

Models: VT1-DWS, VT4-DWS, VT4-DWS11

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www.viqua.com



520181-R_RevP

Congratulations on the purchase of your ultraviolet (UV) water disinfection 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 required to protect your drinking water from microbiological contaminants.

To ensure ongoing disinfection of your water, 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 disinfection 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 disinfection 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 disinfection equipment.
- An increasing number of calls to VIQUA Technical Support are connected with nongenuine 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 disinfection 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.



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.

X	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.	٨	This symbol indicates not to store any combustible or flammable material close to the system.
Hg	This symbol indicates there is Mercury present.		This symbol indicates that the contents of the transport package are fragile and the package should be handled with care.
	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 safety glasses with side protection is required for protection against UV exposure.
A	This symbol indicates a risk of electrical shock and/or electrocution exists.		This symbol indicates gloves must be worn.
A Contraction of the second se	This symbol indicates the marked equipment may contain a component that can eject forcibly. Obey all procedures to safely depressurize.		This symbol indicates safety boots must be worn.
	This symbol indicates the system is under pressure.		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 the plumber must use copper piping.
	This symbol indicates the marked item could be hot and should not be touched without care.		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).
	This symbol indicates there is a potential for VERY hot water when flow is started.		

1.2 Safety Precautions

refer to an authorized service facility.

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,

- 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 disinfection 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 disinfection 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 disinfection system where it will be exposed to the weather or to temperatures below freezing.
- DO NOT store this disinfection system where it will be exposed to the weather.
- DO NOT store this disinfection 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.

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Safety Information

 Puring extended periods of no water flow, the water in your chamber can become very hot (Approx 10° C) and potentially lead to scating. It is normaned the num your water within its hot water has been purged from your 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 outliet 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-freated water that may, in rare instances, pose health hazards. This system contains a UV Lamp. Do not operate the UV Lamp when it is removed from the chamber. Unintended use or damage of the system manufacturer osuld render the system contains a UV Lamp. Do not operate the UV Lamp, even in title doese, 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 manufactures warming. WMMING: 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 cancer, and mercury, which is known to the state of California to cause cancer, and mercury, which is known to the state of California to cause cancer. Carefuly examine the disinfection system after installation. It should not be plugged in if there is water on parts not intended to be wet such as, the control or lange provide the system for approximately doub nous. To ensure continuous protection, replace the up of copper pipe on the outlet of your UV chamber. Pue to thermal expension concerns and potential material degradation due to UV exposer, it is recommended to use metal fittings and at least 10° of copper pipe on the outlet of your UV within ander in may sotater the splited mercury. Obey loca		
 A CAUTION A Carefully examine the disinfection sculd result in minor or moderate injury. Carefully examine the disinfection 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. Due to thermal expansion concerns and potential material degradation due to UV exposer, it is recommended to use metal fittings and at least 10° of copper pipe on the outlet of your UV chamber. Hg EXPOSURE: The UV lamp contains mercury. If the lamp 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 lamp as this may scatter the spilled mercury. Obey local regulations and guidelines for the removal and disposal of mercury waste. The UV lamp inside the disinfection system is rated at an effective life of approximately 9000 hours. To ensure continuous protection, replace the UV lamp annually. The UV spitem 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 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 are 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from this system. Use only extension cord. Set are intended for outdoor use. Use only extension cords that are spreaded. Do not abuse extension cord. Keep extension cords. Examine extension cords before extension cords. Examine extension cord before using and replace if damaged. Do not abuse extension cord. Keep extension cord. Never yank cord to pull plug from outlet. Always grasp the plug and pull to disconnect.		 During extended periods of no water flow, the water in your 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 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. Do not operate the UV Lamp when it is removed from the 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
 Failure to follow these instructions could result in minor or moderate injury. Carefully examine the disinfection 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. Due to thermal expansion concerns and potential material degradation due to UV exposer, it is recommended to use metal fittings and at least 10° of copper pipe on the outtel of your UV chamber. Hg EXPOSURE: The UV lamp contains mercury. If the lamp 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 lamp as this may scatter the spilled mercury. Obey local regulations and guidelines for the removal and disposal of mercury waste. MODIFICE The UV lamp inside the disinfection system is rated at an effective life of approximately 9000 hours. To ensure continuous protection, replace the UV lamp 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 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 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 amged extension cords. Examine extension cord is successary use only extension cord. Never yank cord to pull plug from this contende to the disconnect. If the supply cord is damaged. Do not abuse extension cord as assonnecting this system from the extension cord. Never yank cord to pull plug from outlet. Always graps the plug and pull to disconnect		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.
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 The UV lamp inside the disinfection system is rated at an effective life of approximately 9000 hours. To ensure continuous protection, replace the UV lamp 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. 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) transient voltage surge suppressor is strongly recommended. The UV lamp in this system conforms to the applicable provisions of the Code of Federal Regulations (CFR) requirements including, Title 21, Chapter J, Subchapter J, Radiological Health. Read and understand the Owner's Manual before operating and performing any maintenance on this equipment.	Hg)	 Carefully examine the disinfection 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. Due to thermal expansion concerns and potential material degradation due to UV exposer, it is recommended to use metal fittings and at least 10" of copper pipe on the outlet of your UV chamber. Hg EXPOSURE: The UV lamp contains mercury. If the lamp 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 lamp as this may scatter the spilled mercury. Obey local regulations and guidelines for
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1.3 Water Chemistry		 UV lamp 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.
Water quality is extremely important for the optimum performance of your UV system. The following levels are		 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) transient voltage surge suppressor is strongly recommended. The UV lamp 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.

