



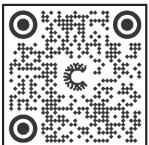
# DC-Controlled Square Protein Skimmers

## Instructions

Please read these instructions in their entirety before attempting to use this product.



150G



300G



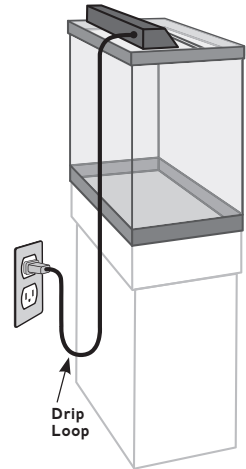
For questions or inquiries about this product, please visit us online at [coralife.com](http://coralife.com) or call 888-255-4527

# IMPORTANT SAFETY INSTRUCTIONS

**WARNING** - To guard against injury, basic safety precautions should be observed including the following:

## 1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

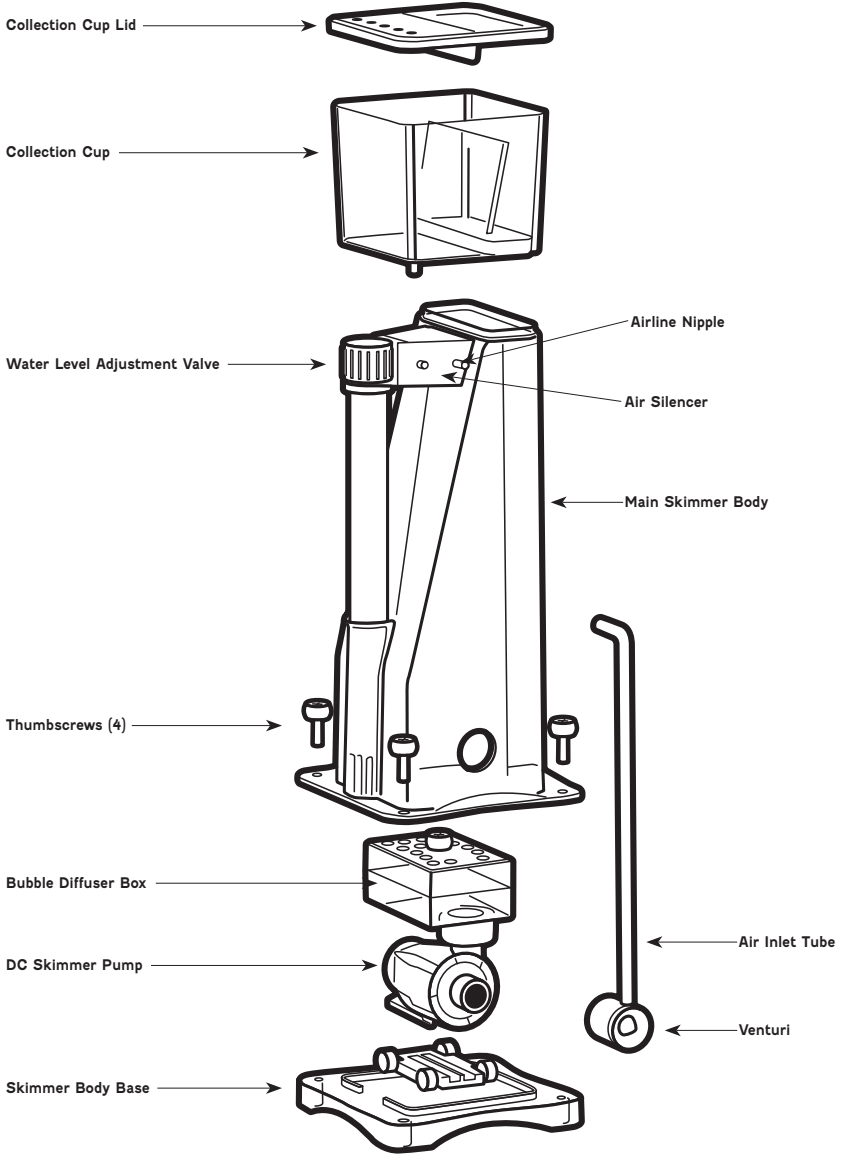
2. **DANGER** - To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt to repair yourself.
  - A. If the appliance shows any sign of abnormal water leakage, immediately unplug it from power.
  - B. Carefully examine the appliance after installation. It should not be plugged in if there is water on the parts not intended to be wet.
  - C. Do not operate any appliance if it has a damaged cord or plug, if it is malfunctioning or if it is dropped or damaged in any manner.
  - D. To avoid the possibility of the appliance plug getting wet, position aquarium stand and tank to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop", shown in the figure below, should be arranged by the user for each cord connecting an aquarium appliance to the receptacle. The "drip loop" is the part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DO NOT unplug the cord. Disconnect the fuse to the circuit breaker that supplies power to the appliance. Then unplug and examine for the presence of water in the receptacle.
3. Close supervision is necessary when any appliance is used by or near children.
4. To avoid injury, do not contact moving parts or hot parts such as heaters, reflectors, lamp bulbs, and the like.
5. Always unplug the appliance from the outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank the cord to pull plug from outlet. Grasp the plug and pull to disconnect.
6. Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
7. Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
8. Make sure an appliance mounted on a tank is securely installed before operating it.
9. Read and observe all the important notices on the appliance.
10. If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.



