

BIO-CEL[®] L+ 960H

Scope of Supply

The BIO-CEL[®] MBR product line 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 L+ 960H modules.

Shipment dimensions and container transport information are detailed on page 2. BIO-CEL L+ 960H modules are shipped in wooden crates. Part numbers in Table 1 are the standard scope of supply. For details about available accessories, please refer to page 3. For spare parts please refer to page 5.

Table 1. Standard scope of supply

Part Number	Module Name	Comments
1000032172	BIO-CEL L+ 960H	1.4301/304 (V2A), permeate port with G 2 ½ inner thread, air port with DN80 (PN10) pipe end in Polypropylene, incl. adjustable legs with screws and nuts
1000032173	BIO-CEL L+ 960H SS316	1.4571/316Ti (V4A), permeate port with G 2 ½ inner thread, air port with DN80 (PN10) pipe end in Polypropylene, incl. adjustable legs with screws and nuts

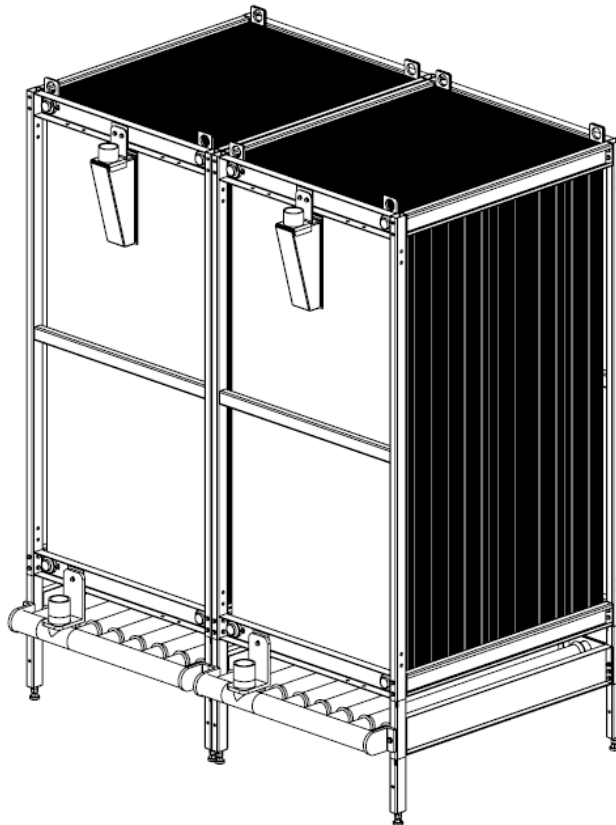


Figure 1. BIO-CEL L+ 960H scope of supply

Table 2. Wooden crate shipment dimensions

	Length	Width	Height	Weight
BIO-CEL L+ 960H	2,338 mm (7.7 ft)	1,650 mm (5.4 ft)	2,580mm (8.5 ft)	1,000 kg (2200 lb)

