

**2007 AAHA MEETING**

**What's Wrong with This  
Anesthetic Machine**

**Harry Latshaw, MS, RVT, VTS (Anesthesia)**











# Functions of the Anesthetic Machine

- 1) Deliver Oxygen







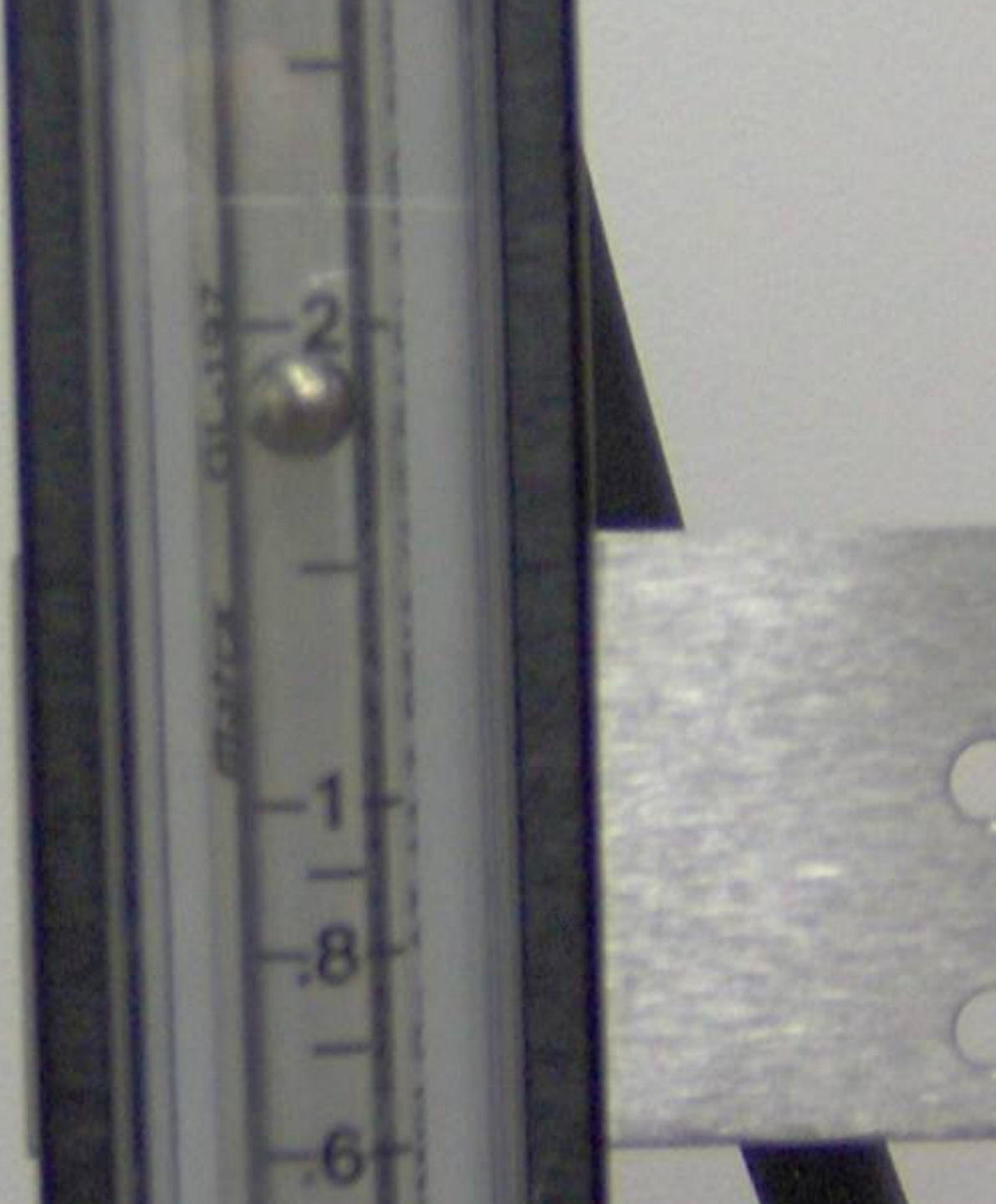












10<sup>m</sup>

20<sup>m</sup>

100

200

100

200





# Functions of the Anesthetic Machine

- 1) Deliver Oxygen
- 2) Deliver Anesthetic

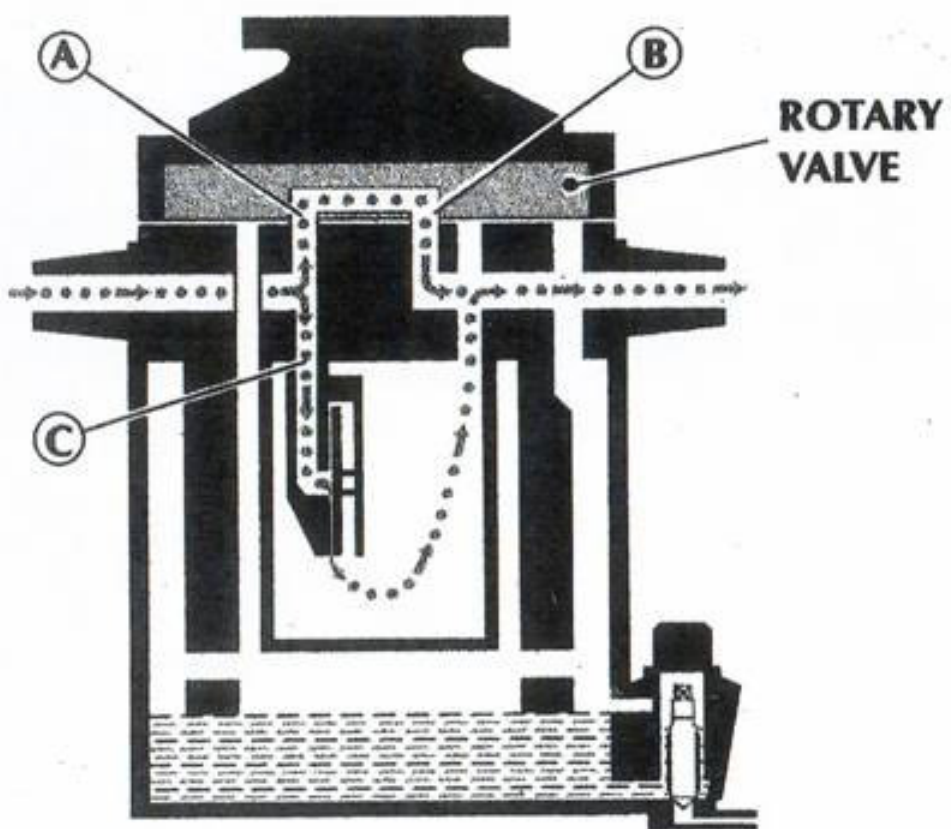
matrix

pressure gauge  
NORPRENE®

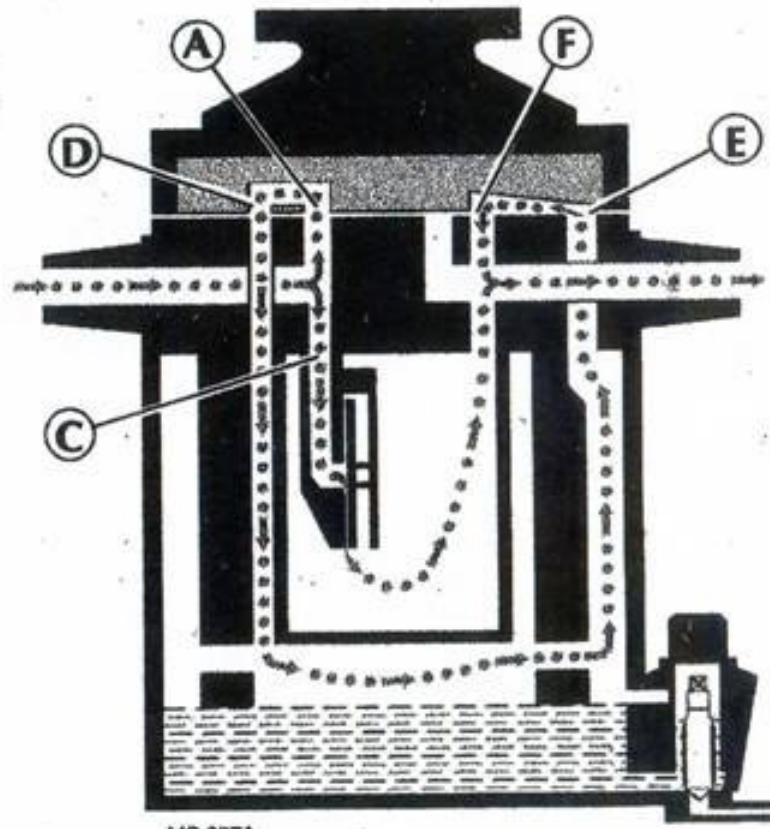
0 OFF

USE ONLY  
**Aerrane**  
EXHAUST

Ataque



**DIAL CONTROL AT "OFF"**



MS 007A

**DIAL CONTROL AT "ON"**

**Fig.2. Schematic - Principle of Operation**



# Volume Per Cent

Flow Rate	Vap Setting	Iso Vapor/min
1 l/m	2%	0.02 l or 20 ml
2 l/m	2%	0.04 l or 40 ml
1 l/m	4%	0.04 l or 40 ml

