



US WATER FILTERS

## Operation & Installation Instructions



USWF-4C101

USWF-4C151

USWF-4CR2

USWF-4CR1

CONTRACTOR SERIES			
System	Rated Flow	System	Rated Flow
USWF-4C101	10 gpm	USWF-4CR1	8 gpm
USWF-4C151	15 gpm	USWF-4CR2	15 gpm

Congratulations on purchasing this ultraviolet disinfection system. By purchasing a US Water Filters UV Disinfection system you are receiving not only a high quality product but also peace of mind. Installing a UV system gives you reassurance that the water in your home will have an extra level of protection. This process is simple in its concept and effective in its abilities to disinfect your water. Simple maintenance and continuous disinfection: US Water Filters makes it that easy.

Please scan the QR code to find and order replacement parts or for more product information.



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## Safety Considerations

It is important that care is taken when operating and/or maintaining your system.

### Please read the instructions

- The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children should be supervised so that they do not to play with the appliance.
- **WARNING:** Do not operate the UV-C emitter when it is removed from the appliance enclosure.
- The appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
- This appliance contains a UV-C emitter.
- Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation. UV-C radiation may, even in little doses, cause harm to the eyes and skin.
- The appliance must be disconnected from the supply before replacing the UV-C emitter.
- The appliance is intended to be permanently connected to the water mains and not connected by a hose-set.
- Maximum working voltage of built-in UV driver U-OUT=240V
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Before servicing this equipment, disconnect the power cord from the electrical outlet.
- **Energy given off by the UV lamp is harmful to your eyes and skin.** NEVER look directly at an illuminated UV lamp without adequate eye protection and always protect your skin from direct exposure to the UV light.
- For complete disinfection, use ONLY genuine replacement parts.
- Do not operate the unit if it has any damaged or missing components.
- To avoid possible electrical shock, use only with a properly grounded electrical outlet.
- Never perform any maintenance to the system unless you are comfortable in doing so. Contact the manufacturer for service instructions if required.
- Do not use this system for any purpose other than what it was intended for. Misuse of this system could potentially cause harm to the user or others.
- Your system is intended to be installed indoors and away from leaking plumbing. DO NOT plug the unit in if the system or any of the components are wet. The disinfection system should be directly installed into a ground fault circuit interrupter (GFCI). If the use of an extension cord is required, the cord must be manufactured with a minimum of 16 gauge wire and care should be taken to avoid potential tripping hazards.
- We recommend that a licensed plumber or certified technician install the system.

**This product is not to be used for general lighting / illumination.**

## Before You Begin

The following will be needed for installing the UV system:

### Tools

- Pipe cutter, hacksaw or other specialized tools required to cut into your existing plumbing (e.g. if you have PEX piping)
- Soldering tools (torch, flux, emery cloth and solder)
- Wrench (for tightening fittings)

### Other Materials

- Inlet/outlet connections
- Teflon™ tape

## Water Quality Parameters

UV disinfection is only effective if the UV light can pass through the water it needs to treat. This means that the quality of your water is very important in order to ensure complete disinfection.

Treated water should be tested for at the least the parameters listed below. If the water exceeds the listed parameters US Water Filters strongly recommends that appropriate pretreatment equipment be installed (equipment required will depend on parameters being treated):

**Hardness:** <7 gpg (120 mg/L) – if hardness level is 7 gpg or slightly below the quartz sleeve must be cleaned periodically in order to ensure efficient UV penetration; if above the water must be softened.

