

PURE

OXYGEN CONCENTRATOR



Product Information and User Instructions

Models CH5000S and CH5000

Caution – This device is only to be used by
or on the prescription of a physician.

CHAD[®]
drive[™]

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Intended Use

The intended use of the Pure Oxygen Concentrator is to provide supplemental oxygen to those individuals needing supplemental oxygen therapy. The device is not intended to be life supporting or life sustaining.

Introduction to Your Pure Oxygen Concentrator

The Pure Oxygen Concentrator is designed as a stationary supplemental oxygen source. A physician has prescribed supplemental oxygen because you are not getting enough oxygen from room air alone. The specific liter flow setting to meet your needs, as prescribed by your physician, will increase the amount of oxygen your body receives. **DO NOT** change the flow settings unless your health care professional instructs you to do so.

How Your Pure Oxygen Concentrator Operates

The Pure is an electrically operated unit which produces concentrated oxygen from room air providing supplemental oxygen flow of 0.5 to 5 liters per minute (LPM) through an oxygen outlet and cannula. Your equipment provider will instruct you on proper and safe operation of this unit. Please read and understand this entire manual before operating your concentrator.

Descriptions of Parts and Controls

Please be sure the following items are included:

- User Manual
- Oxygen Concentrator
- Connection Adapter for humidifier bottle

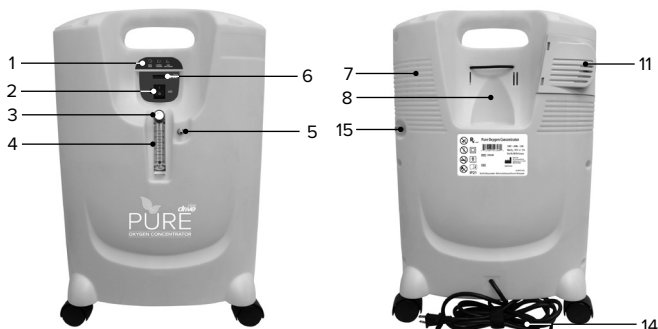


Figure A

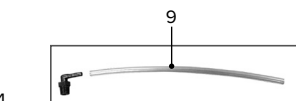
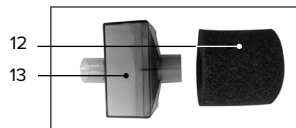
Figure B



Insert 1



Insert 2



Front View [Figure A]

1) LED Operation Indicator Lights

Oxygen Sensing **CH5000S** Model [Insert 1]

- Green Operation Normal, Power On
- Yellow Operation Warning, Read Manual
- Red Operation Alarm, Service Required

Oxygen Purity Levels at 82% - 96%
Oxygen Purity Levels at 72% - 81%
Oxygen Purity Levels below 72% or
other system fault is present.

Non Oxygen Sensing **CH5000** Model [Insert 2]

- Green Operation Normal, Power On
- Red Operation Alarm, Service Required

NOTE: For both the CH5000S and the CH5000 models, the Green LED will blink for 6-10 minutes during start up then become solid Green during normal operation.

2) Power Switch: I/O

- I = On
- O = Off

3) Flow Meter Knob

- Adjusts Liter Per Minute (LPM) output

4) Flow Meter

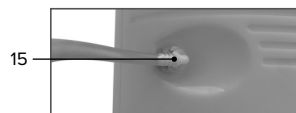
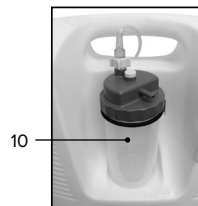
- Displays the Liter Per Minute (LPM) output

5) Oxygen Outlet Barb

- Cannula connection to dispense oxygen from concentrator

6) Hour Meter

- Measures the total operating hours of the concentrator



Rear View [Figure B]

7) Ventilation Slots

8) Humidifier bottle holder

9) Connection Adapter for humidifier bottle

10) Humidifier Bottle (not included)

