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SR-32 Ozone Generator



Installation and Operation Manual

It is the responsibility of the owner to thoroughly read and understand all the contents of this manual.

Cautions, Warnings and Hazards:

Ozone is a powerful oxidizing agent. Observe strict operating procedures when using ozone equipment. ***It is imperative that only ozone compatible materials be used in conjunction with the ozone system.***

Ensure that the Ozone Generator is in a well-ventilated area. Do not allow rain or condensation to contact the Ozone Generator. The Ozone Generator is not weather proof. The unit must be operated indoors or in an enclosure in a non-condensing environment.

Note: If the operator has asthma, he/she must not enter an ozonated airspace. Ozone can induce and an asthma attack.

Carefully review and familiarize yourself with the following important safety information statements concerning the Ozone Generator.

WARNING

Ozone is an extremely aggressive and powerful oxidizer. The Occupational Safety and Health Administration (OSHA) 8-hour exposure limit is 0.10-PPM. The OSHA 15-minute exposure limit for ozone is 0.3 PPM. Above 0.3 PPM, there is the risk of damage to respiratory tissues.

WARNING

People who have no sense of smell should not operate this equipment.

WARNING

Never attempt to verify ozone production by directly breathing or smelling the ozone outlet or the ozone-tubing outlet.

WARNING

The ozone generator contains high voltages. Unauthorized entry can result in serious injury or death. For service instructions, contact Ozone Solutions.

WARNING

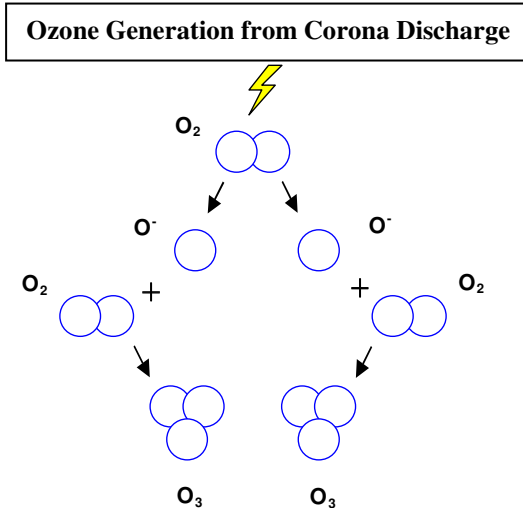
Make sure all tubing connections between the ozone generator and the injection point are secure, and in good working condition. Failure to do so could result in the discharge of ozone into an undesired space.

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Introduction:

The Ozone Generator produces ozone from oxygen via corona discharge. The Ozone Generator is capable of generating 32-gm/hr of ozone with a feed gas of 90% oxygen at 10-l/min. Ozone is used for pathogen inactivation and destruction of odorous gases.



Installation:

Install the mounting bracket (optional) on a secure wall. Attach the brackets with the screws provided 17-inches apart. (It may be advisable to secure a large piece of plywood to the wall for extra support.) Slide the ozone generator into the bracket and secure. Connect the ozone fittings as directed on the back of the units. Do not lay items on the ozone generator as it is not designed to carry heavy loads.

Be certain there is sufficient access space around the Ozone Generator to perform normal maintenance and service. Also ensure there will be a free flow of cooling air around the unit. Connect the unit to a grounded power source rated for the voltage and current requirements.

IMPORTANT: Choose a location for the Ozone Generator that does not allow rain or condensation to contact the unit. The Ozone Generator is not weather proof. It must be operated indoors or in an enclosure in a non-condensing environment.

Ozone/Oxygen Hook-up:

The ozone and oxygen outlet connection is 1/4-inch slip connection on the back of the unit (see adjacent image). Secure the ozone and oxygen tubing with a clamp to ensure no gas leaks from the connections. Spray the fitting with soapy water when oxygen is flowing through the unit to ensure no leakage.

If installing more than one generator, set all ozone generator flowrates to an identical setting so each has the same flowrate going through the unit.

IMPORTANT: Ensure that the oxygen flow is measured and controlled to rates that do not exceed rated capacity of the ozone generator flowmeter.



Water Applications:

If using the SR-32 for a water application, a balance barometer (BB), or water trap, must be installed downstream of the unit. A BB, or water trap, will protect the unit against water. Most injectors have check valves, but check valves **WILL EVENTUALLY FAIL**. Water that enters the unit is not covered under warranty. Contact Ozone Solutions for this equipment.

