

# Midmark Anesthesia Service Parts Guide

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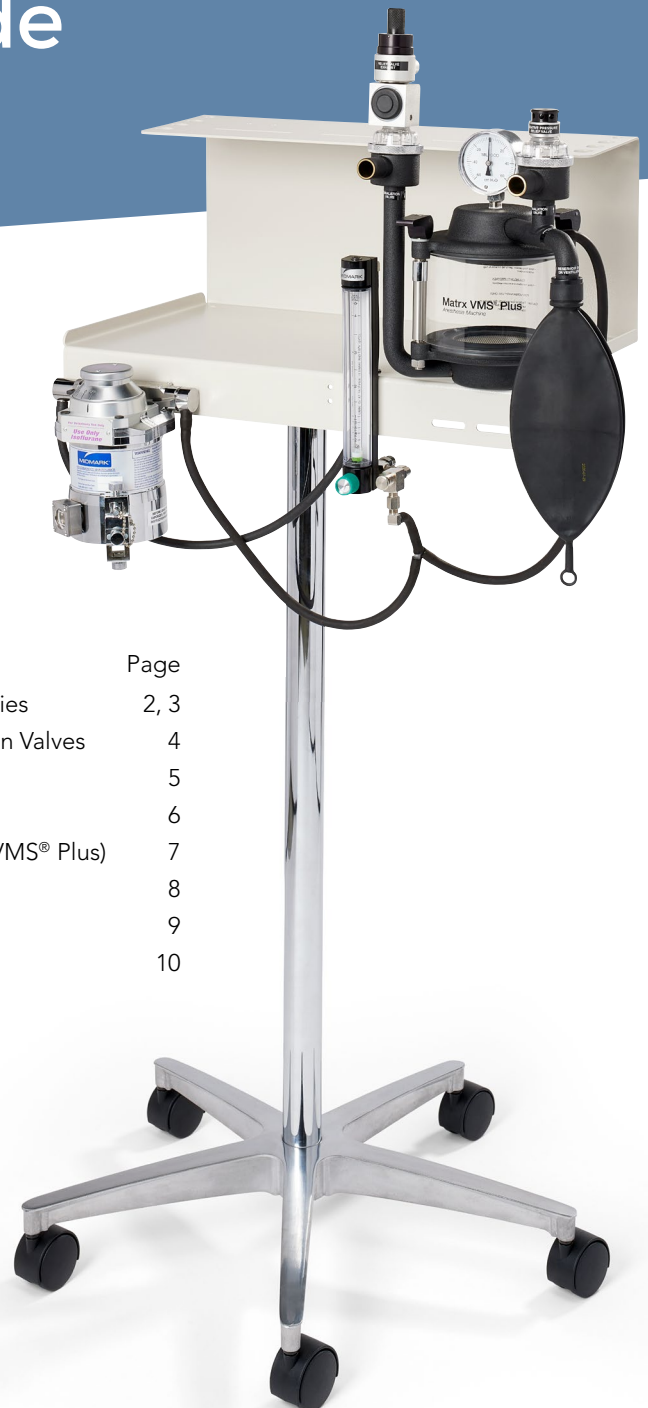
For complete details on vaporizers  
requiring service, or availability of rental  
vaporizers, contact your local Authorized  
Midmark Distributor.

For vaporizer service outside the United  
States and Canada, please contact:

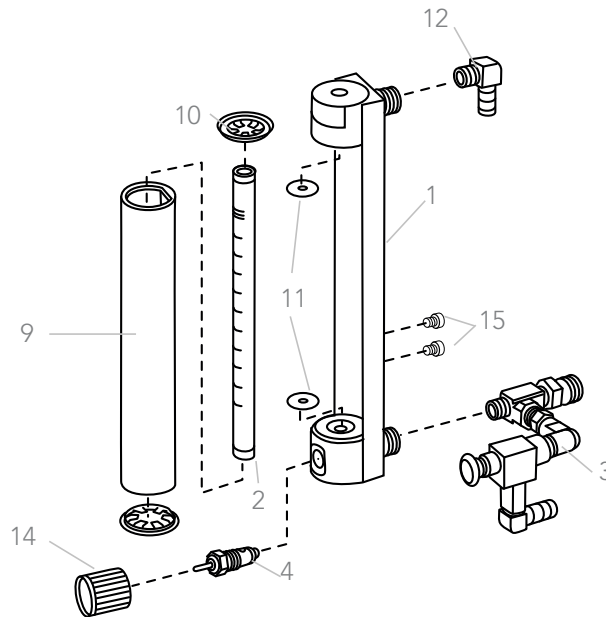
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# Midmark Flowmeter Assemblies



## (VMS®/VMS® Plus/VME®/VME2®/VMR™)

### O<sub>2</sub> Flowmeter Assembly w/o Flush

- 1 91805081 (USA)
- 91805064 (ISO/Canada)
- 91805083 (USA) (0 - 1000cc)
- 91805068 (ISO/Canada) (0 - 1000cc)

## VMS®/VMS® Plus/VME®/VME2®/VMR™

### O<sub>2</sub> Flowmeter Tube Only

- 2 91800641 0.2 - 4 lpm
- 91800643 0 - 1000cc

### VMS® O<sub>2</sub> Flush Assembly

- 3 002-1864-00 (USA/ISO/Canada)
- 61900300 Push Button

### VMS® Plus/VME2® O<sub>2</sub> Flush Valve Assembly

- 3 92305398 (USA/ISO/Canada)

