

# R

# RENAISSANCE™

## Pure Water From Ultraviolet Light



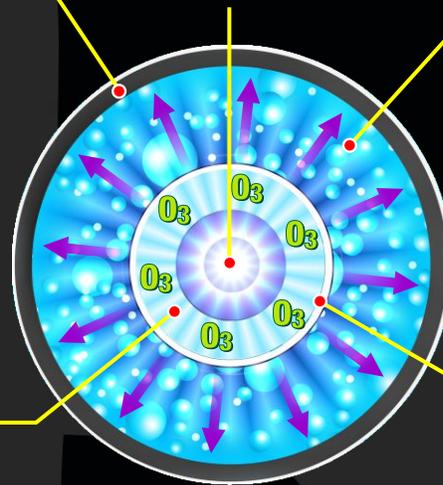
1. Chamber Wall

2. Ultraviolet Lamp produces UV light for sterilization and Ozone for oxidation

3. Using the existing pool pump, water flows through the chamber and is sterilized by UV light from the lamp

5. Simultaneously, Ozone (O<sub>3</sub>) is captured inside the quartz sleeve and injected into water as it exits the chamber.

4. A transparent quartz sleeve surrounds the lamp insulating it from water flowing through the chamber



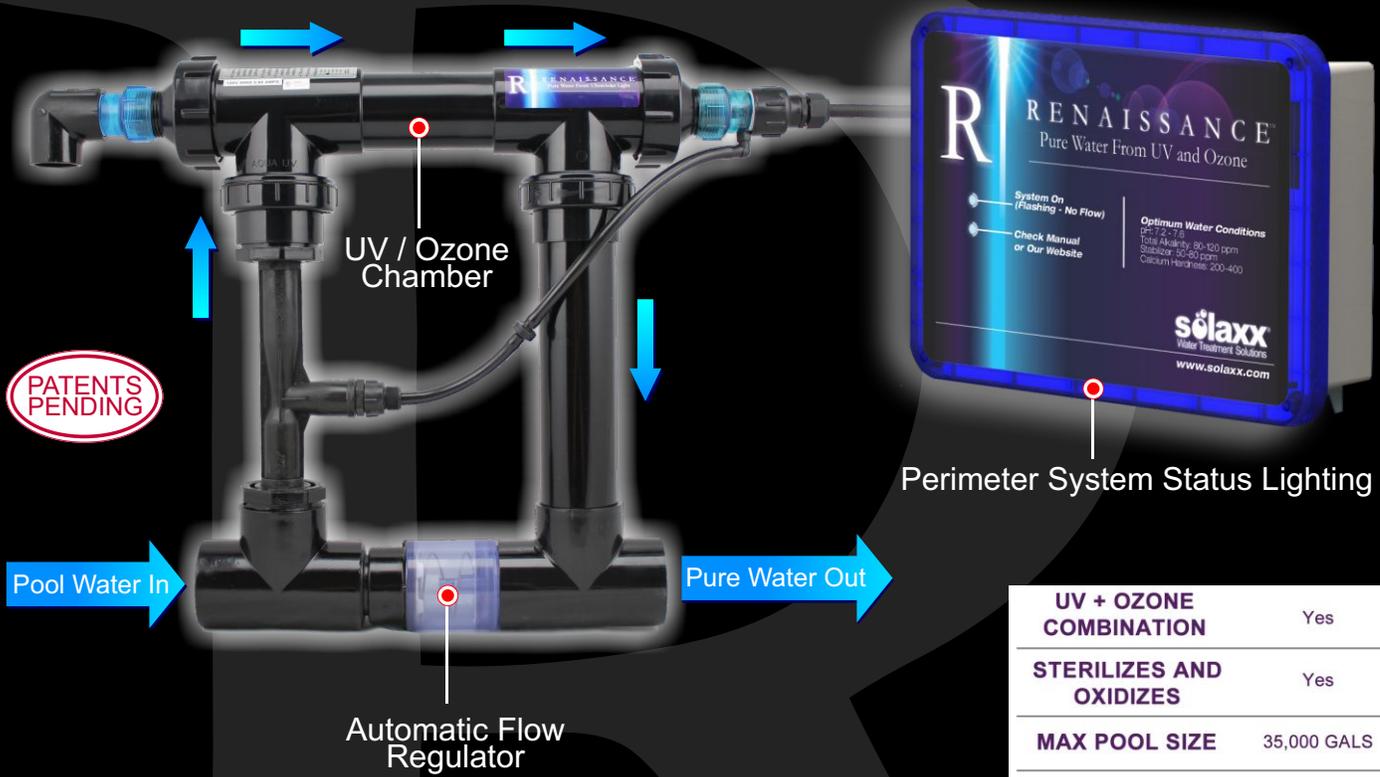
*Sectional view*

## ULTRAVIOLET + OZONE IN ONE POWERFUL SYSTEM

Renaissance combines an Ultraviolet Sterilization Chamber with the power of pure oxygen (Ozone) to treat your water. These two naturally powerful processes eliminate 99.99% of all contaminants in water and reduce the use of pool chemicals up to 80%. No toxic chemicals are used, no metals or minerals, only pure light and pure oxygen.

# RENAISSANCE™

Pure Water From Ultraviolet Light



## How it Works

- Using the existing pool pump, water is circulated through the Renaissance Chamber where it is sterilized to the quality of drinking water and then returned to the pool.
- Renaissance automatically regulates water flow through the chamber for maximum sterilization and minimum impact on other equipment.
- Uses no chemicals, minerals or metals, just pure light and pure oxygen.

<b>UV + OZONE COMBINATION</b>	Yes
<b>STERILIZES AND OXIDIZES</b>	Yes
<b>MAX POOL SIZE</b>	35,000 GALS
<b>MAX OPERATING PRESSURE</b>	50 PSI
<b>MAX GPM</b>	100 GPM
<b>HEAD LOSS</b>	< 5 feet @ 100gpm
<b>BULB LIFE</b>	13,000 Hours
<b>BULB WATTAGE</b>	57 Watts
<b>UV PERFORMANCE</b>	30 mj/cm2 Regulated Flow
<b>OZONE OUTPUT</b>	400 mg/hr
<b>110 OR 220V AVAILABLE</b>	Yes
<b>DRY FIRE PROTECTION</b>	Yes
<b>WARRANTY</b>	3 Years



601 N. Congress Ave. Suite #308  
 Delray Beach, • FL 33445 USA  
[www.solaxx.com](http://www.solaxx.com)  
 Tel: 561.455.0252  
 Fax: 561.455.0257

