



AllPondSolutions<sup>®</sup>  
aquarium range



# AQUARIUM EXTERNAL FILTERS INSTRUCTION MANUAL



**1000EF+**  
**1400EF+**  
**2000EF+**

To ensure your new external filter is set up and running correctly, and to prevent any accidental damage or injury, please read and follow the below instructions carefully before using your product.

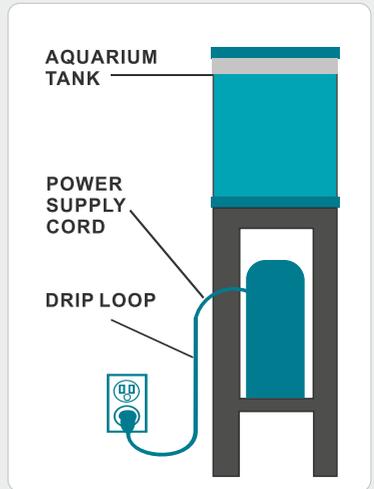
## SAFETY

**Important! Disconnect the mains electricity supply before attempting any installation / maintenance of any kind. Do not attempt to modify this unit in any way and only use the recommended parts for replacement.**

- The external filter should never be run dry as this will cause the unit to overheat and cause permanent damage.
- All connections must be earthed.
- The power cord of this appliance cannot be replaced; if the cord is damaged, the appliance should be discarded. Never cut the cord.
- Do not connect to any voltage other than that stated.
- This filter is suitable for indoor household aquariums only (do not use in exterior locations, swimming pools, ponds, bathrooms etc). Do not place in liquids other than water.
- Do not use with water above 90F or 30C.
- Do not carry or pull the unit by its electrical cable.
- Do not use this unit if it has a damaged cord or plug, if it is malfunctioning or it is dropped or damaged in any manner
- Do not yank cord to pull plug from outlet. Grasp the plug and pull to disconnect. Always unplug an appliance from an outlet when not in use.
- Do not attempt to modify this unit in any way and only use the recommended parts for replacement.
- Before installing, maintaining or handling your equipment, or before placing your hands in your aquarium, ensure that the unit is disconnected from the electricity supply.
- Always unplug any electrical devices when not in use.
- Carefully examine your filter after installation. Do not plug in the unit to the mains if there is water on any parts not intended to be wet.

- The power cable must have a drop loop to avoid any condensation build up reaching the mains (see diagram 1). If the plug does get wet, DO NOT unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug and examine for presence of water in receptacle.
- Carefully examine your filter after installation. Do not plug in the unit to the mains if there is water on any parts not intended to be wet.
- If the unit shows any signs of water leakage, disconnect the power supply cord from the wall socket and consult All Pond Solutions or the retailer you purchased this unit from for further advice.
- If the plug or unit does get wet, DON'T unplug the cord. First, disconnect the circuit breaker or fuse that supplies power to the appliance. Next, unplug and inspect for water presence in the receptacle.
- To avoid injury, do not touch hot or moving parts such as, but not limited to, heaters, reflectors, UV bulbs or impellers.

Diagram 1



**Please note** – this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, provided they are given supervision and instruction concerning use of the appliance and understand the hazards involved. Children must not play with the appliance. Any maintenance must not be made by children without supervision.

## ELECTRIC

This unit comes complete with a generous supply of 3 core cable, however should any additional cable be required, the use of an approved waterproof cable connector with a proper rating is essential. A cord rated for less amperes or watts than the appliance rating may overheat.

### **Please Ensure:**

- The power supply must be earthed and fused at 3amps.
- You regularly inspect the cable for damage and deterioration.
- Do not connect to any voltage other than that stated.
- You consult a qualified electrician if in doubt about any aspects of wiring.

The external filter comes complete with a generous supply of 3 core cable, however, should any additional cable be required then the use of an approved waterproof cable connector is essential. A cord rated for less amperes or watts than the unit may overheat.

**Please Ensure:** The power supply must be earthed and fused at 3amps. Regularly inspect the cable for damage and deterioration. Consult a qualified electrician if in doubt about any aspects of wiring.