### Replacement O<sub>2</sub> Needle Valve Assembly w/ Positive Stop

- 4 91800655 Knob Sold Separately, see item #14
- 9 91805600 Replacement Lens
- 10 91805300 Replacement End Caps 0.2 - 4 lpm
- 91805500 Replacement End Caps 0-1000cc
- 11 91800268 Replacement Gaskets 0.2 - 4. lpm
- 12 91800271 Replacement 90° Elbow, 1/4M Host Barb x 1/8" NPT

### Replacement Needle Valve Knobs

- 14 91800702 Green
- 91800703 White
- 15 10503100 Screw kit for VMS® Plus flowmeter #10-32 x 1/4"
- 10503200 Screw kit for VMS®, VME® and VMR™ flowmeter #10-32 x 5/16"

### VML O<sub>2</sub> Flowmeter Assembly w/o Flush

- 1 91805082 (USA)
- 91805066 (ISO/Canada)

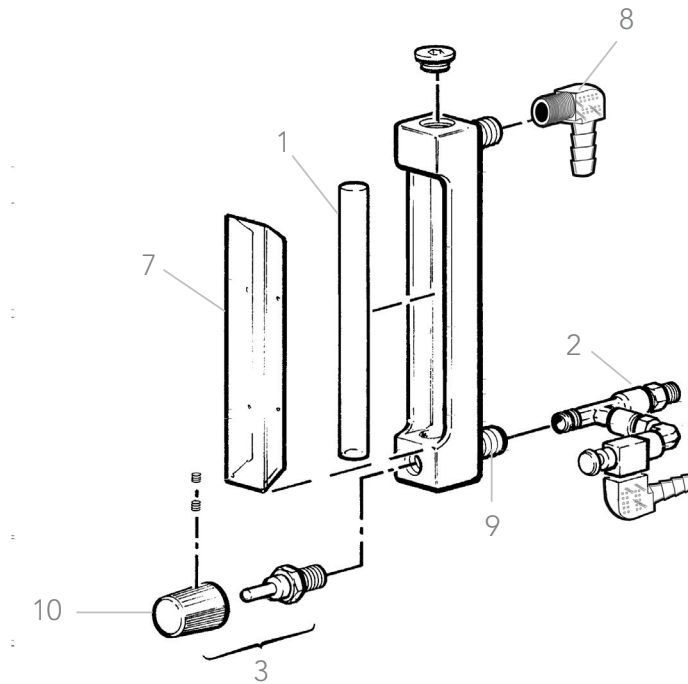
### VML O<sub>2</sub> Flush Valve Assembly

- 3 002-1864-00 (USA/ISO/Canada)

### Replacement O<sub>2</sub> Needle Valve with Positive Stop

- 4 91800655 Knob Sold Separately, see item #14

# Midmark Flowmeter Assemblies - Older Models



## VMS®/VMS® Plus/VME® O<sub>2</sub> Flowmeter Tube Only

- 1 63902902 (USA)
- 62966000 (USA/ISO/Canadian/Swedish) (0-1000cc)

## VMS® O<sub>2</sub> Flush Valve Assembly

- 2 92305375 (USA/ISO/Canadian)

## VMS® Plus O<sub>2</sub> Flush Valve Assembly

- 2 92305398 (USA/ISO/Canadian)

## Replacement O<sub>2</sub> Needle Valve Assembly, with Positive Stop, Silver Knob

- 3 63300512 (USA)
- 63300701 (ISO/Canadian/Swedish)

## Replacement Needle Valve Knobs

- 10 65927101 Green

## VML O<sub>2</sub> Flush Valve Assembly

- 2 92305375 (USA/ISO/Canadian/German/Swiss)

## Replacement O<sub>2</sub> Needle Valve Assembly with Positive Stop, Silver Knob

- 3 63300512 (USA)
- 63300701 (ISO/Canadian/Swedish)

- 7 92815409 Plastic Cover
- 8 62917008 90° Elbow, 1/4M Hose Barb x 1/8" NPT
- 9 91805042 Inlet/Outlet Adapter NPT x 1/4"

# Midmark Inhalation/Exhalation Valves

## VMS®/VMS® Plus

### Inhalation/Exhalation Valve Parts

- 1 002-1702-00 APL Valve
- 2 93805114 Occlusion Valve (VMS® and VMS® Plus Only)
- 3 63200145 O-Ring
- 4 92805012 Air Intake Valve
- 5 10010500 Dome Retainer Ring
- 6 92805015 Plastic Dome
- 7 63200113 O-Ring
- 8 10049000 White Nylon Valve Disc

## VME2®/VME® Tabletop

### Inhalation/Exhalation Valve Parts

- 13 65927800 Thumbscrew
- 14 10391800 Dome Clamp
- 15 10010200 Dome, Inhalation VME®/VME2® Tabletop
- 16 92805015 Dome, Exhalation VME®/VME2® Tabletop
- 17 63200113 O-Ring
- 18 10049000 White Nylon Valve Disc
- 19 002-1702-00 APL Valve

