

OXYGEN CONCENTRATOR USER'S MANUAL JMC9A Ni



**DO NOT OPERATE THIS UNIT WITHOUT FIRST
READING AND UNDERSTANDING THIS MANUAL!**

SAVE THIS MANUAL FOR FUTURE USE.

TABLE OF CONTENTS

1、SAFETY NOTES.....4-11

1.1 important information5

1.2 before installation6

1.3 placement6

1.4 fire warning and explosion7

1.5 maintenance8

1.6 radio frequency interference8

1.7 reduce the risk of burns to persons9

2、FEATURES.....12-15

2.1 summary12

2.2 characteristics12

2.3 specifications13

3、HANDLING.....16

3.1 unpacking16

3.2 inspection16

3.3 storage16

4、INSTALLATION AND OPERATION.....17-22

4.1 feature view17

4.2 prepare work19

TABLE OF CONTENTS

4.3 turning on.....19

4.4 alarm signal20

4.5 alarm signal cue21

4.6 turning off21

4.7 symbols and descriptions22

5、 MAINTENANCE.....23-25

5.1 cleaning the cabinet23

5.2 cleaning the replacing the filter23

5.3 cleaning the optional humidifier bottle25

5.4 oxygen nasal cannula25

5.5 Tube maintenance.....25

5.6 Note: for each new patient.....25

6、 TROUBLESHOOTING.....26-27

7、 OTHER ATTENTIVE ITEMS.....28-34

7.1 GAS PASS OPERATION SKETCH MAP.....28

7.2 Electrical Rationale.....28

7.3 Post-marketing service29

7.2 Treatment of waste and residual29

7.3 Accessories and spare parts30

7.4 Appendix EMC report.....31

COMPANY AND ADDRESS35

1. SAFETY NOTES

WARNING: Users who require continuous oxygenation must plan for alternate reserve sources of power and oxygen in the event of a failure or loss of power and oxygen. This device is to be used as an oxygen supplement and is NOT considered life-supporting or life-sustaining!

WARNING: There is a risk of fire associated with oxygen enrichment during oxygen therapy.

Do not use the oxygen concentrator or accessories near sparks or open flames.

WARNING: To ensure receiving the therapeutic amount of oxygen delivery according to your medical condition [insert model and brand] must

- Be used only after one or more settings have been individually determined or prescribed for you at your specific activity levels.
- Be used with the specific combination of parts and accessories that are in line with the specification of the concentrator manufacturer and that were used while your settings were determined.

WARNING: Use only water-based lotions or salves that are oxygen-compatible before and during oxygen therapy. Never use petroleum or oil-based lotions or salves to avoid the risk of fire and burns.

WARNING: Do not lubricate fittings, connections, tubing, or other accessories of the oxygen concentrator to avoid the risk of fire and burns.

WARNING: Use only spare parts recommended by the manufacturer to ensure proper function and to avoid the risk of fire and burns.

WARNING: Use of this device at an altitude above [insert maximum RATED altitude] or outside a temperature of [insert RATED temperature range] or a relative humidity above [insert maximum RATED relative humidity] is expected to adversely affect the flowrate

1. SAFETY NOTES

and the percentage of oxygen and consequently the quality of the therapy.

WARNING: Oxygen makes it easier for a fire to start and spread. Do not leave the nasal cannula or mask on bed coverings or chair cushions, if the oxygen concentrator is turned on, but not in use; the oxygen will make the materials flammable.

Turn the oxygen concentrator off when not in use to prevent oxygen enrichment.

WARNING: If you feel discomfort or are experiencing a medical emergency while undergoing oxygen therapy, seek medical assistance immediately to avoid harm.

WARNING: Smoking during oxygen therapy is dangerous and is likely to result in facial burns or death. Do not allow smoking within the same room where the oxygen concentrator or any oxygen carrying accessories are located.

WARNING: Open flames during oxygen therapy are dangerous and is likely to result in fire or death. Do not allow open flames within 2 m of the oxygen concentrator or any oxygen carrying accessories.

symbols	contents
	describing the principal RISK(S) foreseen (e.g. "Causes burns", "Risk of explosion", etc.).
	describing what is prohibited (e.g. "Do not open", "Do not drop", etc.).
	Describing required action (e.g. "Wear protective gloves", "Scrub before entering", etc.).

