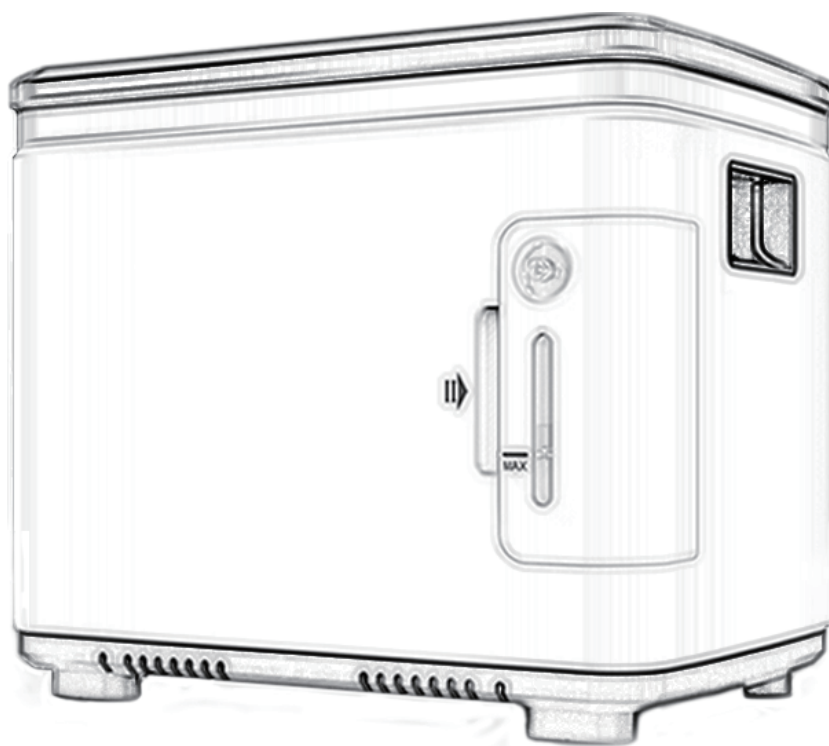


# OXYGEN CONCENTRATOR

## User Manual



The actual object shall prevail.

Please carefully read this manual before using this product.

# Contents

Introduction .....	01
1. Contraindication, Precaution, Warning and Suggestive Description .....	01
2. Overview .....	04
3. Product Description .....	04
4. Installation Instruction .....	06
5. Operation Instruction .....	07
6. Maintenance .....	11
7. Common Fault and Recovery .....	12
8. Package Contents .....	15
9. After Sales Service .....	15

# Introduction

Dear customers,

Thank you for purchasing and using oxygen concentrator. Please read this manual carefully before using so that you can better use this product. This manual expounds the performance, operation condition and storage method appropriately. Please keep this manual properly so that you can use it in the future. Please feel free to contact us if you have any query. We will provide you with solution sincerely.

The actual object shall prevail if there is any differences between the appearance, color on the package and the actual object.

## 1. Contraindication, Precaution, Warning and Suggestive Description



### Contraindication

- ▲ Exceptional patient with hyperthyroidism shall follow the doctor's instructions.
- ▲ This product is an ordinary oxygen generating product and cannot be used as special equipment for life support or first aid treatment.
- ▲ Oxygen users shall equip other backup oxygen equipment (such as oxygen cylinder, oxygen bag etc.) in order to prevent the fault or power failure of the oxygen concentrator.



### Precaution

#### 1.1 Before installation

- ▶ It is prohibited to place the oxygen concentrator upside down or place the oxygen concentrator horizontally.
- ▶ Please add a voltage regulator before use if the power voltage is unstable and surpasses  $220V \pm 22V$ .
- ▶ Please use safe and qualified socket and terminal plate with secure electrician certification.
- ▶ Non professionals are prohibited to open the case.

#### 1.2 Placement

- ▶ Please select the most convenient room to place the oxygen concentrator so that users can conveniently move the machine from one room to another.
- ▶ The oxygen concentrator shall be placed in a well ventilated indoor environment with no direct sunlight. Keep a 10 cm distance between the surrounding and walls, fences, furniture and other obstacles.
- ▶ Do not place the oxygen concentrator in the following environment: heat source, fire source, wet and high or low temperature environment with no shelter.
- ▶ Do not place sundries or water and oil container on the housing.

