

# ClorTec™

## On-Site Sodium Hypochlorite Generation Systems

Series MCT 12 to 36 lb/day (5.4 to 16.3 kg/day)

On-site sodium hypochlorite generation is unparalleled in safety and cost efficiency. ClorTec™ on-site systems generate 0.8% sodium hypochlorite by combining three common consumables:

salt, water and electricity



(Salt + Water + Power = Sodium Hypochlorite + Hydrogen)

ClorTec MCT systems easily control sodium hypochlorite production and provide a powerful disinfection method for any application. MCT systems meet requirements for 12 to 36 lb/day (5.4 to 16.3 kg/day) chlorine equivalent. Applications include potable water, wastewater, odor and corrosion control, cooling towers, oxidation and swimming pool disinfection.

The ClorTec MCT systems are supplied in a factory tested integrated skid mounted configuration. This design allows for ease in serviceability and expansion potential.



### Features:

- Integral skid mounted design
- High efficiency electrolytic cell(s)
- Integrated control panel/power supply
- Integrated brine proportioning pump
- On-board water softener

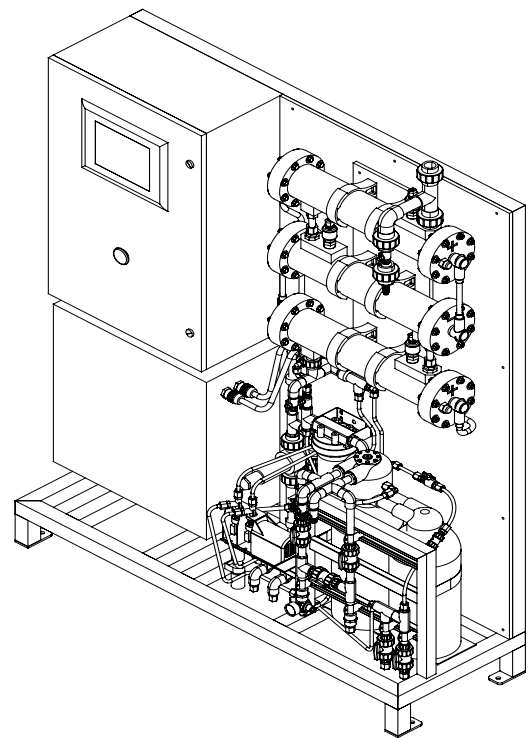
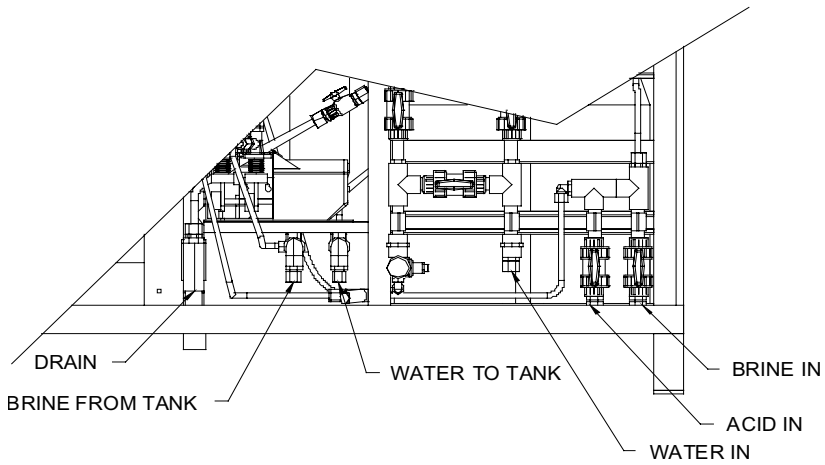
