

AERO/VENT™ "Jr"



*Step by Step Instructions
For Use*



Aero/Vent Jr. Radioaerosol Delivery
System #AV-100H



BETTER DELIVERY = BETTER RESULTS



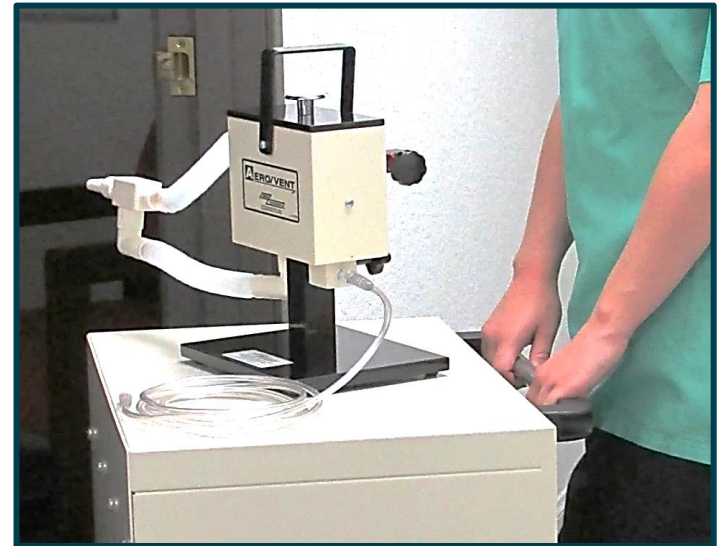
Aero/Vent™ Jr. Overview

Aero/Vent™ Jr. features Medi/Nuclear's proprietary Neb 3A+ fine particle nebulizer to deliver fine and ultra-fine particles (MMAD 0.28 μ) to a patient.

These particles are considerably smaller than those delivered by competitive systems, resulting in excellent image quality.

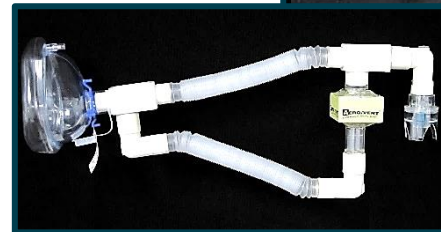
Aero/Vent™ Jr. uses unidirectional airflow to avoid particle growth, improve speed of delivery, and allow ^{99m}Tc -DTPA or an equivalent alternative to be immediately available upon inhalation.

The combination of very fine particles, unidirectional airflow and tidal breathing, rather than a breath hold, supports shallow breathers and provides superior image quality with SPECT and Planar.



Potential Uses for Aero/Vent™ Jr. & Related Products

- Ventilation Studies
 - SPECT
 - Planar
- Theranostics
 - Ventilation Lung Imaging
 - Radioaerosol Lung Therapeutics
- Radiopharmaceuticals
 - Radioaerosol Lung Therapeutics
 - Radioaerosol Systemic Therapeutics
- Pulmonary Aerosol Therapeutics
 - Targeted Delivery for Deep Lung/Systemic Applications
 - Targeted Delivery for Upper/Mid Lung Applications

