OxyFlow 5

Oxygen Concentrator for Medical Use
OxyFlow 5 User Manual

Document No.:
Free Sale Certificate
ISO13485: 2003
CE0123
SPECIAL NOTES

Dealer: This manual MUST be given to the end user of this product.
User: Before using this product, read this manual carefully and save for future reference.

Please closely read this user manual. DO NOT use this product or any available optional equipment without first completely reading and understanding these instructions.

If you are unable to understand the warnings, cautions or instructions, contact your dealer before attempting to use this equipment.

- Consult with a physician before using the equipment. Take oxygen treatment as is prescribed by your physician. Do not change the flow settings and time without consulting your physician first.
- This device is a class II therapy device for supplying supplemental oxygen for respiratory applications.
- Contact your dealer or physician immediately if any service is required.

SAFETY NOTICE

⚠️ Oxygen is a combustible gas, so the machine must be far away from open flames and heat sources. DO NOT SMOKE while using this device. Keep all matches, lighted cigarettes or other sources of ignition out of the room.

⚠️ A spontaneous and violent ignition may occur if oil, grease, or greasy substances come in contact with oxygen under pressure. These substances MUST be kept away from the oxygen concentrator, tubing and connections, and all other supplemental equipment. DO NOT use any lubricants unless recommended by manufacturer.

- Avoid creating any sparks near the medical oxygen equipment. This includes sparks from static electricity, typically created by friction.
- Keep the power cord away from sources of ignition and heat
- Turn off the power when not in use
- DO NOT put oxygen tubing under a bedspread or chair cushion
- Unplug the power cord when servicing the machine
POINTS FOR ATTENTION

Carefully review and familiarize yourself with the following important notes and warnings. These instructions must be followed to ensure correct and safe operation of the device:

CAUTION

- The concentrator should ALWAYS be kept in the upright position to prevent cabinet damage while being transported. It should be used in a clean environment without dust, corruption, and harmful gases.
- Keep unit at least 10cm away from walls, draperies, furniture, etc.
- The ideal temperature for operation is between 10°C to 37°C. If the temperature is lower than 10°C, it may be difficult for the compressor to start working; if it is higher than 37°C, the compressor may overheat, reducing the life of the equipment.
- DO NOT move the equipment when it is running
- DO NOT start the equipment when the flow meter is closed
- DO NOT plug up the exhaust outlet
- DO NOT move or relocate concentrator by pulling on the power cord.
- NEVER block the air inlet of the concentrator or place it on a soft surface, such as a bed or couch, where the air exhaust outlet may be blocked. Keep the openings free from lint, hair, etc.
- Only use distilled water or cold water in the humidifier. DO NOT fill above the maximum volume line.
- For optimum performance, we recommend that each concentrator be on and running for a minimum of 30 minutes at a time. Shorter periods of operation may reduce lifetime of the product.
- Do NOT turn the flow ball in the flow meter up to the red line or the purity of oxygen will decrease.
- Each oxygen concentrator is equipped with 1 set of oxygen tubing. The patient can also buy this as needed. The manufacturer recommends that crush proof oxygen tubing be used with this product.
- The oxygen tube and nebulizer should be used for personal use only, with regular cleaning.

RADIO FREQUENCY INTERFERENCE

Most appliances are vulnerable to radio frequency interference, therefore the use of portable communications equipment nearby oxygen concentrator will interfere the function of the machine.
DANGER

To Reduce the Risk of Burns, Electrocution, Fire or Injury to Persons, please pay attention to the following:

DO NOT disassemble. Refer servicing to qualified service personnel. There are no patient service parts.

Avoid using while bathing. If continuous usage is required by the physician’s prescription, the concentrator MUST be located in another room at least 3 meters from the bath.

DO NOT come in contact with the concentrator while wet. DO NOT place or store product where it can fall into water or other liquids.

DO NOT reach for product that has fallen into water. Unplug IMMEDIATELY and contact dealer.

Use this concentrator for its intended purpose as stated in this manual.

Consult your equipment provider for approved accessories for your concentrator.
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1. PRODUCT OVERVIEW

1.1 Working Principle

An oxygen concentrator for medical use functions with pressure swing adsorption technology. At normal temperature, the machine can continuously separate medical oxygen with high density (93%±3% oxygen for medical use) from the air when powered on. The machine is easy to operate and quick to use, with adjustable flow.

**Note:** Using oxygen concentrator doesn’t influence oxygen content in the air of the room.
2. Using conditions

- Electrical Requirements: 110V±10%, 60Hz±1Hz; or 220V±10%, 50Hz±1Hz

⚠️ **Warning:** Before using the machine; please check the label on the back of the machine for voltage requirements. Do not use the machine if it has the incorrect voltage listed.

