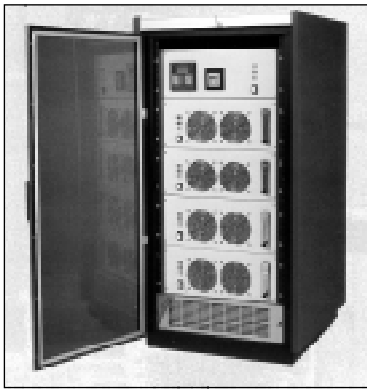




OZONEX™

Clean Water Cleaner Environment



Thousands of municipal and private water treatment companies around the world have greatly reduced chemical usage by installing ozone generators. They have experienced the many benefits of ozonation, including increased equipment life, lower maintenance and energy costs, higher operating efficiency and the reduction or elimination of chemical handling and waste disposal.

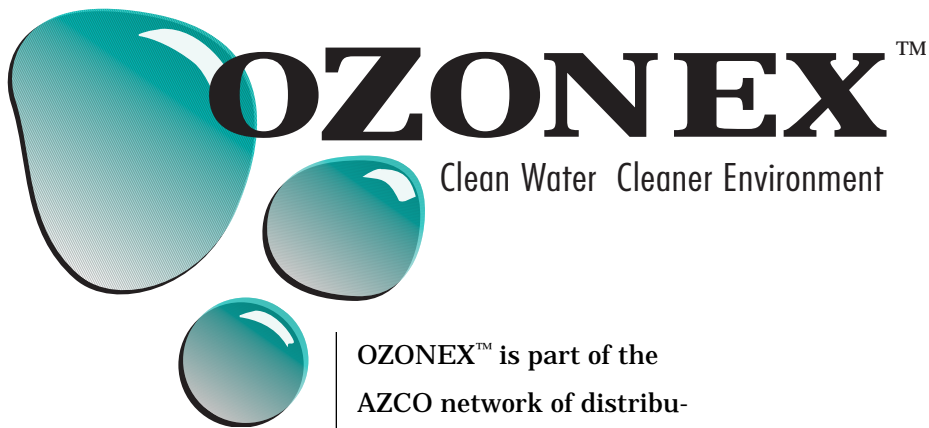
OZONEX™ is a complete water treatment system designed specifically for each application. Cooling towers, thermal storage, scrubbers and other open circuit water applications will benefit from the OZONEX™ system.

What is Ozone?

Ozone (O₃) is a powerful oxidizing agent, 1.5 times stronger than chlorine and thousands of times more effective as a biocide, yet biodegradable and environmentally friendly. Three atoms of oxygen form one molecule of ozone, which is created by either electrical discharge or ultraviolet light. Inherently unstable, ozone leaves no undesirable residue if injected into water; excess amounts will simply revert back to oxygen.

How the Ozonex System Works

OZONEX™ ozone generators create ozone by passing dry air or oxygen through a unique pulse injection corona discharge dielectric field producing ozone concentrations of 1-3%. Contact between the dielectric field and the oxygen molecules produces an ozone gas which is more reactive than oxygen. The ozone gas is then injected into the water. When ozone hits the water it is almost instantly transformed into other oxidizers: hydrogen peroxide, perhydroxyl/hydroxyl radicals and oxygen. In water, the ozone first reacts with easily oxidized substances (FE⁺⁺, MN⁺⁺), and then with organic compounds and pathogens, removing soluble refractory organics and killing, almost instantly, bacteria and micro-organisms. The OZONEX™ process does not form organic compounds, therefore there are no toxic by-products.



Why Ozonex?

OZONEX™ is part of the AZCO network of distributors, dealers and consultants throughout the United States and Canada. The breadth of knowledge, experience and innovation is unmatched in the ozone industry.

OZONEX™ is backed by a company with over 30 years experience in the HVAC market, and offers full engineering and custom design capabilities. Please call your local OZONEX™ distributor for a current list of installations and references.



System Features

- ≈ ORP- (Oxidation/Reduction Potential) controlled to maintain a maximum effective yet non-corrosive ozone level in water
- ≈ Modular design allows for multiple modules to be built into racks for any ozone output requirement
- ≈ Redundant components assure uninterrupted operation
- ≈ Solid state circuits
- ≈ Negative pressure venturi injection and static mixer manifolds
- ≈ Ozone-resistant construction – all piping and components
- ≈ Totally air cooled
- ≈ High dewpoint alarm and interlock
- ≈ Relative humidity sensor and interlock
- ≈ System elapsed time meter
- ≈ Air dryer, -65°F dewpoint, autoregenerative desiccant
- ≈ Balance barometer (backflow preventer)
- ≈ Generator failure alarm
- ≈ Safety interlocks and flow switch
- ≈ CleanStream™ filtration/ solid separation unit consisting of pump, filter, valves, controller, flow switch, injector, mixer and wiring assembled on steel base

