



Licensed Technology



*The Healthy Alternative to Chlorine*



Certified to  
NSF/ANSI Standard 50

A photograph of a woman with long dark hair, seen from behind, relaxing in a hot tub. She is lying on the tiled edge of the tub with her arms outstretched. The water is bubbling and splashing. The hot tub is set in a pool with blue mosaic tiles.

**2018**  
**INFORMATION GUIDE**

# Applications of the Clearwater Pool System

The Clearwater Pool System isn't only for pools.  
There are several applications where it can be installed, including:



**Residential Swimming Pools**



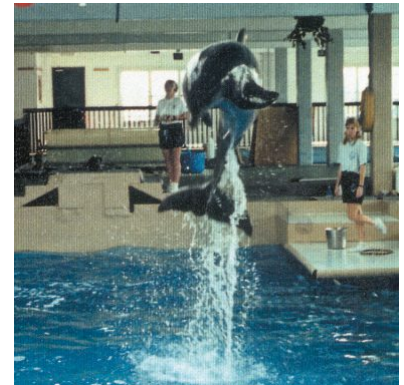
**Commercial Swimming Pools**



**Hot Tubs**



**Fountains**



**Marine Inhabitant Aquariums**



**Cooling Towers**

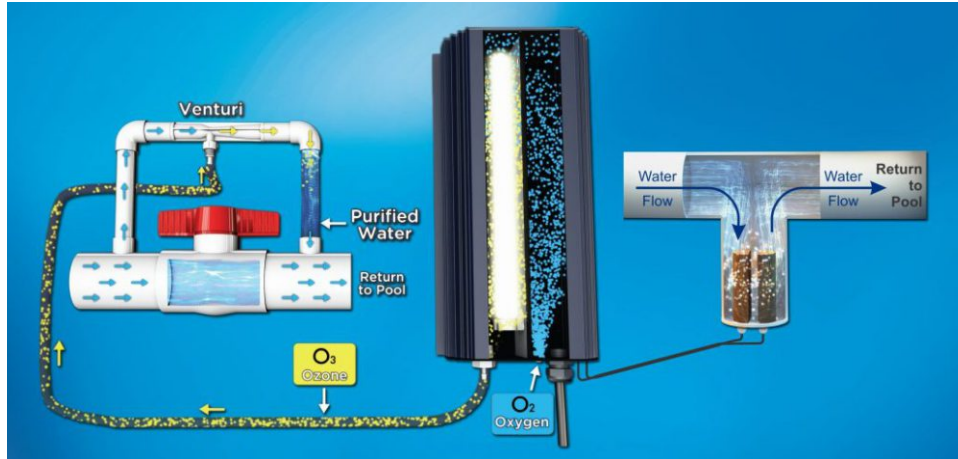


**Lakes, Ponds & Quarries**



**Cisterns**

# What is the Clearwater Pool System?



## Lower chlorine use in residential pools up to 95% and 75% in commercial pools

The **Clearwater Pool System** will dramatically lower the chlorine use in both residential and commercial swimming pools & spas.

## Nature's Way of Treating Water

The **Clearwater Pool System** is nature's way of treating water. By using two of nature's most precious minerals and ozone as a basis for its technology, our system is the most advanced alternative sanitizing system available on the market.

## Ionization and Ozone

Our complete system uses two different technologies – ionization and ozone – combined in one unit. We also have systems that use ionization only (**MineralPURE**) and systems that use ozone only (**OzoneMAX**) to purify the water. By using the pool ionizer and the ozone pool system you have the closest thing possible to a pool without chlorine.

