# Home Medical Equipment

## **Operating, Safety & Cleaning Instructions**



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## Afflovest



## **Indications for Use**

The AffloVest is intended for promoting airway clearance and improvement of bronchial drainage by enhancing mobilization of bronchial secretions where external manipulation of the thorax is the physician's choice of treatment.

### Method

The AffloVest generates vibration and oscillation of the user's chest wall through integrated motor modules, installed into various parts of the vest. The patient controls the rate and frequency at which these motors oscillate the thoracic region with the use of a controller attached to the vest that can increase or decrease intensity to address the volume of mucus present in the air pathways, in compliance with a physician's prescription and orders.

### Charging the Battery

Use only the supplied rechargeable battery and the supplied battery charger to ensure safe and reliable operation of the AffloVest.

• Battery must be fully charged before using the AffloVest for the first time (at least 3 hours) and LEDs are solidy lit.

- To charge the battery, connect it to the battery charger unit.
  - When charging, the Red LED on the battery charger will illuminate.
- When fully charged, the LED changes to Green.
- When LED changes from Red to Green unplug the battery charger
- Connect the power supply plug into the AffloVest battery through the small opening at the bottom of the battery pouch

#### Fitting the Afflovest

- Unbuckle the chest buckles on the AffloVest and set the buckles to maximum size.
- Put on the AffloVest and fasten all 3 buckles. Firmly pull the buckle straps so that the vest fits snugly on the body, but does not restrict a deep, full breath. After adjusting, the sides of the AffloVest should have less than a 5" gap. They may overlap up to 1."
- Adjust the shoulder snaps to place the front upper AffloVest motors on the upper chest just below the collar bone.

## HOME MEDICAL EQUIPMENT BOOKLET

|        | (Stand-By)   | Press and hold to turn Controller ON and OFF                                       |
|--------|--------------|--|
|        | GO           | Press to start pre-programmed GO sequences   |
| (U) GO | PVD          | Percussion, Vibration, Drainage modes  |
| P      | <b>11</b>    | High intensity   |
|        | 4            | Medium intensity   |
|        |              | Low intensity  |
|        | (Play/Pause) | Press to start treatment from Main<br>Menu. Press to select Program/Usage<br>Menus |
|        | (Up/Down)    | Press to navigate through menu items   |
|        | (Left/Right) | Press to change current highlighted selection                                      |

To power On/Off device, press and hold the Standby button on the controller. After a brief startup period, the controller will display the main treatment menu.

Treatments may be started at any time by pressing the button (play/pause) from the main treatment menu.

Pressing the following buttons will update the treatment whether the Afflovest is running or not.

"P" Percussion Mode, all motors operate in a pulsed fashion.

"V" Vibration Mode, all motors operate continuously.

"D" Drainage Mode, motors operate in a preprogrammed sequential fashion.

"Go" Automatically starts the Go mode, the system will default

- Percussion mode: 10 minutes duration at Medium intensity (followed by a 10 second pause)
- Vibration mode: 10 minutes duration at Medium intensity (followed by a 10 second pause)
- Drainage mode: 10 minutes duration at Medium intensity

The AffloVest will start in the Medium intensity mode by default. Pressing the following buttons will update the treatment whether the vest is running or not:

- HIGH intensity
- MEDIUM intensity
- LOW Intensity

While treatment is running, the AffloVest may be paused by pressing the button (Play/Pause). This shall suspend treatment until the button is pressed again.

While paused, press and hold the button to reset the treatment time to the previous setting.

To turn off the AffloVest press and hold the stand-by button for 2 seconds. or disconnect the battery or A/C cord.

## **Cleaning Instructions**

- As needed, use a disinfectant wipe that kills 99% of bacteria and viruses to clean AffloVest.
- Use wipes over all parts of vest as needed.
- Do not place AffloVest in washing machine.
- Do not clean AffloVest with bleach.
- Do not tumble dry AffloVest.
- Do not iron AffloVest.
- Do not wet clean AffloVest.

## Troubleshooting

| Problem  | Possible Cause  | Corrective Action  |
|--|---|--|
| AffloVest controller will not power on when connected to battery               | Battery discharged  | Ensure battery is fully charged  |
|  | Battery not connected properly  | Verify that the battery is<br>connected to the AffloVest<br>correctly            |
|  | Possible damaged controller   | Attempt to operate the AffloVest<br>when connected to the AC Power<br>Supply     |
|  | Possible damaged battery  | Contact your dealer for further assistance.                                      |
| AffloVest controller will not power<br>on when connected to AC Power<br>Supply | AC Power Supply not connected to power  | Ensure AC Power Supply is<br>connected to a working outlet                       |
| заррту   | AC Power Supply not connected properly  | Verify that the AC Power Supply<br>is connected to the AffloVest<br>correctly    |
|  | Possible damaged controller   | Attempt to operate the AffloVest<br>when connected to a fully charged<br>battery |
|  | Possible damaged AC Power<br>Supply   | Contact your dealer for further assistance.                                      |
| The selected program function has suddenly switched off.                       | The therapy cycle has finished<br>and a new therapy cycle must be<br>started. | Start a new therapy cycle  |
|  | Battery discharged.   | Charge battery or switch to the AC<br>Power Supply.                              |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Ambulatory Aids

(Canes, Crutches & Walkers)

## Overview

An ambulatory aid can give a person the proper support for safe and independent walking. Most ambulatory aids are made from lightweight materials to reduce user fatigue.

## **Operating Instructions**

### Safety tips when using any ambulatory aids:

- Wear non-skid, flat sole shoes that can support your weight.
- Check to ensure your shoes are buckled or tied securely.
- Use good posture when walking.
- Look ahead when walking, not at your feet.
- Do not take steps that are too big.
- When turning, take small steps and pivot.

### Cane

- 1. When standing, the cane should extend from the floor to your hip joint (adjust height if needed).
- Keep your elbow at a 30-degree angle and hold the cane in the hand opposite of the injury with the tip 4 inches from the outside of the stronger (uninjured) leg/foot.
- Move the cane and step with your injured leg at the same time, keeping the cane close to your body for support and balance.
- 4. Support your weight on the cane and step up to (or through) with the uninjured leg.

## Crutches

- Stand in the middle of your crutches, grasping hand grips, while supporting your weight with your hands, not your underarm.
- 2. The top of the crutches should be about 1 to 1.5 inches below your underarm and your arm should be slightly flexed, but not straight.
- 3. Place crutches in front of you at a comfortable arm's length.
- Push down on the hand grips and step forward to the crutches with your weaker leg.
- 5. Continue forward and step past crutches with your stronger leg.

Walker

6. Continue steps 3-5.

### Walker

- Stand up straight with your feet close together and place the walker in front of you (arms length) with all four of the legs on the floor.
- Grasp the top handle on each side of the walker and keep your elbows nearly straight. If necessary, adjust the walker height.
- 3. Move the weaker leg toward the walker first (if both legs are injured, use either one to begin walking).
- 4. Then bring your good leg ahead of the weaker leg.
- 5. To carry items, attach a basket or bag to the side or front of the walker using Velcro or straps.





Cane

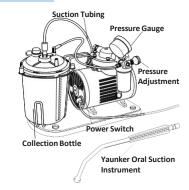
## Aspirator

### **Overview**

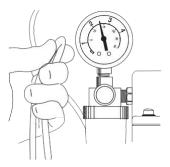
An aspirator (also known as a suction machine) removes secretions from the airways and allows the patient to breathe easier. Suctioning may be performed orally, nasally or through a tracheotomy opening.

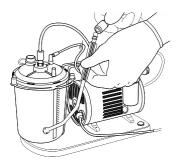
### **Operating Instructions**

- 1. Place Suction Machine on a flat surface near the patient.
- Connect short tubing from suction machine fitting to the port on the collection bottle labeled "SUCTION" or "VACUUM".
- 3. Connect larger tubing port on the collection bottle labeled "PATIENT".
- 4. Plug suction machine power cord into appropriate electrical outlet.
- 5. Turn on power switch.
- 6. Occlude the end of the tubing while reading pressure gauge. Adjust pressure based on patient type:
  - Adult = 100 to 120 cmH2O
  - Children = 80 to 100 cmH2O
  - Infants = 60 to 80 cmH2O
- 7. Attach suction instrument to connecting tubing.
- Introduce suction instrument into the patient's mouth above the tongue and advance into the back of the throat. Use caution as this may cause the patient to gag.
- 9. Aspirate secretions into the collection bottle.
- 10. After each use, aspirate a small amount of water to prevent secretions from drying in the instrument or tubing and causing an obstruction.
- 11. Store suction instrument in its sleeve or a paper towel to keep it free from dust and other contamination.







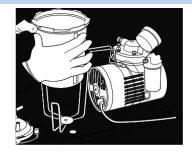


## HOME MEDICAL EQUIPMENT BOOKLET

## **Cleaning Instructions**

- 1. Discard contents of cannister into toilet daily.
- 2. Wash cannister and tubing with warm, soapy water.
- 3. Rinse under cold running water.
- 4. Allow to air dry.
- 5. Once every 3 days after washing, soak cannister for 30 minutes in a solution of 1 part white vinegar and 3 parts water. Do not soak tubing in solution.
- 6. Rinse under cold running water.
- 7. Allow to air dry.
- 8. Dispose of white vinegar and water.







| Problem  | Possible Cause                      | Corrective Action                           |
|--|-------------------------------------|---|
| Aspirator will not work.                             | Aspirator not plugged into outlet.  | Ensure aspirator plugged in outlet.         |
|  | Household fuse blown.               | Check fuse/breaker box.                     |
|  | Power switch is in "off" position.  | Check power switch on device.               |
| No suction from tubing/no pressure reading on gauge. | Suction cannister lid is not tight. | Ensure cannister lid is secure.             |
| pressure reading on gauge.                           | Tubing not connected to cannister.  | Check tubing connections.                   |
|  | Pressure gauge set too low.         | Increase pressure setting.                  |
|  | Cannister full.                     | Empty cannister contents.                   |
| Unable to adjust vacuum                              | Defective regulator.                | Contact equipment provider to replace unit. |

\*Contact your local medical equipment supplier if you are unable to correct problem.

## Enteral Pump

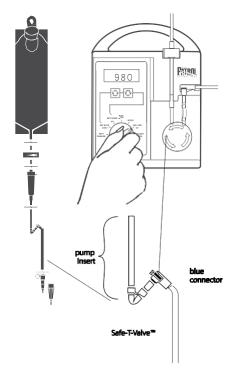
## Overview

For some people, eating drinking and swallowing become impossible. Because they cannot eat enough, or at all, they get nutrition through a feeding tube. Unlike regular eating, the mouth and esophagus are bypassed. Tube feeding through the stomach is accomplished by using a gastrostomy tube (also called a G-tube) or through the jejunum (a section of the small intestine) using a jejunostomy tube (J-tube).