1.1 Important Information



Risk of electric shock.



DO NOT disassemble. Refer servicing to qualified service personnel.

1. SAFETY NOTES

 DO NOT modify this equipment without authorization of the manufacturer.

 Read the following information before operating this product.

1.2 Before Installation

 The concentrator should always be kept in the upright position to prevent damage during transport.

 If the electrical power source becomes unstable, discontinue use and find an alternate source.

 Only use stable and safe electrical power sources.

 The oxygen concentrator cabinet should ONLY be opened by an authorized equipment provider.

1.3 Placement

- You may select a room in your house where using your oxygen concentrator would be most convenient. Your concentrator can be easily roll from room to room on its casters.

 Do not place the oxygen concentrator in surroundings where its airflow is obstructed.

 Be certain to place the oxygen concentrator so that all sides are at least 10 centimeters (4 inches) away from walls, draperies, furniture, or similar surfaces. Avoid deep pile carpets and heaters, radiators or hot air registers.

 Do not place the unit in a confined area.

 The oxygen concentrator MUST be kept away from heat, fire and excessive water sources and conditions.

 The oxygen concentrator should be located so as to avoid

1. SAFETY NOTES

pollutants or fumes.

-  Do Not place items on top of the concentrator.
-  NEVER block the air openings of the unit or place it on a soft surface, such as a bed or couch, where the concentrator may tip or fall. Keep the openings free from lint, hair and the like.

1.4 Fire Warning and Explosion

-  Keep the concentrator away from flammable and explosive areas.
-  Users MUST NOT SMOKE while using this device. Keep all matches, lighted cigarettes or other sources of ignition out of the room in which this product is located. NO SMOKING signs should be prominently displayed. Textiles and other materials that normally would not burn are easily ignited and burn with great intensity in oxygen enriched air. Failure to observe this warning can result in severe fire, property damage and cause physical injury or DEATH.
-  The use of oxygen therapy requires that special care be taken to reduce the risk of fire. Any materials that will burn in air, and some that will not, are easily ignited and burn rapidly in high concentrations of oxygen. For safety concerns, it is necessary that all sources of ignition be kept away from the product and preferably out of the room in which it is being used.
-  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 oxygen equipment.
-  DO NOT use any lubricants unless recommended by manufacturer.

1. SAFETY NOTES

1.5 Maintenance

 The oxygen concentrator was specifically designed to minimize routine preventive maintenance at intervals of once per year. Only professionals of the health care field or persons fully conversant with this process such as authorized or factory trained personnel should perform preventive maintenance or performance adjustments on the oxygen concentrator.

 DO NOT service or maintain while patient in use.

- For optimum performance, manufacturer recommends that the concentrator be on and running for a minimum of 30 minutes at a time. Shorter periods of operation may reduce maximum product life.

1.6 Radio Frequency Interference

 Most electronic equipment is influenced by Radio Frequency Interference (FRI). Always exercise CAUTION with regard to the use of portable communications equipment in the area around such equipment.

 Energy of Radio Frequency of this machine is just for device operation use, so the Radio Frequency is very low, will not affect the running of other electric equipment around regard to the use of portable communications equipment in the area around such equipment.

1. SAFETY NOTES

1.7 To Reduce the Risk of Burns, Electrocution, Fire or Injury to Persons.

 Avoid using while bathing. If continuous usage is required by the physician's prescription: The concentrator must be located in another room at least 2.5 meters (8.2 feet) from the bath.

 DO NOT come in contact with the concentrator while wet.

 DO NOT place or store product where it can drop into water or other liquid.

 DO NOT reach for product that has fallen into water. UNPLUG IMMEDIATELY and call Qualified Service Personnel for examination and repair.

 A product should NEVER be left unattended when plugged in.

 This device is to be used only in accordance with the prescription of a physician and this User's Manual. If at any time the patient or attendant concludes that the patient is receiving an insufficient amount of oxygen, contact the provider and/or physician immediately. No adjustments should be made to the flow rate unless prescribed by a physician.

 Close supervision is necessary when this product is used near children or physically-challenged individuals.

