



SaHoMa[®]
Safety Horse Mask

Inhalation set for the treatment of
respiratory diseases in horses



Instructions for Use

Description:

SaHoMa®-II inhalation set for horses

Type: HM-2000-1

Made in Germany.

Safety Instructions:

Any handling of the device requires precise knowledge and observance of these instructions for use. Reading the Quick Start Guide, which is also available, does **not** replace precise knowledge and observance of these instructions for use. Liability for the safe functioning of the device is transferred to the user in the event of external intervention or handling that does not correspond to the intended use.



Advice





Chapters to which you should pay special attention have been marked for you in the table of contents with the following symbol:



Intended Use:

The SaHoMa®-II inhalation set for horses is used to apply different, suitable inhalation solutions directly into the respiratory system of the horse. The mobile SaHoMa®-II inhalation set for horses has no cables, chambers and tubes and introduces the aerosol with particles of optimal size almost silently directly in front of the horse's nostrils.

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1

Components of the SaHoMa-II inhalation set for horses

Before the first start, please make sure that all components of the SaHoMa®-II inhalation sets for horses are available and familiarize yourself with the connections, the button and the display of the SaHoMa®-II control unit.

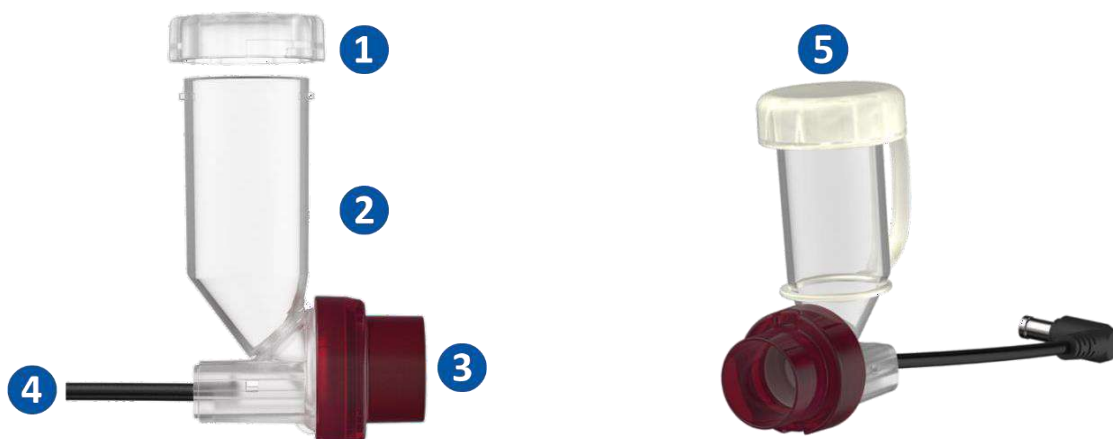
The **SaHoMa®-II inhalation set for horses (HM-2000-1)** consists of



①	SaHoMa®-II housing (HM-211-1)	1 pc.
②	SaHoMa®-II protection cover (HM-211-2)	1 pc.
③	SaHoMa®-II filter basket (HM-212)	1 pc.
④	SaHoMa®-II filter membranes (HM-214)	6 pcs.
⑤	SaHoMa®-II sealing ring for large horses (HM-215)	2 pcs.
⑥	SaHoMa®-II fastening strap (HM-217)	1 pc.
⑦	SaHoMa®-II carrying box (HM-218)	1 pc.



8	SaHoMa®-II control unit (HM-200)	1 pc.
9	SaHoMa®-II power cord (HM-204)	1 pc.
10	SaHoMa®-II mesh nebulization unit (HM-236)	2 pcs.
11	Lid fix for mesh nebulization units (202 000 11)	1 pc.
12	Care and basics set (202 000 01)	1 pc.



Components of the SaHoMa®-II mesh nebulization unit

- 1 Lid
- 2 Medication chamber
- 3 Connector
- 4 Cable for connecting the SaHoMa®-II control unit
- 5 SaHoMa®-II mesh nebulization unit with lid fix

1 | Components of the SaHoMa-II inhalation set for horses



Connection sockets of the SaHoMa®-II control unit

- ① Connection socket for SaHoMa®-II mesh nebulization unit
- ② Connection socket for SaHoMa®-II power cord
- ③ Button
- ④ Display



Display of the SaHoMa®-II control unit

- ① Multifunctional light
- ② Light bars



ATTENTION!

The SaHoMa®-II inhalation set for horses contains small parts that can be swallowed. Therefore, always keep them out of the reach of children or animals. If parts are accidentally swallowed, consult a doctor/veterinarian **immediately!**



Excursus: Large technology, small nebulization unit – the mesh technology

With the SaHoMa®-II mesh nebulization unit you are holding a highly innovative product in your hands that should be handled **as carefully as possible** - your horse will be grateful.

The SaHoMa®-II mesh nebulization unit works with the innovative mesh technology. A perforated disc is used in combination with a piezo ceramic. Due to the resulting pumping function, the medication is pressed through the small holes and made available in their size as aerosol. The holes in the very filigree mesh disc are about 20 times thinner than a human hair, so they are hardly visible to the naked eye.



Another major advantage: When using mesh nebulization units, almost no heat that could influence the effectiveness of the medication is generated during the nebulization process.

2 Getting started with the SaHoMa-II inhalation set for horses

Please follow the steps described below before using the SaHoMa®-II inhalation set for horses.

2.1. Connecting the SaHoMa®-II fastening strap with the SaHoMa®-II housing

Set the SaHoMa®-II fastening strap as wide as possible and connect it with the SaHoMa®-II housing. To do this, fix both quick fasteners in the holders on the SaHoMa®-II housing. Make sure that the SaHoMa®-II fastening strap is attached to the SaHoMa®-II housing with the adjustment possibility on the left side (seen from the horse's perspective) in order to ensure a perfect fit of the SaHoMa®-II fastening strap later on.



2.2. Pulling over the SaHoMa®-II sealing ring

Carefully pull the appropriate SaHoMa®-II sealing ring over the horse's muzzle onto the bridge of the nose. This allows the horse to get used to the upcoming inhalation process.



Caution!

Please do not leave the SaHoMa®-II sealing ring in the sun or near a heater, otherwise it may become porous due to heat and UV radiation.



Our tips

Since the SaHoMa®-II sealing ring is made of foam, it can be cut individually if one of the three standard sizes is not suitable for your horse.

