

ASSEMBLY AND INSTALLATION INSTRUCTIONS FOR

SPECTRUM™ AND SPECTRUM PLUS™ SERIES ULTRAVIOLET SYSTEMS



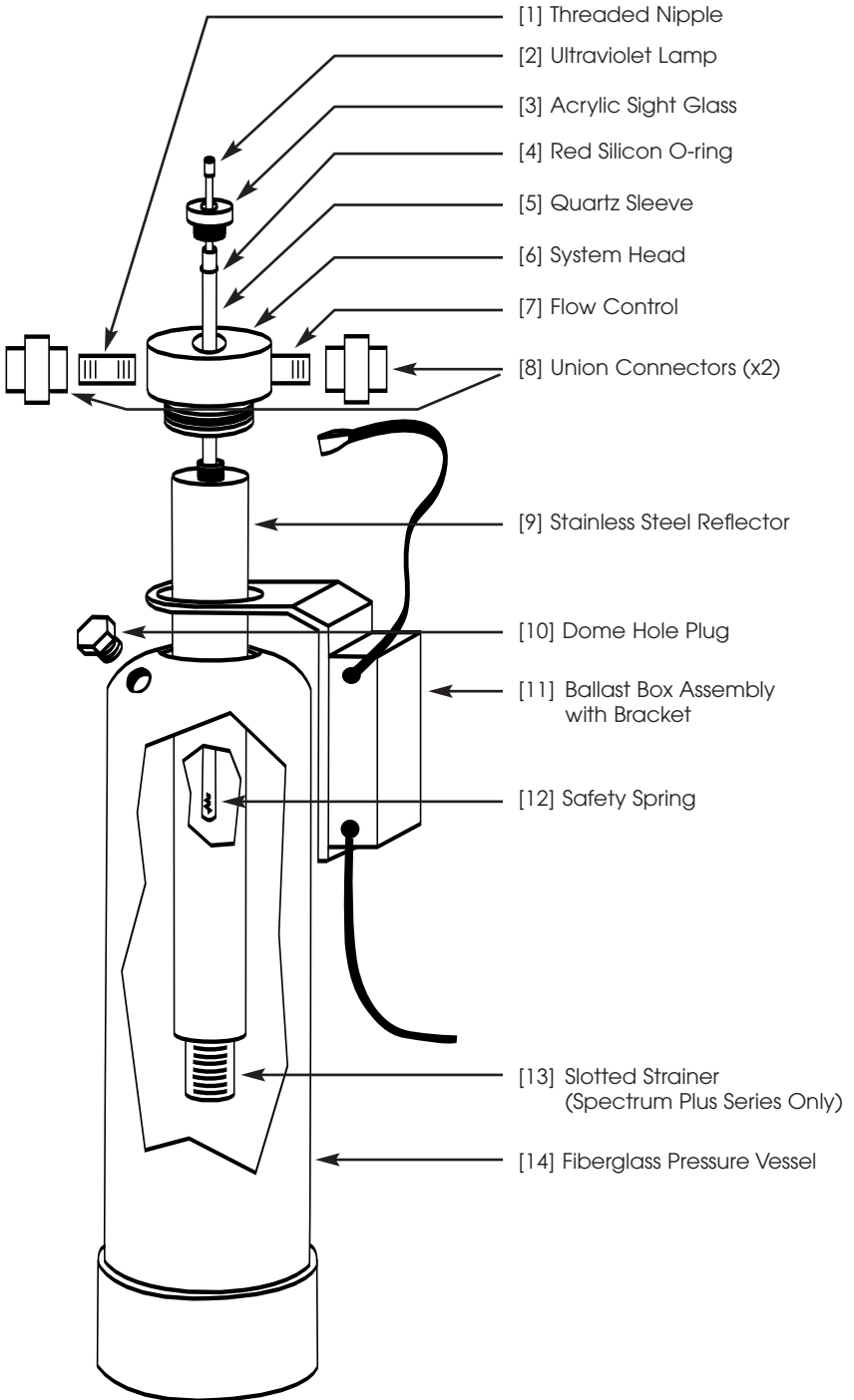
ASSEMBLY AND START-UP PROCEDURE

1. Stand the Spectrum system in the installation site on a level surface.
2. Place the red silicon o-ring [4] about 1 inch (25 mm) from the top of the open end of the quartz sleeve [5]. **Do not lubricate this o-ring!**
3. Carefully slide the closed end of the quartz sleeve [5] through the top opening in the system head [6], down into the pressure vessel [14], until the red silicone o-ring rests on the lip inside the system head. **Do not push the quartz sleeve all the way through the system head!**
4. Place the acrylic sight glass [3] over the open end of the quartz sleeve [5] and screw it firmly onto the top of the system head [6]. **Hand tighten only!** This will lock the quartz sleeve into place. There will be a slight gap between the top of the system head and the bottom of the acrylic sight glass.
5. Drop the safety spring [12] down into the quartz sleeve [5] through the opening in the acrylic sight glass [3].
6. Apply Teflon thread tape to both ends of the threaded nipple [1] and to the flow control [7]. Thread the nipple into the inlet side of the system head [6].
7. Thread one of the union connectors [8] to the nipple [1] on the inlet side of the system head [6], and the other union connector to the flow control [7] on the outlet side of the system head.
8. Attach the Spectrum system to the plumbing. If your Spectrum system has media inside, be sure not to install it reversed, or the media will go into the plumbing. It is suggested that a 3-valve bypass loop (not supplied) be installed around the system for easier servicing.
9. If the Spectrum system has filtration media (i.e. granular activated carbon), the system will need to be flushed to a drain for 10 to 15 minutes to remove any of the very fine media from the system. An easy method to flush the system is to install a garden hose spigot valve (not supplied) after the system. This will prevent the fines from getting trapped in the plumbing.
10. While holding the ultraviolet lamp [2] by the white cap with the four pin connector, slide it carefully through the hole in the acrylic sight glass [3], down into the quartz sleeve [5]. **Do not let go of the ultraviolet lamp!**
11. Plug the ultraviolet lamp [2] into the white plug on the lamp power cord, and insert the lamp the rest of the way into the quartz sleeve [5].
12. Snap the plastic cap into the top hole of the sight glass [3]. This will prevent any direct ultraviolet light from escaping the system.
13. Plug the ballast box assembly [11] into a surge protected power supply.

NOTE: When working around ultraviolet light, always wear ultraviolet blocking eye protection (i.e. eye glasses, safety glasses, sun glasses).

WARNING: *Never look directly at ultraviolet light. It can cause severe eye damage to unprotected eyes. Prolonged exposure to direct ultraviolet light may cause skin cancer.*

PARTS LIST



SPECTRUM SERIES SERVICE INFORMATION

Before servicing your Spectrum unit you must:

- A) Unplug the unit from the wall.
- B) Relieve line water pressure from the unit by turning off the water supply to the unit, and then opening a tap or faucet down line from your Spectrum unit. Failure to do so may cause flooding or injury.

