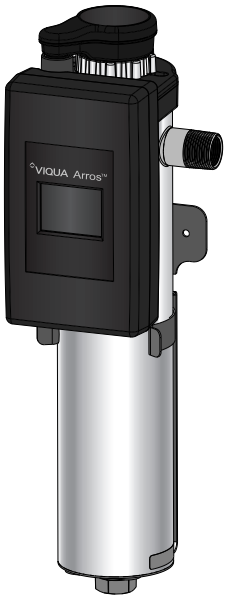
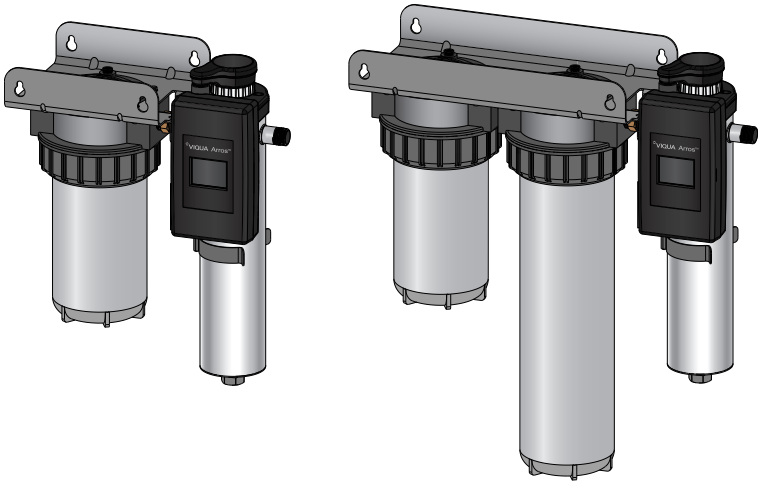
Owner's Manual





VIQUA Arros® and VIQUA Arros® IHS Models

including NSF Standard 55 Class B Validated Models

AS 3497
WM 040316
Global-Mark.com.au

NSF C US
Arros 9-V, Arros 15-V, Arros 22-V Tested and Certified by NSF International against CSA B483.1 and NSF/ANSI 55 for Disinfection Performance, Class B

c UL us LISTED

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bsi ISO 9001 Quality Management Systems CERTIFIED
FM 797693

MEMBER Water Quality ASSOCIATION

520589-R_Rev A

Congratulations on the purchase of your ultraviolet (UV) water system! This system uses the most advanced UV technology on the market and is designed to provide you with years of trouble-free operation with minimal maintenance.

To ensure ongoing optimal operation, UV Lamps need to be replaced annually with VIQUA factory-supplied replacements. VIQUA Lamps are the result of extensive development resulting in a highly efficient platform with extremely stable UV output over the entire 9000 hour lifetime. Its success has led to a proliferation of non-genuine copies in the market.

The UV Lamp is the heart of the UV System, and there should be no compromise when it's time for a replacement.

Why should you insist on genuine factory supplied VIQUA replacement Lamps?

- Use of widely available, non-genuine, replacement Lamps has been shown to damage the control module of VIQUA UV equipment.
- An increasing number of calls to VIQUA Technical Support are connected with non-genuine Lamps being used (unknowingly) as replacements.
- Damage arising from the use of non-genuine Lamps poses a safety risk and is not covered by equipment warranty.
- Unless the UV equipment is equipped with a UV sensor (monitor), it is not possible to verify the UV (invisible) output of replacement Lamps.
- Similar appearance to the original Lamp and the presence of (visible) blue light does not mean equivalent performance.
- VIQUA replacement Lamps undergo rigorous performance testing and strict quality control processes to ensure that the safety and performance certifications of the original equipment are not compromised.

So, you can see that it's simply not worth the risk! Insist on genuine VIQUA replacement Lamps.

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Section 1 Safety Information

These are the original instructions. Please read this entire manual before operating this equipment. Pay attention to all danger, warning, and caution statements in this manual. Failure to do so could result in serious personal injury or damage to the equipment.

Make sure that the protection provided by this equipment is not impaired. DO NOT use or install this equipment in any manner other than that specified in the installation manual.

1.1 Potential Hazards:

Read all labels and tags attached to the system. Personal injury or damage to the system could occur if not observed.

	Waste electrical and electronic equipment (WEEE). This symbol indicates that you should not discard wasted electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center.		This symbol indicates the marked item could be hot and should not be touched without care.
	This symbol indicates there is Mercury present.		This symbol indicates there is a potential for VERY hot water when flow is started.
	This is the safety alert symbol. Obey all safety messages that follow this symbol to avoid potential injury. When on the equipment, refer to the Operational and Maintenance manual for additional safety information.		This symbol indicates not to store any combustible or flammable material close to the system.
	This symbol indicates a risk of electrical shock and/or electrocution exists.		This symbol indicates that the contents of the transport package are fragile and the package should be handled with care.
	This symbol indicates the marked equipment may contain a component that can eject forcibly. Obey all procedures to safely depressurize.		This symbol indicates safety glasses with side protection is required for protection against UV exposure.
	This symbol indicates the system is under pressure.		This symbol indicates gloves must be worn.
	This symbol indicates the marked item could inject fluid into the skin.		This symbol indicates safety boots must be worn.
	This symbol indicates surfaces may be slippery and there is a potential fall hazard.		This symbol indicates the operator must read all available documentation to perform required procedures.
	This symbol indicates there is a potential UV hazard. Proper protection must be worn.		This symbol indicates that the system should only be connected to a properly grounded, grounding-type controller receptacle that is protected by a Ground Fault Circuit Interrupter (GFCI).

1.2 Safety Precautions:

⚠ DANGER

Failure to follow these instructions will result in serious injury or death.





- **Electric Shock:** To avoid possible electric shock, special care should be taken since water is present near the electrical equipment. Unless a situation is encountered that is explicitly addressed by the provided maintenance and troubleshooting sections, DO NOT attempt repairs yourself, refer to an authorized service facility.
- **GROUNDING:** This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electrical shock. This system is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. DO NOT modify the plug provided with this system – if it does not fit in the outlet, have a proper outlet installed by a qualified electrician. DO NOT use any type of adapter with this system.
- **GROUND FAULT CIRCUIT INTERRUPTER PROTECTION:** To comply with the National Electrical Code (NFPA 70) and to provide additional protection from the risk of electric shock, this system should only be connected to a properly grounded, grounding-type controller receptacle that is protected by a Ground Fault Circuit Interrupter (GFCI) or to a residual current device (RCD) having a rated residual operating current not exceeding 30 mA. Inspect operation of GFCI as per manufacturer's suggested maintenance schedule.
- DO NOT operate the UV System if it has a damaged cord or plug, if it is malfunctioning or if it has been dropped or damaged in any manner.
- DO NOT use this UV System for other than intended use (potable water applications). The use of attachments not recommended or sold by the manufacturer / distributor may cause an unsafe condition.
- DO NOT install this UV System where it will be exposed to the weather or to temperatures below freezing.
- DO NOT store this UV System where it will be exposed to the weather.
- DO NOT store this UV System where it will be exposed to temperatures below freezing unless all water has been drained from it and the water supply has been disconnected.

⚠WARNING

- During extended periods of no water flow, the water in your UV Chamber can become very hot (Approx. 60 °C) and potentially lead to scalding. It is recommended to run your water until this hot water has been purged from your UV Chamber. Do not allow water to contact your skin during this time. To eliminate this condition, a temperature management valve can be installed at the outlet of your UV System.
- Do not pass water through the UV System for a minimum of 5 minutes after applying power (including after power interruptions) to avoid passing under-treated water that may, in rare instances, pose health hazards.
- This system contains a UV Lamp Unit. Do not operate the UV Lamp Unit when it is removed from the UV Chamber. Unintended use or damage of the system may result in the exposure of dangerous UV radiation. UV radiation may, even in little doses, cause harm to the eyes and skin.
- Changes or modifications made to this system without the consent of the manufacturer could render the system unsafe for operation and may void the manufacturer's warranty.
- A backflow device (not included) is required to be installed upstream of the inlet in accordance with AS/NZS 2845.1 standards. ***- Applies to WaterMark certified systems only.***

WARNING: This product can expose you to chemicals including phthalates, which is known to the state of California to cause cancer, and mercury, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

⚠CAUTION

Failure to follow these instructions could result in minor or moderate injury.

- Carefully examine the UV System after installation. It should not be plugged in if there is water on parts not intended to be wet such as, the Controller or Lamp Connector.
- **Hg EXPOSURE**: The UV Lamp Unit contains mercury. If the UV Lamp Unit breaks, then avoid inhalation or ingestion of the debris and avoid exposure to eyes and skin. Never use a vacuum cleaner to clean up a broken UV Lamp Unit as this may scatter the spilled mercury. Obey local regulations and guidelines for the removal and disposal of mercury waste.

NOTICE

- The Arros 9, Arros 15, and Arros 22 UV Systems have been validated through microbial testing. Through this testing, performance data has been generated for UV dose delivery to inactivate Cryptosporidium, Giardia, Escherichia coli (E. coli) and Fecal Coliform.
- The Arros 9-V, Arros 15-V, and Arros 22-V UV Systems inactivate heterotrophs, Escherichia coli (E. coli) and Fecal Coliform.
- The Arros 9-IHS10, Arros 9-IHS12, Arros 15-IHS10, Arros 15-IHS12, Arros 15-IHS22, and Arros 22-IHS22 UV Systems have been validated through microbial testing. Through this testing, performance data has been generated for UV dose delivery to inactivate Cryptosporidium, Giardia, Escherichia coli (E. coli) and Fecal Coliform.

- The UV Lamp Unit inside the UV System is rated at an effective life of approximately 9000 hours. To ensure continuous protection, replace the UV Lamp Unit annually.
- The UV System is not to be used or played with by children. Persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, are also not to handle the UV System unless they have been given supervision or instruction.
- This system is intended to be permanently connected to the water lines.
- This system is not intended to be used in or above water or outdoors or used in swimming pools when persons are in the pool.
- **EXTENSION CORDS**: If an extension cord is necessary, use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from this system. Use only extension cords that are intended for outdoor use. Use only extension cords having an electrical rating not less than the rating of the system. A cord rated for less amperes or watts than this system rating may overheat. Exercise caution when arranging the cord so that it will not be tripped over or pulled. DO NOT use damaged extension cords. Examine extension cord before using and replace if damaged. DO NOT abuse extension cord. Keep extension cord away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting this system from the extension cord. Never yank cord to pull plug from outlet. Always grasp the plug and pull to disconnect.
- If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.
- **SYSTEM PROTECTION:** To protect your Controller, a UL1449 certified (or equivalent) Surge Protective Device (SPD) is strongly recommended.
- The UV Lamp Unit in this system conforms to the applicable provisions of the Code of Federal Regulations (CFR) requirements including, Title 21, Chapter 1, Subchapter J, Radiological Health.
- Only the following Class B systems Arros 9-V, Arros 15-V and Arros 22-V or component conforms to NSF/ANSI 55 for the supplemental bactericidal treatment disinfected public drinking water or other drinking water that has been tested and deemed acceptable for human consumption by the state or local health agency having jurisdiction. The system is only designed to reduce normally occurring non-pathogenic nuisance microorganisms. Class B systems are not intended for treatment of contaminated water.
- Read and understand the Owner's Manual before operating and performing any maintenance on this equipment.

	• This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
	• This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
	  • Reorient or relocate the receiving antenna.
	  • Increase the separation between the equipment and receiver.
	  • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
	  • Consult the dealer or an experienced radio/ TV technician for help.
	• Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This appliance meets the domestic water treatment appliance Standard AS 3497 for the following water treatment process:

	Category	Treatment type	Function	Pass
AS 3497 WM 040316 Global-Mark.com.au	I	Microbiological Status Bacteriostatic	Will stop bacteria increasing but will not remove them unless Class II is passed	✓

1.3 Water Chemistry

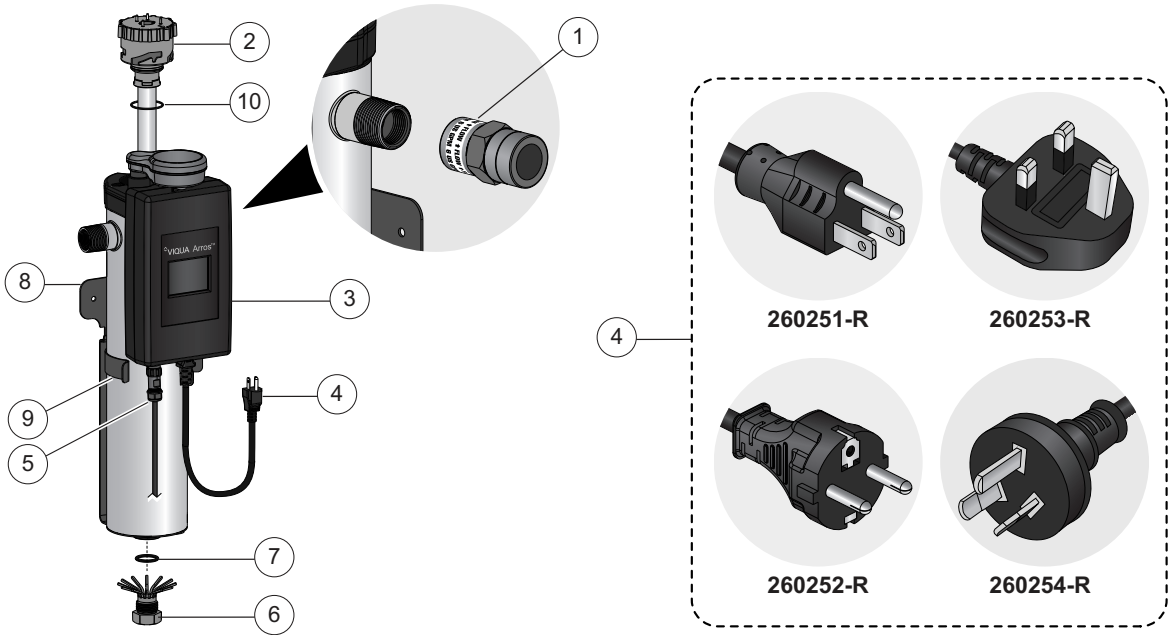
Water quality is extremely important for the optimum performance of your UV System. The following levels are recommended for installation:

Water Quality and Minerals	Level
Iron	< 0.3 ppm (0.3 mg/L)
Hardness*	< 7 gpg (120 mg/L)
Turbidity	< 1 NTU
Manganese	< 0.05 ppm (0.05 mg/L)
Tannins	< 0.1 ppm (0.1 mg/L)
UV Transmittance	> 75% (call factory for recommendations on applications where UVT < 75%)

* Where total hardness is less than 7 gpg, the UV unit should operate efficiently provided the Quartz Sleeve is cleaned periodically. If total hardness exceeds 7 gpg, the water should be softened. If your water chemistry contains levels in excess of those mentioned above, proper pre-treatment is recommended to correct these water problems prior to the installation of your UV System. These water quality parameters can be tested by your local dealer, or by most private analytical laboratories. *Proper pre-treatment is essential for the UV System to operate as intended.*

