

VacDC2 GENERATOR

Our vacuum DC2 system (VacDC2) line of generators takes the traditional 2-chemicals generator method to a new level. Utilizing 32% hydrochloric acid and 31% sodium chlorite, PureLine's VacDC2 generators can realize greater than 95% efficiency, far exceeding competing lines that are only capable of converting lower concentration precursors. This generator is designed for ease of operation and maintenance while maintaining the highest safety standards.

The VacDC2 System is a dual system with one duty ClO₂ Generator System and one standby system. In the event of high demand both ClO₂ Generators can be operated simultaneously, doubling the ClO₂ capacity of the unit. The two generator systems are also configured so in the event of the event of a problem with the duty ClO₂ Generator System; The duty system shuts down safely and the standby unit comes online automatically at the same operation conditions. ClO₂ production is not lost in the switch over.

In each generator the Process Eductor maintains vacuum on the PVDF lined steel ClO_2 Reactor and simultaneously mixes the ClO_2 from the reactor into the motive water stream to form a 500 to 3000 ppm ClO_2 Product stream. In addition to the flow, leak and gas monitoring interlocks present in competing systems, the VacDC2 uses a pressure transmitter, mounted to the top of each reactor tube, to safely shut down the ClO_2 Process on loss of vacuum in the ClO_3 Reactor.

The standard VacDC2 is constructed in polypropylene clad, stainless steel framed modules, there are two Water Feed Modules, two ClO₂ Reactor modules, and two Chemical Feed Pump Modules. This modular design allows for maximum flexibility in the layout of the ClO₂ Process to meet site requirements. Alternate configurations (such as fully enclosed cabinet units) are also available.

The VacDC2 features low maintenance cost and reliable operation. The system has multiple safety interlocks and controls that allow the user to accurately maintain chemical feed ratios for optimal efficiency. The system is available with a water booster pump systems, batch tank(s), Injection pumps and automated manifolds that accept external control signals for flow pacing and/or residual control. The VacDC2 is ideal for affordable and safe CIO, generation from 1 kg/hr. to 100 kg/hr.

PureLine.
VAC

Reaction Chemistry



5NaClO₂ + 4HCl --> 4ClO₂ + 5NaCl + 2H₂O

HS Code: 8421.21.000

Specifications

Cabinet:

Capacity: 1 kg/hr., 5 kg/hr., 10 kg/hr., 20 kg/hr., 40 kg/hr.,

Capacities up to 100 kg/hr. available on request.

The capacity figures listed represent one CIO, Generator System in operation

Tandem operation doubles the ClO₂ capacity

Chemical Usage: 1.76 kg NaClO₂ (active chemical)/ kg ClO₂ @ 95% Yield 5.7 kg NaClO₃ (31% solution) / kg ClO₃

5.1 kg HCl (32.0% solution) / kg ClO₂

Electrical Power: 220 VAC / 60 Hz / 3 Phase – 20 A to 40 A (standard)

Power requirement is site specific based on booster and distribution pumps

Alternate electrical power supply available on request

Inlet Water: (1.00 m³/hr) / (kg ClO₂/hr) – Flow at 1000 ppm ClO₃ solution as product

(0.33 m³/hr) / (kg ClO₃/hr) – Flow at 3000 ppm ClO₃ solution as product

Controls: Allen Bradley CompactLogix PLC Control System

Remote I/O for Start/Stop and monitoring

7" HMI (Standard) – Other sizes available on request

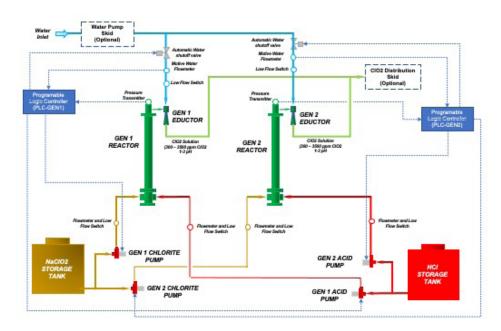
Modular Units – Stainless Steel Frame with Polypropylene Sides Optional Painted Steel or Polypropylene cabinets available

Dimensions: Water Flow Module (each) 152 mm x 424 mm x 2135 mm

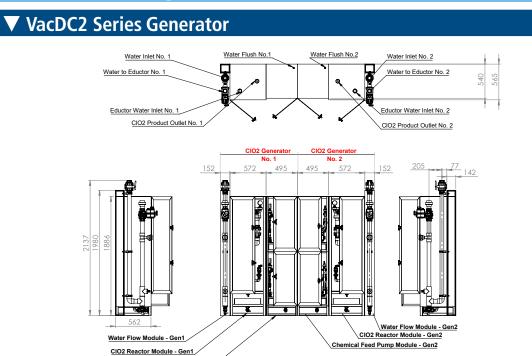
ClO₂ Reactor Module (each) 572 mm x 563 mm x 1884 mm Chemical Pump Module (each) 502 mm x 540 mm x 1884 mm

Weight: 300 – 500 lbs (assembled)





▲ Process Flow Diagram



Experts in the generation and application of chlorine dioxide

Pureline offers a complete line of chlorine dioxide products, solutions and accessories.



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