The Spectrum unit should have the following maintenance performed to keep the unit in peak operating efficiency.

- A) Three months:
After the first three months in operation it is recommended that the quartz sleeve be inspected and wiped down with a damp cloth.

If the quartz sleeve is clean; you will not have to service your unit for another nine months. Then annually thereafter — unless some unforeseen, drastic change should occur in your water's chemistry.

If the quartz sleeve is excessively dirty or has a rusty type coating; this may be a sign that you need additional types of filtration for iron or other things in the water that the Spectrum unit was not designed to treat. You should repeat this cleaning procedure every 3 to 6 months to maintain a clear quartz sleeve for the UV light to transmit through. You may wish to contact your Spectrum representative for further inspection, testing, or information.

- B) Annually:
The lamp must be changed every 12 months even if the lamp is still glowing!
There is no exception to this rule. Even if the bulb is still lit, it may not be putting out an adequate dosage soon after this time frame. The Spectrum unit lamp emits a special UV wavelength light emission to sterilize bacteria and viruses. This special wavelength is not visible to the naked eye. This special lamp is only capable of maintaining high dosage levels for slightly longer than one year. Adequate dosage levels should not be expected after that period of time, even if the lamp is still lit. Contact your Spectrum representative for proper replacement lamps.

For Spectrum Plus owners; It is recommended that the ProActive™ carbon bed be changed for a new bed every year. This will keep your water at its best. The carbon in your unit is a high grade, bituminous coal based carbon for chemical, taste, color and odor removal, with a specific mesh sizing, that the manufacturer has deemed best for pre-ultraviolet filtration of sediment. Carbons of other nature are not recommended without professional guidance. Contact your Spectrum representative for further information about ProActive™ carbon bed replacements.

Should you ever break a quartz sleeve inside the unit, do not turn the water back on under any circumstances. Unplug your unit and call a Spectrum service man or plumber immediately! Your unit will have to be completely cleaned of all glass, and will not operate properly without a replacement quartz sleeve.

UV Quartz Sleeve Cleaning and Maintenance

UV lamps produce heat and UVC output, which may cause certain water characteristics to adhere to and bond on the quartz sleeve. This can cause the quartz sleeve to foul. A fouled quartz sleeve will prevent the UVC from reaching the targeted pathogens.

Denatured alcohol, mild citric acid, or a lime/calcium/rust removal product (LimeAway or CLR) and a ScotchBrite pad (non-scratching) can be used to aid in the cleaning of the quartz sleeve. After the quartz sleeve is rinsed off with water and dry, wipe with a lint free cloth with denatured alcohol as a final step.

The quartz sleeve should be cleaned annually or more frequently, depending on the operating conditions.

Use gloves when handling a clean or new lamp and quartz sleeve. Skin oils will adhere to the lamp and quartz sleeve and prevent UV light from properly emanating.

A quartz sleeve should be changed every three (3) to five (5) years, or sooner if they show wear.