

V² Vecton

Aquarium UV Sterilisers



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IMPORTANT . WICHTIG . BELANGRIJK . IMPORTANTE



Always isolate the unit from mains electricity before carrying out any maintenance.

Isolez toujours l'appareil du courant de secteur avant de procéder à tout entretien

Vor Ausführung irgendwelcher Wartungsarbeiten müssen Sie immer zunächst die Stromversorgung der Einheit unterbrechen.

Isoleer het toestel steeds van de hoofdleiding voordat u een onderhoud uitvoert.

Scollegare sempre l'apparecchio dall'alimentazione di rete prima di intraprendere qualsiasi operazione di manutenzione.

Aísle siempre la unidad de la red eléctrica principal antes de llevar a cabo ningún tipo de reparación o mantenimiento.

Dispose of this unit responsibly. Check with your local authority for disposal information. UVC bulbs must not be disposed of in household refuse but must be taken to an authorised collection point for environmentally responsible disposal.

Éliminez cet appareil en respectant la législation en vigueur, que vous pouvez obtenir auprès de vos autorités locales. Les ampoules UVC ne doivent pas être jetées avec les déchets domestiques mais emmenées dans un centre autorisé où elles seront éliminées de manière écologique.

Entsorgen Sie diese Einheit auf eine verantwortungsvolle Weise. Informationen über die Entsorgung erhalten Sie bei Ihrer Kommunalbehörde. UVC-Röhren dürfen nicht zusammen mit dem normalen Haushaltsmüll entsorgt werden, sondern müssen zu einer genehmigten Sammelstelle gebracht werden, wo sie umweltfreundlich entsorgt werden können.



Gooi dit toestel op een verantwoorde manier weg. Informeer bij uw plaatselijke autoriteit voor informatie over afvalverwerking. UVC-lampen mogen niet bij het huisafval worden gegooid en moeten naar een erkend verzamelpunt gebracht worden voor een verantwoorde afvalverwerking.

Smaltire l'unità in modo responsabile. Per ulteriori informazioni contattare gli enti locali. Le lampade UVC non devono essere smaltite con i rifiuti domestici ma devono essere portate a punti di raccolta autorizzati per lo smaltimento in conformità con le leggi ambientali in vigore.

Deseche esta unidad de forma responsable. Pida información a las autoridades locales sobre cómo proceder correctamente. Las bombillas UVC no pueden desecharse junto con la basura doméstica, sino que deben ser llevadas a un centro de recogida de residuos autorizado para desecharlas sin dañar el medio ambiente.

Instructions for Installation and Use

This V²ecton unit is supplied with two universal hoesetails for connecting the steriliser to the water system. Installation is explained in detail below, but please read the following safety information first.

Important Safety Information - Please Read Carefully

- 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.
- 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. Class I. IPX3. USA models: 120v 60Hz.
Model 200/G8T5: 15-17watts. Model 300/G16T5: 24-26 watts
Model 400/G15T8: 23-25watts. Model 600/G25T8: 36-38 watts
- The unit must not be submerged in water.
- If the quartz sleeve is cracked, replace it immediately.
- This unit is designed to be used indoors and is not suitable for any outdoor applications.



Product Information

This unit is manufactured and conforms to:-

Safety: BS EN 60335-1: 2002. BS EN 60335-2-55: 2003

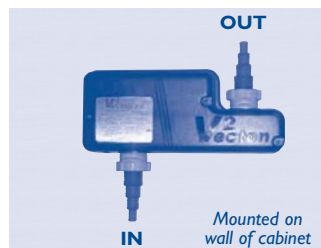
EMC: EN 55015: 2000. EN61000-3-2: 2000 EN61000-3-3: 1995

This unit is CE approved.

POSITIONING THE V²ECTON UNIT

Caution: This unit must not be mounted above the aquarium or in any position where it may accidentally fall into water or be splashed by water.

This unit may be installed either flat on its base or mounted using the key hole slots in the underside of the base. If this unit is mounted then it must only be mounted as shown in the diagram below. It must not be mounted in any other plane.



This V²ecton unit incorporates a light sensitive **LITE SET** lamp life timer. This timer provides a visual indication of when the UV lamp on this unit needs to be replaced and must then be reset when a lamp change is completed.

