

INSTALLATION AND OPERATING INSTRUCTIONS FOR RW519 RAIN WATER FILTRATION SYSTEM



INSTALLATION CAUTIONS

- Installation must conform to all local and state plumbing codes and regulations. Please read carefully the individual instruction sheets of the filters and the UV system before proceeding with installation.
- Do not exceed Maximum Pressure = 100 psi (690 KPa). If water pressure surges, or will at any time exceed the 100 psi maximum, a pressure regulator must be installed before the filter (recommended regulator setting is 75 psi or less) along with a water hammer arrestor to prevent potentially damaging shocks caused by water hammer.
- Connect system to cold water supply only. Water temperature should not exceed 100°F/28°C. Do not subject the system to freezing temperatures
- Do not install the system backwards with the feed water line connected to the outlet. Water first flows through the filters and finally through the UV (see picture).
- Use only Teflon tape to make threaded connections. Do not use any other sealant.
- Do not solder fittings attached to filter housing as high temperature can damage the filter system.
- Do not install system in direct sunlight or where system is exposed to harsh chemicals or may be subjected to being struck by moving equipment, carts, mops or any other item that may cause damage.
- ALLOW a minimum of 2 feet under the housing to allow for filter replacement.

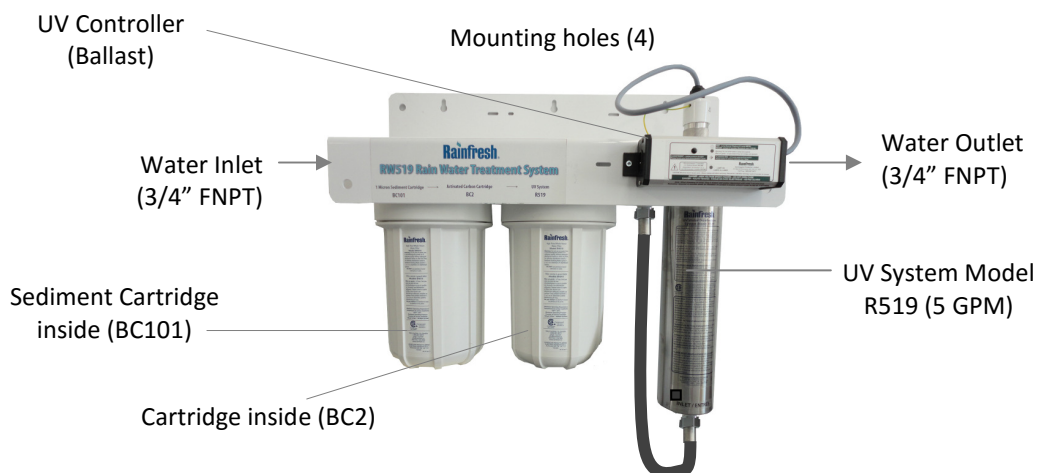


Fig1: RW519 Water Filter System

SYSTEM SPECIFICATIONS

Feed Water Pressure	:	20 psi min to 100 psi (8.6 bar) max
Water Temperature	:	Min: 35°F/2°C – Max: 100°F/38°C. Do not freeze.
Inlet/Outlet Connections	:	3/4" Female NPT (Inlet) and 3/4" Male NPT (Outlet)
Max Service Flow Rate	:	5 US GPM /19 lpm
Capacity	:	Change filters when pressure drops by 10 psi or every 6 months, whichever is earlier. Replace UV lamp when red LED flashes with buzzer beeping (Approx 1 year of continuous use)

SAFETY INSTRUCTIONS

- To avoid possible electric shock, extra care should be taken since water may be present near electrical equipment. Unless specifically referred to in these instructions, do not attempt repairs yourself. Contact the manufacturer for service advice.

