SUPER NOVA SERIES UV STERILIZER

HIGH-INTENSITY ULTRAVIOLET STERILIZER



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 thoroughly tested under pressure before it leaves the factory. Aqua Logic has been manufacturing UV sterilizers for nearly 20 years. Aqua Logic UV sterilizers are used by aquarists, aquaculture, public aquariums, educational institutions, government agencies, and industry and research organizations across the US and around the world.

About SUPER NOVA series UV sterilizer:

SUPER NOVA is a line of UV sterilization units by ***AQUA LOGIC, INC***. By utilizing the latest advances in high-intensity germicidal lamp technology, ***AQUA LOGIC, INC.*** has developed an extremely efficient and economical alternative to high-volume stainless steel units without sacrificing quality and reliability.

The high output lamps used in the **SUPER NOVA** produce higher intensity than ordinary germicidal lamps commonly available. This higher intensity makes it possible to concentrate more ultraviolet energy in a smaller package with fewer lamps than has been previously possible. As a result, **SUPER NOVA** provides:

- Lower operating costs
- Lower lamp replacement costs
- Lower maintenance costs
- Lower floor space costs

SUPER NOVA is a practical, economical, and space-saving solution to water disinfection problems.

AQUA LOGIC, INC. 2806 Gray Fox Rd. Monroe, NC. 28110
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IMPORTANT SAFETY INSTRUCTIONS

WARNING:

DANGER: To avoid possible electrical shock. Use special care when installing this equipment.

SAVE THESE INSTRUCTIONS!!!

To guard against injury. The following basic safety precautions should be observed.

- **DO** read and follow all safety instructions.
- **DO** read and observe all the notices in this instruction sheet.
- **DO** make sure the unit is mounted securely before operating.
- **DO** carefully examine this unit after installation. The main power should not be turned on if there is water on parts not intended to be wet.
- **DO** turn off the main power to the unit if the sterilizer shows any signs of leakage or if water appears that the UV sterilizer shows any signs of leakage or if water is spraying into the ballast cabinet.
- **DO** remove main power and unplug the unit when removing, changing, or installing any parts and during cleaning [unless your unit has the installed flush cleaning system].
- **DO** remove main power and unplug the unit before removing the cabinet.
- **DO** wear protective goggles and safety wear when performing maintenance on the unit.

- **DO NOT** operate this unit if it has a damaged power cord or plug or if quartz sleeves or lamps are broken.
- **DO NOT** attempt repairs on the unit except those listed in these instructions.
- **DO NOT** allow eyes or skin to be directly exposed to the ultraviolet lamp --***severe burns may result!!!*** Always unplug the unit when there is a possibility of direct exposure.
- **DO NOT** operate this unit if suspected that the lamp may be broken. Be safe: remove and inspect the lamps if you are not sure.
- **DO NOT** allow water to freeze in the unit. Severe damage may result.
- **DO NOT** store in extremely hot or cold areas. Damage may result.
- **DO NOT** exceed the maximum rating of 50-psig, or severe damage may result.
- **DO NOT** simultaneously perform bleach (organic removal) flush with muriatic acid (mineral removal). The resultant poisonous gas can be extremely dangerous or deadly.

WARNING: Never use Aqua Logic UV sterilizers on systems that 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.

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 lamp, the quartz sleeve or to the PVC chamber. Damage to the unit caused by freezing is not covered under warranty.

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



UNIT START- UP:

- Mount sterilizer chamber on a flat and level surface with the water connections in the vertical position to allow air to escape.
- Allow at least 24 inches of clearance from both ends of the unit to allow the lamps to be changed.
- Mount ballast/control box on a flat vertical wall or post.(The ballast box is designed for indoor use only)
- Connect water inlet and outlet plumbing to the unit.

IMPORTANT NOTES:

Once installed and water flows through the unit, check thoroughly for leaks BEFORE plugging into the electrical power source. **A licensed electrician should install the unit!**

- Connect the unit to electrical power.
- Turn on main power to unit at the panel.
- Turn unit on/off switch to the on position.
- Check indicator lights and hour meter for proper function.

