



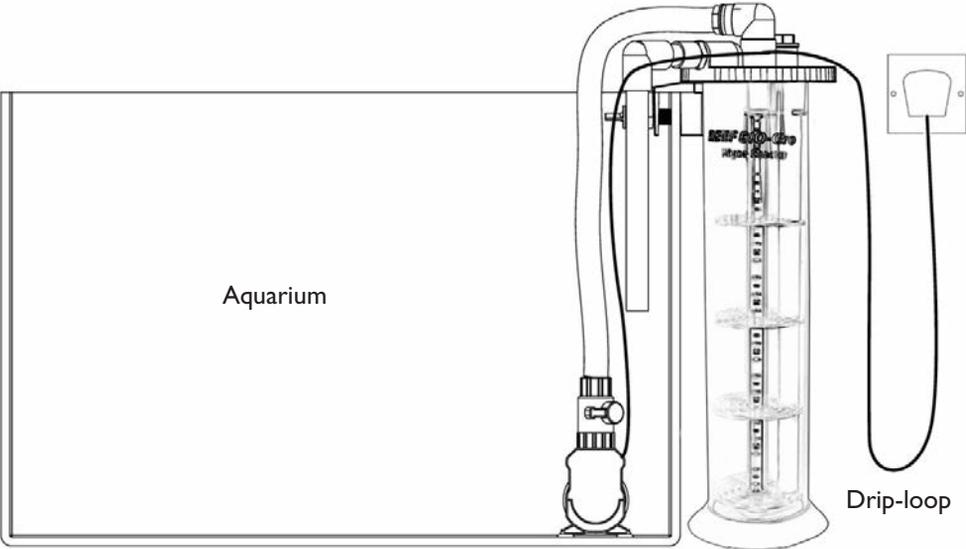
REEF BIO-Gro



REEF BY TMC
FOR ADVANCED AQUARISTS



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Typical Installation

REEF BIO-Gro Algae Reactors

INSTRUCTIONS FOR INSTALLATION AND USE

Important Safety Information - Please Read Carefully

- Always isolate from the mains electricity before installing or carrying out any maintenance to the REEF BIO-Gro unit.
- This product should only be used with an approved power supply unit (PSU). Failure to do so may result in serious harm to you and damage to the unit.
- This unit is designed to be used indoors and is not suitable for any outdoor applications.
- Unless otherwise stated, the PSU is not waterproof so please ensure that it is mounted in a secure, dry location that allows for air circulation. There is a risk of electric shock if the PSU becomes wet, or is handled with wet hands.
- Always leave a drip loop in the cable to prevent water running down the cable and damaging the electronics (see drawing below).
- Ensure the REEF BIO-Gro is securely installed before operating.
- Dispose of this unit responsibly. Check with your local authority for disposal information.

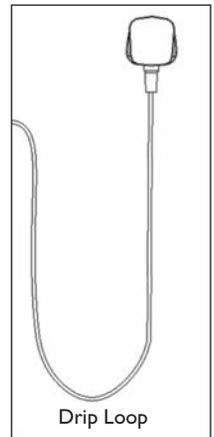


Parts Required for Installation (NOT SUPPLIED)

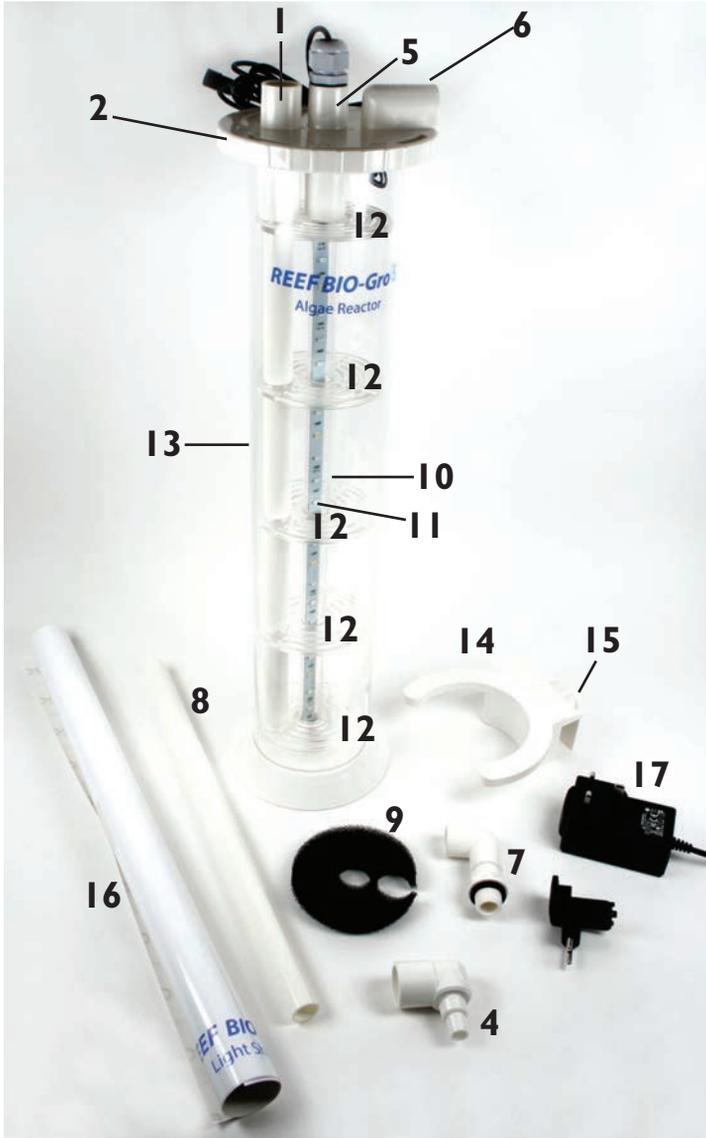
1. Pump to supply water to the REEF BIO-Gro
Please Note: Always leave a drip-loop in the pump cable to prevent water running down the cable and reaching the power source (see drawing).
2. Additional connection fittings (depending on individual installation requirements) e.g. flexible tubing.

