

OPERATION & INSTALLATION INSTRUCTIONS

Congratulations on purchasing the Pura Vida Ultraviolet Water Sterilizer. By purchasing this system, you are receiving not only a high quality product but also peace of mind. In addition to your chlorine puck erosion feeder, a UV system gives you reassurance that your family will have access to cleaner, safer pool water, while significantly reducing chemical usage. UV systems use a chemical free process which is simple in its concept and effective in its abilities to inactivate microorganisms which are resistant to chlorine. Simple maintenance, continuous disinfection and ultimately safe water, Pura Vida makes it that easy to maintain a healthy swimming environment.



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SAFETY CONSIDERATIONS

Although your UV system has been manufactured to the highest safety standards, proper care must be followed when operating and/or maintaining your system.

- 1. Before servicing this equipment, disconnect the power cord from the electrical outlet.
- 2. Energy given off by the UV lamp is harmful to your eyes and skin. NEVER look directly at an illuminated UV lamp without adequate eye protection and always protect your skin from direct exposure to the UV light.
- For complete disinfection and warranty coverage, use ONLY genuine replacement parts.
- 4. Do not operate the unit if it has any damaged or missing components.
- 5. To avoid possible electrical shock, use only with a properly grounded electrical outlet.
- 6. It is highly recommended that maintenance be performed by a certified technician.
- 7. Do not use this system for any purpose other than what it was intended for. Misuse of this system could potentially cause harm to the user or others.
- 8. The disinfection system should be directly installed into a ground fault circuit interrupter (GFCI) or approved junction box or pool automation system if hardwired installation. If the use of an extension cord is required, the cord must be manufactured with a minimum of 16 gauge wire and care should be taken to avoid potential tripping hazards.
- 9. This system should only be installed by a certified technician.

THIS PRODUCT IS NOT TO BE USED FOR GENERAL LIGHTING / ILLUMINATION.

BEFORE YOU BEGIN

The following will be needed for installing the UV system:

Tools

- For existing pools Pipe cutter, hacksaw or other specialized tools required to cut/modify into your existing pool plumbing
- Wrench (for tightening fittings)
- Phillips screwdriver

Other materials

- PVC/PVC glue (to glue pool plumbing to union)
- Non-hardening pipe-thread sealant specifically rated for use with PVC plastic and stainless steel. (THIS SEALANT IS INCLUDED IN YOUR SYSTEM PARTS). Teflon tape and Teflon-based pipe sealants cannot be used on the stainless steel threads.
- If installing in an area that is exposed to weather, the enclosed clear cover is required to cover and protect the controller and maintain warranty coverage

WATER CHEMISTRY

UV disinfection is extremely effective against microorganisms but only if the UV light can pass through the water it needs to treat. This means that the quality of your water is very important in order to ensure complete disinfection.

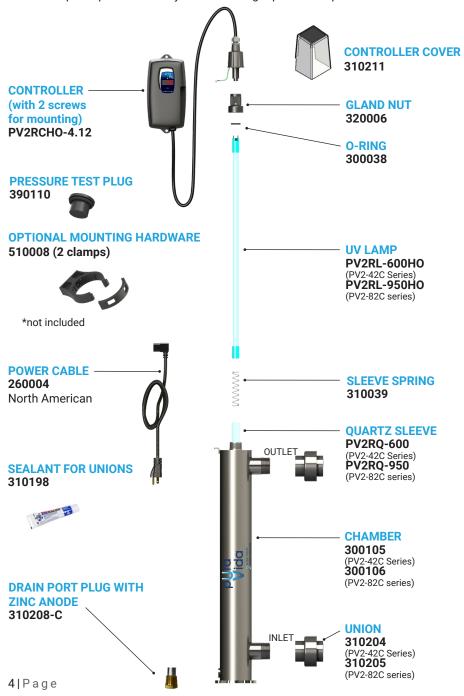
Regular water chemistry testing should be performed as usual.

RECOMMENDED WATER PARAMETERS

Chlorine residual:	1-3 ppm free chlorine
pH:	7.4 - 7.6
Total alkalinity:	80 - 120 ppm

ASSEMBLY AND PARTS LIST

Unpack the system and ensure all the components are included with the system. Your system is shipped with the following components: Please keep this parts list handy when ordering replacement parts.



