

WARNING-Read instruction before operating this equipment

Oxygen Concentrator User Manual

Model: INT-5AY



CONTENTS

IMPORTANT SAFEGUARDS.....	5
WHY YOUR PHYSICIAN PRESCRIBED SUPPLEMENTAL OXYGEN.....	6
HOW YOUR INT OXYGEN CONCENTRATOR WORKS.....	6
IMPORTANT PARTS OF YOUR OXYGEN CONCENTRATOR.....	7
SETTING UP YOUR OXYGEN CONCENTRATOR.....	10
BEFORE OPERATING YOUR OXYGEN CONCENTRATOR.....	10
OPERATING YOUR INT OXYGEN CONCENTRATOR.....	12
DESCRIPTION OF THE ALARM.....	13
CARING AND PERIODIC MAINTENANCE FOR YOUR UNIT.....	14
MINOR TROUBLESHOOTING.....	16
SPECIFICATIONS.....	17
SYMBOL.....	19
ELECTROMAGNETIC IMMUNITY.....	20
DECLARATION OF CONFORMITY.....	20

INDICATIONS FOR USE — The INT SERIAL Oxygen Concentrator is used on a prescriptive basis patients who are diagnosed as requiring supplemental oxygen. The oxygen concentrator will provide supplement, high oxygen concentration oxygen to these patients. It is not life-supporting or life-sustaining. It may be used continuously in a home or institutional/hospital setting.

▲ WARNING

**Under certain circumstances, oxygen therapy can be hazardous.
Seeking medical advice before using an oxygen concentrator is advisable.**

Physician Information

Physician Name: _____

Telephone: _____

Address: _____

Prescription Information

Name: _____

Oxygen liters per minute

at rest: _____ during activity : _____

other: _____

Oxygen use per day

Hours: _____ Minutes: _____

Comments: _____

INT oxygen Concentrator Serial Number: _____

(check one)

5-Liter

INT Provider Information

Service Person: _____

This instruction guide was reviewed with me and I have been instructed on the safe use and care of the INT Oxygen Concentrator.

Signature: _____ Date: _____

IMPORTANT SAFEGUARDS

▲ Read this entire guide before using your INT oxygen concentrator .Important information are highlighted by these terms throughout this guide:

DANGER Urgent safety information for hazards that will cause serious injury or death.

WARNING Important safety information for hazards that might cause serious injury.

CAUTION Information for preventing damage to the product.

NOTE Information which you should pay special attention.

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



DANGER-NO SMOKING

WARNING: 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.

INTRODUCTION

About your INT serial oxygen concentrator .

The INT serial oxygen concentrator device produces concentrated oxygen from room air for delivery to a patient requiring low flow oxygen therapy. The oxygen from the air is concentrated using a molecular sieve and a pressure swing adsorption process.

This instruction guide will acquaint you with the INT serial 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 INT provider if you have any questions.

▲ WARNING

For your safety, the oxygen concentrator must be used according to the prescription determined by your physician.

There is a risk of fire associated with oxygen enrichment during oxygen therapy. Do not use the oxygen concentrator or accessories near sparks or open flames.

NOTE:The prospective operator is the patient

NOTE:The user should read instruction before operating this equipment,and make sure all the functions of the equipment working normally.

NOTE:Pets, insects and children should be kept away from the equipment, otherwise may cause the malfunctions or the unit can't work normally.

WARNING:During the oxygen therapy,it should not be used with or near other instruments that may interfere with the normal operation of the equipment, so as to avoid the abnormal operation that affect the oxygen treatment.

WARNING:DO NOT obstruct the air flow to the inlet and exhaust vents on the oxygen concentrator. the

device should be located in the ventilated area and should be away from plush, hair or other similar objectives.

WARNING:Do not place or store the equipment next to the atomizer or steam boiler, which may cause unit failure, shutdown or short circuit.

WARNING:DO NOT operate or expose the device to temperatures and humidity levels outside the specified operational environment conditions outlined in the specifications section. Excessive temperatures and humidity levels may damage the device.

WARNING:The power cord should be kept away from heat source or high temperature surface.

