REEFER™ SYSTEMS

REEFER™

REEFER™ Deluxe

REEFER™ Peninsula
Red Sea

REEFER™ SYSTEM

REEFER™ NANO

REEFER™ 170

REEFER™ 250

REEFER™ 350

REEFER™ XL 425

REEFER™ 450

REEFER™ XL 525

REEFER™ XXL 625

REEFER™ XXL 750
REEFER™ 350/XL425

Operation Manual

Installation Manual

Cabinet Installation Guide

Cabinet installation Guide V3 (350)

Cabinet installation Guide V3 (XL425)
ReefeR™ DeluXE

ReefeR™ 170 DLX ➔
ReefeR™ 250 DLX ➔
ReefeR™ 350 DLX ➔
ReefeR™ XL 425 DLX ➔
ReefeR™ 450 DLX ➔
ReefeR™ XL 525 DLX ➔
ReefeR™ XXL 625 DLX ➔
ReefeR™ XXL 750 DLX ➔
REEFER™ DELUXE 450/XL525

- Operation Manual
- Installation Manual
- Cabinet Installation Guide
- LED Assembly Manual
- Cabinet installation Guide V3
REEFER™ Operation Manual

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Congratulations on your purchase of the Red Sea REEFER™ reef system.

Red Sea’s REEFER™ Systems provide advanced hobbyists with a solid foundation for building a fully featured reef or marine aquarium. The REEFER™ Series combines a contemporary, rimless, ultra-clear glass aquarium with a stylish cabinet and a comprehensive water management system, including a professional sump with integrated automatic top-up, and Red Sea’s unique silent down-flow system.

Incorporating technologies originally developed for Red Sea’s all-in-one MAX® coral reef systems, the REEFER™ series is designed for ease of operation while enabling hobbyists to install an unlimited choice of lighting, filtration, circulation and controllers to create a uniquely customized system.

This manual complements the graphic assembly manuals and contains installation and operational instructions for all of the REEFER™ series aquariums.

We hope that you enjoy your REEFER™ and your reef.

To benefit from product update information and exclusive special offers to registered REEFER™ owners, please register your REEFER™ on-line at redseafish.com
1 Safety
Please read and follow all safety instructions.

**DANGER:** To avoid possible electric shock, special care should be taken when handling a wet aquarium. For each of the following situations, do not attempt repairs yourself; return the appliance to an authorized service facility for service or discard the appliance.

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

If the external cable is damaged, it shall be replaced by the manufacturer.

To avoid the possibility of the appliance plug or receptacle getting wet, position the aquarium stand and tank to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. You should create a "drip loop" (see Figure 1) for each cord connecting an aquarium appliance to a receptacle. The "drip loop" is that part of the cord below the level of the receptacle, or the connector. Use an extension cord, if necessary, to prevent water traveling along the cord and coming into contact with the receptacle. If the plug or receptacle does get wet, DO NOT unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug the device and examine for presence of water in the receptacle.

Close supervision is necessary when any appliance is used by or near children.

To avoid injury, do not contact moving parts.

Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never pull the cord itself to remove the plug from the outlet. Grasp the plug and pull to disconnect.

Do not use an appliance for anything other than its intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.

Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing point.

Make sure an appliance mounted on a tank is securely installed before operating it.

Read and observe all the important notices on the appliance.

**NOTE:** 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 cannot be tripped over or pulled accidental.

---

Drip Loop
Figure 1
2 Location
The first step in setting up the REEFER™ is to choose a suitable location.

Weight
The flooring directly below the system must be rated to support the following weight:

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight</th>
<th>170kg / 375lb</th>
<th>250kg / 550lb</th>
<th>375kg / 830lb</th>
<th>530kg / 1170lb</th>
<th>680kg / 1500lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nano</td>
<td>180kg</td>
<td>270kg</td>
<td>375kg</td>
<td>530kg</td>
<td>680kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/ 400lb</td>
<td>/ 595lb</td>
<td>/ 830lb</td>
<td>/ 1170lb</td>
<td>/ 1500lb</td>
<td></td>
</tr>
</tbody>
</table>

Room temperature
Site selection is important for correct temperature maintenance. We recommend that you keep the ambient room temperature a comfortable and stable 22°C / 72°F. Avoid placing the tank in front of an air conditioner, heating vents or direct sunlight. A well ventilated room with moderate light is the best place to position the aquarium.