## **Operating Instructions**

- 1. Attach pump to stand using pole clamp.
- 2. Plug pump into grounded outlet.
- 3. Attach pump set onto a filled enteral nutrition container.
- 4. Suspend container 20 inches above pump.
- 5. Place sight chamber into drop detector and seat in place before priming.
- 6. Remove cover from the orange feeding-set adapter.
- 7. With one hand on the blue connector of the pump set, gently pull until fluid flows.
- 8. Completely prime the set by allowing fluid to expel air from the tubing.
- 9. Let fluid slowly enter sight chamber to fill line (1/4 full).
- 10. Grasp the blue connector on the pump insert. Loop the pump insert under the rotor (counter-clockwise).
- 11. Gently pull up and then seat the blue connector in the slot above the rotor.
- 12. Confirm proper placement and function of enteral feeding tube.
- 13. Attach feeding set adapter to enteral feeding tube.
- 14. With one hand on the sight chamber and the other hand on the blue connector, gently pull until fluid drains from tubing.
- 15. Suspend container and re-prime.
- 16. Turn pump dial to SET RATE. Pump will initiate system selfcheck procedure.





## HOME MEDICAL EQUIPMENT BOOKLET

- 17. Select flow rate, from 1 to 300 mL/hr,
- 18. Select dose by turning dial to SET DOSE and pressing the arrows to the desired amount.
- 19. Start feeding by turning dial to RUN.
- 20. To see feeding delivered, turn dial to VOL FED.
- 21. To clear the volume delivered, turn dial to CLEAR VOL (occurs after four beeps).
- 22. When feeding is complete turn pump dial to OFF.

#### **Cleaning Instructions**

Clean outside pump surface as needed using a soft cloth and warm soapy water (use non-chlorine based dish detergent) or isopropyl alcohol. Do not spray water or cleaning solution into pump.

### Troubleshooting

| 75 |   |
|----|---|
|    | ( |

| Visual Display | Possible Cause  | Corrective Action   |
|----------------|---|---|
| no FLO         | Flow has stopped due<br>to occlusion or empty<br>container. | <ol> <li>Turn dial to HOLD.</li> <li>Clear obstruction/check for kinked tubing or<br/>empty container.</li> <li>Refill container, if necessary.</li> <li>Ensure sight chamber is not overfilled or<br/>covered with a film of product.</li> </ol>                                 |
| doSE FEd       | Dose complete - VOL FED is equal to SET DOSE.               | <ol> <li>Turn dial to HOLD.</li> <li>Turn dial to SET DOSE and depress up arrow<br/>to increase dose or down arrow to zero the<br/>dose setting or turn dial to CLEAR VOL (after<br/>four beeps, volume fed will be cleared).</li> <li>Turn dial to RUN to start pump.</li> </ol> |
| Free Flo       | Free-flow alarm.  | <ol> <li>Remove from service immediately.</li> <li>Verify pump set is properly installed, replace<br/>set if necessary.</li> <li>Confirm no drops fall when in HOLD.</li> </ol>   |
| SEL rAtE       | Dial turned to RUN without selecting a rate.                | <ol> <li>Turn dial to SET RATE.</li> <li>Enter a rate using the up and down arrow.</li> </ol>   |
| Lo bAt         | Approximately 30 minutes of battery operation remain.       | <ol> <li>Turn dial to HOLD, then RUN.</li> <li>Plug power cord into AC outlet for 12 hours,<br/>then continue feeding.</li> </ol>   |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

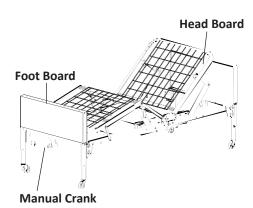
## Hospital Bed

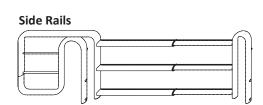
## Overview

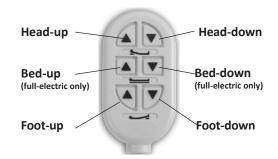
A hospital bed is a specially designed for patients in need of some form of health care. These beds have special features both for the comfort and well-being of the patient and for the convenience of health care workers. Common features include adjustable height for the entire bed, the head, and the feet, adjustable side rails and electronic buttons to operate both the bed and other nearby electronic devices.

### **Operating Instructions**

- 1. Place the bed away from walls to prevent movement of the bed when raising or lowering the bed rails.
- 2. Bed height can be adjusted by either putting the crank in bed ends and adjusting to height or using center crank at foot end of bed (fully electric beds are adjusted from bed controller).
- 3. Support side rails with hand while pulling out release pin located by bottom of side rail at either end and lower carefully.
- 4. To raise side rails pull up until side rail locks. Make sure side rail is securely in UP position before leaving patient unattended.
- 5. Do not pull on rails to position patient.
- 6. Raise head and knees with bed controller.
- 7. Lower head and knees by using the DOWN arrow.
- 8. Move controller from area when bathing patient.)
- 9. In case of power outage, use manual crank found under the mattress in the bedsprings.
- 10. Place crank into base of motor and turn to raise or lower head and knees.





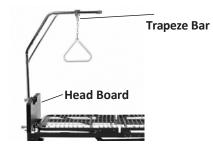


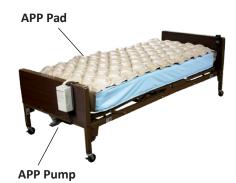
#### **Trapeze Bar**

- 1. Adjust trapeze by loosening clamp that holds triangle, move forward and back, then tighten securely.
- 2. Adjust length of chain on hook to raise or lower to desired height.
- 3. Periodically check trapeze brackets for tightness.

#### **Alternating Pressure Pump & Pad**

- 1. Place the pad onto the mattress and ensure the flaps are tucked under the mattress.
- 2. Attach the pump to the foot board of the bed.
- 3. Connect the air lines to the pump and pad.
- 4. Plug the pump into electrical outlet.
- 5. Turn on power to the pump and allow the pad to fill with air.
- 6. Check for leaks when the pad is almost full.





| Problem  | Possible Cause                   | Corrective Action   |
|--|----------------------------------|---|
| Bed spring does not move.                                  | End of direction stroke reached. | Operate opposite button.                                  |
| Hi/Lo bed function (full electric bed only) does not work. | Bed not plugged in.              | Ensure power cord is plugged into power source.           |
|  | Household fuse or breaker blown. | Check household fuse/breaker box.                         |
|  | Power outage                     | Use manual crank for bed adjustments until power returns. |
| Bed spring does not stop moving.                           | Pendant controller button stuck. | Check controller buttons.                                 |
| Bed does not stay in place.                                | Casters unlocked.                | Lock casters.   |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Nebulizer Compressor



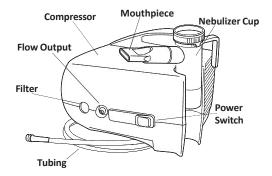
### **Overview**

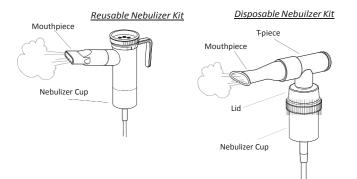
A nebulizer compressor is a device to convert liquid medication into a mist for inhalation. The nebulizer compressor is very portable and lightweight. Some units can be powered with an optional battery pack for greater convenience. Nebulizer therapy uses a prescribed drug. Never increase your frequency of treatments or volume of medication without the specific approval of your physician.

### **Operating Instructions**

- 1. Place compressor on a flat level surface.
- 2. Assemble nebulizer kit.
- 3. Fill medication cup with prescribed solution.
- 4. Attach tubing to the flow output valve on the compressor and to the port on the medication cup.
- 5. Plug the power cord into a appropriate electrical outlet.

- 6. Turn compressor power switch on.
- 7. Nebulizer kit will begin to create white medication mist.
- 8. Place lips over mouthpiece and breathe normal.
- 9. Take deep breath every 30-60 sec. and hold for a count of 5.
- 10. If unable to hold nebulizer in mouth, use a face mask with treatment.
- 11. For infants, direct the mist at the nose and mouth.
- 12. Continue treatment until medication cup is empty (approximately 10–15 minutes). Listen for sputtering sound.
- 13. Turn compressor power switch off.





## **Cleaning Instructions**

#### After Each Treatment

- 1. Disassemble nebulizer kit.
- 2. Wash with warm, soapy water.
- 3. Rinse thoroughly under cold running water.
- 4. Place nebulizer parts on a paper towel to air dry and cover with another paper towel to keep off dust.

#### **Every Other Day**

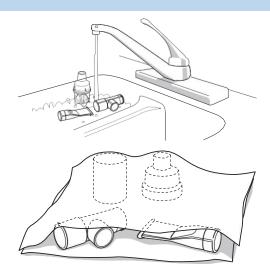
- After rinsing, soak all nebulizer parts (except tubing) in a solution of 1 part white vinegar and 3 parts water for 30 minutes.
- 2. Rinse parts thoroughly under cold running water.
- 3. Place nebulizer parts on a paper towel to air dry and cover with another paper towel to keep off dust.
- 4. Discard vinegar/water solution.

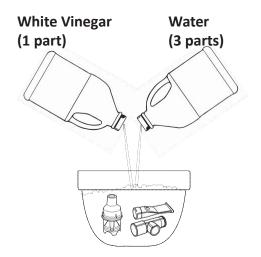
#### Tubing

Tubing (replace every 2 weeks with disposable neb; every 6 months with non-disposable neb). Wipe with damp cloth if soiled. Do not attempt to soak/clean tubing.

### **Replacement Schedule for Supplies**

- Disposable Nebulizer Kit: Every 2 weeks
- Reusable Nebulizer Kit: Every 6 months





| Problem                                    | Possible Cause                           | Corrective Action   |
|--|--|---|
| Medication is not making a mist.           | Nebulizer cup is not clean.              | Clean nebulizer cup and reassemble.<br>Use a new nebulizer kit if needed. |
|  | Nebulizer cup is not properly assembled. | Reassemble nebulizer cup. Use a new nebulizer kit if needed.              |
| Medication leaks out of the nebulizer cup. | Nebulizer cup is cross-threaded.         | Unscrew cap from nebulizer cup and reassemble.                            |
| Compressor does not turn-on                | Unit is not plugged in.                  | Plug in unit. If unit is plugged in, check fuse box for tripped breaker.  |
| Compressor does not have enough flow.      | Filter is dirty.                         | Replace filter.   |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Troubleshooting

### HOME MEDICAL EQUIPMENT BOOKLET

## Oxygen Safety



#### Overview

It is estin atel between 700,000 and 1,000,000 people in America use oxygen the properly, oxygen is very safe. It has many benefits including extending life expectancy, improving activity levels, reducing symptoms such as shortness of breath and reducing damage to the heart and other body organs. However, when used inappropriately, it can present a hazard. Here are some guidelines to follow for safe and effective use.

#### Physician's Order

Oxygen is a drug that requires a prescription from your physician. Notify your physician if you choose to stop using your oxygen. Never adjust your oxygen flow without your doctor's permission.