WARNING:The aging of the oxygen sensor or the loosening the electrode of the equipment may affect the performance of the unit.

DANGER

Oxygen causes rapid burning. Do not smoke while your oxygen concentrator is operating, or when you are near a person utilizing oxygen therapy. Do not use within 2m of hot ,sparking objects or naked sources of flame.

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.

HOW YOUR INT OXYGEN CONCENTRATOR WORKS

Press the power switch to “ I ” position, then press the”On&Off “button ,The oxygen concentrator starts running. It will takes approximately 5 minutes to reach full oxygen concentration.

Rotate the knob to adjust the oxygen flow ,the flow control knob can be adjusted only after the unit is powered on.

WARNING:Do not place the equipment in a strong magnet or electromagnetic field, or hot ignition source, otherwise may cause the interruption of the operation.If this situation occurs, it should be check the site and find out the source of interference, and take the following measures to eliminate interference:

- 1.Turn off nearby devices and then turn on;
- 2.Change the direction or position of interfering equipment;
- 3.Increase the distances between the interfering equipment and the oxygen concentrator.

WARNING:Do not place the equipment where the baby or unconscious patient can touch it.

WARNING: If you feel discomfort or are experiencing a medical emergency while undergoing oxygen therapy, seek medical assistance immediately to avoid harm.

IMPORTANT PARTS OF YOUR OXYGEN CONCENTRATOR

Please take time to familiarize yourself with your INT Serials oxygen concentrator before operating.

Before using this product, make sure you have the following items:

- 1 User manual.
- 1 Oxygen Concentrator set.
- 1 Humidifier Bottle
- 1 Nasal Cannula
- 1 Power Cord
- 1 Nebulizer Kit(Optional)

Front view (Figure 1)



1. Oxygen Connecting Tubing(① connecting to the oxygen outlet,②connecting to the inlet of humidifier bottle)

2. Humidifier bottle

3. Control panel

4. On&Off button/Flow control knob

5. Oxygen outlet

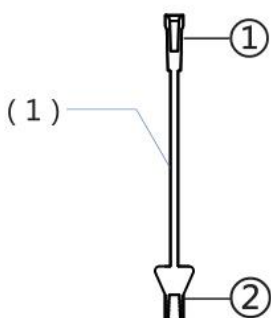
6. Air inlet

7. Power socket

8. Switch

9. Power line








Back view (Figure 2)



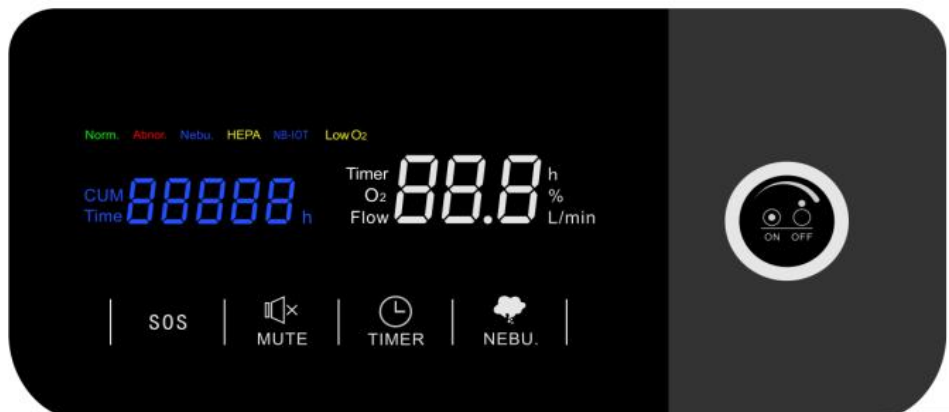
Display interface



Display interface for INT-5AY(Figure3)

Icon	Description
	Cumulative running time of the machine.
	The “timer”lights up on the display when press the “TIMER” button.
	The machine is operating normally and the “Norm.”lights up on the display with green color.
	The machine is operating abnormally and the “Abnor.”lights up on the display with Red color.
	The “Nebu.”lights up on the display with Blue color when press “NEBU” button.(For the machine with nebulization function only)
	The “HEPA”lights up on the display with yellow color every 600 hours,it indicates that the filter needs to be replaced.
	The “Low O2.”lights up on the display with yellow color when the oxygen concentration is below 82%.