2 | Getting started with the SaHoMa-II inhalation set for horses

2.3. Putting on the SaHoMa®-II housing

Now attach the SaHoMa®-II housing to your horse. To do this, slide the SaHoMa®-II sealing ring in the rear bulge of the SaHoMa®-II housing. Since you have not attached the SaHoMa®-II filter basket with the SaHoMa®-II filter membrane yet, the horse can breathe in and out without any resistance.



Now place the SaHoMa®-II fastening strap behind the horse's ears. You can attach the SaHoMa®-II fastening strap to the horse's head using the side adjustment, which should be under the left eye. Then fix the throat strap.



2.4. Connecting the SaHoMa®-II control unit to the SaHoMa®-II housing

Slide the SaHoMa®-II control unit along the slide rails of the SaHoMa®-II housing into the provided opening. The SaHoMa®-II control unit audibly snaps into the SaHoMa®-II housing and ensures a secure hold.



2 | Getting started with the SaHoMa-II inhalation set for horses

2.5. Fixing the SaHoMa®-II filter basket to the SaHoMa®-II housing

Now insert a SaHoMa®-II filter membrane into the SaHoMa®-II filter basket.



Then gently slide the SaHoMa®-II filter basket with the inserted SaHoMa®-II filter membrane forward over the lateral mounting pins of the SaHoMa®-II housing. Now press the two straps of the SaHoMa®-II filter basket over the mounting pins until they audibly snap into place.



2.6. Using the SaHoMa®-II mesh nebulization unit with the lid fix for mesh nebulization units



Our tip

The lid fix for mesh nebulization units makes it possible to attach the loose lid to the SaHoMa®-II mesh nebulization unit and thus facilitates handling, e.g. during filling. In addition, it offers protection against the lid falling off and being swallowed by the horse.

The use of the lid fix for mesh nebulization units is therefore strongly recommended by the manufacturer!

The lid fix for mesh nebulization units is an additional article which is included in every SaHoMa®-II inhalation set for horses. It can of course also be purchased separately.

To attach the lid fix for mesh nebulization units, first take the SaHoMa®-II mesh nebulization unit and open the lid by turning it 80° **counterclockwise** and lift it upwards.



2 | Getting started with the SaHoMa-II inhalation set for horses

Now attach the ring of the lid fix for mesh nebulization units to the medication chamber of the SaHoMa®-II mesh nebulization unit. Therefore, stretch the ring of the lid fix and push it down over the medication chamber of the SaHoMa®-II mesh nebulization unit.



Then place the lid on the SaHoMa®-II mesh nebulization unit and close it with an 80° **clockwise** turn.



Now put the lid fix for mesh nebulization units over the lid of the SaHoMa®-II mesh nebulization unit. Due to the indentations on the inside of the lid fix, the lid automatically moves to the correct position in the lid fix the next time it is opened.



The lid fix for mesh nebulization units can remain permanently on the mesh nebulization unit during opening and closing and doesn't need to be removed.



Advice

When changing the SaHoMa®-II mesh nebulization unit, be sure to remove the lid fix for mesh nebulization units. You can, for example, clean it in warm water with a mild detergent or in the cutlery basket in the dishwasher and then use it again - for the sake of the environment.

2 | Getting started with the SaHoMa-II inhalation set for horses

2.7. Filling the SaHoMa®-II mesh nebulization unit



Caution!

Please read this chapter carefully and follow the steps for each nebulization process. Disregarding these instructions may otherwise shorten the lifespan of the SaHoMa®-II mesh nebulization unit!

Use the medication and mixing cup to mix the inhalation solution to be nebulized with the specified amount of isotonic saline solution (0.9 %).

Fill the inhalation solutions (e.g. a drug and the corresponding amount of isotonic saline solution 0.9 %) into the mixing cup and shake well so that the inhalation solutions combine. You can **only** skip this step if you use isotonic saline solution (0.9 %) exclusively.

Then open the lid of the SaHoMa®-II mesh nebulization unit by turning it 80° **counterclockwise** and lift the lid upwards.



Now shake the prepared inhalation solution again and fill it directly into the SaHoMa®-II mesh nebulization unit or draw it up completely in a syringe and fill it in from there.

Now place the lid on the SaHoMa®-II mesh nebulization unit and close it with an 80° **clockwise** turn.



Caution!

Only use inhalation solutions that are approved for inhalation or have been tested and approved by us. In case of doubt, please read the technical information of the medication or ask your veterinarian. You will find a list of all the active ingredients we have tested in the Download Center on our website. It is updated from time to time and should therefore be downloaded regularly or requested from us. Non-observance of these instructions can lead to a shortened lifespan of the SaHoMa®-II mesh nebulization unit!



Our tips

With the purchase of the SaHoMa®-II inhalation set for horses you are also receiving a care and basics set. This should help you to fill and clean the SaHoMa®-II mesh nebulization units. The medication and mixing cup should be used for mixing and shaking the inhalation solution. The enclosed isotonic saline solution 0.9 % enables you to start directly within the first few days, if you are still waiting for your individual inhalation solution, for example.

To fill in the inhalation solution, use a **syringe without a cannula** to avoid foaming during filling.

The filling of the SaHoMa®-II mesh nebulization unit should be **the last step before starting the inhalation**. Leave the SaHoMa®-II mesh nebulization unit filled as short as possible. Otherwise, the individual inhalation solutions may separate again or push through the fine holes of the membrane, resulting in problems during the nebulization process.

The maximum capacity of the mesh nebulization unit is **15 ml**.

2.8. Connecting the SaHoMa®-II mesh nebulization unit to the SaHoMa®-II control unit

After filling, connect the SaHoMa®-II mesh nebulization unit first to the SaHoMa®-II housing, before you lead the connection cable of the SaHoMa®-II mesh nebulization unit into one of the two connection sockets of the SaHoMa®-II control unit.



2 | Getting started with the SaHoMa-II inhalation set for horses

2.9. Sliding on the SaHoMa®-II protection cover

Finally, slide the SaHoMa®-II protection cover along the slide rails of the SaHoMa®-II housing, over the SaHoMa®-II mesh nebulization unit and the SaHoMa®-II control unit until it audibly snaps into place.



3

Performing the inhalation process

Programs of the SaHoMa®-II control unit

3.1.

The SaHoMa®-II control unit is equipped with two programs:

Program 1: Automatic switch-off

Program 1 is a program that automatically switches off the SaHoMa®-II control unit as soon as there is no more inhalation solution in the medication cup of the SaHoMa®-II mesh nebulization unit.

