



OXY-96 OXYGEN CONCENTRATOR

# SAFETY & INSTRUCTION MANUAL





# CONTENTS

Safety precautions	4
Unboxing	4
Product features	5
Key technical specifications	6
Overview diagram	7
Operating guide	7
Installation	8
Operating instructions	10
Care and maintenance	12
Trouble shooting guide	14
Operating principle	15



*The Natural Ozone Oxygen Concentrator is designed to be used on a prescriptive basis by patients requiring supplemental oxygen. It supplies a high concentration of oxygen and is used with a nasal cannula to channel oxygen from the concentrator to the patient. It should only be used as directed by your physician.*

*ATTENTION! Incorrect use of oxygen can be harmful.*



## SAFETY PRECAUTIONS

In case of power outage or malfunction of the oxygen concentrator, an alternate source of supplemental oxygen (such as oxygen cylinder or oxygen bag) should be prepared for the user in urgent need of oxygen.

Oxygen is a combustible gas, so do not smoke nearby and keep away from any other possible source of ignition while using the machine.

Do not switch on & off frequently. You can restart it after you have switched it off for 3-5 minutes.

Avoid oil or grease-like material for any part of the machine as it may contaminate the oxygen and/or cause fire.

**Note:** This machine does is not suitable for life support or life extension.

## UNBOXING

Check parcel on delivery for signs of damage during transport. After opening the package, please check whether the machine is in good condition, and refer to the accessory list to ensure that all of the items are included. If there is any missing item, please contact Natural Ozone for replacement. If there is

damage to the outside of the parcel, contact the delivery company and register a complaint.

**Note:** The unit housing should only be opened by a licensed professional.

### ► Accessory list:



1. Oxygen generator OXY – 96



2. Oxygen tube with T piece (optional)



3. Nasal cannula



4. Nasal outlet



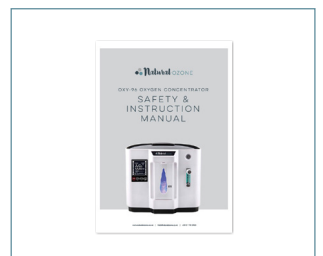
5. Headset oxygen delivery device



6. Remote control



7. Power chord



8. User manual

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## PRODUCT FEATURES

The product is designed in according to the standards of home appliance, for the use of supplemental oxygen.

**Health function:** The use of supplemental oxygen is indicated in a number of different conditions. Always consult your physician to determine the proper usage regime. Improper use of supplemental oxygen can be harmful. Natural Ozone does not give health advice.

**Intelligent control:** LCD display screen, easy use and operate including timing function.

**Overheating protection:** Unit will automatically shut down if the compressor temperature exceeds the set limit.

**Anion (negative ion) function:** (Optional) Anions are negatively charged particles which are released into the atmosphere through the vent at the back of the machine. Studies have shown health benefits from the use of negative ion generators including decreasing pollen, bacteria and other pollutants in the air. While the anion function is activated, the negative ions will be automatically generated and released while your machine is running.



# KEY TECHNICAL SPECIFICATIONS

Using air as raw material, the oxygen concentrator uses an oil-free air compressor and molecular sieve to generate high purity oxygen which is delivered by nasal cannula.

## STANDARD OPERATING CONDITIONS

▶ Operational temperature:	0°C - 40°C
▶ Relative humidity range:	≤80%
▶ Atmospheric pressure range:	86kPa-106kPa

If the machine has been subject to conditions outside of the specified range, please leave within standard operating conditions for at least 4 hours before use.

## TRANSPORT OR STORAGE CONDITIONS

▶ Storage temperature:	20°C - 60°C
▶ Relative humidity range:	≤93%

To avoid strong electromagnetic interference environment or interfering other domestic appliances, please keep the machine at least 3m away from other domestic appliances.

