

**SPECIFICATIONS FOR AUTOMATIC CHEMICAL ANALYSIS AND FEED
SYSTEMS FOR SWIMMING POOLS, SPAS, FOUNTAINS, COOLING TOWERS,
AND ALL INSTALLATIONS USING RECIRCULATING WATER**

Automatic Analyzer/Controller

The Controller shall be capable of testing for both sanitizer residual and pH on a separate and independent basis. Treatment must also be activated on a separate and independent basis. There must be a continuous communication between the pH and ORP existent within the singular modular circuitry.

The Controller sensors must be contained in a remote sensing cell that is totally free from the interference signals created by water turbulence and velocity. The sensor cell must be transparent and provide ready visibility of the sensing electrodes. The sensor cell must have side input for the water with top outflow to eliminate air and floating debris. Top-water siphoning is not acceptable.

The circuit module must be modular and interchangeable without tools or soldered connections; and must be inclusive of all electronics, fuses, relays, transformer, and ORP/chlorine and pH range adjustments. This circuit module must contain solid-state electronics and be environment sealed with PC-101 or equivalent, and capable of withstanding the elements of outdoor or indoor installation. This circuit module must be easily field exchanged by pool personnel for service if required.

The Controller must automatically reset and restart in the event of power failure. It must be capable of resumed operation without manual restart or recalibration except with optional Feed Limit shutdown.

The Controller must have available circuitry selections providing: Optional feeding of acid into the sensor cell at preselected intervals for preselected periods of time; Optional low chlorine and high pH override of ALERT functions; Optional pH feed disables chlorine feed; Optional 4 hour feed limit protection; and chlorine feed kill option at high pH alert. These optional selective programs must be able to be activated without removal or modification of the circuit module.

The Controller must be easily calibrated without additional signal generators or instruments, requiring only a chlorine/pH test kit.

Basic operating and calibration instructions must be permanently etched into the control face panel.

The controller shall be recognized by an approved test laboratory and meet the standards UL 61010-1 and NSF 50.

SENSORS

ORP -- Platinum combination electrode in PVC housing.

PH -- Glass combination electrode in PVC housing.

Polypropylene fittings with locking caps are required for insertion into sensor cell. Clamp type fittings are not acceptable.

CIRCUITRY

Solid State -- Exclusive single total system module, inclusive of all circuitry, relays, fuses, transformer, and optional program selector switches; environmentally sealed. 5 YEAR WARRANTY ON SOLID STATE ELECTRONICS, PARTS & LABOR INCLUDED.

ELECTRICAL

Sanitizer -- 15 amps, fused electronic slo-blo

PH -- 3 amps, fused electronic slo-blo

Standard 110v receptacle required for system operation



WTC

MONITOR DISPLAY

The Controller shall have continuous digital 1.85" LCD display meters for ORP and pH. ORP reading will be direct in mV, the pH meter will be capable of calibration without removing the front panel. It shall have visual LED monitor signals for Chlorine/ORP feed, pH feed, Power, pH alert, ORP alert, and Feed Limit. Analog meters will not be considered adequate or equal.

ALERT SYSTEMS -- PROTECTION OF OVERFEED

Independent "Alert" signals for ORP/Chlorine and pH conditions. Each Alert system automatically disables the feed system. The ORP alert continuously monitors the ORP/Cl level for change, and the pH alert analyzes the pH status every 4 minutes, and automatically resumes automation as soon as the Alert situation is eliminated. No manual reset or restart required.

The Feed Limit Alert designates that the chemical feed has been shut off after 4 hour continuous feed (selective option).

SENSOR FLOW-CELL

Clear Polycarbonate -- Weather resistant -- pressure tested.

Transparent for visual inspection of sensors and water condition.

Side in-flow and top out-flow to provide circulation and eliminate air and floating debris. A top water siphon tube is not acceptable.

ELECTRONICS ENCLOSURE

Polycarbonate, weather resistant, corrosion proof for both indoor or outdoor installation.

PHYSICAL

Enclosure -- 9 3/4" x 11" x 6 5/8"

Sample Cell -- 6" diameter x 3" deep

Shipping Weight -- 9 lbs.

OPTIONS

220 volt available 50/60 hz

Remote Alarm -- to activate remote alarm when in ALERT status.

ALL CONTROLLERS SHIPPED COMPLETE, READY TO INSTALL, WITH FLOW CELL, ELECTRODES, TUBING, FITTINGS, AND TEFLON TAPE INCLUDED IN ONE CARTON.

The Automatic Controller/Analyzer shall be equal to the Aquasol WTC as manufactured by Aquasol Controllers, Inc. in both technology and application, including warranty.

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