



Instructions for Emperor Aquatics, Inc.'s 18, 25 & 50 Watt Advanced UV Sterilizers (for Savio's Skimmers)

Thank you for purchasing our 18, 25 & 50 Watt Advanced UV Sterilizer. Please read all instructions carefully before attempting to install this UV Sterilizer. If at any time you have questions regarding parts or installation, please feel free to contact our Customer Service Department at 610-970-0440 x0.

18, 25, 50 Watt Advanced UV Sterilizer - What is included?

1. UV Lamp
2. Quartz Sleeve
3. Power Supply (Sealed Power Supply w/ Lamp Connector)
4. Connection Assembly w/ Screws

***** Before Installing, Inspect for damage *****



1.0 Important Safety Instructions for Advanced UV Sterilizers

WARNING: To guard against injury, basic safety precautions should be observed, including the following. Water and electricity can be a dangerous combination. Help us ensure your safety **PLEASE READ AND FOLLOW THESE INSTRUCTIONS.**

WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS CORRECTLY COULD RESULT IN A VOID OF WARRANTY OR EVEN UNSAFE CONDITIONS.

1.1 **Always** unplug the unit from its power source before opening the skimmer's lid. UV light can be very dangerous, to avoid injury don't handle or look at the UV lamp while it's operating. Direct exposure to UV rays can cause health risks and skin tissue damage.

1.2 DANGER: Special care should be taken to avoid the possibility of receiving an electric shock, due to water being employed in the use of this pond equipment. For each of the following situations, **do not attempt repairs yourself**. Call EMPEROR AQUATICS, INC. for services or discard the appliance.

1.2.1 If the unit falls into the water, **DO NOT REACH FOR IT!** First unplug it and then retrieve it. If internal electrical components of the unit get wet, unplug it immediately.

1.2.2 If the unit shows signs of water leakage inside the quartz sleeve, immediately unplug it from the power source.

1.3 Do not operate this unit if it has a damaged cord or plug, if it is malfunctioning, or if it has been dropped or damaged in any manner.

1.4 Close supervision is necessary when any appliance is used by or near children.

1.5 Always unplug the unit from an outlet when not in use, before servicing, and cleaning or removing parts. Never yank the cord to pull the plug from the outlet. Grasp the plug and pull to disconnect.

1.6 Do not use the Emperor Aquatics, Inc. Advanced UV Sterilizer on any applications other than its intended use. The use of attachments not recommended or sold by Emperor Aquatics, Inc. may cause unsafe conditions.

1.7 Do not allow the unit to be entirely submerged. Follow water level guidelines as seen on page #5.

1.8 WARNING: Do not operate the Advanced UV Sterilizer when the water level inside the skimmer filter is below the recommended point (as indicated on page #5). Operating the unit in dry conditions will result in damage to the unit and possible unsafe conditions. Damage caused in this way will void the warranty.

1.9 Do not allow the power supply module to be submerged in water. Do not place the power supply in the pond or in an area where rain water may collect.

1.10 The electrical requirements for this Advanced UV Sterilizer are 120VAC 60 Hz. **This unit must be plugged into a well grounded (GFI) electrical outlet.** To comply with the National Electrical Code (NFPA 70) and to provide additional protection from risk of electrical shock, this unit should only be connected to a receptacle that is protected by a ground fault circuit interrupter (GFI). Do not attempt to cut the ground plug off or change the cord to a two-wire plug. Altering the power assembly will void the manufacturer's warranty.

1.11 Use only three-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from this unit.

2.0 Advanced UV Sterilizer Features & Specifications

- UL listed for indoor and outdoor use
- Long lasting UV lamps (13 Month continuous useful UV Lamp Life)
- Protective Quartz Sleeve (thermally protects the UV Lamp; ensures optimum UV performance)
- Watertight Design (resists failure due to water damage, isolates the skimmer water from the UV's electrical hardware)
- Remote Power Supply (moves it away from water inside the skimmer box and the pond)