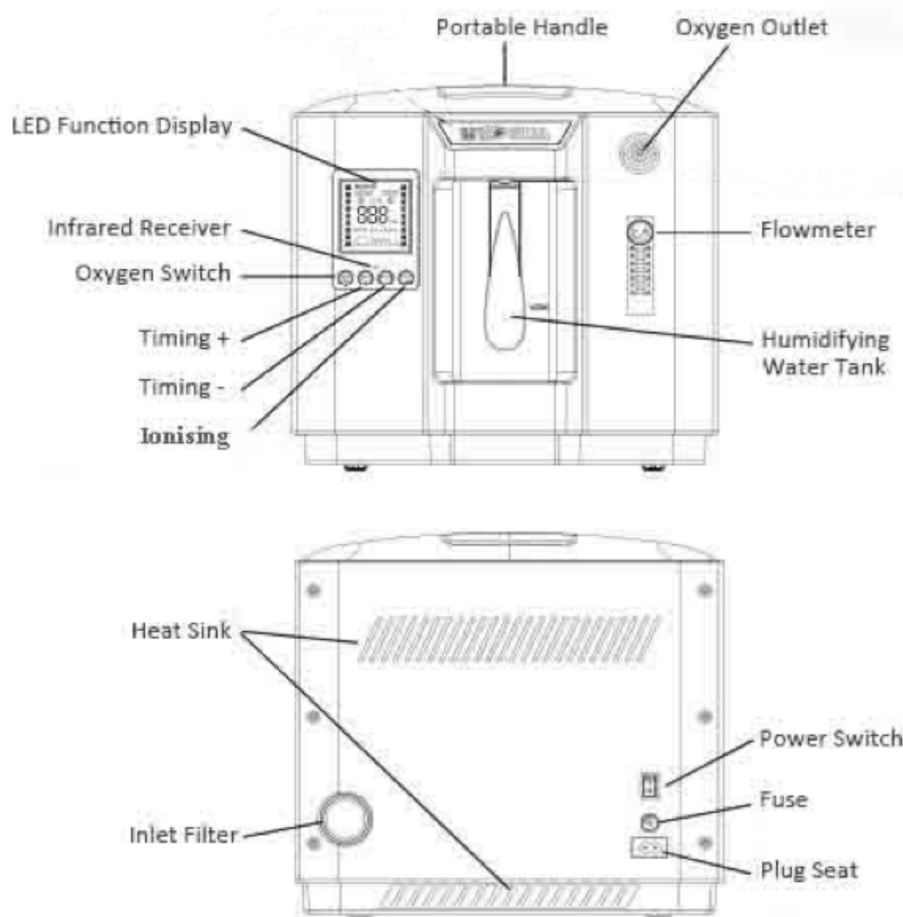
▶ Model:	OXY-96
▶ Oxygen generation method:	Pressure Swing Adsorption (PSA)
▶ Rated voltage:	AC220±15V, 50±1Hz
▶ Input power:	130W
▶ Rated Current:	0.6A
▶ Oxygen flow rate:	0-6L/min adjustable
▶ Oxygen concentration:	30%-96% (±3%) adjustable
▶ Oxygen pressure:	0.02~0.03MPa
▶ Carbon dioxide:	qualified according to the specified method
▶ Carbon monoxide:	qualified according to the specified method
▶ PH value:	qualified according to the specified method
▶ Morphological identification:	odorless, colorless gas, combustion-support
▶ Operating noise:	≤45dB(A)
▶ Classification:	II class
▶ Size:	340mm x 180mm x 310mm
▶ Net weight:	6.0kg
▶ Display control:	LCD light display, intelligent chip control, infrared remote control

# OXY-96 OPERATING GUIDE

## INSTALLATION



### MAIN OVERVIEW



## INSTALLATION

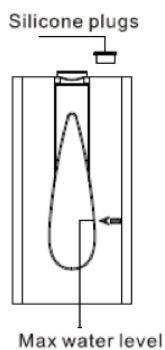
Unit must always be operated in upright position.

Please use standard electrical socket. If the local power supply has unsteady voltage, or is outside of the specified  $220\pm 15$ volt, please connect a voltage regulator before using the machine.

The machine should be located in a well-ventilated space, avoid direct sunlight. The distance between the machine and the wall or other objects should be no less than 10cm.

Never place any objects on the machine while in use.

There should not be any obstruction around the air vents on the back and bottom of the machine. Blocked air inlet or outlet may cause overheating, reduced oxygen supply or damage to the unit.



## FILL THE HUMIDIFICATION WATER TANK:

Grasp the water tank on both sides and pull. The water tank is a separate unit which will detach from the body of the machine.

Open silica gel plug at top and fill pure water to the indicator line.

