

# SOMNI

## REBREATHING ANESTHESIA SYSTEM



SOMNI PRODUCT MANUAL

**SOMNI**  
SCIENTIFIC

The logo for SOMNI Scientific, featuring a stylized blue and orange molecular or network structure to the right of the text.

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# INTENDED USE

The SOMNI Rebreathing Anesthesia System was designed for Veterinary Use Only. It is a lightweight, durable, mobile system with 3-inch casters for maneuverability. The SOMNI Rebreathing Anesthesia System includes an incorporated toggle to switch between rebreathing and nonrebreathing systems, you do not have to remove the breathing circuits during use. There is a monitor shelf as well as a middle shelf to provide more workspace and keep the patient's vitals and anesthesia controls in one area.

## UNPACKING/ INCLUDED ITEMS

SOMNI Rebreathing Anesthesia System assembly

1. H-Frame Stand, Mounting Plate Assembly and Rebreathing Head, Vaporizer Inlet and Outlet Endcaps
2. Hardware packet:
  - 10 Second Card w/chain
  - Black Absorber Canister Covers
  - 4 Connecting Bolts (1/4 -20 x 1/2 inch Button)
  - 1 Allen Wrench (4 mm)
  - 1 E-cylinder wrench
3. Assembly Quick Guide
4. Adult and Pediatric Universal F-Circuit with 3L Bag
5. Non-rebreathing Circuit

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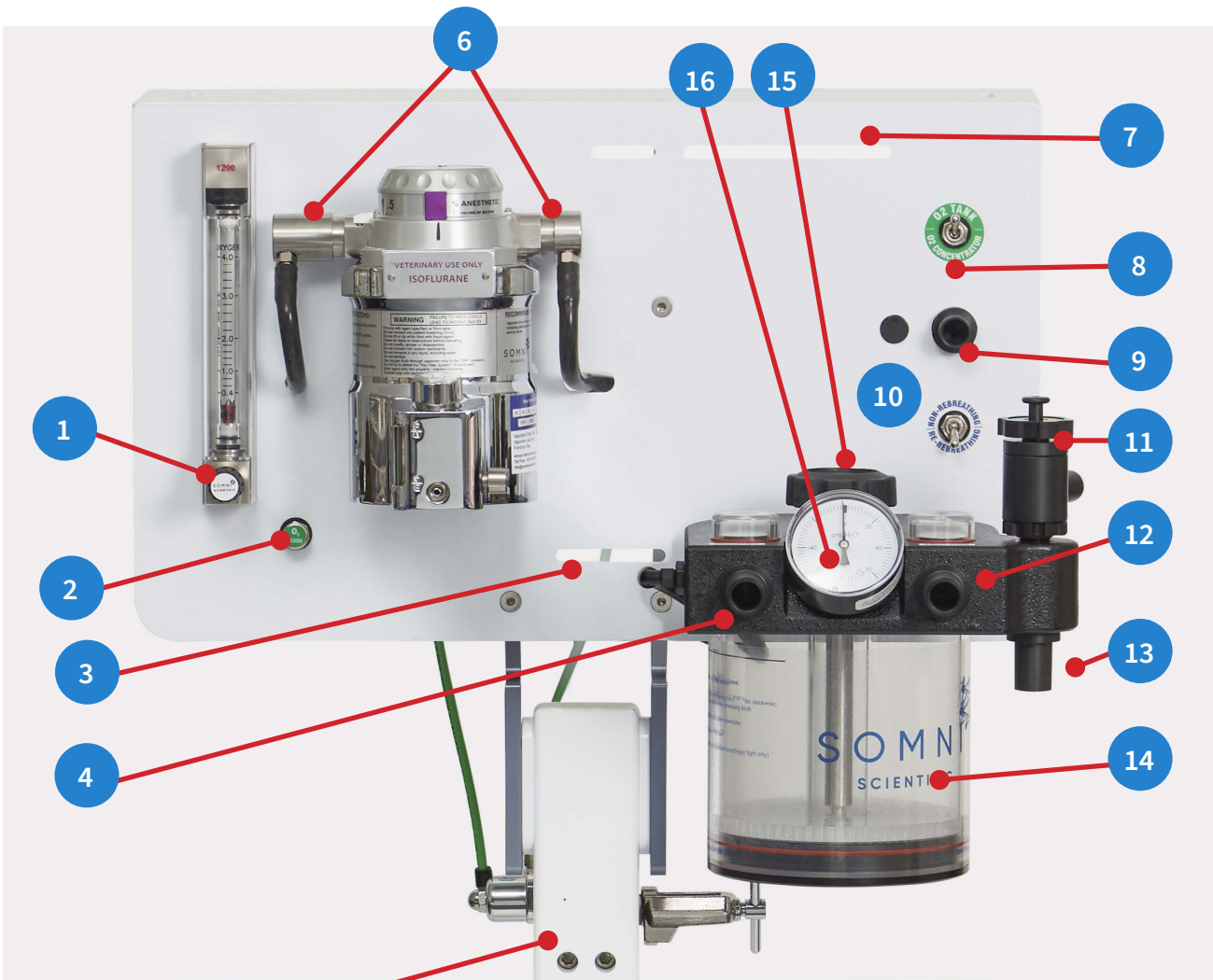
# INTRODUCTION

