

EURO-REEF

AQUARIUM SYSTEMS

RC Series Protein Skimmer Owner's Manual

REV 110108

IMPORTANT!!!

ATTENTION!!

PLEASE READ THIS!!

It is EXTREMELY IMPORTANT that you fill out and return the WARRANTY REGISTRATION document included with this manual. This will ensure that you are able to receive prompt service in the event that you have a warranty issue. Please send it along with a copy of your receipt of purchase to:

Euro-Reef Aquarium Systems
Warranty Dept
23400 Peralta Drive Suite A
Laguna Hills, CA 92653

In addition, take some time to affix the serial number stickers to page #3 of this manual so you will have access to an easy reference to this information. You'll be glad you did!!

THANK YOU!!

Dear fellow hobbyist,

Thank you for purchasing an RC Series protein skimmer. If this is your first experience with our company's product, **you are in for a treat!!** All of our skimmers are hand crafted using the latest tools and technology. Our primary goal is to provide you with the finest product available today, enhancing the joy of your hobby and insuring the health of your aquatic pets. We are confident that you will never have a better experience with any other product.

Please take a moment to read through this manual thoroughly and affix the serial # stickers to this page. It will be your reference for support should you need it.

Please don't hesitate to call us anytime with questions, we're happy to help!

Sincerely,

The Euro-Reef family

Important information:

My Skimmer Serial#	My Pump #1 Serial#
My Pump #2 Serial#	My Pump #3 Serial#
My Pump #4 Serial#	My Pump #5 Serial#

Installation & Setup Instructions

TAKE YOUR TIME AND BE GENTLE WITH THE SKIMMER.

To start, remove the skimmer from the box and unpack skimmer carefully.

Be sure to recycle foam and cardboard whenever possible.

After you have unpacked the skimmer and all its parts carefully, begin the installation by making sure you have enough room to ***easily*** place the skimmer's "Reaction Chamber" (Diagram Page 6, Part #19) into the sump or next to the sump.

If you are putting it in the sump, set the body into the water while holding it firmly and allow aquarium water to enter in through the opened "Drain Valve" (#28) and or the "Union" above the "Skimmer Reaction Chamber Outlet 90° Ell—External" (#12). It will be buoyant and float until it is partially flooded so be sure to hold on to it tightly. Once the body is full enough to sink to the bottom, you can start to attach the rest of the parts.

If you are setting the skimmer up for external use, here is where you start (or pick up from an "IN SUMP" installation).

First attach the outlet assembly to part # 12. The assembly includes parts 9a, 9b, 10a, 10b, 10c, and either 11a or 11b - depending on which control valve option you chose for the skimmer.

Next, attach the "Skimmer Pump" (#17) to the Reaction Chamber. Line up the "Nut" or "Female" side of the unions (the loose part) with the mating or "Male" side on the skimmer Reaction Chamber and couple the top union first, then the bottom union. ***DO NOT*** attach the optional "Skimmer Pump Directional Fitting" (#18) at this time. It 's potential use is discussed on page 8.

Now you can attach the "Silicone Airline Tubing" (#22) to the Venturi's Air Intake Nipple". Be careful not to push to hard as these parts can break if too much force is used. Next, thread the tubing through the "Silicone Airline Tubing Holder" (#24). The "Air Intake Control Valve" or ACV (#23) can be used optionally if you want to manually control the volume of air to the pump. When the ACV is used, a slight reduction in air intake volume and greater turbulence in the reaction chamber will result.

TIP: *If you need to, you can dip one end of the silicone tubing in warm water to make it more flexible and to insure a smooth and easy fit onto the plastic nipple.*

Using some of the included "Silicone Lubricant", lubricate the o-ring that sits in the groove of "Base" of the Euro-Loc that is attached to the top Reaction Chamber. Next, set the "Cup" assembly (parts 1-6) on top of the Reaction Chamber. After aligning the cup over the Reaction Chamber, allow the "Nut" section of the Euro-Loc to fall into place over the tabs protruding from the "Base" and gently turn counterclockwise to seal.

Installation & Setup Instructions

If you are setting the skimmer up “Externally” , the next step will be to position the skimmer where it is going to rest. See the Figure 2.0 on page 9.

Once the skimmer is in place, and pipes and fittings are properly positioned, be sure to glue them in to place as they will leak otherwise.

The last step will be to attach a feed pump to the “Skimmer Feed Pump Inlet Pipe/ Flow Control Valve” (#21). A pump that will provide 1 to 1.5 times the total system volume per hour to the skimmer is ideal:

i.e., If you have a 250 gallon system and running an RC250, you will need to provide between 250 to 375 gph to the skimmer.

