







1060AW



Drive DeVilbiss® 10-Liter Oxygen Concentrator Instruction Guide

**WARNING**–Read instruction guide before operating this equipment. ASSEMBLED IN USA





Guía de instrucciones del concentrador de oxígeno de 10-litros de Drive DeVilbiss®

**ADVERTENCIA**-Lea la guía de instrucciones antes de poner a funcionar este equipo. ENSAMBLADO EN EE. UU.

Guide d'instructions du concentrateur d'oxygène 10-litres Drive DeVilbiss®

**AVERTISSEMENT**–Lire le mode d'emploi avant d'utiliser ce dispositif.

ASSEMBLÉ AUX ÉTATS-UNIS



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|---|--------|
| FRANÇAIS fr                             | fr-29  |
| TABLE OF CONTENTS                       |        |
| Symbol Definitions en                   | en - 3 |
| Important Safeguardsen                  | en - 3 |
| Introduction en                         | en - 6 |
| Intended Use en                         | en - 6 |
| Indications For Use en                  | en - 6 |
| Contraindications en                    | en - 6 |
| Essential Performance en                | en - 6 |
|   | en - 6 |
| , | en - 6 |
|   | en - 6 |
| Important Parts of Your Concentratoren  | en - 7 |
| Setting Up Your Concentrator en         | en - 8 |
| Operating Your Concentrator en          | en - 8 |
|   | en - 9 |
| Caring for Your Concentrator en         | en - 9 |
|   | n - 11 |
| ·                                       | n - 12 |
|   | n - 13 |
|   | n - 14 |
|   | n - 15 |
|   | n - 15 |

# A

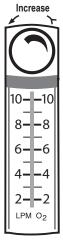
#### WARNING

Under certain circumstances, oxygen therapy can be hazardous. Seek medical advice before using an oxygen concentrator.

Return and Disposal.

Provider's Notes.

Service and Maintenance Guidance



**Drive DeVilbiss 10-Liter Concentrator** 

EN - 2 SE-1060AW

## **SYMBOL DEFINITIONS**

|               | It is mandatory to read and understand the operating instructions prior to use.  This symbol has a blue background on the product label.                        | <b>M</b> | Manufacturer  | REF        | Catalog Number   | LOT  | LOT Number  |
|---------------|---|----------|---|------------|--|--|---|
| 1             | Electric Shock Hazard. Cabinet to be removed by authorized personnel only.  This symbol has a yellow background on the product label.                           | MD       | Medical Device  | SN         | Serial Number  | C TÚV Rheinjand us                               | TUV Rheinland C-US approval mark  |
|               | Danger - No smoking near patient or device.  This symbol has a red circle and diagonal bar on the product label.  | $\sim$   | Alternating Current   |            | Class II, Double Insulated   | <u>†</u>   | Type BF applied part  |
| 8             | Use no Oil, Grease or Lubricants  This symbol has a red circle and diagonal bar on the product label.   | +5°C     | Operating Temperature Range +5 to +40°C (+41 to +104°F)   | 795<br>hPa | Atmospheric Pressure<br>Range 795 to 1013 hPa<br>(Approximate sea level to<br>6562 ft)       | ≤ 10 LP  | M   |
|               | Do not use near heat or open flames  This symbol has a red circle and diagonal bar on the product label.  | 0        | Off<br>On   | <u></u>    | The outlet connector marked with rated range of gas pressure and rated range of gas flowrate | 1010<br>88<br>66                                 | Maximum recommended flow rate: 10 LPM   |
| A             | General Warning  This symbol is used throughout this manual to indicate hazardous situations to avoid.  | (1)      | Recurring Reminders   | 1          | Attention Required   | 44<br>22<br>LPM O <sub>2</sub>                   |   |
| !             | Important Information  This symbol is used throughout this manual to indicate important information you should know.  | ů        | Nurse/Attendant   | Ů          | Biomed Technician  | (O. <u>X</u>                                     | Startup Low O2 LED This symbol illuminates Yellow when active.                        |
| 0             | Note and Information Symbol  This symbol is used throughout this manual to indicate notes, useful tips, recommendations and information.                        |          | Check Air Filter<br>Notification LED<br>This symbol illuminates<br>Yellow when active               | ×,         | Low Flow LED This symbol illuminates Red when active   | 02 % (0)   | xygen Percentage) Status LEDs   |
| $ m R_{only}$ | CAUTION: Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.  |          | Check Compressor Intake<br>Filter Notification LED<br>This symbol illuminates<br>Yellow when active | <b>₽</b>   | Over Temperature LED This symbol illuminates Red when active.                                | Critical Low Oxygen Gilluminates Red when active | Low Oxygen LED Oxygen LED Olluminates Yellow when active Geen when active             |
| IP21          | Ingress Protection - Protected against finger access to hazardous parts; protected against vertically falling water drops.                                      |          |   | *          | Service Required LED<br>This symbol illuminates<br>Red when active.                          |  | Audio Pause Button and<br>Active LED<br>This symbol illuminates<br>White when active. |
| X             | This device contains electrical and/or electronic equipment that must be recycled per EU Directive 2012/19/EU- Waste Electrical and Electronic Equipment (WEEE) |          |   |            | MRI Unsafe symbol –<br>Unsafe for Magnetic<br>Resonance Environment                          | X  | Hour Meter  |

## **IMPORTANT SAFEGUARDS**

Read this entire guide before using your Drive DeVilbiss concentrator. Important safeguards are indicated throughout this guide. Pay special attention to all safety information. Imminently and potentially hazardous information is highlighted by these terms:



#### DANGER

Indicates an imminently hazardous situation which could result in death or serious injury to the user or operator if not avoided.



## WARNING

Indicates a potentially hazardous situation which could result in death or serious injury to the user or operator if not avoided.



## **CAUTION**

Indicates a potentially hazardous situation which could result in property damage, injury, or device damage if not avoided.



## **IMPORTANT**

Indicates important information you should know.



## NOTE

Indicates notes, useful tips, recommendations, and information.

## READ ALL INSTRUCTIONS BEFORE USING.



#### **DANGER**

- 1. NO SMOKING signs should be prominently displayed.
- 2. Oxygen causes rapid burning. Do not smoke while your oxygen concentrator is operating, or when you are near a person utilizing oxygen therapy.
- 3. Smoking during oxygen therapy is dangerous and is likely to result in facial burns or death. Do not allow smoking within the same room where the oxygen concentrator or any oxygen carrying accessories are located.
  - If you intend to smoke, you must always turn the oxygen concentrator OFF, remove the cannula and leave the room where either the cannula or mask or the oxygen concentrator is located. If unable to leave the room, you must wait 10 minutes after you have turned OFF the oxygen concentrator before smoking.
- 4. Oxygen makes it easier for a fire to start and spread. Do not leave the nasal cannula or mask on bed coverings or chair cushions if the oxygen concentrator is turned on but not in use. The oxygen will make the materials flammable. Turn the oxygen concentrator OFF when not in use to prevent oxygen enrichment.
- 5. Keep the oxygen concentrator and cannula at least 2 m (6.5 feet) from hot, sparking objects or naked sources of flame.
- 6. Open flames during oxygen therapy are dangerous and are likely to result in fire or death. Do not allow open flames within 2 m (6.5 feet) of the oxygen concentrator or any oxygen carrying accessories.
- 7. Drive DeVilbiss oxygen concentrators are equipped with a fire mitigating outlet fitting that prevents propagation of fire into the unit.