 Use this product for only intended use as described in this manual.

 DO NOT use parts, accessories or adapters other than those authorized by manufacturer. Use of certain humidifiers and administration accessories not specified for use with this oxygen concentrator may impair the performance.

1. SAFETY NOTES

 If replacement parts used for the periodic servicing by an approved technician do not comply with the manufacturer's specifications, the manufacturer is not responsible in the event of an accident.

 DO NOT connect the concentrator in parallel or series with other oxygen concentrators or oxygen therapy devices.

 In certain circumstances oxygen therapy can be hazardous. Manufacturer recommends that you seek medical advice before using this product.

 Avoid creation of any spark near medical oxygen equipment. This includes sparks from static electricity created by any type of friction.

 If the concentrator has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, call Qualified Service Personnel for examination and repair.

 Keep the cord away from HEATED or HOT surface.

 Do not move or relocate concentrator by pulling on the cord.

 NEVER drop or insert any object into any opening.

 If you have any problems setting up, maintaining or using this device, please contact manufacturer or customer service. Please report to manufacturer if any unexpected operation or events occur.

 Don't open or repair the device by yourself.

 After drop or shock that may cause changes in the performance, please contact with service personnel. Don't open or repair the device by yourself.

1. SAFETY NOTES

 Do not use the device if it is damaged in any way. The continuous use of a damaged unit may cause injury, improper results, or serious danger.

 At least 30 min required of equipment to warm from the minimum storage temperature between uses until it is ready for intended use

 At least 30 min required for me equipment to cool from the maximum storage temperature between uses until it is ready for intended use

 When not in use, store the device with the adapter in a dry room and protect it against extreme moisture, heat, lint, dust and direct sunlight. Never place any heavy objects on the storage case

 Do not servicing/maintenance while the me equipment is in use

 Use this device only with the leads, electrodes, and accessories that the manufacturer recommends.

 Do not share the use of the parts、 accessories or adapters with others.

 The parts placement of attachments is critical to the effectiveness of the therapy.

2、FEATURES

2.1 Summary

JM-10A Ni oxygen concentrator is intended for individual use as an oxygen supplement device in a home or care facility. The patient is an intended operator. It is an electronically operated device that separates oxygen from ambient air. It provides high concentration of oxygen directly to you through a nasal cannula or other methods. Clinical studies have documented that oxygen concentrator are therapeutically equivalent to other types of oxygen delivery systems.

This equipment takes 120V ~ power source as power source, air as raw material, adopts high quality and high efficiency molecular sieve, and through PSA method at room temperature, produces high purity oxygen conforming to medical standards, thus achieving sustainable and uninterrupted oxygen supply.

This user's manual will tell you about your concentrator and will serve as a reference as you use your concentrator.

2.2 Characteristics

- Oxygen concentrator make up of mainframe humidifier and Flowmeter.
- Reliable, safe, complete plastic outer shell, breaker.
- Display screen shows total elapsed working hours.
- Pressure safety valve helps ensure operating pressure.
- Power loss alarm function.
- High and low pressure alarm function.
- Low oxygen concentration alarm function.
- Heat protection to ensure the safety of the compressor and concentrator.

2、FEATURES

2.3 Specifications

1. Power supply: AC120V, 60Hz; Current:4.6A; Power:580VA.
2. Sound level: $\leq 56\text{dB (A)}$; Acoustic power level: 65dB(A) .
3. Maximum recommended flow: 10L/min.
4. Flow Range at Outlet Pressure of zero: $0.5\sim 10\text{L/min}$.
Flow Range at Outlet Pressure of 7 kPa: $0.5\sim 10\text{L/min}$.
Change in maximum recommended flow when back pressure of 7kPa is applied: $<0.5\text{ L/min}$.
5. Oxygen Concentration: When $0.5\sim 10\text{L/min}$, $93\%\pm 3\%$ (after turning on 10 minutes)
6. Output Pressure: $58\text{kPa}\pm 5\text{kPa}$.
7. Release Pressure by machine operation: $250\text{kPa}\pm 50\text{kPa}$.
8. Weight: 23kg.
9. Dimension: $430\times 380\times 720(\text{mm})$.
10. Height above sea level: The oxygen concentration will not decrease on 1828 meter height above sea level, from 1828 meter to 4000 meter; the efficiency will decrease to less than 90%.
11. Safety System:
 - ① Current overload or line surge shutdown.
 - ② High temperature compressor shutdown.
 - ③ High pressure alarm shutdown.
 - ④ Low pressure alarm shutdown.
 - ⑤ Low Oxygen Concentration alarm.