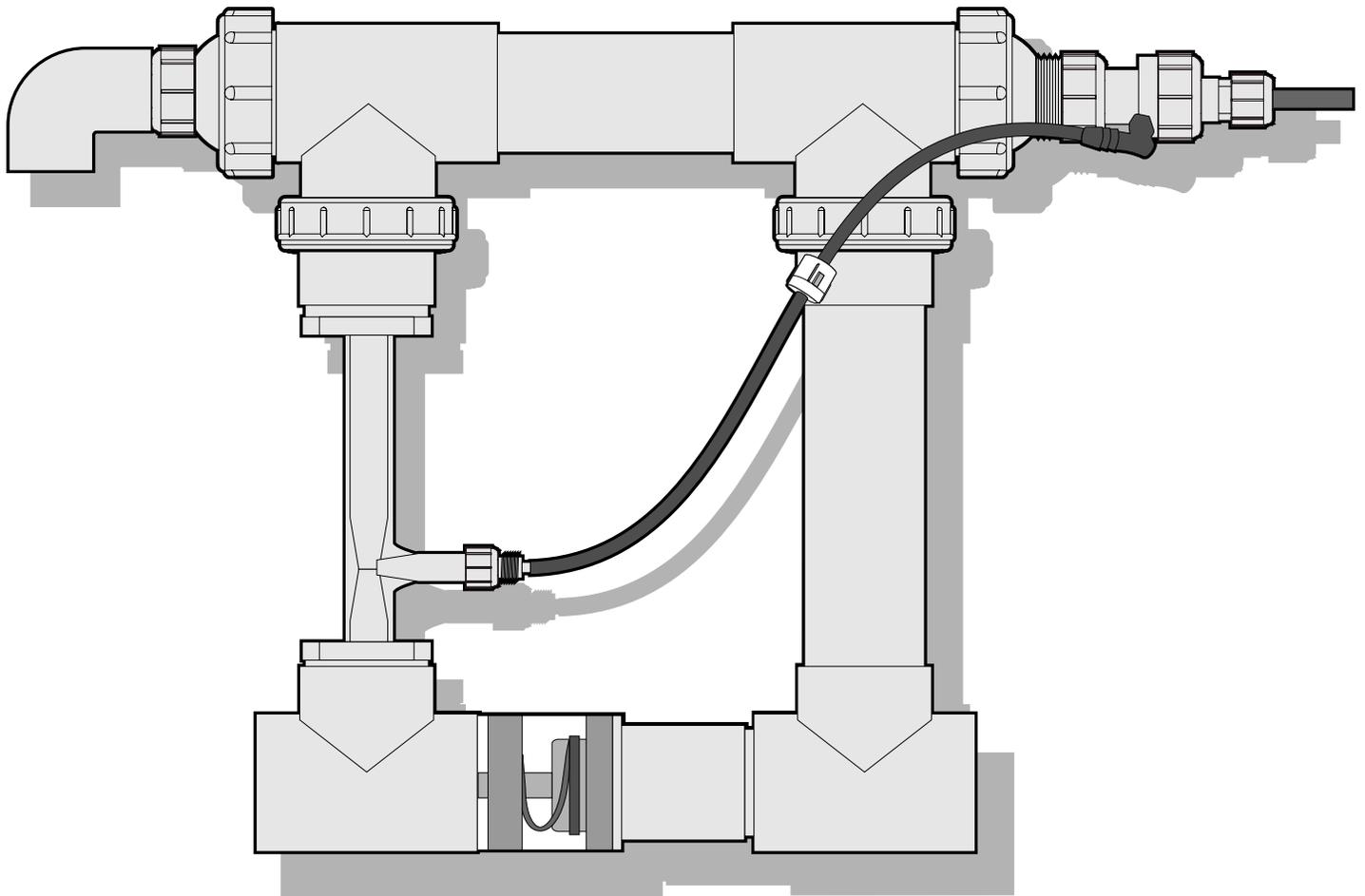
**Your Dealer is:**

# R

# RENAISSANCE

Pure Water From UV and Ozone

## *Installation and Operating Instructions*



**solaxx**<sup>®</sup>  
Water Treatment Solutions

[www.solaxx.com](http://www.solaxx.com)

# SAFETY INSTRUCTIONS

## READ AND FOLLOW ALL INSTRUCTIONS

- ⚠ **WARNING** – Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.
- ⚠ The unit must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the pump without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this pump. Disconnect the pump and have the problem corrected by a qualified service representative before using.
- ⚠ **WARNING** - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- ⚠ **CAUTION** - This product should be installed by a professional service technician or similar person who is qualified in electrical equipment installation. Improper installation and/or operation could cause serious personal injury, property damage or death. Improper installation and/or operation will void the warranty.
- ⚠ **CAUTION** - To reduce the risk of personal injury the power supply must be installed on and wired to the load side of the time clock, electronically controlled switch, or relay load side, so that it will receive power only when the pool pump is on. The Power supply should never be energized when water is not flowing through the unit.
- ⚠ **WARNING** - ELECTRIC SHOCK - Disconnect all AC power during installation or performing any service work.
- ⚠ **CAUTION** - To prevent possible fire or electrical shock, use only replacement lamp specified by the manufacturer.
- ⚠ **CAUTION** - Do not use system if cord is damaged or frayed.
- ⚠ **CAUTION** - Lamps and quartz sleeves are made of glass and are extremely delicate. Care should be taken when handling or replacing these components. Wear cotton gloves when handling lamps or sleeves. Hold bulbs by the ends only. Never touch the glass with bare hands. Wipe any fingerprints from lamps and sleeves with rubbing alcohol.
- ⚠ **CAUTION** - This device is for use on swimming pools less than 35,000 gallons. Do not use this device for potable (drinking) water sanitization.
- ⚠ **DANGER** - ULTRAVIOLET RADIATION. Disconnect Power Before Replacing Lamp . This device contains an ultraviolet lamp that can cause discomfort, irritation and damage to the eyes if viewing occurs while device is in operation. Prolonged exposure to the eyes can cause serious injury to the eyes, including blindness. DO NOT DIRECTLY VIEW UV LAMP WHILE THE DEVICE IS IN OPERATION.
- ⚠ **ENVIRONMENTAL NOTICE** - Hg-Lamp CONTAINS MERCURY. Manage in accordance with disposal laws. See: [www.lamprecycle.org](http://www.lamprecycle.org)

## SAVE THESE INSTRUCTIONS

### Specifications:

**Max Pool Size:** Pools up to 35,000 Gallons

**Shipping Weight:** 17 pounds

**Connections:** Two inch pipe connections on manifold with two inch unions included

**Location Requirements:** Power supply is wall mounted near the manifold and wired to the same source power as the pump. Cord length between power supply and manifold is 9 Feet.