- Operating Environment Temperature: 10 – 37°C
- Relative Humidity: 20 – 65%RH
- Atmospheric Pressure: 700 – 1060hpa
- Environment: dry, well ventilated, without dust, corruption, and harmful gases. Keep away from sunlight and intense electromagnetic interference.

**NOTE:** Add the voltage stabilizer if the power supply voltage fluctuates over ±10%, before starting the concentrator.

3. Application Scope

This equipment is used to provide oxygen only for medical use and health care. We recommend an alternate oxygen supply device in the event of power outage, alarm condition, or mechanical failure (such as an oxygen cylinder or liquid oxygen). Please consult your physician for the requirement of an alternate oxygen supply device.

4. Technical Specification

4.1 Model and Function Definition

<table>
<thead>
<tr>
<th>Item no</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flow rate at 5L/min</td>
</tr>
</tbody>
</table>

**Type name:** OxyFlow 5
4.2 Main Function:

- Oxygen concentration at the rated flow: 93%±3%;
- Can be used 24 hours a day
- The time to reach the rated oxygen concentration at a rated flow should be no more than 5 minutes
- Low oxygen alarm: when the oxygen concentration is below therapeutic level, a red light will flash with sound
- Temperature alarm
- Power failure alarm
- Maintenance alarm

4.3 Specification Form

Machine performance and parameter

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rating</th>
<th>Regulating</th>
<th>Sound level (dB (A))</th>
<th>Function and setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flow (L/min)</td>
<td>purity (%)</td>
<td>flow (L/min)</td>
<td>purity (%)</td>
</tr>
<tr>
<td>M50</td>
<td>5</td>
<td>93%±3%</td>
<td>0-5</td>
<td>93%±3%</td>
</tr>
</tbody>
</table>

Standard function: temperature alarm, low oxygen concentration alarm, power failure alarm, Maintenance reminder

Optional function: Positive pressure outlet.

Parameter setting comparison form

<table>
<thead>
<tr>
<th>Model</th>
<th>OxyFlow 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating power (W)</td>
<td>300</td>
</tr>
<tr>
<td>Compressor exhaust (m³/h)</td>
<td>4.08</td>
</tr>
<tr>
<td>Compressor cylinder cup</td>
<td>USA</td>
</tr>
<tr>
<td>Rating current (A)</td>
<td>3.0</td>
</tr>
<tr>
<td>Electrical Requirement</td>
<td>110V±10%, 60Hz±1Hz</td>
</tr>
<tr>
<td>220V±10%, 50Hz±1Hz</td>
<td></td>
</tr>
<tr>
<td>Flow rate (L/min)</td>
<td>0-5</td>
</tr>
<tr>
<td>Purity (5L/min)</td>
<td>93%±3%</td>
</tr>
<tr>
<td>Outlet pressure (Psi)</td>
<td>7.2 to 7.5</td>
</tr>
<tr>
<td>Sound level dB(A)</td>
<td>≤45</td>
</tr>
<tr>
<td>Net weight (kg)</td>
<td>14.2kg</td>
</tr>
<tr>
<td>Dimension (mm)</td>
<td>390×230×600</td>
</tr>
</tbody>
</table>
**Notice:** The information contained in this manual is subject to change without notice.

### IEC SYMBOLS

<table>
<thead>
<tr>
<th>![Symbol]</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![ON]</td>
<td>ON</td>
</tr>
<tr>
<td>![OFF]</td>
<td>OFF</td>
</tr>
<tr>
<td>![Consult the manual]</td>
<td>Consult the manual</td>
</tr>
<tr>
<td>![No Smoking]</td>
<td>No Smoking</td>
</tr>
<tr>
<td>![Warning &amp; Caution! Consult the manual]</td>
<td>Warning &amp; Caution! Consult the manual</td>
</tr>
<tr>
<td>![Shock-proof Type Class II devices]</td>
<td>Shock-proof Type Class II devices</td>
</tr>
<tr>
<td>![Type B Equipment]</td>
<td>Type B Equipment</td>
</tr>
<tr>
<td>![European CE Declaration of Conformity]</td>
<td>European CE Declaration of Conformity</td>
</tr>
<tr>
<td>![IPX1]</td>
<td>Case protection Class</td>
</tr>
<tr>
<td>![Alternating Current]</td>
<td>Alternating Current</td>
</tr>
<tr>
<td>![Stacking Level Limit]</td>
<td>Stacking Level Limit</td>
</tr>
<tr>
<td>![Upright]</td>
<td>Upright</td>
</tr>
<tr>
<td>![Frangibility]</td>
<td>Frangibility</td>
</tr>
<tr>
<td>![Do not wet]</td>
<td>Do not wet</td>
</tr>
</tbody>
</table>