## INSTALLATION & USE

Please read the below instructions carefully before beginning to set up your filter. **DO NOT CONNECT THE UNIT TO THE MAINS UNTIL SET UP IS COMPLETE AND UNIT IS FILLED WITH WATER.**

### **Important installation information:**

- The base of the unit must **NOT** be more than 1.4m (4.5 ft) below the tank water level.
- The water level must **NOT** be more than 17cm (7 inches) below the tank rim.
- It is essential to position your external filter **BELOW** your aquarium.
- The green hose must be kept taut with no loops and follow a **STRAIGHT LINE** from the filter to the rim of the aquarium. If the hosing is too long the filter **WILL NOT WORK CORRECTLY.**
- The inlet pipe should **NOT** be positioned too close to an air stone, aeration device or the output valve to avoid reducing the effectiveness of the filter.

Unpack the unit and identify all parts using the parts diagram in this manual.

1



To open the unit, unfasten the 2 buckles that are situated at the front and back of the filter then lift the 2 levers that are attached to the left and right sides of the motor head. On doing this the motor head will lift away from the unit.

2



Take out the filter media secure plate and pull out the filter media baskets using the handles provided. Using the baskets, rinse your filter media under the tap until it runs clear. Once you have done this you should place the rinsed baskets and filter media back inside the filter with the filter media secure plate at the top. Before replacing the motor head on the filter, fill your filter 3/4 full with water from your aquarium. Place the motor head back on top of the unit, shut both of the motor head levers down and fasten the buckles to the side of the filter.

3



To attach the provided hoses to the filter, remove the hose adapter by lifting the hose adapter securing buckle and pulling the adapter out of the motor head. Install your hoses onto the Inlet and Outlet connections on the hose adapter and secure them into place using the plastic screw nuts. Push the hose adapter back into the motor head and re-fasten it using the securing buckle.

4



Fit your hose to your aquarium so as the inlet hose is fitted to the overflow pipe and the outlet hose is fitted to the spray bar as per the image opposite. Please ensure your aquarium water level is high enough to cover all inlet and outlet pipework connection points, as otherwise you can let air into the filter system which will stop it from priming properly.

5

You may need to cut off any excess hosing to ensure the hose is not slack or causes looping. Ensure that the hose follows a straight line from the canister to your aquarium and its intake connection point is approximately 7.5cm (3 inches) below the water line. It is advisable to allow a small surplus before cutting the hose – you can always cut the hose further during final installation. This is extremely important as if the hose is too long, the filter may not operate correctly.

**Important** – the 'cut' side of the hose must always be connected to the inlet and outlet pipework connection points, NOT to the inlet / outlet tap hose adapters. The cut end of the hosing must also be kept underwater to ensure a watertight seal.

**You must also make sure that the strainer on your inlet pipework is at least 7.5cm (3 inches) from the bottom of the tank.** If your water intake pipe is too long, you will need to cut the pipe with a hacksaw to the desired length, before replacing the strainer. Once it is correctly positioned, secure the suction cup against the tank glass to hold in place.

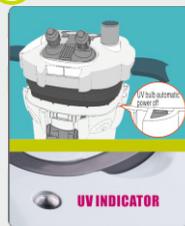
6



Once you have your filter in place and its hoses securely attached to your aquarium you are ready to prime the filter. Using the palm of your hand, push the blue button directly on top of the motor head as far down as it will allow you to and repeat if necessary, until the output hose has filled with water. You are now ready to plug your external filter in.

**IMPORTANT** – to prevent any damage to you unit, ensure the canister is completely full of water before the unit is switched on.

7



The switch to operate the UV inside your filter is located on the side of the motor head under a safety cover.

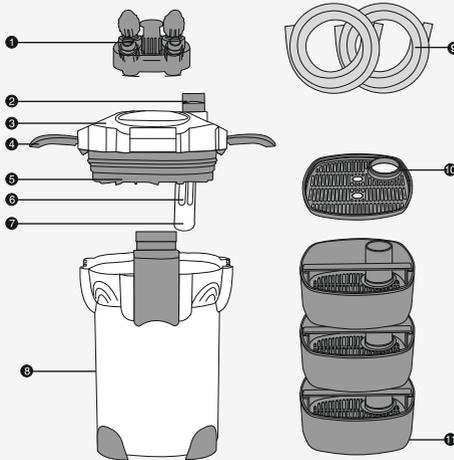
The UV indicator is located on the top of the motor head - please check the UV regularly when cleaning your filter to ensure the bulb is still operational.

