



midmark VMS Anesthesia Machine Installation Guide

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midmark VMS Anesthesia Machine



Product Information

The anesthesia machine is a medical device used by veterinary professionals trained in anesthesia practice. The machine is available in various models, including VMS, VMS Plus, and VMC, and is intended for use in veterinary clinics and hospitals. The machine has various components, including a scavenging/APL valve, occlusion valve (VMS & VMS Plus only), exhalation valve, pressure gauge (manometer), safety valve (negative pressure relief), inhalation valve, flowmeter, oxygen supply fitting, oxygen flush, flowmeter adjustment knob, breathing circuit, fresh gas connection, absorber canister, vaporizer (not included), breathing bag, and more.

The installation of the anesthesia machine should be done carefully as per the instructions provided in the manual. Wall-mounted machines should only be installed in wood stud or concrete walls. The machine should not be installed in a vehicle or any other confined space. Waste gases from the machine could cause impairment to the occupants. The machine should be installed by a licensed veterinarian or a professional trained in anesthesia practice.

Product Usage Instructions

1. Remove the contents from the cartons and place the base with casters on the floor.
2. For wood stud mounting, use #12 x 2 1/2 wood screw and #12 x 5/8 flat washer to mount the wall bracket to the wood stud through 1/2 min drywall. Two screws are required for each mounting.
3. For concrete wall mounting, drill a hole in the wall for #12 lead anchor as instructed by anchor manufacturer. Drive the anchor into the wall and use #12 x 2 screw and #12 x 5/8 flat washer to screw the wall bracket into the anchor. Repeat for each mounting hole.
4. Install the tapered end of the mounting column into the base.
5. Install the absorber/drawer/shelf assembly into the column/stud.

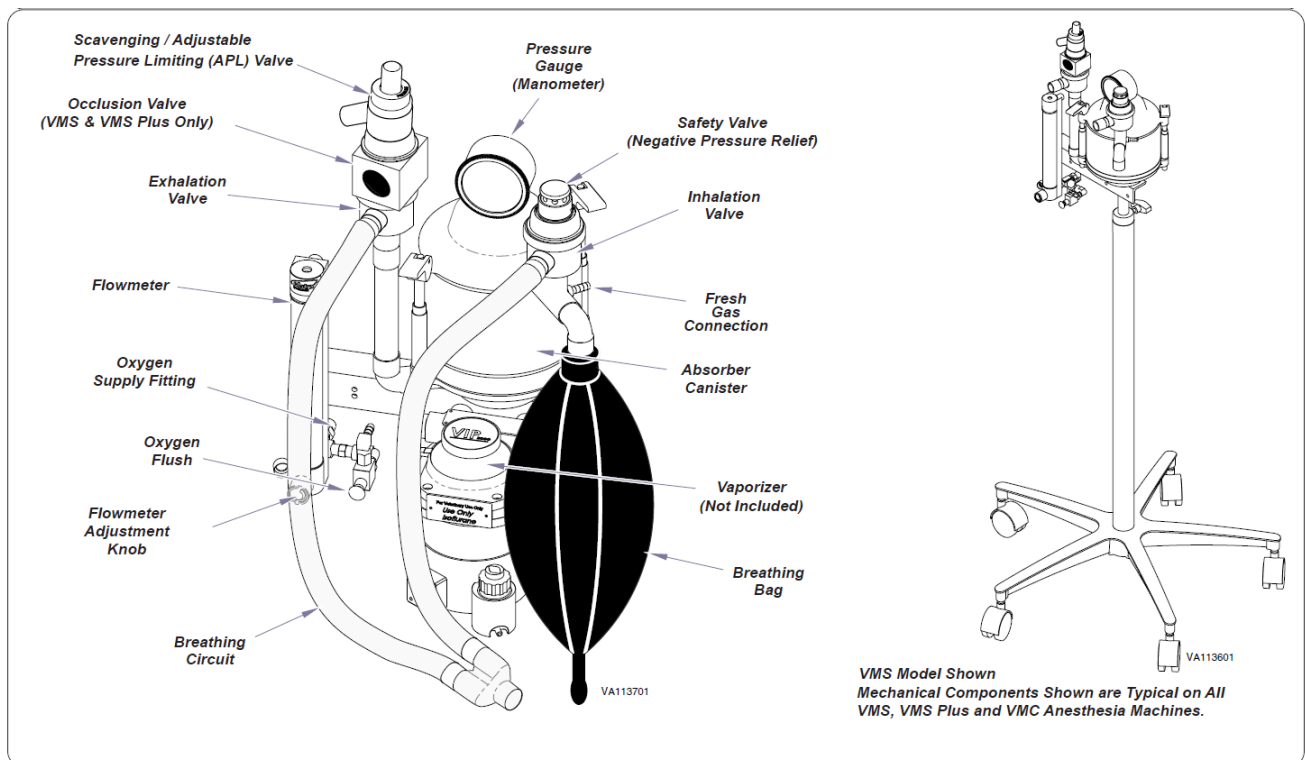
Note: The mounting hardware is not included for wall installation. Refer to the chase installation manual for mounting hole locations. To install VMS, use hardware included with chase cabinet (5/16 bolts, washers, and nuts).

