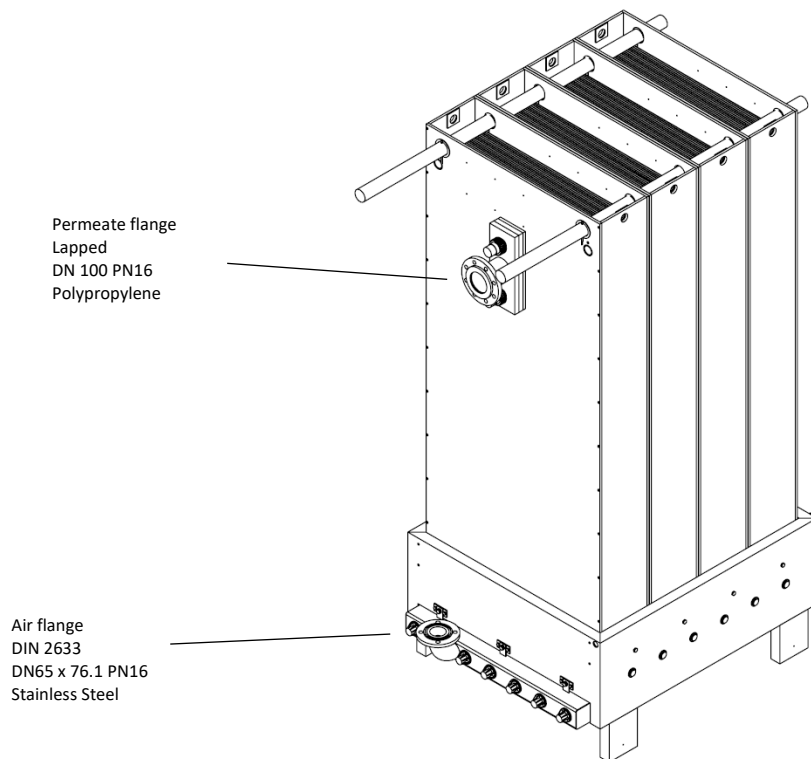
### BIO-CEL® 416 SCOPE OF SUPPLY

The BIO-CEL® MBR product is ideal for biological wastewater treatment in industrial and municipal applications. This product specification sheet provides details about the standard scope of supply, available accessories, and spare parts of BIO-CEL 416 modules.

Find shipment dimensions and container transport information on page 2. BIO-CEL 416 modules are shipped on wooden pallets. Part numbers in Table 1 are the standard scope of supply. For details about available accessories please see page 3; for spare parts please see page 5.

**Table 1.** Scope of supply

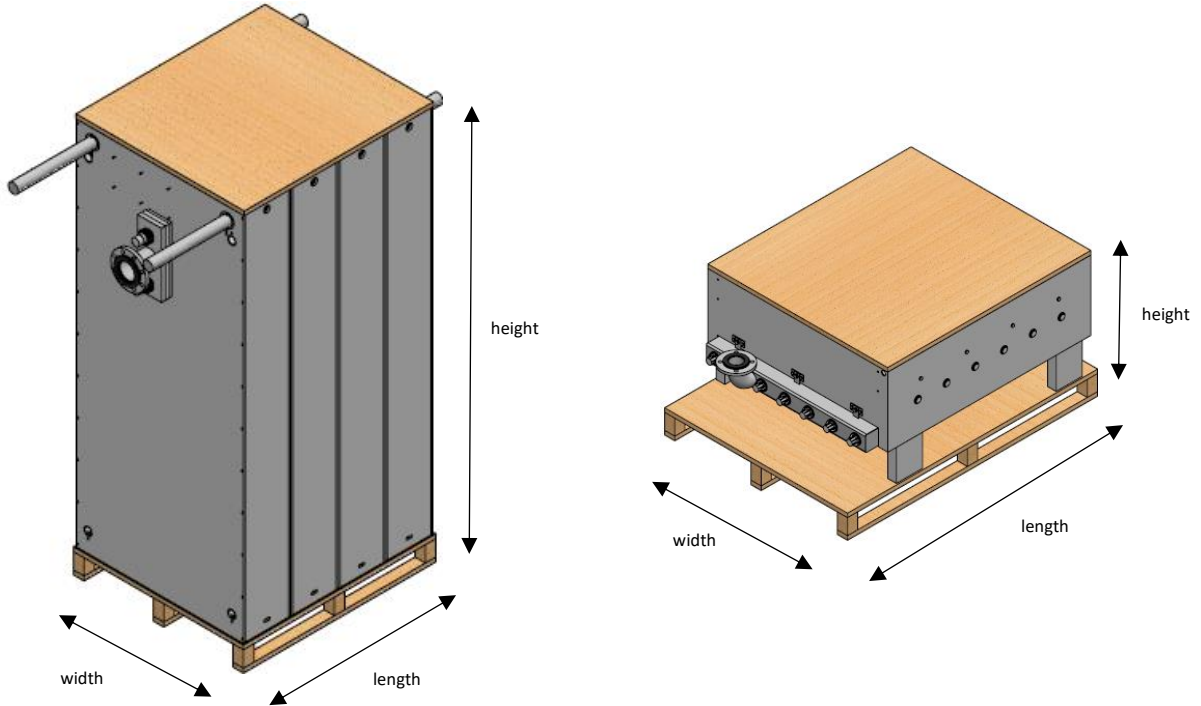
Part Number	Remarks
1000001408	1 pallet with membrane unit; 1 pallet with base frame



