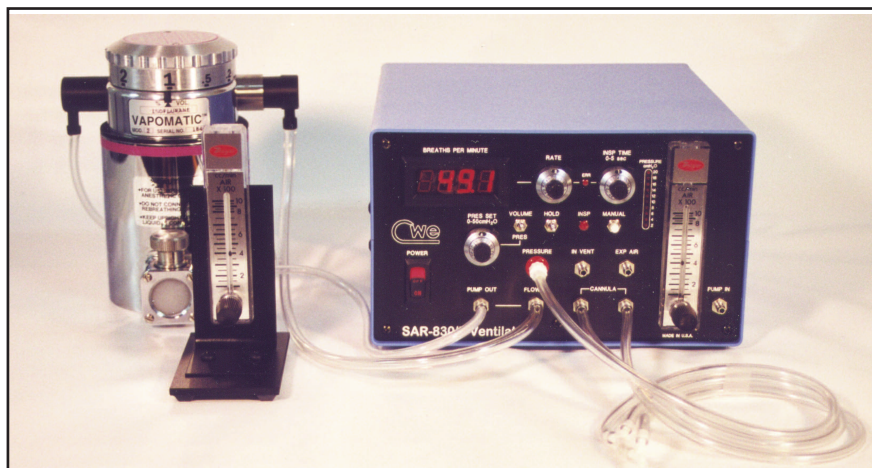


# Small Animal Anesthesia Systems & Accessories

## Isoflurane or Halothane setups for assisted or unassisted breathing



## Introduction

CWE, Inc. offers complete Halothane and Isoflurane anesthesia setups for animals as small as mice. Based on the reliable VAPOMATIC™ anesthetic vaporizers, they are a natural add-on for our popular SAR-830 series Small Animal Ventilators. With these ventilators, very simple anesthesia setups are possible. For a non-rebreathing system it is only necessary to add a kit consisting of a vaporizer and flowmeter. The driving gas can be either O<sub>2</sub> or an O<sub>2</sub>/N<sub>2</sub>O mixture, or the compressed air output from the SAR-830 internal air pump.

We also offer complete free-standing, rebreathing-type anesthesia machines which can be used with or without a ventilator. These are recommended for use with larger animals, or for long term use with small animals, owing to their economical use of anesthetic agents. A range of accessories and related components is available, including anesthetic scrubbers.

## Anesthetic Vaporizers

The VAPOMATIC™ vaporizer is the heart of the anesthesia system. These units are the result of 30 years of experience in the veterinary anesthesia field. They are specially designed for the low flow rates associated with small animal work, and are not merely re-manufactured clinical vaporizers. They are agent-specific; please specify Halothane or Isoflurane when ordering.

VAPOMATIC™ vaporizers are specifically designed to operate accurately over a wide range of flow rates. The accompanying chart shows the linearity of concentration versus flow rate. The vaporizers are accurate with flows as small as 0.1 liter/minute.

The vaporizers come complete with inlet and outlet adapters for connection with standard flexible tubing. Convenient Halothane and Isoflurane kits are available which include a vaporizer, flowmeter, fittings, and tubing (see ORDERING INFORMATION). Four-station flowmeter/regulators are also available, which serve as gas mixing manifolds when using O<sub>2</sub> or O<sub>2</sub>/N<sub>2</sub>O mixtures.

## Specifications

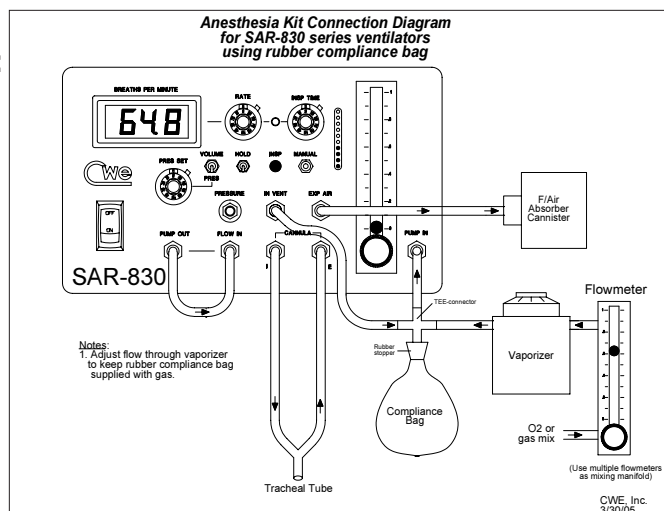
### Anesthesia vaporizer (Halothane or Isoflurane):