This **LITE SET** lamp life timer is an additional feature which works independently of the main operation of the V²ecton steriliser unit. If the **LITE SET** lamp life timer does not reset correctly, or malfunctions in any way, this will not affect the operation of the UV Steriliser which will continue to fully operate normally and effectively for the lifetime of the lamp.

To ensure the correct operation of the **LITE SET** lamp life timer the V²ecton unit must be positioned away from direct natural sunlight or any other strong white light source such as metal halides. As a guide, the unit should not be located in any position where, at any time of the day, even occasionally, direct natural daylight from a window, skylight, door or any other opening can fall on any part of the V²ecton unit. If the **LITE SET** lamp life timer is exposed to strong light at any time during its normal operation it will reset itself when the light diminishes again. This will drastically affect the accuracy of the timer as it will lose the memory of the time run before resetting.

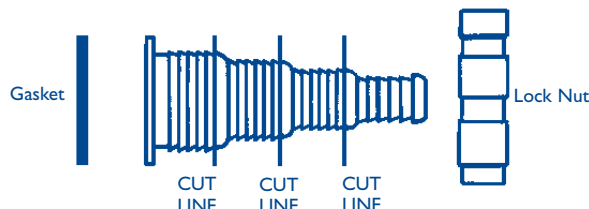
The V²ecton unit is best housed in a cabinet or otherwise fixed in a corner on the same wall as a window as long as it is not exposed to even occasional direct natural light from another opening or a strong white light source in the room.

CONNECTION TO THE AQUARIUM WATER SUPPLY

Water flow: Water should be pumped into the lower inlet port and returned to the aquarium via the upper outlet port as shown in the diagram above.

Connection with flexible hose

The V²ecton unit is supplied with two universal hosetails to take 1/2", 3/4", 1" and 1 1/4" 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 hosepipe 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.)

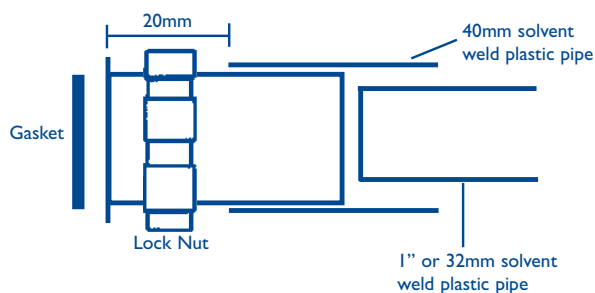
Connection using rigid pipe

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

1. **Using TMC universal rigid pipe adaptors** available from your aquatic supplier (part no. PCADRPACTO4).

These should be fitted as shown in the diagram below.

- A. If using 40mm solvent weld plastic pipe the adaptor will be glued into the pipe. It is essential to fit the lock nut before you solvent weld the adaptor into the 40mm 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.
- B. If using 1" solvent weld pipe the pipe will be glued into the adaptor at the first stepped stage.
- C. 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 rigid pipe adaptor and the V²ecton. 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

Do not exceed the maximum flow rates as this will considerably reduce the efficiency of the unit.

V²ecton 200: For aquariums up to 200 litres/50 imp gal/60 US gal
Maximum flow/hr: 680 litres/150 imp gal/180 US gal

V²ecton 300: For aquariums up to 300 litres/65 imp gal/80 US gal
Maximum flow/hr: 960 litres/215 imp gal/255 US gal

V²ecton 400: For aquariums up to 400 litres/90 imp gal/110 US gal
Maximum flow/hr: 1300 litres/290 imp gal/350 US gal

V²ecton 600: For aquariums up to 600 litres/130 imp gal/160 US gal
Maximum flow/hr: 1900 litres/420 imp gal/505 US gal

Always use the largest diameter hose possible, this will ensure that you get the maximum performance from your water pump.

CONNECTION TO THE ELECTRICAL SUPPLY

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

This unit is supplied fitted with a moulded plug:-

For the United Kingdom: Fitted with a 3 Amp BS1363A plug
For Mainland Europe: Fitted with a Schuko 10/16 Amp two pole and earth plug
For the USA: Fitted with a 15 Amp two pole and earth plug

All models are fitted with an in-line 3 amp fuse. This is located inside the unit to the left of the **LITE SET** lamp life timer (see no. 6 in diagram on page 6).