▶ It is prohibited to place any sundries at the bottom of the oxygen concentrator in order to prevent the shutdown or oxygen concentration decline due to excessive high temperature caused by the blocking of air inlet and air vent.

### **1.3 In use**

- ▶ Oxygen is a kind of combustion supporting gas. It is strictly prohibited to smoke when the machine is in use. Keep it away from match, cigarette and other combustible sources in order to avoid the fire risk.
- ▶ Do not turn on or turn off the oxygen concentrator frequently. Restart the machine after shutdown for 3-5 minutes so that it will not affect the life service of the compressor.
- ▶ Do not apply oil or grease to any part of the oxygen concentrator in order to avoid the oxygen pollution and fire.

### **1.4 Guidance for the use of the machine in electromagnetic environment**

- ▶ This machine is applicable to hospitals, families, and other direct and civil low voltage power connection buildings.
- ▶ The wireless frequency energy can only be used as the internal operation of the machine. Therefore, it has low wireless frequency emission and will not affect the surrounding apparatus and other equipment.
- ▶ The machine will stop working due to the increasing number of the wireless frequency emission device or other device electric noise source in the medical places and serious interferences caused by the near distance or strong emission power.

Please check the use place and find out the interference source in case of the following circumstance and take measures to eliminate the interferences. First, turn off the nearby equipment and then restart. Second, change the place or position of the interference equipment. Third, increase the distance between the interference equipment and this equipment.



### **Warning and Suggestive Description**

Oxygen is a kind of combustion supporting gas. It is strictly prohibited to smoke when the machine is in use. Keep it away from match, cigarette and other combustible sources in order to avoid the fire risk.

Please follow the doctor's advices for the oxygen flow rate and oxygen inhalation time.

Do not use lubricant.

The use of unspecified humidifier and drug accessories may affect its performance.

The oxygen concentration status indicator indicates the oxygen concentration value tolerance when the oxygen concentration of the finished gas is abnormal.

### **Warning and suggestive description of atomization function**

Please stop using and consult the professional personnel or doctor if the users have unusual reaction or extraordinary circumstance (physical discomfort) in the use process.

Please follow the doctor's instructions for the type, dosage and usage of the atomized drug.

Otherwise, it may cause the symptomatic deterioration.

Do not use volatile liquid, such as benzene, diluents, fragrance refined oil, beauty product, refined oil, alcohol, etc.

Do not use powder-like, suspension or high concentration drug (even if dissoluble).

Keep a certain distance between the equipment and eyes because the atomization of some drugs may damage the eyes.

Make sure that the nozzle, mask and medicine glass are clean or clean them before using.

It is recommended that each atomization time shall not exceed 20 minutes.

The atomizer accessory in contact with human body (atomizing cup, nozzle or inhalation mask) can only be used by one person in order to avoid the cross infection.




















This product is driven by air rather than the oxygen (oxygen concentration is 23%).

Do not place or carry the medicine liquid in the atomizing cup.

Do not tilt atomizing cup above 45°. Please avoid violent shaking. Otherwise, users cannot inhale the specified dosage due to the spillover of the medicine liquid.

It is suggested to use the recommended atomizer accessories by the manufacturer in order to avoid the damage of the atomizer.

#### Explanation of figure, symbol, abbreviation of the medical apparatus label

Figure, symbol	Description	Figure, symbol	Description
	Disconnect (main power supply)		Connect(main power supply)
	Type B application part		Class II equipment
	No smoking		No open flames
	Unauthorized personnel are prohibited to disassemble the machine cover.		Please refer to the use manual.
	Note! Please refer to the attached document.		Fragile. Handle with care!
	Avoid the sunlight.		Straight up in transportation
	Please avoid the rain.		The maximum number of layers of stacking of the same package
	Lot code		Date of manufacturing
	SN.		Category number
	Be careful of electric shock.	Be careful.	It may cause the property loss in non compliance with the warning contents.

## 2. Overview

### 2.1 General description

The oxygen concentrator product is applicable to the apparatus that can generate the oxygen for oxygen therapy or alleviate the discomfort caused by various oxygen deficits (abbreviated for this product).

