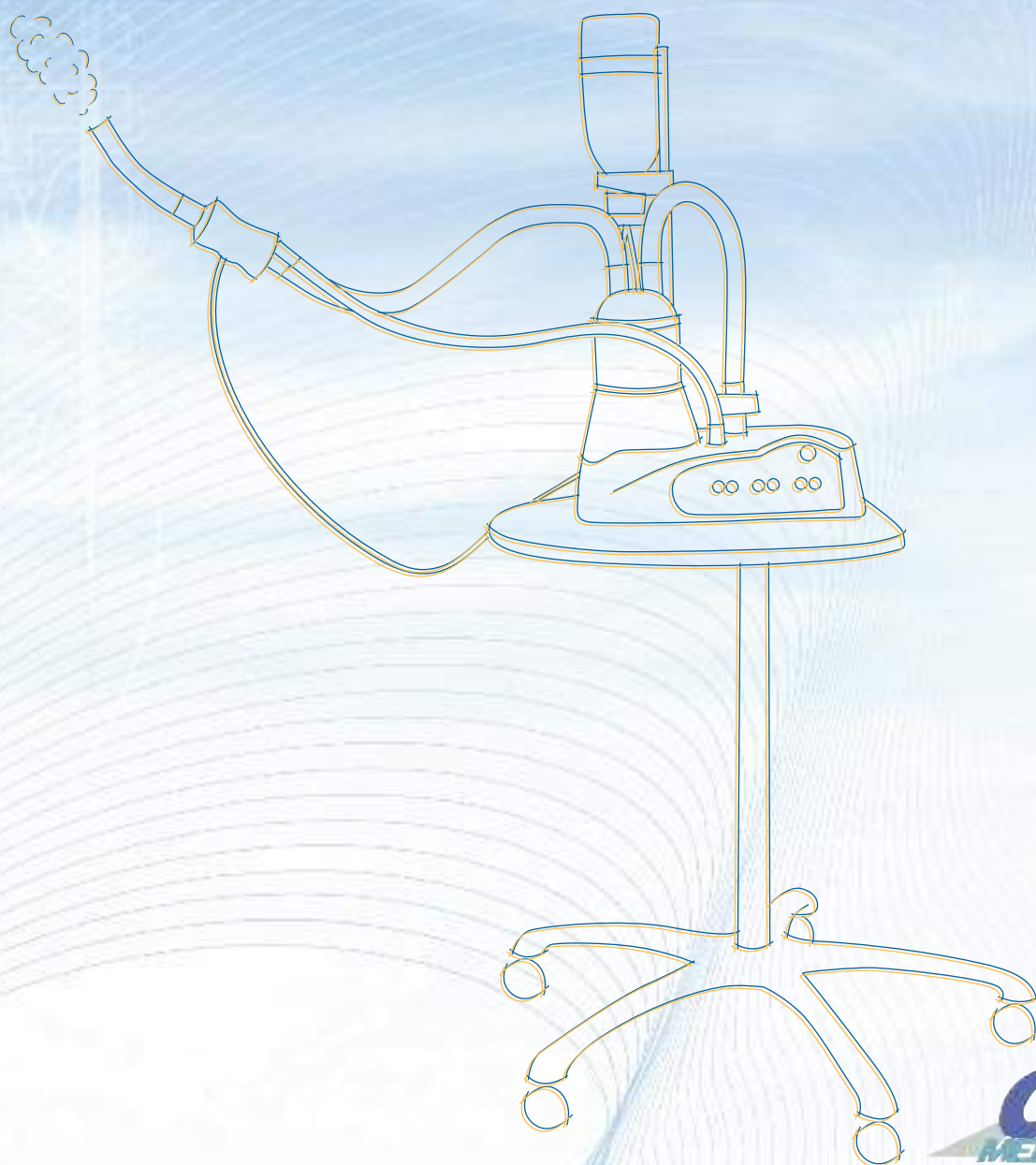




SYSTEMAM[®]