Section 2 General Information

Arros Systems



Arros IHS Systems

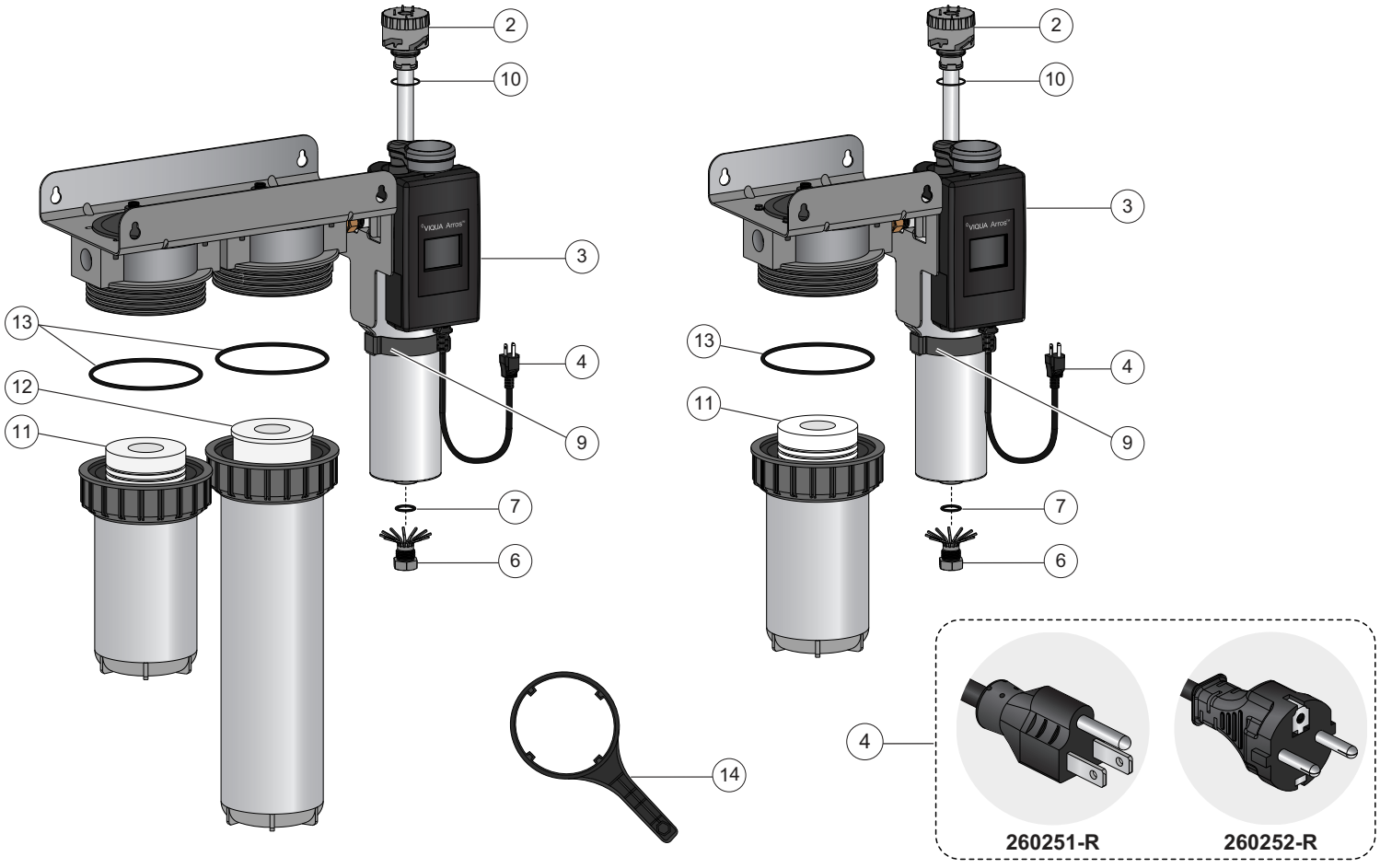


Figure 1 UV System Components

Item	Description	Part Number	System Model													
			Arros 9	Arros 9-V	Arros 9/2AW	Arros 15	Arros 15-V	Arros 15/2AW	Arros 22	Arros 22-V	Arros 22/2AW	Arros 9-IHS10	Arros 9-IHS12	Arros 15-IHS10	Arros 15-IHS12	Arros 15-IHS22	Arros 22-IHS22
1	Flow Restrictor (Required for Validated (-V) and WaterMark certified systems)	FRSS-A9		✓													
		FRSS-A15					✓										
		FRSS-A22								✓							
2	UV Lamp Unit: Includes combined High Output Lamp and Quartz Sleeve	VA09LU		✓								✓					
		VA15LU					✓								✓		
		VA22LU								✓							✓
3	Controller 100-240VAC/50/60Hz	VA-CTRL								✓							
		VA-CTRL-DC					✓										
4	Power Cords for Controller	260251-R[1]								✓							
		260252-R[2]	✓			✓			✓					✓			
		260253-R[3]	✓			✓			✓								
		260254-R[4]			✓			✓			✓						
5	Arros Dry Contact Cable Assembly	260259-R					✓										
6	Drain Plug	411111-R								✓							
7	Drain Plug O-Ring	411138-R								✓							
8	Mounting Bracket	420618-R			✓												
		420624-R								✓							
9	Mounting Bracket Clamp	420619-R								✓							
10	Lamp Head O-Ring	411173-R								✓							
11	Sediment Filter	CMB-510-HF											✓				
		CMB-520-HF														✓	
12	Carbon Filter	C2-02PB											✓			✓	
13	O-Ring	OR40-50W												✓			
14	Sump Wrench	WR40-50												✓			

[1] Applies to (North America, Type B Plug)

[2] Applies only to /2 models (EU, Type F Plug)

[3] Applies only to /WR models (British, Type G Plug)

[4] Applies only to /2A models (AU, Type I Plug)

Section 3 Installation of UV System

⚠ CAUTION

Electronic Controller must be connected to a Ground Fault Protected Circuit (GFCI) receptacle. Ensure green ground wire ring terminal is securely fastened to ground stud on UV Chamber.

3.1 Installing UV System

3.1.1 Installation Orientation

Note: *This section does not apply to IHS Systems. For IHS Systems, skip this section and proceed to Section 3.1.2.*

The UV System is designed to be mounted either horizontally or vertically at the point-of-use or point-of-entry depending on the specific flow rate of the unit. Refer to Figure 2.

Considerations:

- It is preferred that UV Chambers are mounted in a vertical orientation to prevent water exposure and possible damage to the Lamp Pins and Lamp Connector.
- For vertical mounting, the Lamp Connector **must** be on top (Figure 2, Detail A).
- For horizontal mounting, the outlet port **must** be pointing upward to ensure that air can be purged from the UV Chamber (Figure 2, Detail B).

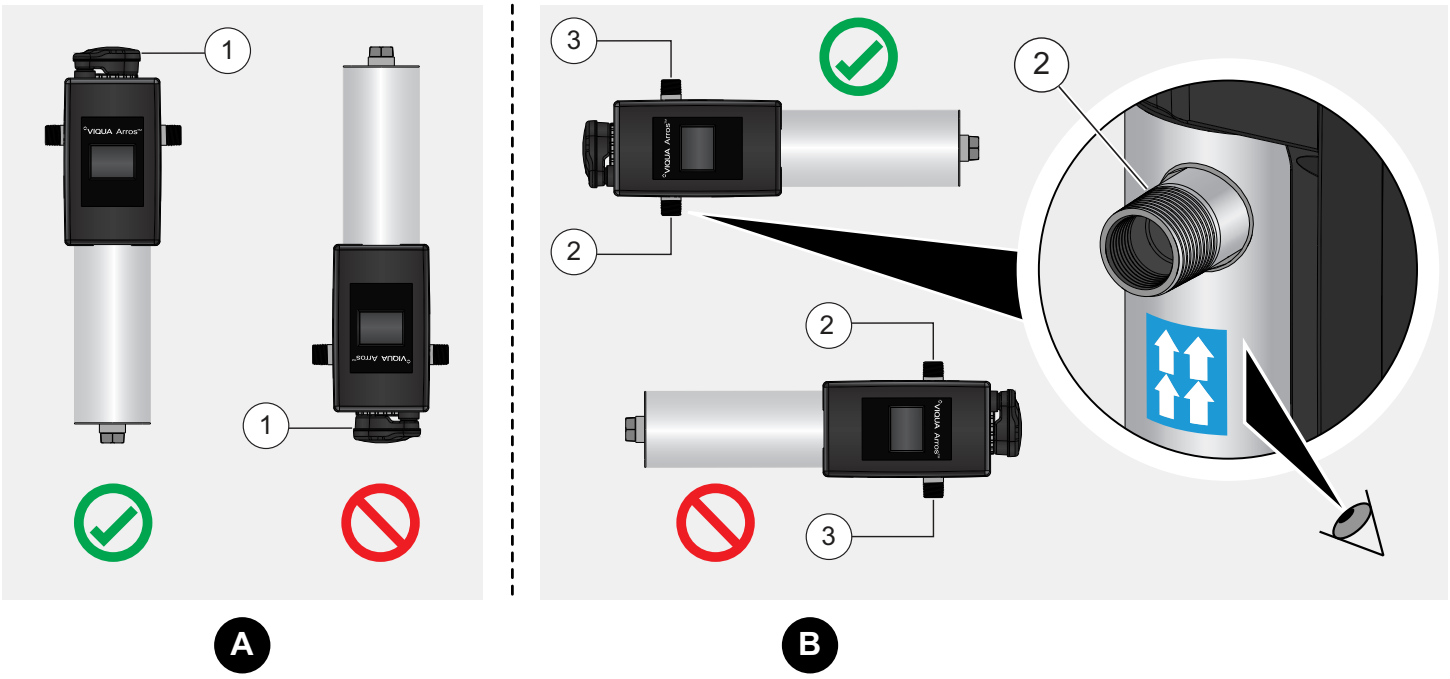


Figure 2 Installation - Vertical and Horizontal Mounting

Item	Description	Item	Description
1	Lamp Connector	**A**	Vertical Mounted[1]
2	Inlet Port	**B**	Horizontal Mounted
3	Outlet Port		

[1] Preferred install orientation

3.1.2 Installation Space Claim

Adequate clearance above the UV Chamber is required to allow for UV Lamp removal. Refer to Figure 3 and Figure 4.

Arros Systems:

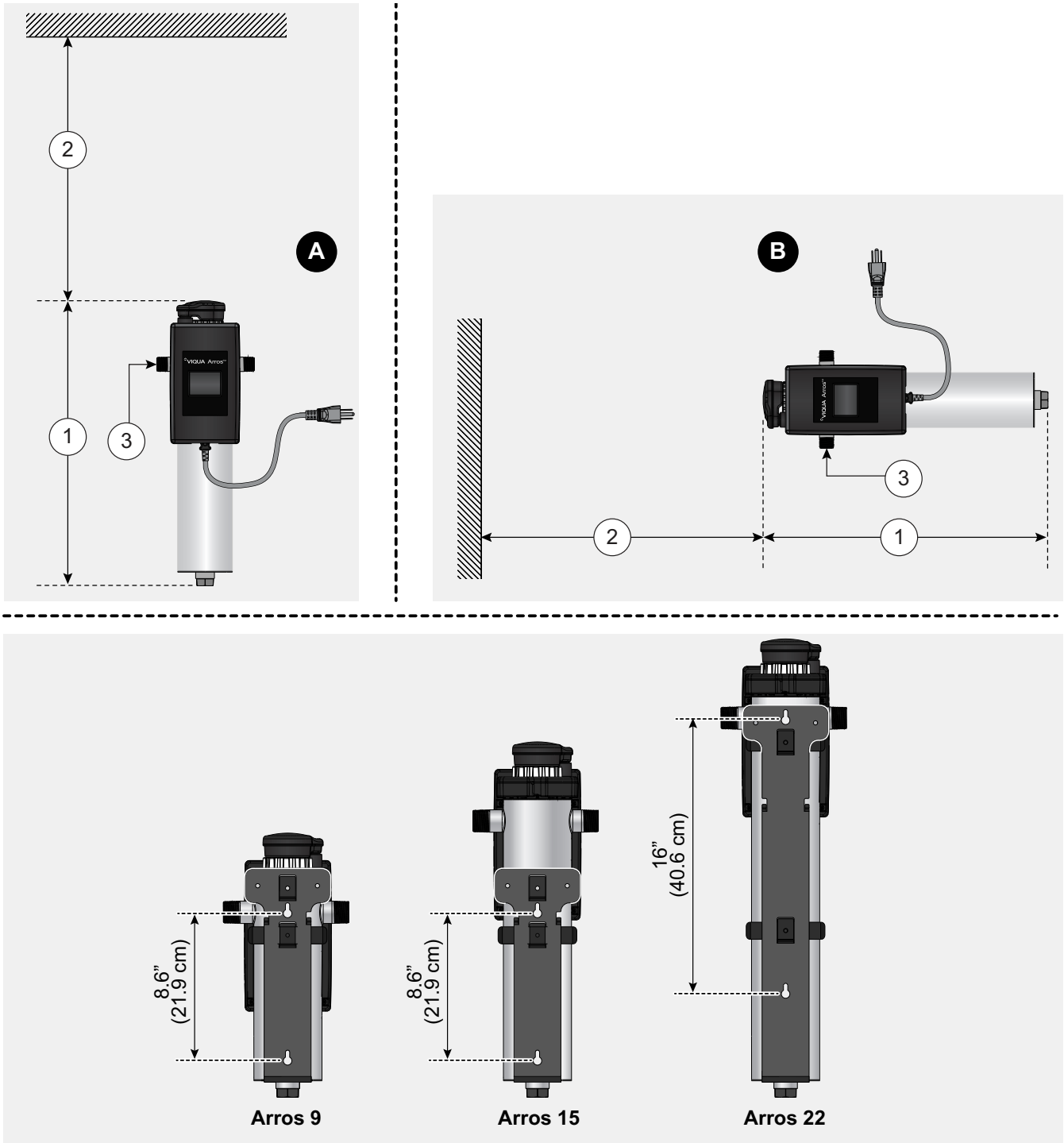


Figure 3 Installation Space Claim - Arros Systems

Item	Description	Item	Description
1	UV Chamber Length	A	Vertical Mounted[1]
2	Clearance required equals UV Chamber Length	B	Horizontal Mounted
3	Inlet Port		

[1] Preferred install orientation

Arros IHS Systems:

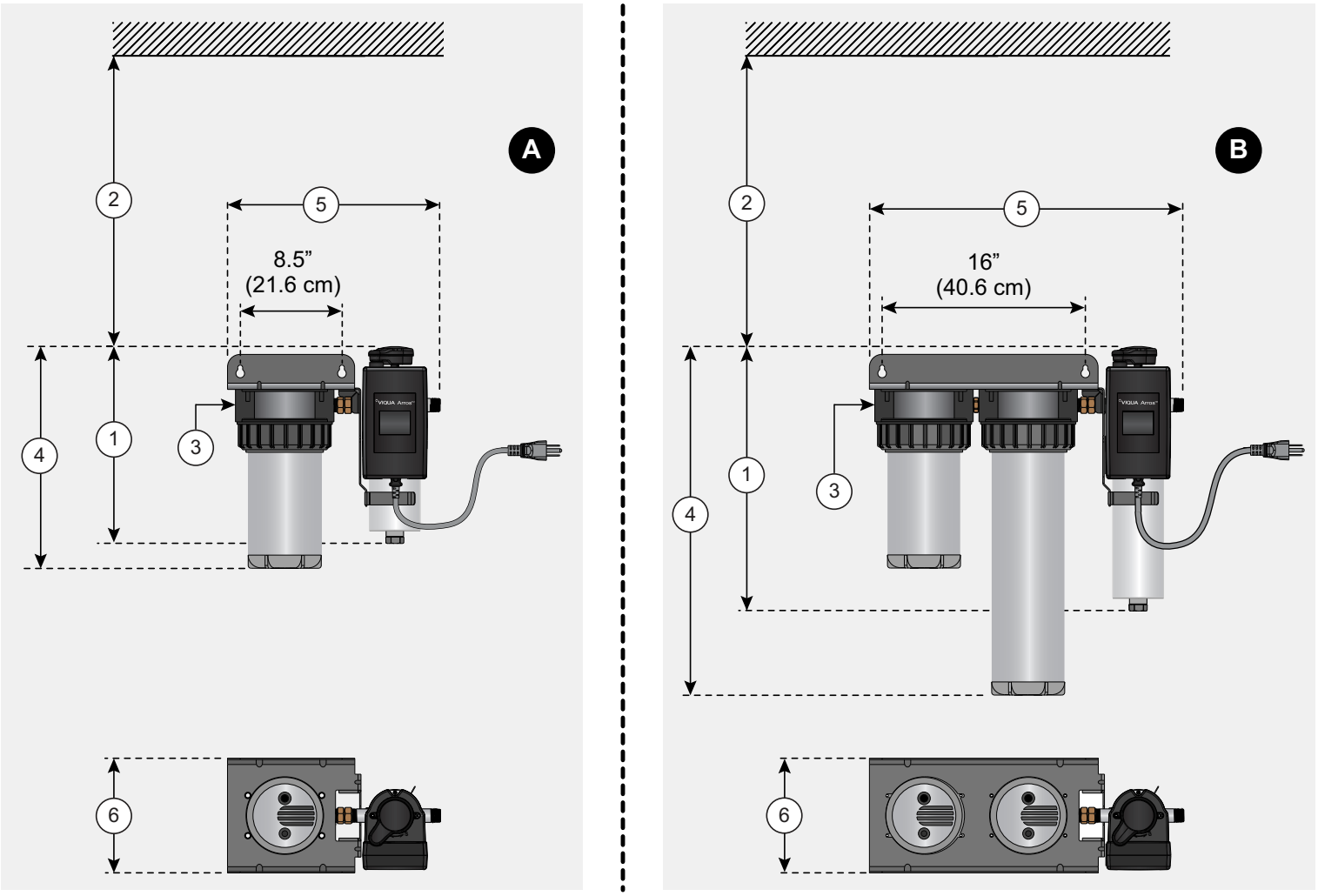


Figure 4 Installation Space Claim - Arros IHS Systems

Item	Description	Item	Description
1	UV Chamber Length	**5**	Overall Length (L)
2	Clearance required equals UV Chamber Length	**6**	Overall Depth (D)
3	Inlet Port	**A**	Single Filter Housing System
4	Overall Height (H)	**B**	Dual Filter Housing System

3.1.3 Installation Procedure

Prerequisites:

For all Systems:

- Determine a suitable indoor location for the UV System and its related components.
- Turn off the main water supply and open a faucet downstream to depressurize the line.