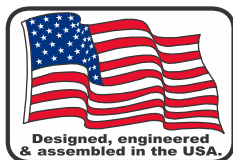
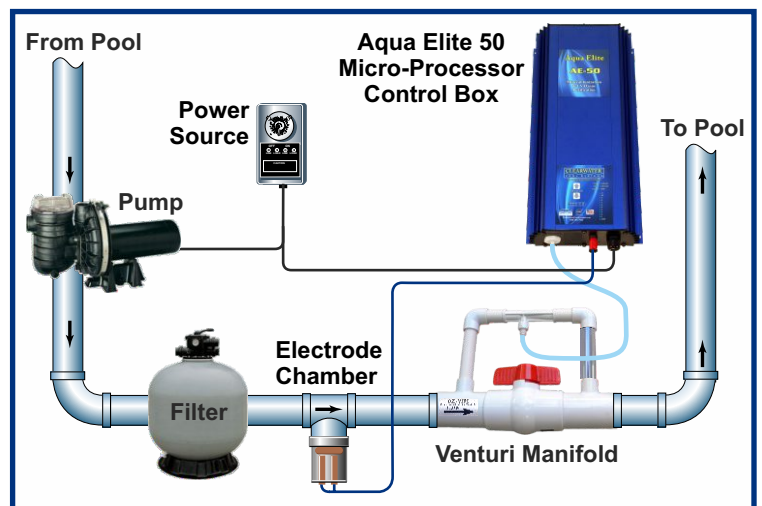
## Control Algae, Bacteria and Viruses

The copper ionization system will help control algae, bacteria and viruses, while the ozone provides the oxidization needed. This new combination system allows you to greatly reduce chlorine levels lower than ever before.

## Advanced Technology

The **MineralPURE** Pool System uses technology that was licensed by NASA and the majority of our units are NSF certified. NSF is the most recognized approval certification in the world. Most of our units are also UL certified, the world's most trusted certification for electrical and safety compliance.

## How The Combo System Is Installed



# History of Copper/Silver Ionization



The Ancient Greeks were the first to discover the sanitizing power of **copper**.



The Egyptians kept their water in **silver** containers to prevent contamination.



Early American pioneers put copper and silver coins into wooden water casks to provide them safe drinking water. The agitation caused the coins to discharge ions into the water killing bacteria and viruses.



During the Plague-ridden Middle Ages, mothers knew to place a **silver** spoon in an infant's mouth to ward off disease.

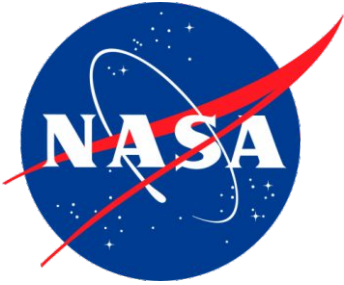


Silver sulfadiazine is the most widely used antibacterial treatment for burns or open wounds. Many people die from severe burns because of lack of bacterial treatment.



Dentists have used silver to fill cavities for decades because of its strong antibacterial features.

# NASA Connection



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NASA harnessed what nature already knew, and designed an ionization system aboard their Apollo flights. An electronic silver-ion generator, slightly larger than a cigarette pack, was mounted on various locations in the spacecraft. These generators dispersed silver-ions to eliminate bacteria and viruses and provide the astronauts with safe drinking water. **They did not want to bring chlorine up in space.**

In 1989, **Clearwater** was granted a license from NASA to commercially use their technology for its ionization systems.

## Company Spokesman Buzz Aldrin



In the early 1990s, Buzz Aldrin was a company spokesman for Clearwater Enviro Technologies.



Buzz Aldrin's historic walk on the moon, July 20, 1969

## NASA Publication



In 1994, *Clearwater* was featured in *Spinoff*, a NASA publication that features companies that use NASA developed technology for the development of their products.

