

Operation Instruction for **OXYGEN CONCENTRATOR**



Product images are for reference only
Please read the Operation Instruction carefully and fully understand it before operation.

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
Safety Overview

Special warning:

1. To prevent from power failure or possible failure of the oxygen concentrator, those in urgent need of oxygen and critically ill patients must be provided with other spare oxygen supply devices (such as oxygen cylinder or oxygen bags, etc.). This equipment is suitable for oxygen supplementation, not for life support or life extension.

2. Oxygen tubes should be purchased by customers.

Warnings and notices shown herein are used for the proper and safe usage of the product, so as to prevent harm or danger to the users or to others. The warning and notices are as follows:

Signs	Contents
 Warning	Indicate that the casualties may occur in case of incorrect use.
 Notice	Indicate that physical injury or damage may occur in case of incorrect use.
	ⓘ indicates the compulsory execution (those compulsory events). Specific contents are shown in ⓘ or its adjacent area with characters or pictures. The left sign shows the "General Compulsory Execution".
	ⓧ indicates the prohibition (those prohibited events). Specific contents are shown in ⓧ or its adjacent area with characters or pictures. The left sign shows the "General Prohibition".

I. Important information

ⓘ There is the danger of electric shock, it is prohibited to dismantle the machine without permission. Please ask qualified maintenance personnel for repair.

ⓘ Please read the following contents carefully before operating the product.

II. Before installation

▶ To prevent from damage during transportation, the oxygen concentrator must be kept upright and not inverted.

▶ During operation, the oxygen concentrator must not be inverted or inclined.

▶ If the power supply is not stable and exceeds the range of 220V±22V/110V±11V, please operate the oxygen concentrator after installing the voltage stabilizer.

▶ Select and use the safe conforming socket and wiring board approved by safety electrician.

ⓧ Unauthorized person must not disassemble the casing of the oxygen concentrator.

III. Placement location

▶ Place the oxygen concentrator indoors with ventilation, avoid direct sunlight. The distance between the oxygen concentrator and the wall, furniture and any other objects shall be more than 20cm. Avoid carpets in piles, heaters, electric radiators or hot-air ventilation equipment. Do not put the oxygen concentrator in a narrow space.

ⓧ Do not put the oxygen concentrator in an airflow blocked environment.

ⓧ Do not put the oxygen concentrator in the place where is hot or near the open or blind fire source, where is moist and unscreened, where is smoggy and polluted, where is with too high or too low temperature.

▶ Do not put the oxygen concentrator in the polluted or smoggy place.

ⓧ Do not put sundries or water or oil container on the top of the oxygen concentrator. Do not put the oxygen concentrator in the place where water or other liquid are easy to drop.

ⓧ Do not put sundries at the bottom, in front and at the back of the oxygen concentrator, do not put the oxygen concentrator on the inclinable or sinkable flexible surface (such as bed and sofa), so as to prevent from the shutdown or reduction of oxygen concentration as a result of high temperature for blocking the inlet and outlet of the oxygen concentrator.

IV. Fire warning or explosion

▶ Keep the oxygen concentrator away from flammable and explosive places.

Oxygen is the combustion supporting gas. During operation, keep the oxygen concentrator away from smoking, matches, burned cigarettes or other combustible sources. Textiles and other normal non-burning materials are easily ignited and strongly burnt in oxygen-enriched air. The ignorance of this warning may lead to serious fire, property damage and personal injury or death.

▶ The oxygen therapy shall be especially cared to reduce the risk of fire. Some materials will be burnt in the air, and some others will not, but might easily be ignited and burnt rapidly in the oxygen-enriched air. From the sake of safety, it is necessary to keep the flammable source way from the oxygen concentrator and to take it out of the room when the product in operation.

▶ Oil, grease or oil substances will be spontaneously combusted and fiercely burnt when in contact with oxygen under certain pressure. These substances must be kept away from the oxygen concentrator, pipes, connectors and any other oxygen devices. Do not use lubricant other than that recommended by the manufacturer.

V. Maintenance

▶ Only by authorized dealers or trained personnel can the oxygen concentrator be pre-maintained or adjusted in performance.

▶ The operation time of oxygen concentrator recommended by the manufacturers for each startup shall not be less than 30 minutes. The high-frequent startup or shutdown of the oxygen concentrator is not allowed. Start up the oxygen concentrator after shutdown for 3-5 minutes, so as not to affect the compressor life.

VI. Guidance for electromagnetic environment of operation

- ▶ The oxygen concentrator is suitable for places including family houses and any other buildings directly connected to power supply of low voltage network for civil use.
- ▶ The radio frequency energy for the oxygen concentrator is only available to the internal operation of machine. Therefore, its radio frequency emission is very low, and will not affect other electrical equipment nearby.
- ▶ The serious interference for many radio frequency transmitting devices or sources of electrical noise, close distance or strong power of emission source may disturb the operation of the oxygen concentrator.
If it happens, check the space for operation to find out the source of interference, and take the following measures to eliminate the interference, including:
(1)close the adjacent equipment, and then open it;
(2)change the direction or position of jamming equipment;
(3)increase the distance between the jamming equipment and the oxygen concentrator.
- ▶ To avoid interference caused by strong electromagnetic environment or interference to other electrical appliances, make sure to keep the oxygen concentrator at least 30cm apart from other household appliances during operation.

VII. Measures for reduction of risks of burn injury, electric shock, fire or personal damage

- ▶ Do not use the oxygen concentrator when taking a bath. If it is used continuously, follow the doctor' s instruction, and put the oxygen concentrator in another room with distance of 2.5 meters away from the bathroom.
- ▶ Do not touch the oxygen concentrator if it falls into the water. Cut off the power supply immediately, and contact with qualified dealer.
- ⊙Take care of the oxygen concentrator with people' s attendance after it is connected to the power supply.
- ▶ Read the Operation Instruction for details of the oxygen concentrator. If the user or service personnel feel oxygen-deficient, contact the supplier or doctor immediately, and adjust the flow as directed.
- ▶ During operation, take care of the children or disable persons who are close to the oxygen concentrator..
- ⊙ Do not use spare parts or accessories not approved by the manufacturer. Otherwise, the performance of the machine might be reduced.
- ⊙Do not connect the oxygen concentrator to any other oxygen concentrators or equipment for oxygen therapy in parallel or in series.
- ▶ There might be risk for oxygen therapy in some particular circumstances. It is recommended to consult with the doctor before using the oxygen concentrator.
- ▶ Do not put the oxygen concentrator near spark, including sparks as a result of frictional static electricity;
- ▶ If the power line or plug of the oxygen concentrator is damaged or it does not work

properly or falls down or is damaged, contact with qualified maintenance personnel for inspection and repair.

- ⊙ Keep the power line away from the heating or exothermic surface.
- ⊙ Do not move the oxygen concentrator when being charged.
- ⊙ Do not drop or insert any substance in the opening of the oxygen concentrator.

Product Features

I. Function of oxygen

- ▶ Oxygen inhalation can improve the body' s oxygen supply and health. Oxygen inhalation is good for the elderly, for people in poor physique, for pregnant women, for people with different degrees of physiological hypoxia. After heavy physical or brain work, oxygen inhalation can also relieve fatigue and restore physical energy.

II. Applicable scope

The oxygen concentrator can generate oxygen for health care treatment.