## WARNINGS, NOTES AND DEFINITIONS

- **Warning!** Operator must read entire manual prior to operation and be trained in the use of inhalant anesthetic equipment. Failure to do so may harm the animal.
- **Warning!** Do not connect unregulated compressed carrier gas to the RS anesthesia system. Compressed oxygen or another carrier gas should be supplied at 50-55 psi.
- **Warning!** Pop-off (APL) valve is closed for shipping. Completely open the Pop-off valve prior to use. The pop-off valve should be kept open during normal operation and only closed when performing a leak check or using a ventilator.
- **Warning!** As a patient safety feature, the oxygen flush will not work with a non-rebreathing circuit. The oxygen flush is only piped to the rebreathing absorber.
- **Warning!** Always operate inhalant anesthetic equipment with waste gas scavenging systems. Failure to control waste anesthetic gas may cause harmful exposure to personnel.
- **Warning!** When using the oxygen concentrator, turn anesthesia machine flowmeter on to allow flow. The concentrator alarm will sound if this step is not followed.
- **Note!** When using the oxygen concentrator, the oxygen flush will not operate without the the e-cylinder turned on. The oxygen flush is piped to the e-cylinder only.
- **Note!** When using the oxygen concentrator, turn the concentrator flow to match the flowrate on the anesthesia machine.
- **Note!** Do not overtighten the flowmeter knob. When the float is resting at the bottom of the flowmeter, the flowmeter is off. Overtightening will damage the needle valve and result in leakage.
- **Note!** Anesthetic Vaporizer and carrier gas (oxygen) accessories are not included. Please follow those products installation guides.
- The Unilimb is a rebreathing circuit for use with animals of approximately 15 lbs (7kg) or more.



# DESCRIPTION OF CONTROLS/FEATURES



1. Oxygen Flowmeter
2. Flush Valve
3. Accessory Mounting Area
4. Inhalation Port
5. Mounting Area for E-cylinder Manifold
6. Vaporizer Inlet and Outlet Endcaps
7. Accessory Mounting Area
8. Switch, O2 Tank / O2 Concentrator
9. Common Gas Outlet
10. Switch, Rebreathing or Nonrebreathing
11. Pop-off (APL) Valve
12. Exhalation Port
13. Rebreathing Bag Port
14. Absorber Canister
15. Absorber Canister Knob
16. Manometer

# PRODUCT OPERATION

Refer to product installation guide for illustration.