Advanced UV Sterilizer Specifications

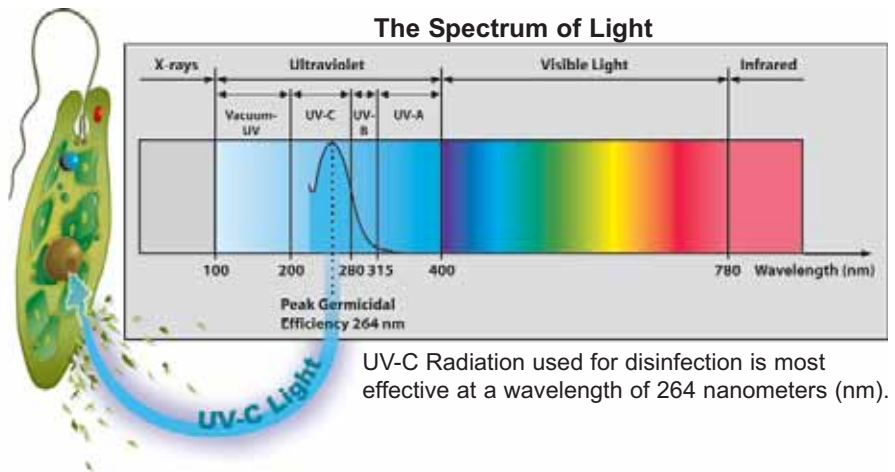
Model No.	Maximum Pond Size	No. Lamps/ Watt	Maximum Water Flow Rate	Dim. (Inches)
02818	1,500 Gal.	1/18	500 GPH	18.5" x 4"
02826	2,340 Gal.	1/25	780 GPH	23.25" x 4"
02850	4,800 Gal.	1/50	1,600 GPH	23.25" x 4"

3.0 Introduction to UV Sterilization

Using a low-pressure mercury vapor germicidal lamp. Input watts are supplied to the UV lamp creating an electrical arc with the mercury inside. This reaction creates UV-C light. The UV-C light between 250nm and 280nm (the germicidal action spectrum) when directly exposed to living microorganisms such as bacteria and Protozoa is very effective at altering their DNA, disabling them from reproducing or even destroying them.

Microorganisms vary in type and size. Identifying the targeted microorganism, (Algae, Bacteria etc...) and matching its type and size to its established UV exposure rate, are prerequisites for eliminating that particular microorganism. Successful UV sterilization requires the UV-C (UV radiation @ 250-280nm) light to penetrate the microorganism's cell wall/cell membrane and destroy its nuclear material as discussed and shown in diagram above.

Successful UV sterilization in a water application requires the targeted waterborne microorganism to be in direct contact with the UV-C light (produced by the UV lamp) for a specific amount of time [UV exposure rate]. Established UV exposure rates must be applied to achieve successful UV sterilization.

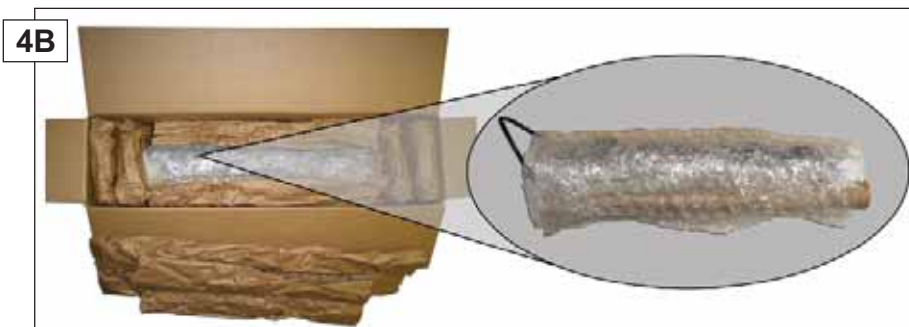


4.0 Inspection

4.1 The 18, 25, & 50 Watt Advanced UV Sterilizer is shipped from our factory as shown here in 4A:



4.2 The Advanced UV Sterilizer is shipped fully assembled and packed as shown here in Photo 4B.



Please inspect these items for possible shipping damage before use. Thoroughly inspect the quartz sleeve and uv lamp for damage of any kind as they are made of glass and are easily broken.

