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ISO 13485
Registered

PM-00068/12/B

PRODUCT MANUAL

SmartDose®
Mini+ Gas Conserver
CTOX-MN02

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

NOTES:

Important Information

Physician Information:

Name _____

Address _____

_____

Telephone _____

Emergency Telephone _____

Prescription Information:

Patient's Name _____

Flow Setting (LPM) _____

Set-Up Information:

Name of person setting up _____

Oxygen Provider:

Company _____

Emergency Telephone _____

This instruction guide was reviewed with me and I have been instructed on the safe use and care of the SmartDose Conserving Device.

_____

Patient or Caregiver Signature Date

Welcome!

Thank you for choosing the SmartDose Mini+ Gas Conserver from CHAD Therapeutics, a Drive Medical Company.

The SmartDose Mini+ Gas Conserver gives you the freedom and confidence to live a more active life.

The SmartDose Mini+ Gas Conserver is the only conserver that monitors your breathing patterns and automatically delivers more oxygen when you need it most to help you stay active and saturated.

Before You Begin

Please read this entire manual before you use your SmartDose Mini+ Gas Conserver. 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 oxygen products, expecially when children are present, you must follow several important safety precautions. Please read the following safety information before you use your SmartDose Mini+ Gas Conserver.

Product Classification

The SmartDose Mini+ Gas Conserver is classified as:

Class II Equipment

Type B Equipment

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

How SmartDose Works

SmartDose extends the use time from a supply of oxygen by only delivering oxygen during the portions of the breath that put the gas into the lungs. SmartDose delivers a volume of oxygen on each breath, right at the start of inhalation. It delivers the full dose (bolus) of oxygen within 2/3 of the inhale cycle. By doing so, it is not delivering oxygen at the end of inhalation or during exhalation, as other devices do.

The normal volume of oxygen that SmartDose delivers is 16 ml per setting, so that a setting of 2 delivers 32 ml of oxygen on each breath, in the first 2/3 of the inhale cycle.

SmartDose monitors a patient's breathing patterns and automatically turns up the oxygen volume by one setting (SportDose 1) during exertion, and if breath rate continues to rise, by another setting (SportDose 2). Many patients turn their settings up and down throughout the day, but this self administered approach is inconsistent and by the time most patients feel the need to turn it up, their oxygen levels have already dropped. SmartDose responds more quickly and consistently. SmartDose recognizes when exertion stops and lowers the volume back down to normal levels thus saving oxygen.
Again, this is often an improvement over manual adjustments since patients often forget to turn the volume down after exerting.
Most patients are able to be titrated at lower base settings due to SmartDose's efficient delivery and auto-adjusting features. This extends the use time of your oxygen supply.

SmartDose also uses a multi-valve system that has multiple delivery flow rates. The unit can deliver a volume at two flow choices. The unit constantly monitors the patient's breath rate and determines the lowest flow option to "fit" the oxygen into the first 2/3 of the inhalation cycle. By delivering at lower flows, the unit is more comfortable, and quieter than units that deliver at higher flows all the time.

Refer to Appendix 1 for oxygen duration times at various settings.

Warranty Information

CHAD Therapeutics, a Drive Medical Company warrants to the original customer of its products that its products are free from defects in material and workmanship. Subject to the conditions and limitations set forth below, CHAD will, at its option, either repair or replace any part of its products that prove defective by reason of improper workmanship or materials. Repaired parts or replacement products will be provided by CHAD on an exchange basis. If CHAD is unable to repair or replace the product, it will refund or credit the current value of the product at the time the warranty claim is made.

This limited warranty does not cover any damage to this product that results from improper installation, accident, abuse, misuse, natural disaster, improper or excessive electrical supply, abnormal mechanical or environmental conditions, or any unauthorized disassembly, repair, or modification. This limited warranty also does not apply to any product which has been handled or packaged correctly, has been sold as second-hand or has been resold contrary to the US export regulations.
This limited warranty covers only repair, replacement, refund or credit for defective CHAD products, as provided above. CHAD is not liable for, and does not cover under warranty, any loss of data or any costs associated with determining the source of system problems or removing, servicing or installing CHAD products.