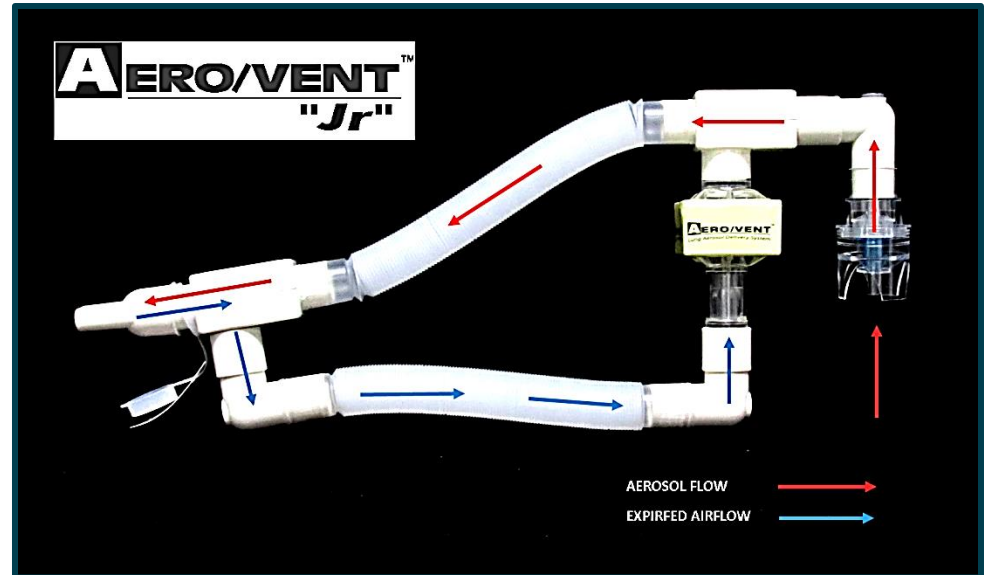


Aero/Vent™ Jr. Airflow

As a patient inhales, medicated aerosol from the nebulizer moves through the upper tube, and into the mouthpiece.

When the patient exhales, the exhalation is directed through the lower tube and into a proprietary HEPA filter. At the same time, medicated aerosol continues to flow through the nebulizer, filling the upper tube.

When the next breath is taken, the patient immediately inhales the medicated aerosol that was produced and stored during exhalation.



Aero/Vent™ Jr. Assembly

- Radioaerosol kits go through an extensive inspection process prior to packing and shipping. To ensure they have arrived safely, remove the following components from the bag and inspect.
 - Aero/Vent™ Jr. assembly (kit body with nebulizer, HEPA filter and breathing tubes).
 - Small bag containing scuba style Safety Shield™ Mouthpiece, nose clip, and “Caution Radioactive Material” label.

NOTE: Retain the resealable bag for kit disposal, after the study.

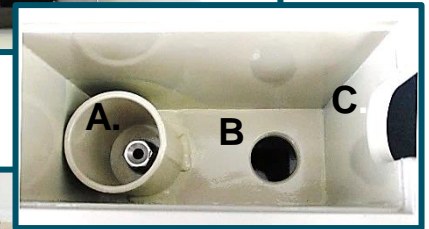
CAUTION: Standard Aero/Vent™ Jr. convenience kits **may not** be used for patients on ventilator.



- Remove the shield's lid.
 - A. Holding the kit level, gently lower it into the shield, placing the tip of the nebulizer into the silver pressure port. Using both hands, press down on top of the kit to secure the nebulizer.

CAUTION: Excessive force or aggressively wiggling the kit may damage the nebulizer tip, preventing the proper seating of the kit and adequate mist production.

- B. The HEPA filter will extend through the exhaust opening in the bottom of the shield.
- C. The upper/attached tube will rest on the opening in the front of the shield.



- While holding down the top of the kit body, attach the elbow on the free end of the lower breathing tube to the HEPA filter.

NOTE: The HEPA filter can be reached through the exhaust opening in the underside of the Aero/Vent™ Jr. shield.

- Recheck the seating of the kit by pressing down gently on top of the kit.

NOTE: A properly seated kit will sit below the lid line.

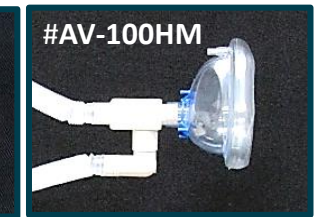
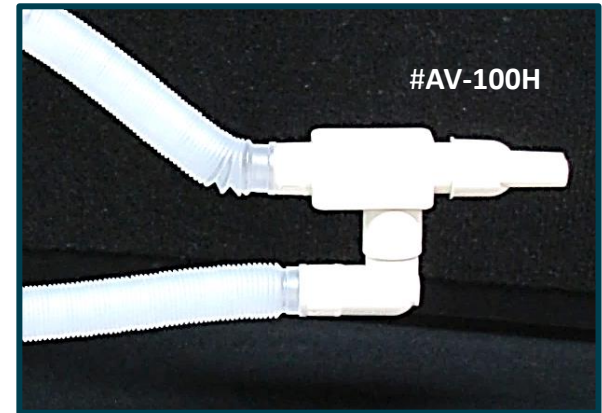


- Attach the mouthpiece to the patient port. If desired, convenience kits with scuba style mouthpiece may be ordered using model #AV-100HS. Kits with face mask may be ordered using model #AV-100HM.