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 disinfection 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 disinfection system to operate as intended.*

Section 2 General Information

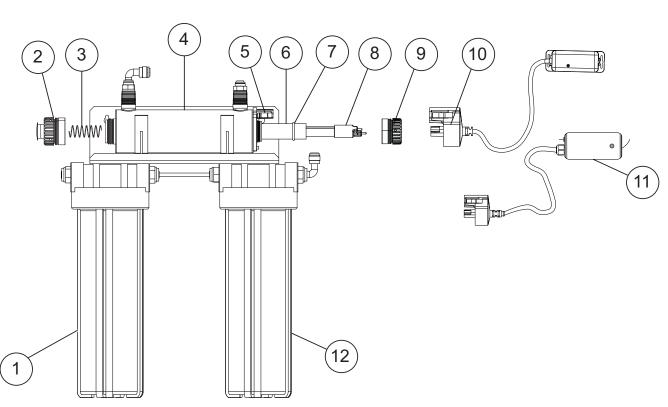


Figure 1 System Components

ltem	Description	Part Number		UV Systems	
1	Replacement cartridges - Sediment filter	AWP110	VT1-DWS, VT1-DWS/12, VT1-DWS/12/MEX, VT4-DWS11		
I		AWP110-2	VT4-DWS, VT4-DWS/12, VT4-DWS/12/MEX		
2	Retaining nut with plug	RN-001/1	Used on all systems		
3	Spring	SP008	Used for all systems		
4	304 SS chamber	-	-		
5	Lamp connector base	270276-R	Used for all systems		
6	Quartz sleeves	QS-212	VT1-DWS, VT1-DWS/12, VT1-DWS/12/MEX		
0		QS-330	VT4-DWS, VT4-DWS11, VT4-DWS/12, VT4-DWS/12/MEX		
7	O-ring	410867	Used for all systems		
8	UV lamp	S212RL	VT1-DWS, VT1-DWS/12, VT1-DWS/12/MEX		
0		S330RL	VT4-DWS, VT4-DWS11, VT4-DWS/12, VT4-DWS/12/MEX		
9	Retaining nut	RN-001	Used for all systems		
	Controller	BA-VT	100-130V/ 50/60Hz		
10		BA-VT/2 BA- VT/2A BA-VT/ 2B	200-250V/ 50/60Hz	Continental Europe (CEE7/7) 2-Pin with ground	
10				Australian version (AS3112) 3-prong grounded	
				UK version (BS1363)	
11	Controller (for 12VDC models only)	BA-RO/P/12	VT1-DWS/12, VT1-DWS/12/MEX, VT4-DWS/12 and VT4-DWS/12/MEX		
12	Replacement cartridges - Carbon filter	C-01PB	VT1-DWS, VT1-DWS/12, VT1-DWS/12/MEX, VT4-DWS11		
12		C-02PB	VT4-DWS, VT4-DWS/12, VT4-DWS/12/MEX		

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2.1 Dimension and Layouts

The Drinking Water System (DWS) may be installed under a sink, in a basement or other location, depending on available space. Do not install unit where temperatures fall below freezing as this temperature damages the unit.

