DZ1BCW Oxygen generator

user's manual

Please read the manual before use

table of Contents

1 Overview

Thank you for purchasing our oxygen generator.

In order to ensure that you can use this oxygen generator safely and correctly, please read this manual carefully before using it to fully understand and master the performance of the product and the correct operation and maintenance methods.

This manual describes the operation, use, and maintenance of the DZ-1BCW oxygen generator.

1.1 Product Features

The DZ-1BCW oxygen generator is one of the series of products produced by our company. The product uses molecular sieve as the adsorbent, uses the advanced pressure swing adsorption (PSA) principle, and uses air as the raw material to produce oxygen through physical means. The following features:

1) The air is taken from nature.

2) Adopt advanced pressure swing adsorption technology (PSA), advanced process flow and low energy consumption.

3) The product has a novel shape design, simple operation, stable operation and convenient maintenance.

2. Precautions for safe use

When using this product, please observe the following safety precautions:

oxygen is a combustion-supporting gas ,it is not allowed to use the oxygen generator in an environment with bright or dark fire source or with flammable or explosive danger. Smoking is strictly prohibited near the oxygen inhaler

It is not allowed to place the oxygen tube under the bedspread or seat cushion . when there is no oxygen absorption ,turn off the power supply of the oxygen generator .

The power supply must meet the requirements for safe use of electricity. if the power supply does not meet the requirements, do not use oxygen generator .

Please turn off the power supply and unplug the power plug ,before cleaning ,maintaining or replacing the safety tube of the oxygen generator .

Improper use of power cord and plug may cause burns or other electric shock hazards. do not use if the power cord is damaged . To avoid danger, it must be replaced by a professional authorized by the manufacturer .Unplug the power plug.

Please select safe and qualified socket and wiring board with safety electrician .

It is forbidden to plug in or unplug the power supply with wet hands . It is forbidden to drag the machine through the traction oxygen absorption pipe or power line.

Personnel not authorized by the company shall not remove the cover for maintenance.

3. Structural characteristics and working principle

3.1 Structural composition

The oxygen generator is mainly composed of the main engine, the flow valve, the humidification cup and the oxygen suction pipe. Among them, the main engine is mainly composed of an air compressor, an adsorption tower and a switching valve, as shown in Figure 1.

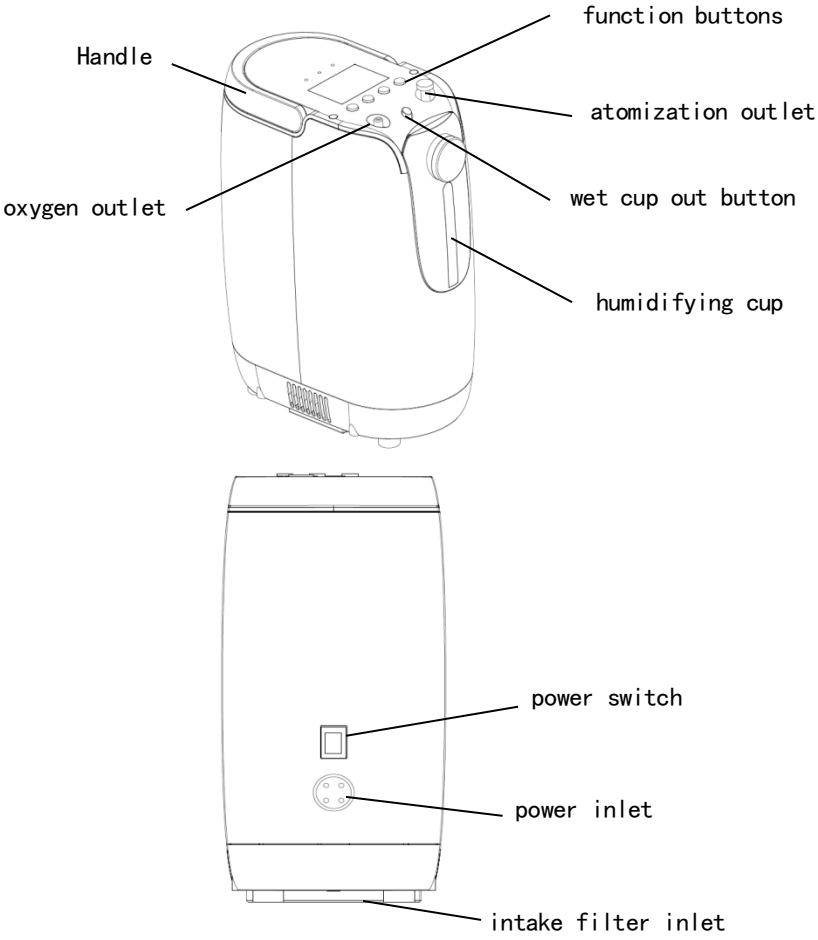


Figure 1 oxygen generator outline drawing

3.2 Working principle

The oxygen flow of DZ-1BCW oxygen generation mechanism is shown in Figure 2:

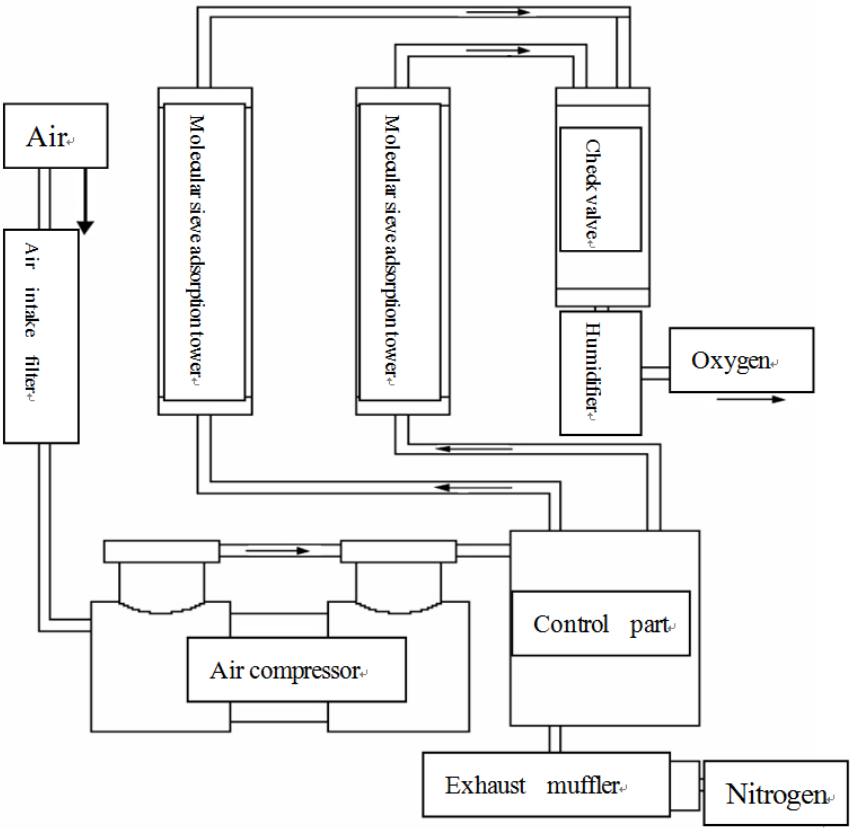


Figure 2 Oxygen flow diagram of the oxygen generation mechanism

The DZ-1BCW type oxygen generator uses molecular sieve as the adsorbent and uses the principle of pressure swing adsorption (PSA) to filter the air and send it to the molecular sieve adsorption tower for pressure adsorption and decompression. oxygen.

4. Technical characteristics

4.1 Use environment

Ambient temperature: 10 ℃ ~40 ℃

Relative humidity： 30% ~ 75%

Atmospheric pressure ： 86.0kPa ~ 106.0kPa

Supply voltage：Ac power adapter ， Input 100V -240V（Output12V-20A）

Vehicle use use power supply: vehicle use DC12V

Outdoor power supply: DC DC12V lithium battery

Power frequency： 50Hz - 60Hz

4.2 Working conditions

Impurities in raw air ≤ 0.3 mg / cm^3

Oil content in the air ≤ 0.01 ppm

The surrounding environment should be free of corrosive gases and strong magnetic fields

4.3 Product Features

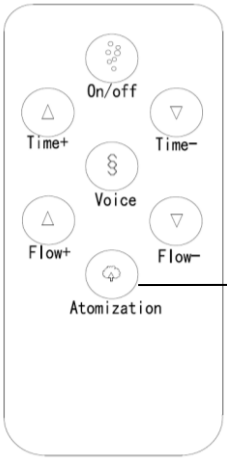
Display mode: LCD display, English characters

Timing function: continuous running timing, timing running timing, automatic cumulative timing

