



Molecular Imaging Products Company

A Division of Summit Anesthesia Support
Anesthesia Technologies

Universal Control Arm AS-01-0517



FEATURES:

1. Used with BAIN NRB System – any length.
2. Reservoir Bag can be changed to match size of animal's tidal volume.
3. Independent “fine tune” Pressure Relief Valve which can be closed down (partially) to manually ventilate an animal.
4. Independent Manometer calibrated in CmH₂O (just like the rebreathing system).
Safety: Using the manometer, the operator can see the pressure in the animals airway.
5. Can be used to safely mechanically ventilate an animal either by a technician or mechanical ventilator.
6. Concentration of anesthetic delivered can be changed almost instantaneously.
7. Can be used in special applications to safely anesthetize animals from 20gm. To 250 lb. Especially useful for MRI applications.

PRINCIPAL OF OPERATION:

1. Fresh gas from the O₂ flowmeter flows at a relatively high rate in relation to the animal's minute volume (tidal volume X breaths per minute).
2. Fresh gas flows directly to the end of the Bain Circuit that is attached to the animal's breathing apparatus either via endotracheal tube or face mask / nose cone.
3. During the apneic phase (the animal is not inhaling nor exhaling), fresh gas continues to flow at a relatively high rate. The fresh gas does not go into the animal's lungs, but flows down the exhaust side of the coaxial system. This action flushes the last exhaled breath containing CO₂ down the exhaust side of the system. If the flowrate is sufficient, the area of the exhaust tube proximal to the animal is filled with fresh gas.
4. With the next inspiratory effort, the animal receives fresh gas from the fresh gas supply, and the volume of the exhaust side of the system which is now fresh gas. If properly configured, the exhaust gas containing CO₂ does not reach the animal's airways.
5. The O₂ flow rate is the same using this system as your current NRB system. Approximately 1.5 LPM for animals 15 lbs. and under.
6. Using a long Bain NRB system (72"), it is possible to safely anesthetize an animal 250 lbs. The limiting factor is the size of the exhaust side of the Bain and the flowrate for the oxygen flowmeter. In this case, the flowrate would need to be approximately 7 LPM .

Please note: The Bain NRB can be used with either a face mask or endotracheal tube.

CAUTION: DO NOT USE O₂ FLUSH THROUGH NRB SYSTEM

DOWNSIDE TO BAIN (OR ANY OTHER STYLE OF NRB):

1. Uses more oxygen and anesthetic than Rebreathing System.
2. Does not conserve on heat like Rebreathing System.
3. Does not conserve on moisture like Rebreathing System.
4. May require humidification of gas for procedures over 2 hours.