

**INSTALLATION INSTRUCTIONS AND
MAINTENANCE MANUAL
FOR
BALBOA ULTRAVIOLET SANITATION SYSTEMS**



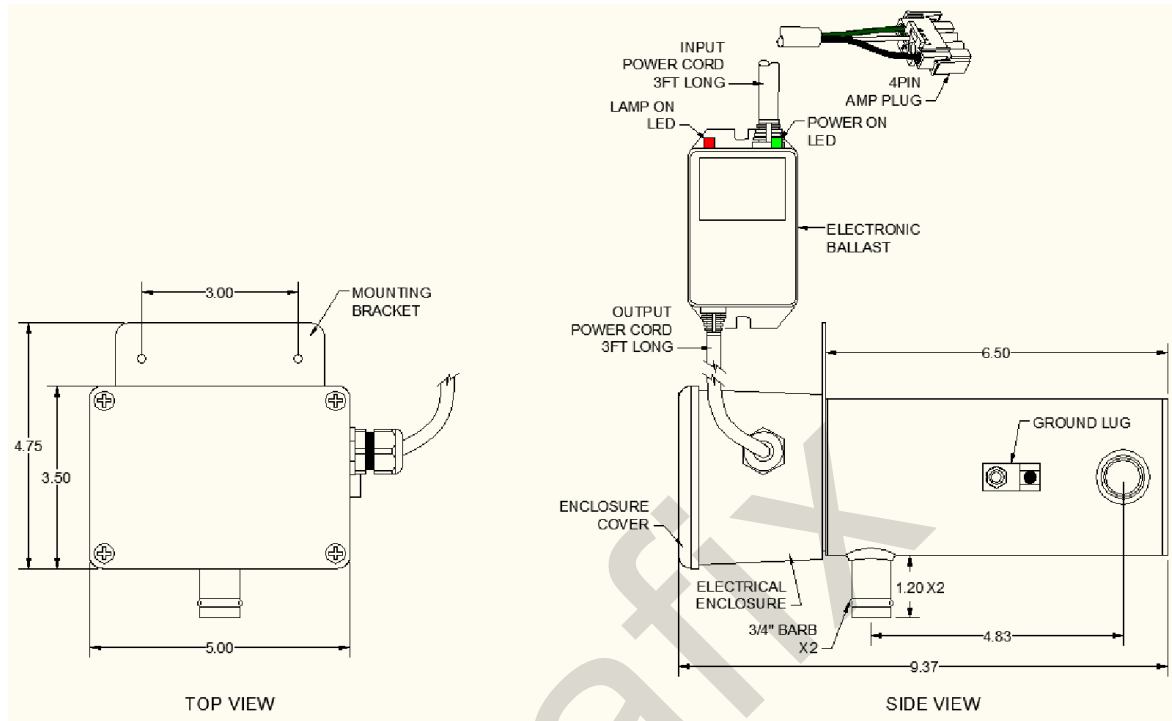
MADE IN THE USA

BALBOA WATER GROUP
1382 BELL AVE - TUSTIN - CA - 92780 – USA
www.balboawater.com

I. Introduction:

Balboa UV Sanitation Systems were designed by Balboa, the leader in reliability in spa controls for over 20 years. These compact sanitizers were created specifically to withstand the demanding environment of the hot tub.

II. Dimensions:



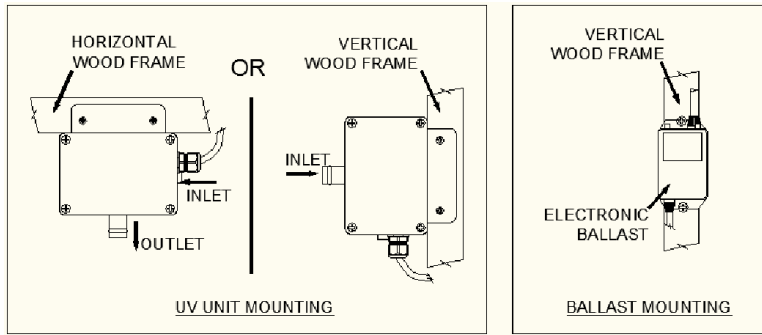
III. Specifications:

MODEL NUMBER	SYSTEM VOLTAGE	LAMP WATTAGE	RATED AMPERAGE	SYSTEM FREQUENCY	FLOW RATE	CONNECTION SIZE	APPROVAL AGENCIES
59060	120V	7W	0.33A	50/60Hz	6 GPM	3/4" BARB	UL/CUL
59061	240V	7W	0.2A	50/60Hz	6 GPM	3/4" BARB	UL/CUL

IV. Important Warnings & Safety Instructions:

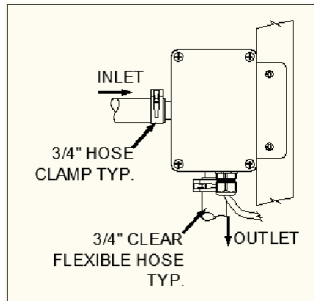
1. This unit is designed for use in spas only. It is not designed for use in potable drinking water. Misuse of this product may be harmful to your health and the environment.
2. This unit to be installed by spa manufacturers only.
3. This unit is not intended for end user installations.
4. This unit is not to be used 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.
5. Children being supervised not to play with the appliance.
6. This unit contains a UV-C lamp.
7. **WARNING:** Do not operate the UV-C lamp when it is removed from the unit enclosure.
8. Unintended use of the unit 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.
9. This unit must be installed completely underskirt of spas only.
10. This unit must be mounted securely to frame structure of the spas.
11. Spa water to be circulated from the spa through the unit with a pump & flexible hoses.
12. Maximum flow rate to be 6 GPM.
13. Maximum operating pressure at inlet is 20 PSI
14. See product label for appropriate electrical ratings.
15. This unit is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.

V. Mounting: This unit and its ballast can be mounted on the spa wooden frame as shown below and to be 12" minimum from the spa floor.



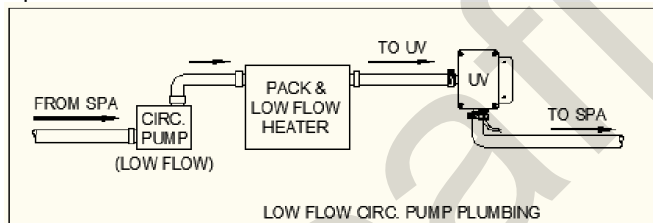
VI. Plumbing:

A. Use 3/4" clear flexible hoses & 3/4" hose clamps for both inlet and outlet connections.

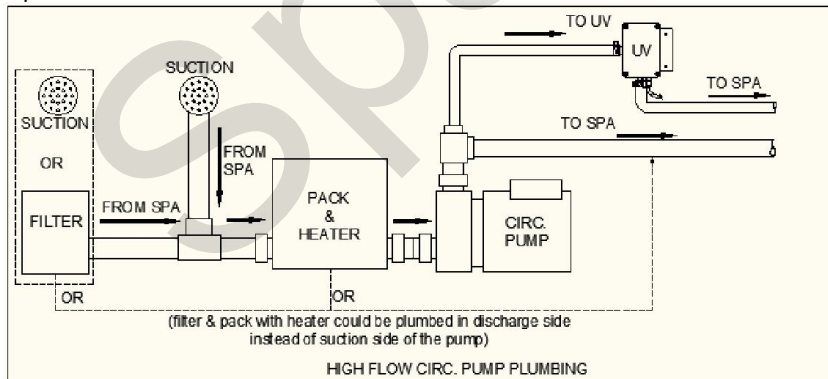


B. This unit can be plumbed with one of the bellow options:

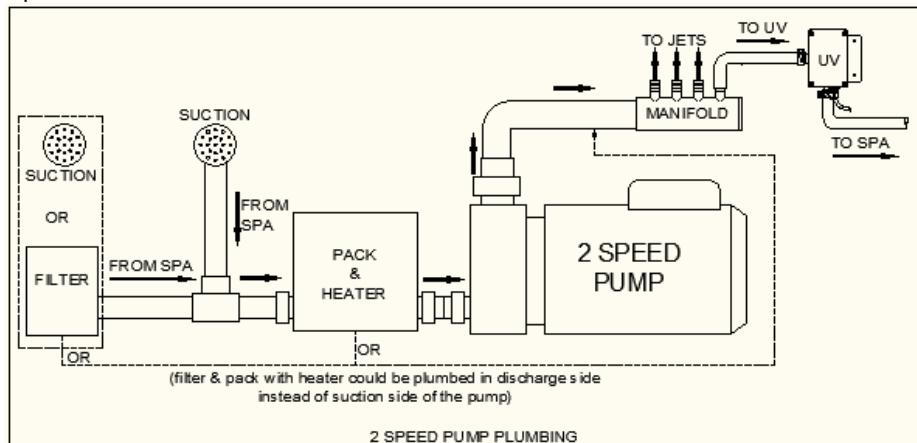
a. Option 1:



b. Option 2



c. Option 3:

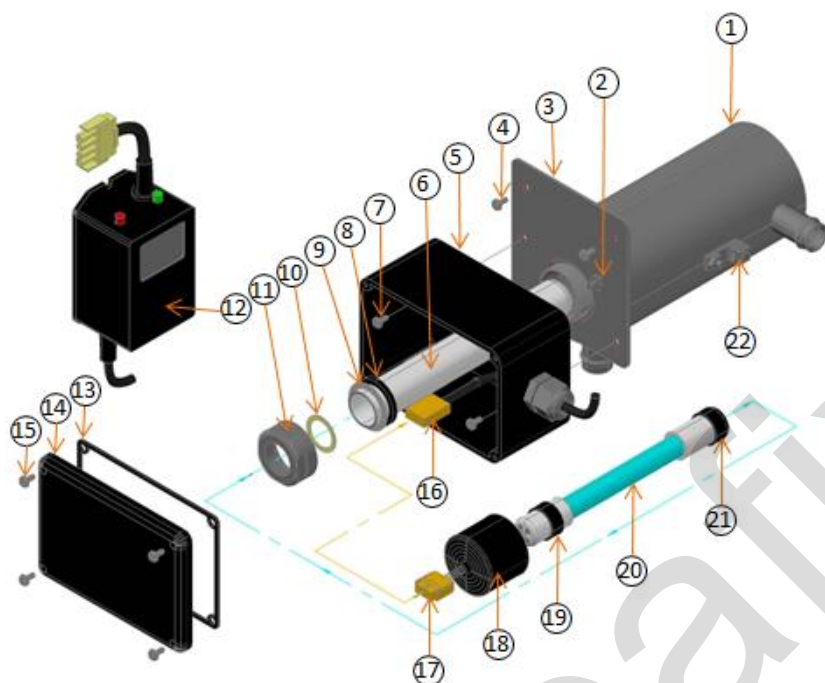


VII. Electrical Connections:

1. **Danger:** Turn the spa breaker to OFF position.
2. This unit must be connected to dedicated UV/Ozone mating connector on the spa controller's circuit board. A splitter (PN: 22934 – Not included) may be required if a separate ozone is being used.
3. Electrical ratings are shown on the product label. This unit must be powered as rated only. Verify electrical ratings of this unit and spa controller before making connections.
4. Ballast must be mounted away from wet locations and 12" minimum from spa floor.

VIII. **Bonding:** This unit is provided with a grounding lug (22) and must be electrically bonded to the spa common bonding grid. Connect the grounding lug with the spa common bonding grid with a #8 minimum solid copper wire.

IX. Exploded drawing:



KEY	DESCRIPTION
1	REACTION CHAMBER
2	NUT KEP
3	MOUNTING BRACKET
4	MOUNTING SCREW (NOT PROVIDED)
5	ELECTRICAL ENCLOSURE
6	QUARTZ TUBE
7	SCREW 8-32 X 3/8"
8	QUARTZ SEAL GASKET
9	COMPRESSION WASHER
10	PLASTIC WASHER
11	COMPRESSION NUT
12	ELECTRONIC BALLAST
13	ENCLOSURE GASKET
14	ENCLOSURE COVER
15	SCREW #8 X 5/8"
16	BALLAST CONNECTOR
17	LAMP CONNECTOR
18	BOOT COVER
19	UPPER CUSHION
20	UV LAMP
21	LOWER CUSHION
22	GROUND LUG