Our medical products with this sign, is in accordance with the European Directive 2002/96/EC (waste electrical and electronic equipment-WEEE). This sign indicates that, when the product life end and the user intend to dispose this product, the product must be separated from the other junk. Please contact your local agency or waste disposal service center for product recycling and reuse.
5. UNPACKING, TRANSPORT AND STORAGE

5.1 Unpacking

1. Check for any obvious damage to the carton or its contents. If damage is evident, notify the carrier, or your local dealer.
2. Remove all foam filled blocks and loose packing from the carton.
3. Carefully take out all the components and the machine from the carton. Inspect/examine exterior of the oxygen concentrator for nicks, dents, scratches or other damages. Check all components. If the device is short of components or there is a quality issue, please contact your local dealer.

**NOTE:** Please keep the carton and packing materials for storage and transport.

5.2 Transport and Storage

1. Keep the machine upright during transport. DO NOT place horizontally or upside down.
2. The dealer shall guarantee that the product reaches you without damage.
3. Ambient Temperature: -30 – 70°C.
4. Comparative Humidity: 15 – 95%RH
5. Atmospheric Pressure: 500~1060hpa
6. PART NAME & DEFINITION

Main components of the concentrator include: compressor, filter, molecular sieve set, control panel, flow meter, humidifier and SD card.
Additional optional parts: positive pressure outlet.

See details below:

Machine Plan
Machine Plan

LCD display 1

O₂ Normal Operation
⚠️ Hours: 00000

LCD display 2

O₂ Service Required
⚠️ H04 Hours: 00000
Product Components:

1. Oxygen Flow meter
2. Serial Port
3. Oxygen Outlet
4. Knob of the Flow meter
5. Humidifier Bottle (350ml)
6. Optional function interface
7. Large LCD Display
8. Power Indicator
   A green light is on when the machine is running
9. Alarm Indicator
10. Power Switch
11. Model Label
12. Power Code
13. Reset button
14. Cabinet air intake filters
15. Humidifier Band
16. Cabinet filter access panel
17. Specifications Label

Content illustration of LCD display:

LCD display 1: Normal Operation display indicates the total running time of the machine.

<table>
<thead>
<tr>
<th>Zone</th>
<th>Display</th>
<th>Meaning</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>“00000”</td>
<td>Total running time (Hour)</td>
<td>LCD will display normal interface, after “00000” display 10s.</td>
</tr>
</tbody>
</table>

LCD display 2: Service required display indicates the product need service with relevant alarm code.

<table>
<thead>
<tr>
<th>Zone</th>
<th>Display</th>
<th>Meaning</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>“00000”</td>
<td>Total running time (Hour)</td>
<td>----</td>
</tr>
<tr>
<td>②</td>
<td>H04</td>
<td>Oxygen Concentration lower than therapeutic levels</td>
<td>The red light flashing, frequency 2Hz, with a shortness of alarm sound</td>
</tr>
<tr>
<td>②</td>
<td>H01</td>
<td>Temperature Alarm</td>
<td>The red light flashing, frequency 2Hz, with a shortness of alarm sound</td>
</tr>
</tbody>
</table>

Note: If multiple alarm codes are generated at the same time, the alarm code will alternate in the display.
7. OPERATING INSTRUCTIONS

7.1 The oxygen concentrator should be placed on flat ground in a ventilated environment, away from sunlight.

- Keep the unit at least 10cm away from walls, draperies, furniture, etc.
- Keep away from open flames and heat sources
- Keep liquids away from the concentrator
- Do not cover the concentrator when operating
- Keep well ventilated

7.2 Only use the humidifier if prescribed by your physician. Take out the humidifier and cannula from the package, and connect them tightly. Turn the humidifying bottle anticlockwise to remove cap from bottle, pour some distilled water to the scale mark, and replace the humidifier cap on the bottle, and then securely tighten.

**NOTE:**
- The water filled in humidifier should be distilled water or cold boiled water, and needs to be refreshed everyday.
- The water level must not exceed the maximum volume indicated and must not go below the minimum volume indicated on the bottle.

7.3 Put the humidifier with water into the humidifier socket and secure it with the band. Connect the humidifier and the oxygen outlet with the cannula tightly.

7.4 Connect the power, insert the power line into the power socket of the machine, and connect the other end of the plug with the indoor power socket. Turn on the power switch. Adjust the flow meter, ensuring the ball is in the center of the meter.

**NOTE:** Be sure to use a safe and qualified socket, where the plug inserts tightly into the socket. If an extended power strip is needed, please choose a product with an electrical safety certification.