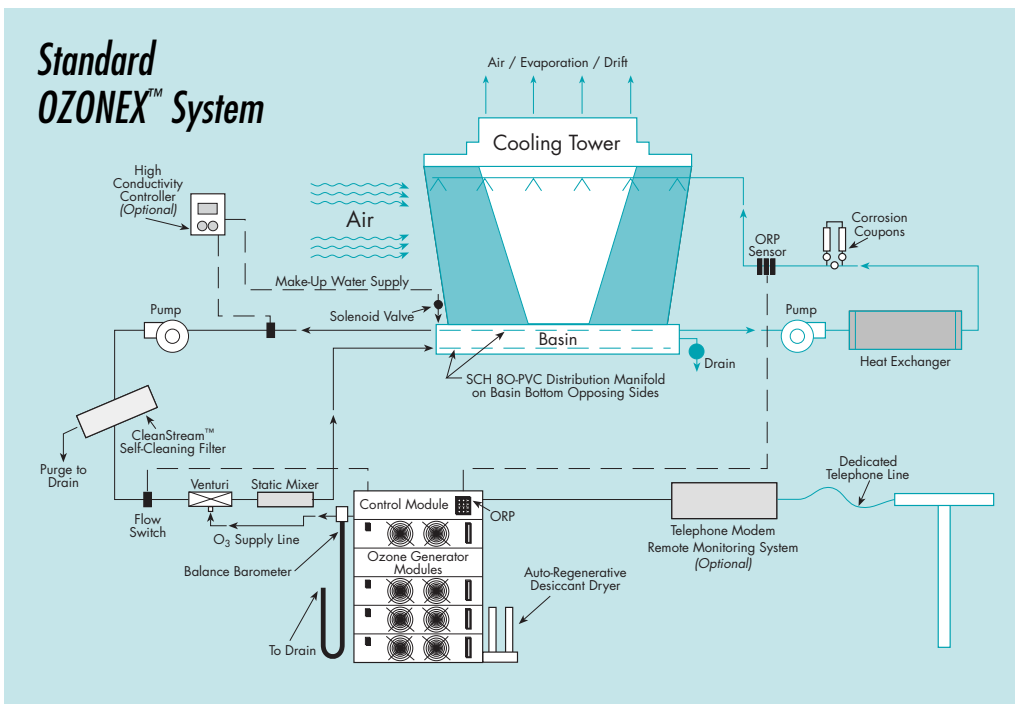
System Benefits

There are many reasons for using the OZONEX™ system instead of chemicals:

- ≈ Virtually eliminates transportation, handling, storage and disposal of environmentally harmful chemicals
- ≈ Reduces or eliminates cooling tower “blow down” which substantially reduces water consumption
- ≈ Allows cooling towers and scrubbers to operate at higher cycles of concentration
- ≈ Oxidizes grease, oil, amines and contaminants out of the water
- ≈ Increases heat transfer efficiency by practically eliminating scaling and fouling
- ≈ Minimizes corrosion, extends equipment life
- ≈ Attacks microbiological contamination (including Legionella disease)
- ≈ Improves filterability of suspended solids
- ≈ Reduces energy, maintenance and downtime costs
- ≈ Maintains pH and total alkalinity
- ≈ Greatly reduces maintenance costs of water treatment equipment

Options

- ≈ Conductivity meter to control cooling tower blow-down
- ≈ ORP time meter
- ≈ Digital programmable pH controller
- ≈ Custom configurations
- ≈ Air conditioned housing for ozone equipment
- ≈ Telephone modem for remote monitoring
- ≈ Positive pressure systems
- ≈ Oxygen separators to provide concentrated oxygen for increased ozone output
- ≈ Dissolved ozone control/monitors
- ≈ Ozone destruct chambers





OZONEX™ Ozone Systems Sizing Guide

OZONEX™ will engineer a water treatment system for your specific site. Factors to be considered include make-up water quality (hardness, total dissolved solids), surface temperature inside the system, periods of system operation, size of the system, sun exposure, and other site-specific variables such as geographic location and skill levels of maintenance personnel.

Maximum Tower Size <i>Tons</i>	Maximum Cooling System Volume ¹ <i>Gallons</i>	Ozonization Equipment ^{2,5} <i>Model No.</i>	Filtration/Injection Package ^{2,3,4,5} <i>Model No.</i>	Filter Pump <i>Horsepower</i>
300	6000	RMU-08-1	IFP-100-2	3
400	7250	RMU-08-1	IFP-130-3	5
600	10,800	RMU-0408	IFP-180-3	5
800-1000	15-20,000	RMU-16-1	IFP-260-4	7.5
1200-1400	23-26,800	RMU-0816	IFP-350-4	7.5
1600-2000	30-36,800	RMU-16-2	IFP-530-6	15

NOTES:

1. For areas with high levels of airborne contamination add 25% to system capacity *for unit selection purposes only.*
2. Power requirements: RMU – 120 volts AC, single phase. IFP – available in 208, 230, or 460 volts AC, three phase.
3. Flushing valve connection(s) 2" NPT. IFP-350-4 and 530-6 have two valves.
4. Bag-type filter for flush water recycling available (zero purge).
5. Units must be installed at same elevation and within 100 feet of cooling tower.



Ozonex Filtration/Injection Packages

An ozone-treated cooling tower operates at higher cycles of concentration, with greater levels of dissolved solids. While this reduces bleed-off water requirements, it also results in a precipitate, in the form of a fine silt, that settles in the cooling tower sump.

The CleanStream™ by OZONEX™ utilizes a unique water saving two-stage filter to automatically remove this silt while it is still suspended in liquid. Ozone is injected by a special venturi and static mixer into the water at the filter pump, which is monitored by a flow switch interlocked to the ozone generators.

The CleanStream™, combined with the ozone injection manifold, forms a compact, ready-to-install factory assembled package.