This product adopts molecular sieve PSA oxygen generating technology, special process material molecular sieve and has long adsorption efficiency and long life service. It can separate the oxygen and nitrogen in normal atmospheric temperature. The rotary switching mechanism enables the system to have high efficiency, low noise and reliable operation and output the oxygen of adjustable flow.

This product consists of air compressor, zeolite molecular sieve, changeover switch, control panel, display panel, flow meter and humidification cup.

**\*Please carefully read the manual before using. Non compliance with the use instruction and warning in the manual may cause serious consequences to patients.**

**\*Please read this manual and correctly comprehend the “safety precautions” in the manual so that you can use this product securely.**

**\*Please keep this manual properly for the consultation and reference in the future.**

### 2.2 Application scope

Oxygen therapy or alleviation the discomfort caused by various oxygen deficits.

## 3. Product Description

### 3.1 Product characteristics

- ▶ All-plastic housing is secure and reliable.
- ▶ It has the accumulative time function and displays the total working time through the display panel.
- ▶ It sets fixed time ON/OFF function, which is convenient to use.
- ▶ It is equipped with air pressure overpressure safety valve, which has more secure guarantees.
- ▶ The compressor is equipped with thermal protector, which can ensure the security of the compressor and the overall machine.
- ▶ This product adopts molecular sieve PSA oxygen generating technology, special process material molecular sieve and has long adsorption efficiency and long life service. It can separate the oxygen and nitrogen in normal atmospheric temperature. The rotary switching mechanism enables the system to have high efficiency, low noise and reliable operation and output the oxygen of adjustable flow.
- ▶ There is no need to add any additives when the machine is in working and there are no pollutants and residues in the whole oxygen generating process.

► The oxygen generating system can separate the dust and other harmful substances in the air and the fresh and clean oxygen generated can provide you with a green and health space.

### 3.2 Technical parameters

Item	Parameters
Net Weight	6.1KG
Overall dimension	350*280*235mm
Input power	150W
Consumption power	150W
Average sound pressure level	≤50dB(A)
Oxygen outlet pressure	30-50kPa
Maximum pressure	50kPa
Flow/oxygen concentration	1L≈93%, 2L≈83%, 3L≈76%, 4L≈61%, 5L≈43%, 6L≈36%, 7L≈31%
Oxygen concentration	35-93±3%(v/v)
Power supply voltage	~220V 50Hz
Normal working environment	Ambient temperature: 5°C-40°C Relative humidity: ≤80%RH Air pressure:860hPa-1060hPa Note: Place the equipment in the environment of normal working temperature for over 4 hours when the storage temperature is lower than 5°C.
Storage and transportation environment	Storage temperature: -10°C~40°C Relative humidity: ≤80%RH Atmospheric pressure range: 860hPa-1060hPa Note: Please avoid great vibration and inverted placement horizontally.
Flow display	1L-7L

### 3.3 Product characteristics

- a) Category according to the electric shock: II type
- b) Category according to the electric shock: B type
- c) Category according to the harmful liquid protection grade: IPX0
- d) Category according to the security degree of flammable anesthetic gas mixed in the air or flammable anesthetic gas mixed in the oxygen or nitrous oxide: Users are prohibited to use the equipment when there is flammable anesthetic gas mixed in the air, oxygen or nitrous oxide.
- e) Category according to operation mode: continuous operation
- f) Pressure range of humidification cup pressure relief device: 30-40kPa