Recommended Parts (NOT SUPPLIED)

1. Programmable timer or AquaBar Control



PARTS LIST



1. Water inlet
2. Lid
3. Lid O ring – not shown
(order code 5788)
4. Water inlet 90 elbow
hosetail (order code 5789)
5. AquaBar LED installation
port
6. Water outlet
7. Water outlet fitting
(order code 5798)
8. Water outlet pipe
(order code 5791)
9. Sponge (order code 5834)
10. AquaBar LED protection
tube
11. AquaBar LED
12. Macroalgae cultivation
plates
13. Growing chamber
14. Hanging bracket
(order code 5795)
15. Hanger securing screw
(order code 5796)
16. Light Shield self-adhesive
sheet
17. AquaBar PSU

The REEF BIO-Gro is an advanced, compact reactor specifically designed to grow macro-algae. It incorporates a high performance LED light, using AquaRay AquaBar technology, with LED diodes selected specifically to promote optimum algae growth inside the reactor. This macro-algae can be used to reduce unwanted nutrients such as nitrate and phosphate in your reef aquarium and also help improve water quality. The versatile, compact design of the REEF BIO-Gro allows it to be installed internally in a sump or aquarium or externally as a stand-alone 'hang-on' unit.

ASSEMBLY AND INSTALLATION

Step 1

Thoroughly rinse the REEF BIO-Gro with fresh water



Step 2

Locate and correctly position the sponge (9) on the filter lid (2)



Step 3

Place a small amount of macroalgae, such as Chaetomorpha, on each of the macroalgae cultivation plates (12)



Step 4

Ensuring that the lid 'O' ring (3) is correctly positioned, replace the lid (2) and securely hand tighten - failure to do so will result in leaks



Step 5

Install and securely tighten the water outlet fitting (7) and water outlet pipe (8) - failure to do so will result in leaks.



Step 6

Install and securely tighten the water inlet 90° elbow hosietail (4) - failure to do so will result in leaks.



Step 7

If required, gently peel off the backing from the Light Shield* and apply to the reactor tube



Step 8

Install the hanging bracket (13) if required.



**The REEF BIO-Gro Light Shield is a purpose-made, self-adhesive vinyl sheet that has been developed to optimize the use of available light from the AquaBar and to help reduce light spill into your aquarium or sump. The Light Shield can be simply cut with scissors along the cut line if you would like a viewing strip so algae growth inside the growing chamber can be easily monitored. When applying to the REEF BIO-Gro it may be easier to apply the middle of the light shield first ensuring that it is straight, and then gradually smooth each side down, being careful to eliminate any bubbles as you go.*



Step 9

Ensure there is adequate space in or around the aquarium or sump to allow the reactor to be securely installed. Make certain you locate it in a position where it can easily be connected to the water outlet of your pump and so that the water leaving the reactor can easily be returned to your aquarium or sump and the reactor can be accessed for harvesting algae, maintenance and cleaning



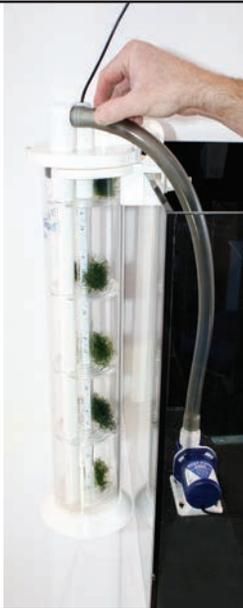
Step 10

If you are hanging the REEF BIO-Gro on the side of your aquarium or sump, tighten the hanger securing screw (14), turning in a clockwise direction. **Caution:** Do not over-tighten the hanger securing screw as this could result in operating problems.



Step 11

Using a suitable length of 16mm flexible hosing (not supplied) connect your pump to the REEF BIO-Gro water inlet (1).



Step 12

Connect the correct plug adapter for your region to the AquaBar PSU. Ensure that the mains electricity supply is switched off, then fully connect the DC connector plug on the PSU to the socket on the AquaBar.