Operation Panel



Control panel for INT-5AY(Figure4)

Buttons	Functions Description	Icon
		INT-5AY
On/Off Button	<p>1.Press the button to turn on or turn off the unit;</p> <p>2.Rotate the knob to adjust the oxygen flow,clockwise rotation for increase the flow,counterclockwise rotation for reduce the flow and the stepped size is 0.1L/min.</p>	
Nebulization Button	Press the button to turn on or turn off the the nebulization function.(For the machine with nebulization function only)	
Timer Button	<p>1.Press the button to select suitable time for your oxygen therapy.</p> <p>2.The setting for INT-5AY is 30 mins/45 mins/1 hr/2hrs/ 3hrs/ 4hrs/ 5hrs/ 6hrs/7hrs/8hrs,and the display showing the time accordingly. The machine turn off automatically while time expired and the time can be setting by cycle.</p>	
Mute Button	<p>1.The machine has the function of voice prompt and the user can be guided by voice,press the button to turn on or turn off the sound of the voice</p> <p>2.The alarm of SOS can't be eliminated.</p>	
SOS Button	The machine has the function of emergency calling.press the button to turn on the SOS and the machine will have the urgent call for help.keep pressing the button for cancelling the SOS.	

SETTING UP YOUR OXYGEN CONCENTRATOR

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

⚠ DANGER

WARNING: Open flames during oxygen therapy are dangerous and is likely to result in fire or death. Do not allow open flames within 2 m of the oxygen concentrator or any oxygen carrying accessories.

NOTE—Do not connect to an electrical outlet controlled by a wall switch. NO other appliances should be plugged into the wall outlet

Position your unit at least 6 inches (16 cm) from walls, draperies, or any other objects that might prevent the proper flow of air in and out of your oxygen concentrator. The Oxygen concentrator should be located in a well-ventilated area to make sure enough airflow to the device . Do not place the concentrator in a small closed space. The device need to be avoided from fumes.

In the event of an equipment alarm or if you are experiencing any signs of discomfort consult your home care provider and/or your health care professional immediately.

Oxygen generated by this concentrator is supplemental and should not be considered life supporting or life sustaining.

In certain circumstances oxygen therapy can be hazardous; any user should seek medical advice prior to using this device.

BEFORE OPERATING YOUR OXYGEN CONCENTRATOR

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

1. Before operating your unit always checks to be sure the air filter (located on the top of your unit, Figure 5) is existed .Proper replace of this filter is discussed in the Caring for Your Concentrator section on page14.

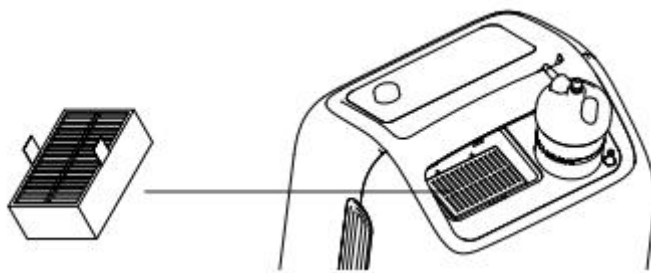


Figure 5

2. Attach the appropriate oxygen accessories to the oxygen outlet.

Oxygen Tubing Connection

NOTE: Pay attention to connect the oxygen tubing well, If it is not connecting well , it may affect your oxygen therapy.