Caution: Federal law restricts this device to sale by or on the order of a licensed veterinarian. The operation of anesthesia machines is restricted to use by veterinary professionals trained in anesthesia practice. The product contains natural rubber latex which may cause allergic reactions. At the end of product life, the unit(s), accessories, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment and other consumable goods.

WARNING

Wall mounted anesthesia machines should only be installed in wood stud or concrete walls. Do not install anesthesia machine in a vehicle or similarly confined space. Waste gases from the machine could cause impairment to the occupants.

Parts



Important Information

Intended Use

The operation of anesthesia machines is restricted to use by veterinary professionals trained in anesthesia practice.

Caution

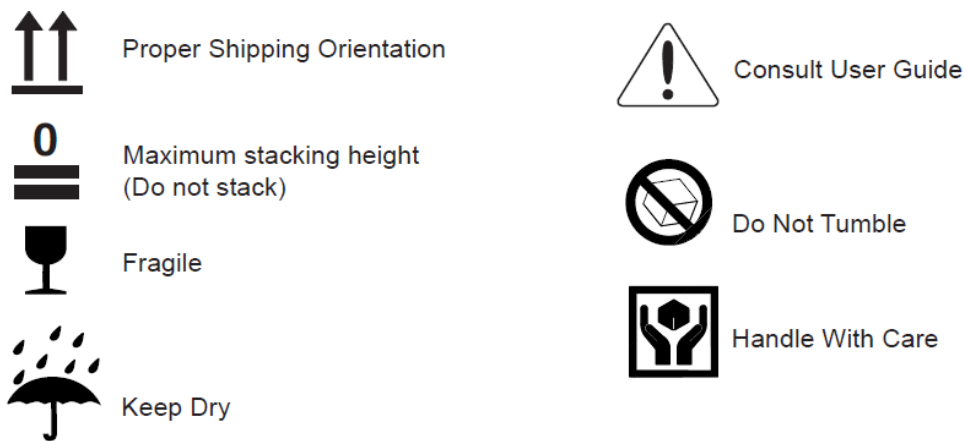
Federal law restricts this device to sale by or on the order of a licensed veterinarian.

Disposal of Equipment

At the end of product life, the unit(s), accessories, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment, and other consumable goods.

- Ambient Temperature Range:32°F to 104°F (0°C to 40°C)
- Relative Humidity.....10% to 90% (non condensing)
- Atmospheric Pressure500hPa to 1060hPa (0.49atm to 1.05atm)

Symbols



These symbols may appear on your equipment and/or in the manuals.

Safety Symbols

WARNING

Indicates a potentially hazardous situation which could result in serious injury if not avoided.

Caution

Indicates a potentially hazardous situation which may result in minor or moderate injury if not avoided. It may also be used to alert against unsafe practices

Equipment Alert

Indicates a potentially hazardous situation which could result in equipment damage if not avoided.

Caution

This product contains natural rubber latex which may cause allergic reactions.

