BERMUDA

Wi-Fi Controlled 📶

Filter Pump

Fully adjustable smart operation

Instruction Manual

IMPORTANT: Please read this instruction manual carefully before using this product. Keep the manual safe for future reference.

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Bermuda Wi-Fi Controlled Filter Pump

Thank you for purchasing a Bermuda Wi-Fi Controlled Filter Pump.

The Bermuda Wi-Fi Controlled Filter Pump is a high performance, energy efficient pump that can be controlled via an app on your phone or tablet. Control the flow rate and energy consumption throughout the day or even the season, or set to feed mode at the swipe of a finger, for complete controllability throughout the year, and perfect matching to your filter. The pump itself is near silent during operation, features a ceramic shaft and bearings, and delivers long lasting performance. Pump can be used in or out of the pond. Every Bermuda Wi-Fi Controlled Filter Pump also includes an external controller.

Downloading the App

The Bermuda Wi-Fi Controlled Filter Pump App uses a third party device platform called Smart Life.

To download the app onto your smartphone or tablet, search for Bermuda Pumps on the App Store or Google Play Store, or scan one of the QR codes shown below using your device:

Apple Devices (App Store)   Android Devices (Google Play Store)

Attention

1. Please read this instruction book carefully before use and use this device according to the instructions. Please make sure the voltage and frequency of the power supply are consistent with the marked voltage and frequency on the ratings plate.

2. Keep out of the reach of children.

3. A drip loop should be installed in the cable, to ensure that water cannot travel down it and into an electrical socket.

4. An RCD (of which the rated working current is not over 30mA) must be installed when using the pump, and the power socket must be connected to an earth.

5. Pumps are designed for use in or out of the water.

6. For submersible use, please make sure that the pump is submersed completely under the water. For dry installation and use, please fill the pump body with water before start up.

7. The device must not be used to pump any flammable liquids, or water with a temperature higher than 35°C.

8. Always disconnect the power supply when handling, servicing or maintaining the pump.

9. Do not attempt to unplug the pump or disconnect from the power supply with wet hands.

10. Do not carry or retrieve the pump from the pond by pulling the electrical cable.

11. The power cable cannot be replaced. If the power cable becomes damaged near to the pump body it cannot be replaced. Electrical components are sealed inside the unit to make them waterproof.

12. Do not submerse the controller or adapter in water.

13. Clean the pump case regularly if dirt builds up on the housing.

Features

- Elegant appearance and practical design.
- Multi-pole permanent magnet brushless motor drives, for adaptive variable frequency, high efficiency and long life.
- Directional variable frequency drive control, with high efficient and eco energy saving, large water flow and high lift.
- Energy saving motor for large water volumes and high pressure.
- Ceramic impeller shaft.
- Fully epoxy sealed motor for waterproofing, safety and reliability.
- Steady and quiet performance.
- Single chip micro-computer control, with current, voltage, overheat and locked rotor protection functions.
- Easily adjust water flow to meet different demands with the push button controller.
- Control from smart devices via Wi-Fi.

Usage

Suitable for outdoor ornamental garden ponds only. Can be run continuously, 24 hours per day.
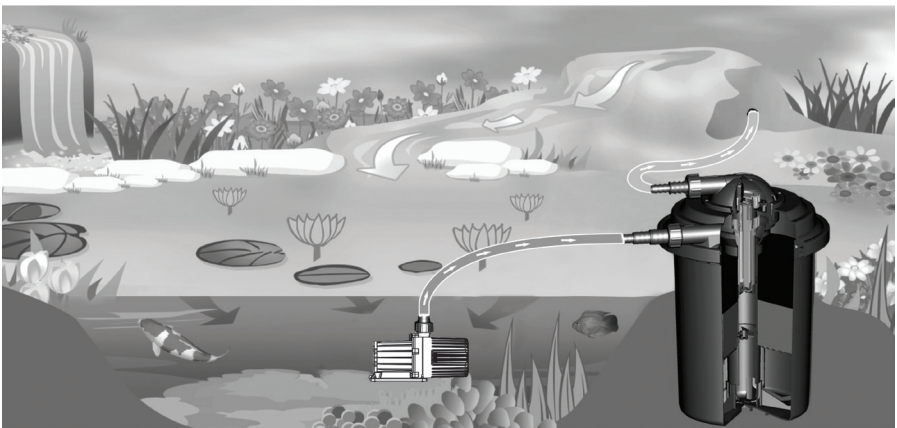
1. The device can be placed at the bottom of the pond. One end of the hose should be connected to the pump outlet, and the other end will feed water either to a filter or water course. Hose clips (not supplied) should be used to fasten the hose to the hosetails.

