

ECOPOWER

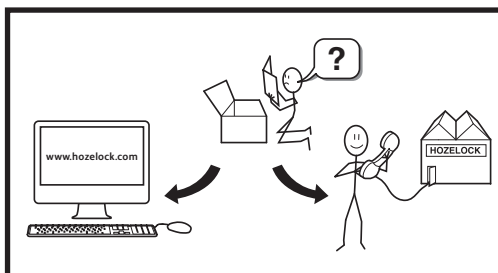
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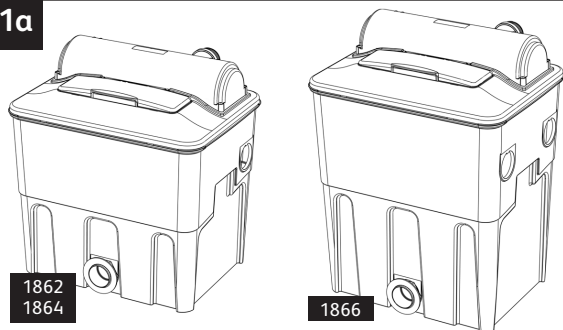
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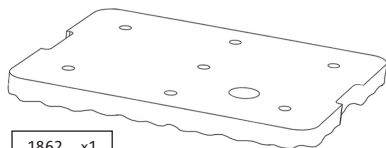
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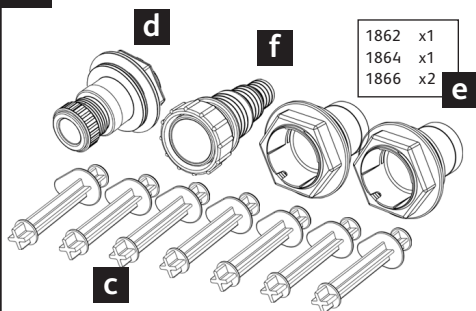


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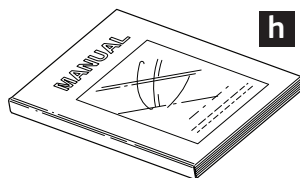
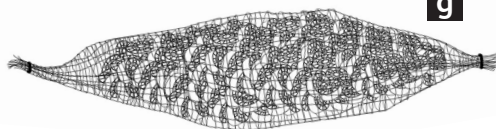


