

UK
English

EVOLUTION
AQUA

evouV

INSTALLATION AND OPERATING MANUAL

Complete instructions for all models of evouV

ev030 ev055 ev0110

WARNING:

- Ensure that the unit is **switched off** at the mains before you attempt to conduct any type of maintenance on the evouV.
- Ensure that the gland nut / end cap is tight before running the unit.
- After replacing bulbs or before tightening the end cap, make sure that the seals are in the correct position, and the bulb socket is dry.
- Should the electrical connections get wet, please dry thoroughly before switching power on.
- **Tampering with the cover plate or serial number plate will invalidate the warranty. There are NO user serviceable parts behind these panels.**

WARNING: PLEASE READ THE FOLLOWING SAFETY INFORMATION FIRST.

IMPORTANT SAFETY INFORMATION

- Please Read Carefully
- Never look directly at an illuminated UV bulb.
- Do not run this unit dry. Do not cover this unit.
- Please ensure that the unit is full of water before switching it on.
- Always isolate the unit from mains electricity and turn off any water supply before carrying out any maintenance.
- Always disconnect all pond appliances from the mains 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 residual operating current not exceeding 30mA.
- This unit must be earthed. Never use a fuse larger than 3 amps on the power lead.
- 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 Winter months.
- Young children should always be supervised near water.



PRODUCT INFORMATION

- **Rating:**
220-240V, 50Hz.
evo30 is 33-36 watt. evo55 is 40-50 watt. evo110 is 67-81 watt.
- **Rating in USA only:**
100-277V, 50/60Hz.
evo55 is 44-52 watt. evo110 is 67-87 watt.
- All units are Class 1, IP64. All units are CE approved.



Disposal Of Your Old Product

Your product is designed and manufactured with high quality material and components, which can be recycled and reused. When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/96/EC. Please contact your local authority about correct disposal for electrical and electronic equipment. Our WEE Registration Number is WEE/FE1471RR.



Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

INTRODUCING EVOLUTION AQUA'S evoUV

Congratulations on purchasing an Evolution Aqua evoUV. Our range of evoUV pond clarifiers have been manufactured using the latest technology and design techniques. evoUVs have been designed to clear green water which is caused by single celled green algae and prevent it from returning. evoUVs will work alongside many different filtration systems but when used alongside Evolution Aqua's pond filtration systems, the evoUV will deliver crystal clear and healthy pond water.

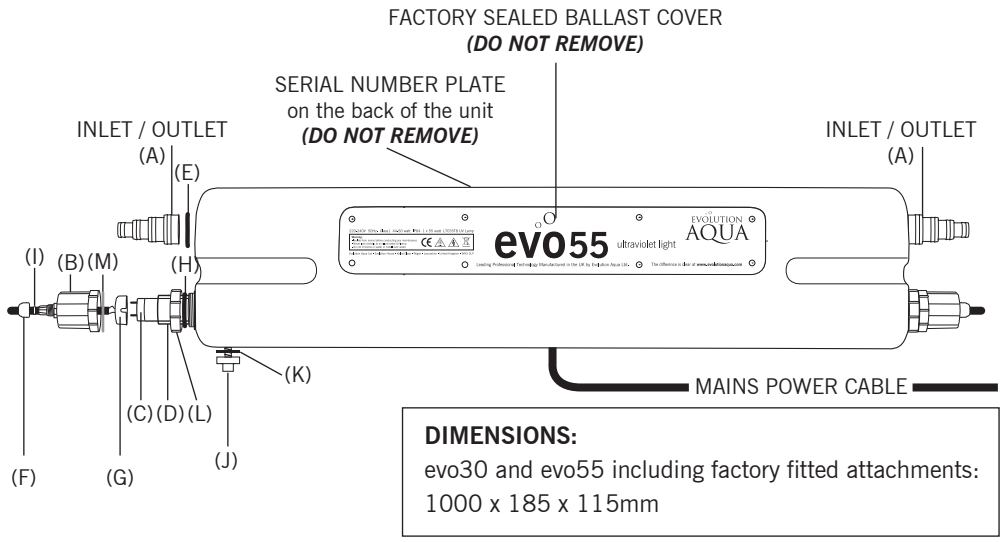
Please read this instruction manual carefully from start to finish before attempting to install your evoUV.