Notes: Use pre-filtration of 16 micron or finer to allow good UV penetration into the water.

When the power switch is in the on position the red “High temperature cutout” light will turn on for a second then turn off. All the amber lamp indicator lights will turn on. The only time the red light will be on is when the water flow is stopped or the ballast box is overheating.

LAMP & QUARTZ SLEEVE REMOVAL FOR ALL UNITS:

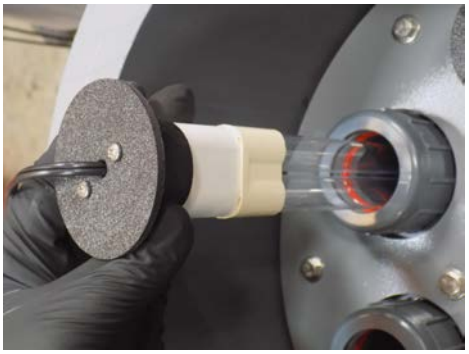
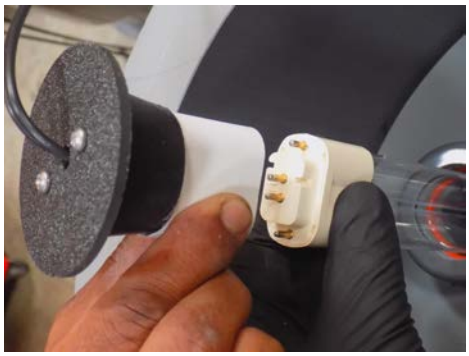
Tools required:

Exspansion pliers
Protective eyeglasses
Two pairs of rubber gloves
One pair of cotton gloves
Teflon grease

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Lamp removal on all SUPER NOVA models:

- Shut off pump.
- Turn off sterilizer and then unplug [or turn off circuit breaker for larger models].
- Remove protective clear end covers.
- **Gently** pull on black rubber/ lamp socket plug.
- **Carefully** slide the lamp straight out of the quartz sleeve.
- Carefully pull on to disconnect socket from lamp.
- Reverse steps after replacement of lamps.


Quartz Sleeve Removal:

1. Remove lamps as per the steps above.
2. Turn off both inlet and outlet valves.
3. Attach a hose to the drain valve.
4. Open the drain valve to relieve pressure from unit.
5. Remove the gold or grey quartz retainer nut by unscrewing counter-clockwise.
6. **Carefully** slide the quartz sleeve out of the chamber (Cotton gloves should be worn at this time to protect both your hands and the quartz sleeve from damage.)
7. Reverse Steps 1-6 to replace sleeves.
8. Tighten **gold or** grey retainer nuts by hand approximately 15 lbs. torque.




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Quartz Sleeve Cleaning:

NOTE:
The quartz sleeve should be cleaned approximately every 12 months or as needed to allow maximum UV output into the water.

WARNING:

When using bleach and acid special care should be observed.
Always wear hand, eye and body protection. Use rubber gloves.
DO NOT pour water into acid or bleach. **DO** pour the acid or bleach into the water.
DO NOT perform acid and bleach flushing at the same time. The gas generated by the mixture is poisonous and can result in serious injury or death.

To remove organic deposits from quartz sleeve:

- Always wear rubber gloves to handle quartz sleeves to protect your hands from chemicals
- Mix 1 part bleach to 3 parts distilled water in five gallon bucket.
- Insert quartz sleeve into bucket.
- Wash sleeve(s) with cotton cloth until build-up is removed. DO NOT use scrub pad to clean the quartz.
- Rinse sleeve(s) with clean distilled water
- Dry sleeve(s) thoroughly inside and out with cotton cloth or allow them to air dry. Remove all water spots.

To remove mineral deposits from quartz sleeve:

Use the same steps as above, but use muriatic acid instead of bleach. Be sure to follow the muriatic acid manufacturer's instructions for use and safety.

