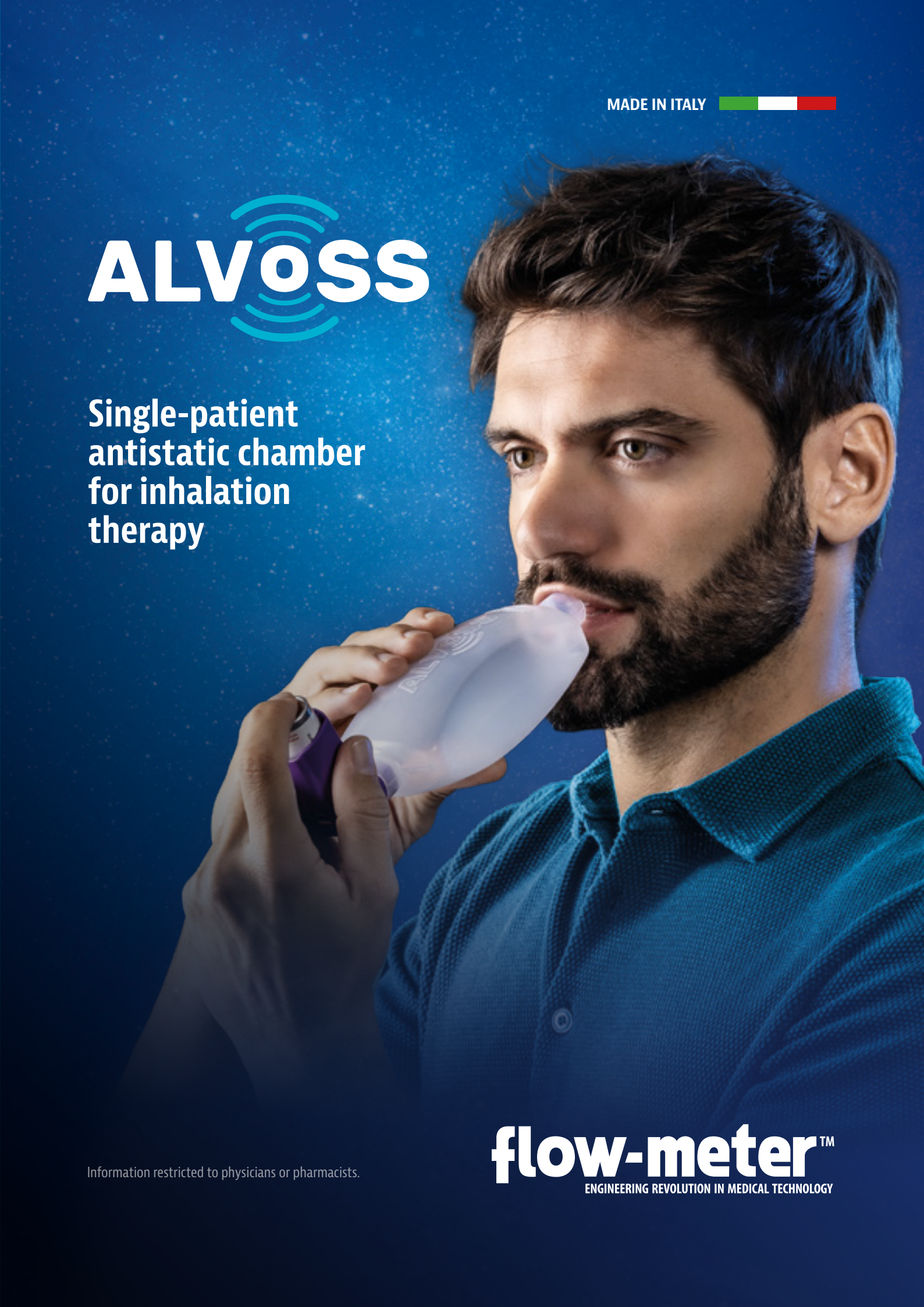
MADE IN ITALY

ALVOSS

Single-patient antistatic chamber for inhalation therapy



Information restricted to physicians or pharmacists.

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ENGINEERING REVOLUTION IN MEDICAL TECHNOLOGY

The spacer

ALVoSS is a single-patient spacer suitable for use with pressurized Metered Dose Inhaler (pMDI). The inhalation chamber made of low-density polyethylene with antistatic treatment, having a capacity of 250 ml, is equipped with a patient-side mouthpiece also allowing the use of face masks and with a universal drug-side connection to accommodate any type of diffuser.

WHEN AND WHY TO USE IT

The spacer spray is considered the best method and the most practical and economical way to administer bronchodilators in aerosol form for both chronic treatment and attack phase during the acute asthma.

THE USE OF THE ANTISTATIC INHALATION CHAMBER IS PARTICULARLY RECOMMENDED:

- for children and patients with inexperienced inhalation techniques;
- in all cases when there is a requirement of administration of a corticosteroid to be inhaled through a pressurized Metered Dose Inhaler *(pMDI)*.

WHY TO USE THE SPACER

The spacer, in its function as an expansion chamber placed between the patient and pMDI, overcomes the following issues that could reduce the optimal benefits of pressurized pre-dosed sprays:

- the **high supply speed** (120 km/hour), which causes the deposition of most of the drug on the oral cavity and mucosa of the first airways;
- the need of a **perfect hand-breathing coordination** by the patient.

Advantages

In the pediatric age, the use of sprays with a spacer offers the advantage of a shorter time of stay in the Emergency Department and a lower increase of heart rate compared to the use of nebulizer during the administration of bronchodilators in cases of an acute asthma attack.

