AQUA LOGIC'S CORONA SERIES UV STERILIZERS

INSTALLATION & OPERATING INSTRUCTIONS FOR ALL MODELS ALSV AND ALSH UNITS



Model No. ALSV-6DX



Model No. ALSH-5DX

<u>Please read all instructions before installing and using this unit</u>

Effective 10/19/23

EPA-086063-CA-001

IMPORTANT SAFETY INSTRUCTIONS

WARNING:
To guard against injury, basic safety precautions should be observed including the following:

DO:

- Read and follow all safety instructions on unit and in these instructions.
- Save these instructions.
- Take special care to avoid possible electrical shock since water is employed in the use of this equipment.
- Use a ground fault interrupter (GFI) on all electrical equipment used near water.
- Carefully examine this unit after installation. It should not be energized if there is water on parts not intended to be wet.
- Immediately remove power from the sterilizer if it shows any signs of leakage.
- Make sure the unit is mounted securely before operating it.
- Always remove power from unit when not in use, before taking off or installing any parts and before cleaning.

DO NOT:

- ***DO NOT TOUCH*** THE STERILIZER if it is exposed to open water.
- ***DO NOT*** attempt to use the equipment if it has been exposed to open water.
- Do not operate this unit if it has a damaged power cord, if it is malfunctioning or if it has been dropped or been damaged in any manner.
- Do not attempt repairs on the unit except those listed in these instructions.
- Do not operate UV sterilizer for more than a minute or two without water running through it.
- **NEVER** allow eyes or skin to be directly exposed to the ultraviolet bulb rays--***severe burns may result!!!*** Always remove power from unit when there is a possibility of direct exposure.
- Do not allow UV sterilizer to be exposed to freezing temperature. Allowing the unit to be exposed to freezing temperatures may result in breakage to the bulb, the quartz sleeve or to the PVC chamber.
- Do not operate this unit if you suspect that the bulb or quartz sleeve may be broken inside. Be safe: remove and inspect the bulb or sleeve if you are not sure.
- Do not attempt to change the bulb or quartz sleeve without using appropriate safety gear.
- Do not exceed the maximum pressure rating of **50 psi**.

DO NOT exceed the maximum rating of 50 PSI or serious damage may result.

Thank you for selecting an Aqua Logic, Inc. ultraviolet (UV) sterilizer. Each model has been designed and built to provide years of reliable service and has been fully tested under pressure before it leaves the factory. Aqua Logic has been manufacturing UV sterilizers for nearly 15 years. Aqua Logic UV sterilizers are used by aquarists, aquaculture, public aquariums, educational institutions, government agencies, industries, and research organizations across the US and around the world.

Aqua Logic offers free technical information by telephone 704.774.1391 M-F 8:00 am to 4:30 pm except selected holidays. Information is also available on the internet at our website (www.aqualogicinc.com) and by email: info@aqualogicinc.com.

- How many hours per day should I use UV on my system?

  We recommend that the UV sterilizer be placed in continuous operation for 24-hours-per-day 7-days-per-week after the biological filtration systems are established (typically about 4 weeks after starting or restarting a system).

- How often should I change the bulb?

  The average life expectancy of bulbs in Aqua Logic UV sterilizers is 12 months of continuous operation for all ALSV units. Even though the bulb may still be glowing with blue light after 12 months, the bulb may no longer produce the kill-rate you desire.

- What are the maximum pressures that I can use on Aqua Logic UV sterilizers?

  ALSV models may be used in applications up to a maximum of 50 psi.

  WARNING: Never use Aqua Logic UV sterilizers on systems which are connected to municipal water systems since the available pressure may exceed the maximum ratings of the equipment and serious damage or injury may result.

- Can I use an Aqua Logic UV sterilizer outdoors?

  ALSV sterilizers may be used in outdoor applications if protected from wet weather or subjected to freezing temperatures.

