



Model :VH-03

Oxygen Concentrator

Instruction manual

Please read the instruction manual carefully before using the product.
The picture is for reference only. Please refer to the actual product!

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1. Precautions

Warning: This is not a medical device and is not considered life-support or life-sustaining equipment.

Warning signs on the product are designed to help users understand and use this product correctly to prevent damage and a property loss. The main warning signs and meanings are as follows:

	Prohibited action		Caution (Warnings and dangers)
	Required action		Class II equipment
	Keep dry		This side up

▲ The machine shall be placed indoors. Keep the room well-ventilated and avoid direct sunlight. Keep the product more than 30 meters away from the walls and other objects.

▲ Do not place miscellaneous items and liquid containers on the machine case.

▲ It is prohibited to stack sundries at the ventilation hole on the back of the machine to prevent clogging of intake and exhaust, which may lead to excessive temperature and thus cause improper shutdown or a decrease in oxygen concentration.

▲ To avoid the machine being interfered by strong electromagnetic environment or interfering with other electrical appliances, please keep it at least 3 meters away from other household appliances when using.

▲ Do not place the machine upside down or laid it horizontally.

▲ If the voltage is unstable and exceeds the range of $220\pm 15V$, please connect the voltage regulator before use.

▲ Please use a safe and qualified socket and a terminal block with safety electrician certification.

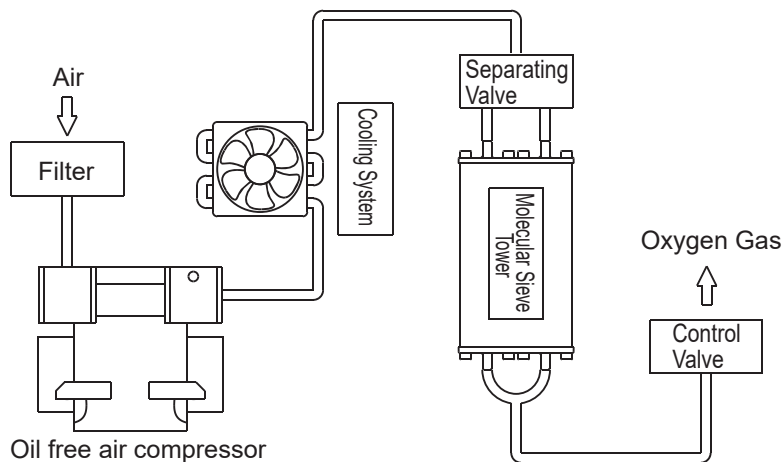
▲ Oxygen is a combustion-supporting gas. Therefore, when using the machine, do not smoke and keep away from the fire source to avoid a fire hazard.

▲ Do not turn on and off the machine too often. Turn off the machine for 3-5 minutes before restarting to maintain the normal service life of the machine.

- ▲ No oil or greasy substance should be used in any part of the machine.
- ▲ Do not use the machine without an air filter.
- ▲ Do not bend the oxygen-inhalation tube when using the machine, otherwise, it will affect the normal output of oxygen.
- ▲ Unauthorized personnel should not disassemble the cover.
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2. Working Principle

Air enters the compressor after being filtered through the inlet filter device, and is compressed into the molecular-sieve tower for oxygen-nitrogen separation. Oxygen passes through the molecular-sieve tower and enters the fine sieve tower, while nitrogen is adsorbed by the molecular sieve and discharged into the atmosphere through the separation valve. With the increase of oxygen concentration in the fine sieve tower, oxygen is finally delivered to the user through the oxygen delivery pipe under the control of the electronic flow control valve.



Schematic Diagram of Oxygen Machine

3. Product Description

This product is applicable to AC 230V/50Hz(110V/60Hz) voltage. It is equipped with a pure copper oil-free compressor and a high-quality molecular sieve. It uses air as raw material to produce high-purity oxygen through a new Pressure Swing Adsorption method (PSA) at room temperature, which can be used for household supplementary oxygen absorption.

The product is designed according to a standard higher than the standard for household appliances. It is fitted with a large clear LED display screen. With intelligent chips controlling the circuit, the machine has automatic fault alarm function, timing function and overheating circuit protection function. When the working temperature of the compressor is too high, it will automatically stop working to better protect the safety of the compressor and the whole machine.

This product is easy to operate, lightweight and portable. It is not only suitable for home use, but also can be used in a car by using the automobile power supply. Suitable for household oxygen supplement.