7.5 To check whether the humidifier bottle is tightly fastened, use your finger to block the humidifier outlet for 20 seconds. If the black ball in the flow meter falls to the bottom, remove your finger and listen for a “Chu” sound from the bottle. This will indicate that your humidifier is tightly fastened. If you do not hear this sound, take out the humidifier, replace and tighten the cap again. If there is still no sound after adjustment, please contact your local dealer.

7.6 Regulate the output flow rate, and make sure that the center of the ball and flow mark is at the same level.
NOTE:

- Adjust the knob of the flow meter, clockwise to decrease, counterclockwise to increase.
- For LTOT, it is very important for the patient to strictly follow their physician’s recommendation. Take oxygen treatment according to the flow rate set by the physician.
- DO NOT turn the ball in the flow meter up to the red line.

7.7 Insert the intake end of oxygen tube to the oxygen outlet or the humidifier outlet, if a humidifier is prescribed by your physician. Then set the nasal cannula over patient’s ears and insert the nasal tube into patient’s nostrils to start the oxygen treatment. If a longer tube is needed, connect the extension tube with outlet of humidifier and oxygen tube.

7.8 Turn off the power when not in use.

NOTE: Unplug the power plug, if continuous use is not needed.
8. MAINTENANCE

1. Disconnect power when performing any maintenance. Wipe down the cabinet panels with a damp towel as needed.
2. The air intake filter is used to prevent dust, and needs to be cleaned regularly. Clean the filter at least once a week depending on environmental conditions. Operation steps as below:
   1) Take off the filter net of the case and take out the sponge mesh.
   2) Rinse the sponge mesh with clean water. Allow the filter to dry before placing back in the concentrator.
   3) Place back into the filter net and insert into the device.
   4) You may also use a clean backup filter.

**NOTE:**
- Do not operate the unit without the air intake filter in place.

3. Reset Button
- Reset button is activated when the concentrator has an unstable supply of power. If the reset button is activated, turn off the concentrator and push in the button to reset the machine. If the reset button is activated repeatedly, discontinue use and contact your equipment provider.

4. Cleaning the Humidifier and cannula
   1) Clean the cannula every day. First, clean with detergent and then rinse with clean water completely, and dry up naturally. Changing a new cannula once a month is recommended.
   2) The distilled water or cold boiled water in humidifier should be refreshed every day. The humidifier should be cleaned and disinfected every 3 weeks. Clean the humidifier with detergent and then rinse with warm or hot water, dip it in household disinfectant for 20-30 minutes, clean again with warm or hot water, and air dry. If not in use, put it in a clean bag.
   3) If an oxygen tube or cannula is needed, please contact your local home care provider or dealer for recommendations. They should also give you instructions on the proper usage, maintenance, and cleaning of the tube or cannula.

8.2 Professional Maintenance Service

Only the professionals or dealers who are trained and authorized by the manufacturer may perform repairs or adjustments.
9. TROUBLE SHOOTING GUIDE

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>PROBABLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power on, the equipment is not working</td>
<td>Start capacity of compressor is broken or compressor is not working</td>
<td>Call service provider or dealer.</td>
</tr>
</tbody>
</table>
| Power on, the equipment is not working or it periodically works | Power cord is not plugged in well or there is a bad connection | * Check whether the power cord is damaged or not.  
* Check whether the power cord is securely plugged in  
If the device is still not working, call your service provider |
| No oxygen outlet or the outlet flow is too small  | * oxygen cannula is kinked or blocked  
* humidifier bottle not properly tightened | * unknit the cannula  
* re-install the humidifier cap  
If the device is still not working, call your service provider |
| The ball in flow meter is not moving when you adjust the knob | * the flow knob is not tightened  
* the knob is being turned abruptly or too fast | * make sure the knob is fully tightened  
* turn the knob slowly and softly  
If the device is still not working, call your service provider |
| There is water in the cannula                      | * temperature difference caused by the weather,  
• The unit is too close to the wall, draperies or furniture,  
• the location of the equipment and cannula is different | * Insure the machine is placed in a well ventilated room.  
* Do NOT use hot water  
* Do NOT over-filled humidifier  
* keep the equipment and cannula in the same room  
If the device is still not working, call your service provider |

10. WARRANTY: Please contact your local equipment provider for warranty details.
Corporate Global Headquarters:
1701 North St Suite 40-2
Endicott, NY 13760
USA

Researching & Manufacturing Base Address:
No.17, Wensu Street, Hunnan New District, Shenyang, China

Authorized EC-Representative:
Shanghai International Holding Corp. GmbH (Europe)