2. The direction of the outlet is adjustable. Hold the pump bracket and turn the pump body to adjust the water outlet direction if needed.

3. Avoid solid particles and objects being sucked into the pump chamber.

4. Make sure that the external controller is mounted higher than the water level and away from water. Connect the plug to the power socket, check if all connections are correct before turning on the power supply.

4. When first connected to the power, spend 30 minutes checking that the pump is running as it should be - steady, normal, and without any abnormal flow, or fault. Check connections to filter to ensure there are no leaks.

Connecting to pipework - Pump in pond

The Wi-Fi Controlled Filter Pump can be submersed in water, as part of a pump-fed system. When installing on pump-fed systems we recommend using the hosetails provided to connect up to flexible hose (not supplied).

Place the pump on the bottom of the pond, and then connect the hose to the water outlet. Make sure that the controller and adaptor are mounted away from water. Make sure that the pump is submersed in the water completely.

1. Flexible hose (not supplied) should be the widest possible diameter.

2. Extra steps on hosetails should always be sawn off and removed.

3. A hoseclip (not supplied) must always be used to hold the hose in place on the hosetail.

4. Ensure sealing rings are fitted properly.

5. All wiring (electrical) work must be carried out by qualified electricians and must be installed in accordance to the local codes.

6. The motor must be earthed.

7. Do not let the pump run dry.

8. The controller **MUST NOT BE** submerged in water.
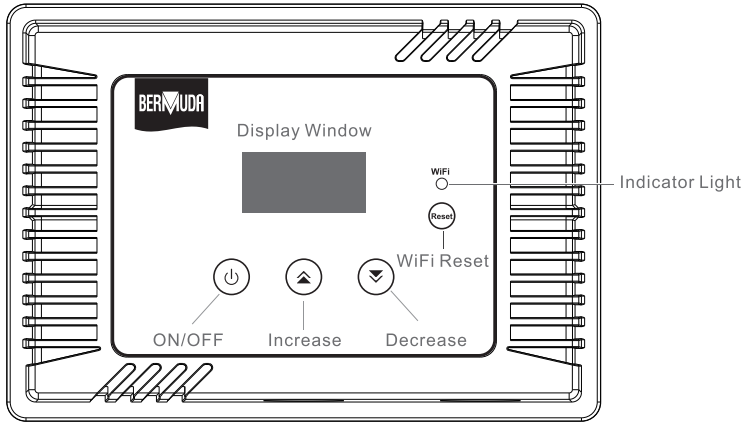
Connecting to pipework - Pump out of pond

Wi-Fi Controlled Filter Pump can also be installed out of the pond, as part of a gravity-fed filtration system. When installing in gravity-fed systems ensure unions are fitted (not supplied) to enable removal of the pump for cleaning and maintenance.

When installed dry, **DO NOT** mount the intake strainer. Connect the water pipe to the inlet first, make sure that the pump is installed on land securely and all the connections are water tight. Make sure that the pump is mounted lower than the water level of the pond, the water inlet of the pump should be lower than the maximum water level too. Otherwise, a non-return valve is required to be mounted on the water intake. For first use, fill the pump body with water before start up.

Running the pump without water inside the pump is strictly prohibited.

1. The pump suction line should not be smaller than 1½" (40mm imperial) or 50mm true metric.

2. The suction line is to have as few bends or elbows as possible. There must not be an air trap on the suction line.

3. Tighten the pump fittings only as much as is required to ensure a tight connection. Excessive torque is unnecessary and may cause damage to the pump.

4. All wiring (electrical) work must be carried out by qualified electricians and must be installed in accordance to the local codes.

5. The motor must be earthed.

6. The weight of the plumbing and fittings is to be independently supported and not carried by the pump.

7. The pump is not self-priming. Therefore, if the water level is below the pump, a non-return valve must be installed below water level. The pump and inlet line must be primed prior to start up. For non-flooded installations a (non-return valve) is recommended.

8. The controller **MUST NOT BE** submerged in water.

Using the controller

There are 4 keys on the controller:

ON/OFF | Increase | Decrease | Wi-Fi Reset.