• Duration of Warranty: 2 years from date of purchase
This limited warranty applies only to the original customer of the product for so long as the original end user customer owns the product.
This limited warranty is non-transferable.

Warranty Claim Procedures and Requirements

To obtain warranty service, you may return a defective product to CHAD Therapeutics, after receiving a Return Material Authorization number (RMA) from our customer service department (866) 390-6628. When calling for an RMA#, please have ready product identification information, including model number and serial number with a detailed description of the problem you are experiencing.

Once you have obtained an RMA number, you must, within thirty (30) days, send the product freight-prepaid and insured to 2975 Horseshoe Drive South, Suite 300, Naples FL 34104, USA. Products shipped to the factory must be properly packaged to prevent damage in transit. You must include the RMA number prominently displayed on the outside of your package.
If you send your product to the factory without the RMA number prominently displayed on the outside of the package, it will be returned to you unopened.

FCC Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced technician for help.

Terms, Abbreviations & Symbols

This guide and the SmartDoseMini+ Gas Conserver product labeling uses the following terms, abbreviations and symbols:

IEC Symbols

	Smoking is not allowed in the area	REF	Indicates a Model Number
	General warning sign	SN	Indicates a Serial Number
	Class II Equipment	IXP1	Drip Proof
	Type B Equipment		Follow Operating Instructions
	Warning: dangerous voltage		Fire Hazard
	On/Adjust		

Important Safeguards

When using oxygen 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:

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

CAUTION Information for preventing damage to the product.

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

NOTE Information to which you should pay special attention.

Important safeguards are indicated through this guide; pay special attention to all safety information. Read all instructions before using. Save these instructions.

General Dangers & Warnings

In order to ensure the safe operation and achieve maximum benefit of the SmartDose Mini+ Gas Conserver, these instructions MUST be followed.

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 SmartDose Mini+ Gas Conserver. Keep all flammable materials or petroleum-based products away from the equipment. These solutions are flammable and may cause injury.

DANGER

Oxygen causes rapid burning. Do not smoke in the vicinity of your SmartDose Mini+ Gas Conserver or when you are near a person utilizing oxygen therapy. Keep the Smart Dose Mini+ Gas Conserver at least 5 feet (1.6M) from hot, sparking objects or open sources of flame.

DANGER

Keep matches, cigarettes, burning tobacco, or other open flames away from the area where the system is being stored or operated. Keep the equipment away from heat sources, electric or gas heaters of any kind, fireplaces, or stoves.

DANGER

Avoid creation of any spark near oxygen equipment. This includes sparks from static electricity created by any type of friction. Keep the equipment at least seven feet away from radios, television sets, window air conditioners, fans, electric razors, hair dryers, and all other electrical appliances.

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.

WARNING

Read instruction manual first. Do not 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. 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 CHAD Therapeutics.

Appendix 1

Use Times

Because SmartDose responds to each person's breathing patterns, the use time will vary. Higher breath rates and higher settings and higher O2 volumes will shorten use time. The following chart shows estimated use times for various cylinders based off of 20 BPM breath rates, setting of SD 2.

USE TIMES (hr)							
Normal Volumes (ml)		16	32	48	64	80	
Equivalent Flow Rates (LPM)		1	2	3	4	5	Mode
Cylinder	Volume (Gas Liters)						
M-6 Cylinder	164	2.7	1.4	0.9	0.7	0.5	CF
		7.2	3.6	2.4	1.8	1.4	SmartDose
ML-6 Cylinder	170	2.8	1.4	0.9	0.7	0.6	CF
		7.5	3.8	2.5	1.9	1.5	SmartDose
C Cylinder	240	4.0	2.0	1.3	1.0	0.8	CF
		11.6	5.8	3.9	2.9	2.3	SmartDose
D Cylinder	425	6.9	3.5	2.3	1.7	1.4	CF
		20.8	10.4	6.9	5.2	4.2	SmartDose
E Cylinder	684	11.4	5.7	3.8	2.8	2.3	CF
		34.3	17.1	11.4	8.6	6.9	SmartDose

CF = Continuous Flow
This chart is intended to be used as a guide only and is an estimation of use times. Actual results may vary.

