

# Instructions for Installation and Use

This Pond Clear Advantage unit is supplied with two universal hosietails and rigid pipe adaptors for connecting the clarifier to the water system. Installation is explained in detail below, but please read the following safety information first.

## Important Safety Information - Please Read Carefully

- Consult a qualified electrician.
- Never look directly at an illuminated UV lamp.
- Do not run this unit dry. Do not cover this unit.
- Always isolate the unit from mains electricity and turn off the water supply before carrying out any maintenance.
- Always disconnect all pond appliances from the mains electricity supply before putting your hands into the water.
- Use in the area of the garden pond only if the installation complies with the relevant wiring regulations.
- Power must be supplied through a Residual Current Device (RCD) with a rated residual operating current not exceeding 30mA.
- This unit must be earthed. Never use a fuse larger than 3 amps.
- Rating: 230V, 50Hz. (USA models: 120V, 60Hz). UV6, 10-12 Watt. UV8, 11-13 Watt. UV15, 21-24 Watt. UV25, 28-31 Watt. Class 1. IPX4.
- The unit must not be submerged in water.
- If the quartz sleeve is cracked, replace it immediately.
- The unit must be either fully frost protected or taken inside during the winter months.
- Young children should always be supervised near water.



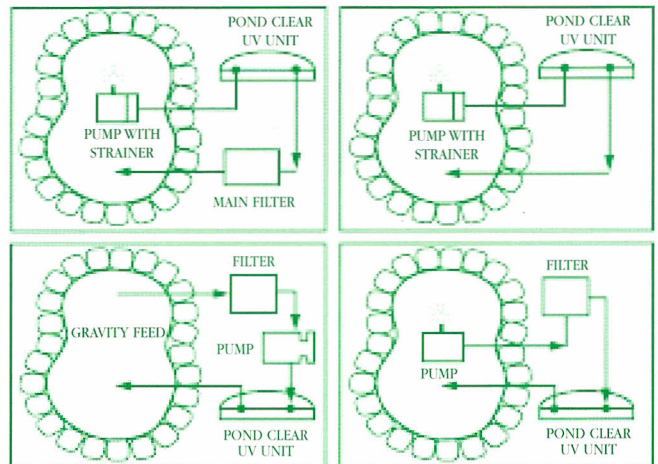
## Product Information

- This unit is manufactured and conforms to BS EN 60335-1 and BS EN 60335-2-55.
- This unit conforms to the low voltage directive (safety) CEE 73 23.
- This unit conforms to the EMC directive CEE 89 336.
- This unit is CE approved.

## POSITIONING THE POND CLEAR UNIT

**Caution:** To prevent this unit falling into water, do not install it above or alongside your pond.

Pond Clear Advantage units are weatherproof but not waterproof. The unit can be positioned either on its base on a flat surface, or mounted on an even, vertical surface using the fixing screws supplied. It must not be submerged in water or placed in a position where water may collect around the unit. To prevent the unit inadvertently being dropped into the pond, we strongly recommend that it is securely positioned at least 2 metres from the edge of the pond. Any flexible cabling used between the unit and the permanent wiring should also be kept to a minimum length. We recommend a maximum length of 1.5 metres. If installing the unit prior to, or without a filter, it is important that a pre-filter is used on the water pump to prevent dirt being pumped into the unit. The unit can be fitted into the water system in any of the ways shown below:-



The unit must be either fully frost protected or taken inside during the Winter months.

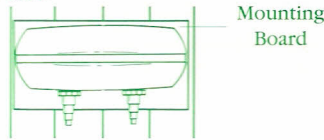
## MOUNTING ON A HORIZONTAL SURFACE

This unit may be mounted on any suitable flat surface including your filter lid. **Caution:** To prevent this unit falling into water, do not install it above or alongside your pond. Do not make the electrical connection to your unit until it has been plumbed in and fixed securely.