Program 2: Time program

Program 2 should be used for medications with increased viscosity or those that tend to foam, as these medications cause a premature switch-off of the SaHoMa®-II mesh nebulization unit in Program 1.

Program 2 is a time program in which you can set the desired nebulization time. The SaHoMa®-II control unit switches off after the set time has elapsed. An automatic switch-off, when the medication is used up, does not occur in program 2.

In **chapter 3.2 „Switching on the SaHoMa®-II control unit in program 1“** and **chapter 3.3 „Switching on the SaHoMa®-II control unit in program 2“** the use of both programs is explained in detail.

3 | Performing the inhalation process

3.2. Switching on the SaHoMa®-II control unit in program 1

Start the SaHoMa®-II control unit by pressing the button for 3 seconds through the side opening in the SaHoMa®-II protection cover.



Immediately after starting, the light bar runs from left to right, the multifunctional light lights up green permanently and the nebulization starts in program 1.



The nebulization process runs continuously and as long as there is inhalation solution in the medication chamber of the SaHoMa®-II mesh nebulization unit.

If the inhalation solution has been completely nebulized, the aerosol production stops. The SaHoMa®-II control unit indicates the end of the inhalation process by two light bars that run synchronously from the center to the right and left.



After some time the SaHoMa®-II control unit switches off automatically. The SaHoMa®-II control unit can also be switched off manually by shortly pressing the button.



Caution!

To activate the automatic switch-off, the SaHoMa®-II control unit needs to run for **at least two minutes**.

3 | Performing the inhalation process

3.3. Switching on the SaHoMa®-II control unit in program 2

Start the SaHoMa®-II control unit by **pressing and holding** the button through the side opening in the SaHoMa®-II protection cover.



Hold the button of the SaHoMa®-II control unit until the nebulization process starts and then a red light bar appears in the first field of the display.



You can now set the desired time in five-minute intervals, with one bar corresponding to a nebulization time of five minutes.

For a nebulization time of 10 minutes, keep the button pressed until a second bar appears.



In this way, you can set a maximum nebulization time of 25 minutes, which corresponds to five light bars. If you keep the button pressed, the display starts again from the beginning in the first field and at a time of five minutes.

When the desired time setting is reached, release the button. The SaHoMa®-II mesh nebulization unit now produces aerosol as long as you have set it via the SaHoMa®-II control unit. The light bar runs from left to right and the multifunctional light lights up green constantly.



3 | Performing the inhalation process

When the set time has elapsed, the aerosol production stops. The SaHoMa®-II control unit indicates the end of the inhalation process by two light bars running synchronously from the center to the right and left.



After some time the SaHoMa®-II control unit switches off automatically. The SaHoMa®-II control unit can also be switched off manually by shortly pressing the button.



ATTENTION!

In program 2, there is **no** automatic switch-off when the inhalation solution is completely used up! Therefore, please make sure that you have filled in an adequate amount of inhalation solution for the selected period of time or stop the inhalation process manually after the inhalation solution has been completely nebulized. **Running empty can cause damage to the SaHoMa®-II mesh nebulization unit.**



Advice

The SaHoMa®-II control unit resets after switching off. The desired time must therefore be set again for the next inhalation process.

3.4. Ending the inhalation process

The inhalation process can be ended either by the integrated, automatic switch-off function or by manually switching off the SaHoMa®-II control unit.

Automatic switch-off function in program 1

If the inhalation solution has been completely nebulized in program 1, the aerosol production stops (= automatic switch-off). The SaHoMa®-II control unit indicates the end of the inhalation process by two light bars running synchronously from the center to the right and left. After some time the SaHoMa®-II control unit switches off automatically.



Caution!

To activate the automatic switch-off, the SaHoMa®-II control unit needs to run for **at least two minutes**.



ATTENTION!

In program 2, there is **no** automatic switch-off when the inhalation solution is completely used up!

Manual ending of inhalation

You can also stop the inhalation process in Program 1 and Program 2 by manually switching off the SaHoMa®-II control unit. To do this, shortly press the button until the multifunction light of the SaHoMa®-II control unit goes out.

3 | Performing the inhalation process

3.5. Putting down the SaHoMa®-II inhalation mask

After finishing the inhalation process, take off the SaHoMa®-II inhalation mask with accessories from your horse as follows:

First loosen the SaHoMa®-II fastening strap by opening both quick fasteners. Then take off the SaHoMa®-II inhalation mask with SaHoMa®-II sealing ring and afterwards remove the SaHoMa®-II fastening strap from the horse's head.

Before you put down the SaHoMa®-II inhalation mask, it is necessary to remove the SaHoMa®-II control unit and the SaHoMa®-II mesh nebulization unit. So open the SaHoMa®-II protection cover and remove both components.



ATTENTION!

Never place the SaHoMa®-II inhalation mask with the SaHoMa®-II control and mesh nebulization unit as shown below, as this may cause residues of the inhalation solution to enter the SaHoMa®-II control unit and possibly cause liquid damage.



Now clean the individual components as described in **chapter 4 „Cleaning and storing the SaHoMa®-II inhalation set for horses“**.

3.6. Inhalation process at cold temperatures

The batteries of almost all battery-operated devices, such as smartphones, reduce their power output in winter at low temperatures.

The SaHoMa®-II inhalation set for horses with its components is not protected against this either. In addition, especially medications can change their viscosity at cold temperatures and become more viscous. If temperatures are too cold, the above mentioned points can cause the nebulization process to deteriorate and therefore last longer than usual. For a smooth inhalation process in winter, please follow our tips on storage and use of the SaHoMa®-II inhalation set for horses:



Storage tips

- The more fully the battery is charged, the better the power output. Therefore in winter it is better to recharge the SaHoMa®-II control unit more often and preferably keep it above a capacity of 70%.
- Do not leave the SaHoMa®-II inhalation set for horses open in the stable in winter. Ideally store it in a separate, heated room.
- We particularly recommend storing the SaHoMa®-II control unit indoors at room temperature to avoid rapid discharge and to ensure constant performance.
- To avoid problems during nebulization, we also recommend storing the SaHoMa®-II mesh nebulization unit and the inhalation solution at room temperature.



Tips for usage

- Keep the SaHoMa®-II control unit, the mesh nebulization unit and the inhalation solution as warm as possible on the way to the horse, e.g. using a hot-water bottle. You can also carry the inhalation solution in your pocket, for example.
- The inhalation process itself can be carried out as usual; no further protective steps are necessary.
- After the inhalation process, we recommend that you clean the components at room temperature, dry and store them there until the next use.