#### WARNING

- 1. To avoid electric shock, do not plug the concentrator into an AC outlet if the concentrator cabinet is broken. Do not remove the concentrator cabinet. The cabinet should only be removed by a an appropriately trained biomed technician. Do not apply liquid directly to the cabinet or utilize any petroleum-based solvents or cleaning agents.
- 2. Improper use of the power cord and plugs can cause a burn, fire or other electric shock hazards. Do not use the unit if the power cord is damaged.
- Ensure the mains power cord is fully inserted into the concentrator connector and the power cord plug is completely inserted into a fully functioning AC wall outlet.Failure to do so may cause an electrical safety hazard.
- 4. The accessories (nasal cannula, masks, oxygen tubing, humidifiers, etc.) that supply oxygen to the patient must be equipped with a means that, in case of fire, stops the propagation of fire through the accessory for the safety of the patient and others. A fire activated flow-stop or thermal fuse device, if available, should be used with the oxygen supply accessories. These types of flow-stop devices stop the flow of oxygen to the patient in the event of fire. This means of fire protection should be located as close to the patient as practicable.
- 5. Locate oxygen tubing and power supply cords to prevent tripping hazards and reduce the possibility of entanglement or strangulation.
- 6. Do not lubricate fittings, connections, tubing or other accessories of the oxygen concentrator to avoid the risk of fire and burns.
- Do NOT use lubricants, oils or grease.
- 8. Before attempting any cleaning procedures, turn the unit OFF.
- 9. Use only water-based lotions or salves that are oxygen-compatible before and during oxygen therapy. Never use petroleum-based or oil-based lotions or salves to avoid the risk of fire and burns.
- 10. Use only spare parts recommended by the manufacturer to ensure proper function and to avoid the risk of fire and burns.
- 11. If you feel discomfort or are experiencing a medical emergency while undergoing oxygen therapy, seek medical assistance immediately to avoid harm.
- 12. Geriatric, pediatric or any other patient unable to communicate discomfort can require additional monitoring and/or a distributed alarm system to convey the information about the discomfort and/or the medical urgency to the responsible caregiver to avoid harm.
- 13. Use of this device at an altitude above 10,000 feet (3050 meters) or above a temperature of 104°F (40°C) or greater than 95% relative humidity may affect the flow rate and the percentage of oxygen and consequently the quality of the therapy. Refer to specifications for details regarding parameters tested.
- 14. To ensure you receive the therapeutic amount of oxygen delivery according to your medical condition, the Oxygen Concentrator must:
- 15. be used only after one or more settings have been individually determined or prescribed for you at your specific activity levels.
- 16. be used with the specific combination of parts and accessories that are in line with the specification of the concentrator manufacturer and that were used while your settings were determined.
- 17. Your delivery settings of the oxygen concentrator should be periodically reassessed for the effectiveness of therapy.
- 18. For your safety, the oxygen concentrator must be used according to the prescription determined by your physician.
- 19. Under certain circumstances, oxygen therapy can be hazardous. Seek medical advice before using an oxygen concentrator.
- 20. The proper placement and positioning of the prongs of the nasal cannula in the nose is critical to the amount of oxygen delivered to the respiratory system of the patient.
- 21. Do not modify the oxygen concentrator or accessories.



#### **WARNING**



- Do not bring the device or accessories into a Magnetic Resonance (MR) environment as it may cause unacceptable risk to the patient or damage to the oxygen concentrator or MR medical devices. The device and accessories have not been evaluated for safety in an MR environment.
- 2. Do not use the device or accessories in an environment with electromagnetic equipment such as CT scanners, Diathermy, RFID and electromagnetic security systems (metal detectors) as it may cause unacceptable risk to the patient or damage to the oxygen concentrator. Some electromagnetic sources may not be apparent, if you notice any unexplained changes in the performance of this device, if it is making unusual or harsh sounds, disconnect the power cord and discontinue use. Contact your home care provider.
- 3. This device is suitable for use in home and healthcare environments except for near active HF SURGICAL EQUIPMENT and the RF shielded room of an ME SYSTEM for magnetic resonance imaging, where the intensity of Electromagnetic DISTURBANCES is high.
- 4. Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- 5. Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the oxygen concentrator, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- 6. Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- 7. Do not use ACCESSORIES, detachable parts and materials not described in the instructions for use.
- 3. Do not interconnect this oxygen concentrator with other equipment not described in the instructions for use.

EN - 4 SE-1060AW



#### WARNING

#### Risk of injury or damage

- 1. When the device is operated at the extremes of the environmental operating specifications (i.e., maximum temperatures and humidity), and in a single fault condition, which is a single component or performance malfunction, such as a blocked exhaust vent, blocked air intake, or an internal cooling fan failure, the temperature of the air coming out of the exhaust vents, located on the bottom left and bottom right sides of the unit can reach temperatures capable of causing a burn injury (see stated temperature and contact time values in the model specific tables below).
- 2. Keep exposed body parts, such as hands and feet, a minimum of 72 inches (1.83 meters) away from the exhaust vents to avoid the risk of burns. Single fault conditions may result in visual and audible alerts and alarms.
- 3. **(1)** NOTE Under normal and single fault conditions, the concentrator releases warm air out the bottom of the unit (exhaust vents) which may discolor temperature sensitive flooring surfaces. The concentrator should not be used over flooring that is sensitive to heat staining. The Manufacturer is not responsible for flooring that becomes discolored.
- 4. Operate the unit in a cool, dry area with good ventilation, located on a hard surface, avoid thick rugs or carpeting. NEVER block the air intake or exhaust vents. Keep the unit a minimum of 12 inches (30.5 cm) away from any wall, draperies, or any other objects that might prevent the proper flow of air in and out of your oxygen concentrator. Proper air flow is needed to prevent overheating of the oxygen concentrator. DO NOT place the concentrator near any heat source such as hot air registers or heaters. Overheating of the oxygen concentrator may lead to low oxygen output and a risk of burns.
- 5. The oxygen concentrator should be located in a well-ventilated area. DO NOT operate the unit in a closed or confined space, such as a closet, bathroom, etc. Avoid operating the device near smoke pollutants and fumes.
- 6. Under extreme environmental conditions and a single fault condition occurs, the following device surface temperatures may exceed 106 °F (41 °C). See Table 1 below for the model specific maximum temperature and safe contact guidance:

#### Table 1 - 1060AW

|   | Maximum Temperature |      |                       |
|---|---------------------|------|-----------------------|
|   | 106                 | MA08 |                       |
| Description                                   | °F                  | °C   | Max safe contact time |
| Air coming from exhaust vents located on each |                     |      | v.to                  |
| side  |                     |      | nute                  |
| Oxyg<br>Pow                                   |                     |      | nute                  |
| Pow   |                     |      | nute                  |
| Flow  |                     |      | nute                  |
| LED   |                     |      | nute                  |
| Canina at the outlet                          | 115.0               | +0.0 | Less than 1 minute    |



## **CAUTION**

- 1. Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.
- 2. It is very important to follow your oxygen prescription. Do not increase or decrease the flow of oxygen consult your physician.
- 3. Use of harsh chemicals (including alcohol) is not recommended. If bactericidal cleaning is required, a non-alcohol based product should be used to avoid inadvertent damage.
- 4. The 1060AW Series oxygen concentrator, its parts and accessories are specified for use at flow rates between 1 and 10 LPM
- 5. Install, use and maintain the 1060AW Series Oxygen Concentrator following this instruction guide to minimize the environmental impact of the oxygen concentrator through its expected life. The oxygen concentrator consumes XXX watts during normal use. Water can be used as needed for humidification of the delivered oxygen. The Bacteria Intake Filter and Final Bacterial Filter are disposable and could need to be replaced twice during the expected service life. Other byproducts created during the normal use of the oxygen concentrator are heat, noise and nitrogen gas. Follow instructions to minimize the effects of heat and noise. Nitrogen gas discharged by the oxygen concentrator is guickly dissipated back into room air. The oxygen concentrator contains no hazardous substances.