#### **Fire Risk**

Three things are necessary for a fire: a combustible material (i.e. something that will burn); an ignition source (i.e. a spark, flame, or high temperature to get the

fire going); and oxygen. While oxygen itself is not flammable, it must be present for a fire to occur. Higher concentrations of oxygen such as when using oxygen therapy, result in easier ignition, higher flame temperatures and extremely fast flame spread.

When using oxygen, combustibles in close contact with oxygen such as clothing, blankets or hair are more prone to catch fire and if they ignite, burn hotter and the flame will spread faster.

To use oxygen safely, maintain at least **15 feet** between oxygen equipment (including tubing) and any flame or other heat source such as cooking stoves, fireplaces and candles.

Avoid using products on your face that contain petroleumbased ingredients, as they are flammable (e.g., petroleum jelly, mentholated rubs, some lip balms and lotions). If you use these types of products, check the label and use products that are not petroleum-based.

Remember to post "No Smoking" signs on the entry doors of your home and where oxygen is used or stored. It is also recommended to have a working smoke detector and fire extinguisher in the home.

#### **Oxygen Concentrators**

Only plug device into a properly grounded outlet that is not being used to power any large appliances and do not use extension cords or multi-outlet adapters. Keep equipment away from walls, drapes, curtains, bedspreads, etc.

#### Portable Oxygen Concentrators

Bring extra charged batteries with you during travel. If using in a vehicle, keep at least one window partially open for ventilation. Do not use the device in pulse mode during sleep.

#### **Oxygen Cylinders**

Keep oxygen cylinders secured upright to prevent falling or rolling; do not store them in extreme temperatures and do not transport them in the trunk of a car.

#### Liquid Oxygen Systems

Never touch frosted components on the system. If the unit falls over, cautiously set it back upright.

If liquid oxygen ever leaks from the unit, do not touch it.

#### **Travel Tips**

- Most travel companies require at least 2 weeks notice if you will be using oxygen on your trip.
- Most airlines require at least 4 weeks notice if you need oxygen during your flight.
- 3. If traveling by plane, request a direct flight, if possible.
- Most airlines allow you to bring a portable oxygen concentrator on board.

## Best of Breathe Easy: It's Never Too Late To Kick The Habit

Smoking is the #1 cause of preventable lung disease. It is the major cause of COPD (chronic bronchitis, and



emphysema) and aggravates other breathing problems such as asthma. The best thing you can do to improve your future outlook is to stop smoking. Quitting helps stabilize your lung function and may result in an improvement for a period. Follow these tips to improve your chance of success.

#### Set a Quit Date

Write the date down and tell a few close friends.



Although it is best to pick a time that is relatively calm, don't postpone quitting. Waiting for a "stress-free" time will likely never occur. Write down your reasons for quitting. Include pictures of family who will be influenced by your decision. Keep these with you and look at it during weak moments. Make a list of alternate activities that you can use when an urge to smoke returns. List health reasons why you should quit.

### Get Help

Using nicotine replacement therapy (gum, patch) or buproprion (antidepressant) have shown an increase in success rates. Some are available over the counter and others require a prescription. Talk with your doctor about which is best for you.

### Support Groups

Participation in a smoking cessation program or even the support of

close friends can increase your chances of quitting. Have a close friend (ex-smoker) or support group member you can call when things get tough. Quit rates may be up to 8 times higher when using a support program and cessation aids compared to trying to quit on your own.

### Go Cold Turkey

Experts agree that stopping all at once is the way to go. Make the decision to quit and throw away your cigarettes and ashtrays. Expect cravings will be greatest within the first 3-4 days and be prepared.

### **Change Your Lifestyle**

Become more active, avoid the smoke break room at work, go for a walk after eating, avoid activities associated with smoking (e.g., alcohol, coffee, etc.).

Never, Never, Never Give Up If you've tried before and failed,



try again. Most people who quit have tried several times previous. If you have tried several times before and failed, you may want to consider counseling. Depression, which is very common in those with chronic lung disease, may contribute to your inability to stop. If you have already quit, encourage your relatives and friends to stop. Point out the negative effects that smoking has had in your life.

### Try These Activities When You Have a Craving

- 1. Take a walk.
- 2. Brush your teeth.
- 3. Chew sugar-free gum.
- 4. Take a bath or shower.
- 5. Call a family member or friend to encourage you.
- 6. Go to a movie.
- 7. Go to a nonsmoking restaurant.
- 8. Keep low-cal snacks on-hand.
- 9. Suck on a toothpick or straw.
- 10. Go see your kids/grandkids.
- 11. Have a cup of tea rather than coffee (if you normally smoke with coffee).
- 12. Avoid Alcohol

### Do Anything Except Smoke!!!!



## Fire Hazard Warning: Don't Let This Happen To You!



Fire destroyed a patient's car after lighting a match while using oxygen.



Fire destroyed a patient's bed after leaving a cigarette burning while using oxygen.

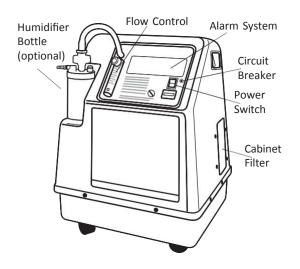


Fire burned the interior of a patient's home after turned on the gas while using oxygen. Place oxygen - no smoking sign at all entrances to home





## Oxygen Concentrator



## Overview

An oxygen concentrator is an electrically operated device that draws in room air, separates the oxygen from the other gases in the air and delivers the concentrated oxygen to you. The concentrator acts like a strainer. It traps oxygen and releases the other gases (mostly nitrogen) back into the room air. This process goes on continuously until the oxygen inside the unit is highly concentrated.

Oxygen concentrators are available in different sizes and models. However, all models have the same basic parts: a power switch to turn the unit on and off, a flow selector that regulates the amount of oxygen you receive and an alarm system that alerts you if the power is interrupted.

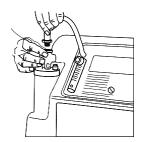
Oxygen is a drug. Do not increase or decrease oxygen flow rate unless directed by your physician.

## **Operating Instructions**

1. Place concentrator in a well-ventilated area, at least 12-18 inches away from walls, drapes or curtains.

- 2. Placement should be in an area where alarm is still audible.
- 3. Keep equipment at least 15 feet away from open flame, heat source, stoves, smoking, etc.
- 4. Keep equipment away from combustible materials (grease, oil, lotions, petroleum based products).
- 5. Do not plug equipment into a power strip or extension cord or plug into an outlet that already supplies power to another large appliance.
- 6. Use power switch to start concentrator (alarm sounds briefly).
- Turn flow control knob until the middle of the ball is at the prescribed rate (for rotary dial, turn knob until prescribed rate appears).
- Connect nasal cannula (or oxygen tubing) directly to the oxygen flow outlet (or humidifier if prescribed).
- If using humidifier, add distilled water up to maximum fill line on jar.
- 10. Fit the nasal cannula to face by inserting the 2 prongs into the nose (prongs curve down).
- 11. Slide nasal cannula tubing over and behind each ear.
- 12. Slide tubing adjuster upward under the chin (not too tight).







13. Use oxygen at the prescribed rate for prescribed hours or activities.

## **Cleaning Instructions**

## Nasal Cannula:

Wipe with damp cloth if soiled and replace every 2 weeks (more often if you have a cold).

## Tubing:

Wipe with damp cloth if soiled and replace every 90 days. Do not attempt to soak tubing.

## Cabinet: (weekly)

Wipe outside cabinet with a clean damp cloth (water only, do not use cleaning solutions).

## Filter: (weekly)

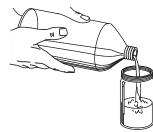
- 1. Remove filter element.
- 2. Wash filter in warm, soapy water.
- 3. Rinse in cold running water.
- 4. Squeeze filter in paper towel to dry.
- 5. Replace filter element.

## Troubleshooting

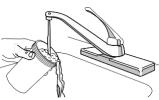


### Humidifier Bottle: (every 3 days; replace monthly)

- Remove the humidifier bottle and wash in warm, soapy water.
- 2. Rinse thoroughly under cold running water.
- 3. Soak for 30 minutes in a mixture of 1 part white vinegar and 3 parts water.
- 4. Rinse under cold running water.
- 5. Allow the bottle to air dry.
- 6. Discard vinegar solution.
- 7. Refill humidifier bottle with distilled water.
- 8. Reconnect the humidifier to the concentrator.



| Problem                              | Possible Cause   | Corrective Action   |
|--------------------------------------|--|---|
| No oxygen flowing from system.       | Cannula or nipple adapter not connected tightly.                   | Check connection at cannula and nipple adapter.                                   |
| Water blocking oxygen tubing.        | Overfilling the humidifier bottle or tubing lying on a cold floor. | Add water trap to catch water or use a dehumidifier.                              |
| Unit not operating (power failure    | Plug not firmly in wall.   | Check plug at outlet.   |
| alarm sounds).                       | Concentrator circuit breaker tripped.                              | Press reset button on back of concentrator.                                       |
|                                      | Electrical power outage.   | Use back-up oxygen system until power is restored.                                |
| Unable to dial prescribed flow rate. | Obstructed humidifier bottle.                                      | Disconnect humidifier bottle. If pressure is restored, replace humidifier bottle. |



## Portable Oxygen Concentrator

## Overview

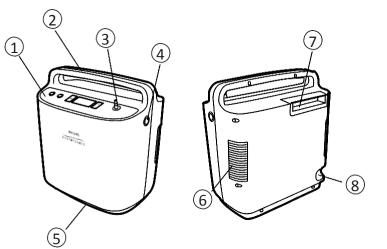
A portable oxygen concentrator (or POC) is a portable device used to provide oxygen therapy to patients at substantially higher oxygen concentrations than the levels of ambient air. It is very similar to a home oxygen concentrator, but is smaller in size and more mobile. The portable oxygen concentrator makes it easy for patients to travel freely; they are small enough to fit in a car and most of the major concentrators are now FAAapproved.

Most of the current portable oxygen concentrator systems provide oxygen on a pulse (on-demand) delivery in order to maximize the purity of the oxygen. The latest models can be powered from main electrical supply, 12v DC (car, boat, etc.) or battery packs.

Approximate battery durations for Pulse Flow settings at 20 BPM and Continuous Flow settings when the battery is fully charged.

Your times may vary based on your activity level, the condition of the batteries, and the age of your SimplyGo device.

Pulse Dose Setting = 2 (3.5 hours) Continuous Flow Setting = 2 (0.7 hours)



| Item | Description                  | Function  |
|------|------------------------------|---|
| 1    | Control Panel                | Control switches and LCD display  |
| 2    | Carrying Handle              | Hand grip area for lifting and transporting the device  |
| 3    | Patient Cannula<br>Connector | Oxygen output and connection point for patient cannula  |
| 4    | PowerInput<br>Connector      | Connection point for Philips Respironics-<br>provided external power supplies: AC line<br>voltage, vehicle DC |
| 5    | Air Exhaust Vent             | Air outlet for enclosure ventilation fan  |
| 6    | Air Intake Vent              | Air inlet for enclosure ventilation fan   |
| 7    | Battery                      | Rechargeable lithium-ion battery with<br>integrated handle used to remove and install<br>battery pack         |
| 8    | Data Port                    | Input-Output data communication with the device.  |
|      |                              | Caution: For use by authorized service personnel only.  |

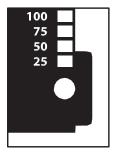
Your SimplyGo device comes with one rechargeable lithium ion battery. To insert it correctly, follow these steps.

