

FSA FILTER SYSTEMS AUSTRALIA

GT7-2K GT7-4K GT7-8K GT7-16K Ultraviolet System Installation & Maintenance



Warning:

For correct operation of this appliance it is essential to observe the manufacturer's instructions.

NOTE: Installation must be carried out by a qualified plumber or authorised technician. The power supply should always be plugged into a surge protector Directly. Standard power supplies are NOT water proof and must be installed out of the elements to avoid water damage

Warranty does not cover any damage to the unit caused by external water damage.

Danger

Dangerous electric voltage is present inside the power supply box and chamber. These instructions must be followed closely to prevent serious personal injury.

Ensure eye protection is worn when servicing and installing this unit – do not look directly at the UV lamp element while on to prevent eye injury.

UV-C radiation is harmful to the eyes and skin. UV lamps should only be used when properly installed in the irradiation chamber. The UV lamp must not be operated outside the disinfection chamber.

- Make sure this disinfection unit is only used for its intended purpose as described in the operating instructions.
- This disinfection unit is to be installed properly, according to the instructions before use.
- Do not use the unit with a damaged electrical lead or plug, a unit with any faulty functions or a unit that has been dropped or damaged in some way.
- Make sure that the unit is unplugged when it is not being used, before fitting, or removing any parts for cleaning or replacement.
- Ensure that this unit is electrically isolated before
 - Repairs or maintenance
 - Cleaning
 - Replacement of UV Lamp
- This unit must be de-pressurised before maintenance
- Do not use the lamp outside the chamber.

UV Lamps are designed for permanent operation to reach their best disinfection capacity. Frequently switching the lamp on and off will reduce the lamp effectiveness.

Assembly / Installation

Pre-Installation Check List

- Inlet pressure should be 20 – 100 psi
- Ambient temperature 0°C – 45°C
- Water temperature 1°C - 40°C
- Max flow rate must not exceed the specifications of the unit for UV dosage of 30mJ/cm²
 - GT7-2K – 3.8L/Min
 - GT7-4K – 30L/Min
 - GT7-8K – 50L/Min
 - GT7-16K – 91L/Min
- The reactor must be mounted so that the chamber remains full of water at all times. For horizontal installation, the inlet and outlet ports must be in a vertical orientation to remove air gaps.

Installing the Reactor:

Before installation, ensure that there is enough free space to service the glassware during maintenance. The reactors (GT7-4K GT7-8K GT7-16K) are designed to be fixed to the wall via the mounting brackets provided OR mounted directly to a steel bracket for Undersink systems (GT7-2K).

The optimal orientation for the UV chamber is to be mounted horizontally with the in/out ports vertical, however, it is also acceptable to mount the unit vertically. When mounting vertically, plumb the outlet at the top to avoid airlocks. The Outlet of the system is the end where the lamp and power are installed.

When mounting the chamber, consideration must be made for the weight of the system fill of water due to the stresses associated with the plumbing fixings. The stainless-steel chamber and surrounding plumbing must be earthed to prevent electrolysis causing corrosion.

Installing the Quartz Thimble:

Due to the fragile nature of the quartz glass, care must be taken when handling and installing the thimble and UV lamp.

1. Remove the sealing Nuts from each end of the UV chamber.
2. Wearing clean gloves, remove the Thimble from its packaging and check for any marks or residues. Insert the thimble domed end first into the chamber (from the open-end side of the UV chamber) and locate it to the opposite end. There should be 5-10mm of thimble protruding from each end.

3. Place the O-Ring over the domed end and seat it against the Male thread of the UV chamber as shown in the photo.

4. The Blind Sealing nut is screwed over the domed end of the thimble as per the photo. The open sealing nut is to be screwed over the open end of the thimble. Screw the blind nut on first firmly by hand, then screw on the open nut firmly by hand.

Due to the design of these UV Systems firmly hand tightened should be sufficient to seal the system with no leaks without the use of tools. If, however the O-rings do not seal, you may use a tool to gently and slowly nip up the fitting to create a seal.

Caution: Overtightening may cause the thimble to crack.

5. Look through the open-end nut to check that the O-ring is seated correctly and compressed. At this stage, the quartz thimble should be sealed allowing you to turn the water on to check for leaks under pressure.



Installing the UV Lamp:

1. Remove the lamp from its protective wrapping – ensure that the tube is always handled by the plastic end caps. You can use a clean cotton cloth to handle the glassware for balance.
2. Before the lamp is installed into the UV chamber, the chamber must be previously tested to check for leaks, any leaks found must be fixed before the lamp is installed.
3. Insert the UV lamp into the quartz thimble through the open end, leaving the 4 pin connections exposed to allow the power connection.

For Vertical installation, you will need to connect the power supply first before inserting tube

Warning: Do not drop the tube into the system (if vertical). Doing so may break the quartz thimble.

4. Firmly holding the white cap of the UV lamp and the Black end of the power supply, push the power supply connection onto the UV lamp pins (there is a long and a short side to the 4-pin connection so ensure it is the correct way).



5. Slide the lamp into the thimble, pushing the rubber sleeve over the end cap.
6. Connect the earth wire to the lug on the bottom of the chamber as seen above.
7. Plug the ballast into a surge protector, then into 240V. Turn the power on and assess the power supply to see that the green light comes on (working).
8. If a red solid or flashing light occurs, check the connection of the lamp and try again or contact the supplier for further information.