## Clearwater Marine Aquarium



The story featured our ionization system on the *Clearwater Marine Aquarium*, now home of "Winter", the star dolphin from the hit movie "*Dolphin Tale*".\*

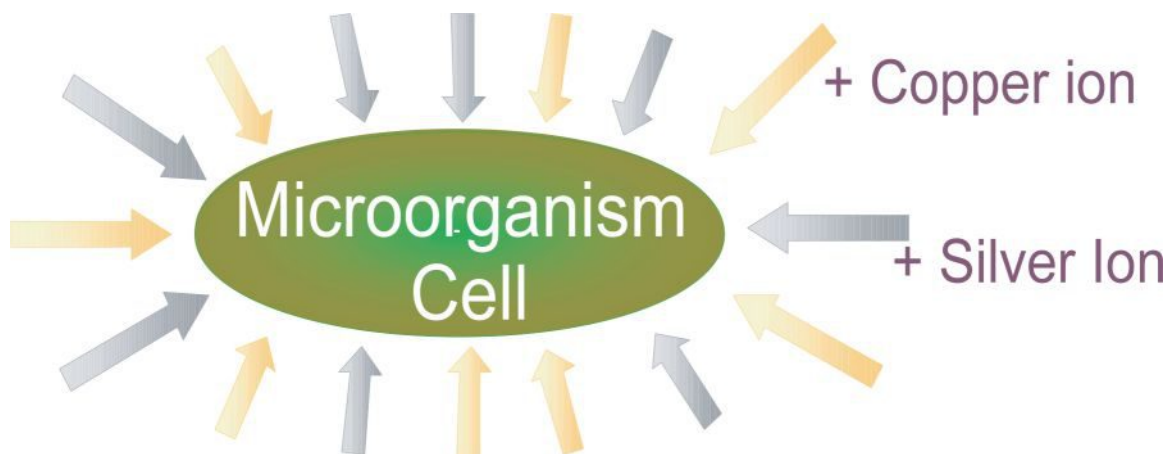
\*Dolphin Tale © Alcon Film LLC/Warner Brothers

# How the MineralPURE Ionization System Works

## MineralPURE®

The **MineralPURE** ionization system consists of a state-of-the-art micro-processor control box and a scientifically designed set of electrodes composed of copper or copper/silver. These are set slightly apart from one another. Water is passed through a specially designed flow cell chamber that houses the electrodes. The control box works by generating a precise, low-voltage, DC current (at milliamp levels) to the electrodes.

Basically, the current causes some of the outermost atoms of the electrodes to lose an electron, thus becoming positive ions. While the water is running through the chamber, many of these ions are swept away before they can reach the other side of the electrodes. As a result, copper or copper & silver ions are dispersed into the body of water that is being purified.

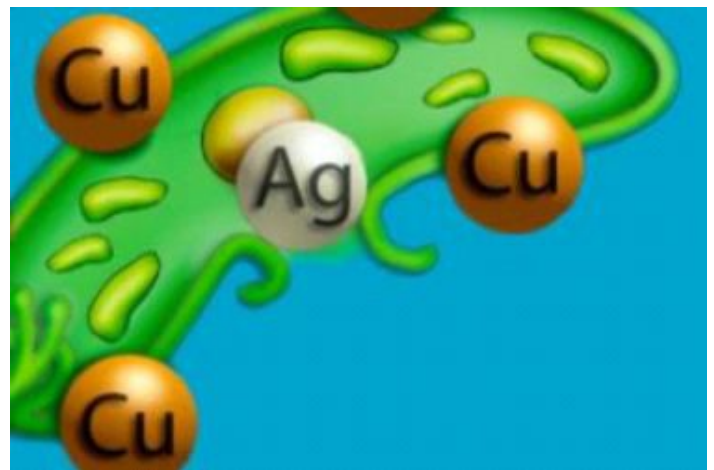


### Algae

The copper ions help control algae.