**Caution:** If the green cover of the unit is wet, gently wipe away any water before removing for servicing or maintenance. This will prevent water accidentally running onto the electrical components.

## MOUNTING ON A FENCE OR WALL

To mount this unit onto a fence panel or wall it must be mounted onto a suitable flat weatherproof panel or board made of a material that will not warp or distort. Mount the weatherproof board onto the fence panel or wall before starting to install the UV unit. The unit must only be mounted with the inlet and outlet ports pointing downwards as shown in the diagram. To proceed with the electrical or water connections, remove the green cover of the unit exposing the black base.



The black base is divided into an electrical chamber and a water jacket chamber. On either side of the electrical chamber there are two fixing holes to take the mounting screws provided. Using the fixing holes as a guide, securely screw the unit onto the flat panel that you have already mounted onto the fence panel or wall. Once you have mounted the base unit on the vertical surface, you are ready to proceed with the installation.

**Caution:** To prevent this unit falling into water, do not install it above or alongside your pond. Do not make the electrical connection to your unit until it has been plumbed in and fixed securely.

**Caution:** If the green cover of the unit is wet, gently wipe away any water before removing for servicing or maintenance. This will prevent water accidentally running onto the electrical components.

## MOUNTING ON A FILTER

This unit may be mounted on any suitable pond filter lid sitting flat on its base, and a plastic filter lid fixing kit is included with this unit. The black base is divided into an electrical chamber and a water jacket chamber. On either side of the electrical chamber there are two fixing holes to take the plastic mounting nuts and bolts provided. Using the fixing holes as a guide, drill 2 x 6mm holes through the fixing holes and your filter lid.

This unit must not be mounted directly onto the side face of any filter. If the unit needs to be mounted in this way then it must first be mounted onto a suitable flat weather proof panel or board made of a material that will not warp or distort.

**Important:** Once mounted onto a suitable board, if you are mounting the unit onto the side of the filter box the fixings attaching the board to the filter side must be significantly above the maximum water level in the filter. Under no circumstances must this unit be mounted with any fixings below the maximum water level of the filter.

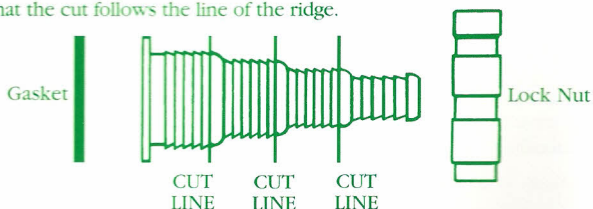
**Caution:** If the green cover of the unit is wet, gently wipe away any water before removing for servicing or maintenance. This will prevent water accidentally running onto the electrical components.

## CONNECTION TO THE WATER SUPPLY

**Important:** If installing this unit in conjunction with any pressurised filtration equipment i.e sand filters, cartridge filters or bead filters, it must only be installed in-line, after the pressure filter.

### Connection with flexible hose

The Pond Clear Advantage unit is supplied with two universal hosetails to take 1/2", 3/4", 1" and 1 1/2" diameter flexible hose. If you are using one of the three larger sizes, the smaller sections of the hosetails must be cut off to ensure sufficient water flow and to prevent possible damage to the pump. We recommend that you use the largest diameter hose available. As it is easier to cut the hosetails while they are attached to the unit, attach them using the female threaded lock nuts and gaskets provided. Ensure that the gaskets are seated correctly between the flat face of the hosetails and the flat face of the inlet/outlet ports. Using a hacksaw, carefully cut off the excess hosetail, ensuring that the sections are cut off at the second ridge and that the cut follows the line of the ridge.



Once trimmed, hand tighten the lock nuts to secure the hosetails to the inlet/outlet ports. Do not use jointing compound or PTFE tape. Secure the hose/pipe to the hosetail with a stainless steel hose clip.

The hosetails supplied are made from a translucent material which will glow when the unit is operating correctly.

(NB. glow only visible in low levels of light.)