4.3 Your Advanced UV will be wrapped as one cocoon of bubble wrap. First, carefully remove the outer layer of bubble wrap. You should now have two protected sections connected by the power cord as shown in **Photo 4C** to the right. Second, carefully remove the bubble wrap from the Advanced UV Sterilizer's power supply. Gently slide the protective tube from the Advanced UV's Quartz Sleeve for removal. Lastly, remove the rubber bands from the power supply cord and the piece of tape holding the screws in place (located on the connection assembly). With the exception of the two mounting screws your Advanced UV Sterilizer should not have any loose parts. If your Advanced UV does not look like the one in **Photo 4A**, or if you noticed any broken parts please contact Emperor Aquatics, Inc. at 610-970-0440 x0 for further assistance.

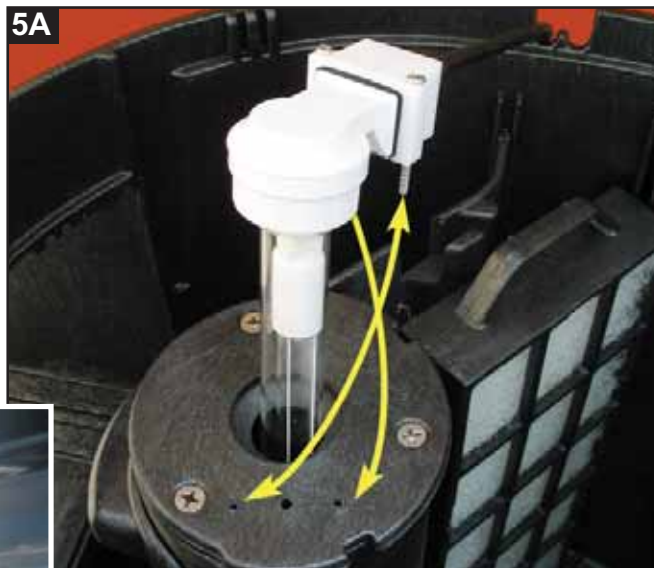


4.4 Your Advanced UV Sterilizer is now ready for installation into your Savio Skimmer.

5.0 Installation

5.1A Slide the quartz sleeve end of the unit gently into the UV chamber of the filter (shown in **Photo 5A**). Line up the two screws of the white connection assembly with the holes on the filter. Ignore the center hole.

5.1B 2008 and Newer Savio Skimmers require the UV Plate hole to be opened up from a 7/8" diameter to 1". Use a 1" hole saw bit to accomplish this. Center the 1" hole saw over the existing hole, then carefully drill through the plastic unit completely. Make sure the freshly cut surface is smooth and clean before proceeding. Note: Using a quartz sleeve maintains the critical operating temperature required by the lamp for optimum UV-C output.

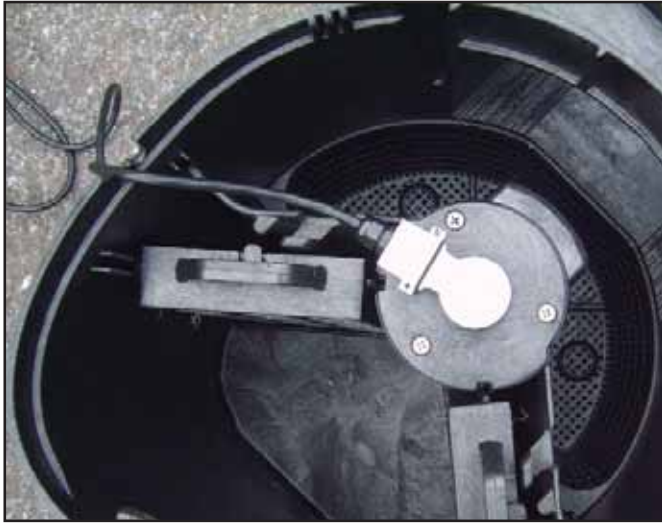


5.2 Secure the Advanced UV Sterilizer by tightening down the two screws (shown in **Photo 5B**).



5.3 Drape the power cord over and out of the filter as shown below. Make sure the cord is resting within one of the notches on the filter rim to ensure the cord will not interfere with the filter lid.

18 Watt Advanced UV



25 & 50 Watt Advanced UV



WARNING: Do not operate the Advanced UV Sterilizer when the water level inside the skimmer filter is below the recommended point (as indicated on Diagram 5-1). Operating the unit in dry conditions will result in damage to the unit and possible unsafe conditions. Damage caused in this way will void the warranty.