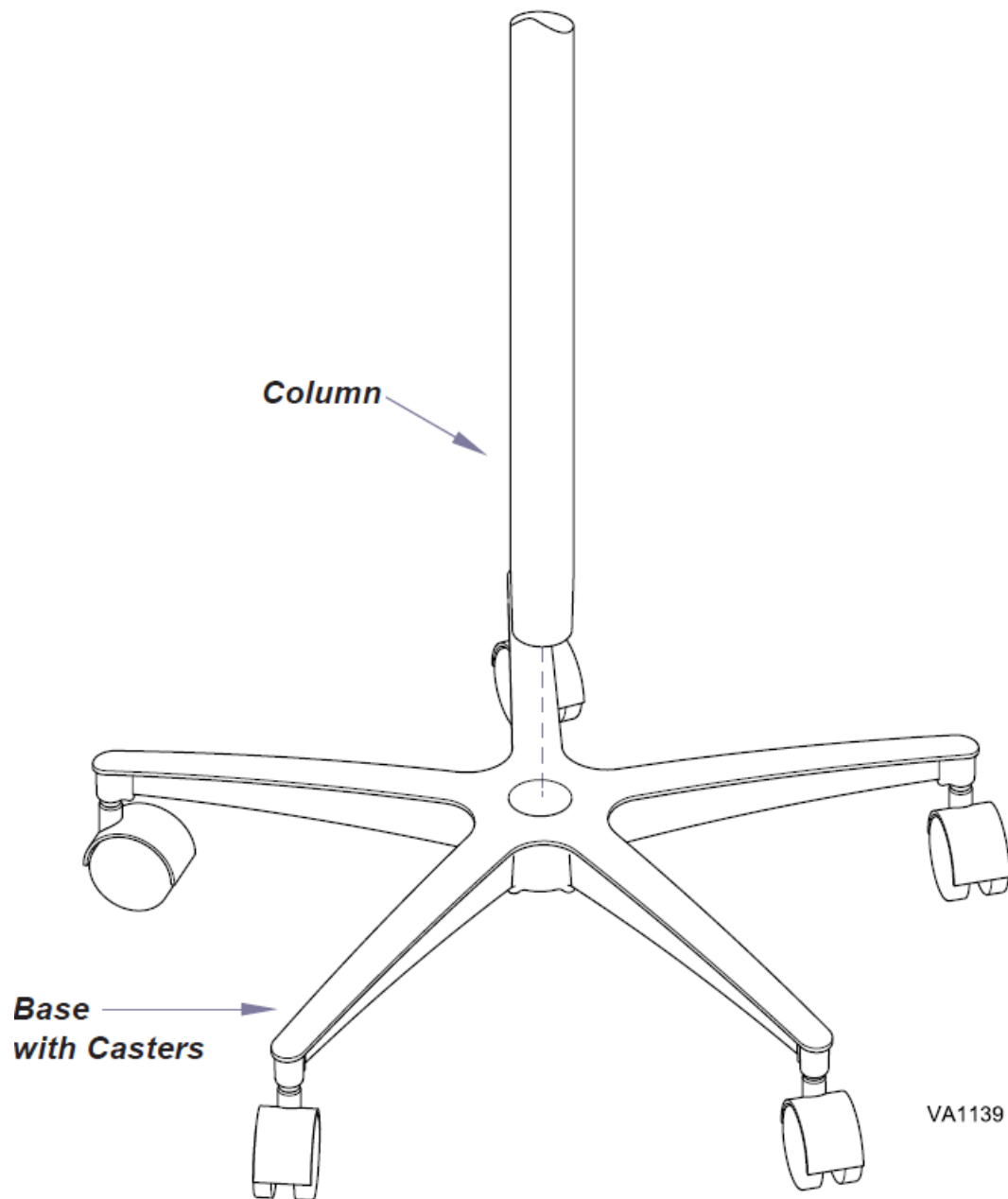
Note

Amplifies a procedure, practice, or condition.

Mounting

Stand Mounted Units Only

- **Step 1:** Remove contents from cartons. Place base with casters on floor.



- **Step 2:** Install tapered end of mounting column into base.

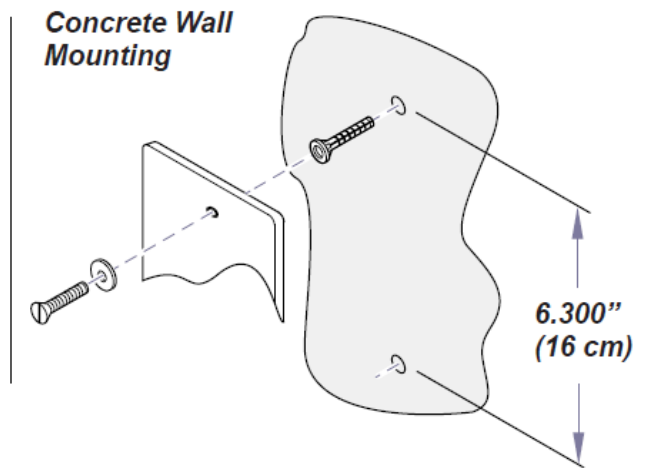
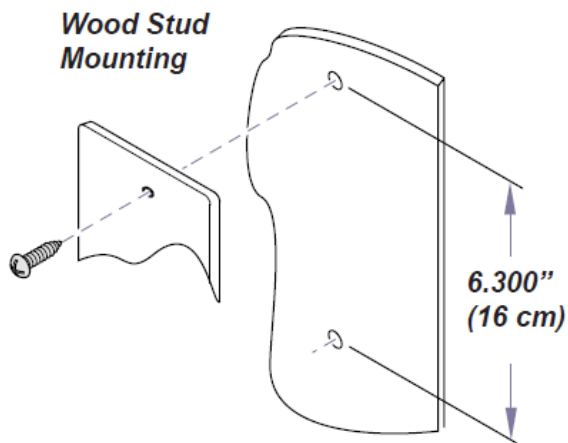
Note

Mounting hardware not included for wall installation.