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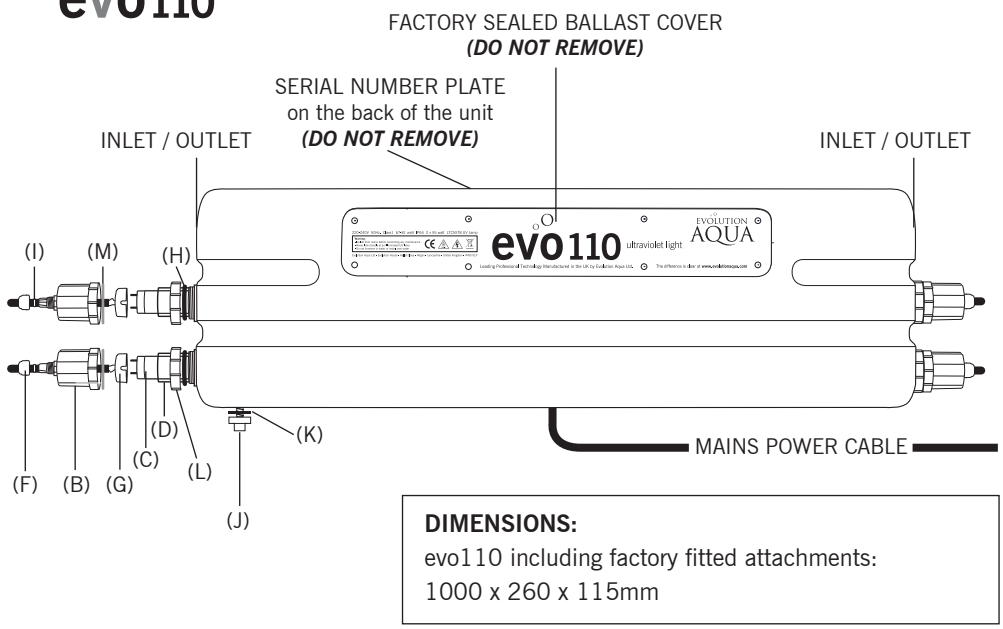
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evo30 evo55

evoUV DIAGRAMS



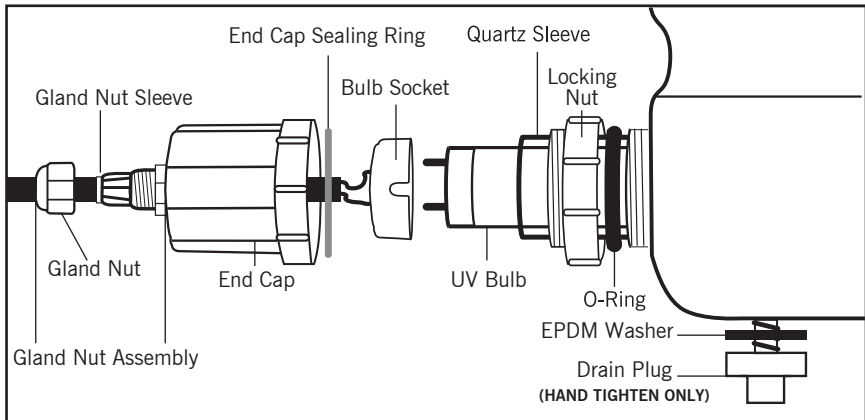
evo110



evoUV COMPONENTS LIST

Cross reference the components listed below, with the diagrams on the previous page.

Description	evo30	evo55	evo110
1½" Hosetail	A	A	-----
End Cap	B	B	B
UV Bulb	C	C	C
Quartz Sleeve	D	D	D
Hosetail O-ring	E	E	-----
Gland Nut	F	F	F
Bulb Socket	G	G	G
O-ring (Quartz Sleeve)	H	H	H
Gland Nut Sleeve	I	I	I
Drain Plug	J	J	J
EPDM Washer	K	K	K
Locking Nut	L	L	L
End Cap Sealing Ring	M	M	M



FLOW RATES

Please note: For optimum performance we recommend that you pass the entire volume of your pond through the evoUV unit once every 2 to 3 hours.

We do not recommend the use of pumps with operating pressures in excess of 2 bar.