X. Maintenance:

1. Quartz tube (6) to be cleaned every six (6) months of usage.

2. Quartz tube (6) cleaning instructions:

- a. **Danger:** Turn the spa breaker to OFF position.
- b. Open the spa controller's cover and disconnect the unit from the spa controller.
- c. Drain the spa
- d. **Warning:** Allow UV-C lamp (20) to cool down prior to removing from the unit.
- e. **Danger:** Never look at the lit UV-C lamp (20). This can cause severe eye damage or blindness
- f. Drain water out of the unit completely
- g. Remove enclosure cover (14).
- h. Make sure to use latex glove when handling the UV-C lamp (20).
- i. Disconnect UV-C lamp connector (17) from ballast connector (16).
- j. Slowly remove boot cover (18) and UV-C lamp (20) from quartz tube (6).
- k. Remove quartz seal compression nut (11).
- l. Use bare hands carefully to remove quartz seal gasket (8) and metal compression washer (9) that go over the quartz tube. Do not use any metal tools.
- m. Carefully remove the quartz tube (6).
- n. Clean the quartz tube (6) with paper towel or dry cotton cloth. Do not use abrasive cleaner as they can scratch the quartz tube surface. Household tub and shower lime removal products can be used if needed. Rinse the quartz tube (6) with clean water to completely remove any cleaning products that were used.
- o. Install the quartz seal gasket (8) over the opened end of the new quartz tube (6). Place the new quartz tube (6) into the unit with the domed end first making sure it is inserted and seated inside the quartz end holder on the bottom of the reaction chamber. Only about 1/8" of quartz tube (6) will be exposed when it is seated correctly.
- p. Reinstall the compression washer (9) over the open end of the quartz tube (6). Push it against the quartz seal gasket (8).
- q. Reinstall and **hand tighten** the quartz seal compression nut (11) by turning it clockwise until it stops. Add another quarter of a turn by using a pair of Channel Lock pliers.
- r. Fill the spa. Make sure no water dripping from the seal compression nut (11). If water is visible, STOP and tighten the compression nut another quarter of a turn with a pair of Channel Lock pliers to make sure a complete seal. Make sure there is no water leaking anywhere before proceeding to the next step.

- s. Turn the breaker back on. Turn on the pump to circulate the water through the unit. Wait for 5 minutes and assure no water is dripping. If water is visible, STOP, fix the leak by repeating the quartz tube maintenance process from step (a) to step (r).
 - t. Turn the pump OFF then turn the breaker OFF.
 - u. Slide the UV-C lamp (20) back inside the quartz tube (6). Install boot cover (18) over compression nut ((11).
 - v. Reconnect the UV-Clamp connector (17) to the ballast connector (16). Make sure the connector mate completely. Do not use force.
 - w. Reinstall the enclosure cover (14) with gasket (13) and secure with screws (15).
 - x. Reconnect the unit to the spa controller and reinstall the spa controller's cover.
 - y. Turn ON the power to the spa.
 - z. Once power is activated you can check the ballast to see if the unit is functioning. A solid green light indicates the unit is being provided power and should always be on. A solid red light indicates that UV-C lamp is activated.
3. UV-C lamp (20) to be replaced every 12 months of usage.
 4. Only use replacement UV-C lamp (20) recommended by spa manufactures and distributed by their certified dealers or distributors.
 5. **UV-C lamp (20) replacement instructions:**
 - a. **Danger:** Turn the spa breaker to OFF position.
 - b. Open the spa controller's cover and disconnect the unit from the spa controller.
 - c. **Warning:** Allow UV-C lamp (20) to cool down prior to removing from the unit.
 - d. **Danger:** Never look at the lit UV-C lamp (20). This can cause severe eye damage or blindness
 - e. Remove enclosure cover (14).
 - f. Make sure to use latex glove when handling the UV-C lamp (20).
 - g. Slowly disconnect old UV-C lamp connector (17) from ballast connector (16).
 - h. Slowly remove old UV-C lamp (20) from quartz tube (6). Save the upper cushion (19) & lower cushion (21).
 - i. Install the upper cushion (19) & lower cushion (21) to the **NEW** UV-C lamp (20).
 - j. Slide the **NEW** UV-C lamp (20) into the quartz tube (6).
 - k. Reconnect the **NEW** UV-C lamp connector (17) to the ballast connector (16). Make sure the connector mate completely. Do not use force.
 - l. Reinstall the enclosure cover (14) with gasket (13) and secure with screws (15).
 - m. Reconnect the unit to the spa controller and reinstall the spa controller's cover.
 - n. Turn ON the power to the spa.
 - o. Once power is activated you can check the ballast to see if the unit is functioning. A solid green light indicates the unit is being provided power and should always be on. A solid red light indicates that UV-C lamp is activated.
 - p. **Warning:** The UV-C lamp used in this unit contains mercury. Properly dispose the old UV-C lamp in accordance with disposal laws. See www.lamprecycle.org.