Transporting & Storing SmartDose Mini+ Gas Conserver

Preparing for Shipping

Prior to shipping the SmartDose Mini+ Gas Conserver, remove the batteries and remove from oxygen cylinders.

Storage

Store the SmartDose Mini+ Gas Conserver 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

Weight (with batteries)	15.55 ounces
Dimensions	4.2 x 3 x 5
Power Supply	2 Standard "AA" alkaline batteries
Operating Temperature	18°F to 104°F (-8°C to 40°C)
Operating Pressure (cylinder)	500 – 3,000 psig (34 to 207 bar)
Operating Humidity	10 – 95 % RH, non-condensing
Storage Temperature	- 20° to 50°C
Storage Humidity	0 – 95% RH, non-condensing
Continuous Flow Rate	2 LPM + 0.25 LPM
Volume / Patient Setting	16 ml +20%,-10%
SmartDose 1 Volume	16 ml, incremental to standard volume
SmartDose 2 Volume	32 ml, incremental to standard volume

WARNING

Do not use if. . .

Do not use the SmartDose Gas Mini+ Conserver if it:
It is not working properly.
Has been dropped or damaged.
Has been submersed in water.

Call a qualified Health Care Dealer Technician for examination and repair.

WARNING

To prevent high concentrations of oxygen:
Keep equipment in well ventilated areas.
Do not carry equipment under a coat or any form of clothing.
Turn off oxygen supply by closing the cylinder valve when not in use.

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 out doors, open doors and windows to ventilate the area, and notify your medical equipment provider or service representative of this condition.

WARNING

Over pressure relief valve. The SmartDose Mini+ Gas Conserver is equipped with a pressure relief valve to ensure the user's safety. When activated, this safety feature may make a slight hissing noise. If this noise occurs and persists, turn the cylinder off and troubleshoot the problem.

WARNING

Always supervise children. Children should always be supervised around the SmartDose Mini+ Gas Conserver. 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 SmartDose Mini+ Gas Conserver must be used in accor dance with the prescription determined by your physician.

WARNING

Not for use in emergency transport vehicles. The SmartDose Mini+ Gas Conserver 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 attaching your Conserver. Do not immerse in liquids or subject device to harsh conditions. Do not use in temperatures greater than 104ºF (40ºC) or below 41ºF (5ºC).

Cautions & Notes

CAUTION Do not disassemble. The SmartDose Mini+ Gas Conserver contains no user serviceable parts. If service is required, contact your home medical equipment provider or authorized service center. Do not allow unauthorized or untrained individuals to operate the equipment.

CAUTION Use only AA type batteries. AA alkaline batteries may be used. Lithium or NiMH rechargeable batteries may be used as a backup. DO NOT mix battery types.

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 SmartDose Mini+ Gas Conserver.

CAUTION Do not use with other equipment (i.e. humidifier, nebulizer, etc.) when in SmartDose delivery mode.

NOTE Have a full cylinder of oxygen on hand. CHAD Therapeutics recommends the medical equipment provider leave a full cylinder of oxygen with the patient after setting up the SmartDose Mini+ Gas Conserver, and instructing the patient to always keep a full cylinder on hand.