Operation:

To start the ozone generator, connect the unit to a grounded power source rated for the voltage and current requirements. Push the toggle switch on the front panel to the up position. The "ON" light will illuminate indicating ozone production.

Internal fuses protect against damaging power fluctuations. If a fuse blows, either Fuse 1 or Fuse 2 (or both) indicators will be lit. This generally means the fuse and PC board needs replacement. Contact Ozone Solutions if either fuse indicator is lit.

(Optional) If a unit was ordered with a 10-position switch, the operator can adjust the ozone output. This switch is only connected to only one of the four internal corona cells. The switch allows an ozone output between 75-100% in increments of 2.5%. (eg. A setting of 0 indicates 75% output; a setting of 10 indicates a 100% output.)

IMPORTANT: Ventilation must be provided to prevent the accumulation of ozone in the event of an ozone leak. Approximately 6 air-changes per hour are recommended.

IMPORTANT: The flowmeter installed on the Ozone Generator is set to read accurately when the discharge is to atmospheric pressure. If the actual discharge pressure is above atmospheric pressure, the reading can be adjusted to determine the precise flow rate, according to the following formula (using psig):

$$(adjusted\ flow) = (measured\ flow) \times \sqrt{\frac{oxygen\ pressure + 14.7}{14.7}}$$



Maintenance:

As long as the feed gas is kept dry, dust free, and pure, the ozone generator will not need maintenance. Ensure strict maintenance procedures of the oxygen generator as specified in the oxygen generator manual.

Specifications:

Feed Gas Requirements:

Air or oxygen dried to a minimum of minus 70-deg F dewpoint. No minimum airflow required. Maximum airflow of 25 l/min. Pressure on the corona cells must not exceed 5 PSI, nor vacuum be greater than 10 inches of Hg.

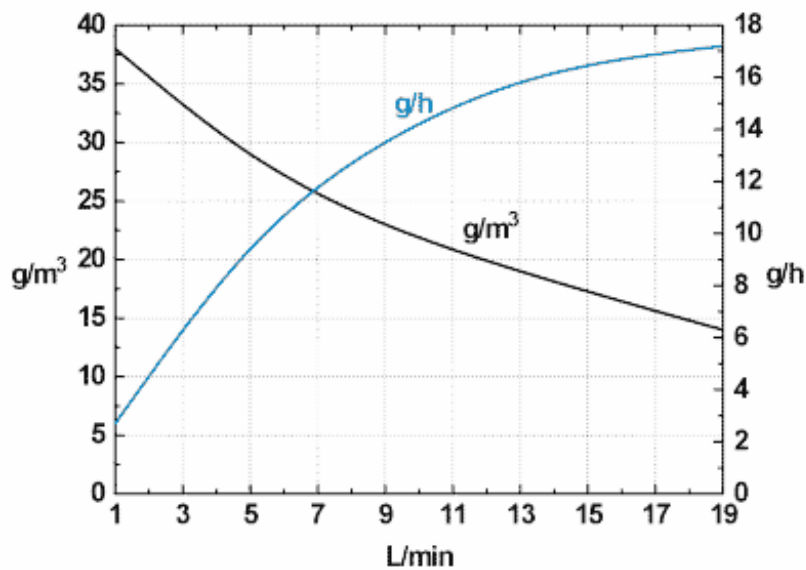
Electrical Input:

100-120 V, single phase, 50/60 Hz, 3.8 Amps, 420 Watts

Ozone Output:

18-gm/hr at 5-l/min of 90% oxygen concentration feed gas (4.2% concentration by wt.)
30-gm/hr at 10-l/min of 90% oxygen concentration feed gas (3.0% concentration by wt.)

PERFORMANCE OUTPUT WITH DRY AIR (O₂ is 2x the output)



(With oxygen, the outputs and concentrations are doubled.)

Environment:

The Ozone Generator is not weather proof; it must be operated indoors or in an enclosure in a non-condensing environment. Sufficient ventilation must be provided to prevent the accumulation of ozone in the event of a leak.

Temperature: -40 to +95 degree F max

Humidity: 0 to 85% RH IMPORTANT!!!

Mechanical:

Dimensions: 7"H x 17"W x 14"D

Weight: 30-lbs

Certifications:



How to Contact Ozone Solutions

By mail:

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