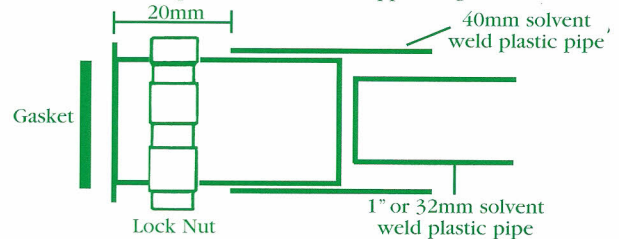
**Please note:** there is no correct flow direction through the unit. Either end of the unit may be used as the inlet or outlet.

## Connection using rigid pipe

This unit may also be rigid plumbed in either of the following ways:-

### 1. By using the rigid pipe adaptors supplied with this unit.

These should be fitted as shown in the diagram and will solvent weld directly into 40mm rigid solvent weld plastic pipe. It is essential to fit the lock nut before you solvent weld the adaptor into the pipe. When solvent welding the two parts, sufficient space (20mm as shown) must be left between the adaptor and the 40mm pipe to allow the lock nut to be undone. If using 1" solvent weld pipe, the pipe will be glued into the adaptor at the first stepped stage. If using 32mm solvent weld pipe, the pipe will be glued into the adaptor at the second stepped stage.



**Important:** Once you have solvent welded the two parts they must be left to fully cure before making the final connection between the pipe and the Pond Clear Advantage (follow adhesive manufacturer's instructions).

When attaching the plumbed rigid adaptors to the unit ensure that the gaskets are seated correctly between the flat face of the pipe adaptor and the flat face of the inlet/outlet ports. Do not use a jointing compound or PTFE tape.

For USA rigid plumbing you should use the 1" pipe option above.

### 2. Using 1 1/2" BSP female threaded plastic sockets that are available from most suppliers of plastic plumbing fittings.

## FLOW RATES

All of our UV units have a maximum flow rate as listed below. Please note that, for optimum performance, we recommend that you pass the entire volume of your pond through the UV unit approximately once every two hours. Please also note that we suggest a minimum flow rate of passing the pond volume through the unit once every three hours.

Unit	Maximum Flow Rate
UV6	300 UK gal/1350 litres/360 US gal per hour
UV8	600 UK gal/2700 litres/720 US gal per hour
UV15	1500 UK gal/6750 litres/1800 US gal per hour
UV25	2000 UK gal/9000 litres/2400 US gal per hour

## CONNECTION TO ELECTRICAL SUPPLY

### Consult a qualified electrician.

**Caution:** Use in the area of the garden pond only if the installation complies with the relevant wiring regulations.

**Caution:** Always disconnect all pond appliances from the mains electricity supply before putting your hands into the water.

**Caution:** Power must be supplied through a Residual Current Device (RCD) with a rated residual operating current not exceeding 30mA.

**Important:** This unit is designed to be permanently wired to the mains supply using the three core 0.75mm<sup>2</sup> Polychloroprene Rubber cable fitted to the unit. This unit must be permanently connected to the mains supply inside a dry, weatherproof enclosure and through a double pole switched fused spur with a minimum contact gap of 3mm. The fused spur must only be fitted with a 3 amp fuse. **For safety never use a larger rated fuse.**

This unit is fitted with 5 metres of power cable. To prevent the unit inadvertently being dropped into the pond, we strongly recommend that it is securely positioned at least 2 metres from the edge of the pond. Any flexible cabling used between the unit and the permanent wiring should also be kept to a minimum length. We recommend a maximum length of 1.5 metres.

## ROUTINE MAINTENANCE

The UV lamp inside the Pond Clear Advantage unit has a useable life of approx 8000 hours. As green water is only a problem during Spring and Summer, the lamp only needs to be replaced once a year in spring (see below).

