

# Operator's Manual

## **Platinum™**

**Oxygen Concentrators Standard,  
with /SensO<sub>2</sub>® and HomeFill®**

**Model IRC5LXAW  
Model IRC5LXO2AW  
Model IRC5LXO2AWQ  
Model IRC9LXO2AWQ**

Dealer: This manual must be given to the end user.

User: Before using this concentrator, read this manual and save for future reference.

**For more information regarding  
Invacare products, parts, and services,  
please visit [www.invacare.com](http://www.invacare.com)**



**Yes, you can.®**

## **WARNING**

**DO NOT USE THIS PRODUCT OR ANY AVAILABLE OPTIONAL EQUIPMENT WITHOUT FIRST COMPLETELY READING AND UNDERSTANDING THESE INSTRUCTIONS AND ANY ADDITIONAL INSTRUCTIONAL MATERIAL SUCH AS OWNER'S MANUALS, SERVICE MANUALS OR INSTRUCTION SHEETS SUPPLIED WITH THIS PRODUCT OR OPTIONAL EQUIPMENT. IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS OR INSTRUCTIONS, CONTACT A HEALTHCARE PROFESSIONAL, DEALER OR TECHNICAL PERSONNEL BEFORE ATTEMPTING TO USE THIS EQUIPMENT - OTHERWISE, INJURY OR DAMAGE MAY OCCUR.**

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## **ACCESSORIES**

There are many different types of humidifiers, oxygen tubing, cannulas and masks that can be used with this device. You should contact your local home care provider for recommendations on which of these devices will be best for you. They should also give you advice on the proper usage, maintenance, and cleaning.

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## **ACCESSORIES WARNING**

**Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.**

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*NOTE: Updated versions of this manual are available on [www.invacare.com](http://www.invacare.com).*

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## SPECIAL NOTES

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. Refer to the following table for definitions of the signal words.

SIGNAL WORD	MEANING
DANGER	Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.

### NOTICE

The information contained in this document is subject to change without notice.

### DANGER

**DO NOT SMOKE** while using this device. Keep all matches, lit cigarettes or other sources of ignition out of the room in which this product is located and away from where oxygen is being delivered.

**NO SMOKING** signs should be prominently displayed. Textiles and other materials that normally would not burn are easily ignited and burn with great intensity in oxygen enriched air. Failure to observe this warning can result in severe fire, property damage and cause physical injury or death.

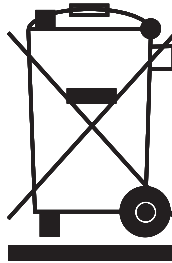
# RECYCLING INFORMATION

This product has been supplied from an environmentally aware manufacturer that complies with the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/CE.

This product may contain substances that could be harmful to the environment if disposed of in places (landfills) that are not appropriate according to legislation.

The 'crossed out wheelie bin' symbol is placed on this product to encourage you to recycle wherever possible.

Please be environmentally responsible and recycle this product through your recycling facility at its end of life.



## SECTION I—GENERAL GUIDELINES

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### **WARNING**

**SECTION I - GENERAL GUIDELINES** contains important information for the safe operation and use of this product.

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

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### **CAUTION**

“Caution: Federal law restricts this device to sale or rental by or on order of a physician, or any other practitioner licensed by the law of the governmental agency in which he/she practices to use or order the use of this device.”

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### **DANGER**

Risk of electric shock. **DO NOT** disassemble. Refer servicing to qualified service personnel.

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## **⚠ WARNINGS**

The use of oxygen therapy requires that special care be taken to reduce the risk of fire. Any materials that will burn in air, and some that will not, are easily ignited and burn rapidly in high concentrations of oxygen. For safety concerns, it is necessary that all sources of ignition be kept away from the product and preferably out of the room in which it is being used. **NO SMOKING** signs should be prominently displayed.

A spontaneous and violent ignition may occur if oil, grease or greasy substances come in contact with oxygen under pressure. These substances **MUST** be kept away from the oxygen concentrator, tubing and connections, and all other oxygen equipment. **DO NOT** use any lubricants unless expressly recommended by Invacare.

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

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

Keep the oxygen tubing, cord, and unit away from heated or hot surfaces, including space heaters, blankets, stoves and similar electrical appliances.

**DO NOT** move or relocate concentrator by pulling on the cord.

**NEVER** drop or insert any object into any opening.

**NEVER** block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air opening may be blocked. Keep the openings free from lint, hair and the like.

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Fill humidifier with water to the level shown by the manufacturer. **DO NOT** overfill.

Keep unit at least 7.5 cm (3 in) away from walls, draperies, furniture, and the like.

Invacare recommends that Crushproof oxygen tubing (supplied by Invacare) be used with this product and **NOT** exceed 15.2 m (50 ft) in length. Recommended use for Platinum 9 is up to 15.2 m (50 ft) in length of high flow tubing.

