



E-Quantum Series

UV Photocatalytic Pool Oxidiser — single & double
Installation, Operating & Maintenance Manual

Series codes: 108.11.21 – 108.11.24



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1. Safety Warnings

Read and follow these instructions for proper installation, use and maintenance. **Incorrect installation will affect your warranty.** Retain this manual for future reference.

UV-C RADIATION — HAZARD TO EYES AND SKIN

Never operate the UV-C emitter when it is removed from the appliance enclosure. Unintended use or damage to the housing may result in the escape of **dangerous UV-C radiation**, which **even in little doses may cause harm to the eyes and skin**. **Never look directly at an illuminated UV lamp.** Young children should never be allowed near the UV sanitiser.

EARTHING AND 30 mA RCD

This unit **must be earthed** and power must be supplied through a **Residual Current Device (RCD) with a rated residual operating current not exceeding 30 mA**. If the supply cord is damaged it must be replaced by the manufacturer, its service agent or a qualified person. The supply cord must be **secured inside the enclosure with a cable tie** to prevent sliding.

DO NOT RUN DRY • DO NOT SUBMERGE • DO NOT COVER

Do not run this unit dry. Do not cover it and do not submerge it in water. Examine the unit carefully after installation: **it should not be powered on if there is water on any parts not intended to be wet**. If the unit shows any sign of water leakage, **immediately disconnect the power supply**.

CRACKED QUARTZ SLEEVE — REPLACE IMMEDIATELY

If the **quartz sleeve** is cracked, **replace it immediately**. Before any maintenance, **disconnect the power from the UV steriliser AND the pump** and drain the unit — failure to do so could result in personal injury or property damage. Read the maintenance instructions **before** opening the appliance.

2. Description & Versions

The **E-Quantum** is a **UV photocatalytic pool oxidiser** manufactured in England. Beyond **UV-C** disinfection, the photocatalytic action oxidises organic load inside the chamber. It is available in a **55 W single** and a **2 × 55 W double** format, supplied with a **flow switch** and, depending on the code, either an **analogue lamp life indicator** or a **digital countdown with intelligent dosing pump**.

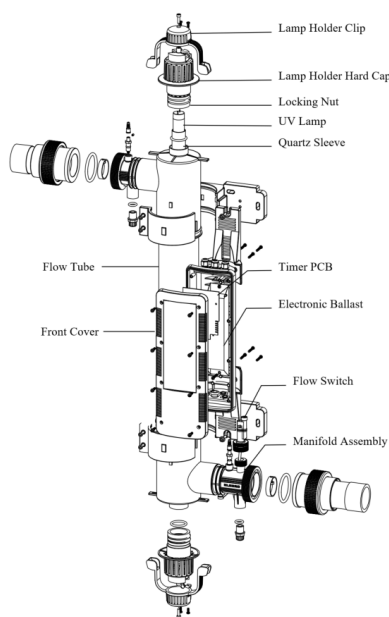
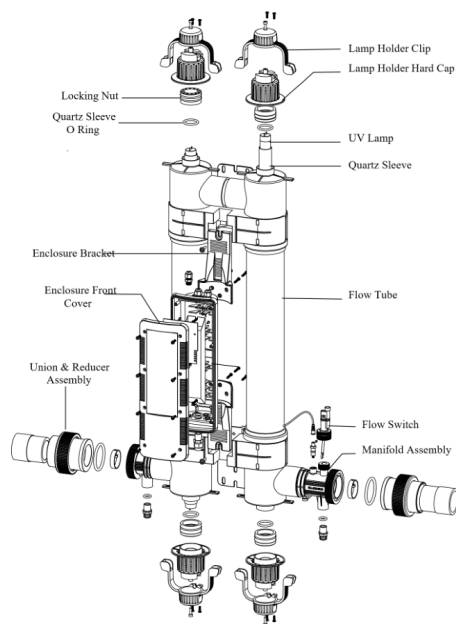


Fig. 4

Unit components — single version



Double version

Key: lamp holder clip · lamp holder hard cap · locking nut · UV lamp · quartz sleeve · quartz sleeve O-ring · flow tube · timer PCB · electronic ballast · flow switch · manifold assembly · front cover · union & reducer assembly.