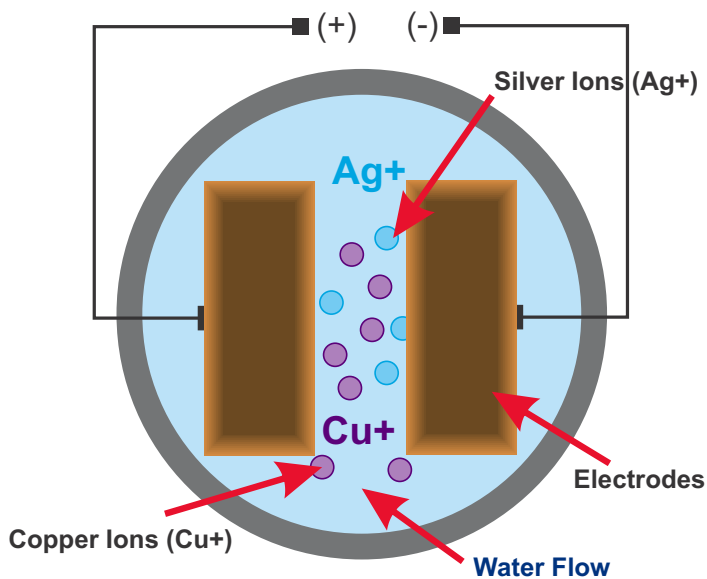
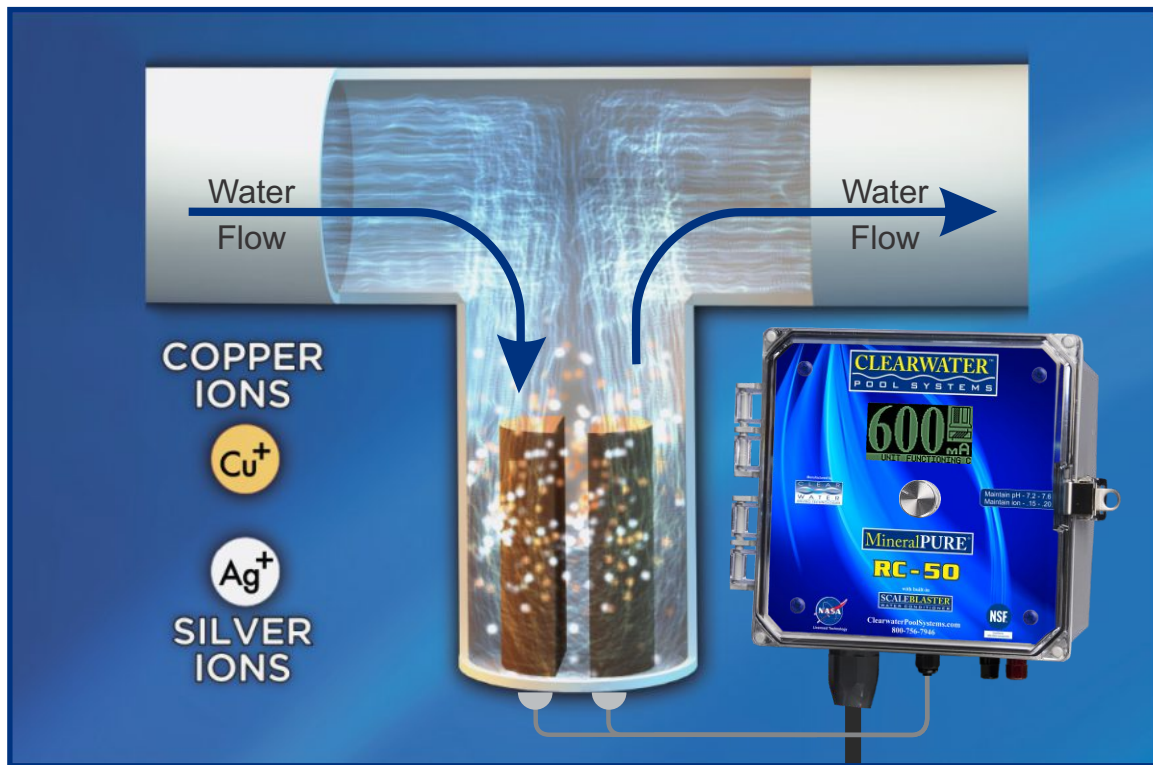
### Bacteria and Viruses

The silver ions help control bacteria and viruses.