4. List of Attachments

Main machine	X1
Oxygen inhaler kit	X1
Parts for nebulization (VH-03 model only)	X1
Remote control (VH-03 model only)	X1
Instruction manual	X1
Certificate of Conformity (attached to the manual)	X1
Power cord	X1

After unpacking, please first check whether the appearance of the product is intact. Then count the items in the package one by one according to the list of attachments above. In case of any omission, please contact the after-sales customer service.

5. Technical Specifications

Product name: Oxygen Concentrator Model: VH-03

Oxygen production method: Pressure Swing Adsorption method (PSA)

Rated voltage: AC230V/50Hz; AC110V/60Hz

Input power: 120VA

Oxygen flow rate: 1-7L/min adjustable

Oxygen concentration: 28-90%

Oxygen output pressure: 20-70kPa

Carbon dioxide: Qualified according to the specified test

Carbon monoxide: Qualified according to the specified test

PH.: Qualified according to the specified test

Morphological identification: Colorless and odorless combustible gas

Voice speaker: 0.5W/8Ω (VH-03 model only)

Operating Time: Maximum 180 minutes

Atomization rate: $\geq 0.2\text{mL/min}$ (VH-03 model only)

Operating noise: $\leq 42\text{dB(A weighting)}$

Electrical classification: Class II

Product size: 204x214x280mm

Net weight: 4.8kg

Normal working conditions

Ambient temperature: $5^{\circ}\text{C} \sim 40^{\circ}\text{C}$

Relative humidity: $\leq 80\%\text{RH}$

Atmospheric pressure: 86kPa-106kPa

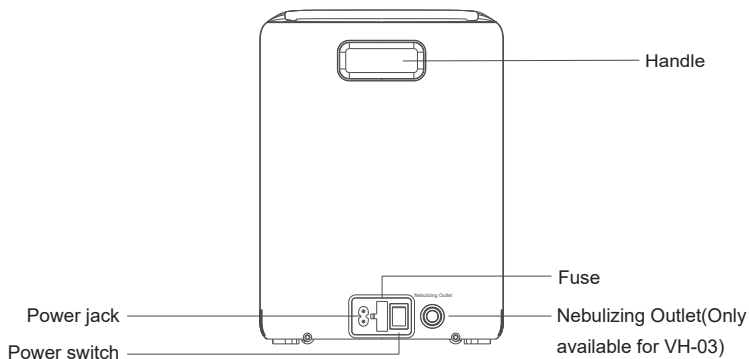
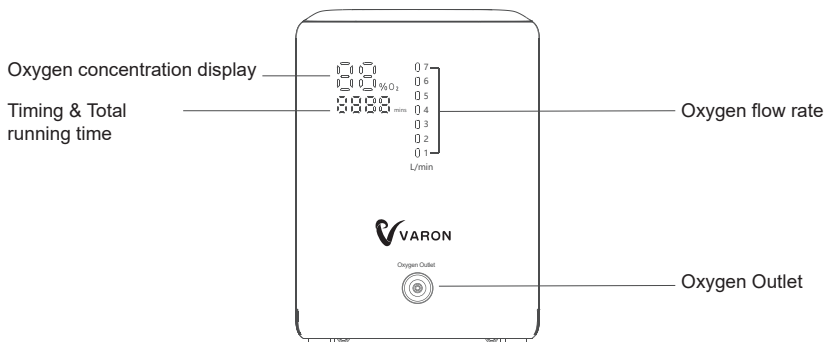
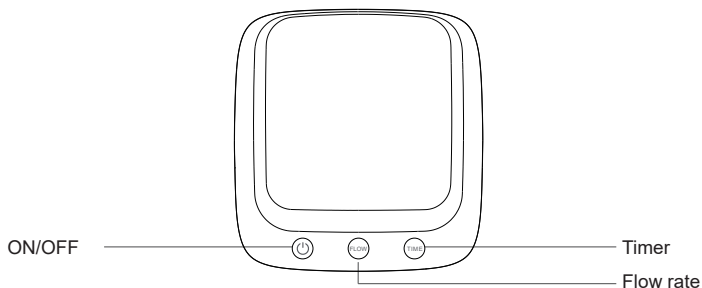
※ When the temperature is lower than 5°C , the equipment shall be placed under normal working conditions for more than four hours before use.