Cleaning & Maintenance

- There are no user serviceable components inside the Conserver. Contact your medical equipment provider in the event that your SmartDose unit requires service.
- Keep the exterior of the SmartDose Mini+ Gas Conserver clean using a clean, damp, oil-free, lint-free cloth.
- Clean and dry the Conserver with a clean, dry, oil-free, lint-free cloth.
- The SmartDose Mini+ Gas Conserver should be kept clean & free from moisture & dust.
- The device should be protected from extreme temperatures.
- Clean the device periodically by wiping it with a dry, lint-free cloth.
- Do not clean the unit with a solvent based cleaning solution.
- Avoid dropping the Conserver or placing it in a position where it could topple or fall since this can damage the device.
- Whenever possible, use a padded carrying bag to carry the SmartDose Mini+ Gas Conserver and cylinder. This will help to protect the unit in the event of a fall.
- Avoid getting fluids or debris such as sand or dirt inside the device.

Accessories

CHAD Therapeutics recommends using only cannula specifically intended to be used with oxygen delivery systems. Cannula should be capable of delivering up to 10 LPM of continuous flow; maximum length that can be used is 7 feet. Contact your medical equipment provider for recommendations and details. Refer to the cannula manufacturer's instructions for proper cleaning and maintenance procedures.

Troubleshooting

Problem	Possible Causes	Solution
SmartDose works fine for some time and then sensitivity seems to drift or unit stops working.	1. Cannula has too much back pressure (pediatric) 2. Pressure sensor is not zeroed	1. Replace cannula with standard cannula 2. Power off unit by removing batteries. Remove cannula from nose. Reinstall batteries, Power on unit, Insert cannula & resume normal breathing.

If the issues are not resolved with the above troubleshooting guide, please contact your equipment provider.

Indications for Use

The CHAD Therapeutics SmartDose Mini+ Gas Conserver is intended as a delivery device for medical-grade oxygen from high-pressure oxygen cylinders.

This is an ambulatory device, which allows patients to ambulate longer than they would with a continuous flow regulator on the same cylinder. The SmartDose Mini+ Gas Conserver is intended to be used in the hospital, healthcare facilities, or homecare environments.

Provider Checklist

Before leaving the SmartDose Mini+ Gas Conserver with a patient, the following checklist MUST be completed:

- ☐ Check all parts for shipping damage. In case of damage, do not use. Contact CHAD Therapeutics / Drive Medical for further instructions.
- ☐ Make sure the SmartDose Mini+ Gas Conserver is compatible with the oxygen source. Be sure to use an oxygen cylinder with a compatible CGA 870 style fitting.
- ☐ Instruct the patient on the safe operation of the SmartDose Mini+ Gas Conserver and all associated accessories and review ALL warnings.
- ☐ Leave a copy of this product manual with the patient.

Clinician's Notes

1. Do not use with patients who breathe below 6 breaths per minute (BPM) or above 40 BPM.

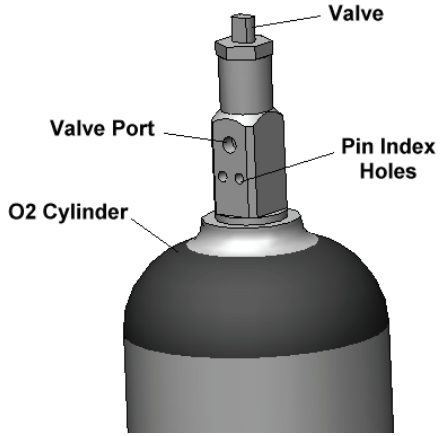
2. Do not use with patients who consistently fail to trigger equipment (i.e., mouth breathing with closed soft pallets).

3. Verify patient is getting adequate PaO2 or SpO2 levels in SmartDose delivery mode.

4. Use only standard nasal cannula with SmartDose delivery. Do not use pediatric (low-flow) nasal cannula, or mask with SmartDose delivery.

5. A mask or any nasal cannula can be used with continuous flow (CF) backup mode.

6. To replace a low cylinder, close cylinder valve and open the continuous flow (CF) knob until pressure gage reads 0 (zero) and then remove unit.