Flow rates that exceed these volumes can make the skimmer difficult to adjust and have a negative affect on efficiency. Use the flow control valve that is provided as a way to achieve the proper flow through rate. You can use it with an elbow and or flexible hose insert fitting (provided) to adapt to your specific installation requirements. We recommend EHEIM hobby pumps for this application as they are quiet and very efficient.

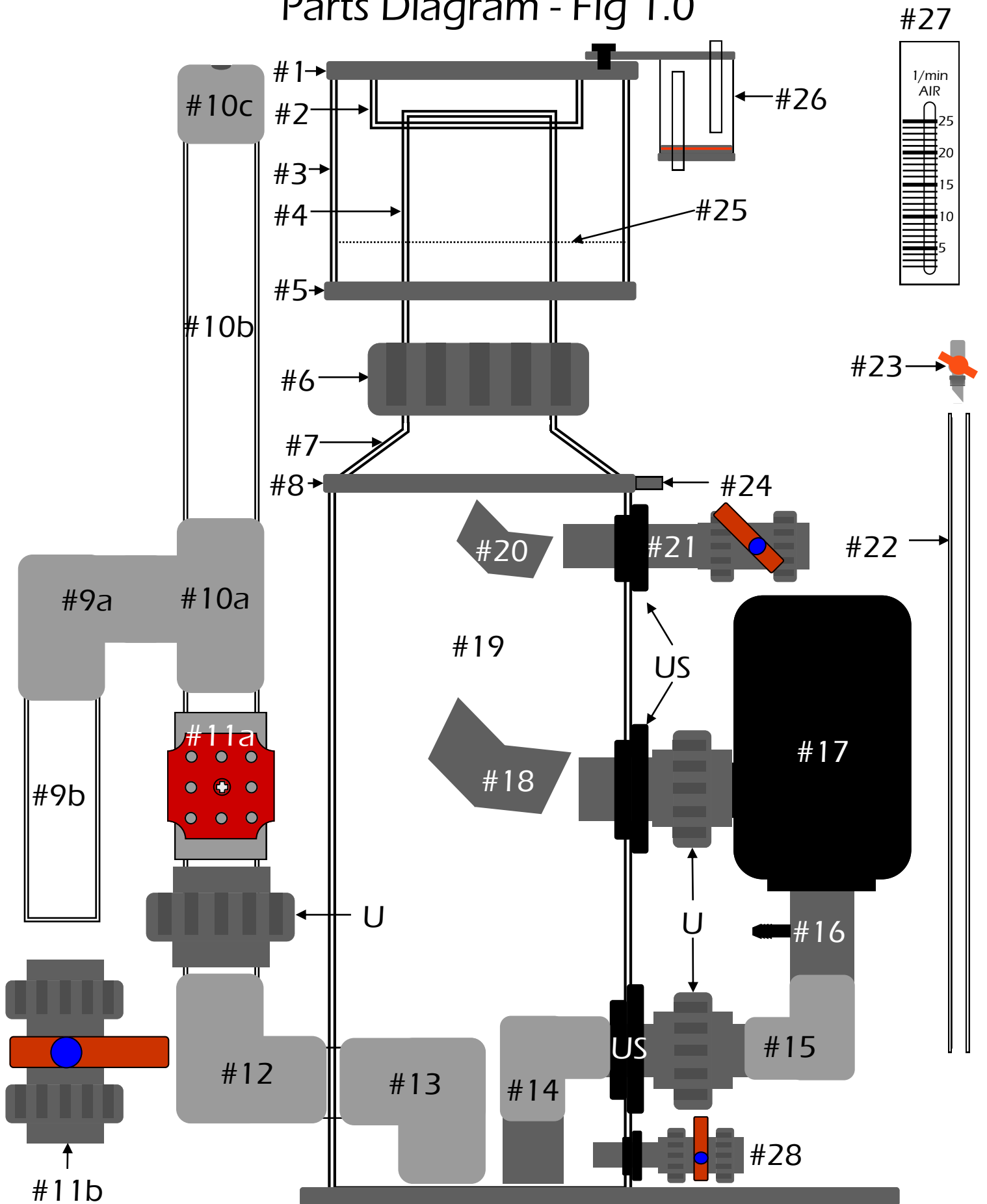
At this time you should also attach the “Skimmer Feed Pump Directional Fitting” (#20) to the side of the “Skimmer Feed Pump Inlet Pipe” (#21) inside the Reaction Chamber. This fitting should be directed downwards at a slight angle so as to insure that the incoming water does not create unwanted turbulence at the transition area and mixes well with the bubbles coming from below. This counter current flow is one of the keys to efficient protein skimming!!

