

ENGLISH COMPRESSOR NEBULIZER LD. Instruction Manual.

POL INHALATOR KOMPRESOROWY LD. Instrukcja obsługi.

HUN KOMPRESSZOROS INHALÁTOR LD. SOROZAT. Használati útmutató.

ROU APARAT DE AEROSOLI CU COMPRESOR LD. Manual de instrucțiuni.

BGР КОМПРЕСОРЕН ИНХАЛАТОР LD. Ръководство за експлоатация.

## 1. FIGURES | ILUSTRAЦІЯ | RAJZOK | FIGURE | ФІГУРИ

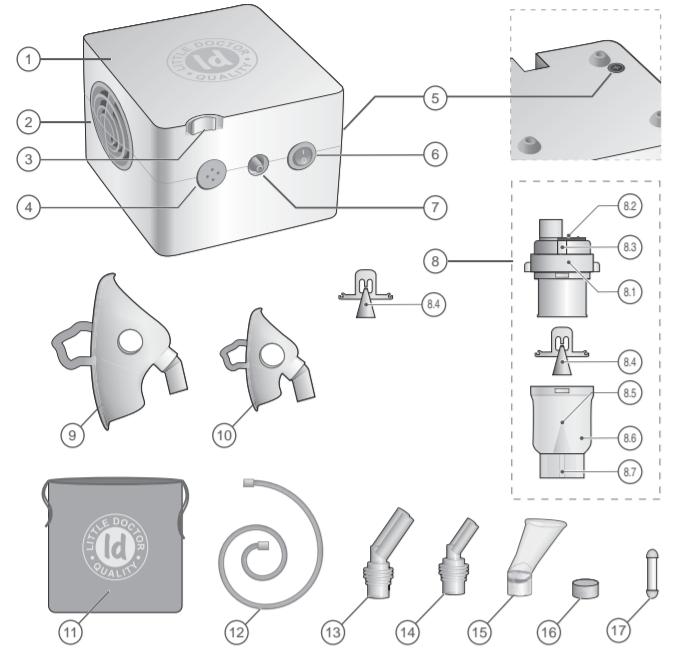


fig.1 / rys. 1 / 1. ábra / fig.1 / рис. 1

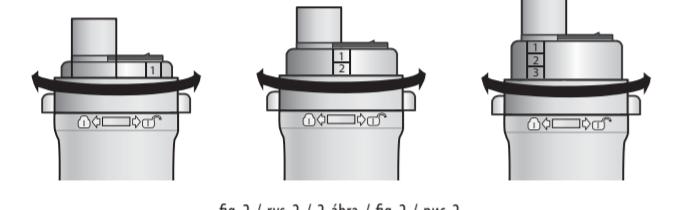


fig.2 / rys. 2 / 2. ábra / fig.2 / рис. 2

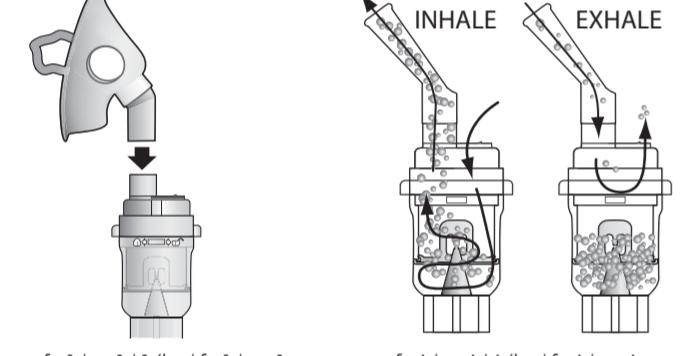


fig.3 / rys. 3 / 3. ábra / fig.3 / рис. 3

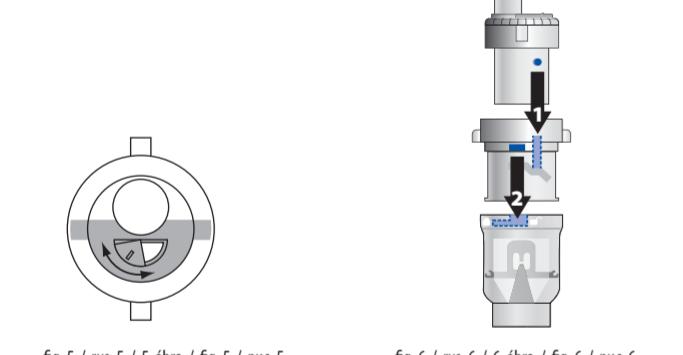


fig.4 / rys. 4 / 4. ábra / fig.4 / рис. 4



fig.5 / rys. 5 / 5. ábra / fig.5 / рис. 5

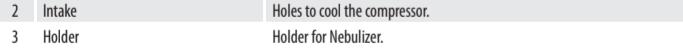


fig.6 / rys. 6 / 6. ábra / fig.6 / рис. 6

## ENG

## 2. MAIN PARTS AND COMPONENTS (Fig.1)

Nº	NAME	DESCRIPTION / INTENDED USE
1	Compressor	Compressor unit of the nebulizer to create air pressure.
2	Intake	Holes to cool the compressor.
3	Holder	Holder for Nebulizer.
4	Socket for the filter	Location of the air filter for the nebulizer. For operating rules and replacement procedures, see Section «10. Maintenance, Storage, Repair, and Disposal».
5	Socket for the fuse	Fuse 250 V. Consumable material. For the replacement procedure, see Section «15. TROUBLESHOOTING TIPS».
6	Power switch	Tumbler I/O-power switch on/off.
7	Connector of the compressor	Compressor fitting to connect an inhalation tube.
8	LD-N107 Nebulizer (including LD-N008 Inhalation Baffle)	Chamber for aerosol formation from an inhalation solution. Consumable material.
9	Part of the nebulizer	Part of the nebulizer.
10	Nebulizer valve	Nebulizer valve to adjust the airflow.
11	Code number	It shows the mode number of the nebulizer.
12	LD-N008 Nebulizer	Inhalation baffle. Consumable material.
13	Nozzle	Tapered hole to create a thin air jet.
14	Bottom part of the nebulizer	Part of the nebulizer (for inhalation solution with a location for the baffle). Fitting to connect an inhalation tube.