## VML Inhalation/Exhalation Valve Parts

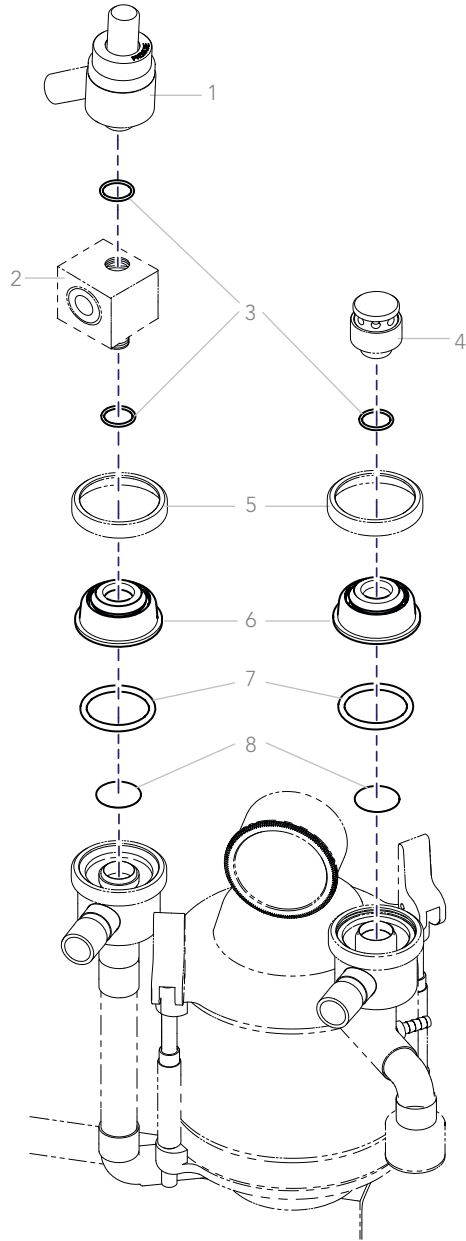
- 9 20048200 Plastic Dome Assembly
- 10 61200700 Gasket
- 11 10006600 Nylon Disc
- 12 10006400 Dome Pin
- n/s 63200124 Lower O-Ring (2-153)
- n/s 62500121 Pan Head Screw – 10-32 x 1/2" for mounting valve to VML

## VML Tie Rod Assembly

- 1A 61920700 Knob
- 2A 61600200 White Nylon Washer
- 3A 20047400 Tie Rod

## VML APL Valve Assembly

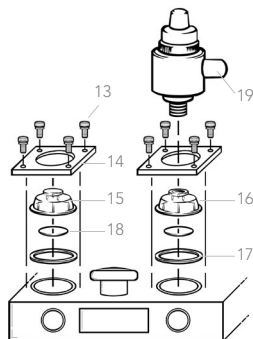
- 4A 002-1702-00 APL Valve
- 5A 63200145 O-Ring
- 6A 20113500 APL Valve Adapter



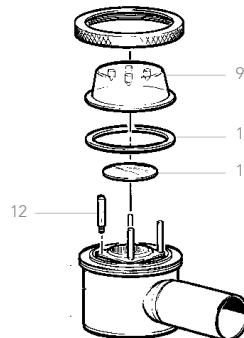
VMS®/VMS® Plus  
Inhalation/Exhalation Valve

### NOTE:

Part number 63200145 is included with APL Valve and Air Intake Valve but can be ordered separately.