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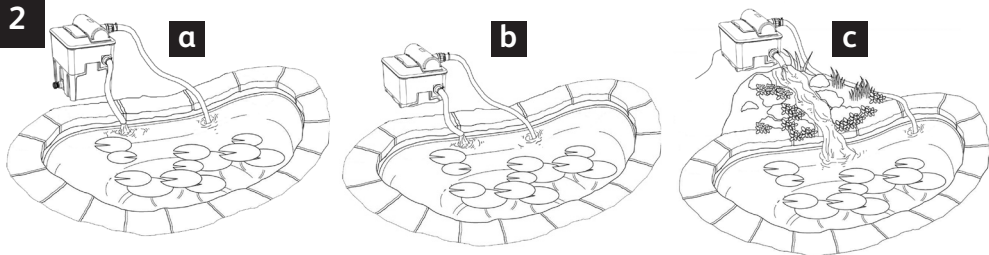
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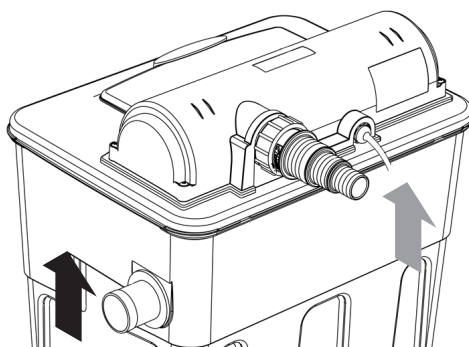
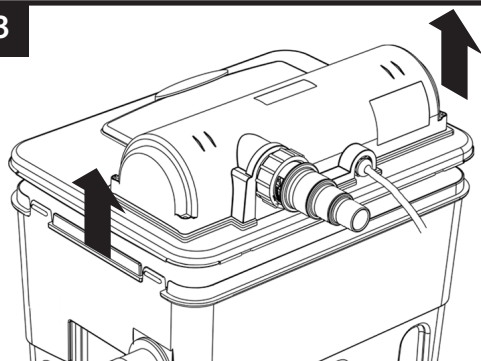
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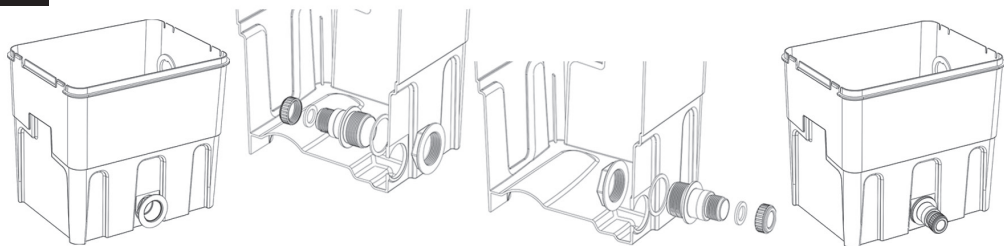
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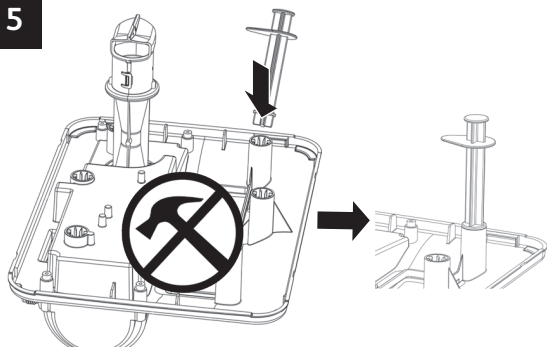
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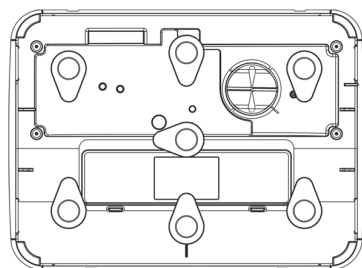
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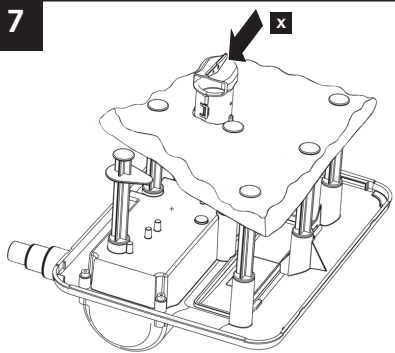
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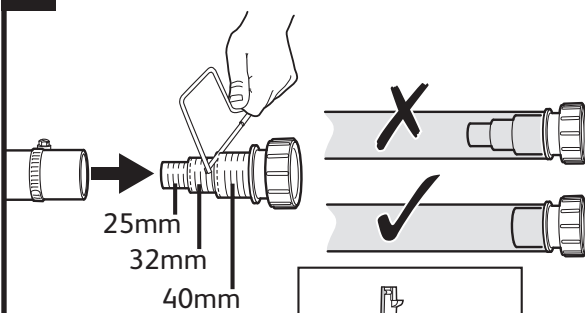
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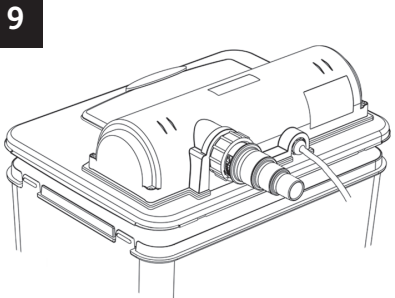
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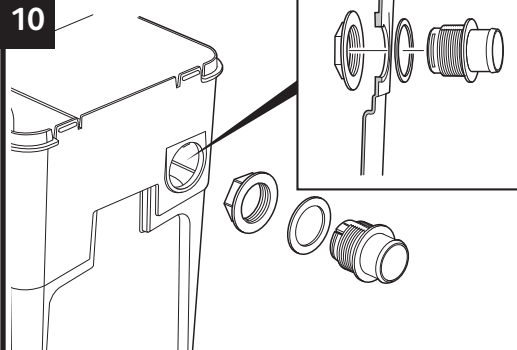