NOTE: Air cushioned face masks may be ordered separately using model #MN5045. Scuba style Safety Shield™ Mouthpiece with Nose Clip may also be ordered separately, using model #MNMP500-NC.

- Connect the oxygen tube to the oxygen inlet on the front of the shield.

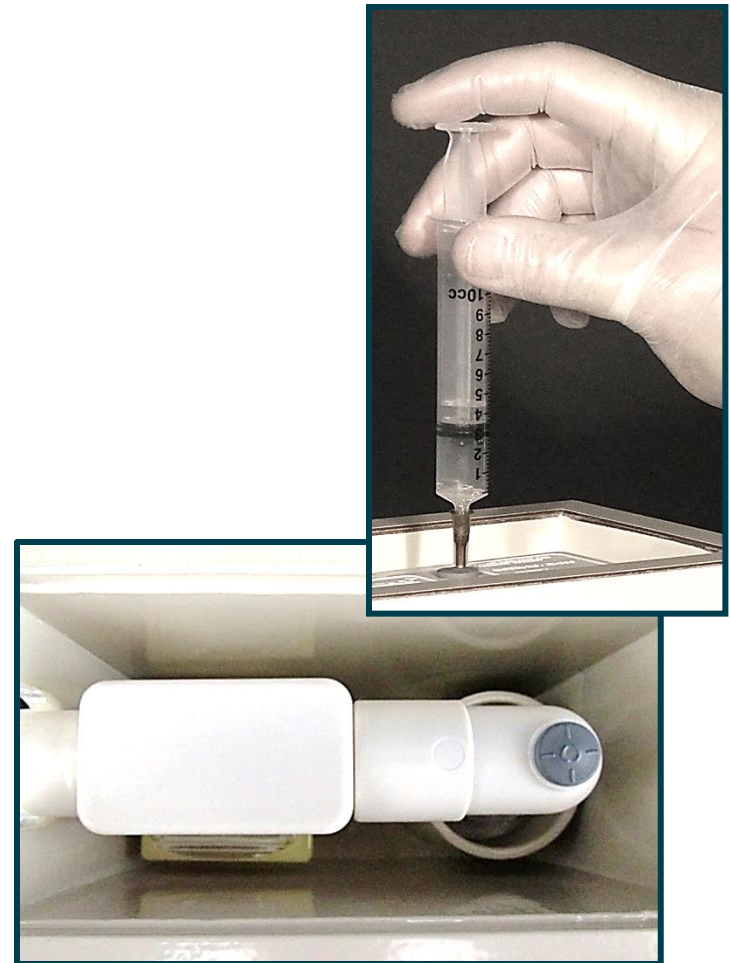
NOTE: Use only the provided oxygen tube (#IV-605). Other oxygen tubes may be slightly over-sized and could cause oxygen leakage.



- Prepare ^{99m}Tc -DTPA , or an equivalent alternative, in accordance with the manufacturer's instructions.
- Using a shielded syringe and needle, held in an upright position, inject **40 mCi/2 mL** of ^{99m}Tc -DTPA solution through the center of the gray stopper, on top of the kit body.

NOTE: Any more than 2mL of liquid will increase dosing time. Any less than 2mL of liquid may not create a steady mist.

- Place the lid on the shield.



Aero/Vent™ Jr. Operation

- Place the scuba style Safety Shield™ Mouthpiece in the patient's mouth, and place nose clip on patient's nose to prevent leakage.

NOTE: To minimize leakage and risk of contamination, be sure nose clip is positioned properly.

- Prior to turning on oxygen/air, instruct the patient to take several test breaths from the system.

NOTE: If patient is unable to use a mouthpiece or nose clip, or is believed to be infectious, a face mask may be used.



To properly place a face mask, place it on the bridge of a patient's nose and carefully roll it downward, making sure it seals securely around the edges. If necessary, a face mask harness may be used to keep the mask in place.

NOTE: When using a face mask, encourage the patient to breathe through the mouth.

Nose breathing will slow the buildup of activity because the hairs in the nose are a very efficient filter and will strip particles from the air. Breathing through the mouth will make the accumulation of activity in the lungs nearly as fast as using a mouthpiece.

NOTE: It's a good practice to wipe the patient's face with a damp cloth following the procedure, as airflow from the nebulizer, combined with a patient's breath, may provide an opportunity for radioactivity to settle on a patient's face.