1. When power is on, the power light is illuminated, and the display window shows " - - - " when the pump is stopped. If the pump is in normal running mode, the display window shows the current actual power. Press the **increase** key or the **decrease** key to adjust the pump power from 1 to 100% performance. The display reverts to the current actual power after 3 seconds.

2. Press the **ON/OFF** key to start or turn off the pump, press the **increase** key or **decrease** key to adjust the power from 1 to 100% performance.

3. The power rating displayed on the window will alter when you press the **increase** or **decrease** key to adjust the pump performance 1 to 100%.

4. For the operation of Wi-Fi connection and app software, please refer to the "App instructions" on page 8.

Note: for Wi-Fi intelligent mode, please press and hold the **"Wi-Fi reset key"** for 4 seconds to enter the Wi-Fi connection mode. You will be able to use mobile phone or tablet to control the pump by app.
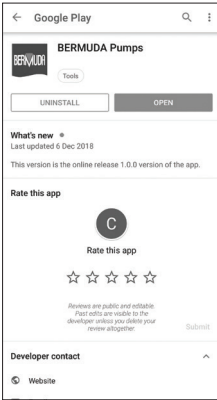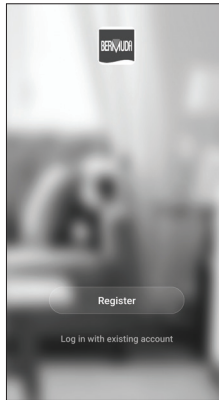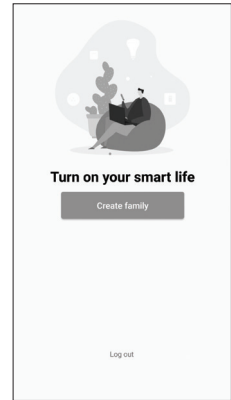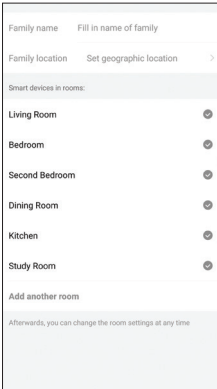
First time installation of App

Figure 1

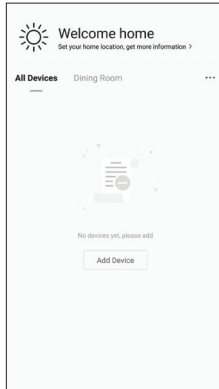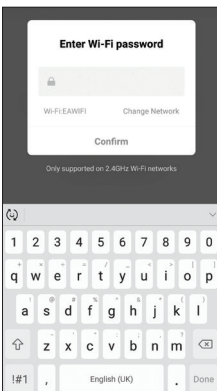Figure 2

Figure 3

Figure 4

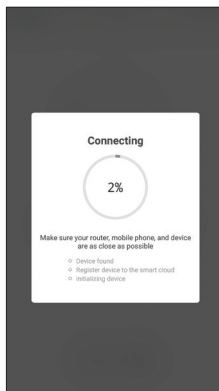
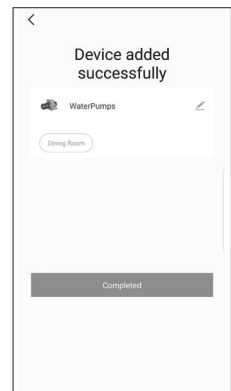Figure 5

Figure 6

Figure 7

Figure 8

Figure 9

First time installation of App

1. Search and download the App **"BERMUDA Pumps"** from App Store / Google Play Store and install on your device.

2. First time you open the App you will have to register your email or telephone number. You will receive an authentication code by text or email, which you enter on the next screen. Once entered, create a password and click **"Completed"**.

3. Press **"Create Family"** on the app screen.

4. Add a family name and press **"completed"**.

5. On Welcome Home page, press the **"ADD DEVICE"** button to add a device.

6. Plug in pump and controller and switch on (see installation guide).

7. The LED light on the controller should be flashing rapidly. If not, press and hold the **RESET** button on the pump controller for 5 seconds, until the LED light flashes rapidly.

8. Enter home Wi-Fi network password and press confirm.

9. App will take a few moments to connect to device.

10. Device should be added successfully, therefore press **"Completed"**.

TIP: Follow on screen help if pump does not connect.

