



Aero Force™

As many hobbyists venture into the world of reef keeping, a common goal among most is to keep the filtration system as simple as possible. One of the most important components to filtration is the removal of compounds which could eventually break down into ammonia and nitrite. The Aero Force™ is designed to provide a simple yet highly efficient protein skimmer for a reef system. The Aero Force™ employs a new dual-body chamber to make maintenance easier and for sturdier construction. Requiring no supplemental plumbing, the Aero Force™ simply hangs on the back of the tank and can be installed in a few short minutes.

To place your Aero Force™ into operation:

1) *Carefully remove all packaging and inspect the unit for damaged or missing parts. You should have:*

- (1) Outer acrylic body*
- (1) Inner protein skimmer body*
- (1) Hydor Pico4 (feed pump)*
- (1) Hydor Ario4 (skimmer pump)*
- (1) Collection cup assembly with "O" ring and lid*
- (1) Outlet sponge*
- (1) O-ring for base plate support*
- (1) Skimmer pump base-plate*

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

2) *Rinse inside of the Aero Force™ with warm water. (optional)*

Your unit will come mostly assembled. See maintenance section for assembly and disassembly instructions.

3) *Attach the Hydor Pico4 (9) to the inlet part 2. Tighten the pump attachment screw (6) on the inlet to ensure that the pump does not fall out.*

4) *Hang the Aero Force™ on your tank. Use the adjustment screws (11) and support screw (12) to position the Aero Force™ so that it is parallel to the back of the tank.*

5) *Clean the collection cup (1) including the throat of the funnel in hot water. This will cause the skimmer to begin collecting waste faster. Do not use any detergents on the collection cup. Insert cup inside protein skimmer section with O-ring placed around the outside. The o-ring acts as a support for the cup, resting on top of the Aero Force™ body. This is not intended to form a seal inside the body.*

6) *Plug in the feed pump first (9). Once the skimmer pump becomes submerged, plug in the skimmer pump (8).*

Your Aero Force™ is now operational.

7) *Place the collection cup (1) in the skimmer column of the unit. The base of the collection funnel should be 1/8" below the water surface for optimal performance. Slide the O-ring (2) up or down until the desired skimmate wetness is achieved.*

It is common that some of the micro-bubbles escape to the tank during the initial set up. The surface tension may rise due to the oils on the acrylic, additives and/or water conditioners being introduced to the water. The skimmer may produce excess bubbles until it is able to break down whatever is raising the surface tension of the water. This process can take from a few days to a number of weeks to clear completely

MAINTENANCE

- 1) The collection cup should be emptied regularly. Every time you empty the cup, clean the base of the funnel and the inside of the throat for better collection.*
- 2) The Aero Force™ should be cleaned every three months, or as needed.*
- 3) Clean the powerheads at least once a month. Replace each powerhead every twelve to eighteen months to ensure optimal performance*
- 4) Insert the Ario4 pump (8) into the pump base plate (See diagram B) by sliding the footing of the pump under the guide supports of the base plate.. The notch on the base plate will match up with the slot on the pump. The pump should fit tightly and be in place with the round outlet at the top.*
- 5) Feed the power cord and airline tubing from the Ario4 through the center of the o-ring. Attach the base plate (7) and Ario4 pump (8) to the inside skimmer body by using the o-ring to hold into position. Insert the base plate from the bottom of the skimmer body (3) and stretch the o-ring to hold onto the support bars (10) on the sides of the opening.*
- 6) Slide the inside skimmer body (3) into the outer body (4) (Diagram A). The inlet pipe parts 1 and 2 should line up once the two bodies are together. Make sure that the air valve on the end of the airline is outside of the water at all times. A black clip is provided at the top of the unit to hold the airline.*

REMOVAL AND CLEANING OF YOUR POWERHEAD

- 1) Remove the inner body from the outer body then remove the pump and base plate from the inner body*
- 2) Slide the Ario4 out of the base plate (7) of the Aero Force™ (See Diagram B)*
- 3) Remove the Pico 400 pump by unscrewing the pump attachment screw (6) and pulling straight down from the inlet part 2.*
- 4) See the next page for pump disassembly images to assist in taking them apart. Remove the airline by pulling away from the powerhead.*
- 5) Wash all parts under warm tap water. Do not use any detergents. Make sure that the air line is clear of any foreign matter, calcium buildup or salt creep before reassembling.*
- 6) Place the powerheads back in place on your Aero Force™*

TROUBLE SHOOTING

Problem:	Cause and Solution:
Small air bubbles returning to the tank	The surface tension of the water has been increased by added supplements, medications, or conditioners. Disable the protein skimmer by submerging the airline into the water (remove muffler first) or shutting off the air valve for 24 hours. Many products contain chemicals which will still be present in the aquarium after 24 hours. Run the protein skimmer as normal to remove compounds which may be affecting surface tension.
	The salinity is too high. Lower the salinity to 1.023.
	Adjust the red flow controller on the feed pump. Reducing the flow will slow the flow rate through the skimmer, reducing the draft of bubbles into the tank.
	The aquarium has just been cleaned or water has been changed. Synthetic salt mixes often contain conditioners which increase the surface tension of the water. Bubbles should disappear within 48 hours.
	The air line is clogged with detritus or salt creep. This will increase the water flow rate and possibly sweep the bubbles from the skimmer chamber back into the tank before they can dissipate. The airline should be cleaned every two weeks.
No waste collecting in collection cup.	The powerhead and its air line may be dirty. Clean the whole unit every two weeks for optimal performance.
	The collection cup is not low enough. See instructions for the correct height of the collection cup.
	The biological load may not be sufficient to generate waste. On a new tank or a tank with supplemental filtration it may take over a week to generate waste foam.
	Skimmer chamber is not filled with micro bubbles. Slowly close the air line valve until the chamber is filled with bubbles.
The Ario pump is producing little or no bubbles.	The airline or the air control valve may be blocked. Detritus, calcium and salt will build up in these parts over time. Clean these parts every two to three weeks with warm tap water.
	The pump may need to be cleaned. If the pump becomes clogged with organic material the flow rate and the air intake rates will reduce. Follow the instructions included with your <i>Aero Force</i> TM to clean your pump.

Before calling CPR's Technical Support, please take some time to look over this trouble shooting guide. Most of the problems associated with the performance of the *Aero Force*TM are due to improper maintenance of the pumps. Cleaning the powerhead at least once a month will ensure