- **Do not** plug the unit in if any electrical surfaces or electrical parts are wet.
- **DO NOT LOOK DIRECTLY AT UV LAMP WHEN LAMP IS ON.** UV light can cause serious burns to unprotected eyes and skin.
- **Do not** operate the UV lamp outside the system.
- **Do not** use this unit for any purpose other than its intended use for rain water treatment. The use of attachments not recommended, approved or sold by the manufacturer may result in improper performance of the unit or an unsafe condition.
- **Do not** operate the system if it has a damaged electrical cord or plug, is malfunctioning, or has been damaged in any way.
- **Do not touch** the lamp or quartz dome with dirty or moist hands. Hold the lamp and dome by the ends with **soft dry gloves** or cloth.
- Before any cleaning or maintenance on the system, always unplug the unit from the power source.
- Disconnect from the power outlet by holding the plug. Never pull the cord.
- You must connect this unit to a grounded (3-pronged) receptacle (a GFI is preferred) and ensure that the lamp connector ground wire is connected to the stainless steel end of the main chamber. Use of extension cords is not recommended.
- Installation of the RW8 system will interrupt electrical grounding continuity of your plumbing system. For directions on restoring the electrical grounding continuity, consult your local electrical inspector.
- Power source for applications outside North America must match requirements of the unit (For example 220V, 50Hz or other).
- Protect your unit from freezing. Drain all water from the unit if freezing temperatures exist.
- The UV lamp inside of the disinfection system is rated at an effective life of approximately 9000 hours. To ensure continuous protection, **REPLACE UV LAMP ANNUALLY.**

BEFORE YOU INSTALL

- The Rainfresh RW519 System is designed for installation on the cold water line only at point of entry (POE). For installation in the province of Quebec, install it to serve a max of 2-3 outlets only, but not serving a majority of the premises.
- It is strongly recommended to have a dedicated electrical circuit for the UV system. Where power fluctuations or surges are anticipated, it is recommended that a surge protector be installed. We recommend a CSA or UL certified surge protector rated for a clamping voltage of less than 400 Volts, response time of less than one nanosecond, and energy absorption of at least 600 Joules.
- The RW519 system has been designed for a maximum water flow rate of 5 US GPM (19 liters per minute). If flow rates exceed 5 US GPM, it is recommended that an 5 USGPM flow restrictor (Rainfresh model FR5K- sold separately) be installed before the system so that the rated flow of the unit will not be exceeded.
- Provide a minimum clearance of 2 feet above the unit for lamp replacement.
- Use only Teflon tape for all connections. Do not use any other sealant.

INSTALLATION

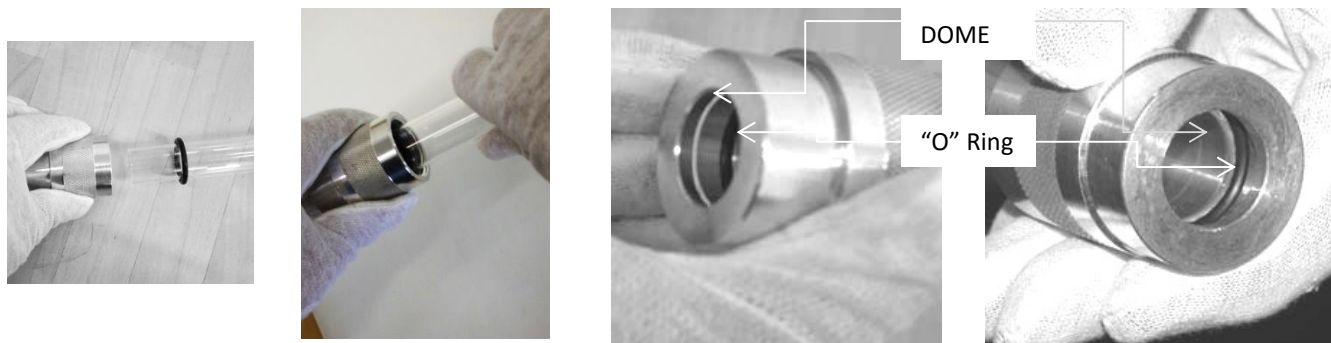
STEP 1 : Installing pre-filter cartridges

