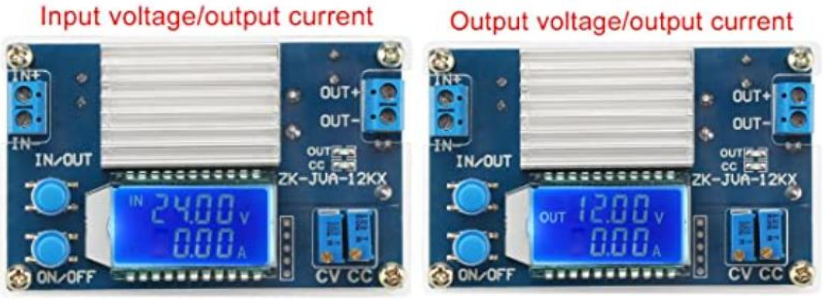
Benthic Chambers Operations Information

1. Place the lid on the midsection of the device such that the red dot on the top of the lid aligns with a red dot on the midsection.
2. Connect the spade connectors to the battery (red wire to the red labeled connection, and the black wire to the black labeled connection). The 12-volt battery, with the red and black labels is shown below as well as the spade connectors used.

   NOTE: When removing the spade connectors, wiggle the connections with the plastic attachment to prevent the wire from disconnecting from the spade connectors.

3. After the spade connectors have been attached to the battery, attach the wires to the battery to the IN+ and IN- ports and secure with Philips head screwdriver. The adjuster will display the current and voltage in, as well as the current and voltage out. These screens can be displayed by pressing the IN/OUT button. The current and voltage can be adjusted by rotating the CV and CC dials shown on the bottom left of the adjuster with a flat head screwdriver. The CV dial will change the voltage out and the CC dial will change the current out.

   NOTE: Ensure the black wire is secured in the IN- port, and that the red wire is in the IN+ port.



4. To attach the electrical connector (shown in the figure below) for the pump to the battery, place the wires in the OUT+ and OUT- ports and secure them with a Philips head screwdriver.

   NOTE: Ensure the black wire is secured in the OUT- port, and that the red wire is in the OUT+ port.

5. When the pump is ready to be powered, connect the electrical connectors. The connectors are shown below.
   NOTE: Be sure to only power the pump when fully submerged to avoid unnecessary damage.

Benthic Chambers Battery Support (Umbrella Stand) Operations Information

1. To use the battery support, extend the legs of the umbrella stand to an operational configuration.
2. Place the PVC attached to a metal tent pole into the base of the umbrella stand and tighten.
3. Place the metal tent poles to the desired height, and then take the structural black flange, which is attached to the battery box, and tighten with an Allen key. The structural flange adjustable screw is shown below.

4. Place the battery in the battery box and use! Ensure that the battery support is placed in level sediment and is not nearing a rising tide. The tripod configuration in use is shown below.

NOTE: The floating battery support is also shown below.

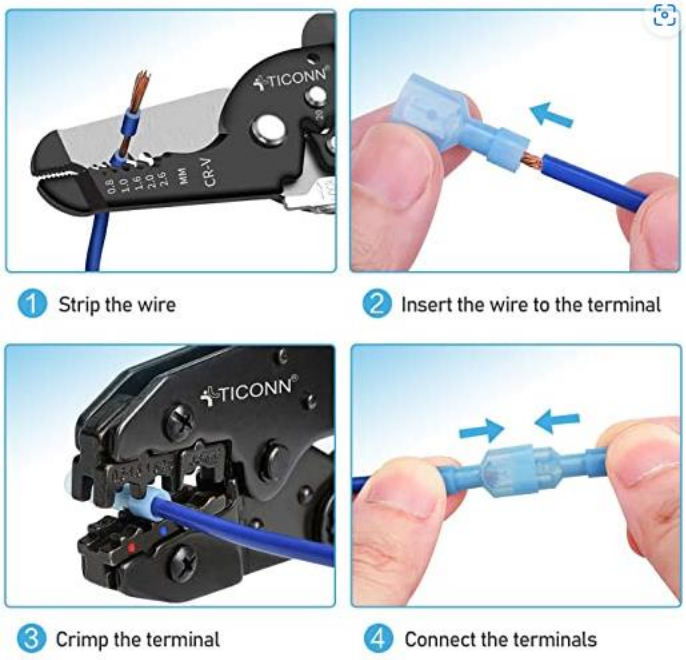
Benthic Chambers Potential Repairs Information

In the case that any portion of the benthic chambers is damaged or needs additional parts, the following materials were provided for the duration of the benthic chambers use.

- Spade connectors
- 18 AWG Wire
- O-Rings
- Water-Resistant Electrical Wire Connectors

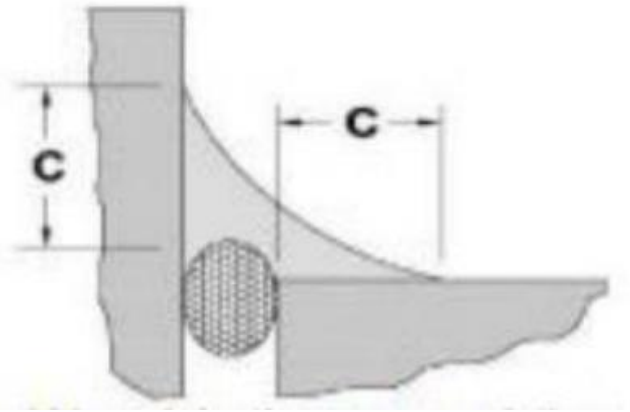
The following items are provided in case of a required repair, or if more materials are needed.

- Spade Connectors for the Battery – if the spade connectors for the battery are damaged, additional parts were provided. However, if more are required, the 18 AWG wire can be crimped with the spade connectors, as shown in the following figure.



- O-Ring on the lid – the O-ring was secured to the lid with silicon. If the O-ring becomes damaged or detached, one can remove the O-ring from the lid, clean the silicon from the lid, and re-apply a bead of silicone around the circumference of the lid. Then, with a rounded corner, a fillet must be created with the silicon bead in a uniform fashion around the lid. With 2-3 individuals, the O-ring is stretched to be larger than the lid edge and is lowered to attach to the lid and silicon fillet. The midsection can then be placed over the top of the lid and attached with the latches. The lid and O-ring must cure for at least 24 hours, and then can be used.

  NOTE: GE Advanced Silicon Clear was used for the attachment of the O-rings.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