### ONLY FOR POLARIZED ATTACHMENT PLUG APPLIANCES

11. This appliance has a polarized plug (one blade is wider than the other) as a safety feature, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

## 12. SAVE THESE INSTRUCTIONS.

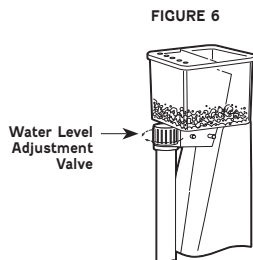
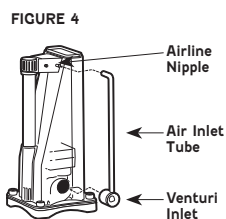
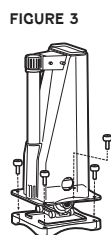
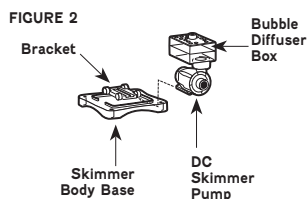
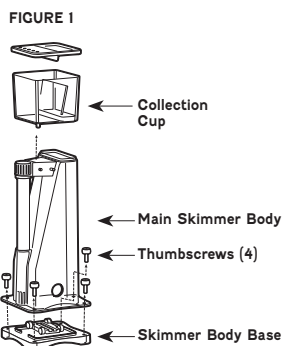


REMOTE CONTROL



# INSTALLATION

1. Carefully unwrap the Skimmer and set all parts aside. Inspect for any damage that may have occurred in shipping.
2. Remove the Collection Cup from the Main Skimmer Body and set aside. (Figure 1)
3. Unscrew the 4 Thumbscrews connecting the Main Skimmer Body to the Skimmer Body Base and separate the base from the body. (Figure 1)
4. Slide the DC Skimmer Pump onto the bracket on the Skimmer Body Base. The power cord will align with the notch in the skimmer base if it is inserted in the right direction. (Figure 2)
5. Attach the Bubble Diffuser Box to the outlet on the pump. (Figure 2)
6. Reattach the Main Skimmer Body to the Skimmer Body Base using the 4 Thumbscrews. (Figure 3)
7. Attach the Venturi Inlet to the water inlet on the Pump by inserting through the hole in the Main Skimmer Body. (Figure 4)
8. Attach the Air Inlet Tube from the Venturi Inlet to the Airline Nipple located on the Air Silencer. (Figure 4)
9. Plug the power remote into the DC power supply.
10. Place the Skimmer in the sump. Water level in sump should be deep enough that pump is completely submerged in sump.
11. Reattach Collection Cup. (Figure 5)
12. Plug Skimmer in and set power level on DC Remote to 2.
13. Use Water Level Adjustment Valve to adjust water level in skimmer so that water level is 0.5-1" below the junction point of the Collection Cup and Main Skimmer Body. (Figure 6)
14. Wait 48 hours for skimmer to break in. Then use remote to adjust power level higher so that water level is obscured by the junction point between the Collection Cup and Main Skimmer Body. This is the ideal level for optimum foam production.



## OPERATION

The following instructions and techniques will keep the skimmer running at optimum performance. Proper maintenance is essential to maintain full function of the skimmer.

### Water Level Adjustment/Foam Wetness

To adjust the water level in the skimmer it is best to set the power level to 2 prior to adjustment. Once power level 2 is programmed, use the water level adjustment valve to adjust the separation line between water and foam to the desired level. Once the desired level is achieved, use the remote to make minor adjustments up or down to maintain the desired level. Foam levels may change on a daily basis due to minor fluctuations in water density or skimmer efficiency. The remote can be used to account for these minor fluctuations.

Different wetness of foam will be preferred by different hobbyists. A “dry” foam is desired for hobbyists who remove the protein by periodically emptying the collection cup. A “wet” foam is desired by hobbyists using the drain tube to drain the protein to another container.

When setup for a dry foam a thick paste like skimmate will collect in the collection cup. It will take longer for it to fill up which reduces the frequency of emptying. It will however clog up the drain tube for the collection cup if you are using a separate skimmate waste container. To create a dry foam, set the water level as low as possible (generally the junction point of the skimmer main body and collection cup). As the foam rises, it will lose water which will make it drier.

If you wish to use a separate skimmate collection container a wet foam is more desirable as this will drain more easily through the tube and won't clog it up. Adjust the water level in the skimmer so that it is midway up the collection cup between the bottom and the spillover wall.

## MAINTENANCE

To keep the skimmer performing it's best, proper maintenance is required.