#### **IMPORTANT**

- 1. It is recommended that the homecare provider lock the flow control knob to prevent inadvertent adjustment. A flow setting other than prescribed may affect the patient therapy.
- 2. Do not service or clean this device while in use with a Patient.
- 3. The Device is classified as IP21 which means it is protected against finger access to hazardous parts and protected against vertically falling water drops.
- 4. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- 5. This device contains electrical and/or electronic equipment. Follow local governing ordinances and recycling plans regarding disposal of device components.

## SAVE THESE INSTRUCTIONS.

#### INTRODUCTION

This instruction guide will acquaint you with your Drive DeVilbiss oxygen concentrator. Make sure that you read and understand this guide before operating your unit. Important safeguards are indicated throughout this guide. Pay special attention to all safety information. Contact your equipment provider should you have any questions.

#### Indications For Use

The DeVilbiss 1060AW 10 Liter oxygen concentrator is intended to provide supplemental oxygen to patients requiring oxygen therapy. The device may be used in the home or an institutional setting. The device is not intended to be life sustaining or life supporting.

#### **Intended Use**

The DeVilbiss 1060AW 10 Liter oxygen concentrator is intended to provide supplemental oxygen to patients requiring oxygen therapy.

#### **Contraindications**

None known.

#### **Essential Performance**

Essential Performance of the Oxygen Concentrator is to deliver a continuous flow of oxygen enriched gas. Visual and audible alarms indicate if the device is not meeting specification or a failure has been detected. If Essential Performance of the oxygen concentrator is lost or degraded and the device is producing less than 85% oxygen, the Low Oxygen alarm activates.

#### **Service Life**

The expected service life of the 1060AW oxygen concentrator, which includes the performance of any required service or maintenance, is 5 years. The expected service life is based on the operation of the device in accordance with all manufacturer guidance for safe use, maintenance, servicing, storage, shipping, handling, and general operation.

The actual service life of the unit, and in particular the service life of certain subcomponents, including the Filters, Sieve Beds and Compressor Cup Seals, will vary based on a number of variables, including the operating environment, storage environment, shipping, handling, performance of preventive maintenance, and both the frequency and intensity of use.

The 1060AW oxygen concentrators have internal sensors and diagnostic systems designed to monitor the system performance, including the oxygen concentration (purity), flow and temperature. The 1060AW concentrators will alert the user when the device requires maintenance or service. Please see the Troubleshooting and Maintenance Sections for more detailed information.

### Why Your Physician Prescribed Supplemental Oxygen

Today, many people suffer from heart, lung and other respiratory diseases. Many of these people can benefit from supplemental oxygen therapy. Your body requires a steady supply of oxygen to function properly. Your physician prescribed supplemental oxygen for you, because you are not getting enough oxygen from room air alone. Supplemental oxygen will increase the amount of oxygen that your body receives.

Supplemental oxygen is not addictive. Your physician prescribed a specific oxygen flow to improve symptoms such as headaches, drowsiness, confusion, fatigue or increased irritability. If these symptoms persist after you begin your supplemental oxygen program, consult your physician.

The oxygen delivery setting has to be determined for each patient individually with the configuration of the equipment to be used, including accessories.

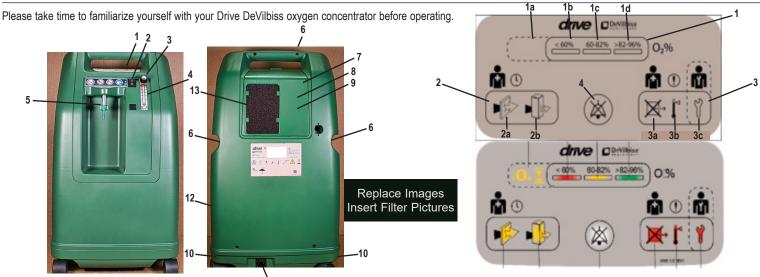
The proper placement and positioning of the prongs of the nasal cannula in the nose is critical to the amount of oxygen delivered to the respiratory system of the patient. Your Delivery settings of the oxygen concentrator should be periodically reassessed for the effectiveness of therapy.

#### **How Your Drive DeVilbiss Oxygen Concentrator Works**

Oxygen concentrators are the most reliable, efficient and convenient source of supplemental oxygen available today. The oxygen concentrator is electrically operated. The unit separates oxygen from room air which allows high-purity supplemental oxygen to be delivered to you through the oxygen outlet. Although the concentrator filters the oxygen in a room, it will not affect the normal amount of oxygen in your room.

EN - 6 SE-1060AW

## IMPORTANT PARTS OF YOUR CONCENTRATOR



Front & Back View (Figure A & B)

1. Control Panel / Operation (LED indicator panel)

- 2. Power Switch
  - | = ON

. O = OFF

- 3. Flow meter knob
- 4. Flow meter
- Oxygen outlet oxygen is dispersed through this port
- 6. Handle (top) and Handgrips (both sides)
- 7. Filter Door
- 8. Compressor Intake Filter (not shown inside door)
- 9. Hour meter (not shown inside door)
- 10. Exhaust Vents



#### WARNING

When the device is used under extreme operating or single fault conditions, the exhaust air near the exhaust vents on the bottom of the unit may exceed 41°C. Keep exposed body parts, such as hands and feet, a minimum of 72 inches (1.83 meters) away from the exhaust vents to avoid the risk of burns.

- 11. IEC power connector.
- 12. Line cord strap
- 13. Cabinet Air Filter (gross particle)

## Control Panel Label (Figure C & D)

NOTE - Symbols on control panel are outlined b&w when not active and illuminated/backlit when active.

- 1. O2 % (Oxygen Percentage) Status LEDs (see page X)
  - a. Startup Low O2 yellow LED
  - b. Critical Low Oxygen red LED
  - c. Low Oxygen yellow LED
  - d. Good Oxygen green LED
- Nurse/Attendant Recurring Reminders (see page X)
   a. Check Cabinet Air Filter LED Illuminates weekly; auto-resets
   b. Check Compressor Intake Filter LED Illuminates weekly; auto-resets
- Nurse/Attendant and Biomed Technician Attention Required Alarms

   Low Flow Condition check for condition cause when illuminated
   Over Temperature Condition check for condition cause when illuminated
  - c. Service Required if LED activates, discontinue use and notify biomedical technician to repair unit.
- Audio Pause Button and Active LED Silences audible alarm and illuminates when pressed/active

#### Accessories



## **CAUTION**

Incompatible parts or accessories can result in degraded performance. Use only recommended parts and filters to ensure reliable operation of the product.

