



THE POND MASTERS GUIDE TO
**GREEN WATER
CLARIFIER**

PRO UVC 16200

PRO UVC 21600

PRO UVC 32400

PRO UVC MOD 64800



Established over 40 years ago, Blagdon are committed to producing a comprehensive range of high quality, easy to use, pond equipment. An ongoing programme of research and development ensures excellent performance and value for all their customers. This product excellence is demonstrated by Blagdon's award winning range of water gardening equipment. As a result Blagdon's reputation for quality is unrivalled amongst experienced pond gardeners and retailers alike.

Blagdon - The Pond Masters
The name you can rely on

www.blagdonthepondmasters.co.uk

Interpet, Dorking, Surrey, RH4 3YX



THE POND MASTERS GUIDE TO

GREEN WATER CLARIFIER

PRO UVC 16200 • PRO UVC 21600
PRO UVC 32400 • PRO UVC MOD 64800

Congratulations on purchasing a Blagdon Professional UVC system. Blagdon Professional Ultraviolet clarifiers have been manufactured with advanced UV technology to ensure effective long term control of green water. Please take the time to study this Pond master guide fully so that the maximum safety, ease of installation, and most effective use and maintenance of this equipment can be realised.

IMPORTANT

Please attach proof of purchase to this manual and file in a safe place.

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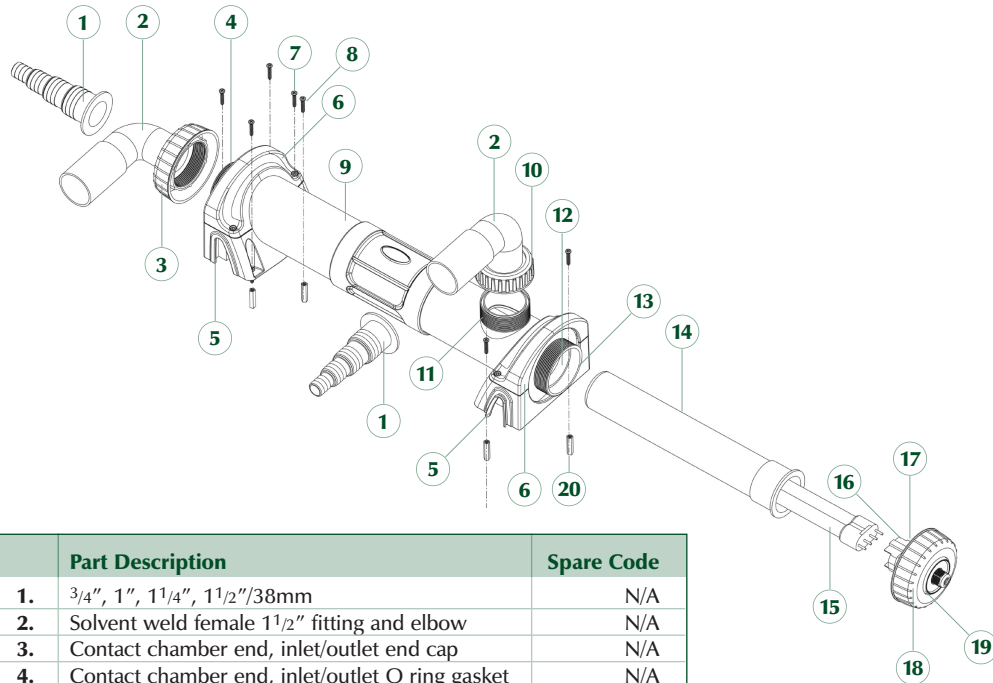
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GETTING TO KNOW YOUR BLAGDON PRO UVC