8

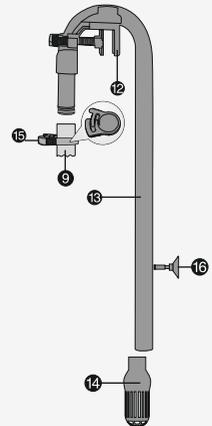
Water should flow constantly from the output – if it does NOT, check to confirm the following:

- The canister cover is fully closed
- Any kinks or slack in the hose have been removed
- The water level in the tank is not more than 17.5cm (7 inches) below the tank rim and the base of the unit is not more than 1.4m (4.5 ft) below the tank water level

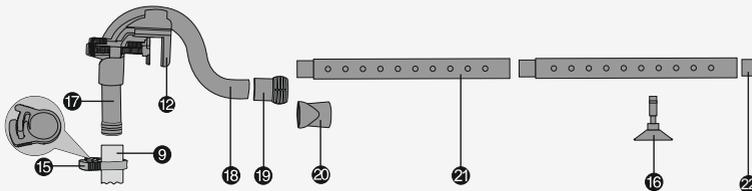
## PARTS DIAGRAM



## INLET PIPEWORK



## RETURN PIPEWORK



|   |                                 |    |                           |    |                                |    |                                      |
|---|---------------------------------|----|---------------------------|----|--------------------------------|----|--------------------------------------|
| 1 | INLET / OUTLET TAP HOSE ADAPTER | 7  | QUARTZ SLEEVE             | 13 | OVERFLOW PIPE FOR WATER INTAKE | 19 | OUTLET NUT                           |
| 2 | PRIMING BUTTON                  | 8  | FILTER BODY               | 14 | STRAINER                       | 20 | OUTLET ADAPTER OPTIONAL TO SPRAY BAR |
| 3 | MOTOR HEAD                      | 9  | GREEN HOSE                | 15 | HOSE FASTENING CLIP            | 21 | SPRAY BAR                            |
| 4 | HEAD CLIPS                      | 10 | FILTER MEDIA SECURE PLATE | 16 | SUCTION CUPS                   | 22 | SPRAY BAR END CAP                    |
| 5 | FILTER HEAD O-RING              | 11 | FILTER MEDIA BASKETS      | 17 | OVERFLOW PIPE FOR WATER RETURN |    |                                      |
| 6 | UV BULB                         | 12 | GLASS FIXING CLAMP        | 18 | OUTLET PIPE                    |    |                                      |

## MAINTENANCE

To ensure optimal performance and that your unit functions correctly, regular maintenance is essential. Failure to do so may result in damage to your unit and may invalidate your warranty.

We recommend that a regular cleaning and maintenance schedule is followed to ensure responsible fishkeeping. Depending on water volume and stocking levels, regular cleaning of the filter media, foams, impeller, inlet/outlet pipework during a 10-25% water change will help ensure that the product works efficiently and the aquarium remains healthy.

For further maintenance guidance, please see the table and additional information below:

|                                       | <b>1 MONTH</b>  | <b>3 MONTHS</b>   | <b>6 MONTHS</b>   | <b>ANNUALLY</b>       |
|---------------------------------------|-----------------|-------------------|-------------------|-----------------------|
| <b>Impeller</b>                       | Clean & Inspect |                   |                   | Replace               |
| <b>Ceramic Shaft</b>                  | Clean & Inspect |                   |                   | Replace               |
| <b>All Pipework</b>                   | Clean & Inspect |                   |                   |                       |
| <b>Green Hose</b>                     |                 |                   |                   | Clean & Inspect       |
| <b>Priming Button</b>                 |                 |                   | Lubricate & Clean |                       |
| <b>O-Rings</b>                        | Clean & Inspect | Lubricate & Clean |                   | Replace               |
| <b>Filter Foams &amp; Other Media</b> | Clean & Inspect |                   | Replace           |                       |
| <b>Carbon</b>                         | Replace*        |                   |                   |                       |
| <b>UV Bulb</b>                        |                 |                   | Replace           |                       |
| <b>Quartz Sleeve</b>                  |                 |                   | Clean & Inspect   | Replace after 2 years |

\* Carbon should be replaced every 2-3 months.