There are many types of humidifiers, oxygen tubing and cannulas/masks that can be used with this device. Certain humidifiers and accessories may impair the device's performance. A mask or any nasal cannula can be used with continuous flow delivery and may be sized according to your prescription as recommended by your homecare provider who should also give you advice on the proper usage, maintenance and cleaning.



#### WARNING

The accessories (nasal cannula, masks, oxygen tubing, humidifiers, etc.) that supply oxygen to the patient must be equipped with a means that, in case of fire, stops the propagation of fire through the accessory for the safety of the patient and others. A fire activated flow-stop or thermal fuse device, if available, should be used with the oxygen supply accessories. These types of flow-stop devices stop the flow of oxygen to the patient in the event of fire. This means of fire protection should be located as close to the patient as practicable.

Do not use ACCESSORIES, detachable parts and materials not described in the instructions for use. Do not modify the oxygen concentrator or accessories.

NOTE- The device should only be used with bubble humidifiers that are designed for use with flows up to 10 liters per minute and 20 psi pressure.

NOTE— A maximum of 50 feet (15 meters) of crush-proof oxygen tubing, plus 7 feet (2.1 meters) of cannula, plus a bubble humidifier is allowed between the concentrator and the patient.

1 NOTE- Your healthcare provider should verify the compatibility of the oxygen concentrator and all of the parts used to connect to the patient before use.

## **SETTING UP YOUR OXYGEN CONCENTRATOR**

1. Position your unit near an electrical outlet in the room where you spend most of your time.

**1** NOTE – Do not connect to an electrical outlet controlled by a wall switch.



#### **DANGER**

Oxygen causes rapid burning. Do not smoke while your oxygen concentrator is operating, or when you are near a person utilizing oxygen therapy. Keep the oxygen concentrator and cannula at least 2 m (6.5 feet) from hot, sparking objects or naked sources of flame.

- 2. Operate the unit in a cool, dry area with good ventilation, located on a hard surface, avoid thick rugs or carpeting. NEVER block the air intake or exhaust vents. Keep the unit a minimum of 12 inches (30.5 cm) away from any wall, draperies, or any other objects that might prevent the proper flow of air in and out of your oxygen concentrator. Proper air flow is needed to prevent overheating of the oxygen concentrator. DO NOT place the concentrator near any heat source such as hot air registers or heaters. Overheating of the oxygen concentrator may lead to low oxygen output and a risk of burns. The oxygen concentrator should be located in a well-ventilated area. DO NOT operate the unit in a closed or confined space, such as a closet, bathroom, etc. Avoid operating the device near smoke pollutants and fumes.
- NOTE— To move the unit, firmly grasp the handle located on the top of the unit, rolling and/or lifting the unit over pathway obstacles.

  Before operating your unit, always check to be sure the cabinet air filter and filter door vents (located on the back of your unit) are clean. Proper cleaning is discussed in the Caring For Your Concentrator section on page 9.





#### **WARNING**

The accessories (nasal cannula, masks, oxygen tubing, humidifiers, etc.) that supply oxygen to the patient must be equipped with a means that, in case of fire, stops the propagation of fire through the accessory for the safety of the patient and others. A fire activated flow-stop or thermal fuse device, if available, should be used with the oxygen supply accessories. These types of flow-stop devices stop the flow of oxygen to the patient in the event of fire. This means of fire protection should be located as close to the patient as practicable.

Attach the appropriate oxygen accessories to the oxygen outlet.

### Oxygen Tubing Connection:

- a. Thread the supplied oxygen outlet connector onto the oxygen outlet.
- b. Attach the oxygen tubing directly to the connector (Figure 1).

#### Oxygen Tubing Connection With Humidification:

If your physician has prescribed an oxygen humidifier as part of your therapy, follow these steps (If using a prefill, go to step b.):

- a. Fill the humidifier bottle as per manufacturer's instructions.
- b. Thread the wing nut located on the top of the humidifier bottle to the oxygen outlet so that it is suspended (Figure 2). Make sure it is securely tightened.
- c. Attach the oxygen tubing directly to the humidifier bottle outlet fitting (Figure 3).

• NOTE—Your physician has prescribed either a nasal cannula or face mask. In most cases, they are already attached to the oxygen tubing. If not, follow the manufacturer's instructions for attachment.

**1** NOTE— Your healthcare provider should verify the compatibility of the oxygen concentrator and all of the parts used to connect to the patient before use.

5. Remove the power cord completely from the line cord strap. Make sure the power switch is in the "OFF" position and insert the plug into the wall outlet. The unit is double insulated to guard against electric shock.



#### WARNING

Ensure the mains power cord is fully inserted into the concentrator connector and the power cord plug is completely inserted into a fully functioning AC wall outlet. Failure to do so may cause an electrical safety hazard.





NOTE—To check your oxygen concentrator and accessories for proper operation; 1. Check the output flow by placing the end of the nasal cannula under the surface of a half-full cup of water and look for the bubbles. 2. Check the system for leaks by bending the nasal prongs over and squeeze tight to stop the flow of oxygen. Look at the flow meter to see that the indicator ball on the flow meter drops to zero. If the indicator ball does not drop to zero, check all connections for possible leaks. Parts to check for leaks are: tubing connections, humidifier bottle and other accessories like firebreaks. Repeat these steps until the flow meter ball drops to zero. Contact your provider or service supplier immediately if you encounter any problems.



## WARNING

Improper use of the power cord and plugs can cause a burn, fire or other electric shock hazards. Do not use the unit if the power cord is damaged.

## **OPERATING YOUR DEVILBISS OXYGEN CONCENTRATOR**



#### **DANGER**

Oxygen causes rapid burning. Do not smoke while your oxygen concentrator is operating, or when you are near a person utilizing oxygen therapy. Keep the oxygen concentrator and cannula at least 2 m (6.5 feet) from hot, sparking objects or naked sources of flame.

Drive DeVilbiss oxygen concentrators are equipped with a fire mitigating outlet fitting that prevents propagation of fire into the unit.





## WARNING

As part of the normal start-up process, all ten (10) LEDs on the front panel should illuminate and the audible alarm should sound when the unit is first turned ON. If ANY front panel LEDs DO NOT illuminate or the audible alarm DOES NOT sound, the alert system is not functioning properly. Refer to the Troubleshooting chart and contact your biomed technician if necessary.

1. Press the power switch to the "ON" position. When the unit is turned ON, all ten (10) LEDs on the front panel will illuminate briefly and an audible signal will briefly alarm

N - 8 SE-1060AW

confirming that the LEDs and audible signal are functioning properly. The unit will then operate in "start-up" mode with the Startup Low O2 LED illuminated until a normal oxygen level is achieved, at which time the Green Good O2 LED illuminates and will remain lit. The start-up mode may take up to 15 minutes..

• NOTE— DeVilbiss recommends for optimal service life that the Drive DeVilbiss Oxygen Concentrator be operated for at least 30 minutes after it is powered on. Shorter periods of operation, operating in extreme temperature/humidity conditions or in the presence of contaminates, and/or handling and storage conditions outside those specified, may affect the long term reliable operation of the product.



