

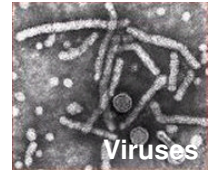
# R519/R830/R1245

## Whole House Ultraviolet (UV) Water Disinfection Systems



### How safe is your water?

Bacteria and viruses can affect all water supplies, especially ground and surface water sources like wells, springs, rivers, cisterns and lakes. It is estimated that 20 to 40% of wells in any area can be contaminated with disease-causing micro-organisms. Even municipally-treated water is not fail-safe. Every year many municipalities across Canada issue *Boil Water Advisories*.



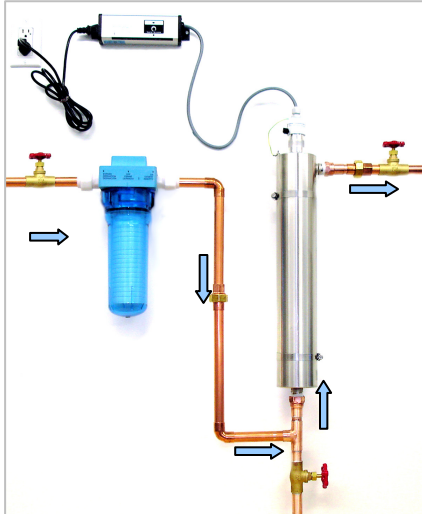
### What can happen if the water supply is contaminated?

Consumption of water that is contaminated with water-borne bacteria (like *E. coli*) and viruses can cause illnesses like diarrhea, dysentery, meningitis, hepatitis, etc.



### How can Rainfresh Whole-House UV Systems protect my family?

Rainfresh UV Systems are a highly effective, non-chemical and environmentally friendly way of disinfecting water and ensuring safe water for your family. Germicidal ultraviolet light (UV) is created by means of a special high-output UV lamp inside a quartz sleeve, placed in stainless steel housing. As the water flows through the UV housing, it is subjected to a lethal dose of germicidal UV light ( $>40 \text{ mJ/cm}^2$ ) that instantaneously inactivates bacteria and viruses by destroying their DNA structure and thus making the water microbiologically safe to drink. The result is a simple, cost effective way of treating water for the entire house!



#### FEATURES

##### Highly Effective!

Rainfresh UV Systems are highly effective against water-borne bacteria like *E. coli* and viruses.

##### Treats water for whole-house!

All the water in the house, hot & cold, is disinfected. Even water in your washrooms, kitchen and laundry!

### Chemical-Free!

Disinfection is achieved by a safe, natural, non-chemical process that does not alter the composition of the water or affect the taste & odour.

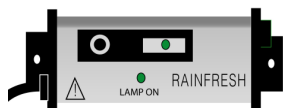
### Compact Design!

Rainfresh UV Systems are compact and extremely easy to plumb in. For an average home, the system would be only 23" in length and 3.5" in diameter, one of the most compact UV systems in the industry.

### High Output UV Lamps!

All Rainfresh UV systems incorporate high-output germicidal UV lamps for maximum UV energy.

### Efficient Controller!



Rainfresh UV systems are driven by a highly efficient microprocessor-controlled ballast. It maintains UV output regardless of voltage or

frequency variations. Due to its energy efficient design, it uses as little energy as a single light bulb.

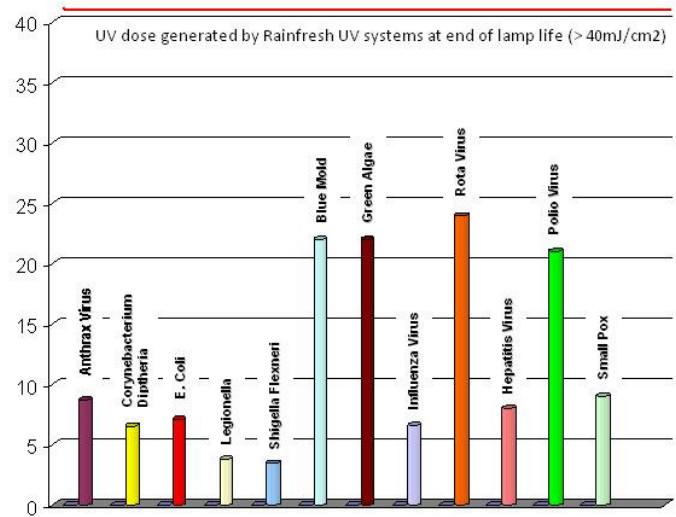
### Automatic Lamp Replacement Reminder!

