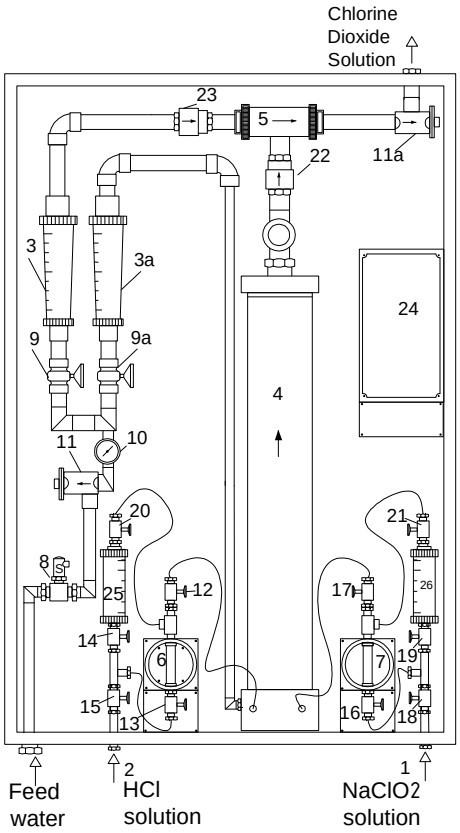
CHLORIDIOX CP SERIES

Onsite Chlorine Dioxide Generators

The IEC chlorine dioxide generator offers a simple and effective way of generating a low strength chlorine dioxide solution.

- Safe, on-demand production of chlorine dioxide
- Simple, reliable operation. Safety interlock as mandatory
- Fully automatic or manual operation
- Low maintenance
- metering pumps for precise metering
- Calibration columns provide a simple, economical method for settling pump flow rates
- As basic chemicals for the generation of chlorine dioxide unit uses hydrochloric acid (32% Hcl) and sodium chlorite (25% $NaClO_2$). Both reagents are metered directly from commercial carboys or intermediate storage tanks into the reaction tower where a chlorine dioxide solution is produced.



The *CHLORIDIOX* Advantage

- Operates simply, reliably and safely
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- Retrofits easily into existing chlorination facilities
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- Minimizes materials handling and maintenance
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- Eliminates chlorine gas & concentrated hypochlorite solutions
- Produces stable, low concentration chlorine dioxide
- Modular construction for adding generators adjacent

System components

1	Feed Line $Naclo_2$
2	Feed Line Hcl
3 & 3a	Flow meter
4	Reactor
5	Mixer
6	Metering Pump
7	Metering Pump
8	Solenoid valve
9 & 9a	Flow control valve
10	Pressure gauge
11 & 11a	Flow switch
12 to 19	Ball valve
20 & 21	Needle valve
22 & 23	Check valve
24	Control panel
25 & 26	Calibration column

The Process

Acid-chlorine is the simplest and easiest to operate generation chemistry. This is a consequence of the use of only two feeds and its simple reaction chemistry. Instead of having to balance the amounts of sodium chlorite and hydrochloric acid, one merely has to provide sufficient hydrochloric acid. The theoretical conversion of sodium chlorite to chlorine dioxide is only 80%.

System Features

- Equally suitable for continuous and intermittent operation
- High stability of the generated chlorine dioxide solution lasting over several days
- Safe automatic restart after mains failure
- Integrated dosing pump for chlorine dioxide

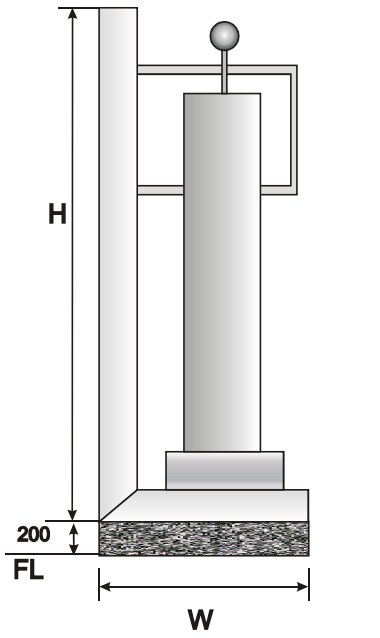
Onsite Chlorine Dioxide Generators

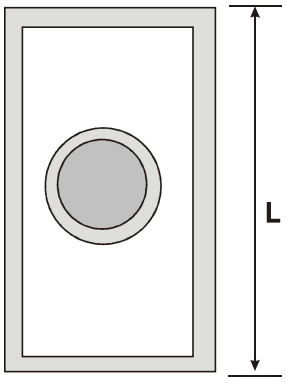
Specifications

Model	CP 1.35	CP 2	CP 4	CP 10	CP 20	CP 30	CP 40	CP 50
Cap ClO_2	**1.35kg/h**	**2kg/h**	**4kg/h**	**10kg/h**	**20kg/h**	**30kg/h**	**40kg/h**	**50kg/h**
Feed water LPH	320	473	947	2368	4736	7104	9472	11840
$Naclo_2$ 25% LPH	10.8	16	32	80	160	240	320	400
Hcl 32% LPH	6.7	11	21	52	104	156	208	260
Outlet ClO_2 Solution flow LPH	337.5	500	1000	2500	5000	7500	10000	12500
Power	Max 3.50 amps			Max 1kw				
Max Back process @ Dosing kg/cm^2	4			7			4	
Feed water for req for Max back process kg/cm^2	6			9			6	
Skid Dimensions								
Length – In (mm) **L**		1000			1500		2000	
Width – In (mm) **W**		350			400		500	
Height – In (mm) **H**		1500			2000		2400	
Max wt kg								

*** For gravity feed dosing min feed water process is $4kg/cm^2$**

END VIEW





TOP VIEW

Chlorine dioxide

Chlorine dioxide is a reactive oxidizing gas that is readily soluble in water. Even dilute solutions (10 ppm) of chlorine dioxide have a characteristic yellow color. The maximum chlorine dioxide concentration typically 4000 ppm. This is to minimize the concentration of chlorine dioxide gas in equilibrium with the solution.

Generator Automation

Chlorine dioxide generators are automated to provide modulation of chlorine dioxide feed rates based upon changes in flow (flow paced control) and chlorine dioxide demand of the water being treated (residual control). Theoretically, the chlorine dioxide feed rate may be varied by either modulating the precursor chemical feed rates to the generator or by turning the generator on and off.

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