



Chemical Injection Technologies

Product/Specification Bulletin

SUPERIOR™ Chlorine Residual Analyzer Model SA-100 Continuous Flow Measuring Cell Analyzer

GENERAL DESCRIPTION

The SUPERIOR™ Model SA-100 Chlorine Residual Analyzer uses a continuous flow measuring cell with a built in flow regulator. The SA-100 is nearly maintenance free, using electrodes which are constantly cleaned by the continuous flow of water over the electrodes. The configuration of the SA-100 Chlorine Residual Analyzer requires cleaning and calibration only once every two to six months, depending on water quality. The SUPERIOR™ SA-100-CLF, for use with free chlorine, is unique in the fact that the electrodes are not membrane covered. Costly replacement and clogging of the membranes are eliminated. Yearly replacement of the main measuring probe at a low cost is recommended, leaving the SA-100-CLF easy and inexpensive to maintain. The SUPERIOR™ SA-100-CLT Total Chlorine Residual Analyzer is also nearly maintenance free, requiring simple replenishment of the electrolyte solution every 1 1/2 to 2 months, depending on water quality, and yearly replacement of the membrane cap from the total chlorine electrode.

FEATURES

The SUPERIOR Model SA-100 represents the most modern design technology coupled with the best materials available to create an outstanding, user friendly piece of equipment. It is designed with user convenience as a primary concern.

- Continuous flow measuring cell
- Built in flow regulator: 15-120 psi
- Wide supply voltage: 85-260 VAC, 50-60 Hz
- Loop power: 4-20 mA
- 400 ohm maximum load
- Measuring ranges: 0-0.200, up to 0-200.00 ppm (mg/L). Standard ranges are: 0-3/5/10 ppm (mg/L), with other ranges available. (Measuring ranges depend on the analyzed substances.)
- Resolution: 0.01 ppm (mg/L)
- Accuracy: BETTER than 1%
- Sample flow: 57 L/hr
- Protection: NEMA 4

APPLICATION

The SUPERIOR™ Model SA-100 is designed for use in:

- Wastewater treatment
- Water purification
- Chlorination
- Dechlorination
- Swimming pools
- Cooling towers - air scrubbers
- Food and beverage processing

SUPERIOR™ design provides ease of operation with top performance. The SUPERIOR™ Chlorine Residual Analyzer can be placed where most convenient for the operator for ease of use and ease of maintenance, and the SA-100 is nearly maintenance free.

Materials used in manufacturing the SUPERIOR™ Model SA-100 have been carefully selected for their superior quality and performance in situations and conditions far more extreme than conditions to be encountered in actual use.

OPERATION

The SUPERIOR™ Chlorine Residual Analyzer sends out a 4 - 20 milliamp signal, which can be utilized by an automatic chemical feed controller, a chart recorder, or other indicating devices or telemetry equipment, such as SCADA.

A gold electrode is supplied with constant voltage generated by a precision voltage generator. A preamplifier and a power amplifier are used for feedback to stabilize the analyzer's measuring voltage. Therefore, the system is independent of the conductivity of the water. The signal will be constant if the measurement is done in 100 µS-water or in brine solution. The substance specific measuring voltage differs depending on which substance is to be analyzed. With the substance specific measuring voltage supplied between the nickel and the gold electrode - a current will flow between the two electrodes. The amount of current differs and depends on the concentration of the substance to be analyzed. The flow of current is linear to the concentration guaranteeing high accuracy of the analyzer.

SPECIFICATIONS

The chlorine analyzer shall be SUPERIOR™ Model SA-100-_____ , man

Chemical Injection Technologies, Inc., Fort Pierce, Florida, and shall have a measuring range of _____ 0 - _____

million. The SUPERIOR Model SA-100 shall come precalibrated, as a complete package, including all necessary items for quick, efficient start up. The package shall include a switching power supply of 85 to 240 VAC in and 24 VDC out, with a replaceable electrode.