Accessibility
Ensure that there is at least 10cm / 4” of clearance behind the REEFER™ to allow easy access for installing/removing cables from the sump as well as sufficient air circulation for a chiller (larger models only). It is recommended to leave approximately 60cm / 24” between one of the sides of the aquarium and any adjacent walls or furniture for access to the rear of the tank.

General considerations
Ensure that the area surrounding the aquarium is waterproof and consider moving away anything that water might damage or may be corroded by the salt.

NOTE: The REEFER™ system should not be moved when full of water.
3 Assembly

The following information complements the graphic manuals.

**WARNING:** If you are not experienced in the construction of self-assembly furniture or the installation of aquarium systems, seek suitably qualified assistance.

The REEFER™ includes the following main components:

- Glass aquarium
- Cabinet (self-assembly)
- Glass Sump including Bubble trap sponge, 400 micron filter bags and Float valve for automatic top-up
- Internal Piping kit with outlet nozzle
- Top-up reservoir

Detailed instructions for the complete assembly of the REEFER™ can be found in the accompanying graphic manuals.

Complete the assembly of the cabinet including the doors as shown in the graphic assembly manual and place in the final operating position (see location above).

**WARNING:** Read before lifting the glass aquarium onto the cabinet.

The top of the cabinet is approximately 86cm/34” from the floor.

The table shows the approximate weights of the different models of the REEFER™ aquarium glass.

<table>
<thead>
<tr>
<th>Model</th>
<th>Nano</th>
<th>170</th>
<th>250</th>
<th>350</th>
<th>450</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>25kg / 55lb</td>
<td>33kg / 72lb</td>
<td>52kg / 115lb</td>
<td>64kg / 140lb</td>
<td>100kg / 220lb</td>
</tr>
</tbody>
</table>

Ensure that you have the correct number of people to lift the aquarium according to its weight and size.

Ensure that anyone lifting the aquarium is physically suitable for such an operation and has been instructed in the correct methods of lifting heavy objects.

Once the aquarium is correctly aligned with the cabinet, check that the cabinet has not moved. If necessary readjust the position of the cabinet.

**NOTE:** The REEFER™ aquarium system should not be moved when full of water.

Before placing the glass sump in the cabinet make sure that the cabinet doors are correctly aligned (see instructions in the cabinet assembly manual). **Once the sump is in position it will not be possible to make adjustments to the lower hinge without moving the sump.**

With the doors properly aligned, rotate the front section of the push opener to the correct extension so that the doors will pop open when pushed.

**NOTE:** It is important to assemble the REEFER™ in the order indicated.
**Overflow box pipes:** Make sure that the O-rings are in position on the threaded connectors before assembly. To ensure correct assembly, firmly hold the threaded connectors from inside the cabinet and tighten well by hand. Do not use tools. Avoid unscrewing the pipes from the overflow box once assembled as the locking mechanism that prevents counter-rotation will be less effective.

**Sump pipes:** Make sure that the O-rings are in position on the connectors before assembly. After assembly check that the pipes are vertical and the securing nut is holding the pipe in position. Do not use tools and do not overtighten.

**Overflow Box Cover:** The overflow box cover reduces noise from the water fall of the surface skimmer. If you wish to use the rear wall of the overflow box for mounting equipment such as lighting, break out the section of the cover as shown in the graphic manual. After breaking out the removable section, smooth the remaining edge with a file or sandpaper.
4 Overview of the REEFER™ water management system

Surface Skimmer / Overflow Box

Surface water from the aquarium flows via the removable comb sections of the surface skimmer into the overflow box that houses the dual intakes of the silent-flow downpipe system and the outlet nozzle of the sump return pump. The silent-flow downpipe system includes a flow-regulated main downpipe and a secondary overflow bypass pipe. An external pipe with a clear upper section is placed over the main downpipe to ensure positive water motion throughout the entire height of the overflow box.

The fine adjustment flow valve on the main downpipe enables the water level in the overflow box to be maintained at a constant height between the intakes of the main and bypass pipes, which ensures positive surface skimming while eliminating all noise from the water flow to the sump. An incorrect setting of the flow valve will be accompanied by the sound of the water returning to the sump and is an indication that the flow valve needs adjusting.