III. Structural features

- ▶ The oxygen concentrator is mainly composed of the main frame, flow meter, humidifier, etc.
- ▶ Equipped with full plastic casing, safe and reliable.
- ▶ Equipped with remote control, which can operate the oxygen concentrator remotely
- ▶ Equipped with cumulative time function to show the total working time by display.
- ▶ Equipped with single time function for real-time control of single oxygen inhalation time.
- ▶ Equipped with the timed shutdown function for easy and convenient operation.
- ▶ Equipped with the function of releasing anion.
- ▶ The heat protector in the compressor ensures the safety of the compressor and the oxygen concentrator.
- ▶ Equipped with flow adjustment function to adjust flow between 1L and 5L.

IV. Oxygen generation principle

- ▶ The oxygen concentrator is powered by power source of 220V±22V/110V±11V, takes the air as the raw material and adopts the high-quality molecular sieve to make high-purity oxygen at normal temperature by pressure swing adsorption separation (PSA).

V. Main technical specifications

- 1.Power supply: AC220V±22V/110V±11V, 50Hz /60Hz±1Hz
- 2.Input power: ≤ 200VA
- 3.Oxygen flow: 1L/min ~ 5L/min
- 4.Oxygen concentration: 30% ~ 90% (when the oxygen flow is 1L/min, oxygen concentration is ≥ 90%)

5.Noise: ≤60dB (A)

6.Shape size: 33.5 × 21.5 × 37.5 (cm)

7.N.W.: 6.5kg

8.Altitude: the oxygen concentration will not be reduced when it is from sea level to 1828m, but the oxygen concentration will be less than 90% when the sea level is from 1828 to 4000m

9.Safety system:

▶ Shutdown due to current overload or loose connections;

▶ Shutdown due to high temperature of compressor;

10.Shortest working time: not less than 30 minutes

11.Electrical classification: Class II equipment, type B application part

12.Operation mode: continuous operation

13.Normal working environment

▶ Ambient temperature range: 5 °C ~ 40 °C;

▶ Relative humidity range: ≤ 80%;

▶ Atmospheric pressure range: 860hPa ~ 1060hPa.

⚠ **Notice:** When the storage and transportation temperature is below 5 °C, the oxygen concentrator shall be placed in normal working temperature for more than 4 hours before operation.

14. Oxygen outlet temperature: ≤ 46 °C

15.Storage and transportation environment:

The oxygen concentrator shall be stored indoors where is dry, ventilating without corrosive gases, the ambient temperature range is -5 °C ~ +40 °C and relative humidity range is 35% to 85%.

During transportation, prevent the oxygen concentrator from direct sunlight, rain, moisture or fierce collision. Do not transport with poisonous, dangerous or corrosive materials.

Handling

I. Unpack

⚠ **Notice:** Unless the oxygen concentrator is used immediately, the carton and the packaging material for storage must be retained before it is used.

▶ First, check the carton or other packaging whether there is obvious damage. If there's damage, please inform the transporter or local dealer in time.

▶ Take out all bulk packaging from the carton.

▶ Carefully take out all modules from the carton.

II. Check

▶ Check whether there are damages such as gaps, dents, scratches or other damages in the appearance of the oxygen concentrator.

▶ Check all modules.

III. Storage

① Store the repackaged oxygen concentrator in a dry place.

② Do not place any objects on the top of the oxygen concentrator.

