

INDUSTRIAL CHLORINE DIOXIDE SYSTEM**FEATURES**

0.1 lb/day to 50 lb/day Standard Systems
Custom Systems up to 400 lb/day
No ClO₂ Storage Required – Not a Batch Process
Dilute ClO₂ Solution Produced – Inherently Safe
Self Monitoring and Self Correcting Operation
Industry Proven Reliable Components

APPLICATIONS

Open Cooling Systems
Closed Cooling Systems
Secondary Disinfection
Reverse Osmosis Membrane Systems
Odor Control
Iron & Manganese Removal

The System

The CLO₂IX™ Industrial System is the ultimate Chlorine Dioxide conversion system. Built to withstand harsh and humid industrial water treatment conditions, the system consistently produces a pure solution of Chlorine Dioxide by utilizing the DWW patented Chlorine Dioxide production method.

The Process

The CLO₂IX™ Industrial System is based on *pure water* technology found routinely in the pharmaceutical and semiconductor industries where purity and safety are not optional. Instead of the traditional way of making Chlorine Dioxide by either mixing concentrated chemicals or through electrochemistry, which produces dangerous by-products, the CLO₂IX™ method combines ion exchange and catalytic technologies to ensure consistent product quality in a rugged industrial piece of equipment.

The Molecule

Chlorine Dioxide is the ultimate biocide. As a dissolved gas in solution, it can destroy and remove biofilm, eliminate both sessile and planktonic bacteria, and prevent their regrowth without interfering with most water treatment chemistry. As a weak oxidizer, it can destroy odors, clarify, and precipitate iron and manganese from contaminated water sources. As the ultimate biocide, it can eradicate Legionella and other harmful bacteria living and growing in water systems. These properties make Chlorine Dioxide the ideal biocide for most Industrial water treatment applications.

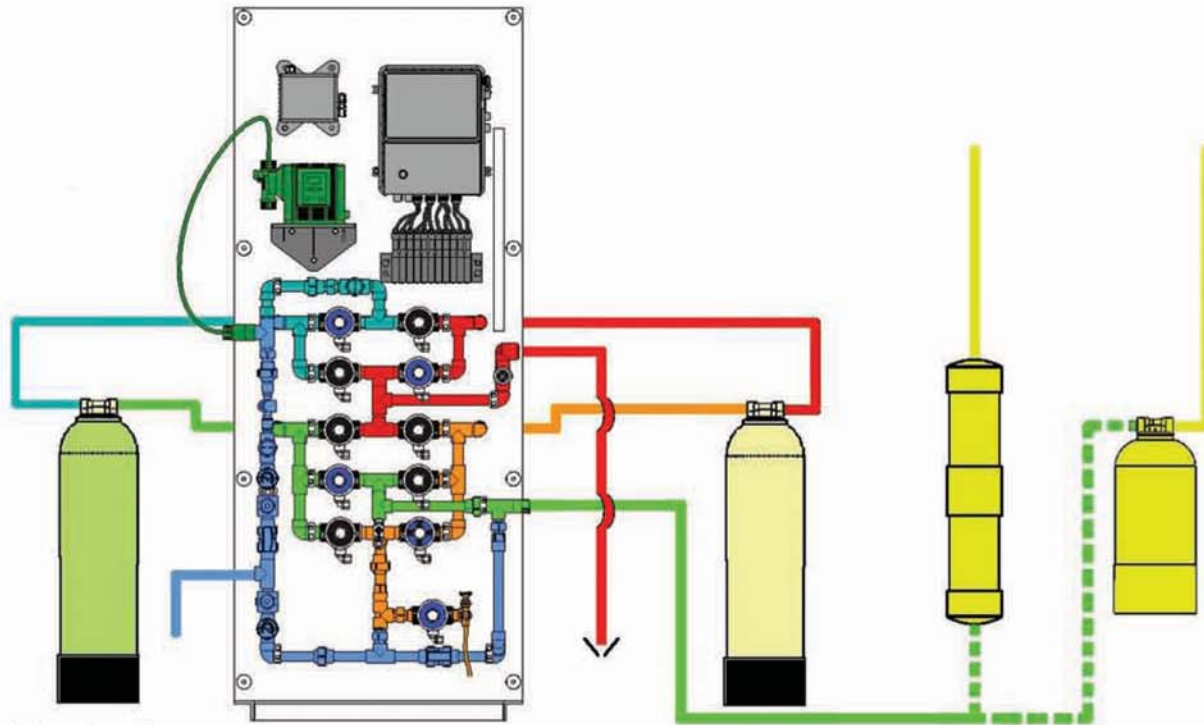


Hundreds of customers worldwide rely on CLO₂IX™ Chlorine Dioxide Systems.

THE PROCESS



HOW THE SYSTEM WORKS



Color coded to schematic

Inlet Potable Water	A potable water source is required for the system.
Sodium Chlorite	A 25% NaClO ₂ solution is diluted with potable water such that the resulting concentration of NaClO ₂ is 1,250 mg/l.
Chlorous Acid	The dilute NaClO ₂ flows through the ion exchange vessels where the NaClO ₂ is converted to HClO ₂ through the exchange of the Na ⁺ in solution for the H ⁺ on the cation resin.
Chlorine Dioxide	The HClO ₂ is converted to dilute ClO ₂ in the catalyst cartridge. The concentration of solution is a safe 700 mg/l.
Regeneration	The H ⁺ ion in the regenerant acid forces the Na ⁺ ion off of the exhausted cation resin. The system is a duplex system, which means that when one cation resin vessel is converting NaClO ₂ to HClO ₂ the other vessel is in regeneration. When the system determines that the first vessel is exhausted, the system automatically switches sides so that HClO ₂ production is not interrupted. To increase efficiency, the Impulse Regeneration Method is utilized.
Drain	The waste regenerant containing the Na ⁺ ions is flushed to drain as part of the regeneration process. The system also primes itself to drain.