NOTE - this conserving device is designed to fit onto CGA 870 style cylinders (otherwise known as "pin-index") as shown.

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 Conserver case. The case should only be removed by a qualified technician.

Problem	Possible Causes	Solution
Oxygen is not being delivered, even though green light is flashing on the Conserver each time I inhale.	1. Oxygen cylinder is empty 2. Oxygen supply is not turned on	1. Check contents gauge on unit. If pressure is in the red, switch cylinders. 2. Open the oxygen flow by opening the valve on the top of the cylinder
Use times are different from those stated in the literature.	1. SmartDose responds to your breath rate and volumes will be increased as your need increases. Time shown are estimates & will vary from patient to patient and day to day 2. Leak in system	1. SmartDose is working properly. 2. Check connection to cylinder. If leak is apparent, contact your oxygen provider for new seal.
SmartDose will not pulse - no green light when I inhale	1. Cannula is not on properly & the unit can not sense your inhale. 2. The unit is not turned on or has powered down. 3. Batteries are depleted or not installed. 4. Mouth breathing. 5. Unit is in CF mode.	1. Check the cannula tubing and ensure that it is comfortably in your nose. 2. Press and hold a button to turn the unit on. 3. Install 2 x "AA" new Alkaline batteries. 4. Inhale through nose. 5. Push CF knob in all the way.

Typical Questions and Answers

Q. How does the SmartDose work?
How does it know when I'm inhaling?

A. When you inhale, you are sucking in air. This creates a very slight vacuum in the cannula tubing. A sensor in the unit is attached to the cannula tubing and can sense these very slight vacuum signals. When the Conserver sees the vacuum, it triggers the valve(s) to open. The microprocessor in the unit has calculated the volume of oxygen and knows your current breath rate. The unit calculates the flow needed to fit the volume into the first 2/3 of the breath and opens the appropriate valve for a specific time to give the correct volume of oxygen.

Q. I can't hear / feel the pulse.
How do I know that SmartDose is working?

A. Because SmartDose uses multiple valves and flows at lower rates than other conserving devices, the oxygen delivery is very gentle and sometimes is difficult to feel or hear. Look at the green indicator lights on the front of the unit. The light for your current setting will illuminate each time oxygen is delivered. Check to make sure that there is oxygen in your cylinder by looking at the contents gauge on the unit & that the cylinder valve is open. If you are still not sure, turn the dose up to feel stronger puffs of air. Then set the dose back to the desired setting.

Q. Why can't I use a cannula longer than 7 feet?

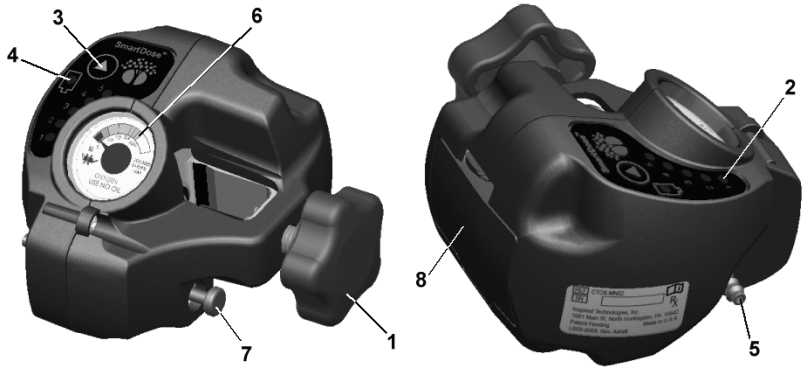
A. The Conserver will likely still sense the vacuum and trigger with longer tubing, but the time it takes for the oxygen to travel at longer lengths of tubing will cause the oxygen to be delivered to the user later and later in the inhale cycle. Longer tubing lengths will put the delivery beyond the first 2/3 of the inhale.