- a. Attach the oxygen tubing directly to the connector.(Figure 6)



Figure 6

Oxygen Tubing Connection with Humidification:

- a. If your physician has prescribed an oxygen humidifier as part of therapy.
- b. Follow these steps:
- c. Fill the humidifier bottle with distilled water. Do not exceed max. (Figure 7)

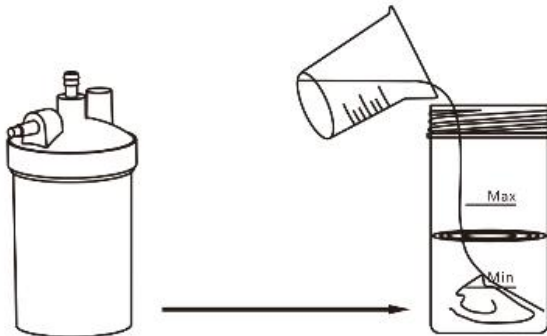


Figure 7

- d. Attach the oxygen tubing directly to the humidifier bottle outlet fitting.(Figure 8)

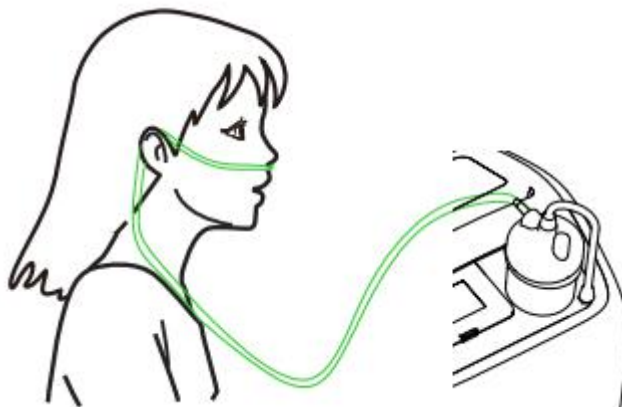


Figure 8

If you are prescribed to use the nasal cannula, connecting tubing, or other accessories as part of your therapy, they should connect to the humidifier outlet.

3.Remove the power cord completely from the line cord strap, Make sure the power switch is in the

“O” position, and insert the plug into the wall outlet; the unit is double insulated to guard against electric shock.

⚠ 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

If the machine is stored below -5 °C ,please make sure to place the machine in the environment of 5°C ~ 40°C for 30 minutes before using it.

OPERATING YOUR INT OXYGEN CONCENTRATOR

⚠ DANGER

WARNING: Oxygen makes fires more likely to start or spread. Do not leave the nasal cannula or mask on bed coverings or chair cushions, if the oxygen concentrator is turned on but without using; the oxygen may make the materials flammable. Turn the oxygen concentrator off when not in use so as to prevent the oxygen enrichment.

WARNING:Do not remove the covers of this device. Servicing must be referred to an authorized and trained INT provider.

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 at Least 2 m from hot, sparking objects or naked sources of flame.

1. Press the power switch to On“T” position,now the power is on,the screen lights up,and the screen displays concentrator total elapsed run time information of “00000”hrs.
2. Turn on the unit by pressing the ON/OFF button ,the oxygen concentrator starts running,and the timer display window displays the single running time
- 3.The INT serial unit adopts advanced automatic intelligent electronic flow valve controlling system,rotate the knob to adjust the oxygen flow.Refer to the function descriptions chart on page 8~9.

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

- 4.When you are not using the oxygen concentrator,turn off the unit by pressing the ON/OFF button,and then press the power switch to the Off “O”position.

Note: the equipment should place in the area which the user can touch the power switch easily.

DESCRIPTION OF THE ALARM

1.The description of the indication light :

A.When the “ Norm ” green light is on ,indicate that the oxygen concentrator is working well and oxygen concentration $\geq 82\%$ (V/V) .

B.When the “ Low O2 ” yellow light is on ,indicate that the oxygen concentration is abnormal ,oxygen concentration $< 82\%$ (V/V) .

C.When the “ Abnor ” red light is on ,indicate that the oxygen concentrator is working abnormal.


2.The description of the alarms and warning:

Alarm and Warning	Condition	Priority	Visual Signal	Error code	Audible Signal	sound range	Type
No flow	The flow less than 0.5L/min (or the real flow is 70% less than the setting flow)	High Priority	RED (flashing)	E01	Di-Di-Di-----Di-Di Di-Di-Di-----Di-Di Beep every 5 seconds	$\geq 60\text{dB}$	Technical alarm
Low oxygen	oxygen concentration $< 60\%$	High Priority	RED (flashing)	E02	Di-Di-Di-----Di-Di Di-Di-Di-----Di-Di Beep every 5 seconds	$\geq 60\text{dB}$	Technical alarm
high temperature	The machine temperature $\geq 60^\circ\text{C}$	High Priority	RED (flashing)	E03	Di-Di-Di-----Di-Di Di-Di-Di-----Di-Di Beep every 5 seconds	$\geq 60\text{dB}$	Technical alarm

3.Description of alarm error code

Error Code	Description
E01	!!! no flow alarm
E02	!!! Low Oxygen
E03	!!! high temperature alarm

4.The instruction for how to stop the audible alarm.

