



**Inspired**  
technologies

*Bringing breath to life.*

1061 Main Street #24  
North Huntingdon, PA 15642  
office 724.861.5510  
fax 724.861.5530

[www.inspiredtechnologiesinc.com](http://www.inspiredtechnologiesinc.com)

©2008 Inspired Technologies, Inc.  
VIAspire Liquefier, SmartDose  
technology, patent pending.  
VIAspire and SmartDose are trademarks  
of Inspired Technologies, Inc.

300P-LT07 REV 1

---

# VIAspire™ Oxygen Portables

## 300 and 600 Product Manual

### CAUTION

Federal (USA) law restricts this device  
to sale by or on the order of a physician.



**Inspired technologies**

*Bringing breath to life.*

---

## Welcome!

Welcome to the VIAspire™ Personal Oxygen System from Inspired Technologies. The VIAspire system gives you the freedom and confidence to live a more active life—with no need for oxygen deliveries.

The VIAspire system consists of the VIAspire Portable—a lightweight and long-lasting oxygen portable that you can refill in just minutes and use all day, every day—along with the VIAspire Liquefier. The VIAspire Portable is the only portable with SmartDose™ technology, which senses your respiratory rate and automatically delivers more oxygen when the you need it most, to help you stay active and more saturated. The VIAspire Liquefier allows you to create a daily supply of liquid oxygen in your home, providing greater freedom and convenience by reducing the need for deliveries.

---

## Before You Begin

Please read this entire manual before you use your VIAspire Portable. If you do not understand the warnings, cautions, and instructions, contact your medical equipment provider before using this equipment. Otherwise, there is a risk of injury to you or damage to the equipment.

When using electrical and oxygen products, especially when children are present, you must follow several important safety precautions. Please read the following safety information before you use your VIAspire Portable.

---

## Product Classification

The VIAspire Liquid Oxygen Portable is classified as:



IEC Class II equipment










Type B Applied Part

Not suitable for use in the presence of a flammable anesthetic mixture with air, or with nitrous oxide.

## Terms, Abbreviations, and Symbols

This guide and the VIAspire Portable product labeling uses the following terms, abbreviations, and symbols:

### IEC Symbols

	Smoking is not allowed in the area	<b>REF</b>	Indicates a Model Number
	General warning sign	<b>SN</b>	Indicates a Serial Number
	Class II Equipment	<b>LOX</b>	Indicates Liquid Oxygen
	Type B Equipment		Follow Operating Instructions
	Warning: dangerous voltage		Fire Hazard

### Important Safeguards

When using electrical products, especially when children are present, basic safety precautions should always be followed. Read all instructions before using. Important information is highlighted by these terms:

<b>DANGER</b>	Urgent safety information for hazards that will cause serious injury or death.	<b>CAUTION</b>	Information for preventing damage to the product.
<b>WARNING</b>	Important safety information for hazards that might cause serious injury.	<b>NOTE</b>	Information to which you should pay special attention.



**Important safeguards** are indicated throughout this guide; pay special attention to all safety information.




**Read all instructions** before using. Save these instructions.



## General Dangers and Warnings

In order to ensure the safe installation, assembly, and operation of the VIAspire Portable, these instructions **MUST** be followed.



### Dangers


**DANGER**   **Fire hazard.** Do not lubricate. Do not allow grease or oil from your hands or other source to come into contact with the internal tubing of the VIAspire Liquid Oxygen Portable. These solutions may be flammable and cause injury.


**DANGER**    **Oxygen causes rapid burning.** Do not smoke in the vicinity of your VIAspire Portable or when you are near a person utilizing oxygen therapy. Keep the VIAspire Liquid Oxygen Portable at least 5 feet (1.6M) from hot, sparking objects or open sources of flame.

**DANGER**   **Do not lay the cannula down.** Do not lay the cannula down while the oxygen is flowing. High concentrations of oxygen can cause rapid burning.