  WARNING: Never allow any UV sterilizer be exposed to freezing temperature. Allowing the unit to be exposed to freezing temperatures may result in breakage to the bulb, the quartz sleeve or to the PVC chamber. Damage to the unit caused by freezing is **not** covered under the warranty.

DO NOT REMOVE HEAT SHRINK FROM UV LAMPS. THE HEAT SHRINK HELPS TO PROTECT THE LAMP FROM DAMAGE. REMOVING THE HEAT SHRINK WILL VOID THE LAMPS WARRANTY.



ASSEMBLING YOUR ALSV AND ALSH EQUIPMENT:

- Upon receipt of your UV sterilizer, inspect the packaging for obvious damage. Be sure to note any damage to the shipper's manifest in case you need to file a claim.
- Open the package and inspect for concealed damage (for example, broken lamps or sleeves, etc.). **Claims for damage must be filed with the carrier promptly within one week.**
- Place the unit where you want to install it.
- If you wish to install the unit on a wall, you must put it on a sturdy shelf. Do NOT attempt to screw or bolt the unit directly to the wall.
- To protect the quartz sleeves and lamps from damage during shipment, the lamps have been individually wrapped. You will need to do the following:
  - Unwrap the lamp(s). We recommend using a dry lint-free cloth to handle the lamps to avoid getting oils from your skin on the lamps.
  - Follow the "Replace Bulb" procedures on page 5 to install the lamps.
- Place the unit where you want to install it. Make sure to install the unit in an correct position.
- Allow at least 20" of clearance above the unit so that lamps and/or quartz sleeves can be replaced without having to disconnect the unit from your system.
- We recommend using valves (not included) on the inlet and outlet of the unit so that the unit may be removed from your system if necessary.
- Be sure to allow the power cord to loop below the UV ballast box and the power outlet so that water cannot drip down the power cord into either the UV or the power outlet.
- Connect unit to your system.
- Apply power to pump and open-air bleed to release trapped air in the UV chamber. Check the system carefully for leaks.
- Apply power to UV sterilizer and check for proper operation of all UV lamps.

Replacing Bulbs:

WARNING: Be sure to wear protective gloves and goggles!!

- Remove power from UV sterilizer.
- Turn off the pump.
- Remove screws from UV lid and remove the lid.
- Gently pull-on lamp wire to remove rubber plug from the top of the quartz sleeve and then unplug bulb pin socket from bulb as shown in right picture and then carefully lift bulb from quartz sleeve.



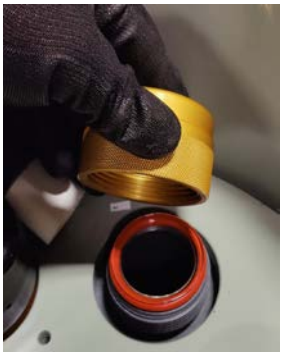


- Replace bulb. Carefully slide bulb into chamber. *We recommend using a clean oil-free cloth to protect the bulb from skin oils.*
- Push pin socket down on bulb until it snaps on bulb as shown in the picture.
- Replace UV sterilizer lid and install screws.
- Turn on the pump.
- Open air bleed valve to release trapped air in the UV chamber.
- Apply power to UV Sterilizer
- The view port should show a blue light after a few seconds.

Replacing the quartz sleeve:

WARNING: Be sure to wear protective gloves and goggles!!

- Unplug or remove power from UV sterilizer.
- Turn off the water pump.
- Isolate UV from main plumbing and drain the unit.
- Remove screws from UV lid and remove the lid.
- Pull bulb pin sockets from bulb as shown in picture above and then carefully lift bulb from quartz sleeve.
- Carefully use the wrench (supplied) to turn counterclockwise and remove the 2” nuts on top of chamber.
- Carefully slide the quartz sleeves with “O” rings still on the sleeves out of chamber.