## **Maintenance**

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

## **Radio Frequency Interference**

Most electronic equipment is influenced by Radio Frequency Interference (RFI). Caution should be exercised with regard to the use of portable communications equipment in the area around such equipment.

## **To Reduce The Risk Of Burns, Electrocutation, Fire Or Injury To Persons**

Avoid using while bathing. If continuous usage is required by the physician's prescription:

The concentrator must be located in another room at least 2.1 m (7 ft.) from the bath.

**DO NOT** come in contact with the concentrator while wet.

A product should **NEVER** be left unattended when plugged in.

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

DO NOT reach for product that has fallen into water. Unplug IMMEDIATELY.

This device is to be used only in accordance with the prescription of a physician and this Owners Manual. If at any time the patient or attendant conclude that the patient is receiving an insufficient amount of oxygen, the supplier and/or physician should be contacted IMMEDIATELY. No adjustments should be made to the flowrate unless prescribed by a physician.

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

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

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

Use of some administration accessories or certain humidifiers not specified for use with oxygen concentrator may impair the performance.

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

This equipment is to be used as an oxygen supplement and is not considered life supporting or life sustaining.

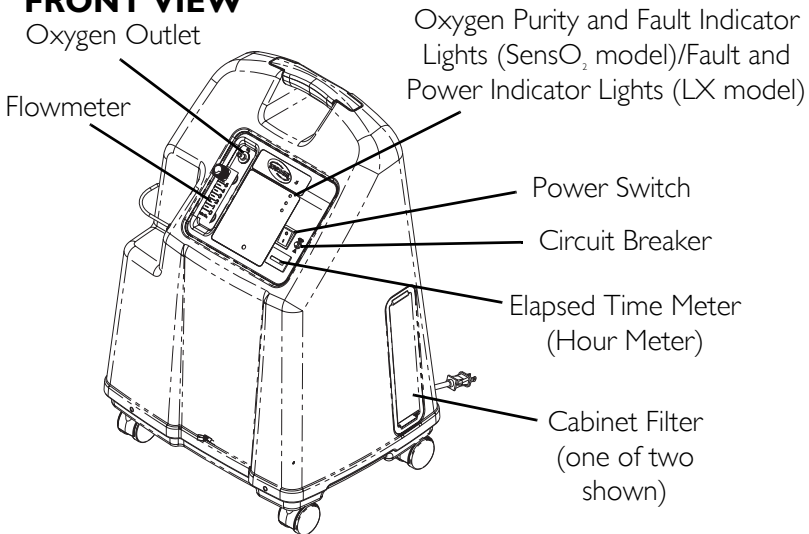
Avoid creation of any spark near medical oxygen equipment. This includes sparks from static electricity created by any type of friction.

## Oxygen Concentration

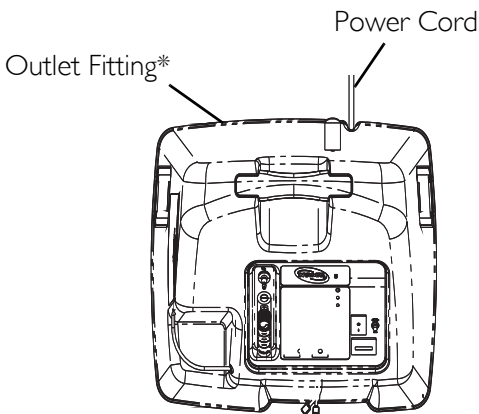
Take care not to set the flow above RED ring. An oxygen flow greater than 5 L/min. (IRC5LXO2AW, IRC5LXAW, IRC5LXO2AWQ) and 9 L/min. (IRC9LXO2AWQ) will decrease the oxygen concentration.

## SECTION 2—FEATURES

### FRONT VIEW



*\*NOTE: This outlet fitting is to be used only for filling oxygen cylinders with the HomeFill home oxygen compressor. The outlet fitting does not affect concentrator performance. Refer to the HomeFill owner's manual, part number 1145804, for connection and operating instructions. When not in use, the plug provided with the concentrator should be inserted into the outlet fitting. For more information about the HomeFill, contact Invacare.*



### TOP VIEW

### ACCESSORIES (NOT SHOWN):

HomeFill home oxygen compressor

Contact your local Invacare representative for available accessory information.

## **SECTION 3—SHIPPING AND HANDLING**

*NOTE: For this procedure, refer to FIGURE 3.1 on page 13.*

Before you install and operate the concentrator, please refer to Platinum Series Owner's Manual.

The Platinum concentrator should ALWAYS be kept in the upright position to prevent cabinet damage while being transported. The shipping container has been designed to assure maximum protection of the concentrator.

If the concentrator is to be reshipped by common carrier, it should be packed in a new carton. Additional cartons are available from Invacare.

The air compressor suspension system has been engineered to withstand severe motion and orientation.