**Iron (Fe):** <0.3 ppm (0.3 mg/L)

**Manganese (Mn):** <0.05 ppm (0.05 mg/L)

**Turbidity:** < 1 NTU

**Tannins (organics):** <0.1 ppm (0.1 mg/L)

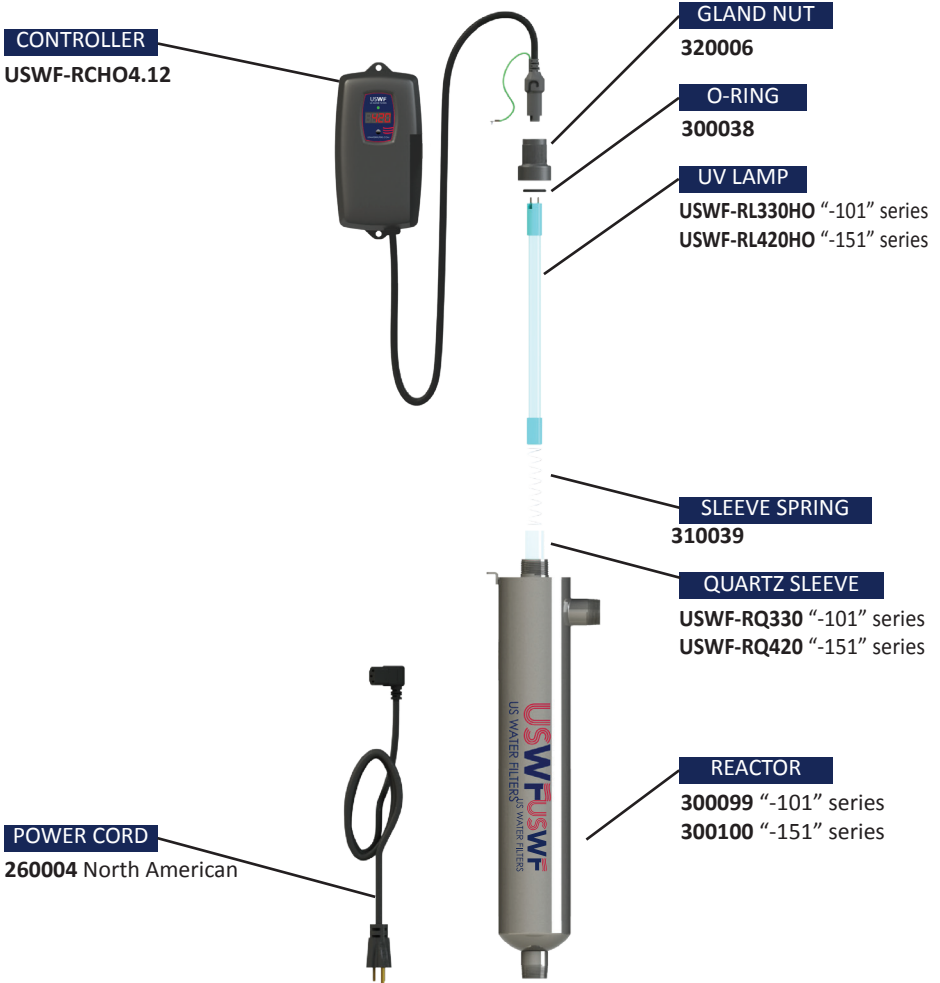
**UVT (transmittance):** >85% (Please contact US Water Filters if water has a UVT that is less than 80% for pre-treatment recommendations)

You can have your water tested at a private analytical laboratory or by your local dealer. It is always recommended to install pre-filtration of at least 5 microns prior to a UV disinfection system.

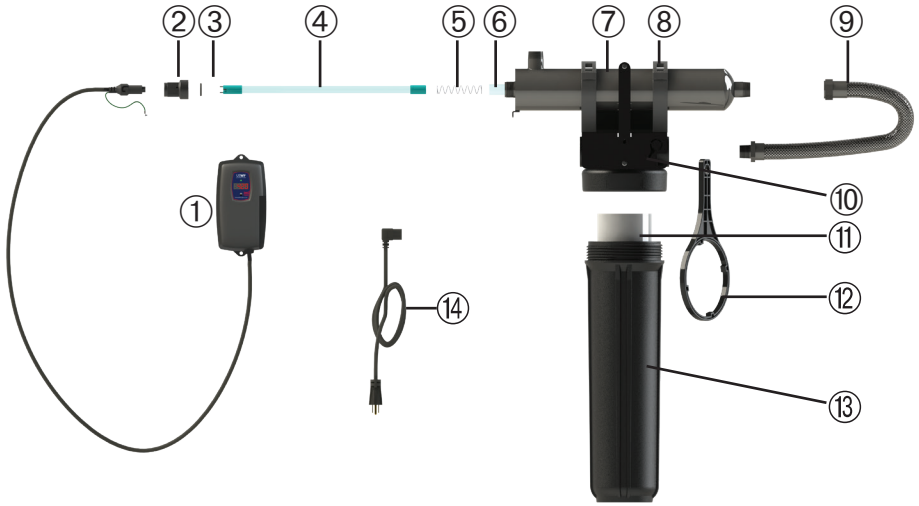
## Assembly

Unpack the system and ensure all the components are included with the system. Your system is shipped with the following components:

### WALL MOUNT SYSTEMS



**RACK MOUNT SYSTEMS**



**1. CONTROLLER**  
**USWF-RCB4.01**  
**USWF-RCHO4.12**

**2. GLAND NUT**  
**320006**

**3. O-RING**  
**300038**

**4. UV LAMP**  
**USWF-RL420**  
**USWF-RL420HO**

**5. SLEEVE SPRING**  
**310039**

**6. QUARTZ SLEEVE**  
**USWF-RQ420**

**7. UV REACTOR**  
**300100**

**8. CLAMPS**  
**390071(each)**

**9. FLEXIBLE HOSE**  
**310130**

**10. MOUNTING PLATE**  
**310122** single filter

**11. FILTER CARTRIDGES**  
**USWF-105** 10" sediment  
 cartridge  
**USWF-205** 20" sediment  
 cartridge

**12. FILTER WRENCH**  
**160011**

**13. FILTER HOUSING**  
**160014** single filter, 10"  
 sump  
**160015** single filter, 20"  
 sump

**14. IEC POWER CABLE**  
 (on USWF-RCHO4.12 units  
 only)

**260004** North American

## System Sizing

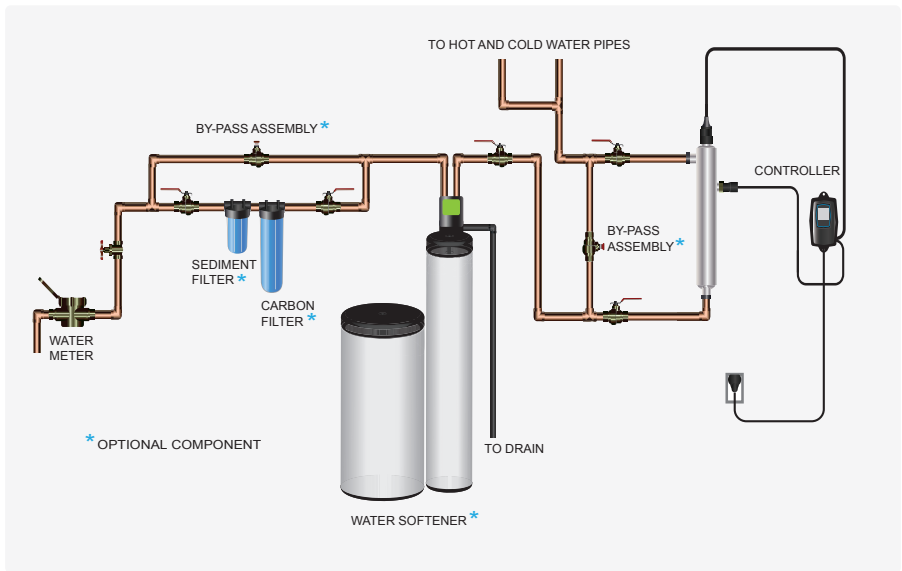
All UV systems are rated for a specific flow rate in water that meets the quality parameters on page 5. **PLEASE NOTE** that increasing the flow above this rating or disinfecting water that does not meet the quality parameters will decrease the dose and therefore compromise the efficacy of the system.

If you need to determine your maximum flow rate, you can fill a 1 gallon bucket with water and time how long it takes to fill up. It is always better to oversize your system than to undersize. For example, if your pump delivers 8 gpm it is recommended to install any of the 10 gpm systems.

**PLEASE NOTE: All UV disinfection systems are intended for indoor use only as they should not be exposed to the elements. The controller will require a ground fault circuit interrupter (GFCI or GFI) outlet and should be mounted beside or above the reactor.**

## Location

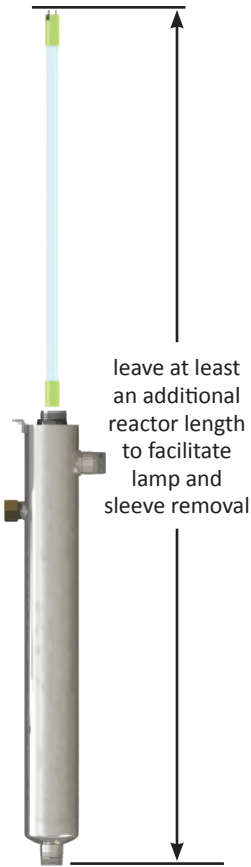
For Point of Entry (POE) systems, choose a location where the main cold water line is accessible. The system must be installed after other water treatment equipment (softener or filters), but before any branches (See Figure 1). For Point of Use (POU) systems, install the unit just before the faucet. US Water Filters recommends that a 5 micron filter be installed **before** the UV system for a final polishing step before the water is disinfected.



**Figure 1. Recommended POE Installation Location**

To facilitate lamp removal, ensure there is enough space at the lamp connector end to safely remove the UV lamp and/or quartz sleeve (See Figure 2).





**Figure 2. Lamp Removal Spacing**

## Installation

**Step 1:** The reactor can be installed either horizontally or vertically using the clamps provided. Vertical installation is the preferred method with the inlet at the bottom (lamp connection at the top) as it allows any air that may be in the lines to be easily purged from the system.

**Step 2:** The use of a by-pass assembly is recommended as it will allow you to isolate the UV reactor. This will allow for easier access in case maintenance is required (See Figure 4).

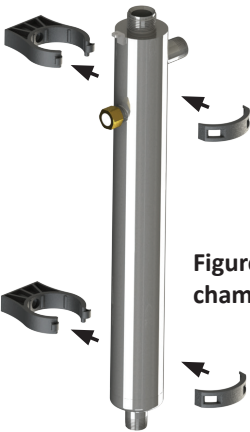
**Step 3:** Fasten chamber clamps to wall with screws provided. The screws must anchor securely into solid wood, concrete, or steel structure for adequate strength. Do not attempt to secure screws into drywall (Figure 3a). Install Chamber into clamps (Figure 3b).

**Step 4:** For water supplies where the maximum flow rate is unknown, a flow restrictor is recommended so that the rated flow of your particular UV system is not exceeded. The flow restrictor should be installed on the inlet port of the reactor.

**Step 5:** It is recommended to have a licensed plumber connect the UV reactor to the water supply and may be a requirement depending on where you are located.



**Figure 3a. Fasten clamps to wall**



**Figure 3b. Install chamber into clamps**

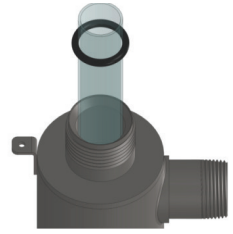


**Figure 4. By-pass assembly**

**Note: Installation of your UV disinfection systems shall comply with applicable provincial/state & local regulations.**

**Step 6:** Once the system has been plumbed in, gently remove the quartz sleeve from its packaging being careful not to touch the length with your hands. The use of cotton gloves is recommended for this procedure as oils from the hands can leave residue on the sleeve and lamp which can ultimately block the UV light from getting to the water.