You are now ready to power up the skimmer, but before you do, check a few things first:

- If you have attached the air intake control valve (#23), check to make sure that it is wide open before you turn the skimmer pump on.
- Be sure to adjust the “Water/ Flow Level Control Valve” (#11a/b) to the open position. You can do this by turning the “Gate Valve” (#11a) counterclockwise until it stops turning. If you are using the TUBV (#11b), make sure that the handle is parallel with the valve body.
- Make sure all fittings are secure and pipes are glued in place.
- Take the pump power cord from the pump (#19) and carefully stretch it out towards the outlet. Be sure to set up a drip loop (a section of power cord that is in the shape of a loop or dip that hangs below and before the wall outlet). This will help prevent electrical shock in the event of water splashing on or near the power outlet or pump power cord. *Where there is water... something's bound to get wet!!!* Double-Triple check that the power source wall outlet is clean, dry and supplying 110v—120v @ 60HZ.

Continued on page 8

Parts Diagram - Fig 1.0



Parts Diagram List

1. Skimmer Cup Lid
2. Skimmer Lid Foam Guide
3. Skimmer Collection Cup (Body)
4. Skimmer Neck
5. Skimmer Cup Base
6. Euro-Loc Quick Disconnect
7. Transition
8. Ring
9. Skimmer Outlet Directional Ell (a) & Pipe (b)
10. Tee Outlet (a) with Vent Pipe (b) & Cap (c)
11. Water/Foam Level Control Valve (Gate- Option "a", True Union- Option "b")
12. Skimmer Reaction Chamber Outlet 90° Ell—External
13. Skimmer Reaction Chamber Outlet 90° Ell—Internal
14. Re-Circulation Pump Intake 90° Ell and Extension Pipe
15. Pump Intake Manifold 90° Ell
16. Venturi Apparatus with Air Intake Nipple
17. Skimmer Pump
18. Skimmer Pump Outlet Directional Fitting 45° Ell (Optional Use)
19. Reaction Chamber
20. Skimmer Feed Pump Inlet Directional Fitting 45° Ell
21. Skimmer Feed Pump Inlet Pipe w/ Flow Control Valve
22. Silicone Air Intake Tubing
23. Air Intake Control Valve (Optional Use)
24. Silicone Airline Tubing Holder
25. Starting foam level should be here @ 1-1.5" up into the neck.
26. Air Intake Silencer (Optional Item)
27. Air Intake Flow Meter (Optional Item)
28. Drain Valve (not on all models)

U= Union

US= Uniseal

Up & Running!

Well, what are you waiting for??? Plug it in!!

First, with the flow control valve set at roughly “half open”, plug in the feed pump to fill the skimmer. As the skimmer fills with water, monitor all fittings for leaks and tighten fittings as required. Once the skimmer fills with water to the point where it starts to exit back into the sump and both the inlet and outlet ports of the skimmer pump are submerged, you can plug in the skimmer pump. Once the skimmer pump is running and producing bubbles, slowly start to close of the “Water/Foam Level Control Valve” (#11). As you close the valve the water/foam level will rise. Make small adjustments and wait to allow the level to stabilize. Once the level has reached the “Starting Foam Level” (#25), you should allow the skimmer to run for a few hours before you make any further adjustments.

If you find that the amount of bubbles being produced by the pump is not filling at least 2/3 of the Reaction Chamber, you can add the optional “Skimmer Pump Outlet Directional Fitting” (#18) and try it at various angles to direct the bubbles downward so that they fill the chamber properly.

****THE BUBBLES PRODUCED BY THE PUMP SHOULD NEVER EXTEND BELOW THE BOTTOM 1/4 OF THE REACTION CHAMBER!**

If they do, they can cause the skimmer pump to overheat and even run dry damaging the both the impeller assembly/magnet/rotor as well as the pump itself. A few stray bubbles is not a problem, but if the Reaction Chamber is nearly full, it can cause damage.

