

MICITECH

5-LITER OXYGEN CONCENTRATOR

User Manual



MODEL: CP502



Read this manual before operating the concentrator.
Save these instructions for future reference.

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INTRODUCTION

INTENDED USE

Thank you for purchasing the MICiTECH CP502 5-Liter Oxygen Concentrator. The intended function of this Oxygen Concentrator is to provide supplemental oxygen to patients with respiratory disorders by separating nitrogen from room air, by way of a molecular sieve. It is **NOT** intended to sustain or support life.

INDICATIONS FOR USE




The Oxygen Concentrator is intended to provide supplemental oxygen in a home, institutional, or travel environment.

CONTRAINDICATIONS

Oxygen poisoning, oxygen allergy patients should not use this device.

Consult your physician if you have concerns about an existing medical condition.



SAFETY SYMBOLS AND PRECAUTIONS

 DANGER	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or equipment damage.
 CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or damage to the device or other property.





















IMPORTANT SAFETY PRECAUTIONS AND WARNINGS



It is important that you read all warnings in user's manual before use. Use the product only for its intended use as described in the manual. Improper use can result in serious or fatal illness / injury, improper treatment or property damage. **DO NOT** attempt to operate this product without reading all instructions carefully. Save this manual for future reference.

 WARNING (USA only)	U.S. Federal Law restricts these devices to sale by, or on the order of, a physician or licensed practitioner. This device should only be used under the continued supervision of a physician or licensed practitioner.
 DANGER	THIS MEDICAL DEVICE IS NOT INTENDED TO BE USED AS A LIFE SUSTAINING OR LIFE SUPPORTING DEVICE.

LABELING SYMBOLS AND DESCRIPTIONS

Symbol	Description	Symbol	Description
	Alternating Current		Fuse
	Class II Equipment		Type BF applied part
	OFF (power)		ON (power)
	No Smoking		No Open Flame; Fire, Open Ignition Source and Smoking Prohibited
	Stacking Limitation		Consult Instructions for Use
	Serial Number		This Side Up
	Keep Dry		Fragile, handle with care
	Storage Temperature Range		Read the instruction manual/booklet prior to use.
	U.S. Federal Law restricts this device to sale by, or on the order of, a physician or licensed practitioner.		
	Non-sterile		
	DATE OF MANUFACTURE. This symbol shall be accompanied by a date to indicate the date of manufacture.		
	Symbol for "MANUFACTURER". This symbol shall be accompanied by the name and the address of the manufacturer.		

SAFETY PRECAUTIONS AND WARNINGS



DANGER

- Supplemental sources of oxygen should be kept on-hand in the event this device becomes inoperable due to power outages, etc.
- Smoking during oxygen therapy is dangerous and is likely to result in facial burns or death. **DO NOT** allow smoking within the same room or vicinity of the oxygen concentrator, or any oxygen carrying accessories.
- Open flames during oxygen therapy are dangerous and likely to result in fire or death. **DO NOT** allow open flames within 6 feet of the oxygen concentrator or any oxygen carrying accessories.
- Users **MUST NOT** smoke while using this device. Keep ALL matches, lighted cigarettes or other sources of ignition out of the room or vicinity of the device. NO SMOKING signs should be prominently displayed. Textiles and other materials may easily ignite and burn with greater intensity in oxygen-enriched air. Failure to observe this warning can result in severe fire, property damage and cause physical injury or death.
- **DO NOT** smoke in the same room as the oxygen concentrator until the device has been turned off and you have waited **AT LEAST 10** minutes for the air to clear.
- 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 at **ALL** times.
- Avoid creation of any spark near the oxygen concentrator, including static electricity.
- Avoid use while bathing. If continuous usage is required under physician order, the concentrator **MUST** be in another room at least 10 feet from the bath or shower.
- **DO NOT** come into contact with the concentrator while wet.
- **DO NOT** place or store the concentrator where it can drop into water or any other liquid.
- **DO NOT** reach for product that has fallen into water. UNPLUG IMMEDIATELY and contact your home care provider for examination and repair.
- Seek immediate medical assistance in the event of discomfort or a medical emergency while undergoing oxygen therapy.



WARNING

- **BEFORE USE**, check the ratings label on the back of the device to ensure that the voltage and current indicated on the unit correspond with the voltage and currently available. **DO NOT** overload wall outlets or use with power strips or extension cords.
- **DO NOT** use this product with a DC to AC converter, or with any AC voltage and/or frequency other than specified.



WARNING (cont.)

- **NEVER** operate this device if it has a damaged cord or plug, is not working properly or any abnormalities occur, or if it has been exposed to any liquids inside or outside of the housing. Contact your home care provider immediately.
- **NEVER** allow the power supply cord to be pulled, jerked, strained, twisted, or severely bent, especially at the plug connections. Damage will occur at the high flex point of entry into the appliance, causing it to rupture and short.
- **DO NOT** open or disassemble the compressor. Contact your home care provider for any service or repair requests.
- **DO NOT** use the device if it is damaged in any way. Continued use of a damaged device may cause injury to the patient or further damage to the device.
- Keep **ALL** electrical cords away from heated surfaces. **DO NOT** operate or store under direct sunlight, high temperature or humidity. See technical specifications for maximum storage and operating temperatures and relative humidity.