1. Unpack the filter system. Remove the sumps & cartridges and set aside.
2. Locate best position for mounting unit on a wall where it can be easily accessed for changing filters and other maintenance.
3. Mount the unit on the wall using appropriate screws in the mounting holes provided. The mounting holes are spaced 16" apart to allow the unit to be mounted on 2 studs. **NOTE:** Leave minimum of 2 feet clearance below the head for the sump & to allow removal of cartridge for replacement.
4. Using Teflon tape, thread in the inlet and outlet piping or tubing into the filter system. **Caution:** Do not over-tighten the fitting into the filter head.

- Remove cartridge shrink wrap and insert the sediment filter cartridge (BC201) in the first 20" inlet sump and the carbon filter cartridge (BC202) in the other 20" sump and attach sumps to respective heads. Hand-tighten the sumps on to the heads. **DO NOT USE FILTER WRENCH TO TIGHTEN SUMPS.**

STEP 2 : Installing UV Quartz Dome and UV Lamp

- Carefully unpack UV lamp (R519L) and quartz dome (R519QD). **Note: Hold lamp and dome by the ends with soft, dry gloves or cloth.** The orange gland nut "O" ring (515) is in the groove of the gland nut (factory-installed) and the dome "O" ring (4032) is in a separate plastic pack.



2. Gently slide the dome "O" ring over the top of the quartz dome to about 1" from the open end.

3. Gently insert the quartz dome into the gland nut until it goes past the nut O-ring and touches the inside top end of the gland nut.

CORRECT

Quartz dome is past gland nut O-ring and is touching the inside top end of the gland nut. Caution: Do not push hard as it can break the quartz dome.

WRONG

Quartz dome is NOT past gland nut O-ring and is NOT touching the inside top end of the gland nut.



7. Carefully slide the quartz dome with gland nut attached into the opening at the top of the UV chamber. Hand-tighten the top gland nut into place. Do not over-tighten the gland nut as it can break the quartz sleeve. **Note: Broken quartz domes are not under warranty.**

WARNING : Slowly open supply-valve and valves before and after UV system. Check for leaks. **Do not proceed to next step until leaks are fixed.**

8. Slide the lamp spring (4036) into the quartz dome followed carefully by the lamp. Holding the top end of the lamp, attach the lamp to the lamp connector. The lamp connector fits over the pins in only one configuration. Slide the lamp connector cover over the gland nut and tighten the black screw on it.

9. Carefully unpack UV lamp (R519L) and quartz dome (R519QD). **Note: Hold lamp and dome by the ends with soft, dry gloves or cloth.**

10. Connect the ballast to the AC supply. The green lamp-on LED will light, followed by three buzzer beeps and three red timer LED flashes. **Your Rainfresh UV Disinfection System is now ready for service.**

STEP 3 : Disinfecting the water lines in the house

Before service begins, all household plumbing lines should be disinfected to prevent the possibility of re-contamination after UV disinfection. You should also disinfect your plumbing system if the power goes out for several hours or more or if the unit has been accidentally shut-off for several hours or more. It is advisable to disinfect the plumbing lines at least once a year.

The following is a general method for disinfection of plumbing lines. If you are uncertain about the efficacy of this procedure you are advised to contact your local health authority responsible for water safety.