**Input Power:** 120/240VAC 60Hz

**Power Consumption:** 60 Watt max.

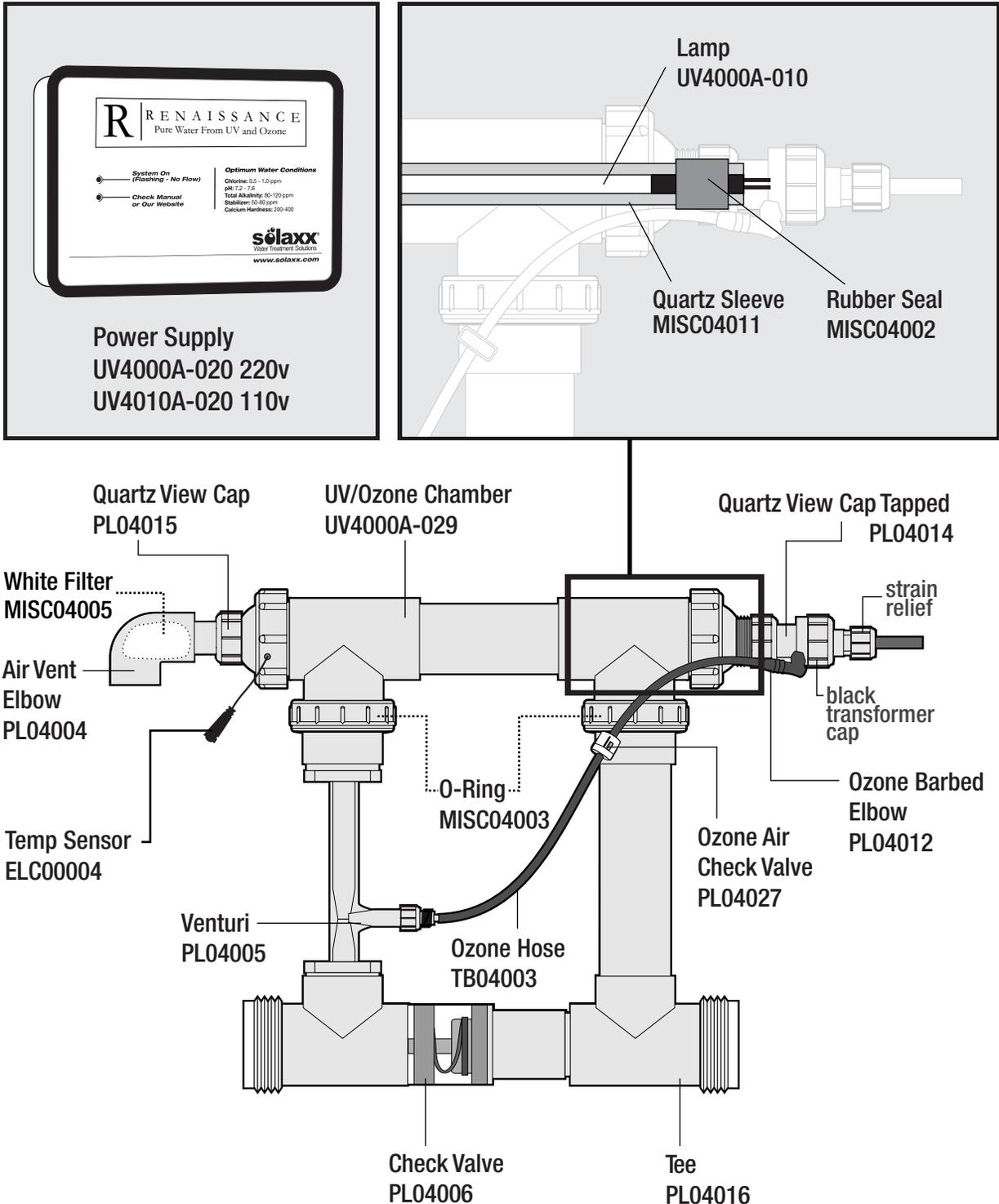
**Max Operating Pressure:** 50 psi

**Operating Flow Range:** 15-120 GPM

**Bulb:** 57 Watt UV 13,000 hour life expectancy

# DESCRIPTION

The system combines an Ultraviolet Sterilization Chamber with Ozone (O<sub>3</sub>) disinfection to treat your water. These two powerful processes eliminate contaminants in water and reduce the use of pool chemicals up to 80%. No toxic chemicals are used, no metals or minerals, only pure light and oxygen. Using the existing pool pump, a specific amount of water is diverted into the UV/Ozone chamber where it is sterilized to the quality of drinking water. A microscopic residual of chlorine (.5-1.0 ppm) is recommended for use with this system as a supplemental source of disinfection. For best results, the pool pump should run at least 12 hours daily, (optimally 24 hours daily) for highest savings in chemical usage and cost.



# INSTALLATION

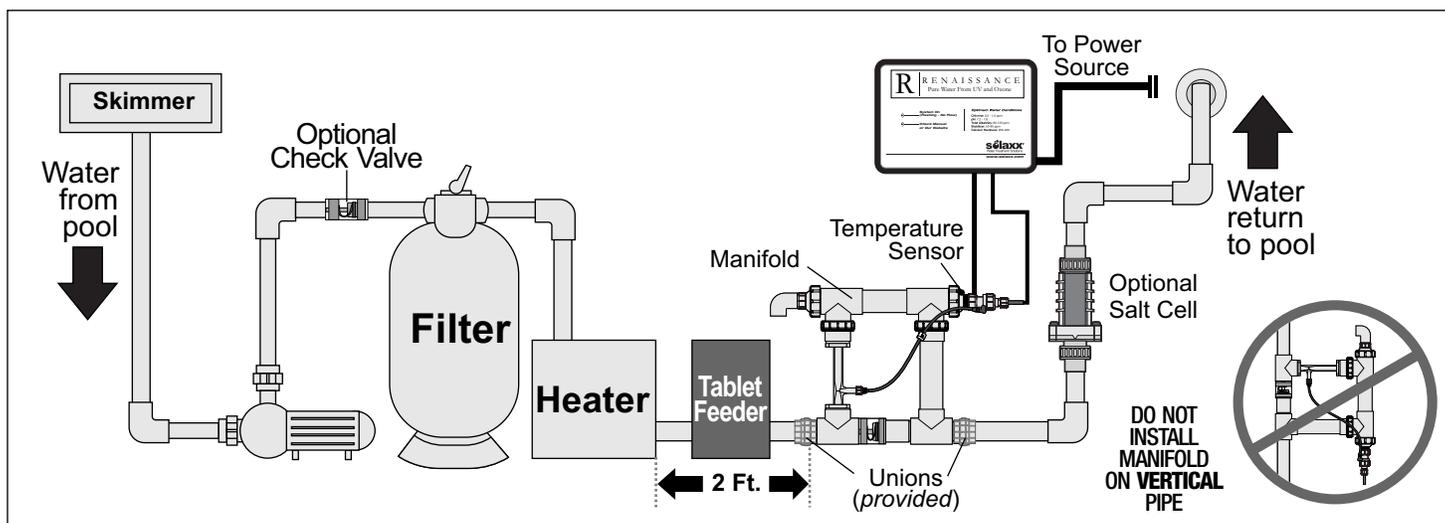


- TURN OFF ALL POWER TO EXISTING EQUIPMENT AT THE BREAKER SWITCH.
- BEFORE STARTING INSTALLATION, YOU MUST READ THIS MANUAL IN ITS ENTIRETY TO ASSURE A SAFE INSTALLATION.