RECOMMENDED PLACEMENT

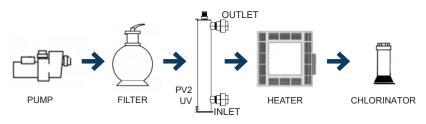


Figure 1. Diagram of flow

FLOW RATES

For detailed flow rates see page 11.

LOCATION

Place UV system in an area to ensure there is enough space at the lamp connector end to safely remove the UV lamp and quartz sleeve (Figure 2).

The controller will require a ground fault circuit interrupter (GFCI or GFI) outlet and should be mounted beside or above the chamber. The controller must be mounted upright. If the controller is mounted outside, the enclosed cover is required to protect electronics from the elements and maintain warranty coverage. If installing unit in horizontal position, you must assemble all components in vertical position beforehand.



Figure 2. Lamp Removal Spacing

INSTALLATION

If desired, please see video at www.puravidauv.ca

The UV system can be installed horizontally or vertically. Vertical installation is the preferred method with the inlet at the bottom (lamp connection at the top) If installing horizontally additional mounting hardware is required (PN 510008).

The use of a by-pass assembly is recommended as it will allow you to isolate the UV chamber. This will allow for easier access when maintenance is required.

If installing vertically, the base can be mounted to the ground however it is recommended leaving the unit unfastened for easy removal when storing during the off season.

It is recommended to have a pool professional connect the UV chamber to the water supply and may be a requirement depending on where you are located.

Step 1: Plumb UV system between filter & heater. Please note, the inlet should be at the bottom and the outlet at the top of the chamber. Use the union sealant that is included in the box to glue union to threads on stainless steel chamber. Use regular PVC plumbing glue to attach union to pool piping.

Step 2: Perform a Pressure Test (See Figure 3). Insert pressure test cap (with o'ring) in top of chamber & screw on top gland nut. Turn on pump and observe for any leaks.

Step 3: Inserting the Quartz Sleeve.WARNING: Do not push glasssleeve down too far. Remove gland nut & pressure test cap. Gently remove the quartz sleeve from its packaging. The use of cotton gloves is recommended for this procedure as oils from the hands can leave residue on the sleeve and lamp which can ultimately block the UV light from getting to the water. Carefully slide the sleeve into the chamber until



Figure 3. Pressure Test Cap Installation

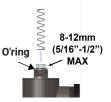


Figure 4. Quartz Sleeve Installation

you feel it rest inside the centre of internal metal basket holder at bottom of unit (See Figure 4). There should only be 8-12mm (5/16''-1/2'') of glass exposed.

<u>Caution</u>: Any more than 12mm of glass exposed can cause the quartz tube to break and void warranty.

Step 4: Install O'Ring and Spring. Slide the o'ring onto the quartz sleeve until it is butted up against the chamber. Insert spring inside quartz tube.

PLEASE NOTE: DO NOT install a UV lamp inside the quartz sleeve without the o-ring and spring in place.

Step 5: Install gland nut. **Hand tighten** the gland nut over the quartz sleeve onto the threaded top of the chamber. Do not overtighten. It has a positive stop to prevent overtightening. **DO NOT USE TOOLS**.

Step 6: Lamp installation. Carefully, remove the lamp from its packaging. Always hold UV lamps by their ceramic ends, not by the glass. Again, the use of cotton gloves is recommended. **Make sure spring is inserted into the quartz tube before this step.** Gently lower lamp into quartz sleeve.

Step 7: Connecting the lamp. Plug the lamp connector into the lamp. Note the keying for proper alignment (Figure 5). Insert the lamp connector into the gland nut, gently push down then turn the connector approximately ¹/₄ turn clockwise to lock the connector to the gland nut (Figure 6). The tabs inside the top nut must align with the channels on the lamp connector in order to achieve a proper lock. Do not pull upon connector before unlcoking from the gland nut.

Step 8: Using a phillips screwdriver tighten the ground screw t the ground lug on the UV chamber to ensure proper grounding (Figure 7).

Step 9: Mount controller in an upright vertical position nearby with supplied screws. If controller is directly exposed to the elements, the enclosed cover is required to protect the controller and maintain warranty coverage.