SYSTEM ASSISTANCE MEDICAL

Ultrasonic Humidifiers and Nebulisers for Medical Institutions



DP100⁺



NF EN ISO 13485



0459



NEW Container

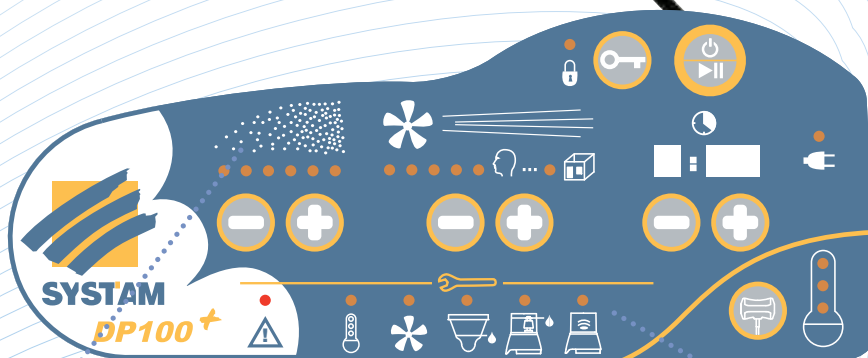
- ↳ Stands upright : convenient for preparing the session.
- ↳ With simple and quick connector.
- ↳ Integrated protecting metal disc in the container for greater lifetime.
- ↳ Electronic built into the housing for greater reliability.
- ↳ Design ensures flow and evacuation of water even in cases of accidental infiltration, preventing any deterioration of the material.

NEW Flexible

- ↳ Coated for improved decontamination.
- ↳ Easy fixing.

NEW Universal Bottle Support Rod

- ↳ Easy fixing.
- ↳ Free rotation to 180° even after fixing. Suitable for different types of bottle and for different consumable configurations.



More settings and new functionalities

- Adjustable nebulisation : 6 settings for nebulisation.
- Ventilation : 5 settings of intensity for direct humidification.
NEW + a "boost" level for indirect humidification.
- NEW** Integrated timer : for programming the duration of the session.
- NEW** Keyboard locking button to avoid any unintended moves.
- NEW** Automatic memory of the settings of the previous session.
- Adjustable temperature of the heater.

Fitted with an intelligent alarm system

By dysfunctions, the DP100+ shows the source of the problem with indicators :