Faucet should be placed near the sink where drinking/cooking water is normally required. A 2" diameter flat surface is required to mount the faucet, if an existing hole for a second faucet is not available. The thickness of the mounting surface should not exceed 1-1/4".

Feed water connection is accomplished with a 1/2" x 1/2" x 3/8" adaptor. Locate this assembly as close to the DWS as possible. Connect to a potable, cold water supply line only.

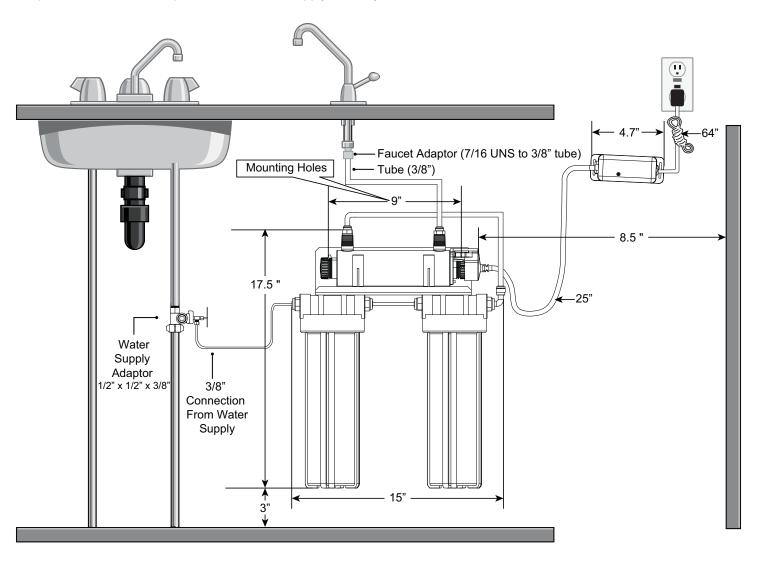


Figure 2 Disinfection System



Section 3 Installation of Drinking Water System

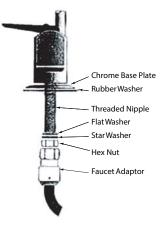


Figure 3 Faucet Installation

	NOTICE
All plumbing n	nust be completed in accordance with local plumbing codes

3.1 Faucet Installation

If the sink has a sprayer it may be disconnected for faucet installation. A pipe cap or plug will be necessary to seal the sprayer connection.

To make the faucet mounting hole (if sprayer or second hole is not used), check below to make sure the drill does not interfere with anything under your sink. Center punch a small indent at the desired faucet location. (A 2" diameter flat surface is required, not exceeding 1 - 1/4" in thickness).

Drill the required pilot hole for the chassis punch and tighten nut to cut the desired hole size. Clean up sharp edges. The faucet should be positioned so it empties into the sink and the spout swivels freely for convenience. If the sink has a hole that can accommodate the faucet, no drilling is required. Proceed with mounting the faucet.

3.2 Mounting Faucet

Disassemble hardware from the threaded nipple, except for chrome base plates and rubber washers. (Rubber washers may be replaced with bead of plumber's putty for neater appearance.) Feed the threaded nipple through sink or counter mounting hole and orient the faucet. From below sink or counter, assemble the white spacer flat washer and hex nut on threaded nipple and tighten by hand. (Open end up; open side toward air gap). After checking faucet orientation, tighten with a wrench until secure.

3.3 Installing the Water Supply Adapter

Note: The supply adapter fits 3/8" - NPT threads.