### **Unpacking**

1. Check for any obvious damage to the carton or its contents. If damage is evident, notify the carrier, or Invacare.
2. Remove all loose packing from the carton.
3. Carefully remove all the components from the carton.

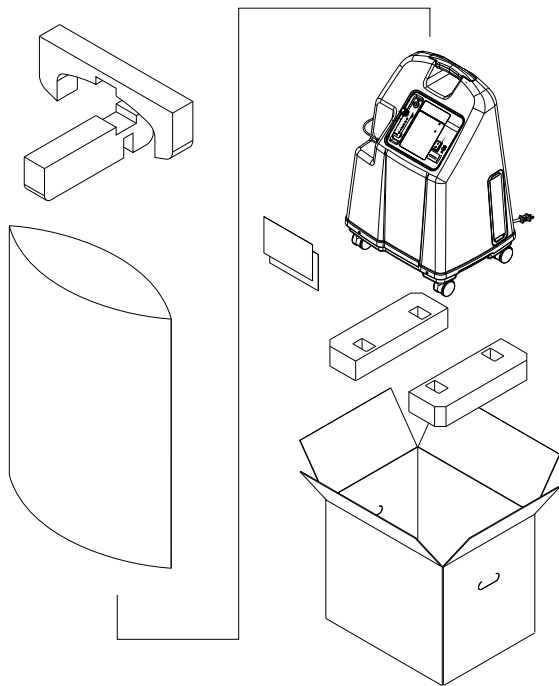
*NOTE: Retain carton and packing materials for storage of the Platinum.*

### **Inspection**

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








### **Storage**

1. Store the repackaged oxygen concentrator in a dry area.
2. DO NOT place other objects on top of the repackaged concentrator.



**FIGURE 3.1** Unpacking

# SECTION 4—TYPICAL PRODUCT PARAMETERS

<b>Regulatory Listing:</b>	EN/IEC 60601-1
	Alternating Current
	Type BF equipment
	Unit running
	Unit not running
	Attention - Consider Accompanying Documents
	DO NOT smoke
	Class II, Double Insulation

Electrical Requirements:	230 VAC $\pm$ 10% (253 VAC/207 VAC), 50 Hz
Rated Current Input:	1.4 A (IRC5LXO2AWQ)
	2.0 A (IRC5LXAW, IRC5LXO2AW)
	2.1 A (IRC9LXO2AWQ)
Sound Level:	39.5 dB Average (IRC5LXO2AWQ)
	44 dB Average (IRC5LXAW, IRC5LXO2AW)
	50 dB Average (IRC9LXO2AWQ)
Altitude:	Up to 1828 meters (6,000 ft.) above sea level without degradation of concentration levels. NOT RECOMMENDED FOR USE ABOVE 1828 meters (6,000 ft)
	For IRC9LXO2AWQ - Up to 4,000 ft. (1230 meters) above sea level without degradation of concentration levels. For 4,000 ft (1230 meters) to 13,129 ft (4000 meters) below 90% efficiency.

## SECTION 4—TYPICAL PRODUCT PARAMETERS

<p>*Oxygen Output Concentration Levels: All 5LXO2AWQ/5LXAW/ 5LXO2AW/9LXO2AWQ models * (Stated concentration levels achieved after initial warm-up period (approximately 30 minutes).</p>	<p>IRC5LXAW, IRC5LXO2AW and IRC5LXO2AWQ 93% minimum at 1 to 3 L/min. 91% minimum at 4 L/min. 87% minimum at 5 L/min. (maximum recommended flow) IRC9LXO2AWQ 92% minimum at 1 to 2 L/min. 91% minimum at 8 L/min. 87% minimum at 9 L/min. 93% minimum at 3 to 7 L/min.</p>
<p>Maximum Outlet Pressure:</p>	<p>IRC5LXAW, IRC5LXO2AW, IRC5LXO2AWQ 34.5 ± 3.45 kPa (5 ± 0.5 psi)</p>
	<p>IRC9LXO2AWQ 62.0 kPa ± 3.45 kPa (9 ± 0.5 psi)</p>
<p>Flow Range:</p>	<p>IRC5LXAW, IRC5LXO2AW, IRC5LXO2AWQ 0.5 to 5 L/min. Flowrates less than 1 L/min. are not recommend</p>
	<p>IRC9LXO2AWQ 1 L/min. to 9 L/min. Flowrates less than 1 L/min. are not recommended.</p>
<p>Low Flow Alarm:</p>	<p>0 L/min. to 0.5 L/min. Rapid Audible Alarm Beeping (No Accessories Connected).</p>
<p>Average Power Consumption:</p>	<p>(IRC5LXO2AWQ) 300 W 280 W @ ≤ 3 L/min.</p>
	<p>(IRC5LXO2AW) 365 W 340 W @ ≤ 3 L/min.</p>
	<p>380 W (IRC5LXAW)</p>
	<p>475 W (IRC9LXO2AWQ)</p>
<p>Pressure Relief Mechanism Operational at:</p>	<p>241 kPa ± 24.1 kPa (35 psi ± 3.5 psi)</p>