Carefully slide the sleeve into the reactor until you can feel it hit the opposite end of the reactor. Align the sleeve so it centered along the length of the reactor, then gently push it in to lock it into the internal centering springs in the far side of the reactor. **CAUTION:** Pushing too hard when the sleeve is not aligned can damage the centering springs. Slide the o-ring onto the sleeve until it is butted up against the reactor.



**Figure 5. Quartz Sleeve Installation**

**Step 7:** Hand tighten the provided gland nut over the quartz sleeve onto the threaded end of the reactor. It has a positive stop to prevent over-tightening. A firm force may be required to fully tighten the gland nut, but **DO NOT USE TOOLS** for this step.

**Step 8:** Insert the provided stainless steel compression spring into the quartz sleeve. The spring works with the lamp and lamp connector to create the proper lamp alignment. **PLEASE NOTE:** DO NOT install a UV lamp inside the quartz sleeve without the sleeve spring in place.

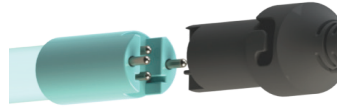
**Step 9:** The reactor is now ready for water flow. When all plumbing connections have been completed, slowly turn on the water supply and check for leaks. Make sure the by-pass valves are functioning properly and that the water is flowing through the reactor. The most common leak is from the o-ring not making a proper seal on the reactor. For new installations, review steps 5 and 6. For older systems drain the reactor, remove the o-ring, dry it and reapply silicon grease. Reinstall the o-ring ensuring that it is properly sealed against the reactor and check again for leaks.

**Step 10:** Fasten controller securely to wall with screws provided. Drywall anchors may be used. Note that the controller must be mounted vertically for adequate airflow across the aluminum heat sink on back (see Figure 6). **Do not plug the controller power cord in before the last step.**



**Figure 6. Fasten controller**

**Step 11:** Always hold UV lamps by their ceramic ends, not by the lamp quartz. The use of cotton gloves is recommended. Be careful to not touch the key's exposed contacts. Insert the UV lamp into the reactor, being careful not to drop it.



**Figure 7. Lamp Connection**

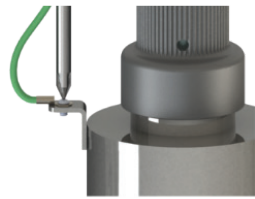
**Step 12:** Plug the lamp connector into the lamp. Note the keying for proper alignment (see Figure 7). Insert the lamp connector into the gland nut and turn the connector approximately  $\frac{1}{4}$  turn to lock the connector to the gland nut as in Figure 8.

**Step 13:** Tighten the captive ground screw to the ground lug on the UV reactor to ensure proper grounding (see Figure 9).



**Figure 8. Lamp Connector**

**Step 14:** Your system is now ready to be plugged into the appropriate GFCI protected outlet. Refer to the following section before any water is allowed to flow through the system.



**Figure 9. Ground Screw Connection**

## Location

Choose a location where the main cold water line is accessible. The system must be installed after other water treatment equipment (i.e. softener), but before any branches (See Figure 10).

