

# Veterinary anesthesia machine

## Owner's manual



# Owners' manual and handling instructions

## Dimensions:

Floor to top of machine: 52 ¾"

Base footprint: 30 7/8"

Shipping weight: 35 lbs.

## Assembly instructions for the machine:

Tools Required: 5/32" Allen wrench, and 7/16" wrench

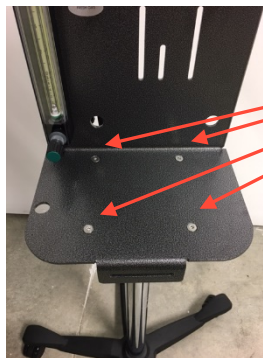
### Base Assembly:

- Turn base over to expose the underside.
- Insert (press fit) the five casters into the five holes at the end of each leg of the base.
- Turn the base over so the casters are on the floor.
- Firmly insert the post into the center of the base.



### Attaching machine chassis to post:

- Remove packet of bolts, nuts, flat washers and star washers.
- Lift machine chassis and place it gently on top of the post. Do not let go until bolts are installed.
- Align the holes in the chassis with the holes on the top of the post.
- Insert the four bolts through the machine chassis from the top down through the post. Be certain the bolts go through both the machine chassis and the top of the post.

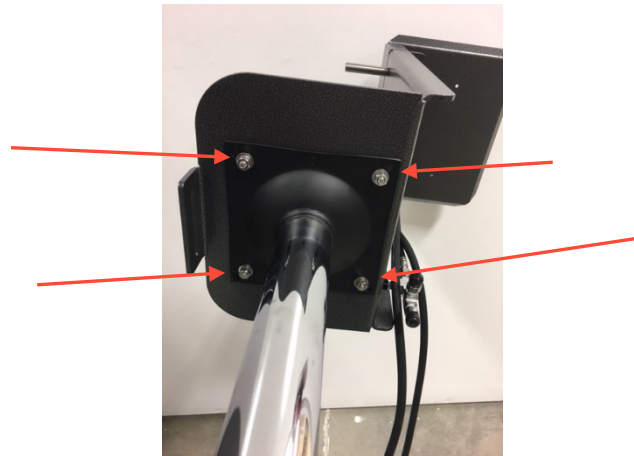


Insert bolts here

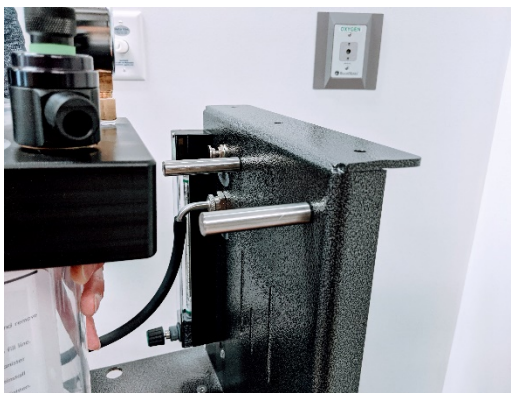
- Install a flat washer, star washer and nut (in that order) on the underneath side of the chassis. Do not tighten until all bolts are installed.



- Use a 5/32" Allen wrench and 7/16" wrench to securely tighten all bolts.



- Install breathing head on machine chassis by sliding the breathing head onto the two studs on the front of the machine chassis.



- Secure to the chassis by inserting the three-arm bolt into the hole in the back of chassis and tighten.



- Insert fresh gas elbow into the fresh gas port on chassis.



## Installing the vaporizer

Tools Required: 5mm Allen wrench for a Tec 3 vaporizer

Note: Tec 3 vaporizer bolts are included - other style vaporizers may require different bolts.

- Disconnect the vaporizer inlet and outlet adapters from each other.
- Attach vaporizer to the chassis by inserting vaporizer bolts, with washers, through the slot (from the back side) into the back of the vaporizer and tighten.