For Arros Validated (-V) and WaterMark Certified Systems:

- A flow restrictor (Figure 5, item 8) must be installed on the outlet side of the UV System.
- Ensure the flow of water matches the flow direction indicated on the flow restrictor. Refer to Figure 8.

For Arros WaterMark Certified Systems:

- A backflow device (Figure 5, item 3) (not included) must be installed upstream of the UV System, filters and other upstream processes.

Considerations:

- The factory default flow direction is from the left side of the UV System. The inlet port can be confirmed by a blue sticker with two arrows (Figure 2) for Arros UV Systems and the Filter Housing Inlet Port on Arros IHS Systems (Figure 4, item 3).

  If inlet flow is required to be from the right side, follow the “Reverse UV System Flow Direction” procedure in Step 1.
- A by-pass assembly (Figure 5 and Figure 6, item 4) is recommended for system off-line maintenance.
- A metal mounting bracket (Figure 7) and two (2) lag bolts are supplied to mount the UV System to a wall. The supplied lag bolts are suitable for attachment to wood materials only.

  Note: *Attachments to other materials (i.e. concrete, metal etc.) will require purchase of alternative hardware.*
- Various connection methods can be used to connect the water source to the UV System, however union type connectors are recommended.
- A customer supplied Ground Fault Circuit Interrupter (GFCI) is required for safety purposes.
- A customer supplied UL1449 certified (or equivalent) Surge Protective Device (SPD) is strongly recommended to protect the Controller.
- Install the UV System on cold water line only, before any branched lines.
- **For Arros Systems:** A 5-micron sediment filter **must** precede the UV System.
- The UV System should be the final piece of treatment equipment.
- The complete water system, including any pressure or hot water tanks, must be sterilized before start up by flushing with chlorine (household bleach) to destroy any residual contamination. Refer to Section 3.2.
- For shipping purposes, the UV Lamp Unit is shipped in a separate cardboard tube. Remove the UV Lamp Unit from the shipping tube being careful not to touch the glass portion with your fingers.
- Figure 5 (Arros Systems) and Figure 6 (Arros IHS Systems) show a typical UV System and related components installation.

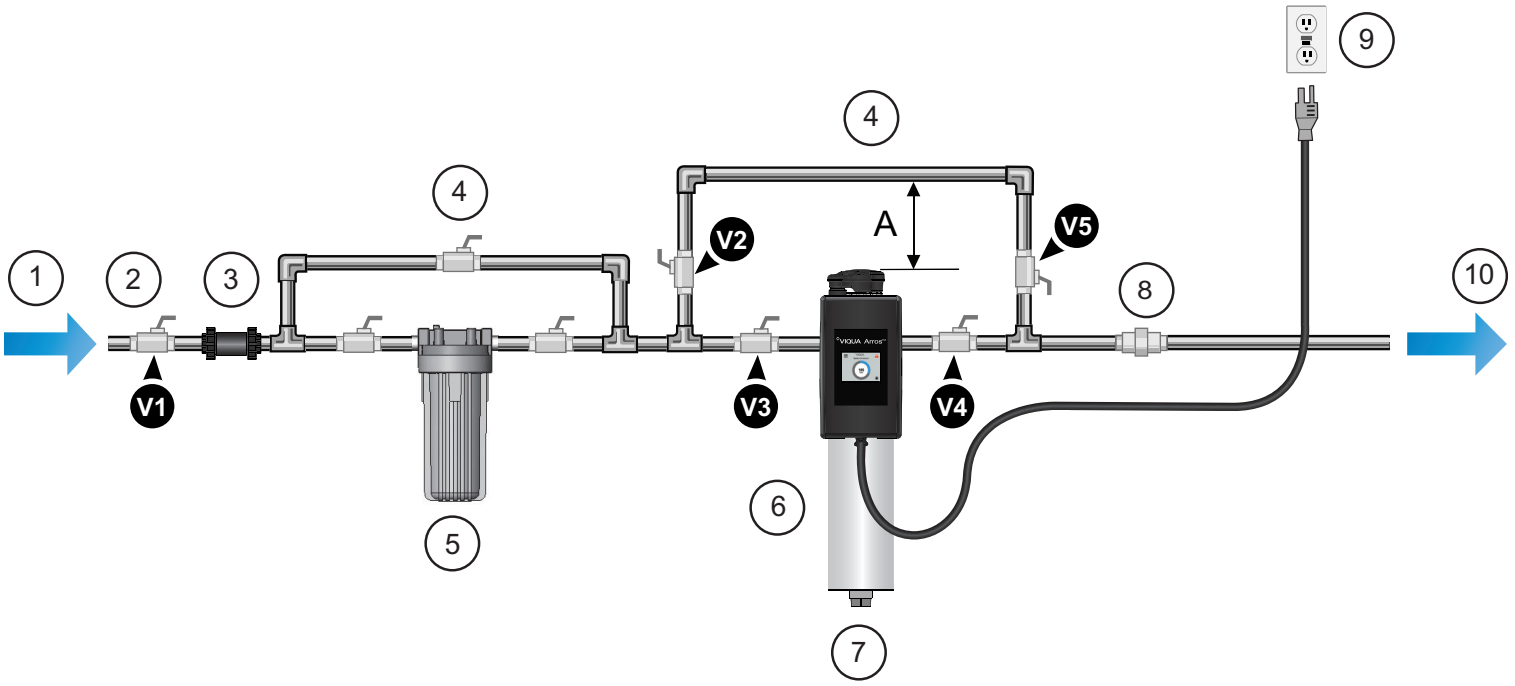


Figure 5 Typical Installation of an Arros UV System

Item	Description	Item	Description
1	Main Water Supply (Inlet)	**6**	Arros UV System[2]
2	Main Water Shut-off	**7**	Drain Plug
3	Optional Backflow Device[1]	**8**	Optional Flow Restrictor[3]
4	Optional By-pass Assembly	**9**	GFCI (Customer supplied)
5	5 micron Sediment Filter	**10**	Outlet

A	**Note:** By-pass pipe should be at least 6 inches (15 cm) above the Arros UV unit and as close to the wall as possible to ensure UV Lamp Unit can be removed.

[1] Mandatory for WaterMark certified systems.

[2] UV System should be the final piece of treatment equipment.

[3] Mandatory for NSF (-V) and WaterMark certified systems. Installed on outlet side of the UV System.

Item	Description	Valve Position	
		Normal Flow	By-pass Flow
V1	Valve 1 (Main water shut-off)	Open	Open
V2	Valve 2	Closed	Open
V3	Valve 3	Open	Closed
V4	Valve 4	Open	Closed
V5	Valve 5	Closed	Open

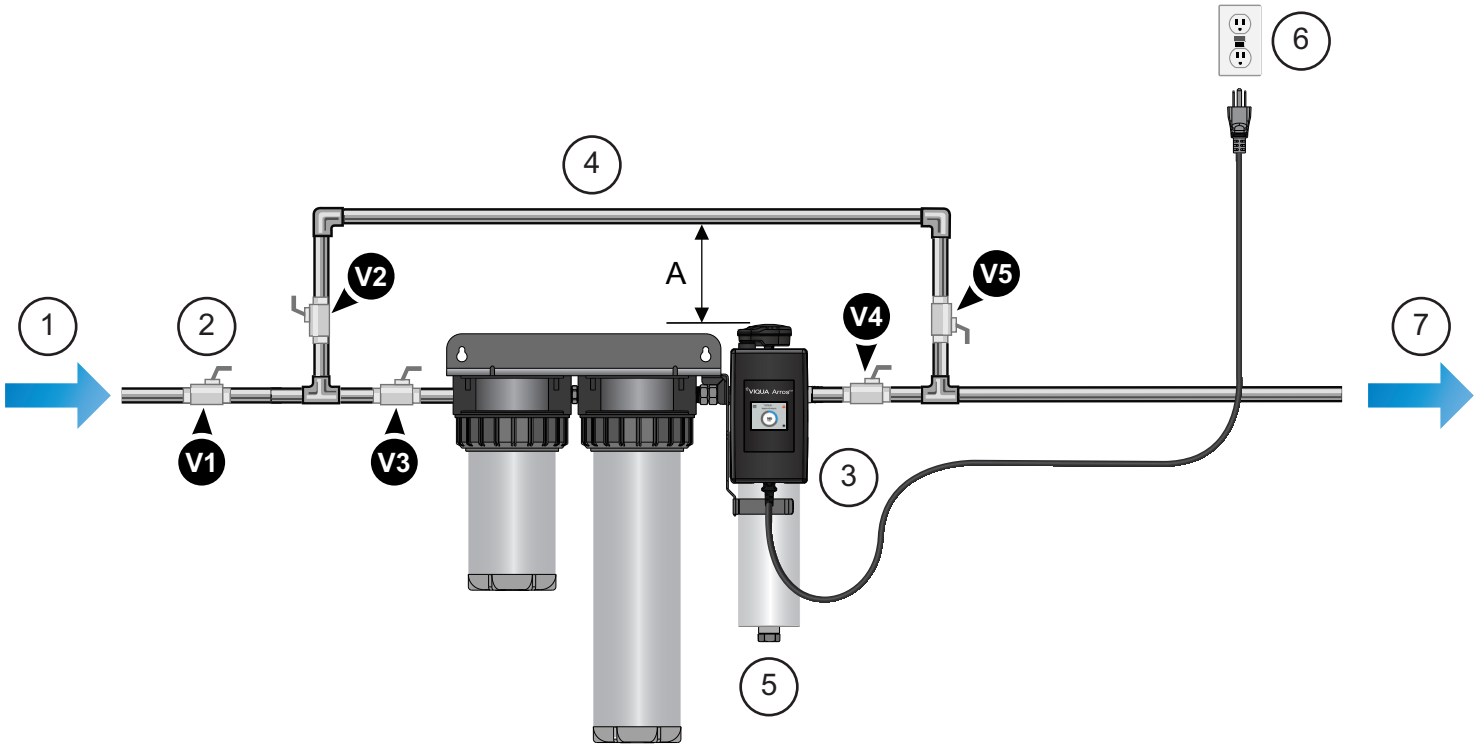


Figure 6 Typical Installation of an Arros IHS UV System

Item	Description	Item	Description
1	Main Water Supply (Inlet)	**5**	Drain Plug
2	Main water shut-off	**6**	GFCI (Customer supplied)
3	Arros UV System[1]	**7**	Outlet
4	Optional by-pass assembly		

A	**Note:** By-pass pipe should be at least 6 inches (15 cm) above the Arros UV unit and as close to the wall as possible to ensure UV Lamp Unit can be removed.

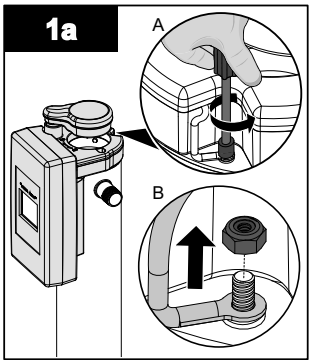
[1] UV System should be the final piece of treatment equipment.

Item	Description	Valve Position	
		Normal Flow	By-pass Flow
V1	Valve 1 (Main water shut-off)	Open	Open
V2	Valve 2	Closed	Open
V3	Valve 3	Open	Closed
V4	Valve 4	Open	Closed
V5	Valve 5	Closed	Open

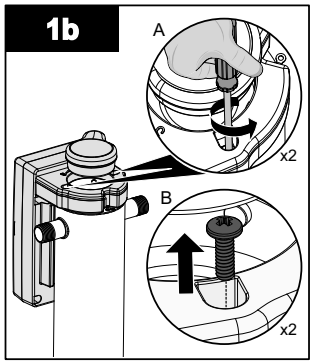
Procedure:

1. Reverse UV System Flow Direction (if required to change the direction of inlet flow).

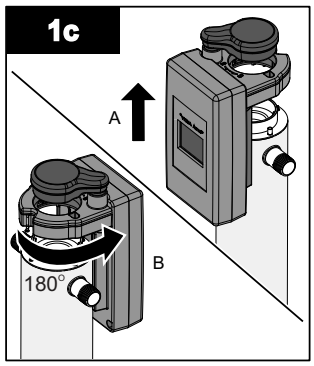
   Note: *If reversal of UV System inlet flow is not required, skip this step and proceed to Step 2.*



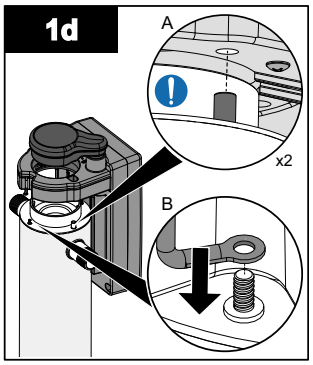
- Remove the locknut found on the back side of the UV System.



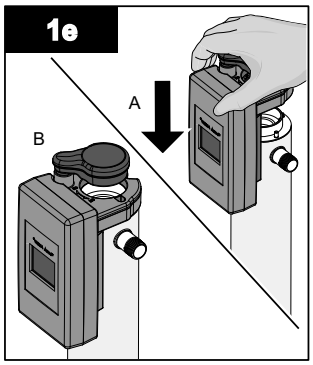
- Remove the two Phillips screws that attach the Controller unit to the UV Chamber.



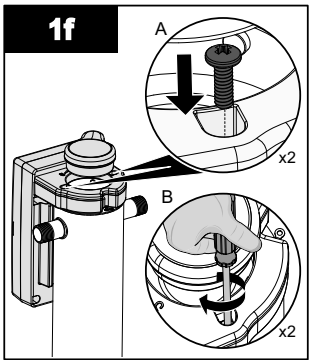
- Pull the Controller off of the UV Chamber and rotate it 180 degrees.



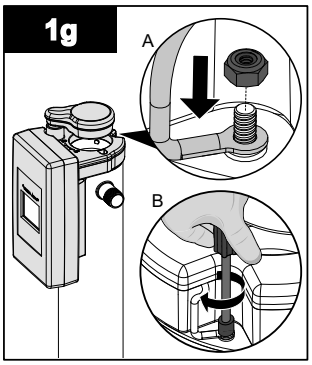
- Align the mounting holes on the Controller with the welded #10 stud mounts on the UV Chamber and insert the ground wire back onto the threaded stud.



- Push the Controller firmly down onto the UV Chamber.

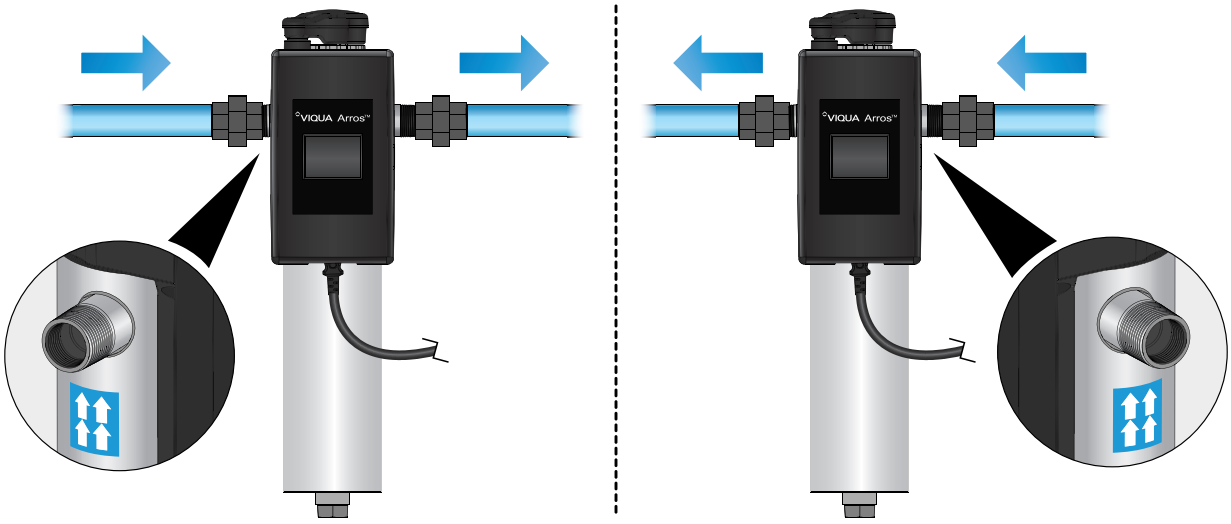


- Reassemble the mounting screws to secure the Controller to the UV Chamber.



