



The JCS Industries Model 4180 Chlorine Dioxide Generator is for operations that require high efficiency, accuracy, control and safety. The Model 4180 feeds a chlorine dioxide solution, safely though vacuum, used in municipal and industrial water treatment systems.

The Model 4180 uses dual reversing servo motors coupled with a v-notch valve to regulate the chemical feed rate, an electronic flow sensor for the sodium chlorite, and a calibrated borosilicate glass rotameter for Cl<sub>2</sub> gas to generate a >95% ClO<sub>2</sub> solution. The unique design allows for a continuous adjustment of both of the chemicals based off the actual chlorite feed rate to ensure accurate feed throughout the operator's desired range. Internal electronics allow for feed system to be remotely monitored and controlled from users SCADA.

The JCS Model 4180 skid comes included with an integrated potable water booster pump that will help maintain adequate water pressure for the injection process.

The JCS Model 4180 Chlorine Dioxide Generator will automatically regulate in both-fixed and variable control modes.

#### Control Modes:

- Fixed Feed Rate
- Flow Paced
- Residual/pH Control
- Compound Loop



- **A wide feed range: 0 to 2000ppd**
- **A turn down ratio of 100:1**
- **High accuracy: +/- 2% of actual feed**
- **Integrated Booster Pump**
- **No air binding or etching**
- **Metering to validate actual flow rate**
- **Multiple failure mode alarms**
- **On-board Totalizer**

**Note\* Liquid feed portion of system covered under US Patent number 7,776,275**

## A LIQUA FLOW PRODUCT

<b>Range</b>	●	5% - 400% in 0.01% Increments 0 - 2000ppd ClO <sub>2</sub>
<b>Accuracy</b>	●	+/- 2% of Actual Feed Rate
<b>Power Supply</b>	●	110/220 VAC, 50/60 Hz
<b>Booster Pump</b>	●	1 1/2 HP, 115/230 VAC, Single Phase
<b>Operating Temperature</b>	●	32 degrees F to 102 degrees F
<b>Enclosure Protection</b>	●	IP 66,67
<b>Display</b>	●	Backlit LCD, 16 characters X 2 lines
<b>Connections Inlet &amp; Outlet</b>	●	1" Socket
<b>Inputs</b>		
<b>Flow, Residual/pH</b>	●	4-20mA DC
<b>Remote Start &amp; Stop</b>	●	110/220 VAC
<b>Outputs</b>		
<b>Chemical Feed</b>	●	4-20mA DC
<b>Rate System Failure</b>	●	Power supply, chemical feed drive motor and set point-all volt free.
<b>Dimensions (Including Wall Mounted Panel)</b>	●	24" L x 34" W x 72" H
<b>Weight</b>	●	130 Lbs

### Characteristics

The plant's water flow rate and/or a chemical residual signal shall be used to adjust the disinfection chemical liquid flow rate by electronically positioning the servo motor driving the feed control valve. The ratio of input signal to liquid flow shall be adjustable over a range of 5% to 400%. This enables increased liquid feed in response to additional chemical demand. Where compound loop control is required, the Model 4180 controller will receive two analog signals and feed to a user defined set point without the need for an additional PID controller. A compound loop with a second trim signal and remote control signal must be included. A provision is available for user adjustment of flow and residual/pH dynamics factor to ensure accuracy of dosage control. In the automatic or manual mode, output relay contacts will provide the means for alarm and control functions. All relays are to be user selectable as normally open or normally closed. A 4-20mA output signal of the actual chemical feed rate is supplied.