



## 21<sup>ST</sup> CENTURY CHLORINE DIOXIDE GENERATION SYSTEM

“A GREAT OLD MOLOCULE MADE A REVOLUTIONARY NEW WAY”

**SAFE pH 7 – EFFECTIVE – RELIABLE – AFFORDABLE**

**Save** tens of thousands of dollars per year in costs by replacing many of your current sanitizers with one E-chem generator.

### Applications Include:

- Conveyer Treatment
- Environmental Biological Control (Fogging)
- CIP Sanitation
- Container Rinse
- Hard Surface Sanitation



### CUTTING EDGE TECHNOLOGY

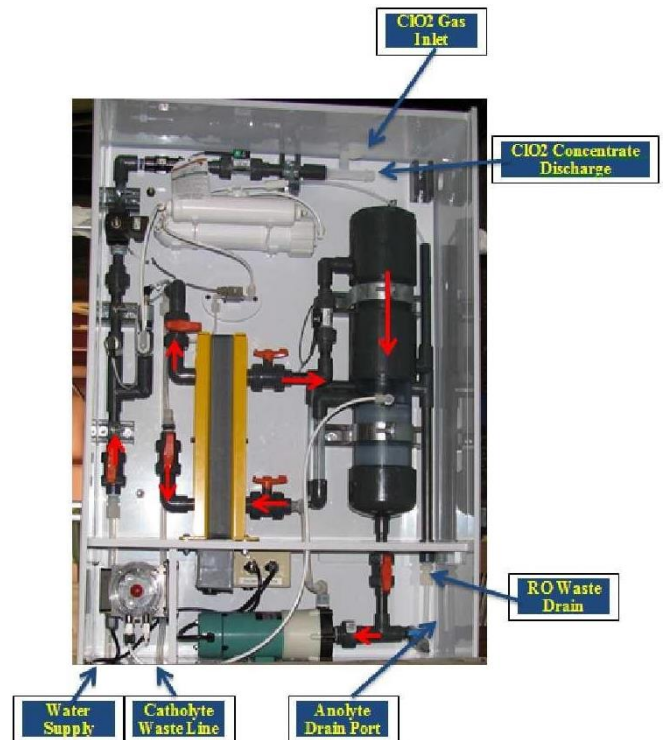
NAD, a dba of **Ozark International Corp**, has been engineering and building **high performance chemical generators for more than 25 years**. Our on-site Generation processes are safe, reliable and economic.

Combined with on-site service agreements, these systems are utilized to solve a variety of issues our clients face.

**Chlorine dioxide** is a molecule whose time has come with the development of single chemical, efficient electrochemical generation systems that **don't** use chlorine or acid. This neutral pH, noncorrosive molecule is one of the most efficient biocides known with broad spectrum pH capabilities at low concentrations.

### FEATURES

- Electrochemically generates pH neutral, nearly pure, gas stripped chlorine dioxide with the highest conversion ratio of sodium chlorite to chlorine dioxide in the industry
- Capacity: The generator line generates from as low as 0.1 lb. ClO<sub>2</sub>/ day and includes units with capacities of 1, 3, & 6 lbs. ClO<sub>2</sub>/ day production.
- Chemical usage: The generators all use a single chemical precursor, either 25% or 31% sodium chlorite; with no acid or chlorine needed
- Electric Power: Standard 110 VAC, 20-30 amp (depending on pump options)
- Generation Byproducts: 2% NaOH solution, H<sub>2</sub> safely diluted to <0.5 vol%, Anolyte solution of sodium chlorite/chlorate and ClO<sub>2</sub>
- Chlorine dioxide solution storage: The ClO<sub>2</sub> solution generated by the system can be stored in an external tank or sent directly to the process stream as a pure gas.
- Process interface: An integrated logic controller operates the system automatically with a number of interface options
- Outputs: Outputs for alarm and running status are provided
- Safety Permissive Interlock: Customer controlled interlock to shut down entire system