Wood Stud Mounting

Use #12 x 2 1/2" wood screw and #12 x 5/8" flat washer to mount wall bracket to wood stud thru 1/2" min dry wall.

Note: Two screws are required for each mounting.



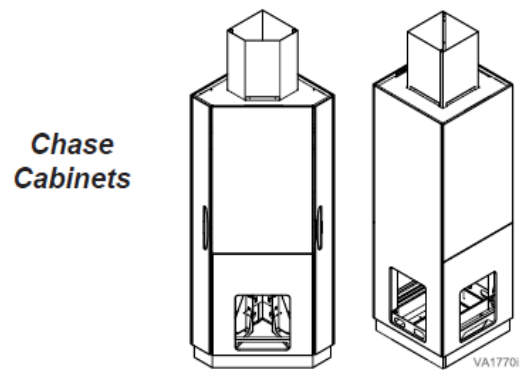
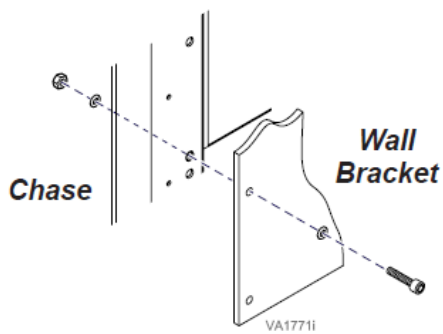
Concrete Wall Mounting

- Drill hole in wall for #12 lead anchor as instructed by anchor manufacturer.
- Drive anchor in wall.
- Use #12 x 2" screw and #12 x 5/8" flat washer to screw wall bracket into anchor.

Note: Repeat for each mounting hole.

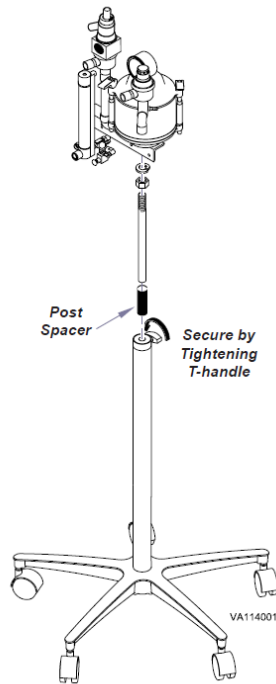
Note

Refer to chase installation manual for mounting hole locations. To install VMS, use hardware included with chase cabinet. (5/16" bolts, washers and nuts)

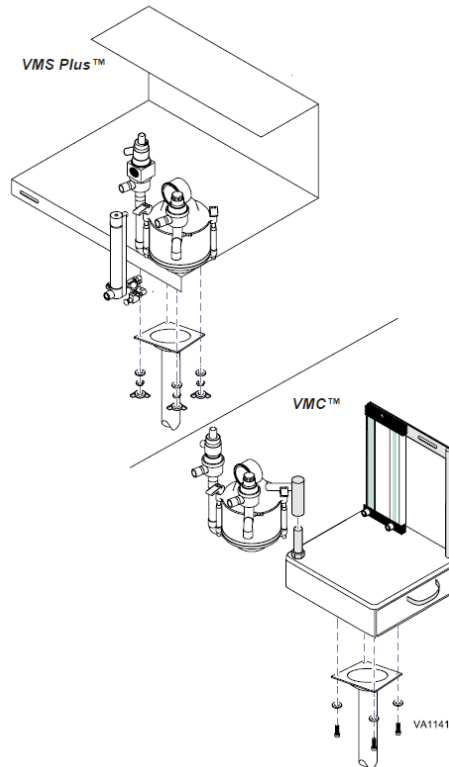


- **Step 3:** Install absorber/drawer/shelf assembly into column/stud.