Installation and Operation

I. Parts sketch and function introduction

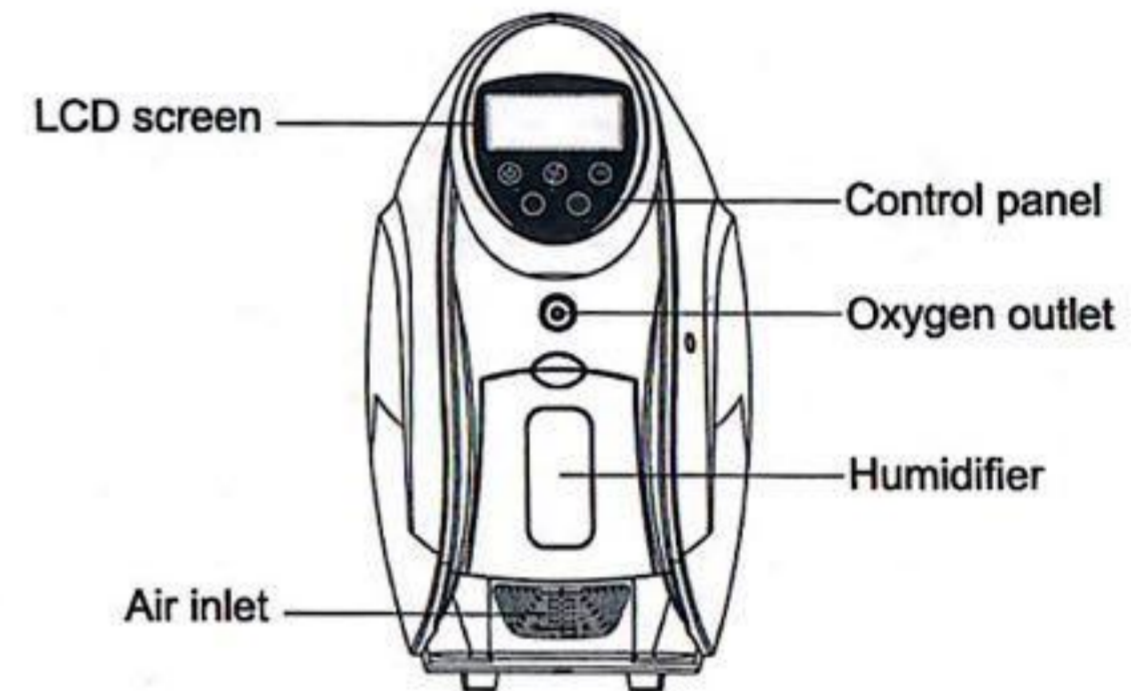


Fig. 1., Front view of oxygen concentrator

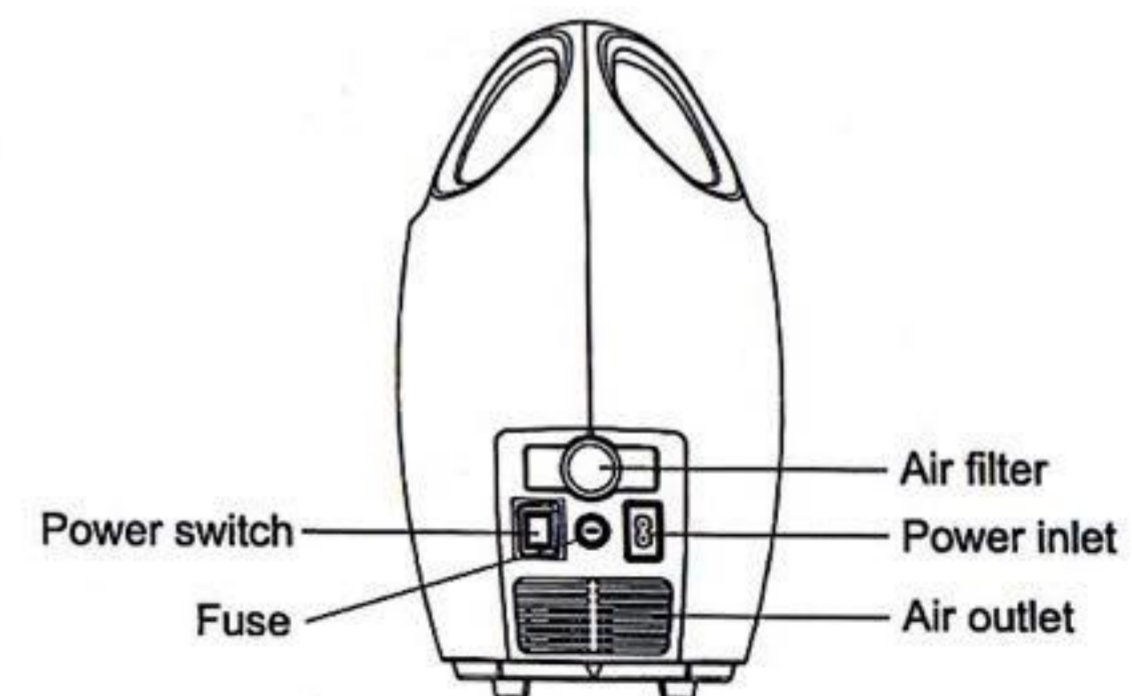


Fig. 2, Back view of oxygen concentrator



Fig. 3, Sketch of Control Panel

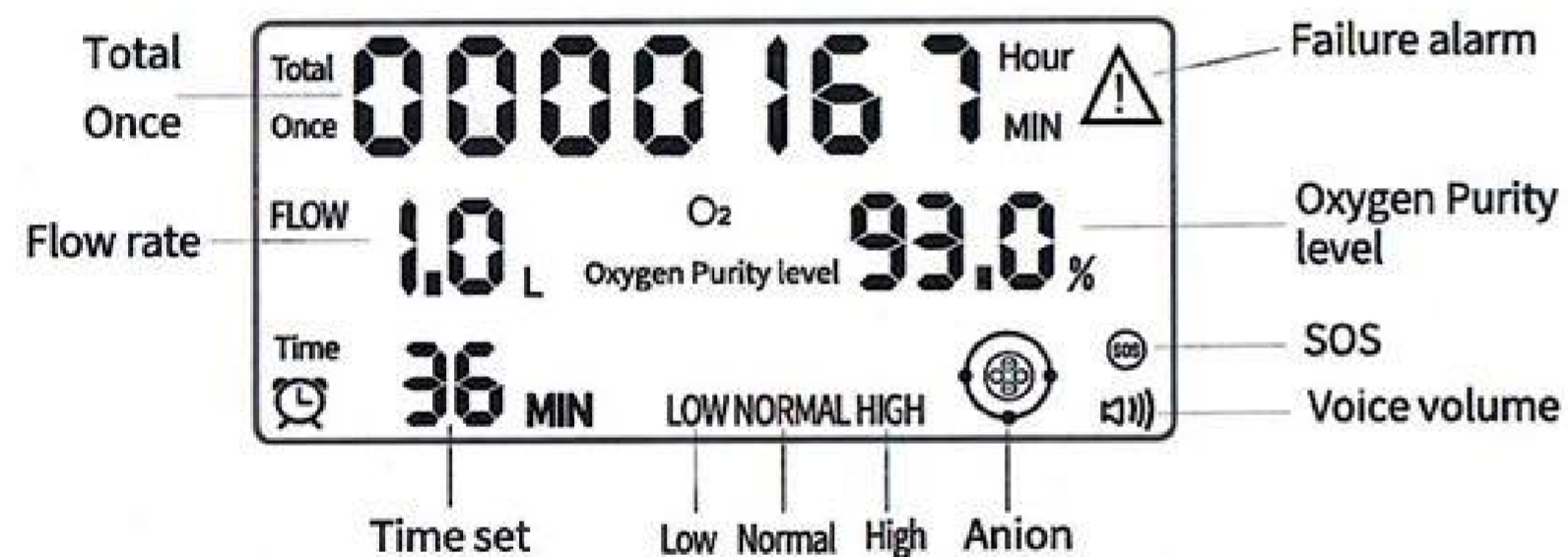


Fig. 4, Sketch of LCD screen

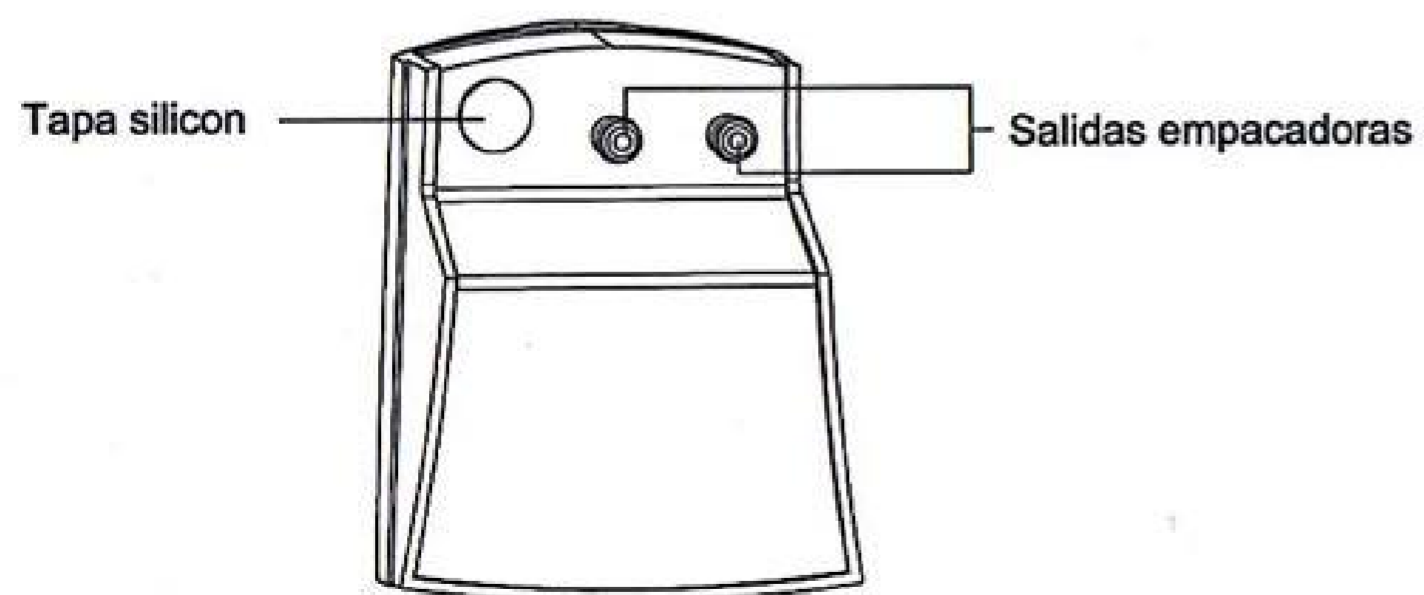


Fig. 5, Sketch of humidifier

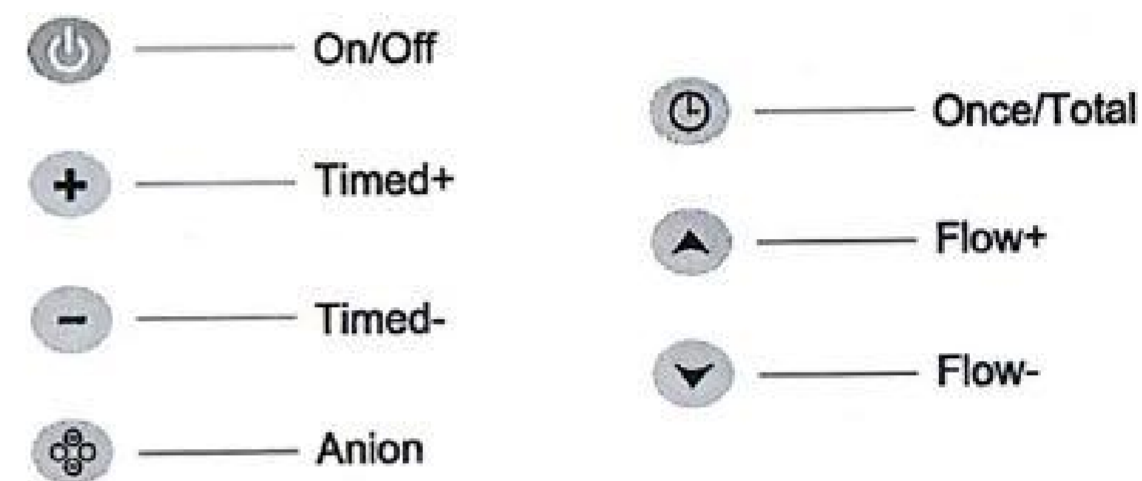


Fig. 6, Sketch of Remote Control

II. Preparation

► Take out the oxygen concentrator from the package, cut off the cable ties at the bottom of the oxygen concentrator, pull out the whole cable ties from the snap joint end before operation. (fig. 7)

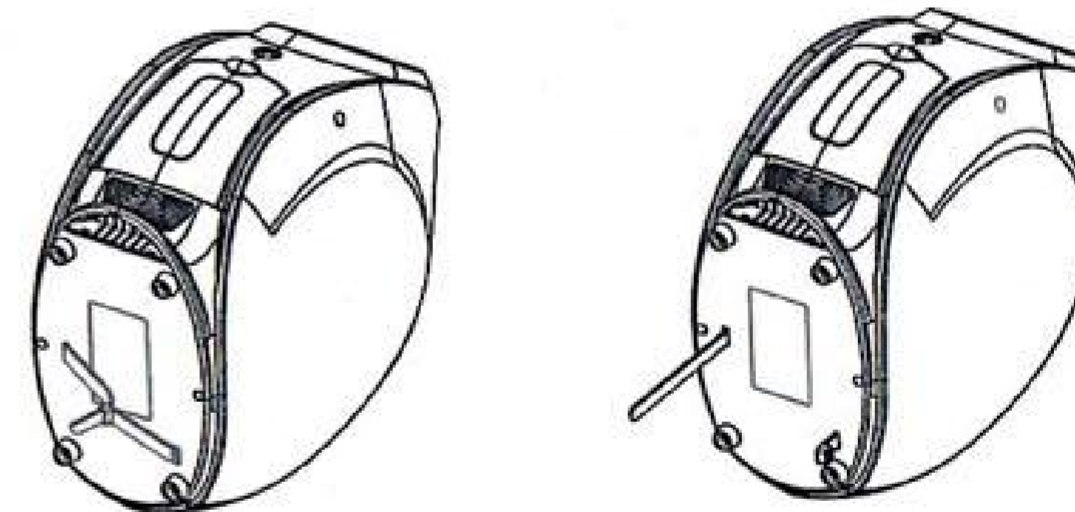


Fig. 7

► Remove the humidifier, pull out the silicone plug of the water filling nozzle, and add cold pure water (or distilled water) which shall not exceed the maximum water level in accordance with the methods stated in Care and Maintenance "III. Clean the Humidifier" in instruction.

Note: The humidifier can also normally release the oxygen without water.

► Plug the silicone plug into the water filling nozzle and reinstall the humidifier in the oxygen concentrator.

► Switch on the power supply: connect the 8-shape plug end to the outlet and the power plug end to the socket with power output and plug it in tightly.

► Press the power switch to "I", where the background light on the control panel On/Off turns green, the oxygen concentrator is ready to work. Press On/Off button, the

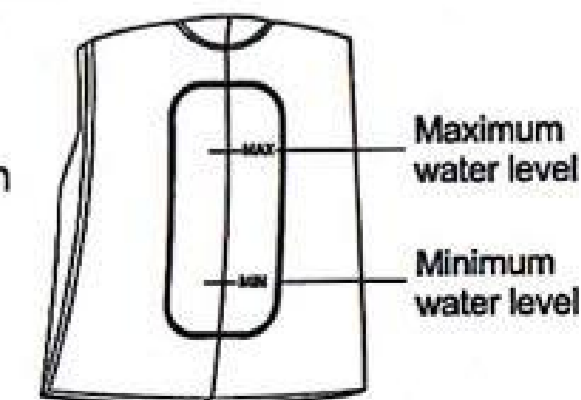


Fig. 8

background light of On/Off turns blue, meanwhile the background light of the humidifier turns on. The LCD screen displays the set timing and the total working time, the LCD screen displays the oxygen flow and the oxygen concentration after the oxygen concentrator has been running for 4 seconds, then the oxygen concentrator works normally. When the oxygen concentrator is working, the sound of "ripping" every several seconds is the normal ventilation sound.

⊙ Do not use the extended power cord.

III. Oxygen inhalation

▶ Press the On/Off button for 4 seconds, the background light of the Flow button turns blue, at this moment, the default flow is 1L, the flow can be adjusted according to user's need by pressing the Flow button on the control panel, meanwhile it voices the setting oxygen flow and the LCD screen displays the corresponding oxygen concentration. At the same time, there shall be bubbles in the humidifier and oxygen output from the oxygen outlet.