Sump /ATO

Water from the flow-regulated main downpipe and the secondary overflow bypass pipe enter a compact reception chamber in the sump. Care should be taken in the choice of any filter media placed in the reception chamber as the turbulent flow conditions from the downpipe could cause a constant discharge of fine media particles. The water then flows through the 400 micron filter before entering the constant-height main reactor or skimmer chamber. If the filter bags are not cleaned frequently enough and become blocked, the water will bypass the filter bags without affecting the overall operation of the sump.

A bubble trap labyrinth with coarse foam separates the reactor chamber from the pump compartment to prevent bubbles from the skimmer being returned to the aquarium.

Any loss of water due to evaporation will cause a drop in the water level in the pump compartment of the sump which will be compensated by the ATO system.

Maintaining a constant water height in the pump compartment (with the ATO) is essential for the stability of the entire water management system by ensuring a constant head pressure on the intake of the main pump. The reservoir contains water for approximately 3 days of evaporation and should be kept topped up at all times.

Return Pump

The recommended flow rates for the return pumps are as shown in the table below. The use of higher rated pumps will result in a higher water level in the aquarium unless an appropriate modification is made to the surface skimmer combs.

<table>
<thead>
<tr>
<th>Model</th>
<th>170</th>
<th>250</th>
<th>350</th>
<th>450</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow</td>
<td>2000lph /530gph</td>
<td>2000lph /530gph</td>
<td>2500lph /660gph</td>
<td>3000lph /790gph</td>
</tr>
</tbody>
</table>
5 Operation

Initial Fill

Check that all pipes are properly assembled and that any flexible tubes are suitably secured in position.

Install any equipment that will take up water volume in the sump before starting to fill the system.

Open the main flow valve (rotate anti-clockwise) to maximum.

Add approximately 15cm/6” of water to the overflow box to make sure that all the pipe joins are watertight. Check for leaks inside the cabinet.

Add water to the main tank and once it is full, monitor the water level in the sump as it begins to fill.

As soon as there is approximately 15cm/6” of water in the main pump compartment switch on the pump and stop adding water.

WARNING: Overfilling the sump with equipment or water may cause a flood in the event of an interruption of electric power.

Switch on skimmers or other filters that will affect the water level in the sump and add more water as required to maintain the 15cm/6” of water in the main pump compartment.

Allow the system to run for a few minutes and adjust the flow valve (as described below) so that the water level in the overflow box is at the correct level.

Add/remove water to/from the system and adjust the flow valve until the water levels in the system stabilise.

Main downpipe valve adjustment

To raise the water level in the overflow box, rotate the valve clockwise. To lower the water level in the overflow box, rotate the valve anti-clockwise.

The main downpipe flow valve provides a very fine control of the flow rate however after making adjustments it takes the system a few minutes to stabilize at the new setting.

Once you have established the approximate setting for the valve make very small adjustments and wait for a few minutes each time. It may take a number of occasional adjustments to reach a stable level. When set properly this system removes all of the noise of water flowing down to the sump.

ATO

On initial set-up, wait until the saltwater system is stable before using the ATO. Ensure that the top-up flow valve is fully closed.

Fill the top-up reservoir with RO water. Disconnect the top-up flow valve from the float valve and slowly open the flow valve until the top-up water drips at a rate of approximately 1 drop per second. Reconnect the flow valve to the float valve.

Adjust the angle of the float so that the valve is closed when the water level is above the inlet of the pump but below the top of the bubble trap.

NOTE: It is recommended to close the valve on the outlet of the reservoir whenever doing maintenance in the sump

Power-out test

After completing the initial set up and after adding any new equipment to the sump, make any adjustments necessary to the main valve to stabilise the system and perform a “power-out” test to check that water does not rise above the rim of the sump.
6 Maintenance

For continuous smooth operation of the water management system make regular checks of the following:

- Water level in the overflow box - adjust the flow valve as required
- Water level in the reservoir – top up with RO water as required
- Water level in the sump, check that the top-up float valve is operating correctly
- Micron Filter Bags – check that water is flowing through the bags and clean/replace as required
- Surface skimmer combs – remove any deposits that reduce water flow
- Pump outlet nozzle – check for blockages and build-up of algae

Micron Filter bags

It is recommended to have at least 3 sets of filter bags.