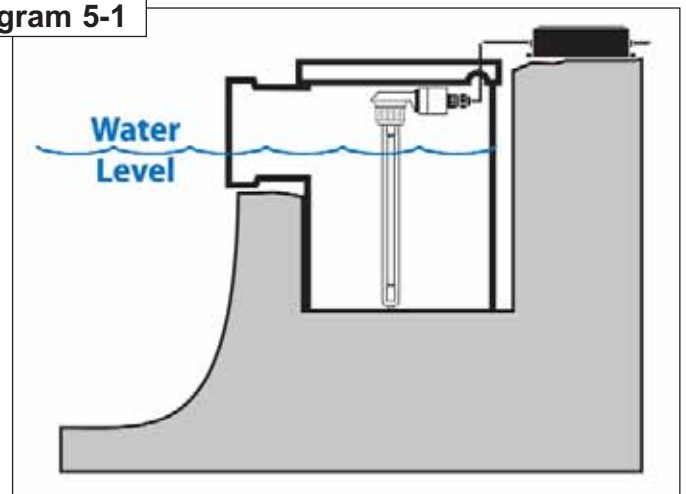
5.4 Under no circumstances should the power supply be submerged under water (inside or outside the filter).

5.5 Place lid securely on the filter.

5.6 After the recommended water level is obtained, you may plug in your Advanced UV Sterilizer to start operation.

5.7 You are now ready to operate the Advanced UV Sterilizer.

Diagram 5-1



6.0 Servicing the 18, 25, & 50 Watt Advanced UV Sterilizer

6.1 QUARTZ SLEEVE CLEANING:

(**WARNING:** Unplug the Advanced UV from the electrical source before removing the lid of the Savio skimmer or you risk possible injury due to ultraviolet light exposure).

Once the Advanced UV is unplugged, remove the Savio Skimmer's lid. Unscrew the UV's mounting screws and gently remove the unit from the skimmer box. Remove the soft solid waste deposits on the quartz sleeve with a mild dish washing detergent then rinse thoroughly. For harder deposits on the quartz sleeve remove with vinegar or muriatic acid. **WARNING:** Extra care must be used when handling chemicals including acids of any kind.

Quartz sleeve cleaning frequency is determined by the condition of the water being treated. Supplying solids-laden water to the UV decreases UV transmissibility through the water and weakens overall UV performance. This also makes the quartz sleeve dirty quicker; therefore, requiring more frequent cleanings. When finished, reinstall the Advanced UV by following these steps in reverse.

Improper Assembly May Result In Electrical Component Water Damage

Emperor Aquatics, Inc. is not responsible for improper assembly of these parts.

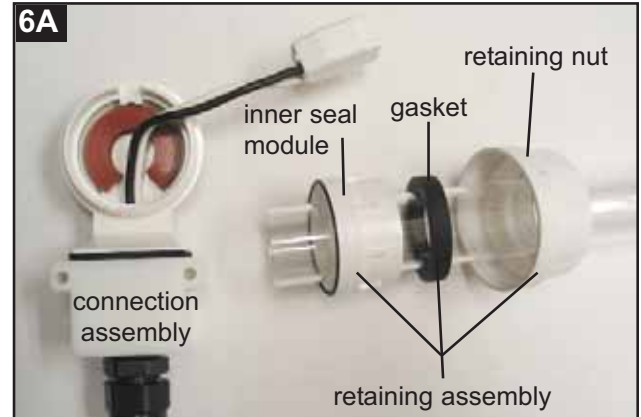
Follow these steps precisely.

6.2 QUARTZ SLEEVE REPLACEMENT:

(WARNING: Unplug the Advanced UV from the electrical source before removing the lid of the Savio skimmer or you risk possible injury due to ultraviolet light exposure).

Once the Advanced UV is unplugged, remove the Savio Skimmer's lid. Unscrew the UV's mounting screws and gently remove the unit from the skimmer box. Then unscrew the white retaining nut from the connection assembly, this will remove the retaining assembly and the quartz sleeve (in one piece) from the connection assembly. Lightly hold the quartz sleeve in one hand and the retaining nut in the other hand. Gently twist the retaining nut while pulling down towards your hand holding the quartz sleeve.

