O3ELITE

Operating Manual

For O3Elite Single, Mini and Dual Models

Quick Start Guide

1. Turn on oxygen source first (30 seconds for tanks, five minutes for concentrators)
2. Turn on ozone generator to desired setting
3. When done, turn off the ozone generator
4. Wait 30 seconds and turn off the oxygen source

Things to Know About Ozone

- **Heat degrades the strength of ozone**
- **Humidity degrades the strength of ozone**

Both factors affect ozone output. You should use your ozone generator at room temperature and not put it in direct sunlight. Always use clean oxygen, either from an O2 concentrator or an O2 tank while using the ozone generator. Never use ambient air, as dust and humidity may enter the ozone generator and compromise the unit. Ambient air use will void the warranty.

Ozone strength will always be greater when using a high-quality oxygen source, as ozone output directly relates to the concentration of oxygen entering the ozone generator.

An oxygen concentrator uses a compressor to separate and purify the oxygen and operates at 90% - 95% pure oxygen. An oxygen tank uses oxygen that was created by cooling oxygen to a liquid and separating out all the impurities, resulting in 99% pure oxygen.

Another factor in ozone output is oxygen flow speed. The slower the oxygen flow, the stronger the ozone output. This is because ozone generators rely on contact time with oxygen. The longer the oxygen can stay in contact with the ozone generator, the stronger the ozone output will be.

About the O3Elite Ozone Generator Series

The O3Elite is a dual or single cell ozone generator designed for performance and efficiency. All models are made in the United States, including the ceramic stainless ozone cells. It comes in a thick aluminum case with 316 grade stainless steel Luer lock fittings. These allow the user to securely connect tubing to the ozone generator, eliminating any chance of the tubing becoming loose or falling off.

Wall mount holes have been added to the Dual and Single to allow the user to place the ozonator on a flat surface or attach it to the wall.

The Ozone Cell

The O3Elite utilizes pulse modulated ceramic stainless cells, which produce stable ozone concentration levels and virtually no heat. This results in a stronger, more efficient ozone production with maximum output and minimum high voltage input. No cooling fan is required which keeps the ozone generator cleaner and increases the life of the machine. The cells produce very little noise which is a result of efficient ozone production. The lower the noise, the more efficient the ozone generation.

Wall Mounts

The O3Elite Mini is designed to sit on a table. The O3Elite Dual and Single come standard with wall mount holes located on the bottom of the ozone generator, and can therefore be used on a table or hanging from the wall. All dials and tube connections are located in easy to see and accessible locations. Mounting screws are not provided.

Operating Conditions & Environment

Operating Conditions

The generator is designed to run with a pure oxygen source. This eliminates any contaminates from being produced that may enter or harm the ozone generator. **Do not exceed 50 psi when using an oxygen tank.** Using psi greater than 50 will result in a voided warranty.

Operating Environment

It is important to set up equipment in an area that is free of airborne moisture and particles. Dust particles and condensation pose a challenge to the consistent operation of all ozone generators. Make sure the ozone generator stays clean and dry.

Power Requirements

The O3Elite offers a standard AC to DC wall transformer which can be used with voltages ranging from 100 to 240 volts. This gives the O3Elite the ability to be used internationally without a step-down transformer; however, please note that a plug adapter will likely be necessary for international use (included with international orders).

- Voltage: 12 VDC
- Power: Mini and Single [800ma]; Dual [800ma with one cell or 1600ma with both]

Safety Guidelines

⚠ **Important:** Please read the following safety guidelines thoroughly before attempting to operate or install your equipment.

- As with all electric devices, this equipment should never come in contact with water.
- The equipment must be operated using a properly grounded electrical circuit that is protected by either a fuse or circuit breaker.
- Virtual Health Options LLC assumes no liability for damages or injuries incurred by misuse of this product.
- Use a power conditioner if line voltage fluctuates outside of specified range.

Setup and Connection

Attaching the Tubing to the O3Elite

The ozone generator has female Luer Lock connectors while the tubing has male Luer Lock connectors. These connectors are designed to work together. Attach the male Luer lock with tubing attached directly to the female Luer lock and turn clockwise. This will lock the tubing in place for quick, easy use. To disconnect the tubing turn the male Luer lock counter clockwise.