1. Remove all cartons from the main package.
2. Remove the machine H-Frame base unit.
3. Unpack and inspect remaining components for damage. Be sure to retain the mounting hardware contained inside package.
4. Using supplied bolts and allen wrench, attach mounting plate assembly to base unit as shown in image. \*2 people recommended for this step.
5. Attach rebreathing head to the mounting plate with bolts that are pre-installed on the back of the rebreathing head and the 4 MM allen key wrench. \*2 people recommended for this step. (Not included for Model RM-17014)
6. Connect black supply line to the hose barb on the left side of the rebreathing head.

**Warning: Open popoff valve prior to use.**

7. Install anesthetic vaporizer onto frame with vaporizer spacer block positioned on the front face of the mounting plate and tighten. \*2 people recommended for this step.

**Note: Mounting hardware supplied with vaporizer.**

8. Connect the inlet and outlet endcaps using a push and twist action to provide a leak free attachment.

**Note: This step can be performed prior to installing the vaporizer onto the frame if needed.**

9. Connect oxygen (carrier gas) supply source to the DISS Male fitting on the back of the flowmeter. \*\*See below for Concentrator Kit instructions\*\*
10. Turn the oxygen (carrier gas) supply on.
11. Connect appropriate active or passive waste gas scavenging system to the 19mm outlet of the popoff valve.
12. Ensure vaporizer has been filled per manufacturer's instructions and is ready for use.
13. Fill absorber canister to line indicated on canister. Use supplied downtube cover (on chain) when filling. Attach absorber canister to the rebreathing head and tighten. (Not included for Model RM-17014)

**Note: Absorbent not included**

14. Leak Test following instructions on 10 second pressure test card.

# CONCENTRATOR KIT INSTALLATION

Stud Hardware installed on base plate:

- (4) 3/8 -24 x 2 inch hex bolt
- (8) 3/8 x 24 hex nut
- (12) 3/8 inch ss washer
- (4) 3/8 inch cushioning washer

*In order as installed: bolt, ss washer, base plate, ss washer, 2x hex nut, ss washer, cushioning washer*

1. Unpack concentrator and remove wheels by pulling away from (base) of concentrator.
2. Set concentrator on studs sticking up from base plate.  
\*2 people recommended for this step.
3. The single e-cylinder manifold will be pre-installed on the middle support shelf. Ensure the brass and black washer/seal is in place prior to installing the e-cylinder.
4. Attach the two high pressure, small green tubes from the anesthesia machine to the e-tank regulator by pushing the tubing into the fittings. Once resistance is felt, continue to push the tubing slightly further to secure connection. Gently pull on tubing to test for proper connection.

**Note: The e-cylinder must be turned on to operate the oxygen flush.**

5. Attach low pressure, large green tubing from the anesthesia machine to the concentrator by threading the green female fitting onto the male fitting on the concentrator.
6. Optional: Use supplied cable tie to organize the green tubing.

**Warning!** When using the oxygen concentrator, flip the switch on the front of the anesthesia machine to concentrator prior to turning the concentrator on.

**Warning!** When using the oxygen concentrator, turn anesthesia machine flowmeter on to allow flow. The concentrator alarm will sound if this step is not followed.

**Note!** When using the oxygen concentrator, turn the concentrator flow to match the flowrate on the anesthesia machine.