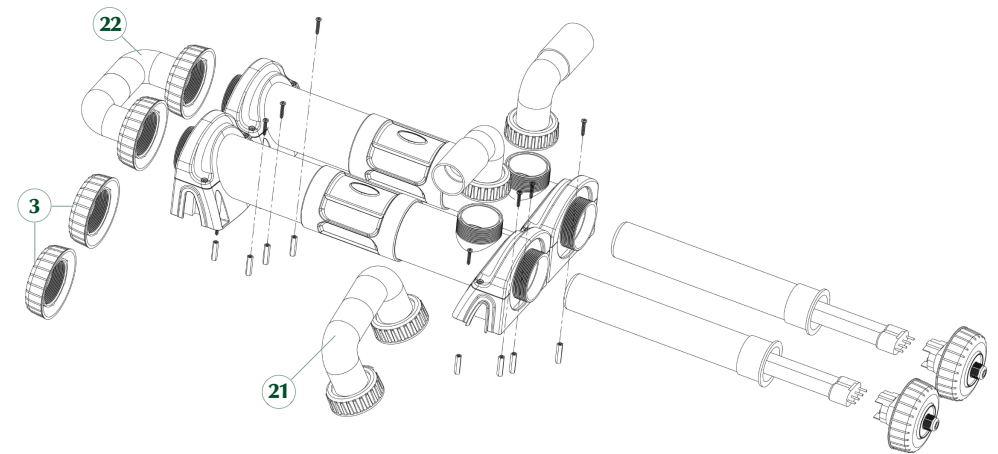
PRO UVC MODELS 16200 (18w) • 21600 (24w) • 32400 (36w)



Part Description	Spare Code
1. 3/4", 1", 1 1/4", 1 1/2"/38mm	N/A
2. Solvent weld female 1 1/2" fitting and elbow	N/A
3. Contact chamber end, inlet/outlet end cap	N/A
4. Contact chamber end, inlet/outlet O ring gasket	N/A
5. Modular linking bracket	N/A
6. Contact chamber bracket	N/A
7. Contact chamber bracket screw	N/A
8. Fixing bracket screws	N/A
9. Contact chamber	N/A
10. Contact chamber, inlet/outlet cap	N/A
11. Contact chamber, inlet/outlet O ring gasket	N/A
12. Quartz sleeve O ring gasket	See 14
13. Electronics cap O ring gasket	See 14
14. Quartz sleeve & O rings	18w 1060035 24w 1060042 36w 1050348
15. UVC lamp	18w 1050128 24w 1050111 36w 1050395
16. UVC lamp socket	N/A
17. Micro switch	N/A
18. Electronics cap	N/A
19. Lamp indicator window	N/A
20. Fixing bracket wall plugs	N/A

GETTING TO KNOW YOUR BLAGDON PRO UVC

PRO UVC MODEL 64800 (72w MODULAR)

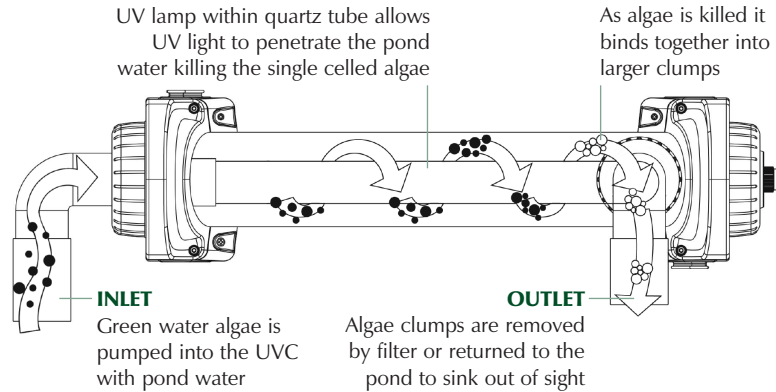


Part Description	Spare Code
21. Contact chamber link pipe	Link kit
22. Contact chamber end link pipe	1050388

The 'link kit' containing both parts 21 and 22 is included with the 'PRO UVC 64800 (72w Modular)'