Your system is now ready to be plugged into the appropriate GFCI protected outlet. You may consider keeping quartz tube and bulb packaging for off season storage. (See Winterization page 8).

PLEASE NOTE: A timer is recommended in conjunction with your pool pump to ensure the Pura Vida UV system is always running at the same time as the pump.

MAINTENANCE

CLEANING THE QUARTZ SLEEVE/LAMP REPLACEMENT

If desired, please see video on www.puravidauv.ca

At a minimum, the quartz sleeve should be cleaned on an annual basis. Depending on the water quality, the quartz sleeve may require more frequent cleaning. The following steps outline a basic cleaning procedure. The lamp should be replaced after 420 days of use & when alerted by the controller.

Step 1: If a by-pass assembly is installed, shut the inlet valve off to prevent water flow through the system. Otherwise, turn off main water valve (and/or turn off the pool pump).

Step 2: Disconnect power cord of UV system from electrical outlet.

Step 3: Release water pressure by opening union and letting water drain from the system.

Step 4: Remove the captive ground screw from the ground lug on the UV chamber.

Step 5: Remove the lamp connector from the chamber (gland nut) by pushing the lamp connector gently down and turning it ¼ turn counter-clockwise. Do not pull up on lamp before unlocking from gland nut. Disconnect the lamp connector from the lamp. **CAUTION: the lamp may be hot!**

Step 6: Remove the lamp from the chamber, being careful to hold it by the ceramic ends.



Figure 5. High Output UV Lamp Connection



Figure 6. Lamp Connector



Figure 7. Ground Screw

Step 7: Unscrew the gland nut from the chamber exposing the end of the quartz sleeve.

Step 8: Carefully remove the quartz sleeve and o-ring by **<u>gently</u> twisting and pulling** the quartz sleeve out of chamber.

Step 9: Cleaning the quartz sleeve. Using a soft, lint-free cloth or towel wipe the outside of glass using a commercial scale cleaner (i.e. CLR® or LIME-A-WAY®). This removes scaling or mineral deposits that may be on the outside of the quartz sleeve. Be careful not to get any moisture or liquids inside of the sleeve and ensure spring stays in place inside quartz sleeve.

Step 10: Dry the sleeve with separate cloth.

Step 11: Slide the clean sleeve back into the chamber. Follow steps 3 through 8 from the installation section of the manual. **Do not push down too far and ensure it rests in its place at bottom of chamber**. Replace O'ring and ensure spring is re-installed into quartz sleeve.

Step 12: If bulb is being replaced, plug new bulb into lamp connector. Remember to reset the countdown timer on the controller. To reset the timer on the controller, firmly hold down the button on the controller for 10 seconds. The controller will read "rSt3", "rSt2", "rSt1" and then beep. The button can now be released, the lamp countdown timer has been reset to 420 days.

INSPECTING THE ZINC ANODE

It is recommended to inspect the Zinc Anode Drain plug once per year. Once pump and system has been shut down, use a wrench to remove the drain plug from the bottom of the chamber. As this is a sacrificial anode, the zinc will break down over time. The zinc anode should be replaced once it reaches approximately ½" in size (original size of anode is 1"). The anode requires PTFE (Teflon[™]) pipe tape to seal. After inspection, the tape may have to be replaced. When replacing, ensure first thread does not have tape as it will interfere with the electrical connection.

WINTERIZATION

Recommended operating temperature is between 2-40 degrees C (36-104F). Please ensure the Pura Vida system and pump is turned off before winterizing.

During the winterization process (or on an annual basis) it is important to inspect the zinc drain plug (see above).



Pressure Test Cap Installation

There are 2 options for winterization (Option 1 is recommended):

1. IF THE BASE IS NOT AFFIXED TO CONCRETE <u>The Pura Vida unit should be</u> <u>disconnected and stored indoors for winter</u>. Turn off the pump, unscrew the unions to disconnect the plumbing and remove the drain plug to allow excess water to escape. A wrench is required to unscrew drain plug. **Keeping the system fully assembled move the chamber and controller inside for the winter**.

3. WHEN BASE IS AFFIXED TO CONCRETE OR IF REQUIRED TO LEAVE CONNECTED TO PLUMBING Disconnect Power. Unscrew the unions to disconnect the plumbing and remove the drain plug. Tip chamber to allow ALL water to drain. Remove the controller from wall mount and carefully disconnect the lamp from the lamp cable. Unscrew ground screw from the ground lug on chamber. Carefully remove the quartz tube and lamp. These are fragile and must be handled with care, gloves are strongly recommended.