DISCONTINUE OPERATION IMMEDIATELY IF ANY OF THE MOTOR HOUSING PARTS BECOME DETACHED OR BROKEN, EXPOSING THE MOTOR OR ANY OTHER INTERNAL ELECTRICAL COMPONENTS.

- 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. **DO NOT** smoke while the oxygen concentrator is in use.
- Oxygen can make materials flammable. **DO NOT** leave the nasal cannula or mask on bed coverings, clothing or chair cushions. Turn the oxygen concentrator OFF when not in use.
- Keep the oxygen concentrator away from flammable and explosive areas.
- Patients who require continuous oxygen therapy should plan for alternate sources of power in the event of a power failure. This device is **NOT** intended to be used as a life sustaining or life supporting device.
- To avoid the risk of fire and burns, **NEVER** use petroleum or oil-based lotions or salves before or during oxygen therapy.
- **DO NOT** lubricate fittings, connections, tubing or other accessories of the device to avoid the risk of fire and burns.
- **NEVER** spray liquids onto the oxygen concentrator housing, especially near the display panel or air vents. Fluid could cause damage to the electrical components and lead to malfunction. If fluid enters the unit, discontinue use immediately and return the product to your home care provider.
- **ALWAYS** unplug immediately after each use and keep unplugged when not in use.
- **DO NOT** run this product unattended.



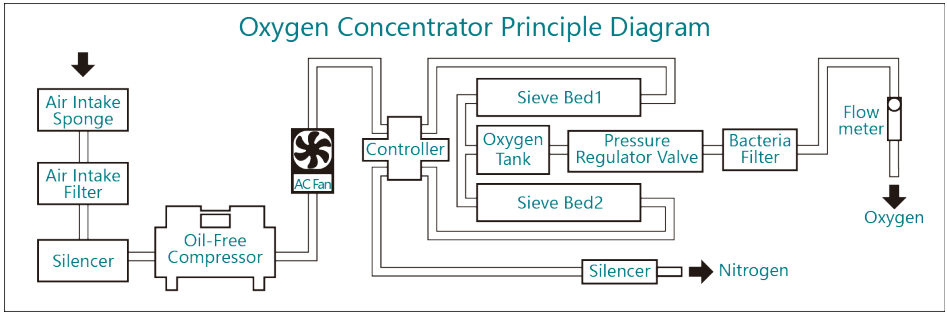
WARNING (cont.)

- This device is to be used **ONLY** in accordance with the prescription of a physician and this user manual. If at any time the patient or attendant determines insufficient oxygen is being delivered, contact the provider and/or physician immediately. **DO NOT** make adjustments to the flow rate **UNLESS** prescribed by a physician.
- Close supervision is necessary when this device is used by or near children and physically or mentally impaired persons.
- If the electrical power source becomes unstable, discontinue use immediately and find an alternate power source.
- **ONLY** use stable and safe electrical power sources.
- **NEVER** block air openings of the oxygen concentrator or place it where the air openings may be obstructed. Keep the openings free from lint, hair, dust, etc.
- **ALWAYS** place the oxygen concentrator at least 12 inches away from walls, draperies, furniture, or similar surfaces. **ALWAYS** avoid deep pile carpets and heaters, radiators or hot air registers.
- **NEVER** drop or insert any object into any opening.
- **DO NOT** place the device in a confined area.
- The oxygen concentrator **MUST** be kept away from heat, fire, and excessive water sources and conditions at **ALL** times.
- **DO NOT** place items on top of the oxygen concentrator.
- **NEVER** use the oxygen concentrator in the presence of pollutants or fumes. The air intake and exhaust should be well-ventilated.
- **DO NOT** connect the oxygen concentrator in parallel or series with other oxygen concentrators or oxygen therapy devices.
- **ALWAYS** keep oxygen concentrator at least 10 feet away from wireless communication equipment such as wi-fi network devices, mobile phones, cordless phones and base stations, walkie-talkies, etc.
- **DO NOT** bring the oxygen concentrator or accessories into a Magnetic Resonance (MR) environment as it may cause unacceptable risk to the patient or damage to the oxygen concentrator or MR medical devices.
- **DO NOT** use this device or accessories in an environment with electromagnetic equipment such as CT scanners, Diathermy, RFID and electromagnetic security systems (metal detectors) as it may cause unacceptable stable risk to the patient or damage to the oxygen concentrator. Some electromagnetic sources may not be apparent; if you notice any unexplained changes in the performance of this device, or it is making unusual sounds, disconnect the power cord and discontinue use immediately. Contact your home care provider.
- This device is suitable for use in home and healthcare environments **EXCEPT** for near active HF surgical equipment and the RF shielded room of an ME system for magnetic resonance imaging, where the intensity of electromagnetic disturbances is high.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 1 foot of the oxygen concentrator, otherwise degradation of the equipment could result.