4

Cleaning and storing the SaHoMa-II inhalation set for horses

A thorough cleaning of the SaHoMa®-II inhalation set for horses is important in order to carry out hygienic inhalation processes and avoid the risk of infection. For cleaning, disassemble the SaHoMa®-II inhalation set for horses into its individual components and proceed as described in the following chapters.

4.1. Cleaning the SaHoMa®-II control unit

Wipe the SaHoMa®-II control unit with a very well wrung cloth. Then dry the SaHoMa®-II control unit completely with a dry cloth or let it air dry on an absorbent surface.



ATTENTION!

The SaHoMa®-II control unit is not waterproof! Neither the charging socket nor the connections for the SaHoMa®-II mesh nebulization unit may come into contact with water or other liquids! Therefore, please make sure that these sockets are always dry and that no water settles there during cleaning!



Caution!

1. Do not immerse the device in water or other liquids.
2. Place the device so that it cannot fall into water.
3. Do not use the device if it has fallen into water.
4. Do not use the device while bathing.
5. Do not use the device near flammable materials.
6. Never operate this device when
 - a) the power cord or plug is damaged.
 - b) the device does not function properly.
 - c) the device has been dropped or damaged.

4.2. Cleaning the SaHoMa®-II mesh nebulization unit

The SaHoMa®-II mesh nebulization unit should be cleaned **after each inhalation process**. The SaHoMa®-II inhalation set for horses contains the care and basics set for this purpose. This should facilitate the cleaning of the SaHoMa®-II mesh nebulization units. Use the dosage bottle with distilled water for cleaning after each inhalation process. In addition, **cleaning with the contained concentrated detergent** is recommended as soon as the performance of the SaHoMa®-II mesh nebulization unit decreases noticeably.

Cleaning the SaHoMa®-II mesh nebulization unit after each inhalation process

1. Fill the SaHoMa®-II mesh nebulization unit with approx. 2 ml distilled water from the dosing bottle.
2. Shake the SaHoMa®-II mesh nebulization unit and pour out the distilled water.
3. Fill the SaHoMa®-II mesh nebulization unit again with approx. 1 ml distilled water.
4. Start the SaHoMa®-II control unit and wait until the filled, distilled water has been completely nebulized. Then switch off the SaHoMa®-II control unit.
5. Let the open SaHoMa®-II mesh nebulization unit air dry on an absorbent surface. Make sure that no residual liquid can run back onto the membrane.



ATTENTION!

Please make sure that the cable with plug on the SaHoMa®-II mesh nebulization unit does **not** get wet (danger of short circuit)! Never pull directly on the cable as this can cause cable breaks and device failures!



Advice

We recommend to use a **separate SaHoMa®-II mesh nebulization unit** per horse and medication to avoid undesired interactions, cross-contamination or infections.

4 | Cleaning and storing the SaHoMa-II inhalation set for horses

Cleaning the SaHoMa®-II mesh nebulization unit when using brine inhalants

Especially when brine inhalants are used, the SaHoMa®-II mesh nebulization unit may be clogged by salt crystals.



Therefore, proceed as follows when cleaning:

1. Fill approx. 5 ml of distilled water into the medication chamber of the SaHoMa®-II mesh nebulization unit.
2. Set the SaHoMa®-II mesh nebulization unit aside for a few minutes and let the distilled water act on the mesh membrane. During this time it dissolves the salt particles.
3. Empty the SaHoMa®-II mesh nebulization unit completely and refill approx. 1 ml of distilled water.
4. Start the SaHoMa®-II control unit and wait until the distilled water has been completely nebulized. Then switch off the SaHoMa®-II control unit.
5. Let the open SaHoMa®-II mesh nebulization unit air dry on an absorbent surface. Make sure that no residual liquid can run back onto the membrane.



Advice

Cleaning with concentrated detergent makes little sense with persistent salt incrustations. Therefore, these should always be removed as described above before using the concentrated detergent.

Cleaning the SaHoMa®-II mesh nebulization unit with the concentrated detergent

As soon as the performance of the SaHoMa®-II mesh nebulization unit decreases noticeably, cleaning with the concentrated detergent is recommended. Proceed as follows:

1. Fill 2-3 ml of the concentrated detergent into the medication chamber of the SaHoMa®-II mesh nebulization unit.
2. Start the SaHoMa®-II control unit and nebulize a part of the filled concentrated detergent for about one minute. Then switch off the SaHoMa®-II control unit.
3. Now wait approx. 3 minutes so that the concentrated detergent can act on the membrane of the SaHoMa®-II mesh nebulization unit.
4. Then nebulize the remaining concentrated detergent completely as described in step 2.
5. Now fill the SaHoMa®-II mesh nebulization unit with approx. 3 ml distilled water from the dosing bottle. Shake the SaHoMa®-II mesh nebulization unit well and then pour out the distilled water.
6. Finally, nebulize 1 ml of distilled water again.
7. Let the open SaHoMa®-II mesh nebulization unit air dry on an absorbent surface. Make sure that no residual liquid can run back onto the membrane.



ATTENTION!

Always ensure optimum ventilation when nebulizing the concentrated detergent! Although the concentrated detergent is not harmful, it should **not** be inhaled!



Caution!

Only use the concentrated detergent offered by the manufacturer for cleaning.



ATTENTION!

It is strongly recommended **not** to clean the front opening of the SaHoMa®-II mesh nebulization unit by using any object (paper towel, cotton swab, etc.) or finger. This can cause **irreparable** damage to the membrane of the SaHoMa®-II mesh nebulization unit, so it's **no longer working**.



4.3. Cleaning of further SaHoMa®-II components

This subchapter describes how to clean the SaHoMa®-II housing, the SaHoMa®-II protection cover, the SaHoMa®-II filter basket (summarized as "plastic parts"), the SaHoMa®-II fastening strap, the SaHoMa®-II sealing rings and the SaHoMa®-II carrying box.

Cleaning the plastic parts

In case of light soiling, you can clean the plastic parts in lukewarm water and with a gentle detergent. Then dry the plastic parts completely or let them air dry on an absorbent surface.

If the plastic parts are very dirty, it is suggested to clean them in the dishwasher. To do this, place the plastic parts in the dishwasher baskets. Start the dishwasher without using a detergent in a program with temperatures up to a maximum of 60° C.