## 1. PLUMBING:

Install manifold downstream of the heater and after chlorine tablet feeder. If space allows, install manifold minimum two feet away from the heater to avoid possible safety shutdown of the system due to hot water conditions in the chamber.

**NOTE: SEE NEXT PAGE FOR INSTALL WITH INFLOOR CLEANING SYSTEM**



A) Install the Renaissance into a 16 3/4 inch opening with a union on both sides to facilitate easy removal should it become necessary. Unions are provided for easy servicing and removal.

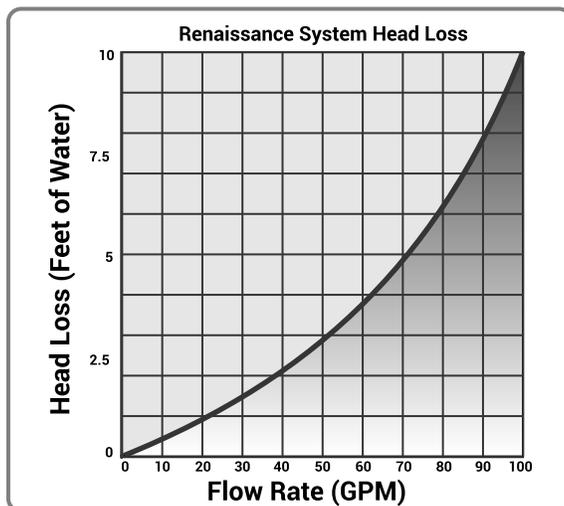
B) Clean the ends of the PVC pipe and glue the manifold into opening in the horizontal position shown above.

C) If existing pipe is sized smaller or larger than 2 inch, use adapters to install manifold (not provided)

D) Water flow is automatically diverted into the UV/Ozone chamber at the proper flow rates. Restriction to the plumbing is nominal when the manifold is inserted into the plumbing and is comparable to adding a heater to the pool. See below:

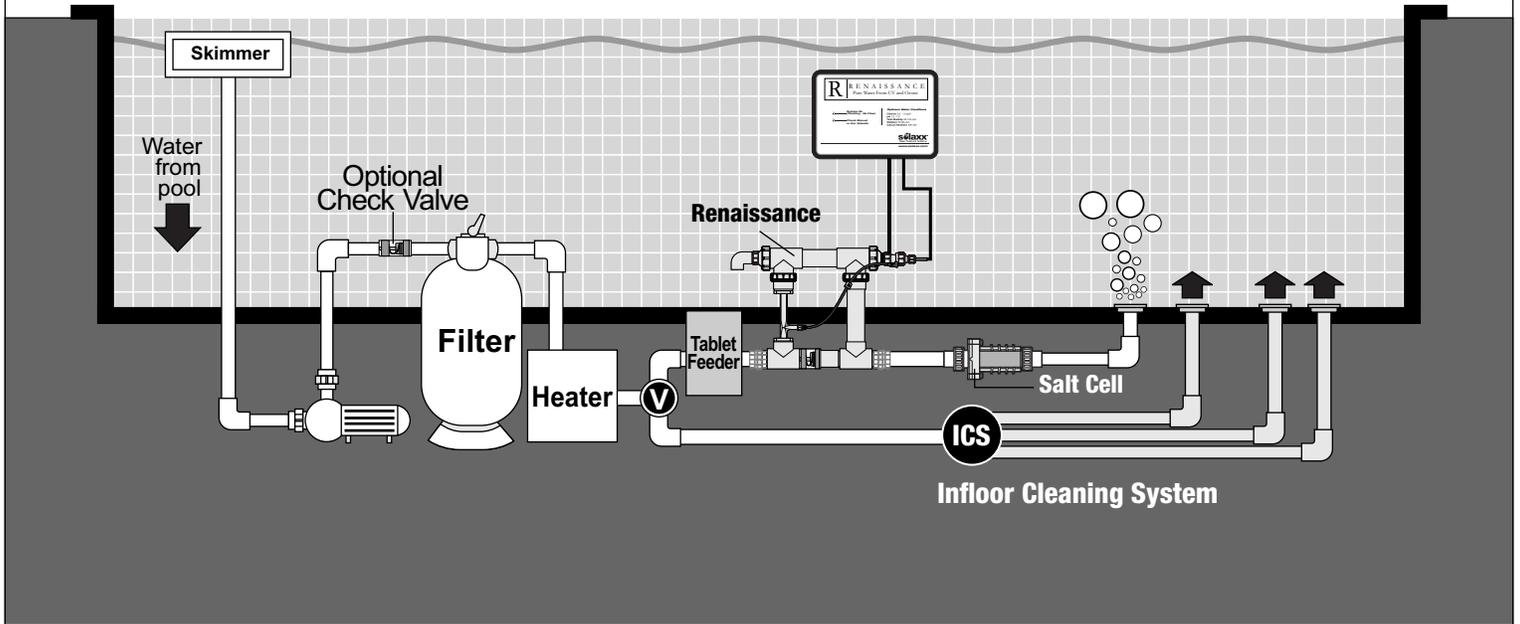
**E) IMPORTANT: Install tablet feeder before (Upstream) of Renaissance manifold.**