CAUTION

- Before use, check tubing and accessories for proper assembly. All parts should be firmly in place. Use of improperly assembled tubing and accessories could diminish or prevent adequate delivery of oxygen and the effectiveness of therapy.
- Use **ONLY** accessories (such as humidifier bottles) recommended by the manufacturer to ensure safe and effective operation of the device.
- Be aware that the power cord and/or tubing could present a tripping or strangulation hazard. Always place the power cord and/or tubing in a manner that prevents crushing by casters or others.
- When the oxygen concentrator is stored outside the temperature range specified under normal operating conditions, please place the device in normal operating condition temperature (room temperature) for at least 4 hours before operating,
- Tubing and accessories are for single patient use only. **DO NOT** share tubing and accessories with other patients.
- **DO NOT** modify this device without authorization of the manufacturer.
- The oxygen concentrator should **ALWAYS** be kept in the upright position to prevent damage.
- The oxygen concentrator cabinet should **ONLY** be opened by an authorized repair center.
- **DO NOT** service or maintain this device while in use.



ENVIRONMENT PROTECTION

① Disposal of waste and residue.

Please do not dispose of the oxygen tube, the humidification bottle and the accessories parts when you are finished using them. It can be sent to a nearby medical waste disposal facility for disposal.

② Please contact your local supplier or manufacturer when this machine is scrapped.

③ The disposal of waste and residues should be in line with the corresponding national legal provisions.

Description	Harmful substances					
	Plumbum (Pb)	Hydrargyrum (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr(VI))	Polybrominated biphenyls(PBB)	Polybrominated Diphenyl ethers(PBDE)
Plastic housing	○	○	○	○	○	○
Internal pipes	○	○	○	○	○	○
PCB (including display)	✘	○	○	○	○	○
Power cord	○	○	○	○	○	○
Zeolite	○	○	○	○	○	○
Air intake filter	○	○	○	○	○	○
Bacterial filter	○	○	○	○	○	○
Package raw	○	○	○	○	○	○

○: It means that the content of the hazardous substance in all homogeneous materials of the component is below the limit requirement specified in IEC 60601-1-2:2014.

✘: Indicates that the content of the hazardous substance in at least one homogeneous material of the part exceeds the limit requirement specified in IEC 60601-1-2:2014.



The symbol indicates that this product contains certain harmful substances, and it can be used with confidence within the 10-year environmental protection use period. After the environmental protection use period is exceeded, it should enter the recycling system.

TECHNICAL SPECIFICATONS

Product Name	OXYGEN CONCENTRATOR
Model	CP502
Product Dimensions	16.04"L x 11.81"W x 21.26"H
Product Weight	32 lbs.
Electrical Requirements	AC110V / 60 Hz
Power Consumption	390W
Rated Current Input	3.2A
Electrical Classification	Class II, Type BF, IP21
Oxygen Concentration	93% ($\pm 3\%$)
Flow Rates	0.5 – 5 LPM, increments of 0.5 LPM
Outlet Pressure	5.8 – 8.7 PSI
Sound Level	≤ 50 dBA
Altitude (maximum)	6,500 Feet
Mode of Operation	Continuous
Expected Service Life	5 Years
Warranty Period	3 Years
Operating Environment	Temperature: 41 - 104 F Humidity: $\leq 80\%$ Atmospheric Pressure: 12.47 - 15.37 PSI
Shipping / Storage	Temperature: -4 - 131 F Humidity: 93% Atmospheric Pressure: 7.25 - 15.37 PSI
Standards	AAMI ANSI ES60601-1 IEC 60601-1-2 IEC60601-1-8 IEC 60601-1-11 ISO 80601-2-69

Oxygen Concentration vs oxygen flow: tested at standard temperature and pressure dry location. (STPD: 14.69 PSI, 68 F)

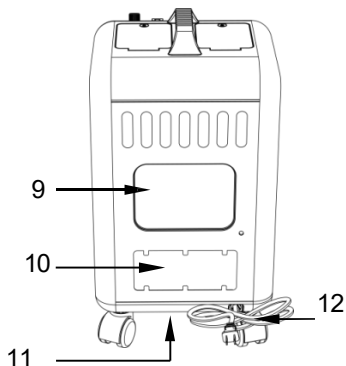
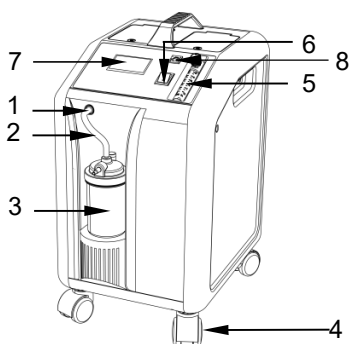
Flow (L/min)	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Oxygen concentration (%)	93% $\pm 3\%$									

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to a radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

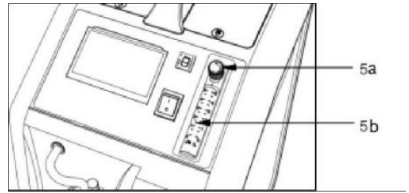
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