Our tip: disinfection

We recommend mikrozid® for the disinfection of plastic parts. For other surface disinfectants, please observe the technical information and test it beforehand on an inconspicuous spot.

Cleaning the SaHoMa®-II fastening strap

Light soiling on the SaHoMa®-II fastening strap can be removed with warm water and a small hand brush.

You can also wash the SaHoMa®-II fastening strap in the washing machine if it is very dirty. Place the SaHoMa®-II fastening strap in a padded laundry net and use the delicate cycle with a temperature of 30° C. Use a mild detergent and avoid fabric softeners.

4 | Cleaning and storing the SaHoMa-II inhalation set for horses

Cleaning the SaHoMa®-II sealing rings

The SaHoMa®-II sealing rings can be wiped off with a damp cloth. A change should be made if the SaHoMa®-II sealing rings are heavily soiled or porous.



Caution!

Please do not leave the SaHoMa®-II sealing ring in the sun or near a heater after cleaning, as it may get porous by heat or UV radiation.

Cleaning the SaHoMa®-II carrying box

Remove all accessories for cleaning the SaHoMa®-II carrying box.

You can then clean it with lukewarm water and a mild detergent. Then dry the SaHoMa®-II carrying box completely or let it air dry.

4.4. Storing the SaHoMa®-II inhalation set for horses

After cleaning, the SaHoMa®-II inhalation set for horses has to be properly stowed in the corresponding SaHoMa®-II carrying box.

Especially during the first inhalation processes and to establish a routine, it makes sense to exactly follow the individual steps described in these instructions for use. In this case, stow the SaHoMa®-II inhalation set for horses after cleaning, disassembled into its individual parts in the SaHoMa®-II carrying box.

As soon as you are familiar with the use of the SaHoMa®-II Inhalation set for horses and also the horse has got used to the inhalation, you do not have to disassemble the SaHoMa®-II inhalation set completely any more, but can stow it already assembled for the next inhalation. Therefore, proceed as follows:

After cleaning all components, first insert a SaHoMa®-II filter membrane into the SaHoMa®-II filter basket and attach it to the SaHoMa®-II housing. You can also place the cleaned SaHoMa®-II sealing ring in the designated place of the SaHoMa®-II housing. Additionally, attach the SaHoMa®-II fastening strap to the SaHoMa®-II housing and stow it in there. Finally, you can slide the SaHoMa®-II protection cover on without having it completely snap into place. When starting the next inhalation process, you only have to slide on the SaHoMa®-II control unit and attach a filled SaHoMa®-II mesh nebulization unit.



ATTENTION!

Always disconnect the SaHoMa®-II control unit and the SaHoMa®-II mesh nebulization unit from the SaHoMa®-II inhalation mask after each inhalation process.

We strongly recommend to protect the SaHoMa®-II control unit from any ingress of moisture by storing it separately from the remaining components, e.g. in a liquid-repellent Zipper® bag, and stowing it with it in the SaHoMa®-II carrying box.

For protection, we also recommend to store only completely dry components in the SaHoMa®-II carrying box in order to avoid (moisture) damage to the individual components.

5

Determining the battery capacity and charging the SaHoMa-II control unit

The SaHoMa®-II control unit is equipped with an integrated lithium polymer battery that needs to be recharged from time to time. To check the battery capacity, the SaHoMa®-II control unit is equipped with a charge indicator.

5.1. Determining the battery capacity

To determine the battery capacity, shortly press the button of the SaHoMa®-II control unit.



The light bars first rise to 100 % and then fall back to the actual battery capacity. One light bar corresponds to a battery capacity of 10 %.



This display appears for approx. 2 seconds and then disappears again. The display shown above shows 8 light bars, which corresponds to a battery capacity of 80%.

5.2. Charging the SaHoMa®-II control unit

If the SaHoMa®-II control unit shows a battery capacity of 30 % or lower, we recommend charging the SaHoMa®-II control unit, otherwise the remaining capacity may not be sufficient for a complete inhalation process. In addition, the battery capacity may also affect the quality of the inhalation process.

To charge the SaHoMa®-II control unit, connect it to the SaHoMa®-II power cord and then with the 230 VAC power supply (socket).



The charging process of the lithium polymer battery starts. As long as the lithium polymer battery of the SaHoMa®-II control unit is charged, the multifunctional light flashes green.



The charging time is a maximum of six hours, depending on the initial capacity.

5 | Determining the battery capacity and charging the SaHoMa-II control unit

When the lithium polymer battery of the SaHoMa®-II control unit is fully charged, the multifunctional light will stay permanently green.



Then disconnect the SaHoMa®-II power cord from the SaHoMa®-II control unit and the 230 VAC power supply.



ATTENTION!

To avoid damage to the SaHoMa®-II control unit, only use the supplied original SaHoMa®-II power cord. Never use a damaged or defective SaHoMa®-II power cord! In this case please contact the manufacturer.



Caution!

The SaHoMa®-II control unit may only be operated via the internal rechargeable battery (lithium polymer battery), but not via the SaHoMa®-II power cord and the 230 VAC power supply (socket).



Our tips for charging

When the lithium polymer battery is fully charged, charging stops automatically to prevent the battery from "overcharging". Even if the SaHoMa®-II control unit is still connected to the SaHoMa®-II power cord and socket, no further charging takes place.

To avoid a deep discharge we recommend to recharge the SaHoMa®-II control unit meanwhile, if it is not used for a longer period of time.

Tips for long-life lithium polymer batteries:

- Hold the lithium polymer battery in an optimal charge state between 30 % and 70 %.
- Do not recharge at a charge level above 70 %.
- Fully recharge at a charge level below 30 %.
- A complete discharge before each recharge is not necessary.
- Do not use or charge the lithium polymer battery intensively in hot or cold conditions; avoid extreme temperatures.

6

FAQ & self-help

6.1. Frequently Asked Questions (FAQ)

Which inhalation solutions can be nebulized with the SaHoMa®-II inhalation set for horses?

Please use only inhalation solutions that are approved for inhalation or have been tested and approved by us. In case of doubt, please read the technical information of the medication or ask your veterinarian. You will find a list of all the active ingredients we have tested in the Download Center on our website. The list is updated from time to time and should therefore be downloaded regularly. If you have any questions about the nebulizable drugs, please do not hesitate to contact us.

Can I use inhalation solutions I have produced by myself?

We recommend professionally manufactured inhalation solutions and ask you to use these only. The use of self-made inhalation solutions is at your own risk, as we do not know the ingredients and mixing ratios!