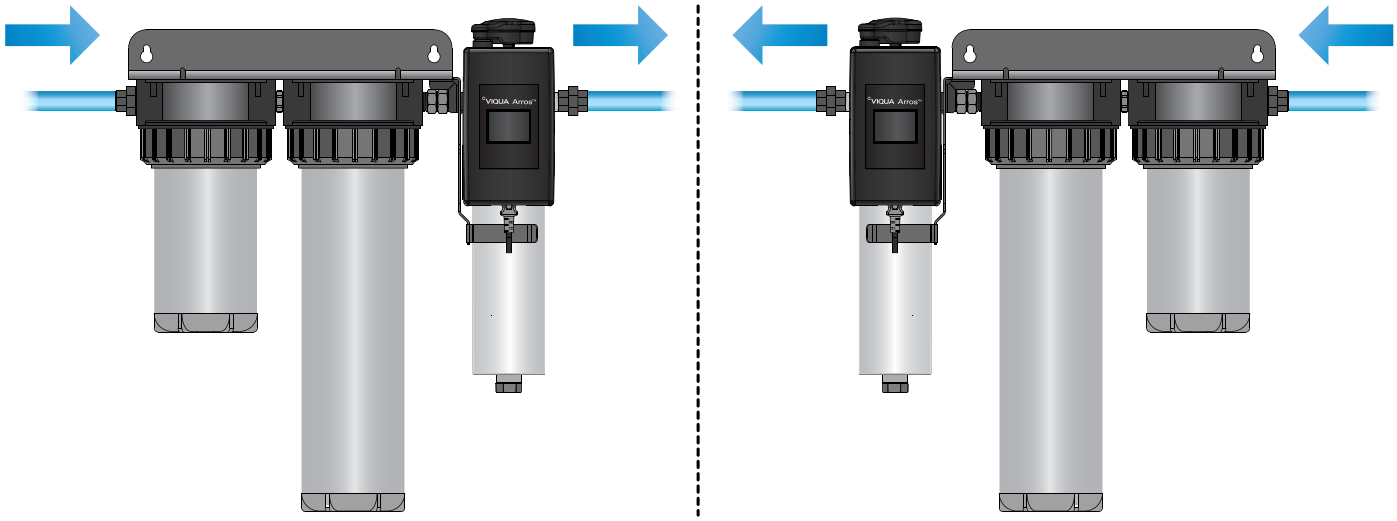
- Tighten down the locking nut to secure the grounding wire.

UV System Flow Direction - Arros Systems:



Before Reversal (Factory Default Flow Direction) **After Reversal**

UV System Flow Direction - Arros IHS Systems:



Before Reversal (Factory Default Flow Direction) **After Reversal**

2. Mount the UV System to the wall using the supplied bracket and lag bolts. Refer to Figure 7.

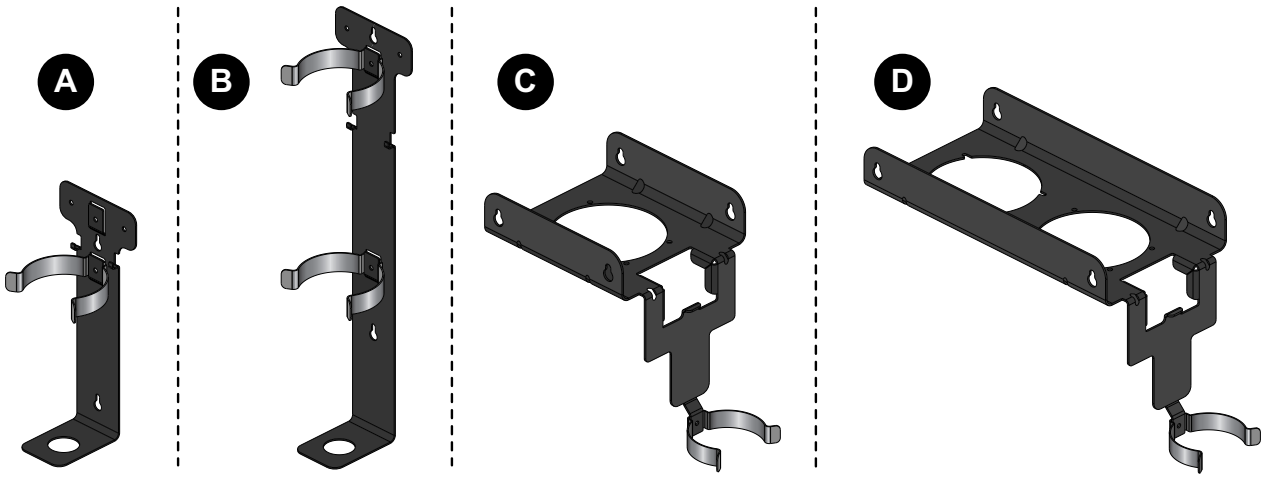


Figure 7 UV System Mounting Bracket

Item	Description	Item	Description
A	Mounting Bracket - Arros 9 and Arros 15 Systems	C	Mounting Bracket - Single Filter/Filter Housing Arros IHS Systems
B	Mounting Bracket - Arros 22 Systems	D	Mounting Bracket - Dual Filter/Filter Housing Arros IHS Systems

3. Install the interconnecting water source piping or tubing.

Note: *DO NOT solder connections while attached to the system as this could damage the O-Ring seals.*

Required for Arros-V (Validated) Systems Only:

4. Install the flow restrictor on the outlet side of the UV System. Refer to Figure 8.

   Note: *The flow restrictor is designed to be installed in one direction only. Ensure that the flow of the water matches the flow direction indicated on the flow restrictor.*

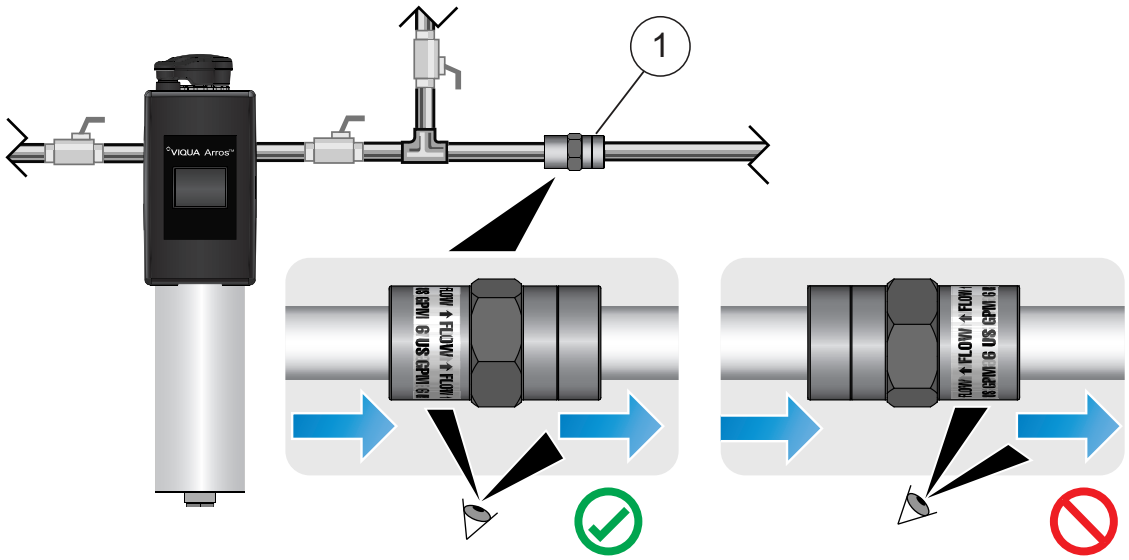
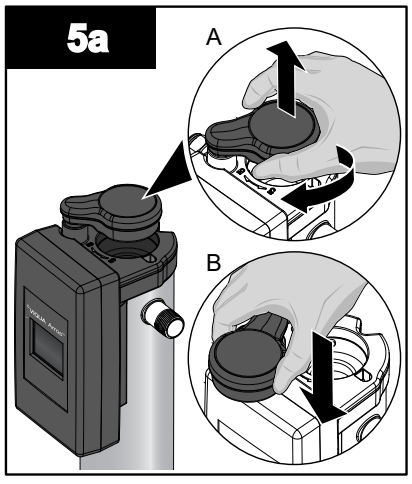


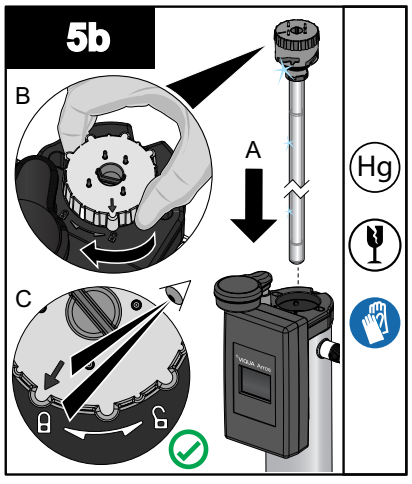
Figure 8 Flow Restrictor Installation Direction

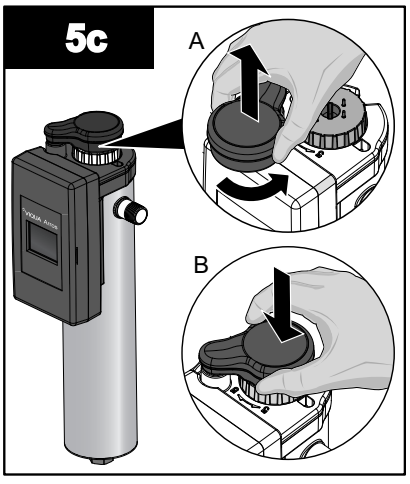
Item	Description
1	Flow Restrictor

For all Arros and Arros IHS Systems:

5. Install the UV Lamp Unit into the UV Chamber. Twist the UV Lamp Unit until fully seated then swing Lamp Connector around and position over top of the UV Lamp Unit and press down until the UV Lamp Unit pins are fully inserted into the Lamp Connector.







6. When all plumbing connections are complete, slowly turn on the water supply and check for leaks. Refer to Section 3.1.4.

7. Once it is determined that there are no leaks, plug the UV System into the GFCI and check Controller to ensure the system is operating properly. The Controller should illuminate without any alarms.

   Note: *DO NOT look directly at the glowing UV Lamp Unit.*

8. Allow the water to run for a few minutes to clear any air or dust that may be in the UV Chamber.

   Note: *When there is no flow, the water in the UV Chamber will become warm. To remedy this, run a cold water tap anywhere in the house for a minute to flush out the warm water.*

9. Perform the Cleaning Procedure. Refer to Section 3.2.

3.1.4 Repair Leaks

UV System

The most likely cause of leaks is from the O-Ring seals in either the UV Lamp Unit or the drain plug.

1. Turn off the main water supply and open a faucet after the UV System to depressurize the line.
2. Remove the UV Lamp Unit and drain the UV Chamber. Follow steps 1-5 in Section 4.1.
3. Wipe the O-Rings and threads with a clean cloth.
4. Re-install UV Lamp Unit and tighten the drain. Follow steps 6-10 in Section 4.1.
5. Slowly turn on the main water supply and check for leaks. Repeat as needed, until all leaks are resolved.
6. Proceed to Section 3.1.3, step 7.

Filter Housings

1. Turn off the main water supply and open a faucet after the UV System to depressurize the line.
2. Press the Pressure Relief button to release the pressure from the Filter Housing.
3. Remove the Filter Housing from the Filter Head using a sump wrench.
4. Inspect the Filter Housing O-Ring. Wipe and clean the O-Ring and threads with a clean cloth if required. Replace the O-Ring if damaged.
5. Ensure proper orientation and centering of the Filter Housing and the Filter Cartridge.
6. Verify that the drain screw at the bottom of the Filter Housing is fully tightened.
7. Reinstall and hand tighten the Filter Housing to the Filter Head. DO NOT use the sump wrench to tighten the Filter Housing.

   Note: *Apply a generous amount of food grade lubricant to the O-Ring when reinstalling Filter Housings.*

8. Press the Pressure Relief button to release the pressure from the Filter Housing.
9. Slowly turn on the main water supply and check for leaks. Repeat as needed, until all leaks are resolved.
10. Proceed to Section 3.1.3, step 7.

3.2 Cleaning Procedure

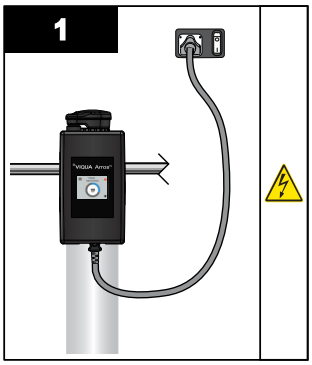
Notes: *1) It is imperative that the entire distribution system located after the UV System be chemically cleaned to ensure that the plumbing system is free from any contaminants. The cleaning process must be performed immediately after the UV unit is installed and repeated thereafter whenever the UV System is shut down for service, without power, or inoperative for any reason.*

2) The addition of chlorine (bleach) to a hot water tank that has in the past been fed with untreated raw water with high levels of other contaminants (iron, manganese, hydrogen sulphide, organics, etc.) will result in oxidation of these contaminants and may require repeated flushing of the hot water tank. This contingency must be dealt with independently under the start-up procedure for any other conditioners that may form a part of the pre-treatment for the UV unit.

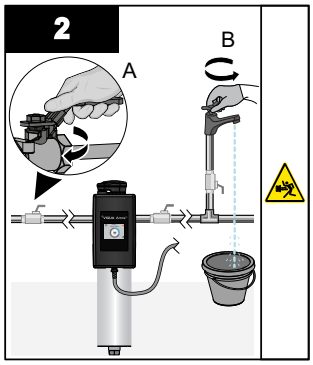
3) The following cleaning procedure will result in a massive chlorine residual far in excess of the 0.5 to 1.0 mg/L typically present in municipally chlorinated water and of a magnitude consistent with the minimum 50 mg/L chlorine solution recommended for the cleaning of distribution systems known to be contaminated. Do not consume water until complete system has been flushed.

3.2.1 Cleaning Procedure - Arros Systems

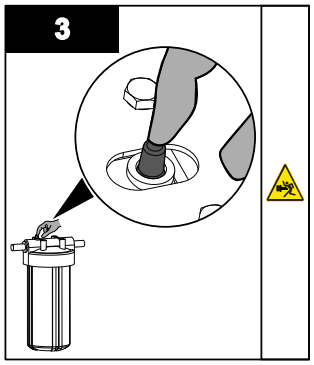
Note: *Go to Section 3.2.2 for Arros IHS System Cleaning Procedure.*



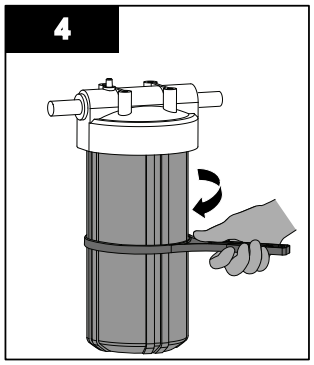
- Ensure power remains on for the entire cleaning process.



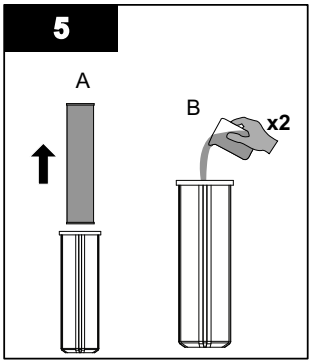
- Shut off the main water supply.
- Open a faucet after the UV System to release pressure.
- Close the faucet.



- Release Filter Housing pressure by:
  - Pressing the Pressure Relief button (if equipped), **OR**
  - Rotating the valve knob from the “On” position to the “Bypass” position 2-3 times (if equipped).

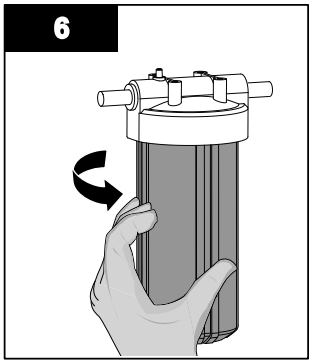


- Remove the Filter Housing drain plug, if equipped and drain into a bucket.
- Reinstall the drain plug.
- Remove Filter Housing(s) with a sump wrench. Clean up spills.