- Gradually turn on the oxygen/air regulator, adjusting the flow rate to 10-12 liters/minute.

NOTE: There will be a drop in air pressure of approximately 10% when extended oxygen tubing is used. To account for this, increase the flow rate to 12-13liters/minute.

CAUTION: At normal 50 PSI pressure for the oxygen/air supply, a sudden increase of flow from 0 to10 liters/minute may blow the air line off of the shield.

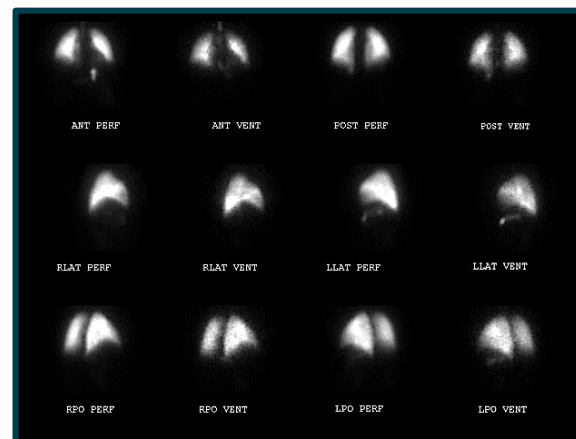
- Instruct the patient to breathe normally until the desired amount of radioactivity is delivered to the lungs. **Dosing time is generally around 3 minutes.**

CAUTION: To prevent possible radiation leakage, be prepared to shut off the oxygen flow immediately if the patient releases the mouthpiece or face mask.



- After inhalation, turn off the oxygen/air and instruct the patient to continue breathing through the mouthpiece, or face mask, for an additional four or five tidal breaths, to clear the system of aerosol.
- Remove the nose clip and the mouthpiece, or the face mask, from the patient.
- Have the patient expel any saliva into a disposable towel and discard the towel into the kit's plastic bag.
- Start the patient imaging procedure as soon as it is convenient. Imaging time should be approximately one minute for 100-150,000 count images.

NOTE: SPECT may be performed with ^{99m}Tc -DTPA or equivalent alternatives such PYP, Sulfur Colloid, and MIBI, with a physician's order.

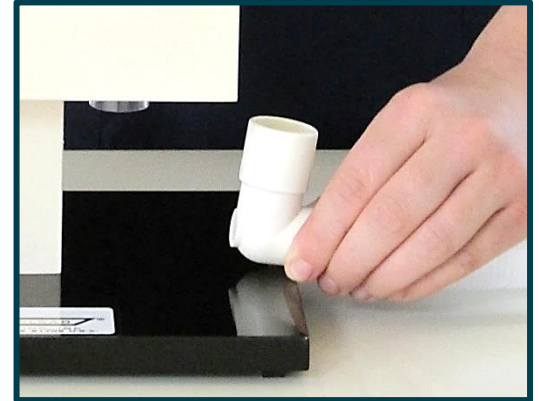


Aero/Vent™ Jr. Disposal

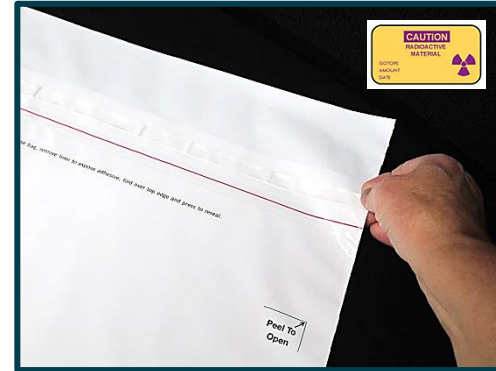
- Be sure the oxygen/air supply is off.
- Disconnect the elbow from the bottom of the HEPA filter.
- Set aside the shield lid and remove the used radioaerosol kit, placing it in the resealable bag.
- Disconnect oxygen tubing from the oxygen/air source.

CAUTION: Disconnecting the oxygen line before removing kit may result in a vacuum sufficient enough to pull liquid into the oxygen port, which could result in contamination.

Please disconnect in the steps shown above.