DO NOT allow quartz sleeves to sit in the acid/water solution more than 10 minutes.

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UV STERILIZER INFORMATION

Lamp Replacement

Lamps should be replaced every 12 months or 9000 hours of continuous operation. All units are supplied with built-in hour meter. If your unit has the optional UV metering system installed, you do not need to change the lamps until the metering system alerts you.

Although the lamp may still be showing blue light after these time periods, it may not be producing sufficient UV intensities to obtain the kill rate you desire. Note: The color of the lamp does not indicate the amount of ultraviolet output. Ultraviolet rays are NOT visible to the human eye.

Proper Sizing

Refer to the maximum flow rates printed in the specification sheets to insure proper sizing of your UV sterilizer to your installation.

Flickering Light

If you notice that the lamp in your UV sterilizer is flickering, you should immediately unplug or turn off the power switch to the unit and obtain a replacement ballast or lamp. If your unit is still under warranty (less than 1 year old), you may obtain a free replacement ballast by contacting ***AQUA LOGIC*** at the address and phone or FAX below. If the unit is no longer in warranty, you may obtain a replacement for a nominal charge from your dealer or directly from ***AQUA LOGIC.***

Filtration

Maximum UV kill rates are achieved when water is free of particulate matter. We recommend that water be prefiltered to a porosity of 16 microns or less for optimal results

Aqua Logic offers free technical information by telephone [(858) 292-4773] or by FAX [(858) 279-0537] M-F 8:00 am to 5:00 pm except selected holidays. Information is available on the internet at our website (www.aqualogicinc.com) and by email: info@aqualogicinc.com.

- How many hours per day should I use a 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 lamp?

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

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

  SUPER NOVA models may be used in applications up to a maximum of **50 PSIG.**

- Can I use an Aqua Logic UV sterilizer outdoors?

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

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About *AQUA LOGIC, INC.*:

AQUA LOGIC, INC. has been in business for more than 20 years. We manufacture innovative water filtration and environmental control equipment and distribute related high-quality equipment. ***AQUA LOGIC, INC.*** employs about 30 people in a 30,000 square-foot plant.

The sales and technical staff offer more than 100 years of combined experience in the filtration industry. The company has key distributors throughout the U.S. and Canada as well as overseas.

In addition to UV sterilizers, ***AQUA LOGIC, INC.*** continues to design, develop and manufacture a wide range of other equipment for water management including:

- Digital temperature controls.
- Water to water titanium heat exchangers.
- Titanium Fluid Chillers and heat pumps (1/4 HP through 60 HP).
- System Pak™ skid-mounted pump and filtration units (up to 1 million GPH).
- Fabricated insulated tanks.
- Fabricated PVC plastic tanks.
- Bioreactor ammonia & CO_2 stripping towers.
- Fabricated stainless steel and coated aluminum tank-support stands.

AQUA LOGIC, INC. SUPER NOVA distributes many other lines of products commonly used in the water management industry including:

- Heating Systems (to 5 million BTUs).
- Pumps (many types and sizes to 100 HP).
- Filters (various types and sizes).

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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 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 lamps (including ultraviolet sterilizer lamps) 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 warrant 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.