11) Filter Door

12) Foam Intake Filter

13) HEPA Intake Filter

14) Power Cord

15) Transfill Connection Port

Warnings and Cautions

- Under certain circumstances, oxygen therapy can be hazardous. Seeking medical advice before using an oxygen concentrator is advisable.
- Proper operation of this device requires unobstructed ventilation of the rear filters and ventilation slots. Keep the device a minimum of 6 inches (15 cm) from walls, furniture, curtains and/or any other object which may impede airflow and ventilation slots.
- The oxygen concentrator should be located so as to avoid pollutants and fumes.
- Do not place the concentrator in a small closed space such as a closet.
- Oxygen accelerates combustion. Do not operate the concentrator within 5 feet (1.5 meters) of hot, sparking objects, a heat source, or an open source flame. Not suitable for use in the presence of a flammable anesthetic mixture with air, or with oxygen or nitrous oxide.
- Do not smoke or permit others to smoke in the vicinity of the concentrator.
- Do not disassemble. Contact Drive Medical or an authorized Drive Medical provider for assistance.
- If you experience discomfort during use of the concentrator, or if an equipment alarm is triggered, contact your equipment provider or healthcare professional immediately.
- This concentrator generates supplemental oxygen for use on order of a physician or healthcare provider. Oxygen supplied by this device should not be considered life supporting or life sustaining.
- For those individuals who a healthcare professional has determined interruption in oxygen therapy may have serious consequences, an alternate source of oxygen should be available for immediate use.
- Do not use oil or grease on the concentrator or its components. When combined with oxygen, these substances may greatly increase the potential of fire hazard or personal injury.
- Do not use the concentrator if the power cord is damaged. Do not use extension cords or electrical adapters with the concentrator.
- Do not clean the concentrator while it is plugged into an electrical outlet.
- Your equipment provider is responsible for appropriate preventive maintenance at intervals recommended by Drive Medical.
- Do not place liquids on the concentrator.
- If liquid is spilled on the device, turn the power off and unplug the unit from the electrical outlet prior to cleaning. Completely dry the unit prior to plugging in the power cord and turning the power back on. If the device does not operate properly, contact your equipment provider for assistance.
- Device operation outside of the voltage, LPM, temperature, humidity, and/or altitude specifications (page 9) may result in decreased unit performance and oxygen purity levels.

NOTE: The use of certain humidifiers and administration of accessories not specified for use with this oxygen concentrator may impair its performance.

Setup and Operation

- 1) Position the concentrator in a location which will permit unrestricted air intake, be near an electrical outlet, and be in a room in which you spend most of your time. Make sure the device is at least 6 inches (15 cm) from walls, furniture and/or curtains, is not in a closed confined space such as a closet, and is at least 5 feet (1.5 meters) from hot sparking objects, a heat source, or an open flame.
- 2) Verify the air filter, located on the back of your unit, is clean and properly installed [See Cleaning and Maintenance on Page 6].
- 3) After reading and understanding this manual, plug the power cord directly into an electrical outlet.

Oxygen Cannula Connection without Humidification Bottle

- 4a) Connect the oxygen cannula to the **Oxygen Outlet Barb** [Figure C]. Skip to Step 9.



Figure C

Oxygen Cannula Connection with Humidification Bottle

- 4b) Connect the **Connection Adapter** to the **Oxygen Outlet Barb** [Figure D]

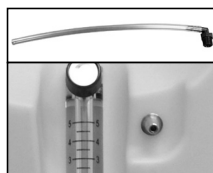


Figure D

- 5) Fill the humidifier bottle with distilled water.
- 6) Using the strap, firmly secure the humidifier bottle to the concentrator [Figure E].
- 7) Run the **Connection Adapter** under the concentrator handle and connect to the humidifier bottle according to the bottle manufacturer's instructions [Figure E].
- 8) Connect the cannula to the humidifier bottle per the bottle manufacturer's instructions.
- 9) Press the **Power Switch** to the ON position [Figure F]. During start up, the **Green LED Operations Indicator Light** will flash. Full oxygen purity will be reached within 6-10 minutes.
- 10) Check the **Flow Meter** to ensure, that at eye level, the center of the ball is in line with the prescribed LPM flow rate [Figure G].



Figure E

- a. To increase the flow rate, turn the **Flow Meter Knob** counter-clockwise.
- b. To decrease the flow rate, turn the **Flow Meter Knob** clockwise.

- 11) Check that oxygen is flowing through the cannula.
 - a. Refer to the Trouble Shooting Guide on page 8 if there is no oxygen flow.
- 12) Put on the cannula as directed by your equipment provider.
- 13) When not in use, turn off the concentrator.



Figure F

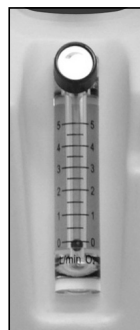


Figure G

Cleaning and Maintenance

Unplug the concentrator before cleaning. Do not use oil or grease.

Concentrator

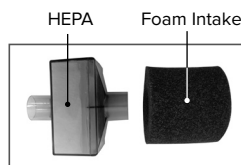
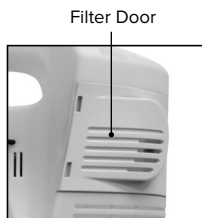
Periodically, with a damp cloth, wipe the outside of the concentrator using a solution of hot water and dishwashing detergent. If any medical cleaning solutions are used, be sure to follow the manufacturer's directions.

