Installation Guide

Billi Luxgarde™ UVC Inline Module







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1. Installation Requirements

IMPORTANT: This Billi appliance is to be installed by a licensed tradesperson in accordance with AS/NZS 3500.1 and AS/NZS 3500.2 and in compliance with applicable state regulatory requirements. For the correct operation of this appliance, it is essential to observe the manufacturer's instructions.

A. Unpacking your LUXGARDE™ UVC box

Before commencing installation, carefully check for any damage to the outer carton, inner liner, appliance case, pipework fittings, and electrical power cord. If damage is found, please photograph and record details for use if a claim is to be made

WARNINGS relating to this appliance must be read before commencing installation. Refer to page 18.

B. What's in your LUXGARDE™ UVC Module Kit

- 1. A LUXGARDE™ UVC unit.
- 2. A Power Adaptor.
- An Installation Kit.
- 4. A bag containing a mounting clip, a screw, and an LED indicator.
- 5. User manual.
- 6. Installation Guide.

C. Water Supply

The LUXGARDE™ UVC Module must only be connected to a COLD/SPARKLING/AMBIENT WATER supply. The appliance is to be installed in line with a Billi appliance. A Billi appliance incorporates a certified pressure limiting and backflow prevention device. Do not fit an additional pressure limiting valve.

Dynamic inlet supply pressure: Min. 250 kPa, max. 700 kPa

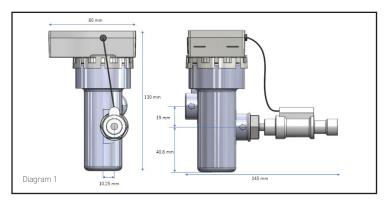
Supply Temperature: min. 5°C max. 40°C.

D. Determine Unit Location

Before cutting tube lengths, plan the installation. Dispenser tube lengths, the position of power and water outlets, required air space around the module and access for service must be considered.

Do not install with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the systems. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.

LUXGARDE™ UVC Module Dimensions



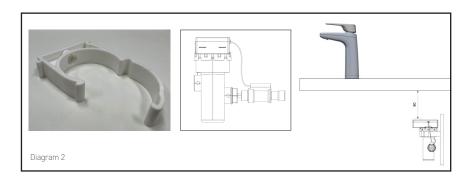
2. Installing the LUXGARDE™ UVC Module

1. Installing Device

This UVC system is intended for use in line with a Billi Water System and is to be installed by professional technicians. We recommend installing the LUXGARDE™ UVC module as close to the Point of Use (Dispensing point) as possible. The LUXGARDE UVC module should not be modified or disassembled in any way. Doing so may result in damage, hazardous operation conditions, and Ultraviolet (UV) light exposure hazards.

1) Choose the Mounting Location

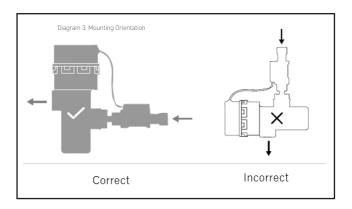
Determine the position of provided UVC mount clip, and fix using either the provided self-drilling screw or a fastener appropriate for the mounting location and material. Ensure there is adequate clearance for ventilation and service access to the units, considering the tube lengths and space available. A minimum of 80mm clearance from the top of the UVC module to the underside of the bench, is required when mounting the LUXGARDE UVC module. Refer to diagram 2.



The UVC Module must be oriented vertically. Mounting the unit in a different orientation as shown below will result in reduced performance and may damage the unit. Refer to diagram 3.



2. Installing the LUXGARDETM UVC Module cont.



2) Identify Components in the Installation Kit

To connect your LUXGARDE™ UVC module in line with your Billi unit and Tap, extra fittings and tubes are required.

Before commencing installation, ensure you have identified the following components in the installation kit:



2. Installing the LUXGARDE™ UVC Module cont.

For Quadra/Eco/Sahara/B4000/B5000:

1x ① LED Indicator Clip
1x ②JG fitting 1/4" x 3/8" NPTF
2x ③ JG Stem 1/4" x 5/16" Barb Adaptor
1x ⑩ Blue Silicone tube 6mm ID x 9mm
OD 1000mm Long

For Quadra Sparkling/Eco Sparkling/B5000 Sparkling/ Alpine Sparkling/B3000 Sparkling/OmniOne:

1x ① LED Indicator Clip

1x ② JG fitting 1/4" x 3/8" NPTF

1x 5 6mm Quick Connector to 6mm Stem Elbow Fitting

1x 6 6mm Quick Connector to 6mm Quick Connector

Elbow Fitting

1x ® JG Tube 1/4" OD x 800mm

1x 9 JG Tube 1/4" OD x 55mm

For Alpine 125:

1x ① LED Indicator Clip

1x 2 1/4" Tube OD x 3/8" NPTF

3x 3 Stem 1/4" x 5/16" Barb Adaptor

1x 4 1/4" Two-way Divider

2x 7 Single Check Valve 1/4" Tube OD

2x 9 JG Tube 1/4" OD x 55mm

2x ® Silicone Tube 9 x 6 Tube 1000mm

1x ® JG Tube1/4" OD x 800mm

1x ① Cable Tie

For B1000/B3000/Alpine 060/120:

1x ① LED Indicator Clip

1x ② JG fitting 1/4" x 3/8" NPTF

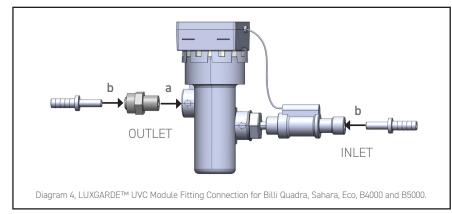
1x ® JG Tube 1/4" OD x 800mm

Installing LUXAGARDE™ UVC Module in line with a Billi unit.

A. Connect LUXGARDE™ UVC Module to your Billi Quadra/Sahara /Eco/B4000/B5000 unit:

a. Screw John Guest 1/4" x 3/8" NPTF fitting into LUXGARDE™ UVC unit outlet.

b. Connect 2 x JG Stem 1/4" x 5/16" Barb Adaptor to 1/4" connector on John Guest 1/4" x 3/8" NPTF fitting and LUXGARDE LIVC 1/4" injet connector

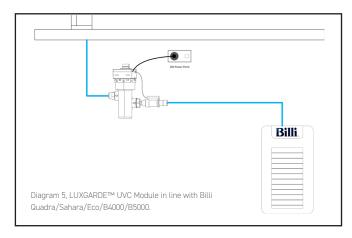




2. Installing the LUXGARDE™ UVC Module cont.

- c. Trim blue silicone tubes to the correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Fit spring clamps to tubing prior to connecting.
- d. Push the silicone tube onto the Billi unit's COLD outlet on Quadra, Eco and B5000 unit, or the AMBIENT outlet on Sahara and B4000 unit. Secure with spring clamp.
- e. Connect the silicone tube with barb fittings on the inlet side of the LUXGARDE™ UVC unit.
- f. Trim Tap cold silicone tubes to correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect the tap cold silicone tube with barb fittings on the outlet side of the LUXGARDETM UVC unit.

Refer to Diagram 5 for the installation layout of the LUXGARDE™ UVC module with a Billi Quadra/Sahara/Eco/B4000/B5000 unit.

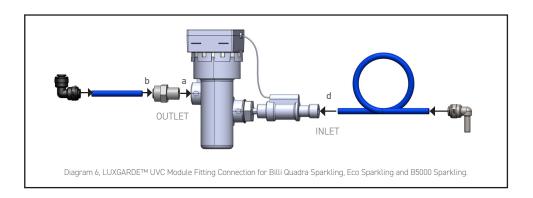


Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is installed in the Billi unit. No additional external PLV is required.

B. Connect LUXGARDE™ UVC Module to your Billi Quadra Sparkling /Eco Sparkling /B5000 Sparkling:

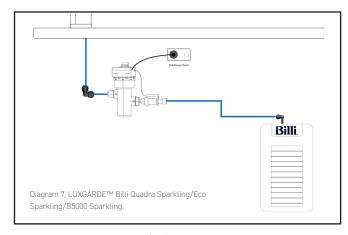
- a. Screw John Guest 1/4" x 3/8" NPTF fitting into LUXGARDE™ UVC unit outlet.
- b. Connect JG Tube 1/4" OD 55mm to 1/4" connector on John Guest 1/4" x 3/8" NPTF fitting.
- c. Connect 6mm Quick Connector to 6mm Quick Connector Elbow Fitting to JG Tube 1/4" OD 55mm.
- d. Trim 1/4" OD JG Tube to correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect 1/4" tube to LUXGARDE™ UVC inlet.
- e. Connect 6mm Quick Connector to 6mm Stem Elbow Fitting to JG 1/4" tube on LUXGARDE™ UVC.