## O-rings

It is vital that O-rings are regularly inspected and replaced as the rubber watertight seal will perish over time, which may cause your canister to leak. Before replacing your o-rings, ensure they are well lubricated.

## Filter Maintenance

In general, it is recommended to disconnect your filter and clean the pipes, impeller and filter media monthly. Pipework will become blocked with waste and protein slime over time, so regular cleaning is important for optimal performance.

The frequency of how often you will need to clean and inspect your unit of course will depend on a lot of factors like how dirty the water is when you first start using an external filter, the volume of your water and also how many fish you have. How often you feed your fish and how long your lighting is on for will also affect how quickly your aquarium water gets dirty and will need to be taken into consideration when planning how often to clean your external filter.

## Impeller and Shaft

A clogged impeller is often the primary cause of all filter faults, so it is extremely important to clean and inspect your impeller every month to ensure it is functioning correctly and remove any debris. Keeping the impeller clean will improve the performance of your filter and lengthen the life of the motor. The impeller itself is a perishable part and will be subject to wear and tear overtime. As a result, it is also very important to replace your impeller and ceramic shaft annually.

To gain access and clean your impeller and shaft open up the filter (disconnect the pipes and turn the filter off). You should be able to then see the impeller through an impeller guard in the middle of the motor head. Turn the impeller guard and pull it away and out of the motor head - you will then have full access to the impeller and shaft.



Simply wash this and clean this with your aquarium water (from a water change) - whilst doing this you will be able to check that the impeller and shaft are both in good condition. When returning this to the motor head ensure this is seated correctly with the two rubbers on either end of the shaft (sometimes the rubbers stay in the holes that they fit into and will not be obviously evident when first removing the impeller and shaft).

**Note:** Handle the ceramic shaft with care as this can break very easily during the cleaning process.

## Filter Media

The filter media provided with your external filter and their positioning within the media trays are designed to give complete and optimum filtration for your tank:

|                          |                  |                       |   |
|--------------------------|------------------|-----------------------|---|
| <b>BOTTOM MEDIA TRAY</b> | Ceramic Rings    | Mechanic Filtration   | Removes small waste particles from the water.                                     |
| <b>MIDDLE MEDIA TRAY</b> | Bio Balls        | Biological Filtration | Creates environment for nitro-bacteria to cultivate and help oxygenate the water. |
| <b>TOP MEDIA TRAY</b>    | Activated Carbon | Chemical Filtration   | Removes soluble waste, chlorine and cultivates nitro-bacteria.                    |

**Important!** Always use water from your fish tank to clean your filter media. Do not use mains water or any cleaning products to clean your media.

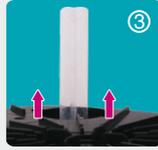
The suggested filter media order is ceramic rings at the bottom, bio balls in the middle and active carbon at the top with one biochemical cotton in each tray, providing mechanical, biological and chemical filtration as the water flows up through the media baskets.

Please remember to change your activated carbon at least every 2-3 months as after this time it is possible that the carbon can have a negative effect on your aquarium as the very waste it removes can be released from the carbon back into the aquarium.

When cleaning mechanical or biological media, **NEVER** rinse with tap water or use any soap or detergent, only your aquarium water. The best time to rinse your filter foams, bio balls and ceramic rings through is when doing a 10 / 20% water change as you can use this water to wash the media through.

When replacing media in your filter, do not replace more than 50% of your media at once. This is to ensure that the nitrifying bacteria present in the old media are able to repopulate in the newly added filter media.

## Replacing the UV light Tube - 1000EF+ and 1400EF+



**Note:** Never look directly at the UV light – the filter's safety switch will turn the bulb off when you remove the filter head but always unplug your filter before removing the head as a precaution.

