



**ELTECH OZONE PVT LTD** is the group company of **ELTECH ENGINEERS PVT LTD**, established in 1992. Eltech Ozone Pvt Ltd is an ISO 9001: 2015 and CE certified Indian Company manufactures different types of Ozone Generators from 1gm/hr to 2 kg/hr.

Eltech Ozone Pvt Ltd is formally for Ozone Generators virtually applications like Waste water treatment, Sewage water treatment, Effluent water treatment, Packaged drinking water, Swimming pool, Laundry, Cooling tower water treatment and Air purification like STP Exhaust, OWC exhaust / rooms, Kitchen exhaust, etc.

We are located in Mumbai, Dahisar at Diamond Industrial Estate, Near toll plaza, Off western express highway.

We have supplied industrial Ozonators to Hyderabad, Australia, etc

## Ozone use in Poultry

Ozone is used in the poultry industry as air and water disinfection /treatments for the storage, incubation of eggs and breeding of healthy birds. Ozone being an effective oxidant, it is mostly used for processing, storage and transport of poultry and meat products. Ozonated water is used to feed the birds as drinking water, wash and sterilize meat and equipment to kill harmful bacteria, virus, pathogen and deodorized the air inside poultry farm.

Although the properties of ozone have been known and studied since the mid 19th century, it is only during the last two decades that it has been applied in commercial and industrial contexts. Initially, circa 1906, ozone was used as a clarifying, deodorizing and purifying agent in drinking and wastewater treatment plants in Europe, where it gained a level of acceptance over the years.

## PROPERTIES OF OZONE

Ozone is a gas that is formed by the breakdown of elemental, diatomic Oxygen ( $O_2$ ) and the recombination of a percentage of the oxygen atoms into a triatomic molecule ( $O_3$ ). Although normal oxygen, a component of the stronger oxidizing properties and reacts more quickly, often in fractions of a second, with a wide range of substances.

In addition, it is one of the most effective biocides known to science, better even than chlorine, bromine and other commonly used disinfectants. Unlike the latter substances, however, it does not form hazardous disinfectant byproducts (DBP's) such as dioxin and nitrites that are harmful to the environment or are toxic to animals and humans. Once ozone has fully reacted with substances in water or air, excess gas decomposes quickly to normal oxygen and is reabsorbed into the atmosphere.

Ozone can be generated from two sources: ambient air or pure oxygen. Because it reacts so easily with other elements and is inherently unstable, it exists for only a short time before combining with another substance or reverting to normal oxygen. Accordingly, it must be generated on-site at the point that it is to be used. Unlike chlorine and other dangerous disinfectants, it does not need to be handled, transported or stored, thereby posing little hazard to personnel at the facility.

Finally, when used in proper concentrations, ozone is an effective corrosion inhibitor, and in the washroom context can reduce the need for substances like chlorine, which are extremely corrosive for equipment and fabrics.



## Ozone – Air treatment for Poultry

- \* Ozone oxidizes ammoniacal gases, methane and carbon dioxide, creating a healthier environment for the birds and the staff working in the poultry.
- \* Ozone is more effective than other air disinfecting systems such as chemical fogging and UV light.
- \* In growing birds, ozone in the pens as a gas reduces the amount of bacteria and thus reducing the spread of infection and viruses thereby increasing their health and even weight by up to 18%. Ozone application helps to improve their skin colour.
- \* Ozone is more effective than formaldehyde in disinfecting Poultry sheds and requires no dormant period in which the sheds have to remain evacuated. Immediately after disinfecting by ozone at high concentrations, the shed is ventilated and can be inhabited by the birds and staff safely. Unlike formaldehyde, ozone is non-carcinogenic.
- \* Hatching hens which are kept under ozonized conditions show an increase in the amount of eggs they lay, and a stronger consistency of the egg shell, because of the corresponding decrease in pathogenic illness and prevention of a toxic build up of disinfectant chemicals. Ozone is used to disinfect incubation rooms and chambers, in the place of chemicals which cause a toxic build-up on the egg shell surfaces and weaken the immune system of the birds.