There are a few options for cleaning the filter bags:

Quick and effective – Spray the outside of the bags with a powerful water jet such as a garden hose to back-flush the detritus from the felt.

More thorough – soak the bags in bleach or diluted vinegar for 24 hours prior to spraying as above. Rinse well to remove all chemicals before returning to sump.

The filter bags can also be put in a cold wash in a washing machine with regular detergent or with vinegar (may require approval from a higher authority).
Red Sea REEFER™

Installation Manual

PRINTING INSTRUCTIONS
To print only the Installation Manual, print pages 26-29.
MAINTENANCE

A

R42189 Comb Set

B

R42188 Outlet Assembly

C

1

R40369 Valve

R40371 Screw Set

R40370 Diaphragm

2

3
PRINTING INSTRUCTIONS
To print only the Cabinet Installation Guide, print pages 34-37.
PRINTING INSTRUCTIONS

To print only the Cabinet Installation Guide, print pages 38-41.

Red Sea REEFER™

350/XL 425
PRINTING INSTRUCTIONS
To print only the Cabinet Installation Guide, print pages 42-45.

Red Sea REEFER™
450/XL 525

Red Sea
1

2
Px4

3

4
Px8

5

6

7
Px6, Yx6

8

9

10
Px6, Yx4
PRINTING INSTRUCTIONS
To print only the Cabinet Installation Guide, print pages 47-57.

Red Sea REEFER™
XXL 625/XXL 750
Aquarium & Cabinet Assembly Manual
### XXL 625 750 Part Description

<table>
<thead>
<tr>
<th>XXL</th>
<th>625</th>
<th>750</th>
<th>Part Description</th>
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<tbody>
<tr>
<td>A1</td>
<td>6138B</td>
<td>6238B</td>
<td>Cabinet Bottom Sump</td>
</tr>
<tr>
<td>A2</td>
<td>6139B</td>
<td>6239B</td>
<td>Cabinet Bottom Chiller</td>
</tr>
<tr>
<td>B1</td>
<td>5304BP</td>
<td>6234B</td>
<td>Cabinet Rear Middle</td>
</tr>
<tr>
<td>B2</td>
<td>5305BP</td>
<td>6235B</td>
<td>Cabinet Rear Top</td>
</tr>
<tr>
<td>B3</td>
<td>5306BP</td>
<td>6236B</td>
<td>Cabinet Rear Bottom</td>
</tr>
<tr>
<td>B4</td>
<td>6132B</td>
<td>6240B</td>
<td>Cabinet Rear Bottom Support</td>
</tr>
<tr>
<td>C</td>
<td>6137B</td>
<td>6237B</td>
<td>Cabinet Top</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXL</th>
<th>625</th>
<th>750</th>
<th>Part Description</th>
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</thead>
<tbody>
<tr>
<td>D</td>
<td>S307</td>
<td>S275</td>
<td>Cabinet Door - Black/White</td>
</tr>
<tr>
<td>E</td>
<td>5309BP</td>
<td>6232B</td>
<td>Cabinet Front Upper</td>
</tr>
<tr>
<td>F</td>
<td>6133</td>
<td>6134</td>
<td>Cabinet Side Left</td>
</tr>
<tr>
<td>G</td>
<td>6232B</td>
<td>6234B</td>
<td>Cabinet Side Right</td>
</tr>
<tr>
<td>H</td>
<td>5303BP</td>
<td>6233BP</td>
<td>Cabinet Front Lower - Black/White</td>
</tr>
<tr>
<td>J</td>
<td>6135B</td>
<td></td>
<td>Cabinet Base Support</td>
</tr>
<tr>
<td>K</td>
<td>6136B</td>
<td></td>
<td>Cabinet Internal Wall</td>
</tr>
</tbody>
</table>
Press and click on D(L)x1/Dx2

Sx3

Press and click on

V1x12
L2x6

D(L)x1/Dx2

Dx1/Dx2

5x3
Maintenance

A
R42189 Comb Set

B
R42319 Outlet Assembly

C
R40369 Valve
R40371 Screw Set

D
R40370 Diaphragm
PRINTING INSTRUCTIONS
To print only the LED Assembly Manual, print pages 58-61.
Assembly - LED Mounts

Place the mounting bracket in the desired position on the back wall of the aquarium. Insert the mounting column to the bracket and fix in position with 2 screws provided. Hand-tighten the screws only! Do not attach the LED modules at this time. Do not insert the cable plugs into the hole in the arm. Make sure that the mounting arm is in the horizontal position.