Atomization function: Compression atomization

Remote control function: infrared remote control operation

RC configuration of RC based on customer requirements



4. Technical characteristics

4.4 Technical indicators

Oxygen concentration（when the flow ≤1L±0.3L） 90 ± 3% (v / v)

Carbon dioxide content ≤0.01% (v / v)

Smell Odorless

Particle size of solid matter ≤10um

Solid matter content ≤0.5mg / m^3

Product technical indicators:

Adjustment range (1 ~ 7 File) Adjustable

Running noise ≤60dB (A)

Timer error ≤ ± 3%

Input power about 80W

Machine weight about 4.5kg

Outline size 260 ×137 × 291 mm

5. Unpacking and installation

5.1 Unpacking

Open the box from the top of the box. Hold the foam with both hands and remove the oxygen generator upwards.

5.2 Inspection

First check the oxygen generator for transportation damage, and then check the accessories and random documents according to the packing list.

5.3 Installation precautions

When installing the oxygen generator, please observe the following precautions:

Installation Precautions

1. The oxygen generator should be installed in an indoor ventilation place free of dust, corrosion, toxic and harmful gases and oil mist. Avoid direct sunlight, and the distance from the wall and other objects should be greater than 20 cm.

2. The oxygen generator cannot be installed in a place with bright or dark fire sources, flammable, explosive danger, humidity, high or low temperature, or used in a closed room (space).

3. The air inlet of the oxygen generator (Under the back) should be well ventilated.

4. Keep the oxygen generator stable, otherwise it will increase the noise during operation.

5. It is forbidden to lay on the oxygen generator.

6. The oxygen generator uses single-phase AC power. If the grid voltage is unstable, it will affect the normal startup of the compressor. Please install a voltage stabilizer.

5.4 Installation

1) Install air filter: At the bottom of the oxygen generator, open the box cover, install the filter, insert the air cover and fasten the cover (see Figure 3).

2) Add water to the humidification Cup: press the humidification cup button on the control panel, take out the humidification cup at the same time, remove the silica gel plug on the back of the humidification cup, add a proper amount of pure water from the water injection port to the cup (the liquid level should not exceed the "maximum water level"), and then seal

the water injection port with silica gel plug (see Figure 4).

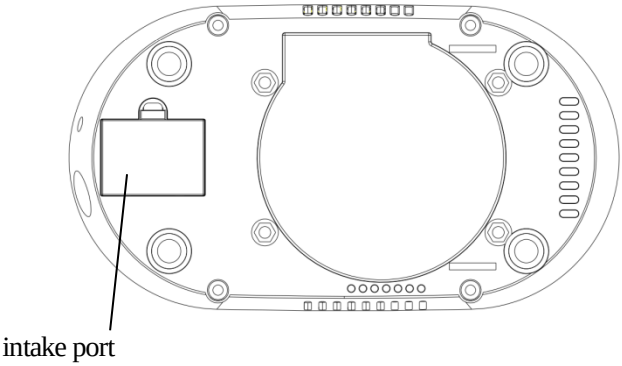


Figure 3 Install air filter

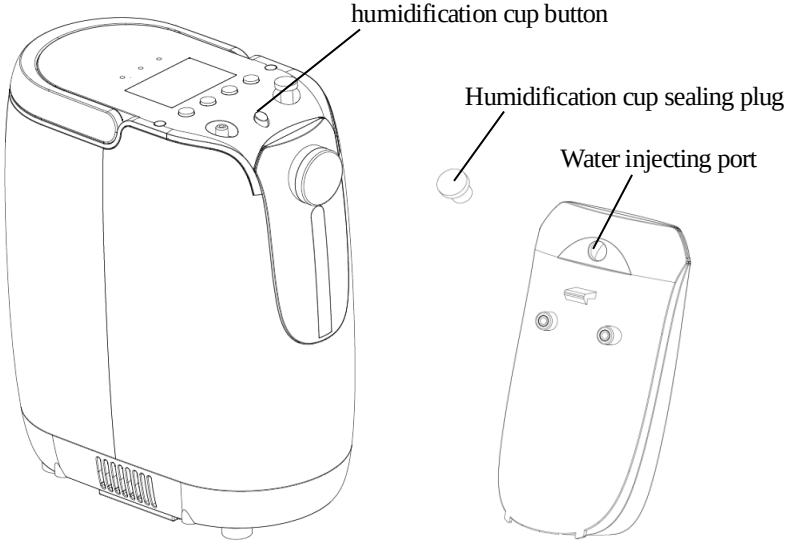


Figure 4 Humidification cup

6. Use and operation

6.1 Precautions for use

When using an oxygen generator, please observe the following precautions:

Precautions for use

1. Make sure that the exhaust of the bottom of the oxygen generator is unobstructed during use, otherwise it will affect the heat dissipation of the oxygen generator.