Unscrew the two screws that are holding the quartz glass tube in place, then gently pull up the quartz cover plate and remove the quartz glass tube. You are then able to remove the UV bulb by gently pulling it out of the motor head. Install a new UV bulb by gently pushing it inside the motor head.

Replace the quartz glass tube and cover plate and replace the screws you removed previously. Place the motor head back on top of the unit and first shut both the motor head levers down, then fasten the buckles to the side of the filter.

**Important!** Check regularly that your UV light is operational by looking at the UV light indicator located on the top of the motor head. Always change your UV bulb every six months regardless of it working or not, as its performance will lessen by this stage.

## Replacing the UV light Tube - 2000EF+



**Note:** Never look directly at the UV light – the filter's safety switch will turn the bulb off when you remove the filter head but always unplug your filter before removing the head as a precaution.

Turn the quartz glass tube until you can see the clips line up between the head and the quartz, then gently pull up and remove the quartz glass tube. You are then able to remove the UV bulb by gently pulling it out of the motor head. Install a new UV bulb by gently pushing it inside the motor head.

Replace the quartz glass tube. Place the motor head back on top of the unit and first shut both of the motor head levers down, then fasten the buckles to the side of the filter.

**Important!** Check regularly that your UV light is operational by looking at the UV light indicator located on the top of the motor head. Always change your UV bulb every six months regardless of it working or not, as its performance will lessen by this stage.

## Quartz Sleeve

It is highly recommended that you inspect and clean your quartz sleeve every 6 months whilst you are replacing your UV bulb. Any dirt or limescale on the quartz sleeve will prevent the UV light from penetrating the water, which will reduce the effectiveness of your unit.

Carefully examine the quartz sleeve to ensure there are no cracks. To clean the quartz, simply wipe with a cloth soaked in vinegar or other mild acid. Rinse thoroughly with tank water (we recommend doing this alongside a routine partial water change). Make sure the cloth is non-abrasive to prevent it scratching the sleeve.

It is recommended that you replace your quartz sleeve every 2 years.

## Draining Your Filter

Should you need to drain your filter for maintenance or repair purposes, please follow the steps below:

- 1 Close the inlet / outlet tap by lifting the lever all the way up. This seals off the input and output hosing connections, keeping the vacuum needed in order to restart the filter without priming.
- 2 Unplug the power cord from the mains.
- 3 Remove the hose adapter by lifting the hose adapter securing buckle and pulling the adapter out of the motor head.
- 4 Holding the canister at the base, move it to a flat stable surface near a sink or other drain. (Be sure to hold upright to avoid spillages.)
- 5 To open the unit, unfasten the 2 buckles that are situated at the front and back of the filter then lift the 2 levers that are attached to the left and right sides of the motor head. On doing this the motor head will lift away from the unit. Set aside.
- 6 Holding the media baskets in place, tilt the canister over the sink or drain, and pour out as much water as possible.
- 7 Your media and foams will be saturated with water. Lift the filter media baskets out of the canister and place them in your sink or a large bucket.
- 8 Rinse the inside of the canister with clear aquarium water. NEVER use tap water, or soap or detergents, when cleaning your unit or rinsing media.
- 9 Rinse the inside of the priming cylinder with clear aquarium water. Make sure no debris is trapped inside the cylinder.
- 10 When you are ready to reconnect your filter, reinsert the filter media trays and reposition beneath your aquarium. Before replacing the motor head on the filter, fill your filter  $\frac{3}{4}$  full with water from your aquarium.

Place the motor head back on top of the unit, shut both of the motor head levers down and fasten the buckles to the side of the filter. Fit the hose adapter back into the motor head and re-fasten it using the securing buckle.

- 11 Top up your aquarium tank water level from any water used.
- 12 Reconnect the power cord to the mains.

## TROUBLESHOOTING

### No Filter Operation / Water Flow

- 1 Always ensure the power has been turned on.
- 2 Check that your impeller and shaft are seated correctly and not damaged in any way.
- 3 Ensure the impeller is free of any type of blockage and can rotate freely inside the motor head.