North American Dioxide (NAD)  
Division of Ozark International  
P. O. Box 1080  
Nixa, MO 65714

**Put our services to the test; contact us for a consultation today.**

**Missouri Valley Environmental of Texas (281) 528-4336**

Division of AECISI  
19525 Wied Road, Suite 510  
Spring, TX 77388

# World Class Manufacturers of Electrochemical Processes for Chlorine Dioxide Generation

## Manufacturer's advanced electrochemical generators

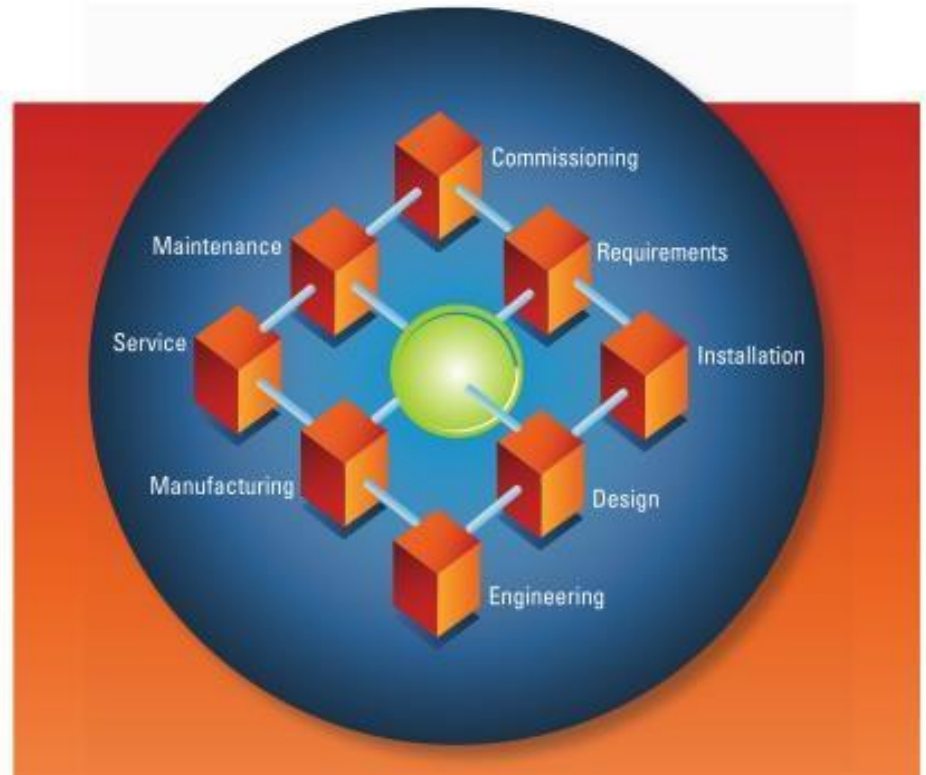
### *The NAD Advantage*

#### **Proven Electrochemical Technologies**

We're water treatment application engineers at our heart, and being in this business for nearly three decades. We know the technologies, and we know how they interact with the various manufacturing processes, allowing us to create reliable, dependable systems.

#### **Knowledgeable Controls Experience**

We have years of experience designing and installing the systems to automate the dosing and control.