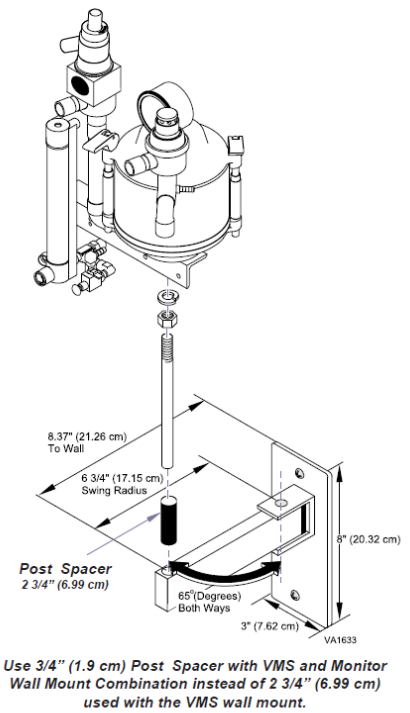
VMS® Stand Mounted



VMS Plus™ & VMC™

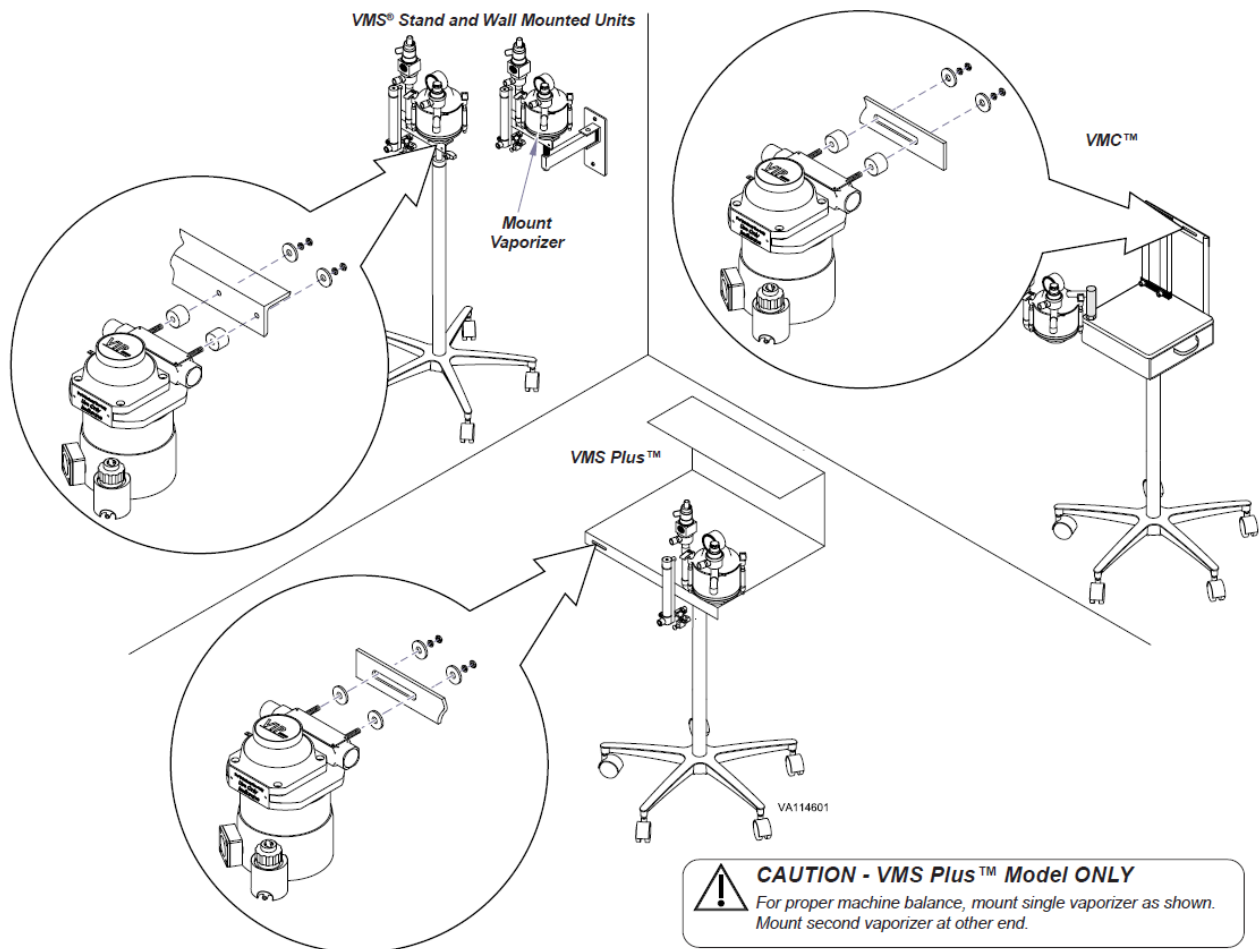


VMS Wall Mounted

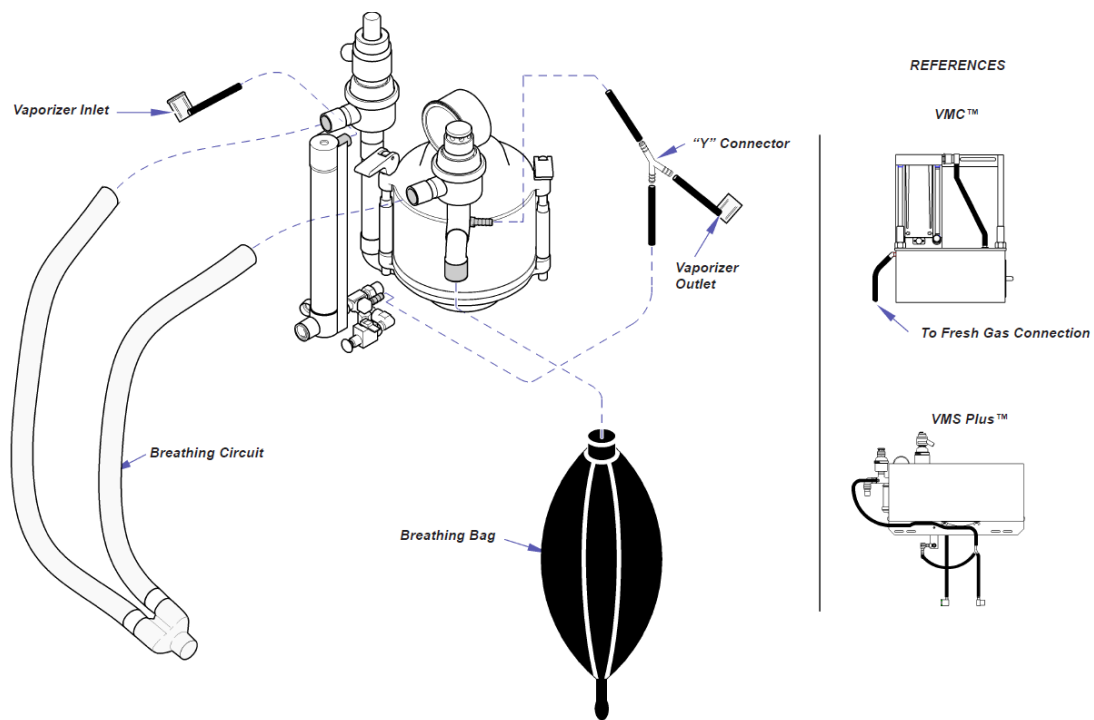


• Step 4: Install vaporizer.