Ozone Check Valve

An ozone check valve is provided with each ozone generator. The ozone check valve should always be used when water is being used, as it can help prevent backflow issues. Using the ozone generator with water or oil and without the ozone check valve will void the warranty. On new units the check valve comes already attached to your silicone tubing.

Note: We recommend replacing check valves every six months. If the check valve comes in contact with oil, replace it immediately.

To install a new check valve, blow into the check valve to determine which side the air comes out. That side should be attached to the ozone tubing that connects to your ozone accessories. The side where air does not come out should be attached to the ozone tubing that is connected to your ozone generator.

How to Operate

Before turning on the ozone generator make sure all the tubing is connected.

- **O3Elite Dual:** Has two ozone cells which are controlled individually with each dial. The dial on the left hand side operates cell one; the dial on the right hand side operates cell two. Each dial has five different settings which allow you to customize your ozone output.
- **O3Elite Single:** Has one dial with eight different settings to customize the output.
- **O3Elite Mini:** Has no dial; the output is controlled by oxygen output.

On the top of each Dual and Single there are two markings: Oxygen In & Ozone Out. The Mini has an Oxygen In on the back and an Ozone Out on the front. This is where you will connect your tubing.

Connect the clear plastic tubing to your oxygen source. Attach the other end with the luer lock to the Oxygen In connection of the ozone generator. Next attach the opaque/hazy silicone tubing with the luer lock to the Ozone Out connection of the ozone generator.

Turning on Your Oxygen Source

Important: It is important to turn your oxygen source on before the ozone generator.

- **For tanks:** Turn on the flow for at least 30 seconds.
- **For oxygen concentrators:** Run the concentrator for five minutes before turning on your ozone generator, as it can take several minutes for the concentrator to reach its maximum purity level. Turning on the ozone generator before high purity oxygen is flowing can lead to nitrous oxides in your ozone. DO NOT use the humidifier that came with your concentrator. Hook your tubing directly to the concentrator's output fitting.

How to Turn on the O3Elite

Now you are ready to turn on the ozone generator. The dial(s) on the generator should be in the *off* position.

- On the **Dual** model there are five settings on each dial, with one being the lowest and five being the highest.
- On the **Single** model there are eight settings on the dial with one being lowest and eight being the highest. When a cell is turned on the appropriate light will also turn on.
- The **Mini** has a single power button that lights up when on.

To adjust your settings to produce the ozone output you want, see the relevant ozone output chart below.

The Proper Way to Turn Off Your Ozone Generator

After you are done using the O3Elite, turn the ozone generator off first. Wait at least 30 seconds and then turn off your oxygen source. This will allow the ozone cells and tubing to flush out, increasing the life span of all of the parts. **Unhook all tubing when not in use.**

Output Charts

O3Elite Single Output Chart

O2 LPM	Ozone Generator Dial Setting							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	2	4	5	6	7	8	9	10
3/4	3	5	7	9	11	13	15	17
1/2	4	7	9	11	14	16	17	19
1/4	9	14	18	22	25	29	31	33
1/8	18	29	33	41	44	46	50	52
1/16	30	37	42	48	54	56	58	63
1/32	36	42	44	51	57	62	66	70

Note: Gamma = ug/ml. To use this chart, determine how many gammas of ozone you want to produce. Find that number in the chart. Set your oxygen to the LPM setting on the left and your O3Elite dial to the setting above.

O3Elite Dual Output Chart

O2 LPM	Dial One Only					Both Dials				
	1	**2**	**3**	**4**	**5**	**5,1**	**5,2**	**5,3**	**5,4**	**5,5**
1	1	3	5	7	8	11	13	15	17	18
3/4	2	4	7	9	10	14	16	18	20	21
1/2	4	8	11	13	15	19	22	26	30	33
1/4	7	13	18	23	26	32	37	42	47	53
1/8	12	24	33	40	45	51	60	68	70	75
1/16	21	40	49	55	59	73	81	85	90	95
1/32	30	52	65	71	78	88	95	101	106	110

Note: To produce 26 gamma, use 1/4 LPM of oxygen and turn dial 1 to 5. To produce 70 gamma, use 1/8 LPM of oxygen and turn dial 1 to 5 and dial 2 to 4.