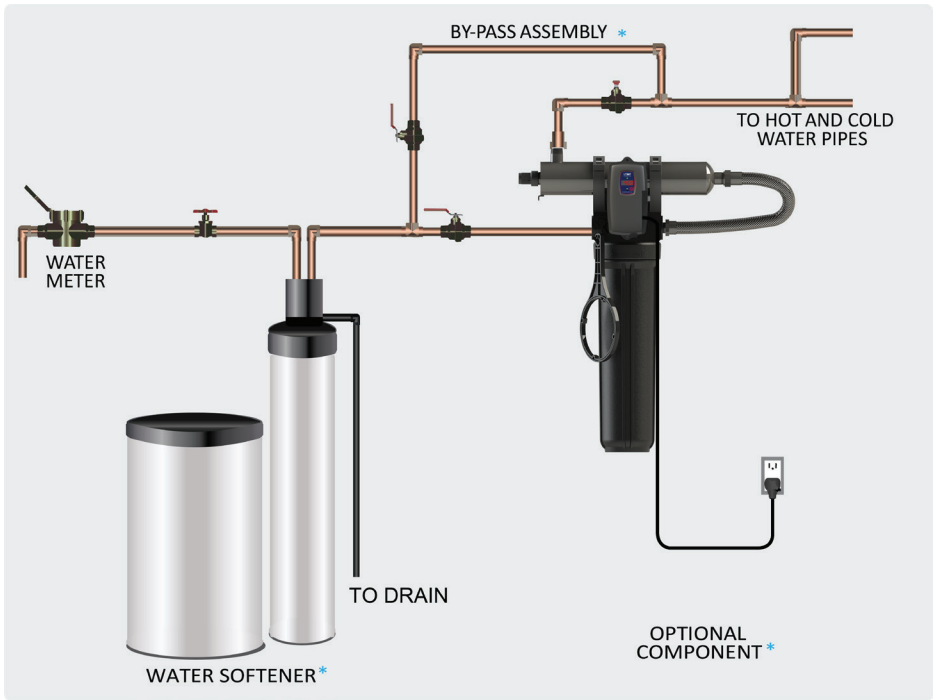


Figure 10. Typical Installation

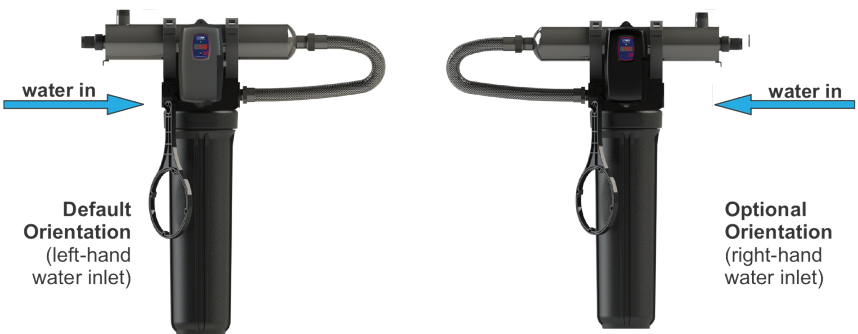
## Orientation

This system has the ambidextrous capability of being able to have the main water inlet enter from either the left hand side or right hand side of the unit. The units comes pre plumbed from the factory for a left hand water inlet. To change to a right hand water inlet follow these simple steps (See Figure 11):

**Step 1:** Remove the filter sump housing from the filter head and set aside.

**Step 2:** Remove the 4 filter head screws from the top mounting plate.

**Step 3:** Carefully lower the filter head (or heads) from the rack assembly and rotate 180 degrees. Reassemble onto the rack assembly and take note of the arrows located on the top of the filter heads indicating water flow (which now should be indicating a flow direction of right-to-left).



**Figure 11. System Orientation (water inlet)**

### Step 4:

Remove the stainless steel UV reactor from the two plastic clamps located on the top of the rack. Carefully remove the top straps securing the reactor with the aid of a standard (slot) screwdriver. Rotate the reactor 180 degrees (with the inlet now facing to the left and the lamp connections located towards the right) and place back into the cell clamps and re affix the two top straps.

In either the left or right configurations, to facilitate lamp removal, ensure there is enough space at the lamp connector end to safely remove the UV lamp and/or quartz sleeve (See Figure 12).



**Figure 12. Lamp Removal Spacing**

## Installation

**Step 1:** Once both the orientation and location have been selected, securely fasten the rack to a suitable backing. As the rack system is extremely heavy when filled with water, it is imperative that the rack be mounted with suitable fasteners for the particular installation. Mounting to a drywall backing is not suitable, unless the rack is fastened directly to the wall studs.



**Step 2:** The use of a bypass assembly is recommended as it will allow you to isolate the UV system. This will allow for easier access in case maintenance is required.

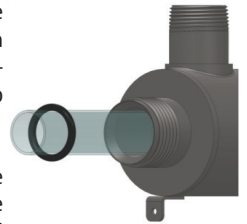
**Step 3:** For water supplies where the maximum flow rate is unknown, a flow restrictor is recommended so that the rated flow of your particular system is not exceeded. The flow restrictor should be installed on the inlet port of the reactor.

**Step 4:** It is recommended to have a licensed plumber connect the UV reactor to the water supply and may be a requirement depending on where you are located.

**Step 5:** Connect both the inlet and outlet to the rack system with the applicable connections based on your particular plumbing requirements. The inlet port of the filters is a 1" FNPT connection and the outlet port of the UV reactor is a 1" MNPT connection.

**Step 6:** Once the system has been plumbed in, gently remove the quartz sleeve from its packaging being careful not to touch the length with your hands. The use of cotton gloves is recommended for this procedure as oils from the hands can leave residue on the sleeve and lamp which can ultimately block the UV light from getting to the water.

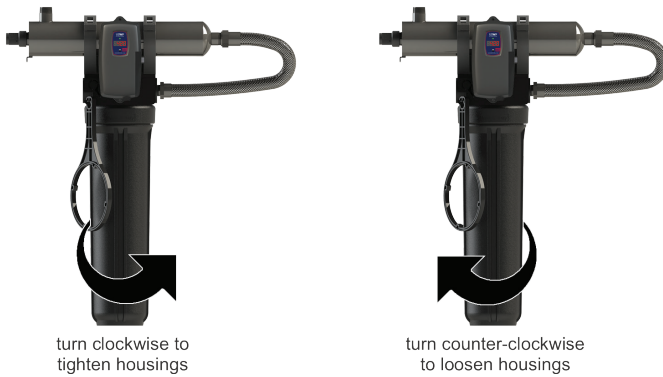
Carefully slide the sleeve into the reactor until you can feel it hit the opposite end of the reactor. Align the sleeve so it is centered along the length of the reactor, then gently push it in to lock it into the internal centering springs in the far side of the reactor. **CAUTION:** Pushing too hard when the sleeve is not aligned can damage the centering springs. Slide the o-ring onto the sleeve until it is butted up against the reactor (See Figure 13).



**Figure 13. Quartz Sleeve Installation**

**Step 7:** Hand tighten the provided gland nut over the quartz sleeve onto the threaded end of the reactor. It has a positive stop to prevent over-tightening. A firm force may be required to fully tighten the gland nut, but **DO NOT USE TOOLS** for this step. Insert the provided stainless steel compression spring into the quartz sleeve. The spring works with the lamp and lamp connector to create the proper lamp alignment. **PLEASE NOTE:** DO NOT install a UV lamp inside the quartz sleeve without the sleeve spring in place.

