



## CLEARRAY™ Water Purification System FAQs for Jacuzzi® Hot Tubs

### **What makes CLEARRAY™ Water Purification System effective?**

CLEARRAY™ uses proven UV-C or germicidal ultraviolet to treat 99.9% of the waterborne pathogens in your water.

### **What is UV-C?**

Ultraviolet (UV) light is part of the natural light spectrum generated by the sun. CLEARRAY™ artificially generates UV-C otherwise known as germicidal ultraviolet light. UV-C light alters the DNA of bacteria and viruses, thus destroying their ability to reproduce.

### **What are waterborne pathogens?**

Waterborne pathogens are disease-causing bacteria, viruses, and protozoa that are transmitted to people when they consume or bathe in untreated or inadequately treated water. UV-C has been proven to effectively treat staphylococcus, pseudomonas aeruginosa, e-coli, cryptosporidium and other coliform. Additionally, CLEARRAY™ effectively eliminates chloramines reducing the odor and irritation caused by chlorine.

### **Where else is UV-C technology used?**

UV-C technology is used in the bottling and beverage industry, municipal water treatment plants, hospitals and other healthcare environments. It is also used in aquaculture industries like zoos, aquariums and fish farms where clean clear water is critical.

### **How do I get CLEARRAY™ Installed on my hot tub?**

Jacuzzi® 2012 and newer models have CLEARRAY™ factory installed. Your authorized dealer can install CLEARRAY™ on older Jacuzzi Hot Tub Models. Check with your dealer on compatibility with competitive hot tub brands.

### **What is included in the CLEARRAY™ Aftermarket Kit?**

The CLEARRAY aftermarket kit includes everything you need to add CLEARRAY™ to a 2006 or newer Jacuzzi Hot Tub. The system can be added to older Jacuzzi models, or competitive tubs at the dealer's discretion. Additional plumbing and electrical modifications may need to be made.

### **Is CLEARRAY™ approved for use in hot tubs?**

Yes, the system is listed with UL, TUV and ETL, all of which are independent testing laboratories, which authorize the use of electrical components with regard to safety.

### **Is CLEARRAY™ safe for my entire family and kids?**

Yes, fewer chemicals are used, making the water more enjoyable for all.

### **Are there any residual by-products from CLEARRAY™?**

No, UV-C light is a disinfectant; water passes inside of the stainless steel housing and is exposed to the UV-C bulb. There is no chemical change to your water as nothing touches or gets added to the water. CLEARRAY does not produce nitric acid. It is not an oxidizer and will not affect metals in your water.





**Does CLEARRAY™ produce ozone?**

No, The CLEARRAY™ system uses only UV-C light.

**Do I still need a residual sanitizer for my hot tub water with CLEARRAY™ installed?**

Yes, we recommend using sanitizers in conjunction with CLEARRAY™ UV-C for proper sanitization. Our laboratory testing showed up to 50% reduction of residual sanitizing chemicals was needed to keep the same level of cleanliness. We do recommend using shock treatment after heavy use. Always refer to state or local government agency standards and regulations on how to maintain your water chemistry.

**Does CLEARRAY™ work with Chlorine or Bromine?**

Yes, it works with both. CLEARRAY™ is 100% compatible with both chlorine or bromine based water care products as well as silver mineral cartridges such as ProClear.

**Does CLEARRAY™ UV-C light reduce effectiveness of Chlorine or Bromine?**

No, the CLEARRAY™ UV-C light does not reduce the effectiveness of sanitizing chemicals.

**Will CLEARRAY™ reduce the amount of chlorine or bromine usage?**

Yes, our tests have shown that CLEARRAY™ can reduce your sanitizer usage up to 50%. Always refer to state or local government agency standards and regulations on how to maintain your water chemistry.

**Do I still need to “Shock” my hot tub water?**

Yes, shocking is recommended after a high bather load.

**Do I still need to balance my hot tub water?**

Yes, all hot tub water should be a fresh fill on start. Do not install without draining the hot tub first. All hot tub water should be monitored for hardness and pH/alkalinity, as well as residual sanitizers. The CLEARRAY™ UV-C treatment does not affect the pH level therefore balanced water is the first requirement to ensure water that is safe and pleasant. You can purchase 6-in-1 test strips developed specifically for CLEARRAY™, simply contact your authorized dealer for more information.

**What care and maintenance is required?**

It requires minimal effort to maintain the CLEARRAY™ system. The UV-C bulb will need to be replaced every 12 months. Additionally, the quartz tube should be wiped clean annually. This can be done at the same time as bulb replacement, but note that the water must be drained to check the quartz tube, but not to change the bulb. Inspection of the quartz tube should be added to your drain and fill procedure.

**Is CLEARRAY™ compatible with salt water chlorine generators?**

Salt water chlorine generators are not recommended for use in Jacuzzi hot tubs due to the corrosive nature of salt water. Salt water may damage components of the hot tub therefore our warranty will be voided if used with a salt water chlorine generator.

