Ozone Solutions
451 Black Forest Road Hull, IA 51239 Ph: (712) 439-6880 Fax: (712) 439-6733

# OZV-4 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.*

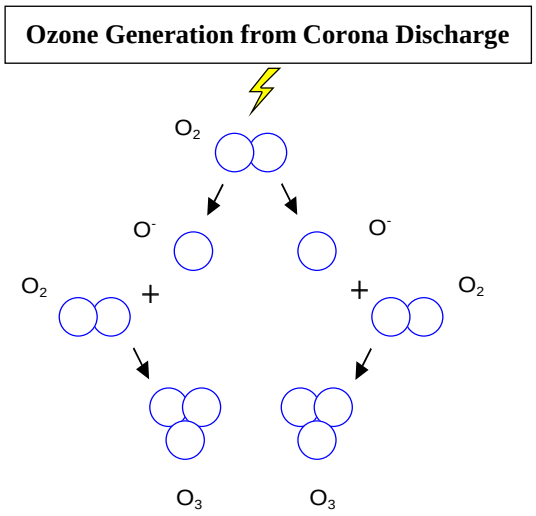
Carefully review and familiarize yourself with the following important safety information statements concerning the Ozone Generator.

| | |
|---|---|
| **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. |

# Table of Contents

## Introduction:

The Ozone Generator produces ozone from oxygen via corona discharge. The Ozone Generator is capable of generating 4-gm/hr of ozone with a feed gas of 90% oxygen at 6-l/min. Ozone is used for pathogen inactivation and destruction of odorous gases.




## Installation:

Hang the OZV-4 by using the holes provided on the back of the case on a secure wall. The unit can be set on a lab bench if preferred as orientation is not important. Connect the ozone fittings as directed on the bottom of the unit. 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 bottom of the unit. 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.

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

## Operation:

To start the Ozone Generator, connect the unit to a grounded power source rated for the voltage and current requirements. The "ON" light will illuminate indicating ozone production. Internal fuses protect against damaging power fluctuations. If a fuse blows the fuse indicator (Red Light) will be lit. This generally means the fuse and PC board needs replacement. Contact Ozone Solutions if fuse indicator is lit.

(Optional) If a unit was ordered with a 10-position switch, the operator can adjust the ozone output. The switch allows an ozone output between 0-100% in increments of 10%. (eg. A setting of 0 indicates 0% 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:** It is the customers responsibility to ensure water does not enter the ozone generator! A check valve or water trap will help prevent water from getting back into the unit.

**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 20 l/min.

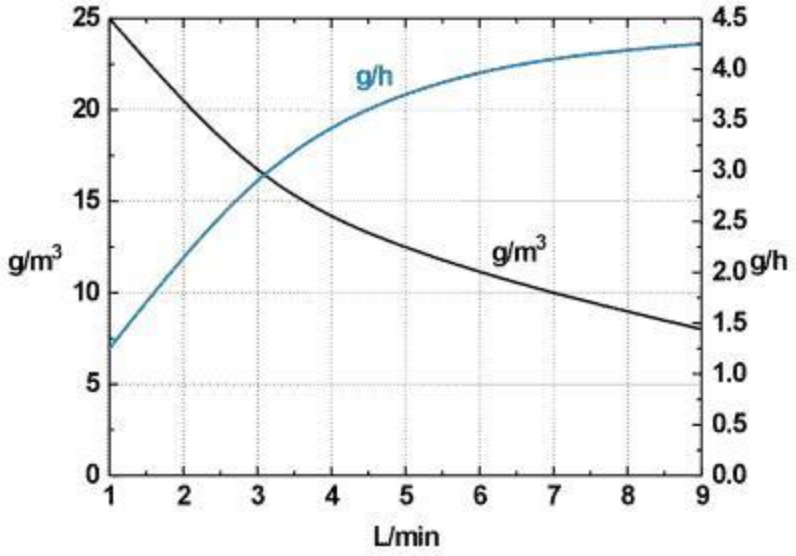
Electrical Input:

100-120 V, single phase, 50/60 Hz, 1.2 Amps, 130 Watts

Ozone Output:

4-gm/hr at 6-l/min of 90% oxygen concentration feed gas; 2-gm/hr on 1.75 lpm of oxygen.

**PERFORMANCE OUTPUT WITH OXYGEN**




**(Dry air will reduce the generation curve and concentration curves in half)**

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 -deg F max
Humidity: 0 to 85% RH

Mechanical:

Dimensions: 16-in H x 10-in W x 4-in D
Weight: 11-lbs

**Certifications:**

**How to Contact Ozone Solutions**

By mail:

*Ozone Solutions, Inc.*
451 Black Forest Rd
Hull, IA 51239

By telephone: (712) 439-6880
By fax: (712) 439-6733
By e-mail: sales@ozonesolutions.com
Website: www.ozonesolutions.com