### Daily:

Check skimmer daily for foam production. Use remote to make minor adjustments.

Empty and clean out collection cup or skimmate collector if necessary.

Check air bubble density inside main skimmer body. If air bubble density is low, perform monthly maintenance.

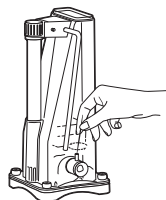
### Monthly:

Unplug skimmer from wall.

Remove venturi inlet from pump inlet and disconnect airline tube from nipple on air silencer.

Soak venturi inlet and airline tube in hot fresh water. The hot water will soften the tube which will make it easier to remove from the venturi.

Remove air hose from venturi. Then use a toothpick or probe to remove salt and calcium deposits from air inlet nipple on venturi. Salt and calcium will build up wherever there is an air/water interface on marine aquariums. Keeping this tube clear and open is essential to maintaining proper air flow.



Replace air tube and reinstall venturi back onto pump.

Plug skimmer back in and adjust water level if necessary.

Model No.	Dimensions	Maximum Aquarium Size	Maximum Pump GPH	Power (watts)	Air Intake
TSN-20	7.1" x 7.1" x 20.3"	150g	528	10-18W	700 l/H
TSN-25	7.8" x 7.8" x 20.3"	300g	660	18-28W	800 l/H

# IMPORTANT SAFETY INSTRUCTIONS

**To prevent possible injury, the following basic safety instructions should be observed when operating the unit.**

1. Never connect the unit to any power source while hands are wet.
2. Always unplug the unit from the power source before installing, replacing parts, or doing regular maintenance.
3. Never allow pump to run dry.
4. Always keep the pump submerged during operation. Failure to keep the pump submerged while in use may damage the pump and/or cause unit failure.
5. Always use a drip loop in the power cord to prevent water from running down the length of the cord and reaching the power source.
6. For added safety, this device should be plugged into a grounded receptacle controlled by a GFCI (Ground Fault Circuit Interrupter) circuit breaker.
7. Make sure the unit is securely installed before operating.

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## HELPFUL HINTS

- Small changes in water density or the addition of certain chemicals may cause foam level production to suddenly increase or decrease. These include: evaporation, water changes, feeding, addition of new animals, invertebrate reproductive events, certain water chemistry chemicals. To prevent a skimmer overflow, it is good to adjust the skimmer foam level down before performing any maintenance on the aquarium which can cause these events.
- If the bubble density looks low in the main skimmer body it is most likely due to the venturi being clogged. Perform monthly maintenance to clear the air inlet. If this doesn't work, check the intake on the skimmer pump to see if any foreign material is causing a blockage.
- If the foam is very wet and overflowing the collection cup adjust the skimmer down so the water level is as low as possible. If the water level adjustment valve is fully opened and the level still does not drop, check the outlet valve pipe for a blockage created by foreign material.

# 12 Month Limited Warranty

## **WHAT THE WARRANTY COVERS:**

Central Aquatics (Company) warrants this Coralife product (see Exclusions below) to the original purchaser against defective material and workmanship that occurs during normal in-home use for 12 months from date of purchase. Company will, at Company's option, either repair or replace same without charge (but no cash refunds will be made). This warranty is limited to replacement or repair of product only and does not cover loss of aquarium life, personal injury, property loss, or damage arising from the use of the product. You must retain original proof of purchase to validate this warranty.

## **EXCLUSIONS:**

1. Damage resulting from accident, misuse, abuse, lack of reasonable care, subjecting the product to any but the specified electrical service, other than the normal and ordinary use of the product, subjecting the product to abnormal working conditions or any other failure not resulting from defects in materials or workmanship.
2. Damage resulting from modification, tampering with or attempted repair by anyone other than the Company.
3. Transfer of product to someone other than the original consumer or purchaser.

## **WHAT YOU MUST DO TO ENFORCE WARRANTY:**

Contact the Company by telephone:  
888-255-4527

Or contact the Company by writing:  
Central Aquatics  
5401 West Oakwood Park Drive, Franklin, WI 53132  
Attn.: Warranty

You must pay any postage, shipping charges, insurance costs and other expenses to return the product along with the original cash register receipt to Central Aquatics. However, if the necessary repairs are covered by the warranty, Company will pay the return shipping charges to any destination within the United States or Canada.

**LIMITATION OF IMPLIED WARRANTIES AND EXCLUSION OF CERTAIN DAMAGES: THE COMPANY DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, WITH RESPECT TO THIS PRODUCT. THIS WRITING CONSTITUTES THE ENTIRE AGREEMENT OF THE PARTIES WITH RESPECT TO THE SUBJECT MATTER HEREOF; NO WAIVER OR AMENDMENT SHALL BE VALID UNLESS IN WRITING SIGNED BY THE COMPANY.**

Some states do not allow the exclusion or limitation of consequential damages, so the above limitation or exclusion may not apply to you.

