

Biofiltration

Commercial Ultraviolet Water Steriliser including Titan UV Suitable for Saltwater & Freshwater Applications

INSTRUCTIONS FOR INSTALLATION AND USE

All Tropical Marine Centre Commercial Ultraviolet Water Sterilisers are supplied with two-inch solvent weld unions for easy connection to existing imperial and US plumbing fittings (excluding 1 lamp and 2 lamp units).

To connect to metric plumbing, adapters can be supplied on request (2"×63mm socket adapter, part number 7545).

We advise that a two inch bypass system is incorporated to the installation of the UV unit to simplify future servicing and maintenance.

IMPORTANT SAFETY INFORMATION - Please Read Carefully

- All units are pressure tested before leaving our facility; however quartz sleeves may migrate during transport or even in long-term storage due to temperature fluctuation. Always check that they are in place and sealed with the o-rings before turning on the water supply. This can be done by removing the lamp caps and running a finger around the quartz tube to ensure it is seated centrally on the unit. Please also ensure that the locking nuts are secure, as this creates the water seal against the quartz sleeve. These should be hand tightened only.
- It is important to hydraulically test the units on installation and commissioning, prior to connecting to mains power.
- For long term storage, it is advised to store in a cool, dry environment, out of direct sunlight.
- All units must be mounted with the lamps in a horizontal position. Never mount the unit with the lamps in a vertical position. Incorrect mounting and positioning can result in malfunction and permanent damage to the unit.
- Never look directly at an illuminated UV lamp.
- Do not operate the unit when disconnected from the water supply.
- Do not allow the unit to run dry.
- Always isolate the unit from mains electricity and turn off the water supply prior to carrying out maintenance.
- Always disconnect from mains supply before putting your hands into the water.
- Electricity should be supplied through a Residual Current Device (RCD) with a rated residual operating current not exceeding 30mA.
- The unit must be earthed. Do not use a fuse larger than 3 amps.
- Rating: UK and European models 220–240V 50/60Hz. Class I IP64.
- Rating: USA models 100–277V 50/60Hz. Class I IP64.
- The unit must not be submerged in water.
- The unit must be fully frost protected or taken inside during the winter months.
- Do not install it above or immediately alongside exposed water, to prevent the unit falling into it.

CONNECTION TO ELECTRICAL SUPPLY

If in doubt, consult a qualified electrician.

CAUTION:

- Installation must comply with the relevant local wiring guidelines and legislation.
- Please consult a qualified electrician. Do not install on the same electrical circuit as inductive loads [e.g. magnetic lighting ballasts, pumps and other motors], as these can cause surges which can damage the steriliser's control gear.
- Suitable mains cable should be used to wire the pumps, UV steriliser and any additional electrical equipment supplied with the unit. All electrical equipment is provided for connection to single-phase supply, unless specified otherwise. If in doubt, consult a qualified electrician.
- A switch with a minimum 3mm contact separation must be installed to allow safe and easy disconnection from the electrical supply during maintenance.

Internal fuse replacement

Always isolate from mains supply before undertaking any maintenance. Only use a suitably rated fuse.

MAINTENANCE PROCEDURES

IMPORTANT SAFETY INFORMATION - Please Read Carefully

- Never look directly at an illuminated UV lamp.
- Always isolate the unit from mains electricity and turn off the water supply prior to carrying out maintenance.
- If the quartz sleeve is accidentally cracked it must be replaced prior to reconnection to either the electrical or water supplies. If you do not have a replacement quartz sleeve, remove the broken sleeve and use the blanking caps provided with the unit to close off the ends of the affected tube.

HALF-YEARLY MAINTENANCE

- All maintenance should only be undertaken by trained and competent staff.
- The UV lamps should be changed at 4000-hour [approximately six months] intervals to achieve a high UV efficiency. Should the lamps only be changed at 8000 hours intervals [approximately annually] there is a 15% depreciation in UV efficiency over one year.

UV LAMP AND QUARTZ SLEEVE

Replacement Procedure

1. Isolate the ultraviolet steriliser from the electrical supply.
2. Isolate the ultraviolet steriliser from the water supply by closing any supply valves and/or opening any installed bypass.
3. Drain the water from the unit by opening the drainage tap [orange bib tap] located on the bottom support bar of the unit. Wall mounted units are not fitted with a drainage tap.
4. Unscrew the dipmould guard and carefully remove the numbered lamp end cap from the lamp. Repeat this procedure at the opposite end of the same lamp assembly.
5. Carefully slide out each used UV lamp ensuring that no pressure is applied to the quartz sleeve.
6. Unscrew the compression fitting [Quartz Sleeve Lock Nut] at either end of the lamp assembly.
7. Remove the o-ring at either end of the quartz sleeve assembly.