Ongoing Maintenance:

Our range of UV systems have an effective lamp lifetime of 9000 hours (12 months).

Lamp: Replace Every 12 Months or Sooner if Required

GT7-2K-Lamp	14W Replacement UV Lamp Suit GT7-2K
GT7-4K-Lamp	20W Replacement UV Lamp Suit GT7-4K
GT7-8K-Lamp	40W Replacement UV Lamp Suit GT7-8K
GT7-16K-Lamp	87W Replacement UV Lamp Suit GT7-16K

Quartz Thimble: Replace Every 1 – 2 Years Depending on Water Quality

GT7-2K-Thimble	331mm x 23mm OD Single Open-End Thimble Suit GT7-2K
GT7-4K-Thimble	490mm x 23mm OD Single Open-End Thimble Suit GT7-4K
GT7-8K-Thimble	895mm x 24.5mm OD Single Open-End Thimble Suit GT7-8K
GT7-16K-Thimble	895mm x 23mm OD Single Open-End Thimble Suit GT7-16K

Power Supply: Replace Every 5 Years as a Precautionary Practice

GT7-8K-PS	10W – 40W UL Certified Ballast Suit 4 Pin Lamp – AU Plug + Earth Cable
GT7-16K-PS	42W – 110W Certified Ballast Suit 4 Pin Lamp – AU Plug Earth + Countdown

Mounting Bracket

GT11-8G	1 pc Plastic Mounting Clamp Suitable for U/Sink Installation.
GT7-8-BRK	1 Pair Aluminium Mounting Brackets Suit GT7-4K GT7-8K GT7-16K

O-Rings – Replace Every 12 Months or Sooner if Required

GT7-2NSF-OR

O-Ring Suit 23mm Thimble (GT7-2K + GT7-4K)

GT7-8NSF-OR

O-Ring Suit 24.5mm Thimble (GT7-8K)



Ultraviolet Sanitation Systems Specific Warranty – GT7-2K GT7-4K GT7-8K

Warranty

Filter Systems Australia (FSA) Warrants each new product to be free from defects in material and workmanship for a period of 1 year from date of tax invoice issued by FSA. During this 12-month period FSA may cover freight expenses for a faulty item. After this 12-month period elapses, it is the responsibility of the buyer to arrange freight and cover expenses to return the item to FSA. Any damage that occurs to items during this transit is not the responsibility of FSA.

Filter Systems Australia's exclusive obligation under this Warranty is, at FSA's own option, to either repair or replace the Product, once FSA has deemed that the Product is defective.

Filter Systems Australia will not cover any labour charge incurred by the buyer for the replacement or repair of any product.

This warranty applies only to the original purchaser of the product – Non-Transferable.

This warranty does not cover any product that is relocated from the site of its original installation.

All replaced or exchanged parts taken out under this warranty become the property of Filter Systems Australia.

Qualification for Warranty

As per Australian Plumbing Codes, all systems must be installed by a qualified plumber. The buyer is responsible for keeping record and proof of installation in the form of an invoice and/or receipt.

UV Systems must be connected to a surge protector Directly before being connected to 240V socket.

Filter systems must be maintained as per FSA recommendations including the use of replacement filters, fittings and components supplied by FSA. Failure to maintain the filtration system using FSA approved products may void warranty.

Filtration systems must be fitted with a Pressure Limiting device to limit the pressure to 500 kPa or lower.

FSA does not take responsibility for retaining customer records, it is the buyer's responsibility to retain all tax invoices from the original sale and ongoing maintenance purchases as proof of upkeep on the system.

Limited Warranty

Components that are susceptible to external elements such as climate conditions or a harsh environment without the proper protection may not be covered by warranty. The system should be installed in a place out of the direct elements to protect the system from prolonged direct sunlight or water from rain.

Components that are considered to be 'consumables' include; UV Lamp, UV Thimble, O-Rings, Power Supply

Consumables will require replacement at or before their recommended replacement times as outlined in the installation manual. Failure to replace components using FSA approved/supplied components may void warranty of the system.

Damage to components due to Water Hammer may not be covered by warranty.

UV System Warranty

The following information outlines the warranty period for all components supplied with FSA UV Systems beginning from date of tax invoice issued by FSA

GT7-2K + GT7-4K

Stainless Steel UV Reactor Chamber	5 Year
Quartz Thimble	1 Year (Pro Rata from date of invoice)
UV Lamp	1 Year (Pro Rata from date of invoice)
Power Supply	1 Year

GT7-8K + GT7-16K

Stainless Steel UV Reactor Chamber	10 Years
Quartz Thimble	1 Year (Pro Rata from date of invoice)
UV Lamp	1 Year (Pro Rata from date of invoice)
Power Supply	1 Year

Damage that is deemed to be by an external cause (e.g. impact, freezing, neglect or if installation is not done by a qualified plumber) will not be covered by Warranty.

For further Warranty Terms & Conditions, please view our full warranty as outlined on our website or by contacting FSA direct. 07 5597 4585

FSA

FILTER SYSTEMS AUSTRALIA

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