Installation of LED Modules

1. Remove the fan cover. Slide the connector plate into the module so that the threaded bushings in the plate are aligned with the holes in the aluminum.

2. Using the M3 screws provided, lightly attach the swivel connector as shown in the diagram. Replace the fan cover and ensure that the swivel connector is parallel to the top of the aluminum before tightening the screws.

3. Put the swivel connector pins and fixing screw within easy reach of the aquarium. Locate the LED Module in front of the mounting arm and push swivel connector in position. Insert the connector pins to both sides and push until firmly in position. Screw the fixing screw into the top of the connector. Adjust the position of the LED module until it is parallel with the top of the aquarium and tighten the fixing screw. The swivel connector allows rotational adjustment for personal preference of approximately 5 degrees.

4. Bring the cable to the rear of the mount and thread the cable through the hole in the arm so that there is sufficient cable to plug the DC jack into the connector on the LED module. Flatten the cable against the underside of the mounting arm and insert the bottom cable plug. Insert the cable plug into the top of the arm so that the cable is facing backwards.

**WARNING**: The LED module is not waterproof. Do not get the unit wet and do not submerge any part of it or the power cord in the aquarium water.

**WARNING**: LED lights produce extremely intense light output that may damage or injure your eyes. Do not look directly into the LED’s any time the fixture is illuminated.
LED Set up and programming

The LED modules have a built-in Wi-Fi network and must be connected to a smartphone or Wi-Fi enabled computer to get the benefits of all of the features. To set up and program the LED’s follow the instructions provided with the LED modules.

Programming guidelines:

Photoperiod: Day/moonlight

The day photoperiod should be between 8 – 12 hours with no more than 4 hours at maximum intensity and at ramp up/down rate of approximately 25% (of maximum intensity) per hour. Corals and fish must have daily periods of darkness. LED moonlight should be limited to 1% of the maximum light intensity for a maximum period of 6 hours.

Acclimation

To prevent photo-inhibition due to the high intensity of LED lights, an acclimation period is recommended for new systems or when introducing new corals.

Acclimation will vary for different kinds of corals however it recommended to allow a period of 8 weeks for new set-ups as follows:

Set the day photoperiod as described above however the 4 hour peak intensity to should not exceed 60% of maximum. Increase the peak intensity by 10% every 2 week.

During the acclimation period look for signs of photo stress and photo-inhibition such as:

- Whitening/Bleaching of the upper section of the tissue (the lower section will continue to show pigments and zooxanthellae).
- Polyps retraction.
- Gas bubbles inside the soft tissue.

In the event of any of the above symptoms immediately reduce the peak intensity by 20% for about 4 weeks and thereafter increase by 5% per week until maximum intensity is reached.

When introducing new corals to already acclimated systems, start by positioning them at the lower levels of the aquarium and gradually raising them to their desired position over a period of several weeks. Keep watching for signs of photo inhibition/stress and if necessary return an affected coral to lower levels for recuperation.

**NOTE:** Red and Green wavelengths are not recommended for use in Reef systems as they may promote the outbreak of unwanted Algae or Cyanobacteria.
PRINTING INSTRUCTIONS
To print only the LED Assembly Manual, print pages 62-65.

REEFER™ XXL LED Assembly Manual
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![Photoperiod Graph]

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Assembly - LED Mounts

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Installation of LED Modules

1. Using the M3 screws provided, lightly Attach the swivel connector to the Hydra 26 HD as shown in the diagram. Replace the fan cover and ensure that the swivel connector is parallel to the top of the aluminum before tightening the screws.

2. Put the swivel connector pins and fixing screw within easy reach of the aquarium. Locate the LED Module in front of the mounting arm and push swivel connector in position. Insert the connector pins to both sides and push until firmly in position. Screw the fixing screw into the top of the connector. Adjust the position of the LED module until it is parallel with the top of the aquarium and tighten the fixing screw. The swivel connector allows rotational adjustment for personal preference of approximately 5 degrees.

