CROISSANCE CORPORATION
Air, Water & Innovation...

OZONE TECHNOLOGY IN SEWAGE TREATMENT PLANTS (STPS)

CleanerEffluent • Odor-Free • Eco-FriendlyCompliance

INTRODUCTION

Sewage Treatment Plants(STPs) face major challenges: pathogen control, odor removal, color reduction, and meeting discharge norms. Conventional treatments often rely on chlorine and other chemicals, which generate harmful disinfection by-products (DBPs) such as trihalomethanes (THMs), raising environmental and health concerns.

Ozone (O_3), a powerful oxidant, provides a sustainable alternative. It ensures effective disinfection, odor removal, and organic breakdown—leaving behind only oxygen. Ozone treatment helps STPs achieve regulatory compliance, reduce chemical usage, and improve effluent quality

How It Works?

01 Ozone Generation

Oxygen is converted into ozone using industrial generators

02 Injection into Effluent

Ozone is dissolved in treated sewage water via mixing systems

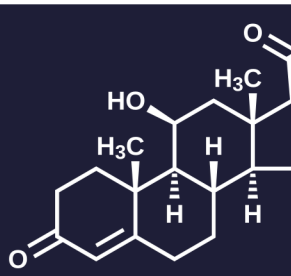
03 Oxidation & Disinfection

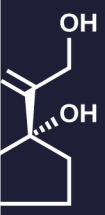
Ozone destroys bacteria, viruses, fungi, and protozoa while oxidizing organic compounds, colorants

04 Self-Decomposition

Ozone reverts back to oxygen, leaving no harmful chemical residues

Benefits at a Glance





Pathogen Elimination

Broad-spectrum disinfection without harmful residues

Odor Control

Removes foul smells caused by H_2S and organic compounds

Color Reduction

Breaks down dye sand pigments in industrial sewage

Improved BOD/COD Reduction

Enhances biodegradability of organics

Eco-Friendly

No harmful by-products; replaces chlorine-based disinfectants

Applications of Ozonolysis

Municipal STPs
Final effluent disinfection before discharge

Industrial Effluents
Textile, pharma, chemical, and food industries

Tertiary Treatment
As an advanced step after biological treatment

Odor & Sludge Reduction
Oxidizes compounds responsible for foul odors

Technical Notes

(Indicative Range – customizable)

01 **Ozone Output**
10 g/h – 500 g/h+ depending on plant capacity

02 **Dosing Levels**
Typically 2–10 mg/L for effluent disinfection

03 **Contact Time**
5–15 minutes in ozone contact chambers

04 **Performance**
Can reduce pathogens to below 1 MPN/100 ml, meeting WHO/EPA discharge guidelines

05 **System Components**

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

Safety First

01 Ozone applied in closed contact chambers only

02 Excess ozone must be safely neutralized via destruct units

03 Operator safety ensured with ambient ozone sensors

04 Must comply with OSHA ozone exposure limits (0.1 ppm, 8-hour TWA)

Recommended Products

(as per requirements we suggest)

01 Oxipure CDI Series

Industrial ozone generators suitable for sewage & effluent treatment

02 Oxipure CC Series (SUEZ)

High-capacity ozone generators for large municipal STPs

03 Ozone Mixing Systems

Venturi and diffuser-based mixing for effluent treatment

04 Dissolved Ozone Sensors

Continuous monitoring for precise disinfection

Conclusion

Ozone technologyprovidessafe, effective, and eco-friendly disinfection for sewage and industrial effluents. It helps STPs achieve pathogen-free, odor-free, and compliant discharge while reducing dependence on hazardous chemicals. With Croissance's advanced ozone systems, STPs can move towards sustainable water management and a cleaner environment

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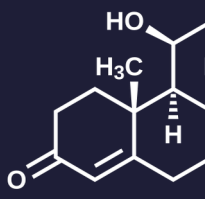
Your Next Step

Experience the future of safe, sustainable sterilisation.



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