

The Ozonator™ converts atmospheric oxygen to ozone for the oxidation of organics to carbon dioxide and water. DTS produces units sized to destroy from 1 to 10 ppm TOC in 1 to 100 gpm streams.

Ozonator™ Application

The Ozonator™ is an excellent tool to destroy TOCs, and an effective alternative to sodium hypochlorite for cleaning membrane filtration systems.

Ozonator™ Operation

Ozone is pumped under pressure into a contact vessel. There it dissolves into water, providing intimate contact with dissolved and suspended organic contaminants. The contaminants are destroyed in minutes.

Advantages of Ozone Generation

Ozone generation technology has been used successfully in industrial applications, and been proven to be effective in nuclear power plants.

Ozone is the strongest oxidant suitable for use in a nuclear application. The advantages of ozone over sodium hypochlorite and peroxide include:

- Since ozone is generated by an electrical discharge into oxygen (supplied as plant air), no handling of hazardous chemicals is required. Ozone production starts with the flip of a switch.
- Ozone has a much higher oxidation potential than hypochlorite (free chlorine). This means that ozone reacts faster and attacks organics at a much higher rate.



DTS Double Ozone Generator Unit

- Because ozone decomposes to oxygen, no chemical contaminants (such as sodium chloride) will affect downstream ion exchange performance or capacity.
- Ozone has a half-life of approximately 30 seconds, so there is no credible scenario for it to be found in plant effluent.
- Ozone dissolved in water is less aggressive to Tubular Ultrafiltration (TUF™) membranes than hypochlorite. The use of ozone can extend membrane life and reduce fouling and the need for cleaning, while maintaining a high flux rate.