3. Technical Data & Product Codes

E-Quantum — μονό / single / simplu

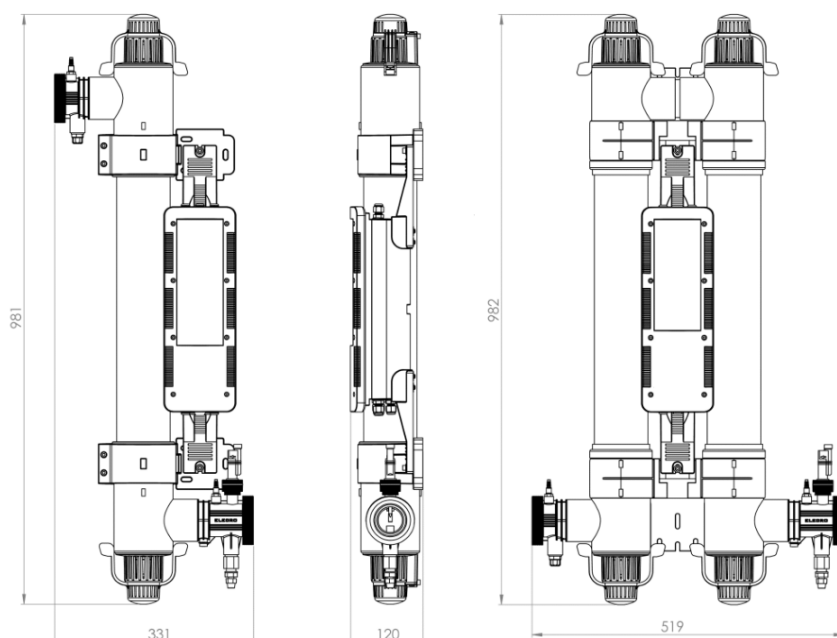
Oxygen code	Lamp	Max pool volume	Max flow	Version
108.11.21	55 W	65 m ³	14 m ³ /h	analogue lamp-life indicator + reset
108.11.22	55 W	65 m ³	14 m ³ /h	digital countdown + intelligent dosing pump

E-Quantum — διπλό / double / dublu

Oxygen code	Lamp	Max pool volume	Max flow	Version
108.11.23	2 × 55 W	130 m ³	28 m ³ /h	analogue lamp-life indicator + reset
108.11.24	2 × 55 W	130 m ³	28 m ³ /h	digital countdown + intelligent dosing pump

Note: the maximum flow rate is **14 m³/h** for the single and **28 m³/h** for the double version. The **usable lamp life is 9,000 hours** on both versions, per the manufacturer's manual.