- Place any additional items used for the study in the resealable plastic bag and seal securely.
- Quickly attach the radioactive material label, and place the kit in a shielded disposal area to allow for radioactive decay.
- Discard decayed waste according to the radioactive waste procedures established by your facility.



Aero/Vent™ Jr. Convenience Kit #AV-100HV for Patients on a Ventilator

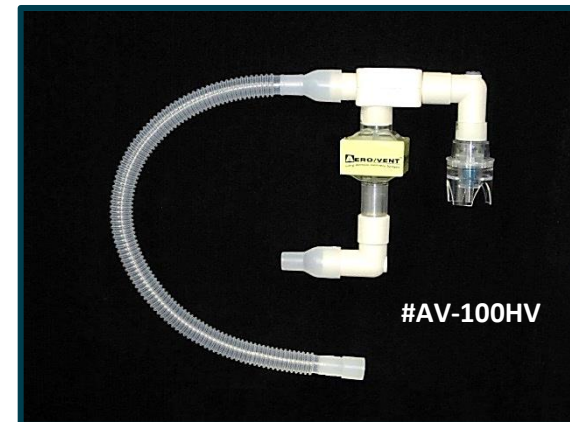
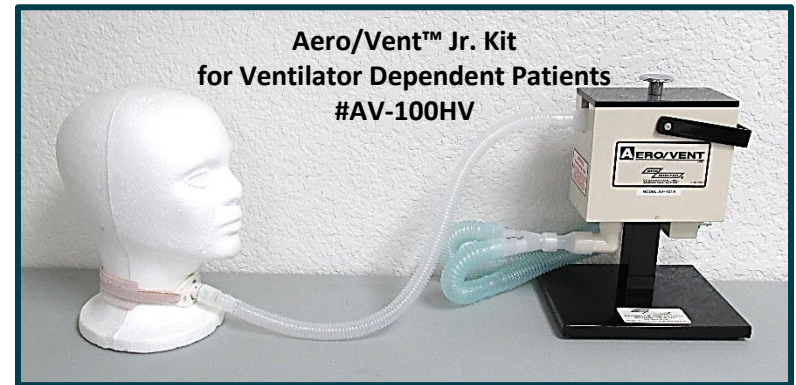
For patients on a ventilator, specially designed convenience kit #AV-100HV may be used.

These special convenience kits:

- Come in a small case of just 6/each.
- Fit all standard 15mm endotracheal and tracheotomy tubes.
- Come complete and ready to use.

Quotes and detailed information available.

CAUTION: Standard Aero/Vent™ Jr. convenience kits may not be used for patients on a ventilator.

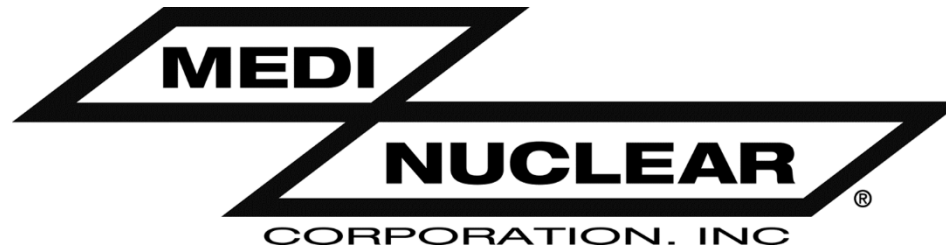


Aero/Vent™ Jr. Ordering Information

Catalog No.	Product Description	Qty/Units
AV-100H	Aero/Vent™ Jr. Radioaerosol Kit with Straight Mouthpiece. Two Tube, Unidirectional System.	24/cs
AV-100HM	Aero/Vent™ Jr. Radioaerosol Kit with Face Mask. Two Tube, Unidirectional System.	24/cs
AV-100HS	Aero/Vent™ Jr. Radioaerosol Kit with Safety Shield™ Mouthpiece. Two Tube, Unidirectional System.	24/cs
AV-100HV	Aero/Vent™ Jr. Ventilator Kit for ventilator dependent patients	6/cs
AV-101A	Aero/Vent™ Jr. Pole Mount/Table Top Shield	Each
IV-605	Oxygen Supply Tubing	3/pk



For additional information,
please contact:



800.321.5981 / 626.960.9822

info@medinuclear.com

www.medinuclear.com

BETTER DELIVERY = BETTER RESULTS

