



# HYPOCHLORITE SYSTEMS

## ON-SITE CHEMICAL GENERATORS

- World's most reliable and advanced hypochlorite generators
- Replace hazardous chlorine gas and bulk hypochlorite with MIOX's on-site Hypochlorite generators

### HYPOCHLORITE PRODUCTION FROM 1 – 2,000+ LBS/DAY FREE AVAILABLE CHLORINE (FAC)



	RIO ZUNI	AE SERIES	VAULT	RIO	RIO-S
	1 - 2 LB/DAY	4 - 8 LB/DAY	15 - 100 LB/DAY	60 - 500 LB/DAY	400 - 2000 LB/DAY
POTABLE WATER	200 PEOPLE				10 MILLION PEOPLE
WASTE WATER	1,000 GALLONS/DAY				100 MGD
COOLING TOWERS	50 TONS				200,000 GPM
OIL & GAS	1 BARREL/DAY				500,000+ BARRELS/DAY
AQUATICS	10K GALLONS				5 MILLION GALLONS
SCALE	1 LB/DAY	FROM 1 → 2,000+ LBS/DAY			2,000+ LB/DAY
CAPACITY	10,000 GALLONS/DAY	FROM 10,000 → 100+ MGD			100,000,000+ GALLONS/DAY





## CONTROL SYSTEM & MONITORING

A fully automated PLC controlled system with remote control capabilities and monitoring for proactive self-diagnosis.

## CELL DESIGN

MIOX electrolytic cells are uniquely designed to ensure consistent oxidant production across the cell surface. Furthermore, MIOX cells result in less hydrogen build up in the cell.

## MODULAR

Modular cell design for improved efficiency and reduced footprint.

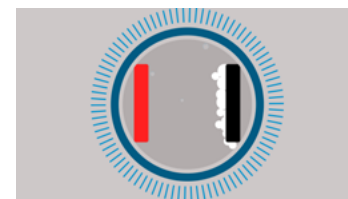
## TRANSFORMER-LESS DESIGN

FOR SYSTEMS 400+ LB/DAY

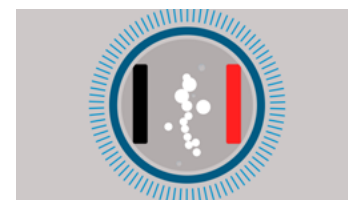
## SELF-CLEANING

EXTENDS CELL LIFE

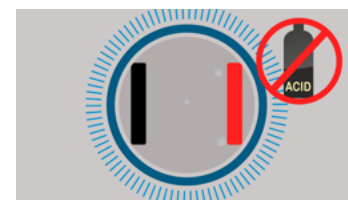
Patented self-cleaning through reversing polarity of the cells to remove impurities and salt build up on the electrodes. This proprietary process significantly reduces the need for acid cleaning and operator intervention.



As the cell is run, impurities from water and salt build on electrodes.



The cell is cleaned by undergoing a proprietary polarity reversal sequence. Particles are flushed from the cell.



The cell returns to normal run mode.

## H2 SAFETY, PASSIVE VENTING

SIMPLE and RELIABLE PROCESS

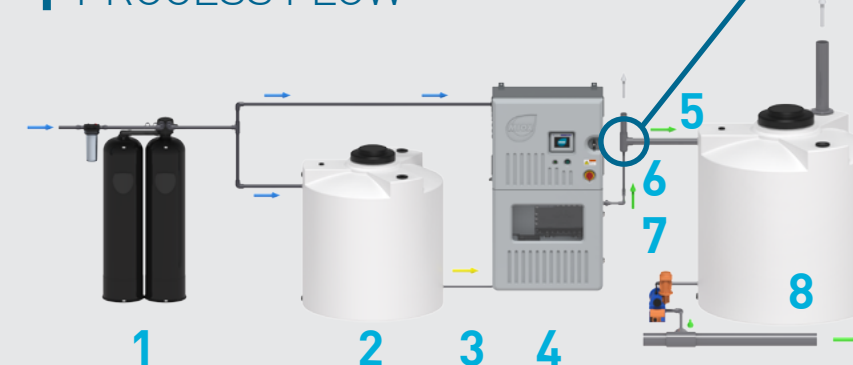
PASSIVE VENTING

A safer hydrogen venting process, via a liquid barrier, with no moving parts, electrical requirements or check valves.

- The Liquid Barrier Hydrogen Vent system uses a gas trap system to prevent hydrogen gas produced during the electrolysis process from entering the oxidant storage tank. Each oxidant tank is equipped with a drop tube that hydraulically locks the oxidant solution similar to a "p-trap" system in household plumbing.
- The MIOX liquid barrier is completely non-mechanical, using simple hydraulic principles to keep hydrogen gas from accumulating in the tank and safely venting it outside the building.
- Dilution blower can be provided if needed.



## ON-SITE GENERATION PROCESS FLOW



- Softened water to Electrolytic Cell & Brine Tank.
- Salt and Water mix in the Brine Tank to form saturated brine.
- Saturated Brine enters the Electrolytic Cell.
- Electrical Current is passed through the Electrolytic Cell producing Oxidant.
- Hydrogen Gas produced during the Electrolysis Process is vented outside.
- Oxidant Solution leaves the Electrolytic Cell and is stored in the Oxidant Tank.
- Oxidant Solution is dosed into the Treatment Process by a metering pump.
- OSG turns ON/OFF from a level switch signal located inside the Oxidant Tank.



## AUTOMATED FLOW CONTROL

Automated flow control that adjusts for unexpected changes in water pressure, ensuring consistent product quality, and reducing operator intervention.



CHLORINE GAS CYLINDERS



MIOX INSTALLATION ROOM

## SAFETY

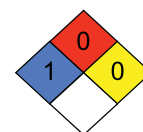
Eliminate hazardous chemicals stored on-site.

## LOGISTICS

- Reduce trucking by 80%
- Eliminate handling of hazardous material, substitute with table salt

## EFFICACY

- Fresh, active disinfectant
- Avoid chemical degradation from time and heat.



MIOX HYPOCHLORITE



SODIUM HYPOCHLORITE



CHLORINE GAS

## ABOUT MIOX

MIOX invests deeply in technology and intellectual property, and regularly partners with new industries to develop solutions for their needs. Increased performance, safety, and a fast return on investment for our customers remain a principal focus. With over twenty years of experience in the water disinfection market and thousands of MIOX installations in over 50 countries, MIOX chemistries are cleaning over 8 billion gallons of water per day.

## ABOUT JOHNSON MATTHEY

Johnson Matthey is an international specialty chemicals company and a leader in sustainable technologies. The company was established 200 years ago and today many of the group's products enhance the quality of life of millions around the world through their beneficial impact on the environment, human health and well-being.



Johnson Matthey