**DO NOT ATTACH MANIFOLD DIRECTLY TO A 90° ELBOW. ALLOW AT LEAST 6 INCHES OF STRAIGHT PIPE ON EACH SIDE.**

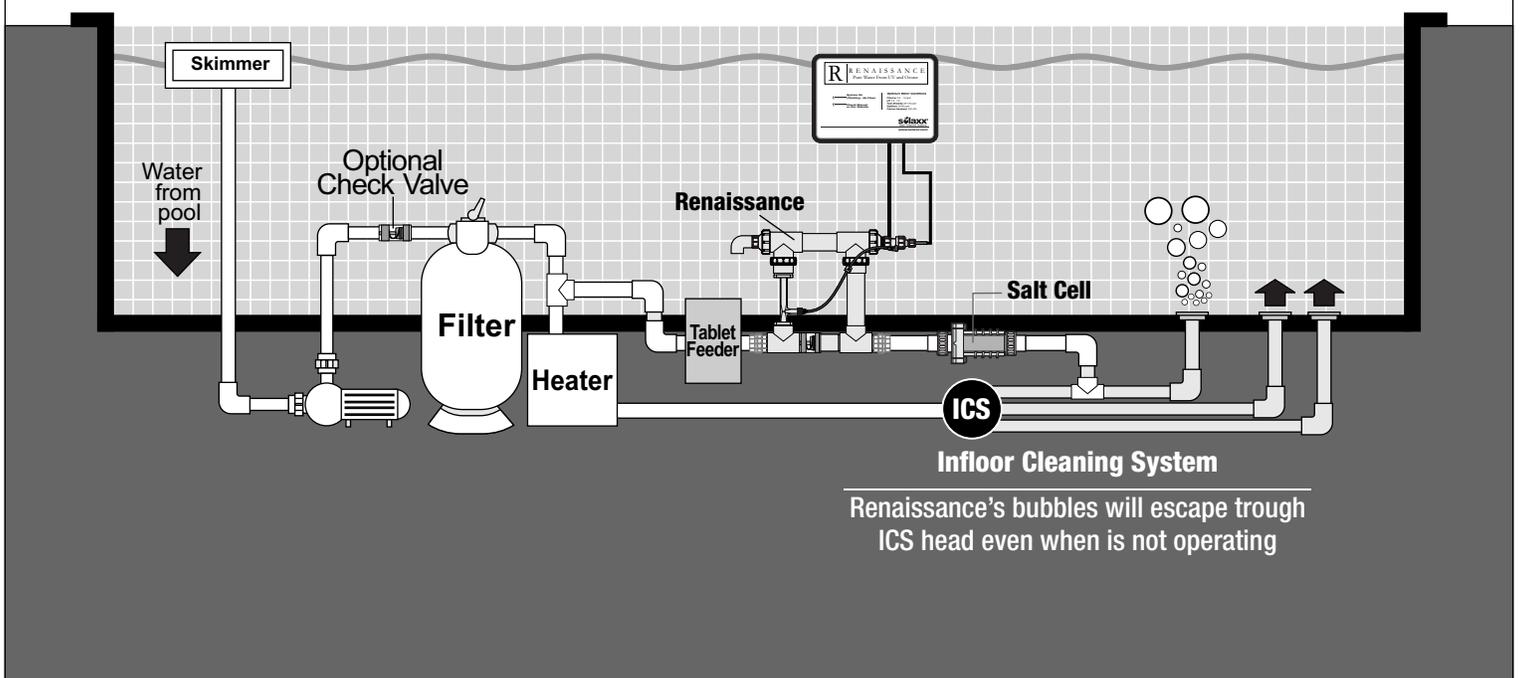


# INSTALLATION

## NEW POOL with Infloor Cleaning System



## EXISTING POOL with Infloor Cleaning System



# INSTALLATION

## 2. INSERT BULB INTO CHAMBER:



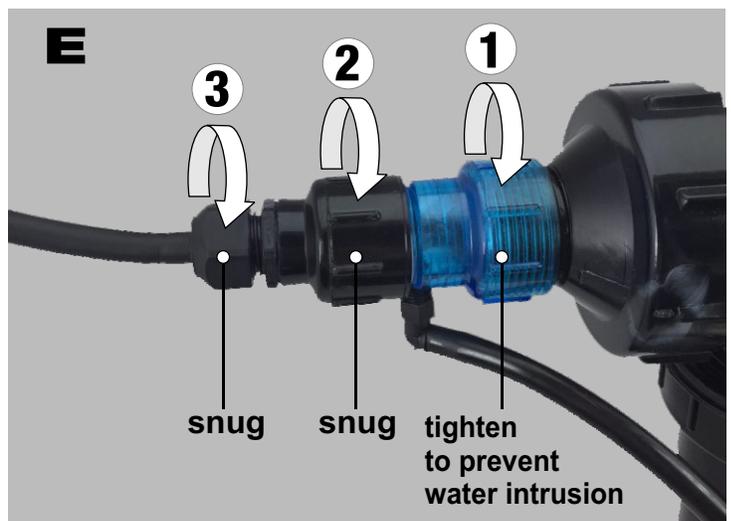
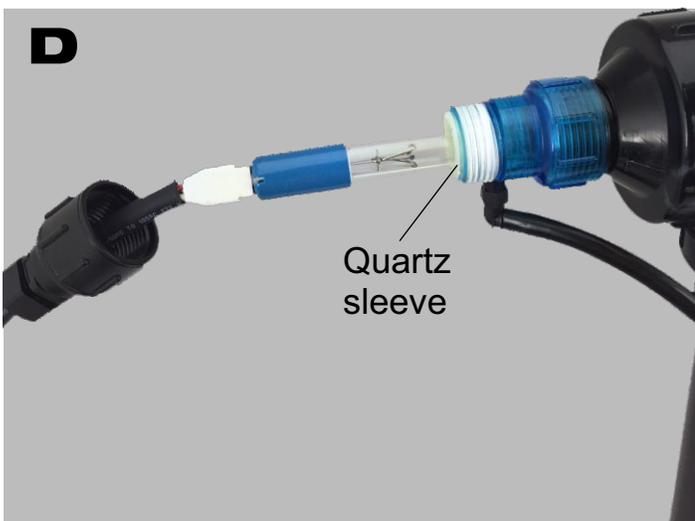
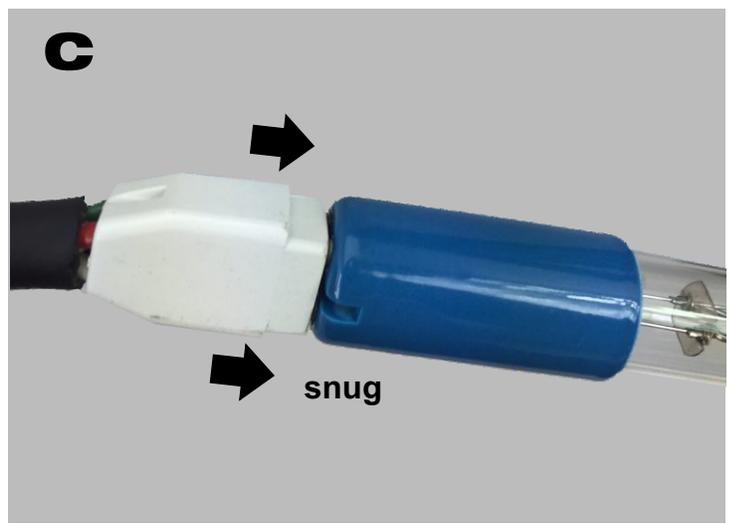
### IMPORTANT:

HANDLE THE BULB BY THE ENDS ONLY AND AVOID TOUCHING THE CLEAR GLASS OF THE BULB. IF POSSIBLE USE COTTON GLOVES TO HANDLE BULB TO AVOID GETTING OILS FROM HANDS ON THE BULB. SKIN OILS ATTACH TO THE BULB AND SHORTEN ITS EFFECTIVE LIFE. IF BULB IS TOUCHED, WIPE CLEAN WITH A SOFT CLOTH AND RUBBING ALCOHOL.