GETTING TO KNOW YOUR BLAGDON PRO UVC

HOW A UV CLARIFIER WORKS



TECHNICAL SPECIFICATION CHART

PRO UVC Model	Max pond size over 75cm / 2'6" average depth shaded	Pond in full sunlight	Shallow pond - under 75cm/2'6" average depth	Pond in full sunlight and shallow
16,200	16200ltr / 3564gal	12150ltr / 2673gal	12150ltr / 2673gal	9112ltr / 2005gal
21,600	21600ltr / 4752gal	16200ltr / 3564gal	16200ltr / 3564gal	12150ltr / 2673gal
32,400	32400ltr / 7128gal	24300ltr / 5346gal	24300ltr / 5346gal	18224ltr / 4009gal
64,800	64800ltr / 14256gal	48600ltr / 10692gal	48600ltr / 10692gal	36450ltr / 8019gal

PRO UVC Model	Pond with Koi full sunlight and shallow	Recommended Max Flow	Recommended Hose Size Inlet & Outlet	Solvent Weld Pipe Inlet & Outlet
16,200	4556ltr / 1002gal	8100ltr / 1782gal	38mm / 1 1/2"	1 1/2" PVC
21,600	6075ltr / 1336gal	10800ltr / 2376gal	38mm / 1 1/2"	1 1/2" PVC
32,400	9112ltr / 2005gal	16200ltr / 3564gal	38mm / 1 1/2"	1 1/2" PVC
64,800	18225ltr / 4009gal	32400ltr / 7128gal	38mm / 1 1/2"	1 1/2" PVC

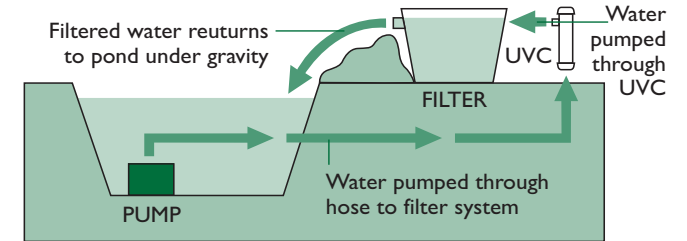
PRO UVC Model	16,200	21,600	32,400	64,800
Watts	18 Watts	24 Watts	36 Watts	72 Watts (2 x 36w)
Voltage	230 Volts	230 Volts	230 Volts	230 Volts
Hertz	50Hz	50Hz	50Hz	50Hz
Safety Rating	IP56CE	IP56CE	IP56CE	IP56CE
Cable	5 metres	5 metres	5 metres	2 x 5 metres
Pressure Rating	2BAR 29PSI	2BAR 29PSI	2BAR 29PSI	2BAR 29PSI

INSTALLATION

CONVENIENT INSTALLATION

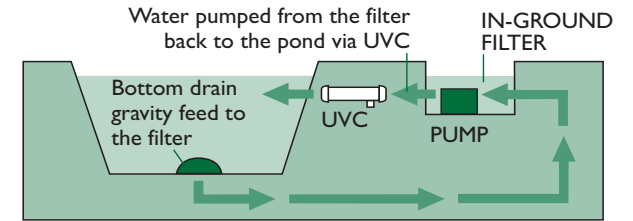
IN-GROUND FILTER SYSTEM:

A gravity-fed in-ground filter linked to the pond by a bottom drain and pipework. Water is returned to the pond by a pump in the in-ground filter via the UVC.



ABOVE-GROUND FILTER SYSTEM:

Water pumped from the pond passes through the UVC (killing the algae) and then through the filter before returning to the pond (under gravity) via a waterfall.



INLET/OUTLET INSTALLATION OPTIONS

Pond professional UVC can be installed correctly with the flow entering or exiting from either inlet/outlet.

Pond professional UVC can be connected to your pump correctly with either the Multi hosetail hose fittings or the solvent weld female solid pipe work adapters provide.

