



GAS ANESTHESIA SYSTEM FOR RODENTS

To carry out
anesthesia in laboratory rodents



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Orchid's gas anesthesia system for rodent is one of the safest, user friendly and the most economical gas anesthesia system in the market. Our system successfully integrates efficient gas delivery at the same time minimizing excess gas exposure to lab personnel.

Every anesthesia procedure needs following components to conduct an induction phase and a maintenance phase :

- Anesthetic Vaporizer with flow meter.
- Gas Evacuation/ Scavenging system.
(for gas anesthetic removal)
- Induction box and/or mask with breathing circuit.

Features :

- Compact & Modular
- TEC3 vaporizers with Key fill adaptors, minimizing exposure to anesthetic agents.
- Table top or Trolley mounted options available.
- Depth of anesthesia can be easily adjusted.
- Suitable for different animals, by changing masks or induction chamber.
- Suitable for multiple animals using multichannel manifold.
- Option of air pump available, eliminating need of gas tank.



Anesthesia Vaporizer Module :

Comprises of oxygen flow meter, vaporizer, stand, end caps, toggle switch and quick flush switch. Quick flush switch enables immediate delivery of oxygen either to flush the anesthetic agent in the induction chamber to evacuation unit or to recover the animal in emergency. Toggle switch allows convenient and immediate switch over between induction chamber and mask.



A precise and calibrated flow meter of range from 0.1 to 4.0LPM with large scale for precision and ease of reading is mounted on the Anesthesia module.

New Tec 3 Vaporizer :



- We offer new Tec3 anesthetic vaporizer made from lightweight aluminum.
- It has one piece sump for added strength.
- Calibrated specifically for Isoflurane using a Laser Refractometer.
- Compact wick system for increased drug capacity.
- Safety lock to prevent accidental turn-on of dial.
- These vaporizers are designed to be unaffected by duration of user, temperature and flow rate to give accurate level of agent concentrations.
- When used with the I.P.P.V. the variation in outputs is negligible.
- 150ml of drug capacity.
- They provide accurate delivery of anesthetic agent in following range : from 0.5%-5% in 0.5% increments.

Euthanasia Anesthesia Vaporizer Module :

Comprises of oxygen and carbon dioxide flow meter, vaporizer, stand, end caps, switch, etc. Useful for carrying out euthanasia & anesthesia on small rodents

Product	Product Code	Accessories included
Anesthesia Vaporizer Module	AVM-01	Stand, vaporizer, oxygen flow meter, end caps, quick flush switch, vaporizer mounting gaskets, screws, silicon tube.
Euthanasia Anesthesia Vaporizer Module	AEVM-01	Stand, vaporizer, oxygen flow meter, carbon dioxide flow meter, end caps, quick flush switch, vaporizer mounting gaskets, screws, silicon tube.

Gas Evacuation System :

The scavenging system is designed for the removal of waste gas associated with inhalation anesthesia, safely and actively. It consists of Gas Evacuation Apparatus and Activated Charcoal Canister. The Gas Evacuation System can pull the waste gas through activated charcoal canister so that air can be recirculated into the room.

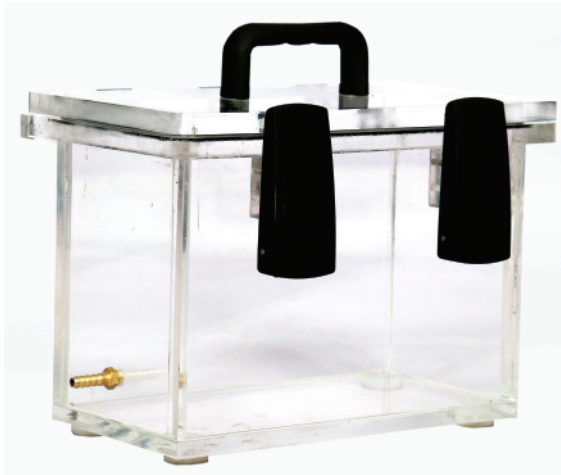


Product	Product Code	Accessories included
Gas Evacuation Apparatus, 110-240V with 1 pc of Gas filter canister	FXA-01	Gas evacuation unit with main cord, 1pc of filter canister.
Optional		
Gas filter canister 830g, large, 1pc	GASF-01	1pc of gas filter canister
Gas filter canister, large, Packet of 6pc	GASF-06	6pcs of gas filter canister

Induction chamber :

Induction chamber makes it possible to anesthetize rodents without stress often associated with handling in connection with anesthesia.

Induction Chamber is constructed of thick, transparent plastic, with all joints securely cemented. The transparent plastic allows the animal to be under constant observation.