**SECTION 4—TYPICAL PRODUCT PARAMETERS**



Change in maximum recommended flow when back pressure of 7k Pa is applied:	0.7 L/min.
Filters:	Cabinet (2), Outlet HEPA and Compressor Inlet.
Safety System:	Current overload or line surge shutdown. High temperature compressor shutdown. High Pressure Alarm w/compressor shutdown. Low Pressure Alarm w/compressor shutdown. Battery Free Power Loss Alarm. SensO <sub>2</sub> Oxygen System (SensO <sub>2</sub> Model) Low Flow Alarm.
Width:	46.7 cm ± 1 cm (18 3/8 in ± 3/8 in)
Height:	67.0 cm ± 1 cm (6 3/8 in. ± 3/8 in)
Depth:	36.5 cm ± 1 cm (14 3/8 in. ± 3/8 in)
Weight:	IRC5LXAW, IRC5LXO2AW, IRC5LXO2AWQ 23.6 kg ± 1 kg (52 lbs ± 2 lbs)
	IRC9LXO2AWQ 24.0 kg ± 1 kg (53 lbs ± 2 lbs)
Shipping Weight:	IRC5LXAW, IRC5LXO2AW, IRC5LXO2AWQ 26.8 kg ± 1 kg (59 lbs ± 2 lbs)
	IRC9LXO2AWQ 27.2 kg ± 1 kg (60 lbs ± 2 lbs)
Operating Ambient Temperature:	10°C - 35°C (50°F - 95°F) at 20-60% relative humidity.
Exhaust:	Less than Ambient +19°C (+ 35°F)
Oxygen Output:	Less than Ambient +2°C (+ 4°F).
Cabinet:	Impact Resistant flame-retardant plastic cabinet that conforms to UL 94-V0.




## SECTION 4—TYPICAL PRODUCT PARAMETERS

Regulatory Listing:	<p>IRC5LXAW/IRC5LXO2AW/                      IRC5LXO2AWQ/IRC9LXO2AWQ                      ETL tested as complying with:                      EN55011                      EN61000-3-2                      EN61000-3-3                      IEC 60601-1, A1, A2                      IEC 60601-1-2</p> <p>IRC5LXO2AW, IRC5LXO2AWQ,                      IRC9LXO2AWQ Models Only                      ISO8359                      MDD</p>
CE marked models:	IRC5LXO2AW, IRC5LXO2AWQ, IRC9LXO2AWQ
Electrical:	No extension cords.
Placement:	No closer than 7.5 cm (3 inches) from any wall, furniture, draperies, or similar surfaces.
Tubing:	<p>IRC5LXAW, IRC5LXO2AW,                      IRC5LXO2AWQ                      2.1 m (7 ft) cannula with a maximum 15.2 m (50 ft) of Crush-Proof Tubing (DO NOT pinch).</p>
	<p>IRC9LXO2AWQ                      Recommended use up to 15.2 M (50 ft) high flow tubing with high flow cannula at all flow rates.</p>
Relative Humidity:	20 to 60%
Time of Operation:	Up to 24 hours per day.
Recommended Storage and Shipping Temperature:	-29°C to 65°C (-20°F to 150°F) at 15-95% relative humidity.

**SENSO<sub>2</sub> INDICATORS**

LABEL SYMBOL	STATUS	INDICATOR LIGHTS (LED)
O <sub>2</sub>	SYSTEM OKAY O <sub>2</sub> over 85% (± 2%)	GREEN Indicator Light
	O <sub>2</sub> Between 73% (± 3%) to 85% (±2%)	YELLOW Indicator light A. YELLOW Solid B. YELLOW Flashing Sensor Failure Call a qualified technician.
	SYSTEM FAILURE O <sub>2</sub> Below 73% (±3%)	RED Indicator Light Refer to <u>Troubleshooting Guide</u> on page 31.

**LX INDICATORS**

LABEL SYMBOL	STATUS	INDICATOR LIGHTS (LED)
I/O	SYSTEM OKAY	GREEN Indicator Light
	SYSTEM FAILURE	RED Indicator light Continuous Audible Alarm Sieve-GARD™ Compressor Shutdown Call a qualified technician

## **SECTION 5—OPERATING INSTRUCTIONS**

### **Introduction**

Your oxygen concentrator is intended for individual use in the home. It is an electronically operated device that separates oxygen from room air. It provides high concentration of oxygen directly to you through a nasal cannula. Clinical studies have documented that oxygen concentrators are therapeutically equivalent to other types of oxygen delivery systems.

Your provider will show you how to use your oxygen concentrator. He/She should be contacted with any questions or problems regarding your oxygen concentrator. This owner's manual will tell you about your concentrator and will serve as a reference as you use your concentrator.