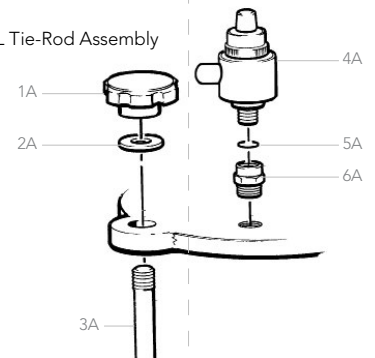


VME2®/VME® Tabletop  
Inhalation/Exhalation Valve

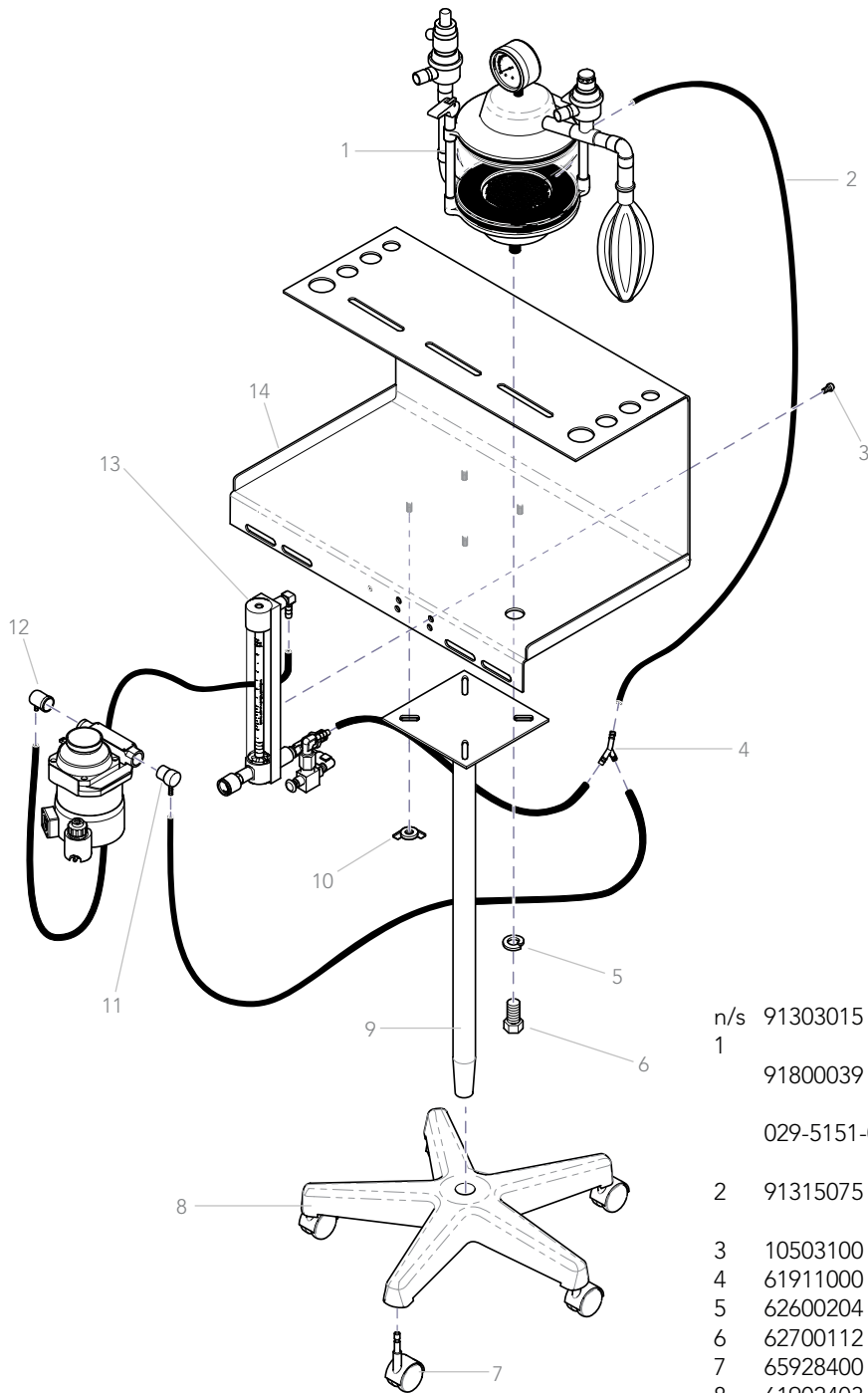


VML Inhalation/Exhalation Valve

## VML Tie-Rod Assembly



# Matrx VMS® Plus Small Animal Anesthesia Machine



n/s	91303015	Maintenance Kit for VMS®, VMS® Plus
1	91800039	VMS® Absorber Assembly
		a) VMS® Plus units with a "V" serial number prefix
	029-5151-02	b) VMS® Plus units without a "V" serial number prefix
2	91315075	Black Neoprene Rubber Tubing, 1/4" ID (specify length in inches when ordering)
3	10503100	Screw Kit (10-32 x 5/6")
4	61911000	"Y" Connector
5	62600204	Lock Washer
6	62700112	Bolt
7	65928400	Caster
8	61902403	Spider Base, 5-Leg
9	65929300	Column
10	61402002	Wing Nut
11	92305073	FS-2 Outlet Adapter
12	92305072	FS-2A Inlet Adapter
13	91800203	O <sub>2</sub> Flowmeter with Flush Assy.
14	050-8688-00-216	Shelf
n/s	91316042	2 Liter Breathing Bag
n/s	002-1705-00	Breathing Circuit, 22mm Dia.
n/s	91316419	Breathing Circuit, 15mm Dia. w/1 Liter Breathing Bag

# Matrix VMS<sup>®</sup> Small Animal Anesthesia Machine

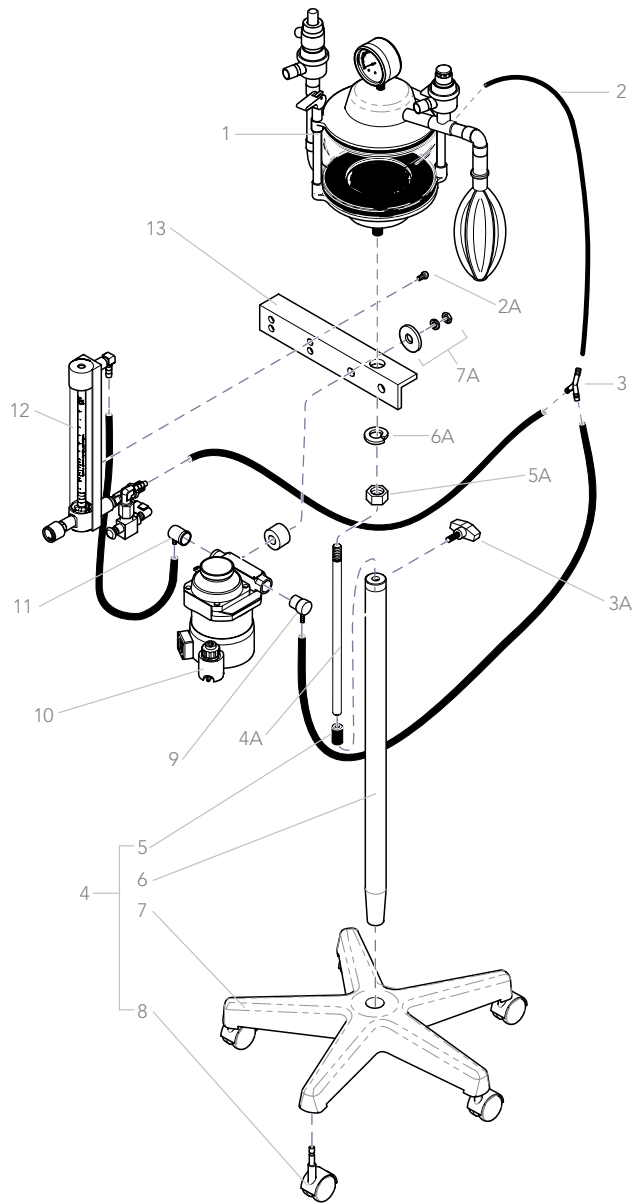
- n/s 91303015 Maintenance Kit for VMS<sup>®</sup>, VMS<sup>®</sup> Plus
- 1 VMS<sup>®</sup> Absorber Assembly
  - 91800039 a) VMS<sup>®</sup> units with a "V" serial number prefix
  - 029-5151-02 b) VMS<sup>®</sup> units without a "V" serial number prefix
- 2 91315075 Black Neoprene Rubber Tubing, 1/4" ID (specify length in inches when ordering)
- 3 61911000 Nylon "Y" Connector
- 4 91806046 VMS<sup>®</sup> 40" Stand Assembly (includes items 5-8, 3A-6A)
- 5 91305280 Post Mount Spacer
- 6 20122401 Column
- 7 61902403 Spider Base, 5 leg
- 8 65928400 3" Caster
- 9 92305073 FS-2 Outlet Adapter
- 10 Vaporizer (Not Included)
- 11 92305072 FS-2A Inlet Adapter
- 12 91800206 O<sub>2</sub> Flowmeter with Flush Assy
- 13 050-8413-00-312 Mounting Bracket