THIS ULTRAVIOLET RADIATION APPLIANCE CONFORMS TO THE APPLICABLE PROVISIONS OF THE CODE OF FEDERAL REGULATIONS (CFR) REQUIREMENTS, INCLUDING TITLE 21, CHAPTER 1, SUBCHAPTER J, RADIOLOGICAL HEALTH

- A. Unthread and remove the end cap with the wire attached from the end of the UV chamber, by first loosening the small black plastic nut, then the larger black nut to pull out plug.
- B. Plug the 4 prong plug into the end of the UV bulb. If lamp is not fully plugged in, damage to the unit may occur.
- C. Slide bulb **straight** into chamber - **Be careful, inserting the lamp at an angle, even a slight angle can crack the quartz sleeve.**
- D. Rethread blue cap back onto chamber fitting very snug to assure tight seal. BE SURE ALL THESE CONNECTIONS ARE SNUG TO ASSURE PROPER OZONE DELIVERY



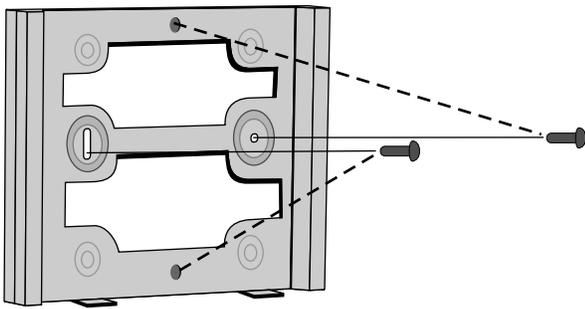
# INSTALLATION

## Mounting the Power Supply

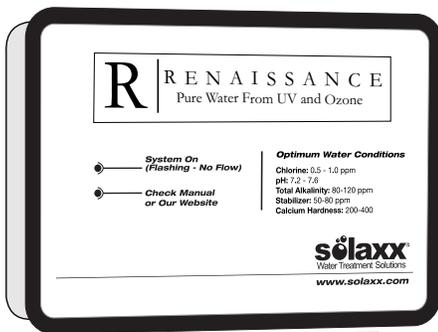


**CAUTION:** FOLLOW ALL APPLICABLE BUILDING AND ELECTRICAL CODES

1. Before making any electrical connections, mount the power supply to a vertical surface. Since Renaissance is designed to turn on only when the pump is running, locate the power supply within 8 feet of the source power for the pump. The Renaissance power supply is wired to the same source power as the pump. See page 8 for electrical connections after mounting power supply.



2. Mount the aluminum bracket first on a vertical surface at a height of approximately five (5) feet above the ground using the screws provided with the spacers against wall to allow air flow behind bracket. Level the bracket using the oval hole for a clean installation. Dotted lines show alternate mounting holes for mounting on a post.



3. Once bracket is secured, slide the power supply down onto the bracket using slots on back of the power supply. Push down onto bracket gently until it hits the stops and is mounted securely in place.



# INSTALLATION

**3. ELECTRICAL CONNECTIONS:**  
**CAUTION:** TURN OFF ALL POWER TO THE POOL EQUIPMENT BEFORE CONNECTING THE POWER SUPPLY TO ANY ELECTRICAL SOURCE. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH!

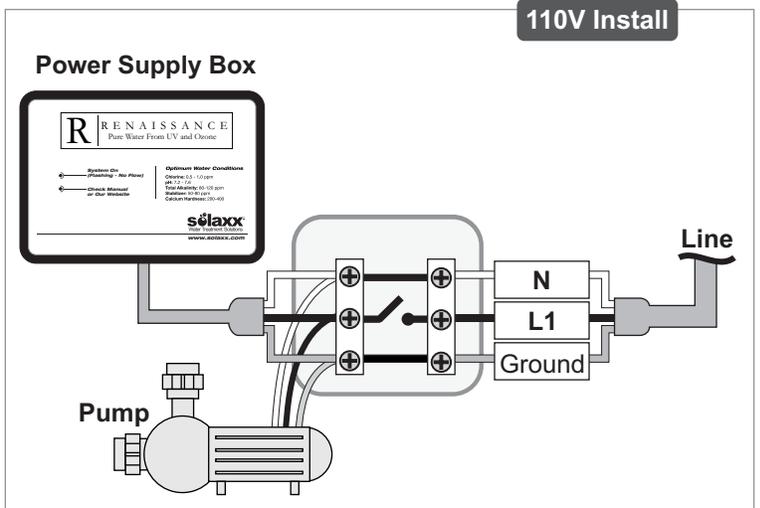
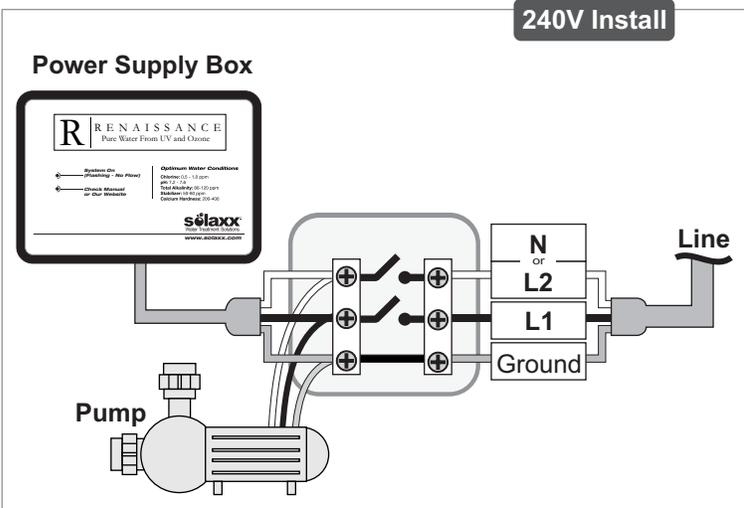
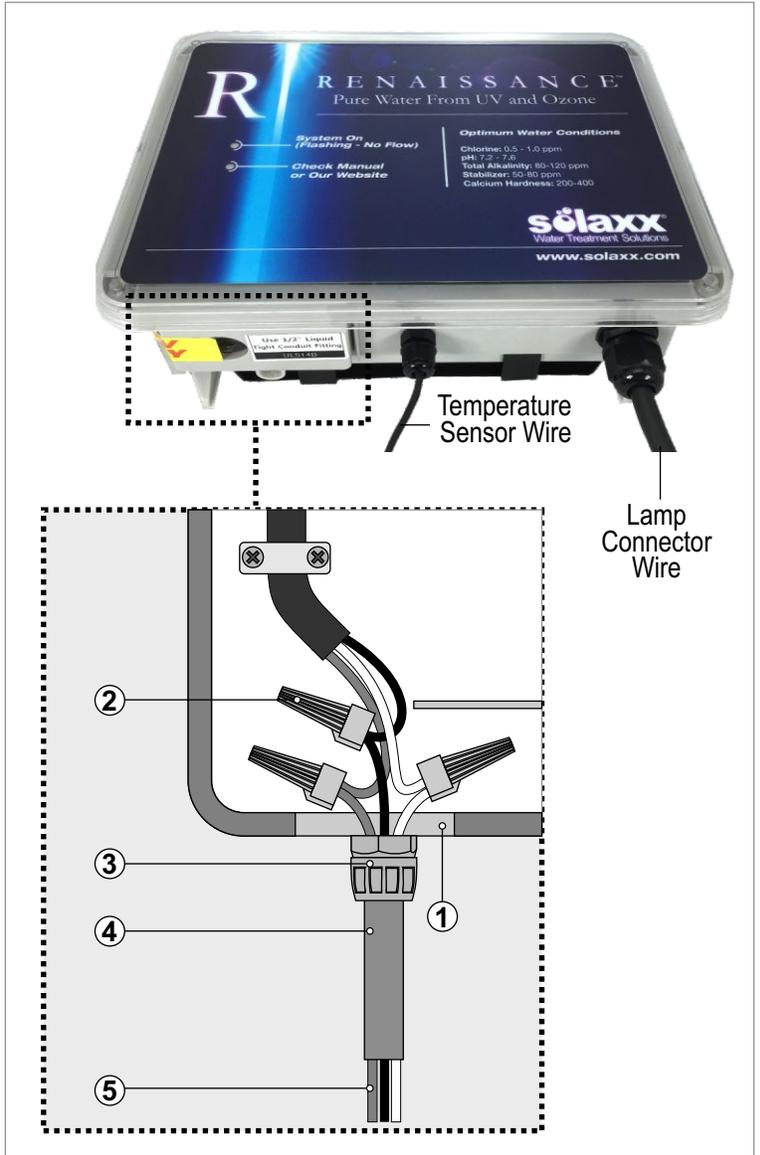
**USE COPPER CONDUCTORS ONLY**