COMPONENT NAME

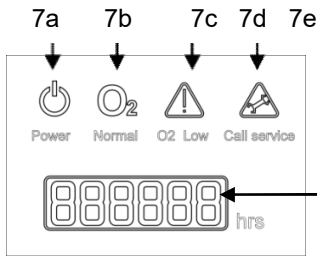


1. Oxygen Outlet
2. Connecting silicone pipe
3. Humidifier bottle
4. Locking Castors
5. Flow meter

- 5a Flow Indicator (Liters Per Minute)
- 5b Flow Knob for adjusting the Liter Flow



- 6. Power Switch: ON / OFF
- 7. LCD Display



LCD Display

- 7a Green Power indicator
- 7b Green Normal O2 indicator
- 7c Yellow Low Purity indicator
- 7d Yellow – Contact Provider indicator
- 7e Hour Meter & Alarm Indicator

- 8. Circuit Breaker/Reset Button: Provides electrical overload protection.
- 9. Product Nameplate / Serial Number
- 10. Cabinet (Gross Particle) Filter
- 11. Exhaust (Bottom of the device – cannot be blocked for proper air flow and cooling purposes)
- 12. Power cable

O₂ SENSOR AND ALARMS

	LCD Display	O ₂ Purity	Alarm	Details
	Green		No	Power On, Normal Operation
	Green	82% or higher	No	Normal Operation No action necessary
	Yellow	Less than 82%	Yes	Continue use and call provider immediately, Ensure backup oxygen source is nearby.
	Lo-P		Yes	Low Pressure, power off device immediately and switch to backup oxygen source, Call provider.
	Hi-P		Yes	High Pressure, power off device immediately and switch to backup oxygen source, Call provider.
	Lo-PO ₂		Yes	Compressor failure, power off device immediately and switch to backup oxygen source, Call provider.
	Hi-T		Yes	Overheating, power off device immediately and switch to backup oxygen source, Call provider.
	E08		Yes	Low Flow Alarm, power off device immediately and switch to backup oxygen source, Call provider.
	N/A		Yes	Low Flow Alarm, check power input, in event of power outage, switch to backup oxygen source.

GETTING STARTED

UNPACKING

- Check for any obvious damage to the carton or its contents. If damage is evident, **DO NOT** use the device and notify the distributor immediately.
- Remove all loose packing from the carton.
- Carefully remove the oxygen concentrator and all components from the carton.

NOTE: DO NOT dispose of the carton or packing materials. The oxygen concentrator will be required to ship in its original packaging for warranty repair or return.

NOTE: Store the oxygen concentrator in its original packaging until use is required.

INSPECTION

- Examine exterior of the oxygen concentrator for any visible damage, including nicks, dents, cracks, or scratches.
- Inspect all components, including accessories, display panel, power cord, caster wheels, etc.

STORAGE

- Whenever device is not in use store in a cool, dry place where the temperature is between -4 F - 131 F with relative humidity of 93% or less.

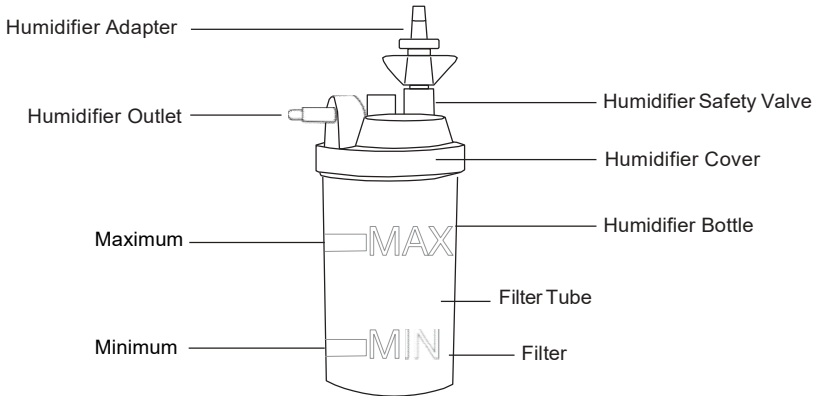
OPERATING THE CONCENTRATOR

SELECT A LOCATION

Select a room in your home where placement of the oxygen concentrator is most convenient. Take into consideration the Safety Precautions & Warnings detailed on pages 5-8 of this manual. The oxygen concentrator can be rolled from room to room as needed.

SETTING UP THE CONCENTRATOR

Cut the two large Cable Ties at the bottom and remove them prior to powering up the device. Plug the oxygen concentrator power cord to an electrical outlet (see electrical requirements in Technical Specifications)



CONNECT HUMIDIFIER BOTTLE (IF PRESCRIBED)

- Remove cover from humidifier bottle. Clean according to humidifier manufacturer instructions.
- Fill humidifier with distilled water. **DO NOT** fill past the maximum water level line. Maintain the water level above the minimum level at all times.



WARNING: DO NOT fill humidifier with boiling water

- Tighten the humidifier bottle cover and secure in place by pulling the elastic band at the front of the device and sliding the humidifier bottle down toward the humidifier holder.
- Connect the humidifier to the air outlet using humidifier tubing.
- Connect the nasal cannula or oxygen mask tubing to the air outlet of the humidifier bottle.
- Press the power switch of the oxygen concentrator to the “on” position.
- After assembly, ensure oxygen flow through cannula or mask.