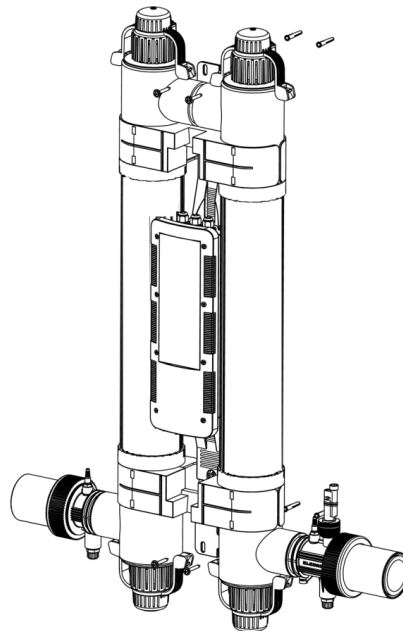
4. Dimensions



Dimensions — single (Fig. 1) and double (Fig. 2) version

5. Mounting

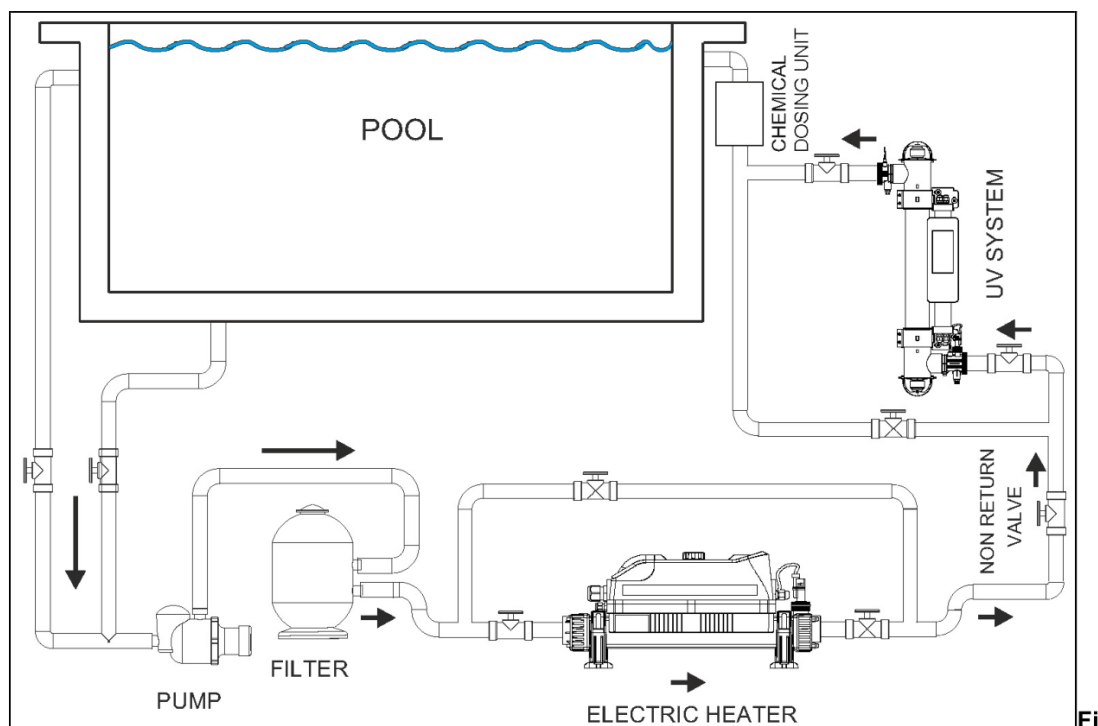
- Install **horizontally or vertically**, allowing enough space for the pipe connections, wiring and maintenance of lamps/quartz sleeve.
- Secure it **firmly to a solid wall** using the fixing kit provided.
- **Leave a clearance of at least 1 metre** on one side so the lamp and quartz sleeve can be replaced. If installing **vertically**, the clearance must be **above or below** the unit; if **horizontally**, **to the left or right**.
- The location must be **dry and permanently weather-proof** — moisture inside the enclosure **voids the warranty**.
- If the unit is unused during the winter months it must be **drained**: water freezing inside will cause severe damage.



Wall mounting

6. Pipe Work

- The unit is placed **downstream of** any pumps, filters and heating devices, and **upstream of** any chemical dosing or similar water treatment.
- It is factory set to accept water flow **entering on the left and exiting on the right**. For **horizontal** mounting the water must **enter low and exit high**.
- If the flow is reversed, the **flow switch must be rotated 180°** (half a turn).
- The flow switch paddle **can be damaged** if lifted more than **5 mm** from its housing and turned with force. After rotating, make sure it locks **perpendicular** to the water flow.
- The unit is supplied with **unions for 2" or 63 mm rigid pipe** and **reducers for 50 mm or 1½"**.



Position in the circuit — after the filter and heater, before dosing

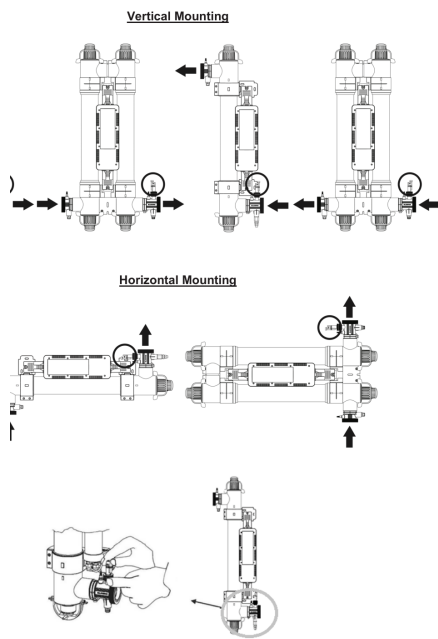
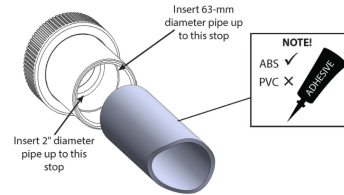