#### DANGER

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

• NOTE- If the audible signal alarms but the unit is not operating, there is no power to the unit. Refer to the Troubleshooting chart on page 10, and contact your biomed technician if necessary.

• NOTE—If an audible low-frequency vibration sound is detected, the unit is not operating properly. Refer to the Troubleshooting chart on page 10, and contact your biomed technician if necessary.

2. Check the flow meter to make sure that the flow meter ball is centered on the line next to the prescribed number of your flow rate.



#### CAUTION

It is very important to follow your oxygen prescription. Do not increase or decrease the flow of oxygen - consult your physician.

NOTE

— Your oxygen provider may have preset the flow meter so that it cannot be adjusted.

• NOTE- If the flow meter knob is turned clockwise, the flow decreases (and eventually will shut off the oxygen flow). If the knob is turned counterclockwise, the flow increases.

• NOTE— For prescriptions of 10 LPM, be sure the ball is centered on the 10 liter line. The ball should not touch the red line. Setting the flow higher than 10 may cause the oxygen purity level to drop.

**1** NOTE— The low-flow alarm may activate if the flow meter ball is set below 1 lpm. The unit will continue to run; however, the Service Required light will come on accompanied by an audible alarm. Adjust the flow meter to your prescribed flow.

3. Your oxygen concentrator is now ready for use, properly position the cannula with the nasal prongs facing upward, insert the prongs into nose. Wrap the cannula tubing over the ears and position in front of body (Figure 4). Allow 15 minutes for the oxygen concentrator to reach stated performance.



### **DeVilbiss OSD® Operation**

The OSD (Oxygen Sensing Device) is a device within your concentrator that monitors the oxygen produced by your unit.

The OSD lights on the top panel are defined as follows:

- Green Good Oxygen LED acceptable oxygen level.
- · Yellow Low Oxygen LED below the good oxygen level.
- Red Critical Low Oxygen LED below the critical oxygen level.

If the oxygen purity falls below the acceptable level: The green Good Oxygen LED will shut off, the yellow Low Oxygen LED will illuminate, and an intermittent audible signal will sound. If the oxygen purity continues to fall into the critical low level, the Red Critical Low Oxygen LED alerts with an audible alarm.

Refer to the Troubleshooting section in this guide. Do not attempt any other maintenance. Contact your biomed technician immediately if the issue is not resolved.

#### CARING FOR YOUR DEVILBISS OXYGEN CONCENTRATOR



#### WARNING

- Do NOT use lubricants, oils or grease.
- · Before attempting any cleaning procedures, turn the unit OFF.



## **CAUTION**

Incompatible parts or accessories can result in degraded performance. Use only recommended parts and filters to ensure reliable operation of the product.

• NOTE— Install, use and maintain the 1060AW Series Oxygen Concentrator following this instruction guide to minimize the environmental impact of the oxygen concentrator through its expected life. The oxygen concentrator consumes XXX watts during normal use. Water can be used as needed for humidification of the delivered oxygen. The Bacteria Intake Filter and Final Bacterial Filter are disposable and could need to be replaced twice during the expected service life. Other byproducts created during the normal use of the oxygen concentrator are heat, noise and nitrogen gas. Follow instructions to minimize the effects of heat and noise. Nitrogen gas discharged by the oxygen concentrator is quickly dissipated back into room air. The oxygen concentrator contains no hazardous substances.

#### Cannula/Mask, Tubing and Humidifier Bottle

Clean and replace the cannula/mask, tubing and humidifier bottle according to the manufacturer's instructions.

## **Oxygen Outlet Connector**

Remove the oxygen outlet connector and clean as needed or replace between patients.

#### **Filter Door with Vents**

Inspect the vents periodically, and wipe with a dry cloth as needed to remove dust.

#### **Cabinet Air Filter**

The cabinet air filter should be inspected when the Check Cabinet Filter LED illuminates and cleaned as needed by the user or caregiver. Replace if torn or damaged. To clean, follow these steps:

NOTE- Frequency of inspection and cleaning of filter may be dependent upon environmental conditions like dust and lint.

- 1. Remove the air filter located on the back of the unit.
- 2. Wash in a solution of warm water and dishwashing detergent (Figure 5).
- 3. Rinse thoroughly with warm tap water and towel dry. The filter should be completely dry before reinstalling.



#### **CAUTION**

To prevent product damage, do not attempt to operate the unit without the air filter or while the filter is still damp.

#### **Intake Filter**

The Intake Filter should be inspected when the Check Intake Filter LED illuminates and replaced as necessary. To check or replace, follow these steps:

1 NOTE - Frequency of inspection and cleaning of filter may be dependent upon environmental conditions like dust and lint.

- 1. Open the filter door on the rear of the concentrator.
- 2. Remove the air filter from behind the door and inspect the color and debris. If filter is discolored to a dark gray, it should be replaced.



#### CAUTION

To prevent product damage, do not attempt to operate the unit without the intake filter.

#### **Exterior Cabinet**

Clean the concentrator exterior cabinet weekly by using a damp cloth and wiping dry; the vents can also be wiped with a damp cloth.

#### Cleaning

|                         | Recommended cleaning interval              | Number of cleaning cycles * | Compatible cleaning method  |
|-------------------------|--|-----------------------------|---|
| Outer Cabinet           | 7 days                                     | 260                         | Water, use only a damp cloth  |
| Filter Door Vents       | 7 days                                     | 260                         | Wipe with dry cloth, or a cloth dampened with water to remove dust. |
| Oxygen Outlet Connector | 7 days                                     | 104                         | Mild dish soap (2 tbsp) and warm water (2 cups)                     |
| Cabinet Air Filter      | 7 days inspect, clean or replace as needed | 104                         | Mild dish soap (2 tbsp) and warm water (2 cups), towel dry          |
| Intake Filter           | 14 days inspect, replace as needed         |                             | Do not clean, replace when discolored to dark gray.                 |

<sup>\*</sup> number of cleaning cycles determined by recommended cleaning interval and expected service life



#### **WARNING**

To avoid electric shock, do not plug the concentrator into an AC outlet if the concentrator cabinet is broken. Do not remove the concentrator cabinet. The cabinet should only be removed by an appropriately trained biomed technician. Do not apply liquid directly to the cabinet or utilize any petroleum-based solvents or cleaning agents.



#### **CAUTION**

Use of harsh chemicals (including alcohol) is not recommended. If bactericidal cleaning is required, a non-alcohol based product should be used to avoid inadvertent damage.

EN - 10 SE-1060AW

## **TROUBLESHOOTING**

The following troubleshooting chart will help you analyze and correct minor oxygen concentrator malfunctions. If the suggested procedures do not help, call your biomed technician. Do not attempt any other maintenance.



#### **WARNING**

To avoid electric shock, do not plug the concentrator into an AC outlet if the concentrator cabinet is broken. Do not remove the concentrator cabinet. The cabinet should only be removed by an appropriately trained biomed technician.