^{2.}

Ensure the spring remains in the quartz tube and o-ring in place as it is essential for reassembly. <u>Utilize original packaging to safely store the lamp and quartz sleeve</u>. Apply the pressure test cap and screw at the top gland nut, as noted in STEP 2 of installation. This will act as a winter cap. After water has been completely drained, the unions can now be re-connected if desired.

TO MAINTAIN WARRANTY COVERAGE, IT IS REQUIRED TO STORE ELECTRONICS/ CONTROLLER INSIDE DURING WINTER MONTHS.

*When ready to reconnect the Pura Vida in the spring, please refer to the original installation instructions above.

**If proper winterization and installation instructions are not followed, the warranty will be rendered void.

OPERATION

CONTROLLER



Simplistic in operation, this system features a tri-colour LED light, indicating system status and a 4-digit display to indicate lamp life remaining. Pressing the button will change the display to indicate total running time. When the UV lamp is on and within its operating age, the LED light will be green. When the UV lamp is not on or the lamp life has expired, the LED will be illuminated red and an audible buzzer will sound. To remedy this condition, the UV lamp must be replaced with a new genuine Pura Vida UV lamp.

PLEASE NOTE: A timer is recommended in conjunction with your pool pump to ensure the Pura Vida UV system is running at the same time as the pump.

LAMP COUNTDOWN SEQUENCE

Starting at 420 days, the system counts down the number of days until a lamp change is required. Please note, the countdown timer will stop when unit is unplugged during winter or when PuraVida is not powered on.



At thirty days remaining, the LED or display screen will change to a yellow caution indicator. At seven days remaining, the system will additionally repeat an audible chirp. Past the zero day threshold, the LED or display screen changes to solid red with a continuous buzzer.







At any point during this sequence, the audible chirp or alarm can be deferred for seven days by holding the controller button down for a period of five seconds. The number of deferrals used will be displayed as below. Once the deferral expires, the alarm will sound once again. The deferral can be repeated up to three times.

PLEASE NOTE: At any point after lamp expiration, the water disinfection rate is now compromised.



LAMP REPLACEMENT

Please see page 7 for full instructions. Ensure to reset the controller after a lamp change by holding down the button for 10 seconds. The controller will read rSt3, rSt2, rSt1 and then beep.

SYSTEM TROUBLESHOOTING

Hard Alarms: The following will give a constant audible alarm.

System Display	Problem	Resolution
	The system has detected a problem with the lamp.	Reset lamp protection circuit -unplug unit for 10 seconds. Replace the lamp with the part as indicated on the silver label on the chamber or on parts list (Page 4).
	Although the lamp is powered and visibly illuminated, due to the lamp's age its UV output is no longer sufficient for proper disinfection.	Replace the lamp with the part as indicated on the silver label on the chamber or on parts list (Page 4).

For any other questions or troubleshooting, please contact your dealer, call 1-855-881-0889 or email info@selectpoolproducts.ca

SYSTEM SPECIFICATIONS

Model	PV2-42C	PV2-82C
	42 GPM	82 GPM
Flow Rate	159 lpm	310.4 lpm
	9.5 m³/hr	18.6 m³/hr
Port Size	1.5" MNPT	2" MNPT
Electrical	90-265V/50-60Hz. (IEC power cord included)	
Plug Type	American, NEMA 5/15, 3 wire for all 110V systems	
Lamp Watts	67	101
Replacement Lamp	PV2RL-600HO	PV2RL-950HO
Replacement Sleeve	PV2RQ-600	PV2RQ-950
Replacement Controller	PV2RCHO-4.12	
Chamber Material	316L Stainless Steel, A249 Pressure Rated Tubing, Polished & Passivated	
Chamber Dimensions	3.5 x 26.9" (8.9 x 68.3 cm)	3.5 x 40.7" (8.9 x 103.4 cm)
Controller Dimensions	8.6 x 4.2 x 4" (21.7 x 10.8 x 10.2 cm)	
Operating Pressure	0.7-10.3 bar (10-150 psi)	
Operating Water Temperature	2-40° C (36-104° F)	
Lamp Change Reminder	YES (4-digit LED display)	
Visual Lamp Out Indicator	YES	
Audible Lamp Out Indicator	YES	
Shipping Weight	7.9 kg (17.5 lbs)	10.0 kg (22.1 lbs)

LIMITED WARRANTY STATEMENT

The PuraVida2 UV System is warrantied to the original user only to be free of defects in material and workmanship for the period specified below. This warranty only applies to the original purchaser and is not transferable. Warranties will not be approved after installation of replacement parts have been completed without prior authorization from Select Pool Products or one of its approved dealers.