**FOLLOW ALL APPLICABLE ELECTRICAL CODES.**

## Internal Wire Connections

1. Cover of the Junction Box
2. Wire Nut Connections
3. Liquid-Tight Conduit Fitting (1/2 inch) (UL514B)
4. Liquid-Tight Conduit (1/2 inch) (UL514B)
5. Wires

Wires to be connected to either a circuit breaker, automation system or variable speed pump per diagram below:



# POOL WATER PREPARATION

1. OZONE IS NOT COMPATIBLE WITH *BIGUANIDE* BASED WATER TREATMENT SYSTEMS. BRAND NAMES FOR THIS TYPE OF TREATMENT MAY BE CALLED *BAQUACIL*, *REVACIL* OR POSSIBLY OTHERS.

CHECK WITH YOUR POOL PROFESSIONAL TO BE SURE YOUR POOL IS NOT USING A *BIGUANIDE* TREATMENT PROGRAM. IF SO, THE *BIGUANIDE* MUST BE NEUTRALIZED BEFORE OPERATING THE SYSTEM. CHLORINE FROM CHEMICALS OR SALT SYSTEMS ARE NOT A PROBLEM AND THE SYSTEM MAY BE STARTED WHILE USING CHLORINE.

2. Test pool water and adjust pH, total alkalinity, calcium hardness, stabilizer and check phosphate levels before starting system. See Table below.



## Optimum Water Conditions

Chlorine: 0.5 - 1.0 ppm

pH: 7.2 - 7.6

Total Alkalinity: 80-120 ppm

Stabilizer: 50-80 ppm

Calcium Hardness: 200-400

# OPERATION



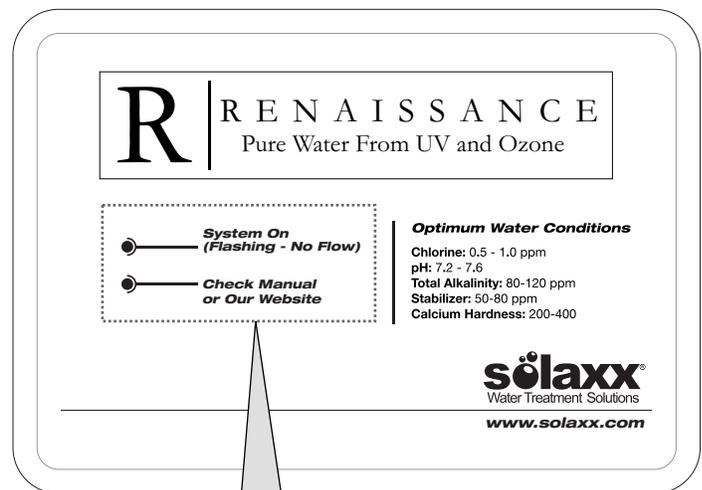
**WARNING: DO NOT ATTEMPT TO OPEN THE POWER SUPPLY FOR ANY REASON. IT IS SEALED AND NOT DESIGNED TO BE REPAIRED IN THE FIELD. A DEFECTIVE OR NON FUNCTIONING POWER SUPPLY IS REPLACED WITH A NEW UNIT ONLY.**

- Steady Blue LED = system has power and is operating normally

- Flashing Blue LED = no flow to chamber. This could be caused by the pool pump losing its prime or from blockage in the plumbing. Check water flow through system.

**Note: The flow is determined using a temperature sensor. Therefore, it may take a few minutes to recognize NO FLOW. This is not harmful to the Renaissance chamber.**

- Steady Red LED = system error. This means an error has occurred in the power supply. Please go to [www.solaxx.com](http://www.solaxx.com) to create an RMA form which will be answered within 24 hours or next business day to resolve this issue.



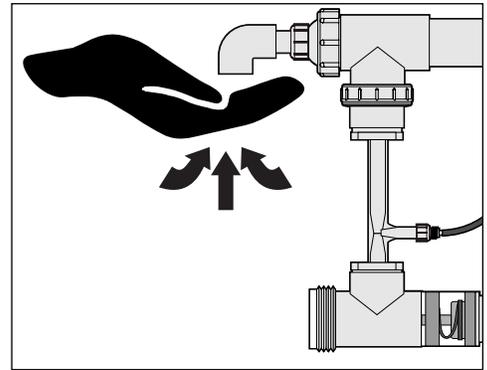
● System On (Flashing - No Flow)

● Check Manual or Our Website

# OPERATION IMPORTANT

**Extremely high flow rates** can prevent the Renaissance from operating correctly and possibly cause damage to the system. To ensure proper operation of the Renaissance, check for a **gentle suction** from the air vent elbow after installation and once the pump is turned on.

A gentle tug should be felt when a hand is covering the air vent elbow.



- On a **VARIABLE SPEED PUMP** if there is no suction, adjust the pump speed until suction can be felt.
- On a **SINGLE SPEED PUMP** if there is no suction, add a bypass with ball valve.
- It is normal for bubbles to enter the pool when Renaissance is running.