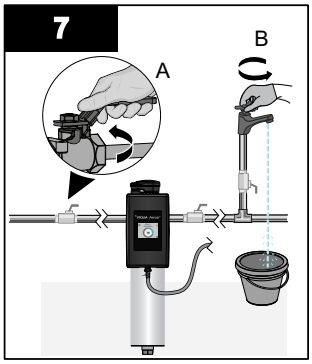


- Remove cartridge(s). Pour 2 cups (0.5L) of 5.25% household bleach into the Filter Housing(s).

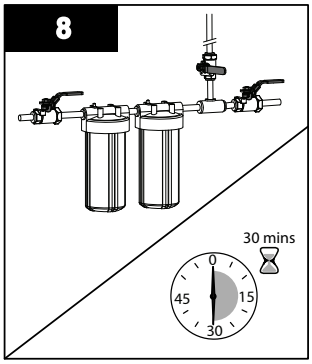
  Note: *DO NOT use Hydrogen Peroxide.*



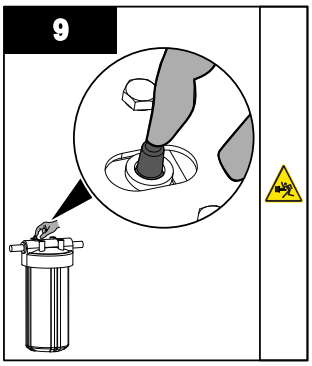
- Reinstall Filter Housing(s) to Filter Head(s).



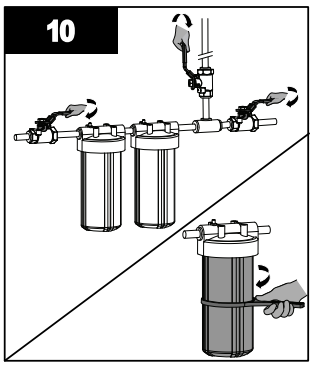
- Turn on main water supply, open a cold water faucet after the UV System. Allow water to fill the Filter Housings and UV Chamber until you smell bleach. Close the faucet.
- Repeat for the hot water faucet (if available).



- Repeat step 7 for remaining faucets.
- Wait 30 minutes.

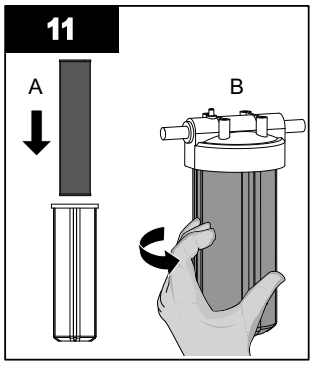


- Shut off the main water supply.
- Open a faucet after the UV System to release pressure.
- Release Filter Housing pressure by:
  - Pressing the Pressure Relief button (if equipped), **OR**
  - Rotating the valve knob from the “On” position to the “Bypass” position 2-3 times (if equipped).

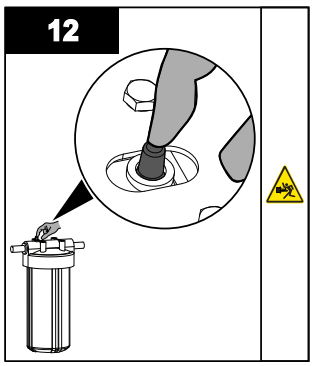


- Close all faucets.
- Remove the Filter Housing(s) from the Filter Head(s) using a sump wrench.

  Note: *The Filter Housing will be full of water and will be heavy. Clean up spills.*



- Reinstall cartridge(s).
- Install Filter Housing to Filter Head.
- Turn on main water supply.
- Open all cold and hot water faucets to flush water until bleach can no longer be smelled (minimum 5 minutes).



- Release Filter Housing pressure by:
  - Pressing the Pressure Relief button (if equipped), **OR**
  - Rotating the valve knob from the “On” position to the “Bypass” position 2-3 times (if equipped).
- Inspect for leaks.
- Repair detected leaks. Refer to Section 3.1.4.

3.2.2 Cleaning Procedure - Arros IHS Systems

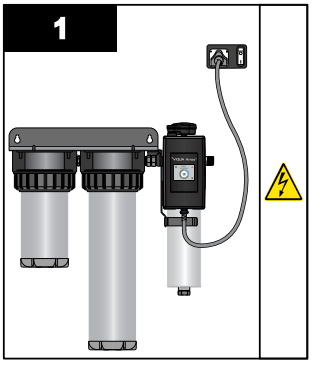
Note: *Go to Section 3.2.1 for Arros System Cleaning Procedure.*

⚠ CAUTION

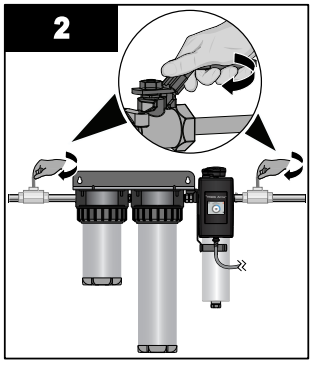
⚠	The Filter (sump) Housings will be heavy.

Prerequisites:

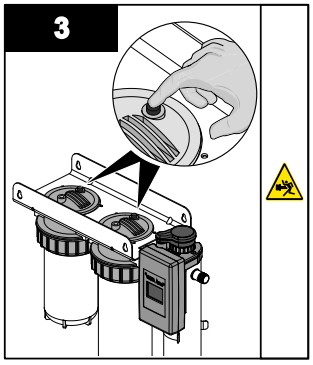
- Apply a generous amount of food grade lubricant to the O-Ring when reinstalling Filter Housings.



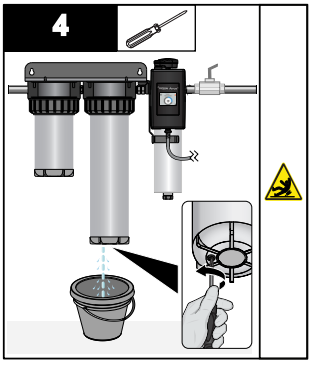
- Ensure power remains on for the entire cleaning process.



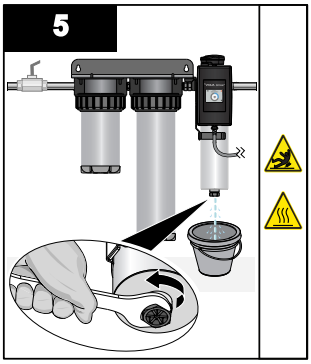
- Shut off the main water supply.
- Open a faucet after the UV System to release pressure.
- Close the faucet.



- Press the Pressure Relief button to release the pressure from the Filter Housing.

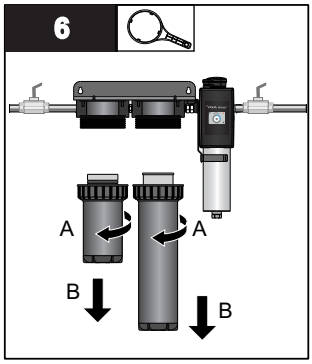


- Place a bucket below the Filter Housing.
- Remove drain plug to drain water into the bucket.
- Reinstall the drain plug.
- Clean up spills.

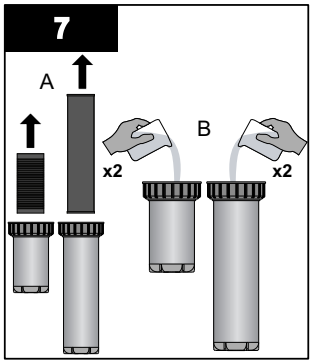


- Loosen the drain plug at the bottom of the UV Chamber and place a pail to catch the water. DO NOT remove the drain plug.
- Tighten the drain plug, using a wrench. DO NOT over-tighten.

  Note: *It is normal for the drain plug to make a clicking sound during install.*
- Clean up spills.

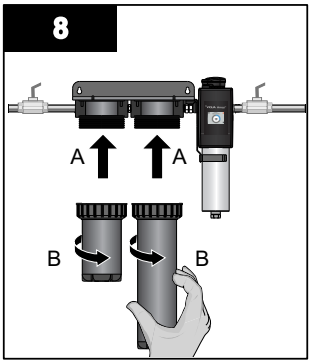


- Remove Filter Housing(s) from the Filter Head(s) with a sump wrench.

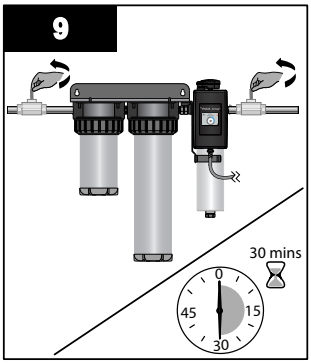


- Remove cartridge(s). Pour 2 cups (0.5L) of 5.25% household bleach solution into the Filter Housings.

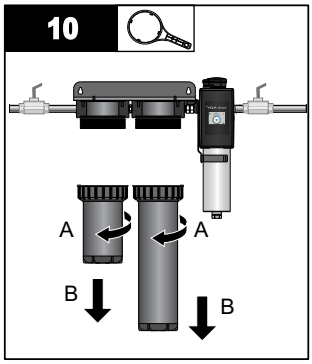
  Note: *DO NOT use Hydrogen Peroxide.*



- Reinstall Filter Housing(s) to Filter Head(s).

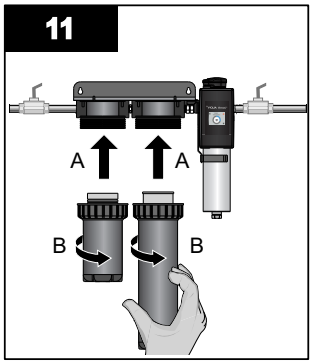


- Turn on main water supply, open a cold water faucet after the UV System. Allow water to fill the Filter Housings and UV Chamber until you smell bleach. Close the faucet.
- Repeat for the hot water faucet (if available). Repeat steps for remaining faucets. Wait 30 minutes.

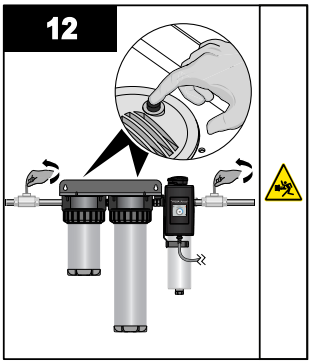


- Shut off the main water supply.
- Open a faucet after the UV System to release the pressure.
- Press the Pressure Relief button to release the pressure from the Filter Housing.
- Close all faucets.
- Remove the Filter Housing with a sump wrench.

  Note: *The Filter Housing will be full of water and will be heavy. Clean up spills.*



- Reinstall cartridge(s).
- Install Filter Housing(s) to Filter Head(s).
- Turn on main water supply.



- Open all cold and hot water faucets to flush water until bleach can no longer be smelled (minimum 5 minutes).
- Press the Pressure Relief button to purge air.
- Inspect for leaks.
- Repair detected leaks. Refer to Section 3.1.4.

Section 4 Maintenance

⚠WARNING

- Always disconnect power before performing any work on the UV System.
- Always shut-off water flow and release water pressure before servicing.
- Regularly inspect your UV System to ensure that the power indicators are on and no alarms are present.
- Replace the UV Lamp Unit annually upon Controller alert, typically after 1 year or 9000 hours of operation.
- Always drain the UV Chamber and Filter Housings when closing a seasonal home or leaving the unit in an area subject to freezing temperatures.

4.1 Remove and Install a UV Lamp Unit

NOTICE

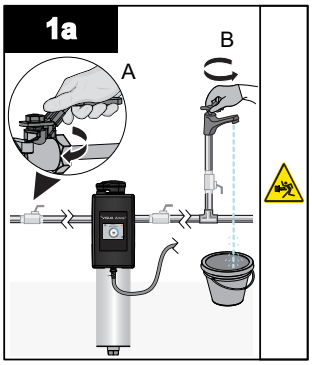
- Refer to www.lamprecycle.org for Lamp disposal.
- DO NOT use water during replacement of UV Lamp Unit.

UV Lamp Unit replacement is a quick and simple procedure requiring no special tools. The UV Lamp Unit must be replaced after 9000 hours of continuous operation (approximately one year) in order to ensure adequate performance.

Note: *An alarm will be triggered at the Controller when a UV Lamp Unit replacement is required.*

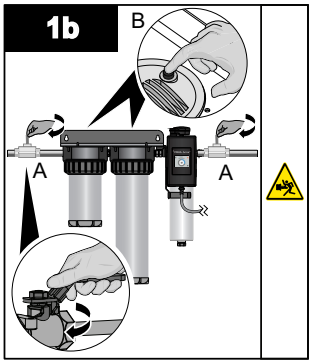
Procedure:

Note: *IHS Filters not shown in some illustrations for clarity.*



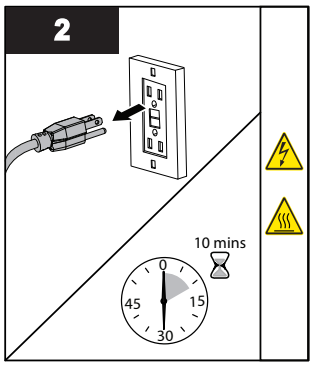
Standalone Systems

- Shut off the main water supply.
- Open a faucet after the UV System to release pressure.
- Release Filter Housing pressure by:
  - Pressing the Pressure Relief button (if equipped), **OR**
  - Rotating the valve knob from the "On" position to the "Bypass" position 2-3 times (if equipped).

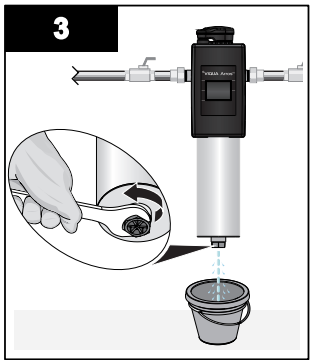


IHS Systems

- Shut off the main water supply.
- Open a faucet after the UV System to release pressure.
- Press the Pressure Relief button to release the pressure in the Filter Housing(s).

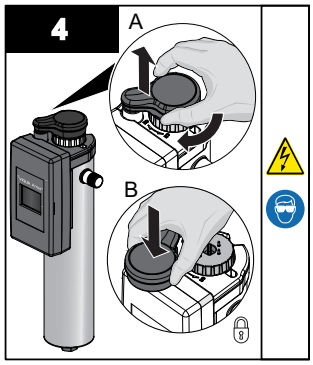


- Disconnect main power source and allow the unit to cool for 10 minutes.

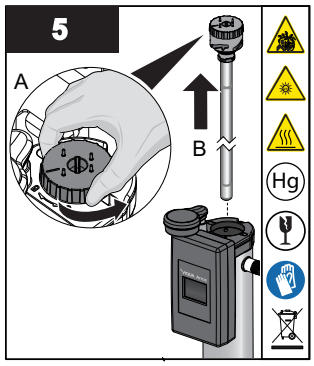


- Loosen the drain plug at the bottom of the UV Chamber and place a pail to catch the water. DO NOT remove the drain plug.
- Tighten the drain plug, using a wrench. DO NOT over-tighten.

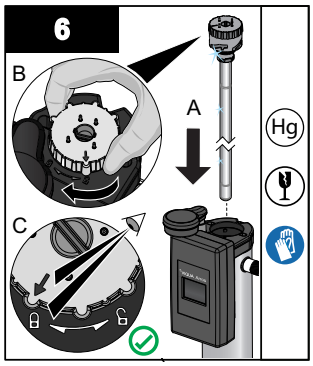
  Note: *It is normal for the drain plug to make a clicking sound during install.*



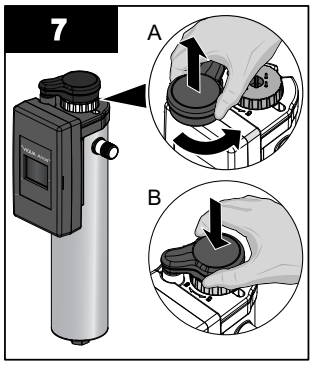
- To remove the Lamp Connector from the UV Lamp Unit, pull the Lamp Connector straight up until the pin sockets disengage from the UV Lamp Unit pins.
- Rotate the Lamp Connector clockwise until a stop is felt.
- Press down to lock in the service position.



- To remove UV Lamp Unit, rotate counter clockwise until the UV Lamp Unit becomes free from the bayonet mounting taps.
- Carefully pull UV Lamp Unit straight out from UV Chamber ensuring it does not contact the UV Chamber.
- Always hold the UV Lamp Unit by the plastic Lamp head.