Transportation and storage conditions

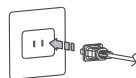
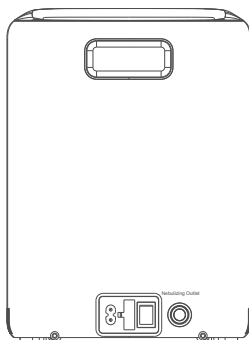
Ambient temperature: $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$

Relative humidity: $< 93\%\text{RH}$

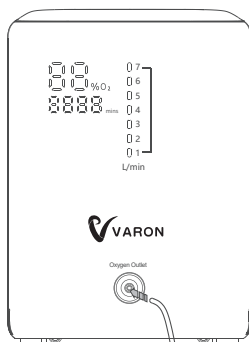
6. External View



7. Operation Steps

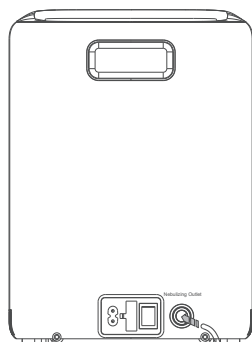


- ① Connect the power cord
Insert the output terminal of the power cord into the power port on the machine first (as shown in the left figure), and then insert the other terminal of the power cord into the socket.



- ② Connect the oxygen tube
Insert the large diameter end of the oxygen inhalation tube into the "Oxygen outlet" port.

Oxygen inhalation tube



- ③ Connect the atomizing tube.(VH-03 only)As shown in the figure, connect the atomiz-er to the "Nebulizing outlet". Adjust it to the right position, and wear it well.

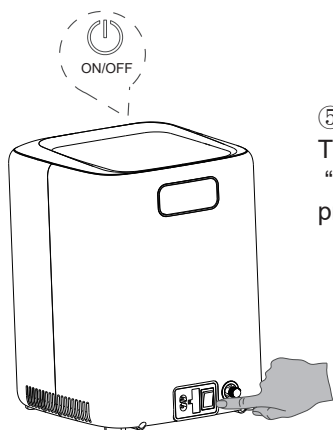


Atomizing tube

- ④ Wear the oxygen inhaler
Wear the oxygen inhaler correctly as shown. When using a Nasal cannula, align the two vents with the nostrils and tighten the rubber ring.

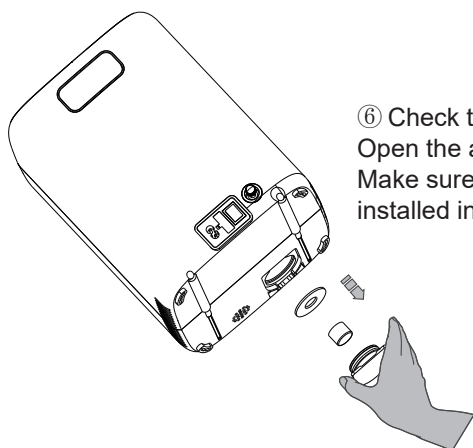


Nasal cannula



- ⑤ Start the oxygen machine
Turn on the "Power switch" and touch the "ON/OFF" button, the machine will start to produce oxygen.

※ Please adjust the oxygen concentration to the appropriate gear according to your own conditions. The recommended oxygen concentration: 70%~90% for special people (if not recommended by a doctor, do not inhale high concentrations of oxygen); 50%~70% for the elderly and pregnant women; 30%~50% for office workers and students. Please consult a physician for specific use.

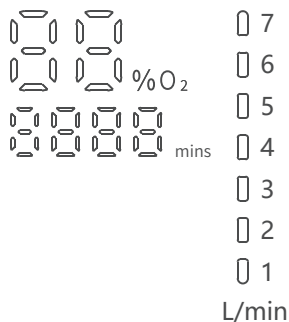


- ⑥ Check the "Air filter"
Open the air inlet cover and check. Make sure the air filter is clean and is installed in place.

8. Instructions for the Panel

Introduction to the display

1. Oxygen concentration
2. Timing & Total running time
3. Oxygen flow rate



Function buttons

Turn on the power switch, the display will show the total operating time and enter the standby state.



Gently touch the "ON/OFF" key, and the machine will start making oxygen. The oxygen concentration value on the screen will gradually rise to the corresponding value of the selected flow gear.

Flow button

Press the "Flow" button to adjust the oxygen concentration to your prescribed level; the greater the gas flow, the lower the oxygen concentration. There are seven flow levels: 1 liter, 2 liters, 3 liters, 4 liters, 5 liters, 6 liters, and 7 liters. The corresponding oxygen concentration percentages are 90%, 60%, 45%, 40%, 35%, 30%, and 28%. Default flow rate in the power off state is 1L. When the system is rebooted in standby mode, the flow value set before will retain.