### **Select a Location**

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

Your oxygen concentrator will perform best when operated under the following conditions. Usage in environments other than those described may result in the need for increased equipment maintenance. The air intake of the unit should be located in a well ventilated area to avoid airborne pollutants and/or fumes.

## Recommended Guidelines for Optimum Performance

Temperature:	(10°C - 35°C) 50°F - 95°F
Electrical:	No extension cords.
Placement:	No closer than 7.5 cm (3 in) from the wall, furniture, draperies, or similar surfaces.
Tubing and Cannula:	IRC5LXAW, IRC5LXO2AW, IRC5LXO2AWQ 2.1 m (7 ft) cannula with a maximum 15.2 m (50 ft) of Crush-Proof Tubing (DO NOT pinch).
	IRC9LXO2AWQ Recommended use up to 15.2 m (50 ft) high flow tubing with high flow cannula at all flow rates.
Environment:	Smoke and soot-free. No confined spaces (Example: No closets).
Relative Humidity:	20 to 60%
Time of Operation:	Up to 24 hours per day.
Flow Rate	IRC5LXAW, IRC5LXO2AW, IRC5LXO2AWQ 0.5 L/min. to 5 L/min. Flow rates less than 1 L/min., are not recommended.
	IRC9LXO2AWQ 1 L/min. to 9L/min. Flow rates less than 1 L/min. are not recommended.
Minimum Operating Time:	30 Minutes

*NOTE: Ensure that your concentrator is at least 7.5 cm (3 in) away from walls, draperies or furniture to assure sufficient air flow. Avoid deep pile carpets and heaters, radiators or hot air registers.*

## Plug in Power Cord

1. Plug in power cord to an electrical outlet.

## Connect Humidifier (If So Prescribed)

*NOTE: For this procedure, refer to FIGURE 5.1, FIGURE 5.2, FIGURE 5.3 on page 22 and FIGURE 5.4 on page 23.*

1. Fill humidifier with distilled water to the level indicated by the manufacturer. (Please contact Invacare for recommendations).

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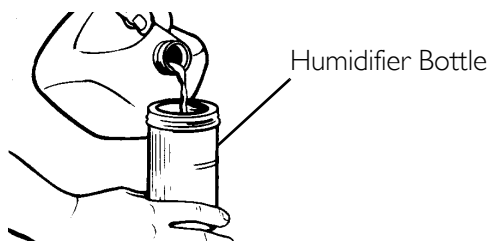
### **⚠ WARNING**

**DO NOT overfill humidifier.**

**Replace the humidifier cap and securely tighten.**

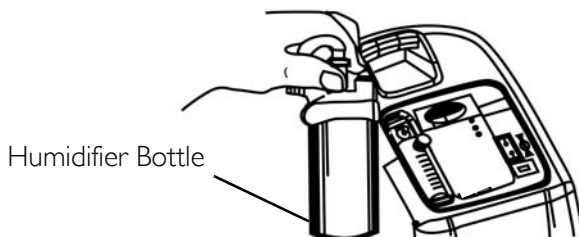
**DO NOT reverse the oxygen input and output connections. Water from the humidifier bottle will travel through the cannula back to the patient.**

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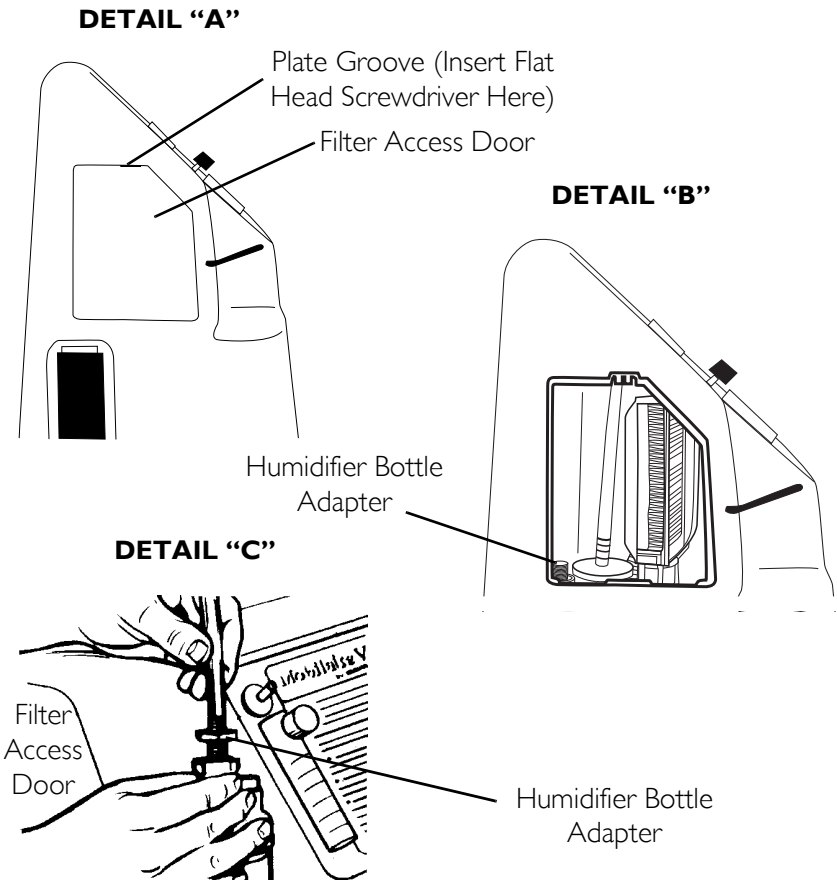
**FIGURE 5.1** Filling the Humidifier

