



CY294 Cyclone Bio-Filter

The CY294 Cyclone Bio-Filter has been designed to provide a combination protein skimmer/biological trickle filter all in one compact unit. Rated for aquariums up to 500 gallons, the CY294 features two protein skimmers as well as a cubic foot of our revolutionary filter media, Bio-Bale™, which has the highest surface area of any media on the market. Utilizing two Rejuvenation Venturi powerheads, the CY294 is capable of flow rates up to 1500 gallons per hour and quickly oxidizes harmful ammonia and nitrite with its highly efficient biological section. The advantages of easy cleaning, a non-warping lid to reduce evaporation and the ability to attach a sump all make the CY294 the choice of serious marine aquarists.

Warning: This unit is not designed for use with ozone injection. Although the acrylic is ozone safe, the use of ozone will drastically reduce the effectiveness of the biological filtration section. If you must use ozone, be sure to place carbon filtration in the upflow chamber between the protein skimmers and the biological filtration section.

To place your filter into operation:

1. Open the packaging carefully and inspect the unit for damaged or missing parts. You should have:
 - (1) Cyclone Bio-Filter body and lid with (2) skimmer columns
 - (2) Collection cups with lids and drain lines
 - (2) RVT Rejuvenation Venturi powerheads
 - (2) Drip plates
 - (1) Bio-Bale™ filter media
 - (1) Filter floss pad
 - (1) Egg crate
 - (2) 1" inlet assemblies
 - (1) 1 1/2" outlet assembly

If any parts are damaged or missing, please contact your dealer immediately.

2. Attach each RVT Rejuvenation Venturi powerhead to a skimmer column by sliding the column up and inserting the outlet of the powerhead into the inlet of the skimmer column. **Position the powerhead so that it is upside down, with the two gray elbows pointing upward.** Make sure that the end of the airlines (with mufflers) are out of the water at all times. To do this, attach it to the black clip at the top of the unit. For ease of maintenance, cut the airline just long enough to reach past the clip.
3. Assemble the outlet assembly with the bulkhead nut on the outside of the filter and the gasket on the inside of the filter.

4. Attach the drain line to each collection cup and place the cup into the protein skimmer column. The drain line can be run into a container to collect the foam residue that will eventually drain out.
5. Place the egg crate into the biological chamber as shown in the diagram. Place the Bio-Bale™ filter media over the egg crate. Place the drip plates in position over the Bio-Bale™ and place the filter pad over the drip plates, tucking the edge of the pad under the lips of the adjustable gates.
6. Connect hose from your overflow(s) or drilled tank to the one-inch inlets going into the skimmer chambers. We recommend using 1" hose as any larger will only get reduced at the inlets and any smaller will restrict the flow to the unit.

We recommend using an additional sump when setting up the CY294.

7. Install your return pump according to its instructions. For maximum efficiency, the flow rate through the CY294 should not exceed 1500 gallons per hour (most pumps come with a chart showing how the flow rate decreases with height). If you are using an overflow, make sure it is installed properly and follow the instructions on priming the overflow. Once the siphon starts, add water to the aquarium until the water in the Bio-Filter covers no more than 1/3 of the Bio-Bale™.
8. Initially it may be necessary to fill the filter one to two inches higher than the desired water line to compensate for your dry return line. Wait for a period of time and check the system for any leaks. Once this is done, start the return pump and check for leaks again, particularly at hose connections. It may be necessary to use adhesives to secure the fittings, but this will make these connections permanent.
9. Plug in the powerheads attached to the skimmer columns. Set the adjustable gates (with red screws) so that the water level in each skimmer column is about 3/4" above the base of the collection cup funnel. After the skimmers have run for 24 hours you may need to readjust the water height in the skimmer. If foam is coming out too fast or too wet, lower the adjustable gate. If the skimmer is not pulling any material from the tank you may need to raise the gate. The protein skimmers should start producing greenish-brown foam within approximately ten hours depending on your tanks water quality and biological load. If the tank is new you may find that the skimmers pull out very little or that you are only collecting clear liquid. This should not be a concern until you begin to add substrate and organisms to the tank.
10. The collection cups should be checked and cleaned regularly, paying special attention to the throat of the funnel. Excessive buildup of waste in the throat can decrease the efficiency of the skimmer to collect skimmate. The filter floss should be cleaned or replaced weekly.

Your Cyclone Bio-Filter is now operational

Removal and Cleaning of Your Powerhead

- 1) Slide the powerhead and protein skimmer tube out of filter. Then remove powerhead from skimmer tube.
- 2) Remove the round plate by unscrewing it.
- 3) Wash all parts under running tap water. Never use a detergent on parts which will come into contact with aquarium water. Make sure air lines and elbows are clear of any foreign matter.
- 4) Reassemble the powerhead and place it back on the protein skimmer tube.
- 5) The powerhead should be regularly cleaned, at least once a month, and should be replaced every twelve to eighteen months for optimal efficiency of the protein skimmer.

MUFFLER

The CY194 works better without the muffler attached. If the noise level is acceptable without the muffler, remove it. To clean the muffler, soak it in warm water and allow it to dry completely. It can also be replaced with a coarse airstone, which allows more air in than the standard muffler but has quieter operation.