## Ozone in drinking water for Poultry

Drinking water for poultry is an important dietary requirement. Under normal conditions, birds will consume, approximately, double the quantity as food on weight basis. Poor water quality, can retard growth, curtail egg production, or produce lower egg quality. Feed conversion has been positively correlated to the presence of sulfate and copper concentrations in the water and Ozone effectively oxidize them and can be easily removed by filtration

## Benefits of ozone in drinking water

1. It reduces waterborne pathogens and prevents development of resistance by pathogen
2. It helps to accelerate weight gain by the birds
3. It improves feed conversion and increased layer output
4. It helps to increase the dissolved oxygen in water which helps the birds to tolerate heat.

## Ozone – Water treatment for washing Poultry carcasses, equipment's and Cold Storage.

\* Ozonated water is effective as a disinfectant for poultry carcasses without loss of colour and flavour.

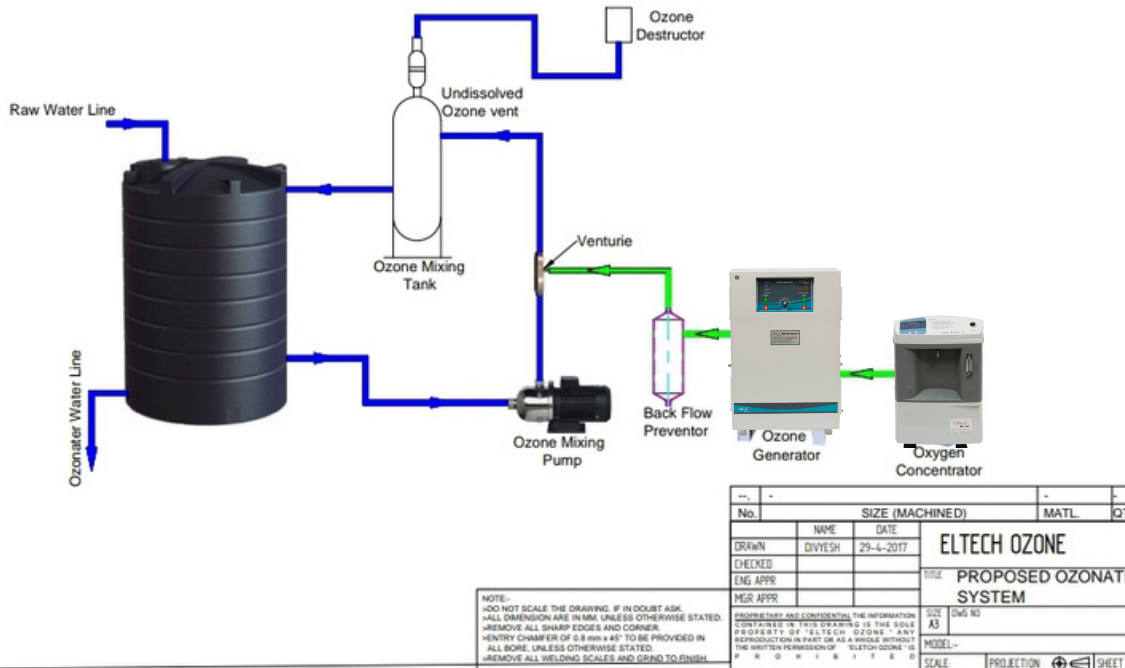
\* Ozonated water kills instantly more than 5 log units of Salmonella typhirium and Escherichia coli cells, as well as 4,5 log units of Candida albicans and Zygosaccraomyces bacilli.

\* It has been proved that Staphylococcus colonise on de feathering machinery have become endemic with poultry processing plants, and become resistant to normal cleaning and disinfecting, including chlorine. Ozone has got the property of killing and destroying those bacteria effectively.

\* Ozone during refrigerated storage of poultry has a pronounced effect on flora causing deteriorations and consequently prolongs the shelf life of poultry in cold storage.

# Eltech Ozone Pvt Ltd

## Process Layout and Ozone Model



*Ozone Generator and  
Oxygen Concentrator*



## ELTECH OZONE PVT LTD

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