Connect PSU to mains electricity.

USEFUL TIP

For optimum results, it is recommended that the AquaBar LED is set to operate on a reverse cycle and switch on when the main lights in your aquarium switch off.



Step 13

Make sure all connections are tightly secured. Switch on and slowly adjust the water flow of your pump until the correct flow is achieved.

The pump flow rate should be regulated according to the amount of macroalgae in the growing chamber and the speed should be increased as the macroalgae grows.

Please note: Fluctuations in the water level in your aquarium or sump may affect the water level inside your reactor.

Step 14

Switch on the AquaBar LED



MAINTENANCE

Caution: Always isolate the pump and AquaBar LED from the mains electricity before harvesting algae or carrying out any maintenance to the REEF BIO-Gro.



The REEF BIO-Gro should need very little adjustment and maintenance once set up correctly. However, due to factors such as organics, detritus, salt and calcium levels, it is common for deposits to build up in and around the reactor and therefore it is recommended that it is cleaned periodically. **Please note:** It is essential that the AquaBar LED protection tube is regularly cleaned as any dirt or detritus on this part will inhibit the penetration of the light into the growing chamber and will consequently reduce the growth rate of your macroalgae.

1. The pump to your REEF BIO-Gro must function 24 hours a day and for optimum results we recommend that the AquaBar LED should be set to operate for up to 12 hours a day on a reverse cycle, switching on when the main lights in your aquarium switch off.
2. Regularly check the growth of algae within the reactor and harvest accordingly.
3. Ensure the water inlet 90 elbow hoesetail (4), the sponge (9) and the water outlet pipe assembly (8) are clean and free of blockages. Failure to do so could result in operating problems and leaks.
4. Ensure the AquaBar LED protection tube is clean and free from any dirt, detritus, salt and/or calcium deposits.
5. Clean your pump regularly to ensure it does not become clogged with debris or detritus (refer to your pump instructions for full maintenance instructions)
6. When carrying out routine maintenance ensure that the lid O ring (3) is correctly positioned and free from any dirt, detritus, salt and/or calcium deposits. Failure to do so could result in operating problems and leaks.

USEFUL TIP: During routine maintenance it is advisable to ensure that the filter lid O ring (3) is checked for any signs of degradation and replaced accordingly. Spares are available from your local stockist (part no 5788).

7. No user serviceable parts inside. Do not attempt to open the AquaBar or PSU.
8. If the DC cable becomes damaged the AquaBar should be disconnected immediately from the mains electricity supply.
9. The DC cable cannot be replaced so, if damaged, the AquaBar should be returned to TMC or disposed of responsibly. Check with your local authority for disposal information.

TROUBLE SHOOTING

Problem: Water flow through the reactor is not sufficient

1. Possible Cause: Water flow rate to the reactor is incorrect.
Solution: Adjust water flow to the reactor accordingly.
2. Possible Cause: Pump is not plugged in or is not operating correctly.
Solution: Refer to the instructions supplied with your pump.
3. Possible Cause: Air is trapped inside the reactor.
Solution: Switch off your pump. Wait for a few minutes for the air to escape and then switch the pump back on and adjust the water flow accordingly.
4. Possible Cause: Water inlet (1), water inlet 90° elbow hose tail (4), water outlet (6), water outlet fitting (7), or water outlet pipe assembly (8) is blocked.
Solution: Check for blockage and clean accordingly.
5. Possible Cause: Sponge is blocked.
Solution: Check for blockage and clean accordingly.

Problem: The AquaBar does not switch on

1. Solution: Check cable connection between lamp unit and PSU. If the lamp unit is still not switching on, return the PSU and lamp unit to your local stockist for further testing and replacement if necessary.

Problem: The AquaBar starts flashing

1. Solution: Return the PSU to your local stockist for replacement with an authentic Tropical Marine Centre part.

Problem: One or more LEDs in the AquaBar unit do not come on or cease to work

1. Solution: Return the AquaBar to your local stockist for replacement with an authentic Tropical Marine Centre part.

Problem: The macroalgae inside my reactor doesn't seem to be growing

1. Possible Cause: To grow, algae needs elevated levels of nutrients such as nitrate and phosphate. If the water quality in your aquarium is good (which means it would have lower levels of these sorts of nutrients) then algae will grow at a slower rate.
2. Possible Cause: The AquaBar LED protection tube may be dirty and inhibiting the penetration of the light into the growing chamber.
Solution: Check for dirt or detritus and clean accordingly.
3. Possible Cause: The AquaBar LED is not switching on.
Solution: Check cable connection between lamp unit and PSU. If the lamp unit is still not switching on, return the PSU and lamp unit to your local stockist for further testing and replacement if necessary.
4. Possible Cause: The water flow rate through the reactor may be too fast or too slow.
Solution: Adjust the water flow accordingly and monitor results.
5. Possible Cause: Poor quality Macro algae.
Solution: Try replacing it with fresh algae.



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Open between

9am - 5pm Monday to Thursday/9am - 12pm Friday.

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