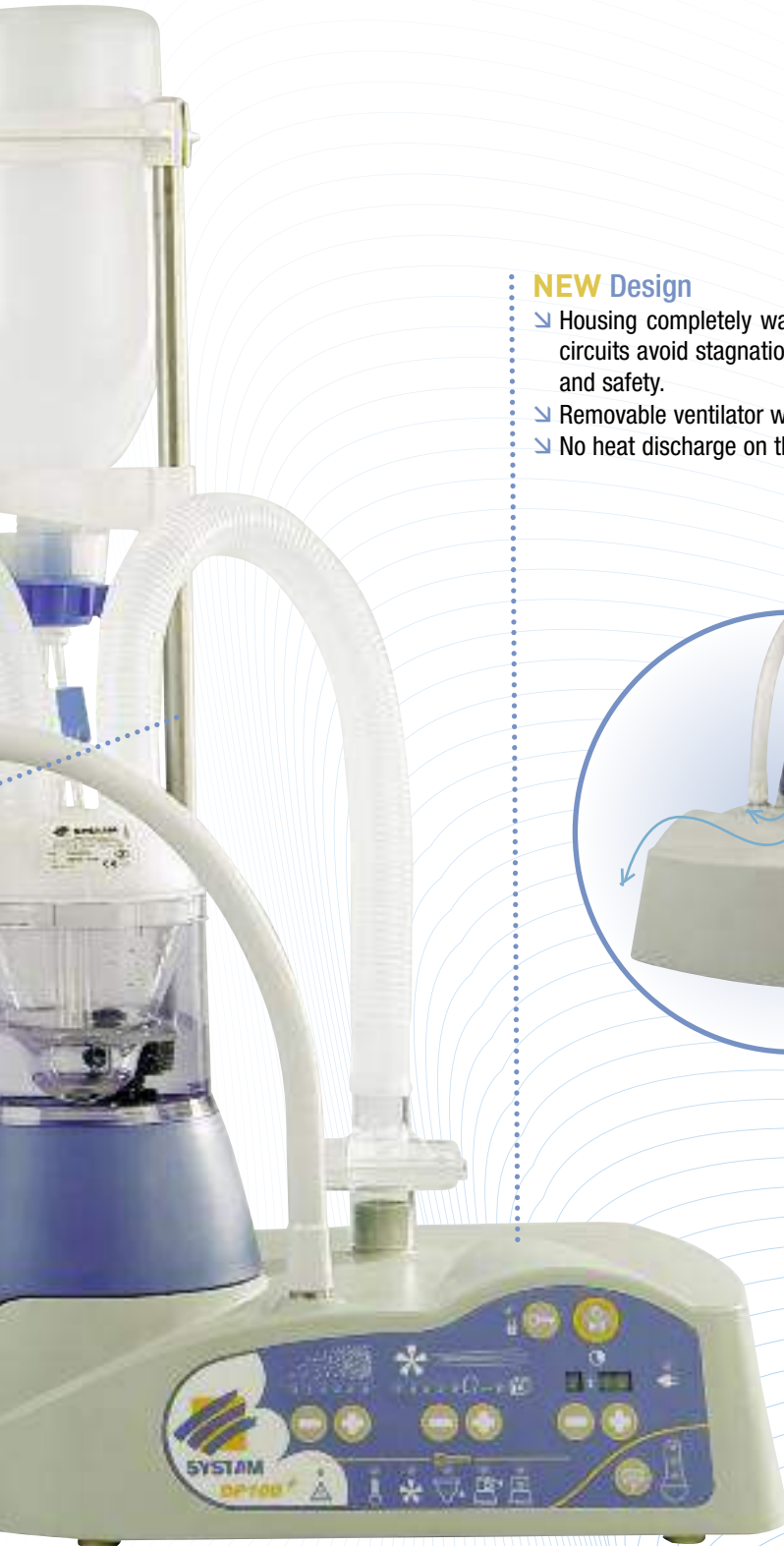
 Mist-heater alarm

 Ventilation alarm

 Water level in the container (too low or too high)