- Slide new quartz sleeves in the top of the chamber with **new** “O” rings attached. *We recommend using a clean oil-free cloth to protect quartz from skin oils.*
- Carefully tighten by hand (approximately 15 in / lbs.) the quartz compression nuts. ***Recommendation****: Water test unit for leaks. If a leak occurs, then use the wench to tighten just until leak stops.* ***Caution: Damage to the quartz sleeve may occur if compression nut is over tightened.***
- Carefully slide bulb into quartz sleeve. *We recommend using a clean oil-free cloth to protect the bulb from skin oils.*
- Apply power to pump and open-air bleed to release trapped air in the UV chamber. Check the system carefully for leaks.
- Push bulb pin socket down on bulb as shown in the picture above.
- Replace UV sterilizer lid and install screws.
- Apply power to the UV sterilizer.
- The view port should show a blue light after a few seconds.

SCHEDULED MAINTENANCE:

1 Month Scheduled Maintenance (all models):

* Look through the view port in lid of unit to see if the bulb is glowing.
  * Open air bleed valve to release trapped air in UV chamber.
  * Carefully inspect the UV and plumbing for leaks.

1 Year Scheduled Maintenance:

  * Replace bulb(s) [see page 5].

Maintenance as Required:

  * Cleaning UV chamber / quartz sleeve assembly

CLEANING UV CHAMBER WITH CHEMICALS REMOVING ORGANICS FROM THE UV:

WARNING: Be sure to wear protective gear for your hands and eyes!!

* Turn UV power switch off on control box.
* Isolate UV from main plumbing and drain the unit.
* Make a pure chlorine bleach solution (1 cup bleach to 1 quart water)
* Connect the flush kit hoses to the drain and air bleed of the UV sterilizer.
* Cycle the solution through the UV sterilizer for 5-10 minutes.
* Drain the bleach solution from the UV sterilizer.
* Rinse or flush the unit thoroughly to remove all chlorine. Continue to flush until you can no longer smell chlorine. You may wish to add a few drops of a de-chlorinator to ensure that all chlorine has been neutralized.
* Reconnect the UV to the plumbing.
* Apply power to pump and open-air bleed to release trapped air in the UV chamber. Check the system carefully for leaks.
* Apply power to UV sterilizer.
* The view port should show a blue light after a few seconds.



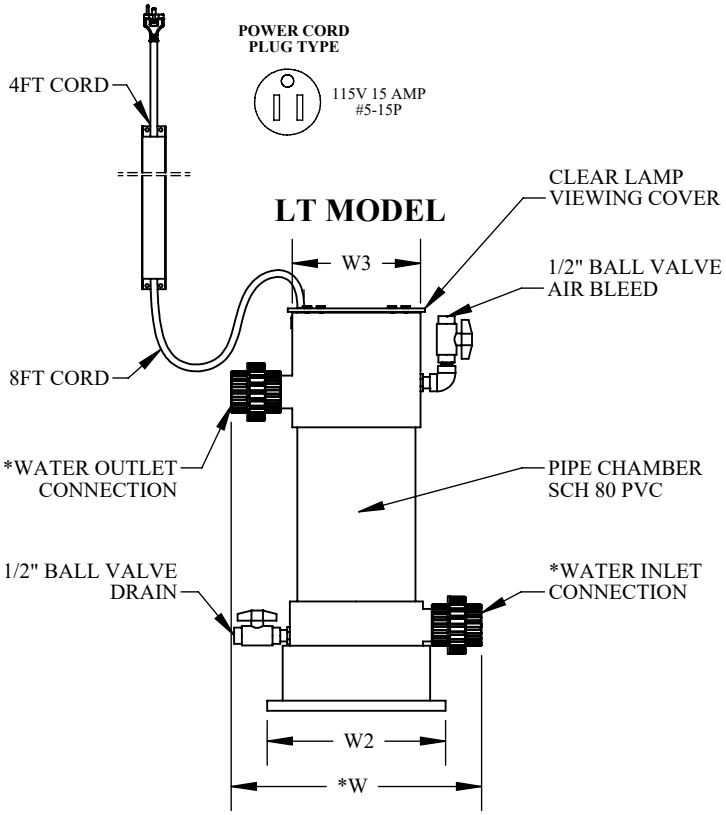
Air Bleed and Drain Valves

REMOVING MINERAL DEPOSITS FROM THE UV:

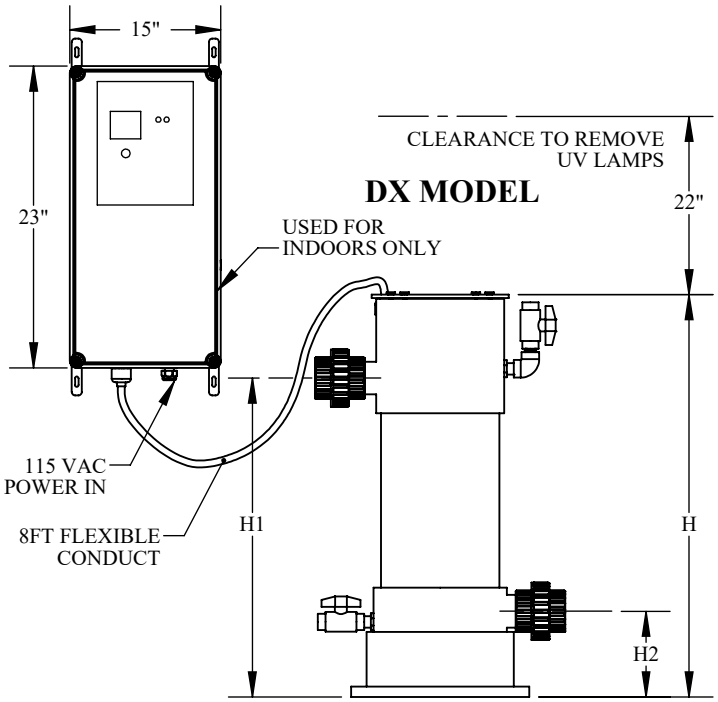
WARNING:
Be sure to wear protective gloves and goggles!!
DO NOT COMBINE chlorine bleach with muriatic acid or equivalent. The resultant gases may be poisonous.

- Follow procedure as above except that you use muriatic acid or equivalent. Be sure to follow product instructions carefully.

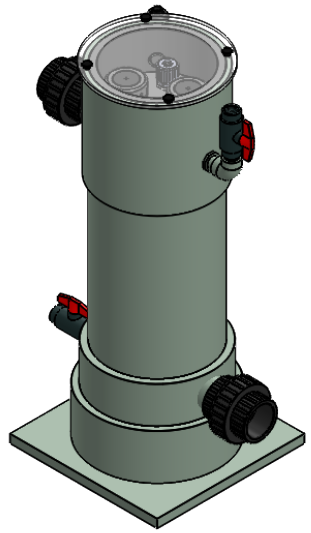
ALSV-2 THRU ALSV-8 UV STERILIZERS

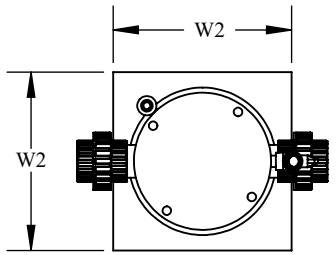


LT MODEL INCLUDES:
· EPOXY POTTED PLUG-IN BALLAST.