2、FEATURES

- 12. Minimum Operating Time: 30 minutes.
- 13. Electric Classification: Class II equipment , Type BF applied part(Nasal oxygen cannula).
- 14. Mode of operation: Continuous duty.
- 15. Normal Operating Ambient:
 - 1. Temperature range: 5℃～40℃ (41°F～104°F)
 - 2. Relative humidity: ≤80%
 - 3. Atmospheric pressure: 86kPa～106kPa (12.47psi～15.37psi)

NOTE: ① When the storage temperature is lower than 5℃, the equipment shall be laid in normal operation temperature environmentfor at least 4 hours.

② The life time or equipment will be affected and the efficiency will be lowered if the equipment runs under conditions exceeding normality.

- 16. Electrical category: II; IP21.
- 17. Oxygen Output Temperature: Less than Ambient +6℃.
- 18. Tube: To prevent folding of tube, nasal oxygen 2 meters,prolonged tube notlonger than 15.2 meters (no flatting).
- 19. The Storage and transport Ambient:
 - 1. Temperature Range: 0℃～+55℃(32°F～+131°F)
 - 2. Relative Humidity Range: 10%～90%
 - 3. Atmospheric pressure: 70kPa～106kPa (10.2psi～15.3)

NOTE: The oxygen concentrator should be stored in area withouterode gas; be avoided shaking and inversion in transportation.

2、FEATURES

- 20. This device is expected to work for a period of 6 years. For a longer use, please consult your Equipment Provider and physician.
- 21. Software version: A1.0
- 22. Contraindication: Do not use in patients with oxygen allergy or oxygen poisoning.

3、 HANDLING

3.1 Unpacking

NOTE: Unless the oxygen concentrator is to be used immediately, retain containers and packing materials for storage until concentrator use is required.

- Check for any obvious damage to the carton or its contents. If damage is evident, please notify the carrier or local dealer.
- Remove all loose packing from the carton.
- Carefully remove all the components from the carton.
- PACKING LIST

Oxygen Concentrator: 1 unit

User Manual: 1 piece

Humidifier bottle: 1 set

3.2 Inspection

- Examine exterior of the oxygen concentrator for nicks, dents, scratches or other damages.
- Inspect all components.

3.3 Storage

- Store the repackaged oxygen concentrator in a dry area.
- ❌ DO NOT place anything on top of the repackaged concentrator.

4、INSTALLATION AND OPERATION

4.1 FEATURE VIEW



Figure 1

1--Power switch

2--Outlet connector

3---Flow meter

Setting oxygen flow rate by adjust the knob.

4--Status indicator light (Alarm/Normal Low)

5—Humidifier bottle station

6--Cabinet air filter

4、INSTALLATION AND OPERATION

7--Breaker

To protect the machine and user, breaker will cut off power automatically when current $\geq 10A$. After cooling, machine can be turn on if push up the breaker.

8--Elapsed time meter

9--Intake filter

10--Atomization port



Figure 2: Humidifier Features

⊘ DO NOT add water over the maximum water level. Pure water shall be added in humidifier to between maximum and minimum water level in use.

- Power switch——“I” indicate the power is on, “O” indicate the power is off. When the switch locates on “ON”, if the power cutting occurs, the oxygen concentrator will not run, there will be alarm noise.

- The oxygen will be obtained by passing humidifier. Pure water shall be added in humidifier to between maximum and minimum water

4、INSTALLATION AND OPERATION

level in use. When the tube of oxygen exit of humidifier wrested or jammed, the pressure in humidifier will ascend to $25\pm 5\text{kPa}$, the safety valve of humidifier will open to release the pressure.

- Expected service life of humidifier bottle: 3 years.