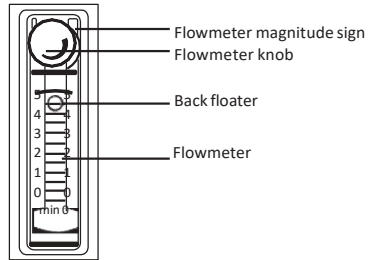
NOTE: Allow 30 minutes for the device to “warm up” to reach optimum oxygen concentration. Concentrator may be used during the initial warm up time.

FLOWRATE

- Turn the flowmeter knob to the LPM setting prescribed by your physician. Turn the knob counter-clockwise to increase the flow and clockwise to decrease the flow.

NOTE: DO NOT set the flow above the red line on the flowmeter. An oxygen flow greater than 5 L/min will decrease the oxygen concentration.

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



CANNULA AND TUBING


- Connect the Oxygen Tubing to the outlet of the Concentrator or Humidifier Bottle if prescribed
- Place the Cannula reservoir above the patient's upper lip while inserting the Nares into their nostrils
- Route the Cannulas tubes around the patient's ears and tighten the bolo loosely beneath their chin

TURNING OFF THE CONCENTRATOR

- Press power switch to the "off" position and unplug the concentrator from the wall outlet.

CLEANING AND MAINTENANCE

With proper care and maintenance, the MICiTECH CP502 Oxygen Concentrator has an expected service life of five years of operation when used in accordance with the safety instructions, maintenance intervals and correct use stated in this manual. The effective service life can vary according to frequency and duration of use. Refer to the Preventive Maintenance Checklist in this manual for a schedule of recommended maintenance.

 **WARNING:** Regular scheduled maintenance with original equipment manufacturer filters is recommended for optimal performance and should **ONLY** be performed by qualified Dealer Technicians. **DO NOT** remove cabinet or attempt to make any repairs. Repairs should only be performed by Manufacturer Certified Repair Centers using replacement parts recommended by the manufacturer/distributor **ONLY** to ensure proper function and to avoid the risk of fire and burns.

CLEANING THE CABINET

Check the exterior housing of the oxygen concentrator monthly for visible dirt or dust.

- Turn off the power switch and unplug the device.
- Using a damp cloth or sponge with a small amount of mild dish soap, gently clean the exterior case.
- Allow the surface to air dry or use a clean, dry towel to wipe up dampness before operating the concentrator.



WARNING

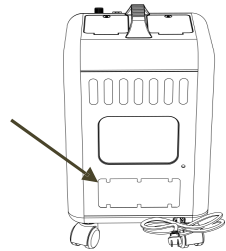
- DO NOT** use acetone, solvents or any other flammable products.
- DO NOT** spill liquid inside the cabinet
- DO NOT** use lubricants, oils or grease
- DO NOT** service or maintain while in use
- DO NOT** spray or apply any cleaning product directly to the cabinet
- DO NOT** hose down the product

CLEANING THE CABINET FILTER

- Turn off the power switch and unplug the device.

NOTE: It is recommended that the intake filter be cleaned every 100 hours of use or weekly at a minimum. Conditions in the home or facility may require more frequent inspection and cleaning of the filter, including high dust, air pollutants, pet fur and dander, etc.

- Carefully pull the cabinet filter from the rear panel.
- The device comes with an extra cabinet filter which can be used while the other filter is being cleaned and dried.
- Wash the dirty filter in a solution of warm water and mild dish soap.
- Rinse thoroughly with warm tap water and gently squeeze excess water out. Allow to air dry or blow dry completely before next use.

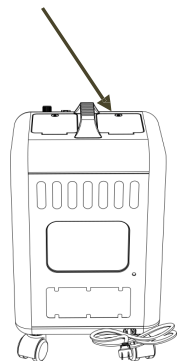


WARNING: **DO NOT** operate the concentrator without the filters installed, or if filters are wet. Permanent damage to the concentrator could occur. The cabinet filter should be cleaned or switched to a clean filter weekly and replaced every three years or between patients. Where the environmental conditions warrant, more frequent cleaning or filter changes may be required.

REPLACING THE COMPRESSOR INTAKE FILTER - DEALER TECHNICIANS AND CERTIFIED REPAIR FACILITIES ONLY

WARNING: The compressor intake filter **CANNOT** be cleaned and should only be replaced.

NOTE: Intake filter replacement is recommended every 3 years or between patients. Filter cleaning/changes per the preventative maintenance schedule (see page 16) are minimum requirements. More frequent service, cleaning and filter changes may be required when the unit is used continuously and where environmental conditions warrant.

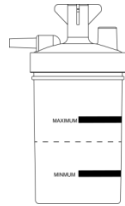


Intake and bacteria filter replacement should **ONLY** be completed by a qualified Dealer Technician. Failure to regularly inspect and change as detailed above may cause permanent damage to the device and may void the warranty.

CLEANING THE HUMIDIFIER BOTTLE

NOTE: If using a humidifier, change the water daily.
Clean the humidifier bottle and cover at least weekly.