Q. Can I use a humidifier with SmartDose?

A. No. The Conserver can not sense the inhale through the water of a humidifier and will not trigger.
Because of the intermittent delivery of oxygen and the lower flow rates, many patients find that humidification is not necessary.

SmartDose Mini+ Gas Conserver Overview

The illustration shows the parts of the SmartDose Mini+ Gas Conserver.



1. Knob - used to attach the Conserver to the cylinder.

2. SmartDose Indicators - One green light illuminates one flash on each breath when in SmartDose mode to show the current setting.

3. SmartDose On/Adjust Button - use this to power on and adjust the patient setting.
   - Push and release to turn on. Push and hold to change settings.

4. Low Battery Indicator
   - Flashes red when batteries are low, & should be replaced as soon as possible.
   - Solid red means batteries are dead.

5. Cannula Fitting – Use this fitting to attach the cannula tubing.

6. Oxygen Contents Gauge – Indicates the remaining pressure in the oxygen cylinder.
   When this gauge falls into the red section, you should switch to a new cylinder.

7. Continuous Flow (CF) Knob – Pull knob out to switch unit to 2 LPM CF oxygen.
   Does not require batteries. Knob must be in to initiate SmartDose.

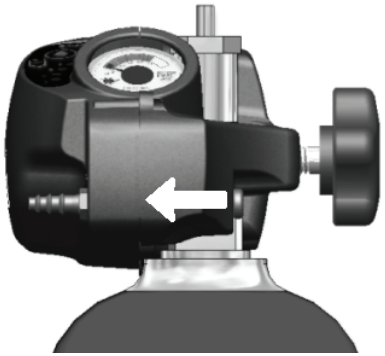
8. Battery Compartment – Battery holder for 2 AA alkaline batteries.
   Note polarity when inserting new batteries.

SmartDose Mini+ Gas Conserver Delivery Modes

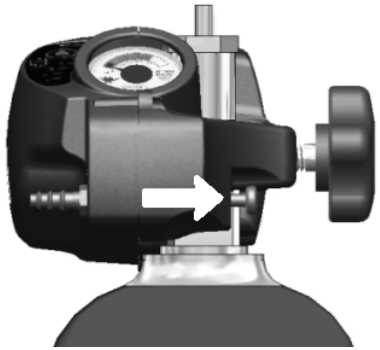
The SmartDose Mini+ Gas Conserver has two modes: SmartDose and Continuous Flow.

To receive the benefits of SmartDose technology, set your SmartDose Mini+ Gas Conserver 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 oxygen supply will be depleted rapidly when set to operate in Continuous Flow mode.

SmartDose mode
CF switch pushed IN



Continuous Flow mode
CF switch pulled OUT



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 Conserver 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.

5 Set the Indicator light to your prescribed setting (1 to 5). Be sure that the CF (Continuous Flow/SmartDose) switch is pushed in as shown, confirming that your SmartDose Mini+ Gas Conserver is in SmartDose mode. (See figures on page 10.)

6 Place the cannula near the nose after turning on the SmartDose Mini+ Gas Conserver.

7 Gaseous oxygen is now ready to flow from your SmartDose Mini+ Gas Conserver, and with each breath you should receive your set dose of oxygen. Adjust the cannula breathing tube to the proper position on your nose so that you will be able to breathe the oxygen comfortably.

8 Low Battery
- When the battery indicator lights up red with each breath, it is time to replace the batteries.
- 2 AA batteries should last approximately 1000 hours

NOTE

If the batteries are dead and you cannot replace them, switch to Continuous Flow mode by pulling the CF switch out. Continuous Flow mode does not require batteries. See the "Changing the Batteries" section in this manual for more information.