The greatest benefit of copper or copper/silver ionization is that the ions remain in the water providing a residual protection. They provide long-term, nontoxic purification and prevent against recontamination. Unlike most types of sanitizers, the copper and silver ions remain in the water until they flocculate, or form masses with the algae and bacteria and then become large enough to be removed by the filtering equipment. When the "used" copper and silver ions are removed, the microprocessor control box is always producing new ions to continuously sanitize the water.

# How the MineralPURE Ionization System Works



**Have you ever noticed how clear the water is in a wishing well or fountain?**

All those coins you throw in there for “good luck” are responsible for the clarity of the water! Chances are, you won't find chlorine or other sanitizers in the water. The coins are producing copper and silver ions in the water and leaving the water sparkling clear!



**MineralPURE®**

# What is Ozone?

## O<sub>3</sub>zoneMAX™

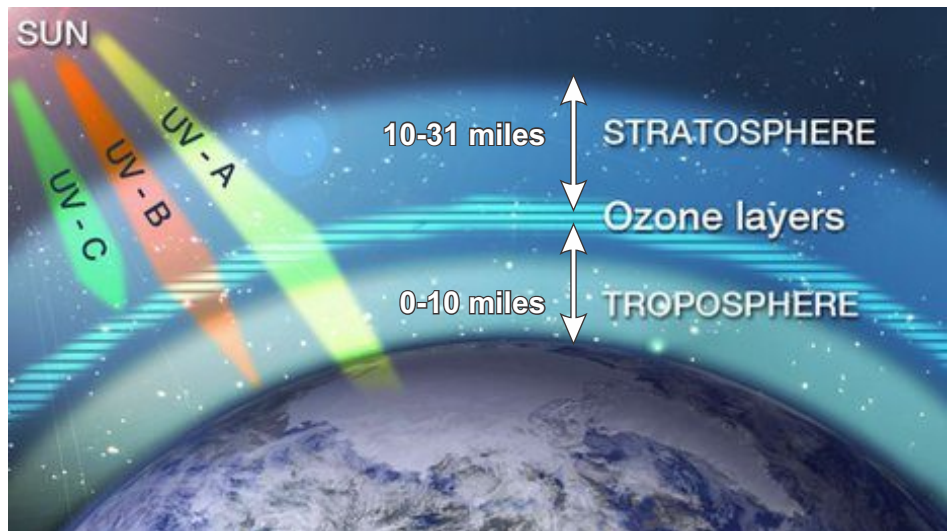
Ozone is one of the most powerful oxidizers on Earth. It is *55 times more powerful* than chlorine and reacts *3,000 times faster*. It greatly improves water clarity and is effective in controlling *cryptosporidium* and *E. coli* while eliminating harmful chloramines. It will not irritate eyes or dry out your skin.

When combining this with mineral ionization, you have the most effective system at reducing chlorine use while helping kill harmful microorganisms.

### A Natural Occurrence

Ozone is formed naturally throughout the Earth's atmosphere when sunlight reacts with oxygen molecules and is also produced during lightning storms.

The **OzoneMAX** unit employs a light source that generates a narrow-band ultraviolet light. Our sun sustains the ozone layer in the stratosphere of Earth, and a similar occurrence takes place in our weather-proof aluminum enclosure.