## **Troubleshooting Chart**

| SYMPTOM   | POSSIBLE CAUSE   | REMEDY   |
|---|--|--|
| A. Unit does not operate. All lights are off when the   | Power cord not properly inserted into wall outlet.           | Check power cord connection at the wall outlet. Also check the mains connection on the back of the unit.   |
| power switch is On. Audible alert is pulsing  | No power at wall outlet.                                     | Check your circuit breaker and reset if necessary. Use a different wall outlet if the situation occurs again.  If the above remedies do not work, contact your biomed technician.  |
| B. Yellow Start Up Low O2 LED is on.  | 1. Unit in "start up" mode.                                  | Allow unit up to 15 minutes to complete start up period.   |
|   | Flow meter is not properly set.                              | Ensure the flow meter is properly set to the prescribed number.  |
| C. Yellow Low Oxygen LED is on and intermittent   | 2. Filter door vents are blocked.                            | 2. Check filter door vents and ensure that the openings are not blocked.   |
| audible signal is sounding.   | 3. Exhaust is blocked.                                       | Check the exhaust area and make sure there is nothing restricting the unit exhaust.  If the above remedies do not work, contact your biomed technician.  |
|   | Flow meter is not properly set.                              | Ensure the flow meter is properly set to the prescribed number.  |
| D. Red Critical Low O2 LED and Red Service  | 2. Filter door vents are blocked.                            | 2. Check filter door vents and ensure that the openings are not blocked.   |
| Required LEDs are illuminated and an intermittent audible signal is sounding.                       | 3. Exhaust is blocked.                                       | Check the exhaust area and make sure there is nothing restricting the unit exhaust.  If the above remedies do not work, contact your biomed technician.  |
|   | Filter door vents are blocked.                               | Check filter door vents and ensure that the openings are not blocked.  |
| E. Unit operates. Red Over Temperature LED is illuminated. Audible alert may be sounding.           | 2. Exhaust is blocked.                                       | Check the exhaust area and make sure there is nothing restricting the unit exhaust.  If the above remedies do not work, contact your biomed technician.  |
| F. Unit operates. Red Low Flow LED is illuminated. Audible alert may be sounding.                   | Blocked or defective cannula, face mask, or oxygen tubing.   | 1. Detach cannula or face mask. If proper flow is restored, clean or replace if necessary. Disconnect the oxygen tubing at the oxygen outlet. If proper flow is restored, check oxygen tubing for obstructions or kinks. Replace if necessary. |
|   | Blocked or defective humidifier bottle.                      | 2. Detach the humidifier from the oxygen outlet. If proper flow is obtained, clean or replace humidifier.  |
|   | 3. Flow meter set too low.                                   | Set flow meter to prescribed flow rate.  If the above remedies do not work, contact your biomed technician.  |
| G. Red Service Required LED is illuminated and an intermittent audible signal is sounding.          | Electronic assembly or other internal component malfunction. | Turn your unit OFF. Call your biomed technician and switch to alternate oxygen source  |
| H. Unit operates. Audible low-frequency vibration sound is detected.                                | Electronic assembly malfunction.                             | Turn your unit OFF. Call your biomed technician and switch to alternate oxygen source.   |
| I. Unit operates. Any of the visual and audible alerts do not function when the device is turned ON | Electronic assembly malfunction.                             | Turn your unit OFF. Call your biomed technician and switch to alternate oxygen source.   |
| J. Red Service Required LED flashes, no AC power present, no audible alarm                          | Power Failure Alarm  | Turn unit off until electric is restored.  |
| K. If any other problems occur with your oxygen concentrator.                                       |  | Turn your unit OFF. Call your biomed technician and switch to alternate oxygen source.   |

## **OVERVIEW OF ALARMS AND SERVICE INDICATORS**

This device contains an alarm system which monitors the state of the device and alerts of abnormal operation, loss of essential performance or failures. Alarm conditions are shown on the control panel. The alarm system functions are tested at power up by lighting all visual alarm indicators and sounding the audible alarm (beep).

All alarms are Low Priority Technical Alarms.

| Alert or Alarm<br>Condition                       | LED Icon | Details of Alert or Alarm Condition  | Visual Alert or Alarm  | Audible Alarm  | Action  |
|---|----------|--|--|--|---|
| Power-On Test                                     | ALL      | Unit was just turned On; test of all visual/audible indicators   | All LEDs ON for a few seconds                                    | Audible indicator beeps for a few seconds  | Wait for unit to complete Power On Test, up to 30 seconds.  |
| Start-up Period                                   | 10. 3    | The unit has recently been started and is in start-up mode, the output flow of the oxygen is temporarily < 82%                                 | Yellow Startup Low O2 LED<br>ON along with one O2%<br>Status LED | No audible alarm during start-up period  | Wait for unit to finish start-up period, up to 15 minutes   |
| Normal Operation                                  | >82-96%  | Normal device operation (O2 >= 85.0%), no errors, startup period over  | Green Good O2 LED ON   | OFF  | Use device as desired   |
| Check Cabinet Filter<br>Notification              |          | Notification – Check Cabinet<br>Filter. LED turns ON every X<br>days for 12 hours then restarts<br>the timing cycle.                           | Yellow Check Cabinet Filter<br>LED ON                            | OFF  | Check Cabinet Filter and clean (wash/dry) or replace as necessary.  |
| Check Compressor<br>Intake Filter<br>Notification |          | Notification – Check Compressor Intake Filter. LED turns ON every X days for 12 hours then restarts the timing cycle.                          | Yellow Check Compressor<br>Intake Filter LED ON                  | OFF  | Check Compressor Intake Filter and replace if necessary   |
| Low Oxygen Output<br>Concentration                | 60-82%   | Error – O2 below 85.0% (>=60.0% < 85.0%), startup period over.   | Yellow Low O2 LED ON   | The audible alarm is beeping intermittingly. Alarm can be silenced with the Audio Pause button.  | Continue to use device. Refer to Troubleshooting to try to resolve problem. If problem not resolved, contact your Biomed Technician for assistance.           |
| Critical Low Oxygen<br>Output Concentration       | < 60%    | Error – O2 below 60.0% (<60.0%), startup period over.  | Red Critical Low O2 LED<br>ON. Red Service Required<br>LED ON    | The audible alarm is beeping intermittingly. Alarm can be silenced with the Audio Pause button.  | Refer to Troubleshooting to try to resolve problem. If problem not resolved, contact your Technician for assistance and to arrange for servicing of the unit. |
| Audio Pause Off                                   |          | Audio Pause not active (either<br>no current alarm condition or<br>audible alarm is actively<br>sounding).                                     | Audio Pause LED OFF  | If no current alarm, OFF.  If alarm condition is active, audible alarm is beeping intermittently. Alarm can be silenced with the Audio Pause button. | Correct the Alarm Condition if audible alert is active (beeping).   |
| Audio Pause On                                    |          | Audio Pause active (symbol is illuminated indicating active alarm silenced).   | Audio Pause LED ON   | OFF  | Correct the Alarm Condition to deactivate audible alert and return to normal operation.   |
| Over Temperature                                  |          | Warning – O2S gas over temperature or internal over temperature  | Over Temperature LED ON  | The audible alarm is beeping intermittingly. Alarm can be silenced with the Audio Pause button.  | Refer to Troubleshooting to try to resolve problem. If problem not resolved, contact your Technician for assistance and to arrange for servicing of the unit. |
| Low Flow Rate                                     | <b>*</b> | Warning – flow rate too low (no flow or obstruction). Flow rate below low flow threshold for 30 seconds  | Low Flow LED ON  | The audible alarm is beeping intermittingly. Alarm can be silenced with the Audio Pause button.  | Refer to Troubleshooting to try to resolve problem. If problem not resolved, contact your Technician for assistance and to arrange for servicing of the unit. |
| High Flow Rate                                    | *        | Warning – flow rate too high. Error due to corrupted settings, OSD communication failure, fan not running, motor error, or rotary valve error. | Red Service Required LED<br>ON                                   | The audible alarm is beeping intermittingly. Alarm can be silenced with the Audio Pause button.  | Refer to Troubleshooting to try to resolve problem. If problem not resolved, contact your Technician for assistance and to arrange for servicing of the unit. |
| Device Malfunction                                | *        | The device is experiencing a malfunction that requires servicing to correct  | Red Service Required LED light is illuminated                    | The audible alarm is beeping intermittingly. Alarm can be silenced with the Audio Pause button.  | Contact your Technician for assistance and to arrange for servicing of the unit   |
| Power Failure                                     | *        | Power Failure Alarm – AC power not present, microcontroller running from a backup capacitor.   | Red Service Required LED is flashing                             | The audible alarm is beeping intermittingly. Audio Pause is not available during a power failure alarm.  | Turn unit off until electric power is restored.   |