Inspection of performance of humidifier: 1. use the PVC soft tube to connect the humidifier adapter and the oxygen outlet of the shell; 2. turn on the oxygen concentrator, adjust the flux to about 5L/min, jam the exit of humidifier, after about 5 seconds, the safety valve will open, the gas will release, the valve will close, which indicate the gas proofing of humidifier and safety valve in conforming.

4.2 PREPARE WORK

- Unscrew the cover of the humidifier, fill the purify water (or distil water) into the humidifier bottle between the maximum and minimum water level lines, and then screw the humidifier bottle. (If needed, add other medicine into the water, please according to the doctor's suggestion.)
- Screw the humidifier bottle absorbing connector into the cover of the humidifier, then insert the humidifier to the elastic belt on the left side of the unit, and connect the other end of the cannula to the oxygen outlet.
- Plug in power supply: Ensure that the power switch is off; plug the concentrator's AC connector into power outlet.

4.3 Turning the Concentrator ON

- Press power switch to the "I" position. At that time green, yellow light all will be on which means the function of machine is normal. After about 1 second, only green light on. After 4 seconds, the

4. INSTALLATION AND OPERATION

display will show accumulation work time.

- To properly read the flowmeter, locate the prescribed flow rate line on the flowmeter. Next, turn the flow knob until the ball rises to the line. Now, center the ball on the L/min. line prescribed (Figure 3).

NOTE: Oxygenation times and the flow rate ranges are established and prescribed by your physician.

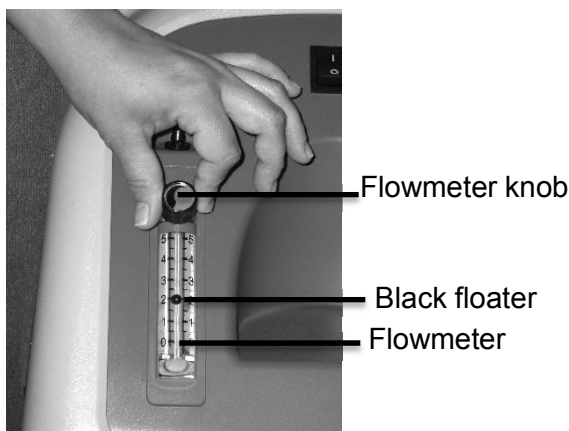


Figure 3

CAUTION: If the flow rate on the flowmeter ever falls below 0.5L/min, check tubing or accessories for blocked or kinked tubing or a defective humidifier bottle.

4.4 Alarm Signal

- Initial startup of the concentrator

NOTE: Concentrator may be used during the initial start warm-up time (approximately 5 minutes) while waiting for the O₂ concentration to reach maximum.

4、 INSTALLATION AND OPERATION

When the unit is turned on, the green light will come on (O_2 concentration greater than $85\% \pm 3\%$). After 5 minutes, the oxygen sensor will be operating normally and will control the indicator lights depending on oxygen concentration values. The explanations of the indicator light functions are as follows.

4.5 Alarm Signal cue

1. O_2 concentration is greater than $82\% \pm 2\%$. Green light illuminates. Normal Operation.
2. O_2 concentration is greater than $73\% \pm 2\%$ and less than $82\% \pm 2\%$. Yellow light illuminate.
3. O_2 concentration is less than $73\% \pm 2\%$. Yellow light illuminate, intermittent audible alarm sounds.
4. Compressor failure alarm--Yellow light illuminate, intermittent audible alarm sounds.
5. Low/High pressure, cycle failure alarm--Yellow light illuminate, intermittent audible alarm sounds.
6. Low flow alarm--When the oxygen flow rate is lower than 0.5L/min, Yellow light illuminate, intermittent audible alarm sounds.

4.6 Turning the Concentrator Off

Press power switch to the "O" position and unplug the concentrator's AC connector from the power outlet.

Use the plug device to isolate the concentrator from the supply mains.