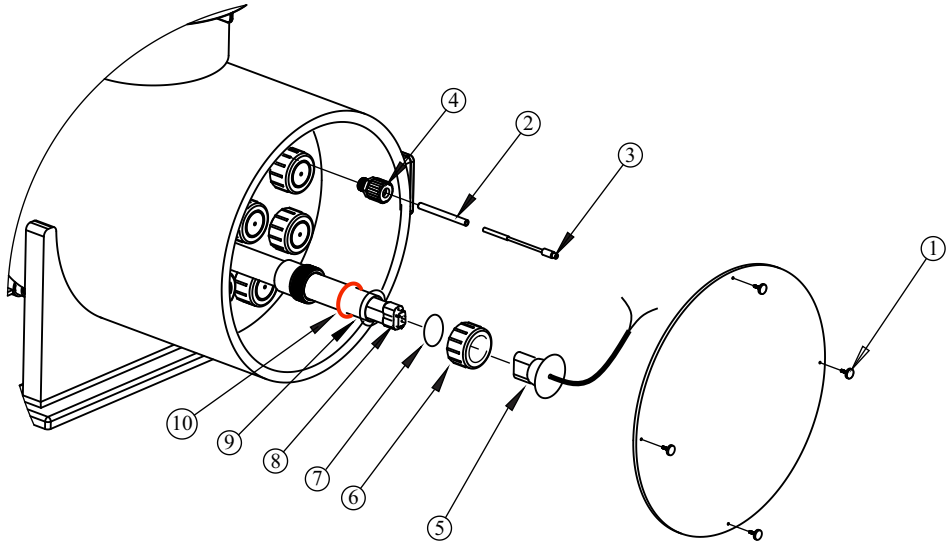
- ***AQUA LOGIC*** shall not be liable for the cost of field repairs, inspection, installation, replacement, etc., without prior written authorization and/or valid authorization number.

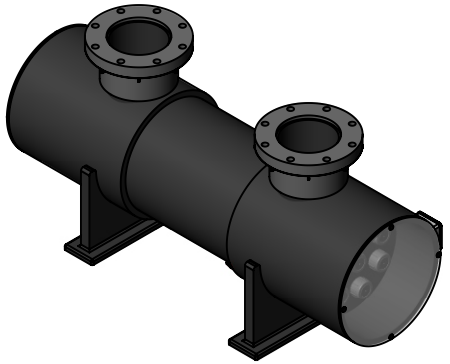
- ***AQUA LOGIC*** shall not be liable for shipping damage or loss.

- ***AQUA LOGIC*** shall not be liable for unauthorized shipping costs to return warranty items.

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ALS-7608.12 TRHU ALS-152016.16
UV STERILIZERS PART LIST (5-2023)





PART LIST			QUANTITY PER MODEL					
ITEM NO.	**PART NUMBER**	**DESCRIPTION**	**ALS-7608.12**	**ALS-95010.12**	**ALS-114012.12**	**ALS-114012.16**	**ALS-133014.16**	**ALS-152016.16**
1	SCREW-THUMB-050	Black Screw-Thumb	8	8	8	8	8	8
2	UV-SW-3/8”	Titanium Temperature Sensor Dry Well	1	1	1	1	1	1
3	DC-10SS-NTC	UV Chamber Limit Sensor	1	1	1	1	1	1
4	FT-HUBBELL-3/8	Plastic Sensor Well Compression Fitting	1	1	1	1	1	1
5	UV-PLUG-ASSM-1	UV Plug Assembly with 2 ft wire	8	10	12	12	14	16
6	UV-COMP-COUP-1.25-AL-NUT	Aluminum Compression Nut	8	10	12	12	14	16
7	UV-OR-SPLIT	Split PTFE O-Ring	8	10	12	12	14	16
8	UV-BULB-095W-1	ALA-95ST, Bulb, 95W STEP, UV	8	10	12	12	14	16
9	UV-QTZ-Q95ST	Test Tube-Quartz,43x610 mm	8	10	12	12	14	16
10	UV-OR-SIL-RED	O-Ring, 9396K87, Silicone	8	10	12	12	14	16

aqua LOGIC
Aquatic Design, Manufacturing & Integration
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Monroe, NC. 28110