1. Shut off the supply valve and de-pressurise the lines by opening a tap until it runs dry.
2. Remove both the filters in the filter housings and add about 1-2 cups (250-500ml) of unscented household bleach (5 to 6% sodium hypochlorite) to the first empty filter housing and put it back on the filter head.
3. Open the supply valve and slowly open a faucet and let the water run until you can smell the chlorine and then shut the faucet off. Repeat the procedure for all hot and cold outlets in the house. Add more bleach as required. Run hot faucets longer to allow the chlorine to come through the hot water tank.
4. Leave the bleach solution in the plumbing system for about 6 to 8 hours preferably overnight.
5. Take off aerators (if any) on the faucets and thoroughly flush all outlets until the chlorine smell is minimal.
6. Shut-off the supply valve again and open a faucet to depressurize the system. Open the filter housing and re-install the filter cartridges.
7. Open the supply valve slowly. **You are ready to use the water now.**

UV BALLAST FEATURES

The micro-processor controlled electronic UV ballast supplied with your RW8 Rain Water system has both audio and visual alarm indicators to indicate the lamp operation and an integral annual lamp change reminder timer.

UV Power Source Initialization Sequence: When AC power is applied to the UV ballast, the lamp is ignited as indicated by the green lamp-ON LED and alarm buzzer consisting of three buzzer beeps and three red timer LED flashes.

Normal Operation: During normal operation only the green lamp-ON LED is illuminated.

Lamp-Change Timer Operation: At the end of one year, the red lamp-change timer LED will flash and the buzzer will sound indicating that the timer is in a **28-day grace period**. You can silence the buzzer for seven days by pushing the timer button, but the LED will continue to flash. At the end of the 28-day period, the red timer LED illuminates continuously and the buzzer sounds. Pressing the timer button at this point will not silence the buzzer until the lamp is replaced. **The UV lamp is not shut down in this alarm mode and the solenoid valve (if connected) is not closed.**

Re-Setting the Lamp-Change Timer: The lamp-change timer is reset after installing a new lamp by depressing the timer button while reconnecting ballast to electrical outlet and keep the button depressed until the ballast emits a solid three-second beep. This will re-set the lamp-change-timer to zero and the 3-second beep will confirm that the re-set was successful. NOTE : It is not possible to reset the lamp-change-timer unless the timer is in the grace period or lamp-change alarm mode or lamp-failure mode.

Time Remaining: When the lamp-change-timer is not in the grace period or lamp change alarm mode, the number of months of lamp life remaining can be determined by pressing the timer push button and counting the number of times the red LED flashes.

Lamp Failure: When the ballast detects a lamp failure or enters the auto-shut down mode due to abnormal operating conditions, the alarm buzzer sounds and the green lamp-ON LED switches OFF.

Note: The UV ballast is designed to shut down if the AC input voltage is outside the operating limits. When this happens, a lamp failure alarm will become active. You should unplug the unit from the AC power source wait for fifteen seconds and then reconnect. If the failure was due to out-of-limit AC power, the unit will re-ignite the lamp and operate normally. If not refer to trouble-shooting.

MAINTENANCE

The following are general maintenance instructions for the RW8 unit. For details, please refer to the individual instruction sheets of the filters and UV system.

1. Replace sediment filter at least once every 6 months
2. Replace activated carbon cartridge at least once every 6 months or when pressure drops by 10 psi
3. Replace UV lamp after 1 year of continuous use. UV will alarm with flashing red LED when lamp has to be replaced
4. Replace quartz dome after 3 years of use
5. To winterize the unit, turn the water off to the unit and unscrew the drain plug at the bottom of the UV and leave open until all the water inside has drained out. Apply Teflon tape on the plug before screwing back. Remove sumps of both pre-filters and drain water.

Limited Warranty

Envirogard system is warranted, to the original purchaser/owner, for a period of **one (1) year**, from the date of purchase, against defects in materials or workmanship. O-rings and installation fittings are also warranted for a period of one (1) year from the original date of purchase. Envirogard's obligation under this warranty shall consist of repair, replacement or credit, at its option, of any part found by Company inspection to be defective, provided that the product has not been misused, abused, altered or damaged as determined by the Company and provided that only approved Envirogard replacement cartridges have been used in the housings. This warranty does NOT apply to the replacement cartridge(s) which, by nature, will diminish in performance through normal use and require(s) regular replacement.

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