- 1. Place your device in a well ventilated location and make sure it is turned off.
- 2. To remove the battery, insert your fingers into the opening in the battery handle.



- Steadily pull upward on the handle until the battery is released from the enclosure. Continue to lift the battery until it is entirely removed from the battery compartmen
- from the battery compartment.4. If the device has been operating, the surfaces may be warm to the touch. This is normal.
- 5. Check the battery gauge by pressing the white button on the battery and watch how many LEDs light up.
- 6. If the batteries are low, you can recharge them.

| No. of LEDs              | Battery Charge   |
|--------------------------|--|
| 4 LEDs Light:            | 75% to 100% full   |
| 3 LEDs Light:            | 50% to 75% full  |
| 2 LEDs Light:            | 25% to 50% full  |
| 1 LED Lights:            | 10% to 25% full  |
| 1 LED Blinks<br>3 Times: | Battery is less than<br>10% and needs to<br>be recharged |

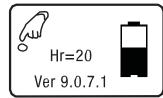


To insert the battery

- Insert your fingers into the opening in the battery handle and grip the handle between your fingers and thumb.
- Position the battery over the battery compartment in the top, rear corner of the SimplyGo enclosure with your fingers pointing toward the handle. The battery compartment is shaped so that there is only one way the battery can be inserted and align the battery correctly.
- 3. Lower the battery into its compartment until the

handle contacts the equipment enclosure. Firmly push on the battery handle until it snaps into place in the enclosure top.

- 4. After the battery is inserted, check to make sure the battery handle is level with or slightly below the top of the plastic case.
- 5. Momentarily depress the Power key, and the following should occur:
  - The LCD and the 5 Key backlights turn ON
  - The screen shown here displays on the LCD
  - If you do not see the battery symbol or the device does not turn On, the battery is not installed correctly. Re-insert the



battery and make sure it snaps in place.

#### **Charging The Battery**

- 1. Connect the AC Power Supply's output cable to the SimplyGo power input connector.
- 2. Connect the AC Power Cord's connector into the AC power supply.
- 3. Connect the power cord plug into an AC outlet
- The light on the AC Power Supply lights up and the cooling fan turns on. This is normal. The fan will run the entire time it is charging to keep the battery cool.



 When charging is complete (this takes four hours or less), disconnect the AC Power Supply and store it with the AC Power Cord for future use.

#### **Device Warm-Up Breathing**

When you turn on your SimplyGo device, it will sense if you are breathing from it. If you are not yet breathing through the cannula, SimplyGo will begin to pulse automatically about once every five seconds.

The purpose of this "device warm-up breathing" is to help the device warm up faster. As soon as you begin breathing through the cannula, the device will begin delivering pulses based on your breathing. Device warm-up breathing occurs only when you first turn on the device. You may begin breathing from the SimplyGo at any time. If the device does not sense a breath after two minutes, a No Breath alarm will sound.

#### **Operating Modes**

This section describes additional operating screens on the SimplyGo device.

#### Pulse Mode Screen:

When the device is in the Pulse operating mode, it detects when the user begins to take a breath and then delivers a pulsed volume of oxygen determined by the setting number, during inhalation. If no breath is detected for a period of time, the system automatically delivers the pulsed volume of oxygen determined by the setting number at a fixed rate of 12 breaths per minute. If no breath is detected for 2 minutes, the device signals an alarm and shuts down after 30 minutes.

#### Continuous Flow Mode Screen:

In Continuous Flow operating mode, a constant flow of oxygen is supplied based on the setting number (in liters per minute):

- .5 LPM
- 1 LPM
- 1.5 LPM
- 2.0 LPM

Caution: When the SimplyGo device is connected to a CPAP device, you can only use the Continuous Flow operating mode.

#### Sleep Mode Screen

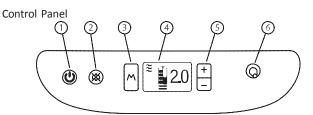
The Sleep operating mode is similar to the Pulse Mode. The device detects when the user begins to take a breath using a more sensitive detection level. The SimplyGo then delivers a pulsed volume of oxygen determined by the setting number. During inhalation, a low amplitude and longer pulse duration is used to make sleeping more comfortable. If no breath is detected for a period of time, the system automatically delivers a continuous flow of oxygen at a rate of 2.0 LPM.

To Use The Device:

 Connect a nasal cannula to the patient cannula connector on top of the device, as shown. Ensure that



the cannula is routed to prevent it from being pinched or kinked to avoid a disruption of oxygen flow.



| Item | Description                  | Function   |
|------|------------------------------|--|
| 1    | Power                        | Turns the device On and Off                            |
| 2    | Alarm Silence                | Turns the audible alarm                                |
| 3    | Mode                         | Selects one of the three possible                      |
|      |                              | operating states of the device                         |
| 4    | Display Screen               | Shows information about the operating                  |
|      |                              | status of the device                                   |
| 5    | Plus (+)/                    | + Increases the displayed setting;                     |
|      | Minus (–)                    | <ul> <li>Decreases the displayed setting</li> </ul>    |
| 6    | Patient Cannula<br>Connector | Oxygen output and connection point for patient cannula |

- To start the device, press the Power button. After the first press, the display screen and the 5 button backlights turn on and you will see a screen similar to the one shown below.
- 3. Press the Power button a second time to place the device in operating mode. This second press

helps prevent unwanted starts or inadvertent changes in oxygen flow.

- Every time it starts up, the device starts producing oxygen to meet the specified setting. It may take up to ten minutes to reach the specified purity levels for the setting. It is safe to begin breathing from the SimplyGo device immediately.
- Breathing from the device will cause it to reach oxygen purity levels faster than ten minutes. The dot in the lower right corner of the LCD display is the pulse symbol. It appears whenever you take a breath and the device delivers a pulse of oxygen.

## **Cleaning Instructions**

The exterior covers of the device and rechargeable battery should be cleaned as needed:

- 1. Turn the device off and disconnect from the power source before cleaning.
- 2. If the battery is removed, wipe the battery bay and battery with a dry cloth.
- 3. Clean the device exterior using a damp cloth with a mild household cleaner and wipe it dry.

| Problem                               | Possible Cause                      | Corrective Action   |
|---------------------------------------|-------------------------------------|---|
| Device won't<br>power on              | Battery is depleted                 | Use the AC or DC power cords to operate the device (with the battery inserted) to recharge the battery. If this does not resolve the problem contact your home care provider. |
|                                       | Battery is not installed correctly  | Remove the battery and reinstall it correctly.  |
|                                       | Power button not<br>pressed twice   | Press the power button twice.   |
| Device will not<br>trigger a pulse of | The unit it not powered on          | Press the power button twice.   |
| oxygen                                | Cannula tubing is kinked or twisted | Make sure tubing is connected properly to the oxygen outlet port and that it is not obstructed.   |
|                                       | Device malfunction                  | Contact your home care provider.  |
| Oxygen not at full concentration      | Device is warming up                | Wait 10 minutes for the device to deliver oxygen at the prescribed concentration. If the condition persists, contact your home care provider.                                 |
| Alarm occurs                          | The device needs your attention     | See the alarm indicators and screen symbols section for information about specific alarms and what you should do.   |

Troubleshooting

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Alarm Indicators & Screen Symbols

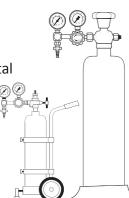
| Visual, Audio<br>Indicators   | Description  | What To Do  |
|---|--|---|
| B<br>B<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | <b>No Breath Alarm</b><br>This alarm occurs when a breath is not detected for<br>a period of 2 minutes or more. It can be silenced<br>by pressing the Alarm symbol. This alarm becomes<br>silent as soon as a breath is detected. If no breath<br>is detected after approximately 30 minutes, the<br>device shuts down to conserve power. ( <i>This alarm is</i><br><i>inactive for ten minutes after startup.</i> ) | Check connection from the cannula<br>to the device. Make sure the nasal<br>cannula is correctly positioned on<br>your face and that you are breathing<br>through your nose. Make sure the<br>cannula tubing is not kinked or<br>obstructed. |
| ₹<br>02<br>2<br>3 long beeps<br>+<br>1 short beep                       | <b>Low Oxygen Concentration Alarm</b><br>This alarm occurs when the device is delivering a<br>lower concentration of oxygen than specified. This<br>alarm can be silenced by pressing the Alarm symbol.  | Change to another source of oxygen<br>and contact your equipment<br>provider.   |
| I long beep<br>after 2 minutes  | <b>High Breath Rate Alarm</b><br>This alarm indicates that the user's breath rate is<br>exceeding the capacity of the device. The device is<br>still working properly and is still providing oxygen at<br>the rate specified for the setting. The beeps can be<br>silenced by pressing the Alarm symbol.   | The indicator resets itself when<br>the breath rate is reduced. If this<br>indicator regularly occurs, contact<br>your home care provider.  |
| 3 short beeps<br>3 long beeps   | <b>Technical Fault Alarm</b><br>This alarm occurs when: a) the battery runs out or b)<br>the device has a general malfunction and the device<br>is no longer operating properly. The device may or<br>may not shut down depending on the severity of<br>the alarm. This alarm can be silenced if the symbol<br>appears on-screen.  | Recharge the battery and try to<br>restart the device. If this alarm<br>occurs again, change to another<br>source of oxygen and contact your<br>home care provider.   |
| Ĩ Ĩ Ĩ Ĩ 1 short beep  | Low Battery Alarm<br>This alarm occurs when approximately 17 minutes<br>of battery life remains. Remaining battery life is<br>dependent on your device settings and your activity<br>level. The empty battery symbol flashes on-screen.  | Replace the battery or connect to<br>a power source. (Press the Alarm<br>symbol to silence the alarm.)  |
| ₩F<br>A<br>3 long beeps<br>+<br>1 short beep                            | <b>No Flow Alarm</b><br>This alarm occurs when the device detects there is<br>no oxygen flowing in the patient cannula.  | Check the cannula for kinks or other<br>obstructions that are stopping<br>oxygen flow through it.   |

| Visual, Audio<br>Indicators                              | Description  | What To Do   |
|--|--|--|
| Ĩ 2.0<br>△ 2.0<br>Alternating<br>short and long<br>beeps | <b>Depleted Battery Alarm</b><br>This alarm occurs when approximately two minutes<br>of battery life remains. The battery symbol flashes<br>on-screen. | Replace or recharge battery.<br>(Press Alarm symbol to silence the<br>alarm.)  |
| X  | Alarm Silence Symbol<br>Appears when you press the Alarm Silence button.   | No further action is needed.   |
|  | Attention<br>This symbol appears when corrective action is<br>required.  | Make sure it has been placed<br>correctly in the case so that the<br>outlet vents are in the front. The<br>vents should be visible through the<br>slot at the bottom. If the alarm<br>continues, contact your home care<br>provider. |
|  | <b>Pulse Mode Indicator</b><br>This symbol appears when the device is operating in<br>Pulse mode.  | If this is your Mode setting, no<br>action is needed. If this is not your<br>Mode setting, press the Mode<br>button until your proper Mode<br>setting appears.   |
| ·  | <b>Sleep Mode Indicator</b><br>This symbol appears when the device is operating in<br>Sleep mode.  | If this is your Mode setting, no<br>action is needed. If this is not your<br>Mode setting, press the Mode<br>button until your proper Mode<br>setting appears.   |
| ~  | <b>Continuous Flow Mode Indicator</b><br>This symbol appears when the device is operating in<br>Continuous Flow Mode.                                  | If this is your Mode setting, no<br>action is needed. If this is not your<br>Mode setting, press the Mode<br>button until your proper Mode<br>setting appears.   |
| <b>A</b>   | On/Off Symbol<br>Appears when device is powered on or is ready to be<br>turned on or off.  | To prevent inadvertent starts and<br>stops, the device requires two<br>presses of the power button to turn<br>it on and off.   |