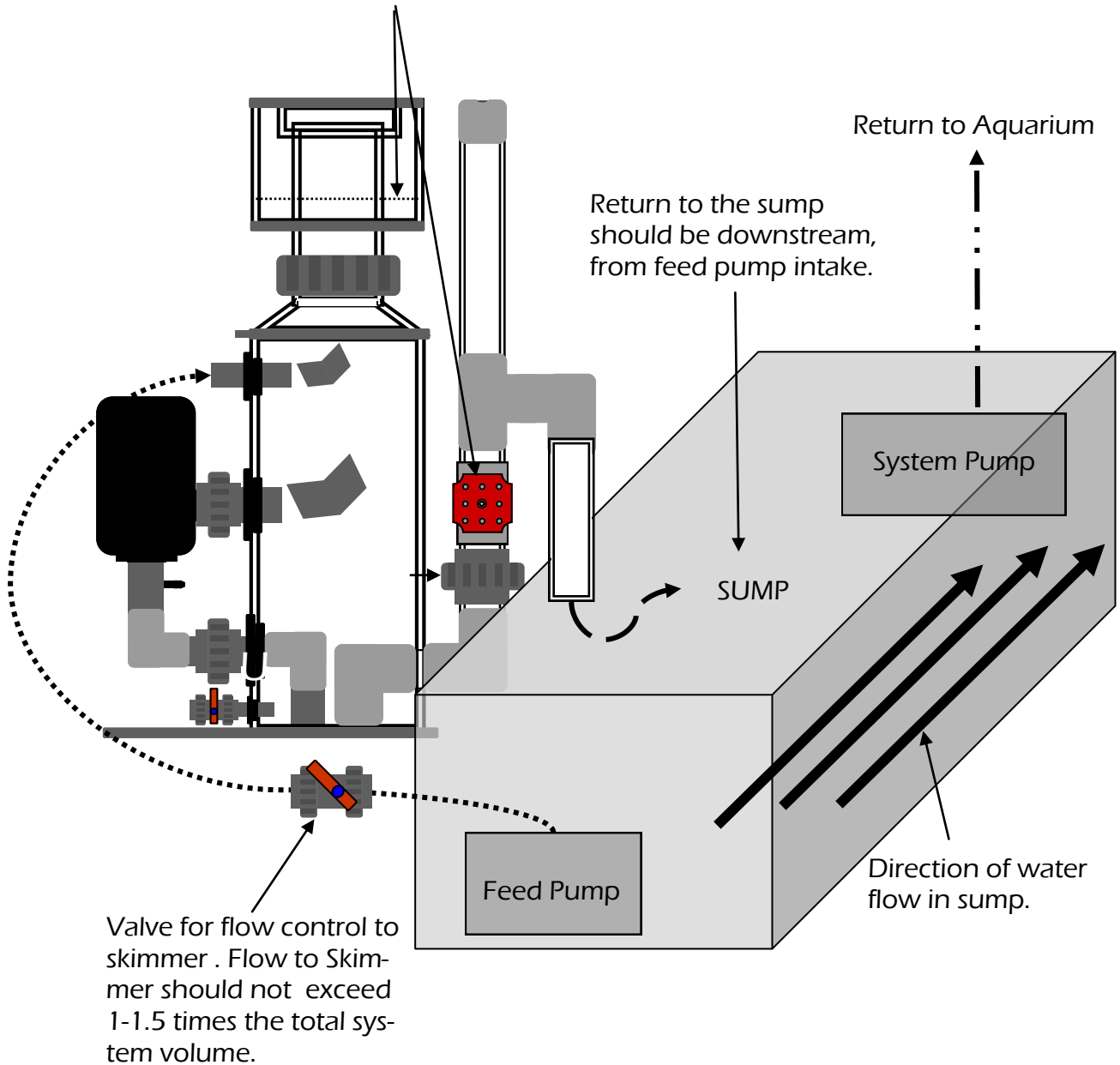
TIP: *If the foam fills the cup immediately due to the presence of excessive foaming agents (i.e. fish food, water conditioner, pH buffer .etc), slowly close the air valve until the foam level reaches the proper level as indicated in the skimmer diagram. If the proper level still cannot be attained by use of the air valve alone, we recommend that activated carbon in a filter media bag (1/2lb per 50 gallons) be placed in the sump to absorb excess foaming agent. Give the system 24-hours for the excessive foaming agent to be eliminated, then repeat the air valve adjustment step as many times as required until the proper foam level is reached.*

Be sure to monitor the skimmers performance closely for the first week or so as it will be settling in and may need additional adjustment. For now....

Sit back and enjoy your skimmer!!