Description	evo30	evo55	evo110
Maximum Flow Rate	15,000 litres/hour	27,500 litres/hour	36,500 litres/hour
Bulb life	9000 hours	9000 hours	9000 hours
Bulb – with EA code	1 x 30 Watt EVOBT30	1 x 55 Watt EVOBT55	2 x 55 Watt EVOBT55
Inlet / Outlet	1½" BSP male thread	1½" BSP male thread	2" BSP male thread
Inlet / Outlet USA Models	N/A	2" NPT male thread	2" NPT male thread
Evolution Aqua order codes for UK hardpipe fittings only	Adaptor– K82-23-55	Adaptor– K82-23-55	Adaptor– K82-23-66
	or Union – K82-78-55	or Union – K82-78-55	or Union – K82-78-66

It is important to note that there are factors that affect how you select the right size of evoUV for your pond.

Your evoUV will keep your pond clear of green water up to its maximum capacity as stated on the box for the evo30 and evo55. The evo110 is an effective unit and has multiple uses. It can be used on large ponds, retail installations, aquaculture and other commercial aquaria installations. Please see your local Evolution Aqua dealer for details.

	evo30	evo55	evo110
PONDS UP TO	30,000 litres	55,000 litres	75,000 litres

You will need to take into consideration such things as stocking levels, sunlight / shade, daily sunshine amounts etc. This is not always possible to calculate, and if this is the case, apply the rules of thumb below as a guide.

USA - Southern States / Mediterranean	3 Watts UV per 1,000 litres
Northern Europe including UK	2 Watts UV per 1,000 litres
USA - Northern States / Canada	1 Watts UV per 1,000 litres

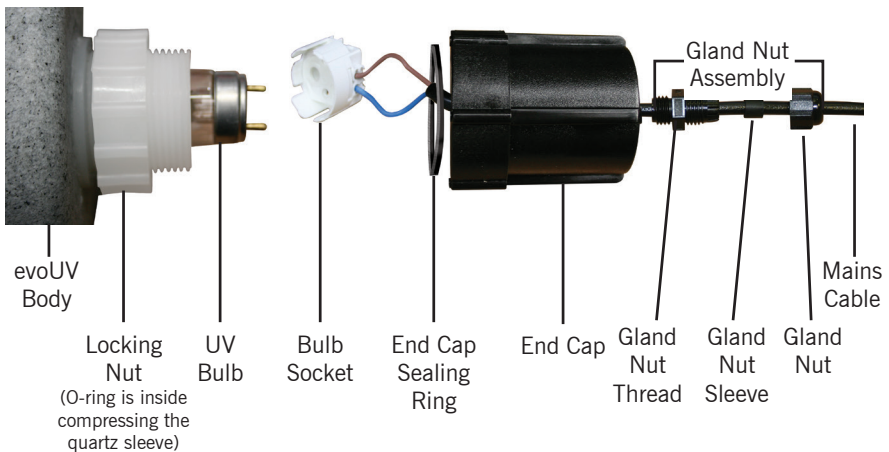
It must be stressed however, that these are only guidelines, and you should take advice from your local Evolution Aqua dealer.

INSTALLING THE evoUV FOR THE FIRST TIME

1. Unscrew the black end cap, taking care to keep the end cap sealing ring safe.
2. Carefully remove the UV bulb and put to one side for later installation.
3. Ensure the locking nut is tight, compressing the O-ring against the quartz sleeve. It is not necessary to use tools for this.
4. Position the evoUV and connect your pipework as shown on pages 8 to 12.
5. Before you install the bulb and end caps you should run water through the system until you are satisfied that there are no leaks.
6. Once you are satisfied with your installation you can now fit the bulb (see below) and connect the unit to the power supply (see page 13).

To fit the UV Bulb:

- Slide the bulb carefully into the quartz sleeve.
- Starting with either end, you will notice that the gland nut assembly is loose to enable the cable to move freely.
- Push enough wire through the end cap to give access to the bulb socket. Slip the end cap sealing ring into position, push the bulb socket onto the UV bulb.
- Tighten the end cap up to the thread on the locking nut, while ensuring that the end cap sealing ring is positioned correctly inside the end cap.
- With the gland nut sleeve positioned correctly, tighten up the gland nut assembly.
- Repeat this procedure at the other end.



POSITIONING AND MOUNTING THE evoUV

The table below shows the inlet and outlet sizes of the evoUV:

MODEL	UK AND EUROPE	USA AND CANADA
evo30	1½" BSP	N/A
evo55	1½" BSP	2" NPT
evo110	2" BSP	2" NPT

evoUV units are splashproof but not waterproof. The unit can be positioned either on a horizontal or vertical surface.