4、INSTALLATION AND OPERATION

4.7 Symbols and Descriptions

Symbol	Meaning	Symbol	Meaning
~	Alternating		Refer to instruction
	Class II Equipment		Type BF applied part
O	OFF (power)		ON (power)
	Circuit Breaker		No open flame; Fire, open ignition source and smoking prohibited
	Height		Avoid sun exposure
	Serial number		Date of manufacture
	Up		Manufacturer
	Keep dry		Temperature limitation
	Fragile, handle with care		Atmospheric pressure limitation
	Humidity limitation		Usage reference
	Batch code		No smoking
IP21	IP classification		

5. MAINTENANCE



Warning: Power should be disconnected before beginning preventive maintenance on the concentrator.



DO NOT service or maintain while patient in use.

The concentrator need no extra approved maintenance as it pressure and oxygen purity self-check of the unit, so it but the device shall be maintained once a year. In location with much dust the maintenance can be performed if necessary. The minimum maintenance is the insurance of oxygen concentrator.

5.1 Cleaning the Cabinet

Clean the cabinet at least once a month.

- Turn off the power switch and unplug the concentrator's AC connector from the power outlet.
- Only the outside of the concentrator is to be cleaned. Use a soft dry cloth, a damp sponge or wipes with alcohol based solution. Do not use acetone, solvents or any other inflammable products. Do not spill liquid inside the cabinet.

5.2 Cleaning or Replacing the Filter (3 Types)

Clean and replace the filters as often as specified in the following paragraphs in order to protect the compressor and extend the concentrator's life.



DO NOT operate the concentrator without the filters installed , or filters are wet. These actions could permanently damage the concentrator.

5、 MAINTENANCE

- Disassembly

(1) Cabinte air filter

The air filters located on either side of the cabinet should be cleaned at per half a month to keep your concentrator running properly. (Figure 4)



Figure 4

(2) Intake filter

The Intake filter, need to clean per half a month.

- The intake filter access door is located on the left side of the concentrator, open the access door by pressing down then pulling out of the access hook. Remove the intake filter.
- Washing or change frequency of filter shall Based on actual use time and environment. If the filtration core becomes black, no matter how long.

5、 MAINTENANCE

5.3 Cleaning the Optional Humidifier Bottle

- Change the water in the humidifier bottle every day.
- Clean : Wash the humidifier bottle weekly. First use household detergent to wash, then rinse under running water and dry.
- Disinfect: Disinfect the humidifier parts by immersing them in a disinfection solution, or 1 part vinegar diluted with 10 parts water . then rinse under running water and dry.
- Disassembly humidifier bottle.
 - (1) Unscrew the humidifier bottle.
 - (2) Take out tube and its terminal filtration.

5.4 Oxygen nasal cannula (Available accessories)

Follow the nasal cannula manufacturer's instructions.

5.5 Tube maintenance

The connection tube of humidifier bottle that can become contaminated with body fluids or expired gases during both NORMAL CONDITION and SINGLE FAULT CONDITION. It is recommended to maintain/replace internal tube once a year.

5.6 Note: for each new patient

Follow the instructions from the humidifier manufacturer. The cabinet air filter should be washed or replaced.

The entire oxygen administration circuit (oxygen therapy nasal cannula, etc.) must be changed.

6、TROUBLESHOOTING

Troubleshooting Guide

Symptom	Probable cause	Solution	Remark
Elapsed time meter displays, the green and the yellow light are always bright, but the oxygen concentrator stops running immediately and has continuous buzzer.	1) Four corns plug-in of the valve has not been inserted completely	1) Check and Connect the circuit board to the valve's four corns plug-in.	Repairs by qualified personnel
	2) Exhaust sound buffer box jammed.	2) Replace it.	
	3) Can't open the valve.	3) Replace it.	
	4) Failure of the main electronic control circuit board.	4) Replace it.	
The nasal cannula has more mirage or blobs.	1) It's not ventilate completely around machine, so operating temperature is too high.	1) Make sure the machine is at least 10 cm away from the walls, other jam or heater.	Repairs by qualified personnel
	2) Fan inside the machine can't run or running rate turns slow make the operating temperature too high.	2) a. Take out the winker that locks the fan. 2) b. Replace it.	
	3) Temperature of the water added in humidifier bottle is too high.	3) Add cold water in bottle.	
	4) The water added in humidifier bottle is too much.	4) Water added should between the maximum and minimum of the liquid level.	