Fig. 6

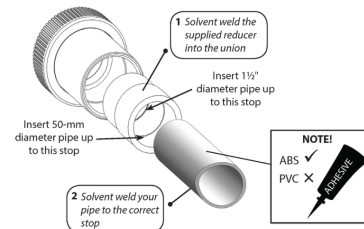
Flow direction — vertical (top) and horizontal (bottom) mounting

The unit is supplied with unions to allow connection to 2" or 63-mm rigid pipe. Reducers are available to allow connection to 50-mm or 1½" rigid pipe - see Fig. 7.

For pipework 63-mm or 2" in diameter.



For pipework 50-mm or 1½" in diameter.



Fi

Unions and reducers — for Ø 63 mm / 2" and Ø 50 mm / 1½" pipe

7. Electrical Connection

- Installation by a **qualified electrician**, in accordance with national regulations, with an **Electrical Installation Certificate** issued on completion.
- The power supply must be fitted with a **30 mA RCD**.
- The unit **must be earthed**.
- Any alteration or use of non-standard components **affects the warranty**.
- **Never look directly at an illuminated UV lamp**.

8. Operation & Lamp Life Indicator

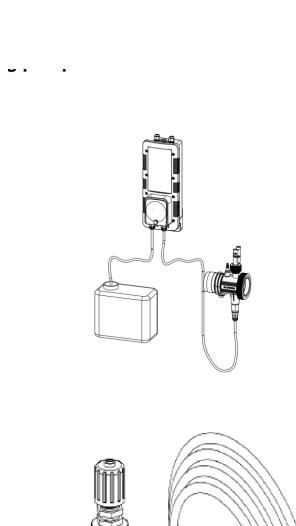
- The unit is **plug and play**: as long as the minimum flow rate is achieved it works as soon as the power is switched on.
- **Minimum flow rate: 4 m³/h** on every version.
- On completion of the installation, run the pump to **purge all air** from the system.

Lamp life indicator (analogue version)

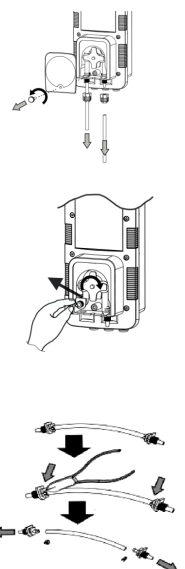
- Under normal conditions the UV lamp has a usable life of **9,000 hours**.
- At initial power-on the LED lights **red for one second** — indicating the 9,000-hour setting — and immediately turns **green**: the timer has started.
- When fewer than **500 hours** remain the LED turns **amber** — order a replacement lamp.
- At **zero** the LED turns **red**: the lamp must be changed.
- **Reset**: after changing the lamp, press and hold the reset button until the LED goes off and comes back on. On release it lights red for one second, then green — the timer has restarted.
- The reset can be carried out **only while the LED is on**.

Digital controller & intelligent dosing pump (digital version)

- The digital controller has **four programmable functions**: **UV Lamp Life** · **Shock Dose** · **Dose Chemical** · **Set Time**.
- The timer counts down from **9,000 hours** and the remaining lamp life is displayed. Green down to 500 hours, **amber at 499**, **red at zero**.
- After changing the lamp the timer **must be reset** to 9,000 hours: "Reset UV Lamp" → hold O.K. until the display shows **SAVED**. The display then reads "UV Life 9,000 Hrs".
- **A power failure does not affect** the countdown.
- The dosing pump is pre-programmed for **two chemical types**: **hydrogen peroxide (H₂O₂)** / **active oxygen** or **liquid chlorine**.
- **Dosing pump capacity 2.4 l/h** · **maximum working pressure 0.75 bar**.
- The **UV lamp switches off** while the dosing pump is running **and for 30 minutes after** dosing is complete, and also when there is **no or low water flow**.
- The time must be entered in **24-hour format**.