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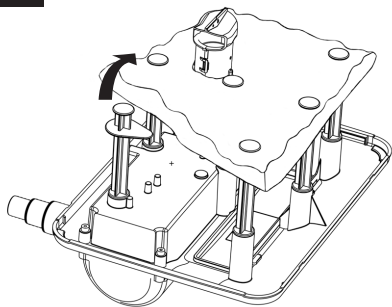
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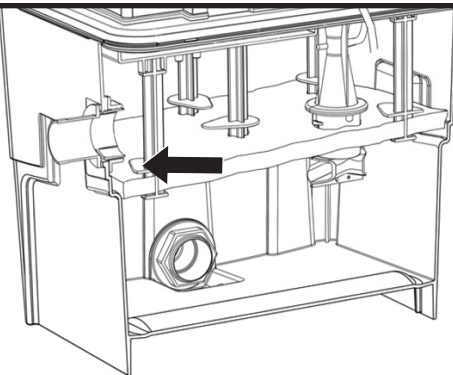
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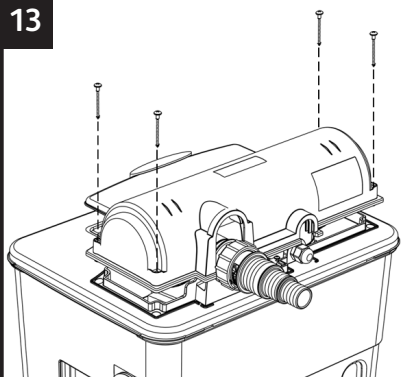
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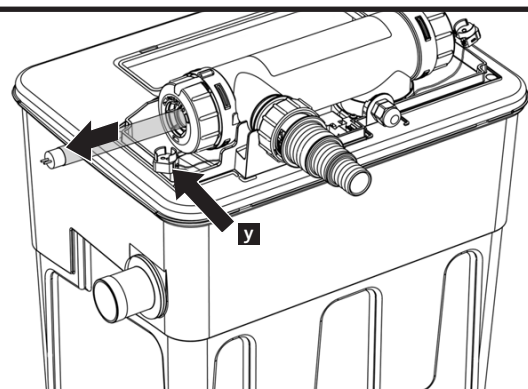
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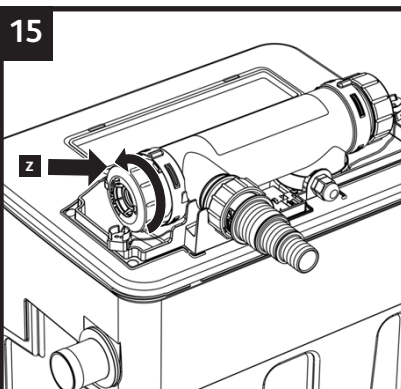
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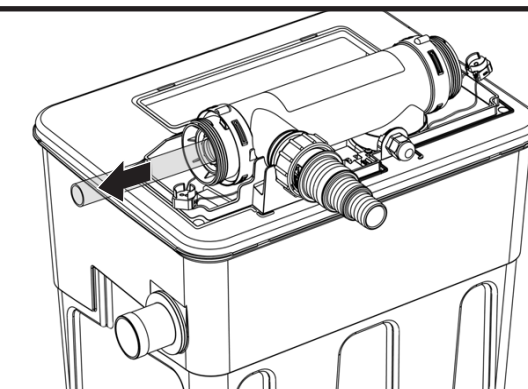
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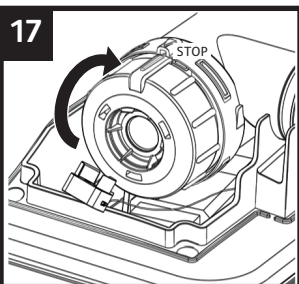
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Thank you for choosing a Hozelock quality product, you can be assured of many years of reliable service from this product.

