

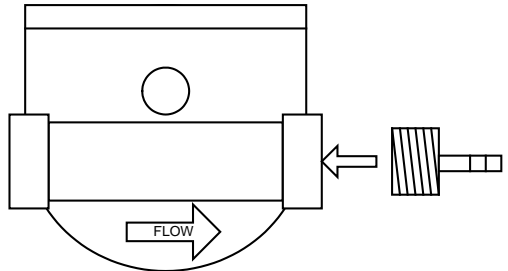
THE CO₂ SCRUBBER™

PATENT PENDING

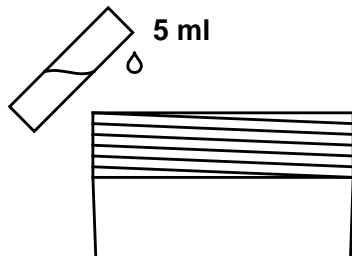
Installation

1. The CO₂ Scrubber includes the following items:
 - Housing
 - 3/8-inch threaded adapter
 - 1/4-inch threaded adapter
 - 3/8-inch barbed hose connector
 - 1/4-inch barbed hose connector
 - 2 feet, 3/8-inch silicone tubing
 - 2 feet, 1/4-inch silicone tubing
 - CO₂ media cartridge
2. You need determine whether your skimmer hose is 1/4 or 3/8 inch. Take both barbed hose connectors and slip them on to the end of the skimmer's air intake hose one at a time. Use the one that fits snugly. You will not need one set of fittings and tubing (either the 3/8 or 1/4-inch set) for installation.

3. Remove the blue housing cover from the clear canister.
4. Attach either the 3/8 or 1/4-inch threaded adapter to the blue housing cover. The adapter should be screwed into the right side of housing closest to the FLOW arrow. Hand tighten only. Teflon tape is not necessary.

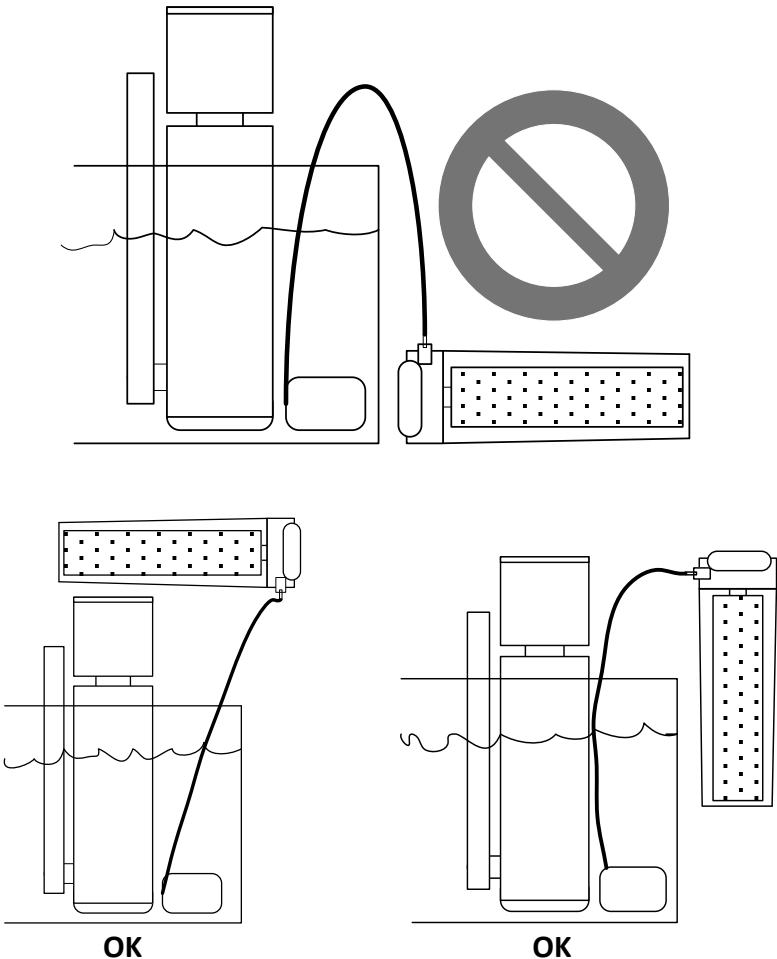


5. Pour 1 teaspoon (5 ml) of RO or tap water into the empty housing. This will activate the



media as the water evaporates during the first day of use. Do not add any more water after the initial installation.