Note: Vaporizer is not included with anesthesia machine, however the mounting kit and 10 mm nut driver for vaporizer installation is included.



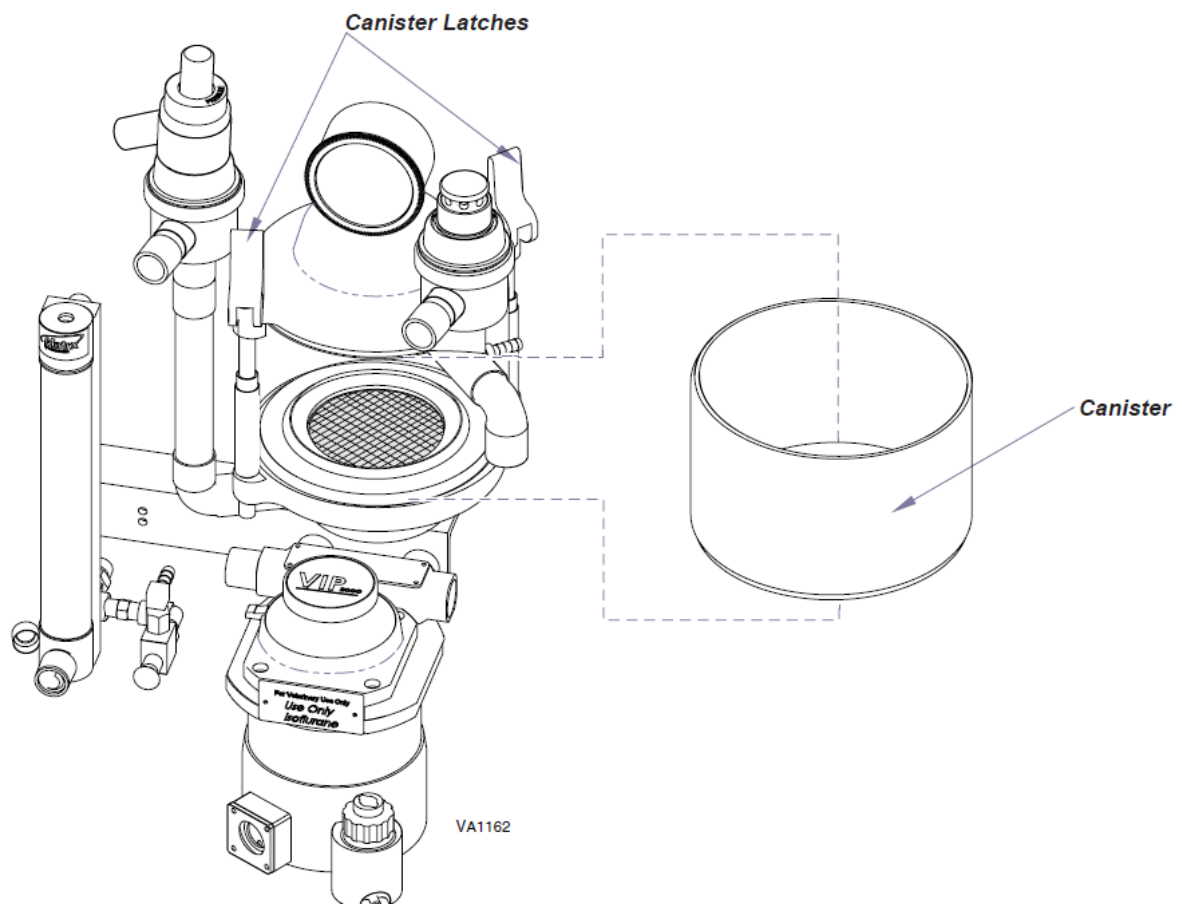
• Step 5: Install tubing, breathing bag and breathing circuit.