External Set-Up Diagram - Fig 2.0

Valve to control skimmers' internal water/ foam level. This also controls the kind of foamate and effluent the skimmer produces. Higher levels produce "wetter" foamate and lighter skimmate. Lower levels produce "drier" foamate and a darker more concentrated skimmate which is ideal for most applications.



Notes, Maintenance

Never run the pump dry. A pump that is run dry and burns out **WILL NOT BE COVERED BY OUR WARRANTY!!!**

Never operate the pump in an area where the intake/suction of the pump will be in close contact with a liquid calcium supplement, Kalkwasser, or any powdered buffer supplements i.e. dKH buffer, pH buffer, Mg (magnesium) buffer. Prolonged or regular exposure to these compounds without the required maintenance* (see below) will cause the motor to seize and burn out!! If this happens the pump will **NOT BE COVERED BY OUR WARRANTY!!!**

Skimmer Maintenance:

Required Quarterly Pump Service:

The pump should be cleaned and disassembled for inspection **at least** once every three months. The pump should be **run** in a bath 1-part distilled white vinegar and 2-parts water for 12 hours or overnight if possible. After the bath, remove the pump from the solution and rinse it thoroughly with freshwater and remove all visible debris (try our cleaning brush). Take the pump apart and inspect all the internal pieces checking them for additional mineral deposits, SPECIFICALLY THE CERAMIC SHAFT AND ROTOR BEARINGS. If you see any residual mineral deposits, soak these parts in a 1:1 Vinegar and Water solution for 6-12 hours. Rinse and re-assemble the pump, fitting it back on to the skimmer in the sump. Restart the skimmer.

It's not a bad idea to perform this service to the whole skimmer once a year.

*** If you are using any of the supplements noted above you should perform this service every 8-10 weeks to be safe.**

Clean the skimmer cup and neck as often as possible to ensure optimal performance. **Once a week is a minimum!!** Even if the collection cup is not very full, cleaning it will enhance extraction substantially. Dry it thoroughly inside and out before replacing it back on the skimmer.

Once every 1-2 weeks take some time to dip the end of the Silicone Air intake tube into a cup of warm, purified freshwater i.e. Reverse Osmosis. The suction created by the venturi will draw this warm water through the tube rinsing the tube and the Venturi's water air interface point where salt crystals often form restricting the flow of air. This can dramatically effect the skimmer's efficiency (less air, less foam etc...).

*****Be sure to keep ALL the o-rings clean and lubricated. This will ensure ease of maintenance, proper sealing, and extend the life of the o-rings. Use Silicone Lubricant Euro-Reef for best results!**

Warranty

The complete protein skimmer has a 1 year limited warranty*. If you believe you have a defective part, **DO NOT CONTACT YOUR DEALER!!** Contact our support department (see below) so we can troubleshoot the problem with you. If it is determined that service will be required, we will provide you with an RMA# and instructions for shipping the item.**

Once you mail in your warranty registration, the warranty period begins as of the date of your purchase. If you do not mail in your warranty registration, the warranty period begins date of production plus three (3) months.

Euro-Reef **requires** that you return any parts in question for inspection before a warranty replacement is authorized. You are responsible for return shipping costs. If you believe you have a valid warranty claim within the warranty period, please contact us via phone or e-mail to request an **RMA** (Return Materials Authorization).

Once we have received the part at the factory, as soon as we can **verify** that the part is in fact defective, we will send you a replacement. As always, our goal is to provide a *FAST* turnaround so that you are back in business ASAP. If we determine that the part is not defective but has failed due to **improper use or maintenance** (for example: a pump that has seized up with calcium deposits due to improper maintenance) we will contact you with options for factory service or replacement

NOTE: Euro-Reef insists on the inspection of all parts returned for warranty replacement before replacement is authorized.

Items received without RMA's may be discarded!!

Euro-Reef parts and accessories are available on our website online store at www.euro-reef.com. **We suggest that key operational parts such as pumps & impeller assemblies be purchased as backups to avoid filtration downtime during routine maintenance or an unforeseen event.**

"BLEM" protein skimmers have a 90 day limited warranty

**** Contact us:**

Via e-mail: support@euro-reef.com

Via telephone at: 949-770-9913 ext 17 or at 1-877-HEY EURO (1-877-439-3876)

Help & Support

If you have questions about our products, we encourage you to contact your local Authorized Euro-Reef Dealer. For technical and warranty support you may contact us via:

Via e-mail: support@euro-reef.com

Via telephone at: 949-770-9913 ext 17

Or toll free at 1-877-HEY EURO (1-877-439-3876)

General Contact Information

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