Product	Product Code No.
Suitable for mouse/ neonatal rat Inner dimensions : 4.72"x3.93"x4.72" (12x10x12cm)	EUTH-1A
Suitable for rat up to 300g, Inner dimensions : 9.05"x4.33"x6.69" (23X11X17cm)	EUTH-1B
Suitable for rat up to 500g/ guinea pig up to 350g, inner dimensions : 11"x5.75"x7" (27.94x14.60x17.78)	EUTH-2A
Suitable for Large rat (above 500g)/ Guinea pig (above 350g), inner dimension : 16"x8"x8" (40.64x20.32x20.32)	EUTH-3

Nose Cone Mask :

Mask provides predictable delivery of anesthesia for small laboratory animals. The stream lined flow eliminates any dead space in the mask, avoiding the need for tight fitting face masks.

Orchid's nose cone mask is made from transparent material with openings from soft black silicone material making it comfortable for animal. Each mask has separate inlet for delivery of anesthetic agent and outlet for connecting to Gas Evacuation System so that exposure of anesthetic agent to the researchers will be avoided. Single channel stand is also available for holding the mask of any of the size and to adjust the position of the mask as needed.

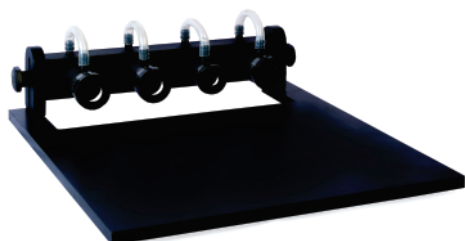


Product	Product Code No.
Size 1 : Nose cone mask for mouse, Diameter 25mm x length 65mm, exposure area 5mm, suitable for animal of weight range 15-40g	NCON-A
Size 2 : Nose cone mask for mouse/ neonatal rat, Diameter 25mm x length 55mm, exposure area 10mm, suitable for animal of weight range 40-100g	NCON-B
Size 3: Nose cone mask for rat, Diameter 30mm x length 55mm, exposure area 17mm, suitable for animal of weight range 100-300g	NCON-C
Size 4: Nose cone mask for large rat/ Guinea pig, Diameter 40mm x length 55mm, exposure area 25mm, suitable for animal of weight range 300-450g.	NCON-D
Single Channel stand- suitable for one mouse/ rat mask	NCT-1

Manifold for multiple masks :

The manifold allows the connection of up to 5 nose masks of mice or up to 3 nose cone masks of rats respectively to one anesthesia system for simultaneous operation.

Each manifold has provision to make connection to Gas Evacuation System so that waste gas from all masks can be evacuated.



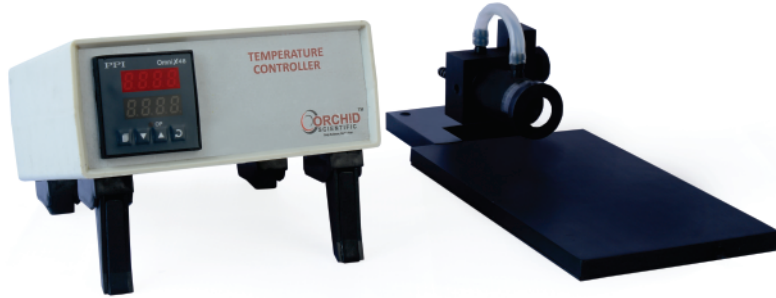
Product	Product Code No.
Five Channel Manifold - suitable for 5 mouse masks/ 3 rat masks	NCT-5

Non-breathing circuits :

Ayre's T-piece breathing circuit (Mapleson E) offer advantage of low dead space as well as low resistance to breathing, which is very important when we consider anesthesia in small animals.

Heating Blanket :

The heating pad helps to keep rodent warm during anesthesia and thus prevent hypothermia. Plate is made of Aluminium for uniform heat distribution and temperature can be controlled using a digital temperature controller. The temperature probe of the system can be used either to check plate temperature or to check animal body/ rectal temperature.



Product	Product Code No.
Heating blanket with digital temperature controller, suitable for one mouse/ rat	HBLD-01

Oxygen Source :

An oxygen source is needed for anesthesia procedure and usually it's an oxygen tank. Orchid has provided option to client eliminating need of Oxygen tank.

a. Air pump : Low noise air pump with stable, safe and reliable performance.



Compact design and easy to transfer
Flow rate : 2.5 to 4.0LPM
Voltage : 110/220V AC

Stainless Steel Trolley for Anesthesia System :

Orchid has designed special trolleys for carrying Veterinary anesthesia system with provision to mount main console and also foldable shelves for placing Induction Chambers, Nose Cone Mask and Gas Evacuation Apparatus. Trolley also has provision to hold 10ltr capacity oxygen cylinder. Trolley has four castor wheels out of which two are with brake and two are without brake.

Product	Product Code No.
Stainless Steel Trolley with castor wheels for above system with provision to hold oxygen cylinder of 10ltr capacity and 3 foldable shelves, Suitable for Anesthesia System	TR-AVM
Stainless Steel Trolley with castor wheels for above system with provision to hold oxygen cylinder of 10ltr capacity and 4 foldable shelves, Suitable for Anesthesia and Euthanasia System	TR-AEVM

* Note : Orchid's continuing product development makes specifications subject to change without prior notification.

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