INSTALLATION & OPERATING INSTRUCTIONS



READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION.

FAILURE TO OBSERVE THE FOLLOWING NOTICES MAY RESULT IN INJURY, PRODUCT DAMAGE OR LOSS OF FISH.

KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Hozelock Cyprio Ecopower+ garden pond filters can be sited almost anywhere (See Fig 2a,2b,2c). Used with the appropriate pond pump, it will improve water clarity, remove unwanted solid matter from the pond and convert dissolved organic and chemical fish waste into harmless compounds.

In addition, these combined filter/UVC units will give Guaranteed Clear Water if the advice given in the Hozelock Cyprio Filter Equipment Selection Chart and in these instructions is adhered to.

Attention: UV Caution

This appliance contains a UV-C emitter. Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation. UV-C radiation may, even in little doses, cause harm to the eyes and skin. The lamp is fitted with an interlock that will turn the lamp off in the event that the electrical housing is opened.

When switched on, the lamp can be checked for operation in dark conditions, by switching off the supply pump briefly and looking for a bluish glow from bottom of the Venturi (Fig 7 (x)). Do not run the product dry.

Warning: Do not attempt to operate the UV-C emitter when the top cover is removed from the product's lid.

Warning: The appliance must be disconnected from the supply before replacing the UV-C emitter

Important

This appliance must only be used by or under the supervision of a responsible adult who is capable of using the appliance in a safe way and who understands the hazards involved. Use and store this appliance out of reach of children and persons with reduced physical, sensory, or mental capabilities.

Maintenance of the electrical housing should only be carried out by a suitably qualified person or at a Service Centre.

Warning: Safety & Electrical Connections

1.1 WARNING: ALWAYS UNPLUG OR DISCONNECT ALL APPLIANCES IN THE POND FROM THE ELECTRICITY SUPPLY BEFORE PUTTING YOUR HANDS IN THE WATER WHILST EQUIPMENT IS BEING INSTALLED, REPAIRED, MAINTAINED OR HANDLED.

1.2 This filter has been designed for the use with garden ponds only. Do not use this filter for any other use (i.e. do not use this filter in swimming pools, etc). Using the product for any other application may result in injury or product damage.

1.3 Appliances that are obviously damaged must not be operated.

1.4 The clear tube inside the unit is made from quartz glass and care should be taken during installation and maintenance. We recommend the use of eye protection and suitable gloves.

1.5 Your Ecopower+ filter is weatherproof but not submersible. Position the unit upright near the pond but not where it can fall into the water or where the ground can become waterlogged (See the section, "Installation").

1.6 Important:
This product is supplied with 5m of 3-core electric cable. It is designed to be permanently wired to the mains supply. For connection to the mains supply use only 3-core cable (ref H05 RN-F). This has a minimum copper cross-section of 0.75mm² with Polychloroprene-Rubber insulation.

The termination to the mains supply should be:

- a) Permanent.
- b) Inside a dry weatherproof enclosure.
- c) Through a double pole switched fused spur to BS 3676.
- d) Fitted with a 3 or 5 amp fuse.

1.7 If an extension cable is required, this should be connected to the end of the unit cable using a weatherproof connector. The joint must be positioned in a suitable weatherproof housing. The extension cable should be of 3 core 0.75mm² Polychloroprene rubber insulated cable (ref: H05 RN-F) and permanently wired to the mains supply as described above in 1.6.

1.8 WARNING: This appliance MUST be earthed and it is essential that the connections are made using the following code:

- **BROWN** - live
- **BLUE** - neutral
- **GREEN/YELLOW** - earth.

- 1.9 Exposed cable runs should be sensibly positioned and protected by armoured conduit, especially if there is a risk of contact with gardening equipment such as forks and lawnmowers, or children and domestic animals.
- 1.10 Do not operate this product if the mains supply cable has become damaged in any way. If the cable is damaged, the unit should be disposed of according to local regulations.
- 1.11 A 30mA maximum Residual Current Device (RCD) MUST be fitted to the mains supply.
- 1.12 Permanent installations to the mains supply (hard wiring), must conform to the national and local wiring regulations. If in any doubt about wiring to the mains supply, consult a qualified electrician or local electricity authority.
- 1.13 Do not use the supply cable to lift the unit, as this may cause damage. If the product needs to be moved, the product should be switched off and lifted by gripping both sides of the vessel (Fig 3) or to lift the lid, grip both sides of the lid (Fig 3).
- 1.14 Do not operate your filter dry.
- 1.15 Do not operate or leave the unit in freezing conditions. (See the section, "Winter Storage").
- 1.16 This product is not suitable for water temperatures above 35°C or below 0°C.
- 1.17 Only use accessories which have been designed for use with this product. The use of any other accessories or spares may invalidate your guarantee.

Installing this product in the garden is classed as 'notifiable' in the Regulations for England and Wales. The Regulations require you to tell your local authority building control department that you intend to install this product before installation. Your local authority will let you know how you can get your installation approved.