# Isoflurane Consumption Chart Estimated CC's Per Hour

Vaporizer Setting	Oxygen Flow (liters/min)					
	1.0	2.0	2.5	3.0	4.0	5.0
1.0	3.00	6.00	7.50	9.00	12.00	15.00
1.5	4.50	9.00	11.25	13.50	18.00	22.50
2.0	6.00	12.00	15.00	18.00	24.00	30.00
2.5	7.50	15.00	18.75	22.50	30.00	37.50
3.0	9.00	18.00	22.50	27.00	36.00	45.00

# Sevoflurane Consumption Chart Estimated CC's Per Hour

Vaporizer Setting	Oxygen Flow (liters/min)					
	2.0	3.0	3.5	4.0	5.0	7.0
1.0	6.66	9.99	11.66	13.32	16.65	23.31
1.5	9.99	14.99	17.48	19.98	24.98	34.97
2.0	13.32	19.98	23.31	26.64	33.30	46.62
2.5	16.65	24.98	29.14	33.30	41.63	58.28
3.0	19.98	29.97	34.97	39.96	49.95	69.93



*Depth of anesthesia is determined by assessing the patient, not the vaporizer setting*





Omada  
Isotrac 4

Use Only  
Isotrac 4





25 50 75 OFF

VAPORIZER FOR  
ISOFLURANE  