15	Nebulizer connector	Adult inhalation mask. Consumable material.
16	LD-N041 Adult Mask	Adult inhalation mask. Consumable material.
17	LD-N040 Child Mask	Child inhalation mask. Consumable material.
18	Accessory bag	Accessory bag.
19	LD-N051 Inhalation Tube	Inhalation tube. Consumable material.
20	LD-N053 Nebulizer	Adult inhalation nozzle. Consumable material.
21	LD-N059 Nebulizer	Child inhalation nozzle. Consumable material.
22	LD-N022 Mouthpiece	Inhalation mouthpiece. Consumable material.
23	LD-N055 Inhalation Filter	Air filter for the nebulizer. Consumable material.
24	Fuse 250V	Spaner type 5 x 20 Consumable material.

## 3. NEBULIZER THERAPY - WHAT IS IT?

Nebulizer is a device for formation and spraying of aerosols. The word "nebulizer" is derived from the Latin word "nebulus" (fog cloud) and was first used in 1874 for a device that turns a liquid substance into an aerosol for medical purpose. One of the first portable "aerosol apparatus" was created by J. Sales in Paris in 1859. The first nebulizers were used as steam jet energy sources and were applied for inhalation of vapors of resins and antiseptics by tuberculosis patients. Presently, the term "inhaler" is often used instead of "nebulizer". The purpose of the nebulizer therapy is to quickly deliver to the respiratory passages a therapeutic dose of a preparation in aerosol form. Continuous supply of aerosol allows, within several minutes, creating high concentration of a medicine in the upper and lower respiratory passages and lungs, with low probability of any side-effects. Respectively, effective

bronchodilation (bronchi expansion) is reached, and the need for hospitalization is eliminated or the hospital stay is reduced. Little Doctor International (S) Pte. Ltd. offers you to use inhaler LD-213C, whose distinctive features are the possibility to use a wide range of medicines, low inhalation solution residual volume, and reliable and simple use. We thank you for your choice.

