

Four Years of *Nature Fresh* Spa Water

High Ozone Output, Long Lasting,
Ultra Violet (UV) Ozone Generators



Model EUV3

UltraPure
WATER QUALITY INC.

Meaningful Innovations
Since 1982

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Great Water, Great Spa

Spas are electronic, engineering marvels. Virtually everything is automatic, ergonomic and durable. Accessories are endless, covers, stereos, TV's, massage jets, etc. Yet, full spa enjoyment can only be realized when the water quality is as good as it can be. Circulation, filtration and heating are taken care of by the spa manufacturer. Test kits for water balance are available from your dealer. The day-in, day-out sanitation of your water is up to you. High temperatures and small water volumes create large amounts of non-living bather waste. Keeping the water clean, safe and appealing is a snap with an UltraPure UV Ozone generator. Ozone, injected as the spa runs on its filter/heat cycle and a small amount of Chlorine (or bromine), added after usage, does the sanitation job simply and easily.

Ozone - The Automatic Water Cleaner

One spa bather introduces twenty times the wastes of one swimmer in a pool—significant considering the small water volume. This 'loading' of the water occurs because spa water temperature is set above body temperature at 100 to 104° F. Ninety percent of the work in cleaning (sanitizing) spa water is removing these non-living bather wastes. Ozone, produced by an UltraPure UV Ozone generator, breaks down or alters non-living bather wastes through a process called 'Oxidation'. When the filter heater pump is running, Ozone is bubbled in and 'automatically' cleans these wastes from the water. Once this Oxidation work is done, Ozone (O₃) reverts to Oxygen (O₂) leaving nothing behind in the water except Nature Fresh, spa water.

Defining Spa Water Sanitation with Ozone

Spa water sanitation has three components:

- **Disinfection** —Killing microorganisms such as bacteria and molds
- **Residual** —Keeping a disinfectant safety back up in the water
- **Oxidation** —Removing the non-living wastes introduced by bathers

Disinfection and Residual are less than 10% of the sanitation workload, while **Oxidation** is over 90%. **The role of Ozone in spa water sanitation is the Oxidation of non-living bather wastes.** It is a continuous, virtually automatic, non-chlorine shock for the water. Ozone does not kill microorganisms, nor does it remain in the water for any length of time. A very small amount of **Chlorine or Bromine (Halogen) provides Disinfection and a Residual.**

Ozone Makes the Best Spa Water

Everyone wants crystal-clear, fresh-smelling, safe water, which requires minimal maintenance and is economical to operate. The high amounts of non-living bather wastes introduced into the spa water fall into two categories: greases and oils (organics) from lotions, cosmetics, antiperspirants, creams and body oils, and ammonia compounds (amines) from perspiration and urine.

Organics and amines both combine with Halogens (Chlorine or Bromine) to form obnoxious compounds. 'Halogenated' organics cause bathtub rings, clogged filters, coated heater elements, and greasy-feeling water. 'Hal-amines' result in odors, skin dryness, eye irritation, bathing suit and hair discoloration. Using 'packaged' chemicals shortens the water 'lifespan' due to chemical buildup; wreaks havoc with water balance; causes short filter runs; leads to heater inefficiencies; and, still leaves the work of cleaning the bathtub ring and the 'gunk' off the filter media.

Ozone, in adequate amounts, breaks down the organics and alters the amines through an efficient, preventative Oxidation process. Both categories of non-living bather wastes are simply not available to form the unwanted Halogenated combines. There is no chemical build up with Ozone only Nature Fresh spa water for pleasurable extended use.

Ozone means the Most Enjoyment and Fewest Chemicals

The benefits of using Ozone to oxidize Spa water 'automatically', day in and day out are no bath tub ring; a long running and easily cleaned filter; an uncoated heater with like-new efficiency; water which lasts longer between dumps and refills; easily maintained water balance; and more effective Disinfection and creation of a Residual by a very little amount of Halogen. These advantages can be enjoyed in a Spa, which virtually never needs shock treatment; algacides: bathtub ring cleaners; filter degreasers; scale inhibitors, clarifiers; Scents; or, filter aids. Ozone truly allows you a helicon spa experience in crystal clear, nature fresh water. For a Spa to be as good as it can be it must have an Ozone generator to treat the water. Virtually every (portable) Spa built today is made Ozone ready.

UltraPure EUV3 UV Ozone Generator - High Ozone Output & Long life

We have supplied Ozone generators to the Pool and Spa industries since 1982. There are two types of Ozone Generators. A Corona Discharge (CD) unit uses a 'spark gap' to create Ozone much as lightning does. CD units require an air treatment system. Our research proves, CD Spa units cease to produce Ozone within six months running six hours per day - 1100 hours of operation. Therefore, we offer only Ultra Violet (UV) Spa Ozone generators which produce Ozone in the same way sunlight makes the earth's Ozone layer. Our New Electronic UltraPure UV Spa Ozone generator has high (initial CD) output and operates on untreated (ambient) air. It is effective for at least four years, at six hours per day or 8800 hours of operation. No combined halogen in the water or sufficient amount of Ozone to 'bleach' test-crystals quickly, to indicate an effective Ozone output. Our EUV3 is made with advanced electronics, which extend lamp life, eliminate pack interference and protects it from electrical irregularities. It is field serviceable by an authorized dealer; and, is covered by a conditional three-year full replacement warranty. Detailed Spa water treatment information from our R&D studies is available on line.

We are Here to Help You

Please contact us for additional articles and write ups on Ozone Water Chemistry; Salt Chlorine Generators, Menu Management for Water Sanitation, Ultra Violet (UV) Versus Corona Discharge (CD) Ozone Generators and Ozone in Spa Applications.

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