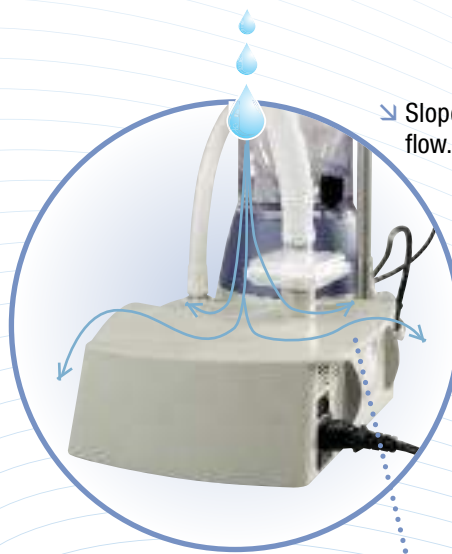
new generation device

- ✦ safe
- ✦ simple
- ✦ efficient

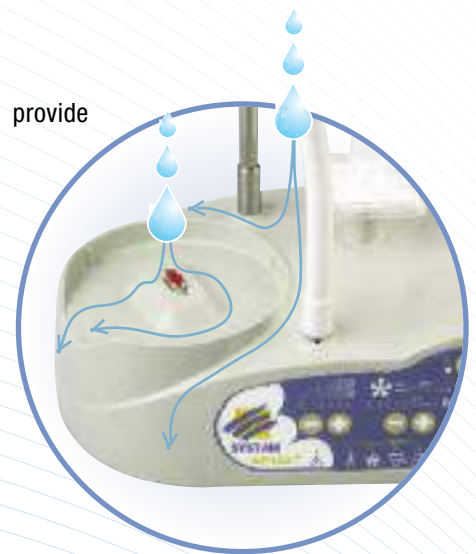


NEW Design

- Housing completely water repellent and watertight thanks to its design : the slopes and flow circuits avoid stagnation of liquid thus protecting the electronic components for added reliability and safety.
- Removable ventilator without tools allows a perfect decontamination of air circuits.
- No heat discharge on the surface of the casing.



➤ Slopes provide flow.



➤ A protecting visard at the back provides protection for the connections.



In addition, 2 innovative functionalities are included in the alarm detection system :

NEW Detection system in the nebulisation chamber **PATENTED**

- Automatic stop of the device at the end of the session when the nebulisation chamber is empty: facility and time saving for the nursing staff who do not need to supervise the end of the session, to switch off the device in time with risks of damaged consumable (deteriorated chamber).
- Also detects an exceptionally high water level in the chamber (in the event of incorrect settings).

NEW The management of the service life of the quartz

- The device analyses and indicates a quartz whose end of service life is close. The functioning of the device is not at this stage blocked. This gives time to technicians to make the replacement.
- When the quartz is totally outworn the device will stop.

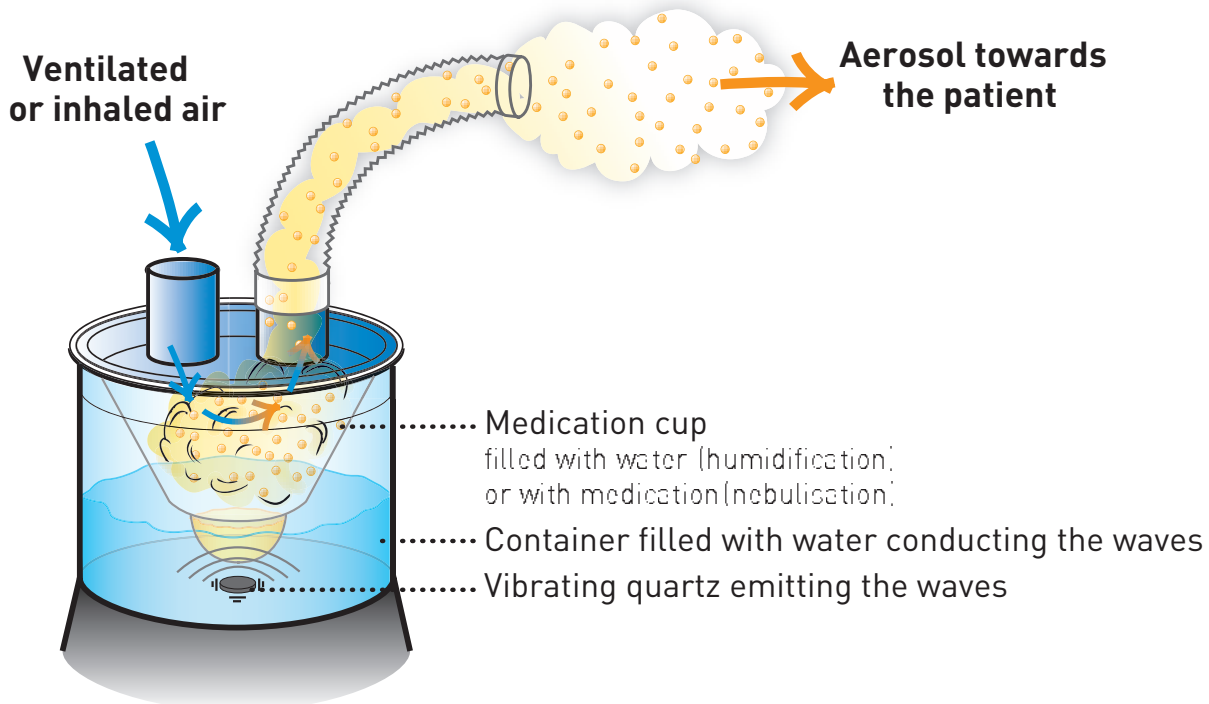
Aerosol Therapy (medicinal or humidifying) ULTRASONIC