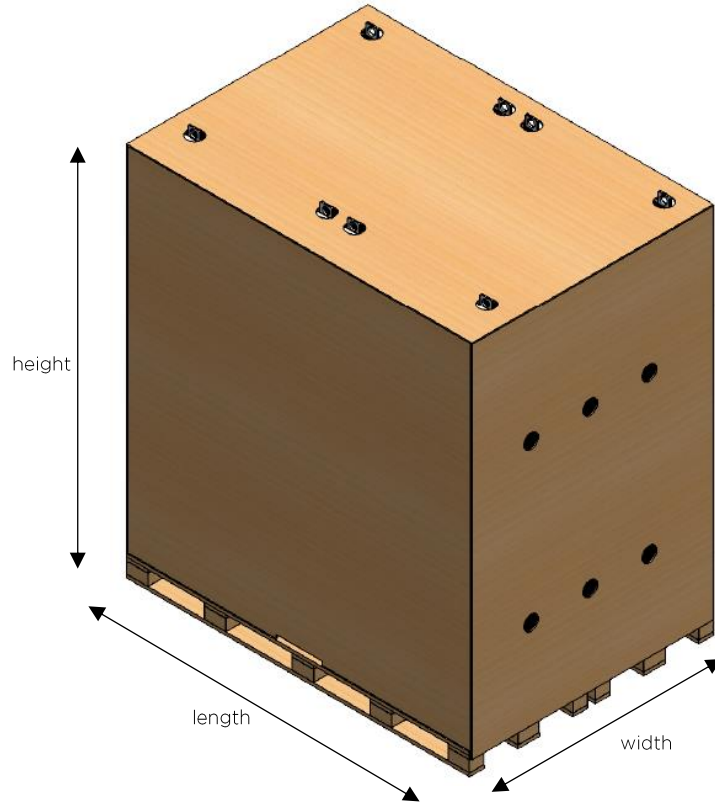


Figure 2. BIO-CEL L+ 960 H in transport packaging

Table 3. High cube container inner dimensions

	Length	Width	Height
20 ft container	5,898mm (19.4 ft)	2,350mm (7.7 ft)	2,690mm (8.8 ft)
40 ft container	12,032mm (39.5 ft)	2,350mm (7.7 ft)	2,700mm (8.8 ft)
Door opening	-	2,350mm (7.7 ft)	2,597mm (8.5 ft)

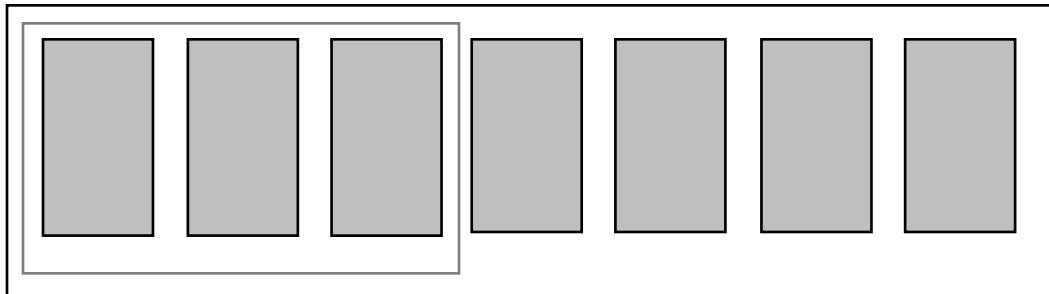


Figure 3. BIO-CEL L+ 960H arrangement in 20 / 40 ft HC container (6 / 14 pcs capacity)

BIO-CEL L+ 960H

Accessories

To ensure proper installation and operation of BIO-CEL MBR modules, certain accessories may be necessary. Drawings are available on request. Drawings of wall fixations, lifting & guiding system, hanging concepts and lifting tool can be sent on request.

Table 4. Accessories

Position	Part Number	Accessory	Material / Comment
A1	1000000679	BIO-CEL L Air Port Flange Adapter	Polypropylene adapter to DN80 flange including DN80 Grip Clamp (Stainless Steel 1.4404/316L and EPDM sealing) (BIO-CEL L-2 Double requires 2 sets)
A2	1000003064	BIO-CEL L Air Pipe Extension Kit GP	Polypropylene pipe with DN80 flange including pipe support and Grip Clamp (Stainless Steel 1.4404/316L and EPDM sealing) (BIO-CEL L-2 Double requires 2 sets)
A3	1000002852	BIO-CEL L Permeate Pipe Extension Kit	DN80 (PN6) flange, Stainless Steel 1.4404/316L (BIO-CEL L-2 Double requires 2 sets)
A4	1000021089	BIO-CEL L Ground Fixation Set	Set of 4 brackets including screws and nuts, Stainless Steel 1.4404/316Ti
A5	1000025074	BIO-CEL L Guide Brackets Set	Set of 4 brackets including screws and nuts, Stainless Steel 1.4301/304
	1000024949	BIO-CEL L Guide Brackets Set SS316	Set of 4 brackets including screws and nuts, Stainless Steel 1.4404/316Ti
A6	1000032324	BIO-CEL L+ 960H Lifting Tool	Stainless Steel 1.4301/304. Lifting of two pre-assembled cassettes possible