## Oxygen Cylinders

## Overview

High pressure oxygen cylinders provide short-term supplemental oxygen for necessary travel while away from your stationary unit and for use during emergency situations. Oxygen cylinders are not to be used while at home in place of your stationary unit.



Oxygen cylinders are available in a variety of sizes to provide portability while traveling away from the home. The cylinders are made portable through the use of a wheeled cart or small shoulder bag. Often, an oxygen conserving device is applied to a cylinder to extend the duration of the tank.

Rotech delivers oxygen cylinders typically one time every 90 days. Number of cylinders delivered is calculated based on a patient's prescribed liter flow and need. If a patient has an unexpected need for additional oxygen cylinders before the next schedule delivery, they can be exchanged one for one at our local office.

## **Safety Instructions**

- Keep oxygen cylinders in a well-ventilated area at least 15 feet open flames or heat sources.
- Keep oxygen cylinders away from combustible materials (grease, lotions, solvents, etc.).
- Do not store oxygen cylinders in a closet.
- Do not store oxygen cylinders standing upright unless in a rack or cart.
- Do not transport oxygen cylinders in the trunk of a car.
- Do not change oxygen liter flow unless directed by your physician.

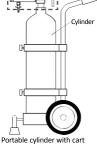
## **Operating Instructions**

### **Continuous Flow Portable System**

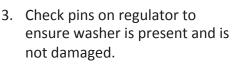
## (E or D Cylinder)

- Remove tape from cylinder valve.
- 2. Using cylinder wrench, slightly open then close cylinder valve to

blow away any

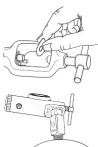


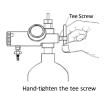
Pressure Gauge Selector Nipple Outlet



dust or debris from the outlet.

- Place the regulator over the top of the cylinder post and align the pins with the opening on the cylinder.
- Turn the T-handle clockwise (to the right) to create a tight seal between the cylinder and regulator.
- Use cylinder wrench to open valve. The needle on the pressure gauge will register the amount of oxygen in the cylinder. A full cylinder shows approximately 2,000 PSI on the gauge.





Attach the regulator to the

cylinder

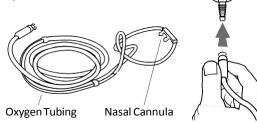




Regulator on a portable oxygen cylinder

### HOME MEDICAL EQUIPMENT BOOKLET

 Attach end of tubing from nasal cannula to the nipple adapter.



- 8. Set flow control to prescribed rate.
- Place nasal cannula in nose and secure tubing over and behind each ear.



10. When finished using oxygen, turn flow control counterclockwise (to the right) to turn off oxygen.

See page 31 for estimated amount of time cylinder should last based on your prescribed liter flow rate.

## Stationary Back-up System (H or M Cylinder)

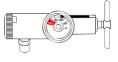
- If necessary, remove the white tape on the cylinder.
   Open the cylinder valve slightly by turning counterclockwise. This will blow off any
  - dust in the orifice of the cylinder outlet. Close the valve tightly.
- 3. Attach the regulator

to the cylinder by threading the regulator connector nut clockwise on the cylinder outlet. Tighten firmly with a cylinder wrench.

- 4. Attach a nipple adapter to the regulator outlet and attach the oxygen tubing to the nipple adapter.
- 5. Slowly open the cylinder valve by turning counterclockwise.
- 6. Adjust flow to prescribed rate.
- 7. Place nasal cannula in nose and secure tubing over and behind ears.
- 8. When finished using oxygen, turn flow control counterclockwise (to the right) to turn off oxygen.

Backup oxygen cylinders are for emergency use only (power outage or concentrator malfunctioning).

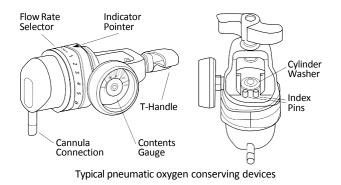
To obtain a replacement backup cylinder, contact your local Rotech office when the backup cylinder gauge reads 500 psi.



## **Oxygen Conserving Device**

An oxygen conserving device extends the lifespan of your oxygen cylinders by delivering oxygen only on inspiration, therefore conserving the amount of oxygen you use.

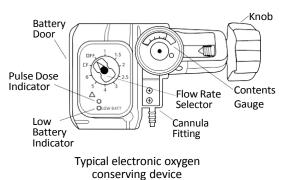
#### **Pneumatic Powered Device**



- 1. Remove protective tape from cylinder valve.
- 2. Use cylinder wrench to slightly open, then close cylinder valve to blow away any dust or debris in the cylinder outlet.
- 3. Place the regulator over the top of the cylinder post. Align the pins with the opening on the cylinder.
- Turn the t-handle clockwise (to the right) to create a hand-tight seal between the cylinder and regulator.
- 5. Use cylinder wrench to open valve.
- 6. Attach the connecting tubing from a dual-lumen nasal cannula (required) to the conserving device.
- 7. Set Flow control to prescribed rate.

#### **Electronic Battery Powered Conserver**

1. Remove protective tape from cylinder valve.



- 2. Use cylinder wrench to slightly open, then close cylinder valve to blow away any dust or debris in the cylinder outlet.
- 3. Place regulator over the top of the cylinder post and align pins with the opening on the cylinder.
- 4. Turn the t-handle clockwise (to the right) to create seal between the cylinder and regulator.
- 5. Use cylinder wrench to open valve.
- 6. Attach the end tubing from nasal cannula to the conserving device.
- 7. Place nasal cannula in nose and secure tubing over and behind each ear.
- 8. Set flow control to prescribed rate. Conserving device will deliver a puff of oxygen at the prescribed setting, usually on inspiration and may not happen with each breath.

#### **Check/Change Battery**

- 1. Press battery check button on top for current status or look for low battery light.
- 2. To replace battery, open battery door, remove old battery and replace with same type/size.

## Troubleshooting

| Problem                                    | Possible Cause   | Corrective Action   |
|--|--|---|
| No oxygen flowing from<br>cannula          | Cylinder is empty.   | Check pressure gauge. If cylinder is empty, replace with new full cylinder. |
|  | Cannula connection to regulator is loose.  | Check tubing connection to regulator.                                       |
|  | Cylinder valve is off.   | Check cylinder valve to ensure it is open.                                  |
|  | Flow control is off.   | Check flow control to ensure it is on.                                      |
|  | Battery is dead (if using battery operated conserving device).                       | Change battery in device.   |
|  | Not using special double lumen<br>cannula (if using pneumatic<br>conserving device). | Connect double lumen nasal cannula to device.                               |
| Oxygen cylinder hisses and leaking oxygen. | Regulator is not tightly connected to cylinder.                                      | Turn cylinder off. Tighten regulator connection to cylinder.                |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Usage Hours by Cylinder Size

| FLOW RATE       | 1    | 1.5  | 2    | 2.5  | 3    | 4   | 5   |
|-----------------|------|------|------|------|------|-----|-----|
| M4              |      |      |      |      |      |     |     |
| Pulse Dose      | 5.7  | 3.8  | 2.9  | 2.3  | 1.9  | 1.4 | 1.1 |
| Continuous Flow | 1.9  | 1.3  | 0.9  | 0.7  | 0.6  | 0.5 | 0.4 |
| M6              |      |      |      |      |      |     |     |
| Pulse Dose      | 8.3  | 5.5  | 4.1  | 3.3  | 2.8  | 2.1 | 1.7 |
| Continuous Flow | 2.7  | 1.8  | 1.4  | 1.1  | 0.9  | 0.7 | 0.6 |
| ML6             |      |      |      |      |      |     |     |
| Pulse Dose      | 8.6  | 5.7  | 4.3  | 3.4  | 2.9  | 2.1 | 1.7 |
| Continuous Flow | 2.8  | 1.9  | 1.4  | 1.1  | 0.9  | 0.7 | 0.6 |
| С               |      |      |      |      |      |     |     |
| Pulse Dose      | 12.1 | 8.1  | 6.1  | 4.9  | 4.0  | 3.0 | 2.4 |
| Continuous Flow | 4.0  | 2.7  | 2.0  | 1.6  | 1.3  | 1.0 | 0.8 |
| D               |      |      |      |      |      |     |     |
| Pulse Dose      | 21.0 | 14.0 | 10.5 | 8.4  | 7.0  | 5.2 | 4.2 |
| Continuous Flow | 6.9  | 4.6  | 3.5  | 2.8  | 2.3  | 1.7 | 1.4 |
| E               |      |      |      |      |      |     |     |
| Pulse Dose      | 34.4 | 23.0 | 17.2 | 13.8 | 11.5 | 8.6 | 6.9 |
| Continuous Flow | 11.4 | 7.6  | 5.7  | 4.6  | 3.8  | 2.8 | 2.3 |

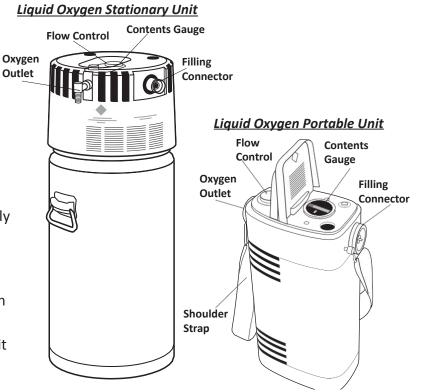
## Liquid Oxygen System

## Overview

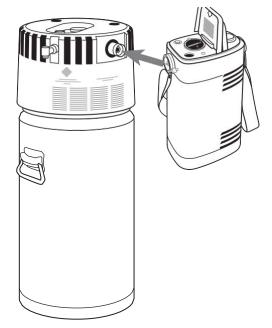
When oxygen is cooled to a very low temperature (around 300 degrees below zero Fahrenheit), it becomes a liquid. In liquid form, large amounts of oxygen can be stored in a container at a low pressure. To remain in the liquid form, the oxygen must continue to be kept very cold. Therefore, the units in which the liquid oxygen is stored are insulated canisters. As the liquid oxygen leaves the container, it warms up to room temperature and becomes a gas again. A liquid oxygen system usually includes a stationary reservoir and a portable unit.