When installing vertically, position the unit with the drain plug at the bottom.

Your evoUV must not be submerged in water or placed in a position where water may collect around the unit.

Fix your evoUV into position using the stainless steel brackets attached to the evoUV. Screws and washers are not provided. On the evo30 and evo55 models a third bracket is attached to the rear serial number plate. This bracket is angled down during transit. Turn the bracket upright to install.

When fixing to the wall please leave a 1 metre gap at one end of the evoUV to enable bulb / quartz sleeve removal and maintenance.

If installing the unit prior to or without a pond filter, we would recommend that the use of a pre-filter is used on the water pump to prevent excess solids from being pumped into the unit. The evoUV may be connected to the water flow on any pumped line, this could be, for instance, a skimmer line or any other additional pumped line. The two most common forms of set up are pump fed and gravity fed. These are illustrated on the following pages.

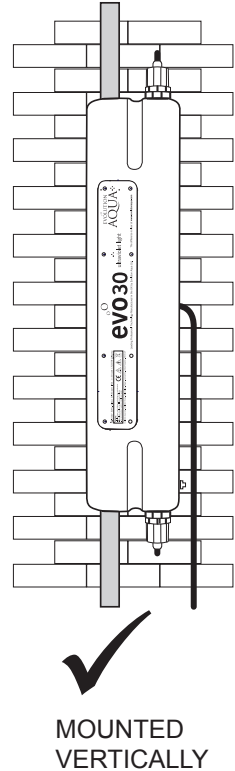
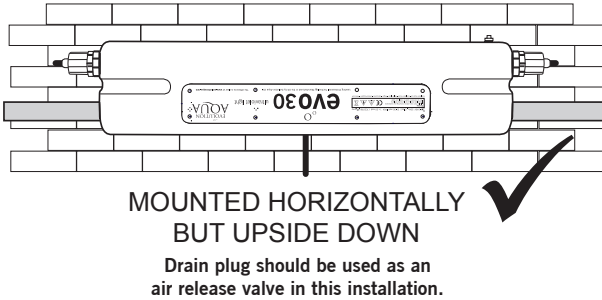
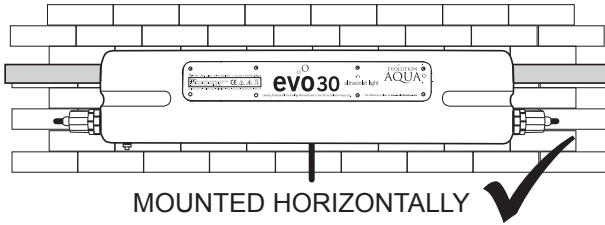
It is possible that because of the positioning of your pipework, you may want to install the evoUV upside down. Your evoUV can be positioned in this way, but it is likely to cause an air lock. If this occurs the drain plug can then be used to release the trapped air.

Positioning the evoUV this way will mean that the drain plug can not be used to drain the unit, therefore extra care must be taken during maintenance and when the bulb and quartz sleeve are being replaced to ensure the end caps and electrical connections are kept dry.

POSITIONING AND MOUNTING THE evoUV

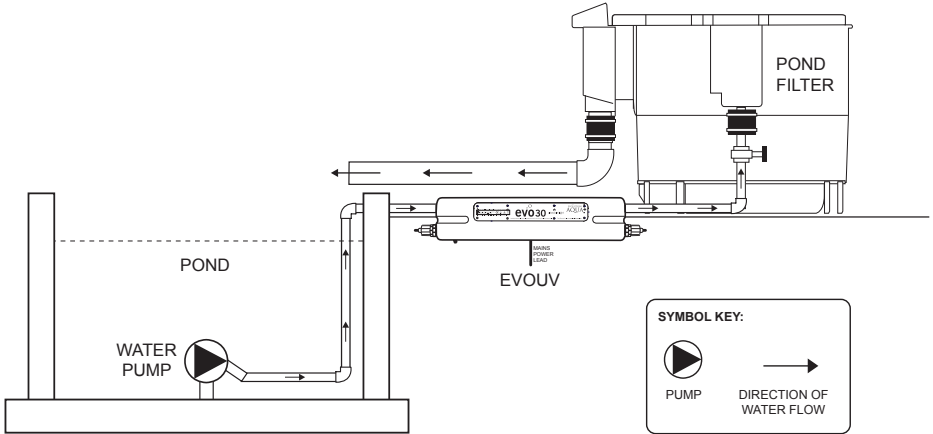
PLEASE NOTE:

Always leave approximately 1 metre of free space at one end of the evoUV for UV bulb and Quartz Sleeve maintenance.