When the machine have an abnormal alarm , the user could press “  ” button to stop the audible alarm for 2 mintues .

NOTE-The user should operate the control panel in front of the oxygen concentrator .

NOTE—The Alarm parameters are set by the manufacturer and cannot be adjusted without permission

NOTE—To verify whether the alarm system is working well , the user could block the oxygen outlet

for 20S after the machine start up ,and check whether the alarm occurs.

NOTE—If an audible sound is detected and the “Abnor”lights up on the display, the unit is not operating properly. Refer to the Minor Troubleshooting chart on page 16, and contact your INT provider if necessary.

WARNING: Geriatric, pediatric or any other patient unable to communicate discomfort should require additional monitoring and or a distributed alarm system to convey the information about the discomfort and or the medical urgency to the responsible care giver to avoid harm.

CARING AND PERIODIC MAINTENANCE FOR YOUR UNIT

All maintenance except cleaning the humidifier bottle, cannula,mask,and tubing, described in the following section, is to be performed only by authorized service personnel.

DANGER: Modification of the equipment may cause danger, and unauthorized modification of the machine is prohibited.

Accessories, detachable parts and materials other than the instruction manual are prohibited;

It is forbidden to connect the device to other devices other than those specified in the instruction manual

Not—Use no lubricants, oils or grease.

⚠ WARNING

Before attempting any cleaning procedures, turn the unit “off.”

Oxygen Humidifier (reusable bottles)

If your physician has prescribed humidification, clean your humidifier bottle daily. Follow the instructions Supplied by the manufacturer, If no cleaning instructions were supplied, follow these steps

1. Wash the humidifier in a solution of hot water.
2. Soak the humidifier in a solution of one part white vinegar to three parts hot water for 30 minutes.

This solution acts as a germicidal agent.

3. Rinse thoroughly with warm tap water and refill with distilled water for use. Do not exceed max.

Note: It should stop using the equipment if there is dirty things inside the humidifier that cannot be cleaned, or any damage,the humidifier bottle is recommended to replace after 1 year of use.

Cannula, Mask, and Tubing

Clean and replace the cannula, mask, and tubing as instructed by your INT provider.

WARNING: To ensure receiving the therapeutic amount of oxygen delivery according to your medical condition the oxygen concentrator must

——Be used only after one or more settings have been individually determined or prescribed for you at your specific activity levels.

——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.

Air Filter

It is recommended that the Air Filter be replaced every 600 hours.the “HEPA” lights up on the display with 1 time voice prompt to remind to replace the Air Filter on time.if the INT oxygen concentrator is used in a dusty environment,filter replacement may be required more frequently.Contact your equipment provider for additional replacement filters.

Long press “TIMER” for 5 seconds to eliminate the alarm;

CAUTION—To prevent product damage, do not attempt to operate the unit without the air filter or

while the filter is still damp.

Exterior Cabinet

WARNING

To avoid electric shock, do not remove the concentrator cabinet. The cabinet should only be removed by a qualified INT technician. Do not apply liquid directly to the cabinet or utilize any petroleum-based solvents or cleaning agents.

Use only water-based lotions or salves that are oxygen-compatible before and during oxygen therapy. Never use petroleum or oil-based lotions or salves to avoid the risk of fire and burns.

Do not lubricate fittings, connections, tubing, or other accessories of the oxygen concentrator to avoid the risk of fire and burns.

Use only spare parts recommended by the manufacturer to ensure proper function and to avoid the risk of fire and burns.

Clean the concentrator exterior cabinet by using a damp cloth or sponge with a mild house-hold cleaner and wipe it dry.