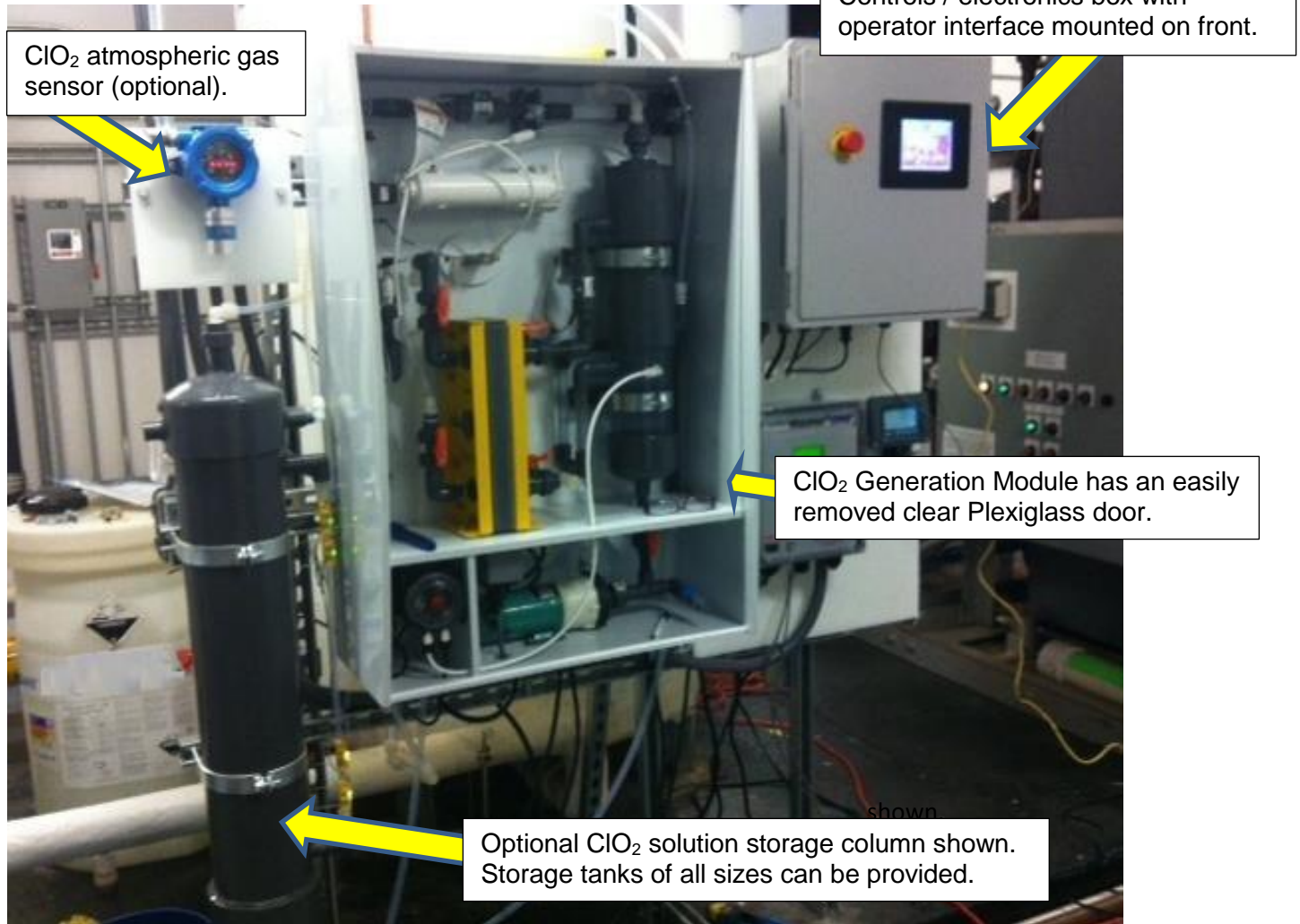
#### **Your Comprehensive Project Partner**

From the beginning of every project, we work with you to make sure we meet your requirements.