### Warnings

**WARNING**   **Read instruction manual first.** Do not install, assemble, or operate this equipment without first reading and understanding this instruction manual and the warning labels on the product. If you do not understand the warnings, cautions and instructions, contact your medical equipment provider or technical personnel before attempting to install or use this equipment; otherwise, injury or damage may occur.

**WARNING**  **Patient use only.** The use of this device is limited to an oxygen patient. Liquid oxygen **MUST** be used **ONLY** by an oxygen patient and is not intended to be distributed to any other individual for any purpose.

**WARNING**  **Use only authorized parts.** Do not use parts, accessories, or adapters other than those authorized by Inspired Technologies, Inc.

**WARNING Do not use if...**



Do not use the VIAspire Portable if it:

- Is not working properly.
- Has been dropped or damaged.
- Has been submerged in water.

Call a qualified technician for examination and repair.

**WARNING Unintended oxygen leakage.**



If any unintended leakage of oxygen is detected, do not attempt to use the product. Turn the product off. If leakage persists, place the product outdoors and notify your medical equipment provider or service representative of this condition.

**WARNING High pressure relief valves.**



The VIAspire Liquid Oxygen Portable is equipped with several high pressure relief valves to ensure the user's safety. When activated, this safety feature will make a loud noise. If this noise occurs and persists, turn the unit off and contact your medical equipment provider or service representative.

**WARNING Always supervise children.**



Children should always be supervised around the VIAspire Liquid Oxygen Portable. Failure to do so may result in damage to the unit or personal injury.

**WARNING Use in accordance with your prescription.**



For your safety, the VIAspire Liquid Oxygen Portable must be used in accordance with the prescription determined by your physician.

**WARNING Not for use in emergency transport vehicles.**



The VIAspire Liquid Oxygen Portable is not intended to be used in emergency transport vehicles (ambulances or helicopters), or other similar areas where high levels of Electromagnetic Interference (EMI) may be expected.

---

## Warnings About Handling

**WARNING**



**Use extreme care when filling.** Use extreme care when filling your VIAspire Portable.

**WARNING**



**Keep unit in an upright position.** Always ensure that the portable is in an upright position. Turning the portable on its side will cause venting of oxygen from the relief valves.

---

## Cautions and Notes

**CAUTION**



**Do not disassemble.** The VIAspire Liquid Oxygen Portable contains no user serviceable parts. If service is required, contact your home medical equipment provider or authorized service center.

**CAUTION**



**Use only AA type batteries.** AA alkaline or AA rechargeable batteries may be used. If using Rechargeable batteries, they must be fully charged before installing. It is recommended to use  $\geq 1800$  mAh Ni-MH (Nickel Metal Hydride) batteries.

**CAUTION**



**Federal law restricts** this device to sale by or on the order of a physician.

**CAUTION**



**Portable and mobile RF (Radio Frequency) communications equipment** can affect the VIAspire Liquid Oxygen Portable.

**NOTE**



**Have a full cylinder of oxygen on hand.** Inspired Technologies recommends the medical equipment provider leave a full cylinder of oxygen with the patient after setting up the VIAspire Portable, and instructing the patient to always keep a full cylinder on hand.

**NOTE**



**Allow portable to stabilize after filling.** After filling the VIAspire Portable, Inspired Technologies recommends waiting at least 5 to 10 minutes before using it. This allows the liquid oxygen to stabilize within the portable and better maintain the prescription flow setting.

---

## Indications for Use

The VIAspire Portable 300P and/or 600P provides a source of supplemental oxygen for ambulatory home healthcare patients, by vaporizing medical grade liquid oxygen and then dispensing it to the patient via an integral electronic conserving device. The VIAspire Portable 300P and/or 600P is neither a life-sustaining nor a life-supporting device.

