35 Years of Innovation

AeroChamber*
BRAND OF CHAMBERS

Often imitated Never duplicated

For **dose assurance** and **improved clinical outcomes** recommend ***AeroChamber Plus**** ***Flow-Vu**** chamber.

Different chambers deliver different amounts of MDI medication and this may affect the safety and efficacy of the treatment.[1,2]

Do not substitute.

TRUSTED BRAND
DESIGNED FOR PATIENTS BACKED BY SCIENCE

Trudell Medical International*

aerochamber.com

Clinical Reference Sheet

AeroChamber Plus Flow-Vu

	OUTCOME	SUMMARY
ROLE AND BENEFITS	Chambers have an important clinical role to play in the delivery of inhaler medication.	Review article summarizes the role of valved holding chambers (VHC). Highlights the fact that chambers are not all the same and should not be considered interchangeable. Optimizing the Delivery of Inhaled Medication for Respiratory Patients: The Role of Valved Holding Chambers. McIvor RA *et al.* Canadian Respiratory Journal, 2018, Article ID 5076259
	AeroChamber Plus **Flow-Vu**** chamber significantly reduces the amount of medication deposited in the oropharynx, minimizing the risk of side effects.	Compared oropharyngeal and lung deposition of both a suspension MDI (Flovent†) and a solution MDI (Qvar†) alone and with the addition of a chamber. The use of ***AeroChamber Plus*** **Flow-Vu**** chamber reduced orophyngeal deposition from 62% to 7% of dosage for the suspension formulation and from 29% to 3% for the solution formulation MDI. Assessment of Potential Mouth/ Throat Deposition and Lung Delivery of Suspension-and Solution Formulated Inhaled Corticosteroid Formulations Delivered by Pressurized Metered Dose Inhaler without and with Valved Holding Chamber Using an Anatomic Adult Upper Airway. Suggett J *et al.* Drug Delivery to the Lungs 28, Dec 2017
	AeroChamber Plus **Flow-Vu**** chamber provides consistent medication availability even with a delay.	Evaluated the impact of delay on respirable dose for a number of antistatic chambers. Fine particle mass (available for delivery to the lungs) was highest with the ***AeroChamber Plus*** **Flow-Vu**** VHC regardless of delay interval. Even after a 10 second delay , the respirable dose was still within 20% of the intended dose (MDI alone with no delay). Antistatic Valved Holding Chambers do not necessarily offer similar aerosol delivery performance. Suggett J *et al.* European Respiratory Society Annual Congress, September 2013
	The use of ***AeroChamber Plus**** VHC optimizes the delivery of medication to the lungs for patients with poor inhalation technique.	In people with poor inhalation technique, the use of the ***AeroChamber Plus*** **Flow-Vu**** chamber increased the bioavailability of Symbicort MDI to the same level observed in people with good inhalation technique without a chamber. Effect of a spacer on total systemic and lung bioavailability in healthy volunteers and in vitro performance of the Symbicort (budesonide/formoterol) pressurized metered dose inhaler. Gillen M *et al.* Accepted for publication August 2018 by Pulmonary Pharmacology & Therapeutics.
SUPERIOR PERFORMANCE	Performance of the two ***AeroChamber Plus**** chamber variants is equivalent. The substantial clinical literature that exists for the ***AeroChamber Plus**** chamber, (which incorporates data for virtually all innovator MDIs), can reasonably be extrapolated to the newer anti-static ***AeroChamber Plus*** **Flow-Vu**** chamber. The other chambers tested are not equivalent and should not be considered to be interchangeable.	Only ***AeroChamber Plus*** **Flow-Vu**** chamber was equivalent to the reference ***AeroChamber Plus**** device. The compact Space Chamber† plus, InspiraChamber† and OptiChamber Diamond† were all inequivalent to the reference chamber. The respirable dose emitted from the chambers was aproximately half that of the reference device with a corresponding doubling of the mass retained within the chamber. Between device variability was approximately two to three fold greater with the other devices compared to the ***AeroChamber**** brand of devices. Are valved holding chambers interchangeable? An in vitro evaluation of VHC equivalence. Dissanayake S *et al.* Pulmonary Pharmacology & Therapeutics 48 (2018) 179-184.
	Different chambers deliver different amounts of medication which can lead to meaningful differences in clinical performance. Overt advantages suggested for the ***AeroChamber Plus*** **Flow-Vu**** chamber compared to other chambers.	Examined available data regarding chambers to determine whether meaningful differences exist between chambers with a focus on ***AeroChamber Plus*** **Flow-Vu**** VHC. Author found that it was unequivocal that differences exist between different chambers which in a number of cases are sufficiently large that meaningful and overt clinical differences would be anticipated as a result. A review of the in vitro and in vivo valved holding chamber (VHC) literature with a focus on the ***AeroChamber Plus*** **Flow-Vu**** anti-static VHC. Dissanayake S *et al.* Therapeutic Advances in Respiratory Disease 2018, Vol 12: 1-14.
	Use of ***AeroChamber Plus*** **Flow-Vu**** chamber may result in better asthma control compared to the use of other chambers.	Use of ***AeroChamber Plus*** **Flow-Vu**** chamber was associated with delayed time to first exacerbation (p=0.0005), a 13% reduction in ER visits (p=0.017), a 19% reduction in hospitalizations (p=0.070) A retrospective study of the effectiveness of the ***AeroChamber Plus*** **Flow-Vu**** antistatic valved holding chamber for asthma control. Burudpakdee *et al.* Pulmonary Therapy 2017; Vol 3 (2):283-296.
	The exclusive ***Flow-Vu**** Inhalation Indicator increases caregiver quality of life (p=0.029).	*In vivo* study of 80 children (age 1-5 years) with asthma to determine parent preference and patient outcomes when using ***AeroChamber Plus**** chamber and ***AeroChamber Plus**** VHC with ***Flow-Vu**** Indicator. Asthma control was the same for both groups demonstrating clinical equivalency. Perceived quality of life increased significantly (4x) for the families of patients using the chamber with ***Flow-Vu**** Indicator. Evaluation of Asthma Control, Parents Quality of Life and preference between ***AeroChamber Plus**** and ***AeroChamber Plus*** **Flow-Vu**** Spacers in Young Children with Asthma. Ammari WG *et al.* Journal of Asthma Vol 52;3,2015.

For a comprehensive overview of published studies refer to the ***AeroChamber**** brand of chamber Study Summary.

1 Dissanayake S et al. A review of the *in vitro* and *in vivo* valved holding chamber (VHC) literature with a focus on the ***AeroChamber Plus*** **Flow-Vu**** Anti-static VHC. Therapeutic Advances in Respiratory Disease 2018, Vol. 12: 1-14. **2** Drug Safety Update - Inhaled products that contain corticosteroids, July 2008. Medicines and Healthcare Products Regulatory Agency.