2. Installing the LUXGARDE™ UVC Module cont.



- f. Connect 6mm Quick Connector to 6mm Stem Elbow Fitting to the 6mm bulkhead fitting on the Sparkling unit.
- g. Connect tap blue PE tube with 6mm Quick Connector to 6mm Stem Elbow Fitting on the outlet side of the LUXGARDE™ UVC unit.

Refer to Diagram 7 for the installation layout of the LUXGARDE™ UVC module with a Billi Quadra Sparkling/ Eco Sparkling/B5000 Sparkling unit.



Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is installed in the Billi unit. No additional external PLV is required.

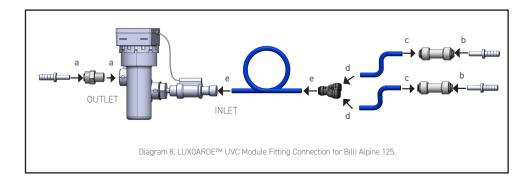


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2. Installing the LUXGARDETM UVC Module cont.

C. Connect LUXGARDE™ UVC Module to your Billi Alpine 125 unit:

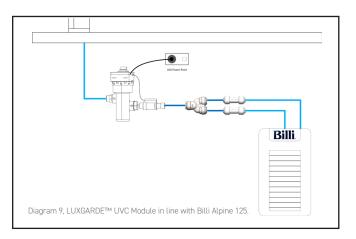
- a. Screw John Guest 1/4" x 3/8" NPTF fitting into LUXGARDE™ UVC unit outlet and connect JG Stem 1/4" x 5/16" Barb Adaptor to 1/4" outlet.
- b. Connect two 1/4" stem x 5/16" barb fitting to two 1/4" Non-Return valves.
- c. Connect two 55mm JG tubes 1/4" OD with two 1/4" Non-Return valves.
- d. Connect the 1/4" Two-Way Divider with two 55mm 1/4" JG tubes on the Non-Return Valves.
- e. Trim the 1/4" JG tube to the correct length. Connect one end with the 1/4" Two-Way Divider and the other end with the LUXAGARDE™ UVC module's inlet.



- f. Trim the two 1000mm long 9 x 6 blue silicone tubes to the correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Fit spring clamps to tubing prior to connecting. Push the silicone tubes onto two 1/4" stem x 5/16" barb fittings.
- g. Push the silicone tube onto the COLD and Ambient outlet on the Billi Alpine 125 unit. Secure with spring clamp.
- h. Trim Tap cold silicone tubes to correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect the tap silicone tube to the 5/16" barb on the UVC outlet. Use the cable tie to tie up all the tubes from the tap.

Refer to Diagram 9 for the final installation layout of the LUXGARDE™ UVC module with a Billi Alpine 125 unit.

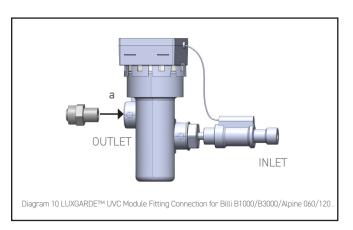
2. Installing the LUXGARDE™ UVC Module cont.



Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is installed in the Billi unit. No additional external PLV is required.

D. Connect LUXGARDE™ UVC Module to your Billi B1000/B3000/Alpine 060/120:

a. Screw John Guest 1/4" x 3/8" NPTF fitting into LUXGARDE UVC unit outlet.

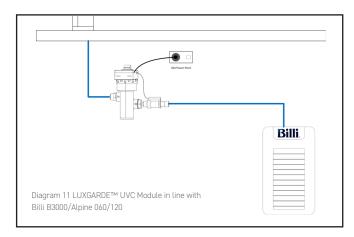


- b. Trim the 1/4" JG tube supplied to the correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect one end of the 1/4" JG tube to the quick connector on the UVC module and the other end to the Billi unit Cold outlet.
- c. Trim 1/4"OD JG Tube on the tap to correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect the 1/4" tube to the John Guest 1/4" x 3/8" NPTF fitting.



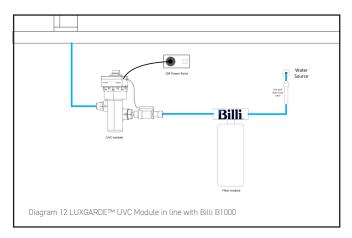
2. Installing the LUXGARDE™ UVC Module cont.

