

## HOW TO USE THE OZONE TREATMENT CALCULATOR (OZONE CALC APP)

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**Ozone treatment is a deodorization technique that is used after cleaning and not in place of it. The Ozone Calc was developed to give technicians insight to proper set up of an ozone treatment. Once you enter the basic data required and hit the calculate button, you will be given info to best set up this treatment.**

**The bold headings refer to the Ozone Calc data points needed to calculate what equipment is needed to successfully conduct an ozone treatment.**

- 1- Select Purge Time:** Determine how long you want to purge after the treatment for safe entry. This will make sure the area is below the .1 PPM PEL levels. You can choose between 30, 60 and 90 minutes. After all the other inputs and calculate, you may need to reconsider the purge time and recalculate.
- 2- Square Footage:** Enter the square feet of the treatment area. You may need to isolate portions of the project to match you equipment you have in service.
- 3- Room Height:** Enter ceiling height of the treatment area. This with the square footage will determine cubic feet to be processed.
- 4- Select Contamination Level:** Light, medium or heavy. **Light** - would be like something burning on the stove for a few minutes that smoked up the house but no fire. **Medium** - would be like a small fire or long term contamination where it has permeated throughout the structure. **Heavy** – would be either a hot burning structural fire or a smoldering fire that ran for a more than 15 minutes.
- 5- Select Surface Area: Open Structure – Perimeter Only** – would be an open structure without interior walls, like a warehouse. **Open Structure** – would be a standard occupied structure with interior walls, like a house or office. **Low Contents** – would be a lightly furnished facility. **Medium Contents** – would be like a standard house. **Heavy contents** – would be like an ozone chamber.
- 6- Calculate:** Once you hit the calculate button, the lower portion will be populated.

**Grams per hour:** refers to the size of ozone generator production per hour

**Duration:** refers to the treatment time

**Pressurize area:** refers to the amount of air, in cubic feet per minute, being brought into the area, to create a positive pressure needed to assist the ozone to penetrate and deodorize.

**Lift:** refers to the number of air movers needed to create the lift and mix needed to create a consistent PPM throughout the treatment area.

**Purge:** refers to the amount of air, in cubic feet per minute, leaving the treatment area.

The NUVOAIRE logo is a direct link to our support page like this document.

nuvoaire - Ozone Treat...

Select Purge Time

Square Footage

Room Height (Feet)

Select Contamination Level

Select Surface Area

Submit

Grams per hour:  grams

Duration:  hours

Pressurize area:  cfm

Lift:  air movers

Purge:  cfm

Download warning sign.

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Use the app for supporting documentation: take a screen shoot of the app after you have made you calculations. Send it to your email and upload it into your supporting docs for a loss.

## HOW TO USE THE OZONE TREATMENT CALCULATOR (OZONE CALC APP)

### Step by Step Procedure to turn a house into an ozone chamber

- 1) Make sure there are no people, pets or plants in the structure. Post signs restricting entrance. Time for entry needs to include the purge time as well as the treatment time.
- 2) Open cabinet doors, drawers, and space clothing 3-4 inches apart.
- 3) Determine the amount of ozone you need to treat the area. Use the Ozone Calc app. It will give you a starting point to know how much ozone you need to create every hour and for how long. Use one or multiple units to get enough ozone for success. Place it near the HVAC return air vents and turn the system fan "on". This will evenly disperse the ozone throughout the structure.
- 4) Duct in fresh air using an Air Scrubber or equivalent, pre heat if needed, and direct it into the path of the ozone generator. This creates a positive pressure and takes the activated oxygen to all the nooks and crannies in the house. Try to get the CFM close to the pressurize calculation.
- 5) At the opposite end or level of the house, install one or more 4 inch dryer duct, with the louvers on the inside of the house. The positive pressure will hold it closed during the treatment. When the exhaust fan turns on to purge the treatment area, the louvers will allow fresh air in and draw the air across the area.
- 6) Install small fans, with no more than 1000 CFM, directed towards the ceiling. Place one every 100-150 square feet. This will lift the heavier ozone and get an even mix of ozone throughout. Turn them on.
- 7) Set up an air scrubber at the lowest and furthest point from the fresh air in dryer ducts. Make sure the CFM is near the 30.60 or 90 minute purge as per the Ozone Treatment Calculator. This will ensure that upon completion, the ozone levels will be below the PEL of .1 PPM as required by OSHA. Set the timer for the purge to start following the ozone treatment cycle.
- 8) Set timer for either, 4, 6, or 8 hours for the ozone machine. If you have a combination ozone/hydroxyl generator, turn on the additional light. The treatment has begun.
- 9) Upon completion of the treatment, the person that is going to purge the structure has PPE. Full face respirator with organic filters is required to enter. Only enter after the purge has been going for 1/3 of its purge cycle. Using an electric leaf blower, walk through and blow off contents. The air velocity will help break down the ozone and stop the oxidization process.
- 10) After the purge is complete, check the odor. If needed, use the Ozone Calc, and retreat accordingly. It is better to do two shorter treatments than one long one.

Remember, ozone breaks down organic materials and it goes through a phase that is different than the original odor and the smell of ozone. Purging the area will eliminate the partially broken material as well as ozone. Do not judge the outcome until the ozone has been purged. There must be enough ozone, as measured in grams,

with enough dwell time to deodorize and sanitize the area.



Screen shot the Ozone Calc to use as supporting documentation for the amount and size of equipment needed for successful ozone treatment. Any question regarding this or other ozone related situation please call 844-688-6247 or email [questions@nuvoaire.com](mailto:questions@nuvoaire.com) and someone will get back to you.