2. The specified performance can only be achieved after the oxygen generator is started for 10 minutes.

3. There is a gap of exhaust sound when the oxygen generator is in use (about once every 4 seconds).

4. Do not use oil, grease or other similar substances on or near the oxygen generator.

5. In use, when the water in the humidifying cup is insufficient, make up for it in time.

6. The oxygen generator cannot be started frequently. It should be restarted after 5 minutes after shutting down.

7. Molecular sieves will age due to factors such as the use time and the environment, which will cause the recoverability of the oxygen production to decrease. When this phenomenon is found, please contact the maintenance point or the manufacturer to replace the molecular sieve.

8. When the oxygen generator is stopped, you must unplug the power cord.

9. During the use of the oxygen generator, the shutdown due to the high ambient temperature and the thermal protection of the air compressor is a normal phenomenon. The power must be turned off and the machine cooled down before being used.

6.2 Use

The oxygen generator control panel is shown in Figure 5.

1) Turn on the power: Plug in the power cord of the fuselage, and then turn on the power; when you stop using the oxygen generator, you must first unplug the power plug.

2) Ready to start: press the power switch (under the back cover), the oxygen generator enters the ready to start state, as shown in Figure 6, indicating that the oxygen generator is ready to start.

3) Continuous oxygen generation: Press the "Oxygen" button on the control panel, the oxygen generator starts, and the oxygen indicator light turns on. Press it again, the oxygen generator stops, and the oxygen indicator goes off.

4) Timing: Each time you press the "timing" key, the timing increases by 15min, and the

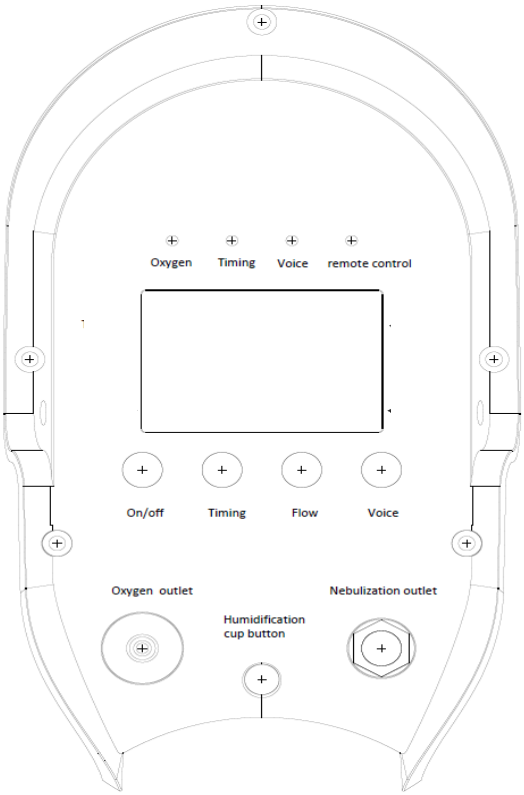
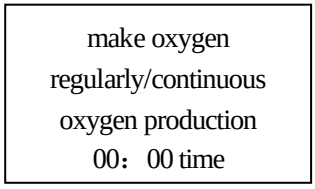
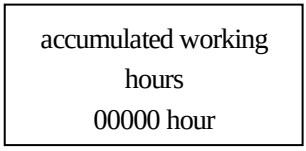


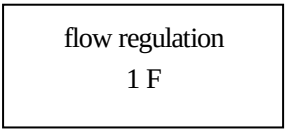
Figure 5　The oxygen generator control panel



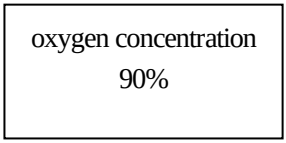
（1）timing oxygen generation/ continuous oxygen production time



（2）cumulative oxygen production time



（3）1-7 File flow regulation



（4）oxygen concentration display

Figure 6　Boot display

maximum timing is 9 hours and 45 minutes.

When the maximum timing time is reached, continue to press the "timing" key, the timing will cycle again, and the set timing indicator will light up.

5) Voice: The "Voice" key controls the voice on and off. Press the "Voice" key to turn the voice on, the voice indicator is on, and then press the "Voice" key to turn the voice off, and the voice indicator is off.