EN - 12 SE-1060AW

|  | DRIVE DEVILBISS 10-LITER SERIES  |
|--|--|
| Catalog Number   | 1060AW   |
| Delivery Rate  | 1 to 10 LPM  |
| Maximum Recommended Flow (@ nominal outlet pressures of zero and 7 kPa)**    | 10 LPM   |
| Outlet Pressure  | 8.5 ± 0.5 psig (58.6 ± 3.5 kPa)  |
| Electrical Rating  | 230 V~, 50 Hz, 3.2 Amp   |
| Operating Voltage Range  | 195-253 V~, 50 Hz  |
| Oxygen Percentage  | 1-10 LPM = 87%-96% +/- 3%  |
| Operating Atmospheric Pressure   |  |
| 1013 hPa to 795 hPa<br>0-2000 meters (0-6562 feet)                           | Tested at nominal voltage: No degradation in O2 performance across the operating temperature, humidity and atmospheric pressure range. |
| Operating Environment Range  | 41°F (5°C) – 104°F (40°C)  |
| Operating Relative Humidity Range  | 15% to 95%, non-condensing   |
| Power Consumption  | 230 vac, 50Hz: 664 watts   |
| Weight   | 42 lbs. (19 Kilograms)   |
| Safe Working Load  | 53 lbs. (24 Kilograms)   |
| Sound Pressure Level at 3 and 10 LPM   | <62 dBA  |
| Sound Power Level at 3 and 10 LPM  | <70 dBA  |
| Dimensions   | 24.5"H x 13.5"W x 12"D<br>(62.2 x 34.2 x 30.4 cm)  |
| Maximum Limited Pressure under Normal condition under Single Fault condition | 27 PSIG (186 kPa)<br>35 PSIG (241 kPa)   |
| Operating System   | Time Cycle / Pressure Swing  |
| Storage Conditions   | -13°F (-25°C) to 158°F (70°C), humidity range of 15% to 95% non-condensing   |
| Equipment Class and Type   | Class II Equipment Double Insulated;  Type BF Applied Part  IP21   |
| Approval Body and Safety Standard  | TUV<br>IEC 60601-1:2020<br>IEC 60601-1-6:2020+A1<br>IEC 60601-1-11:2020<br>EN ISO 80601-2-69:2020                                      |
| EMC Compliance To  | EN60601-1-2  |

Specifications subject to change without notice.

## Oxygen Concentration by Flow Rate

| Flow L/m | % <b>0</b> <sub>2</sub> |
|----------|-------------------------|
| 10       | 87% - 96%               |
| 9        | 87% - 96%               |
| 8        | 87% - 96%               |
| 7        | 87% - 96%               |
| 6        | 87% - 96%               |
| 5        | 87% - 96%               |
| 4        | 87% - 95%               |
| 3        | 87% - 95%               |
| 2        | 87% - 96%               |
| 1        | 87% - 96%               |

#### **ELECTROMAGNETIC COMPATIBILITY INFORMATION**



#### WARNING

## MR Unsafe

- Do not bring the device or accessories into a Magnetic Resonance (MR) environment as it may cause unacceptable risk to the patient or damage to the oxygen concentrator or MR medical devices. The device and accessories have not been evaluated for safety in an MR environment.
- Do not use the device or accessories in an environment with electromagnetic equipment such as CT scanners, Diathermy, RFID and electromagnetic security systems (metal detectors) as it may cause unacceptable risk to the patient or damage to the oxygen concentrator. Some electromagnetic sources may not be apparent, if you notice any unexplained changes in the performance of this device, if it is making unusual or harsh sounds, disconnect the power cord and discontinue use. Contact your home care provider.
- This device is suitable for use in home and healthcare environments except for near active HF SURGICAL EQUIPMENT and the RF shielded room of an ME SYSTEM
  for magnetic resonance imaging, where the intensity of Electromagnetic DISTURBANCES is high.



#### **NARNING**

Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



#### WARNING

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the oxygen concentrator, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Maximum length of AC line cord = 8 ft (2.4m)



#### **WARNING**

Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

#### WARRANTY

#### **ORDERING AND RETURNING PARTS**

#### **RETURN AND DISPOSAL**

This device may not be disposed of with household waste. After use of the device, please return the device to the provider for disposal. This device contains electrical and/or electronic components that must be recycled per EU Directive 2012/19/EU-Waste Electrical and Electronic Equipment (WEEE). Non-infectious used accessories (e.g. nasal cannula) can be disposed of as residential waste. The disposal of infectious accessories (e.g. nasal cannula from an infected user) must be made via an approved waste disposal company. Names and addresses can be obtained from the local municipality.

Store used sieve beds in sealed airtight container to minimize release of adsorbed substances. Waste must be handled in accordance with all federal, state, provincial, and local regulations. There are no known hazardous contaminants adsorbed into the molecular sieve therefore used sieve beds may be disposed of as residential waste. Never dispose by means of public sewers or drainage.

#### **PROVIDER'S NOTES**

The healthcare provider is to assess the needs of the patient, at time of installation, for backup supplies of supplementary oxygen in case of oxygen concentrator or power failure, based on the condition of the patient, the environment in which the patient lives and the ability to resupply the patient with backup supplies of supplementary oxygen. The healthcare provider should reassess as conditions change.

#### Cleaning and Disinfection When There is a Patient Change

NOTE – Recommendations for preventative maintenance at 3-year intervals are outlined in the Service and Maintenance Guidance below.

Drive DeVilbiss Healthcare recommends that at least the following procedures be carried out by the manufacturer or a qualified third party between uses by different patients.

NOTE – If the following described complete processing of the concentrator by an appropriately trained individual is not possible, the device should not be used by another patient.

NOTE – If preventive maintenance is due at this time, these procedures should be carried out in addition to the servicing procedures.