IMPORTANT: Access to the electronics cap should be taken into account when sitting the UVC in order that viewing the lamp indicators is convenient, and replacement of the UV lamps and if required Quartz sleeve can be achieved easily.

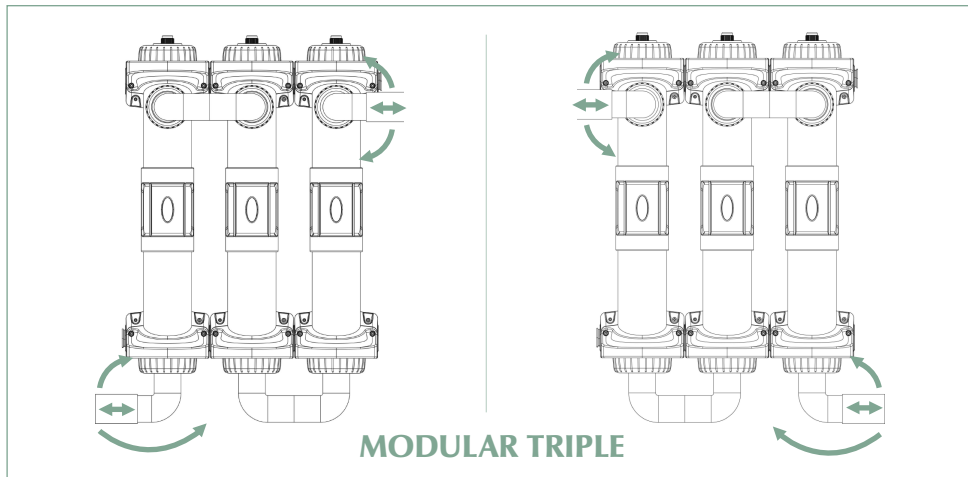
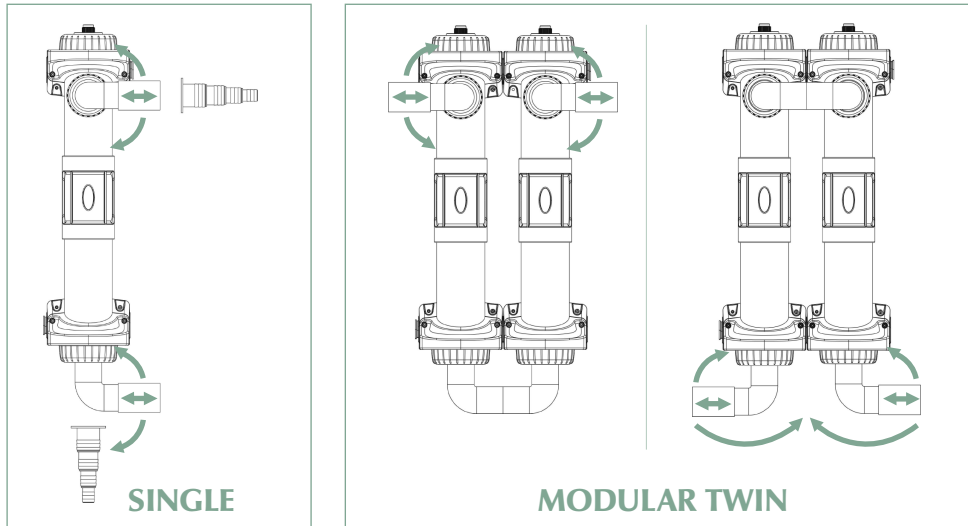
Please note that even after the UVC has been permanently installed using the fixing brackets screws and wall plugs the UVC contact chamber can be removed independently by removing the contact chamber brackets / screws (see 'Getting to know your UVC' on pages 3 and 4 - parts 6 - 7).