General Guidance

- 2.1 The Technical Information Chart overleaf gives general guidance on the specifications of the filter, recommended flow rates and flexible hose diameter for garden ponds up to 10000 litres. However, for best results several other condition factors should be taken into consideration, as these reduce the capabilities of the filter.
 - **Pond depth:** Hozelock Cyprio recommends a minimum depth of 1.2m (4') for Koi ponds. For a pond with an average depth of less than 0.75m (2' 6") the Condition Factor is + 25%. Shallow ponds are subject to full penetration of sunlight, and warm up quickly. This encourages algae growth.
 - **Location:** Pond location determines the daily

amount of sunlight or shade a pond receives. Ponds exposed to full sunshine throughout the day have a Condition Factor of +25%.

- **Climate:** Climate affects water temperatures and fish activity rate/feeding requirements. The more active the fish, the greater the demands on the filtration system. In hot climates (ie South Africa), the Condition Factor is +35%. In temperate climates (ie Southern Europe), the Condition Factor is +15%. In a Northern European climate (ie most areas of Great Britain), the Condition Factor is +0%.

- **EXAMPLE:** You have a 2200 litre goldfish pond 0.75m deep (Condition Factor +25%). You live in London – a Northern European climate (Condition Factor +0%). The pond is exposed to full sunlight (+25%). The effective volume of your pond is therefore increased by 50% (25% + 25%), and you would need to size your equipment as though your pond held 3300 litres.

- 2.2 **Flow Rate:** For best results the pond volume should pass through the Ecopower+ every 1½ - 2½ hours, the fastest flow rate being recommended for Koi ponds. Do not exceed the maximum flow rate, as stated in the Technical Information Chart overleaf. Correct flow rate is essential if you are to obtain clear water. If your installation does not suffer from high losses (ie long hose runs) it may be necessary to adjust the flow to achieve the 1½ - 2½ hours turnover rate using a flow control hose tap.

Small diameter hose, unnecessarily long hose runs and a high pumping lift ('head') can all considerably reduce a pump's output. We recommend choosing a pump that will deliver the required flow against full static lift (= vertical distance between pond surface and filter inlet), plus 0.6m (2ft) to allow for friction losses in hoses.

The object of filtration is to transfer waste material from the pond into the filter, and so any pump used as part of the package should be capable of handling solids such as Hozelock Cyprio's range of Aquaforce pumps which have been specifically designed for ponds in the size range covered by Ecopower+. The pump should be positioned in the deepest part of the pond to ensure the best circulation of water in the pond and maximise its solids handling capability. The pump should be installed on a flat level platform which is raised 300mm off the bottom of the pond. This will prevent the pump sucking dirt directly from the bottom of the pond and will also ensure that sufficient water remains in the pond in the event of accidental leakage of pond water.

How to check your flow rate: Take a container

of a known volume and time how long it takes to fill (in seconds). Then divide 3600 by the number of seconds it takes to fill the container, and multiply by the volume (litres or gallons) of the container. The result will be the flow rate in litres or gallons per hour (lph or gph).

- 2.3 **Fish Stocking Density:** Under normal conditions and feeding regime, the Ecopower+ range will support up to 50cm per 1000 litres (10" of fish per 100 gallons) of pond capacity. Introduce fish slowly over the first few weeks, up to 20% of maximum recommended level, increasing this if you wish to 50% after six months. The balance will allow for fish growth.

- 2.4 **Pond Treatments:** Some medications/ treatments can degrade very quickly by UVC radiation. Consider switching off the filter during disease treatment. The mechanical and biological filtration will continue to work.

If treating your pond for blanketweed, turn off your pump and filter for the duration of treatment until the treated blanketweed has been removed from the pond.

- 2.5 Extra care should be taken with any hose connections as leaks will result in loss of water from the pond.

Before First Use

Inappropriate handling of this product during transit may result in damage to the quartz tube. Please inspect the quartz tube and seal before installation.

See the section "Maintenance" for details on how to access the quartz tube and lamp.

Installation

- 3.1 **Important:** Do not use a pump with a flow rate greater than that shown in the Technical Information chart overleaf or a maximum head greater than 3.5m with the Ecopower+ range of filters.

- 3.2 **Important:** Ecopower must only be installed in an upright vertical position.

Locate the Ecopower+ on firm, level ground where you can access it conveniently.

Ecopower filters are pump fed, external filter with an integral UVC unit, suited to either above ground (Fig. 2a), in-ground (Fig. 2b) installation adjacent to your pond or concealed at the top of a waterfall (Fig 2c).

If you choose to install your filter above ground, place the filter on flat level ground.

If you choose to part bury your filter, the excavation should be firmly back filled with compacted sand to support the unit.