- 1. Use disinfectants safely. Always read the label and product information before use.
- 2. Always wear personal protective equipment when performing this procedure. Use suitable gloves and safety glasses. Cover exposed skin on arms to prevent accidental contact with bleach solution that has been applied to the concentrator.
- Dispose of all accessories that are not suitable for reuse. This includes but may not be limited to the oxygen tubing, tubing connectors, nasal cannula and/or
  mask, oxygen outlet connector, and humidifier bottle. Reusing accessories marked for single use may cause risk of cross contamination or loss of performance.
- 4. Clean the exterior of the concentrator with a clean lint-free cloth. Heavy soil should be removed with a clean lint-free cloth dampened with water. A soft bristled brush dampened with water can be used to remove stubborn soil. Dry the concentrator using a clean lint-free cloth if water was used to remove soil.
- 5. Use 5.25% chlorine bleach (Clorox Regular Liquid Bleach or equivalent). Mix one (1) part bleach with four (4) parts water in an appropriate clean container. This ratio produces a one (1) part bleach to five (5) total parts solution (1:5). The total volume (amount) of solution required is determined by the number of concentrators in need of disinfection. NOTE An alternate suitable disinfecting agent (e.g. Mikrobac® forte or Terralin® Protect) may also be used. Follow disinfectant manufacturer's instructions.
- 6. Apply the bleach solution in an even manner to the cabinet and power cord using a clean lint-free cloth. The cloth should be dampened only and not dripping of solution. Do not use a spray bottle to apply the solution. Do not saturate the device with the solution. Take care that no solution enters the vent areas on the concentrator base or the Auxiliary O2 fitting area on the back of the unit. Avoid over-saturating the cabinet seams so that no solution residue builds up in these areas. Avoid the caster wells located on the bottom of the unit.

EN - 14 SE-1060AW

- 7. Exposure time of the disinfectant solution should be 10 minutes minimum to 15 minutes maximum.
- 8. After the recommended exposure time, all surfaces of the concentrator should be wiped with a clean lint-free cloth dampened with drinking quality water no warmer than room temperature. Dry the unit with a dry, clean lint-free cloth. This is to remove residue that may stain or leave a film on the unit, especially after repeated disinfections.
- 9. Check the cord, the plug on the back of the device, the power switch, and the indicator LEDs for possible damage. Replace all damaged or worn components.
- 10. Replace the Cabinet Air Filter on the back of the device.
- 11. Check the oxygen concentration. If the device is within specification, the compressor intake filter does not need to be replaced between patients. If the oxygen concentration is not within specification, the provider should refer to the service manual section on Troubleshooting.

• NOTE – There is no portion of the gas pathways through the concentrator that could be contaminated with body fluids under normal conditions. The device patient connection may unintentionally become contaminated with expired gases for a single fault condition i.e., a hose internal to the device becomes disconnected. This condition will cause no flow out of the device and/or an alarm condition. Should this occur, refer to the service manual for additional instructions.

#### **Disinfection**

● NOTE – The disinfection process can only be completed by the manufacturer or by an appropriately trained individual.

|  | Recommended disinfection interval          | Number of disinfection cycles | Compatible disinfection method   |
|--|--|-------------------------------|--|
| Cabinet, power cord  | Between patients                           | 20                            | 1:5 chlorine bleach (5.25%) and water solution, Mikrobac forte, Terralin Protect |
| Oxygen tubing, tubing connectors, nasal cannula/mask, oxygen outlet connector, humidifier bottle, cabinet air filter | Do not disinfect, replace between patients | N/A                           | N/A  |

#### **SERVICE AND MAINTENANCE GUIDANCE**

Service and maintenance should only be performed by appropriately trained biomed technician.

|        | DeVilbiss Oxygen Concentrator Preventive Maintenance/Service Guide   |  |   |   |  |  |  |  |
|--------|--|--|---|---|--|--|--|--|
| Model  | Oxygen Purity<br>Verification  | Compressor<br>Intake Filter  | Internal<br>Compressor<br>Filter **                               | Final HEPA<br>Filter **   | Cabinet<br>Air Filter  | Sieve Beds **  | Compressor Cup Seals **  |  |
| 1060AW | Every 3-years or<br>between<br>patients,<br>whichever<br>comes first | Inspect when Recurring Reminder illuminates on control panel. Replace if needed. | Inspect in conjunction with compressor service. Replace if needed | Inspect in<br>conjunction with<br>compressor<br>service. Replace<br>if needed | Inspect when Recurring Reminder illuminates on control panel and wash as needed. Replace if torn or damaged. | When indicated by device performance below specification for oxygen purity, operating pressures and/or other indications of component wear | When indicated by device performance below specification for oxygen purity, operating pressures and/or other indications of component wear |  |

<sup>\*\*</sup> Sieve bed, compressor cup seals, compressor filter and final HEPA filter service should only be performed by appropriately trained biomed technician.

• NOTE – This is a suggested maintenance and service schedule for home oxygen providers. Individual maintenance requirements may vary based upon local operating conditions, regulations, or other circumstances.

#### **Initial Inspection**

- 1. Upon receiving, examine the unit for external damage. If the unit appears to have external damage, please contact DeVilbiss for assistance.
- 2. Check to be sure the cabinet air filter and the intake filter are in place.
- 3. Plug the unit into an electrical outlet, turn the unit ON and check the audible/visual alarms. When the unit is turned ON, as part of the normal start-up process, all ten (10) LEDs on the front panel should illuminate and the audible alarm should sound when the unit is first turned ON. If ANY front panel LEDs DO NOT illuminate or the audible alarm DOES NOT sound, the alert system is not functioning properly. Refer to the Troubleshooting chart and contact your biomed technician if necessary.
- 4. Set the flow meter at the maximum recommended flow rate and allow the unit to run for 20 minutes. The internal oxygen sensor monitors the oxygen purity. If the oxygen is within specification, the Green Good Oxygen LED will be illuminated. If the Yellow Low Oxygen LED is illuminated, refer to Troubleshooting in the IFU, the Service Manual, or contact DeVilbiss for assistance.
- 5. With unit still running, unplug to test the power fail alarm. If the power fail alarm does not provide an audible alert, refer to the Service Manual or contact DeVilbiss for assistance.

## **Oxygen Provider Preventive Maintenance Guidance**

1 NOTE – Scheduled maintenance should be performed in accordance with the Preventive Maintenance/Service Guide table above or Between Patient Uses.

- 1. Dispose of all accessories that are not suitable for reuse including oxygen tubing and connectors, cannula/mask, oxygen outlet connector, and humidifier bottle. Reusing accessories marked for single use may cause risk of cross contamination or loss of performance.
- 2. Replace cabinet air filter and follow the Cleaning and Disinfection Instructions
- 3. Clean the concentrator cabinet and inspect/replace filters in accordance with the table above.
- 4. Inspect all plugs, cords, and components. Replace any damaged or worn components.
- 5. Check oxygen concentration with a calibrated oxygen analyzer and record the oxygen percentage. If the concentration is not within specification, refer to troubleshooting section of the IFU or the Service Manual.
- 6. Record the unit hours of use.
- 7. Verify Audible Alert and Indicator LEDs at each service at startup and while operating.
- 8. With unit still running, unplug to test the power fail alarm. If the power fail alarm does not provide an audible alert, refer to the Service Manual or contact DeVilbiss for assistance.

EN - 16 SE-1060AW

EN - 18 SE-1060AW



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