As already mentioned, it is essential that the unit is protected from frost during the Winter months, or disconnected from water and electricity supplies and stored indoors during the Winter. During the Spring/Summer season, the quartz sleeve, which separates the UV lamp from the water passing through the unit, will need to be cleaned two or three times. This is essential, as dirt building up on the quartz sleeve will inhibit the penetration of the ultraviolet light into the water.

## LAMP REPLACEMENT AND QUARTZ CLEANING

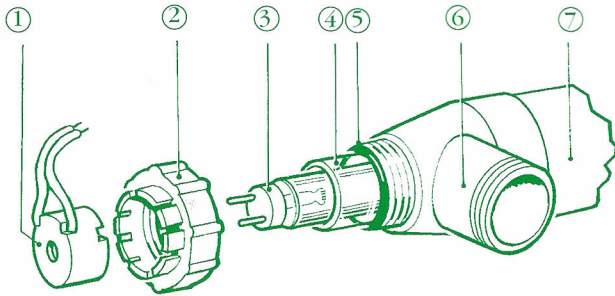
Isolate from electrical and water supplies before removing the green cover.

**Caution:** If the green cover of the unit is wet, gently wipe away any water before removing for servicing or maintenance. This will prevent water accidentally running onto the electrical components.

Remove the green cover and lift out the black plastic body. To dismantle the body, pull off the white plastic lampholders at either end (see diagram) and slide the lamp out carefully. Next, unscrew the two compression fittings located at either end of the black plastic body (see diagram) and slide off the two 'O' rings. Then slide out the quartz sleeve. Clean the sleeve and polish with a soft cloth or paper towel. If you live in a hard water area there may be some limescale on the quartz sleeve. This can be easily removed by soaking the sleeve in a proprietary kettle descaling solution. Failure to remove the limescale will limit the effectiveness of the UV lamp.

## ASSEMBLY PROCESS

Slide the quartz sleeve into the unit. Ensure that you locate the 'O' rings carefully on the ends of the quartz. Failure to do so will result in leaks when the water is turned on.



1. Lampholder 2. Compression Fitting 3. UV lamp  
4. Quartz Sleeve 5. 'O' Ring 6. Hosetail Socket  
7. Black Body

If you are carrying out the annual lamp change, use new 'O' rings. Firmly hand tighten the compression fittings. Replace the lamp or fit a new one. Relocate the lampholders and place the unit back into the base.

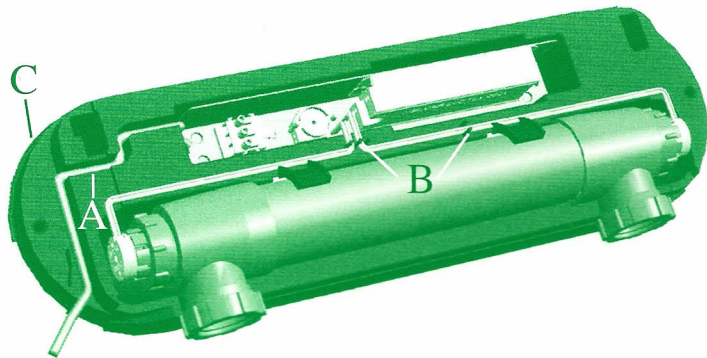
**Caution:** Ensure that the mains power cable is properly located in the cable slot in the black base (see A in diagram below).

**Caution:** Ensure that the white lamp leads are re-located securely between the cable guide posts (see B in diagram below).

**Caution:** Before replacing the green cover ensure that the grey tubular gasket is correctly located in the gasket recess in the black base (see C in diagram below).

Reconnect and turn on the water supply to check for leaks before connecting the electricity supply. Replace the cover before switching the unit on.

**Caution:** To achieve a proper seal, ensure that the two cover fixing screws are fully tightened, securing the green cover to the black base.



## IMPORTANT

The plastic body and any hosetails supplied with this unit are manufactured from polymers that have been specifically stabilised, to protect them from the effects of UVC light emitted from the lamp. Despite this UV protection the plastic body and hosetails will be eroded by the UVC and the water flow. As a matter of course they should be inspected whenever a lamp change is carried out, to ensure that they are not showing excessive wear and tear. Low cost replacements are available from your local aquatic supplier.

