OZONE PRO
WATER TREATMENT SYSTEM

Recycle and Disinfect your Nutrient Solution.
The Ozone Pro is a software-controlled water sterilization system for recycled irrigation wastewater.

- Thousands of times faster and more powerful than chlorination
- Ozone dissipates within minutes to reoxygenate the water
- Unlike UV technology, the variable injection of ozone eliminates inorganic and organic contaminants such as algae

The Ozone Pro is key to improving the bottom line and can be customized to suit the grower’s specific needs such as water flow rates. Ensure the crop has fresh, clean, purified water with every irrigation.

**Value Proposition**

Biofilm is a slimy scale that grows in irrigation equipment for almost all growing operations. This film can clog emitters and cause crop failure or variations in the crop because of partial clogging.

- The Ozone Pro destroys biofilm and allows for recycling of water
- The Ozone Pro also adds needed oxygen to the roots of the crops
- Recycling leachate reduces fertilization costs
BENEFITS

The Ozone Pro water treatment technology for leachate complies with environmental regulations and will give the grower the following benefits:

- Reduced fertilizer costs of 40% and water savings of 30%
- An increase in crop yields by as much as 10%
- Lower power consumption and operating costs
- No chemical residue left in the water
- Higher residual oxygen in the water for stronger, healthier roots
- Removal of bacteria, viruses and algae from the recycled nutrient water

The process of dissolved ozone in the water kills any bacteria, viruses, and pathogens resulting in clean, sterilized leachate.

TECHNICAL

The CCS-SW80 Plasma Ozone technology is ideal for sterilizing irrigation wastewater for all crops, indoor and out. The ozone water treatment systems are available for water flow rates from 10 U.S. GPM to 1000 U.S. GPM. Each system is custom-designed to suit any specific flow rate.

The process of dissolving ozone with patented Nano-Bubble technology into the water kills any bacteria, viruses and pathogens resulting in clean sterilized water for blending with fresh water before it is treated by the fertilizer treatment system as it is sent to the plants.

The residual ozone in the water not only sterilizes but also provides enriched dissolved oxygen in the irrigation water which is very beneficial for plant growth.
OZONE PRO SOFTWARE PROGRAM

RUN TIME SCHEDULE SCREEN

The Run Time Schedule screen allows the grower to set the time period to run the Ozone Pro system over the 24-hour day.

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METERS SCREEN

The Meters screen displays ORP (Oxidation Reduction Potential), conductivity, pH, temperature and water levels in the related tanks. All readings are displayed on each LCD display and on the computer screen. Meters can be programmed to show up on the main screen as required. Each meter can be labeled by a specific tank name for easy identification.

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OZONE PRO SCREEN

The Ozone Pro screen gives an overall view of the system status and schedule. The green indicator lights on the right side of the screen indicate that all functions are normal. If the indicator lights turn red, it indicates a fault function within the system.
The Maintenance screen displays the function of the ORP (Oxidation Reduction Potential) Sensor, Filter, Air Dryer and Molecular Sieve Cylinders.

**MAINTENANCE SCREEN**

**SET UP SCREEN**

The Set-Up screen allows the grower to program the meters required for the system. (1) System Settings are for the setpoints for the ORP meter/controller and the Water Flow Meter Settings. (2) Meter Configuration programs specific meters in or out of the program. (3) Timer Delays preset the Oxygen, Ozone and Pump delays. (4) Alarm Delays preset alarm delays for the ORP Meter, Water Flow, Oxygen, Pressure, Ozone Level, Generator Fault and Ozone Leak Detection.
AVAILABLE SYSTEMS

MEDIA FILTRATION SYSTEM
The Media Filtration system is available for various flow rates for the filtration of irrigation water.

Media filters remove any loose particulates down to 5 microns. They are also an excellent way of removing various types of unwanted elements in the collected water before it is sent to the ozone treatment system.

BUILT-IN OXYGEN GENERATING SYSTEM
This built-in oxygen generator provides pure oxygen to produce maximum ozone levels for bacteria destruction.

As some of the oxygen ends up at the root zone it enhances root development in turn producing a healthier plant.

OZONE BACTERIA DISINFECTION SYSTEM
Ozone bacteria disinfection systems are available for various water flow rates. The system is complete with solid-state reactors with 4 to 20 mA input to connect to the ozone controller.

Once the system is set up, it automatically maintains a set ozone level in the water to constantly destroy bacteria.
Climate Control Systems is a North American distributor for Watts Water Systems.

Watts RO Systems are complete commercial reverse osmosis systems. Their standard features include electronic controllers, Big Bubba pre-filter housing, and heavy-duty multi-stage centrifugal pump. Flow meters and pressure gauges are included at various points in system. Options include UV treatment and installed chemical feed pump.

**INSTRUMENTATION AND CONTROL**

- Optional relays for process control and alarms
- Field searchable 4 to 20 mA for computer interface
- Power supply 12 to 24 VDC regulated

**Water Flow Meter/Controller**
- 0515 Water flow sensor from ½" line to 12" lines
- 2536 Water flow sensor from ½" line to 12" lines

**Conductivity Meter/Controller**
- 2821 Conductivity Sensors

**pH, ORP, Oxygen Meter/Controller**
- 2726 pH sensor (round bulb)
- 2724 pH sensor (flat sensor)

**Water Level Meter/Controller**
- 2250 Water Level Sensor
  - Programmable tank level indication
  - Programmable in gallons or liters

**Temperature Meter/Controller**
- 2350 Temperature Sensor
  - Temperature in degrees Celsius or Fahrenheit
  - Optional relays for process control and alarms
Creating consistent growing environments for **healthy crop growth and quality control.**

Climate Control Systems Inc. has been manufacturing greenhouse automation systems around the globe since 1985.

Our greenhouse automation software and solutions work around the clock to optimize greenhouse climate, increase crop yields and reduce water, energy and fertilizer costs.

We provide complete solutions for your growing operations. Our solutions help achieve a better crop while saving you precious time and overhead costs.

Nebula Group’s primary mission is to profitably expand leadership in food production and safety in a localized manner through the decentralization of the food supply chain via sustainable resources, modernized technology systems, and self-sufficient processes. Learn more at nebulagroup.co.

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