



**Ozonator** artificially convert oxygen (O<sub>2</sub>) to ozone (O<sub>3</sub>) using an electric discharge field (Corona discharge simulation of the lightning). In general, dry air carrying about 21% oxygen or pure O<sub>2</sub> oxygen gas is used as feed gas which is allowed to pass through high voltage discharge tube which converts O<sub>2</sub> to O<sub>3</sub>. The quantity of the ozone output is doubled when oxygen is used as feed in place of dry air to the same size ozonator. Oxygen feed also increases the ozone concentration in the output gas. During this high voltage corona discharge process, heat is evolved so either air or water is used to keep the temperature of the system down. Smaller systems are available in air cool whereas large systems are designed for water cooled operations.

Ozone is a powerful oxidant which can kill most bacteria and microorganisms present in the water. Ozone has a very strong oxidizing power with a short reaction time and additionally help eliminate a wide variety of inorganic, organic chemicals, taste and odor problems, slime growth.

Ozone is effective over a wide pH range and rapidly reacts with bacteria, viruses and protozoans. Ozone has stronger germicidal properties than chlorine and does not create any carcinogenic chlorinated disinfection by-products. In bottled water ozonation, the ozone system is controlled to maintain a specific dissolved ozone concentration for a set contact time, which provides a powerful disinfection before the bottling step, treatment, packing and increases its shelf life.

Ozone systems can be used at pre-treatment process steps to assist in removal of iron, manganese, colour, bacteria, taste and odor. Pre-ozonation reduces development of biofilm and ensures the quality of the water and also reduces the maintenance costs of the process equipment. In many cases ozone is used alongside with other techniques, but is always a central treatment and sanitation step to avoid unwanted taste in the final product which will be the case if chemicals such as chlorine are used.

Water 2000 design and install a complete range of ozone treatment systems from laboratory use to large municipal water treatment application. We are one of the few manufacturers who use premium certified components giving your system optimum performance with reliability and durability. A complete ozone treatment system comprises of ozone generator, ozone injector, re-circulation pump, ozone mixing tank and ozone monitoring system..



## Benefits

- Non-chemical & economical disinfection
- Clearer, cleaner water
- No residue or chemical by-products
- Complete sanitation
- Eliminate handling of chemicals
- Effective slime growth
- Superior oxidation
- pH neutral
- Reduces dissolved metal

## Applications

Few of the main uses of ozone technology and its systems are

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|-----------------------------------|----------------------------------|-------------------------------|
| • Municipal water                 | Drinking water                   | Bottles water                 |
| • Cooling water treatment         | Process industry                 | Industrial process water      |
| • Food & beverage                 | Dairy industries                 | Pharmaceutical                |
| • Hospitals, medical and dialysis | Apartments, condominiums & homes | Motels, resorts & restaurants |



Water 2000 offers a wide range of water treatment systems for industrial, commercial, residential, municipal and irrigation applications. Please give us a call on 042 3542039-40 or email us at [sales@water2000.com.pk](mailto:sales@water2000.com.pk) and one of our professional team member will happily demonstrate, using our solutions, how we can save your significant cost and greatly improve the performance of any of your water or wastewater treatment system.