Operating the pump and setting modes
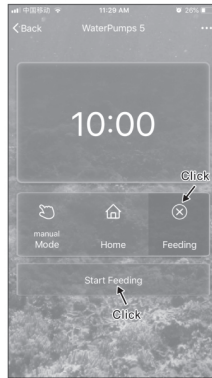

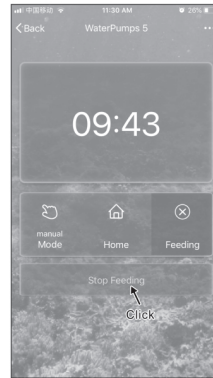Figure 10   Figure 11   Figure 12

1. Select one device from the **"Select device"** screen and log into the main control app screen.

2. **ON/OFF control:** Click the power key on the controller to turn the pump on or off. The app app screen is illuminated when the pump is on and displays the pump rotation speed and power (see Figure 10). The app screen will be dark when the pump is off and the rotation speed and power all display "O".

3. **Adjust Flow Power Rate:** Click the power key on the controller and drag the slider on the app screen to adjust the power rate (range from 1% to 100%). Manual mode is always prior performed when the buttons on the control box are pressed or the app is manually adjusted, and meanwhile the timer mode of app is auto defeated.

4. **Feeding Mode:** Click **"Feeding"** and log in the app screen of**"Start feeding"** (see Figure 11). Click **"Start feeding"** and in default the pump stops for 10 minutes counting down for feeding. Manual stop feeding and resume to normal operation when clicked on **"Stop feeding"** during feeding period. (see Figure 12).
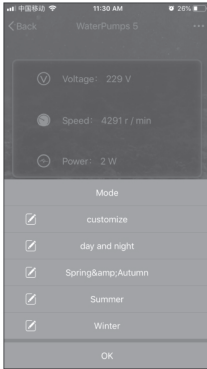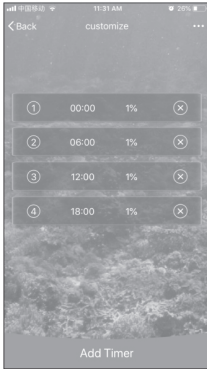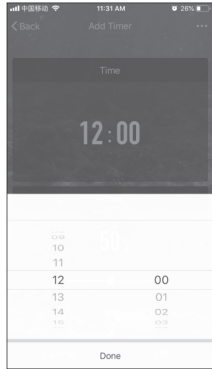
Timer

| Figure 13 | Figure 14 | Figure 15 | Figure 16 |

1. Click **"Manual Mode"** (see Figure 10) and enter the app screen of Mode selection (see Figure 13): Customize, day and night, Spring and Autumn, Summer and Winter, in total 5 different modes for selection.

2. Click the left side on each mode to set its parameters (see Figure 14). Multi time points in 24 hours can be set . Click 1 time point for enter and set up the target parameter at the time point (see Figure 15) by dragging the slider of the power to adjust the power rate (scale of 0% to 100%) . Click the Time (see Figure 16) for setting the time point. The first 2 digits are for hours and the last 2 digits are for minutes. Move upward and downward to adjust the digits to set the time point (scale 00:00 to 23:59). Click **"Done"** when the setup is completed and resume to the app screen as Figure 15. Cancel or OK to cancel or save the previous program setting and resume the app screen as Figure 14.

3. On the app screen as Figure 14, click to **"delete"** the time point you have set.

4. On the app screen as Figure 14, click **"Add"** to add additional time point. Proceed as above.

Timer (cont.)

5. Click return at top left corner of the app screen as Figure 14 after all setup for 24 hours and resume to the app screen as Figure 13.

6. On the app screen as Figure 13, click the right end of the mode you intend to apply and the 0 symbol appears (see Figure 17). Click **"OK"** to saving and resume to the app screen as Figure 16. The **"Manual Mode"** on Figure 10 will become **"timer"** as you have set for Customize or Summer etc.

7. The timer will be overridden by manual adjusting the control box or manual adjustment on the app.

Other set-up

1. **Modify device name:** Click the key at the top right corner as Figure 17 and enter the app screen of **"More"** as Figure 18 and click **"Modify Device Name"**. Input a new name into the pop-up box and click OK (see Figure 19)

2. **Device sharing:** On the app screen as Figure 18, click **"Device Sharing"** to enter the app screen as Figure 20. Click **"Add"** to enter the app screen as Figure 21. Input mobile phone number and email address then click **"confirm"** to save it or click **"Back"** to resume the app screen as Figure 20. Any shared devices will be displayed as Figure 21. On app screen as Figure 20, the setting will be cancelled and resume to the app screen as Figure 22 if clicked **"Cancel"** at the top left corner.