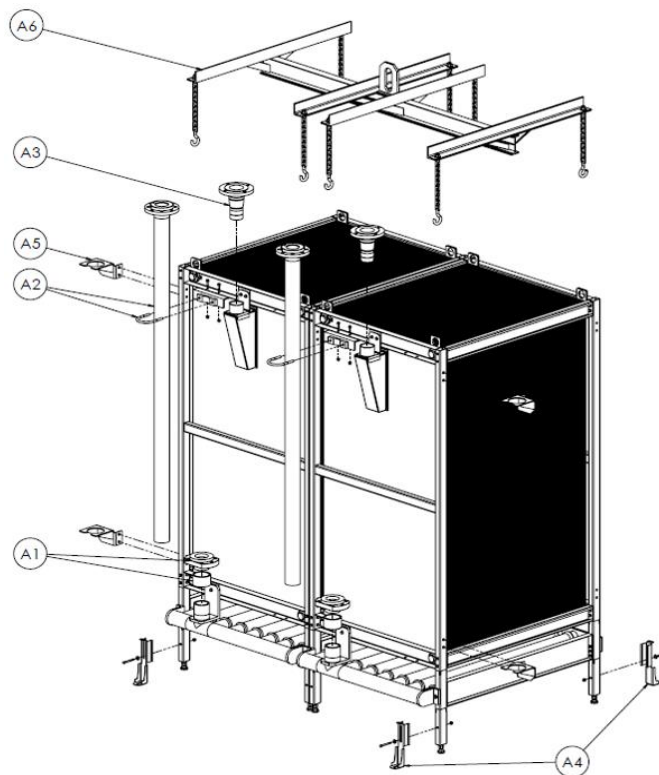


Figure 4. BIO-CEL L+ 960H accessories

BIO-CEL L+ 960H

Spare Parts

No spare parts are typically required for BIO-CEL L+ 960H modules within the first five years of operation. If spare parts are needed, they may be ordered as per Table 5. Please note that the below table and figure is referring to 1 BIO-CEL L+ 480 cassette.

Table 5. Spare parts

Position	Part Number	Spare Part	Remarks
S1	1000032166	BIO-CEL L+ 480 Cassette	Stainless Steel 1.4301/304 (V2A), Single BIO-CEL L+ 480 cassette
	1000032168	BIO-CEL L+ 480 Cassette SS316	Stainless Steel 1.4571/316Ti (V4A), Single BIO-CEL L+ 480 cassette
(S1)	1000032169	BIO-CEL L+ 960H Cassette	Stainless Steel 1.4301/304 (V2A), two pre-assembled BIO-CEL L+ 480 cassettes
	1000032180	BIO-CEL L+ 960H Cassette SS316	Stainless Steel 1.4571/316Ti (V4A) , two pre-assembled BIO-CEL L+ 480 cassettes
S2	1000001436	BIO-CEL L Permeate Block Standard	1.4301/304 (V2A), permeate port with G 2 ½ inner thread
	1000022956	BIO-CEL L Permeate Block Standard SS316	1.4571/316Ti (V4A), permeate port with G 2 ½ inner thread
S3	1000001438	BIO-CEL L Diffuser Grid Incl. Diffuser Hoses	Polypropylene (Grid) Silicone (Hoses)
S4	1000001470	BIO-CEL L Diffuser Hose Set SIL	Set of 8 silicone hoses, ear clamps, glue strips (changing diffuser hoses requires BIO-CEL L-2 Diffuser Tool)
S5	1000001432	BIO-CEL L Adjustable Legs	Set of 4 legs including screws and nuts, Stainless Steel 1.4301/304
	1000001457	BIO-CEL L Adjustable Legs SS316	Set of 4 legs including screws and nuts, Stainless Steel 1.4404/316LTi
-	1000001439	BIO-CEL L Diffuser Tool	Pliers for assembly of ear clamps