Range of gas flow rates	0.1 to 10 liters/minute
Operating temperature range	60° to 90° F
Range of anesthetic concentration	0 to 5%
Calibration accuracy	±0.1% concentration
Liquid capacity	200ml

## Adding Anesthesia to SAR-830 Ventilators

Any SAR-830 series ventilator can be easily and economically upgraded to an anesthesia/respiratory maintenance station. Aside from a source of pressurized breathing gas (air, O<sub>2</sub>/N<sub>2</sub>O mixture, etc.), all that is required is a Halothane or Isoflurane kit, consisting of a vaporizer, flowmeter, fittings, and tubing. If an SAR-830/A or SAR-830/AP model is being used (internal air pump models), no other source of compressed gas is necessary. For models *without* the air pump (SAR-830 and SAR-830/P), an external air pump or compressed gas cylinder is required. Please call CWE and we will be happy to advise you on your particular setup.

These anesthesia kits can also be used for simple "blow-by" setups. In this configuration, the animal breathes spontaneously from a stream of anesthetic gas. Face masks for a variety of animals are offered for this purpose.



Anesthesia connections to SAR-830 series ventilators

# Small Animal Anesthesia Systems Continued...

## Anesthesia Scrubbers

For most anesthesia setups using small animals, it is only necessary to vent any anesthetic-bearing gasses to a fume hood or other exhaust system. In cases where this is not possible, we offer the Omnicon F/AIR scrubber unit. This is a highly effective anesthesia scrubber capable of removing at least 50g of halogenated gasses before replacement is required.

An anesthesia absorber kit is available consisting of one scrubber canister, a canister holder, a 40" corrugated connection tube, and tubing adapters. Additional scrubber canisters can be purchased separately.



Anesthetic absorber kit showing canister, canister holder, tubing, and adapters

## Specifications of anesthesia components:

### Anesthesia vaporizer:

Range of gas flow rates	.01 to 10 liters/minute
Operating temperature range	.60° to 90° F
Range of anesthetic concentration	.0 to 5%
Calibration accuracy	±0.1% concentration
Liquid capacity	.200ml
Weight	.7.5 lbs
Dimensions	.4.8 x 5.4 x 7.3 inches

### Omnicon f/air scrubber unit:

Halothane retentivity	.50g
Absorbant surface area	.200,000mm <sup>2</sup> /gram
Pressure drop	<.0.1psi
Electrical properties	.non-conductive
Canister diameter, height	.3.25", 6"
Connector outside diameter	.0.875" male

## Ordering Information:

PART No.	DESCRIPTION
13-12000	Halothane kit: VAPOMATIC™ vaporizer, flowmeter, fittings, and tubing
13-13000	Isoflurane kit: VAPOMATIC™ vaporizer, flowmeter, fittings, and tubing
13-10000	VAPOMATIC™ vaporizer for Halothane, including inlet/outlet tubing adapters
13-11000	VAPOMATIC™ vaporizer for Isoflurane, including inlet/outlet tubing adapters
13-10010	Spare vaporizer inlet and outlet tubing adapters, set of 2
12-10020	EFM-1: Single flowmeter/regulator with stand, 0-1 liter/min (or specify other range)
12-10021	EFM-4: Four-station flowmeter/regulator manifold with stand, 0-1 liter/min (or specify other range)
13-20000	Anesthetic Absorber Kit: 1 canister, holder, tubing & adapters
13-21000	Absorber: Replacement Omnicon f/air absorber canister
13-80122	Tubing adapters for absorber setup, set of 3
13-27392	Corrugated tubing set with "Y" connector, pediatric size
13-21014	Tubing adapter: 0.875" dia. corrugated tubing to 15mm female
13-10132	Rat Mask: small, 1" dia., 5mm male tubing connector
13-10133	Cat Mask: medium, 2.5" dia., 15mm male connector
13-52122	Free-standing anesthesia machine, O <sub>2</sub> and N <sub>2</sub> O, vaporizer not included
13-51111	Free-standing anesthesia machine, O <sub>2</sub> only, vaporizer not included
13-50001	Option 01 1.0 liter/min O <sub>2</sub> and N <sub>2</sub> O flowmeters for above anesthesia machines
12-01100	SAR-830/A Small Animal Ventilator: volume-cycled, with internal air pump
12-02100	SAR-830/AP Small Animal Ventilator: volume/ pressure-cycled, with air pump
12-01020	Mouse Kit: SAR-830 Mouse Kit; Smaller internal components and tubing for mice
12-05000	CTP-VA-3: External Solenoid Valve Assembly, cat to small dog size

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