ONLY  
SERIAL NUMBER: 515220344  
VETERINARY USE ONLY

100 mL  
Isoflurane  
VET CLINICAL  
25 Box 881  
New Hope, NJ 07881

REFILL















FULL  
AT TOP OF DOT

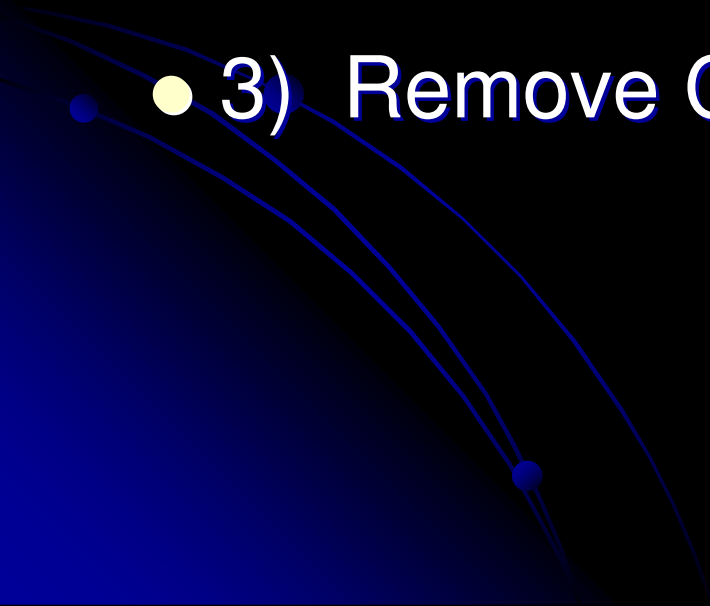


USE ONLY  
**Aerrane**  
(Aquaquest)  
Aquaquest

PRIMARY ONLY

Before use  
read  
operator  
manual

# Functions of the Anesthetic Machine

- 1) Deliver Oxygen
  - 2) Deliver Anesthetic
  - 3) Remove Carbon Dioxide
- 

















RELIEF VALVE  
EXHAUST



NEGATIVE PRESSURE  
RELIEF VALVE

**Matrix**  
MEDICAL INC.  
VMS Anesthesia Machine  
140 Mt. Cleary Drive, Columbus, Ohio 43215

RESPIRATOR  
VALVE

IN  
RESPIRATOR

Matrix

RESPIRATOR



Because the flow of fresh gas into the system is greater than what the patient removes, there must be a way for the excess gas to be removed



