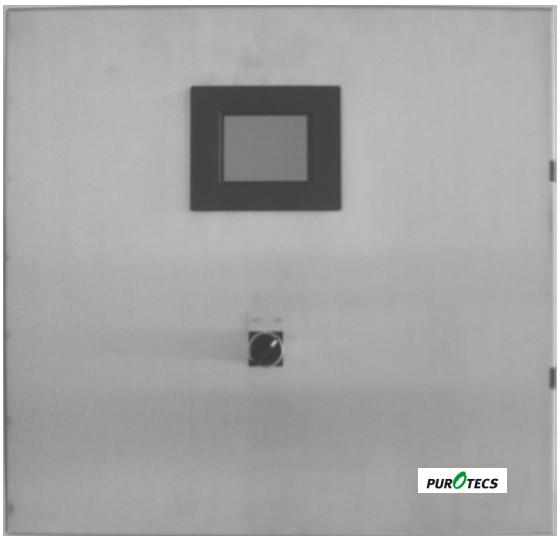
OZONE MONITOR CONTROLLER



5604 FEATURES

- UP TO 4 APPLICATIONS PER MONITOR
- WATER AND AIR APPLICATIONS
- PROVEN UV MEASUREMENT
- SETPOINT CONTROL .05 TO 5 ppm
- COLOR TOUCH SCREEN DISPLAY
- STAINLESS STEEL CABINET
- PID CONTROLLED OUTPUTS
- HIGH SPEED COMMUNICATIONS

