

**iHerz**<sup>®</sup>

INTELLIGENTE PFLEGE

compressor  
NEBULIZER SYSTEM  
model iWind



## **DEAR IHERZ® COMPRESSOR NEBULIZER OWNER**

Thank you for choosing **iHerz®** Compressor Nebulizer model iWind. We are sure that having appraised worthily the high quality and reliability of this device you will become a regular user of the products of German trademark **iHerz®**.

Your nebulizer is intended for use in treatment of asthma, COPD and other respiratory ailments in which an aerosolized medication is required during therapy. Aerosol easily and quickly comes to both upper and lower respiratory tracks.

Before starting to use the compressor nebulizer, please, study the user's manual carefully. Following the rules stated in the user's manual will provide for the faultless operation of the compressor nebulizer for a long period of time. For all questions concerning the unit, please, contact service centre of distributor of trademark **iHerz®** in your country.

# INTRODUCTION

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## **What is a nebulizer and how does it work?**

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The compressor nebulizer system is a device that turns a liquid drug into a fine aerosol under the influence of the compressed air. Aerosol contains large and small particles. When breathing the gravity makes the larger particles accumulate on the walls of the upper respiratory passages while the smaller particles have enough time to reach the lower bronchial branches. Therefore the drug comes to all parts of the patient's bronchial tree, including the smallest bronchi and alveoli, and gets into the blood vessels on the walls of the alveoli in big therapeutic doses with tiny or none side effects.

## **What is nebulizing therapy used for?**

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**Nebulizer systems are used by the patients with:**

- acute respiratory diseases,
- obstructive pulmonary disease,
- chronic inflammatory processes in respiratory passages such as chronic bronchitis, bronchial asthma (incl. chronic or unstable ones, exacerbation of asthma), chronic pharyngitis,
- respiratory passages infections,
- abnormalities in secretion quality and secreting in bronchi,
- different types of coughing.

## **What are the advantages of nebulizing therapy?**

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Nebulizing therapy gives a possibility to quickly effect the inflammatory zone by big drug doses which increases the influence of the treatment and reduces the risk of side effects to other organs. Nebulizing therapy is the easiest way of inhalation treatment and it is also an economical means of treatments from the point of view of purposeful use of drug. Aerosol treatment with the help of nebulizing systems can be used for children, adults and infirm patients.

# **BEFORE STARTING TO USE THE UNIT**

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## **Important Safety Information**

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Please read the information in the instruction manual and any other literature included with the product before using the device. It is important to follow all instructions in this manual including Safety instructions. Failure to follow the instructions may result in potentially hazardous situation resulting in serious injury.

- For type, dose, and regime of medication follow the instructions of your doctor or respiratory therapist.
- If you feel anything unusual during use, stop using the device immediately and consult your doctor.
- Clean and disinfect the nebulizer kit, mask, mouthpiece or nosepiece before using them for the first time after purchase.
- If the device has not been used for a long period of time, or if more than one person uses the same device, clean and disinfect the nebulizer kit, mask, mouthpiece or nosepiece before using them.
- Be sure to wash the parts after use, and ensure that they are thoroughly disinfected and dried, and stored in a clean location in a sealed bag.
- Do not store the nebulizer kit parts while there is moisture, medicine, cleaning solution or medication remaining inside.
- Do not use or store the device where it may be exposed to high humidity, noxious fumes, volatile substances, flammable gases, heat sources, corrosive fluids and gases.
- Do not cover the compressor with a blanket, pillow, towel, or any other type of cover during use. Do not block the ventilation slots. Never place the device where the ventilation slots may be obstructed during operation. Keep the air openings free of lint, hair and the like.
- Never place the device on a soft surface, such as a bed or couch, where the ventilation slots may be blocked.
- Do not block the air filter cover.
- Use fresh medication each time, always dispose of any remaining medication after use.
- Do not use in anesthetic or ventilator breathing circuits.
- Do not use attachments not recommended by the manufacturer.
- Do not operate unit in a backpack or carrying bag.
- Never plug, unplug or handle the device with wet hands.
- The compressor and power cord are not waterproof. Do not spill water or

other liquids on these parts.