LAMP LIFE

The UV lamp fitted in this unit has a usable life of 8000 hours (one year). At 8000 hours the lamp will still be glowing brightly but the emission of germicidal UVC will have deteriorated to approximately 85% efficiency.

For the majority of home aquarium applications the lamp should be changed once a year (8000 hours).

For more critical applications the lamp should be changed at 4000 hours.

LITE SET LAMP LIFE TIMER

This V²ecton unit incorporates a light sensitive **LITE SET** lamp life timer. This timer provides a visual indication of when the UV lamp on this unit needs to be replaced and must then be reset when a lamp change is completed.

This **LITE SET** lamp life timer is an additional feature which works independently of the main operation of the V²ecton steriliser unit. If the **LITE SET** lamp life timer does not reset correctly, or malfunctions in any way, this will not affect the operation of the UV Steriliser which will continue to fully operate normally and effectively for the lifetime of the lamp.

Once set the timer will show:-

A GREEN indicator LED for the first 4000 hours
An ORANGE indicator LED for the next 4000 hours
A RED indicator LED when the lamp needs replacing at 8000 hours

To show that the timer is working a RED light will flash for 1 second every 60 seconds during the GREEN and ORANGE phases.

SETTING THE TIMER

Install the unit and turn on the mains power. Once the unit is running aim the light beam of the **LITE SET** torch (supplied with the unit) at the small window through which the green indicator light is visible.

The torch produces a concentrated light beam. When you shine the beam into the window you will see two plastic posts. Aim the light beam directly onto the left hand post at a distance of not more than 2cm from the window and keep the light beam aimed in this position for at least 10 seconds. When you first aim the beam at the window the indicator light will go through a flashing green-orange-red sequence, repeating several times, but after about 10 seconds a red light will flash on and off at 1 second intervals. When this has occurred more than 3 times the timer is set and you can switch off the torch. The LED will now be set on green.

Note: If, at any time, the mains power to the unit is disrupted, the **LITE SET** lamp life timer will retain memory of used lamp life and automatically continue timing when the power is restored. Do not attempt to reset if the green light is showing.

When you change the lamp repeat the procedure to reset the timer.

| Unit Operation | LED | Condition | Operation |
|----------------|--|--------------------------|---|
| Switch ON | Green | Constant | Normal Working Condition Unit is set correctly and present light conditions are compatible with the operation of the timer. Check this is the case under all lighting conditions, day and night. When the timer is working correctly it will flash RED once for 1 second every 60 seconds. |
| Switch ON | Red | Flashing | Timer is not set Light conditions are too bright to allow the unit to reset. The timer function will not be working. |
| Switch ON | Green <i>then cycling through 3 colours before</i> Red | Constant Flashing | Timer is trying to reset Light conditions are possibly too bright or may be changing. Timer is trying to reset so the timer function cannot operate correctly. |
| Running | Green | Constant | Normal Working Condition Unit is set correctly and present light conditions are compatible with the operation of the timer. Check this is the case under all lighting conditions, day and night. When the timer is working correctly it will flash RED once for 1 second every 60 seconds. |
| Running | Orange | Constant | Warning Condition UV lamp has been operating for more than 4000 hours and, in some critical applications, may need replacing. When the timer is working correctly it will flash RED once for 1 second every 60 seconds. |
| Running | Red | Constant | Critical Condition UV lamp has been operating for more than 8000 hours and needs to be replaced to ensure maximum effectiveness. |
| Running | Red | Flashing | Timer is not set Light conditions are too bright to allow the unit to reset. The timer function will not be working. |

ROUTINE MAINTENANCE

The UV lamp should be changed at intervals of either 4000 hours or 8000 hours dependent on application. At each lamp change the quartz sleeve should be removed and cleaned.

WATER DISPLACEMENT GASKET

A soft black circular rubber gasket is fitted to the right hand side of the white plastic body and is fitted to protect the lamp holder assembly from any accidental water spillage or splashing.

Each time the cover is removed from the base this gasket must be correctly located on re-assembly.

When replacing the cover, and before screwing it to the base, make sure that the gasket is fitted onto the right hand end of the white plastic body and located between the white plastic body and the white plastic compression fitting. It will be held (loosely) in place by this compression fitting. When correctly fitted the gasket must lean towards the right, away from the outlet port.

When the cover is replaced on the unit this gasket will be visible through the cover and should be tilting away from the outlet port and towards the lamp end and lamp holder.