Where can I find information about NEBU-TEC and the products and where can I buy the products and accessories?

Our service staff will be happy to assist you by telephone at +49 (0) 6022 - 610 62 -0 or by e-mail to info@nebu-tec.de. Please also visit our website at <http://www.nebu-tec.de>. Further information can be found in the Download Center on our website.



All articles mentioned in these instructions for use can be ordered by telephone at +49 (0) 6022 610 62 -0 or via our online shop at <http://shop.nebu-tec-shop.de>.

What should I do if I have a complaint or need a repair?

*All information on Service & Repair can be found in **Chapter 8 "Service & Repair"**. For repairs, please use our repair form, which you can request by e-mail or download from our Download Center on the website.*

6.2. Troubleshooting

If you experience problems while using the SaHoMa®-II inhalation set for horses, the following table can help you to find the causes and eliminate them.

Error	Possible Causes / Elimination
 <p>The display shows a light bar, which is on the left and the multifunctional light flashes alternately red and green.</p>	<p>Possible Causes:</p> <ul style="list-style-type: none"> - The SaHoMa®-II mesh nebulization unit has reached the end of its lifespan - No SaHoMa®-II mesh nebulization unit is connected - There is a cable break in the SaHoMa®-II mesh nebulization unit - The battery capacity is too low for inhalation <p>Elimination:</p> <ul style="list-style-type: none"> - Check the connection of the SaHoMa®-II mesh nebulization unit and the SaHoMa®-II control unit (<i>chapter 2.8</i>) - Replacing the old SaHoMa®-II mesh nebulization unit with a new one (<i>chapter 9</i>) - Charging the SaHoMa®-II control unit (<i>chapter 5.2</i>)
 <p>The display shows a light bar, which is on the right and the multifunctional light flashes alternately red and green.</p>	<p>Possible Causes:</p> <ul style="list-style-type: none"> - Increased power consumption of the SaHoMa®-II mesh nebulization unit <p>Elimination:</p> <ul style="list-style-type: none"> - To protect the electronic of the SaHoMa®-II control unit, this SaHoMa®-II mesh nebulization unit has to be disposed or used in program 2 only (<i>chapter 3.3</i>) <p>ATTENTION: Further use in program 1 can cause damage to the SaHoMa®-II control and mesh nebulization unit!</p>

Error	Possible Causes / Elimination
The inhalation times are noticeably longer and there is no or only a small aerosol output .	<p><u>Possible Causes:</u></p> <ul style="list-style-type: none"> - Dirty or clogged membrane of the SaHoMa®-II mesh nebulization unit - Mechanically damaged membrane of the SaHoMa®-II mesh nebulization unit (e. g. in case of improper handling) - The end of the lifespan of the SaHoMa®-II mesh nebulization unit has been reached or exceeded - The room or ambient temperature is below 10° C <p><u>Elimination:</u></p> <ul style="list-style-type: none"> - Cleaning the SaHoMa®-II mesh nebulization unit (<i>chapter 4.2</i>) - Replacement of the SaHoMa®-II mesh nebulization unit (<i>chapter 9</i>) - Please wait approx. 30 minutes until the system has adjusted to room temperature and only fill in and nebulize inhalation solutions with room temperature.
The SaHoMa®-II control unit switches off unintentionally during the inhalation process despite a remaining residual quantity.	<p><u>Possible Causes:</u></p> <ul style="list-style-type: none"> - Air bubbles on the membrane of the SaHoMa®-II mesh nebulization unit - Use of a foaming medication suggesting a filling in form of foam residues <p><u>Elimination:</u></p> <ul style="list-style-type: none"> - Light tapping of the SaHoMa®-II mesh nebulization unit to loosen the air bubbles; if necessary restart the SaHoMa®-II control unit - Proper dilution of foaming medications according to the list of medications; nebulization in program 2 under constant observation with manually switching off the SaHoMa®-II control unit.

Error	Possible Causes / Elimination
Charging the SaHoMa®-II control unit is not possible.	<p><u>Possible Causes:</u></p> <ul style="list-style-type: none"> - Defective SaHoMa®-II power cord or defective plug of the SaHoMa®-II power cord - No voltage at the socket used - Defective charging socket <p><u>Elimination:</u></p> <ul style="list-style-type: none"> - Use of another socket - Check the plug connection at the SaHoMa®-II control unit - Otherwise send in for inspection/repair



Important Advices

In all other cases or in case of uncertainty, please contact our service staff who will be happy to help you:

+49 (0) 6022 - 610 62 -0.

Please note that in the case of a repair, you will have to complete the repair form and send it to us with all the necessary components.

7

Technical data

7.1. Technical data of the SaHoMa®-II inhalation set for horses

Technical data of the SaHoMa®-II control unit

Dimensions (L x W x H) 115 x 85 x 70 mm

Weight 215 g

Power supply types battery operation

Power cord 110 - 230 V AC / 1,5 A

Battery lithium polymer battery / 11,1 V DC / 1130 mAh

Electrical protection class II Type B

Technical data of the SaHoMa®-II mesh nebulization unit

Dimensions (L x W x H) 55 x 30 x 75 mm

Weight 25 g

Maximum filling quantity 15 ml

For further information about performance and particle size please refer to **chapter 7.2 "Aerosol delivery rate and aerosol spectrum"**.