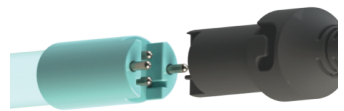
**Step 8:** Install the filter cartridges. Once the cartridges are in place, use the supplied filter wrench to "snug" the filter housing onto the filter head (See Figure 14).



**Figure 14. Cartridge Removal**

**Step 10:** The system is now ready for water flow. When all plumbing connections have been completed, slowly turn on the water supply and check for leaks. Make sure the bypass valves are functioning properly and that the water is flowing through the system. The most common leak is from the o-ring not making a proper seal on the reactor. For new installations, review steps 6 and 7. For older systems drain the reactor, remove the o-ring, dry it and reapply silicon grease. Reinstall the o-ring ensuring that it is properly sealed against the reactor and check again for leaks. To help vent the pressure from the system while the system is filling up with water, it is a good idea to twist open the pressure relief valve located on the top of the filter head. Close the valve once water appears at the port.

**Step 11:** Always hold UV lamps by their ceramic ends, not by the lamp quartz. The use of cotton gloves is recommended. Be careful to not touch the key's exposed contacts. Insert the UV lamp into the reactor, being careful not to drop it.



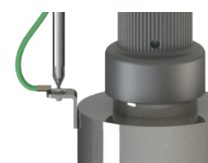
**Figure 7. Lamp Connection**

**Step 12:** Plug the lamp connector into the lamp. Note the keying for proper alignment (see Figure 7). Insert the lamp connector into the gland nut and turn the connector approximately ¼ turn to lock the connector to the gland nut as in Figure 8.



**Figure 8. Lamp Connector**

**Step 13:** Tighten the captive ground screw to the ground lug on the UV reactor to ensure proper grounding (see Figure 9).



**Figure 9. Ground Screw Connection**

**Step 14:** Your system is now ready to be plugged into the appropriate GFCI protected outlet. Refer to the following section before any water is allowed to flow through the system.

## System Disinfection

With a new installation, or any time the UV system is shut down for service, without power, or is inoperative for any other reason, the lines in the home or facility could be contaminated. Use the following steps to fully disinfect the lines throughout the entire home or facility.

**Step 1:** Check for and remove any “dead ends” in the lines throughout the home as these can harbor bacteria. Plug in the UV system and wait until it is ready for operation.

**Step 2:** Remove the filter cartridge from the last sump and fill it with 1-2 cups of household bleach (most are 5.25% chlorine). Replace the sump and slowly turn on the water supply.

**Step 3:** At a water outlet, run the water until bleach can be smelled. Repeat this for all faucets, toilets, shower heads, refrigerators, outdoor taps, the washing machine, dishwasher, etc. at the home or facility. Once finished, wait a minimum of 30 minutes before continuing.

**Step 4:** Reinstall the filter cartridge into the sump and flush the chlorine solution by opening all faucets until chlorine can no longer be detected. Your home has now been disinfected and your UV system is ready to use.

## Cleaning the Quartz Sleeve

Depending on the water quality, the quartz sleeve may require periodic cleaning. At a minimum, the quartz sleeve should be cleaned on an annual basis. The following steps outline a basic cleaning procedure.

**Step 1:** If a by-pass assembly is installed, shut the inlet valve off to prevent water flow through the system. Otherwise, turn off main water inlet valve (and/or turn off the water pump).

**Step 2:** Disconnect power cord of UV system from electrical outlet.

**Step 3:** Release water pressure by opening a downstream faucet and then close the outlet shut-off valve (if any). If there is no outlet shut-off valve, expect water to drain from the system as the head pressure in the system will cause the water to flow back down.

**Step 4:** Remove the captive ground screw from the ground lug on the UV reactor.

**Step 5:** Remove the lamp connector from the reactor (gland nut) by pushing the lamp connector in and turning it ¼ turn counter-clockwise. Disconnect the lamp connector from the lamp. CAUTION: the lamp may be hot!

**Step 6:** Being careful to touch only the ceramic ends, remove the lamp out of the reactor.

**Step 7:** Unscrew the gland nut from the reactor exposing the end of the quartz sleeve.

**Step 8:** Remove the quartz sleeve and o-ring by **gently twisting and pulling** the quartz sleeve.

**Step 9:** Using a soft, lint-free cloth or towel wipe the sleeve down using a commercial scale cleaner (i.e. CLR® or LIME-A-WAY®). This removes scaling or iron deposits that may be on the outside of the quartz sleeve. Be careful not to get any moisture or liquids inside of the sleeve.



**Step 10:** Dry the sleeve with separate cloth.

**Step 11:** Replace the o-ring and slide the sleeve back into the reactor following steps 7 and 8 from the installation section of the manual.

### Operation

US Water Filters systems come with a feature laden controller that incorporates both the lamp driver (ballast) and control features in one water-tight case. Two controllers are available for the UV systems (depending on your model). Both models feature a power factor corrected, constant current lamp driver with a universal power input.