O3Elite Mini Output Chart

Oxygen Flow Rate	Ozone Output	Intensity
1 LPM	7	Low
3/4 LPM	9	
1/2 LPM	13	Medium
1/4 LPM	25	
1/8 LPM	38	
1/16 LPM	52	High
1/32 LPM	65	

To use, determine the amount of ozone you want to produce under Ozone Output. Set your oxygen source to the LPM setting specified under Oxygen Flow. Once oxygen is running at the specified LPM, turn on the O3Elite Mini to achieve your desired output.

Ozone Definitions

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1 Gamma = 1ug (microgram)/ml = 1g/L = 1g/m³
1LPM = 1000 cc/min = 1000 ml/min
Total volume in ml = flow (cc/min) x time (min)
Total Ozone = Total Volume (ml) x Ozone Concentration (ug/ml)
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Maintenance and Cleaning

Turning Off Your Ozone Generator

When you are done using your ozone generator you will want to follow these simple steps to ensure your equipment is properly maintained:

1. After your ozone session, turn off the ozone generator.
2. Wait 10 to 15 seconds before turning off your oxygen source.
3. Disconnect the tubing when not in use and place the cap covers back on the oxygen in and ozone out ports.

Filling an Insufflation Bag

1. Turn on your oxygen source to the desired flow rate.
2. Turn on the ozone generator to the desired output.
3. Attach the insufflation bag to the ozone out port of the ozone generator (make sure the tube is not clamped).
4. Once the bag is full, disconnect and clamp the tubing.
5. Follow the steps above to turn off your ozone generator.

Cleaning Oil from Your Glassware

The best way to clean oil from your glassware is hot water and soap. The hot water will help break up the oil. If this doesn't work, you can use a solvent such as ethanol or acetone and let the glass soak overnight. You will then want to rinse with fresh clean water.

Troubleshooting: No Air Flow

Why am I not getting air through my ozone generator?

There are several things to check if you do not see any air exiting your ozone generator:

1. Make sure your oxygen source is turned on and running.
2. Check the tubing for any tears or leaks.
3. Make sure all your connections are tight (this includes using the correct connectors).
4. Make sure your check valve is working properly. You may need to remove this and manually blow through it to check.

When to Replace Silicone Tubing

There are several things to look for that will indicate when you need to replace the tubing for your ozone generator:

- Tubing discoloration (may turn brownish-orange).
- The tubing becomes brittle and cracks easily.
- When you notice a whitish residue on the outside of the tubing.

How to Remove Silicone Tubing from Glass Components

If the silicone tubing that connects to the water bubbler or oil bubbler ever needs to be replaced, this can be done easily:

1. Cut off the silicone tubing as close as you can get to the glass.
2. Take a razor blade and shave off the silicone tubing (get it as clean as possible).
3. Take a fresh piece of silicone tubing and dip in water.
4. Slide the silicone tubing over the glass.

Ozone Destruct Systems

If you start to notice escaping ozone smells when using your ozone destruct, we recommend replacing the ozone destruct material. Under normal circumstances the destruct material should last one to two years. If water enters the ozone destruct system you will need to replace the destruct material.

How to Clean Your Catheter

Cleaning your catheter is a must if you plan to reuse it. Simply rinse the catheter clean with water and then sterilize with hydrogen peroxide. If the catheter becomes difficult to clean, fill a syringe with water, attach to the connection port, and push water through the catheter. This will help dislodge and clean the catheter.

Flooded Ozone Generators

> ⚠️ **Important:** Our ozone cells have been designed to stop producing ozone if water enters.

If your generator becomes flooded, follow these steps:

1. Turn off the generator and unplug the system.
2. Disconnect the tubing from the Ozone Out port.
3. Lift the tubing and any water left in it should quickly flow back into your bubbler.
4. Let oxygen flow through the generator at 1/2 LPM or more for an hour (or more if needed, depending on the amount of water in the cell). Concentrators can be run at 5 or 10 LPM. If you're low on oxygen, an air pump can be used.
5. Some find this will work faster if you turn the generator upside down while oxygen is flowing.

Most of the time, this will fix the problem without a need to send it in for repair.

After 30-45 minutes, you can make sure the process is working by plugging the generator back in and run it on a high setting with your oxygen at 1/8 LPM. If it is drying out you should be able to smell ozone in a few seconds. Unplug the machine again and allow the drying process to complete until you can again turn on the machine and smell ozone.

Disclaimer

This unit is for recreational and experimental use only.

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