- Clean humidifier bottle according to humidifier manufacturer instructions.



CAUTION: To limit risk of bacterial growth, clean the humidifier and air dry thoroughly when concentrator is not in use.

CLEANING ACCESSORIES (Oxygen tubing, Cannulas, Masks)

- Clean and/or maintain per accessory manufacturer's instructions.

CLEANING AND DISINFECTION BETWEEN PATIENTS – DEALER TECHNICIANS AND CERTIFIED REPAIR FACILITIES ONLY



WARNING: Cleaning and disinfection of the oxygen concentrator and accessories between patients should **ONLY** be performed by qualified Dealer Technicians or Certified Repair Centers.

- Dispose of and replace all single patient accessories including:
 - o Nasal Cannula or Oxygen Mask and Supply Tubing
 - o Humidifier
 - o Filters
- Perform maintenance procedures described in this manual and the Preventive Maintenance Checklist.
- Check oxygen concentrator for any external damage that may require repair.
- Run checks to ensure the concentrator functions properly and all alarms are in working order.
- Ensure contents of package include concentrator and user manual.

DISPOSAL

- The device and accessories out of shelf life or use life should not be disposed of randomly. Please dispose of the device per local regulations.

PREVENTATIVE MAINTENANCE LOG

Model: CP502

Serial Number:

EACH INSPECTION										
Date of Service										
Hour Meter Readout										
Clean Cabinet Filter (Weekly)										
Liter Flow Prescription										
PREVENTIVE MAINTENANCE SCHEDULE AND/OR BETWEEN PATIENTS*										
Oxygen Concentration (Every 36 months)										
Replace Cabinet Filter*										
Replace Compressor Intake Filter*										
Inspect/Replace Bacteria Filter*										
Check Power Loss Alarm (Every 36 months)										

* Between patients or every 3 years. Filter cleaning/changes and maintenance checks are minimum requirements. More frequent service and cleaning may be required where environmental conditions warrant.

All Preventative Maintenance should only be performed by a qualified dealer technician.

TROUBLESHOOTING GUIDE

Below are possible symptoms, potential causes and their remedies for correcting the device's issues. If the proposed remedies do not solve the issue(s), please don't try additional repairs and contact Compass Health or Compass Health authorized repair center.

Symptom	Possible Cause	Remedy
A. Unit does not operate. Power light is off when the power switch is "on". Audible alarm is pulsing and Service Required light is on.	1. Power cord not properly inserted into wall outlet.	Check power connection at the wall outlet and check power cord for damage
	2. No power at wall outlet.	Check your home circuit breaker and reset if necessary. Use a different wall outlet if the situation occurs again.
	3. Oxygen concentrator circuit breaker activated.	Press the concentrator circuit breaker button located below the power switch. Use a different wall outlet if the situation occurs again.
B. While unit is operating, within 1 minute, the Power light is on when the Power switch is "On". Yellow Service Required light is illuminated. Audible alarm may be sounding.	1. Cabinet Filter is blocked.	Check the Cabinet Filter. If the Filter is dirty, replace it. (follow cleaning instructions in maintenance section).
	2. Exhaust is blocked.	Check the exhaust area; make sure there is nothing restricting the unit's exhaust flow.
	3. Blocked or defective nasal cannula, mask, or oxygen tubing.	Detach nasal cannula or mask. If proper flow is restored, clean or replace if necessary. Disconnect the oxygen tubing at the oxygen outlet. If proper flow is restored, check oxygen tubing for obstructions or a kink. Replace if necessary.
C. While starting up a new unit, the power light is on and an audible low-frequency vibration sound is detected.	The Zip Ties at the bottom of the Concentrator have not been snipped and removed.	Turn off the machine and unplug the device from the wall outlet. Lie the concentrator on its side and cut the Tie Wraps and pull them out. Return the device to its upright position and power on.
D. Both the green Normal Oxygen and the yellow Low Oxygen lights are either on or	O.C.I malfunction	Contact Compass Health or Compass Health authorized repair center.


off.		
E. Yellow Low Oxygen light is on or the yellow low Oxygen light is on and the intermittent audible Signal is sounding.	1. Flowmeter is not properly set.	Ensure the flowmeter is properly set to the patient's prescribed liter flow.
	2. Cabinet Filter is blocked or plugged.	Check the Cabinet Filter. If the Filter is dirty, replace it. (Follow the instructions in the maintenance section)
	3. Exhaust is blocked.	Check the exhaust area: make sure there is nothing restricting the unit exhaust flow.
F. Service Required light is on and an intermittent audible signal is sounding.	1. Flowmeter is not properly yet.	Ensure the flowmeter is properly set to the patient's prescribed liter flow.
	2. Air filter is blocked.	Check the Filters, if dirty, replace immediately following the instructions in the user manual maintenance section.
	3. Exhaust is blocked.	Check the exhaust area: make sure there is nothing restricting the unit exhaust flow. If the above remedies do not work, contact Compass Health or a Compass Health authorized Repair Center.
If you followed the Troubleshooting Guide and either the issue your device is exhibiting is not listed above or the recommended remedy for the issue your device is exhibiting has not corrected the problem please contact Compass Health or a Compass Health authorized repair center.		