---

## Provider Checklist

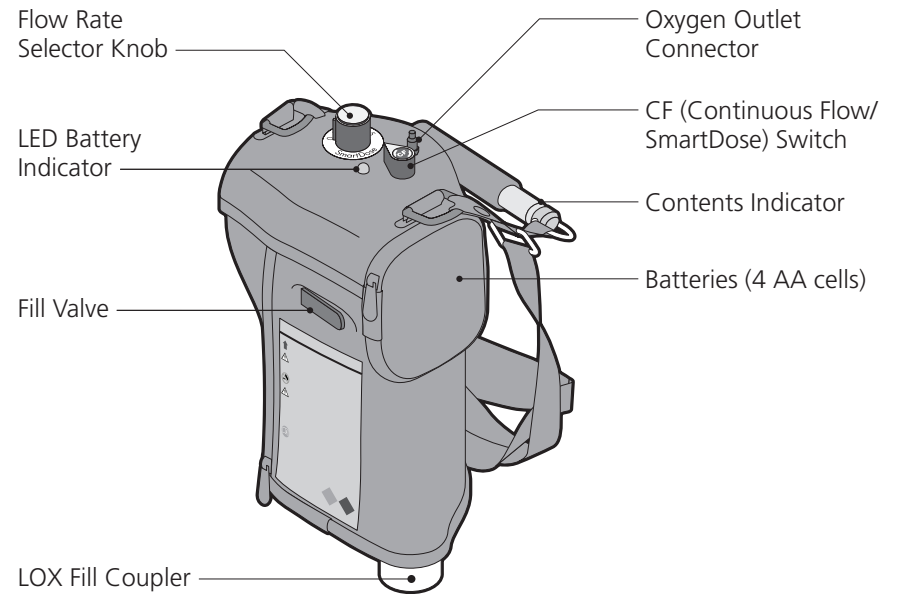
Before leaving the VIAspire Portable with a patient, the following checklist **MUST** be completed:

- Check all parts for shipping damage. In case of damage, do not use. Contact Inspired Technologies, Inc. for further instructions.
- Make sure the VIAspire Portable is compatible with the liquid oxygen source. If the patient intends to use the VIAspire Portable 300 or 600 with a 99% coupler, be sure to use a liquid oxygen reservoir with a compatible coupler.
- Instruct the patient on the safe operation of the VIAspire Liquid Oxygen Portable and all associated accessories, and review ALL warnings.
- Leave a copy of this product manual with the patient.

---

## VIAspire Portable Overview

The illustration shows the parts of the VIAspire Portable.

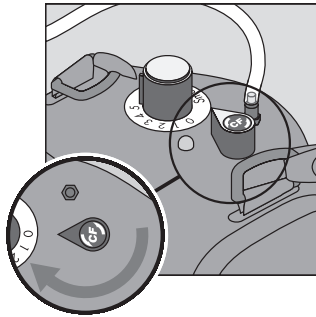


## VIAspire Portable Delivery Modes

The VIAspire Portable has two modes: SmartDose and Continuous Flow. To receive the benefits of SmartDose technology, set your VIAspire Portable to SmartDose mode. Continuous Flow mode is offered as a backup option in case your batteries run out of power. Continuous Flow mode provides a steady flow of oxygen until you can replace the batteries; it does not offer the benefits of SmartDose technology. Also, be aware that your portables oxygen supply will be depleted rapidly when set to operate in Continuous Flow mode.

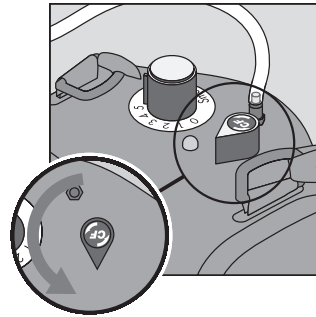
### SmartDose mode

CF switch points *toward* the dial.



### Continuous Flow mode

CF switch points *away* from the dial.



With the Portable in SmartDose mode, SmartDose technology detects changes in your breath rate and automatically adjusts the oxygen dose using a unique valving system. In this way, the VIAspire Portable automatically adapts the oxygen flow to meet your needs as your activity level goes up and down throughout the day. After you have set the flow rate to your prescribed dose, there is no need to manually change the oxygen flow rate during the day—SmartDose technology does it for you.