Refer to Diagram 11 for the installation layout of the LUXGARDE™ UVC module with a Billi B3000/Alpine 060/120 unit.



Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is installed in the Billi unit. No additional external PLV is required.

Refer to Diagram 12 for the installation layout of the LUXGARDE™ UVC module with a Billi B1000.



Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is provided with the Billi B1000. Install the PLV immediately at the main water supply before entering any Billi device.

2. Installing the LUXGARDE™ UVC Module cont.

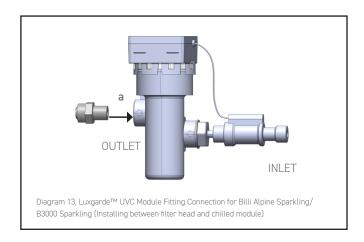
E. Connect LUXGARDE™ UVC Module to your Billi Alpine Sparkling/B3000 Sparkling unit:

To install the Luxgarde TM UVC module in line with a Billi Alpine Sparkling or a B3000 Sparkling unit, customer can choose from the following two options:

Option 1:

Install one LuxgardeTM UVC module between the filter head and the Sparkling module, which means treating the pre-filtered water before it enters the machine rather than treating the cold/sparkling water in the dispense line.

a. Screw John Guest 1/4" x 3/8" NPTF fitting into LUXGARDE™ UVC unit outlet.



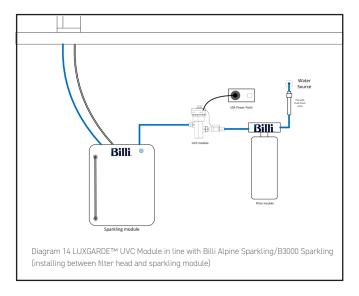
- b. Trim the 1/4" JG tube supplied in the Alpine Sparkling/B3000 Sparkling installation kit to the correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect one end of the 1/4" JG tube to the quick connector on the UVC module, and the other end to the Billi filter head outlet.
- c. Trim the 1/4" JG tube supplied in the Luxgarde™ UVC installation kit to the correct lengths using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect one end of the 1/4" tube to the John Guest 1/4" x 3/8" NPTF fitting, and the other end to the water inlet on the Alpine Sparkling module.



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2. Installing the LUXGARDE™ UVC Module cont.

Refer to Diagram 14 for the installation layout of the Luxgarde UVC module with a Billi Alpine Sparkling/B3000 Sparkling (Installed between filter head and sparkling module).



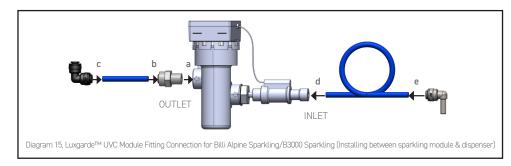
Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is provided with the Billi Alpine Sparkling/B3000 Sparkling unit. Install the PLV immediately at the main water supply before entering any Billi device.

Option 2:

Install the LuxagardeTM UVC module between the sparkling module and the dispenser. Customers choose to install one UVC module on either the COLD or SPARKLING water line or install two UVC modules on both the COLD and SPARKLING water lines.

- a. Screw John Guest 1/4" x 3/8" NPTF fitting into LUXGARDE™ UVC unit outlet.
- b. Connect JG Tube 1/4" OD 55mm to 1/4" connector on John Guest 1/4" x 3/8" NPTF fitting.
- c. Connect 6mm Quick Connector to 6mm Quick Connector Elbow Fitting to JG Tube 1/4" OD 55mm.
- d. Trim 1/4"OD JG Tube to the correct length using a sharp knife or plastic tube cutter. Avoid leaving excess tubing which will sag and trap water. Connect 1/4" tube to LUXGARDE™ UVC inlet.
- e. Connect 6mm Quick Connector to 6mm Stem Elbow Fitting to JG 1/4" tube on LUXGARDE™ UVC.

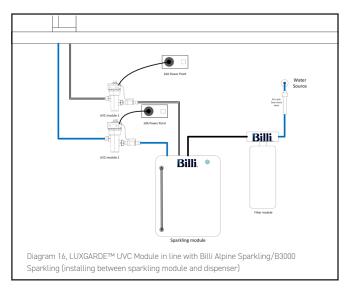
2. Installing the LUXGARDE™ UVC Module cont.