3. Bring the cable to the rear of the mount and thread the cable through the hole in the arm so that there is sufficient cable to plug the DC jack into the connector on the LED module. Flatten the cable against the underside of the mounting arm and insert the bottom cable plug. Insert the cable plug into the top of the arm so that the cable is facing backwards.

WARNING: The LED module is not waterproof. Do not get the unit wet and do not submerge any part of it or the power cord in the aquarium water.

WARNING: LED lights produce extremely intense light output that may damage or injure your eyes. Do not look directly into the LED’s any time the fixture is illuminated.
ReefPeninsula™

- ReefPeninsula™ 500
- ReefPeninsula™ 500 DLX
- ReefPeninsula™ 650
- ReefPeninsula™ 650 DLX
REEFER™ PENINSULA 500 DLX

Operation Manual
Assembly Manual
LED Pendant Manual
Aquarium Water Management System

Aquarium R42380
Sponge R42317
Refugium wall R42382
Sump R42381
Reservoir R42383
Gate R42338
Gate Nut R42339

R42319 R42181 R42320
R42323
R42321
R42322
R42388
R42387
R42389
R42393
30

31

5x2

32

L3x4

V1x8

D(L)x1/
Dx1

33

L

R

Press and
click on

D(L)

Cabinet
Front

D

Cabinet
Front

D

D(L)
Maintenance

A

R42189 Comb Set

B

R42319 Outlet Assembly

C 1

R40369 Valve
R40371 Screw Set

2

3

R40370 Diaphragm
Red Sea REEFER™
Peninsula 650
Aquarium & Cabinet Assembly Manual
Aquarium Water Management System

Aquarium R42384
Sponge R42317
Refugium wall R42386
Sump R42385
Reservoir R42316
Gate R42338
Gate Nut R42339

R42319
R42181
R42320
R42323
R42322
R42321
R42391
R42390
R42392
R42393
R42385
Cabinet

<table>
<thead>
<tr>
<th>P650</th>
<th>Part Description</th>
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<tbody>
<tr>
<td>A1</td>
<td>6511B  Cabinet Bottom Sump</td>
</tr>
<tr>
<td>A2</td>
<td>6512B  Cabinet Bottom Chiller</td>
</tr>
<tr>
<td>B</td>
<td>R42407 Cabinet Side Panel - Black</td>
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<tr>
<td>B</td>
<td>R42408 Cabinet Side Panel - White</td>
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<tr>
<td>C</td>
<td>6510B  Cabinet Top</td>
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<tr>
<td>D</td>
<td>R42405 Cabinet Door - Black</td>
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<tr>
<td>D</td>
<td>R42406 Cabinet Door - White</td>
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<tr>
<td>E1</td>
<td>6516B  Cabinet Front Upper - Door Side</td>
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<thead>
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<th>Part Description</th>
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<td>6437-B/W Cabinet Front - Black/White</td>
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<td>6436-B/W Cabinet Rear - Black/White</td>
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<td>H1</td>
<td>6517B  Cabinet Front Lower - Door Side</td>
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<td>H2</td>
<td>6518B  Cabinet Front Lower - Panel Side</td>
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<tr>
<td>J</td>
<td>6514B  Cabinet Base Support</td>
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<tr>
<td>K1</td>
<td>6513B  Cabinet Internal Wall</td>
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<tr>
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6

H1

H2

Px2 Qx2

7

E2

E1

V2x4

Tx2

N x4 M x8

N x4 M x8

8

E2

E1

Px2 Qx2

9

K2

Px2 Qx2
Maintenance

A

R42189 Comb Set

B

R42319 Outlet Assembly

C

1

R40369 Valve

R40370 Diaphragm

R40371 Screw Set
Red Sea REEFER™
Peninsula LED Pendant
Assembly and installation instructions
<table>
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<tr>
<th>Item</th>
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<th>P500 White</th>
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</table>
Please read and follow all safety instructions

Danger: To avoid possible electric shock, special care should be taken when handling a wet aquarium. For each of the following situations, do not attempt repairs yourself; return the appliance to an authorized service facility for service or discard the appliance.

Warning: To guard against injury, basic safety precautions should be observed, including the following:

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.

If the external cable is damaged, it shall be replaced by the manufacturer.