Note: The adjusting range of Flow on the control panel is 1L--5L, the concentration increases 1L with each pressing until 5L, afterwards it will turn back to 1L.

▶ Connect one end of the oxygen tube to the oxygen outlet, and the other end (for oxygen inhalation) to the user to start oxygen inhalation.

⊙ Please consult your doctor for the time and flow of the oxygen inhalation.

⚠ Caution: If there is no air or bubble generated at the oxygen outlet or in the humidifier, please check whether the tube or accessories are clogged or kinked or the humidifier is leaking or lacking of seal rings and other defectives.

IV. Time setting

▶ The oxygen concentrator has timer function, and user can set time within the range from 05 to 180 minutes by pressing the Timer button on the control panel if required. After pressing Timer button (with a beep sound), the background light turns blue.

▶ When the power is on for the first time, the control panel shows "--- minutes", indicating that the function of timed shutdown has not been set and the oxygen concentrator is in continuous operation until the power is switched off.

▶ Press Timer button once, the showing number adds 5 minutes, indicating the operation time adds 5 minutes, till it is added to 180 minutes. When the time setting is 180 minutes, press Timer button again to resume continuous operation.

▶ The oxygen concentrator will be turned off automatically when it reaches the set time. The oxygen concentrator is on standby, the back light of the On/Off button turns green on the control panel, the LCD screen turns off, the cooling fan stops after working two minutes more.

V. Operation of Anion

▶ Press the button Anion on the control panel to start or stop the operation of anion.

▶ Press the button Anion on the control panel, the buzzer rings, the background light

turns blue. Press again the button Anion, the operation of anion stops, the light is off.

VI. Operation of Once/Total working time

▶ The Once/Total button on the control panel can switch the single run and cumulative working time of the oxygen concentrator.

The LCD normally displays the total working time, it is stored when switching on and off without being reset.

▶ After pressing the Once/Total button on the control panel, it is switched to a single working time, the buzzer rings, the light turns blue, the single working time is continuously displayed, and it is automatically reset after shutdown. After pressing the Once/Total button again, it is switched to the total working time for continuous display.