Always ensure that the filter outlet(s) are at least 100mm above the level of the water in your pond.

- 3.3 **Connection -** Place the unit next to the pond and route the cable back to the mains supply. Ensure that you allow for enough cable for positioning the product in the desired location in the pond.

- 3.4 **For transportation the drain outlet has been fitted to the vessel back to front. Remove this by unscrewing the nut and replace it the correct way round as shown in (Fig 4).**

- 3.5 Turn the lid upside down and push the foam spacer legs (Fig 1c) into the spaces indicated shown in Fig 5. The point at the end of the legs should point inwards as shown in Fig 6.

NEVER USE A HAMMER TO FIT THE LEGS !

- 3.6 Push the foam (x2 on Ecopower+ 20000) onto the ends of the foam spacer legs. The large hole fits over the end of the yellow venturi outlet (Fig 7). The foam will only fit one way with the dimples facing away from the lid.

- 3.7 Ecopower+ filters incorporate an inlet hose tail (Fig 1f) to fit 20 - 40mm (3/4" – 1 1/2") hose (refer to Technical Information Chart overleaf) and outlet hose tail(s) (Fig 1e) to fit 40mm (1 1/2") hose. The pump inlet and filter outlet pipe should be at opposite ends of the pond for optimal water circulation in the pond. Bear this in mind when purchasing, measuring and cutting the Cypriflex hose.

Cut the inlet hose tail on your Ecopower+ Filter to the size appropriate for the diameter of the hose to be used (Fig 8) and fit it to the filter inlet (Fig 9). Attach a suitable length hose between the supply pump and the filter inlet securing the hose to the hosetails using a Hozelock Cyprio hoseclip, available separately.

- 3.8 The filter outlet connector and overflow moulding(s) (x2 on Ecopower+ 10000) should be secured to the side of the vessel (Fig 10).

The outlet hose (if fitted) should be secured in the same way as the inlet hose. Avoid kinks and bends, and keep hose runs as short as possible (preferably less than 1m) to minimise flow restrictions.

For best results we recommend that the end of the outlet hose (if fitted) does not dip into the pond.

- 3.9 Gently locate the lid onto the vessel and snap down around the rim. Looking through the viewing hatch, ensure that the foam sheet is positioned below the outlet(s) in the vessel (Fig 12).

Operation

- 4.1 Connect the filter's supply cord (See section 1 – Safety & Electrical Connections). This switches on the UVC lamp. You can check that the lamp is working in dark conditions by switching off the pump briefly and looking for the blue glow from the end of the yellow venturi outlet (Fig. 7 (x)) .
- 4.2 Switch on the pump.
- 4.3 Periods of Operation: Keep the filter working 24 hours a day. Ideally it should run all year round but at least throughout the feeding season (ie until water temperature falls below 10°C). In winter, operating the pump and filter will maintain a basic level of useful bacteria in the Ecopower+ and will help prevent the pond icing over in all but the severest weather conditions. If the pump is switched off for winter, the filter media (foam and/or plastic biomedica) must be thoroughly washed before resuming filtration in the spring, and your Ecopower+ will need to be re-matured from scratch (see 'Maturation'). Never feed your fish when the filter is not in use.

Maturation

- 5.1 Biological maturation means that the filter has built up enough nitrifying bacteria to convert harmful fish and other organic waste (ie ammonia, nitrite) into relatively harmless nitrate. The process normally takes 6-8 weeks, but depends on many factors such as water temperature, feeding rate and stocking density. Speed up maturation by adding a maturing agent such as Hozelock Cyprio Filter Start.

Cleaning

- 6.1 Ecopower+ filters deliver maximum performance with minimum maintenance. However, as the foam blocks up less water can flow through the foam and cleaning becomes necessary. If the pond is very dirty, the filter may need cleaning every few days at first, as it takes up waste matter very quickly. Once the pond becomes clearer, there will be less waste to remove and the filter will need cleaning less often.
- WARNING:** Prolonged running of the filter when it needs cleaning will result in difficulty in cleaning and may reduce the life of the foam. Switch off and isolate (by removing the fuse) the pump supplying water to the filter when it needs cleaning and the power supply to the Ecopower+ unit.
- 6.2 Switch off the supply pump at the mains.
- 6.3 Switch off Ecopower+ at the mains.
- 6.4 Gently remove the lid from the vessel (Fig 3).
- 6.5 Remove the foam(s) (Fig 11) and rinse it in the

water left in the vessel. Do not over clean. Drain the vessel of all the waste and water.

