

# Rat and Mouse Non-Rebreathing Circuit User Instructions

RES500, RES600

The Rat and Mouse Non-Rebreathing Circuit is specially designed to both deliver fresh anesthetic gas to rats and mice, and effectively remove waste anesthetic gases- all in one, complete system. When used properly, the nosecone diaphragm minimizes waste anesthetic gas leaks into the environment- even when using a passive waste anesthetic gas removal system.



- A.** Fresh anesthetic gas delivery tube with 15mm male adaptor. Connects to common outlet of the vaporizer on the anesthesia machine.
- B.** Coaxial fresh anesthetic gas delivery body.
- C.** Waste anesthetic gas outlet for 19mm or 22mm EVAC tubing.
- D.** Nosecone
- E.** Replaceable nosecone diaphragm.
- F.** Diaphragm capture ring.

## Set-Up:

1. Connect the fresh anesthetic gas delivery tube to the common outlet of the vaporizer or Diverter System utilizing the 15mm male adaptor (A).
2. Secure the latex diaphragm (E) onto the nosecone (D) utilizing the included capture ring(F).
  - a. Stretch the diaphragm material over the end of the nosecone, holding it in place with the thumb and forefinger of one hand and reinstall the ring over the diaphragm material.
  - b. The ring will only fit over the latex material when oriented properly. If the O-ring does not slide on easily, or fit snug, remove the ring, flip it over and replace over the latex material.
  - c. The diaphragm is made of 12 mil thickness latex sheet material. This material is thicker and more resistant to tearing and oxidation than surgery glove material (2-3 mil thickness). **We do not recommend that you replace the diaphragm with surgery glove material.** Surgery gloves are potentially permeable to anesthetic gases allowing the waste gases to escape into the environment. 10 packs of replacement diaphragms are available (P/N RES501).
3. Cut an appropriate sized hole in diaphragm.
  - a. The diaphragm can be cut appropriately using a pair of delicate sharp/sharp scissors. It is vital to the proper operation of the Rodent Nosecone that the diaphragm be cut with the proper sized orifice--appropriate for the size of the subject and the position of the subject. The circular hole in the diaphragm needs to be small enough such that the diaphragm forms a tight seal around the subject's muzzle, but large enough so that it is not too tight and occludes the nares preventing proper spontaneous breathing.  
**Do not cut a cross (+) or an "X" in the diaphragm for the subject's nose because diaphragm will not seal properly around the subject's muzzle and anesthetic gases will escape into work space.**
4. Fit the nosecone into the coaxial fresh gas delivery body (B).
5. Connect either 19mm or 22mm EVAC tubing to the waste gas outlet of the breathing circuit (C).
6. Connect the opposite end of the EVAC tubing to your waste gas management system.

## Use:

1. Make sure waste anesthetic gas management system is in place and functioning.
2. Place anesthetized subject's muzzle into the nosecone/diaphragm, making sure the diaphragm seals around the subject's muzzle.
3. Turn on the fresh anesthetic gas flow to the circuit.
  - a. Recommended fresh gas flow rate is 0.5-1.5 LPM at 1-2% isoflurane concentration.
4. When finished with procedure, turn vaporizer and fresh gas flow to zero, and remove subject from the nosecone/diaphragm to recovery area.