6. Remove the CO2 media cartridge from the sealed bag and insert into the housing. The black rubber washer on the cartridge should be facing up. Twist the housing cover onto the housing. Hand tighten only.
7. Mount the CO2 SCRUBBER on the tank stand or other surface close to the Protein skimmer using the integrated bracket on the blue housing cover. The unit may be mounted either horizontally or vertically. Do not mount the unit below the skimmer's air intake hose, as water may back siphon into the unit when the skimmer loses power.



8. Connect the skimmer's air hose to the threaded adapter you installed on the housing. If the hose does not reach, use the included silicone tubing and barbed hose connector to extend to hose from the skimmer to the housing install location. To avoid a decrease in skimmer performance, cut the included silicone tubing to the shortest possible length.

Operation

The media will turn from white to a light blue color fairly quickly, starting at the bottom of the cartridge and working up. The blue color **does not** indicate the media is exhausted. Unlike color-changing DI Resins that change color when exhausted, the CO2 media changes color during its entire life cycle. Therefore, the media will continue to change to a darker blue as it approaches the end of its useful life. When all the media in the cartridge is a very dark blue/purple color, the media should be replaced.

Precautions

1. Do not allow saltwater to enter the housing or siphon back from the tubing. If the media cartridge gets wet with tank water, it will no longer function.
2. Do not open the media cartridge. Breathing dust may cause irritation to lungs or on contact with skin. The media mix is rated non-Hazmat. Exhausted media cartridges may be disposed of with common household trash.

Replacing The Media Cartridge

1. Replacement cartridges are available from your dealer or direct through [www. mcuresearch.com](http://www.mcuresearch.com).
2. Remove housing cover and pull out cartridge.
3. Add 1 teaspoon (5 ml) of water as described in initial installation.
4. Insert new cartridge and attach housing cover.

Frequently Asked Questions

How does the CO2 SCRUBBER work?

While skimmers raise oxygen levels, they also raise carbon dioxide levels. The CO₂ in marine/reef aquariums accumulate at higher than ambient levels, causing a drop in pH. The CO2 SCRUBBER removes carbon dioxide from the air before it is drawn in by the skimmer, lowering dissolved CO₂ levels in the aquarium. As a result, the pH rises and stabilizes naturally at a new higher level. As a side benefit, you will also experience enhanced skimmer production.

Will it work with my model/brand of protein skimmer?

The CO2 SCRUBBER is rated for use with all protein skimmers that draw up to 2000 lpm (liters per minute) of air. If your skimmer draws over 2000 lpm, you can gang 2 scrubber units together. You can also gang two units together on smaller skimmers to double the time between media replacement.

How long does the CO2 media last?

This depends on the air intake (lpm) of the skimmer. The lifetime of the media is about twice that of Activated Carbon. You can expect the media to last from 1 to 3 months.

Can I recharge the media?

No. Once the media turns dark blue/purple it has chemically changed and cannot be recharged.

How do I know when to change the CO2 media?

The CO2 media has a color indicator that causes it to change color as it gets used up. It is important to understand that unlike color-changing RO/DI Resins that change color when exhausted, the CO2 media changes color during its entire lifecycle. It starts out a white color and will turn a pale blue fairly quickly. The media will continue to change to a dark blue/purple color as it approaches the end of its useful life. If you have a pH controller or pH test kit, you can also monitor pH levels and replace the cartridge when the pH drops.



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