**Is CLEARRAY™ an oxidizer?**

No, unlike ozone which may oxidize metals in your water and stain the acrylic shell, CLEARRAY™ has no oxidation properties and will not oxidize metals in your water. Therefore CLEARRAY™ will not discolor your components or acrylic shell.





**If I have ozone, can I use CLEARRAY™?**

Yes, you can. CLEARRAY™ is compatible with ozone however we do not recommend it because our testing has proven CLEARRAY™ does not need ozone to be effective. Should you choose to use ozone always be sure to use genuine Jacuzzi® parts. Contact your authorized dealer for more information.

**If I have ozone, can I replace it with CLEARRAY™?**

Yes, if you wish to only use CLEARRAY™, an aftermarket kit is available that your authorized dealer can install. They will remove the ozone and install the CLEARRAY™ water purification system.

**How often does the UV-C bulb need to be replaced?**

The bulb will need to be replaced annually.

**Tell me about the UV-C bulb?**

The CLEARRAY™ bulb is a low-pressure 10W UV-C monochromatic bulb. It uses a proprietary Molex connector so only CLEARRAY™ bulbs can be used in a CLEARRAY™ system. Bulbs can be purchased only from authorized dealers. The bulbs do contain a small amount of mercury, so will need to be disposed of properly. Your authorized dealer can recycle your bulb, or it can be taken to other locations that accept CFL bulbs for recycling.

**Does CLEARRAY™ have mercury in the bulb?**

Yes, 5 mg of mercury, which is equivalent to an amount that would fit on the tip of a ballpoint pen.

**What is mercury?**

Mercury is an element (Hg on the periodic table) found naturally in the environment. Mercury emissions in the air can come from both natural and man-made sources.

**What is the CLEARRAY™ bulb life expectancy?**

The life expectancy of the bulb is dependent on how much current is run through the bulb, which causes the dissipation of the mercury in the tube.

**How do I know when I need to change my UV-C Bulb?**

On 2012 and newer Jacuzzi® hot tubs, your bulb needs to be replaced when a “blb” message appears on your control panel. This means the bulb has been in use for 365 days. The message will flash between “blb” and water temperature. The countdown timer for the UV-C bulb needs to be reset, so refer to your owner’s manual on how to reset. A new UV-C bulb can be purchased from a CLEARRAY™ local authorized dealer. If your tub loses power, the countdown position will be stored in the control panel memory. If for some reason your control system components are serviced, you may lose your countdown position. Replace the bulb and reset. In older models with CLEARRAY™ installed as an aftermarket accessory, a label is included to remind you when to change your bulb.

**How do I dispose the old UV-C bulb?**

The CLEARRAY™ UV-C bulb contains mercury. Dispose of the bulb in accordance with disposal laws in your area. See [www.lamprecycle.org](http://www.lamprecycle.org) for more information. Local authorized dealers will accept bulbs for recycling.





### **How should I clean up a broken UV-C bulb?**

The UV-C bulb contains a small amount of mercury sealed with the glass tubing. When a bulb breaks in your home or backyard, some of this mercury is released as mercury vapor. To minimize exposure to mercury vapor, EPA recommends that residents follow cleanup and disposal steps. For more information on all sources of mercury, visit <http://www.epa.gov/mercury>.

### **What if I accidentally touch the UV-C bulb during the replacement process?**

We recommend using the glove enclosed when handling the bulb to prevent fingerprints or oils contaminating the bulb. If you do touch it, make sure to take a soft cloth to wipe the bulb and remove any oils that might have been left on the bulb. If fingerprints are left on the bulb, the oils will burn on the outer portion of the bulb, leaving burn marks on the bulb itself; this will degrade the bulb quicker.

### **Can the UV-C Bulb harm my eye sight?**

Yes, do not power the bulb outside of its stainless housing as it can harm your eyesight.

### **How often does the quartz tube need to be replaced?**

The quartz tube does not need to be replaced unless it has been broken or cracked. However it does need to be cleaned annually in order to keep the bulb effective in delivering high quality water. The quartz tube should be wiped clean from film and debris to transmit the light given off by the UV-C bulb.

### **If the quartz tube has mineral deposits, what should I do?**

The following items are needed before cleaning your quartz tube: distilled white vinegar, a glass container, and Scotch-Brite™ sponge or a soft brush. The following instructions are to remove mineral deposits:

1. Remove the quartz tube from the UV-C assembly as explained in the UV-C instruction manual.
2. Soak the quartz tube completely, immerse in white vinegar for 1 hour.
3. Remove the quartz tube and rinse with hot water.
4. Use the sponge or brush to remove any remaining film.
5. Rinse and dry thoroughly, inside and out.

### **Does the green and red LED light on the electronic ballast need to be on?**

Yes, the green light is indicating power and the red indicates the UV-C bulb is properly connected and is working, but only when your CLEARRAY™ unit is in operation. When the unit is not generating UV-C such as in between filtration cycles both lights will remain in the off position.