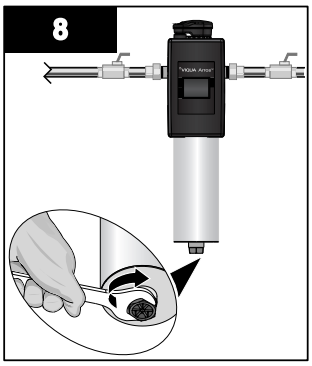


- Insert the new UV Lamp Unit fully into the UV Chamber and rotate clockwise until Lamp is fully inserted and aligns with the lock position shown on the Controller top.



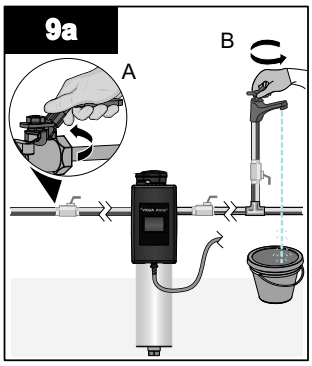
- Rotate the Lamp Connector counter clockwise from the service position until it is over top of the UV Lamp Unit connector pins.
- Press down until the Lamp Connector fully engages the UV Lamp Unit pins.

  Note: *The Controller will automatically reset the Days Remaining counter, manual reset is not required.*



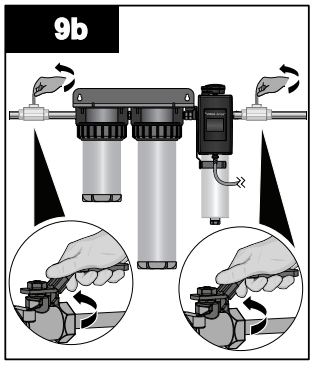
- Tighten the drain plug, using a wrench. DO NOT over-tighten.

  Note: *It is normal for the drain plug to make a clicking sound during install.*

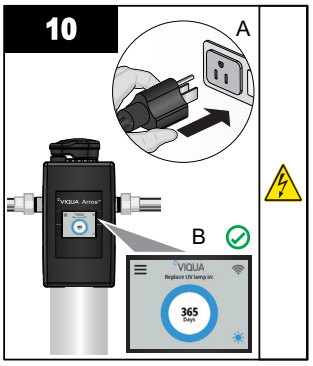


Standalone Systems

- Turn on main water supply.
- Open all cold and hot water faucets.
- Inspect for leaks.
- Close all open faucets.
- Repair detected leaks. Refer to Section 3.1.4.



IHS Systems



- Restore power to the UV System. The End of Lamp timer should now automatically reset to 365 days remaining.
- Perform the cleaning procedure. Refer to Section 3.2.

4.2 Cleaning Lamp Unit Assembly Quartz Sleeve

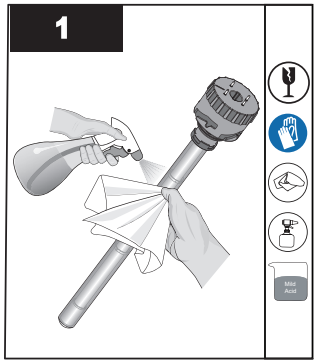
Minerals in the water slowly form a coating on the Quartz Sleeve. This coating must be removed because it reduces the amount of UV light reaching the water, thereby reducing performance. If the Quartz Sleeve cannot be cleaned the UV Lamp Unit assembly must be replaced. It is recommended to check the status of the UV Lamp Unit periodically.

Prerequisites:

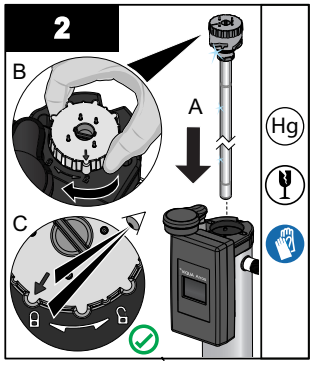
- Remove the UV Lamp Unit. Refer to Section 4.1, Steps 1 through 5.

Procedure:

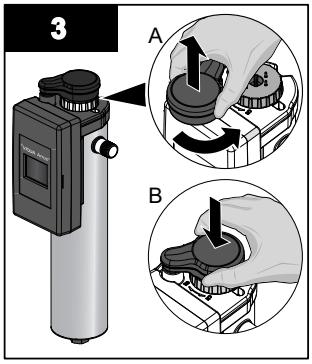
Note: *IHS Filters not shown in some illustrations for clarity.*



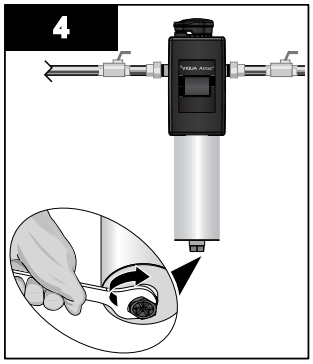
- Clean the Quartz Sleeve with a cloth soaked in CLR, vinegar or some other mild acid and then rinse with water.



- Insert the cleaned UV Lamp Unit fully into the UV Chamber and rotate clockwise until UV Lamp Unit is fully inserted and aligns with the lock position shown on the Controller top.

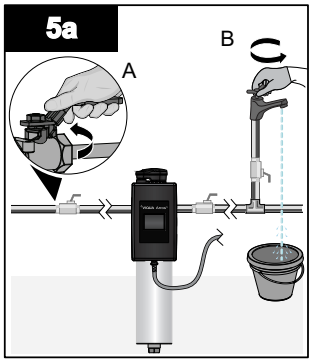


- Rotate Lamp Connector counter clockwise from the service position until it is over top of the UV Lamp Unit connector pins.
- Press down until the Lamp Connector fully engages the UV Lamp Unit pins.

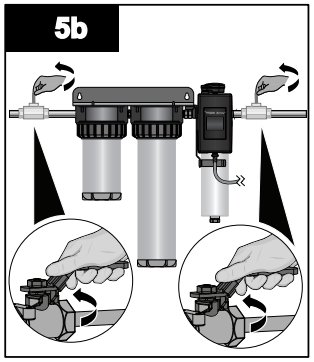


- Tighten the drain plug, using a wrench. DO NOT over-tighten.

  Note: *It is normal for the drain plug to make a clicking sound during install.*



Standalone Systems



IHS Systems

- Turn on main water supply.
- Open all cold and hot water faucets.
- Inspect for leaks.
- Close all open faucets.
- Repair detected leaks. Refer to Section 3.1.4.
- Perform the cleaning procedure. Refer to Section 3.2.

4.3 Replacing Cartridges

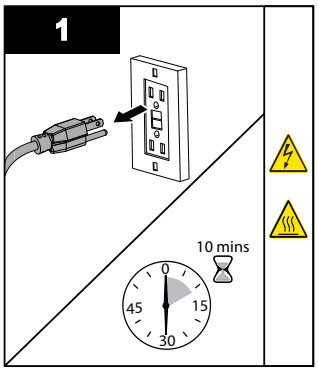
Note: *This section applies to Arros IHS Systems only.*

⚠ CAUTION

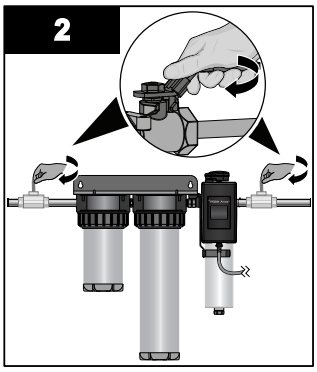
⚠	The Filter (sump) Housings will be heavy.

It is recommended to change the filter cartridges regularly, approximately 3-4 times per year depending on water quality and usage. A gradual drop in water pressure after the filtration device is an indication that the pre-filter cartridges are nearing the end of their useful life.

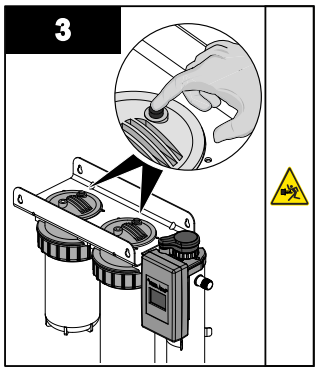
Procedure:



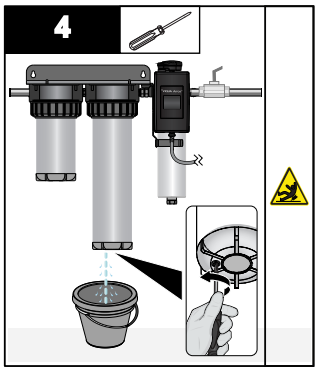
- Disconnect main power source and allow the unit to cool for 10 minutes.



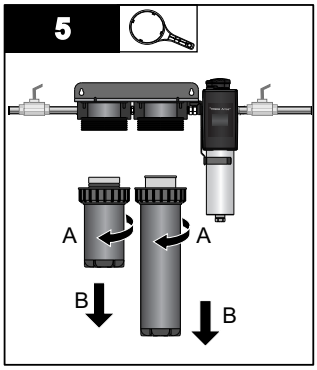
- Shut off the main water supply.
- Open a faucet after the UV System to release pressure.



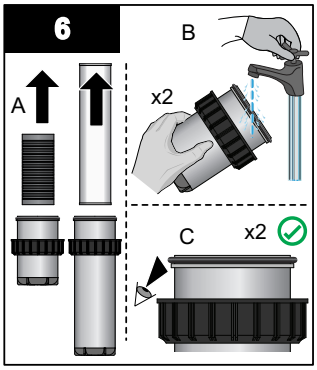
- Press the Pressure Relief button to release the pressure from the Filter Housings.



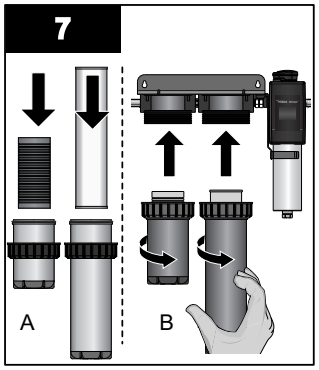
- Place a bucket below the Filter Housing.
- Remove drain plug to drain water into the bucket.
- Reinstall the drain plug.
- Clean up spills.



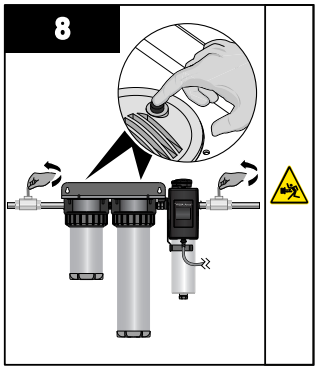
- Remove Filter Housing(s) with a sump wrench.



- Remove and discard the old cartridge(s).
- Thoroughly rinse the Filter Housing(s) with water to remove any cleaning agents.
- Ensure that the O-Ring is properly seated on the shoulder at the top of the Filter Housing. Replace the O-Ring if there is any visible damage.
- Apply a generous amount of silicone-based lubricant to the O-Ring when reinstalling the Filter Housing(s).



- Install new cartridge(s).
- Reinstall Filter Housing(s) to Filter Head(s).



- Open a faucet after the UV System.
- Restore power and turn on the water supply.
- Close the faucet.
- Press the Pressure Relief button to purge air.
- Inspect for leaks.
- Close all open faucets.
- Repair detected leaks. Refer to Section 3.1.4.
- Perform the cleaning procedure. Refer to Section 3.2.

Section 5 Operation

⚠WARNING

⚠ The advanced warning system has been installed to provide the optimum protection against microbiological contamination in water. DO NOT disregard the warning signals. The best way to ensure optimum UV performance is to have the water microbiologically tested by a recognized testing agency on a regular basis.

5.1 UV System Operation

Note: *Firmware updates may modify the UI screens and processes. If necessary, refer to the online manual for most up-to-date information.*

Note: *The factory default settings on the Controller are as follows, Language = English; LCD Orientation = Vertical. Default settings can be changed in the Settings Screen.*

5.2 Home Screen

1. The Home Screen displays the Lamp life remaining and counts down from 365 to 0 days as the system is ON.

2. The Home Screen also displays Lamp Status ON/OFF, indicated by the sun symbol in the bottom right hand corner of the screen.

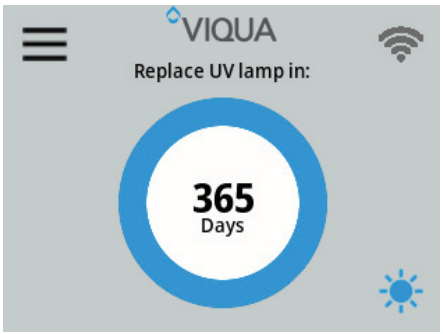
Symbol	Color	Description
☀	Cyan	Lamp On
☀	Black	Lamp Off

3. A Minor Warning Alarm is initiated once the Lamp life reaches 30 days remaining and will also alarm when the Lamp life reaches 14 days remaining.

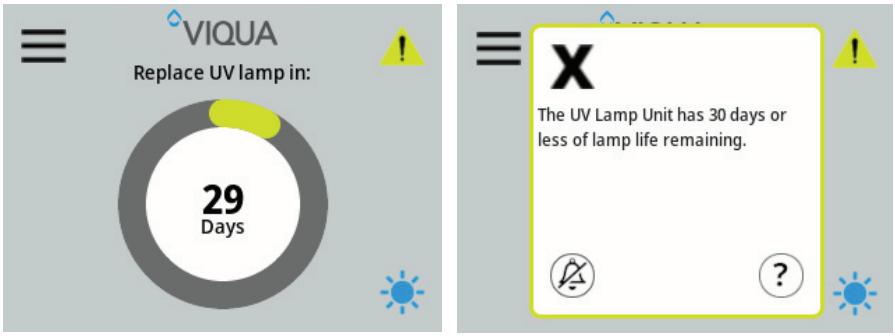
4. A Major Lamp Alarm will be initiated once the Lamp life reaches 0 days.

Notes: *1) The UV System Wi-Fi capability is for firmware updates only (Section 5.4) and is not capable of system status or control.*

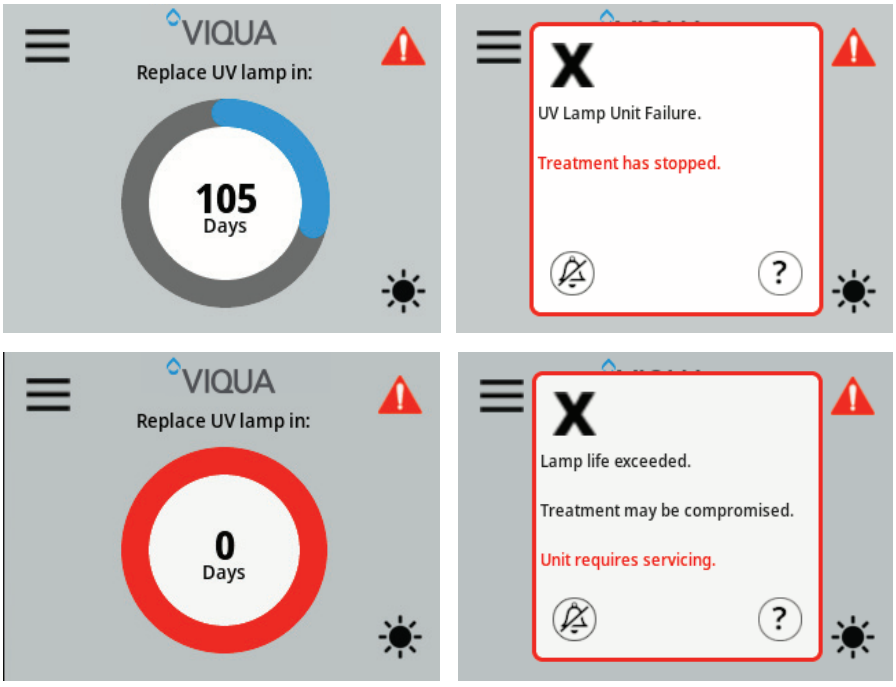
2) Use of a non-VIQUA UV Lamp Unit will result in an ongoing fault mode (minor Lamp alarm), including an audible beep every 60 seconds and will impair accurate Lamp-life tracking.



Lamp On



Minor Alarms



Major Alarms Lamp Fault/Lamp Life expired

Figure 9 Home Screen

5.3 Menu Screen

1. From the Home Screen, press the top left  icon to access the Menu Screen.
2. The Menu Screen provides access to four main user screens; Spare Parts, Contact, Information and Settings:

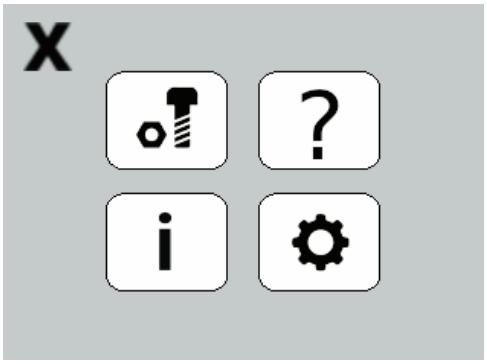


Figure 10 Menu Screen

5.3.1 Parts Screen

The Parts Screen displays the common replacement part numbers for the UV System.

