

# SUPERIOR AUTOVALVE

## SUPERIOR Series 2000 **AUTOVALVE**

For Automatic Flow Proportioning, Residual, & Compound Loop Control of Chlorine or Sulfur Dioxide gas.

The new **SUPERIOR AUTOVALVE** is designed to give water and wastewater treatment facilities a true operator-friendly means of controlling the feed rate of chlorine or sulfur dioxide gas when treating varying water flow rates. Quick response times and a very rugged, powerful hi-torque DC stepper motor give unsurpassed accuracy and reliability.

Using a simple to understand, menu driven operator interface panel, the **SUPERIOR AUTOVALVE** can be installed in virtually any existing gas chlorination or sulfur dioxide system and be up and running in less than 30 minutes.

Operators do not have to be instrument savvy, nor do they have to make any complicated calculations to set up or calibrate the **AUTOVALVE**. All that is required is a 4 to 20 milliamp signal from a water flow meter, a 120/240 VAC power supply, and a gas chlorinator (or sulfonator).

The user friendly menu system guides you through any calibration operation, although most installations will only require a minimum initial check to set maximum gas feed rates.

### ALL "OPTIONS" ARE ALREADY BUILT-IN

A "Low Flow" alarm setpoint allows the operator to hook up any type of signaling device to let personnel know if the input signal has been interrupted, or if the flow of water has fallen below a predetermined level.

A 4 to 20 milliamp output signal allows for transmission of the valve position to a remote monitoring location and can be used in SCADA systems.

Input signal filtering allows user adjustment of the controller's sensitivity to very small changes in the water flow meter's output. This eliminates "pulsing" signals which can cause continual movement of the valve, a source of maintenance problems in many older designs.

Dosage rates can be easily adjusted to account for seasonal or short term environmental variables which may cause a change in the chlorine or sulfur dioxide demand of the treated water.

A **MANUAL** control mode allows operators to quickly and easily adjust the gas feed rate from the menu control panel, in the event that an input signal is lost due to flow meter problems or cable damage.

Programming and circuitry has built-in "sanity checks" to prevent system lock-up when unexpected values are received by the controller, or if incorrect calibration procedures are performed.

Maximum feed rate capacities up to 500 PPD (10 KG/HR) are available.



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Power:	115/230 VAC ( $\pm 15\%$ ), 50/60 Hz, Single Phase.	Stepper Motor:	Bi-polar (4 wire), 5.6 VDC, 1A Phase Resistance 5.6 Ohms Phase Inductance 25.6 mH Holding Torque 72 oz-in Rotor Inertia 0.00166 oz-in-sec <sup>2</sup>
Physical Inputs:	FLOW: 4-20mA DC REDIDUAL: 4-20mA DC VALVE POSITION: Potentiometer input, approx. 0.25-2.25 VDC 4-20mA Input	Valve Plug Travel:	1.25" Maximum
Impedance:	250 Ohm (+/- 1%)	Keyboard Inputs:	Dosage Ratio Residual Set Point Alarm set points Manual position set Calibration for 0%, 25%, 50% & 100% Valve Open positions 4-20 mA input, 4-20 mA output Calibration Input Signal Filter (Adjust sensitivity to minor signal change)
Display:	2-line, 16 character, back-lighted LCD.	Control Mode:	Manual or Automatic
Calibration:	Factory Set, field adjustable. 0%, 25% & 100% valve set points 4mA & 20 mA Input signal 4mA & 20 mA Output (Valve Position) Input Signal Filter; 0-50S	Max. Feed Rates	10, 25, 50, 100, 200, 500, 1000, & 2000 PPD (200, 500, 1000, 2000 gr/hr; 5, 10, 20& 40 Kg/hr)
Alarm Contacts:	10 Amps @120 VAC or 30 VDC 5 Amps @ 240 VAC resistive load, unlatching.	Shipping Weight:	30 lbs. (13.6 kg)
Dosage Ratio:	4:1, adjustable through keypad and display.		
EEPROM:	256 bytes		
Outputs:	2.5 VDC potentiometer excitation 4-20mA reference to local ground – 600 ohm drive (maximum)		
Environment Limits:	32° F to 122° F (0° to 50° C)		