To avoid the possibility of the appliance plug or receptacle getting wet, position the aquarium stand and tank to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. You should create a “drip loop” (see Figure 1) for each cord connecting an aquarium appliance to a receptacle. The “drip loop” is that part of the cord below the level of the receptacle, or the connector. Use an extension cord, if necessary, to prevent water traveling along the cord and coming into contact with the receptacle. If the plug or receptacle does get wet, do not unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug the device and examine for presence of water in the receptacle.

Close supervision is necessary when any appliance is used by or near children.

To avoid injury, do not contact moving parts.

Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never pull the cord itself to remove the plug from the outlet. Grasp the plug and pull to disconnect.

Do not use an appliance for anything other than its intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.

Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing point.

Make sure an appliance mounted on a tank is securely installed before operating it.

Read and observe all the important notices on the appliance.

Note: 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 cannot be tripped over or pulled accidental.
7.

Kx2

PENINSULA 500

PENINSULA 650
8.

9.
Lighting

The LED modules have a built-in Wi-Fi network and must be connected to a smartphone or Wi-Fi enabled computer to get the benefits of all of the features. To set up and program the LED’s follow the instructions provided with the LED modules.

Programming guidelines:

Photoperiod: Day/moonlight

The day photoperiod should be between 8 – 12 hours with no more than 4 hours at maximum intensity and at ramp up/down rate of approximately 25% (of maximum intensity) per hour. Corals and fish must have daily periods of darkness. LED moonlight should be limited to 1% of the maximum light intensity for a maximum period of 6 hours.

Acclimation

To prevent photo-inhibition due to the high intensity of LED lights, an acclimation period is recommended for new systems or when introducing new corals.

Acclimation will vary for different kinds of corals however it recommended to allow a period of 8 weeks for new set-ups as follows:

Set the day photoperiod as described above however the 4 hour peak intensity to should not exceed 60% of maximum. Increase the peak intensity by 10% every 2 week.

During the acclimation period look for signs of photo stress and photo-inhibition such as:

- Whitening/Bleaching of the upper section of the tissue (the lower section will continue to show pigments and zooxanthellae).
- Polyps retraction.
- Gas bubbles inside the soft tissue.

In the event of any of the above symptoms immediately reduce the peak intensity by 20% for about 4 weeks and thereafter increase by 5% per week until maximum intensity is reached.

When introducing new corals to already acclimated systems, start by positioning them at the lower levels of the aquarium and gradually raising them to their desired position over a period of several weeks. Keep watching for signs of photo inhibition/stress and if necessary return an affected coral to lower levels for recuperation.

NOTE: Red and Green wavelengths are not recommended for use in Reef systems as they may promote the outbreak of unwanted Algae or Cyanobacteria.

WARNING: The LED module is not waterproof. Do not get the unit wet and do not submerge any part of it or the power cord in the aquarium water.

WARNING: LED lights produce extremely intense light output that may damage or injure your eyes. Do not look directly into the LED’s any time the fixture is illuminated.
Red Sea REEFER™

250 (refugium ready)

Aquarium & Cabinet Assembly Manual
Aquarium Water Management System

Aquarium R42166

Reservoir R42168-V3

Refugium wall R42209

Sump R42167-V3

Gate R42425

Gate Nut R42339

Sponge R42185-V3

Gate Nut R42318

Aquarium Water Management System
MAINTENANCE

A
R42189 Comb Set

B
R42188 Outlet Assembly

C
1
R40369 Valve
R40371 Screw Set

R40370 Diaphragm
Red Sea REEFER™

350 (refugium ready)

Aquarium & Cabinet Assembly Manual
MAINTENANCE

A

R42189 Comb Set

B

R42188 Outlet Assembly

C

1

R40369 Valve

R40371 Screw Set

2

R40370 Diaphragm
Press and click on.
Aquarium Water Management System

- Aquarium: R42283
- Refugium wall: R42424
- Reservoir: R42428
- Gate: R42427
- Gate Nut: R42339
- Sponge: R42223-V3
- R42181
- R42319
- R42225
- R42224
- R42206
- R42202
- R42324
- R42326
- R42325
MAINTENANCE

A

R42189 Comb Set

B

R42319 Outlet Assembly

C

1. R40369 Valve
2. R40371 Screw Set
3. R40370 Diaphragm