This action will separate the retaining assembly's three parts as shown in **Photo 6A**. Remove these parts from the old quartz sleeve and place them on the new sleeve in the exact order shown in **Photo 6A**. Place the gasket approximately three quarters of an inch (3/4") from the top (open end) of the quartz sleeve (*Note: If quartz sleeve gasket is older than 1 - year, replace it*). Make sure the outer edge of the gasket is flat as shown in **Diagram 6-1**. "Sandwich" the gasket with the Retaining Nut and Inner seal Module as shown in **Photo 6A**. Squeeze these parts together. You should feel and hear the Inner Seal Module hook into place. Now the retaining assembly is complete. The top of the quartz sleeve should be slightly below the level of the Retaining Assembly as shown in **Photo 6B** (You may adjust the Retaining Assembly's position on the Quartz Sleeve by gently applying pressure up or down). Bring the Quartz sleeve up over the lamp and screw the Retaining Assembly onto the Connection Assembly. Be careful not to skew the threads as you turn. You will feel resistance but continue to turn until the Retaining Assembly mates flush with the Connection Assembly. To reinstall the Advanced UV into your Savio Skimmer follow the first steps of 6.2 in reverse.

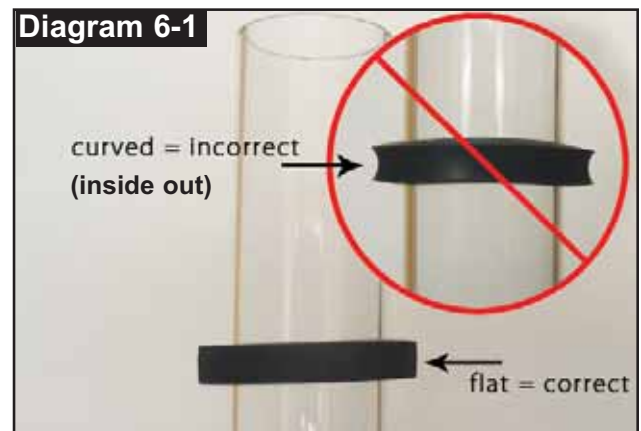


6.3 UV LAMP REPLACEMENT:

(WARNING: Unplug the Advanced UV from the electrical source before removing the lid of the Savio skimmer or you risk possible injury due to ultraviolet light exposure). Once the Advanced UV is unplugged, remove the Savio Skimmer's lid. Unscrew the UV's mounting screws and gently remove the unit from the skimmer box. Then unscrew the white retaining nut from the connection assembly, this will remove the Retaining Assembly and the Quartz Sleeve (in one piece) from the Connection Assembly. Unplug the used Lamp from the Connection Assembly's 4 pin Lamp Connector. Securely attach the new Lamp to the Lamp Connector and follow these steps in reverse.

6.4 SEAL REPLACEMENT:

Follow the steps in section 6.2 above, but replace the existing gasket with a new one. Pay close attention to the edge of the gasket as described above and shown in **Diagram 6-1**. This Quartz Sleeve Gasket should be replaced at least once annually.



7.0 Winterizing

7.1 Winterizing: Using the Advanced UV in extremely cold temperatures can cause damage to the unit, especially if the water is allowed to freeze inside the filter. Please note that damage to the product in this manner is not covered under warranty.

7.2 We recommend shutting the Advanced UV down when the temperature consistently falls below 50 degrees.

7.3 Remove the Advanced UV from the filter (following the steps in 6.1 on page 5).

7.5 Once clean and dry, store the Advanced UV in a dry place for the winter. Return the Advanced UV to service when temperatures consistently return to 50 degrees. Be sure to replace the quartz sleeve gasket prior to operating the equipment. (See Section 6.0)