VII. Shutdown

▶ During operation, if the oxygen inhalation needs to be temporarily stopped, press the On/Off button on the control panel to stop.

▶ During operation, press the On/Off button on the control panel, the buzzer rings, and the oxygen concentrator is on standby. The background light of the On/Off turns green, The cooling fan stops after operating for two minutes more.

▶ After operation, turn off the power switch, unplug the power supply to cut off the network power supply.

Pull out the oxygen tube or the connecting pipe at the oxygen outlet, remove the silicone plug at the top of the humidifier, empty the remaining pure water (or distilled water), cram the silicone plug in the water filling nozzle after cleaning and re-install the humidifier on the oxygen concentrator.

VIII. Remote control

▶ The oxygen concentrator can be remotely operated through the remote control. Apart from the buttons consistent with those on the control panel, the function of "Flow --" and "Timed --" on the remote control makes the parameter setting decrease progressively without additional operation. The flow and setting time are free to set with the remote control.

Note: Operate the remote control at the front of the remote receiving window.

IX. Symbols and implications for safety requirements

Symbols	Implications	Symbols	Implications
~	Alternating current	⚠	Attention! Refer to file accompanied.
⊞	Equipment of II type	⚠	Application part of B type
	Connection (main power)	⊙	Disconnection (main power)
↑↑	Up	☔	Keep dry
🍷	Fragile, be careful while moving	🚭	No Smoking

Care and Maintenance

I. Parts sketch and function introduction

Warning: Cut off the power supply before the oxygen concentrator maintenance. DO not disassembly the casing to avoid electric shock.

I. Clean the casing

Clean the casing at least once a month: cut off the power supply, and use the clean and soft wet cotton cloth or sponge to wipe the casing, don't let any liquid leak into the casing gap.

II. Clean or replace the filter

The air filter is very important for protecting compressor and molecular sieve and prolonging the service life of the oxygen concentrator. Please replace it in time.

Caution: Operation of the oxygen concentrator is not allowed before the air filter is not installed or turns black or wet, otherwise, the oxygen concentrator will be permanently damaged.

► Disassembly

(1) Air filter is located at the back of the oxygen concentrator. Pull the filter out and remove the filter sealing ring. (As shown in Fig. 9).

(2) The air filter shall be replaced at a time interval which shall be determined according to the actual service time and environmental impact.

(3) The filter shall be replaced immediately regardless of the length of its service time as long as its surface turns black.

► Installation of the new filter

Take out the new filter and place the sealing ring into the filter, then press it on the corresponding location of the oxygen concentrator with appropriate force.

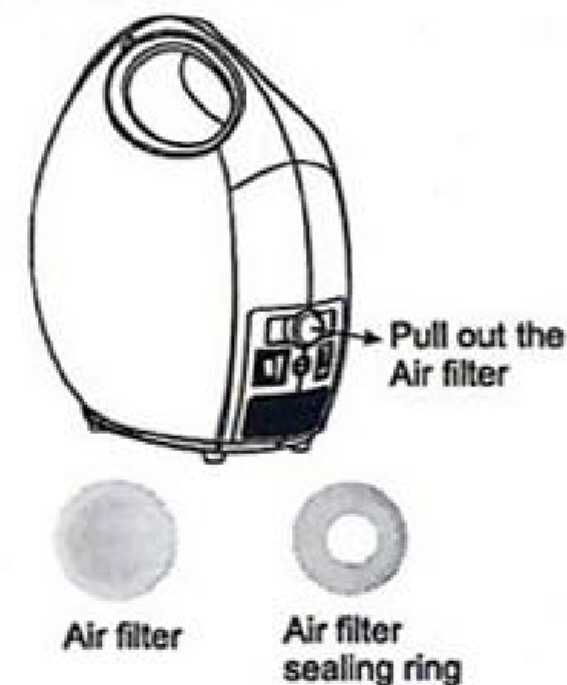


Fig. 9

III. Clean the humidifier

Change the water in the humidifier daily.

Clean the humidifier once a week, wash it with water repeatedly to ensure the oxygen hygiene.

Clean the silicone plug at the time of cleaning the humidifier.

Note: There might be scale or smell in the humidifier for not cleaning or changing water for a long time, soak it with vinegar for over half an hour, shake it and wash it with clean water.

► Disassembly the humidifier

(1) Pull out the humidifier (Fig. 10) in the direction as shown below.

(2) Remove the silicone plug (Fig. 11).

Note:

① Check the position of the sealing rings in the air inlet and air outlet, check whether the

sealing rings are missing when installing the humidifier.

② The installation procedures of the humidifier are reverse to those of its disassembly.