**Figure 1.** BIO-CEL® 416 scope of supply

**Table 2.** Wooden pallet shipment dimensions

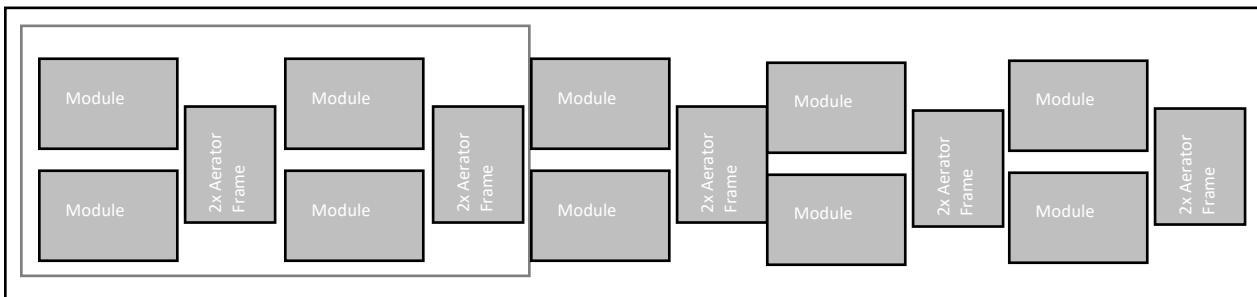
	length	width	height	weight
BIO-CEL® 416 module	1,810mm (5.9 ft)	1,060mm (3.4 ft)	2,485mm (8.1 ft)	650 kg (1,430 lb)
BIO-CEL® 416 aerator frame	1,600mm (5.2 ft)	1,060mm (3.4 ft)	820mm (2.7 ft)	150 kg (330 lb)



**Figure 2.** BIO-CEL® 416 in transport packaging

**Table 3.** high cube container inner dimensions

	length	width	height
20 ft HC container	5,898mm (19.4 ft)	2,350mm (7.7 ft)	2,69 mm (8.8 ft)
40 ft HC container	12,032mm (39.5 ft)	2,350mm (7.7 ft)	2,690mm (8.8 ft)
Door opening	-	2,340mm (7.7 ft)	2,597mm (8.5 ft)



**Figure 3.** BIO-CEL® 416 arrangement in 20/40 ft HC container (4 / 10 pcs capacity)

BIO-CEL® 416 ACCESSORIES

To ensure proper installation and operation of BIO-CEL® MBR modules, certain accessories are necessary. These accessories are listed in Table 4 and may be purchased or produced by a third-party supplier. Detailed drawings are available on request. The following accessories are mandatory for BIO-CEL® 416 membrane modules:

- Set of legs
- Lifting tool

**Table 4.** Accessories

Position	Part Number	Drawing Numbers	Accessory	Remarks
A1	1000001406	-	BIO-CEL® 208/416 Permeate Set	Elbow: PVC DN100, PN16 incl. flat sealing and fastening material (drawings available)
A2	1000001385	MN-00700-004-0010	BIO-CEL® 208/416 Feet Ext. Set	200mm PP feet to ensure minimum ground clearance
A3	On request	MN-00700-010-0000	BIO-CEL® 416 Lifting Tool	Drawings available
-	On request	121-00-00	BIO-CEL® 416 Lifting and Guiding System	Drawings available
	On request	MN-0700-018	BIO-CEL® 416 Hanging Traverse	Drawings available
	On request	MN-0700-017	BIO-CEL® 416 Wall Fixation	Drawings available