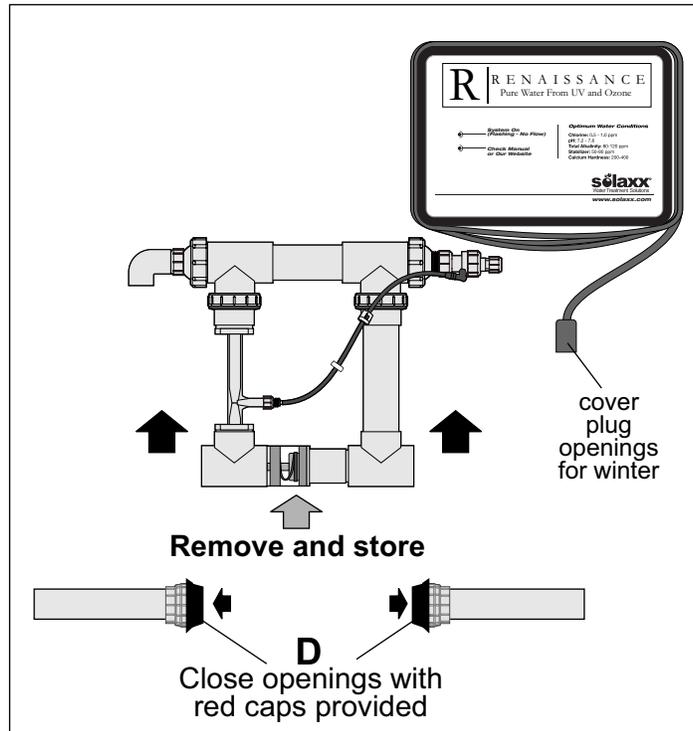
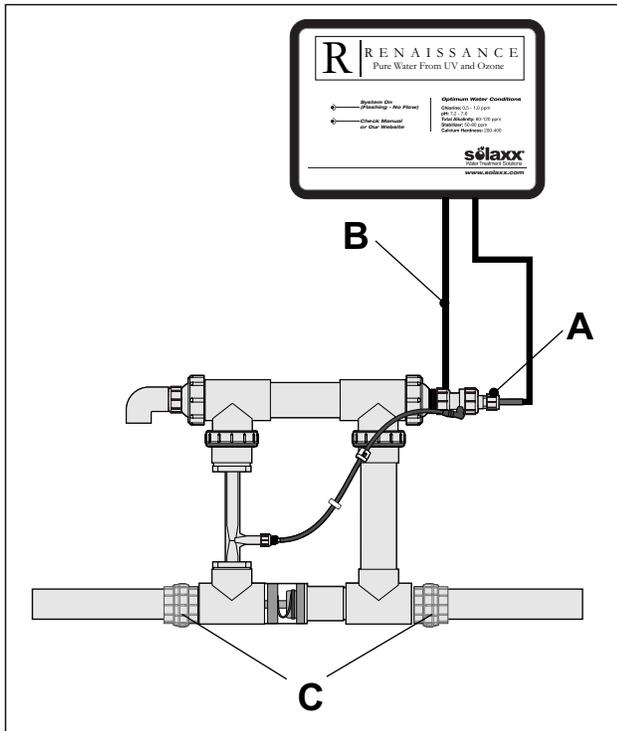
# MAINTENANCE

## WINTERIZING

In areas where the pool and the equipment is winterized (equipment drained and pool covered), Renaissance should be winterized also. This is done by removing the entire Renaissance manifold from the plumbing and storing in a warm, dry place.

First, blow out all pipes with air while the Renaissance is still installed on the pipe. Then:

- Unplug the bulb in reverse order of inserting it as shown on page 6.
- Coil the wire around the power supply which is mounted to the wall and leave in place for winter. Protect the 4 prong plug openings by wrapping with duct tape to protect against moisture over the winter.
- Unthread the union nuts and remove the entire black manifold from the pipe and store safely inside.
- Cover opening in pipes with red caps provided. Secure caps with a little duct tape.



## CHANGE AIR FILTER

A. The air filter should be changed annually to allow system to operate properly. It is located in the elbow at the end of the UV/Ozone chamber. Pull the old filter out by hand or tweezers and replace with a fresh air filter by pushing it into the opening so it appears as shown.

B. Replacement Filter Media can be purchased at [www.solaxx.com](http://www.solaxx.com)



# MAINTENANCE

## BULB REPLACEMENT

The UV bulb is rated for 13,000 hours of service and can be monitored through the blue viewing caps at either end of the chamber. **DO NOT VIEW BULB DIRECTLY - ALWAYS USE VIEWING CAPS.** When the bulb requires replacement, follow this simple procedure:



**Shut off AC power to Renaissance before performing maintenance**

**Allow bulb to cool for 10 minutes before handling**

- A. Unthread and remove the end cap with the wire attached from the end of the UV chamber, by first loosening the small black plastic nut, then the larger black nut to remove bulb
- B. Plug the 4 prong plug into the end of the UV bulb. If lamp is not fully plugged in, damage to the unit may occur.
- C. Slide bulb straight into chamber - **Be careful, inserting the lamp at an angle, even a slight angle can crack the quartz sleeve.**
- D. Rethread blue cap back onto chamber fitting very tight to assure tight seal.

## IMPORTANT:

HANDLE THE BULB BY THE ENDS ONLY AND AVOID TOUCHING THE CLEAR GLASS OF THE BULB. IF POSSIBLE USE COTTON GLOVES TO HANDLE BULB TO AVOID GETTING OILS FROM HANDS ON THE BULB. SKIN OILS ATTACH TO THE BULB AND SHORTEN ITS EFFECTIVE LIFE. IF BULB IS TOUCHED, WIPE CLEAN WITH A SOFT CLOTH AND RUBBING ALCOHOL.



## CLEANING THE QUARTZ SLEEVE

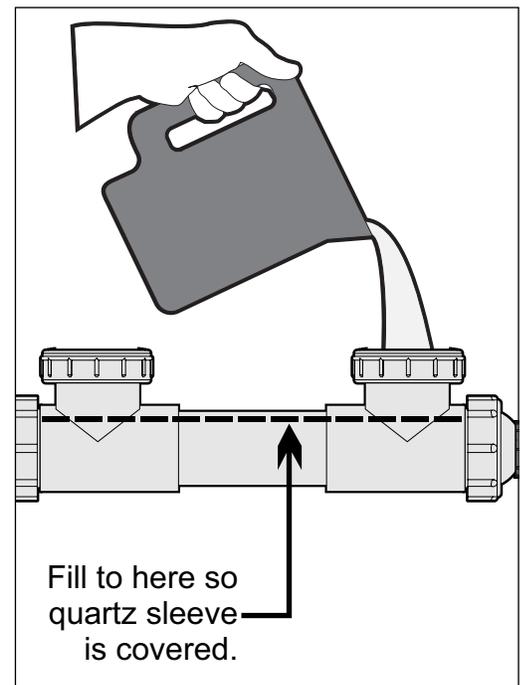
The quartz sleeve inside the UV chamber encases the UV bulb and should be cleaned while winterizing the system, or annually if system is installed on a pool running 12 months. The quartz sleeve is brittle and can be cracked, chipped or broken if it is not handled with care. Do not remove the sleeve or attempt to scrape or scrub the sleeve as it could crack or break it.

-After removing the manifold as shown in WINTERIZING section, unthread the top chamber and turn the chamber over so the openings face up.

-Using CLR or Lime Away or a comparable cleaning product (available at grocery stores or home centers), pour into the chamber to cover the quartz sleeve with the liquid and allow to soak for 30 minutes. Dispose of cleaning solution by following instruction on the cleaning solution container.

-Rinse the quartz sleeve with isopropyl alcohol to remove any remaining residue from the sleeve.

-Rinse the sleeve again with water.



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Pure Water From UV and Ozone

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