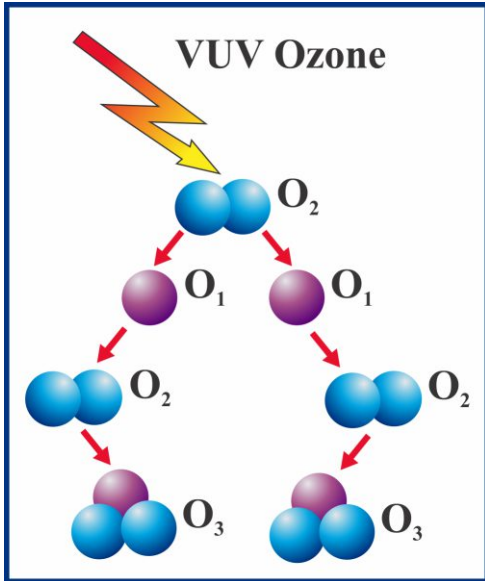
### Ozone Benefits



- Complements the MineralPURE ionizer perfectly
- Excellent oxidizer
- Improves water clarity greatly
- Helps kill bacteria & viruses
- Minimal maintenance required



# How Ozone is Made



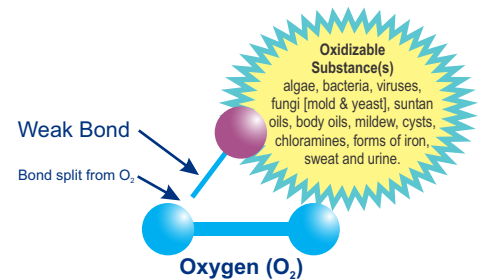
Ozone is produced by splitting oxygen molecules with an ultraviolet lamp. This produces a pair of unstable atoms ( $O_1$ ) that will combine with normal oxygen molecules ( $O_2$ ) and forms ozone ( $O_3$ ), which is injected into the water by a venturi manifold which is included with the system.



## How Ozone Performs

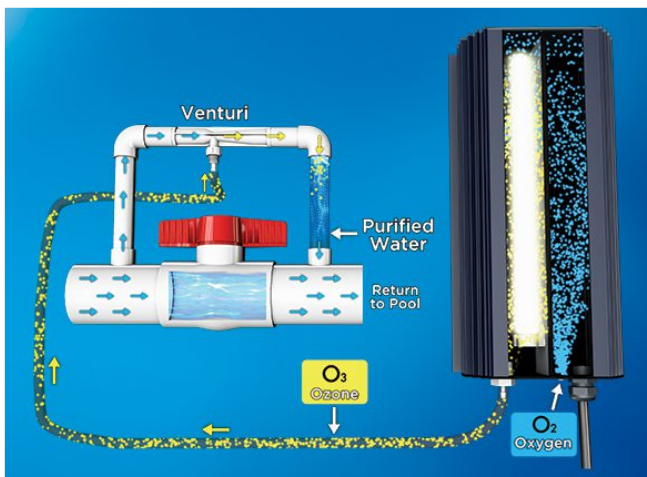
An oxidation reaction occurs upon any collision between an ozone molecule and a molecule of an oxidizable substance(s) (i.e. algae, bacteria, viruses, fungi [mold & yeast], suntan oils, body oils, mildew, cysts, chloramines, forms of iron, sweat and urine).

These oxidized compounds then “clump” together thus greatly enhancing your filter’s ability to capture these organisms from your water. Once the ozone loses the third unstable oxygen molecule, it simply reverts back to life breathing oxygen.



The weak bond splits off leaving oxygen as a by-product.

## How OzoneMAX Works



The **OzoneMAX** unit includes a side stream venturi manifold that injects the ozone into the water. As ambient air enters the ozone generator, the venturi creates a suction-effect to pull air past the UV bulb, creating  $O_3$  – ozone. The ozone is then safely injected into the water flow and the “instant purification” takes place at that time. Within seconds, the ozone is dissipated by the time it returns to the pool.