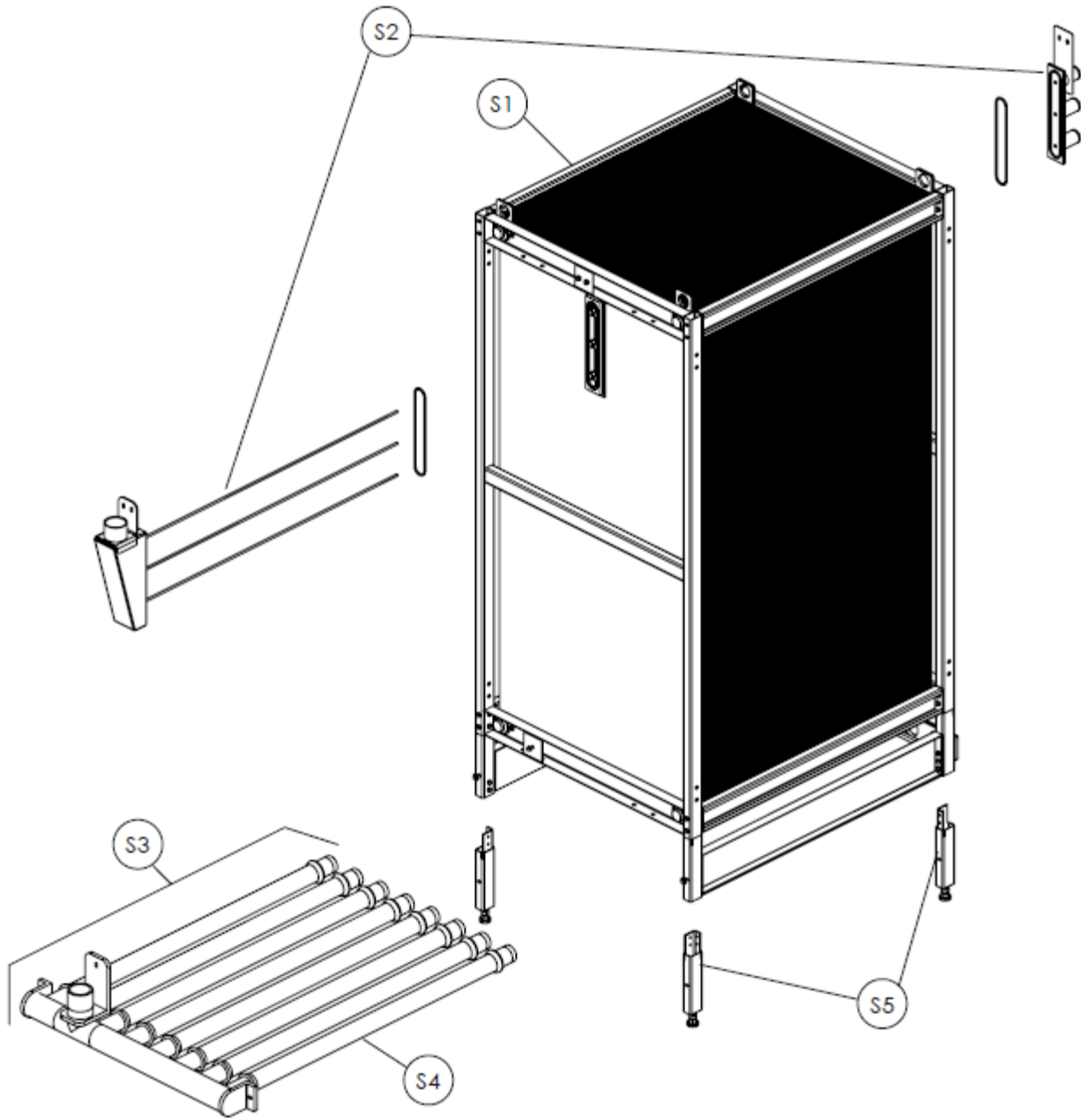


Figure 5. BIO-CEL L+ 480 spare parts

Contact

Europe

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

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