Procedure:

- 1. Turn off cold water inlet supply line. If cold water line does not have a shut off valve under the sink, one should be installed.
- 2. Turn on the cold water faucet and allow all water to drain from the line.
- 3. Disconnect cold water line from 3/8" 14 NPS threaded stub on bottom of the main faucet.
- 4. Using the nut that previously connected the cold water line to the faucet, screw the old water line to the male supply adapter threads.
- 5. Under the sink connections may vary, alternate connector can be obtained from your local plumbing wholesaler.



3.4 DWS Unit installation

Procedure:



- 1. For shipping purposes, the UV lamp is shipped in a separate cardboard tube. Carefully remove the UV lamp from the shipping tube being careful not to touch the "glass" portion with your fingers. Insert the UV lamp into the quartz sleeve and chamber making sure the connection end is inserted last. Mount the disinfection system to the wall or cabinet.
- 2. If the disinfection system is to be hard plumbed, make sure you leave enough clearance in front of the lamp connector to facilitate lamp service (a length equal to the length of the unit should suffice).
- 3. Mount the system to the wall using the two mounting holes in the back of the disinfection system with appropriate fastening devices. Refer to Figure 1.
- 4. Final tubing connections: With all components in place, complete final tubing connections using these guidelines:
 - a. Cut tubing to desired length using square cuts and proper cutting device.
 - b. Make no sharp bends.
 - c. Keep tubing from the supply line to the unit and faucet as short as practical for good flow.
 - d. Connect tubing from faucet to DWS.
 - e. Connect tubing from water supply adaptor to DWS.



5. Prior to connecting the power source, check all connections to ensure that they are indeed secure, turn on water supply and check for any leaks. If satisfied that there are no leaks, proceed with the following steps.



6. The power source provided with your disinfection system must be located within five (5) feet of an electrical outlet. DO NOT use an outlet that can be switched off (ie. a waste disposal outlet). Attach the lamp connector to the UV lamp, slide the connector over the retaining nut. Plug the ballast into the outlet and ensure the POWER-ON LED is illuminated.



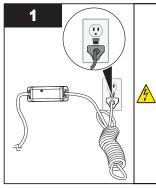
3.5 Disinfection Procedure

Prerequisites:

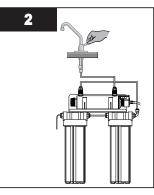
• Reapply a generous amount of lubricant to the O-ring when reinstalling sumps.

Procedure:

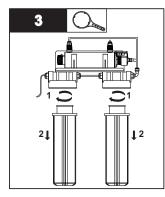
UV disinfection is a physical disinfection process and does not add any potentially harmful chemicals to the water. As UV does not provide a disinfection residual, it is imperative that the entire distribution system located after the UV be chemically disinfected to ensure that the plumbing system is free from any bacteriological contaminants. The disinfection process must be performed immediately after the UV unit is installed and repeated thereafter whenever the UV is shut down for service, without power, or inoperative for any reason. The procedure for sanitizing the plumbing system is readily accomplished as follows:



 Ensure the controller is plugged in for entire disinfection process.

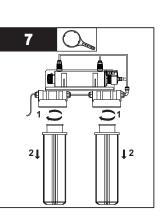


- Shut off the water supply.
- Open an upstream faucet to release pressure.

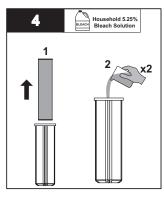


• Remove the sump housings using sump wrench.

Note: Sumps will be full of water and they will be heavy.

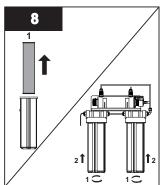


 With all faucets closed, remove sump housings using sump wrench.

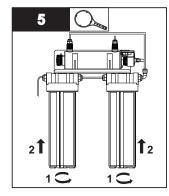


• Remove cartridges and pour 2 cups of household bleach solution into the sump housings.

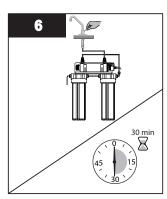
Note: DO NOT use Hydrogen Peroxide.



- Reinstall the cartridges into sump housings and connect to the unit.
- Flush all water outlets until bleach can no longer be smelled (at least 5 minutes).



- Connect only the sump housings to the unit.
- Turn on water supply.
- Allow water to fill the chamber.



- Turn on the cold water supply followed by hot water (if available) until you smell the bleach.
- Close all faucets and allow bleach to settle in the water lines for 30 minutes.