# Clearwater Pool Systems Installations

**BELLAGIO<sup>®</sup>**  
LAS VEGAS  
Bellagio Conservatory



**Wet'n Wild**  
Las Vegas



**Federated States of Micronesia**  
Olympic Swimming Pool



**Six Flags**  
FIESTA TEXAS



**Northfield Swimming Pool**  
United Kingdom



**Wet'n Wild**  
Hawaii



# Clearwater Pool Systems Installations

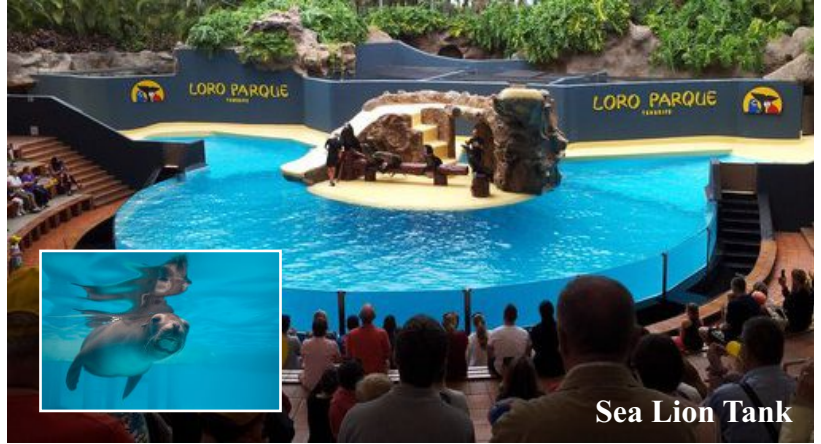


**LORO PARQUE**

Santa Cruz de Tenerife, Spain



Tiger Moat



Sea Lion Tank

**El Rollo Water Park**  
Mexico



**Church of Christ - Cordell, Oklahoma**  
1,000 gallon baptismal tub



**University of Texas, Littlefield Fountain**  
Austin, TX



# Performance Comparison



**Clearwater  
Pool Systems**



**Salt  
Generator**



**CHLORINE**

HELPS CONTROL ALGAE?	YES	YES	YES
HELPS CONTROL BACTERIA?	YES	YES	YES
HELPS CONTROL VIRUSES?	YES	NO	NO
CORROSIVE TO EQUIPMENT?	NO	YES	YES
EVAPORATES?	NO	YES	YES
LINKED TO CANCER?	NO	YES	YES
ABSORBS THROUGH SKIN?	NO	YES	YES
FORMS CARCINOGENIC THM's?	NO	YES	YES
REQUIRES USE OF CYANURIC ACID?	NO	YES	YES
HARMFUL TO THE ENVIRONMENT?	NO	YES	YES
COSTS \$100'S A YEAR TO OPERATE?	NO	YES	YES
HARMFUL TO EYES?	NO	NO	YES
IRRITATING TO SKIN?	NO	NO	YES
BLEACHES HAIR?	NO	NO	YES
EXPLOSIVE, UNSAFE TO HANDLE?	NO	NO	YES
DANGEROUS TO STORE?	NO	NO	YES
FADES SWIM SUITS?	NO	NO	YES
UNPLEASANT TO SMELL?	NO	NO	YES
CREATES CHLORAMINES?	NO	NO	YES



# Residential Pool Models



## Aqua Elite 50 – Clearwater Pool System Complete

- Combination ionization-ozone system
- Handles 50,000 gallon pools
- Heavy duty metal enclosure
- Check electrode, ozone bulb indicators
- Includes test kit, electrode & Venturi manifold
- 3 - year warranty

**Aqua Elite 50**

**50,000 gallon pools**



## RC-50 – Platinum Deluxe Ionization System

- Our most sophisticated ionizer ever built
- Handles up to 50,000 gallon pools
- Full LCD digital readout display panel
- Includes test kit & electrode
- Built-in ScaleBlaster for limescale control
- 5 - year warranty NSF, UL listed

**RC-50**

**50,000 gallon pools**



## R-40 – Economical Pool Ionization System

- Economically-priced ionization system
- Handles up to 40,000 gallon pools
- 6 – settings
- Includes test kit & electrode
- NSF listed
- 5 - year warranty