Technical data of the SaHoMa®-II housing

Dimensions (L x W x H) 275 x 250 x 325 mm

Weight 590 g

Material specification Makrolon®

7.2. Aerosol delivery rate and aerosol spectrum

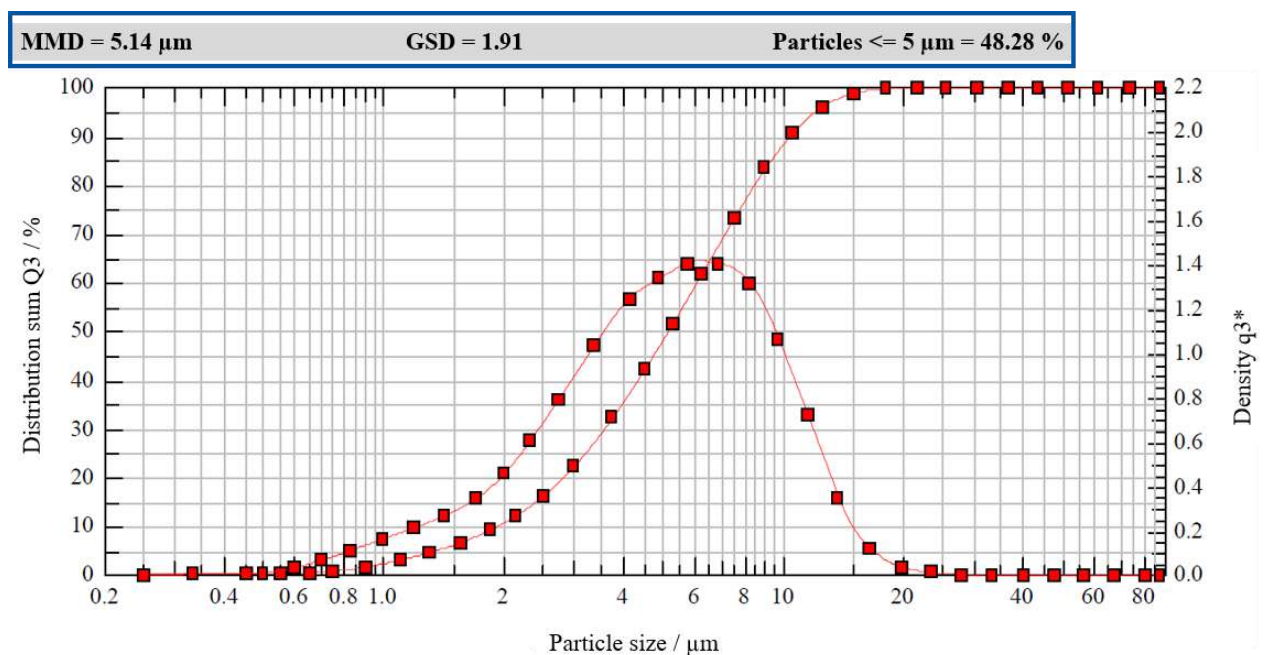
When using the SaHoMa®-II control unit in connection with the SaHoMa®-II mesh nebulization unit, the average **aerosol delivery rate** is 0.8 ml isotonic saline solution (NaCl) 0.9 % per minute.

When using the SaHoMa®-II control unit in combination with the SaHoMa®-II mesh nebulization unit (test medium: isotonic saline solution (NaCl) 0.9 %), the **aerosol spectrum** was determined as follows:

Determination of the aerosol spectrum using a laser diffractometer

(HELOS VARIO KF)

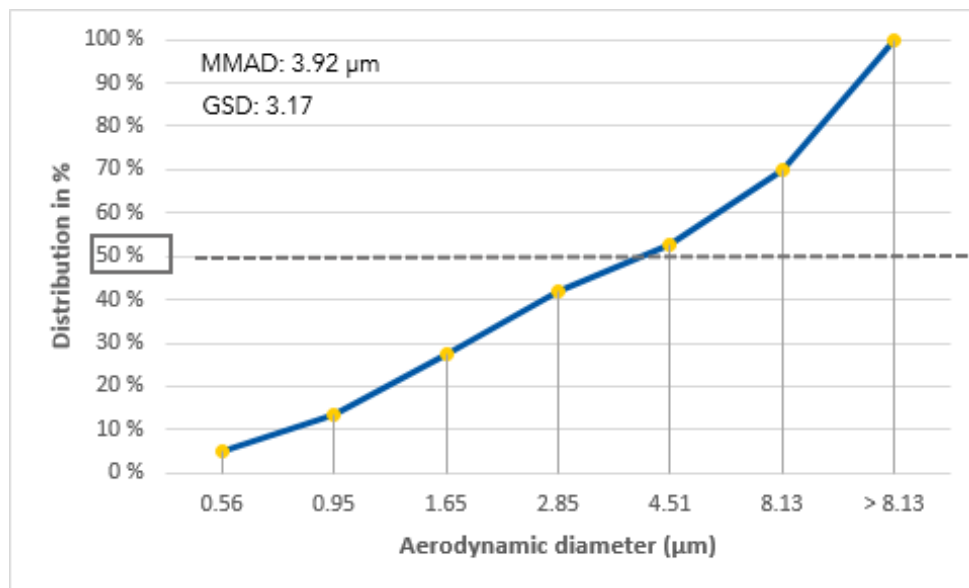
The average particle size is **5.14 μm MMD** with a GSD of 1.91. **48.28 %** of the particles are $\leq 5 \mu\text{m}$.



Determination of the aerosol spectrum using a cascade impactor (NGI)*

The particle size is **3.92 μm MMAD** with a GSD of 3.17. **42.64 %** of the particles are between 1.5 and 8 μm .

* The determination of the aerosol spectrum using a cascade impactor (NGI) was carried out by the Fraunhofer Institute for Toxicology and Experimental Medicine ITEM in Hanover (Germany).



Advice

These are an exemplary measurements of a representative sample.

MMD

for Mass Mean Diameter [µm]

MMAD

for Mass Median Aerodynamic Diameter [µm]

GSD

Geometric Standard Deviation

In the Service Center on our website www.nebu-tec.de you will find all kinds of information worth knowing about this and other topics relating to inhalation. All information is written by veterinarians in a simple and understandable way and kept in a short form in order to support you in the best possible way during this time.

7.3. Operating conditions

In the following environmental conditions, the proper operation of the components as well as the specified nebulizer performance and aerosol spectrum are guaranteed:

Ambient temperature	+10° C to +40° C; 20° C optimally
Relative air humidity	25 % to 75 %
Air pressure	450 hPa to 1100 hPa

Please note that inhalation solutions intended for nebulization should also be at room temperature. If the ambient temperature is too low (< 10° C) or too high (> 40° C), the nebulizer performance and the aerosol spectrum of the SaHoMa®-II inhalation set for horses can no longer be guaranteed.

For tips on using the SaHoMa®-II inhalation set for horses at cold temperatures, please read **chapter 3.6 “Inhalation process at cold temperatures”**.

7.4. Transport and storing conditions

In the following environmental conditions, the transport and storage of the components can take place without causing damage to them or the components themselves representing a source of danger:

Ambient temperature	-10° C to +50° C
Relative air humidity	25 % to 75 %
Air pressure	450 hPa to 1100 hPa

The components must be stored and transported away from direct sunlight.

Do not store the components in damp rooms or transport them together with damp objects. In the event of extreme fluctuations in the ambient temperature, the functionality of the components may be impaired by condensation moisture.