SmartDose technology helps you in two ways: when you are active, a higher oxygen dose helps reduce feelings of breathlessness and stay active. When you are at rest and your breathing rate slows down, SmartDose technology adjusts the oxygen dose to the lower level that meets your needs. Keeping the oxygen flow rate as low as possible helps to extend oxygen duration, minimize nasal dryness, and provide quieter therapy.

### NOTE

Always turn the Flow Rate Selector knob to “0” when changing to Continuous Flow mode.

## Filling a VIAspire Portable

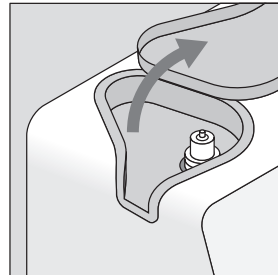
### Filling a VIAspire Portable from the VIAspire Liquefier

After the VIAspire Liquefier has liquefied enough oxygen, you can fill your portable by following these instructions.

**WARNING** If the Liquid Oxygen Coupler Access Door on top of the VIAspire Liquefier is opened and the unit continues to run, do not fill the portable. Contact your medical equipment provider to service the equipment.

**CAUTION** The VIAspire Portable is designed to accept medical grade liquid oxygen from the VIAspire Liquefier. Most oxygen portables are not compatible. Attempting to use an incompatible portable device may damage the VIAspire Portable or Liquefier, or could lead to injury.

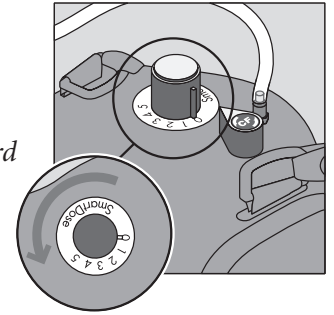
- 1 Open the Liquid Oxygen Coupler Access Door on the top of the VIAspire Liquefier. This will stop the liquefaction process.



Use a clean, dry, oil-free, lint-free cloth to clean and dry the couplers on both units.

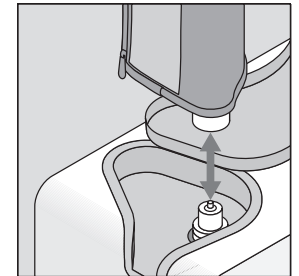


- 2 On the VIAspire Portable, turn the Flow Rate Selector knob to the 0 position. Be sure to select SmartDose mode by turning the teardrop-shaped CF switch *toward* the Flow Rate Selector knob as shown.

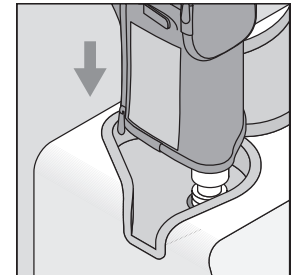


**NOTE** Always keep the portable in SmartDose mode unless you run out of battery power.

- 3 Align the coupler on the bottom of the VIAspire Portable with the coupler in the dock area on top of the Liquefier.

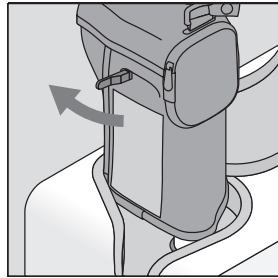


- 4 Press down firmly on the top of the VIAspire Portable, keeping it in an upright position. The VIAspire Liquefier and Portable are now connected.



- 5** Open the Vent Valve on the VIAspire Portable to begin filling the portable.

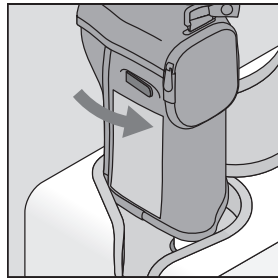
Continue to hold down the VIAspire Portable in place throughout the filling process.



**NOTE** The hissing sound you hear is the sound of some oxygen escaping; this is normal.

**NOTE** You may see vapor around the connection. This is normal and due to the great difference in temperatures between the liquid oxygen and the warm air surrounding the VIAspire Portable.

- 6** When the portable is full, close the Vent Valve. You will know that it is full when the hissing sound changes tone, and some liquid comes out of the vent line.