- Review the application to ensure regulatory compliance
- Custom design the dosing and control system to meet your requirements
- Ensure the manufacturing process conforms to our exacting quality standards
- Commission the system and train operations and maintenance personnel
- Provide long-term support through extensive operator training, a well-stocked parts inventory, and on-site maintenance support

## 1, 3, and 6 Lb/Day ClO<sub>2</sub> Generators – Features

Physical Design: Wall mounted generation/ dosing unit with remote wall mounted electronics enclosure module, floor mounted assembly shown is optional

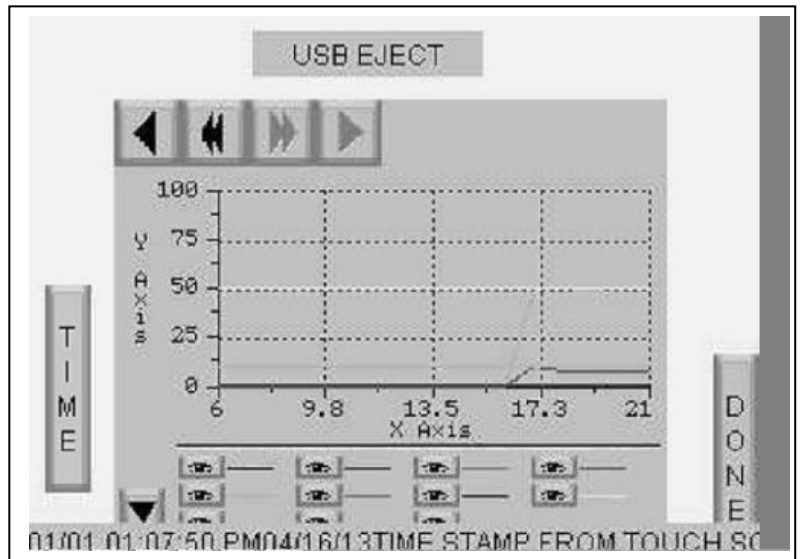


### Standard Features & Specifications

- Chemical Precursor: Sodium Chlorite 25%
- Byproducts: 2% NaOH solution, H<sub>2</sub> safely diluted to <0.5 vol%, chlorite/sodium chlorite / ClO<sub>2</sub> waste stream
- Electrical Power: 110VAC, 1PH, 30A service
- Electrochemical Cells: One-1, 3, or 6 PPD (pounds per day) ClO<sub>2</sub> cells with re-concentration packages available.
- Supply Water Usage: 0.9 – 1.2 GPM; 50 psi minimum for proper system operation.
- ClO<sub>2</sub> solution production: 200 - 400 ppm concentration at 0.6 – 1 gallon per minute.
- Fully upgradeable design allows customer to economically expand base platforms as needed.
- Wall mounted space saving design

## Optional Features:

- Remote ClO<sub>2</sub> storage / supply tank system with system level controls, alarms, with supply pump override
- ClO<sub>2</sub> solution feed at pressures up to 105 psi.
- Supply water booster pump, and flow package optional as needed.
- Remote wireless monitoring and communication package.
- Remote access system software / restore / upgrade capability.
- Automated gas flow monitoring sensor with safety shut down feature.
- Automated “Feed Stop” overfeed protection.
- ClO<sub>2</sub> Solution Injection: Up to 2 optional, independently-controlled distribution pumps capable of delivering ClO<sub>2</sub> in solution independently to both points of use with water meter inputs from either a 420 or pulse contact.
- POU (Point of Use) Water meter data logging for up to 2 separate streams.
- Internal leak detection sensor.
- ClO<sub>2</sub> Gas detection sensor optional with emergency shut down and remote alarm and/or exhaust fan output contact.
- Re-concentration package that allows for elevated ClO<sub>2</sub> solution concentration.
- Atmospheric gas sensor and safety shut down feature.
- Automated current control package.



## Online access of operational data and status reports

Options can include remote command and control, start/stop, concentration monitoring and reporting, troubleshooting, software updates; this dramatically reduces the time required when operators have questions on the system. Also with real-time updates and alarms for concentration related issues, the management of the system is easier than ever!

Alarm History		Total of 2 Alarms
Entry No	Alarm No	Message
1	13	01:07:50 PM 04/16/13 TIME STAMP F
2	13	01:07:48 PM 04/16/13 TIME STAMP F

Alarm Coun Page Up Page Down Line Up Line Down Details Clear All Exit