Note: *The replacement parts displayed will be for the system model configured during the setup at the factory and is configurable on the Settings Menu.*

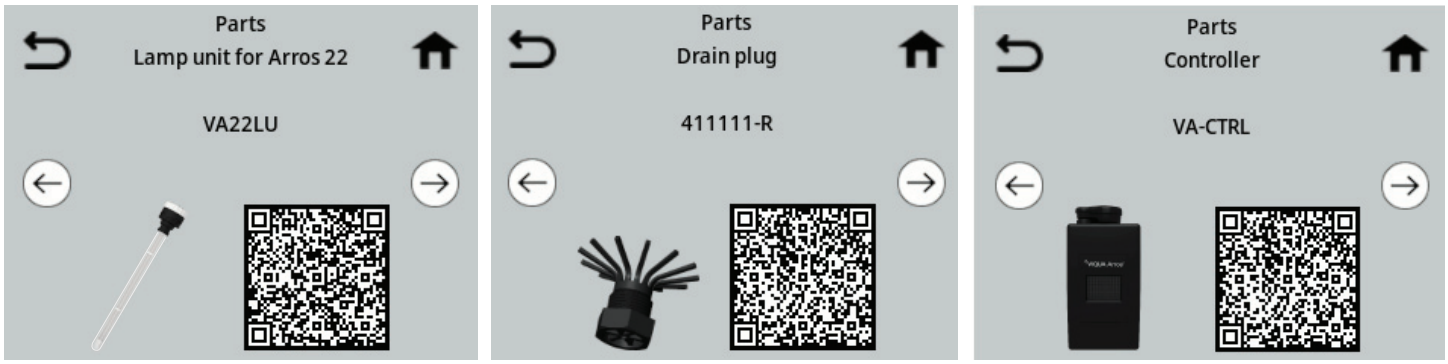


Figure 11 Parts Screen

5.3.2 Settings Screen

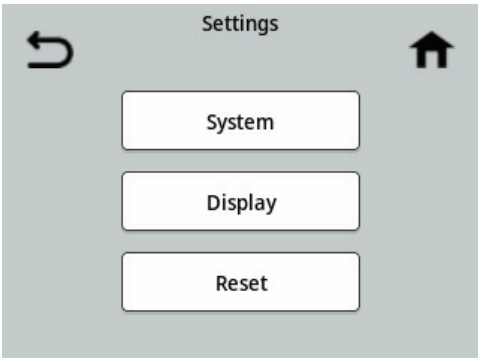


Figure 12 Settings Menu

The Settings Screen allows users to change the following settings:

Button	Setting
System	Language - Set the user interface language, choose from English, French or Spanish
	Model Number - Preset at the factory
Display	Screen Brightness - Move the brightness slider to increase or decrease the LCD Screen brightness
	Halo Brightness - Move the brightness slider to increase or decrease the Lamp Head Status Lights brightness (Section 5.3.2.2).
	Screen Saver Time - Adjust the screen saver time
	User Interface Orientation (Section 5.3.2.1) • Vertical, select for vertical UV Chamber install orientation • Horizontal, select for horizontal UV Chamber install orientation
Reset	Select to return all settings back to the factory defaults

5.3.2.1 Display Setting - User Interface Orientation

When mounting the UV System in a horizontal installation, the LCD Screen can be configured to the most preferred orientation. Press the arrows to change the LCD Screen orientation. Once the desired orientation is shown, press the Home button.

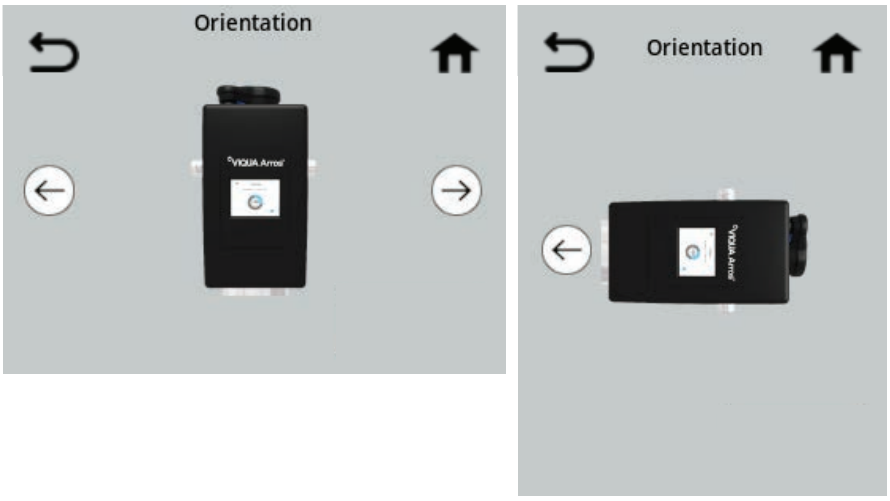


Figure 13 LCD Screen Orientation

5.3.2.2 Lamp Head Status Lights

The white top cap (Halo) of the UV Lamp Unit will illuminate when the Lamp is operating. For normal operation (no faults, Lamp on) the top cap is blue. When there is a minor alarm condition (Lamp life less than 30 days left), the top cap is amber. When there is a major alarm condition, the top cap will be red.



Blue Halo (Normal Operation) **Amber Halo (Minor Alarm Condition)** **Red Halo (Major Alarm Condition)**

Figure 14 Lamp Head Status Lights

5.3.3 Information Screen

Information menu which provides system information including System model, Firmware revision, Lamp serial number and Controller serial number. Additionally, it provides access to register the UV System and find a dealer in your area.



Figure 15 Information Screen, Register Screen and Contact Screen

Button	Setting
Register	Select to display the Register Screen that displays a QR code to complete the online registration. Scan the QR code to go to **viqua.com/register** to register your system, to receive important updates about the UV System, including UV Lamp replacement reminders
Contact	Select to display the Contact Screen that displays a QR code to find a dealer near you. Scan the QR code to go to **viqua.com/where-to-buy** to find a service and replacement parts dealer in your area.

5.4 Firmware Updates

Firmware updates are released periodically to enhance the performance or add features to the Controller. New firmware can be uploaded to the Controller using the VIQUA App from a smart phone or tablet.

Note: *The VIQUA App does not send remote alarm notifications.*

1. Connect mobile device to a Wi-Fi network.
2. Scan the QR code or click the link provided below in Figure 16 (for iOS devices) or Figure 17 (for Android devices) to download the VIQUA App.

Download on the App Store

Figure 16 VIQUA App - iOS Devices

GET IT ON Google Play

Figure 17 VIQUA App - Android Devices

3. Once the VIQUA App is installed, open the App, the option for 'Firmware Update' will be displayed in the top left hand side of the Home Screen.
   a. Select the 'Check for Updates' button. If a new firmware version is available, download and follow the steps on the screen. The download may take a few minutes.

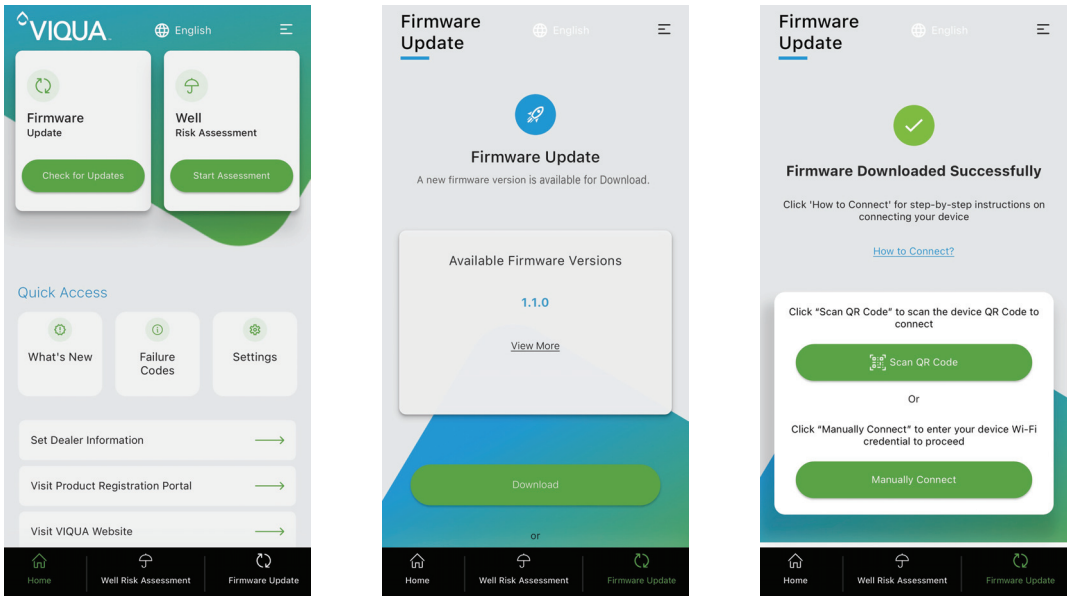


Figure 18 Download the Firmware

4. Select the 'Scan QR Code' button to open the camera application on your mobile device.
5. Navigate to the Home Screen on the Arros UV System Controller.
   a. Press the Wi-Fi symbol in the top right hand corner of the screen, to display a QR code.

      Note: *If the Wi-Fi symbol is not visible, the Arros UV System may need to be powered off for a few seconds then powered back on.*

   b. Scan the QR Code displayed on the screen using the mobile device camera.

6. Connect to Arros Unit network, then select ‘Update Firmware’. The firmware will then update automatically.

For more details on the VIQUA App, go to: www.viqua.com/arros.

5.5 Dry Contact Connection Information

Note: *This section applies to Arros Systems only.*

The VIQUA Arros Controller model supplied with the Dry Contact connection allows connection to a remote device such as a Solenoid Valve or remote alarm indicator when a major alarm occurs with the UV System. The contact ratings are 5A, 300V.

5.5.1 Alarm Descriptions

The Dry Contact Output will inform you on the following Major Alarms:

1. Controller Failure
2. Lamp Failure

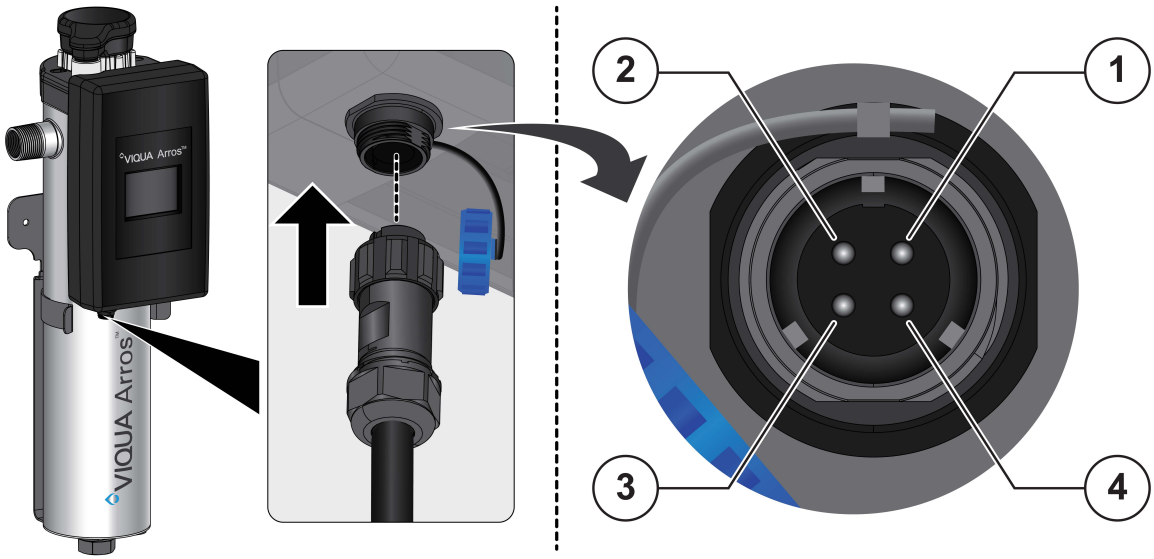


Figure 19 Dry Contact Connections

1	Normally Open (NO)	**3**	Common (COM)
2	Normally Closed (NC)	**4**	Unused

5.5.2 Dry Contact Connection Logic Chart

Dry Contact Connection Logic Chart		
Output Connection	**UV System Running Normally (No Major Alarms)**	**UV System Is In a Major Alarm or No Power is Connected to the UV System**
Normally Open Contact (NO)	The Electrical path between these contacts are closed	The Electrical path between these contacts are open
Common (COM)		
Normally Closed Contact (NC)	The Electrical path between these contacts are open	The Electrical path between these contacts are closed
Common (COM)		