## PRODUCT OPERATION CONT.

### ATTACHING THE F-CIRCUIT

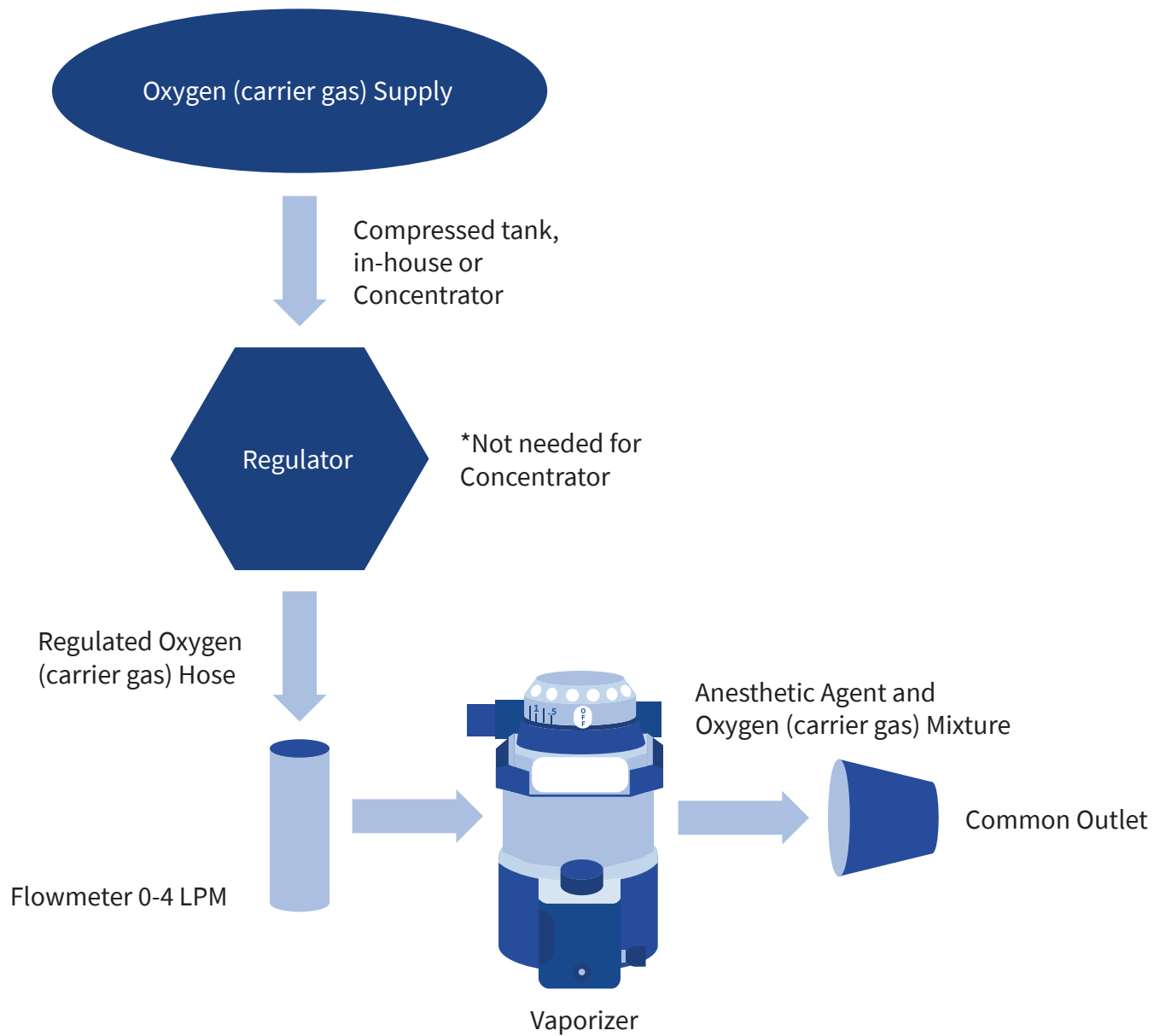
\*The F-circuit is a rebreathing circuit for use with animals that weigh approximately 15 lbs. (7kg) or more.

1. Connect the longer, single limb of the circuit to the inhalation valve.
2. Connect the shorter, corrugated tube to the exhalation valve.
3. Connect a rebreathing bag (appropriate to the patient size) to the port located below the popoff valve.
4. Flip the Rebreathing/ Non-rebreathing switch to Rebreathing when using this circuit. Note: It is not necessary to remove the non-rebreathing circuit.