- **Step 6:** Unlock canister latches.

Remove canister from side of assembly.

Fill with absorbent according to specifications on canister label. Reinstall canister and secure latches.



- **Step 7:** Connect oxygen tank and perform leak test.

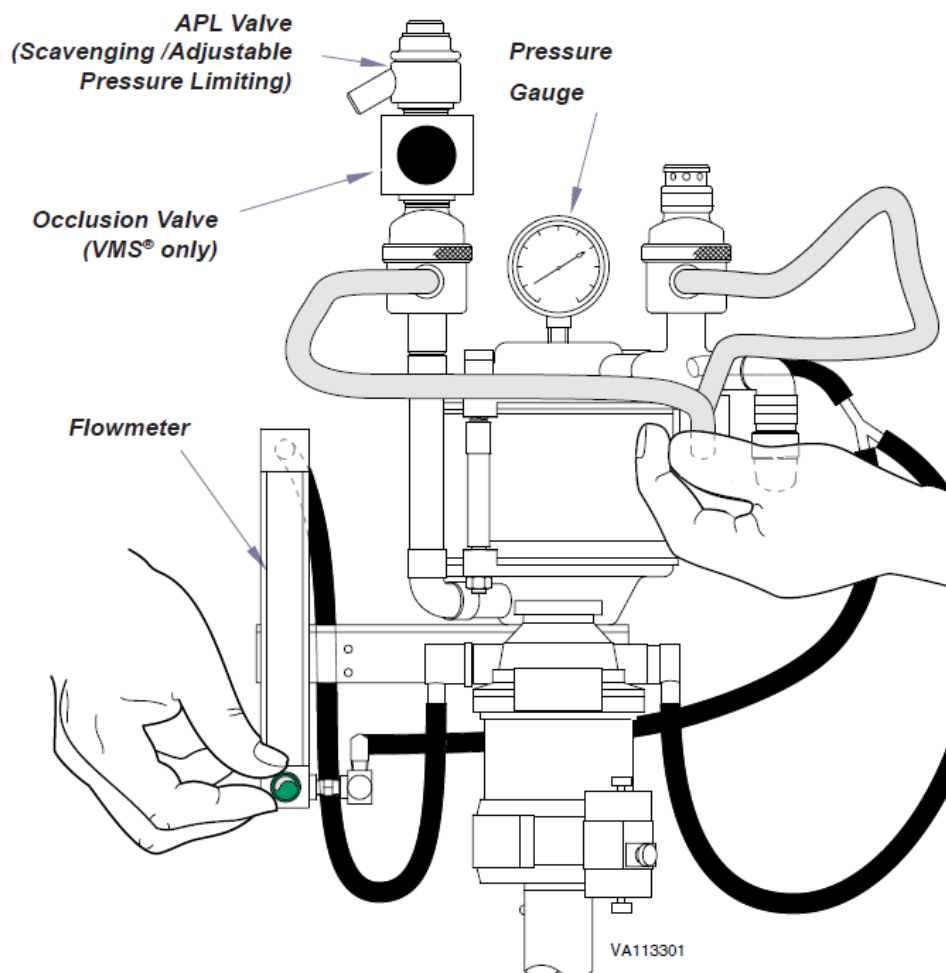
To perform leak test...