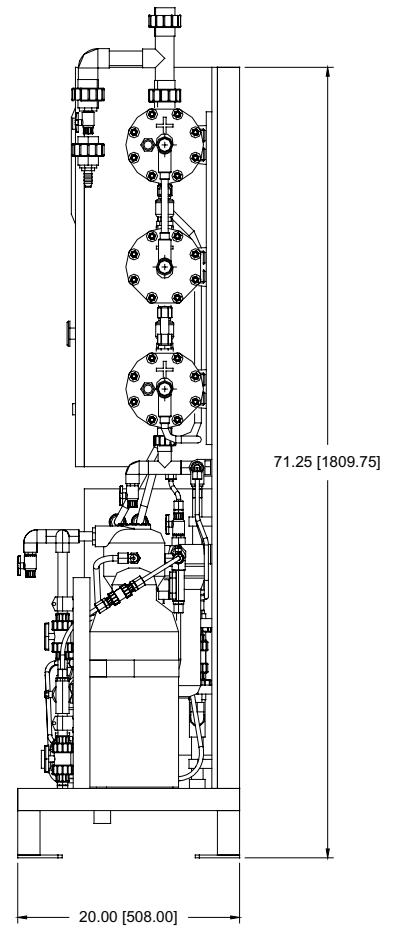
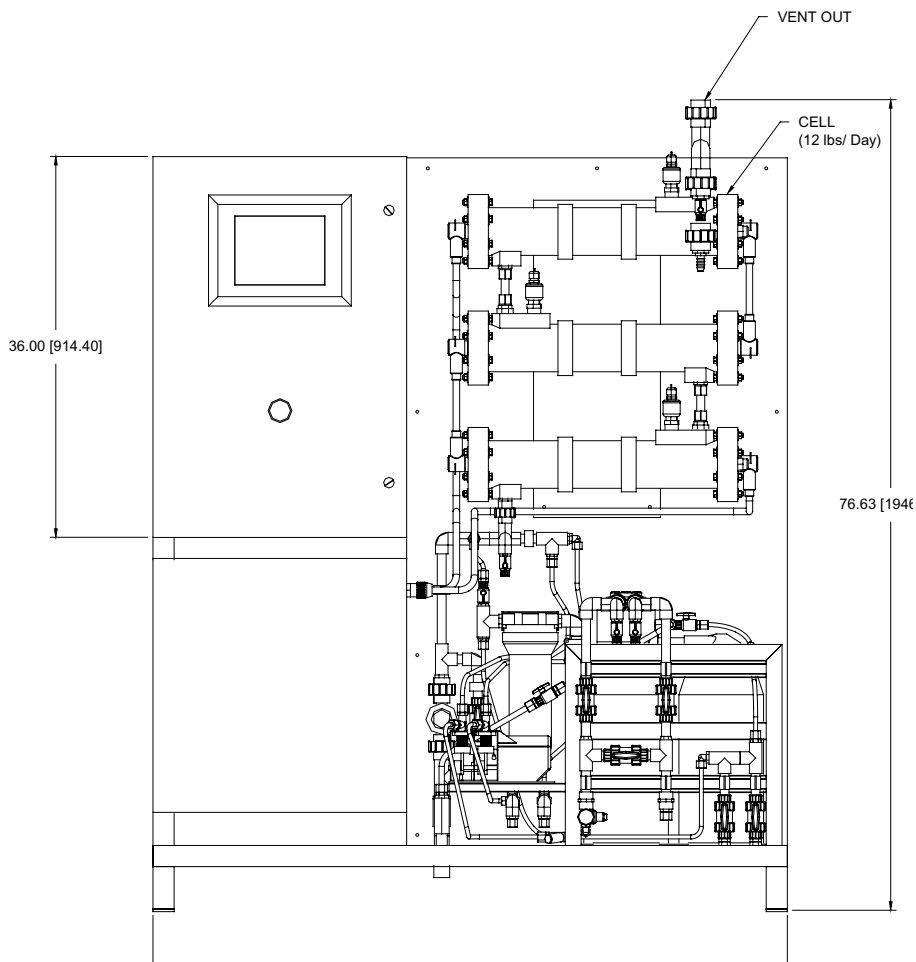
### Typical Accessory Components:

- Brine generator
- Product storage tank
- Metering pump
- Ultrasonic level control
- Hydrogen dilution blower
- Water chiller or heater

### Benefits:

- New cell design delivers 20% reduction in consumable operating cost
- On-demand sodium hypochlorite production
- No handling or transportation of hazardous materials
- Exempt from Process Safety Management
- Exempt from Risk Management Planning
- Superior Warranty
- Easy operation
- Minimizes disinfection by-products
- NSF 61 and 50 certified
- Optional hydrogen dilution blower safely removes and disperses H<sub>2</sub> gas, ensuring safe hypochlorite generation
- Optional water chiller reduces operating costs by increasing efficiency of sodium hypochlorite conversion





## MCT SERIES SYSTEM SPECIFICATIONS

**Capacities:** 12-36 lbs/day (5.4-16.3 kg/day). Free available chlorine.

**Control:** Automatic batch, regulated by storage tank status.

**Hypochlorite:** 0.8% ± 0.05%.

**Raw Materials:** Per pound of chlorine produced; 3 lbs. (1.4 kg) salt, 2 kWh electrical energy, and 15 gal. (57 L) water.