3. **Remove Device:** Click **"Remove Device"** on the app screen of **"More"** as Figure 18 to remove the device.

4. **Restore manufacturer defaults:** Click **"Restore manufacturer defaults"** on the app screen of **"More"** as Figure 18 to restore manufacturer defaults.
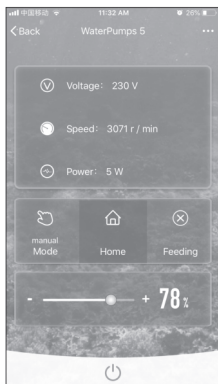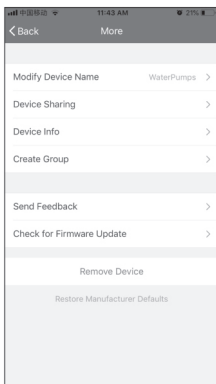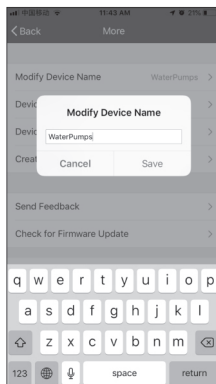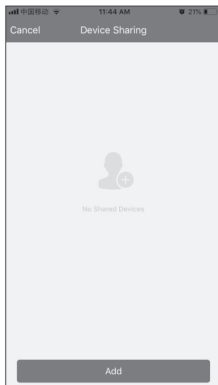
Other set-up (cont.)
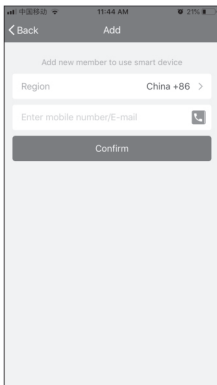
Figure 17

Figure 18

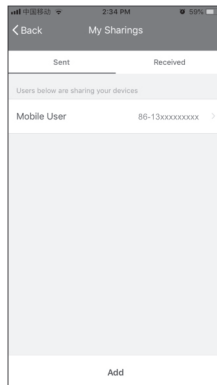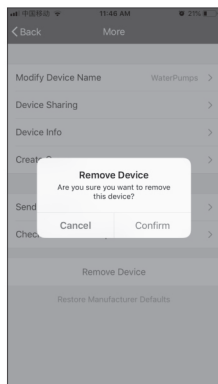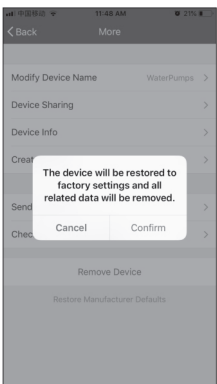Figure 19

Figure 20

Figure 21

Figure 22

Figure 23

Figure 24

13

Setting custom timings and seasonal changes

Extra settings can be made to accommodate seasonal changes, so instead of 50% at night and 100% in the day for example, the pump could be programmed to run at 25% at night and 75% in the day, in Spring and Autumn. To do this set your preferred settings and when you want to activate them, change the mode to Spring and Autumn, Summer, or Winter. If you want to change from all your settings you can set up another program in the customize section. This could be after a filter clean for example, or in a heat wave, where you want different performance to what you would normally set for that time of year.

Manual control

By sliding your finger on the percentage bar at the bottom of the app, presets are overridden and the app reverts to manual mode. To return to your settings, press manual mode the preset you want to return to, ie day and night, and press ok.

Wired manual control

Basic functions can also be controlled by way of the inline controller. Percentage output can be controlled with the up and down buttons on the controller, and the display will show percentage power first, followed by actual power consumption in watts. If the app is still connected, the app will mirror your manual commands on the wired controller and switch to manual mode. The pump will then stay in manual mode, and on your manual settings, until you override it, either on the wired controller or on the app again. The pump can also be switched on and off by the controller, and the Wi-Fi signal to the app reset.