8.0 Replacement Parts

22318: Advanced 18-watt Quartz Sleeve Replacement

22326: Advanced 25 & 50-watt Quartz Sleeve Replacement

22018: Advanced 18-watt UV Lamp Replacement

22025: Advanced 25-watt UV Lamp Replacement

22050: Advanced 50-watt UV Lamp Replacement

20100-SAVIO-1: Advanced 18 & 25-watt Power Supply

20250-SAVIO-1: Advanced 50-watt Power Supply

22323: Advanced Quartz Sleeve Gasket

To order replacement parts go to www.qualityuvlamps.com

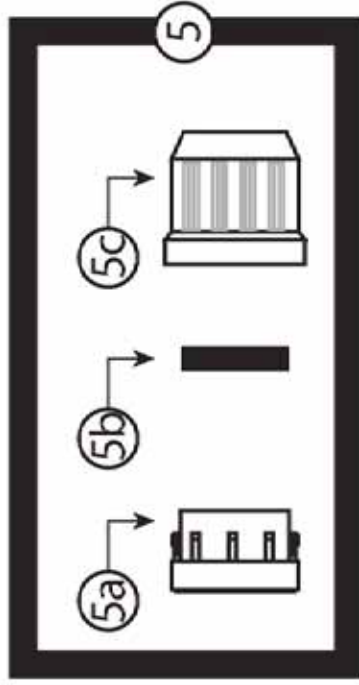


Quality Products & Service
LOWEST PRICES ON THE WEB!

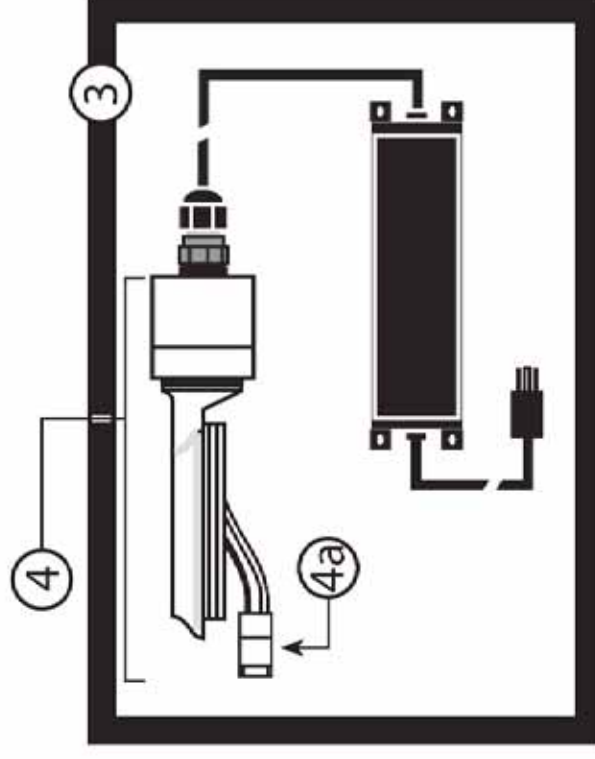
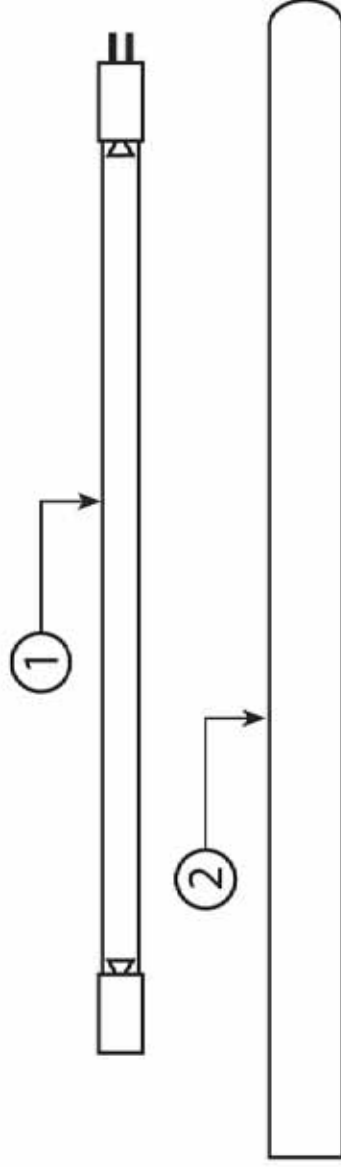
ADVANCED UV - EXPLODED PARTS VIEW

For MODEL #'s 02818, 02826 & 02850.

