CROISSANCE CORPORATION
Air, Water & Innovation...

OZONE TECHNOLOGY IN WASTEWATER TREATMENT

Disinfection | COD/BODReduction | OdorControl

INTRODUCTION

Wastewater contains a complexmix of organic pollutants, pathogens, colorants, and chemicals that must be removed before discharge or reuse. Conventional methods rely heavily on chlorine and other oxidants, which generate harmful disinfection by-products (DBPs) and contribute to secondary pollution.

Ozone (O_3) is one of the strongest and cleanest oxidants available. It provides broad- spectrum disinfection, odor elimination, COD/BOD reduction, and color removal—all while decomposing back into oxygen, leaving no harmful residues. Ozone helps industries and municipalities meet strict environmental regulations and reduce chemical dependency

How It Works?

01 Ozone Generation

Oxygen is converted into ozone using industrial-grade generators

02 Injection

Ozone gas is dissolved into wastewater using venturi injectors or diffusers

03 Oxidation

Ozone destroys micro organisms, breaks down complex organic molecules

04 Decomposition

Ozone reverts to oxygen, leaving treated water free of secondary pollutants

Benefits at a Glance

Effective Disinfection

Kills bacteria, viruses, protozoa, and fungi

COD & BOD Reduction

Converts refractory organics into biodegradable forms

Color Removal

Breaks down dye sand pigments in industrial effluents

Odor Control

Eliminates hydrogen sulfide and volatile organic compounds (VOCs)

Residue Free

Leaves no harmful by-products like chloramines or THMs

Applications of Ozonolysis

Municipal Wastewater
Final disinfection before discharge or reuse

Industrial Effluents
Textile, paper, chemical, pharmaceutical, and food industries

Combined Treatment Plants
Mixed municipal + industrial wastewater treatment

Tertiary Treatment & Reuse
Polishing step before recycling water for cooling, irrigation, or industrial use

Technical Notes

(Indicative Range – customizable)

01 **Dosing Range**

5–50 mg/L for COD/color reduction; 1–5 mg/L for disinfection

02 **Contact Time**

5–20 minutes in ozone contact chambers

03 **Performance**

- Up to 90% color removal in textile effluents
- 30–70% COD reduction depending on load
- Complete pathogen inactivation in seconds to minutes

05 **System Components**

- Ozone generator (oxygen-fed, high capacity)
- Ozone injection systems
- Dissolved ozone monitoring sensors
- Ozone destructors for off-gas handling

Safety First

01 Use ozone only in closed contact systems

02 Excess ozone safely neutralized with destructors

03 Operator safety ensured with ambient ozone sensors

04 Must follow OSHA exposure limits (0.1 ppm, 8-hour TWA)

Recommended Products

(as per requirements we suggest)

01 Oxipure CDI Series

Industrial ozone generators for municipal and industrial wastewater

02 Oxipure CC Series (SUEZ)

High-capacity generators for large wastewater treatment plants

03 Ozone Mixing Systems

Efficient gas-liquid contact for reliable treatment

04 Dissolved Ozone Sensors

Continuous monitoring of ozone levels in wastewater

Conclusion

Ozonetechnologyoffersa powerful, sustainable, and residue-free solution for wastewater treatment. It enhances COD/BOD reduction, removes color and odors, and provides pathogen-free discharge or reuse water. With Croissance's advanced ozone systems, municipalities and industries can achieve compliance, cost savings, and environmental sustainability

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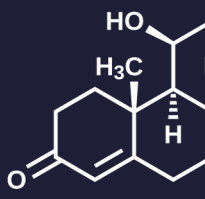
Your Next Step

Experience the future of safe, sustainable sterilisation.



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