Please Note: While the LED is red and the buzzer is sounding the water from the system should NOT be consumed. If any water does pass through the system during this period, please follow the disinfection procedure as outlined in this manual before the water is consumed. Even though they have a visual and audible warning built into the controller, a green LED or status screen does not necessarily indicate that the water coming from this system is in fact potable (safe to drink). These systems do not measure the level of disinfection; they simply measure the “on-off” status of the lamp. Please have your water checked for microbiological contaminants on a regular basis

### Controllers



**USWF4  
Series**



**USWFH4  
Series**

Simplistic in operation, these systems feature a tri-colour LED that indicating system status and a 4-digit display to indicate lamp life remaining. Pressing the button will change the display to indicate total running time. When the UV lamp is on and within its operating age, the LED will be green. When the UV lamp is not on or the lamp life has expired, the LED will be illuminated red and an audible buzzer will be sounding. To remedy this condition, the UV lamp must be replaced with a new genuine US Water Filters UV lamp.

### Lamp Countdown Sequence

The system counts down the number of days until a lamp change is required.



At thirty days remaining, the LED will change to a yellow caution indicator. At seven days remaining, the system will additionally repeat an audible chirp. Past the zero day threshold, the LED screen changes to solid red with a continuous buzzer.



At any point during this sequence, the audible chirp or alarm can be deferred for seven days by holding the controller button down for a period of five seconds. The number of deferrals used will be displayed as below. Once the deferral expires, the alarm will sound once again. The deferral can be repeated up to three times. **PLEASE NOTE:** At any point after lamp expiration, the water may be unsafe for consumption and should not be consumed without another form of disinfection.





### Lamp Replacement

After the lamp is expired, it must be replaced with the same part number as indicated by the label on the reactor. Begin replacing the lamp by unplugging the power for the controller, then refer to **Installation**, starting with step 11 (page 11) for instructions on installing the new lamp. To reset the timer firmly hold down the button on the controller for 10 seconds. The controller will read “rSt3”, “rSt2”, “rSt1” and then beep. The button can now be released, the lamp count-down timer has been reset.

## System Troubleshooting

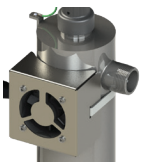
**Alarms:** The following give a constant audible alarm.

System Display	Problem	Resolution
	The system has detected a problem with the lamp.	Reset lamp protection circuit -unplug unit for 10 seconds. Replace the lamp with the part as indicated on the silver label on the reactor.
	Although the lamp is powered and visibly illuminated, due to the lamp's age its UV output is no longer sufficient for proper disinfection.	Replace the lamp with the part as indicated on the silver label on the reactor.

**Boil Water Advisory:** If any failure occurs on a UV system, the water must not be used for human consumption until the system is returned to a safe operational mode. If the water is used for human consumption during this period, the water must be boiled (minimum 20 minutes at a full boil) **prior to** consumption.

## Temperature Management Devices

Your UV system is designed to run continuously to ensure optimal disinfection. However, during periods when no water is drawn through the system, the energy from the disinfection process can cause the temperature of the water inside the chamber to rise. In extreme situations elevated water temperature or the fluctuation in temperature can lower the output of the UV lamp. In these cases, or if the elevated water temperature is a nuisance, US Water Filters recommends one of the following forms of temperature management devices.



### Cooling Fan

The fan runs continuously to cool the water by forced convection. The long-life fan is powered independently using a compact modular power adapter that operates from 100-240V/50-60Hz.  $\pm 10\%$ . The cooling fan must only be supplied at SELV. Order PN **USWF-MOD-FAN**.



### Temperature Relief Valve (TRV)

On reaching a higher temperature, the TRV is designed to drain a small amount of water to allow fresh, cooler water to enter the system. The TRV works without power and comes complete with 10' of drain line. Order PN **USWF-TRV0.5** for 1/2" ports, PN **USWF-TRV0.75** for 3/4" ports, PN **USWF-TRV1** for 1" ports and PN **USWF-TRV1.5** for 1 1/2" ports.