INSTALLATION

MODULAR CONNECTION OPTIONS

PRO UVC Models 16200 (18w), 21600 (24w) and 32400 (36w) use the same contact chamber and pipe work fittings and can be combined to create a modular system when used in conjunction with the optional link pipe fittings set (included in the Modular 64800 2x 36w model) (see parts 21/22 on page 3). Please see below for the range of configurations that can be achieved and chose the most suitable for your installation requirements.

Modular fittings set complete (Code: 1050388) please see your retailer for details.



INSTALLATION

IMPORTANT: The inlet/outlet hose or solid pipe work should be installed over as short a distance as possible with no kinks and the minimum number of bends. This will minimise flow restrictions and back pressure on the pump resulting in the minimum loss of pump flow rate. Pro UVCs must cause some restriction in the flow in order to work effectively, however this product has been specifically designed to minimise this effect.

CONNECTING INLET HOSES

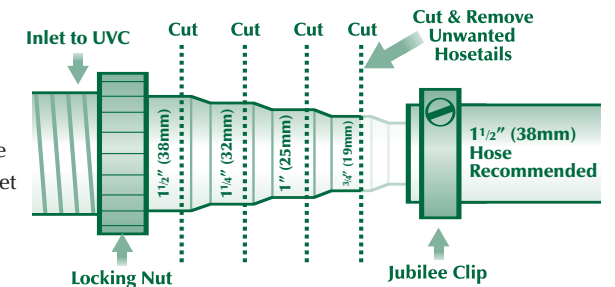
The recommended hose size for your PRO UVC is stated in the UVC performance and specification charts on page 3.

Always secure hose with a jubilee clip. Warming the hose in a bucket of boiling water can aid fitting.

Always ensure that the smaller diameter hosetail is cut off and removed to prevent reduced UVC performance.

Use the shortest possible hose lengths to minimise flow restrictions.

Avoid folds and kinks in the hose, which will reduce flow and UVC performance.



CONNECTING INLET/OUTLET SOLVENT WELD SOLID PIPE WORK

Solvent weld waste pipe work cement should be used to permanently glue the connection.

The Two female solvent weld 1 1/2" (43mm) internal diameter solid waste pipe work connectors with elbows provided should be cleaned with pipe cleaning fluid along with pipe the work to be inserted.

Always remove excess cement from the outside, and the inside of the pipe work immediately.

IMPORTANT: The UVC has been designed to be operated when water is passing through the contact chamber, always turn off the lamps if the pump system is not operational to prevent overheating.

INSTALLATION

CONNECTING TO YOUR PUMP

The pump supplying the PRO UVC must not have a pumping head exceeding 20m - 2 Bar.

The maximum flow rate recommended is stated in the UVC performance and specification chart.

This flow should not be exceeded.

The ideal flow rate for your pond is to pump the volume of the pond water through the UVC every 2-4 hours. To calculate your pond volume: average length (m) x average width (m) x average depth (m) x 1000 = Litres Pond Volume.

To calculate your pump's flow rate, fill a container from the outlet hose of the UVC at the pond side.

Time how long this takes in seconds e.g. a 10 ltr bucket takes 12 seconds to fill. Divide 3600 (the number of seconds in an hour) by the time it takes to fill the bucket e.g. 12 seconds. Then multiply by the volume of the container. e.g. 10 ltr. Therefore - $3600 \div 12 = 300$ seconds $300 \times 10 \text{ ltr} = 3000$ ltrs per hour flow rate.

To increase flow you may need to get a larger pump. If flow is too high use an inline valve to reduce it.

The purpose of the pump is to transfer green water from the pond to the PRO UVC.

Placing the pump at the opposite end of the pond to the UVC will give the best results.

UVC LAMPS & QUARTZ SLEEVE MAINTENANCE

The UVC lamp must be replaced every six months / once a season. It is recommended that the lamp is replaced and reconnected in the spring.

The Quartz sleeve can become coated in lime scale build up in hard water areas. This should be carefully removed from the quartz sleeve and cleaned with a soft cloth.

