# Gas Anesthesia System For Rodents

# TO CARRY OUT ANESTHESIA IN LABORATORY RODENTS

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.



One Of The Safest, User Friendly And The Most Economical Gas Anesthesia System



# **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
- Options of oxygen concentrator or air pump available eliminating need of gas tank

#### **ANESTHESIA VAPORIZER MODULE:**

Each module comprises of oxygen flow meter, Isoflurane vaporizer, stand, end caps, toggle switch, key fill adaptor, and quick flush switch for oxygen. Orchid uses Key fill type vaporizers only in the system which ensures protection to the user during the filling and emptying of the vaporizer.

The quick flush switch enables immediate delivery of oxygen either to flush the anesthetic agent in the induction chamber to the evacuation unit or to recover the animal in an emergency. A toggle switch allows a convenient and immediate switchover between the induction chamber and mask.





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





# **NEW TEC 3 VAPORIZER:**

- We offer a new Tec 3 key fill anesthetic vaporizer made from lightweight aluminum.
- It has a piece pump 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 the dial.
- When used with the I.P.P.V. the variation in outputs is negligible.
- 150ml of drug capacity
- They provide accurate delivery of anesthetic agents in the following range: from 0.5%-5% in 0.5% increments.

# **ORDERING INFORMATION:**

Product	Product Code	Accessories included/ mounted
Anesthesia Vaporizer Module	AVM-01	<ul> <li>Stand</li> <li>Tec 3 isoflurane vaporizer</li> <li>Oxygen flowmeter</li> <li>End caps</li> <li>Quick flush switch</li> <li>Vaporizer mounting gaskets</li> <li>Screws</li> <li>Silicon tube</li> <li>Key fill adaptor</li> </ul>



# **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	<ul><li>Gas evacuation unit with main cord</li><li>1pc of filter canister.</li></ul>
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
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
Size 1: Nose cone mask for mouse, Diameter 25mm x length 66mm, 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 56mm, exposure area 10mm, suitable for animal of weight range 40-100g	NCON-B
Size 3: Nose cone mask for rat, Diameter 30mm x length 56mm, 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 56mm, exposure area 24mm, suitable for animal of weight range 300-450g	NCON-D
Size 5: Mask for Rabbit	NCON-E
Breathing bag and endotracheal tube for Rabbit mask	RAB-AC-01
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
Five Channel Manifold - suitable for 5 mouse masks/ 3 rat masks	NCT-5

#### **HEATING BLANKET:**

The heating pad helps to keep rodent warm during anesthesia and thus prevent hypothermia. Plate is made of Aluminum for uniform heat distribution and temperature can be controlled using a digital temperature controller



Product	Product Code
Heating blanket with digital temperature controller, suitable for one mouse/ rat Size: Controller Unit (LXWXH mm): 153 X 160 X 80 mm Heating Blanket (LXWXH mm): 220 X 120 X 19 mm	HBLD-01

#### **OXYGEN SOURCE:**

An oxygen source is needed for anesthesia procedure and usually it's an oxygen tank. Orchid has provided options 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 held 10ltr capacity oxygen cylinder. Trolley has four castor wheels out which two are with brake and two are without brake.



Product	Product Code
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



# **ANESTHESIA AND EUTHANASIA SYSTEM:**

Orchid has designed an Anesthesia and Euthanasia System which is suitable to carry out anesthesia as well as euthanasia procedures on small rodents. Each system includes a trolley mounted with Tec 3 Isoflurane vaporizer, Oxygen and Carbon dioxide flowmeter. The control panel is mounted with different options like quick flush switch for flushing oxygen, induction chamber or nose cone mask selection switch, active or passive evacuation switch and euthanasia supply and exhaust ports. This trolley is also fitted with three electrical sockets with switches for connecting the evacuation system, heating blanket or air pump. Trolley is fitted with four castor wheels for ease of movements.

# **FEATURES:**

- · Made of stainless steel 304 material
- Single system for anesthesia and euthanasia operation
- Fitted with all control panel switches, inlet and outlet ports at single place giving ease of operation
- Fitted with electrical sockets for connecting evacuation system, air pump or heating blanket.
- Fitted with drawer at bottom for keeping accessories
- Provision to fix cylinders on the same trolley





Product	Product Code	Accessories included/ mounted	Optional
Anesthesia Euthanasia System	AES Ultra 01	Stainless steel trolley, Tec 3 isoflurane vaporizer, oxygen flowmeter, carbon dioxide flow meter, end caps, quick flush switch, key fill adaptor. Three electrical sockets with switches and stainless steel drawer are mounted on the trolley. Fitted with castor wheels for ease of movement	<ul> <li>Evacuation apparatus with canisters</li> <li>Nose cone mask of choice</li> <li>Single or five channel manifold</li> <li>Induction chamber or euthanasia chamber of choice</li> <li>Heating blanket</li> <li>Air pump / O2 / CO2 cylinders</li> </ul>



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