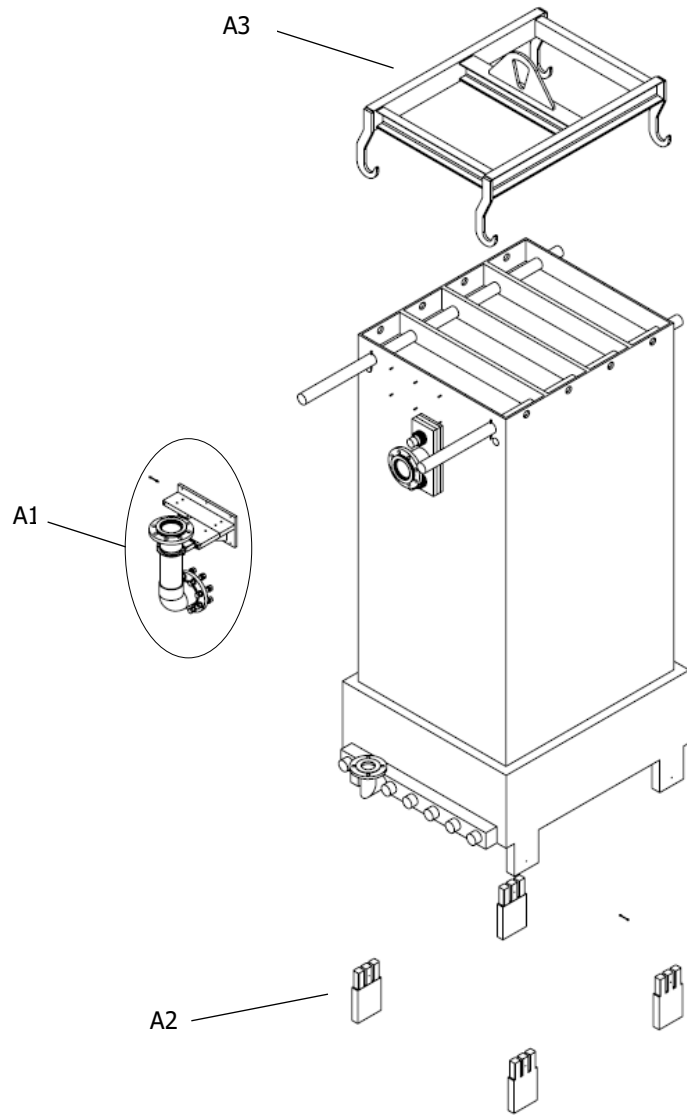


Figure 4. BIO-CEL® 416 exploded drawing of available accessories

BIO-CEL® 104 SPARE PARTS

No spare parts are typically required for BIO-CEL® 416 modules within the first 5 years of operation. If spare parts are needed, they may be ordered as per Table 5.

**Table 5. Spare parts**

Position	Part Number	Spare Part	Remarks
S1	1000001409	BIO-CEL® 416 Without Base Unit	Preassembled Cassette Unit 1 wooden pallet; incl. Pos. S5 and Pos. S7
S2	1000001388	BIO-CEL® 416 Base Unit	Diffuser set (Pos. S3) included & assembled
S3	1000001453	BIO-CEL® 416 Diffuser Set SIL	7 diffusers + connectors (Silicone)
-	1000001462	BIO-CEL® 416 Diffuser Hose Set SIL	7 diffuser hoses + clamps without support pipe (Silicone)
-	1000002874	BIO-CEL® Diffuser Assembly Tool Set <sup>a</sup>	Torque wrench with special wrench socket
-	1000002876	BIO-CEL® star shaped socket	Special wrench socket only (for torque wrench to exchange single aerators)
-	1000001439	BIO-CEL® Diffusor Hose Tool	Tool needed for exchange of diffusor hoses
S4	1000001407	BIO-CEL® C104 Cassette	Replacement for BIO-CEL® 208/416
S5	1000001396	BIO-CEL® 416 Connection Set	Front and rear part incl. steel parts and O-Ring
S6	1000001399	BIO-CEL® 416 Connection Set 2	Rear part with rods; necessary to change cassettes and O-Ring
S7	On request	Lifting Bars	Incl. steel parts
S8	1000001406	BIO-CEL® 208/416 Permeate Set	Elbow: PVC DN100, PN16 incl. flat sealing and fastening material (drawings available)
-	1000001394	BIO-CEL® 208/416 Gasket Set	9x O-ring EPDM, 2xDN100 flat gasket EPDM, 1xDN65 flat gasket EPDM
-	1000001390	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.