A wet test must be carried out after maintenance to ensure there are no leaks before the UVC is reconnected.

WET TESTING THE UVC

IMPORTANT: A wet test of the UVC under operating conditions must be carried out before the UVC or electrical supply is installed.

Connect the UVC to the pump following all installation instructions.

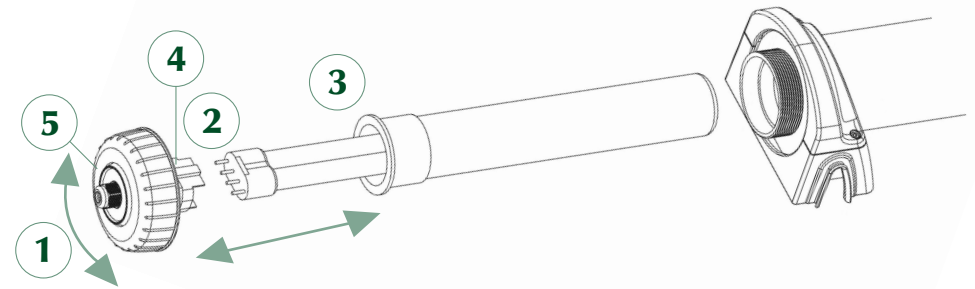
After running for 24 hours check for leaks.

INSTALLATION

TESTING/REPLACING THE UVC LAMP

IMPORTANT: Ensure that the mains supply is switched off and the power isolated before removing the UVC cover.

1. Unscrew the UVC electronics cover cap.
2. Inspect the UVC cap and Quartz sleeve for water leaks.
3. If there are no signs of leakage reverse the procedure ensuring that the Cover O-ring is in place.
4. This unit is protected by a micro switch that prevents the UVC light from illuminating when the cover is removed even if the power is on.
5. In order to check that the UVC lamp is operating check the lamp indicator window. This operation may need to be carried out at dusk as UVC lamps emit a dim blue light under normal operation.



If there has been any damage to the unit please return to the point of purchase for inspection. This test should be repeated whenever the the bulb or quartz is changed.

WARNING: Direct exposure to UVC light can damage your eyes or skin.

ELECTRICAL INSTALLATION

Electrical installation - UVC



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.

Do not use the supply cable to lift the UVC 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.

IMPORTANT: Please note all electrical work on garden lighting and power installations must comply with part P of the building regulations. Failure to comply is a criminal offence. If the installation of this product is not carried out by a competent electrician who is registered under the Part P self-certification scheme then you must notify the local building control department before work begins. For further information and guidance on this matter and other electrical installations in your home that might be covered by the relevant legislation, contact your local authorities building control department.

For permanent installations to the mains supply, it is necessary to conform to the regulations of the local electricity authority and this would include the use of a metal or plastic conduit to protect the cable.

Attention has been drawn to the fact that special rules may exist concerning the installation of your pond UVC (i.e. local building regulations).

This UVC must not be used in swimming pools, or areas where people are in contact with the water.

Always disconnect the mains electricity supply whilst the equipment is being installed, repaired, maintained or handled. Consult a qualified electrician if in any doubt about wiring this product to the mains supply.



Electrical/Safety

UVC Warning: Caution - Dangerous Ultra Violet Radiation. The rays from the UVC lamp are harmful to eyes and skin.

Always turn off UVC electrical supply before any maintenance.

To protect unit from flooding, leave a minimum 5cm showing above ground level to protect UVC electrics.

Never immerse unit in water.

Locate unit 1m minimum from pond edge to ensure the UVC cannot fall in.

MAINTENANCE & CLEANING

Annual maintenance

Check for wear

Once a year you should dismantle your PRO UVC. Dismantle the UVC examining all the parts for wear or damage, replacing any parts show obvious signs of wear or damage. (see getting to know your PRO UVC for replacement codes and parts descriptions on pages 2 and 3).

