BIO-CEL® L-2 Stack 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 L-2 Stack modules.

Shipment dimensions and container transport information are detailed on page 2. BIO-CEL L-2 modules are shipped in cardboard. Part numbers in the below table are the standard scope of supply. For details about available accessories please refer to page 3. For spare parts please refer to page 5.

Please note that the second cassette and the connection parts are packed separately.

Table 1. Standard scope of supply

| Part Number | Module Name | Comments |
|-------------|-------------------------|--|
| 1000026500 | BIO-CEL L-2 STACK | 1.4301/304 (V2A), permeate port with G 2 ½ inner thread, air port with DN80 (PN10) pipe end in Polypropylene, incl. adjustable legs and connection set with all brackets, stiffeners screws and nuts |
| 1000026501 | BIO-CEL L-2 STACK 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 and connection set with all brackets, stiffeners screws and nuts |

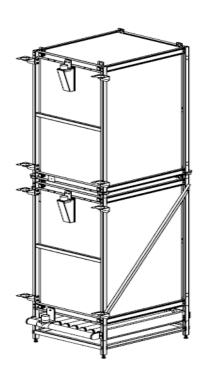


Figure 1. BIO-CEL L-2 Stack scope of supply



BIO-CEL L-2 STACK packaging consists of three pieces, two carboards as shown in Figure 2 and one pallet with all additional connection parts in boxes. Depending on the number of BIO-CEL L-2 STACK modules ordered, all additional connection parts for more than just one module might be packed on one or more pallets project-specific.

Table 3 shows the arrangement in different container sizes for the carboards only.

Table 2. Cardboard shipment dimensions

| | length | width | height | weight |
|-------------|-------------------|-------------------|-------------------|-----------------|
| BIO-CEL L-2 | 1,614 mm (5.3 ft) | 1,136 mm (3.8 ft) | 2,550 mm (8.4 ft) | 425 kg (937 lb) |

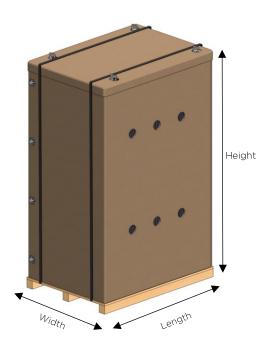


Figure 2. BIO-CEL L-2 in Transport packaging

Table 3. High cube container inner dimensions

| | length | width | height |
|-----------------|---------------------|-------------------|-------------------|
| 20 ft container | 5,898 mm (19.4 ft) | 2,350 mm (7.7 ft) | 2,690 mm (8.8 ft) |
| 40 ft container | 12,032 mm (39.5 ft) | 2,350 mm (7.7 ft) | 2,700 mm (8.8 ft) |
| Door opening | - | 2,350 mm (7.7 ft) | 2,597 mm (8.5 ft) |

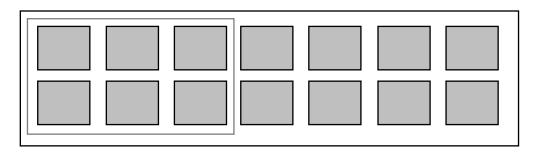


Figure 3. BIO-CEL L-2 arrangement in 20/40 ft HC container (6 / 14 pcs capacity)



BIO-CEL L-2 Accessories

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

Table 4. Accessories

| Position | Part Number | Accessory | Material / Comment |
|----------|-------------|-------------------------------------|--|
| A1 | 1000001433 | BIO-CEL L-2 Lifting Tool | Stainless Steel 1.4301/304 |
| A2 | 1000000679 | BIO-CEL L-2 Air Port Flange Adapter | Polypropylene adapter to DN80 flange including DN80 Grip Clamp (Stainless Steel 1.4404/316L and EPDM sealing) |

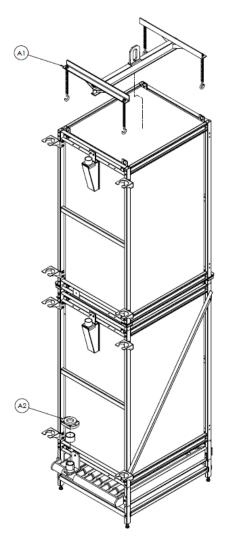


Figure 4. BIO-CEL L-2 Stack accessoires



BIO-CEL L-2 Spare Parts

No spare parts are typically required within the first 5 years of operation. If spare parts are needed, they may be ordered as per the table 5.