- Do not immerse the compressor in water or other liquid.
  - Do not operate the device with a damaged power cord or plug.
  - Keep the power cord away from heated surfaces.
  - Do not use while bathing.
  - Do not place or store product where it can fall or be pulled into a tub or sink.
  - Never submerge the unit in water; should this accidentally occur, unplug immediately do not reach for the submerged unit, always unplug first. After removing the unit from water, do not use again, ensure it is returned to an authorized service dealer.
  - The product should never be left unattended when plugged in.
  - Do not use this product with a DC to AC converter, or with any AC voltage and/or frequency other than specified.
  - If necessary, use adapters or extension leads which conform to the safety standards in force, paying attention not to exceed the rated current value and maximum power value indicated on the adapter.
  - The power cord and air tube should be kept away from children, invalids it may cause strangulation hazard.
  - Provide close supervision when this device is used by, on, or near children or invalids, or persons who cannot express their consent.
  - Do not use the device while sleeping or if drowsy.
  - Keep the device and accessories out of the reach of unsupervised infants and children. The device may contain small pieces that can be swallowed and cause choking hazard.
  - Make sure that the parts are attached correctly.
  - Make sure that the air filter is clean. If the air filter has changed color, or has been used on average for more than 60 days, replace it with a new one.
  - Do not tilt the nebulizer kit at an angle of greater than 45 degrees in all directions shake it while in use.
  - Do not use or store the device while the air tube is creased or kinked.
  - Use only original nebulizer parts, air tube, air filter and air filter cover
- The medicine cup can take 10 ml medicine but it is recommended to add no more than 7 ml medicine.
- Do not subject the device or the parts to any strong shocks such as dropping the device on the floor.
  - Do not distort the vaporizer head (baffle), or jab the nozzle of the medication tank with a pin or any sharp object.
  - Do not insert fingers or objects inside the compressor.
  - Do not disassemble or attempt to repair the device there are no user serviceable parts inside.
  - Do not use a microwave oven, dish dryer or hair dryer to dry the device


or the parts.

- Approved for human use only.
- When using the device, the main unit may become hot. Do not touch the main unit for other than necessary operation such as turning off the power while nebulizing.
- To avoid injury to the nose mucosa, do not squeeze the nosepiece into the back of the nose.
- Do not use Ethylene Oxide Gas disinfection or low temperature plasma sterilizer to disinfect the device.
- Always unplug the device from the power outlet after use and before cleaning.
- Plug the device into the appropriate voltage outlet. Do not overload power outlets or use extension cords.
- Do not misuse the power cord.
- Do not wind the power cord around the compressor.
- Changes or modifications will void the user warranty.
- Do not pull the power cord strongly.
- Do not carry the device with the power cord.
- Inspect the device and parts before using them each time, and check that there are no problem. In particular, be sure to check the following:
  - That the nozzle or air tube are not damaged.
  - That the nozzle is not blocked.
  - That the compressor operates normally.
- When using this device, there will be some noise and vibration caused by the pump in the compressor. There will also be some noise caused by the emission of compressed air from the nebulizer kit. This is normal and does not indicate a malfunction.
- Operate the device only as intended. Do not use the device for any other purpose.
- Make sure that the air tube is securely attached to the compressor and nebulizer kit, and does not come loose.
- To completely isolate the device from the power source unplug the plug from the power source.

This product or its accessories should not be disposed of with

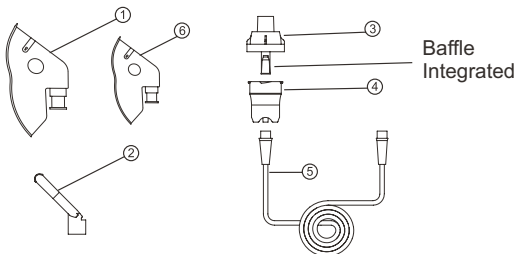


other household wastes at the end of its durable life.

Users are advised to check their local waste disposal guidelines  for correct separation and disposal of the device and accessories

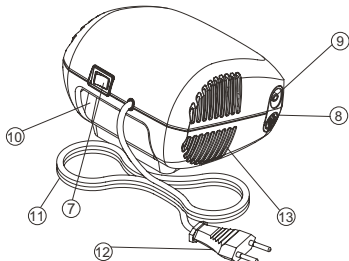
**KEEP THIS INSTRUCTION MANUAL DURING THE WHOLE SERVICE LIFE OF THE UNIT**

## Unit Identification



1. Adult mask
2. Adult mouthpiece
3. Medicine bottle cap with integrated baffle
4. Medicine bottle cup
5. Air tube
6. Child mask

7. Power switch
8. Filter
9. Air-outlet connector
10. Carrying handle space
11. Power cord
12. Power plug
13. Ventilation slot



## CARRYING OUT NEBULIZING THERAPY

### Assembling the Unit operate of the unit

Before initial operation, your nebulizer should be cleaned following clean-

ing instructions, or as recommended by your Physician.

- Make sure the power switch is in the “OFF” position.
- Unwrap power cord.
- Place compressor so that the rubber feet are resting on a level, sturdy surface and upon which the controls can be easily reached when seated. Never block the air openings of the product or place it on a bed or couch where the air openings may be blocked.
- Plug power cord into an appropriate wall outlet.

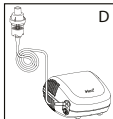
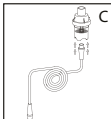
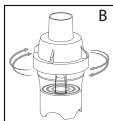
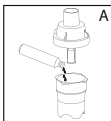


**Compressor/nebulizer must be operated on the specified power source to avoid risk of electric shock and damage to the compressor. See instrument bottom panel for power details.**



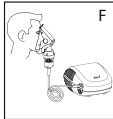
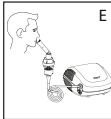
Wash hands. Ensure hands are dry.