"Timing" button

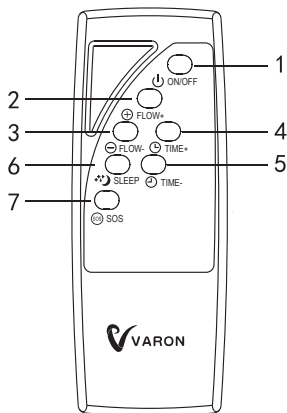
Touch the "Timing button" to adjust the timing. Each time you press, the duration increases by 15 minutes; the maximum duration is 180 minutes. After 3 seconds of no operation, the timer starts to count down.

"Timing" button on remote control: The duration increases or decreases by 15 minutes after each press.

9. Instructions for the Remote Control

(Only for VH-03 model)

1. Turn on/off
2. Flow plus
3. Flow minus
4. Timing plus
5. Timing minus
6. Sleep mode
7. One click for help



Sleep mode

Press "SLEEP" when in the working state, the icon will flash 3 times, and the display will enter sleep mode and shut off. Press any function key on the remote control or on the panel to wake up the display.

SOS voice

Press the "SOS" button when in the standby or working state, there will be a voice broadcast of "I need help" to help the user ask for help. The voice will not stop until you press the "SOS" button again.

※Operation of the rest buttons are the same as the corresponding function buttons on the host machine.

10. Specific Functions

Power saving mode

In the working state, the display, in the absence of operation for a minute, will enter the power saving mode with the display brightness reduced, making your life more eco-friendly.

Sleep mode (Only for VH-03 model)

In the working state, press the "sleep mode" button on the remote control, the display will shut off to create a better sleeping environment for you.

Cumulative timing

The machine is designed with the function of recording the total running time. After working for one hour, the cumulative time value on the panel will increase by "1".

Self-checking function

This machine has a self-checking function. It helps you find out where and the fault is.

Fault detection of cooling fan: If the cooling fan fails during the use of the machine, the display screen will display the fault code "E1", accompanied by a buzzer alarm.

SOS voice (VH-03 model only)

Press to broadcast "I need help", which will not stop until you press the button again, to help the user ask for help.

※To use this function, please keep the host machine powered on and the remote control fully charged.

Use of atomization function (VH-03 model)

1. Unscrew the nut on atomizing port anticlockwise before starting the machine.
2. Connect one terminal of the Atomizing tube to the atomizing port. Please use it as needed or under the guidance of a professional doctor, and wear it as required.
3. Turn on the machine, press "ON/OFF" and confirm the gear is set to 1L, and then the oxygen machine will be switched to atomization purpose.
※When the atomization is finished, press "ON/OFF" key to shut down the machine. Remove the atomizer connecting pipe and install the atomization port nut back in place and tighten it.

11. Maintenance and Repair

Clean the shell

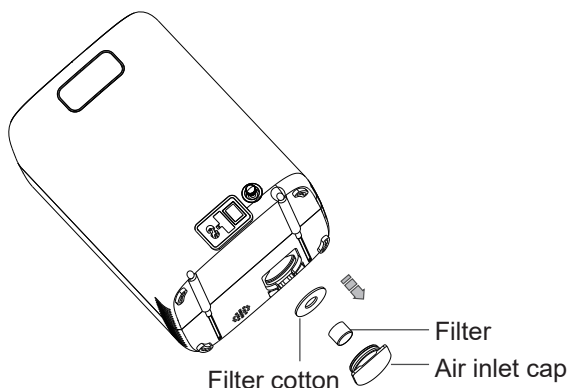
The shell surface should be cleaned at least once a month. Cut off the power supply and wipe it with a clean, soft, slightly wet cloth soaked in disinfectant. Prevent the liquid from seeping into the interior of the machine.

Clean or replace filter and filter pad

The white air filter at the back of the machine can reduce noise, keep the dust out and purify air. Timely cleaning and replacement of the filter are of great importance to protect the compressor and molecular sieve and prolong the service life of the machine. So please clean or replace it in time.

 Do not operate the oxygen concentrator when the filter and filter pad are not installed or are wet, which could cause permanent damage to the machine.

Generally, filters and filter pads shall be cleaned or replaced every 100 hours.



▲ **Disassembly:** Pull out the air inlet cover outward from the back of the machine to remove the filter.

Whether to clean or replace the filter and filter cotton shall be determined according to the actual use conditions. If the filter is dirty or clogged, it should be cleaned or replaced immediately regardless of the using time.

Note: Filters and filter pads are consumables and need to be replaced regularly.