In the case of corticosteroid use via pMDI, it is necessary to use the spacer for administration in order to reduce oropharyngeal side effects and intestinal absorption.

The health crisis caused by the COVID-19 pandemia has highlighted several critical issues in hospital therapeutic procedures. In addition, for the inhalation therapy of all hospitalized patients or in the emergency room, the **American Thoracic Society** and the **European Respiratory Society** strongly recommend to switch from the use of traditional aerosol therapy with ampoules, to a disposable spacer or, as a second choice, to a sterilizable spacer. The aim is to reduce the high risks of contamination of the aerosol produced.

Universal drug-side connection which allows to accommodate any type of diffuser.

Inhalation chamber made of low-density polyethylene with antistatic treatment.

Universal mouthpiece adequate for the coupling of any masks (recommended use in children younger than 4 years).

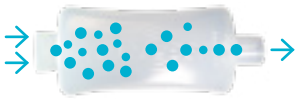
Main features of the inhalation chamber (spacer) ALVoSS

1 **Flexible spray connection**, that can be adapted to most spray nozzles. Shape of the expansion chamber facilitating the suspension of particles passing through it.

2 **Universal mouthpiece** allowing the coupling of any masks.

3 **Transparent expansion chamber** made of antistatic material to grant a better check of the real supply of the drug. Such material prevents electrostatic charges from attracting the drug onto the walls of the chamber, increasing the bioavailability.

4 **Flexible and Ergonomic shape** overcoming the difficulty of coordination hand-breathing.
The medical device does not contain latex components and it is phtalates & BPA free.



The volume of expansion chamber is optimized to receive the drug and slow down the speed of spray exit, thus avoiding impact on the oropharynx and, at the same time, ensuring a rapid emptying with a running breath.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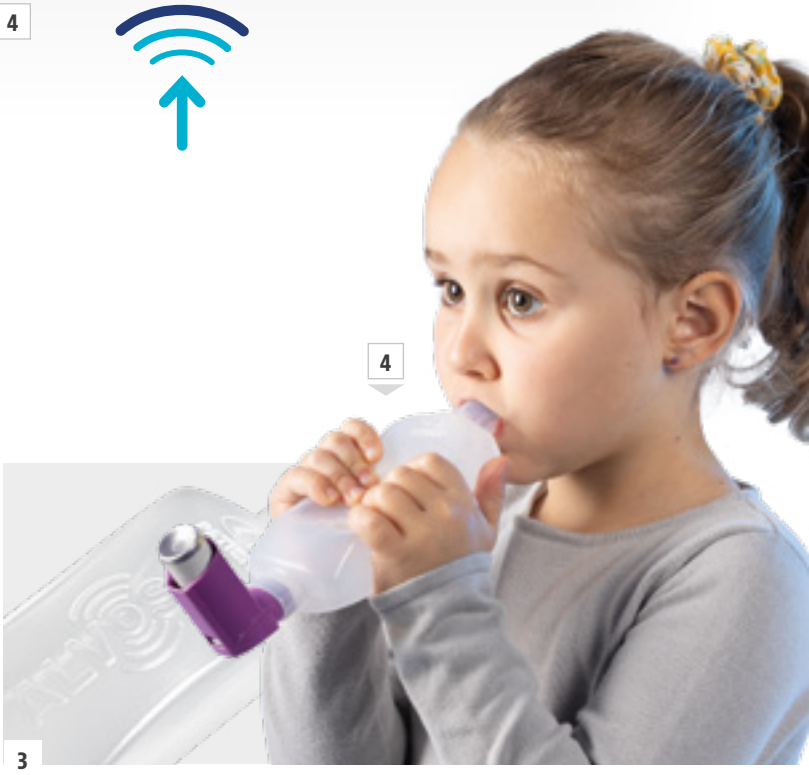

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ALVoSS

The choice of the spacer

ALVoSS meets the requirements of inhaled drug quantity and safety toward the patient, complying with the following key factors for the selection of a spacer:

SINGLE-PATIENT DEVICE

The choice of such a product simplifies the use of the spacer and allows departments to perform a crucial therapeutic practice without exposure to cross-infection.

VOLUME AND SHAPE

ALVoSS with a capacity of 250 ml conforms to a recent random study, reporting that 5 different volume spacers (165 ml to 1,000 ml, with or without mask) were equally effective in improving PEF and FEV when using salbutamol in 150 children aged 5 to 14 years.

MOUTHPIECE AND MASK

International guidelines suggest using spacers fitted with a mask in children under 4 years, always making sure that a perfect fit is created between the mask and the child's face. It is certainly preferable to use a soft mask with reduced dead space and rounded edges and then move directly to the mouthpiece as soon as the patient's correct inhalation technique allows it. It is important that the patient acquire proper technique in using the spacer with pMDI.

ELECTROSTATIC CHARGES

It must be taken into consideration that, when using a spacer manufactured of a nonconductive material such as plastic, the presence of electrostatic charges can reduce the amount of drug inhaled and make variable the drug dose taken. The use of spacers, such as **ALVoSS**, with an expansion chamber made of an antistatic material, eliminates this inconvenience and prolongs the bioavailability of the aerosol inside the chamber up to 30 seconds, far exceeding the 9 seconds obtained with devices made of untreated plastics.

ENVIRONMENTAL SAFETY

The **ALVoSS** spacer must be disposed as special hospital waste and its incineration does not produce any toxic residue beyond the legal limits.

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