DX MODEL INCLUDES:
· POWER ON / OFF SWITCH.
· POWER AND OVER TEMPERATURE LED INDICATORS LIGHTS.
· LCD HOUR METER.
· OVER TEMPERATURE AIR AND WATER CUTOUTS.
· NEMA 4X RATED CONTROL BOX.
· INDIVIDUAL LAMP INDICATOR LIGHTS.
· UL-508A RATED CONTROL BOX. (OPTIONAL)





PLAN VIEW

ALSV UV STERILIZER SPECIFICATIONS

MODEL NO.	NO. OF LAMP / WATTS	VOLTS	AMPS / WATTS	*W	W2	W3	H	~H1	~H2	*STANDARD WATER IN / OUT WATER CONNECTIONS	MAXIMUM WATER FLOW RATE (GPM) AT UV INTENSITY µWsec/cm2 @ 90% TRANSMISSIBLITY 85% AT END OF LAMP LIFE				
											30K	45K	60K	90K	120K
ALSV-2	2 / 190	115	1.8 / 207	18"	13"	10"	29.75"	23.25"	6.25"	2" UNION	80	53	40	27	20
ALSV-3	3 / 285	115	2.5 / 287	22"	14"	12"	30.75"	21.50"	8.50"	3" UNION	151	101	76	50	38
ALSV-4	4 / 380	115	3 / 345	22"	14"	12"	30.75"	21.50"	8.50"	3" UNION	213	142	106	71	53
ALSV-5	5 / 475	115	4.5 / 517	22"	14"	12"	30.75"	21.50"	8.50"	4" FLANGE	282	188	141	94	70
ALSV-6	6 / 570	115	5.4 / 621	24"	19.5"	17.7"	31"	19.5"	8"	6" FLANGE	372	248	186	124	93
ALSV-8	8 / 760	115	7.2 / 828	24"	19.5"	17.7"	31"	19.5"	8"	6" FLANGE	533	355	266	177	133

NOTE:
·SHADED AREAS HAVE WATER VELOCITIES GREATER THAN 5 FT / SEC.
·CONTACT AQUA LOGIC FOR LARGER CONNECTION SIZES.

***NOTE:**
· ALSV-6-LT AND ALSV-8-LT MODELS HAVE TWO PLUG-IN BALLAST.
· FLOW RATES BASED ON "END OF LIFE", LAMP OUTPUT OF 85% AT 9000 HOURS.
· ALL DIMENSIONS ARE APPROXIMATE AND SUBJECT TO CHANGE WITHOUT NOTICE.
· ADD -LT OR -DX TO PART NUMBER TO SELECT POWER OPTION DESIRED
· ALL UNITS 50 PSIG MAXIMUM OPERATING PRESSURE.
· OTHER WATER CONNECTIONS SIZES ARE AVAILABLE.

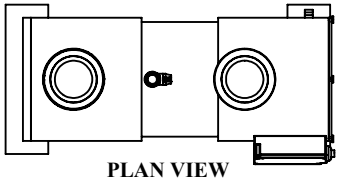
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aqua LOGIC
Chillers & Titanium Heat Exchangers
2806 Gray Fox Rd.
Monroe, NC 28110

DESCRIPTION	DRAWING #	SHEET TITLE
AQUA LOGIC ULTRAVIOLET STERILIZERS		ALSV-2 THRU 8 UV SPECIFICATION

DRAWN BY	DATE	REVISION	SCALE	SHEET #
Arnaldo Guzman	2/17/2022	2/1/2026 CE		1 OF 1

