

GS4000 DATASHEET

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Biochem

T70GS4000

Chlorine Dioxide Generator - 2g/day - 10g/h

System Advantages

Dosage Flexibility

The generator produces a chlorine dioxide solution, which can be dosed according to the specific process requirement. The system is able to produce a chlorine dioxide solution always on demand.

Flexibility in Auxilliary Components

The system offers superior flexibility, as optional elements such as dosing pump, sensors and control devices can be configured according to the application. The dosing pump is not provided as a standard item, since the specification for this will depend on the intended use of the system.

Ease of Operations

The T70GS4000 produces chlorine dioxide through a completely automatic process.



Technical Specification

- Production capacities: from 2 g/day to 10 g/h of ClO₂
- Produced solution concentration: 1 g/l of ClO₂
- Reagents: hydrochloric acid 8.5% and sodium chlorite 7.5% (commercially available solution)
- Hydraulic connections:
 - Dilution water inlet: 1/2" gas female;
 - Chlorine dioxide solution to dosing pumps: 1/2" gas female;
 - Drain: 1/2" gas female;
 - Vent tube: poly tube 10x12 mm;
- Materials:
 - Holding plate and shelf: PVC;
 - Reaction tower and tank: PVC;
 - Mixer: PVC;
 - Internal tube and fittings: teflon/PVDF/PVC/PE;
 - Biochem enclosure: ABS, reinforced fiberglass (17%);
- Ambient temperature: 5 - 45°C
- Power Supply: 230 Vac ±10%, 50 Hz, max consumption. 50 VA;
- Dimensions: 800 x 600 x 150 mm;
- Weight: 24 kg
- Wall mounting;
- Protection: Biochem IP65

Control Unit

- Display: digital LCD, 16+16 characters, back lighted.
- Digital inputs/outputs
 - Digital inputs: 8 (eight) NPN transistor;
 - Digital outputs: 8 (eight);

Functionality

- Biochem Control Unit allows the following signal retransmission:
 - Start/Stop of dosing pump (pump is supplied as optional);
 - Alarm switch for "system running";
 - Alarm switch for "system in alarm";
 - Alarm switch for "system in alarm " with assignable delay;
- The following signals/commands can be connected to the control unit:
 - Remote START/STOP command;
 - Up to 4 digital inputs coming from external sensors (tank level)

Auxilliary Equipment

The process for the injection of chlorine dioxide solution into the treatable water is the same as for the injection of any other disinfectant solution (sodium hypochlorite, peracetic acid etc)

The system is grouped into the following components:

1. A pump capable of dosing up to 10 l/h of solution. The only requirement of the pump specification is the option of a connection to a start/stop switch from the chlorine dioxide generation unit. Moreover the pump can be provided with an analog or impulsive input, for connection to a flow rate transmitter to proportionally dose the amount of water to be treated.
2. A flow rate transmitter with an output signal compatible with the dosing pump, in case a proportional dosage is required.
3. Chlorine dioxide analyser/controller for analysis and control of residual chlorine dioxide in the treated water. This element is not necessary for system operation, except when dosage control is based on the chlorine dioxide residual. If the dosage is proportional to the flowrate, the analyser can simply be used for indication and/or alarm.