When correctly fitted this gasket will protect the lamp end assembly from any possible water splash.



Correctly
positioned
water
displacement
gasket

LAMP REPLACEMENT AND QUARTZ CLEANING

Isolate from electrical and water supplies before removing the cover of the unit.

Caution: If the 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.

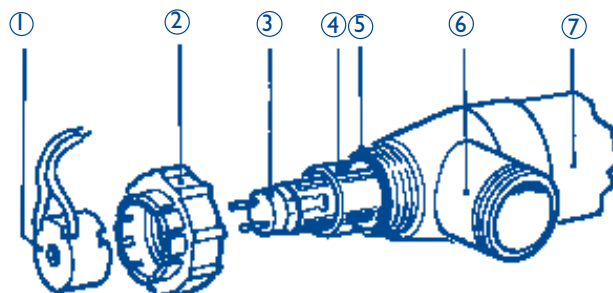
Remove the cover and lift out the white plastic body. To dismantle the body, pull off the white plastic lampholders at either end (see diagram) and slide the lamp out carefully.

Next, unscrew the two compression fittings located at either end of the white 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 back into the white plastic body. Ensure that you locate the 'O' rings accurately 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. White Body

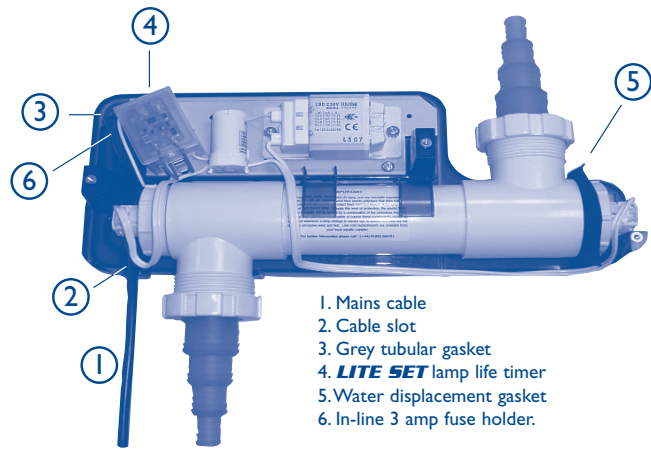
If you are carrying out the annual lamp change, use new 'O' rings. Firmly hand tighten the compression fittings. Fit a new lamp. Relocate the lampholders and place the unit back into the base.

Caution: Ensure that the mains power cable is properly located in the cable slot in the base (see no. 2 in diagram on page 6).

Caution: Before replacing the cover ensure that the grey tubular gasket is correctly located in the gasket recess in the base (see 3 in diagram on page 6).

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 three cover fixing screws are fully tightened, securing the cover to the base.



IMPORTANT

The plastic body and any hoses/tails 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 hoses/tails 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.

GUARANTEE

PLEASE NOTE that the 36 month guarantee cover for the unit does not include serviceable parts e.g **LITE SET** lamp assembly, UV lamp, seals and quartz sleeve

GARANTIE

VEUILLEZ NOTER que la Garantie de 36 mois de l'unité ne couvre pas les pièces remplaçables, c'est-à-dire le système d'assemblage **LITE SET**, l'ampoule UV, les joints d'étanchéité et le manchon en quartz

GARANTIE

BITTE BEACHTEN SIE, dass die 36-monatige Garantie für die Einheit keine Wartungsteile, wie **LITE SET**-Leuchtersatz, UV-Leuchte, Dichtungen und Quarz-Mantel, beinhaltet

GARANTIE

MERK OP dat onder de garantie van 36 maanden voor het toestel geen onderhoudsonderdelen vallen, bijvoorbeeld **LITE SET** lamp, UV-lamp, dichtingen en kwartsvoering

GARANZIA

NOTARE che la garanzia di 36 mesi per l'apparecchiatura non comprende i componenti soggetti a normale usura, quali il gruppo lampada **LITE SET**, la lampada UV, le guarnizioni e il manicotto di quarzo

GARANTÍA

TENGA EN CUENTA que la cobertura de la garantía de 36 meses no incluye las piezas reparables, como por ejemplo, el ensamblado de la lámpara marca **LITE SET**, lámpara de rayos UV, sellos y manga de cuarzo



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