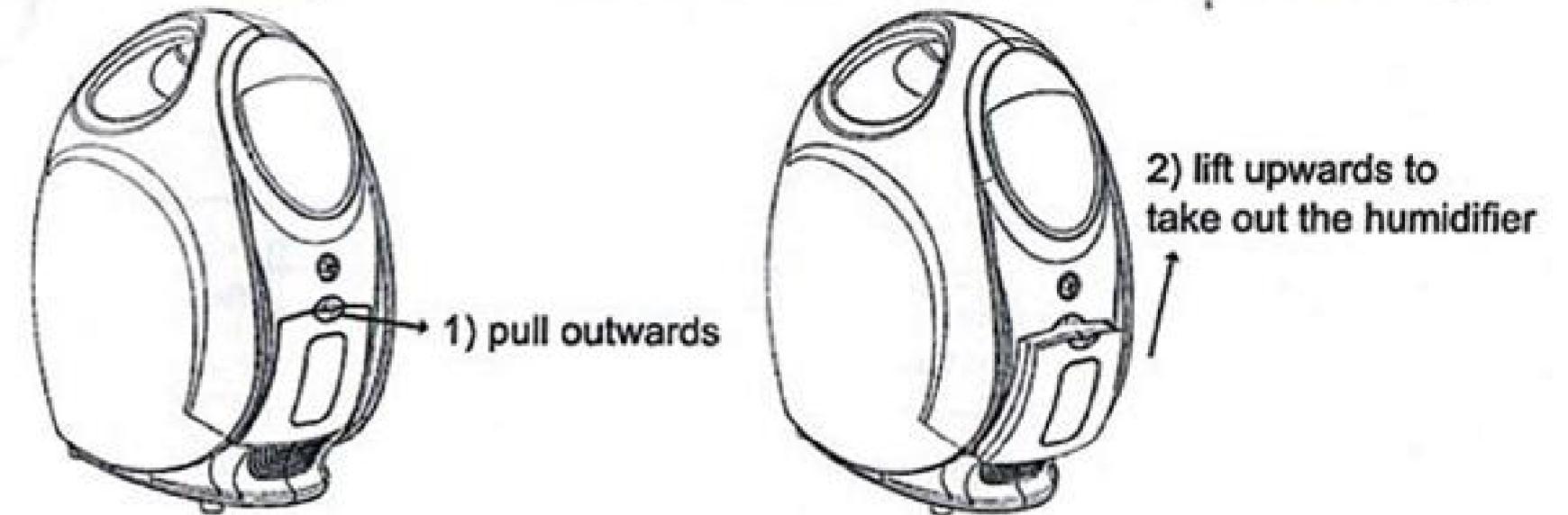


Fig. 10

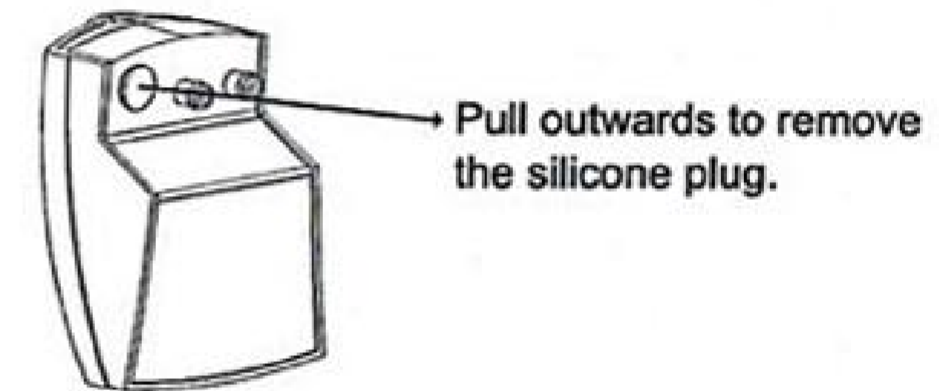


Fig. 11

IV. Replace the fuse

Cut off the power supply, counter-clockwise screw off the cover of the fuse holder at the back of the oxygen concentrator with the cross screw driver, remove and replace the fuse (Fig. 12).

Fuse model is F2AL250V, $\Phi 5 \times 20$ if the power is 220V;

Fuse model is F2AL250V, $\Phi 5 \times 20$ if the power is 110V.

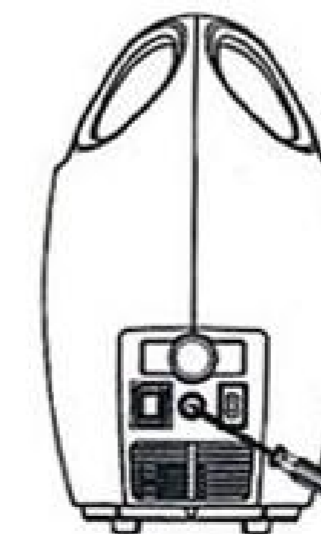


Fig. 12

Troubleshooting

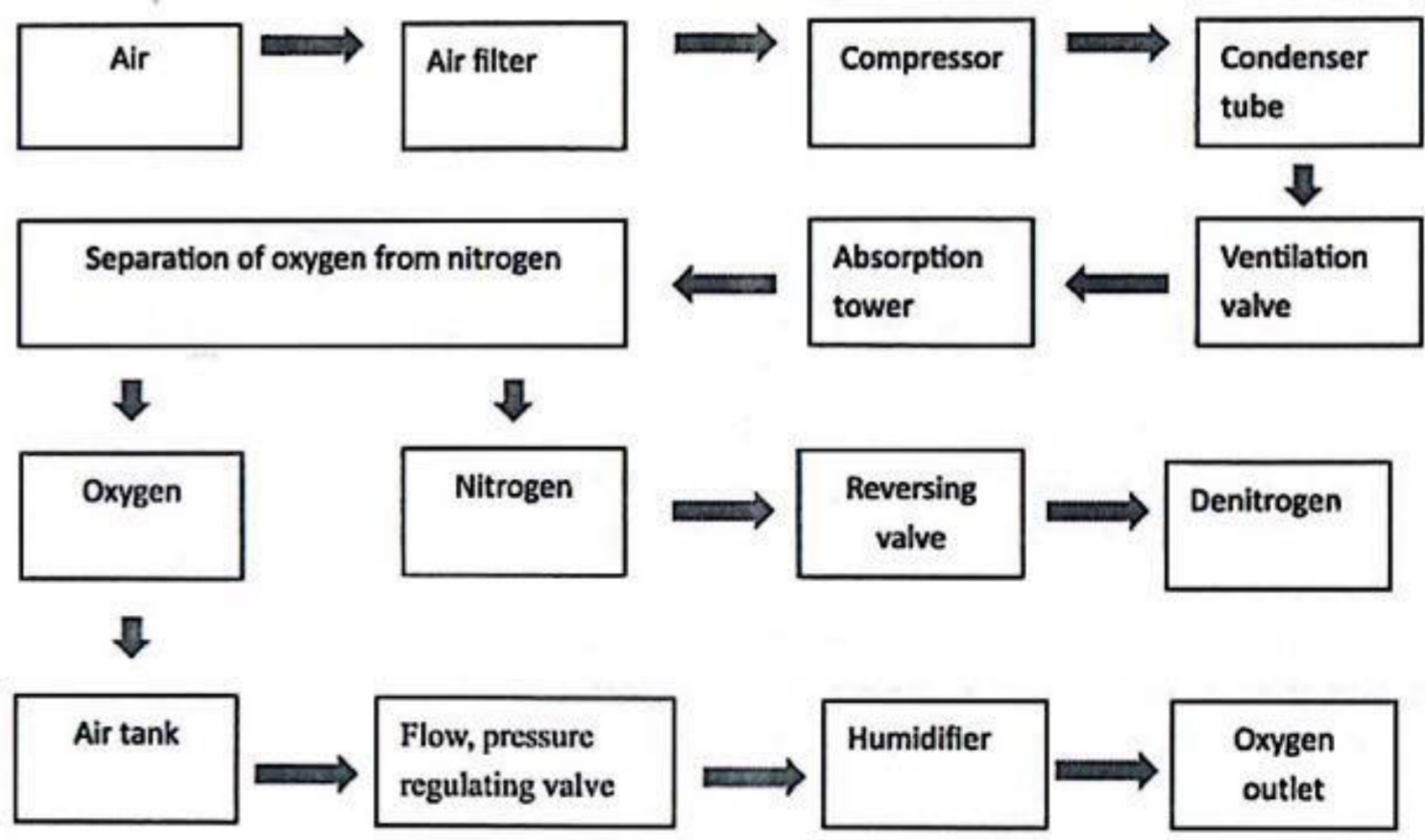
N o.	Failures	Possible reasons	Resolutions
1	Power-off alarm: Press the On/Off button, there is continuous buzzing, but the light is not on, the display board does not display, the oxygen concentrator is not working, there's sudden power off during working.	1) The plug of power line is not properly plugged	1) Firmly plug the plug of power line into the socket
		2) The socket has no power output	2) Move to a socket with power output
		3) The wire of connector is loose or falls off	3) Check and firmly plug the connector
		4) The power panel is broken	4) Replace the power panel
		5) There is not enough input power	5) Do not use the extension cord plug and move to a socket with regular power supply
		6) The fuse cap is loose or onboard fuse is broken	6) Please tighten the fuse cap with the cross screw-driver or open the oxygen concentrator to replace the onboard fuse
		7) Failure of the main control board	7) Replace the main control board
2	The oxygen concentrator works, but generates little or no oxygen	1) The environmental temperature is too low	1) Start after placing in the environment of 5°C~40°C for 4 hours
		2) The flow is too small	2) Adjust the flow, check whether the nasal oxygen tube is kinked or blocked
		3) The air filter is blocked	3) Replace the air filter
		4) The secondary filter is blocked	4) Open the casing to replace the second filter
		5) The connecting pipe of suction port of the compression pump is kinked	5) Check and straighten the pipeline after opening the casing
		6) The throttling valve is blocked	6) Check and change the throttling valve
		7) The pipeline is leak or falls off	7) Check the pipeline, replace or tighten the pipelines
		8) The ventilation volume of air valve is not enough	8) Replace the air valve
		9) Failure of main control circuit board	9) Replace the main control circuit board
3	There is abnormal alarm sound and the oxygen concentrator stops working	1) The exhaust silencer is blocked	1) Replace the exhaust silencer
		2) Failure of solenoid valve	2) Replace the solenoid valve
		3) Failure of main control circuit board	3) Replace the main control circuit board
		4) Molecular sieve is invalid or the internal pipelines leaks or falls off	4) Replace the molecular sieve or replace/tighten the pipelines
4	There is more mist or water drops in the nasal oxygen tube	1) There is no complete ventilation around the oxygen concentrator, and the working temperature is high	1) Make sure that the distance between all sides of the oxygen concentrator and the wall or other obstacles, or heater is at least 20cm
		2) The cooling fan does not working or the speed is low, resulting in high working temperature	2) Remove the foreign matters that make the cooling fan deadlocked or replace the cooling fan