**R-40**

**40,000 gallon pools**

# Residential Pool & Spa Models



## OZ-50 – Pool Ozone System

- Vacuum Ultraviolet Ozone System
- Handles up to 50,000 gallon pools
- Heavy duty metal enclosure
- Includes Venturi Manifold Assembly
- Competitively priced
- 1 - year warranty

**OZ-50**

**50,000 gallons pools**



## SPA-1R – Spa Ionization System

- Premium spa ionization system
- Celebrating its 27th anniversary!
- Handles up to 1,000 gallon spas
- Alternating electrode indicators
- Includes test kit & electrode
- 5 - year warranty

**SPA-1R**

**1,000 gallon spas**



## OZ-SPA – Spa Ionization System

- Vacuum Ultraviolet Ozone System
- Handles up to 1,000 gallon spas
- Heavy duty metal enclosure
- Includes Venturi assembly
- Amazing water clarity
- 1 - year warranty

**OZ-SPA**

**1,000 gallon spas**

# Commercial Pool & Spa Models

Copper or copper/silver ionization system with all new state-of-the-art technology. Over 200 precise settings. LED readout display. System releases precise amounts of safe, natural minerals into the water to help control algae, bacteria & viruses in the water. Enables commercial pool operators to lower chlorine use up to 75%. Provides long-term, nontoxic residual protection. Amazing water clarity. All units are supplied with schedule 80, 3" flow-cell tees and electrodes unless specified. 4" is also available.

## CS-75



- Handles up to 75,000 gallons pools
- Digital readouts with 200 precise settings
- Includes test kit & one 6" electrode
- Includes one regular schedule 80 tee
- NSF, UL, CUL listed
- 3 – year warranty

**75,000 gallons**

## CS-150



- Handles up to 150,000 gallon pools
- Digital readouts with 200 precise settings
- Includes test kit and two 6" electrodes
- Specify regular tee and/or cross tee - schedule 80
- NSF, UL, CUL listed
- 3 – year warranty

**150,000 gallons**

## CS-225



- Handles up to 225,000 gallon pools
- Digital readouts with 200 precise settings
- Includes test kit and three 6" electrodes
- Specify regular tee and/or cross tee - schedule 80
- NSF, UL, CUL listed
- 3 – year warranty

**225,000 gallons**

## CS-300



- Handles up to 300,000 gallon pools
- Digital readouts with 200 precise settings
- Includes test kit and four 6" electrodes
- Specify regular tee and/or cross tee - schedule 80
- NSF, UL, CUL listed
- 3 – year warranty

**300,000 gallons**

## CS-450



- Handles up to 450,000 gallon pools
- Digital readouts with 200 precise settings
- Includes test kit and six 6" electrodes
- Specify regular tee and/or cross tee -schedule 80
- NSF, UL, CUL listed
- 3 – year warranty

**450,000 gallons**

## CS-600



- Handles up to 600,000 gallon pools
- Digital readouts with 200 precise settings
- Includes test kit and eight 6" electrodes
- Specify regular tee and/or cross tee - schedule 80
- NSF, UL, CUL listed
- 3 – year warranty

**600,000 gallons**

# CLEARWATER™

## POOL SYSTEMS

*The Healthy Alternative to Chlorine*

### MineralPURE®

*Mineral Ionization*

### O<sub>3</sub>zoneMAX™

*Vacuum-ultraviolet Ozone System*

Manufactured by



Established 1989

[ClearwaterPoolSystems.com](http://ClearwaterPoolSystems.com)

1-800-756-SWIM (7946)

727-562-5186

Authorized Dealer

[Green-Energy-Products.com](http://Green-Energy-Products.com), LLC

13055 SW 83rd Avenue

Pinecrest, FL 33156-6648

305-251-9630

<https://green-energy-products.com/product-category/clear-water-pool-systems/residential-models/>



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