- Close APL (Scavenging /Adjustable Pressure Limiting) valve by turning knob clockwise.
- Place thumb over patient connection of breathing circuit
- Remove breathing bag and cover bag port opening. (Use palm of hand that is covering

- With oxygen (50-55 PSI [3.4-3.8 Bar]) supplied to anesthesia machine, slowly open flowmeter to register 30cm H₂O on anesthesia machine pressure gauge.
- Turn off flowmeter when pressure reaches 30cm H₂O. (If pressure holds steady the system is leak free but if pressure drops, proceed to step (F).)
- Slowly open flowmeter until pressure stabilizes at 30cm. H₂O setting. (This determines the magnitude of the leak. If leak rate is greater than 300ml/min; proceed to step (G).)
- Refer to "What if machine leaks?"
- Replace reservoir bag. Repeat step (B) and steps (D) through (F). This will determine the integrity of breathing bag.
- Open APL Valve at end of Leak Test Procedure by turning knob counter clockwise.

What if Machine Leaks?

1. **Breathing Bag** – If leak occurs, replace.
2. **Breathing Circuit** – Install new breathing circuit or obstruct inhalation / exhalation openings to determine if leak originates from breathing circuit.
3. **Vaporizer Fittings** – Verify fittings and tubing are securely attached.
4. **Canister Gaskets** – Check for loose absorbent grains between canister housing gaskets.
5. Verify Canister is seated properly.
6. **Safety Valves** – Remove valve and obstruct opening to determine if leak originates from negative pressure relief valve. Check the o-ring under valve for damage.
7. **APL Valve** – Remove valve and obstruct opening to determine if leak originates from APL valve. Check the o-ring under valve for damage.
8. **Occlusion Valve** – Remove valve and obstruct opening to determine if leak originates from Occlusion valve. Check the o-ring, diaphragm and back up ring on valve for damage.
9. O-Rings under chrome retaining rings. Check the o-rings for damage.

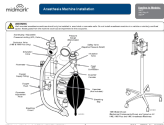


Dimensions

Dimensions	VMS® Stand	VMS Wall Mounted	VMS Plus	VMC
Floor to Top of Anesthesia Machine:	54" (137.15 cm)	N/A	57" (127 cm)	53 1/2" (135.89 cm)
Total Width of Unit:	12" (30.48 cm)	12" (30.48 cm)	12" (30.48 cm)	21" (53.34 cm)
Width of Shelf:	N/A	N/A	22" (55.88 cm)	12" (30.48 cm)
Length of Shelf:	N/A	N/A	13 1/4" (33.65 cm)	12" (30.48 cm)
Swing Radius:	N/A	6 3/4" (17.14 cm)	N/A	N/A
Distance from Wall:	N/A	8 3/4" (22.23)	N/A	N/A
Floor Footprint:	27" (68.58 cm)	N/A	27" (68.58 cm)	27" (68.58 cm)
Wall Footprint:	N/A	22" x 12" (55.88 x 30.48 cm)	N/A	N/A
Shipping Weight:	42 lbs	26 lbs	75 lbs	75 lbs

Dimensions	VME Stand	VME Wall Mounted	VME Tabletop
Floor to Top of Anesthesia Machine:	51" (129.54 cm)	N/A	N/A
Total Width of Unit:	15" (38.1 cm)	15" (38.1 cm)	15" (38.1 cm)
Width of Shelf:	10 1/2" (26.67 cm)	13 1/2" (34.29 cm)	13 1/2" (34.29 cm)
Length of Shelf:	10" (15.24 cm)	8 1/2" (21.59 cm)	8 1/2" (21.59 cm)
Distance from Wall:	N/A	8 3/4"	N/A
Floor Footprint:	27" (68.58 cm)	N/A	N/A
Wall Footprint:	N/A	19" x 14" (48.26 x 35.56 cm)	19" x 14" (48.26 x 35.56 cm)
Shipping Weight:	44 lbs	27 lbs	24 lbs

Documents / Resources

	<p>midmark VMS Anesthesia Machine [pdf] Installation Guide VA113701, VA113601, VMS, VMS Anesthesia Machine, Anesthesia Machine, Machine</p>
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