Maintenance

Regularly inspect and clean the pump housing to make sure it has not accumulated too much dirt and leaves. Visibly reduced pump flow is a strong indicator that either the pump cage is nearly completely blocked, or the filter it is attached to is blocked, and needs cleaning, or new mechanical filter media.

Cleaning

Step 1: Hold pump by the handle and remove the inlet strainer basket

Step 2: Using a Phillips screwdriver, undo the four screws at the base of the pump body

Step 3: Remove the volute

Step 4: Clean any debris and algae from inside the volute using a brush

Step 5: Pull the impeller out of the housing by hand

Step 6: Clean the impeller with a bush. Handle carefully to avoid damage

Step 7: Clean inside the impeller housing with a brush

Step 8: Replace the screws and inlet strainer basket

Cleaning

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8

Trouble shooting

1. If the pump is not working after it has been connected, please check if the plug is loose, or if it is properly connected to the power supply, or check if the cable is damaged.

2. If the pump is working but there is no water coming out, please check if there is water in the pump body, or if the pipe is blocked, or if the air is sucked into the water inlet hose, if the impeller is damaged or blocked, or if the restrictor valve is turned on.

3. In the event of loss of water flow or water pressure, please check if the hose is leaking and air is being drawn into the hose, or if the pipe is blocked, or if the restrictor valve is turned on but the angle is too small, or if the retaining valve has malfunction, or if the impeller is damaged or blocked.

4. Please clean the pump cage regularly if fitted.

5. The pump can be re-started once all the faults are solved and observe the pump running for 30 minutes.

6. Please make sure the power connection is switched off and the pump during maintenance.

Trouble shooting

Symptom	Problem	Resolution
No Flow	Insufficient Prime	Prime system with water and purge all air from suction piping.
	No Power	Wired incorrectly or an RCD has tripped.
		Pump has been switched off at the controller.
	Flow Restriction	Ensure valves are open.
		Ensure plumbing is clear, including suction strainers, check valves, etc.
		Verify non return valve orientation and direction of permitted flow.
		Clean out leaves or other debris from basket strainer (if applicable).
	Air leak	Fix air leaks at fittings, connections, strainer basket etc. This typically occurs on the intake side.
	System Incompatibility	Verify hydraulic compatibility: i.e. pump & pipe are sized for the system.
Excessive Noise	Cavitation	Verify airtight plumbing on the suction plumbing especially fittings!
		Clean out leaves or other debris from basket strainer (if applicable).
		Increase pipe size where possible.
		Decrease suction pipe length, reduce the number of elbows, etc.
		Verify hydraulic compatibility: i.e. pump and pipe are sized for the system.
	No Power	Wired incorrectly or an RCD has tripped.
		Pump has been switched off at the controller.
	Flow Restriction	Ensure valves are open.
		Ensure plumbing is clear, including suction strainers, check valves, etc.
		Verify non return valve orientation and direction of permitted flow.

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Guarantee

This product is guaranteed against defects in material and workmanship for **two years** from the date of purchase, under normal usage.

The guarantee **DOES NOT APPLY** in case of improper use, negligence, lack of maintenance or accidental damage to the pump. If the pump fails due to a manufacturing fault within this period it will be either repaired or replaced free of charge. Moving parts or wearable parts including the impeller and any washers or sealing rings are not covered by the guarantee and are available to order from your Bermuda retailer.

Should your Bermuda product stop working refer first to trouble shooting and if this does not help, please contact your Bermuda retailer. If still unsolved - please return the product to the place of purchase in a clean condition.

Liability is limited to replacement of the faulty product only. No other costs will be reimbursed. This guarantee is not transferable and does not affect your statutory rights.

Do not attempt to tamper with or access electrical components inside the pump. Doing so will invalidate the warranty.

The manufacturer or supplier shall not be responsible, or held liable for any damages caused by defective components or materials of this product, or for loss incurred by interruption of service, or any consequential/incidental damages and expenses arising from the production, sale use or misuse of this product or any other consequential loss.

Any warranty claim must be accompanied by a valid, dated proof of purchase. Evolution Aqua, Bermuda, its distributors and dealers shall not be held liable for any loss of fish, plants or any other livestock as a result of any failure or defect of this product.

The installation and use of your product outside of our recommendations as printed in this manual may also void the warranty.

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Waste management

A defect UV-C unit/lid must Not be thrown in the normal municipal waste, but must be delivered at one of the home municipality's recycling stations.