DEFINITION OF AEROSOL THERAPY

- An aerosol is a suspension of solid or liquid particles in a gas or a gas mixture (e.g. air). In the application of medicinal aerosol therapy this aerosol is a spray of medication for inhalation by the patient. In the humidifying application the particles produced are droplets of water.

OPERATING PRINCIPLES OF ULTRASONIC TECHNOLOGY

- Under the action of an oscillator the quartz located at the base of the container is subjected to very high frequency vibrations producing the effect of ultrasound (waves).
- These waves travel through the liquid up to the surface of the solution producing a liquid film of very fine droplets (cavitation process).
- The size of the particles thus formed is proportional to the length of the quartz wave (fixed for each unit) but the nebulisation density (= quantity of particles produced or output) can be modified by varying the amplitude of the quartz.



TECHNICAL CHARACTERISTICS DP100 ✨

Generator features

- Quartz frequency : 2,4 Mhz
- Ventilation for use by patients both active and inactive

Characteristics of the particles to norm NF-EN 13544-1 (NaF 1% - filled volume 4ml)

- MMAD (measure by Malvern® optical laser diffraction) = 4,2 µm
- Output liquid aerosol produced : 0,19 ml/min
- Quantity of produced aerosol (inhalable volume) : 1,36 ml
- Delivered fraction (inhaled) : 34%
- 71% of the particles ≤ 5 µm

Nebulisation capacity

- In aerosol therapy : 2 to 8 ml with Control'Dose® / 8 to 30 without Control'Dose®
- In humidification universal bottle supply system
- Dead volume : ±0,6 ml

Other

- Meets electrical safety norms and CEM NF EN 60601-1 & 60601-2
- Available accessories (supplied separately) : mist-heater, water trap, rolling stand, consummable.

The DP100⁺ for aerosoltherapy

ADVANTAGES OF AEROSOLTHERAPY IN RAPPORT TO THE ADMINISTRATION OF MEDICATION BY MOUTH

- The aerosol reaches directly the targeted organ, thus providing much greater treatment efficiency.
- Good bio-availability at the bronchial epithelium.
- Requires less medication doses.
- Low systemic absorption : reduction of side effects.

INDICATIONS

- Asthma, cystic fibrosis, bronchial pneumonia, COPD, bronchiolitis, winter ailments, ENT ailments, sinusitis, rhinitis...

SYST'AM[®] CONSUMABLE FOR AEROSOLTHERAPY FOR USE WITH THE DP100⁺



Adult/adolescent set
Ref. 2901H



Adult/adolescent mask

Mouth piece with valved mask



Pediatric set (1 to 10 years)
Ref. 2901NH



Pediatric mask



Infant set
Ref. 2901BBH



Infant mask



Air inlet Medication particles outlet



Medication cup

Control'Dose[®]

Particle production area

Medicinal solution

THE CONTROL'DOSE[®] PATENTED SYSTEM : A SYST'AM[®] INNOVATION

PATENTED



- Reduces dead volume thereby limiting the dilution of the medication.
- Shorter session.
- Maximised inhaled fraction.

Controlled dosage...

- Enables the nebulisation of very small quantities of medication (from 2 to 8 ml) without dilution.
- Allows nebulisation with a residual volume of 0,6 ml. In operation the medicinal solution remains within the volume created by the Control'Dose[®] and the medication particles produced are carried to the patient.