## Equipment Specifications

Model	USWF-4C101	USWF-4C151	USWF-4CR1	USWF-4CR2
Flow Rate (30mJ/cm <sup>2</sup> @ 95% UVT)	10 GPM	15 GPM	8 GPM	15 GPM
	37.9 lpm	56.8 lpm	30.3 lpm	56.8 lpm
	2.3 m <sup>3</sup> /hr	3.4 m <sup>3</sup> /hr	1.8 m <sup>3</sup> /hr	3.4 m <sup>3</sup> /hr
Filter Housing	N/A	N/A	5 micron sediment <b>USWF-105</b>	5 micron sediment <b>USWF-205</b>
Port Size	1" MNPT		1" MNPT	
Electrical	90-265V/50-60Hz.			
Plug Type	North American, NEMA 5/15			
Lamp Watts	34	45	20	45
Power (Watts)	38 (36 @ 230V)	57 (48 @ 230V)	23 (21 @ 230V)	57 (48 @ 230V)
Maximum Current (amps)	1	1	1	1
Replacement Lamp	USWF-RL330HO	USWF-RL420HO	USWF-RL420	USWF-RL420HO
Replacement Sleeve	USWF-RQ330	USWF-RQ420	USWF-RQ420	
Replacement Controller	USWF-RCH04.12		USWF-RCB4.01	USWF-RCH04.12
Chamber Material	Polished 304 stainless steel, A249 pressure rated tubing			
Reactor Dimensions	3.5 x 16.5" (8.9 x 41.8cm)	3.5 x 20.0" (8.9 x 50.8cm)	3.5 x 20.0" (8.9 x 50.8 cm)	
Controller Dimensions	8.6 x 4.2 x 4" (21.7 x 10.8 x 10.2 cm)		6.8 x 3.6 x 4" (17.2 x 9.2 x 10.2 cm)	8.6 x 4.2 x 4" (21.7 x 10.8 x 10.2 cm)
Operating Pressure	0.7-10.3 bar (10-150 psi)		0.7-8.3 bar (10-120 psi)	
Operating Water Temp.	2-40° C (36 - 104°F)			
Lamp Change Reminder	YES (4-digit LED display)			
Visual Lamp Out Indicator	YES			
Audible Lamp Out Indicator	YES			
Shipping Weight	5.4 kg (11.9 lbs)	6.0 kg (13.2 lbs)	11.3 kg. (25 lbs.)	12.4 kg. (27.4 lbs.)

## Limited Warranty Statement:

Products manufactured by US WATER FILTERS are warranted to the original user only to be free of defects in material and workmanship for a period as specified below. This warranty only applies to the original purchaser and is not transferable.

### UV SYSTEMS

Ten (10) year Limited Warranty on the stainless steel reactors, from the date of original purchase, or installation (proper documentation required for verification).

### ELECTRONICS

Three (3) year Limited Warranty on the ballasts and controllers, from the date of original purchase, or installation (proper documentation required for verification).

### UV LAMPS, UV SENSORS & QUARTZ SLEEVES

One (1) year Limited Warranty on all ultraviolet lamps, UV sensors and quartz sleeves from the date of original purchase, or installation (proper documentation required for verification).

This US Water Filters Ultraviolet Disinfection System will be repaired or replaced, at our sole option, providing that the ultraviolet system or any component is defective in materials or workmanship for the periods outlined above and subject to the "Limitations of Warranty" as outlined below. US Water Filters liability under this warranty shall be limited to repairing or replacing the product, without charge, F.O.B. US Water Filters closest Distribution Facility or authorized service depot. US Water Filters will not be liable for any costs of removal, installation, transportation, or any other charges which may arise in connection with a warranty claim. US Water Filters will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair, or if the product was not installed in accordance with the Manufacturers printed installation and operating instructions.

## LIMITATIONS OF WARRANTY

This warranty does not apply to any of the following:

- Water Quality Parameters lie outside of the following ranges
  - Hardness > 120 mg/L (7 gpg)
  - Iron > 0.3 mg/L (ppm)
  - Manganese > 0.05 mg/L (ppm)
  - Tannins > 0.1 mg/L (ppm)
  - Turbidity > 1 NTU
  - Transmittance (UVT) < 75%
- A product that has been incorrectly installed according to the owners manual.
- A product that has been modified in any manner, unless approved by the manufacturer.
- A product where the serial number has been altered defaced or removed.
- Damage caused by the use of parts that are not compatible, suitable and/or authorized by US Water Filters for use with the product (e.g. non-original lamps or sleeves).
- Damage caused during shipment of the product.
- Water damage is found inside ballast housing or controllers.
- Product is installed outdoors in direct contact with the environment (rain).
- Product is installed in freezing temperatures.
- Product is used in conditions that exceed US Water Filters specifications.

## TO GET WARRANTY SERVICE

To obtain service under this warranty, you must first contact where the product was originally purchased to obtain a Warranty Return Authorization. You will require proof of purchase and installation date, failure date, and any other requested data. Any defective product to be returned to US Water Filters must be sent freight prepaid; documentation supporting the warranty claim and/or a Return Goods Authorization must be included if so instructed.

US WATER FILTERS WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY FIRE, FLOOD, OR ACTS OF GOD, LOSSES, OR EXPENSES ARISING FROM INSTALLATION, USE, OR ANY OTHER CAUSES. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THOSE WARRANTIES DESCRIBED OR REFERRED TO ABOVE.

THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY MADE BY US WATER FILTERS WITH RESPECT TO THE PRODUCT, AND IS GIVEN IN LIEU OF ANY OTHER WARRANTY. TO THE EXTENT ALLOWED BY APPLICABLE LAW, ANY AND ALL EXPRESS OR IMPLIED WARRANTIES NOT SET FORTH HEREIN ARE WAIVED AND DISCLAIMED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. US WATER FILTERS LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED SOLELY TO THOSE LIABILITIES SET FORTH ABOVE. IN THE EVENT THAT ANY PROVISION OF THIS LIMITED WARRANTY SHOULD BE OR BECOME INVALID OR UNENFORCEABLE UNDER APPLICABLE LAW, THE REMAINING TERMS AND CONDITIONS HEREOF SHALL REMAIN IN FULL FORCE AND EFFECT AND SUCH INVALID OR UNENFORCEABLE PROVISION SHALL BE CONSTRUED IN SUCH A MANNER AS TO BE VALID AND ENFORCEABLE.





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