2. Place the humidifier bottle in the humidifier compartment.



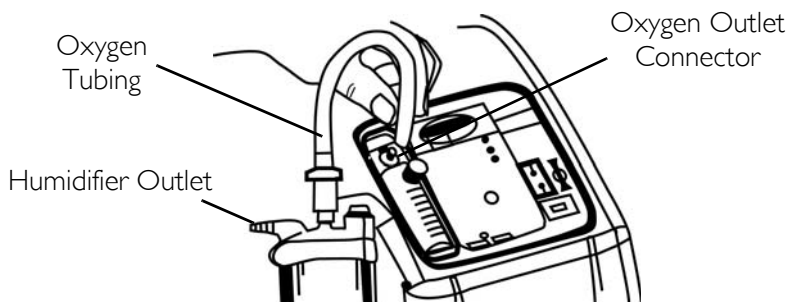
**FIGURE 5.2** Humidifier Compartment

3. Remove the filter access door located on the side of the concentrator. Insert a flathead screwdriver in the plate groove on the top edge of the filter access door and gently pry the filter access door open. Refer to Detail "A" in FIGURE 5.3.
4. The humidifier adapter is next to the inlet filter. Pull up and remove the humidifier bottle adapter. Refer to Detail "B" in FIGURE 5.3.
5. Attach it to the humidifier by turning the wing nut on the humidifier bottle counterclockwise until it is securely fastened. Refer to Detail "C" in FIGURE 5.3.



**FIGURE 5.3** Attaching the Humidifier Bottle Adapter

6. Attach oxygen tubing from the humidifier bottle to oxygen outlet connector on the oxygen concentrator.
7. Attach the cannula/patient supply tubing to the humidifier bottle outlet.
8. After assembly, ensure that oxygen is flowing through the cannula.
9. Replace the filter access door on the side of concentrator by snapping it back into the plate groove.



**FIGURE 5.4** Attaching the Oxygen Tubing

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**⚠ WARNING**

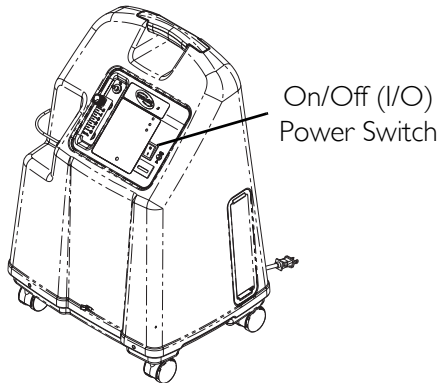
**For optimum performance, Invacare recommends that each concentrator be on and running for a minimum of 30 minutes at a time. Shorter periods of operation may reduce maximum product life.**

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## **Power Switch**

*NOTE: For this procedure, refer to FIGURE 5.5 on page 24.*

1. Press power switch to on position. All the panel lights and the audible alarm will come on for one second, indicating that the unit is functioning properly.



**FIGURE 5.5** Power Switch

## Flowrate

*NOTE: For this procedure, refer to FIGURE 5.6 on page 25.*

1. Turn the flowrate knob to the setting prescribed by your physician or therapist.

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### **⚠ WARNING**

**DO NOT change the L/min. setting on the flowmeter unless a change has been prescribed by your physician or therapist.**

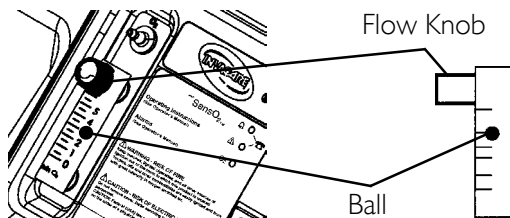
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*NOTE: To properly read the flowmeter, locate the prescribed flowrate line on the flowmeter. Next, turn the flow knob until the ball rises to the line. Now, center the ball on the L/min. line prescribed.*

2. If the flowrate on the flowmeter ever falls below 0.5 L/min. for more than about one minute, the LOW FLOW alarm will be triggered. This is a rapid beeping of the audible alarm. Check your tubing or accessories for blocked or kinked tubing or a defective humidifier bottle. After rated flow is restored, more than 0.5 L/min., the LOW FLOW audible alarm will go off.