6) Adjusting the flow rate: Press the "flow rate" key to adjust to the required flow rate. At the same time, bubbles can be seen in the humidified water; the "oxygen port" should have oxygen output.

7) Start oxygen inhalation: Place the inhalation sac of the oxygen inhalation tube in the nasal cavity, move it around the ear wheel, and move the live fastener to fix it. Then insert one end of the oxygen main pipe into the "oxygen port" and confirm that there is oxygen in the nosepiece After output, you can start to inhale oxygen.

8) Atomization operation: Unscrew the knurled screw of the atomization socket by hand, insert the inlet pipe of the atomizer into the atomization socket, the flow rate is set to 1 File, press the "oxygen" key, and the air compressor starts to work The atomization can be carried out. For the use of the atomizer, please follow the instructions of the atomizer's instruction manual. After the atomization is completed, press the "oxygen" key to stop the air compressor and unplug the inlet tube of the atomizer Then screw the knurled screw back to the atomizing socket. (Please refer to the nebulizer manual for the operation process of the nebulizer and atomization)

9) Automatic shutdown: When the preset timing of oxygen generation is reached, the compressor automatically stops working and the cooling fan is automatically turned off.

10) Manual shutdown: When the oxygen generator is running, press the "oxygen" button on the control panel to stop the compressor.

11) Restart: After restarting the oxygen generator,

it needs to operate according to （3） of 6.2.

7 Fault analysis and troubleshooting

If you have a problem using the oxygen generator, please read this chapter carefully before sending it for repair. You may be able to solve the problem yourself very easily.

If you cannot solve the problem successfully according to the suggestions in this chapter, please unplug the oxygen generator and send it for repair. Do not try to repair the oxygen generator or remove the casing of the oxygen generator yourself.

Examples of fault analysis and troubleshooting are shown in Table 1:

Table 1 Failure analysis and troubleshooting example table

Failure phenomenon	Check item	solution
When turned on, the oxygen generator does not work and the display does not light up.	1. Is the power on? 2. Is the fuse blown?	1. Check and tighten the power cord. 2. Replace the fuse.
The oxygen generator is operating normally, but there is no oxygen output from the oxygen pipe.	1. Is the oxygen inlet plug plugged in? 2. Is the lid of the humidification cup tight? 3. The sealing ring inside the lid of the humidification cup has fallen off? 4. Humidification cup and front cover air outlet plug off?	1. Plug the oxygen pipe plug in. 2. Tighten the lid of the humidifier. 3. Install the seal inside the cover. 4. Install the air inlet and outlet air plugs in the front cover.
The start-up operation is normal, but the flow rate is less than the rated value, and the air bubbles in the humidification cup are small.	1. The air intake filter is blocked by dust? 2. The oxygen pipe is folded or squeezed to block the air outlet pipe?	1. Clean or replace the filter. 2. Smooth out the oxygen suction tube.
Noisy running.	Is the oxygen generator placed smoothly?	Place the oxygen generator smoothly.

8. Maintenance and care

8.1 Maintenance precautions

When performing maintenance, please observe the following precautions:

Maintenance precautions

1. If the oxygen generator fails, you should contact the dealer or the manufacturer for repair. Only personnel authorized by the manufacturer can debug and repair the oxygen generator. Do not disassemble and repair it by yourself.

2. Under normal use, the humidification cup should be kept clean. The humidification cup should be filled with pure water and the water level should be below the maximum water level. It is recommended to clean the humidification cup, air filter cotton and air intake cover once a week to ensure Oxygen Hygiene.

3. The power cord is configured according to the power of the oxygen generator, please do not replace it at will.

4. Cleaning the oxygen suction tube, please follow the instructions in the instruction manual of the accessory.

5. Before using the oxygen generator for a long time, it should be turned on and checked before use, and it should be put into use after confirming that the functions are normal.

8.2 Cleaning the humidifier

When cleaning, remove the humidifying cup as shown in Figure 4, and generally wash it with water. If there is scale, you can get rid of the scale and then rinse with water.

When cleaning, special attention should be paid to the air inlet at the bottom of the core tube of the cup to keep the oxygen flowing.

After cleaning, sterilize (soak with a disinfectant containing effective chlorine 500mg / L is recommended) and rinse it with pure water. Add an appropriate amount of pure water to the cup, and the water level should be between the highest and lowest water level lines Check whether the sealing ring on the lid is properly installed, and then tighten the humidified lid to use.

