CROISSANCE CORPORATION
Air, Water & Innovation...

OZONE TECHNOLOGY IN EFFLUENT TREATMENT PLANTS (ETPS)

ColorRemoval | COD/BODReduction | Eco-FriendlyCompliance

INTRODUCTION

Industrial effluents often contain dyes, chemicals, heavy organics, and pathogens that are difficult to treat using conventional methods. Traditional chemical treatments may reduce pollutants but generate secondary sludge, toxic residues, and high operational costs.

Ozone (O_3), one of the strongest oxidants, offers a sustainable, residue-free solution. It breaks down complex organic molecules, reduces color and odor, lowers COD/BOD, and disinfects water—leaving behind only oxygen. Ozone treatment helps industries achieve regulatory discharge norms and reduce environmental impact

How It Works?

01 Ozone Generation

High-capacity generators produce ozone from oxygen

02 Injection

Ozone is dissolved into effluent via venturi injectors or diffusers

03 Oxidation

Ozone breaks down dyes, phenols, pesticides, and refractory organics while killing pathogens

04 Decomposition

Ozone naturally reverts to oxygen, leaving treated water free of chemical residues

Benefits at a Glance

Color Removal

Breaks down dye molecules (ideal for textile, paper, and chemical industries)

COD/BOD Reduction

Oxidizes complex organics into simpler, biodegradable compounds

Odor Elimination

Removes foul smells caused by sulfides and VOCs

Pathogen Control

Effective against bacteria, viruses, and fungi

Eco-Friendly

Eliminates need for chlorine, hydrogen peroxide, or other hazardous oxidants

Applications of Ozonolysis

Textile Industry
Color removal and COD reduction in dye effluents

Chemical & Pharma Plants
Oxidation of toxic intermediates and organics

Food & Beverage Processing
Odor, grease, and microbial load reduction

Pulp & Paper Mills
Color and lignin breakdown in effluent streams

Technical Notes

(Indicative Range – customizable)

01 **Dosing**

Typically 10–50 mg/L depending on effluent load

02 **Contact Time**

10–20 minutes in ozone contact chambers

03 **Performance**

- Up to 90% color removal in textile effluents
- 30–60% COD reduction (as pre-treatment or polishing)
- Pathogen reduction to safe discharge levels

05 **System Components**

- Ozone generator (oxygen-fed)
- Ozone diffusion system
- Dissolved ozone sensors
- Ozone destruct units for safe off-gas handling

Safety First

01 Must be applied in closed contact chambers

02 Residual ozone safely neutralized via destructors

03 Ambient ozone sensors protect operators from exposure

04 Complies with OSHA exposure limits (0.1 ppm, 8-hour TWA)

Recommended Products

(as per requirements we suggest)

01 Oxipure CDI Series

Robust ozone generators for industrial effluent treatment

02 Oxipure CC Series (SUEZ)

Large-scale ozone generators for high-capacity ETPs

03 Ozone Mixing Systems

Venturi and diffuser-based injection for efficient contact

04 Dissolved Ozone Sensors

Continuous monitoring for dosing accuracy

Conclusion

Ozone technologytransforms Effluent Treatment Plants by providing an eco-friendly, residue-free alternative to chemical oxidation. It helps industries reduce color, COD, odor, and pathogens while meeting strict discharge norms. With Croissance's advanced ozone systems, industries can achieve sustainable, compliant, and cost-effective wastewater management

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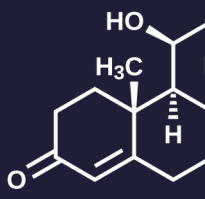
Your Next Step

Experience the future of safe, sustainable sterilisation.



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