Filters

The Foam Intake filter is a washable filter. Rinse and wash as needed.

- 1) Remove the filter cover.
- 2) Remove both the Foam Intake filter and the HEPA filter.
- 3) Separate the Foam Intake filter from the HEPA filter.
- 4) Wash in a solution of warm water and dishwashing detergent.
- 5) Thoroughly rinse and dry.
- 6) Replace Foam Intake filter, HEPA filter, and Filter Cover.

The HEPA Intake Filter is a replaceable filter. Replacement is recommended approximately every 12 months, or as needed. Please contact your equipment provider for a replacement.



Cannula, Tubing, and Humidifier Bottles

Clean and replace as recommended and directed by the manufacturer or your equipment provider.



Model, Parts and Accessories

Model Description

CH5000S	Pure Oxygen Concentrator, with Oxygen Sensor
CH5000	Pure Oxygen Concentrator, without Oxygen Sensor

Parts Description

PL-2001844	Hooded Swivel Caster	1/each
PL-2001853	HEPA Intake Filter	1/each
PL-2001854	Reusable Foam Intake Filter	1/each
PL-3000706	Filter Intake Door	1/each

The following humidifier bottle is recommended for use with the Pure Oxygen Concentrator.

Accessories Description

HUM 001	Humidifier Bottle	50/case
HUM-TUB	Humidifier Adapter Tubing	50/case
CON 550	Ridged Oxygen Tubing Connector	50/case
SOFT 225	Non-kinking Cozy Nasal Cannula	25' 25/case
SOFT 250	Non-kinking Cozy Nasal Cannula	50' 20/case
TUB NK 25	Non-kinking Oxygen Tubing	25' 25/case
TUB NK 50	Non-kinking Oxygen Tubing	50' 20/case

Alarms and Troubleshooting

Alarm Table – Oxygen Sensor Model Number CH5000S

Light Indication	Sounds	Cause
Blinking Green	None	Normal Operation - Unit in Start-up Phase
Solid Green	None	Normal Operation
Solid Yellow	None	Oxygen Purity Between 72% and 81%. Device can still be used but service provider should be contacted.
Solid Red	Solid Audible Tone	Oxygen Purity Below 71% and/or Low/No Flow (0 to 0.3 LPM). Service Required - Call Provider.
Solid Red with Solid Green	Solid Audible Tone	Oxygen Purity Above 82% and Low/No Flow (0 to 0.3 LPM). See section B of the troubleshooting section of this manual.
Solid Red with Solid Yellow	Solid Audible Tone	Oxygen Purity Between 72% and 81% and Low/No Flow (< 0.5 LPM). See section B of the troubleshooting section of this manual.
None	Intermittent Beep	The unit has lost the power connection and the switch is in the on position. See section A of the troubleshooting section of this manual.
	Intermittent Beep	No power to Unit. See section A of the troubleshooting section of this manual.

Alarm Table – Non-Oxygen Sensor Model Number CH5000

Light Indication	Sounds	Cause
Blinking Green	None	Normal Operation - Unit in Start-up Phase
Solid Green	None	Normal Operation
Solid Red	Solid Audible Tone	Low/No Flow (0 to 0.3 LPM). Ensure tubing is not blocked. If tubing is not blocked and alarm continues, contact service provider.
Solid Red with Solid Green	Solid Audible Tone	Low/No Flow (0 to 0.3 LPM). See section B of the troubleshooting section of this manual.
None	Intermittent Beep	The unit has lost the power connection and the switch is in the on position. See section A of the troubleshooting section of this manual.
	Intermittent Beep	No power to Unit. See section A of the troubleshooting section of this manual.

Basic Troubleshooting

Symptom	Probable Cause	Potential Action
A. Unit does not operate. No lights are seen on the front panel when the power switch is “On”. An audible alarm is heard (intermittent beep).	1. Power cord not properly inserted into wall outlet.	Check power connection at the wall outlet.
	2. Issue with power supplied to wall outlet.	Check your home circuit breaker and reset if necessary. Try using a different wall outlet if the situation occurs again.
B. Unit is running and either the red and green light OR red and yellow light is lit when the power switch is in the “On” position. An audible alarm is heard.	1. Air filter is blocked.	Check the air filters. If dirty, clean/replace the filter(s) per the instructions in this manual (see “Cleaning and Maintenance” section of this manual). If unit ceases to alarm after a minimum of two minutes and proper flow appears to have returned, this was the issue.
	2. Vents in back are blocked.	Check the rear cooling vents are not blocked or restricted. If unit ceases to alarm after a minimum of two minutes and proper flow appears to have returned, this was the issue.
	3. Blocked tubing	Detach cannula, catheter, or face mask from oxygen outlet. If unit ceases to alarm after a minimum of two minutes and proper flow appears to have returned, this was the issue. Check for obstructions or kinks in external cannula, catheter, face mask, or tubing. Clean or replace, if necessary.
	4. Blocked / defective humidifier bottle.	Detach the humidifier from the oxygen outlet. If unit ceases to alarm after a minimum of two minutes and proper flow appears to have returned, this was the issue.
	5. Flow meter set too low.	Turn flow meter dial counter-clockwise to a minimum of 0.5 LPM or greater. If unit ceases to alarm after a minimum of two minutes and proper flow appears to have returned, this was the issue.
C. If any other problems occur with your oxygen concentrator or none of the solutions above work		Turn your unit “OFF”, switch to your reserve / alternate oxygen system, and contact your service provider immediately.