Section 4 Maintenance

- **A**WARNING
- Always disconnect power before performing any work on the disinfection system.
- Always shut-off water flow and release water pressure before servicing.
- Regularly inspect your disinfection system to ensure that the power indicators are on and no alarms are present.
 - Replace the UV lamp annually (or biennially if seasonal home use) to ensure maximum disinfection.
 - Always drain the chamber when closing a seasonal home or leaving the unit in an area subject to freezing temperatures.

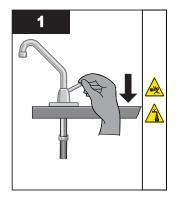
4.1 Replacing UV Lamp

NOTICE

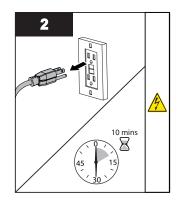
Do not use water during replacement of UV lamp.

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

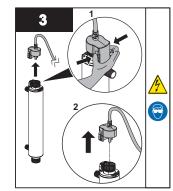
Procedure:



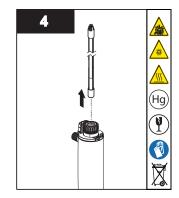
 Shut off the water line to UV chamber and release system pressure before servicing.



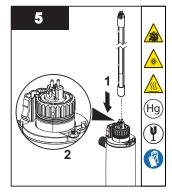
• Disconnect main power source and allow the unit to cool for 10 minutes.



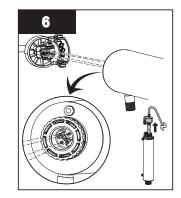
 Remove the lamp connector by squeezing the plastic locking tabs on the side of the connector.



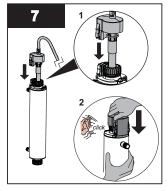
- Remove the lamp in upward direction from the chamber and lamp connector base.
- Always hold the lamp at the ceramic ends.



 Insert the new lamp fully into the chamber leaving about two inches of the lamp protruding from the chamber.



 Attach the connector to the UV lamp and note that the connector will only allow correct installation in one position.



- Push the lamp connector against lamp connector base together until an audible click is heard.
- Re-pressurize the system to check for leaks.



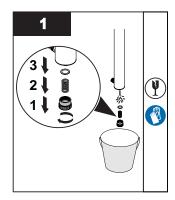
4.2 Cleaning and Replacing Quartz Sleeve

Note: 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 disinfection performance. If the sleeve can not be cleaned, it must be replaced.

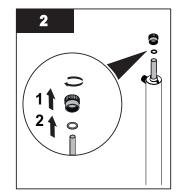
Prerequisites:

- Shut off water supply and drain all lines.
- Place a small pail under the unit to catch any spills.
- Remove the UV lamp. Refer to Section 4.1.

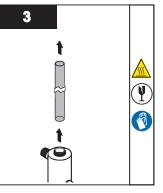
Procedure:



• Remove the bottom retaining nut, floating spring, and O-ring.



 Remove the top retaining nut and O-ring.

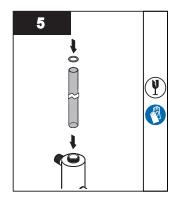


· Remove the quartz sleeve.

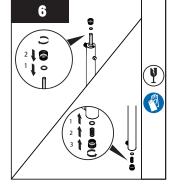


• Clean the quartz sleeve with a cloth soaked in CLR, vinegar or some other mild acid and then rinse with water.

Note: If sleeve cannot be completely cleaned or it is scratched or cracked, then replace the sleeve.



 Reinstall the quartz sleeve in the UV chamber allowing the sleeve to protrude at equal distance on both ends of the UV chamber.



- Reinstall the top and bottom retaining nuts, floating spring, and O-rings respectively.
- When service is complete, assemble the prerequisites in the reverse order of disassembly.

Notes: 1) After replacing the UV lamp or quartz sleeve perform the disinfection procedure, refer to Section 3.5.

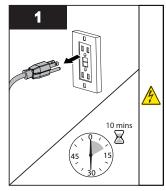
2) If the system is put on a temporary by-pass or if it becomes contaminated after the disinfection system, it is necessary to shock the system with household bleach for a full 20 minutes before resuming the use of the water.