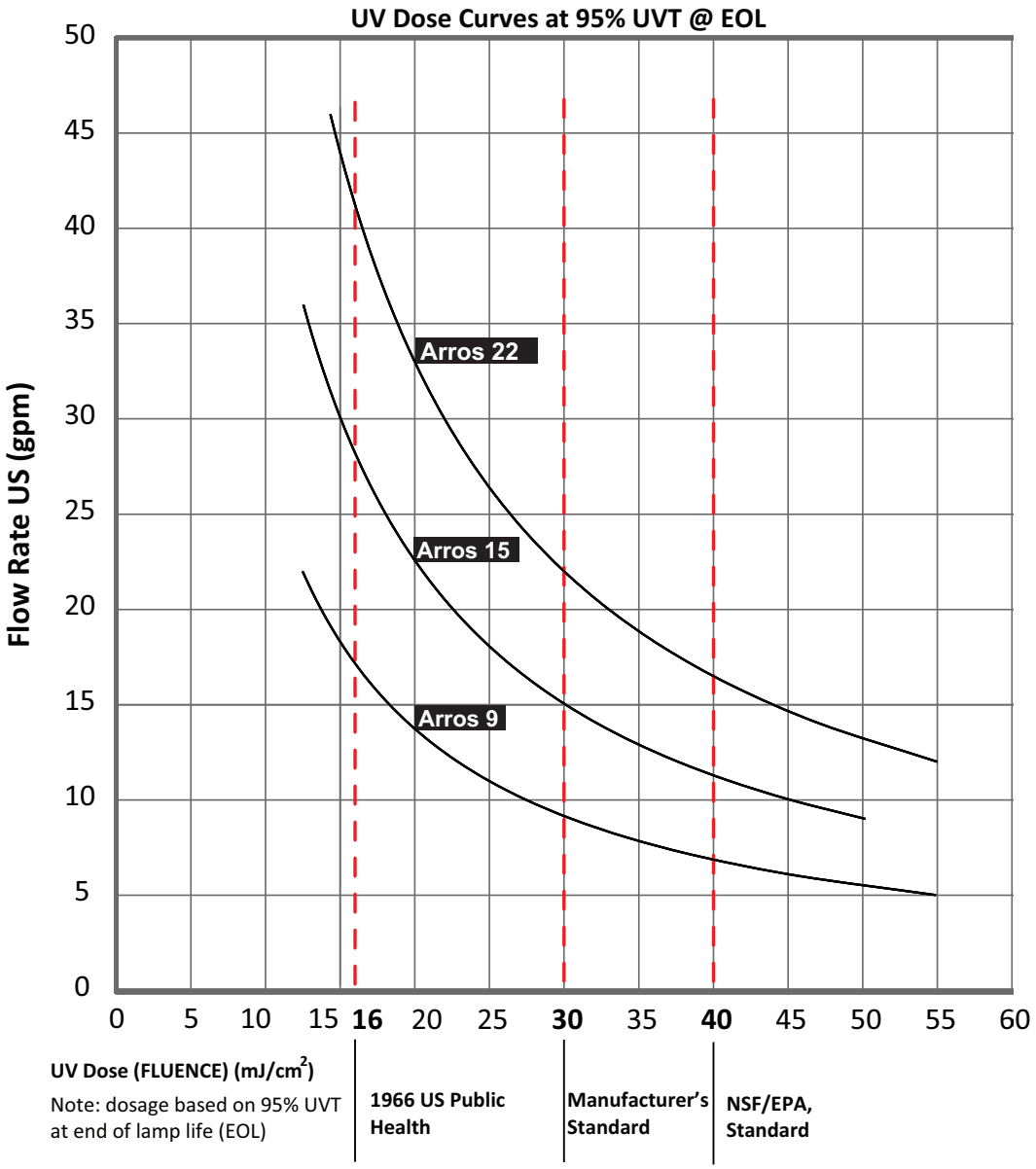
Section 6 Troubleshooting

Alarm	Description	Possible Cause	Troubleshooting
UV Lamp Unit Failure.	UV Lamp Unit Failure. Treatment has stopped.	**1** UV Lamp Unit connection. **2** UV Lamp Unit failed.	**1** Disconnect UV System from power supply. **2** Check for secure Lamp connection. **3** Restore power to UV System. **4** If failure repeats, replace UV Lamp Unit. Refer to Section 4.1.
	Silencing: The Lamp Fault audible alarm can be silenced for 24 hours at a time up to 7 times.		
Controller Failure.	Controller Failure. Controller Requires Servicing. Treatment has stopped.	**1** Incorrect power supply. **2** Unreliable power supply. **3** Power supply connection. **4** Controller failed.	**1** Disconnect UV System from power supply. **2** Ensure power supply is reliable and matches Controller ratings. **3** Restore power to UV System. **4** If failure repeats with a correct and reliable power supply, replace Controller.
	Silencing: The Controller Fault audible alarm can be silenced for 24 hours at a time up to 7 times.		
Over temperature	Over temperature detected. Treatment has stopped.	**1** Room temperature too high. **2** Heat source near treatment system. **3** No water in the treatment system. **4** Water temperature too high.	**1** Wait for UV treatment system to cool down. **2** When UV System has cooled down enough it will automatically restart. **3** If failure repeats, check for and remove source of heat near treatment system. **4** If failure repeats, ensure room temperature is below maximum rating for treatment system. **5** If failure repeats, check if the treatment system has water in it. **6** If failure repeats, check if the water temperature is below the maximum rating for the treatment system.
	Silencing: The over temperature audible alarm can be silenced for 24 hours at a time up to 7 times.		
Lamp Life Exceeded	Lamp life exceeded. Treatment may be compromised. Unit requires servicing.	UV Lamp Unit life exceeded.	Replace UV Lamp Unit. Refer to Section 4.1.
	Silencing: The UV Lamp Unit life exceeded audible alarm can be silenced for 7 days at a time up to 4 times.		
Lamp Data Fault	Lamp data fault. Lamp days are unavailable. Treatment may be compromised.	**1** UV Lamp Unit connection. **2** UV Lamp Unit failed.	**1** Disconnect UV System from power supply. **2** Check for secure Lamp connection. **3** Restore power to UV System. **4** If failure repeats, replace UV Lamp Unit. Refer to Section 4.1.
	Silencing: The Lamp Data Fault audible alarm can be silenced for 7 days at a time up to 4 times.		
Lamp Life - 30 Days	The UV Lamp Unit has 30 days or less of Lamp life remaining	UV Lamp Unit within one month to end of life.	Replace UV Lamp Unit before zero days remaining. Refer to Section 4.1.
	Silencing: The UV Lamp Unit below 31 days audible alarm can be silenced for 14 days at a time up to 2 times.		
Lamp Life - 14 Days	The UV Lamp Unit has 14 days or less of Lamp life remaining	UV Lamp Unit less than two weeks to end of life.	Replace UV Lamp Unit before zero days remaining. Refer to Section 4.1.
	Silencing: The UV Lamp Unit below 15 days audible alarm can be silenced for 7 days at a time up to 2 times.		
Reminder[1]	Check your filter and replace if needed.	It is recommended to change the filter cartridges regularly depending on water quality and usage.	

Symptom	Possible Cause	Possible Solution
No Power	GFCI and or circuit breaker has tripped	Reset GFCI and or circuit breaker
	Transient voltage surge suppressor damaged	Replace TVSS
	Controller damaged	Replace Controller and use a TVSS
GFCI or circuit breaker repeatedly trips	Connection between Lamp and Lamp Plug is wet	Clean and dry area around the Lamp and Lamp Connector, check unit for leaks or condensation
	Short circuit in electrical assembly	Replace Controller
Leak at inlet or outlet	Threaded pipe fittings are leaking	Clean threads, reseal with Teflon tape and re tighten
Leak detected from area of UV Chamber	Condensation of warm moist air on cold UV Chamber (slow accumulation)	Control humidity or relocate unit
	O-Rings damaged, deteriorated or incorrectly installed	Inspect O-Rings and replace if deteriorated.
	UV Lamp Unit not properly installed (not fully inserted into Controller Lamp locking assembly)	Tighten and ensure Lamp Assembly is fully inserted into Controller locking assembly
Alarm	Refer to Alarm Menu (Section 6)	Follow alarm menu help guidance
System is operating but water tests reveal bacterial contamination	Equipment downstream of UV System is acting as a breeding ground for pathogens	Ensure UV System is the last piece of treatment equipment
	Pathogens are residing in the distribution lines post UV	Ensure all distribution lines have been disinfected with chlorine. Refer to Section 3.2.
	Recontamination from pipe dead-ends	Remove any pipe dead-ends and flush with chlorine. Refer to Section 3.2.
Pressure Drop	Sediment Pre-Filter clogged	Replace filter cartridge with appropriate 5 micron cartridge. ***Note:*** *Check source water supply as fluctuations may occur in source pressure*
	Flow regulator	Flow regulator will result in pressure drop when approaching full flow.
High Bacteria Counts	UV Lamp Unit Quartz Sleeve is stained or dirty	Clean Quartz Sleeve of UV Lamp Unit with scale cleaner and eliminate the source of staining problem (i.e soften hard water) Refer to Section 4.2.
	Change in feed water quality	Have source water tested to ensure that water quality is still within allowable limits for this system.
	Contamination in water lines after UV System	It is imperative that effluent water stream be shocked with chlorine (bleach) before water leaves UV System - the system must have a bacterial free distribution system to work effectively. Refer to Section 3.2.
	Possible break-through of sediment through pre-filter	Have source water tested for turbidity- may need stepped filtration in order to catch all sediment entering water system (20 micron filter followed by a 5 micron filter followed by the UV System)
Heated Product Water	Common problem caused by infrequent use of water	Run water until it returns to ambient temperature
Water Appears Milky	Caused by air in the water lines	Run water until air is purged
Unit Leaking Water	Problem with O-Ring seal on Lamp Assembly or Drain Plug Assembly	Ensure O-Ring is in place, check for any cuts or abrasions, clean O-Ring, moisten with water/food grade lubricant and re-install, replace if necessary
	Condensation on UV Chamber caused by excessive humidity and cold water	Check location of UV System and control humidity
	Inadequate inlet/outlet port connections	Check thread connections, reseal with Teflon tape and re-tighten connection
System shutting down intermittently	Interrupted Controller	Ensure system has been installed on its own circuit as other equipment may be drawing power away from UV (i.e. pump or fridge) UV System should not be installed on a circuit which is incorporated into a light switch
Lamp Failure Alarm on New Lamp	Loose connection between Lamp and Lamp Connector	Disconnect Lamp from connector and reconnect, ensuring that a tight fit is accomplished
	Moisture build up in connector may keep Lamp and connector from making a solid connection	Eliminate chance of any moisture getting to the connector and/or Lamp pins
Leak detected at filters[1]	O-Ring damaged, deteriorated or incorrectly installed	Remove the sump, wipe the O-Ring and threads clean. Ensure the O-Ring is fitted properly, then reinstall.
	Filter cartridge not centered	Remove sump, check for cartridge damage, re-assemble ensuring cartridge is centered.

[1] Only applies to Arros IHS Systems

Section 7 Manufacturer's Dose Flow Chart



Note: Not performance tested or certified by NSF

Figure 20 Dose Flow Chart

NSF Standard 55 Class B Certified Systems

Model	Flow Rate	Min Dose @ 70% UVT
Arros 9-V	6.4 gpm	16 mJ/cm²
Arros 15-V	9.4 gpm	16 mJ/cm²
Arros 22-V	12.9 gpm	16 mJ/cm²

Note: *Performance tested or certified by NSF.*

Section 8 Specifications

			System Model													
			Arros 9	Arros 9-V	Arros 9/2AW	Arros 9-IHS10	Arros 9-IHS12	Arros 15	Arros 15-V	Arros 15/2AW	Arros 15-IHS10	Arros 15-IHS12	Arros 15-IHS22	Arros 22	Arros 22-V	Arros 22/2AW	Arros 22-IHS22
Flow Rate[1]		*NSF class B certified 16mJ/cm^2 @70% UVT	N/A	6.4 gpm (24.2 lpm) (1.45 m^3/hr)		N/A		N/A	9.4 gpm (35.58 lpm) (2.13 m^3/hr)		N/A			N/A	12.9 gpm (48.8 lpm) (2.93 m^3/hr)		N/A
	Not performance tested or certified by NSF	US Public Health 16mJ/cm^2 @ 95% UVT	17 gpm (64.3 lpm) (3.86 m^3/hr)		N/A	17 gpm (64.3 lpm) (3.86 m^3/hr)		29 gpm (109 lpm) (6.59 m^3/hr)		N/A	29 gpm (109 lpm) (6.59 m^3/hr)			42 gpm (159 lpm) (9.54 m^3/hr)		N/A	42 gpm (159 lpm) (9.54 m^3/hr)
		VIQUA Standard 30mJ/cm^2 @ 95% UVT	9 gpm (34.1 lpm) (2.0 m^3/hr)		N/A	9 gpm (34.1 lpm) (2.0 m^3/hr)		15 gpm (56.8 lpm) (3.41 m^3/hr)		N/A	15 gpm (56.8 lpm) (3.41 m^3/hr)			22 gpm (83.3 lpm) (5.0 m^3/hr)		N/A	22 gpm (83.3 lpm) (5.0 m^3/hr)
		NSF/EPA 40mJ/cm^2 @ 95% UVT	7 gpm (26.5 lpm) (1.59 m^3/hr)		N/A	7 gpm (26.5 lpm) (1.59 m^3/hr)		12 gpm (45.4 lpm) (2.73 m^3/hr)		N/A	12 gpm (45.4 lpm) (2.73 m^3/hr)			16 gpm (60.6 lpm) (3.63 m^3/hr)		N/A	16 gpm (60.6 lpm) (3.63 m^3/hr)
Dimensions		Arros UV Chamber (H x D)	28.4 cm x 10.16 cm (11.2” x 4.0”)					42.0 cm x 10.16 cm (16.5” x 4.0”)						57.2 cm x 10.16 cm (22.5” x 4.0”)			
		Controller (L x H x D)	12.7 cm x 26.7 cm x 16.5 cm (5.0” x 10.5” x 6.5”)														
		Arros IHS Overall (L x H x D)	N/A			43 cm x 45 cm x 23 cm (17.0” x 17.5” x 9.0”)	63 cm x 70 cm x 23 cm (25.0” x 27.5” x 9.0”)	N/A			43 cm x 53 cm x 23 cm (17.0” x 20.8” x 9.0”)	63 cm x 70 cm x 23 cm (25.0” x 27.5” x 9.0”)		N/A			63 cm x 70 cm x 23 cm (25.0” x 27.5” x 9.0”)
Inlet Port Size[3]			Combo 3/4” FNPT / 1” MNPT[2]			1” FNPT		Combo 3/4” FNPT / 1” MNPT[2]			1” FNPT			Combo 3/4” FNPT / 1” MNPT[2]			1” FNPT
Outlet Port Size[3]			Combo 3/4” FNPT / 1” MNPT														
Shipping Weight			12 lbs (5.4 kg)			40 lbs (18.1kg)	46 lbs (20.9 kg)	15 lbs (6.8 kg)			40 lbs (18.1kg)	46 lbs (20.9 kg)	50 lbs (22.7kg)	18 lbs (8.2 kg)			50 lbs (22.7 kg)
Electrical		Voltage[4]	100-240 V / 50/60 Hz														
		Max. Current	1.5 Amp														
		Power Consumption	35 W					50 W						65 W			
		Lamp Watts	24 W					38 W						52 W			
Maximum Operating Pressure			125 psi (8.6 bar)			100 psi (6.9 bar)		125 psi (8.6 bar)			100 psi (6.9 bar)			125 psi (8.6 bar)			100 psi (6.9 bar)
Ambient Water Temperature			2-40 °C (36-104 °F)														

Specifications

	System Model														
	Arros 9	Arros 9-V	Arros 9/2AW	Arros 9-IHS10	Arros 9-IHS12	Arros 15	Arros 15-V	Arros 15/2AW	Arros 15-IHS10	Arros 15-IHS12	Arros 15-IHS22	Arros 22	Arros 22-V	Arros 22/2AW	Arros 22-IHS22
Lamp Type	High Output														
Display	LCD Touch Screen														
Lamp Replacement Reminder	Yes														
Visual Lamp Life	Yes														
True Lamp Running Time	Yes														
System Total Running Time	Yes														
UV Chamber Material	304 SS														
Acceptable Inlet/ Outlet Piping (By others)	All standard household piping or tubing (i.e. copper, PEX, PVC, etc.)														

[1] Flow rates based on End of Lamp Life; 20°C.

[2] For units manufactured before September 09, 2024, port size = 3/4” MNPT.

[3] Units ending in “/WR” have BSPT connections.

[4] Units ending in “/2” are for 230V applications.

Section 9 Manufacturer's Warranty

Our Commitment

VIQUA is committed to ensuring your experience with our products and organization exceeds your expectations. We have manufactured your UV System to the highest quality standards and value you as our customer. Should you need any support, or have questions about your system, please contact our Technical Support team at 1.800.265.7246 or technicalsupport@viqua.com and we will be happy to assist you.

How to Make a Warranty Claim

Note: *To maximize the performance and reliability of your VIQUA product, the system must be properly sized, installed and maintained. Guidance on the necessary water quality parameters and maintenance requirements can be found in your Owner's Manual.*

In the event that repair, or replacement of parts covered by this warranty are required, the process will be handled by your dealer. If you are unsure whether an equipment problem or failure is covered by warranty, contact our Technical Support team at 1.800.265.7246 or e-mail technicalsupport@viqua.com. Our fully trained technicians will help you troubleshoot the problem and identify a solution. Please have available the model number (system type), the date of purchase, the name of the dealer from whom you purchased your VIQUA product ("the source dealer"), as well as a description of the problem you are experiencing. To establish proof of purchase when making a warranty claim, you will either need your original invoice, or have previously completed your product registration online.

Specific Warranty Coverage

Warranty coverage is specific to the VIQUA range of products. Warranty coverage is subject to the conditions and limitations outlined under "General Conditions and Limitations".

Ten-Year Limited Warranty for VIQUA UV Chamber

VIQUA warrants the UV Chamber on the VIQUA product to be free from defects in material and workmanship for a period of ten (10) years from the date of purchase. During this time, VIQUA will repair or replace, at its option, any defective VIQUA UV Chamber. Please return the defective part to your dealer who will process your claim.

Five-Year Limited Warranty for Electrical and Hardware Components

VIQUA warrants the electrical (Controller) and hardware components to be free from defects in material and workmanship for a period of five (5) years from the date of purchase. During this time, VIQUA will repair or replace, at its option, any defective parts covered by the warranty. Please return the defective part to your dealer who will process your claim.

One-Year Limited Warranty for UV Lamp Units

VIQUA warrants UV Lamp Unit to be free from defects in material and workmanship for a period of one (1) year from the date of purchase. During this time, VIQUA will repair or replace, at its option, any defective parts covered by the warranty. Your dealer will process your claim and advise whether the defective item needs to be returned for failure analysis.

Note: *Use only genuine VIQUA replacement UV Lamp Units in your system. Failure to do so may seriously compromise performance and affect warranty coverage.*

General Conditions and Limitations

None of the above warranties cover damage caused by improper use or maintenance, accidents, acts of God or minor scratches or imperfections that do not materially impair the operation of the product. The warranties also do not cover products that are not installed as outlined in the applicable Owner's Manual. Parts repaired or replaced under these warranties will be covered under warranty up to the end of the warranty period applicable to the original part. The above warranties do not include the cost of shipping and handling of returned items.

The limited warranties described above are the only warranties applicable to the VIQUA range of products. These limited warranties outline the exclusive remedy for all claims based on a failure of or defect in any of these products, whether the claim is based on contract, tort (including negligence), strict liability or otherwise. These warranties are in lieu of all other warranties whether written, oral, implied or statutory. Without limitation, no warranty of merchantability or of fitness for a particular purpose shall apply to any of these products. VIQUA does not assume any liability for personal injury or property damage caused by the use or misuse of any of the above products. VIQUA shall not in any event be liable for special, incidental, indirect or consequential damages. VIQUA's liability shall, in all instances, be limited to repair or replacement of the defective product or part and this liability will terminate upon expiration of the applicable warranty period.



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