- 6.6 Reposition the clean foam sheet onto the ends of the foam spacer ensure that the foam is positioned with the venturi passing through it and with the dimples in the foam facing away from the lid.
- 6.7 Switch the supply to the Ecopower+ on and check that the UVC lamp is working.
- 6.8 Gently locate the lid onto the vessel and snap down around the rim. Looking through the viewing hatch, ensure that the foam sheet is positioned below the outlet(s) in the vessel (Fig 12).
- 6.9 Restart the pump, checking for leaks, which if left undetected could result in the pond being drained of water.
- 6.10 The biomedica is contained within a mesh bag. Normally, there is no need to remove the biomedica as any cleaning may kill the colonies of bacteria that make toxic waste harmless. However if the biomedica becomes heavily clogged, then remove the mesh bag containing the biomedica and rinse it in a bucket clean pond water and then replace it into the vessel. Never use tap water to clean the biomedica.

Maintenance

Maintenance of the electrical housing should only be carried out by a suitably qualified person or at a Service Centre.

Refer to the section "Safety & Electrical Connections" before attempting any maintenance.

Warning: Read these maintenance instructions before opening the appliance.

7.1 Replacing the UV lamp.

Warning: The appliance must be disconnected from the power supply before disconnecting the UV-C emitter.

A UV lamp's effectiveness reduces significantly over time so you should replace your lamp every 12 months even if the lamp is still functioning.

Remember: The product is fitted with an interlock that will turn the lamp off when the top cover is removed, so you can only see if the lamp is working in dark conditions, switching off the pump briefly and looking for a bluish glow from bottom of the Venturi (Fig 7 (x)).

Warning: Do not attempt to operate the UV-C emitter when the top cover is removed from the product's lid.

Warning: The appliance must be disconnected from the supply before replacing the UV-C emitter.

- 7.1.1 Switch off the supply pump at the mains.
- 7.1.2 Switch off Ecopower+ at the mains.
- 7.1.3 Remove the top cover / viewing hatch by removing the four screws (Fig 13).
- 7.1.4 Pull off the lamp terminals (Fig 14 y). Slide out the lamp (Fig 14). Dispose of the old lamp according to local regulations.
- 7.1.5 Slide in the replacement lamp and push the lamp terminals onto both ends of the UVC lamp.
- 7.1.6 Refit the top cover / viewing hatch and replace the four screws. The lamp will not work unless the top cover is screwed down.
- 7.1.7 Switch the supply to the Ecopower+ on and check that the UVC lamp is working.
- 7.1.8 Restart the supply pump.
- 7.2 Care of the quartz tube.

Especially in hard water areas the quartz tube sheathing the UVC lamp may become covered in lime scale. This will reduce the efficiency of the unit if it is allowed to build up. To clean, follow the below procedure.

- 7.2.1 Switch off the supply pump at the mains.
- 7.2.2 Switch off Ecopower+ at the mains.
- 7.2.3 Remove the top cover / viewing hatch by removing the four screws (Fig 13).
- 7.2.4 Remove the lamp as described above in 7.1.
- 7.2.5 Unscrew the two YELLOW compression nuts at each end of the UV housing and place to one side (Fig 15).
- 7.2.6 Slide out the quartz tube (Fig 16).
- 7.2.7 Wipe the outside of the quartz tube with a soft cloth moistened with a gentle cleaning agent (e.g. vinegar and water).
- 7.2.8 Inspect the quartz tube for any damage. If the quartz is cracked or damaged in any way, it should be disposed of and a new one fitted.
- 7.2.9 Slide the quartz tube back into the UVC unit. Reattach one of the yellow compression nuts loosely. Do not screw down.
- 7.2.10 Reattach the other yellow compression nut. Screw both compression nuts down at the same time. The quartz tube will align itself in the correct position. Screw down each nut until the stop on each yellow compression nut hits the stop on the UV shroud. The line on the nut will line up with the arrow on the UV Shroud. Do not attempt to screw the yellow compression nuts beyond the stop position (Fig 17).
- 7.2.11 Refit the lamp as described above in 7.1.
- 7.2.12 Refit the top cover / viewing hatch and replace the four screws. The lamp will not work unless the top cover is screwed down.