ALSH-2DX THRU 8 UV STERILIZERS

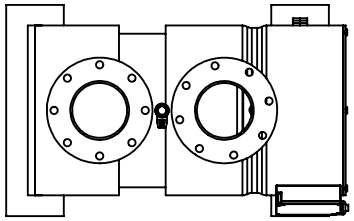


PLAN VIEW
ALSH-2DX THRU 5

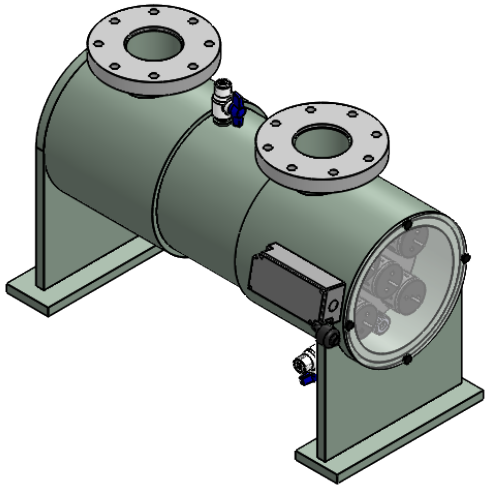
POWER CORD PLUG TYPE

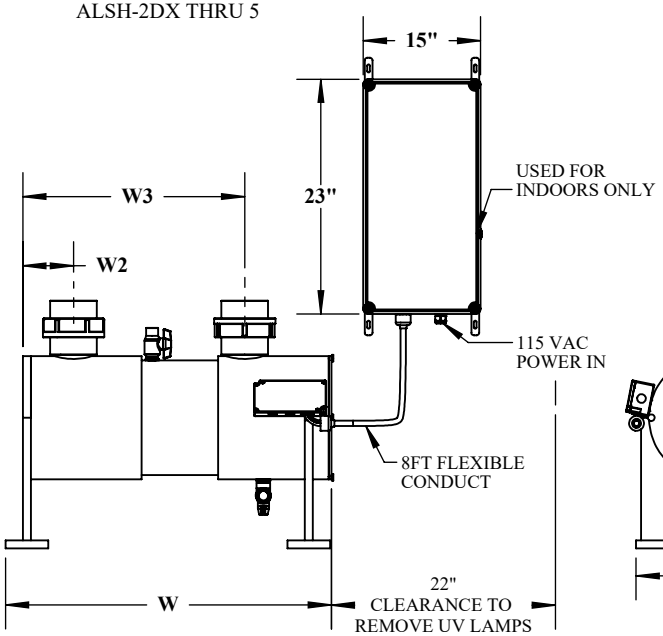


115V 15 AMP
#5-15P

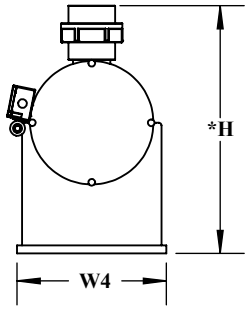


PLAN VIEW
ALSH-6DX & 8

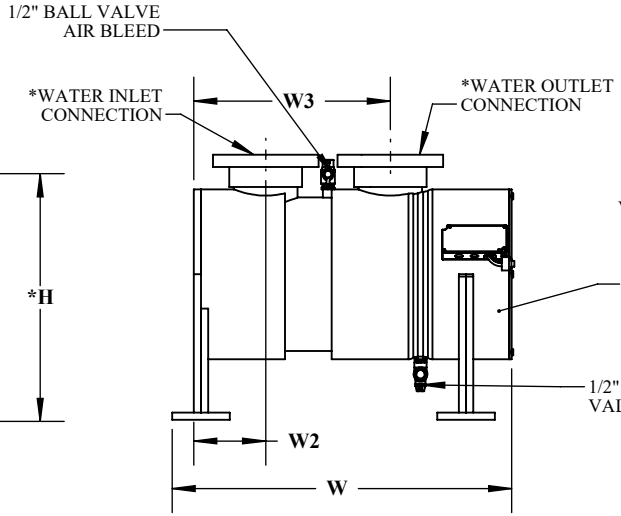




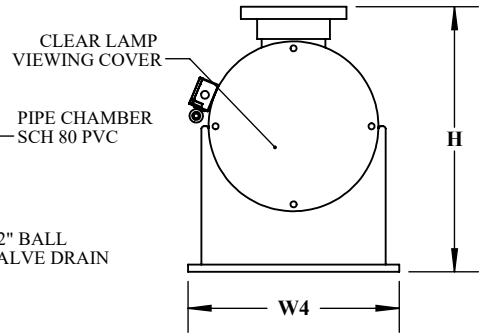
FRONT
ALSH-2DX THRU 5



RIGHT
ALSH-2DX THRU 5



FRONT
ALSH-6DX & 8



RIGHT
ALSH-6DX & 8

***REPLACE UV LAMP EVERY 11 MONTHS**
REPLACEMENT UV LAMP PART#: UV-BULB-095W-2

ALSH UV STERILIZER SPECIFICATIONS

MODEL NO.	NO. OF LAMP / WATTS	VOLTS	AMPS / WATTS	W	W2	W3	W4	*H	*STANDARD WATER IN / OUT WATER CONNECTIONS	MAXIMUM WATER FLOW RATE (GPM) AT UV INTENSITY µWsec/cm2 @ 90% TRANSMISSIBLITY 85% AT END OF LAMP LIFE				
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NOTES:
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· CONTACT AQUA LOGIC FOR LARGER CONNECTION SIZES.

DX MODEL INCLUDES:
· POWER ON / OFF SWITCH.
· POWER AND OVER TEMPERATURE LED INDICATORS LIGHTS.
· LCD HOUR METER.
· OVER TEMPERATURE AIR AND WATER CUTOUTS.
· NEMA 4X RATED CONTROL BOX.
· INDIVIDUAL LAMP INDICATOR LIGHTS.
· UL-508A RATED CONTROL BOX. (OPTIONAL)

***NOTES:**
· FLOW RATES BASED ON "END OF LIFE", LAMP OUTPUT OF 85% AT 9000 HOURS.
· ALL DIMENSIONS ARE APPROXIMATE AND SUBJECT TO CHANGE WITHOUT NOTICE.
· ALL UNITS 50 PSIG MAXIMUM OPERATING PRESSURE.
· OTHER WATER CONNECTIONS SIZES ARE AVAILABLE.

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9558 Camino Ruiz, San Diego, CA 92126

DRAWING #	SHEET TITLE
	ALSH-2DX THRU 8 UV SPECIFICATIONS

DESCRIPTION	DRAWN BY	DATE	REVISION	SCALE	SHEET #
AQUA LOGIC ULTRAVIOLET STERILIZERS		2/17/2022			1 OF 1

Limited Warranty Terms: (PLEASE READ CAREFULLY)