5	The machine works normally without any abnormal sound, but generates little or no oxygen	3) The temperature of the water in the humidifier is too high	3) Add cold water into the bottle and do not overheat it			
			4) Too much water in the humidifier	4) Make the added water between the highest and lowest marks in the humidifier		
		The flow is displayed, the volume can be adjusted, but generates little oxygen	The flow can be displayed, but no response after regulation	1) The silicone plug of the humidifier has not been plugged	1) Plug the silicone plug	
				2) The humidifier cap is not sealed or damaged	2) Seal or replace the humidifier cap	
				3) There is a defect in the nasal oxygen tube	3) Replace the nasal oxygen tube	
				4) The oxygen outlet pipe is loose	4) Tighten the oxygen outlet pipe	The power shall be cut off first, and all procedures shall be conducted by professional maintenance personnel
				5) The nasal oxygen tube is kinked or blocked	5) Tighten the pipelines	
				6) The internal pipelines are kinked or blocked	6) Tighten the pipelines	The power shall be cut off first, and all procedures shall be conducted by professional maintenance personnel
				1) The internal pipelines are loose	1) Open the oxygen concentrator, tighten or replace the pipelines	
				2) The throttling valve is blocked	2) Replace the throttling valve	

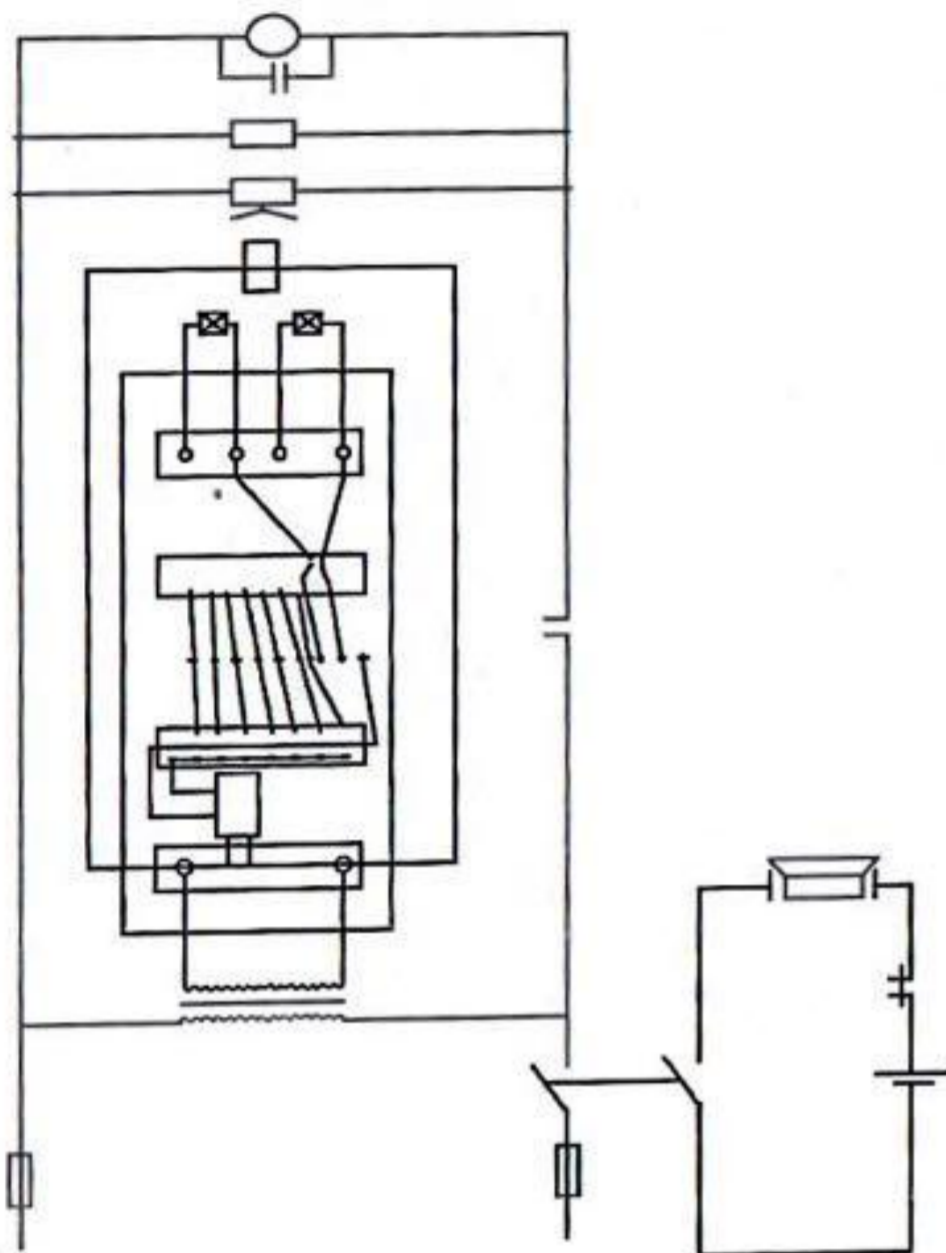
Note: please contact the supplier if the oxygen concentrator faults cannot be eliminated.

Other Precautions

I. Schematic diagram for air circuit



II. Schematic diagram for electric principle



III. After-sales service

► Remove the humidifier, pull out the silicone plug of the water filling nozzle, and add cold pure water (or distilled water) which shall not exceed the maximum water level in accordance with the methods stated in Care and Maintenance "III. Clean the Humidifier" in instruction.

Note: The humidifier can also normally release the oxygen without water.

► Plug the silicone plug into the water filling nozzle and reinstall the humidifier in the oxygen concentrator.

► Switch on the power supply: connect the 8-shape plug end to the outlet and the power plug end to the socket with power output and plug it in tightly.

► Press the power switch to "I", where the background light on the control panel On/Off turns green, the oxygen concentrator is ready to work. Press On/Off button, the

IV. List of packaging

1. oxygen concentrator	1 piece
2. disposable nasal oxygen tube	2 pieces
3. air filter	6 pieces
4. sealing ring of humidifier	2 pieces
5. fuse	1 piece
6. remote control	1 piece
7. power cord	1 piece
8. Operation Instruction	1 piece

V. Disposal of wastes and residues

The disposal of wastes and residues shall be in conformity with the relevant state laws and regulations.

VI. The right to retain the technology and appearance change of the product is subject to change without notice.

Electromagnetic Compatibility

▲ The equipment shall be installed and operated according to electromagnetic compatibility information provided in accompanying documents, applicable to requirements of equipment and system that are not specified to be used in shield position only, and the instructions for the electromagnetic environment are as shown in Table 1-Table 4.

Portable and mobile radio frequency communication equipment may affect the normal operation of the equipment.