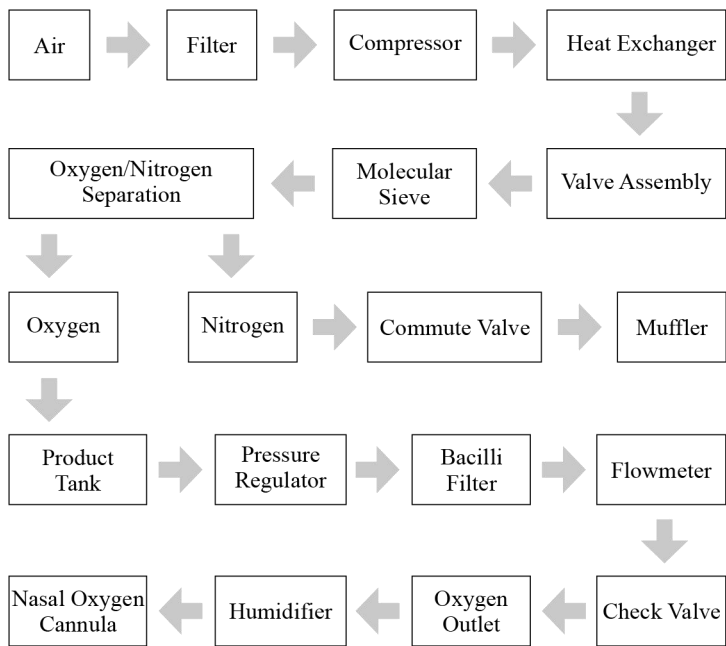
6. TROUBLESHOOTING

Symptom	Probable Cause	Solution
Concentrator works, but yellow light illuminates.	1) Concentrator's oxygen concentration is safe, but decreasing.	1) Clean or Replace filters.
	2) Unit overheating due to blocked air intake.	2) Move concentrator at least 10 cm (4 inches) away from walls, draperies, furniture, or similar surfaces.
	3) If condition persists, OK to continue use, but contact Equipment Provider immediately.	
Concentrator doesn't work, red light illuminates, continuous audible alarm sounds.	1) Low pressure alarm.	1) Clean or Replace filters.
	2) If condition persists, discontinue use, contact Equipment Provider immediately.	
Concentrator doesn't work, red light illuminates, continuous audible alarm	High pressure alarm.	Contact Equipment Provider immediately.
Concentrator doesn't work, continuous audible alarm sounds.	Compressor open circuit alarm.	Contact Equipment Provider immediately.
Concentrator doesn't work, continuous audible alarm sounds.	Compressor short circuit alarm.	Contact Equipment Provider immediately.

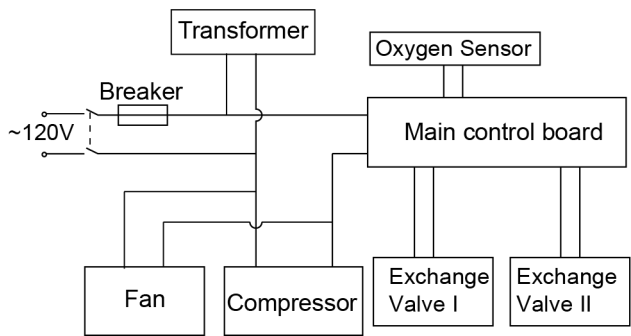
NOTE: If you experience a problem with your concentrator and are unable to service it yourself, contact the equipment provider from whom you purchased the concentrator.

7、 OTHER ATTENTIVE ITEMS

7.1 GAS PASS OPERATION SKETCH MAP



7.2 Treatment of waste and residual



7、 OTHER ATTENTIVE ITEMS

7.3 Post-marketing service

(a) In normal use and normal maintenance circumstances, if the Oxygen Concentrator can not be normally used in half a year since delivery date (or in a year of commerce storage)(compressor 3 years), the company is responsible for repair for free or change for free; if it can not be normally used in half a year, user can contact the post-sales service department, office or agents for repair for free based on invoice and repair guarantee card; If it can not be normally used after one year, the company can provide accessories and repair with reasonable charge.

(b) The following cases is not in scope of repair guarantee:

- ① damage of distortion of the integral equipment caused by collision;
- ② water or rain entering integral equipment;
- ③ Equipment out of gear caused by water and drug;
- ④ Articles easily to damage or easily to consume, grade I filtration net, filtration carpet; damping filter, damping tube.