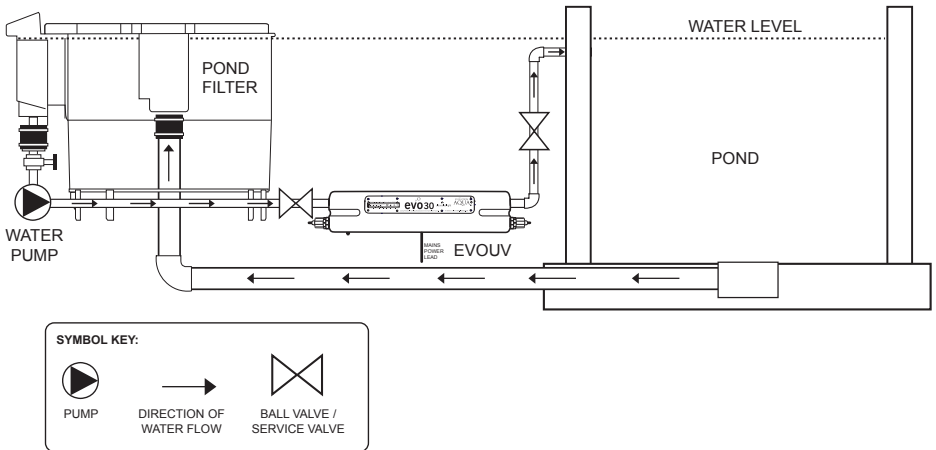


POSITIONING AND MOUNTING THE evoUV

Pump Fed Installation



Gravity Fed Installation



PLEASE NOTE:

On Gravity Fed systems it is recommended to install a ball valve either side of the evoUV for maintenance.

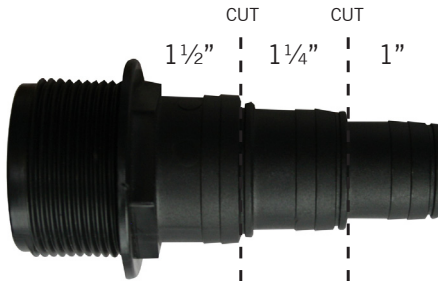
CONNECTION TO YOUR PIPEWORK

The two universal hosetails supplied with the evo30 and evo55, should be screwed into the inlet / outlet at either end of the unit. Hosetails should be tightened using hand pressure only. Ensure that the O-rings are in position before assembling. Please note that there is no correct direction of flow through the unit, either end of the unit may be used as the inlet or outlet.

* *Pipework fittings are not provided with the evo110.*

Connection with flexible hose (evo30 and evo55 only)

The evo30 and evo55 is supplied with two universal hosetails to take 1", 1¼", and 1½" diameter flexible hose. If you are using one of the two 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. The hosetails should be trimmed away from the unit as shown in the diagram below. Once the hosetails have been trimmed, attach them to the unit as shown below. Secure the flexi-hose to the hosetail with a stainless steel hose clip (not provided).



CUT AND REMOVE UNWANTED HOSETAILS

This fitting is provided with the evo30 and evo55 only.

CONNECTION TO FLEXIBLE HOSE

Use these fittings to connect 1½" Flexible Hose to an evo30 and evo55. Use a stainless steel hose clip (not supplied) to secure the hose to the fitting.



CONNECTION TO YOUR PIPEWORK

Connection using rigid pipe (evo30, evo55 and evo110)

The unit may also be rigid plumbed by the use of an adaptor (not supplied). See table on page 6 for relevant fittings. These fittings will screw directly into the evoUV and will enable you to connect to the relevant size pipework.

For other installation options please refer to the Evolution Aqua website <http://evolutionaqua.com/acatalog/evoUV.html>

The table below shows the inlet and outlet sizes of the evoUV:

MODEL	UK AND EUROPE	USA AND CANADA
evo30	1½" BSP	N/A
evo55	1½" BSP	2" NPT
evo110	2" BSP	2" NPT

evo110 Installation

We recommend that 2" pipework is used into and out of the evo110 for as long a run as possible. This ensures the most efficient flow through the evoUV.