## Detail A (rear view)

- 1A 91525269 Optional Drain Valve Assembly
- 2A 10503200 Screw kit for VMS<sup>®</sup>, VME<sup>®</sup>, VME2<sup>®</sup> and VMR™ #10-32 x 5/16"
- 3A 65936800 Tee Handle-Stand
- 4A 92505017 15" Mounting Stud
- 5A 62400318 Hex Nut 5/8"-18
- 6A 62600204 5/8" Lock Washer
- 7A 002-1844-00 Vaporizer Mounting Kit for VMS<sup>®</sup> and VML
- n/s 91525270 Replacement Pipe Plug Assembly

For VMS<sup>®</sup> inhalation/exhalation valve parts, see page 4.

For VMS<sup>®</sup> oxygen flowmeter assemblies and parts, see pages 2 and 3.



## Absorber Quick Release Conversion Kit

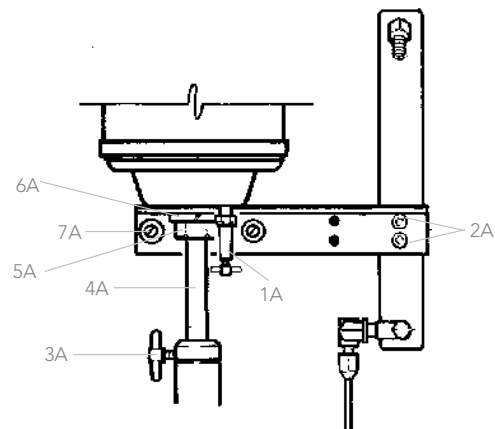
Easily convert a thumb nut version absorber to a convenient quick release absorber. Simple flip lever locking mechanism allows you to easily seal the absorber canister.

- 91800138 Quick Release Conversion Kit

## VMS<sup>®</sup> to VMS<sup>®</sup> Plus Conversion Kit

Update your existing VMS<sup>®</sup> anesthesia machine to a VMS<sup>®</sup> Plus anesthesia machine.