All UV Sterilizers manufactured by ***AQUA LOGIC, INC.*** (hereafter called ***AQUA LOGIC***) are warranted against defects and workmanship for a period of one (1) year from the date of purchase by the original purchaser/end-user. Any ***AQUA LOGIC*** product found to be defective within the warranty period will be repaired or replaced at the option of ***AQUA LOGIC.***

Warranty **EXCEPTIONS**:

- All UV Sterilizer chambers are warranted for life against leakage caused by UV degradation.
- Light bulbs (including ultraviolet sterilizer bulbs) are warranted for a period of ninety (90) days from date of purchase.

- The warranty applies only to the original end-user and is not transferable.

- The limited warranty may not be modified by verbal statements by the manufacturer, distributors, retailers, their agents nor any other party.

- The warranty covers only the repair or replacement of the ***AQUA LOGIC*** product. ***AQUA LOGIC*** denies all liability for any other loss including but not limited to loss of equipment, income, livestock or personal injury.

- ***AQUA LOGIC*** does not guarantee the suitability of the product for the end-user's application.
- All warranties are voided by the following:

  --Product labels defaced or removed.
  --Product improperly installed or maintained by user or their agent.
  --Product abused, misused, or damaged by user.
  --Product misapplied to application.
  --Product damage caused by electrical surges, spikes, brownouts or improper voltage.
  --Product damage caused by freezing, extremely cold or extremely high temperatures.
  --Product damage caused by water hammer effect.

- ***AQUA LOGIC*** shall not be liable for the cost of field repairs, inspection, installation, replacement, etc., without prior written authorization and/or valid authorization number.
- ***AQUA LOGIC*** shall not be liable for shipping damage or loss.
- ***AQUA LOGIC*** shall not be liable for unauthorized shipping costs to return warranty items to ***AQUA LOGIC.***