CONNECTION TO THE ELECTRICITY SUPPLY

Electrical installations must be done by a qualified electrician.

The power supply must meet the specifications on the product. The cores in the supply cable are coloured in accordance with the following code:

Brown = Live. Blue = Neutral. Earth = Green/Yellow.

Do not use the supply cable to lift the evoUV as this may cause damage.

WARNING - A Residual Current Device (RCD), also known as the Residual Current Circuit Breaker (RCCB), with a tripping current not exceeding 30mA must be installed in the supply circuit. A means of disconnection from the supply having a contact separation of at least 3mm in all poles must be incorporated in the wiring.

Caution: Use in the area of the garden pond only if the installation complies with the relevant wiring regulations. Please consult a qualified electrician.

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

All electrical installations and wiring must be adequately protected to prevent any damage.

Enough electrical cable is supplied with the unit to connect to the mains electric. This unit must be connected to permanent wiring. A switch with 3mm contact separation must be provided in the fixed wiring to provide disconnection from the electricity supply.



ROUTINE MAINTENANCE

UV Bulb Replacement

ALWAYS ISOLATE THE UNIT FROM ANY ELECTRICITY AND WATER SUPPLIES BEFORE CARRYING OUT MAINTENANCE ON THE UNIT.

To Change the Bulb:

It is not necessary to stop the water circulating through the evoUV to change the bulb.

1. On the side that you wish to pull the UV bulb out, slacken off the gland nut on the end cap to release the cable. (Fig.B)

IMPORTANT: *Never undo the end cap without unscrewing the gland nut first.*

2. Unscrew the end cap taking care not to lose the end cap sealing ring.
3. Disconnect the bulb socket.
4. With the end cap out of the way, carefully slide out the UV bulb. (You may need to pull firmly on the bulb in order to disconnect it from the bulb socket at the other end.)
5. Slide in the new UV bulb gently turning the bulb until the pins locate in the bulb socket at the closed end of the unit.

If you have difficulty locating the pins, you can remove the end caps at both ends to make replacing the bulb easier.

6. Once you have attached the bulb socket, replace the end cap ensuring the end cap sealing ring is located correctly.
7. Replace the gland nut sleeve and tighten up the gland nut.

WARNING: If the end caps / electrical connections get wet during this procedure, please ensure that they are thoroughly dried before re-connecting.

After checking all the fittings are correctly tightened, you can switch your unit back on.

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 spring and summer season, the quartz sleeve, which separates the UV bulb from the water passing through the unit, will need to be cleaned two or three times. This is essential, as dirt or limescale building up on the quartz sleeve will inhibit the penetration of the ultraviolet light into the water and affect the efficient working of the unit.

evo110 Bulbs Only:

If only one bulb lights up on the evo110 you should carry out some initial checks to ascertain if the UV bulb has failed.

- Swap over the end connectors on each bulb at one end of the evoUV.
- Check that the end connectors are completely dry and are connected properly.
- Replace the UV bulb.

Fig.A: *Never undo end cap while gland nut is tight*

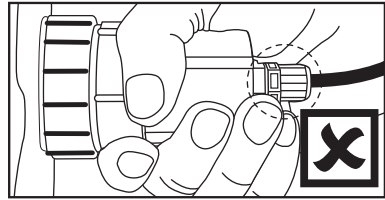
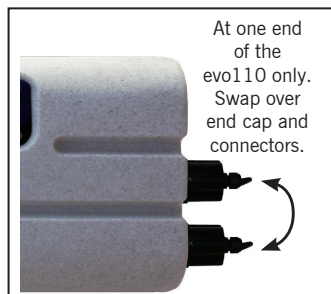
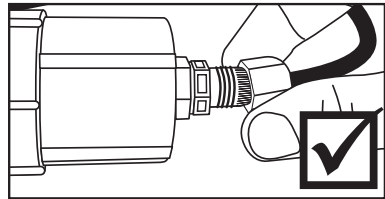


Fig.B: *Slacken off gland nut before unscrewing end cap*



Replacing / Cleaning Quartz sleeve

ALWAYS ISOLATE THE UNIT FROM ANY ELECTRICITY AND WATER SUPPLIES BEFORE CARRYING OUT MAINTENANCE ON THE UNIT.