- 91800167 VMS<sup>®</sup> to VMS<sup>®</sup> Plus Conversion Kit

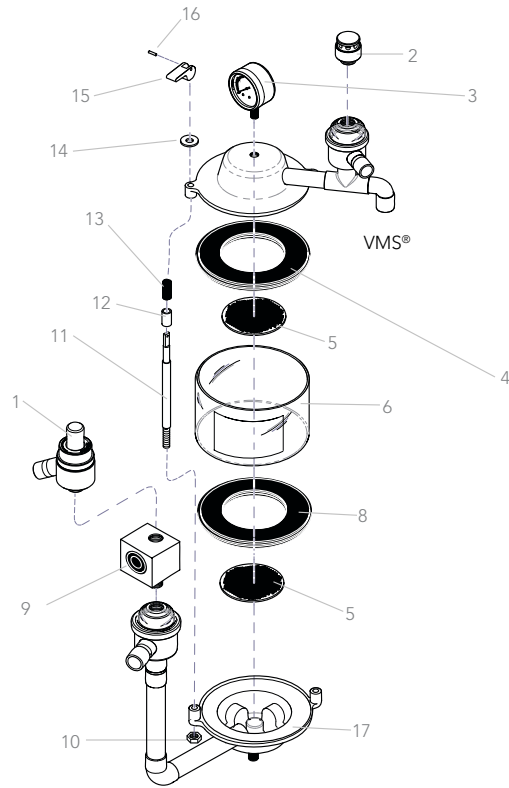


VMS<sup>®</sup> – Detail A Rear View

# Matrix VMS®/VMS® Plus Absorber Assemblies

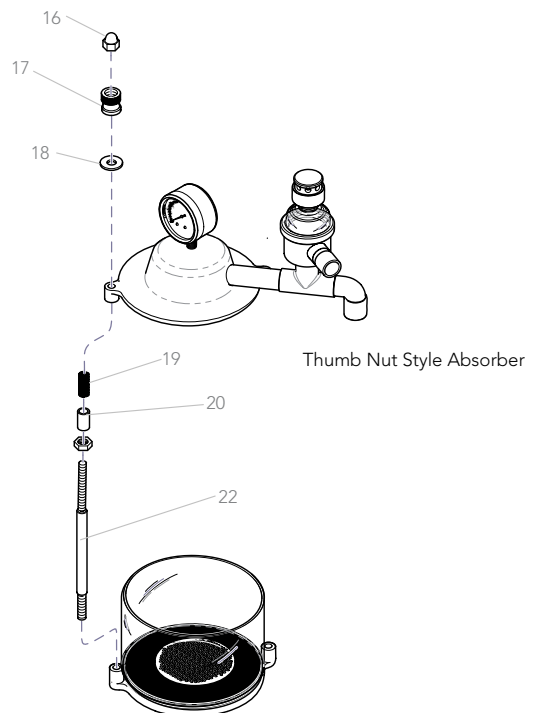
## VMS®/VMS® Plus Absorber

- 91800039 VMS® Absorber Assembly  
(Includes items 1-16)
- 1 002-1702-00 APL Valve
  - 2 92805012 Air Intake Valve
  - 3 91800434 Pressure Gauge
  - n/s 91800435 Pressure Gauge Replacement Cover-Wexler  
(Included with 91800434)
  - n/s 91315276 Pressure Gauge Replacement Cover-Marshall
  - 4 92316066 Upper Gasket
  - 5 61919800 Screen (upper or lower)
  - 6 92300519 Canister Assembly, includes canister,  
lower gasket/screen and fill label
  - 8 92316067 Lower Gasket
  - 9 93805114 Occlusion Valve (VMS® and VMS® Plus only)
  - 10 62400344 Hex Nut
  - 11 10404200 Tie Rod
  - 12 10046500 Sleeve
  - 13 61100400 Compression Spring
  - 14 65943500 Nylon Washer
  - 15 10404000 "Quick Release" Lever
  - 16 65929700 "Quick Release" Lever Pin
  - 17 30172300 Exhalation Valve / Tubing Assembly with  
Lower Housing
  - n/s 92805126 Canister w/Decal & Ring, no Gaskets
  - n/s 91525269 Optional Drain Valve Assembly
  - n/s 91525270 Replacement Pipe Plug Assembly

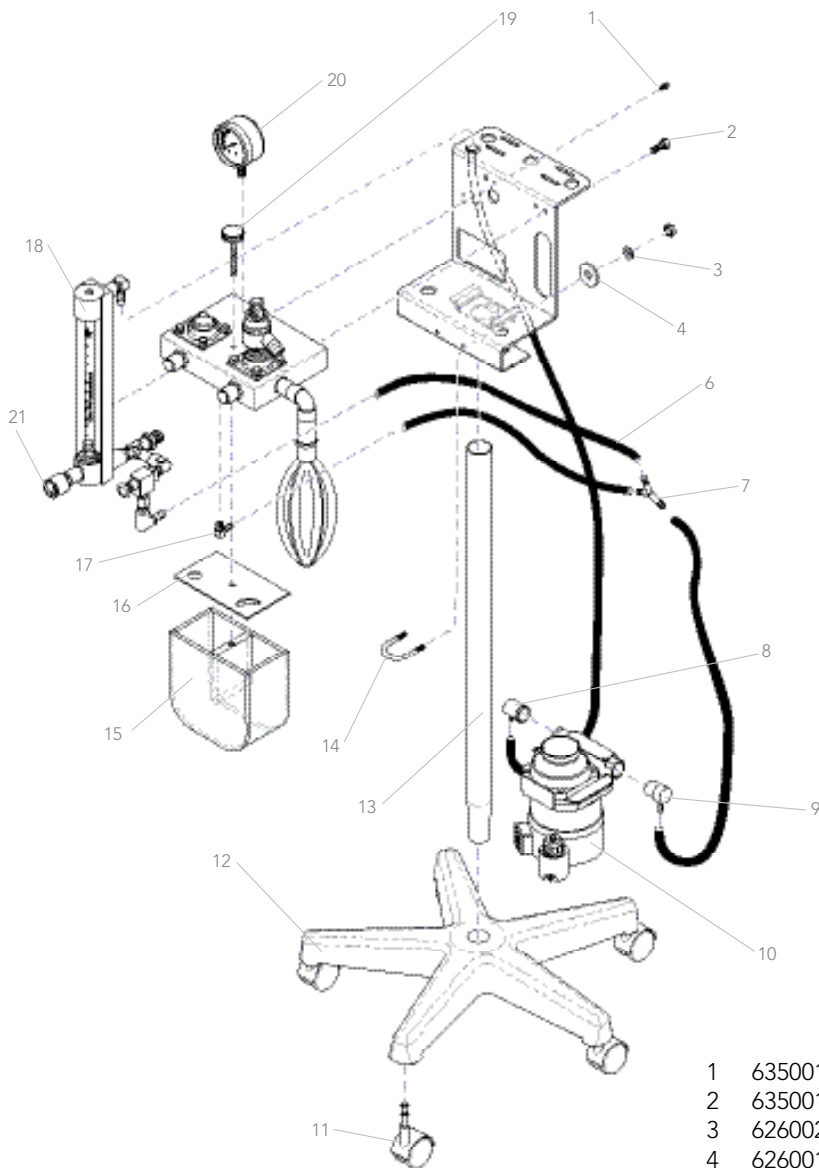


## Thumb Nut Absorber Replacement Parts

- 16 62400104 Acorn Nut 1/4 – 20
- 17 61400500 Thumb Nut
- 18 61201000 White Nylon Washer
- 19 61100400 Compression Spring
- 20 10046500 Sleeve
- 22 10046201 Tie Rod