- Connect inlet and outlet adapters to the vaporizer, routing the Norprene tubing under the machine.
- Fill the vaporizer by removing the fill cap and fill to line in window with the correct anesthetic agent. Allow at least an hour for the wick to saturate.
- Agent is only delivered when there is oxygen flow and the vaporizer is on.
- Turn the vaporizer on by depressing the button on the left side of the dial and turn the dial to the desired concentration.
- Concentration is constant regardless of oxygen flow.



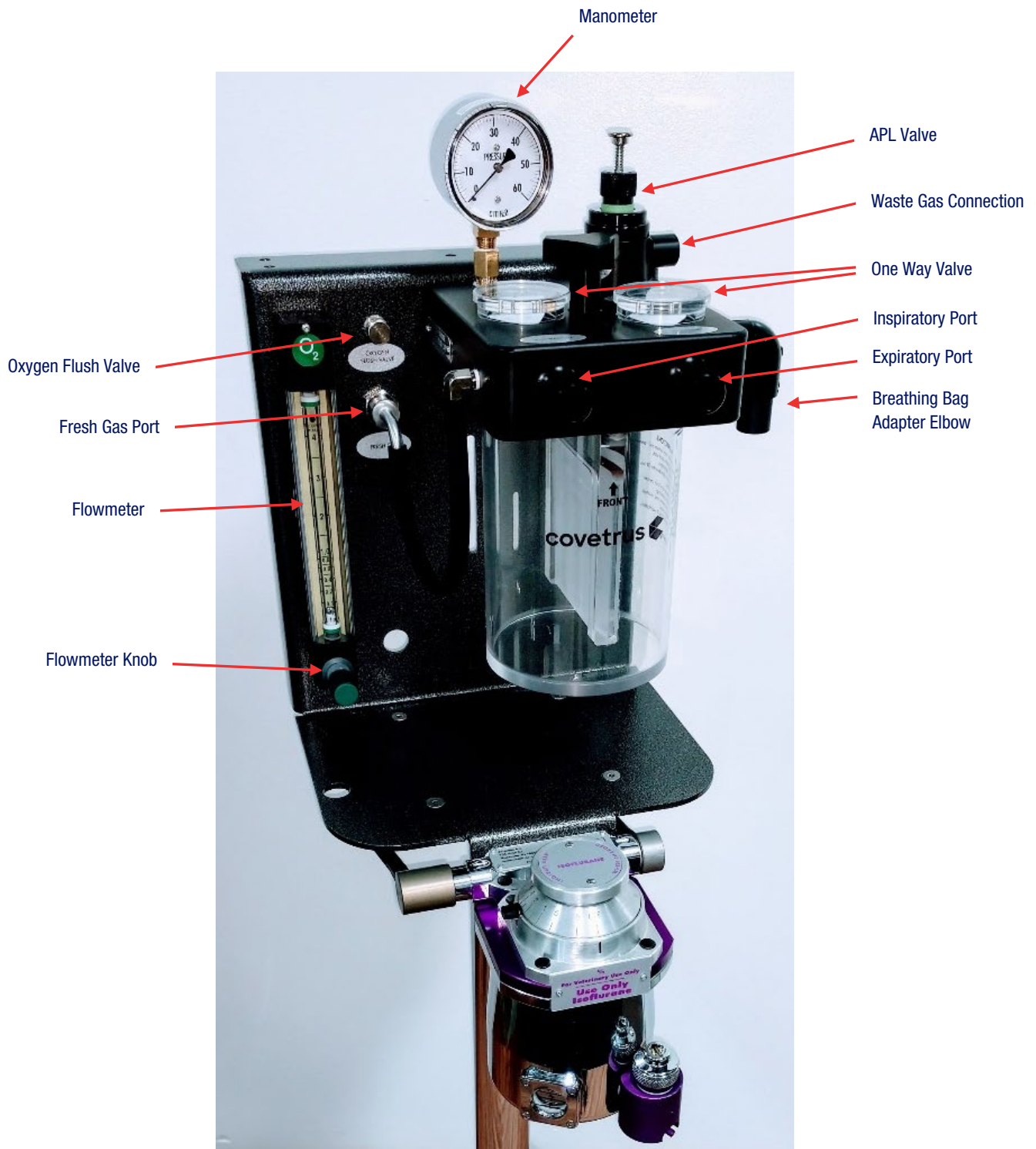
### Rebreathing Circuit and Oxygen Source Connections

- Remove the absorber canister by supporting the canister from the bottom and removing the three-arm knob on top of the breathing head. Canister will drop from the breathing head once its loosened so be sure to hold on to the canister.



