

### COMMERCIAL CHLORINE DIOXIDE SYSTEM

#### FEATURES

- Less than 1.5 lb/day of Chlorine Dioxide
- Replaceable Cartridges – No Acid On Site
- Self Monitoring and Self Correcting Operation
- No ClO<sub>2</sub> Storage Required – Not a Batch Process
- Dilute ClO<sub>2</sub> Solution Produced – Inherently Safe
- Industry Proven Reliable Components

#### APPLICATIONS

- Secondary Disinfection
- Open Cooling Systems
- Closed Cooling Systems
- Reverse Osmosis Membrane Systems
- Customer Serviced Sites
- Sites with Acid Restrictions

#### The Process

The CLO<sub>2</sub>IX™ Commercial 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 CLO<sub>2</sub>IX™ method combines ion exchange and catalytic technologies to ensure consistent product quality in a dependable piece of equipment.

#### The Molecule

Chlorine Dioxide is the ultimate biocide. As the ultimate biocide, it can eradicate Legionella and other harmful bacteria living and growing in water systems. 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. These properties make Chlorine Dioxide the ideal biocide for most commercial water treatment applications.

#### The System

The CLO<sub>2</sub>IX™ Commercial System is the ultimate Chlorine Dioxide conversion system in its market. Built of industry proven industrial water treatment components, the system operates for years without component failure and the downtime associated with it. Instead, the Commercial System consistently produces a pure solution of Chlorine Dioxide by utilizing its patented Chlorine Dioxide production method.

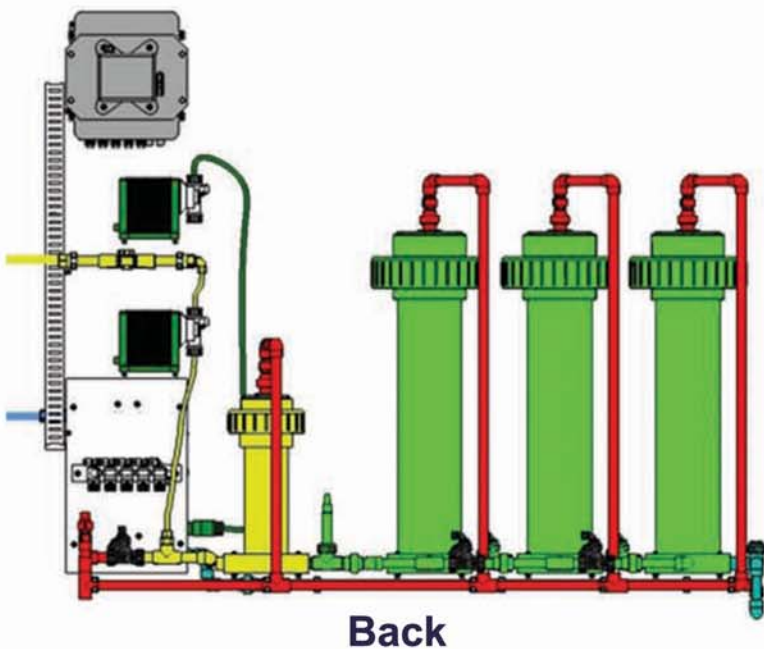
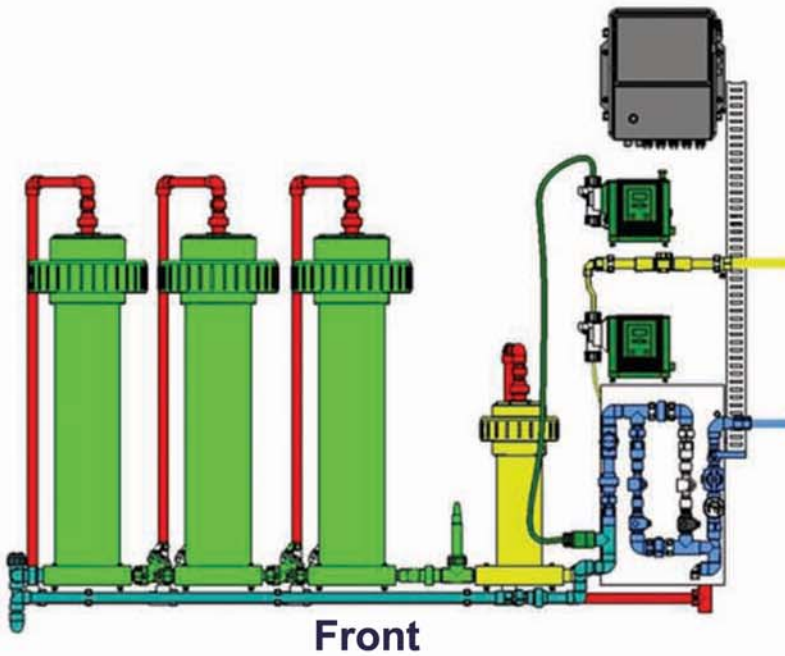


Hundreds of customers worldwide rely on CLO<sub>2</sub>IX™ Chlorine Dioxide Systems.

# THE PROCESS



# HOW THE SYSTEM WORKS



Color coded to schematic

<b>Inlet Potable Water</b>	A potable water source is required for the system.
<b>Sodium Chlorite</b>	A 25% NaClO <sub>2</sub> solution is diluted with potable water such that the resulting concentration of NaClO <sub>2</sub> is 1,250 mg/l.
<b>Chlorous Acid</b>	The dilute NaClO <sub>2</sub> flows through the ion exchange cartridges where the NaClO <sub>2</sub> is converted to HClO <sub>2</sub> through the exchange of the Na <sup>+</sup> in solution for the H <sup>+</sup> on the cation resin.
<b>Chlorine Dioxide</b>	The HClO <sub>2</sub> is converted to dilute ClO <sub>2</sub> in the catalyst cartridge. The concentration of solution is a safe 700 mg/l.
<b>Drain</b>	When either the catalyst cartridge or the cation resin cartridges are changed, water flushes through the system to drain. The system also primes itself to drain.