**Water Supply:** Potable water @20-50 psi (1.4-3.5 bar), temperature range 65°F-80°F (18°C-27°C).

**Salt Quality:** 99.7% pure dry weight Solar Salt or equivalent.

### Electrical Power:

- Rectifier: 208-240 VAC 1 Phase, 60 Hz
- Control panel: 208-240 VAC 1 Phase, 60 Hz

### Operator Interface:

- 6 Inch monochromatic touch screen.
- 2 line LCD display with dedicated keypad.
- Data logging and communications capability.

**Control Panel:** Grey polyester coated NEMA 4 welded steel enclosure UL 508a

## TYPICAL ACCESSORIES

**Brine Generator:** HDPE or FRP tank to store minimum of 1 weeks supply (lb/day x 3 x 7 days minimum).

**Hydrogen Air Dilution System:** Waste hydrogen is exhausted to atmosphere by an active air dilution blower system.

**Water Chiller** - Recommended when water temperatures are over 80°F (27°C): Air cooled design. Classified by Underwriters Laboratories in accordance with ANSI/NSF 61, 1997b.

**Water Heater** - Recommended when water temperatures are below 65°F (18°C): UL® and CSA recognized and listed unitized assembly.

## SODIUM HYPOCHLORITE TANK

**Material:** HDXLPE or equivalent.

**Size:** One day storage recommended.

**Level Control:** Ultrasonic or mechanical level sensor in tank controls start/stop function of system.

| Model Series | Cells Configuration | Output |        | Flow    |       | Salt   |        | Typical Circuit Capacity* ampere | Dry Shipping Weight |
|--------------|---------------------|--------|--------|---------|-------|--------|--------|----------------------------------|---------------------|
|              |                     | lb/day | kg/day | gal/day | L/day | lb/day | kg/day |                                  |                     |
| MCT-12       | 1 x 12              | 12     | 5.4    | 180     | 681   | 36     | 16.3   | 40                               | 665 lbs.            |
| MCT-24       | 2 x 12              | 24     | 10.9   | 360     | 1363  | 72     | 32.7   | 50                               | 680 lbs.            |
| MCT-36       | 3 x 12              | 36     | 16.3   | 538.0   | 2044  | 108    | 50     | 60                               | 695 lbs.            |

\*Max @ 240VAC 1 phase, standard MCT system.

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# MCT Sodium Hypochlorite Generator Ordering Information

## MCT

### System Capacity

- 12 – 12 lb/day Chlorine Equivalent
- 24 – 24 b/day Chlorine Equivalent
- 36 – 36 lb/day Chlorine Equivalent

### Operating Voltage

- 208 – 208V/1 phase/60 Hz
- 220 – 220V/1 phase/60 Hz
- 240 – 240V/1 phase/60 Hz

### Display/PLC

- AB – 6" Monochrome Touchscreen/AB 1500 Micrologix
- 2L – 2 Line Display/Integrated PLC

### Electrical Enclosures

- P – Gray Polyester Powder coated carbon steel
- S – 304 Stainless Steel

### Water Softener

- W – On-Board Water Softener

### Order Example:

MCT24220ABPW

24 lb/day system, 220V/60 Hz operating power, touchscreen, gray steel enclosures with an on-board water softener.

### Equipment Included:

- Epoxy powder coated steel skid
- Cells/Electrodes
- Brine proportioning system
- Power supply/rectifier
- Control Panel with:
  - PLC & HMI
  - SCADA ready (Modbus for 2 line display model & DF1 for AB touchscreen model)
  - Blower controls (blower package sold separately)
  - Intrinsically safe barriers for cell level & temperature safety switches
  - (Dosing Controls not included in PLC)
- One hardcopy O & M Manual and one CD Electronic version
- Supplied with domestic crating

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