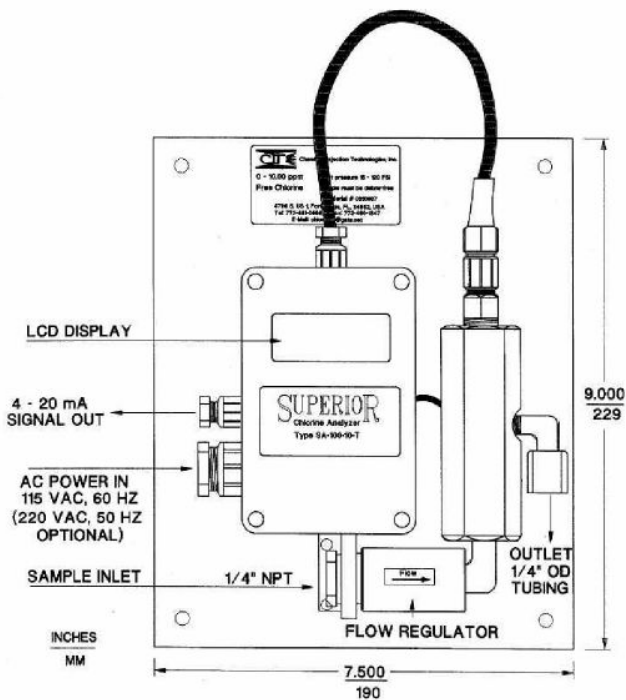
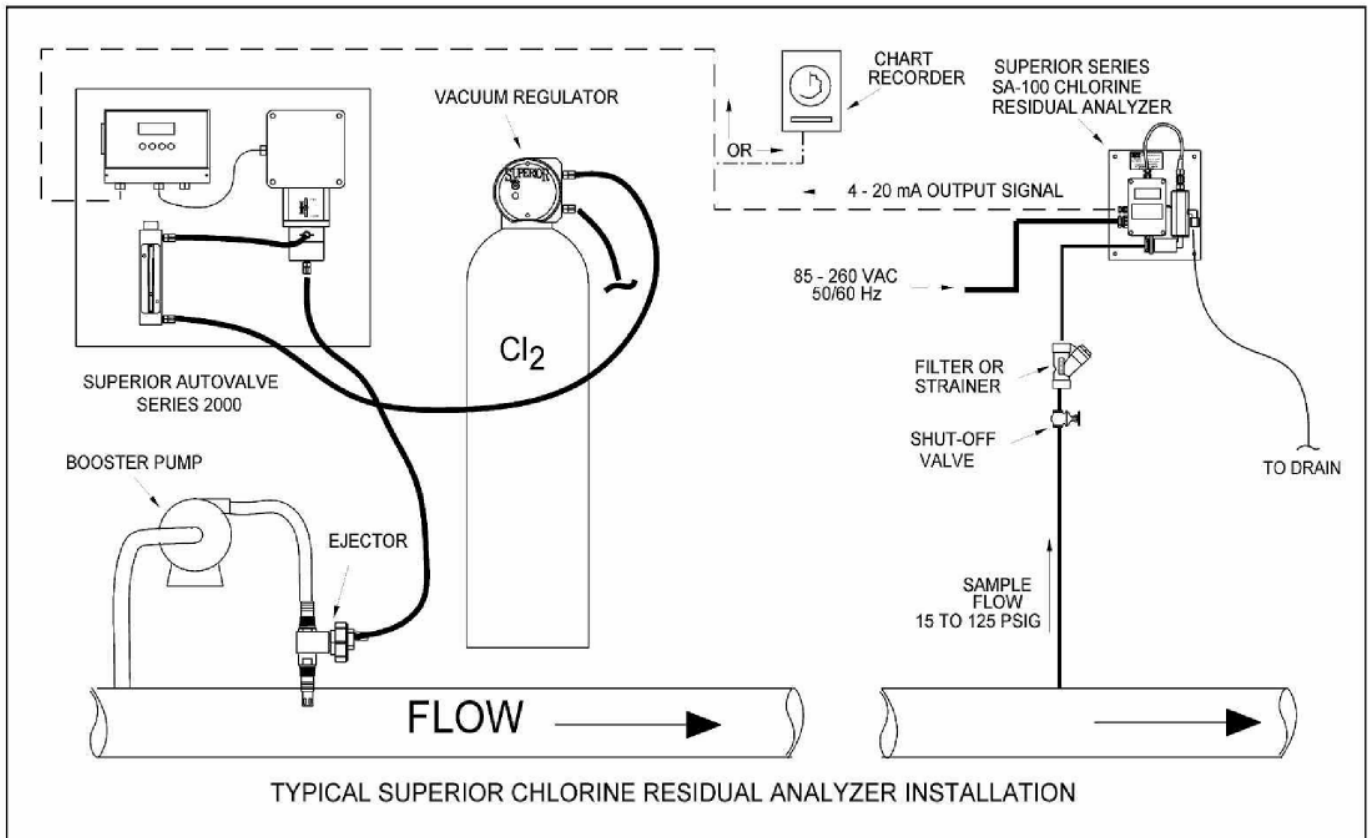
Electrode for
Free Chlorine



Electrode
for
Total Chlorine

Sampling system requirements: Sample pump or line pressure must allow for constant flow rate between 15 and 30 liters per hour (4-8 gallons per hour). A steady flow must be maintained through the measuring cell. Solids and debris must be filtered out.

Pressurized system requirements: The system is to allow between 15 and 120 psi. The flow regulator is to maintain a steady flow through the measuring chamber. The sampling water within the system is not to be lost; the system shall allow for sampling water to be fed back to a tank. Solids and debris must be filtered out.



STANDARD PACKAGE

Switching Power Supply: 85 to 240 VAC in - 24 VDC out
 Replaceable Electrode Membrane cap
 Wall Mounting Panel with Flow Regulator / Measuring Cell / LED Display

OTHER SUPERIOR™ SYSTEMS

(For Vacuum Operation)

AUTOMATIC SWITCHOVER GAS CHLORINATORS
MULTIPLE POINT GAS CHLORINATORS
GAS SULFONATORS (DECHLORINATORS)
AMMONIATORS
AUTOMATIC FLOW PROPORTIONING
AUTOMATIC RESIDUAL CONTROL
ELECTRONIC GAS FEED RATE CONTROL VALVES

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