9 To stop oxygen flow, push the CF switch in and the power will turn off after 5 minutes of inactivity.

NOTE

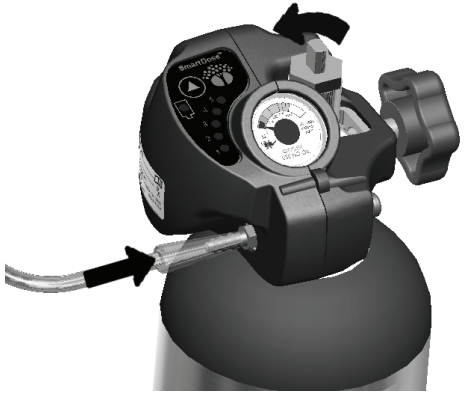
If the SmartDose Mini+ Gas Conserver is in Continuous Flow mode, 2 LPM of oxygen will still be delivered. The conserver must be powered off & the CF switch pushed in to completely turn off the flow of oxygen.

Powering Down the Unit

When you are finished using the SmartDose Mini+, simply remove the cannula tubing. After 5 minutes of inactivity, the unit will power itself down. The unit quickly opens and closes the valves 3 times thirty seconds before powering down to alert you that it is about to shut down. In the event that you have simply been mouth breathing, this should alert you that the unit has not seen a breath and will be shutting down. Close cylinder valve when not in use.

Starting Oxygen Delivery from the SmartDose Mini+ Gas Conserver
To receive oxygen from your Conserver, follow these steps.

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



2 Open the cylinder valve by turning counter-clockwise.

WARNING

To prevent injury from cylinders tipping over, do not use cannula tubing lengths over 7 feet with small compressed oxygen cylinders. Unattended cylinders should be secured in a cylinder stand.

A mask should not be used with the conserving device when in SmartDose mode as it may not allow triggering of the unit.

Pediatric or low-flow cannula tubing should not be used in SmartDose mode due to increased back pressure.

SmartDose delivers a volume of oxygen at the start of inhalation, but does not deliver oxygen throughout the entire inhale. Both the volume of oxygen, as well as the flow rate can vary from breath to breath.

3 Attach your nasal cannula to the cannula fitting on the Conserver. Up to 7 feet of cannula tubing can be used.

4 Turn on the SmartDose Gas Mini+ Conserver by pressing and holding the On/Adjust button until all of the numerical LEDs (1 through 5) light up. SmartDose Gas Mini+ will signal it is ready by pulsing three times.

Changing the Batteries

When the red battery indicator light begins blinking red, it means the Conserver's batteries are low and it's time to replace them. 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 cylinder.

Follow These Steps to Replace the Batteries:

1 Remove the battery cover by pressing the clip on the top of the unit and pull the cover out.

2 Remove old batteries from the compartment and discard properly.

3 Insert 2 "AA" Alkaline with the polarity as indicated on the holder.

4 Insert the battery cover back onto the unit and push until the retaining clip snaps into place.

CAUTION Do not mix battery types.

WARNING Using the SmartDose Mini+ Gas Conserver in Continuous Flow mode (CF Switch pulled out) will use oxygen at a faster rate than using it in SmartDose mode. Monitor the contents of your cylinder so you do not run out of oxygen.

NOTE When using the SmartDose Mini+ Gas Conserver in Continuous Flow mode, the indicator light will NOT light up green or red with each breath. Turning the On/Adjust button all the way down will not completely stop the flow of oxygen. To stop the flow of oxygen push the CF switch in & turn the cylinder valve off.

Attaching the SmartDose Mini+ Gas Conserver to a Cylinder

1. Make sure that sealing gasket is clean & no damage or tearing is present. If the gasket is damaged in any way, do not use & call your home medical equipment provider immediately.

2. Loosen the knob on the Conserver & check cylinder valve port for damage & debris.

3. Carefully lower the Conserver over the valve post of the cylinder.

CAUTION Alignment pins can damage sealing surfaces of the valve post increasing the chance of oxygen leaking.

4. Align the pins in the Conserver to the holes in the cylinder valve post as you would a standard regulator.

5. Hand tighten the knob until the conserver is secure.