## TROUBLE SHOOTING

### •HOW CAN I TELL IF THE UNIT IS WORKING?

The translucent hosetails will glow a deep blue or green colour. In strong sunlight this may not be apparent but at night and at low levels of light, the glow is detectable.

### •HOW LONG AFTER I INSTALL THE UNIT WILL MY POND BECOME CLEAR?

There are many factors which control this including the levels of nutrients available to the algae, the water temperature and levels of sunlight. Assuming that the correct size unit has been installed properly most ponds should clear within 3-14 days. However, please allow a full six week period for the unit to take effect.

### •THE LAMP IS NOT WORKING. EVEN AT NIGHT THE HOSETAILS ARE NOT GLOWING - WHAT IS WRONG?

First check the power supply and the fuse. Check that the end caps are correctly located on the lamp pins. If it still doesn't work, remove the lamp (as detailed on the previous page). Check that the lamp and quartz are not broken.

### •THE UNIT WORKED WELL WHEN I FIRST INSTALLED IT BUT RECENTLY MY POND HAS GRADUALLY GONE GREEN AGAIN - WHAT IS WRONG?

This usually indicates that the quartz sleeve has become dirty and requires cleaning (read maintenance instructions).

### •DOES A POND CLEAR ADVANTAGE UNIT PUT ANYTHING INTO THE WATER, AND WILL IT HARM ANYTHING LIVING IN THE POND LIKE FROGS, NEWTS, PLANTS OR FISH?

Ultraviolet lamps leave no residues, and only affect the water pumped through the unit. Unlike many chemical treatments, your Pond Clear Advantage unit will not harm the plants and animals living in the water.

### •WHAT IS THE DIFFERENCE BETWEEN A POND CLEAR ADVANTAGE UNIT AND A STERILISER?

Pond Clear Advantage units are designed to control the single cell algae that cause ponds to go green. They allow for a wide margin of variability in their application and are designed to allow relatively high flows of water through them.

A true UV steriliser kills just about all the organisms that pass through it. They use different levels of water flow. Pond Clear Advantage units do control some bacteria and other organisms but should never be seen as a means of preventing disease. A pond that is fitted with a Pond Clear Advantage unit will have a cleaner and healthier environment.

### •HOW LONG CAN I LEAVE THE UNIT RUNNING?

Pond Clear Advantage units should be run 24 hours per day, every day, from mid March to early October, depending on the weather conditions. If the unit is frost protected, it may be left running throughout the Winter. Otherwise, the unit should be removed, drained and stored safely for the Winter.

### •CAN I USE MY POND CLEAR ADVANTAGE UNIT IF I AM USING TREATMENT FOR MY FISH?

From our own experience of using a wide range of treatments and medications, we have found no harmful effect from running Pond Clear Advantage units at the same time as treating a pond. Some medications are broken down a little quicker than normal.

### •WILL MY POND CLEAR ADVANTAGE UNIT CONTROL BLANKET WEED AND OTHER ALGAE THAT GROW ON THE SIDE OF THE POND?

No. Only water that passes through the unit is treated, so only algae that are suspended in the water will be affected.

### •CAN I BYPASS SOME OF THE WATER FROM MY PUMP IF SAY, THE FILTER BACKS UP OR I WOULD LIKE TO "T" OFF SOME OF THE FLOW TO A FOUNTAIN?

Yes, Always remember that to get the best results from your Pond Clear Advantage unit, you should make sure that you keep within the recommended flow guidelines.

### •CAN I BURY THE UNIT UNDERGROUND?

Do not bury the unit. It could become waterlogged at a later date, which would be dangerous.

**General Note:** Large carp such as Koi can cause murky water by stirring up the bottom of the pond. This murky water should not be confused with suspended algae.