**Note:** Do not overfill.

**Note:** To ensure the water tank stays clean, use only pure water such as cool boiled or distilled water. Distilled water is available from most supermarkets.

**Note:** Remember to replace the silicon plug firmly back into the inlet hole before replacing the water tank.

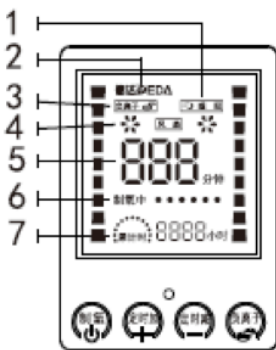
Return the water tank to into position: Line up the three air pipes and push the water tank back into place.





## CONNECT OXYGEN TUBE

Connect one end of oxygen tube (supplied) with the oxygen outlet nipple and connect the other end with oxygen inhaler, eg cannula.



## LED SCREEN DISPLAY DIAGRAM

1. Sleep mode indicator
2. Brand logo indicator
3. Anion (negative ion) indicator
4. Cooling fan indicator
5. Timing setting indicator
6. Generating oxygen indicator
7. Cumulative time indicator

## OXY-96 OPERATING GUIDE

# HOW TO OPERATE

## POWERING UP

Ensure that the machine is connected to a standard power socket. Press the toggle switch at the back of the machine. The unit will emit a short beep and enter standby mode. The on/off button will light up and the machine is ready to operate from either the keypad or remote control.

## SWITCHING ON

Press the ON/OFF (oxygen) switch and the machine will commence operation. Various indicator lights will show as well as the backlight on the water tank. The machine will emit a gentle whirring sound and oxygen will flow from the outlet, while nitrogen will be emitted from the vent at the back. The machine runs continuously by default.

## TIME+

Once the machine has been switched on, it will run continuously by default. Press the Time + button once and the time setting will display 15 minutes. Each time you press the Time + button, the running time will increase in increments of 15 minutes until the maximum of 180 minutes has been reached. Use the time setting as prescribed by your physician.

## TIME-

Once the machine has been switched on, it will run continuously by default. Press the Time – button once and the time setting will display 180 minutes. Each time you press the button, the running time will be reduced by 15 minutes. Use the time setting as prescribed by your physician.

## IONISE

The Natural Ozone OXY-96 oxygen concentrator has an additional feature known as a negative ion generator. Negative ions are charged particles (anions) which are released into the environment through a vent at the back of the machine. The anions do not get mixed with the oxygen which flows through the outlet. Negative ions have been shown to have beneficial effects such as reducing pollution, pollen and pathogens in the environment. This is an optional benefit that you may choose to select while you are using your oxygen concentrator. To operate, press the “ionize” (anion) key and the machine will start producing them automatically. Press again to switch the function off. The indicator light will illuminate while the anion function is operating.

## FLOW RATE VS OXYGEN CONCENTRATION

The concentration of oxygen delivered is controlled by the flow rate which can be adjusted by the knob on the flow meter, which is located on the right hand side of the machine. The higher the flow rate, the lower the oxygen concentration. Please refer to the chart below for details. Turn the knob anti-clockwise to increase the flow rate and decrease the oxygen concentration. The flow rate is indicated by a black bead inside the glass tube of the flow meter. Please use the concentration and flow rate as prescribed by your physician.

### OXYGEN CONCENTRATION CHART\*

Litres/minute	1	2	3	4	5	6
Concentration	96%	80%	65%	50%	40%	30%

\*Note 3% variation



## REMOTE CONTROL

The remote control buttons function in the same way as the buttons on the machine keypad.

1. On/Off key
2. Time +
3. Time –
4. Negative ion
5. Sleep mode

When the machine is operating, press “Sleep” mode key. The “Sleep” icon on the display screen will flash three times, then the screen will turn off but the machine will continue normal operation. Press any key on the remote control or touch any key on the machine panel to reactive the screen.

## OXY-96 OPERATING GUIDE

# CARE AND MAINTENANCE

### HOUSING CLEANING

The surface of the housing should be cleaned at least once every month. Disconnect the power cord before you clean it. Wipe it with a clean, mild, damp cloth soaked with disinfectant. Do not let the liquid penetrate into the machine.

### WATER TANK CLEANING

To keep the water tank clean, use only purified water, distilled water or cold boiled water and change water every day.