EMC INFORMATION


The essential performance description of subject device:


The subject device in both normal condition and single fault condition of oxygen concentration should be $93\% \pm 3\%$ and highest flow with 7 kPa pressure and lowest flow with 0 kPa pressure, change of flow should be ≤ 0.5 L/min.

Otherwise, when a failure occurs, the generation of an alarm condition: power supply failure: alarm sound, no display, machine not working;


O2 concentration is less than 82%: Yellow light illuminate () and alarm sounds.


Call supplier immediately ()

Compressor failure alarm: alarm sounds and panel shows word “Lo- Po2”. Total unit shutdown. Switch immediately to backup oxygen supply ().

Pressure failure alarm: alarm sounds and panel shows word “Lo-P” or “Hi-P”. Total unit shutdown. Switch immediately to backup oxygen supply. Call supplier immediately ()

Over temperature alarm: alarm sounds and panel shows word “HI-t”. Total unit shutdown.

Switch immediately to backup oxygen supply. Call supplier immediately ().

Low flowrate alarm: alarm sounds and panel shows word “E08”. Total unit shutdown. Switch immediately to backup oxygen supply. Call supplier immediately ().

Low flowrate alarm signal will be generated after the alarm condition has occurred approximately 30 seconds.

This device complies with Medical EMC Standard IEC 60601-1-2:2014.

Guidance and manufacturer’s declaration – electromagnetic emissions		
This equipment is intended for use in the electromagnetic environments specified below, and the purchasers or users shall ensure that it is used in these electromagnetic environments.		
Emissions	Compliance	Electromagnetic environment-- guidance
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The device is suitable for used in domestic establishment and in establishment directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity


The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device 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	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floors 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 ± 1 kV for input/output 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 line to line ± 2 kV line to earth	± 1 kV line to line	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, Short interruptions and voltage variations on power supply	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT(30 % dip in UT) for 25 cycles<5 % UT (>95 %	<5 % UT (>95% dip in UT.) for 0.5 cycle 40 % UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95 % dip in	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires Continued operation during power mains interruptions, it is recommended
input lines IEC 61000-4-11	dip in UT) for 5s	UT) for 5 sec	that the device be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field EC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE UT is the a.c. mains voltage prior to application of the test level

Guidance and manufacturer's declaration – electromagnetic immunity

OXYGEN CONCENTRATOR is intended for use in the electromagnetic environment specified below. The customer or the user of OXYGEN 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 Vrms 150 kHz to 80 MHz	3 Vrms 150 kHz to 80 MHz	Portable and mobile RF communications equipment should be used no closer to any part of OXYGEN CONCENTRATOR, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
	6 Vrms in ISM bands	6 Vrms in ISM bands	Recommended separation distance $d=[3,5/V1] \times P^{1/2}$ $d=1.2 \times P^{1/2}$ 80 MHz to 800 MHz $d=2.3 \times P^{1/2}$ 800 MHz to 2.7 GHz
Conducted RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz	3 V/m 80 MHz to 2.7 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 meters (m).
	385MHz-5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless Communication equipment (Refer to table 9 of IEC 60601-1- 2:2014)	385MHz-5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless Communication equipment (Refer to table 9 of IEC 60601-1- 2:2014)	Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, 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: 

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

NOTE-2 These guidelines may not apply in all situations. Electromagnetic 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 OXYGEN CONCENTRATOR is used exceeds the applicable RF compliance level above, the OXYGEN CONCENTRATOR should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating OXYGEN CONCENTRATOR.

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

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

Recommended separation distances between portable and mobile RF communications equipment and the Oxygen Concentrator.

The OXYGEN CONCENTRATOR is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the OXYGEN CONCENTRATOR can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the OXYGEN CONCENTRATOR as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output of transmitter (W)	Separation distance according to frequency of transmitter(m)		
	150 kHz to 80 MHz $d=1.2 \times P^{1/2}$	80 MHz to 800 MHz $d=1.2 \times P^{1/2}$	800 MHz to 2.7 GHz $=2.3 \times P^{1/2}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above the recommended separation distance d in meters (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.

Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment

Test frequency (MHz)	Band ^{a)} (MHz)	Service ^{a)}		Modulation ^{b)}	Maximum power (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
385	380-390	TETRA 400		Pulse modulation ^{b)} 18Hz	1.8	0.3	27
450	430-470	GMRS 460, FRS 460		FM ^{c)} ±5 kHz deviation 1 kHz sine	2	0.3	28
710	704-787	LTE Band 13,17		Pulse modulation ^{b)}	0.2	0.3	9
745							

780				217Hz			
810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5		Pulse modulation ^{b)} 18Hz	2	0.3	28
870							
930							
1720	1700- 1900	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS		Pulse modulation ^{b)} 217Hz	2	0.3	28
1845							
1970							
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7		Pulse modulation ^{b)} 217Hz	2	0.3	28
5240	5100- 5800	WLAN 802.11a/n		Pulse modulation ^{b)} 217Hz	0.2	0.3	9
5500							
5785							
		NOTE: If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.					
a.	b. For some services, only the uplink frequencies are included. c. The carrier shall be modulated using a 50% pulse duty cycle square wave signal. d. As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.						