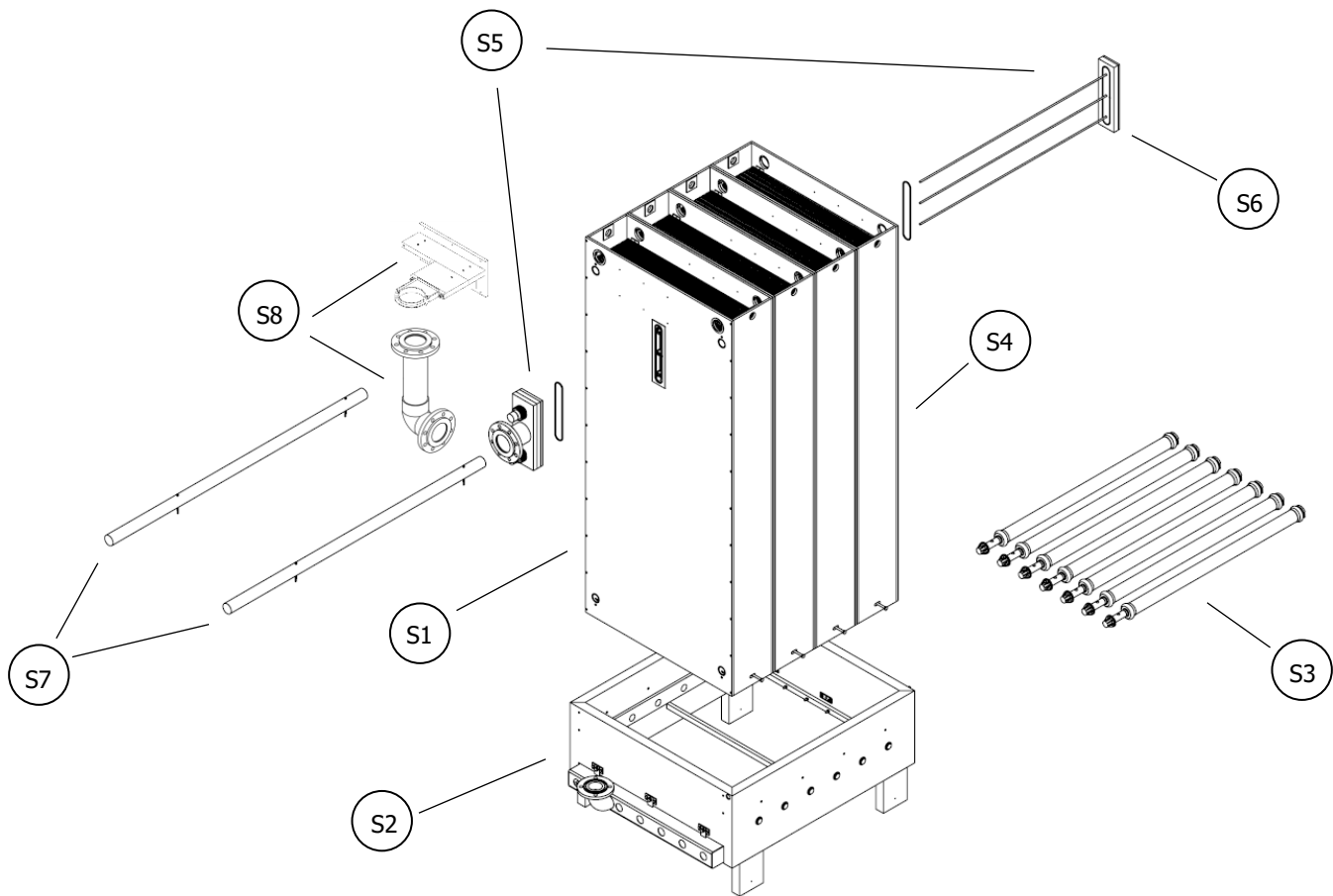


Figure 5. BIO-CEL® 416 exploded drawing showing available spare parts

## Contact

Europe  
Germany: +49 611 962 6001  
Italy: +39 0721 1796201  
info@microdyn-nadir.com

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

Asia  
Singapore: +65 6457 7533  
China: +86 10 8413 9860  
waterchina@mann-hummel.com