Specifications

Electrical Requirements	120 VAC +/- 10%, 60 HZ	
Rated Current	3A	
Power	390 W @ 3 LPM	
Typical Sound Level	45 dBA	
Altitude	13,123 ft (4000 m) above sea level - concentration level at 93%	
Operating Temperature	41°F - 104°F (5°C - 40°C)	
Operating Humidity	20 - 60% RH, Non-condensing	
Storage Temperature	-13°F to 158°F (-25°C to 70°C) up to 93% RH	
Oxygen Output Purity	87% to 96% for flows ranging 0.5 to 5 LPM	
Outlet Pressure	5.5 PSI +/- 0.5 PSI	
Flow Range	0.5 to 5 LPM	
Low Flow Alarm	< 0.5 LPM	
Pressure Relief	35 PSI +/- 5 PSI (247kPa +/- 35 kPa)	
Change in Maximum Recommended Flow when Back Pressure of 7kPa is Applied	0.5 LPM	
Filters	Compressor Inlet, Foam Intake, HEPA Intake	
Safety	Current Overload	Low Flow Audible Alarm
	High Pressure Relief	High Temperature Compressor
	Power Loss	Oxygen Purity (OCI Model only)
Dimensions	16.75" W x 10.25" D x 24.5" H	
Weight	35lbs	
Cabinet	UL94V-O Flame Retardant Rated Thermoplastic	
Electrical	Double Insulated Cord - Do Not Use an Extension Cord	
Duty Cycle	Continuous Use	
Warranty	Limited 3 Year	

Separation Distances












Recommended separation distances between portable and mobile RF Communications equipment and the Pure Oxygen Concentrator

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

Max Output Power (Watts)	Separation distance according to transmission frequency in meters		
	150 kHz to 80 MHz $D = (3.5/V_r)(PP)$	80 MHz to 800 MHz $D = (3.5/V_r)(PP)$	800 MHz to 2.5 GHz $D = (7/V_r)(PP)$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.69	3.69	7.38
100	11.67	11.67	23.33

This equipment has been tested and is in compliance with the EMC limits specified in IEC/ EN 60601-1-2. These limits are designed to provide a reasonable protection against harmful interference in a residential installation. If you do experience interference from other equipment you may try to correct or reduce the interference by one of the following measures:

- Reposition, relocate, or increase the separation distance between the equipment
- Connect the equipment into an outlet on a circuit that is different from that to which the other device is connected

Symbol Key	Description
	Warning, Consult Accompanying Documents
	Follow Instructions for Use
	Manufacturer
	Degree of Protection Against Electrical Shock: Type BF Unit
	Class II Equipment
	Do Not Dispose of in Household Waste
	No Smoking
	No Oil or Grease
	Prescription Only
	Do Not Disassemble
	Serial Number
IP21	Drip Proof Equipment

Warranty

The Pure Oxygen Concentrator has been carefully manufactured and inspected in our Lehigh Acres, FL USA facility and is warranted to be free from defects in workmanship and materials. Under this warranty, Drive Medical and its subsidiaries obligation shall be limited to the replacement or repair of any such units or parts that prove, by Drive Medical's inspection to be defective within three years from original date of purchase. This warranty is not transferable or assignable to any subsequent purchaser or owner. Any abuse, operation other than the intended use of the product as outlined in the manual, negligence, accident or repair by someone other than a **Drive Medical Authorized Service Professional**, shall immediately void this warranty.

Drive Medical will not accept damages or charges for labor, parts, or expenses incurred in making field repairs, except upon written authorization prior to such action.

The foregoing warranty is exclusive and in lieu of all other expressed warranties. Implied warranties, if any, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, shall not extend beyond the duration of the express warranty provided herein. In no event shall Drive Medical or its subsidiaries be liable for loss of use or profit or other collateral, special or consequential damages.

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