The water tank should be cleaned every week. First, remove the tank from the unit and half fill with water and a small amount of detergent and give it a good shake. Next rinse with clean water. Ensure that all residue of detergent is washed out.

After cleaning the water tank, please remember to replace the silicon plug to avoid leakage of oxygen.

### AIR FILTER CLEANING

The white air filter at the back of the machine can reduce noise, isolate dust and purify the air and should be cleaned around every ten days.

1. Grasp the round air filter cover on the back of the machine and pull it out. It has an O-ring seal, so you need to pull quite hard. Once the cover has been removed, the filter will be visible.
2. Remove the filter, which looks like a thimble from the air inlet tube.
3. First use detergent to wash, and then rinse it with clean water. Pay special attention that it is dry before replacing or the function of the molecular sieve could be damaged, which will lead to decreased oxygen concentration.
4. Replace the filter back onto the air inlet and replace the cover.

### OXYGEN TUBE AND OXYGEN INHALER CLEANING

The oxygen tube should be cleaned every three days. The delivery part of nasal cannula should be cleaned after each use. You can soak it with 5% potassium permanganate (condensed crystals) solution for 5 minutes, then rinse with clean water, or wipe it with alcohol. Replace the oxygen tube every year.

## LONG TERM STORAGE

If you are not intending to use your oxygen concentrator for a long period of time, please follow these instructions:

1. Remove water tank, drain and dry then replace
2. Unplug power chord
3. Store tubes and cannulas in a clean, dry environment, protected from light and extreme temperature

## RECOMMISSIONING AFTER LONG TERM STORAGE

1. Check for signs of damage especially to the electrical cable
2. Clean oxygen tube and inhaling devices
3. Clean water tank



## OXY-96 OPERATING GUIDE

# TROUBLE SHOOTING GUIDE

# PHENOMENON	CAUSE ANALYSIS	SOLUTION
1 ► Odour in the air	In the initial stage of use, there is a smell from the connection tube and other plastic parts. It is normal.	The odour that comes from silicone tube and ABS rubber parts is normal and non-toxic. The odour will disappear as time goes by.
	The humidifier water tank hasn't been cleaned for a long time or the water hasn't been changed.	Clean the oxygen tube and humidifier water tank.
2 ► Water flows from the oxygen outlet	The water level of the humidifier water tank is beyond the highest water level, so the airflow pushed water into the oxygen tube.	Keep the water lower than the highest water level.
	The machine has been used for a long time, so that the steam in the oxygen flow condenses on the tube wall.	Replace water in the tank and allow oxygen tube to dry out
3 ► The machine lets out "Puff" sound every several seconds	It is the sound of nitrogen discharging which is normal and is a sign of fine working.	No action necessary
	The flowmeter is off or the value is too small	Turn up the oxygen flow.
	The oxygen tube is twisted or blocked.	Straighten the oxygen tube.
	The inner connection tube of the machine is disconnected or broken.	Disconnect the power cord and bring to a professional to repair
4 ► After start-up, the water tank bubbles, but there is no oxygen flowing from the oxygen outlet	The silica gel stopper of the humidifying water tank is not properly positioned.	Remove the humidifying water tank and ensure that the plug is properly in place.
5 ► After start-up, the indicator lights are working but the machine does not	Compressor malfunction.	Disconnect the power cord and take to a professional for repair.
	The temperature is so high that the self-protection function of the compressor is activated.	This is working correctly. When the temperature lowers, the machine will restart automatically.
	Separation valve malfunction	Disconnect the power cord and bring to a professional to repair
	The inner connection tube of the machine is disconnected or broken.	Disconnect the power cord and bring to a professional to repair

If it still does not work as you have followed the solutions listed above, do not disassemble the machine. Please consult the manufacturer for assistance.

## OPERATING PRINCIPLE

The air comes into the compressor via the air inlet filter, and then it enters into molecular sieve tower to separate the oxygen and nitrogen. The oxygen goes through the molecular sieve tower into the fine sieve tower while the nitrogen is discharged into the atmosphere through the separating valve. The oxygen concentration is enhanced in the fine sieve tower and controlled by the flowmeter. Then the oxygen is humidified by the humidifying water tank. Finally, the oxygen is delivered to the user through oxygen supply tube.

