PUROTECS

OZONE GENERATOR

COLD STORAGE RA AND CA ROOMS

FRESH PRODUCT WASHING

DRY PRODUCT SANITIZING

DISINFECTION OF PROCESS WATERS

BOTTLED WATER

HIGH PURITY WATER USP 24

AIR SANITIZING

FACILITY CLEANING AND SANITIZING

3400 SERIES AIR COOLED GENERATORS

DESCRIPTION

Purotecs manufactures industrial ozone generators that utilize the latest flat plate micro gap corona discharge technology. The generators include a color touch screen operator interface that continuously displays the status of the entire ozone generator. The ozone output level is precisely controlled by the integrated PLC controller. The generator is designed to include all the necessary hardware to operate as a stand alone ozone generating system that only requires electric power connection. Each generator includes a rotary orbiting scroll oil-free air compressor, air filtration, -100°F dewpoint oxygen concentrator, plug-in power supply/ ozone generating module(s) and a plug-in PLC controller, all packaged in a NEMA 3R enclosure. Utilizing oxygen for the feed gas maximizes the ozone production while minimizing the power requirements and the by-products of a corona discharge ozone generator. The generator produces ozone from 0 to 8 pounds/day, with ozone concentrations up to 8% by weight. This technology provides excellent long term reliability with minimum ongoing maintenance. Service is accomplished by replacing standardized plug -in modules and air filters. Generators are provided with two independently controlled outputs. Each ozone generator module output can be directed to a specific application or combined into a large single output. Forced air passes through the ozone generating cells to provide cooling.

OZONE GENERATION

Ozone is produced by passing a stream of gas containing 95% oxygen through a high voltage corona discharge field. The **Purotecs** ozone generating module is made up of a high voltage power supply, an ozone generating cell, a mass oxygen flow controller and a cell pressure regulating system all in a single plug-in module.

The power supply voltage is minimized by utilizing thin ceramic dielectrics with the micro gap and frequencies up to 25 KHz. The ozone generating cell utilizes high technology flat plate ceramic dielectrics. The ceramic dielectrics are precision ground and precisely mounted to create an industrially rugged, high output, ozone generating cell. The PLC Controller monitors and controls all the critical parameters of the ozone generator. Precise PID control ensures proper dosage for each process application. The color touch screen display provides visual output as well as the operator interface. Additional analog/digital inputs are included for field sensors. The PLC controller includes communications to interface with standard facility PLC systems and the internet.

This plug-in module design ensures maximum operating life and serviceability. All the electronic devices are within one of the two plug-in modules. Up to two ozone generating modules can be plugged into a single cabinet to provide treatment for multiple applications or combined to provide a single high quantity ozone output. Ozone output quantity and concentration are PLC controlled.

PLC Controller

Ozone Cell

SPECIFICATIONS: 3400 SERIES

TYPE:	Up to two Corona Discharge Cells
CELLS:	Micro gap flat plate ceramic dielectric with oxygen mass flow control
POWER SUPPLY:	High Frequency/Fixed Voltage with Pulse Density Modulation 25Khz
TURN DOWN:	5% to 100%
OZONE OUTPUT:	Ozone generating module controlled up to 4 pounds/day below 85^0F Up to 8% by weight.
OZONE CONNECTION:	3/8 Stainless steel tube dual ferrule compression fitting
COOLING:	Forced air
OUTPUT PRESSURE:	10 PSIG
OXYGEN FLOW:	Adjustable 5 to 20 l/min (.17 to .53 scfm) for each ozone generating module
AIR PREPARATION:	Oil free Orbiting Scroll Compressor Air Aftercooler and Water Separator Filters: 10 micron cabinet, 5 micron compressor inlet; .1 micron coalescing Oxygen concentrator output: 40 l/min(1.4 scfm) at –100^oF dewpoint
CONTROL:	PLC with color touch screen interface Communications: Ethernet, Serial 232/485 and internet 4 Analog or Digital inputs 0 - 5 VDC or 4 - 20 ma, 24 VDC source Digital output status for each ozone generating module Digital input for each ozone generating module On/Off
CABINET:	NEMA 3R Steel powder coated or stainless steel, with filtered air inlet
DIMENSIONS:	74”H x 38”W x 31”D
WEIGHT:	400 Pounds
OPERATING TEMP:	0 to 110^oF, non-condensing
POWER:	208V or 460V, 3 Phase, 50/60 Hz with neutral and ground 25/15 Amps