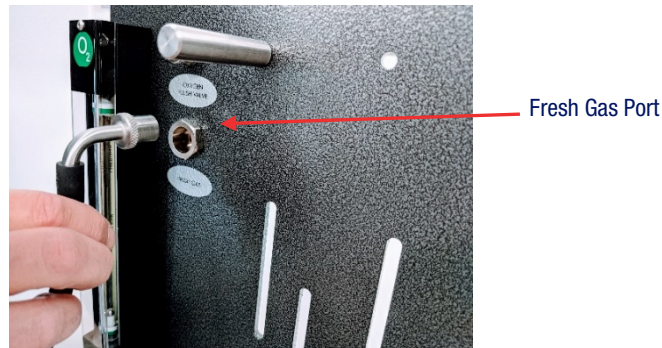
- Fill canister with absorbent to fill line. Do not over-fill the canister. Wipe the top rim of the canister with a paper towel to remove any soda sorb dust. Wipe canister gasket on underside of absorber breathing head.
- Replace canister by inserting the threaded rod up through the breathing head. Replace the three-arm knob and tighten.
- Connect the machine to an oxygen source at 20-50psi using one of the DISS fittings on the left side of the machine. The machine is plumbed for two oxygen sources.
- Check for oxygen flow by slowly opening the flowmeter knob and observing the ball rising in the tube on the flowmeter. Depress the oxygen flush valve to assure that there is a “flush” of oxygen into the system by listening for oxygen flow. The oxygen flush valve is restricted for patient safety.

- Connect the rebreathing tubes to the inspiratory and expiratory ports on the front of the breathing head. If a universal coaxial breathing circuit is used, be certain that the inspiratory leg of the circuit is connected to the inspiratory port.
- Connect the waste anesthetic gas scavenging tube to the adjustable pressure limiting (APL) valve.



## Non-rebreathing Circuit

- To use a non-rebreathing circuit, remove the fresh gas elbow from the fresh gas port on the machine. Connect the fresh gas tube of the non-rebreathing circuit to the fresh gas port on the machine.



- Set the oxygen flowmeter and anesthetic vaporizer to the desired flow and concentration and connect the patient to the circuit.

## Adjustable Pressure Limiting (APL) Valve

- The APL valve is adjusted by turning the black textured knob clockwise to increase the pressure or counter-clockwise to decrease the pressure.
- The APL valve has a “depress to bag” function which allows the anesthetist to “sigh” or bag the animal without changing the adjustment on the APL valve.
- To manually “sigh” the patient:
  - Depress the button on top of the APL valve then compress the rebreathing bag.
  - Observe the manometer on top of the inspiratory manifold to achieve the desired pressure (no more than 20cm H<sub>2</sub>O).



## Pressure Test

A pressure test is performed on the breathing system to check for hazardous leaks.

- Occlude the inspiratory, expiratory and rebreathing bag port.
- Close the APL valve.
- Using the flowmeter (DO NOT USE THE FLUSH VALVE), increase the pressure on the manometer to 30cm/H<sub>2</sub>O. Turn the oxygen off.
- Observe the manometer for 30 seconds.
  - If the manometer remains at 30cm/H<sub>2</sub>O, the equipment is safe to use. If the manometer increases in pressure, there is a significant oxygen leak in the flowmeter or flush valve which needs to be corrected before using the machine.
  - If the manometer pressure begins to drop, set the oxygen flow at 200cc/minute and observe the manometer. The pressure on the manometer should remain constant or rise. If the manometer continues to drop, there is a leak in the equipment which needs to be isolated and corrected before using the machine.
- If a leak is detected, turn off oxygen cylinder or disconnect equipment. Contact your Vetamac service technician for assistance.
- VERIFY THE APL VALVE IS OPEN AFTER PRESSURE TESTING IS COMPLETE!
- Perform individual tests on breathing circuit and bag to detect possible leaks in these components.