1. #22018, 22026 or 22050 UV Lamp
2. #22318 or #22326 Quartz Sleeve
3. #20100-SAVIO1 18 / 26 Watt SMART Power Supply
or #20257-SAVIO1 50 Watt Power Supply



4. Connection Assembly
 - 4a Pin Lamp Connector
5. Retaining Assembly
 - 5a Inner Seal Module
 - 5b Retaining Assembly Gasket
 - 5c Retaining Nut



To order replacement parts go to:
www.qualityuvlamps.com



Quality Products & Service
LOWEST PRICES ON THE WEB!

SERVICE AND REPAIR

Your retailer or distributor is not an authorized service or repair center! If trouble develops, do not take the unit back to your retail store. Instead, call Emperor Aquatics Inc. at (610)-970-0440 x0 to discuss the problem then if necessary we will give you an RMA number, so you may return the unit to us for proper service. After being given an RMA number carefully pack the unit up to avoid shipping damage. Send the unit to the following address:

**EMPEROR AQUATICS INC.
2229 SANATOGA STATION RD.
POTTSTOWN, PA 19464**

DO NOT RETURN ANY PRODUCT WITHOUT PRIOR AUTHORIZATION

Insure your package prior to shipping it; clearly indicate the problem on paper and place it in the box. Please provide your return address, as well as a daytime phone number where you can be reached. Upon receipt of your unit, we will repair or replace the unit (at no charge if the warranty is still in effect, proof of date of purchase will be required) or call/send you an estimate of the cost of the repairs which requires your authorization in order for us to proceed.

WARRANTY

EMPEROR AQUATICS, INC. warrants to the original purchaser of its Advanced Ultraviolet Sterilizers to be free from defects in workmanship or materials for a period of twelve (12) months from the date of purchase on the power supply and all gasket seals. There is a 90 day warranty on the UV lamp for electrical operation only. The UV lamp and the Quartz Sleeve are not warranted against breakage due to their glass construction. The equipment must be installed in accordance with the factory instructions & operated within the environment and limitations for which it was designed for warranty coverage. Should any of the integral parts of the unit become defective within their time constraints from the date of purchase, they will be repaired or replaced, if proven defective in workmanship or material in the opinion of the manufacturer, This does not include damage by freezing or the reuse of gasket seals that are more than twelve (12) months old.

Any costs incurred for the labor of removing the unit shall be the responsibility of the original purchaser, as will be all shipping charges to and from Emperor Aquatic's Inc. factory. Any non-warranty repair will be billed at \$78.00 per hour with a minimum of 1 hour plus the cost of the parts. Damage or failure of any part of the Advanced UV Sterilizer covered by this warranty, which results from causes, directly or indirectly, connected with the installation, operation, environment, use or willful abuse, including, without limitation, improper packaging and damage incurred during shipping is not covered by this warranty. Otherwise, any implied warranties, which accompany the sale of these goods, are limited to their respective time constraints from the date of purchase. The manufacturer will only be responsible for the repair or replacement of any of its products or parts there of that are found to be defective and will not bear the cost of any incidental or consequential damages arising out of the occurrence of such a defect.

OWNER'S REGISTRATION OF EQUIPMENT

FOR YOUR WARRANTY TO BE VALID YOU MUST SUBMIT A FILLED OUT INFORMATION FORM OR COMPLETE AN ONLINE REGISTRATION FORM AT WWW.EMPERORAQUATICS.COM WITHIN 30 DAYS OF PURCHASE.

PURCHASER'S NAME: _____

PHONE #: _____ FAX #: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ ZIP _____

SERIAL #: _____ MODEL #: _____ PURCHASE DATE: _____

EMAIL ADDRESS: _____

(PLEASE PRINT)

HOW DO YOU LIKE OUR PRODUCT?

We at Emperor Aquatics take your comments about our products very seriously. Please take a few moments to answer these questions and return this form with your product registration.

1. Was this product packaged well? _____

2. Did you receive all of the parts and instructions with the unit?

3. Were the instructions easy to understand?

4. Were you satisfied with the quality of the product?

5. Are you satisfied with the product's performance?

6. Would you recommend our products to someone else?

7. Where did you purchase the unit?

8. What did you pay for the unit?