Oxygen Concentrator Verrification

INT recommends verifying the oxygen concentrator every 2000 hours.contact your provider for the verrification.

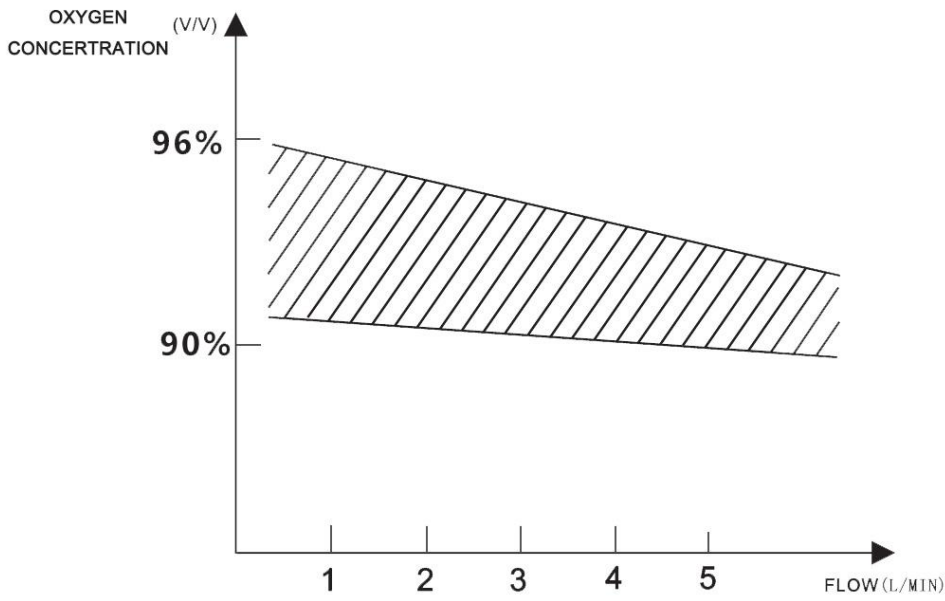
MINOR TROUBLESHOOTING

Symptom	Possible Cause	Remedy
A. Unit does not operate. Power light is off when the power switch is “on .”	1. Power cord not properly inserted into wall outlet.	Check power connection at the wall outlet.
	2. No power at wall outlet.	Check your home circuit breaker and reset if necessary. Use a different wall outlet if the situation occurs again.
	3.The fuse blew out.	Contact your INT provider to change the fuse .
B. Unit operates; the Power light is on when the Power switch is “On”. Red “Abnor” light is on. Audible alarm may be sounding.	1. Air filter is blocked.	Check the air filter. If the filter is dirty, following the replace instructions on page 14.
	2. Exhaust is blocked.	Check the exhaust area; make sure there is nothing restricting the unit exhaust.
	3. Blocked or defective cannula, catheter, face mask or oxygen tubing.	Inspect tubes and cannula to ensure that they are not kinked or blocked.
	4. Blocked or defective humidifier bottle.	Detach the humidifier from the oxygen outlet .If proper flow is obtained, clean or replace humidifier.
	5. Compressor is not working	Check whether the compressor is working or abnormal sound,if yes,contact your INT provider immediately.
C. Abnormal sound when turn on the unit if the machine place for a long time.	1.After placement,compressor increases. long-time friction	Turn on the unit as usual and run the machine for 20 minutes.check whether the abnormal is existed,if yes,contact your INT provider.

SPECIFICATIONS

No.	Item	Rating
1.	Delivery Rate	0.5 to 5 LPM
2.	Outlet Pressure	8.5±0.5psi (0.04-0.06Mpa)
3.	Power supply	110/220/230VAC~50/60Hz (Please see the machine name plate)
4.	Oxygen Concentration	93%±3%,
5.	Operating Environment Range	Temperature 5°C to 40°C, Humidity 15% to 80%
6.	Weight	13kg
7.	Sound Level	≤42dbA
8.	Dimensions	290mm(L) x300mm(W) x517mm(H)
9.	Operating System	Time Cycle / Pressure Swing
10.	Storage Conditions	Temperature -20°C to 55°C Humidity 10% to 95% Atmospheric pressure 50~106 kpa (7.3~15.4 psi)
11.	Equipment Class and Type	The type of protect against electric shock: Class II The degree of protect against electric shock: TYPE BF Applied part
12.	Pressure Relief Valve	250 kPa± 50 kPa
13.	Fuse	110V(125V 6.3A) 、 220/230V(250V 5A)