Digital controller



Dosing pump

9. Water Quality

Water quality **must** be within the following limits. **Failure to meet them voids the warranty.**

Parameter	Limit
pH	6.8 – 8.0
Total alkalinity (TA)	80 – 140 ppm
Chloride content	max 150 mg/l
Free chlorine	2.0 mg/l
Total bromine	max 4.5 mg/l
Calcium hardness	200 – 1,000 ppm

10. Maintenance — Lamp & Quartz Sleeve

Annual maintenance is essential to avoid water leaks and maintain optimum performance. Failure to do so could result in damage to the product and a **significant drop in efficiency**.

- **Change the lamp(s)** if necessary.
- **Inspect and clean the quartz sleeve.** Replace it if any cracks are discovered.
- **Replace all O-rings.**
- **Replace the lamp connectors** (white plastic insert inside the blue lamp shroud) if corroded, wet, damaged or overheated.

SP-UV-LAMP-EL



Fig. 1

SP-UV-QS



Fig. 2

SP-UV-ORS

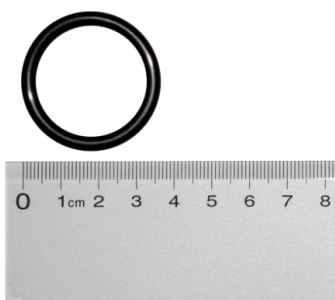


Fig. 3

SP-UV-LLL-LF

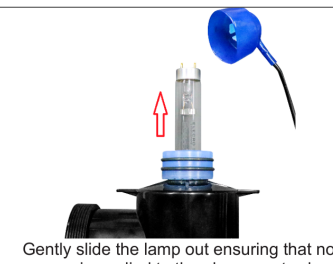
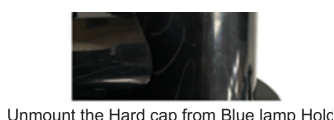


Fig. 4

Annual maintenance spare parts

Eleco code	Spare part
SP-UV-LAMP-EL	UV-C lamp
SP-UV-QS	Quartz sleeve
SP-UV-ORS	O-ring set
SP-UV-LLL-LF	Lamp connector (white insert)

- Unscrew the fasteners and unclamp the clip from the body.
- Remove the lamp holder clip from the hard cap and unmount the hard cap from the blue lamp holder.
- Carefully remove the blue lamp holder shroud and the white plastic electrical end caps from the lamp end.
- Gently slide the lamp out, **ensuring no pressure is applied to the quartz sleeve**.
- Unscrew the **blue quartz sleeve locking nuts** anticlockwise — **both ends** — and slide the O-ring off. The sleeve can now be removed.
- **Cleaning:** polish with a soft cloth or paper towel. In hard-water areas, limescale is 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.**
- **Reassembly:** slide the clean dry sleeve in · locate the O-rings on the ends · wipe a little **silicone grease** on the threads · **hand tighten** the blue locking nuts — overtightening **can damage the quartz sleeve**.
- Refit or replace the lamp and the shrouds, **matching the correctly numbered lamp connector**.
- To avoid bending the lamp pins during reassembly, **pull the plastic fitting out of the shroud**, connect it to the lamp and push the shroud back into place.



Removing the lamp

Push the shroud back in to place.



Removing the quartz sleeve

11. Warranty & Contact

- Guaranteed for **two years within Europe** and one year outside, from the date of purchase, against faulty workmanship and materials.
- The manufacturer will, at its discretion, **replace or repair** faulty units or components returned for inspection. Proof of purchase may be required.
- Not covered: **incorrect installation**, inappropriate use or neglect, **failure to connect the Safety Circuit**, moisture in the enclosure, water outside the quality limits, frost damage.
- Shipping damage must be reported **within 48 hours** of receipt; later claims are not covered.
- **Consumables** (glass parts, seals, water connections) are excluded.

The warranty does not cover: incorrect installation, moisture in the enclosure, water outside the quality limits, frost damage, dry running, or failure to carry out the annual maintenance. Lamps, quartz sleeves, O-rings and connectors are **consumables**.

Contact Information

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ISO Certifications

ISO 9001:2015 Quality Management <i>EUROCERT</i>	ISO 14001:2015 Environmental Management <i>BQV</i>	ISO 45001:2018 Occupational Health & Safety <i>BQV</i>
ISO 22301:2019 Business Continuity <i>EUROCERT</i>	ISO 46001:2019 Water Efficiency <i>BQV</i>	

Recycling of materials must be carried out in accordance with applicable regulations.