# Functions of the Anesthetic Machine

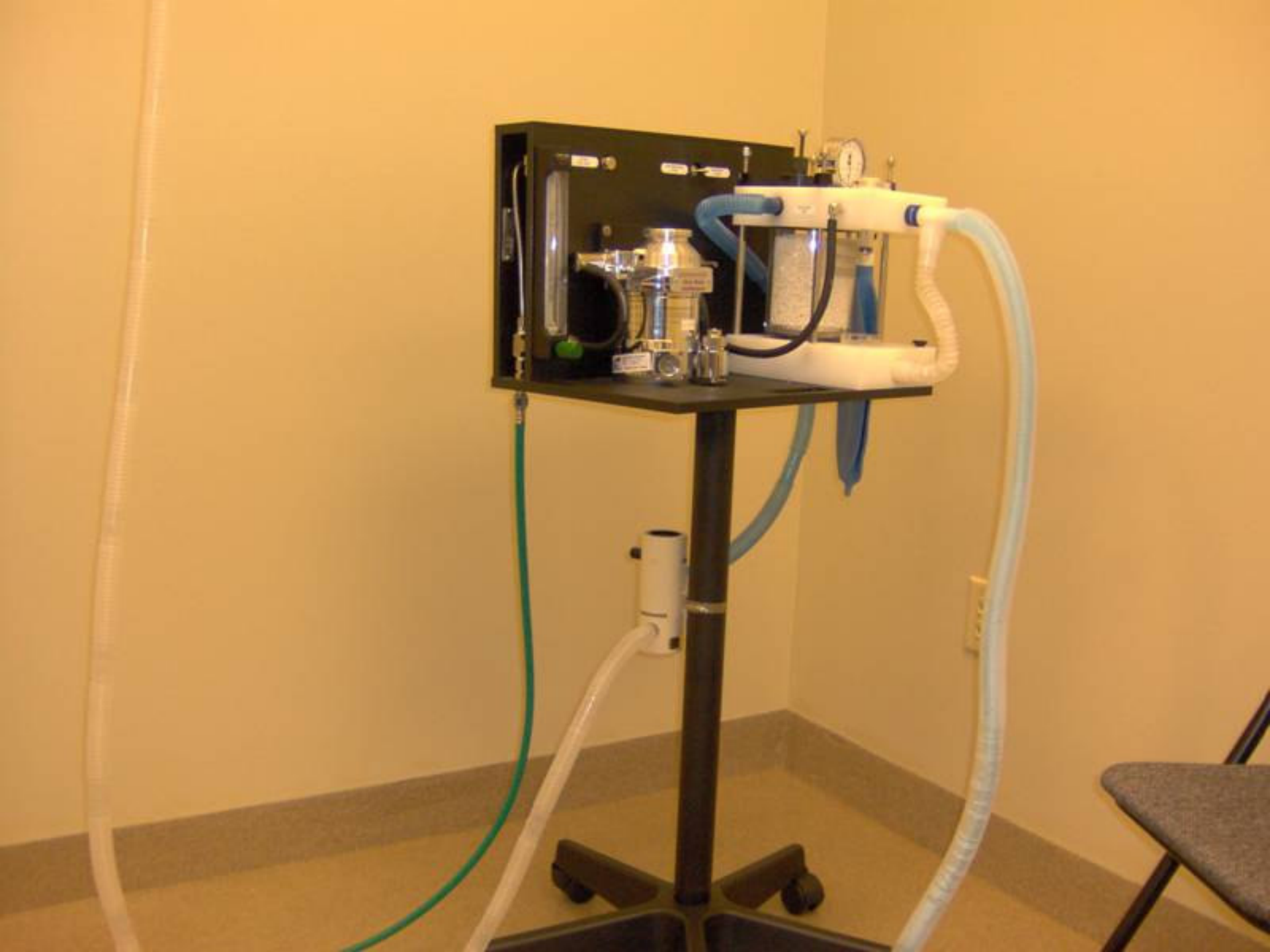
- 1) Deliver Oxygen
- 2) Deliver Anesthetic
- 3) Remove Carbon Dioxide
- 4) Remove Waste Anesthetic Gas (WAG)