- 7** Lift the portable off of the VIAspire Liquefier.

If the portable does not separate easily, do not use force. The VIAspire Liquefier and Portable may be frozen together, which sometimes occurs. A slight twisting motion will release them.

- Wait until the units warm up for 3 to 5 minutes, and then they will separate with slight effort.
- Do not touch any frosted parts.
- If any liquid is leaking from the VIAspire Liquefier or Portable after separation, reattach the portable immediately, then separate the units again.
- If liquid continues to leak, leave the units connected and call your medical equipment provider.

- 8** Close the Coupler Access Door. After a short period of time, the VIAspire Liquefier will begin liquefying to replenish the liquid oxygen level.

**WARNING** Should any excessive leakage occur, to the point that a stream of liquid is present, leave the area and call your medical equipment provider immediately.

**WARNING** Liquid or cold gaseous oxygen can cause frostbite on the skin. Oxygen will result in increased fire hazard.

**NOTE** For additional information and instructions on proper use of your VIAspire Liquefier, refer to the product manual that came with it.

---

## Filling a VIAspire Portable from another oxygen source

The VIAspire Portable is available with a 99% oxygen (blue) coupler that lets you fill a VIAspire Portable from a Puritan Bennett or Caire liquid oxygen (LOX) reservoir. This 99% portable (part number 300P-0601 or 600P-0601) is *not* compatible with the VIAspire Liquefier and must be filled from an alternate source of liquid oxygen.

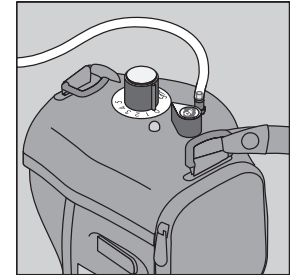
To fill your VIAspire Portable with a 99% oxygen coupler, follow the instructions in the manual for your oxygen source, and note all applicable warnings and cautions. All terms, abbreviations and symbols, safeguards, cautions, warnings, notes, and Indications for Use within this manual still apply.

---

## Starting Oxygen Delivery from the VIAspire Portable

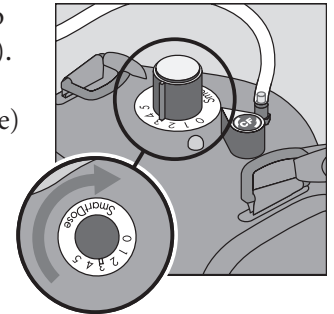
To receive oxygen from your VIAspire Portable, follow these steps.

- 
- 1 Push the cannula breathing tube firmly onto the oxygen outlet port.



- 
- 2 Adjust the cannula breathing tube to the proper position on your nose so that you will be able to breathe the oxygen comfortably.

- 
- 3 Turn the Flow Rate Selector knob to your prescribed setting (1 to 5). Be sure that the teardrop-shaped CF (Continuous Flow/SmartDose) switch points *toward* the Flow Rate Selector knob as shown, confirming that your VIAspire Portable is in SmartDose mode.



- 
- 4 Gaseous oxygen is now flowing from your VIAspire Portable, and with each breath you should receive your set dose of oxygen.

5

Keep an eye on your VIAspire Portable's battery power.

- The battery indicator lights up green with each breath, signaling that the VIAspire Portable is being triggered to deliver oxygen. The light *only monitors battery power* and *does not indicate* whether there is liquid oxygen in the reservoir.
- When the battery indicator lights up red with each breath, it is time to replace the batteries.
- The battery indicator will remain lit red (not blinking with each breath) if the batteries are totally depleted.

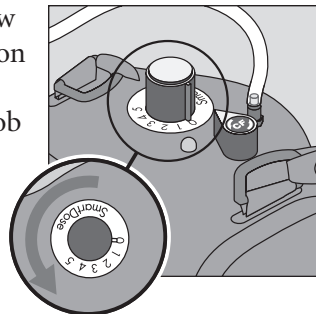
**NOTE**

If the batteries are dead and you cannot replace them, switch to Continuous Flow mode by turning the CF switch *away* from the Flow Rate Selector knob. Continuous Flow mode does not require batteries. Leave the Flow Rate Selector knob at your prescribed dose.