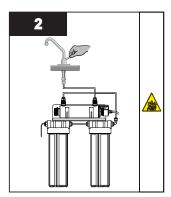
4.3 Replacing Cartridges

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.

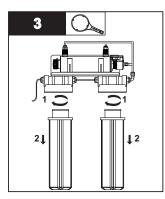
Procedure:



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

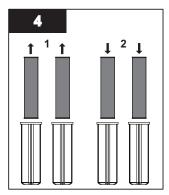


Shut off the water supply.Open an upstream faucet to release pressure.



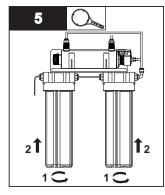
Remove the sump housings using sump wrench.

Note: Sumps will be full of water and they will be heavy.



- Discard the used cartridge and clean the sump housings as required or perform the disinfection procedure, refer to Section 3.5.
- Install the new cartridges.

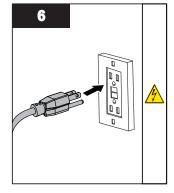
Note: Ensure the sump Oring is lubricated with silicone base lubricant.



• Reinstall the sump housings using sump wrench.

Notes: 1) Sumps will be heavy.

2) Reapply a generous amount of lubricant to the O-ring when reinstalling sumps.



- Restore power.
- Slowly turn on the water supply and allow any air that may now be present to bleed off from the system. This can easily be accomplished by partially opening a nearby faucet.
- Once the water runs without the presence of any air, return the system to use.



Section 5 Specifications

	Model	VT1-DWS, V	T1-DWS/12	VT4-DWS11	VT4-DWS, VT	4-DWS/12
Flow Rate @ 96% UVT	30 mJ/cm ²	1gpm (4lpm) (0.24 m ³ /hr)		3.5 gpm (13 lpm) (0.8 m ³ /hr)	3.5 gpm (13 lpm) (0.8 m ³ /hr)	
Dimensions	Length	38 cm (15")		48 cm (19")	48 cm (19")	
	Height	43 cm (17")		43 cm (17")	70 cm (27.5")	
	Depth	15 cm (6")		15 cm (6")	15 cm (6")	
Inlet/Outlet Port Size		Combo 1/2" MNPT/3/8" FNPT		Combo 1/2" MNPT/3/8" FNPT	1/2" MNPT	
Shipping Weight		6.5 kg (14 lbs.)		7.5 kg (16.5 lbs)	9.1 kg (20 lbs.)	
a	Voltage	100-130V/50-60Hz	12VDC	100-130V/50-60Hz	100-130V/50-60Hz	12VDC
Electrical	Power Consumption	13 W	13 W	19 W	19 W	19 W
	Lamp Watts	9 W	9 W	15 W	15 W	15 W
Maximum Operating Pressure		6.9 bar (100 psi)		6.9 bar (100 psi)	6.9 bar (100 psi)	
Water Temperature		4-38 °C (40-100 °F)		4-38 °C (40-100 °F)	4-38 °C (40-100 °F)	
Ambient Air Temperature		0-40 °C (32-104 °F)		0-40 °C (32-104 °F)	0-40 °C (32-104 °F)	
Installation Kit		Yes		Yes	Yes	
Visual "Power-On"		Yes		Yes	Yes	
Chamber Material		304 SS		304 SS	304 SS	
Filter Housing		two 10" high		two 10" high	two 20" high	
Units er	nding in "/2" are for 230V appli	cations				
Units er	nding in "/MEX" meet the requi	irements established in t	he Mexican Officia	Norm NOM-244-SSA1-2008		

Section 6 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 disinfection 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. We sincerely hope you enjoy the benefits of clean, safe drinking water after the installation of your VIQUA disinfection system.

How to Make a Warranty Claim

Note: To maximise the disinfection 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 and returned your product registration card via mail or 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.

Three-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 three (3) 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 lamps, Sleeves, and UV Sensors

VIQUA warrants UV lamps, sleeves, and UV Sensors 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 lamps and sleeves in your system. Failure to do so may seriously compromise disinfection 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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