## **Operating Instructions**

- 1. Keep equipment in a well-ventilated area (not in a closet).
- 2. Keep unit on a flat surface, do not allow the unit to tip over.
- 3. Keep equipment away from combustible materials (grease, lotions, solvents, etc.)
- Keep equipment at least 15 feet from heat sources (smoking, matches, open flame stoves, heaters, toasters, hair dryers, burning candles, etc.)
- 5. Do not place anything on top of the equipment (drinks, plants, covers, etc).
- 6. Adjust liter flow by turning the rotary flow control to the prescribed rate.
- 7. Keep equipment in upright position at all times.
- 8. Fit the nasal cannula to face by inserting the prongs into the nostrils (prongs point downward).
- 9. Slide tubing over and behind each ear.
- 10. Move slider upward under the chin but not too tight.
- 11. Use oxygen at the prescribed liter flow, number of hours and/or activities each day.

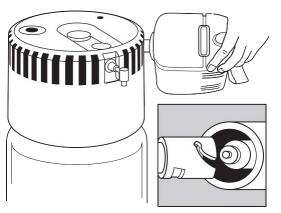


## Filling the Portable Unit:



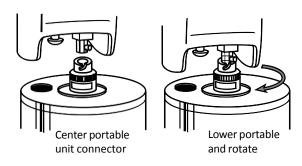
- 1. Wipe both of the filling connectors with a clean, dry, lint-free cloth to remove dust and moisture.
- 2. Turn off flow selector on portable unit.
- 3. Attach portable unit to stationary unit. Some units attach from the side of the reservoir and others refill at the top.

Side Mount Refill



- Tilt portable unit counter-clockwise to a 45 degree angle.
- Insert the portable unit connector into the reservoir connector.
- Rotate the portable unit clockwise to an upright position until the pin locks into place. You should not have to force it to rotate.
- Continue to step 4 below.

#### Top Mount Refill



- Center the portable unit connector over the reservoir connector OR lower the unit into the shaped recess or onto the connector.
- Once the unit is resting on the connector, rotate it clockwise until the pin locks into place and you feel firm resistance.

- 4. Open the valve (could be a lever, button, or key) to start fill process: During the fill process it is normal to hear a loud "hissing" sound.
- 5. It will take approximately two (2) minutes to fill the portable unit. Stay with equipment while portable is filling.
- Portable unit is full when "hissing" noise changes and a vapor cloud begins to spew from stationary unit.
- 7. Disengage the portable unit from the stationary unit.
  - If portable unit does not separate easily, the valves may be frozen together.
  - Wait until valves warm up to disengage (usually 5–10 minutes).
  - To prevent skin damage, do not touch any of the frosted areas.
- 8. Connect nasal cannula to oxygen outlet on portable unit.
- 9. Adjust flow to prescribed rate.

| Apr           | Portable Reservoir<br>Approximate Use Time in Hours (h) and Minutes (m) |         |         |         |
|---------------|---|---------|---------|---------|
| Liter<br>Flow |   |         |         |         |
| 1             | 9h  | 13h 30m | 15h 30m | 11h 45m |
| 2             | 4h 40m  | 6h 30m  | 8h 30m  | 6h 20m  |
| 3             | 3h  | 6h 30m  | 5h 48m  | 4h      |
| 4             | 2h 12m  | 5h 6m   | 4h 18m  | 3h 15m  |
| 5             | 1h 48m  | 4h 12m  | 3h 24m  | 2h 40m  |

## **Other Precautions**

#### In the even of accidental tip over:

- 1. Cautiously place unit back in upright position.
- 2. Never touch any of the frosted parts.



 Avoid contact with the liquid stream while filling the portable unit.

#### In the event of a liquid oxygen leak:

- 1. Attempt to reattach portable unit.
- 2. Open windows and doors and leave the area.
- 3. Contact your home oxygen provider.

### In the event of a liquid oxygen spill:

- 1. Ventilate the area by opening doors and windows.
- 2. Do not touch the liquid oxygen.
- Do not smoke or expose yourself to any heat source or fire.



- 4. If the spill is on asphalt, the area cordon off the area for at least 30 minutes.
- 5. Avoid sources of ignition and do not walk or roll equipment on affected area.
- 6. Contact your home oxygen provider.
- Any clothing or porous material that is splashed with liquid oxygen should be removed and aired for at least one hour away from any source of ignition.
- 8. Direct exposure to liquid oxygen or exposure to its vented gas or components cooled by liquid oxygen can result in frostbite.
- 9. If frostbite occurs, seek medical attention immediately.

#### If the vent fails to close and hissing continues

- 1. Remove portable unit by pressing the release button on the stationary unit.
- 2. Keep the portable oxygen unit upright and do

not tip unit during this time.

- 3. The portable oxygen unit will stop venting in a few minutes.
- 4. Allow the portable oxygen unit to warm until you can close the vent valve.
- 5. The portable oxygen unit may require up to 60 minutes to restore adequate pressure for usage.

### **Cleaning Instructions**

Wipe equipment as needed with damp cloth (water only).Do not use any type of cleaning products on the equipment.

#### Nasal Cannula:

Wipe with damp cloth if soiled and replace every 2 weeks (more often if you have a cold).

#### **Tubing:**

Wipe with damp cloth if soiled and replace every 90 days. Do not attempt to soak tubing.

### Humidifier Bottle: (every 3 days; replace monthly)

 Remove the humidifier bottle and wash in warm, soapy water.



- 2. Rinse thoroughly under cold running water.
- 3. Soak for 30 minutes in a mixture of 1 part white vinegar and 3 parts water.
- 4. Rinse under cold running water.
- 5. Allow the bottle to air dry.
- 6. Discard vinegar solution.
- 7. Refill humidifier bottle with distilled water.
- 8. Reconnect the humidifier to the stationary unit.



## Troubleshooting

| Problem   | Possible Cause   | Corrective Action  |
|---|--|--|
| No oxygen flow from cannula or mask.                    | Loose connections.                                     | Check each connection from the unit to the cannula.  |
|   | Flow control knob is not pointing directly to setting. | Adjust flow knob pointing directly to prescribed setting.  |
|   | Unit is empty  | Call your home care supplier.  |
|   | Stationary unit obstructed flow.                       | Fill portable unit and call your home care supplier.   |
|   | Dirty or faulty cannula or mask.                       | Remove cannula or mask and check<br>tubing for kinks or obstructions.<br>Replace item if needed.   |
|   | Decreased awareness of oxygen flow.                    | Place cannula in clean glass of<br>water, if bubbles observed, unit is<br>functioning properly.  |
| Portable unit cannot be removed from stationary system. | Units are frozen together.                             | Wait 15-30 minutes for connection to thaw.   |
| Portable unit does not last as<br>long as usual.        | Not fully filled.                                      | Review filling procedure. If problem persists, call your home care supplier.   |
| White vapor spewing out of connector after uncoupling.  | Fill valve stuck open.                                 | Immediately reconnect portable to<br>stationary while being careful not<br>to come in contact with the vapor.<br>Wait 15-30 minutes for ice to thaw.<br>Remove portable. |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Positive Airway Pressure (PAP) Device

### **Overview**

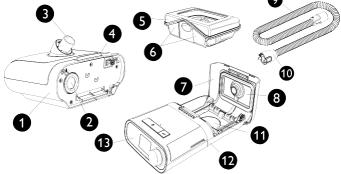
Most people using Positive Airway Pressure (PAP) devices have a condition known as Obstructive Sleep Apnea (OSA). During sleep, the muscles in the back of the throat relax causing the upper airway to become smaller. This is especially true during the deepest stages of sleep (called Rapid Eye Movement or REM sleep). In some individuals, the upper airway can actually collapse, causing a blockage of air movement into the lungs. When airflow is stopped for at least 10 seconds, it is referred to as apnea, and can occur many times each hour and hundreds of times each night.

PAP Device without Humidifier

| 1 | 2 | 3      | 0    |
|---|---|--------|------|
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| •  | •                | <b>9 0</b>                   |
|----|------------------|------------------------------|
| #  | Device Feature   | Description                  |
| 1  | On/Off Button    | Starts and stops the airflow |
| 2  | Ambient Light    | Detects room light levels    |
|    | Sensor           | and adjusts brightness       |
| 3  | Ramp Button      | Activates ramp feature       |
| 4  | SD Card & Filter | Access to SD card and filter |
| 5  | LCD Display      | User interface for device    |
| 6  | Control Dial     | Scroll options, press to     |
|    |                  | choose an option.            |
| 7  | Accessory        | Access to optional           |
|    | Access           | accessories                  |
| 8  | Humidifier       | Humidifier connects          |
|    | Connector        | to the back of device.       |
| 9  | Air Outlet Port  | Connect tubing here          |
| 10 | Power Inlet      | Connect power cord here      |

PAP Device Humidifier Attachment



| #  | Device Feature                      | Description   |
|----|-------------------------------------|---|
| 1  | Humidifier                          | Connect your therapy device here  |
| 2  | Air Inlet Port                      | Connects to outlet port on therapy device   |
| 3  | Air Outlet Port                     | Connect the tubing here   |
| 4  | Lid Release<br>Latch                | Latch to open humidifier lid  |
| 5  | Water Tank                          | One piece removable tank  |
| 6  | Max Fill Line                       | Max water level for safe operation  |
| 7  | Humidifier Lid                      | Open lid to access water tank   |
| 8  | Humid. Lid Seal                     | Seals water tank to<br>humidifier lid   |
| 9  | Flex Heated<br>Tubing<br>(optional) | This optional heated<br>tube connects from the<br>humidifier to the patient's<br>mask |
| 10 | Humidifier<br>Connector End         | Connect this end of tubing to the humidifier  |
| 11 | Heated Plate                        | Warms water in tank   |
| 12 | Humidifier<br>Release Button        | Release humidifier from therapy device  |
| 13 | Therapy Device                      | Humidifier connects to back of therapy device   |

## **Operating Instructions**

- 1. Place device on a flat level surface or on the floor next to the bed. Do not place the device directly onto carpet, fabric or other flammable materials. Keep device away from curtains or other items that could block air flow to device.
- 2. Fill the humidifier with distilled water.
- 3. Attach tubing to flow generator and to the face mask or nasal pillows.
- Plug socket end of AC power cord into the power supply. Plug pronged end of AC power cord into an electrical outlet that is not controlled by wall switch. Plug the power supply's cord connector into the power inlet on the side of device.
- 5. Power-on device to inflate mask (or nasal pillows)
- 6. Fit mask (or nasal pillows) to face and adjust headgear.
- 7. Move into a comfortable sleeping position and readjust headgear, if necessary.
- 8. Breathe through nose and try not to exhale through mouth.
- If unable to exhale with full pressure, press ramp button (allows device to start with low air pressure with a gradual increase to your prescribed pressure).
- 10. If it is necessary to get up during the night, do not remove the mask or nasal pillows from the face. Turn power off on the PAP device and disconnect tubing from device before getting up. Upon returning to bed, reconnect the tubing to the PAP device and turn power on.
- 11. Upon rising in the morning, turn off device and remove mask (or nasal pillows) and headgear.
- 12. Empty water chamber and refill with distilled water.