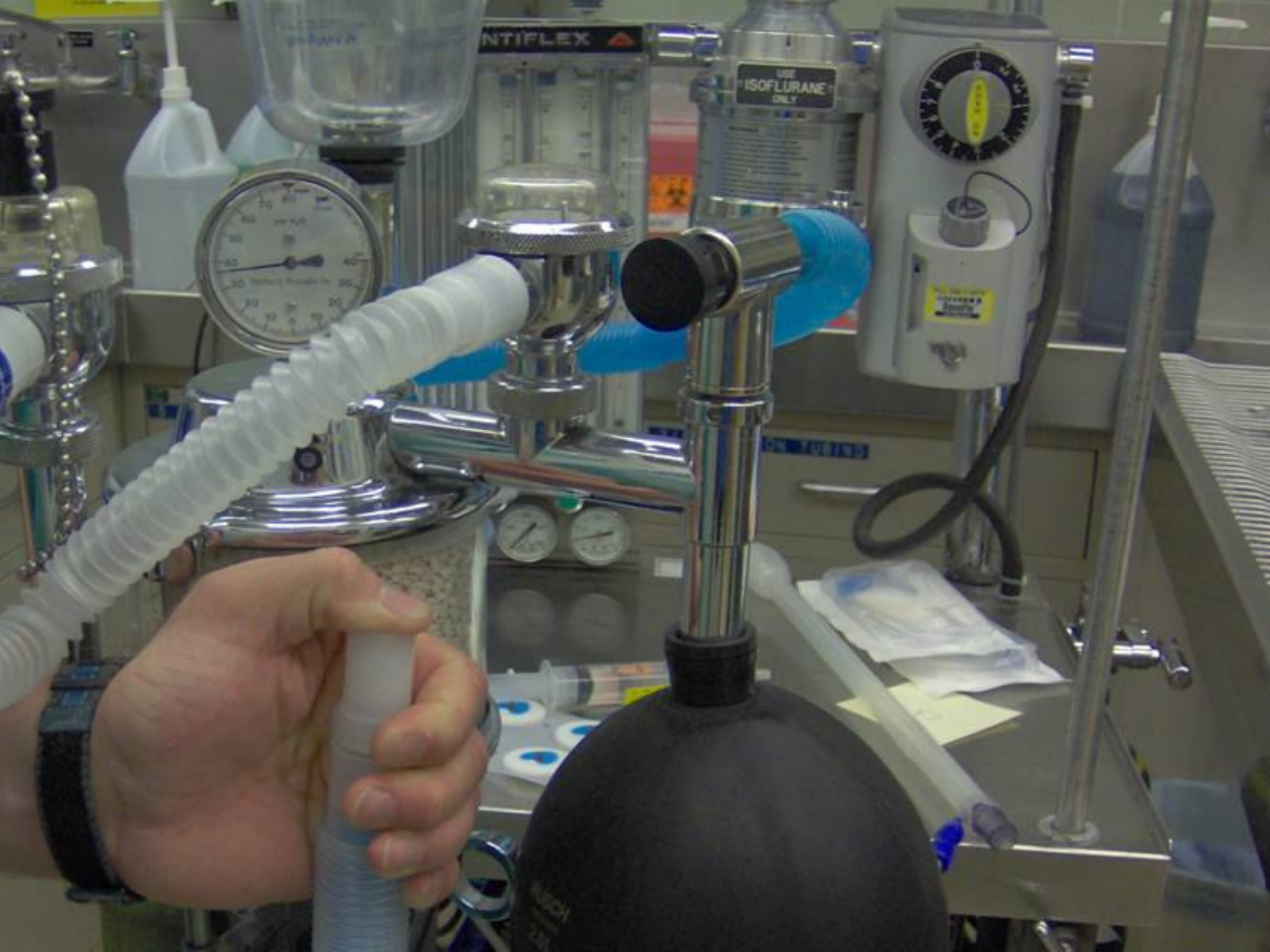
















































VIP 3000  
Isoflurane  
Matrix

VIP 3000 Isoflurane Vaporizer  
Made in England

There is nothing  
wrong with this  
anesthetic  
machine!