

# Small Design, Big Results

*AeroChamber mini*<sup>™</sup> Holding Chamber (HC)



The *AeroChamber mini*<sup>™</sup> HC is a new and unique device designed to deliver pMDI aerosols to patients in conjunction with:

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

## **StatBan® Anti-Static Chamber**

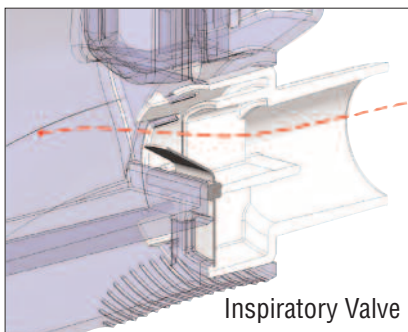
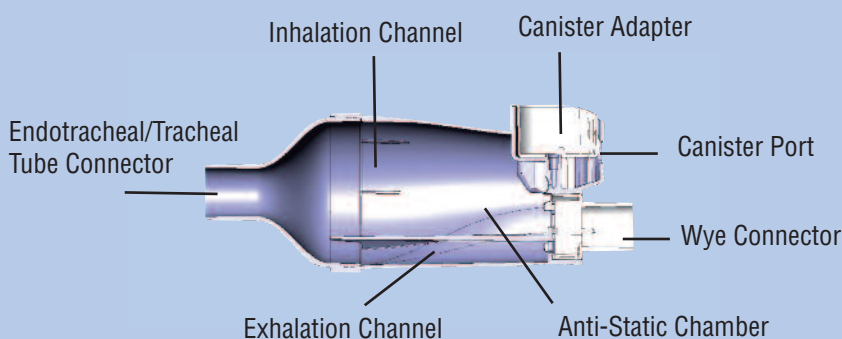
The *AeroChamber mini*<sup>™</sup> HC is comprised of the **StatBan®** anti-static, dual chamber design. The patented exhalation channel has a one way valve that preserves aerosol dose and minimizes dead space.

## **Designed with the patient in mind**

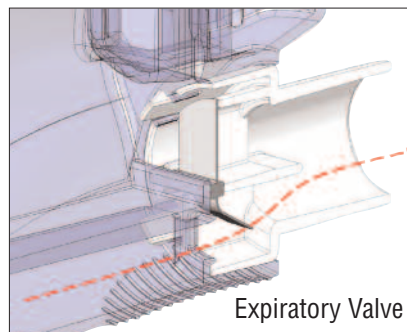
The *AeroDock*<sup>™</sup> canister port makes the *AeroChamber mini*<sup>™</sup> HC a device designed to accept standard pMDIs as well as those with integrated dose counters. The counters will activate with this feature.

## **Effective Treatment**

The *AeroChamber mini*<sup>™</sup> HC is ergonomically correct 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.



Inspiratory Valve



Expiratory Valve



**monaghan**<sup>™</sup>

## Supporting In Vitro Studies:

R. DiBlasi, DP. 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
<b>MV</b> (Mechanical Ventilation)	3.3 $\pm$ 1.2	3.8 $\pm$ 2.1	4.2 $\pm$ 2.3
<b>MR</b> (Manual Resuscitation)	5.5 $\pm$ 0.3	10.7 $\pm$ 0.9	10.0 $\pm$ 1.1
<b>SB</b> (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. McKay, 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<sub>f</sub> ( $4.5\mu\text{g} \pm 2.2\mu\text{g}/\text{actuation}$ ). 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

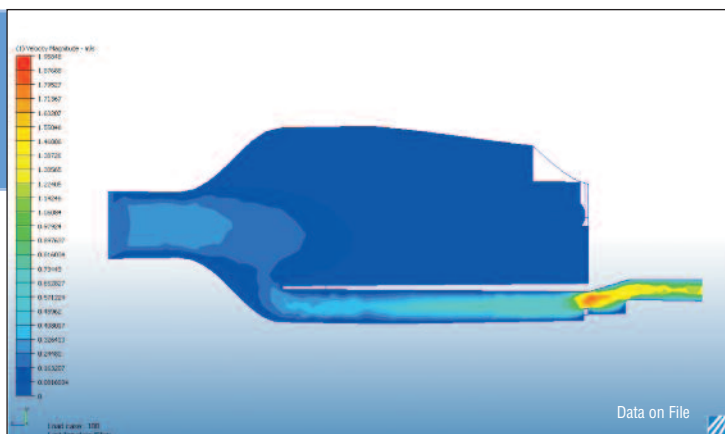
- The **AeroChamber mini™** HC was studied with three HFA formulations: Ventolin<sub>f</sub> (albuterol), Flovent<sub>f</sub>-50 (fluticasone propionate) and Atrovent<sub>f</sub> (ipratropium bromide).
- Fine particle mass of  $4.7\mu\text{m}$  from the **AeroChamber mini™** HC was substantially equivalent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

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

\*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.



**monaghan™**



Monaghan Medical Corporation, 5 Latour Ave., Suite 1600, Plattsburgh, NY 12901  
Customer Service 800-833-9653 • www.monaghanmed.com

™ and © are trademarks and registered trademarks of Monaghan Medical Corporation or an affiliate of Monaghan Medical Corporation

© 2009 Monaghan Medical Corporation

+ trademarks and registered trademarks of the respective companies

**AeroChamber**  
**mini™**