To Replace / Clean the Quartz Sleeve:

Switch off pumps and if possible isolate the evoUV by closing any valves.

1. Drain the water from the evoUV by unscrewing the drain plug.
(You may need to bleed some air, do this by partially unscrewing the connection on the inlet or outlet.)
2. Once completely drained, remove the UV bulb as described on page 14. You will need to undo both end caps.
3. Unscrew the locking nuts which hold the quartz sleeve in place. Taking care not to lose the O-rings.
4. Gently slide out the sleeve, taking care not to allow it to drop inside the UV body.
5. Clean the sleeve and polish with a soft cloth or paper towel. *If you live in a hard water area, you may get limescale on the quartz sleeve; this can be easily removed by using vinegar or a cold water descaler.*
6. Replace the quartz sleeve by sliding it back into the evoUV, ensuring that an equal amount of the sleeve is showing at each end.
7. Slide the two O-rings back into position on each end of the quartz sleeve, and screw on the locking nuts tightly until the seals are compressed.
8. Now replace the bulb as described on page 14.

WARNING: If the end caps / electrical connections get wet during this procedure, please ensure that they are thoroughly dried before re-connecting.

During this procedure or if you notice water leaking from around the end caps you should check the following:

- 1) Check the O-ring is undamaged.
- 2) Check there are no cracks and breaks in the quartz sleeve.
- 3) Check that the locking nut is compressing the O-ring to form a water tight seal.
- 4) Check that the gland nut and gland nut sleeve are installed correctly and are tight.
- 5) Check that the end caps are sufficiently tight.
- 6) All components are clean and free from dirt and debris.

****Please note that the items mentioned under the list 1-6 are service items and therefore not subject to a claim under warranty. The service items listed are available from your EA stockist.***

In Built Protection

The evoUV range of pond clarifiers have thermal overload protection which automatically shuts down and then enables a fast re-start when the problem has been cleared. This may be as a result of water in the end caps. Please see the troubleshooting section on page 17.

Thermal Overload Protection (Only on evo55 and evo110 models) -

This will automatically switch off the unit should the temperature exceed the maximum operating temperature limits.

Automatic start up and shut down protection - This protects the electrical components in the event of a power surge.

OUR GUARANTEE

This product is guaranteed against defects in material and workmanship for 2 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 evoUV. If the evoUV fails due to a manufacturing fault within this period it will be either repaired or replaced free of charge. 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. This guarantee does not confer any rights other than those expressly set out above. This guarantee does not cover the evoUV bulb or quartz sleeve.

Tampering with the cover plate or serial number plate will invalidate the warranty. There are NO user serviceable parts behind these panels.

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.

Any warranty claim must be accompanied by a valid, dated proof of purchase.

Evolution Aqua and its 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 evoUV has a serial number plate attached to the back of the unit. If this serial number plate has been removed or tampered with, this will void the warranty.

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

TROUBLE SHOOTING

My pond water is not clear, is this due to the evoUV not working correctly?

Koi, goldfish and other pond inhabitants can cause murky water by stirring up the bottom of the pond. This murky water should not be confused with suspended algae. Always check all your pond filtration is working and is being maintained correctly prior to checking the evoUV.

If the UV bulb is not lit, then you need to investigate the power to your unit.

- Has your RCD tripped? If yes, check your wiring and reset.
- Examine the UV bulb for signs of failure, and replace if necessary.
- Is the UV bulb fitted correctly? Unscrew the end caps and ensure correct fitting as per the instructions on page 14.
- Are the end caps dry? If not, allow to dry thoroughly. We recommend the use of a hair-dryer for this.

If only one bulb is lit up on the evo110 only.

- Please check the UV bulb as per UV bulb maintenance on page 14.
- If one bulb is still not lit, swap the bulb end connectors at one end of the evo110.



The unit worked well when I first installed it but recently my pond has gradually gone green again – what is wrong?

Quartz sleeve may have become dirty and requires cleaning (see page 15). Also make sure you have the right model for your pond size. Ensure your pond filtration is removing fish waste and debris efficiently. Dirt in ponds will affect the efficiency of the evoUV. Check that your pond water volume is pumping through the evoUV every 2 to 3 hours.

Only after you have carried out these checks should you contact your Evolution Aqua dealer, who will then be able to advise you further.