UV SYSTEMS

Three (3) year Limited Warranty on the stainless steel chambers, from the date of original purchase, or installation (proper documentation required for verification).

ELECTRONICS

Three (3) year Limited Warranty on the controller, from the date of original purchase, or installation (proper documentation required for verification).

UV LAMPS & QUARTZ SLEEVES

One (1) year Limited Warranty on all ultraviolet lamps, UV sensors and quartz sleeves from the date of original purchase, or installation (proper documentation required for verification).

This Pura Vida Ultraviolet Water Sterilizer will be repaired or replaced, at our sole option, providing that the ultraviolet system or any component is defective in materials or workmanship for the periods outlined above and subject to the "Limitations of Warranty" as outlined below. Pura Vida's liability under this warranty shall be limited to replacing the part, without charge, F.O.B. Select Pool Products' closest Distribution Facility or applicable service depot. Select Pool Products will not be liable for any costs of removal, installation, transportation, or any other charges which may arise in connection with a warranty claim. Select Pool Products will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair, or if the product was not installed or winterized in accordance with the manufacturer's installation and operating instructions. Select Pool Products is not responsible for any personal injury, property damage or economic loss, however caused.

Limitations of warranty

This warranty does not apply to any of the following:

- A product that has been incorrectly installed according to the installation manual.
- A product that has been modified in any manner, unless approved by the manufacturer.
- A product where the serial number has been altered, defaced or removed.
- Damage caused by the use of parts that are not compatible, suitable and/or authorized by Select Pool Products for use with the product (i.e. non-original lamps or sleeves).
- · Damage caused during shipment of the product.
- If the product has not been stored properly or properly assembled.
- If the product has not been winterized by our specifications.

For Warranty Service

Select Pool Products will not be liable for any incidental or consequential damages, losses, or expenses arising from installation, use, or any other causes. There are no express or implied warranties, including merchantability or fitness for a particular purpose, which extend beyond those warranties described or referred to above.

Please visit: www.selectpoolproducts.ca/warranty-request-form to submit a warranty claim for any part considered defective. Proof of purchase as well as part numbers will be required. Select Pool Products will contact you within 48 hrs to process the claim. Please do not replace or discard any parts until instructed to do so by Select Pool Products. For further assistance and troubleshooting help, call 1-855-881-0889.

This limited warranty is the sole and exclusive warranty with respect to this ultraviolet disinfection product, and is given in lieu of any other warranty. To the extent allowed by applicable law, any and all express or implied warranties not set forth herein are waived and disclaimed, including any implied warranty of merchantability or fitness for a particular use. Select Pool Products' liability under this limited warranty is limited solely to those liabilities set forth above. In the event that any provision of this limited warranty should be found to be or become invalid or unenforceable under applicable law, the remaining terms and conditions hereof shall remain in full force and effect and such invalid or unenforceable provision shall be construed in such a manner as to be valid and enforceable.

WARRANTY REGISTRATION

It is imperative that you complete the warranty registration process with the manufacturer. This not only registers your UV disinfection system for the provided manufacturer's warranty, but also allows the factory to provide you with any important product updates or technical bulletins concerning your product. The registration process is a simple process and can ONLY be done online at **www.uv-warranty.com**. Please ensure that ALL information is filled in, including a valid e-mail address. **PLEASE NOTE:** This information is for the sole purpose of technical support for your disinfection system and will not be used, or sold, to any other organization for any other purpose.



PREMIUM PRODUCTS. EXCEPTIONAL SERVICE.

1-855-881-0889 104A-3345 North Service Road, Burlington, ON L7N 3G2 www.selectpoolproducts.ca



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