7.4 Treatment of waste and residual

The treatment of waste and residual shall be conforming to law and regulations.

The change of electric circuit and appearance caused by improvement of equipment will not be informed additionally.

7、 OTHER ATTENTIVE ITEMS

7.5 Accessories and spare parts

The accessories used must be oxygen compatible and be biocompatible.

Note: The connectors, tubes, nasal cannula or masks must be designed for oxygen therapy usage. Included in the set of accessories supplied with the device, comply with these requirements. Contact your equipment supplier to obtain these accessories.

List of accessories:

Oxygen Concentrator:	1 unit
User Manual:	1 piece
Humidifier bottle	
(JM-10A Ni; including Connection tube of humidifier bottle):	1 set

7、 OTHER ATTENTIVE ITEMS

7.6 Accessories and spare parts

Guidance and manufacturer' s declaration - electromagnetic emissions- for all EQUIPMENT and SYSTEMS

Guidance and declaration of manufacturer -Electromagnetic emission		
The JM-10A Ni Oxygen Concentrator is intended for use in an environment specified below. The customer of the user of JM-10A Ni Oxygen Concentrator should assure that the unit is used in such an environment.		
Emission test	Compliance	Electromagnetic environment- regulations
RF emissions CISPR 11	Group 1	The JM-10A Ni Oxygen Concentrator uses RF energy solely for its internal function. Therefore, its RF emission are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The JM-10A Ni Oxygen Concentrator is suitable for use in all establishments, including domestic and those directly connected to the public low-voltage power supply network that supplies building used for domestic purposes.
Emission of harmonics IEC 61000-3-2	Class A	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Complies	

7、 OTHER ATTENTIVE ITEMS

Guidance and manufacturer's declaration – electromagnetic immunity – for all EQUIPMENT and SYSTEMS

Guidance and manufacturer's declaration – electromagnetic immunity			
The JM-10A Ni QXYGEN CONCENTRATOR is intended for use in the electromagnetic environment specified below. The customer or the user of JM-10A Ni QXYGEN CONCENTRATOR should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines	±2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 sec	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the JM-10A Ni QXYGEN CONCENTRATOR requires continued operation during power mains interruptions, it is recommended that the JM-10A Ni QXYGEN CONCENTRATOR be powered from an uninterruptible power supply.
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Mains power quality should be that of a typical commercial or hospital environment.
NOTE U_T is the a.c. mains voltage prior to application of the test level.			

7、 OTHER ATTENTIVE ITEMS

Guidance and manufacturer's declaration – electromagnetic immunity – for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration – electromagnetic immunity			
The JM-10A Ni QXYGEN CONCENTRATOR is intended for use in the electromagnetic environment specified below. The customer or the user of JM-10A Ni QXYGEN CONCENTRATOR should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 V _{rms} 150 kHz to 80 MHz	3 V _{rms}	Portable and mobile RF communications equipment should be used no closer to any part of the JM-10A Ni QXYGEN CONCENTRATOR, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \left[\frac{3.5}{V_1} \right] \sqrt{P}$ $d = \left[\frac{3.5}{E_1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = \left[\frac{7}{E_1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$ Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the JM-10A Ni QXYGEN CONCENTRATOR is used exceeds the applicable RF compliance level above, the JM-10A Ni QXYGEN CONCENTRATOR should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the JM-10A Ni QXYGEN CONCENTRATOR.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

7、 OTHER ATTENTIVE ITEMS

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM – for EQUIPMENT or SYSTEM that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and the JM-10A Ni QXYGEN CONCENTRATOR			
The JM-10A Ni QXYGEN CONCENTRATOR is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the JM-10A Ni QXYGEN CONCENTRATOR can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the JM-10A Ni QXYGEN CONCENTRATOR as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	$d = \left[\frac{3.5}{V_1} \right] \sqrt{P}$	$d = \left[\frac{3.5}{E_1} \right] \sqrt{P}$	$d = \left[\frac{7}{E_1} \right] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.69	3.69	7.38
100	11.67	11.67	23.33
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			



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