### **Cleaning Instructions**

#### Nasal Mask, Full Face Mask and Tubing (daily)

- 1. Wash in warm water with mild detergent.
- 2. Rinse thoroughly under cold running water.
- 3. Shake off excessive water.
- 4. Allow to air dry on a paper towel and cover parts with another paper towel to keep dust off.

#### Headgear or Chinstrap (weekly)

- 1. Machine or hand wash in mild detergent if soiled
- 2. Allow to air dry.

#### Humidifier (every 3 days)

- 1. Wash in warm water with mild detergent.
- 2. Rinse thoroughly under cold running water.
- 3. Shake off excessive water.
- 4. Soak humidifier for 30 minutes in a solution of 1 part white vinegar and 3 parts water.
- 5. Rinse thoroughly under cold running water.
- 6. Shake off excessive water.
- 7. Allow to air dry on a paper towel and cover with another paper towel to keep dust off.
- 8. Dispose of white vinegar and water.

#### **Reusable Filter (weekly)**

- 1. Wash in warm soapy water
- 2. Rise using cold running water
- 3. Squeeze water from filter.
- 4. Allow to dry before reinstalling.

#### **Disposable Filter**

Replace white disposable filter at least every 2 weeks, more frequently if necessary.

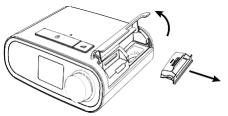
## Installing/Replacing The Air Filters

The device uses a reusable blue pollen filter that can be rinsed and a disposable light-blue ultra-fine filter. The reusable blue filter screens out normal household dust and pollens, while the light-blue ultra-fine filter provides more complete filtration of very fine particles. The reusable blue filter must be in place at all times when the device is operating. The ultra-fine filter is recommended for people who are sensitive to tobacco smoke or other small particles. The reusable blue filter is supplied with the device. A disposable light-blue ultra-fine filter may also be included. If your filter is not already installed when you receive your device, you must at least install the reusable filter before using the device.

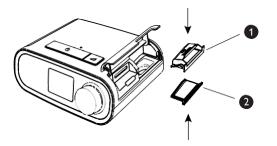
This device has an automatic air filter reminder. Every 30 days, the device will display a message reminding you to check your filters and replace them as directed.

Note: This message is a reminder only. The device does not detect the performance of the filters nor does it recognize when a filter has been rinsed or replaced.

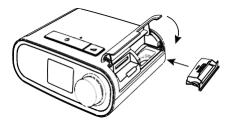
1. Lift up on the filter access door and swing open. If replacing, pull out the old filter assembly.



 If applicable, place a dry, reusable blue pollen filter (1) on top of a new, optional disposable light blue ultra-fine filter (2) and firmly snap them together.



3. Place the new filter assembly back in the side of the therapy device. Swing the door closed.



## Menu Navigation (Therapy On) & Optional Humidification Settings

While the device is delivering therapy, you can adjust Tube Temperature or Humidifier Settings. Rotate the control dial to choose either setting. Press and rotate the dial to change the setting.

Note: If you are using the Humidifier without the Heated Tube, simply just rotate the control dial to change the Humidifier setting.



Therapy Pressure Screen 4

| # | Device Feature                            | Description  |
|---|---|--|
| 1 | Therapy                                   | Displays current delivered   |
|   | Pressure                                  | pressure   |
| 2 | Adjustable Tube<br>Temperature<br>Setting | Change setting 0-5, only<br>works when heated tube is<br>connected |
| 3 | Adjustable<br>Humidifier<br>Setting       | Change setting 0-5, only displays if humidifier is attached        |
| 4 | Enabled<br>Features                       | Depending on setup,<br>certain available features<br>shown here    |

### **Sleep Progress**

Your device provides summary information about your therapy use each time therapy is turned off. The first screen displays your "3 Night Summary." It shows your nightly usage for the last 3 sleep sessions (measured in 24 hour periods, ending at noon each day). The most recent session is

displayed in the right hand bar, labeled with the number of hours slept. A green bar indicates that you slept more than 4 hours, and a yellow bar indicates less than 4 hours of use.



**Three Night Summary Screen** 

The second screen shows the total number of 4+ hour nights that you have slept in the last 30 days. It provides a goal of sleeping at least 4 hours per night for 70% of the last 30 nights. Therefore the

goal is 21 "good nights" of use. This screen provides a simple way to track your progress. The screen will stop displaying when you reach the goal, or after the first 90 days of use has passed, whichever comes first.



Goal Progress Screen

## **Check Mask Fit**

The optional check mask fit feature can be enabled or disabled by your home care provider. This feature allows you to check the fit of your mask prior to starting therapy. This is done by measuring the



Check Mask Fit Screen

amount of leak. Put on your mask assembly. Refer to your mask instructions if needed. Navigate to the

Check Mask Fit screen under "My Setup" and press the control dial to initiate the check.

The device will deliver a test pressure while the screen counts down 40 seconds. A green bar indicates good fit, while a red bar indicates improvement is needed. After the test, normal therapy will start and the screen will either display a green check mark or a red "X". The green check mark indicates that the leak found allows for optimal performance of the device. The red "X" indicates that the leak may affect device performance, however, the device will remain functional and deliver therapy.

## Troubleshooting

| Problem   | Possible Cause  | Corrective Action  |
|---|---|--|
| Device does not power-<br>on.                         | Power cord not firmly connected to the device or the electrical outlet.               | Verify proper electrical connections.  |
|   | Device is not connected to a live outlet.   | Check to verify live outlet (plug in a<br>lamp or other electrical device into the<br>outlet).                     |
|   | Device has blown a fuse.  | Replace fuse with same type. Verify the voltage selector is set correct.   |
|   | DC battery voltage fell below 10.5<br>volts.  | Recharge or replace battery.   |
| Device stops and starts.                              | Power cord not firmly connected to the device or the electrical outlet.               | Verify proper electrical connections.  |
| No air flow from device when power is connected.      | Voltage selector switch is set incorrect.   | Verify the voltage selector is set correct.  |
| Soreness around nose and/or mask leak.                | Wrong size mask   | Contact supplier to refit mask.  |
|   | Wrong type mask   | Contact supplier to fit for new type mask.   |
|   | Headgear straps too tight.  | Adjust straps.   |
| Nasal congestion/runny nose                           | Nasal reaction to air flow.   | Increase room humidity. Contact your<br>physician or supplier to ask about<br>using a humidifier with your device. |
| Dryness or burning sensation<br>nose or throat.       | Air is too dry. Relative humidity is<br>less than 40%.                                | Increase room humidity. Contact your physician or supplier to ask about using a humidifier with your device.       |
| Cold nose.  | Room air temperature is too cold.<br>Air cools while traveling through<br>the tubing. | Reposition the tubing so it runs under your bed covers to reduce heat loss.  |
| Redness on the face where the mask contacts the skin. | Irritation or allergy to mask material.   | Use barrier between your skin and the<br>mask (3M Micropore tape or Squibb's<br>Duoderm).                          |

## Routinely Changing Your PAP Supplies

Timely replacement of your supplies is essential for optimal comfort and proper operation. In addition to cleaning, your mask, cushions, headgear, tubing, filters and other components, you should replace these items on a regular basis. Ignoring the replacement schedule may lead to mask air leaks, discomfort, skin irritation, illness and dissatisfaction.

Sleep Central, a division of Rotech Healthcare Inc., provides quality supplies for your CPAP or BIPAP device and ongoing customer support for your success and improved health. Respiratory Therapists are available to answer technical questions or clinical issues and Patient Care Coordinators are available to address your questions and monitor your replacement schedule based on your insurance coverage.

#### Mask Replacement (every 3 months)

Constant use and routine cleaning of your mask causes it to become less effective over time leading to decreased comfort and non-compliance with your therapy. Routine replacement helps protect your health by eliminating the potential health risks associated with a contaminated and worn out mask.

#### Mask Cushion & Pillows (2 times a month, once a month for full face mask)

Today's masks are made for better comfort and seal but the fragile material used is highly susceptible to tears and deterioration. Constant wearing of a mask compresses the cushion or pillow, which along with normal oils from your face leads to a weaker seal and adversely affects the effectiveness of the mask. If the mask does not form a strong seal it will not do its job properly and leads to ineffective therapy. When cushions or pillows deteriorate you should replace them and not just tighten the mask further, as this creates many other issues including strap marks, headaches and teeth or jaw pain.

#### Headgear & Chinstrap (every 6 months)

Most headgear and chinstraps are made out of neoprene, which stretches to accommodate your facial and head structure. As it stretches out over time it hampers the mask's ability to form a strong seal. Cinching the headgear or chinstrap tighter because of an improper fit results in a poor mask seal, possible sores on the face, strap marks and headaches.

#### Tubing (every 3 months)

Unseen to the naked eye, tiny holes may develop and can compromise the accurate delivery of air pressure. Even with routine cleaning a buildup of germs can still occur. Remember anything in the tubing is being breathed directly into your lungs, which can lead to respiratory issues.

#### Filters (disposable filters: 2 times a month) (non-disposable filters: every 6 months)

Replacing filters can add life to your machine. Just as you should routinely change your furnace or air conditioning filters at home, or the filters in your automobile, you should regularly change the filters in your machine for optimum care.

#### Humidifier Water Chamber (every 6 months)

Your water chamber can become discolored with a white powdery substance, or develop a pink fungus. Even with vigilant cleaning you must replace the chamber on a regular basis.