Winter storage

The UVC can be run year round if the pump flow is maintained, this is the best option. Alternatively in winter the UVC may be switched off. Follow annual maintenance procedure and store frost-free in the house or garage until spring.

TROUBLESHOOTING

In order to correctly identify if you have green water or cloudy/brown water, a settlement test should be carried out.

Take a glass of pond water and allow to settle for a few hours. When the glass is stirred a small layer of settled waste can be seen at the base of the glass. This indicates that you have brown or cloudy water and that your UVC is working correctly. If there is no settlement it indicates that you have green water and the UVC is not working correctly.

UVC leaks

- Check that the UVC inlet/outlet caps and O-ring have been correctly assembled and that they are hand tight.
- PTFE tape may be needed to give a water tight seal and should be applied to the inlet or outlet hosetails.
- Always secure the UVC inlet hose and outlet hose with a jubilee clip.

TROUBLESHOOTING

Cloudy/brown water

- The flow rate / pond turnover is too high or too low. Check that you have correctly calculated the pond volume and that pump flow rate is within limits. (see connecting your pump page 6)
- The filter is not being supplied with water 24 hours a day. Do not turn off your pump or UVC. Continuous running is needed to maintain a clear and healthy pond.
- Your filter foam/media is insufficiently blocked to trap the fine waste. Treat with Interpet Clear Pond treatment.
- Do not clean filter foams or media until it is thoroughly blocked.
- The water is extremely dirty, remove pond waste and leaves - carry out a partial water change.
- Filter is incorrectly sized - refer to your filter performance and specification chart. Calculate the pond volume.

Green water

- Settlement test the water to ensure that there is no sediment suspended in the water. If there is, follow the brown cloudy water trouble shooting guide.
- In order to check that the UVC lamp is operating, view the lamp indicator window, a faint blue light should be seen. This operation may need to be carried out at dusk as UVC lamps emit a dim blue light under normal operation. Turning the lamp on and off may aid visual identification. (Ensure the UVC lamp is not more than 6 months old).
- The UVC may be working effectively but the filter foam/media is too clean and is unable to remove the fine coagulated waste. Treat the pond with Interpet Clear Pond and do not clean the foams/media until they are blocked.
- The flow rate of the pump exceeds the maximum flow rate that the UVC is able to handle. Check the UVC specification chart and reduce the pump flow rate if needed.
- The filter is too small for the pond, check your filter selection chart.
- The UVC quartz sleeve is dirty or coated in lime scale. Gently remove the quartz sleeve and clean.
- Follow all cloudy water trouble shooting points.

UVC light not illuminated

- Check all fuses / RCD and electrical connections follow electrical installation (pages 7-8).

IMPORTANT

FAULTS - PROBLEMS PROCEDURE

Before returning your PRO UVC to your dealer or contacting our Consumer Advice Department, please carry out the following steps. This will solve most problems quickly and easily.

1. Ensure electrical procedures have been followed fully. Check fuses and any cable connectors/switch boxes.
2. **(a)** Follow maintenance procedure fully. **(b)** Check location and connecting your pump details including flow rates. **(c)** Ensure that your pond volume and pump flow rate meet the maximum pond size recommended for the filter model on the filter performance and specification chart. **(d)** Follow troubleshooting guide.
3. If there is a mechanical breakdown of the UVC, return to the point of purchase for inspection and advice (You will need proof of purchase).

CONSUMER ADVICE CONTACT DETAILS

Interpet (Blagdon) Consumer Advice Department

Vincent Lane, Dorking, Surrey RH4 3YX

Telephone: 0845 226 7437

(Monday to Friday 10am to 1pm except Bank Holidays - Times may vary)

Fax: 01306 876712 **E-mail:** customercare@interpet.co.uk

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 UVC. If the UVC 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 UVC lamp, which will need replacing when worn or every 6 months. If any parts are needed, spares are available from your retailer.