FCC COMPLIANCE STATEMENT

FCC Supplier's Declaration of Conformity

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

LIMITED WARRANTY

MIC Medical Technologies Co. warrants the CP502 5 Liter Stationary Oxygen Concentrator to be free from defects in workmanship and materials and will perform in accordance with the product specifications for a period of three (3) years from date of shipment to the original dealer who purchased the unit unless contractually specified otherwise. This warranty is limited to exclusions set forth within this warranty and is also limited to product repair (parts and labor) by a manufacturer Trained and Certified Repair Technician or Authorized Service Center. Routine maintenance items such as filters are not covered under this warranty, nor does it cover normal wear and tear. It is at MIC Medical Technologies' sole discretion to request a copy of the maintenance record for the unit to qualify the claim and also to make the decision on whether to repair or replace a defective unit and MIC Medical Technologies reserves the right to provide adjustment instructions and/or replacement parts to the dealer or user to perform a repair or adjustment or to replace a defective part. Replacement parts/components are warranted for the unexpired portion of the original Limited Warranty of the unit. This warranty only applies to the labor for repairs performed by a MIC Medical Technologies Trained and Certified Repair Technician or Authorized Service Centers. It does not apply to the labor performed by the purchaser or user. The need for a repair under this warranty does not obligate MIC Medical Technologies to provide a loaner unit during the time that a unit is being shipped to and from an Authorized Service Center and for the time it is being repaired. This Warranty does not cover odors, stains, or fading of colors of the exterior of the unit from exposure to chemicals, heat or light nor does it cover damage associated with spills. This warranty shall be void and MIC Medical Technologies shall be relieved of any obligation or liability associated if:

- Unqualified service personnel attempt to repair the device while under warranty or there has been an attempt to open or service the 4-Way Valve by anyone other than a MIC Medical Technologies Trained and Certified Repair Technician or Authorized Service Center.
- The device has been misused, altered, used improperly, or used for any purpose other than what the product was originally designed.
- Malfunction results from inadequate cleaning or failure to follow the use and maintenance schedule including, but not limited to, proper cleaning and frequency of filter replacement necessary based upon environmental conditions.
- Unauthorized parts, components, filters, or regenerated sieve material is utilized in the unauthorized repair of a device.

THIS WARRANTY HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW. THERE IS NO OTHER EXPRESS WARRANTY, IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THE EXPRESS LIMITED WARRANTY AND TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED.

THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL AND INCIDENTAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. COMPASS HEALTH BRANDS CORP DISCLAIMS ALL LIABILITY FOR ECONOMIC LOSS, LOSS OF PROFITS, OVERHEAD, CONSEQUENTIAL OR PUNITIVE DAMAGES WHICH MAY BE CLAIMED TO ARISE FROM ANY SALE OR USE OF THIS PRODUCT OR TO PRODUCTS DAMAGED BY CIRCUMSTANCES BEYOND COMPASS HEALTH BRAND CORP'S CONTROL. COMPASS HEALTH BRAND CORP'S SOLE REMEDY TO THE ORIGINAL PURCHASER, IF ANY, IS LIMITED TO THE PRICE PAID FOR THE DEVICE OR PARTS & REPAIRS OF THE DEVICE ISSUE GIVING RISE TO THE CLAIM. SOME STATES **DO NOT** ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE LIMITATION OR EXCLUSION OF CONSEQUENTIAL OR INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

WARRANTY CLAIM SUBMISSION

The original purchaser must submit any warranty claim to include the serial number of the affected unit, hours on the unit and a copy of their original invoice from Compass Health Brands or an Authorized Compass Health Brands dealer directly to Compass Health Brands Corp. Upon verification of the purchaser and warranty status, Compass Health will assign an RMA (Return Merchandise Authorization) for the Dealer along with instructions for the shipping of the affected unit to a Compass Health Authorized Service Center. Where feasible, and at the discretion of Compass Health Brands, the product owner may choose to arrange for a MIC Medical Technologies Trained and Certified Repair Technician to conduct an onsite repair. For all returns to be sent by mail/courier, the original purchaser must:

1. Properly package the unit in an original, MIC Medical Technologies approved shipping carton with both top and bottom protective inserts
2. Properly display the Return Authorization Number on the shipping carton
3. Send the shipment to the designated Authorized Repair Center freight prepaid

When the device is repaired and tested it will be returned to the original purchaser to an address within the 48 continental United States via the most economical means and at the expense of MIC Medical Technologies. If expedited repair and/or alternate or expedited return shipping is desired by the original purchaser, the coordination of and incremental expense for the expedited repair and shipping will be the complete responsibility of the original purchaser. MIC Medical Technologies recommends that the shipping party fully insure the concentrator, at their expense, in the event of damage or loss when in transit to and from an authorized repair facility.

MICiTECH

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