FREQUENTLY ASKED QUESTIONS

How often should I change the UV bulb?

The evoUV bulb has an effective lifespan of 9000 hours, but it is an accepted practice to replace a UV bulb once a year, at the start of every pond season.

How long after I install the unit will my pond become clear?

There are many factors which affect how long your evoUV will take to clear your pond, such as the levels of nutrients available to the algae, the water temperature and the level of sunlight. Assuming that you have installed the correct size unit, most ponds should clear within 3-14 days. However, this may take up to six weeks in some instances.

Does the evoUV harm fish, plants or wildlife?

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

Is the evoUV suitable for salt water use?

The evoUV is manufactured from materials that will not corrode in salt water and it is safe to use your evoUV in marine systems.

Can I use my evoUV if I am using any treatments for my fish?

Always check the manufacturer's instructions before using any water treatment as they will tell you whether it's recommended that the evoUV can be switched off or on.

How long can I leave the unit running?

evoUVs have been designed and manufactured to the highest standards, and should be run 24 hours a 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 bury the unit underground?

No. The evoUV, although weatherproof, is not suitable for installing in any situation that may be subject to immersion in water.

Can it be used with ozone?

Yes. The evoUV is safe to use with ozone units, however, the O-rings on the hosedails are not. When using ozone units please use rigid pipe.

When replacing the bulb I cannot locate it into the bulb socket at the opposite end of the evoUV?

Please follow the procedure for cleaning / replacing the quartz sleeve on page 15. This will explain the correct procedure for removing both end caps and sockets and explain the method for easy installation.

✂

TO ACTIVATE YOUR FREE 1 YEAR EXTRA WARRANTY COVER, COMPLETE THIS FORM & SEND IT TO US TODAY.

Your evoUV comes with a 2 year warranty. To extend this for no additional cost, simply complete the information below and return this form to us by post, email or fax, and receive a further 1 year warranty cover from the date of purchase on your evoUV. This gives you peace of mind for a full 3 years.

Complete this form, cut it out and return it using one of the following methods:



Post this in an envelope to:
**Evolution House,
Kellet Close, Wigan,
Lancashire, United Kingdom,
WN5 0LP**



Scan and email this form to:
marketing@evolutionaqua.com



Fax a copy of this form to:
+44 (0) 1942 418489

Your Name: _____

Your Address: _____

Postcode: _____

Country: _____

Tel N°: _____

Mobile N°: _____

Email: _____

Purchased From: _____

Date of Purchase: _____ / _____ / _____

Model of evoUV: _____

Serial Number: _____

Other Evolution Aqua products I use: (please tick)

Nexus 210 Nexus 310 EazyPod EazyPod Complete Cetus Sieve Dechlorinator
AirPumps Perfect Pumps Sequence Pumps Pure Pond Treatments EA Foods

Please send me information about other Evolution Aqua products including: (please tick)

Nexus 210 Nexus 310 EazyPod EazyPod Complete Cetus Sieve Dechlorinator
AirPumps Perfect Pumps Sequence Pumps Pure Pond Treatments EA Foods

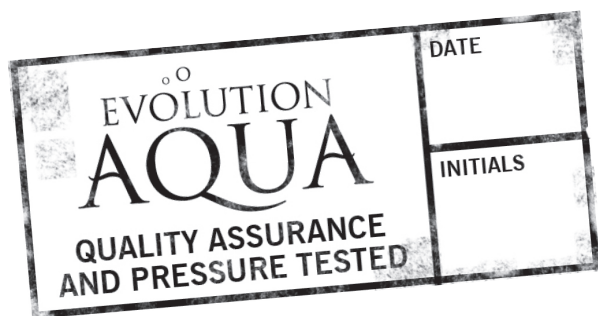
I have read and accept the terms and conditions listed in the warranty card, and understand the obligations of the Customer under this warranty.

Signature: _____ Date: _____ / _____ / _____

Evolution Aqua Ltd. may contact you in the future with product updates or offers, which may be of interest to you.
If you do not wish to receive this information please tick this box.



Evolution Aqua are the award winning pond filtration manufacturer who put innovation, research and development at the top of their agenda. With a proven track record for delivering the latest technology to the aquatics and fish farming markets - we are the first choice for everyone from the general hobbyist to the serious fishkeeper. Find out more about the evoUV and all of our other innovative products at www.evolutionaqua.com. The difference is clear.



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