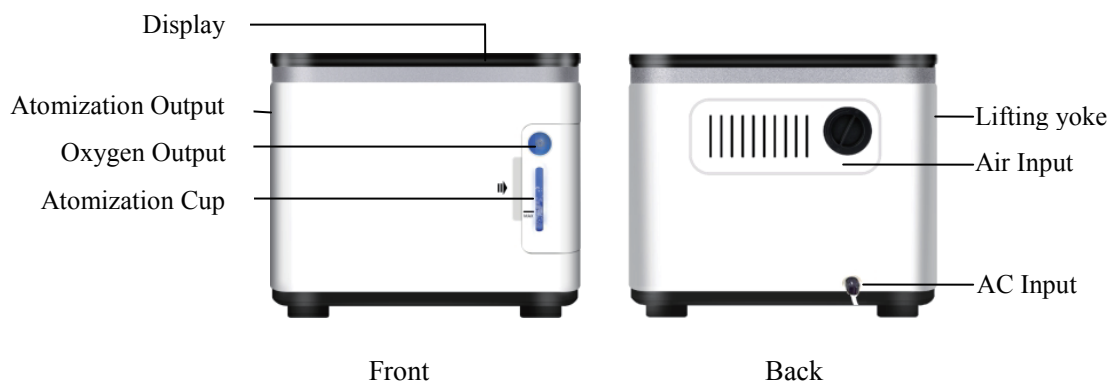
## 4. Installation Instruction

### 4.1 Unpacking inspection

Users shall read this use manual carefully before unpacking and check whether the product appearance is complete and whether the accessory type and quantity are consistent with the product list.

### 4.2 Structure diagram

This product mainly consists of compressor, zeolite molecular sieve, changeover switch, control panel, display panel, flow meter and humidification cup.



### 4.3 Preparation before use

Please wash the humidification cup with warm water and dry it before using for the first time.

Remove the humidification cup, add purified water (or steam water) to the maximum water line of the humidification cup “MAX” and minimum water line "MIN"(Follow the doctor’s advice to add some other drugs in the water when necessary) and place the humidification cup into the installation slot of the host machine.

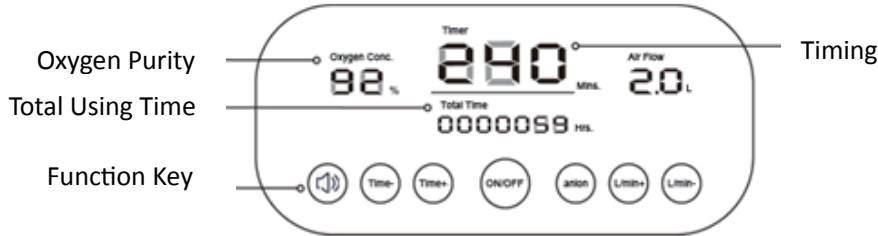
Power connection: Connect the power plug to the socket of the power output. There will be a “tick” alarm sound after the ON/OFF key is pressed, showing that the machine works normally.


Note: The oxygen concentrator will give out a “popping” sound when it is working, which is sound for normal changing over and air vent. The oxygen concentrator will reach the best oxygen concentration value 5 minutes after startup.



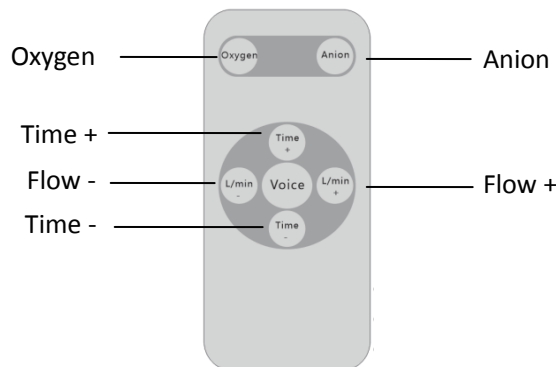
## 5. Operation Instruction

### 5.1 Operation panel and key function



- (1) “ON/OFF” key: It can turn on and turn off the oxygen generating function.
- (2) “anion” key: It can turn on and turn off the negative ion function.
- (3) “L/min +” key: It can increase the oxygen flow.
- (4) “L/min -”key: It can decrease the oxygen flow.
- (5) “Time+” key: It can increase the oxygen inhalation time.
- (6)“Time-”key: It can decrease the oxygen inhalation time.
- (7) “” key: It can turn on/off the voice function.

### Remote controller description



Note: This type of machine is equipped with remote controller. We can use the remote controller for operation. (Users need to use the remote controller in the signal receiving range.)

### 5.2 Oxygen generation operation

Working environment temperature: 5°C-40°C

Use environment temperature: ≤80%RH

Atmospheric pressure: 860hPa-1060hPa

Note: No strong corrosive gas, oil pollution, strong powder and vibration.