## Sleep Central: (800) 288-1853 or email help@sleepcentral.com

## PAP Supplies Replacement Schedule

|                          |          | Setup               |   |   |   |   |   |   |   |   |   |    |    |    |
|--------------------------|----------|---------------------|---|---|---|---|---|---|---|---|---|----|----|----|
|                          |          |                     |   |   |   |   |   |   |   |   |   |    |    |    |
| Item                     |          | Month               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mask Interface           |          |                     |   |   |   |   |   |   |   |   |   |    |    |    |
| □Full Face Mask          | G        | 1 every<br>3 months |   |   |   |   |   |   |   |   |   |    |    |    |
| □Nasal Mask              |          | 1 every<br>3 months |   |   |   |   |   |   |   |   |   |    |    |    |
| □Nasal Pillows           |          | 1 every<br>3 months |   |   |   |   |   |   |   |   |   |    |    |    |
| Mask Interface Cushions, | /Pillows |                     |   |   |   |   |   |   |   |   |   |    |    |    |
| □Full Face Cushion       |          | 1 every<br>month    |   |   |   |   |   |   |   |   |   |    |    |    |
| □Nasal Cushion           |          | 2 every<br>month    |   |   |   |   |   |   |   |   |   |    |    |    |
| □Nasal Pillow Cushion    |          | 2 every<br>month    |   |   |   |   |   |   |   |   |   |    |    |    |
| Headgear                 | Ż        | 1 every<br>6 months |   |   |   |   |   |   |   |   |   |    |    |    |
| Chinstrap                | Ĥ        | 1 every<br>6 months |   |   |   |   |   |   |   |   |   |    |    |    |
|                          |          | 1 every<br>3 months |   |   |   |   |   |   |   |   |   |    |    |    |
| Disposable Filters       |          | 2 every<br>month    |   |   |   |   |   |   |   |   |   |    |    |    |
| □Non-disp. Filters       |          | 1 every<br>6 months |   |   |   |   |   |   |   |   |   |    |    |    |
| Humidifier Chamber       | <b>E</b> | 1 every<br>6 months |   |   |   |   |   |   |   |   |   |    |    |    |

\*Quantity and frequency may vary with your insurance coverage.

## Sleep Central: (800) 288-1853 or email help@sleepcentral.com

## Volume <u>Ventilator</u>

#### Overview

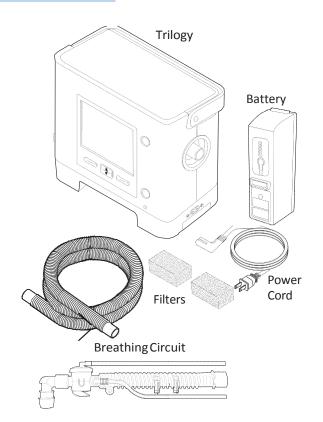
A volume ventilator also known as a respirator, is used to mechanically assist breathing by delivering air to the lungs. A volume ventilator may be ordered for use only at night, during limited daytime hours or around the clock, depending on your condition.

Volume ventilators used in the home are small, lightweight and portable; operate on household electrical current with an internal backup battery in case of power outage. It is advisable to have an external backup battery or generator readily available in case of power outage or an emergency.

A manual resuscitator or "self-inflating bag" should be kept readily available to provide positive pressure ventilation to the patient following suctioning and in case of equipment malfunction.

#### **Operating Instructions**

- 1. Ventilator must be placed on flat level surface at or below patient's head at all times.
- 2. Humidifier must be placed on a stand or attached to the ventilator (positioned lower than the patient's head).
- 3. Fill humidifier with distilled water only.
- 4. Plug ventilator and humidifier directly into grounded electrical outlet. Do not use extension cords or multi-outlet adapters.
- 5. Attach small section of corrugated tubing between ventilator and inlet on humidifier.
- 6. Connect patient circuit to outlet on humidifier.
- 7. Add water trap to lowest point on patient circuit.
- 8. Power on ventilator and humidifier.
- 9. Connect oxygen source (if required) and set to prescribed rate.
- 10. Ensure ventilator controls are set at prescribed settings. Do not change settings unless instructed by the physician.
- 11. Before connecting patient, perform leak test by occluding the end of circuit and observe high pressure alarm indicating circuit passes leak test. If high pressure alarm does not sound, check all connections on circuit and humidifier and test again.







12. When alarm sounds, observe patient breathing effort and recheck ventilator control settings. All alarms indicate a potential safety risk to the

patient.\*IF IN DOUBT, DISCONNECT PATIENT FROM CIRCUIT AND USE MANUAL RESUSCITATOR (WITH OXYGEN IF PRESCRIBED) UNTIL PROBLEM CAN BE CORRECTED!





- 13. Refill humidifier bottle with distilled water as necessary.
- 14. Empty water trap as necessary.
- 15. In case of power failure, the portable ventilators with switch to an internal battery. The internal

battery will last approximately 1 hour when fully charged. It is also recommended to have an external battery to last from 4 to 24 hours.



## Changing Ventilator Circuit & Humidifier (Replace every 4 weeks)

It is recommended to have <u>two (2) people available</u> when changing the circuit. You should have the following items assembled (patient ready) before you disconnect the patient:

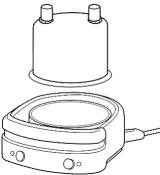
- 1. Clean ventilator circuit
- 2. Clean humidifier chamber
- 3. Manual resuscitator
- 4. Oxygen source (if prescribed)

#### **Changing Ventilator Circuit**

- 1. Wash your hands.
- 2. Place manual resuscitator at patient's side.
- 3. Have clean circuit assembled and ready.
- 4. Disconnect dirty tubing from ventilator and patient.
- 5. Ventilate patient with manual resuscitator (and oxygen if ordered).
- 6. Connect clean circuit to ventilator.
- 7. Check circuit for leaks before reconnecting patient.
- 8. After patient is reconnected, check for a rise in chest and pressure manometer during next inspiration.
- 9. Wash your hands.

#### **Changing Humidifier Chamber**

- 1. Wash your hands.
- 2. Fill clean humidifier with distilled water.
- Disconnect patient circuit from trach tube and attach resuscitation bag.



- Have 1 caregiver gently squeeze bag to meet patient normal respiratory breathing rate while the other caregiver changes humidifier.
  - 5. Disconnect patient circuit and small corrugated tubing from humidifier.
  - 6. Replace dirty humidifier chamber with clean chamber.
  - 7. Reconnect small corrugated tubing from ventilator to inlet on clean humidifier chamber.
  - 8. Reconnect patient circuit to outlet on clean humidifier chamber.
  - 9. Check circuit for leaks before reconnecting patient.
  - 10. Remove resuscitation bag from trach tube and reconnect circuit.
  - 11. After patient is reconnected, check for a rise in chest and pressure manometer during next

inspiration.

12. Wash your hands.

### **Cleaning Instructions**

#### **Ventilator Circuit**

Clean As Needed (Replace every 4 weeks)

- Disassemble and wash reusable circuit (or reusable parts) in warm, soapy water using a mild liquid detergent.
- 2. Rinse thoroughly under cold running water.
- 3. Soak entire circuit (or reusable parts) in a solution of 1 part white vinegar and 3 parts water for 30 minutes.
- 4. Rinse thoroughly under cold running water.
- 5. Shake off excessive water.
- 6. Allow to air dry on a paper towel and cover with another paper towel to keep off dust.
- 7. Reassemble circuit and store in sealed plastic bag.

### **Humidifier:**

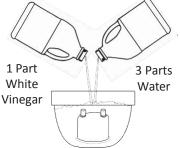
### Daily

 Refill humidifier chamber up to the maximum level with distilled water.



### Weekly

- 1. Wash humidifier chamber in warm, soapy water using a mild liquid detergent.
- 2. Rinse thoroughly with cold running water.
- Soak humidifier in a solution of 1 part white vinegar and 3 parts water for 30 minutes.



4. Rinse thoroughly under

cold running water.

- 5. Shake off excess water and allow to air dry on a paper towel, covering with another clean paper towel to keep off dust.
- 6. When dry, store in a sealed plastic bag.

#### Filters:

- 1. Check foam filters weekly, clean with warm water as needed.
- 2. Squeeze thoroughly to remove excess water and allow time to completely dry before reinstalling.
- 3. Replace cloth filters (if equipped) as necessary.
- 4.

#### Surface:

1. Clean surface as needed with a damp (water only) cloth. Do not spray or use any cleaning products on the equipment.

## Troubleshooting

| Possible Cause   | Corrective Action  |  |  |  |  |
|--|--|--|--|--|--|
| Patient disconnected or circuit<br>connection is not tight | Verify circuit firmly connected<br>to trach. Confirm all other<br>connections are tight.   |  |  |  |  |
|  | Ensure low pressure alarm is at correct setting.   |  |  |  |  |
| Buildup of secretions in patient's airway.                 | Suction patient.   |  |  |  |  |
| Water accumulated in patient circuit.                      | Empty water traps on circuit.  |  |  |  |  |
| Internal battery is running down.                          | Connect ventilator to a wall<br>circuit or external battery<br>source.<br>If no power source available,<br>remove patient from ventilator<br>and ventilate with a manual<br>resuscitation bag. |  |  |  |  |
|  | Patient disconnected or circuit<br>connection is not tight<br>Buildup of secretions in patient's<br>airway.<br>Water accumulated in patient circuit.   |  |  |  |  |

\*Contact your medical equipment supplier if you are unable to resolve the problem.

## Wheelchair

## Overview

A wheelchair is mobility assistance equipment for use by individuals with difficulty walking or impossible due to illness, injury or disability. Often people who have



difficulty sitting and walking also need to use a wheelchair. The chair is propelled by the seated occupant turning the rear wheels by hand or by someone else pushing using the handles located behind the seat.

## **Safety Instructions**

- Do not operate wheelchair on streets or roadways.
- Do not use on wet or icy surfaces.
- Do not turn wheelchair while going down hill.
- Do not attempt inclines without anti-tippers installed in the downward position.
- Do not attempt any incline or decline greater than six degrees (10% grade, or one foot of rise or fall per ten feet of ramp length).
- Do not use wheel locks to slow or stop chair.
- Do not stand on foot or leg rests.

## **Operating Instructions**

- 1. To fold chair, grab front and back of seat and pull up.
- To open chair, place hands on seat, push down and outward with both hands.
- Always lock both brakes before rising or sitting. Put



chair against the wall or have someone steady from behind.

- 4. Lift up the footplate before rising or sitting to prevent tripping.
- 5. Keep the wheelchair clean. Dust, dirt or grease may impair the chair's function.
- 6. Periodically shift your body weight while seated in the wheelchair to prevent skin irritation or muscle soreness.

### Swing-Away Foot and Leg Rest

Remove from Wheelchair:

- To release foot and leg rests, pull swing-away lever forward, toward front of wheelchair. Foot/ leg rest will swing outward.
- 2. To remove, lift foot/leg rest straight up off wheelchair hinge pins.

### Attach to Wheelchair:

- 1. Set foot/leg rest on wheelchair (foot/leg rest hinge plates engage wheelchair hinge pins).
- 2. Swing foot/leg rest inward.
- Ensure that swing-away release lever is locked in a rearward position, toward back of wheelchair.

#### Safety Accessories

<u>Heel Loops</u>: Provide support behind the heel of your foot, keeps foot from sliding backwards off wheelchair footplate.

<u>Anti Tippers</u>: Device to prevent the wheelchair from tipping over

<u>Brake Extensions</u>: Device extends handle higher and closer for the user to engage wheelchair brakes.







Anti-tipper



Brake Extension Handle



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