8

Service & Repair

Do you have a product that does not work properly or is damaged?

Your satisfaction is very important to us. For a fast processing of your repair we ask you to follow our instructions carefully.

If one of your ordered products does not function properly or is damaged externally, we ask you to first read **chapter 6.2 "Troubleshooting"** to see whether you can correct the error by yourself.

If it is not possible to eliminate the error by yourself, we recommend to contact us by telephone as soon as possible. We will then try to find a solution together with you.



Advice

Our service staff will be happy to assist you during our opening hours (Mon - Thu from 8 am to 5 pm, Fri from 8 am to 1 pm) by telephone under +49 (0) 6022 - 610 62 -0 or via E-Mail to info@nebu-tec.de.

If a return of the item is unavoidable, please use our repair form for repairs, which you can request by E-Mail or download in our Download Center on the website. Here you will also find information on how to proceed.



Our service for you!

Can't interrupt your horse's inhalation therapy?
Ask us for a replacement device!

9

Information on handling consumables; lifespan

In this chapter, we refer you to the lifespan of the individual consumables when used as intended. Provided that the instructions for use have been observed, the intended use corresponds to **one inhalation session per day with 15 ml isotonic saline solution 0.9 %**.



Intended use

= one inhalation session per day with 15 ml isotonic saline solution 0.9 %

SaHoMa®-II mesh nebulization unit

When used as intended, the typical lifespan of the SaHoMa®-II mesh nebulization unit is 30 days.

SaHoMa®-II filter membranes

When used as intended, the typical lifespan of the SaHoMa®-II filter membranes is one day. We recommend renewing the SaHoMa®-II filter membrane just like a handkerchief, depending on the degree of soiling and frequency of use. The SaHoMa®-II filter membranes are **not** designed for cleaning.

If the end of the lifespan of the respective consumable has been reached, a replacement of this component is recommended. The lifespan of the components may change, if they are used for purposes other than their intended purpose or if a medication is nebulized. When using medications, please note the list of all active ingredients tested by us, which you can download from the Download Center on our website or request from us at any time.



Advice

Consumables are subject to normal wear. The progress of wear depends on various factors (such as inhalation frequency and quantity). However, normal wear due to age or usage does not constitute a defect and therefore does not constitute any warranty or guarantee rights. Please note that consumables can't be repaired!

10

Manufacturer's Guarantee

NEBU-TEC (manufacturer) grants end customers (means consumers) a temporary manufacturer's guarantee under the following conditions and to the extent described. The manufacturer's guarantee applies in addition to the legal warranty.

Our products are quality products manufactured in Germany. The used materials have been carefully selected and, like the production process, are under constant control. Therefore we guarantee that our products do not show any material or processing defects when used as intended.

In the exceptional event of a defect, we will repair, replace or refund the component at our discretion, giving priority to repair. Replacement or repair does not constitute a new guarantee. All exchanged components or old devices become property of NEBU-TEC.

Within the scope of this guarantee, only defects that can be proven to be due to a material or manufacturing defect will be remedied. Should a product defect prove not to be covered by this guarantee, the costs incurred shall be borne by the consumer himself. In addition, the consumer shall bear the costs arising from the examination of the product, including any costs for working hours.

The guarantee period starts from the date of purchase. When purchasing our products from one of our distributors, a receipt showing the date of purchase must be presented as proof of purchase.

A **24-month guarantee** applies from the date of purchase for the following products:

- Plastic parts, means SaHoMa®-II housing, protection cover, filter basket
- SaHoMa®-II control unit
- SaHoMa®-II power cord

A **six-month guarantee** applies from the date of purchase for the following products:

- Lithium polymer battery of the SaHoMa®-II control unit

All other items (accessories and consumables) are not covered by the manufacturer's guarantee.

**Caution!**

Consumables are subject to normal wear. However, normal wear due to age or usage does not constitute a defect and therefore does not constitute any warranty or guarantee rights. See also **chapter 9 „Information on handling consumables; lifespan“**.


The guarantee is also **not** granted if




- the product has not been properly used and maintained in accordance with the instructions for use.
- there is damage due to external influences such as water.
- there is damage due to intentional or deliberate damage, negligence or carelessness.
- the damage was caused by improper transport or by a fall.
- the serial number on the product has been changed, removed or made illegible, or the warranty seal has been broken.
- unauthorized persons have made repairs, adjustments or modifications to the product.

11

Accessories and information

The SaHoMa®-II inhalation set for horses (HM-2000-1) consists of the following articles, which are sold separately as well:

Art.-No.	Qty.	Illustration	Description	
HM-200	1x		SaHoMa®-II control unit	
HM-236	2x		SaHoMa®-II mesh nebulization unit	
202 000 11	1x		Lid fix for mesh nebulization units	
HM-204	1x		SaHoMa®-II power cord	
HM-211-1	1x		SaHoMa®-II housing	
HM-211-2	1x		SaHoMa®-II protection cover	
HM-212	1x		SaHoMa®-II filter basket	

Art.-No.	Qty.	Illustration	Description	
HM-214-5	6x		SaHoMa®-II filter membranes	
HM-214-50				
HM-215	2x		SaHoMa®-II sealing ring for large horses	
HM-217	1x		SaHoMa®-II fastening strap	
HM-218	1x		SaHoMa®-II carrying box	
202 000 01	1x		Care and basics set consisting of: <ul style="list-style-type: none"> • Dose bottle with distilled water (250 ml) • Concentrated detergent for mesh nebulization units (5 ml) • Medication and mixing cup (20 ml) • Isotonic saline solution 0,9 % (4 x 5 ml) 	

Optional accessories

Beneath all components of our SaHoMa®-II inhalation set for horses, there are optional accessories available:

Art.-No.	Illustration	Description	
HM-107		SaHoMa®-II adapter for dosage aerosol	
HM-216		SaHoMa®-II sealing ring for foals	

Art.-No.	Illustration	Description	
HM-219		SaHoMa®-II sealing ring for foals (small)	
202 000 02		Medication and mixing cup with scale (20 ml)	
202 000 05		Dose bottle for 250 ml (unfilled)	
202 000 06		Concentrated detergent for mesh nebulization units (5 ml)	
202 000 07		Concentrated detergent for mesh nebulization units (50 ml)	
202 000 08		Dead-Sea-brine by OxygenConcept	
202 000 09		Available in different concentrations; 1 liter	
202 000 10		Concentration: 1 %	
		Concentration: 2,5 %	
		Concentration: 5 %	