*NOTE: The use of some accessories such as the pediatric flowstand and the HomeFill compressor will deactivate the Low Flow Alarm.*



**FIGURE 5.6** Flowrate

## **SensO<sub>2</sub> Oxygen Purity Indicators (LX O<sub>2</sub> Sensor Model)**

This feature monitors the purity of oxygen generated by the oxygen concentrator. If purity falls below factory preset standards, indicator lights on the control panel will illuminate.

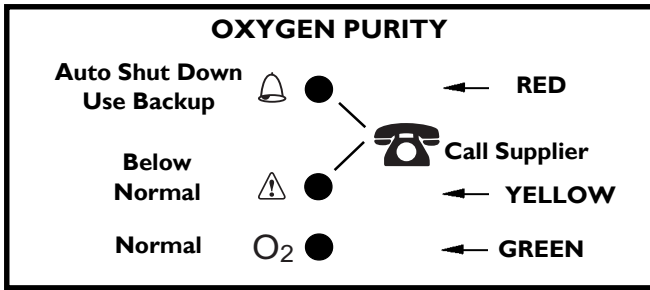
### **Initial Startup of the Concentrator**

*NOTE: Concentrator may be used during the initial start warm-up time (approximately 30 min.) while waiting for the O<sub>2</sub> purity to reach maximum.*

When the unit is turned on, the GREEN light will come on (SYSTEM OK/O<sub>2</sub> greater than 85%). After five minutes, the oxygen sensor will be operating normally and will control the indicator lights depending on oxygen concentration values.

### **Explanation of Oxygen Purity Indicator Lights**

*NOTE: For this procedure, refer to FIGURE 5.7.*



**FIGURE 5.7** SensO<sub>2</sub> Oxygen Purity Indicators (LX O<sub>2</sub> Sensor Model)

GREEN light (O<sub>2</sub>) - Normal Operation.

YELLOW light (⚠️) - Call supplier IMMEDIATELY. You may continue to use the concentrator unless instructed otherwise by your supplier. Be certain that backup oxygen is nearby.

RED light (🔔) - Total unit shutdown. Switch IMMEDIATELY to backup oxygen supply. Call supplier IMMEDIATELY (FIGURE 5.7).

GREEN light - with YELLOW light flashing - Call supplier IMMEDIATELY. Oxygen sensor malfunctioning; you may continue to use the concentrator (FIGURE 5.7).

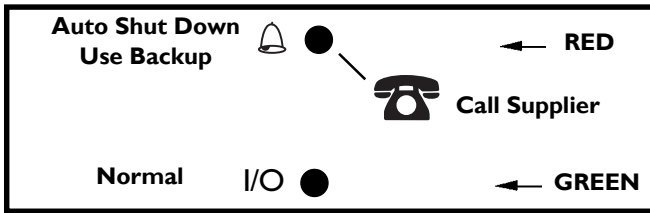
## Indicators (LX Model)

*NOTE: For this procedure, refer to FIGURE 5.8.*

### Explanation of LX models Indicator Lights

RED light (🔔) - Total Unit Shut-Down. Switch IMMEDIATELY to a back-up oxygen supply. Call supplier IMMEDIATELY.

GREEN light (I/O) - On/Off. System okay.

**FIGURE 5.8** Indicators (LX Model)

## Main Power Loss Alarm System

The alarm system contains no battery - and is thereby maintenance free. The alarm system is powered by a capacitor that is continuously charged and ready to trigger the alarm in the event of main power loss.

## Elapsed Time Meter (Hour Meter)

The hour meter displays the cumulative number of hours the unit has operated.

## SECTION 6—MAINTENANCE

*NOTE: The Invacare concentrators are specifically designed to minimize routine preventive maintenance. In places with high dust or soot levels, maintenance may need to be performed more often. Only authorized or factory-trained personnel should perform preventive maintenance on the concentrator. Power should be disconnected before beginning preventive maintenance on the Invacare concentrator.*

*NOTE: At a minimum, preventive maintenance MUST be performed according to the maintenance record guidelines. Refer to Preventive Maintenance Record on page 30.*

### Routine Maintenance

*NOTE: The following routine maintenance should be performed more frequently. See recommended intervals in each section and preventive maintenance record.*