Table 5. Spare parts

| Position | Part Number | Spare Part | Remarks |
|----------|-------------|--|---|
| S1 | 1000001435 | BIO-CEL L-2 Cassette | Stainless Steel 1.4301/304 (V2A) |
| | 1000001467 | BIO-CEL L-2 Cassette SS316 | Stainless Steel 1.4571/316Ti (V4A) |
| S2 | 1000001436 | BIO-CEL L-2 Permeate Block Standard | 1.4301/304 (V2A), permeate port with G 2 ½ inner thread |
| | 1000022956 | BIO-CEL L-2 Permeate Block Standard SS316 | 1.4571/316Ti (V4A), permeate port with G 2 ½ inner thread |
| S3 | 1000001438 | BIO-CEL L-2 Diffuser GRID Incl. Diffuser Hoses | Polypropylene (Grid) Silicone (Hoses) |
| | | Their Birraser Floses | Sincorio (116563) |
| S4 | 1000001470 | BIO-CEL L-2 Diffuser Hose Set SIL | Set of 8 silicone hoses, ear clamps, glue strips (changing diffusor hoses requires BIO-CEL L-2 Diffuser Tool) |
| \$5 | 1000001432 | BIO-CEL L-2 Adjustable Legs | Set of 4 legs including screws and nuts, Stainless Steel 1.4301/304 |
| | 1000001457 | BIO-CEL L-2 Adjustable Legs SS316 | Set of 4 legs including screws and nuts, Stainless Steel 1.4404/316Ti |
| S6 | 1000025076 | BIO-CEL L-2 Stack Interconnector Set | Set of 4 interconnectors including screws and nuts, Stainless Steel 1.4301/304 |
| | 1000025028 | BIO-CEL L-2 Stack Interconnector Set SS316 | Set of 4 interconnectors including screws and nuts, Stainless Steel 1.4404/316Ti |
| S7 | 1000025034 | BIO-CEL L2 Stack Cross Stiffening Set | Set of 2 stiffeners including screws and nuts, Stainless Steel 1.4301/304 |
| | 1000025036 | BIO-CEL L2 Stack Cross Stiffening Set SS316 | Set of 2 stiffeners including screws and nuts, Stainless Steel 1.4404/316Ti |
| S8 | 1000025037 | BIO-CEL L2 Stack Stiffening Set | Set of 4 stiffeners including screws and nuts, Stainless Steel 1.4301/304 |
| | 1000025038 | BIO-CEL L2 Stack Stiffening Set | Set of 4 stiffeners including screws and nuts, Stainless Steel 1.4404/316Ti |
| S9 | 1000025074 | BIO-CEL L-2 Guide Brackets Set | Set of 4 brackets including screws and nuts, Stainless Steel 1.4301/304 |
| | 1000024949 | BIO-CEL L-2 Guide Brackets Set SS316 | Set of 4 brackets including screws and nuts, Stainless Steel 1.4404/316Ti |
| - | 1000001439 | BIO-CEL L-2 Diffuser Tool | Pliers for assembly of ear clamps |



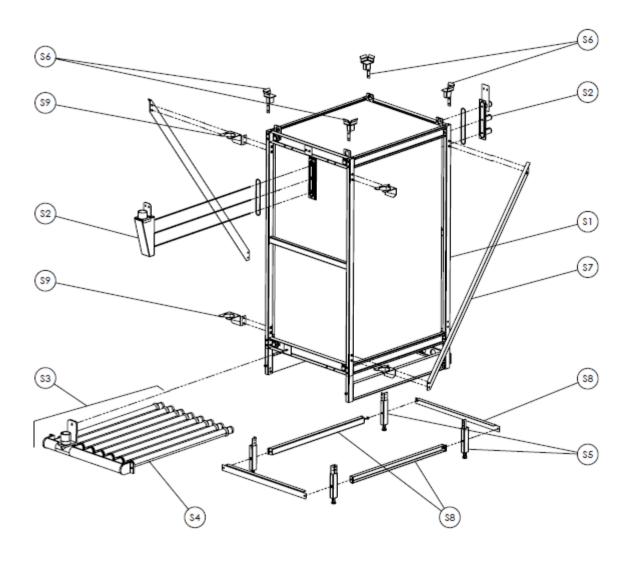


Figure 5. BIO-CEL L-2 Stack spare parts

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