(1) The display screen lamp will be lighted up after the power line is connected. The display panel will display the oxygen flow, oxygen concentration, timing function and accumulative times.

(2) Press “ON/OFF” key to start oxygen generating function. The system continuously generates the oxygen by default. Press “ON/OFF” key to stop oxygen generating function during operation period.

(3) Press “Time +” and “Time –“to increase or decrease the oxygen inhalation time . Press “Time +” key to increase the oxygen inhalation time by 10 minutes each time. It is recommended that the single oxygen inhalation time shall not be too long with 30 minutes each time. The “Time” area in the display screen displays the oxygen inhalation time and the “total time” area displays the accumulative oxygen generating time of the machine.

(4) Press “L/min+” and “L/min-”key to increase or decrease the flow. Press “L/min+”key to increase 1 litter flow.

At this time, the oxygen concentration will be decreased. Press “L/min-”key to decrease 1 litter flow. At this time, the oxygen concentration will be increased. It is suggested to use 3 L/min flow for general oxygen therapy.

(5) Press “anion” key to start anion function. This system continues to work be default. Press “anion” key again to turn off anion function. The startup time of anion function is consistent with the oxygen generating time. 【Turn on the anion function separately when turning off the oxygen generating function of this machine. Press “Time+”key to increase by 10 minutes and press “Time-“ key to decrease by 10 minutes.】

(6) Please wear headset oxygen tube or nasal oxygen tube for oxygen inhalation (see the detail wearing description below.)

(7) Press “ON/OFF” key to turn off oxygen generating and unplug the oxygen tube of the oxygen concentrator after using.

(8) Unplug the power socket and properly place the oxygen concentrator so that you can use it next time.

#### Description on how to wear nasal oxygen tube

- ① Connect one end of silica gel connecting piece to the humidification cup.
- ② Connect the other end of the silica gel connecting piece to nasal oxygen tube
- ③ Align the two oxygen outlet in the middle of the nasal oxygen tube to the nostril
- ④ Hang the rubber hose on both sides of the oxygen outlet behind the ears.

#### Description on how to wear headset oxygen tube

- ① Connect one end of silica gel connecting piece to the humidification cup.
- ② Connect the other end of the silica gel connecting piece to headset rack
- ③ Hang the headset rack to the ears and adjust the degree of tightness
- ④ Rotate the oxygen rubber hose and bend it below the nose. Align the small hole at the end of the rubber hose to the nostril.

\*The oxygen concentrator can reach the expected performance after startup for 120s.

### 5.3 Oxygen output

Press “L/min+” and “L/min-” for the increase and decrease.

Press “L/min+” and “L/min-” key to increase or decrease the flow. Press “L/min+” key to increase by 1 liter flow. At this time, the oxygen concentration will be decreased. At the same time, there will be bubbles around the filter core of the humidification cup and there should be oxygen output at the humidification cup oxygen outlet.

Note: There should continuous exhaustion sound in the humidification cup, showing that the oxygen tube is blocked. Please dredge the pipe.

### 5.4 Self setting of time

This machine has time-setting function. Users can press the “Time key” on the panel for self setting.

The display panel displays the accumulative hours and time “00: 00” after initial startup. Users can set the working time according to actual demands.

The oxygen concentrator will automatically stop working after reaching the set time. At this time, the time displays “00: 00”. Press “Time” key to reset the working time.

### 5.5 Power off

Turn off the power switch, unplug the power socket and cut off the power supply after using.

Note 1: The machine starts in low temperature environment (10°C below). There will be large noise due to the preheating of the system. It will restore to be normal after the ending of preheating. It is a normal phenomenon and will not affect the normal use.

Note 2: This machine can still be used when it is used in the environment beyond the above provisions. The oxygen concentration and flow will be affected or changed to some degrees when this machine is used in the environment of different temperature, humidity and altitude. Please

consult the customer service center or local agent for specific matters.  
Note 3: Do not use machine in the environment with dust, oil and gas.

## **5.6 Atomization operation**

This machine has atomization operation. We can select atomizing mouth or atomizing mask for medicine liquid atomization. The procedures for operation are as below.