Replacing original components with component not provided by manufacturer may result in an increase in product or system emissions or a decrease in immunity.

The equipment shall not be close to other equipment or stacked for operation, and if it must be close to other equipment or stacked for operation, then that it can be operated properly under the configuration used shall be observed and verified.

Table 1:

Guidance and Statement of Manufacturer - Electromagnetic Emission		
It is expected that oxygen concentrator shall be operated under electromagnetic environment specified as follows, and the buyer or the user shall guarantee that it is operated under such electromagnetic environment, which is as follows:		
Emission test	Conformance	Electromagnetic environment-guidance
Radiated emission GB 4824	Group 1	The oxygen concentrator only uses RF energy for its internal function, and therefore, its RF emission will be quite low with slim chance to interfere adjacent electronic equipment.
Conducted emission GB 4824	Type B	The oxygen concentrator is applicable to all facilities, including domestic facility and public low-voltage supply network connected to domestic residence directly.
Harmonic emission GB 17625.1	Type A	
Voltage fluctuation/ twinkling emission GB 17625.2	Be conforming	

(Corresponding to table 201 in YY 0505-2012)

Temporary voltage reduction, short interruption and voltage change on power input line. GB/T 17626.11	<5% UT, continuing for 0.5 period (More than 95% temporary reduction on UT) 40% UT, continuing for 5 periods (60% temporary reduction on UT) 70% UT, continuing for 25 periods (30% temporary reduction on UT) <5% UT, continuing for 5s (More than 95% temporary reduction on UT)	<5% UT, continuing for 0.5 period (More than 95% temporary reduction on UT) 40% UT, continuing for 5 periods (60% temporary reduction on UT) 70% UT, continuing for 25 periods (30% temporary reduction on UT) <5% UT, continuing for 5s (More than 95% temporary reduction on UT)	The network power shall have typical quality for the commercial or hospital environment.
Power frequency magnetic field GB/T 17626.8	3A/m	3A/m	The power frequency magnetic field has horizontal characteristic of the power frequency magnetic field in typical place in typical commercial or hospital environment.


Note 1: UI represents AC network voltage before test voltage is imposed.

(Corresponding to table 202 in YY 0505-2012)

Table 3:

Guidance and Statement of Manufacturer – Electromagnetic Immunity - Non Life Support Equipment and System			
It is expected that oxygen concentrator shall be operated under electromagnetic environment specified as follows, and the buyer or the user shall guarantee that it is operated under such electromagnetic environment, which is as follows:			
Immunity test	IEC 60601 test level	Conforming level	Electromagnetic environment-guidance
Electrostatic discharge GB/T 17626.2	±6kV contact discharge ±8kV air discharge	±6kV contact discharge ±8kV air discharge	The ground shall be wood, concrete or tile, and if the ground is covered with synthetic material, the relative humidity shall be 30% as a minimum.
Electrical fast transient burst GB/T 17626.4	±2kV pair power line ±1kV pair input/output line	±2kV pair power line is not applicable.	The network power shall have typical quality for the commercial or hospital environment.
Surge GB/T 17626.5	±1kV line to line ±2kV line to the ground	±1kV line to line is not applicable.	The network power shall have typical quality for the commercial or hospital environment.

Guidance and Statement of Manufacturer – Electromagnetic Immunity - Non Life Support Equipment and System			
It is expected that oxygen concentrator shall be operated under electromagnetic environment specified as follows, and the buyer or the user shall guarantee that it is operated under such electromagnetic environment, which is as follows:			
Immunity test	IEC 60601 test level	Conforming level	Electromagnetic environment-guidance
Radio-freq conduction GB/T 17626.6 Radio-freq radiation GB/T 17626.3	3V (effective value) 150kHz~ 80MHz 3V/m 80MHz~ 2.5GHz	3V(effect ive value) 3V/m	Portable and mobile radio frequency communication equipment shall not be used with its distance from any part of oxygen concentrator (including cables) lower than the recommended isolation distance and the distance shall be calculated using the formula corresponding to the frequency of the transmitter. Recommended isolation distance $d = 1.2\sqrt{p}$ $d = 1.2\sqrt{p}$ 80MHz~800MHz $d = 2.3\sqrt{p}$ 800MHz~2.5GHz In the formula: p-The maximum rated output power of transmitter provided by transmitter manufacturer with watt (W) as the unit; d- Recommended isolation distance with meter (m) as the unit.

			<p>The field strength of the fixed radio frequency transmitter is determined by reconnaissance ^a in the electromagnetic field, which is lower than the level required in each frequency range ^b.</p> <p>Interference may occur near the equipment that is marked with the following symbols:</p> 
<p>Note 1: in 80MHz and 800MHz frequency points, relatively high frequency band formula shall be adopted.</p> <p>Note 2: the guidance may not be applicable to all conditions, and electromagnetic propagation is affected by absorption and reflection of building, object and human.</p> <p>^a Fixed transmitter, such as base stations for radio and terrestrial mobile radio, amateur radio, AM and FM radio, and television broadcasting etc., its field strength cannot be foreseen correctly in theory. In order to evaluate the electromagnetic environment of fixed radio frequency transmitter, electromagnetic field reconnaissance should be taken into consideration. If the field strength of the position where the oxygen concentrator lies measured is higher than the above applicable conforming level of radio frequency, the equipment shall be observed to verify its normal operation. If no normal performance is observed, supplementary measures may be necessary, such as readjusting the direction or position of the oxygen concentrator.</p> <p>^b In the whole 150kHz~80MHz frequency range, field strength shall be lower than 3V/m.</p>			

(Corresponding to table 204 in YY 0505-2012)

Table 4:

Recommended Isolation Distance between Portable and Mobile Radio Frequency Communication Equipment and oxygen concentrator- Non Life Support Equipment and System			
It is expected that oxygen concentrator shall be operated under electromagnetic environment where radio frequency interference is controlled. According to the maximum rated output power of communication equipment, the buyer or the user can prevent electromagnetic interference through the minimum distance between Witte portable and mobile radio frequency communication equipment (transmitter) and oxygen concentrator as recommended as follows.			
The maximum rated output power of transmitter (W)	Isolation distance of different frequency of corresponding transmitter/m		
	150kHz~80MHz $d = 1.2\sqrt{P}$	80MHz~800MHz $d = 1.2\sqrt{P}$	800MHz~2.5GHz $d = 2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For the maximum rated output power of transmitter not listed in above table, recommended isolation distance d takes meter (m) as the unit, and formula in corresponding transmitter frequency column can be used for determination, and P is the maximum rated output power of transmitter provided by transmitter manufacturer, taking watt (W) as the unit.			
Note 1: in 80MHz and 800MHz frequency points, relatively high frequency band formula shall be adopted.			
Note 2: the guidance may not be applicable to all conditions, and electromagnetic propagation is affected by absorption and reflection of building, object and human.			

(Corresponding to table 206 in YY 0505-2012)

Customer Information Card

1. Product information

Product name	oxygen concentrator	Product model	
Machine No.		Invoice number	
Store of purchase			
Date of purchase (required)			

2. Customer information

Name of customer		Birth date (required)	
Contact address			
Tel		Zip code	
Note			

3. Store information

Name of sales promoter		Tel	
Address of store			

Warranty Card

Product name	oxygen concentrator	
Product model		
Machine No.		
Date of purchase (required)		
Invoice number		
Address of purchase		
Maintenance record	Item	Maintenance personnel
Note	Please show this card when maintaining the machine.	