## Care of the machine

- Disconnect the breathing tubes and bag from the machine when not in use.
- Wash breathing tubes with mild soap and warm water, rinse and hang to dry.
- Rinse thoroughly and hang bag to dry.
- If one way valves have excessive moisture, remove valve caps and wipe dry (see picture on page 6 for location of one way valves).
- Clean fill cap, O-ring and funnel of vaporizer with alcohol moistened gauze.
- Tighten vaporizer drain pin in center of funnel (not applicable with all vaporizers).
- Clean vaporizer externally with alcohol moistened gauze.

## Changing the absorbent granules

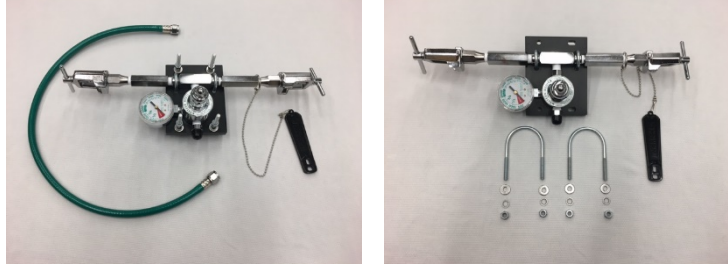
Replace absorbent when color changes or every month.

- Remove the absorber canister by supporting the canister from the bottom and removing the three-arm knob on top of the breathing head. Canister will drop from the breathing head once its loosened so be sure to hold on to the canister.
- Empty canister and refill with fresh CO<sub>2</sub> absorbent granules. Do not over-fill the canister. Wipe the top rim of the canister with a paper towel to remove any soda sorb dust. Wipe canister gasket on underside of absorber breathing head.
- Replace canister by inserting threaded rod up through the breathing head. Replace the three-arm knob and tighten.
- Perform a pressure test.



## Installing an E-tank yoke (optional on post and base model)

- The E-tank bracket is adaptable to fit most sizes of anesthetic machine posts. Two sizes of U-bolts are included with the bracket. The correct size needs to be used to ensure the U-bolts grip the post appropriately.
- Remove nuts, washers and **large** U-bolts from the bracket. The large U-bolts are for the Dream 2" post.



- Align U-bolt around back of post through the yoke bracket.



- Place flat washer, star washer, and nut on U-bolt. Align yoke parallel with machine. Adjust height of bracket on post to allow clearance at the floor and at the top of the tanks. Tighten using 7/16" wrench. Do the same for second U-bolt on bottom of bracket.



- Attach one end of oxygen hose to the back of machine. Attach other end of hose to regulator on yoke.



- Rotate post in base to allow tanks to hang between legs of base.



## Warranty

Vetamac warrants to the original purchaser that the Vetamac Equipment, not including accessories or consumable products, shall be free from defects in materials and workmanship under normal use, if maintained by Vetamac and in accordance to Vetamac guidelines, and used in accordance with its labeling, for a period of seven (7) years. This warranty is void if the Equipment has been altered, misused, damaged by neglect or accident, tampered with, not properly maintained, or repaired by persons not authorized by Vetamac. This warranty does not cover normal wear and tear and maintenance items and specifically excludes accessory items and any other equipment used with the Equipment.

## **Periodic Service**

Vetamac recommends that the anesthetic machine be serviced annually by Vetamac or an authorized service technician. This service should include a verification and test of the following components on the machine: the high and low pressure circuits, the flowmeter and oxygen flush valve, the rebreathing circuit and accessories, the non-rebreathing circuit and accessories, the gas scavenging circuit, and the overall condition of the machine. The service should also include a pressure test of all components including the vaporizer and a verification of the vaporizer calibration.

**This machine is designed to give many years of reliable service, with the ultimate goal of the best possible patient care.**

### **Questions?**

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Covetrus North America  
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Dublin, OH 43017  
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### **Reorder #072985**

AH-072985-Owner's Manual-01  
REV: 0121