8.3 Cleaning the oxygen generator

In the case of cutting off the power of the oxygen generator, you can use a soft towel dipped in a small amount of neutral household detergent to clean the whole area, and then dry it with a dry towel.

When wiping, care should be taken not to allow liquid to penetrate the gaps in the chassis.

8.4 Cleaning of Intake Silencer Filter

Clean the intake muffler and intake cover weekly.

8.5 Cleaning the oxygen pipe

The oxygen tube supplied by the oxygen generator is a single-use sterilized product and should be replaced by a special person. It should be replaced regularly. The nose of the oxygen tube should be cleaned and disinfected after each use. Wash it with water after soaking for 5 minutes; it can also be wiped with medical alcohol. It is recommended that the oxygen suction tube be replaced every one year after use. (Note: The oxygen suction tube should be kept dry.)

8.6 Replacement of the fuse

The replacement of the safety tube requires a professional or the company's maintenance service department.

8.7 Handling during long periods of inactivity

Before preparing to leave the oxygen generator for a long time, please do the following:

(1) Remove the humidification cup, drain the water from the humidification cup, and put it back in place.

(2) Cut off the power and retract the power cord.

(3) Store the oxygen suction tube dry at room temperature to avoid direct sunlight and pollution.

After leaving the oxygen generator for a long time, before you prepare to reuse it, please do the following:

(1) Inspect the power cord for damage.

(2) Clean the oxygen suction tube, check whether it is blocked or discounted, and clean it up in time.

(3) Clean the humidification cup.

(4) Clean the intake silencer and the air intake cover.

9. Transportation and storage

9.1 Precautions for transportation and storage

Please observe the following precautions during transportation and storage:

Precautions for transportation and storage

1. Before the oxygen generator is transported or stored, the water in the humidification cup should be drained.
2. It is forbidden to place the oxygen generator upside down or horizontally during transportation and handling.
3. When the storage temperature is lower than 10 ℃, the oxygen generator should be left in the normal working environment for 8 hours before use.
4. The oxygen generator has been disabled for a long time, and it should be turned on and checked before use, and it can be put into use after confirming that all functions are normal.

9.2 Environmental requirements for storage and transportation

Ambient temperature: -20 ℃ ~ 50 ℃;
Relative humidity ≤95%;
Atmospheric pressure 500hPa ~ 1060hPa.

9.3 Transport

The oxygen generator with complete packaging should avoid severe collision and direct rain and snow during transportation.

9.4 Storage

The oxygen generator should be stored in a well-ventilated room that avoids strong sunlight and non-corrosive gases.

10. Warranty period and after-sales service

10.1 Warranty period

Since the product was sold, the warranty period is as long as the requirements for handling, storage, use and maintenance are observed.

One year, and the product usage time is less than 3000 hours. If one of the following situations occurs, it does not belong to our company

Free warranty coverage:

1) Damage caused by the user's incorrect operation or use under abnormal conditions.

2) The damage caused by the user's own disassembly, repair and modification.

3) Damage caused by natural disasters.

4) Fragile, consumables and accessories that should be replaced by the user (such as oxygen suction tubes, insurance tubes, filters, etc.).

5) Cannot provide proof of purchase to prove the date of purchase.

10.2 Disclaimer

The company is not responsible for direct or indirect damages to users due to improper use or failure to operate in accordance with the instruction manual.

10.3 After-sales service

The company has maintenance points at various dealers to maintain products for life. It only charges maintenance costs and offers a variety of spare parts at a discount.

11. Packing list, supporting accessories specifications

11.1 Attentions for selecting accessories

When choosing accessories, please observe the following precautions:

Attentions for selecting accessories

1. The oxygen generator uses a special humidification cup. If you need repair or replacement, please contact the supplier.

2. The oxygen suction tube should use qualified products with medical device registration certificate, and can be tightly connected with the corresponding "oxygen output" socket of the oxygen generator. Users can purchase according to the sample specifications in the random accessories. Avoid adverse effects on safety.

11.2 Packing List

Table 2 Packing list of oxygen generator

Serial number	model	name	unit	Quantity	Notes
1		oxygen generator	station	1	With power cord
2		Oxygen pipe	set	1	
3		Nebulizer	set	1	
4		remote control	Each	1	
5		Humidification cup sealing plug	Each	1	
6		Humidification cup inlet and outlet air sealing plug	Each	2	
7		Air intake filter	Each	1	
8		user's manual	Share	1	
9		Product certification	Share	1	