### Self Priming & Air Pocket Problems

- 1 Ensure you have set up the filter on your tank with all of the pipes connecting straight from the top of the tank directly to your filter without having any kinks and as little bends as possible.
- 2 Check that you have connected the hose connector valve correctly to the unit by fully pushing down the lever.
- 3 All of your entrance pipework must have its connections beneath water level to ensure that no air bubbles are able to enter the system.
- 4 If you have purchased extra filter media on top of what is supplied with the unit, be careful not to overfill the unit as this can affect its priming and filtering capabilities.
- 5 If you needed to press the blue button more than once when first priming the filter, we suggest that you should prime the filter from scratch again following the above tips. The most important thing is that you are not letting any air into your filter system as this will affect the priming of the filter as well as the long term operation of your filter.

### Noisy Operation

- 1 Check that your impeller and shaft are seated correctly and not damaged in any way.
- 2 Ensure the impeller is free of any type of blockage and can rotate freely inside the motor head.
- 3 Air could be trapped inside the filter - please resolve by following the 'self priming and air pocket problems' troubleshooting section,

## UV Indicator Not Lighting Up

- 1 If the UV indicator on top of the motor head is not lighting up, the first thing to check is that the bulb is still in good condition and no filaments have broken inside the bulb. Please ensure you completely unplug your filter before opening the unit to check the UV bulb.
- 2 If the bulb is fine it is still recommended to try a new bulb inside the unit. If the UV indicator is still not lighting up, we recommend you contact the supplier of the item.

## SPECIFICATIONS

| MODEL                 | 1000EF+           | 1400EF+            | 2000EF+            |
|-----------------------|-------------------|--------------------|--------------------|
| FLOW RATE             | 1000 L/H          | 1400 L/H           | 2000 L/H           |
| HOSE OUTSIDE DIAMETER | 20mm / 0.8"       | 20mm / 0.8"        | 25mm (1")          |
| HOSE INSIDE DIAMETER  | 15mm / 0.6"       | 15mm / 0.6"        | 18mm (0.7")        |
| HOSE LENGTH           | 1.8 Metres x 2    | 1.8 Metres x 2     | 1.8 Metres x 2     |
| WATER VOLUME          | 8 Litres (Approx) | 12 Litres (Approx) | 20 Litres (Approx) |
| HEIGHT MAX            | 1.4 Metres        | 2.0 Metres         | 2.5 Metres         |
| VOLTAGE               | 220-240v          | 220-240v           | 220-240v           |
| POWER                 | 18w               | 35w                | 55w                |
| UV POWER              | 9w                | 9w                 | 9w                 |
| DIMENSIONS            | 232x232x395mm     | 258x258x430mm      | 290x290x485mm      |

## WARRANTY

The All Pond Solutions external filter range is guaranteed against defects in material or workmanship under normal aquarium usage and comes with 12 months warranty for all electrical parts. The warranty period commences from the date of purchase.

If you require support on how to use your unit, replacement parts or if your filter develops a fault during the warranty period, please contact the supplier of your unit.

Non-replaceable, non-perishable and non-serviceable parts will be repaired or replaced free of charge, once the unit is returned with all components along with a valid proof of purchase and postage paid. We reserve the right to replace or repair the unit at our discretion.

Please be aware that perishable parts that are subject to normal wear and tear, such as impellers, impeller covers, motor seals and UV bulbs, are not covered by your warranty and a charge may be required for replacements of these.

This warranty does not apply to any unit that has been subjected to misuse, accidental damage, negligence, tampering or customisation. It does not apply to units which have been assembled incorrectly, improperly maintained, or where the instructions and safety information in this manual has not been followed correctly.

No liability is assumed with respect to loss or damage to livestock or personal property irrespective of the cause thereof.

Please ensure that only genuine All Pond Solutions components are used when completing a replacement or repair. Spare parts are available at our official website or from your local supplier.

Before returning your unit under warranty terms, check that all setup and maintenance instructions have been correctly followed. If you are in doubt, please contact your local aquatic retailer for further advice before returning the product.

**This does not affect your statutory rights.**



[www.allpondsolutions.co.uk](http://www.allpondsolutions.co.uk)