### Cleaning the Cabinet Filter

*NOTE: For this procedure, refer to FIGURE 6.1 on page 29.*

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#### **CAUTION**

**DO NOT operate the concentrator without the filters installed.**

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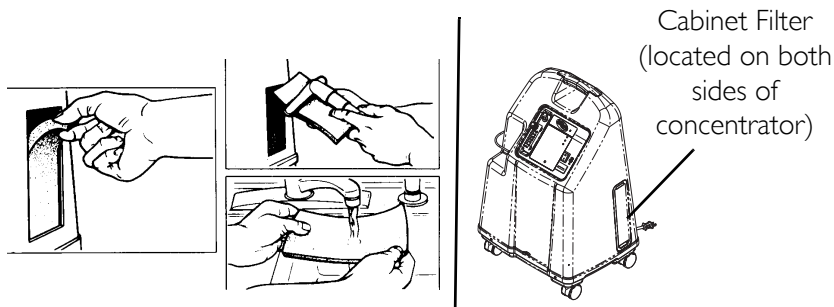
*NOTE: There are two cabinet filters. One filter located on each side of the cabinet.*

1. Remove each filter and clean at least once a week depending on environmental conditions.

*NOTE: Environmental conditions that may require more frequent cleaning of the filters include but are not limited to: high dust, smoking, air pollutants, etc.*

2. Clean the cabinet filters with a vacuum cleaner or wash in warm soapy water and rinse thoroughly.

3. Dry the filters thoroughly before reinstallation.



**FIGURE 6.1** Cleaning the Cabinet Filter

## Cabinet

### **⚠ WARNING**

**Unplug the concentrator when cleaning. To avoid electrical shock, DO NOT remove cabinet.**

1. Clean the cabinet with a mild household cleaner and non-abrasive cloth or sponge.

## Humidifier

*NOTE: To clean the oxygen humidifier, follow the instructions provided by the manufacturer. If none are provided, follow these steps:*

1. Clean the humidifier every day.
2. Wash it in soapy water and rinse it with a solution of ten parts water and one part vinegar.
3. Rinse thoroughly with hot water and refill with distilled water to the level shown on the humidifier.

### **⚠ WARNING**

**DO NOT overfill humidifier bottle.**



## SECTION 7—TROUBLESHOOTING GUIDE

SYMPTOM:	PROBABLE CAUSE:	SOLUTION:
<b>Alarm:</b>	<b>Main Power Loss:</b>	
Short beeps, long pause	1. Power cord NOT plugged in.	1. Insert plug into outlet.
Concentrator not operating, power switch On.	2. No power at outlet.	2. Inspect house circuit breakers or fuses. If problem recurs, use a different outlet.
Beep.....Beep.....	3. Tripped circuit breaker.	3. Call Service Provider.
<b>Alarm:</b> Continuous  Concentrator not operating, Power Switch On.  Beeeeeeep....	<b>System Failure:</b> 1. Unit overheating due to blocked air intake.  2. Insufficient power at outlet.  3. Internal repairs required	1a. Remove and clean cabinet filters.  1b. Move oxygen concentrator at least 7.5 cm (3 in) away from walls, draperies or furniture.  2. DO NOT use extension cords. Move to another electrical outlet or circuit.  3. Call Service Provider.

**SECTION 7—TROUBLESHOOTING GUIDE**

SYMPTOM:	PROBABLE CAUSE:	SOLUTION:
<p>YELLOW or RED light illuminated.</p> <p>Alarm: Continuous On red light only.</p> <p>* Only applies to SensO<sub>2</sub> models.</p>	<p>1. Low oxygen purity.*</p> <p>2. Kinked or blocked tubing, cannula or humidifier.*</p> <p>3. Flowmeter set at 0.5 L/min. or less.*</p> <p>4. Unit overheating due to blocked air intake.</p> <p>5. Insufficient power at outlet.</p> <p>6. Internal repairs required.</p>	<p>1. Clean or Replace filters.</p> <p>2. Inspect for kinks or blockages. Correct, clean or replace item. Once corrected, turn power OFF for 60 seconds and then turn power back ON.</p> <p>3. Check flowmeter is set to 1.0 L/min. or more. (Refer to <u>Recommended Guidelines for Optimum Performance</u> on page 20.</p> <p>4.a. Remove and clean cabinet filters.</p> <p>4b. Move concentrator at least 7.5 cm (3 in) from walls, draperies, and furniture.</p> <p>5. DO NOT use extension cords. Move to another electrical outlet or circuit.</p> <p>6. Call Service Provider.</p>
<p>GREEN light YELLOW Light Flashing.</p>	<p>1. Internal repairs required.</p>	<p>1. Call Service Provider.</p>
<p><b>Alarm:</b> RAPID</p> <p>Beep....Beep... Beep...Beep</p>	<p><b>Low Flow Alarm</b></p> <p>1a. Kinked or blocked tubing, cannula or humidifier.</p> <p>1b. Flowmeter set at 0.5 L/min. or less.</p>	<p>1a. Inspect for kinks or blockages. Correct, clean or replace item. Once corrected, turn power OFF for 60 seconds and then turn power back ON.</p> <p>1b. Reset flowmeter to prescribed flowrate. Flowrates less than 1L/min. are not recommended.</p>



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