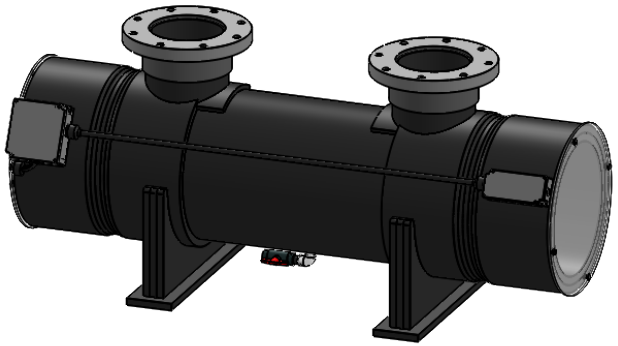
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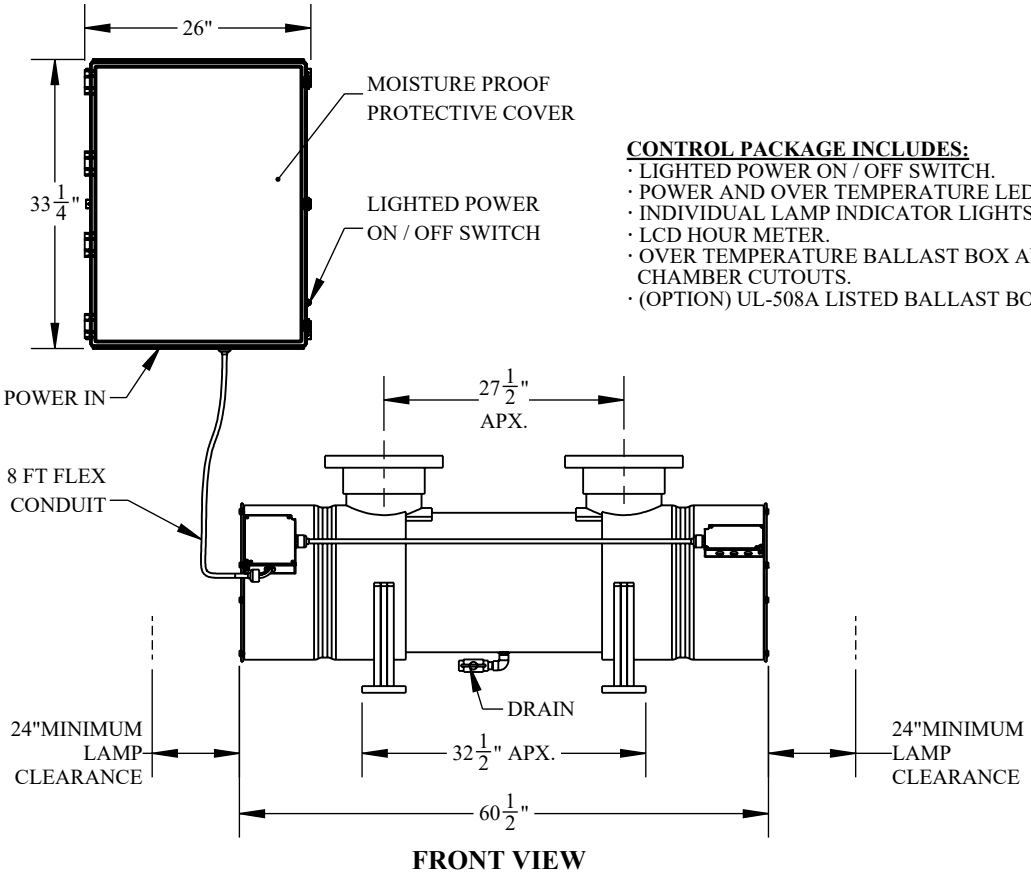
DRAWING #	SHEET TITLE
	UV STERILIZER PART LIST

DESCRIPTION
ALS-760 THRU 1520 UV STERILIZERS PART LIST

DRAWN BY	DATE	REVISION	SCALE	SHEET #
ARNALDO GUZMAN	1/30/2015	8/15/23CE	1:4	1 OF 1

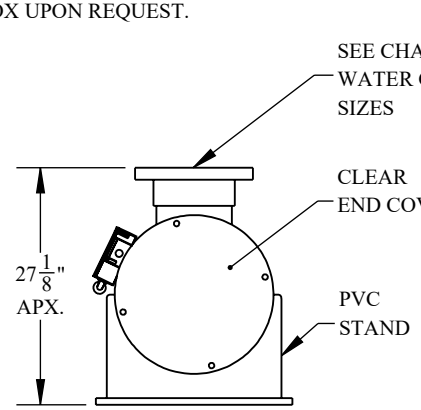
ALS-7608.12 THRU ALS-152016.16 UV STERILIZERS