## 4. GENERAL INFORMATION

Compressor nebulizer LD is designed for treating the diseases of respiratory passages and lungs by medicine solution aerosols in clinic. This instruction Manual is designed to assist the user in safe and effective operation of the Compressor Nebulizer LD. Use this instruction Manual to learn how to use the device. Read and understand the whole Instruction Manual. Use the device for any other purposes. Read and understand the whole Instruction Manual. Functionally, the device consists of an air compressor and nebulizer (aerosol formation chamber). The air compressor, on/off power switch and air filter are united in one casing. From the air compressor, the compressed air is fed through a pipe to the nebulizer, where aerosol is formed. For cooling the compressor, air is force-fed into the device's casing.

## 5. INDICATIONS FOR USE

The LD compressor nebulizer is designed for the treatment of respiratory diseases such as rhinitis, pharyngitis, laryngotracheitis, acute and chronic bronchitis, bronchial asthma.

6. CONTRAINDICATIONS

The LD compressor nebulizer is contraindicated for use if there are malignant neoplasms, systemic blood diseases, severe general exhaustion, stage III hypertension, pronounced atherosclerosis of the cerebral vessels, disease of the cardiovascular system in the stage of decompen-sation, nosebleeds, hemoptysis, fever (body temperature above 38 °C), acute pulmonary edema, acute pulmonary hypertension, hyperemia of the mucous membranes of the respiratory tract, tonsillitis, pleurisy, bronchitis with frequent cough, hypotension, severe convulsive seizures, psychosis with symptoms of psychomotor agitation, alcohol or drug addiction, individual intolerance to procedures, general severe patient status. If the patient has recently undergone dental surgery or if the patient is undergoing treatment related to problems in the mouth or throat, it is necessary to consult a doctor before use of the device.

## 7. SIDE EFFECTS

The use of the LD compressor nebulizer has no side effects if used with the observance of precautions.

## 8. PRECAUTIONS

**Important information!** For correct work of the nebulizer it is recommended to use all types of standard inhalation liquid in liquid form for nebulizer therapy produced by pharmaceutical companies.

**Solutions for inhalation should be prepared under sterile conditions using 0.9% sodium chloride as a solvent.**

**Attention!** Do not use (even boiled) or distilled water to prepare the inhalation solution. The dishes in which the solution is prepared should be pre-disinfected by boiling.

**Type of inhalation:** by mouth, using a mouthpiece or through the nose, using a mask or a nozzle, the frequency, the inhalation solution used and the dosage must be determined by YOUR DOCTOR.

**Place the device on a flat surface for use.**

**To avoid overheating of the device, do not block the air inlet.**

**Children must use the device under the supervision of an adult.**

**If you are not using the device, disconnect it from the mains by pulling out the plug from the socket.**

**Do not touch the power plug with wet hands.**

**Do not place the device in water, under a water drain or in a shower stall. Do not use when bathing.**

**Do not touch the device if it has fallen into water. Unplug it immediately.**

**Make sure the power cord is not damaged before use.**

**The power cord must not touch hot or heated surfaces.**

**If the device does not work, see section «15. TROUBLESHOOTING AND ELIMINATION».**

**Use specified accessories specified for this model and described in this manual.**

**This device cannot be used for inhalation anesthesia and artificial ventilation of the lungs.**

**Do not insert foreign objects into the openings of the device.**

**The device is not intended for outdoor use.**

## 9. USING THE DEVICE

## Preparing the device for inhalation.

**Important!** Before using the device for the first time, it must be thoroughly cleaned, as described in paragraph 1 of Section «10. Maintenance, Storage, Repair, and Disposal».