NOTE: If water pours out of the unit at this stage then the unit has either not been isolated from the system or not drained prior to commencing the maintenance procedure.

8. Remove the o-rings and discard them. O-rings should be replaced at each service interval [part number: 5281].
9. After removing the o-ring, carefully slide out the quartz sleeve. Clean the quartz sleeve by washing in warm soapy water. Rinse it thoroughly in fresh water, then dry, and polish it using a paper towel.

NOTE: If the quartz sleeve has calcified with lime scale deposits from the water it should be cleaned with a proprietary plastic kettle descaling solution, following the manufacturer's recommendations. Plastic gloves and eye protection should be worn for this process. The quartz sleeve should be rinsed in fresh water, dried and polished with a paper towel.

10. To reassemble the unit reverse the above procedure by carefully sliding the quartz sleeves back into the plastic housing and locating it correctly. Slide new o-rings over either end of the quartz sleeve and locate them into the o-ring recess on the main casing.
11. Ensure the female threads on the compression fitting and the male threads on the main plastic body are clean. Wipe a little silicon grease [NOT silicon sealant] onto these threads. As these threads are only serviced twice a year, this lubrication will help prevent them binding. Replace and firmly hand tighten the compression fittings.

NOTE: The compression fitting must be adequately **hand-tighten only** onto the o-ring and quartz sleeve or the unit will leak water when reconnected to the main system.

12. Once all the quartz sleeves, o-rings and compression fittings have been reassembled, the drainage tap at the base of the unit must be closed and any utility valves be reopened. Check each assembly to ensure there are no water leaks. If water is leaking from any of the assemblies then the unit must be drained down again following the procedure above. At the points where water is leaking, check the quartz sleeves for damage and check that the o-rings are correctly positioned.
13. Make certain that the compression fittings are fully tightened.
14. Assuming there are no water leaks, slide the new UV lamp into the quartz sleeve and replace the lamp ends. Each end cap has a unique number that refers to each lamp. It is critical that the correct lamp end cap is fitted to the appropriate lamp.
15. Always ensure that water is circulating through the UV steriliser before the lamps are turned back on.
16. Once all the lamps have been connected, the UV steriliser unit should be turned back on. Check each lamp to verify that it is working. Only view the lamp through the plastic locknut compression fitting. Never look directly at an exposed UV lamp.

IMPORTANT:

The plastic body of this unit has been manufactured from polymers specifically stabilised to protect them from the effects of germicidal UVC light emitted from the lamp.

Despite the UV protection, the unit will be eroded over time by a combination of the UVC and water flow.

As a matter of course, inspect the unit whenever lamp changes are carried out.

Make sure that the unit does not show signs of excessive deterioration.

Replacement parts are available from Tropical Marine Centre.

UV Lamp and Quartz Sleeve SPARE PARTS

Code	Product
6056	Replacement UV Lamp 55 watts
5277	Replacement Quartz Sleeve (871 x 30mm)
5281	O-Ring for Quartz Sleeve (29 x 4mm)
PP110WL/NUT	Quartz Sleeve Lock Nut
COMUVCAPASSY	Tube Blanking Cap
P1TUBECGUK (*)	Replacement Control Pod for 1 lamp unit
T1TUBECGUK (*)	Titan replacement Control Pod for 1 lamp unit
P2TUBECGUK (*)	Replacement Control Pod for 2 lamp unit
T2TUBECGUK (*)	Titan replacement Control Pod for 2 lamp unit
COMUVPODAUK (*)	Replacement Control Pod A (Power in, Link out)
TCOMUVPODAUK (*)	Titan replacement Control Pod A (Power in, Link out)
COMUVPODBUK (*)	Replacement Control Pod B (Link in, Link out)
TCOMUVPODBUK (*)	Titan replacement Control Pod B (Link in, Link out)
COMUVPODCUK (*)	Replacement Control Pod C (Link in only)
TCOMUVPODCUK (*)	Titan replacement Control Pod C (Link in only)

[*] When ordering for 110V, change the last two letters from 'UK' to 'US'.



UK
Solesbridge Lane
Chorleywood
Hertfordshire WD3 5SX
England

Call +44 [0]1923 284151

Iberia
Rua Cidade de Paris 6
Parque Industrial do Arneiro
2660-456 São Julião do Tojal
Portugal

Call +351 [0] 219 739 140

biosystems-tmc.com

info@biosystems-tmc.co.uk