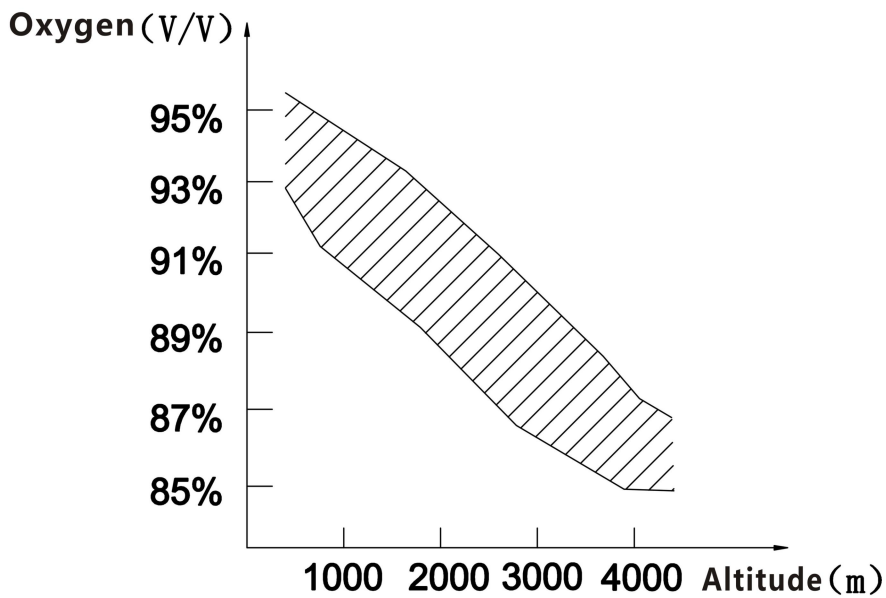
Oxygen Concentration under the operational Temperature/Humidify range and flow rate















NOTE: Device operation above or outside of the voltage, LPM, temperature, humidify and/or altitude values specified may decrease oxygen concentration levels.

Oxygen concentration over altitude and flow rate


Oxygen concentration over altitude range 0-4000m



SYMBOL

	General warning, caution, risk of danger Please read the instructions carefully before operating the product.
	Type BF applied part
	Class II equipment
SN	Manufacture's serial number
	Authorized representative in the European community
	Date of manufacture
	Manufacture
	Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE Directive) after over the valid term within 3 years, the machine should be treated on local law or regulation requirement. To avoid hurt users and pollute environment.
	FRAGILE Contents of the transport package are fragile therefore it shall be handled with care.
	THIS WAY UP Indicates correct upright position of the transport package.
	Non-ionizing electromagnetic radiation
IP21	Ingress Protection - Protected against finger access to hazardous parts; protected against
	No smoking
	No open flame

ELECTROMAGNETIC IMMUNITY

Guidance and manufacturer's declaration – electromagnetic immunity			
The INT SERIAL OXYGEN CONCENTRATOR is intended for use in the electromagnetic environment specified below. The customer or the user of the INT SERIAL OXYGEN CONCENTRATOR should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	<p>Portable and mobile RF communications equipment should be use no closer to any part of the INT ATOR including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = \left[\frac{3.5}{V_1} \right] \sqrt{P}$ $d = \left[\frac{3.5}{E_1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$
Conducted RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	$d = \left[\frac{7}{E_1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$ <p>Where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).^b</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^ashould be less than the compliance level in each frequency range. ^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic is affected by absorption and reflection from structures, objects and people.			
^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the INT SERIAL OXYGEN CONCENTRATOR is used exceeds the applicable RF compliance level above, the INT SERIAL OXYGEN CONCENTRATOR should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the INT SERIAL OXYGEN CONCENTRATOR.			
^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			