- ① Rotate and remove the air cap at the atomization outlet.
- ② Connect one end of the atomizing tube to the atomization outlet of the oxygen concentrator and the other end to the bottom of the atomizing cup.
- ③ Add drug liquid to the atomizing cup.
- ④ Connect the atomizing mouth or atomizing mask to the atomizing cup.
- ⑤ Put the atomizing mouth into the mouth or the mask on the face.
- ⑥ Press “ON/OFF” key to start oxygen generating function. At the same time, we can start the atomizing function (Start the oxygen function before atomizing function.)
- ⑦ Unplug the atomizing pipe at the atomizing outlet after drug liquid atomization, tighten the air cap at the atomizing outlet and turn off the oxygen concentrator.

Note: Users cannot conduct oxygen inhalation and atomization at the same time.

## 6. Maintenance

### 6.1 Transportation and storage condition

Storage temperature: -10℃ ~40℃

Relative humidity: ≤80%RH

Atmospheric pressure range: 860hPa-1060hPa

Place it in a well ventilated and dry place with no corrosive gas. Please avoid great vibration and inverted placement horizontally.

### 6.2 Maintenance

(1) Clean the housing of the oxygen concentrator.

- ① First disconnect the power supply.
- ② Wipe the machine surface with a piece of wet towel dipped with a small amount of detergent.
- ③ Remove the detergent with a piece of wet towel after removing the stains.
- ④ Dry the residual water on the body with a dry towel.

Note: Do not let the water penetrate into the machine body in order to avoid fault. Do not wipe the machine surface with flammable liquid like grease in order to prevent the oxygen pollution and fire. Do not cover the dust proof cover when using the oxygen concentrator.

(2) Cleaning of humidification cup

- ① Clean the humidification cup with light detergent solution
- ② Flush with clean water
- ③ Pour out the water in the humidification cup, clean the humidification cup and dry it for storage if the machine is not used for a long time.

(3) Replacement of air filter box

- ① Take out the air filter box from the rear part of oxygen concentrator.
- ② Load the fresh air filter box into the oxygen concentrator

Note: Please replace the air filter box according to the environment conditions. Replace the air filter box every six months if there is good air. Increase the frequency to replace the filter box if the air is poor (with much dust, smoke, serious air pollution).

Do not operate the machine with no installation of the filter box.

### 6.3 Treatment of waste and residue

Please treat the waste and residue in compliance with the national laws and regulations.

The circuit or appearance caused by machine transformation shall subject to changes with no prior notice.

## 7. Common Fault and Recovery

SN.	Phenomenon	Cause analysis	Solution
1	Continuous buzzer, display screen display failure, machine operation failure	1. Power socket is not plugged well.	1. Insert the power line reliably.
		2. The socket has no power output.	2. Move to the socket with power output.
		3. Fuse tube is breaking.	3. Replace the fuse tube <b>【repair by professional personnel】</b> .
2	The machine operation sound is normal, the flow meter is adjusted to be normal but there is few or no oxygen output after startup.	1. The humidification cup and cover are not sealed and there is air leakage.	1. Reinstall the humidification cup and tighten the bottle and cover.
		2. Oxygen tube leakage, twisting, blocking.	2. Replace oxygen tube.
		3. The humidification cup outlet and pipeline are not connected to place and there is air leakage.	3. Reinsert the humidification cup pipeline <b>【repair by professional personnel】</b> .
		4. Filter cotton is black and blocked.	4. Replace the filter box.
		5. Contact the supplier if this phenomenon continues.	
3	Mist in the nasal oxygen tube	1. Excessive high temperature of the water.	1. Add cooling water into the cup.
		2. There is too much water in the humidification cup.	2. The water added is between the maximum water level and minimum water level.
		3. The surrounding of the machine is not ventilated and the working temperature is high.	3. Keep the oxygen concentrator minimum 15cm to the wall, textile or other objects.
		4. Sudden shutdown in the oxygen inhalation process.	4. Immediately stop oxygen inhalation and restart the machine for drain of the steam.
		5. Sudden shutdown when the oxygen tube is folded.	5. Straighten out the nasal oxygen tube
		6. Fan inside the machine fails to run or high working temperature due to small speed.	6. Remove the foreign objects stuck to the fan <b>【repair by professional personnel】</b> .
4	Large noise/abnormal sound of the machine	1. The machine is not balance in using.	1. Keep the machine balance in using without tilting. Do not shake the machine body and then restart.