See the “Changing the Batteries” section in this manual for more information.

6

To stop oxygen flow, turn the Flow Rate Selector knob to the 0 position and be sure the CF switch points *toward* the Flow Rate Selector knob as shown.



**NOTE**

If the VIAspire Portable is in Continuous Flow mode, a small amount of oxygen will still be delivered, *even if* the flow rate is set to 0. The portable *must* be in SmartDose mode *and* set to 0 in order to completely turn off the flow of oxygen.

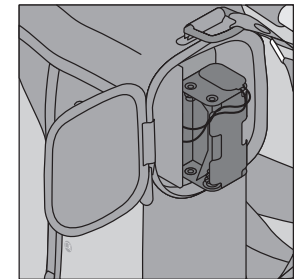
## Changing the Batteries

When the red battery indicator light begins blinking red, it means the VIAspire Portable's batteries are low and it's time to replace them. A continuous, non-blinking red light means the batteries are dead. Until you can replace the batteries, you should switch the portable to Continuous Flow mode by turning the CF switch *away* from the Flow Rate Selector knob. Leave the Flow Rate Selector knob at your prescribed dose. Continuous Flow mode does not require batteries and will deliver a continuous flow of oxygen, but this mode also significantly shortens the oxygen duration of your portable. Follow these steps to replace the batteries.

1

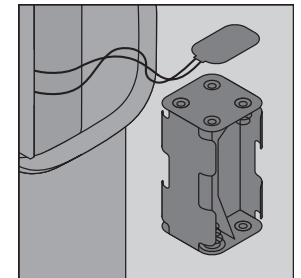
Unzip the battery pouch on the side of the portable.

Remove the battery holder from its Velcro attachment.

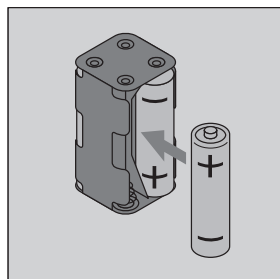


2

Disconnect the battery holder from the cable as shown.



- 3** Place 4 AA Alkaline or rechargeable batteries in the battery holder. Confirm that all batteries are oriented properly, with the negative (–) pole touching the spring in the battery holder.



**NOTE** If using rechargeable batteries, ensure they are fully charged before installation. Nickel Metal Hydride (Ni-MH)  $\geq 1800$  mAh rechargeable batteries are recommended.

- 4** Reconnect the battery holder to the cable. Reattach the battery holder on the Velcro strap. Zip the battery pouch closed. Verify that batteries are installed correctly by pointing the CF switch *toward* the Flow Rate Selector knob and turning the Flow Rate Selector knob to your prescription setting. The battery indicator light should start to blink red then green, and the portable can now be used.

**WARNING** Using the VIAspire Portable in Continuous Flow mode (teardrop-shaped CF switch pointed away the Flow Rate Selector knob) will use oxygen at a faster rate than using it in SmartDose mode. Monitor the contents of your VIAspire Portable as described in “Checking the Level of Liquid Oxygen” so you do not run out of oxygen.

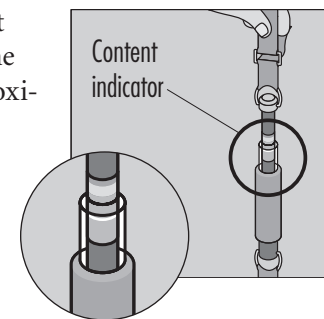
**NOTE** When using the VIAspire Portable in Continuous Flow mode, the indicator light will NOT light up green or red with each breath. Turning the Flow Rate Selector Knob to 0 *will not completely stop* the flow of oxygen. To stop the flow of oxygen completely, point the CF switch toward the Flow Rate Selector knob *and* also set the Flow Rate Selector knob to 0.