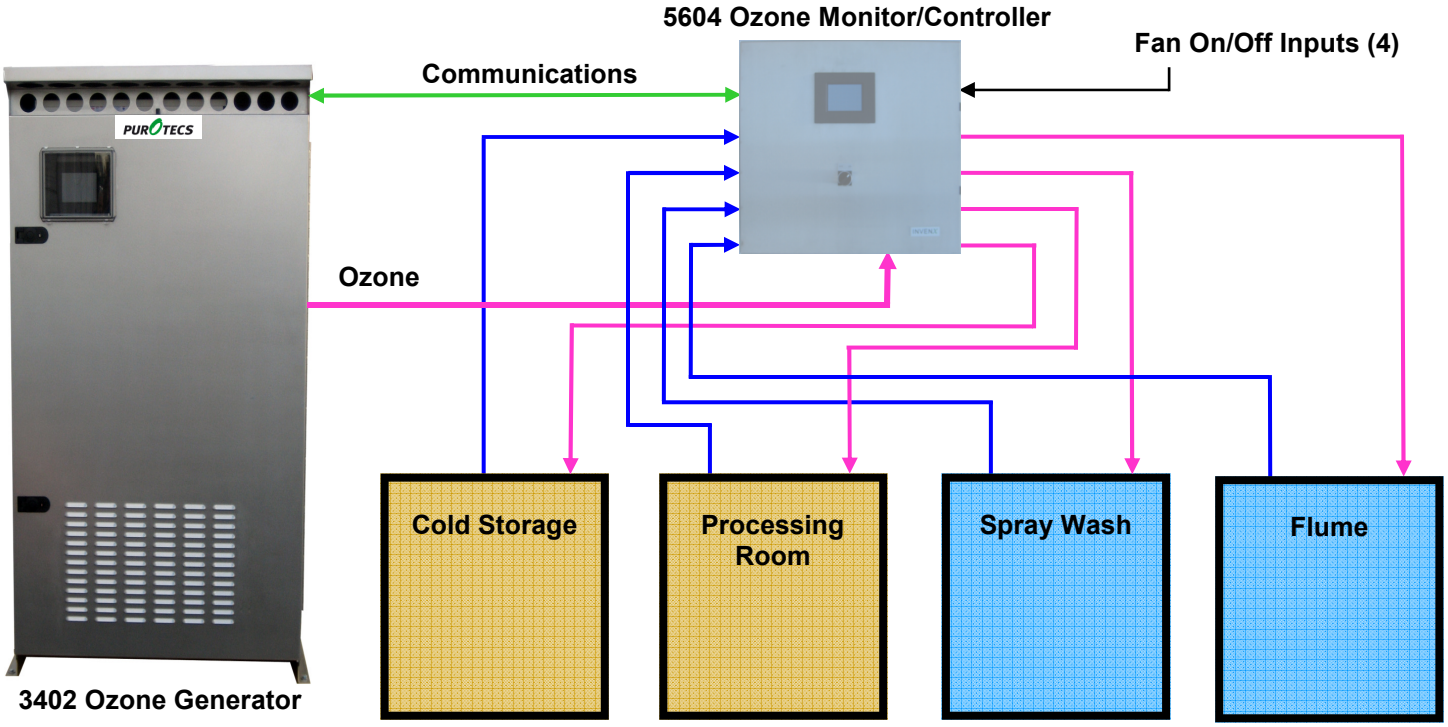
DESCRIPTION

The purOtecs ozone Monitor/Controller (OMC) is the only cost-effective UV ozone monitor that provides monitoring and control for multiple rooms storing fresh agricultural products. Ozone is supplied continuously to RA and CA cold storage rooms destroying ethylene, retarding ripening, and controlling molds. This proven storage technology has been applied to apples, lemons, onions, kiwi fruit, berries, tomatoes, grapes and other fresh products. Ozone applied continuously at levels between .05 to .15 ppm will significantly increase the pack-out of stored fresh products. Ozone is maintained at levels that are safe for workers who enter the rooms during treatment. Ozone in the storage facilities will reduce or eliminate the use of most post harvest chemicals. Fumigation of facilities and products is accomplished with ozone gas at levels between 10 to 500 ppm for short durations. Ozone is approved for organic products and has an FDA food additive approval for direct contact with all food products.

The OMC utilizes proven UV absorption technology to measure ozone levels in cold storage facilities. The gas to be measured is drawn from the room through a Teflon filter to remove particulate material then through the monitor. UV ozone measurement is the world standard for measuring ozone. The monitor recalibrates itself several times a minute to assure the accuracy of the reading. If a discrepancy occurs in the monitor the ozone gas feed to the room is immediately suspended to prevent damage from excessive ozone and an alarm is transmitted to personnel for immediate attention. The monitor includes a PLC controller with a digital display for ozone levels, control setpoints and alarm setpoints with alarm indication. The Room Monitor/Controller continuously draws the sample gas from each room to assure that the sample gas represents the ozone level for each room. An ON/OFF switch is located on the front panel to allow the operator to turn the Ozone Monitor/Controller on and off. The 5601 and 5602 Ozone Monitor/Controller includes a sequencer to select and treat up to four rooms using the same UV sensor and four proportional control valves to feed ozone to each room. The operator selects the rooms to be treated by entering the room number on the color touch screen.

OPERATION

The OMC is mounted near the rooms to be treated and connected to each room with an inlet sensing line and an outlet stainless steel ozone feed tube. A small pump draws air from the rooms through the inlet filter, sensor manifold, the UV sensor and then through the flow meter. The OMC operates on standard 120V power. A high speed communication link interconnects the monitors with the generator. Data from each room monitor is stored in the ozone generator and is available via Ethernet with MODBUS protocol or an internet connection. A single ozone gas distribution line supplies all the room monitors with ozone from the ozone generator. Each OMC includes 4 individual PID setpoints to continuously maintain the ozone level for each room by use of a proportional control valve.



5604 SPECIFICATIONS

Sensor Air: UV Absorption 254nm Beer Lambert Law with auto calibration
Range: 0 to 0.50 ppm, 0 to 500 ppm
Sensor Water Dissolved Ozone Monitor
Range: 0.0 to 20.0 ppm
Accuracy: 1% of full scale
Resolution: < .003ppm
Zero Noise: < .0015 ppm
Repeatability: +/- 0.5% of full scale
Units: 0 to 0.5 ppm displayed in ppb, 0 to 500 ppm
Linearity: Better than 1%
Response time: < 30 sec
Gas flow: 1 l/min
Compensation: Pressure and Temperature
Inlet Filter: 0.1 micron Borosilicate glass and Teflon
Sequencer: Includes 4 sequence selection valves to sense up to four ozone sources

CONTROL
Setpoints: Ozone Levels and Alarm Levels
Output: Four PID controlled ozone outlet valves
Control: PLC with color touch screen display
Communication: Ethernet MODBUS protocol and internet

GENERAL
Power: 120V - 60Hz 2 Amps
Environmental: 25 – 110°F (-5 - 45°C) 95% humidity non-condensing
Enclosure: NEMA 3R Stainless Steel
Dimensions: 18”H x 19”W x 6”D
Ozone Connections: 3/8” dual ferrule compression stainless
Sensing Connections: 1/4” dual ferrule compression stainless
Weight: 30 pounds