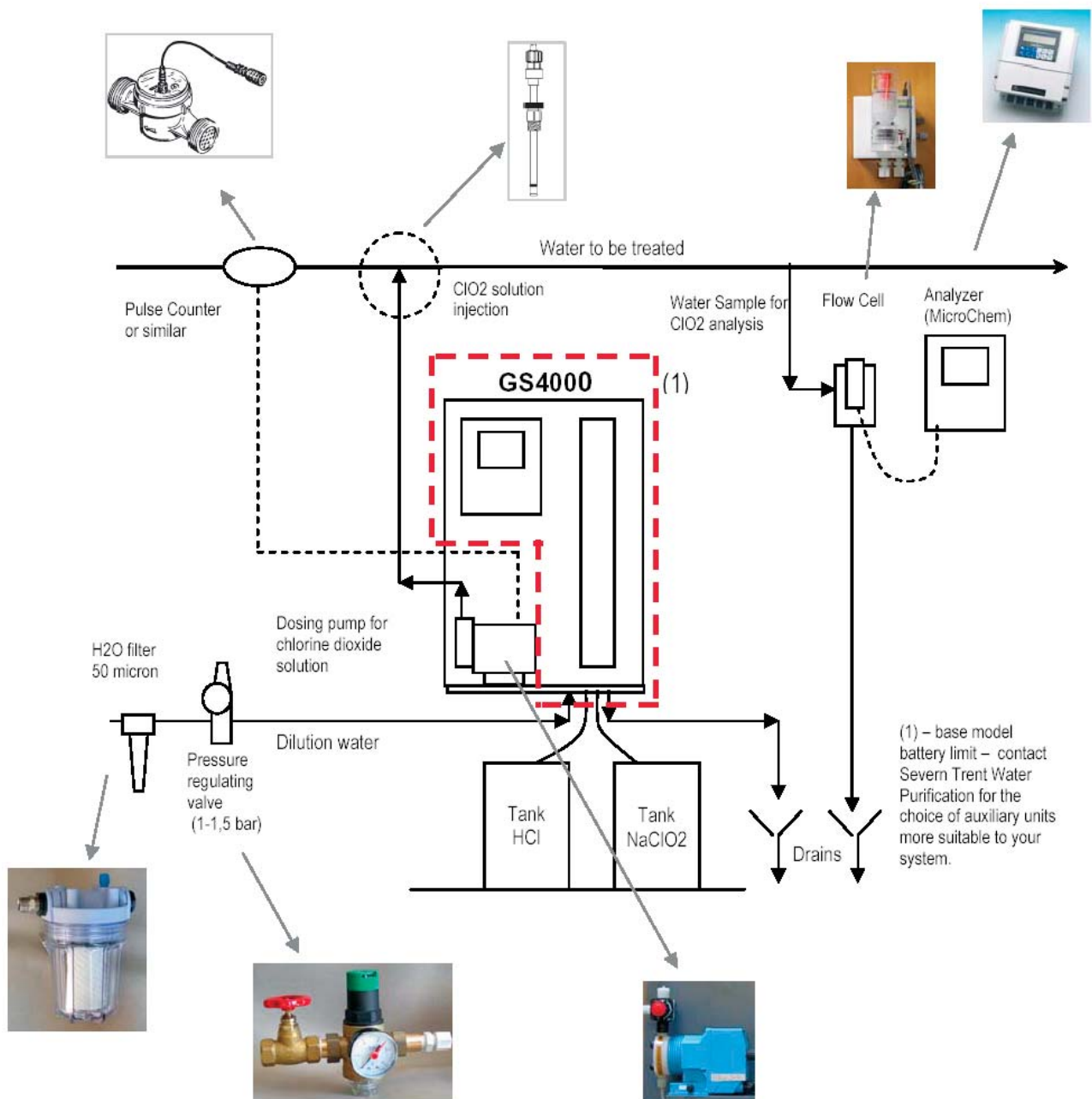
Reagents Storage Section

The reagents storage section comprises of two polyethylene tanks with a capacity from 20 litres to 100 litres depending on the estimated consumption. These will hold diluted hydrochloric acid (8,5% concentration) and diluted sodium chlorite (7,5% concentration).

The GS4000 basic model includes a feature to indicate if either of the two chemical tanks is running low. However, Severn Trent Services can provide optional additional level switches for connection to the control unit in the generator. This option enables the chlorine dioxide production to be stopped in case of a shortage of reagents and an alarm to be generated. The two containment tanks must remain separated (grated basins made of antiacid material or something similar).

Optional Accessories

- Covering Panel, made of plastic material, to protect the generator's components.
- Dosing pump for the chlorine dioxide solution, properly sized accordingly to the application.
- Accessories for the dosing pump (backpressure valve, injection system)
- Containment basins for reagents.
- Pressure regulator for dilution water line.
- Filter, for dilution water line.
- Pulse Counter, to be installed on the line of the water to be treated, to control the dosing pump.
- Chlorine dioxide analyser (MicroChem2), with a measuring cell specifically designed for use with hot water (T17KC4700).



Typical Installation scheme of the chlorine dioxide generator and auxiliary components

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