... Controlled time !

- Reduces the length of the aerosol therapy session.
- Therefore reduces the patient participation (particularly for young children).
- Thus guarantees better treatment control.

The DP100⁺ as a humidifier

WHY HUMIDIFY ?

- ↳ Humidification becomes necessary due the dry nature of compressed gases used in hospital (oxygen therapy). It avoids the drying out of the bronchial mucosa and at the same time fluidising the expectorations in the event of bronco-pulmonary infection.
- ↳ In normal time the upper airways provide the warming and humidification of the inhaled air. Also they retain the warmth and humidity contained in exhaled air .
In the case of ventilated patients under anaesthetic (with tracheal probe) or tracheotomies the upper airways are no longer able to function.
Prolonged exposure to dry compressed gasses can bring harmful effects including a localised inflammation in the trachea, a reduction in the ciliary function, a reduction in secretions, a lowering of body temperature, a reduction in the function of the cardio-pulmonary, an increased risk of a blockage in the tracheotomy tube...
- ↳ Humidification is mainly obtained in the hospital environment by the production of aerosols (sprays, micro-droplets) from an ultrasonic nebuliser providing particles from 0,5 to 6 µm, optimal size for reaching both the tracheobronchial and the cavities.
- ↳ It may also be preferable, for patient comfort, to warm the compressed gasses prior to a humidification sessions...

INDICATIONS

- ↳ Tracheotomy, tracheostomy
- ↳ Trauma, palliative care
- ↳ Neonatology, bronchiolitis
- ↳ Bronchio-pulmonary infections...

SYST'AM® CONSUMABLE FOR HUMIDIFICATION FOR USE WITH THE DP100⁺



Closed humidification sets,



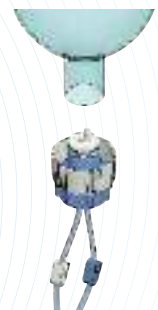
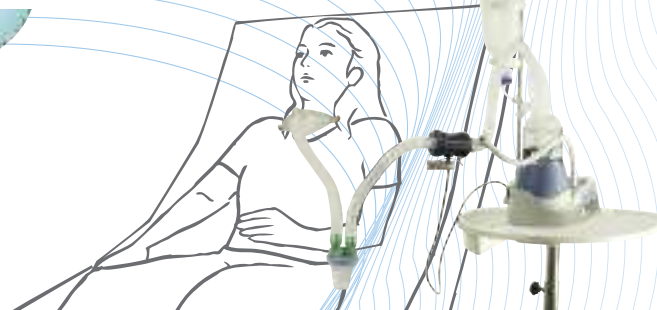
Open humidification set,

For bottles with
puncture cap :
Ref. 2901HUPN

For bottles with
screw-top :
Ref. 2901HUVN

For tracheotomy with bottles with
screw-top :
Ref. 2901HUVNT **NEW**

For bottles with
screw-top :
Ref. 2901HOV



THE BENEFITS OF A SINGLE-PATIENT CLOSED SYSTEM HAVING NO DIRECT CONTACT WITH THE DEVICE (2901HUVN, 2901HUPN, 2901HUVNT)

Systems with an open respiratory circuit present potential contamination risks. The single-patient closed consumable prevents all hand-carried contamination risks, stops the infiltration of pathogenic agents and thus contributes to improving patient's quality of treatment.

Controlled hygiene

- ↳ Limitation of contamination
- ↳ Closed breathing circuit without contact with the device.

Universal system can be used with most bottles types

- ↳ Distilled sterile water or isotonic sterile solutions (500 ml or 1000 ml screw thread or puncture top)
- ↳ Stock's handling and purchasing are simplified
- ↳ Easy installation and use for nursing staff.

Overall improves quality of care in institutions through :

- ↳ Time saving
- ↳ Greater patient safety
- ↳ Lower daily treatment cost
- ↳ Capacity of nebulising during a humidification session.