# Matrix VME2<sup>®</sup> Small Animal Anesthesia Machine



- |    |          |   |
|----|----------|---|
| 1  | 63500182 | Socket Head Bolt (1/4 - 20 x 5/8")                                  |
| 2  | 63500176 | Screw (5/16 - 18 x 3/4")  |
| 3  | 62600207 | Washer (lock)   |
| 4  | 62600120 | Washer (flat 5/16)  |
| 6  | 91315075 | Black Neoprene Rubber Tubing, 1/4" ID                               |
| 7  | 61911000 | "Y" Connector   |
| 8  | 92305072 | FS2A Inlet Adapter  |
| 9  | 92305073 | FS2 Outlet Adapter  |
| 10 |          | Vaporizer (Not Included)  |
| 11 | 65928400 | Caster  |
| 12 | 65928300 | Spider Base, 5-Leg  |
| 13 | 61902507 | Column  |
| 14 | 62700503 | U Clamp   |
| 15 | 91316418 | Absorber Canister w/Decal   |
| 16 | 62956200 | Absorber Canister Gasket  |
| 17 | 62956200 | Elbow (90 Deg Male - 1/4 HB x NPT Plated)                           |
| 18 | 91800203 | O <sub>2</sub> Flowmeter Assembly with Flush                        |
| 19 | 65928200 | Canister Knob   |
| 20 | 91800434 | Pressure Gauge  |
| 21 | 91800655 | Replacement O <sub>2</sub> Needle Valve Assembly with Positive Stop |

**NOTE:**

For VME2<sup>®</sup> inhalation/exhalation valve parts, see page 4.

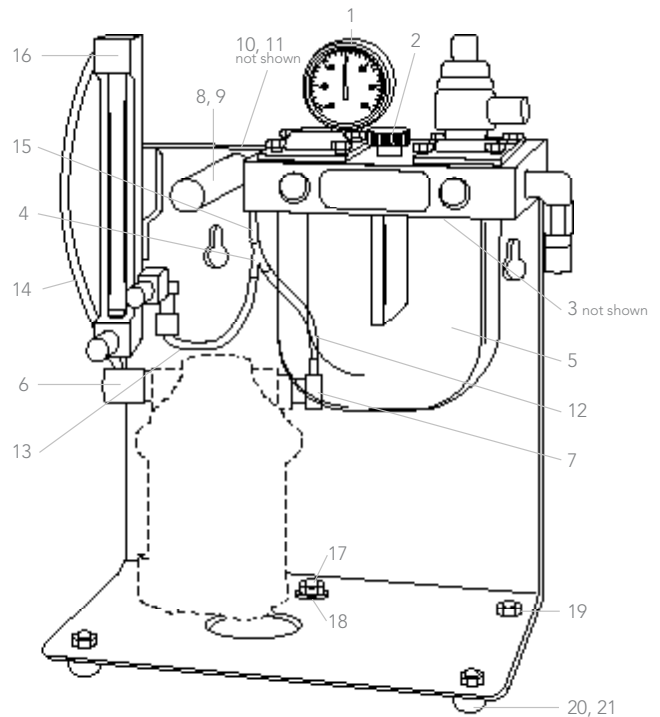


# Matrix VME®/VME2® Tabletop Small Animal Anesthesia Machine

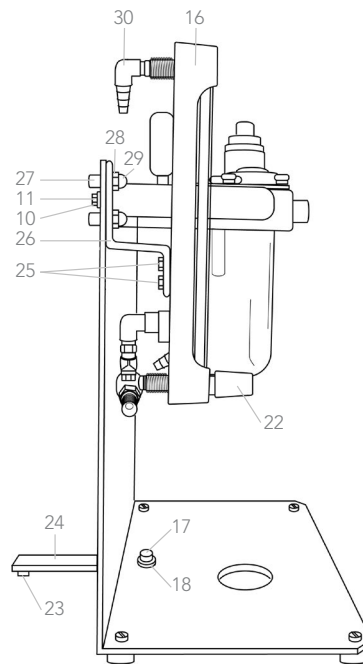
- n/s 91303017 Maintenance Kit for VME®/VME2®-Tabletop
- 1 91800434 Pressure Gauge
- 2 65928200 Canister Knob
- 3 62956200 Absorber Canister Gasket
- 4 61911000 "Y" Connector
- 5 91316418 Absorber Canister w/Decal
- 6 92305072 FS2A Inlet Adapter
- 7 92305073 FS2 Outlet Adapter
- 8 65936200 Handle Grip
- 9 10415300 Handle
- 10 63500176 Socket Head Screw, 5/16 – 18x3/4
- 11 62600207 HLCL Spring Lock Washer, 5/16, Plated
- 12 61930903 Tubing, 3"
- 13 61930909 Tubing, 6"
- 14 61930913 Tubing, 11"
- 15 61930916 Tubing, 5"
- 16 91800199 O<sub>2</sub> Flowmeter Assembly with Flush
- 17 62501705 Socket Head Shoulder Screw, #10-32
- 18 62919404 Curved Spring Washer – 1/4
- 19 62500124 Pan Head Screw, #10-32 x 5/8"
- 20 65936300 Foot
- 21 62400309 Hex Nut, #10-32, Plated
- 22 63300512 O<sub>2</sub> Needle Valve Assembly
- 23 65936900 Bumper
- 24 10424202 Leg, Anodized
- 25 10503200 Screw kit for VMS®, VME®/VME2® and VMRTM #10-32 x 5/16"
- 27 63500114 Socket Head Screw, 1/4-20 x 5/8", Plated
- 28 62600502 Washer – 1/4
- 29 62400118 Acorn Nut, 1/4-20
- 30 62917008 1/4 HB x 1/8 NPT Elbow

**NOTE:**

For tabletop inhalation/exhalation valve parts, see page 4.