- f. Connect the 6mm Quick Connector to the 6mm Stem Elbow Fitting to the 6mm bulkhead fitting of the COLD or SPARKLING outlet on the sparkling module.
- g. Connect tap CLEAR PE tube with 6mm to 6mm Quick Connector Stem Elbow Fitting on the outlet side of the LUXGARDE™ UVC unit if the UVC module is connected to the SPARKLING water line. Or connect the tap BLUE PE tube with the 6mm to 6mm Quick Connector Stem Elbow Fitting on the outlet side of the LUXGARDE™ UVC unit if the UVC module is connected to the COLD water line.

Note: if the customer chooses to install the Luxgarde UVC module on both the Cold and Sparkling line, repeat steps a – g in this section for an additional UVC module.

Refer to Diagram 14 for the installation layout of the Luxgarde™ UVC module with a Billi Alpine Sparkling/B3000 Sparkling (Installed between the sparkling module and dispenser)

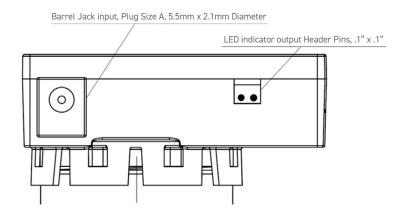


Note: A certified pressure limiting valve (PLV) incorporating a dual check valve for backflow prevention is provided with the Billi Alpine Sparkling/B3000 Sparkling unit. Install the PLV immediately at the main water supply before entering any Billi device.



3. Commissioning Unit

- A. Connect the LED indicator to the Header Pins, 0.1"x 0.1". Use the LED indicator Clip to fix the LED light in the desired position.
- B. Connect the 24V power source to the Barrel Jack Input on the LUXGARDE™ UVC Module.



- C. Plugin or energize the 24V power source to provide power to the LUXGARDE™ UVC Module.
- D. Flush the water system for no less than 2 minutes to prime the unit and to confirm that water connections have been installed correctly. The LED indicator should be on consistently for the flushing period and turned off after flushing is completed. If the LED does not turn on, disconnect, check, and repair any electrical connections between the LUXGARDE™ UVC Module, power supply, and LED Indicator. If there is leakage from any portion of the plumbing connections completed during the installation, disconnect, check, and repair the installation plumbing connections before further operation of the LUXGARDE™ UVC Module.
- E. To reduce the presence of pathogens existing in the water distribution system before the installation of the LUXGARDE™ UVC Module, complete a full system disinfection procedure before consuming or using any water from the system.

4. Commissioning Checklist and Warnings:

CHECK EACH OF THE FOLLOWING ITEMS:

- UVC unit mounted securely.
- ☐ Tube cut to correct lengths and not twisted or kinked.
- Tubing secured correctly nuts and spring clips fitted.
- Unit connect to COLD/SPARKLING/AMBIENT water ONLY.
- Water main flushed before connection to unit.
- Correct air clearances around unit.
- Unit LED light working properly.
- Chilled water flow correctly.



WARNINGS:

For continued safety of this appliance, it must be installed, operated, and maintained in accordance with the manufacturer's instructions. For correct operation of this appliance, it is essential to observe the instructions as outlined in this booklet.

- Your appliance should be installed by a suitably qualified tradesperson.
- For correct operation of this appliance it is essential to observe the instructions as outlined in this booklet.
- Do not use this appliance with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.
- The device must be filled with water during LED ON operation. The system should not be operated for a period greater than 1 minute if water supply is not flowing through the reactor. Operating the device dry or for extended periods without water flow may cause permanent damage.
- Do not pass water through the system for a minimum of 5 seconds after connecting input power (including after power interruptions) to avoid passing undertreated water that may, in rare instances, pose health hazards.
- Do not operate the UV-C emitter when it is removed from the appliance enclosure.
- The system should not be disassembled for cleaning or maintenance.
- Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation. UV-C radiation may, even in little doses, cause harm to the eyes and skin.
- Use this appliance only as directed in these instructions and relevant Billi User Guide and only for its designed purpose.
- Do not install unit if power cord is damaged.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental
 capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning
 use of the appliance by a person responsible for their safety.
- Wipe away spills on the device.
- Cleaning and user maintenance shall not be made by children without supervision. Do not use harsh chemicals
 when cleaning.
- This appliance is designed for indoor installation only.
- Packaging material including plastic bags must be kept out of reach of children and disposed of according to local regulations.





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