4	Large noise/abnormal sound of the machine	1.The machine is not balance in using.	1.Keep the machine balance in using without tilting. Do not shake the machine body and then restart.
		2.Filter box is black and blocked.	2.Replace the filter box.
		3.Circuit of solenoid valve falls off.	3.Tighten the connecting line <b>【repair by professional personnel】</b> .
		4.Air valve fault.	4.Replace the air valve <b>【repair by professional personnel】</b> .
		5.Main control circuit panel fault.	5.Replace the main control circuit panel <b>【repair by professional personnel】</b> .
		6.The machine gives a ‘titter” sound. It is the nitrogen exhaust and air exchange on the molecular sieve foundation. It is a normal phenomenon.	
5	Machine operation sound is normal but the machine displays panel has no display or appears error code.	1.Display panel connecting line falls off.	1 .Connect the connecting line <b>【repair by professional personnel】</b> .
		2.Display panel connecting line damage.	2.Replace the connecting line <b>【repair by professional personnel】</b> .
		3.Display panel fault.	3.Replace the display panel <b>【repair by professional personnel】</b> .
6	The machine runs normally but the flow meter has no reaction	1.Flow meter air inlet falls off.	1.Re insert the pipeline <b>【repair by professional personnel】</b> .
		2.Flow meter fault.	2.Replace the flow meter <b>【repair by professional personnel】</b> .
		3.Regulating valve breaking.	3.Replace the regulating valve <b>【repair by professional personnel】</b> .
		4.Flow meter is turned off the numerical value is too small.	4.Readjust the regulating flow meter <b>【repair by professional personnel】</b> .
		5.Flow meter stuck	5.Re adjust the flow meter <b>【repair by professional personnel】</b> .
7	Excessive heating of the machine body	1.High indoor temperature.	Keep the internal air and internal air exhaust smooth of the machine.
		2.Air vent blocking at the bottom.	

8	Machine runs normally, air valve changing over sound is weak, current value cannot be adjusted	1.Filter box is blocked.	1.Replace the filter box.
		2.Insufficient input power.	2.Do not use the branching socket. Move it to the socket with stable power.
		3.Air inlet pipe of the compressor is twisted.	3.Straighten the air inlet pipe <b>【repair by professional personnel】</b> .
		4.Air leakage of the compressor safety valve.	4.Repair or replace the safety valve <b>【repair by professional personnel】</b> .
		5. Adsorption tower pipeline is loose and has air leakage.	5.Re tighten the adsorption tower pipeline <b>【repair by professional personnel】</b> .
		6.Insufficient air valve changing over quantity.	6.Replace the air valve <b>【repair by professional personnel】</b> .
		7.Main control circuit fault.	7.Replace the main control circuit panel <b>【repair by professional personnel】</b> .
9	Oxygen concentrator work failure	1.Power(socket) is not energized.	1.Replace the power socket.
		2.Compressor fault.	2.Return to the factory for repair.



## 8. Package Contents

List number	List detail	QTY.	Expected life service	Remark
1	Main machine of the oxygen concentrator	1	3 years	
2	Use manual	1	—	
3	Oxygen Tube	1	—	
4	Humidification cup	1	—	Disassembly components

Note: Accessories and components without the authorization from manufacturer are prohibited to be installed on the machine.

Otherwise it will cause the machine use failure, reduce the use effect or cause major risk.

## 9. After Sales Service

\* Users can get free warranty service for the manufacturing process or component damages that are deemed to be in normal use condition by maintenance personnel one year since the date of purchasing.

\* The free service excludes the replaceable consumable parts and accessories, auxiliary devices and transportation fee.

\* Users cannot get the free service in the following circumstances.

1) Artificial damage caused by improper use, such as improper power connection, improper use of accessories, improper installation, non-compliance with the use manual, error use or negligence, etc. Damaged caused by transportation or other accidents. The authorized disassembly, maintenance and modification by the company. Damaged caused by force majeure (such as natural disaster, voltage abnormality, etc.

2) Product ageing and wear in normal use without affecting the normal use of the product.