## Checking the Level of Liquid Oxygen

The VIAspire Portable has a built-in tool to check the amount of liquid oxygen. Follow these steps for using the Contents Indicator.

- 1** Hold the short strap directly above the black spring scale Contents Indicator on the portable as shown below.

- 2** Let the portable stabilize (do not bounce or shake it), then read the exposed color scale for the approximate amount of liquid oxygen.



**NOTE** If the portable is empty, only the red colored band of the scale will be exposed. In this case, you need to fill the portable before you can use it.

---

## Troubleshooting

The following troubleshooting chart will help you analyze and correct minor system malfunctions. If the suggested procedures do not help, call your medical equipment provider. Do not attempt any other maintenance.

**WARNING** To avoid electric shock hazard, do not remove the portable case. The case should only be removed by a qualified technician.

Problem	Solution
No indicator light	<ul style="list-style-type: none"><li>• Check that there are new or fully charged batteries in the unit (four AA batteries).</li><li>• Check that the cannula tubing is properly connected and that the tube is not blocked.</li><li>• Check that the CF (Continuous Flow/SmartDose) switch is in the SmartDose position. Refer to the "VIAspire Portable Delivery Modes" section in this manual for additional information.</li><li>• Check that the flow rate selector knob is <i>not</i> set to 0.</li></ul>

---

## Cleaning and Maintenance

---

### Removing Frost

Under certain environmental conditions, frost may form on the vaporizer coil and on the case. You can remove it by tapping the portable or wiping the case.

---

### Preventative Maintenance

Contact your medical equipment provider annually to schedule preventative maintenance for your VIAspire Portable. There are no user-serviceable components inside the portable.

Keep the exterior of the VIAspire Portable clean using a clean, damp, oil-free, lint-free cloth.

Clean and dry the couplers on both the VIAspire Liquefier reservoir and the VIAspire Portable with a clean, dry, oil-free, lint-free cloth before each portable fill.

---

### Accessories

Inspired Technologies recommends using only cannula specifically intended to be used with oxygen delivery systems. Cannula should be capable of delivering up to 8 LPM of continuous flow; maximum length that can be used is 10 meters (35 ft.). Contact your medical equipment provider for recommendations and details. Refer to the cannula manufacturer's instructions for proper cleaning and maintenance procedures.

## Transporting and Storing VIAspire Portables

### Preparing for Shipping

Prior to shipping the VIAspire Portable, remove the batteries and empty any residual oxygen from the unit. Allow the portable to rest for at least 8 hours to empty.

### Storage

Store the VIAspire Portable in a cool, clean, dry area when not in use. Avoid storing in direct sunlight.

### Battery disposal

Dispose of all batteries in accordance with local, state, and federal regulations.

## Specifications

Batteries Required	4 AA-Cell	
Oxygen Pressure	22 to 25 psig	
LOX Content Volume	Model 300	0.33 liters (approx)
	Model 600	0.6 liters (approx)
Weight (empty)	Model 300	3.5 lb
	Model 600	4.5 lb
Temperature	Storage/Transport	-20 to 50°C
	Operating	+ 5 to 40°C
Humidity (non-condensing)	Storage	0 to 95% RH
	Operating	15 to 95% RH

## Appendix

### Oxygen Duration of Portable

The VIAspire Portable comes in three sizes. The table shows approximately how long liquid oxygen lasts at different settings for each model.

Flow	Setting	Approximate Hours of use
<b>VIAspire Portable 300 with SmartDose technology*</b>	1	13.2
	2	7.6
	3	5.4
	4	4.1
	5	3.4
<b>VIAspire Portable 600 with SmartDose technology*</b>	1	24.4
	2	14.1
	3	9.9
	4	7.6
	5	6.2
<b>VIAspire Portable 1200 (Continuous Flow)</b>	1	17.3
	1.5	11.5
	2	8.6
	2.5	6.9
	3	5.8

\* These durations are based on the VIAspire Portable being set in SmartDose mode. For more information, refer to the "VIAspire Delivery Modes" section in this manual.