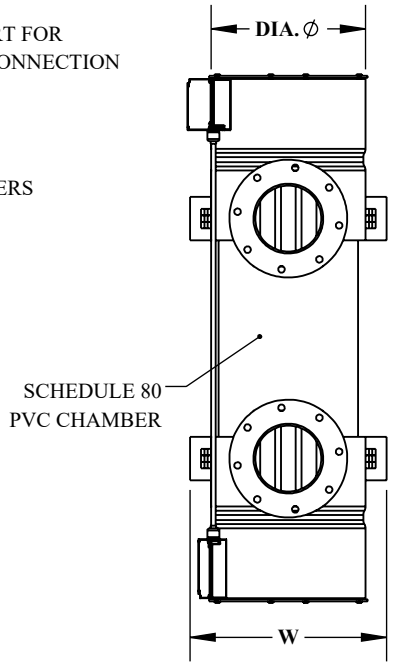


FRONT VIEW

CONTROL PACKAGE INCLUDES:
- LIGHTED POWER ON / OFF SWITCH.
- POWER AND OVER TEMPERATURE LED INDICATOR LIGHTS.
- INDIVIDUAL LAMP INDICATOR LIGHTS.
- LCD HOUR METER.
- OVER TEMPERATURE BALLAST BOX AND UV WATER CHAMBER CUTOUTS.
- (OPTION) UL-508A LISTED BALLAST BOX UPON REQUEST.



SIDE VIEW



PLAN VIEW

ALS UV STERILIZER SPECIFICATIONS													
MODEL NO.	UV UNIT BULB TOTAL WATTS	NO. OF LAMPS	VOLTS	AMPS / WATTS	L	W	CHAMBER DIA.	*WATER INLET / OUTLET CONNECTIONS	MAXIMUM WATER FLOW RATE (GPM) AT UV INTENSITY µWsec/cm2 @ 90% TRANSMISSIBLITY 85% AT END OF LAMP LIFE				
									30K	45K	60K	90K	120K
ALS-7608.12	760	8	115	6 / 690	57"	20"	12"	6" FLANGE	408	271	204	135	102
ALS-95010.12	950	10	115	7.5 / 863	57"	20"	12"	6" FLANGE	500	333	250	166	125
ALS-114012.12	1140	12	115	9 / 1035	57"	20"	12"	6" FLANGE	560	372	280	187	140
ALS-114012.16	1140	12	115	9 / 1035	61"	22 1/2"	16"	6" FLANGE	693	460	346	231	173
ALS-133014.16	1330	14	115	12 / 1150	61"	22 1/2"	16"	8" FLANGE	780	519	390	260	195
ALS-152016.16	1520	16	115	16 / 1380	61"	22 1/2"	16"	8" FLANGE	876	583	438	292	219

***NOTE:**
- FLOW RATES BASED ON "END OF LIFE", LAMP OUTPUT OF 85% AT 9000 HOURS.
- SHADED AREAS HAVE WATER VELOCITIES GREATER THAN 5 FT / SEC.
- WATER CONECTIONS MAY CHANGE ACCORDING TO FLOW RATE, OTHER SIZES AVAILABLE.
- ALL DIMENSIONS ARE APPROXIMATE AND SUBJECT TO CHANGE WITHOUT NOTICE.

9558 Camino Ruiz, San Diego, CA 92126

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DRAWING #	SHEET TITLE
PDF-0225	ALS-7608.12 THRU 152016.16 UV SPACIFICATION

DESCRIPTION				
AQUA LOGIC ULTRAVIOLET STERILIZERS				
DRAWN BY	**DATE**	**REVISION**	**SCALE**	**SHEET #**
Arnaldo Guzman	3/17/2023		1:22	1 OF 1