



## Cooling Towers

Cooling towers discharge waste heat at the end of a cooling system. They are used by manufacturing, power plants and HVAC systems. Cooling towers cool by evaporating water and can be easily identified by the misty vapor blowing into the air. In many cases cooling towers are the number one users of water in the entire facility. As you would expect, treating water for use in cooling tower systems has some challenges. As water evaporates, solid residue in the water is left behind that can build up scaling on heat exchange surfaces which reduces the cooling efficiency. As water temperature rises, the life-giving properties of water can also encourage bacterial growth to become more aggressive. Depending upon the chemistry of the water, it could have a corrosive effect on the heat exchange surfaces and piping. A standard water treatment uses a biocide (for bacteria) a scale dispersant (to keep hardness in solution) and a corrosion inhibitor. These must be constantly added to the water because some of the chemicals are lost with the evaporating water and more is pushed down the drain as new make up water refills the cooling tower.

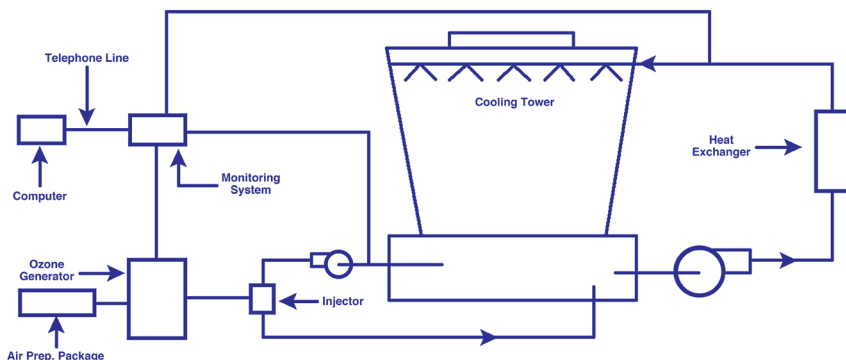
The use of ozone as a water treatment alternative for cooling towers has some great advantages. Ozone is a very effective disinfectant that does not allow algae, bacteria or viruses to build up because it oxidizes both organic and inorganic substances. Microorganisms cannot become resistant to ozone even after long exposure, like they can and do in response to most chemicals. Biocides are environmentally the most persistent of the cooling tower chemicals. Using ozone in place of biocides reduces environmental impact and allows for more water savings due to the purity of ozonated water. Ozone permits chemical free cooling towers by replacing disinfectants, dispersants and inhibitors. The high efficiency of heat exchangers is maintained because ozone prevents scaling and biofilm buildup. Immediate savings will occur because there are no chemical compounds to buy, store, apply and dispose of.

### OWS OFFERS:

- Service
- Rental Equipment
- Monitor Calibrations
- Uniform Fire Code Compliance
- Parts Support
- Sales
- Pilot Systems
- Refurbished Equipment
- In-house Repairs
- Custom System Design
- Years of Experience

### OZONE FACT

Ozone can be used in conjunction with chemicals or as a stand-alone treatment depending on water quality.



Typical Ozone Skid