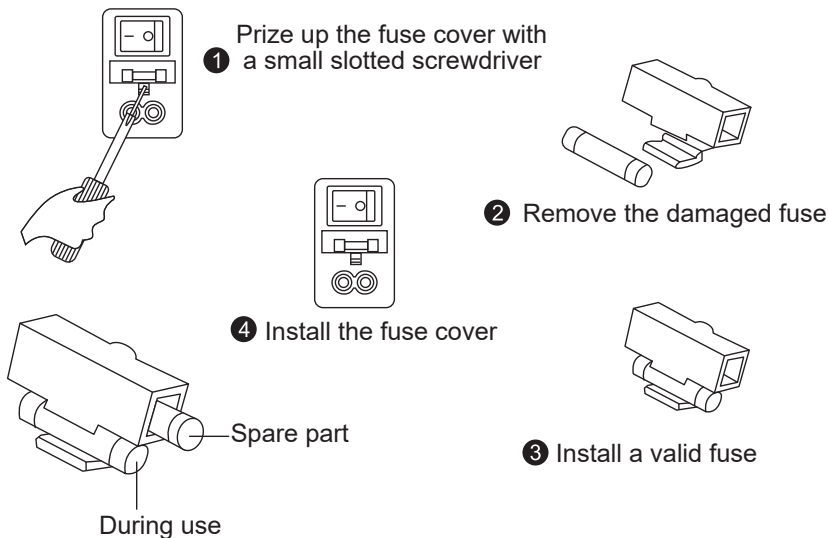
▲ **Cleaning:** Clean with diluted detergent first and rinse with water. Install it on the machine after it is completely dry.

Clean the oxygen inhaler and atomization components

Cleaning should be done after each use. The nasal suction heads on the nasal cannula should be cleaned and disinfected after each use. Soak in 5% potassium permanganate solution for 5 minutes, and then clean it with clean water; or wipe it with alcohol.

Fuse replacement

Unplug the power, use a slot screwdriver to pry open the fuse cap (as shown in the diagram), remove the invalid glass fuse, and then install a new one. Put the fuse cover back in place and tighten it.



Long-term idle

Make the following preparations if the machine shall be in long-term idle.

1. Cut off the power supply and put away the power cord.
2. Store the machine in a dry environment at room temperature. Do not bend the tube.
3. Avoid direct sunlight and pollution.
4. Place the machine out of reach of infants and children.

Make the following preparations before using the machine which has been in long-term idle.

1. Check the power cord for normal use.
2. Clean the oxygen tube and inhaler to avoid clogging or bending.

12. Trouble Shooting

No.	Problems	Possible causes	Solutions
1	Odor in the air stream	When the machine is used for the first several times, the connection tube and other plastic parts will emit a smell, which is normal.	This odor is a normal smell emitted by silicone tubes and ABS plastic parts. It has been tested to be non-toxic and harmless. With the use of the machine, it will gradually disappear.
2	The machine makes a chuffing sound every few seconds.	This is the sound of nitrogen discharge when the machine is normal, which is a sign of the good operation of the machine.	
3	The machine runs normally after starting up, but the flow rate is small.	Low flow rate has been set.	Turn up the level of flow rate.
		Tube is twisted or blocked.	Straighten the tube.
		The connecting tube inside the machine is disconnected or broken.	Disconnect the power supply and have it repaired by professional maintenance personnel.
4	After powering on, the indicator light is normal, but the machine fails to work properly (abnormal working sound)	Compressor failure	Disconnect the power supply and have it repaired by professional maintenance personnel.
		Ambient temperature is too high. Self-protection program of the oil-free compressor is activated.	This is a normal phenomenon. The machine will restart automatically when the temperature lowers down.
		The connecting tube inside the machine is disconnected or broken.	Disconnect the power supply and have it repaired by professional maintenance personnel.

※ If the machine does not operate normally after following the above methods, please call the customer service hotline for advice. Do not disassemble the machine.

13. Other Matters

▲ The date of production can be found printed on the product label. General service life is five years (excluding consumables, such as atomization accessories, oxygen tubes, etc.).

▲ The disposal of waste shall be carried out in accordance with relevant laws and regulations of the state or local governments.

▲ Pictures in this user manual and on other printed materials are for illustration purposes only, the actual product shall prevail.

▲ The company reserves the right to change the product technology and appearance at any time. Subject to change without prior notice.



Certificate of Conformance

Product Name: Oxygen Concentrator

Model Number: VH-03

Test Date: _____

Inspector: _____