



Industrial Water Treatment Choosing the Right Water Treatment Solution

From cooling towers and process loops to food & beverage production lines, water treatment must balance safety, system performance, and environmental responsibility. The available oxidation methods perform very differently in industrial contexts.

Key factors in water treatment

Biofilm removal efficacy

Safety

Byproducts

Is the method good at fighting biofilm?

Can it be used without risking materials damage or worker safety?

Does it leave harmful residues in the water?

	Chlorinator	Chlorine Dioxide	Ozone	Chemicals	Onsite Peroxide UltraPure™ Generation
Sustainable	⊗	⊗	⊗	~	✓
Biofilm efficacy	✓	⊗	⊗	✓	✓
Chemical-input free	~	⊗	✓	⊗	✓
Safety	⊗	⊗	⊗	⊗	✓

Chlorination is widely used for industrial water treatment but poses sustainability challenges. It leaves chemical residues that must be neutralised before discharge and involves safety risks such as the potential release of hydrogen gas.

Chlorine dioxide is effective against microorganisms but relies on hazardous chemical inputs and produces chlorine-based byproducts. Its generation and handling present significant safety risks due to the use of toxic gases.

Ozone is a strong oxidant that requires no chemical inputs and works effectively at the point of application. However, it has limited impact on system-wide biofilm control and demands careful safety measures during operation.

Conventional chemical treatments can be effective but are not chemical-input-free, requiring strict handling, storage, and dosing precautions to ensure worker safety and regulatory compliance.

Onsite-generated hydrogen peroxide (Peroxide UltraPure™) offers a clean and sustainable alternative. Produced directly from water, air, and electricity, it effectively controls biofilm throughout the entire system and decomposes into pure water and oxygen after use—leaving no residues or byproducts behind.