After one year of service, the ballast sets off an audible and visual reminder, notifying you to replace the lamp.

### Easy to Maintain!

Regular maintenance is extremely simple and can be performed in minutes without tools.

#### UV Dose Required to Inactivate Common Microorganisms



### SYSTEM SELECTION

	SMALL HOME/ COTTAGE	AVERAGE HOME/COTTAGE	LARGE HOME/COTTAGE
Model Recommended	R519	R830	R1245
Maximum Rated Flow Rate	5 gpm (19 Lpm/1.14m <sup>3</sup> /hr)	8 gpm (30 Lpm/1.8m <sup>3</sup> /hr)	12 gpm (45 Lpm/2.72m <sup>3</sup> /hr)
UV Dose at rated flow	> 40 mJ/cm <sup>2</sup>	> 40 mJ/cm <sup>2</sup>	> 40 mJ/cm <sup>2</sup>
AC Supply Voltage	120V, 50/60Hz, 0.7A	120V, 50/60Hz, 0.7A	120V, 50/60Hz, 0.7A
Total Power Consumption (incl. lamp)	27 Watt	40 Watt	62 Watt
Lamp Power (Watts)	25 Watt	38 Watt	60 Watt
Lamp Service Life	9000 hours	9000 hours	9000 hours
Annual Lamp Change Timer	Yes	Yes	Yes
Lamp-ON Indicator	Yes	Yes	Yes
Lamp-Failure Audible/ Visual Indicator	Yes	Yes	Yes
Lamp Change Grace Period	28 days maximum	28 days maximum	28 days maximum
Grace Period Audio Alarm Disable	Yes (7 day increments)	Yes (7 day increments)	Yes (7 day increments)
Reactor Chamber Material	Stainless Steel 304	Stainless Steel 304	Stainless Steel 304
UV Monitor	Yes (Model R519M)	Yes (Model R830M)	Yes (Model R1245M)
Solenoid Output (12V DC)	No	Optional	Optional
Flow Restrictor	Optional Model FR5K	Optional, Model FR8K	Optional, Model FR12K
Inlet/Outlet Port Size	¾" MNPT	¾" MNPT	¾" MNPT
Chamber Dimensions (LxD)	16" x 3.5"	19" x 3.5"	31.4" x 3.5"
Controller Dimensions (LxDxW)	5.15" x 1.7" x 2.2"	7" x 1.7" x 2.3"	7" x 1.7" x 2.3"
Maximum Operating Pressure	100 psi	100 psi	100 psi
Maximum Ambient Temperature	50°C (122°F)	50°C (122°F)	50°C (122°F)
Water Temperature Range	4 - 37°C (40-99°F)	4 - 37°C (40-99°F)	4 - 37°C (40-99°F)

For optimum performance of the system, water entering the Rainfresh UV System should meet the following parameters: Hardness < 7.0 gpg (120 ppm); Iron < 0.3 ppm; Manganese < 0.05 ppm; Turbidity < 1 NTU; Tannins/Colour: None; UV Transmissivity > 85%

### TYPICAL INSTALLATION

Rainfresh UV Systems are installed as the final stage of treatment, after softeners, iron filters or sediment filters, just before the plumbing line divides into hot and cold lines.

### CERTIFICATION



Drinking Water

Rainfresh R519, R830 & R1245 UV Systems are tested and certified by CSA International to CSA B483.1.

### WARRANTY

Following are the warranties against defects in materials &/or workmanship.

**7 Years** – Stainless steel chamber

**1 Year** - Miscellaneous hardware, seals and ballast.

**6 months** – UV lamp. See warranty card for details



R1245 Installed