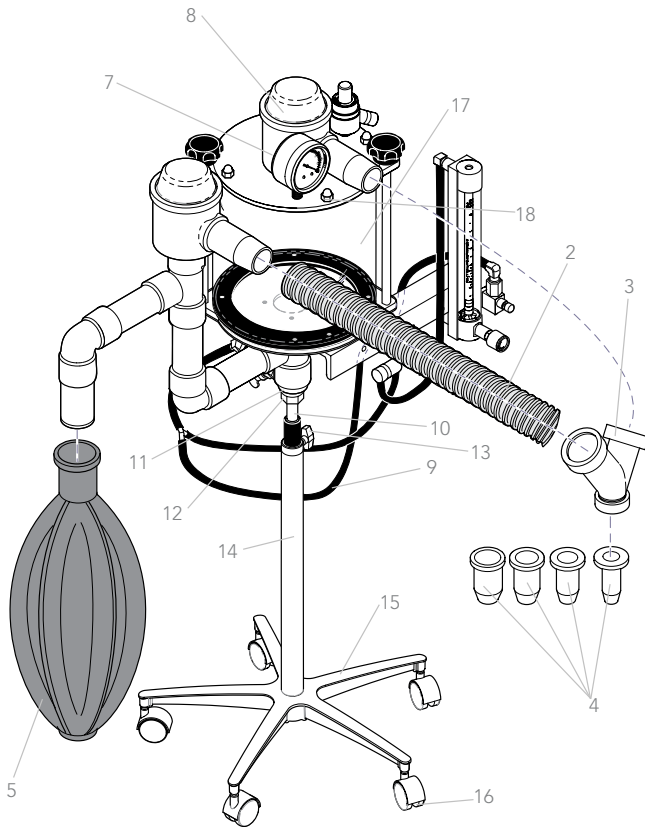


VME®/VME2® – Tabletop Front View



VME®/VME2® – Tabletop Side View

# Midmark VML Large Animal Anesthesia Machine



## VML Absorber Assembly

2	20221100	Corrugated Breathing Tube 64"
3	93815403	VML Inhaler "Y" with Retaining Ring
n/s	10008200	VML Inhaler "Y" Retaining Ring
4	92805421	(a) 22mm Endo Tube Connector
	92805425	(b) 25mm Endo Tube Connector
	92805434	(c) 30mm Endo Tube Connector
	92805435	(d) 40mm Endo Tube Connector
5	93815400	Breathing Bag (30L)
n/s	91305093	FS-44 Spacer Kit (not shown)
	10032500	(a) Plated Spacer (2)
	62600127	(b) Flat Washer (2)
	62503501	(c) Socket Set Screw (2)
	62600901	(d) Lock Washer (2)
	62400343	(e) Hex Nut (2)
7	91800434	Pressure Gauge
8	30028400	Exh. Valve Assembly
9	91315075	Black Neoprene Rubber Tubing, 1/4" ID

## VML Stand Assembly Parts

10	92505017	15" Mounting Stud
11	62600204	Washer 5/8
12	62400318	Hex Nut 5/8
13	65936800	"T" Handle
14	20122401	Column Assembly
15	61902404	Spider Base, 5 Leg
16	65928400	3" Caster
n/s	91305280	Post Spacer
17	93805419	Canister Assembly
18	62400104	Acorn Nut 1/4-20
n/s	92305072	FS2A Inlet Adapter
n/s	61930907	Black Neoprene Rubber Tubing, 1/4" ID x 36"
n/s	62600113	Washer
n/s	61911000	Nylon "Y" Connector

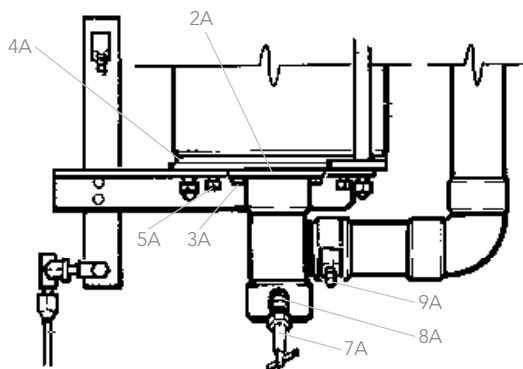
## VML-Detail A – Rear View

2A	63200123	O-Ring (2-143)
3A	62500124	Pan Head Screw No. 10-32 x 5/8
4A	30027600	Gasket
5A	63500117	Socket Head Screw 1/4-20 x 1
7A	61300400	Drain Valve Assembly
8A	62900100	45° Street Elbow
9A	62900800	Hose Barb Connector
n/s	002-1844-00	FS-44 Spacer Kit (includes 2 hex head screws, 4 flat washers, 2 spacers)

n/s = not able to show in illustration.

VML inhalation/exhalation valve parts on page 4.

VML oxygen flowmeter assemblies and parts on pages 2 and 3.



VML – Detail A Rear View



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Outside the USA call: 1.937.526.3662 or visit our website: [midmark.com](http://midmark.com)

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MKT-00417 3/23