1. Place the nebulizer in front of the table. Make sure that the device is turned off (the power switch is in the "0" position) and the power cord is not plugged in.

2. LD-N107 Nebulizer is used for respiratory inhalation (see paragraph 8 of the «2. Main Parts of the Device» section).

3. Set Mode 1, 2 or 3 of the nebulizer with the baffle inside by turning the nebulizer cap (Fig. 2). Nebulizer Mode 1 is effective for the treatment of lower airways. Mode 2 affects the entire respiratory system. For the best therapeutic effect on upper airways, turn Mode 3.

4. Remove the upper part of the nebulizer by turning it counter-clockwise. Pour the nebulizer solution into the bottom part of the nebulizer. The dosage should not exceed the recommended by your doctor. The body of the device has marks to determine the volume of solution in the nebulizer. The maximum chamber volume is 10 mL.

5. Attach the upper part to the nebulizer by turning it clockwise as it will go.

6. Depending on the type of inhalation, attach either a mouthpiece, a nosepiece, or a mask to the upper part of the nebulizer (Fig. 3). Hold the nebulizer vertically or place it on the body of the device using the nebulizer holder.

**Important!** Each patient is recommended to use an individual mouthpiece, mask, and/or nosepiece.

7. Connect the power cord to mains by inserting the plug into the socket.

8. Connect one end of the inhalation tube to the compressor fitting and the other end to the nebulizer fitting.

9. Turn on the nebulizer by turning the power switch to the "1" position. DEVICE IS READY FOR INHALATION.

## Breath-actuated nebulizer (Fig. 4).

The special design of the nebulizer in the form of chambers connected in a certain way determines different airflow paths during inhalation and exhalation.

When inhaling, this allows you to get an airflow of a higher concentration of aerosol and to reduce the loss of aerosol when you exhale. The effectiveness of inhalation with a breath-actuated nebulizer is greatly increased.

## Performing inhalation.

Your doctor should determine the duration of one treatment session.

Always hold the nebulizer relaxed during inhalation. Breathing should be slow and deep so that the medication fills the lungs well and reaches the deepest parts of the bronchi.

Hold your breath for a short time, then slowly exhale. Do not try to breathe too often. Take pauses if you need them for a break.

**Use of the nebulizer (see paragraph 8.2 of Section «2. MAIN PARTS OF THE DEVICE»).**

Changing the position of the valve (Fig. 4) results in the following:

**A closed valve reduces aerosol formation rates and reduces the airflow into the mouthpiece (nosepiece, mask).**

**An open valve increases the aerosol formation rates and increases the airflow into the mouthpiece (nosepiece, mask).**

**It takes more time to inhale one aerosol volume with the valve closed than with the open one. For the aerosol formation rate at different valve positions, see Section «13. TECHNICAL SPECIFICATIONS».**

**Recommendations for use of the nebulizer valve:**

**Close the valve partially or completely if inhalation is carried out for a child or a person with difficulty breathing. This will make inhalation more comfortable.**

**Open the valve if you need to reduce the inhalation time.**

## Completion of inhalation.

After the nebulizer is used or the inhalation time recommended by your doctor has elapsed, switch off the device by turning the power switch to the "0" position and unplug the power cord from the socket.

After inhalation, breath fresh air for a while to ensure a better therapeutic effect.

When inhaling, this allows you to get an airflow of a higher concentration of aerosol and to reduce the loss of aerosol when you exhale. The effectiveness of inhalation with a breath-actuated nebulizer is greatly increased.

## Performing inhalation.

Your doctor should determine the duration of one treatment session.

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Changing the position of the valve (Fig. 4) results in the following:

**A closed valve reduces aerosol formation rates and reduces the airflow into the mouthpiece (nosepiece, mask).**

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