7.2.13 Restart the supply pump checking for leaks.

7.2.14 Switch the supply to the Ecopower+ on.

Winter Storage

When not in use, the unit should be removed, thoroughly washed and cleaned, dried and stored in a dry frost protected area. Always store the unit with the lid off to ensure adequate ventilation and drying.

Contact/Spare Parts

For product advice and spares please contact Hozelock Cyprio Consumer Services on 0121 313 1122 or visit www.hozelock.com

Hozelock Cyprio Clearwater Guarantee

WE GUARANTEE YOU CLEAR WATER OR YOUR MONEY BACK for a Hozelock Cyprio Ecopower+ when used with the appropriate pump.

NOTE: IN SOME CASES IT CAN TAKE UP TO 8 WEEKS FOR YOUR WATER TO BECOME CLEAR.

This guarantee runs for 12 months after purchase, provided that

- You have followed the installation and operating instructions.
- You are using equipment of the correct size and stocking level according to Hozelock Cyprio's sizing information.
- You consult our Helpline (0121 313 1122) early enough for any problems to be put right.
- The product has been returned undamaged.

A refund can only be authorised by Hozelock Cyprio and is made only at the place of purchase to the value of the purchase price of the Ecopower+ only. A Proof of Purchase will be required. Please note that the Clearwater Guarantee does not cover loss of water clarity when blanketweed, as opposed to greenwater algae, is the cause.

2 Year Product Guarantee

If this Ecopower+ (excluding lamp) becomes unserviceable within 2 years of the date of purchase it will be repaired or replaced at our option free of charge, unless in our opinion it has been damaged. Liability is not accepted for damage due to accident, improper installation or use. Liability is limited to replacement of the faulty unit. This guarantee is not transferable. It does not affect your statutory rights. To obtain the benefits of this guarantee, firstly contact Hozelock Cyprio Consumer Services (0121 313 1122) who may request that the unit is sent along with proof of purchase directly to the address below. Hozelock Cyprio Consumer Services on 0121 313 1122 or visit www.hozelock.com

Troubleshooting / FAQs

Problem	Possible cause	Remedy
No water flow through filter to pond.	Supply pump not switched on or not working.	Check that the pump is working and switched on.
	Supply hose blocked.	Check supply hose and pond return hose for blockages.
Reduced flow through filter	Foams are blocked.	Clean filter (See "Cleaning").
	Supply hose blocked.	Check supply hose and pond return hose for blockages.
Water does not clear	New Filter has not matured yet.	The pond water clarity should start to improve within 2-3 weeks, but full biological maturation can take 6-8 weeks before the filter is fully effective.
	Wrong sized filter for your pond.	Check you are using the appropriate filter for your pond set up.
	Wrong size supply pump.	Check your flow rate. See 2.2.
	Blown UV lamp.	Replace UV lamp.
	Old UV lamp.	Replace UV lamp every 12 months.
	Lamp not working	Check fuse, RCD and wiring.
	Foams need cleaning.	Clean filter (See "Cleaning").
	The outlet of the pond return hose is positioned above the supply pump	Move the pump or the outlet of the pond return hose so that they are as far apart as possible.
	Pond is overstocked with fish.	Reduce the quantity of fish in your pond.
	Overfeeding.	Only feed your fish with as much food as can be consumed in a few minutes. only feed once per day.

Technical Information

Part Number		1862	1864	1866
Range		Ecopower+		
Model		4000	6000	10000
Volts		230V 50Hz		
UVC (W)		8W	12W	16W
Total Power (W)		14	20	22
Maximum Pond size without Fish		8000 ltr (1760 gal)	12000 ltr (2640 gal)	20000ltr (4400 gal)
Maximum Pond size with Fish		4000 ltr (880 gal)	6000 ltr (1320 gal)	10000 ltr (2200 gal)
Max recommended Flow, Qmax, (lph)		2000 lph (440 gal)	2500 lph (550 gph)	4500 lph (9900 gph)
Recommended Hose Internal Diameter	Inlet	20-40mm	20-40mm	20-40mm
	Outlet	40mm	40mm	40mm
IP Rating		IPX4	IPX4	IPX4
Water Temperature Tmin-Tmax, (°C)		1-35°C	1-35°C	1-35°C

* Measured under controlled conditions



Hozelock Ltd.
Midpoint Park, Birmingham,
B76 1AB, England
Tel: +44 (0) 121 313 1122

www.hozelock.com
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Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. In the EU, when replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least free of charge.