

Small Design, Big Results

AeroChamber mini™ Holding Chamber (HC)



The **AeroChamber mini™** HC is a unique device designed to deliver pMDI aerosols to patients in conjunction with:

- mechanical ventilation
- manual resuscitation bag
- standard aerosol resuscitation mask

Anti-Static Chamber

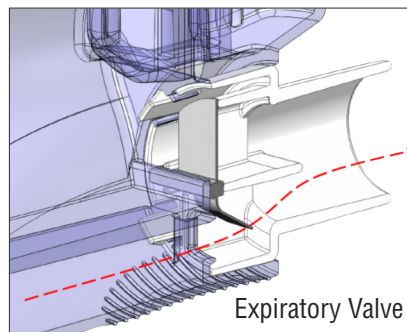
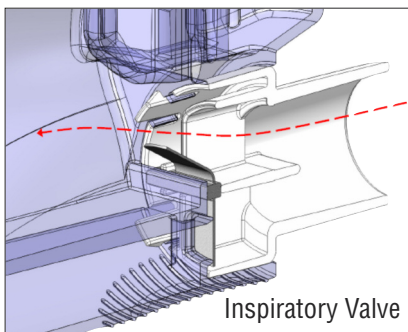
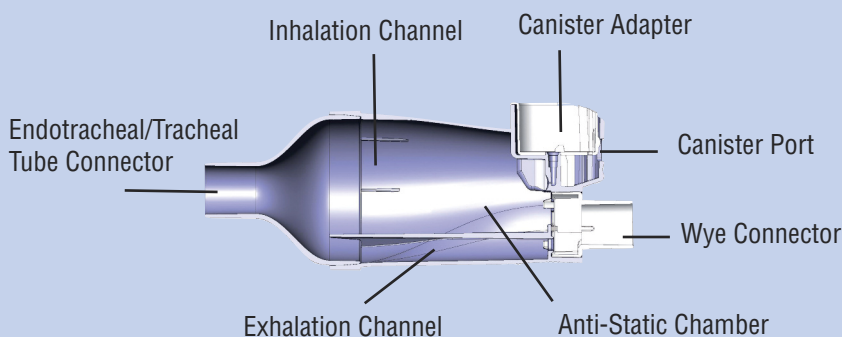
The **AeroChamber mini™** HC is comprised of an anti-static, dual chamber design. The patented exhalation channel has a one way valve that preserves aerosol dose and minimizes dead space.

Designed with the patient in mind

The **AeroDock™** canister port makes the **AeroChamber mini™** HC a device designed to accept standard pMDIs as well as those with integrated dose counters. The counters will activate with this feature.

Effective Treatment

The **AeroChamber mini™** HC is a 110cc ergonomically correct chamber and fits comfortably in your hand. It can be easily connected to the endotracheal tube in front of a wye or HME in a ventilator circuit. While in a ventilator circuit it is designed to maintain positive end expiratory pressure (PEEP). It can be used with a standard aerosol resuscitation mask and is effective for use with low tidal volume patients.



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Supporting In Vitro Studies:

R. DiBlasi, D.P. Coppolo, M.W. Nagel, C.C. Doyle, VA. Avvakoumova, R.S. Ali, J.P. Mitchell A NOVEL VALVED HOLDING CHAMBER FOR DELIVERING INHALED MEDICATIONS TO NEONATES AND SMALL CHILDREN: LABORATORY SIMULATION OF DELIVERY OPTIONS
Resp Care 2010 April;55(4):TBD

- The **AeroChamber mini™** HC was successfully tested using pre-term infants, infants and small child breathing patterns each with three common delivery methods.

Total Emitted Mass (TEM)

Treatment Modality	Pediatric Patient Simulation ($\mu\text{g}/\text{actuation}$) Mean \pm S.D.		
	Pre-term Infant	Infant	Small Child
MV (Mechanical Ventilation)	3.3 \pm 1.2	3.8 \pm 2.1	4.2 \pm 2.3
MR (Manual Resuscitation)	5.5 \pm 0.3	10.7 \pm 0.9	10.0 \pm 1.1
SB (Spontaneously Breathing)	6.0 \pm 1.0	10.5 \pm 0.7	12.1 \pm 1.8

M. Nagel, M. Foley, J. P Mitchell, R. Ali, H. MacKay, D. Coppolo IN VITRO EVALUATION OF A NOVEL AEROSOL CHAMBER FOR DELIVERY OF AEROSOLIZED MEDICATION TO THE MECHANICALLY VENTILATED PREMATURE INFANT
Poster Presented at ERS Annual Congress 2009

- Using pediatric ventilator settings the **AeroChamber mini™** HC delivered significantly more ($8.8\mu\text{g} \pm 3.1\mu\text{g}/\text{actuation}$) medication as related to the Ace \dagger ($4.5\mu\text{g} \pm 2.2\mu\text{g}/\text{actuation}$). Unpaired t-test, $p < 0.001$.

DP. Coppolo, JP. Mitchell, HA. MacKay, VA. Avvakoumova, MW. Nagel A NOVEL SPACER FOR IN-VENTILATOR CIRCUIT USE PROVIDES EFFICIENT MEDICATION DELIVERY FROM PRESSURIZED METERED DOSE INHALERS (PMDI)
Poster Presented at ATS 2009

- The **AeroChamber mini™** HC was studied with three HFA formulations: Ventolin \dagger (albuterol), Flovent \dagger -50 (fluticasone propionate) and Atrovent \dagger (ipratropium bromide).
- Fine particle mass of $4.7\mu\text{m}$ from the **AeroChamber mini™** HC was substantially equivalent of fine particle mass $4.7\mu\text{m}$ emitted by the pMDI alone.

Formulation	pMDI alone	AeroChamber mini™
ipratropium bromide (Nominal Dose 18 μg)	6.7 \pm 0.4	5.2 \pm 0.2
fluticasone propionate (Nominal Dose 44 μg)	19.0 \pm 2.3	15.3 \pm 1.6
albuterol HFA (Nominal Dose 90 μg)	34.8 \pm 1.4	40.8 \pm 2.9
FPM* $< 4.7 \mu\text{m}$ ($\mu\text{g}/\text{actuation}$)		

*Fine Particle Mass n = 5 devices/group
mean \pm SD

Dimensions: patient connection - 15mm ID/ wye connection - 15mm OD Tested up to 25 PSI

This diagram illustrates a flow test performed on the **AeroChamber mini™** HC during exhalation. The exhaled air moves through the **AeroChamber mini™** HC and out through the exhalation valve to prevent the patient from re-breathing carbon dioxide.

Ordering Information

Part # Description
98810 **AeroChamber mini™** HC cs/10

For more information or a demonstration, contact your Monaghan Medical Sales Representative.



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