# PRODUCT OPERATION CONT.



# ROUTINE MAINTENANCE

## Daily test




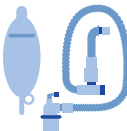


1. Turn the flowmeter knob fully open and observe the float ascends and descends freely and rests completely at the bottom when knob is turned off.
2. Inspect lines, connectors and accessories for wear prior to use.
3. Perform a Leak Test as shown on next page

## Cleaning

Use a damp cloth to clean, do not spray cleaning agent directly onto the machine surface. Dilute Chlorhexidine or similar cleaning and disinfecting agent can be used. Do not use alcohol.



Before each use, “**leak test**” the machine, and also ensure that the waste gases have a clear way through your evacuation system.

-  1 Close the pop-off valve and create a tight seal of the patient circuit with your hand.
-  2 Push the oxygen flush button, or turn on oxygen flow meter, until the bag is fully distended and/or manometer reads 30-40 cm of H<sub>2</sub>O pressure.
-  3 Release the oxygen flush button and/or ensure the oxygen flowmeter is off; float is at the bottom of the tube. Observe the manometer (or the bag if your machine does not have a manometer). The manometer needle should remain steady. If the manometer needle drops, the bag deflates, or if you hear a hissing sound, you have a leak.
-  4 Check hoses, bag, vaporizer inlet and outlet, any fittings or seals at the top and/or bottom of your CO<sub>2</sub> absorbent container for leaks (a soapy water solution can be used for leak test). When the pressure remains constant, with the oxygen turned off, your machine can be considered leak-free on the low-pressure side.
-  5 Re-open the pop-off to your standard setting.
-  6 Squeeze the bag (with your hand still over the patient circuit) to ensure the gases have a clear way out through your scavenging system.

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## TROUBLESHOOTING

Flowmeter will not turn off – Needle valve may be worn or need adjustment

Animals will not go to sleep/stay asleep – Inspect system for leak

- Tighten any loose connections (vaporizer endcaps, tubing connections)
- Inspect breathing circuit and bag for leak or loose connection
- Check active waste gas system function/attenuation
- Confirm vaporizer has an adequate amount of agent

**Call 877-637-3625 for assistance**

## SPECIFICATIONS

### Dimensions and Weight

**Weight:** 45 lbs./ 20.5 kg

**Dimensions:** 21in W x 21in D x 53in Tall  
(53 cm W x 53cm D x 135 cm T)

**Vaporizer endcaps:** 23 mm tapered

**Flowmeter:** 0.2-4 LPM

**Oxygen (carrier gas) inlet:** DISS Male

**Frame:** Aluminum

## SUPPLIES AND ACCESSORIES

- SOMNI 3 Vaporizer Isoflurane
- SOMNI 3 Vaporizer Sevoflurane
- Oxygen Concentrator 0-5lpm
- Bain Block Nonrebreathing Assembly
- Pediatric Unilimb (F-Circuit), 60 in.
- Cpram/Bain Circuit, 72 in.

# WARRANTY AND SERVICE INFORMATION

## Limited Warranty

SOMNI Scientific (SOMNI) warrants to the original purchaser that the products, not including accessories, shall be free from defects in materials and workmanship under normal use, if maintained in accordance with SOMNI's guidelines and used according to its labeling, for the period specified in the manual.

THIS LIMITED WARRANTY, IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This warranty is void if the product has been altered, misused, damaged by neglect or accident, tampered with, not properly maintained, not installed in strict compliance with applicable codes and ordinances, or repaired by persons not authorized by SOMNI. This warranty does not cover normal wear and tear and maintenance items and specifically excludes accessory items and any other equipment used with the product.

## Limitation of Remedies

SOMNI Scientific's only obligation under this limited warranty is the repair or replacement of the product. THIS IS THE EXCLUSIVE REMEDY. SOMNI shall not be liable for and hereby disclaims any direct, incidental, consequential or special damages or delays, including but not limited to loss of use, downtime, lost business, revenues and profits.

## Warranty Procedure

To obtain warranty service, contact SOMNI Scientific 877-637-3625 or [info@somniscientific.com](mailto:info@somniscientific.com).

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