- Assemble clean nebulizer parts by placing baffle down in medication cup.
- Open the medicine cup cap and put the medicine from medicine vial into the medicine cup (A). Close the medicine cup cap tightly (B).
- Attach one end of the tube to the medicine cup (C).
- Connect another end of the nebulizer tubing to the compressor air-outlet connector (D).



(NOTE: during high humidity weather conditions, condensation, water build up can occur in the nebulizer tubing).


- Assemble mouthpiece, or mask and T-piece (if applicable) and insert into the top of the nebulizer cap (E, F).
- Press the power switch “ON” position to start the compressor as aerosol being to flow, inhale deeply and slowly, hold & then exhale slowly. Follow instructions as given by your physician. If treatment needs to be interrupted, simply press power switch “OFF”.
- When treatment is complete, turn unit “OFF” by pressing the power switch to the “OFF” position. Unplug the unit from the wall power outlet.






Clean the appliance & accessories as indicated.

- It may happen that during the use of the nebulizer visible humidity deposits form in the connection tube disconnect the tube from the nebulizer and let it dry using the compressor air flow.

 **Some nebulizers are rated for intermittent operations. Please do not operate continuously for more than rated time. See instrument bottom panel for details.**

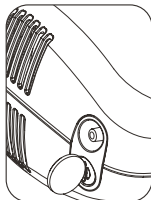
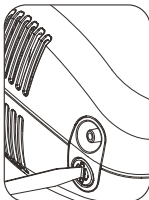
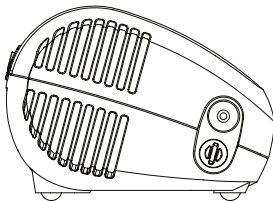
**Allow specified off period for instrument to cool before resuming use.**

- The nebulizer is made with high quality of plastic which is safe for use. However due to variety and continuous evolution of the drugs, the possibility of a chemical interaction cannot be excluded. Once opened, the drug should be used as soon as possible, and prolonged contact between drug and nebulizer should be avoided.

 The use of **essential oils** can cause damage to the Nebulizer.

## Changing the Air Filter

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Filter should be changed every 6 months or sooner if filter discolors.


- Remove filter by turning the filter cover anticlockwise and pulling out of the unit. Discard old filter.
- Replace with a new filter. Additional filters should be purchased from your provider.
- Push new filter into position. Turn the filter cover clockwise to fit in position.
- You can use a small coin or flat screwdriver to open filter.

**Caution:** Do not reuse or wash filter or substitute any other material such as cotton for a air-inlet filter. It will result in compressor damage.

## UNIT MAINTENANCE

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All parts of the nebulizer kit, except tubing, should be cleaned according to the following instructions. Your physician may specify a certain cleaning procedure. If so, follow their recommendations.

 **To prevent possible risk of infection from contaminated medication, cleaning of the nebulizer is recommended after each aerosol treatment. Disinfecting is recommended once a day.**

### Clean after Every Use

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With power switch in the “OFF” position, unplug power plug.

Disconnect tubing from the air-inlet connector and set aside.

Disassemble mouthpiece, or mask from cap. Open nebulizer by turning cap counter clock wise and removing baffle.

Wash all items, except tubing, in a warm water / dishwashing detergent solution. Rinse under warm tap water, remove detergent residue. Allow to air dry.

### Disinfect Daily

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Using a clean container or bowl, soak items for 30 minutes in three parts warm water & one part medical bacterial-germicidal disinfectant available through your provider. With clean hands, remove items from disinfectant solution, rinse under warm tap water, and air dry on clean paper towel.

Store in a zip lock bag.

Keep the outer surface of the tubing dust free by wiping regularly. Nebulizer tubing does not have to be washed because only filtered air passes through it.

**Note: Do not towel dry nebulizer parts, this could cause contamination. It is recommended to replace the medication nebulizer medicine cup once a year or as directed by your doctor.**

The Nebulizer kit is recommended for single patient use only to prevent cross infection.

**To prevent possible risk of infection from contaminated cleaning solutions, always prepare fresh solution, for each cleaning cycle and discard solution after each use.**



**⚠ Clean the nebulizer kit before using for first time after purchase.**

## Compressor Cleaning

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- With power switch in the “OFF” position, unplug power from wall outlet plug.
- Wipe outside of the compressor cabinet with a clean damp cloth to keep dust free.

Do not submerge in water, doing so will result in compressor damage.

## Maintenance

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Electric shock hazard. Do not disassemble compressor cabinet. All disassembly and maintenance must be done by a qualified service provider.

To completely isolate the device from the power source unplug the power plug from the power source.

## Functional test

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- Before use check the parts are connected properly and securely
- The connections are not loose
- There is no damage to the parts
- The nozzle and tube is not blocked or and the compressor operated normally


## Troubleshooting

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<b>Problem</b>	<b>Cause</b>	<b>Remedy</b>
Compressor does not start when the power switch is pressed	Power plug is not plugged into a power outlet	Check that the plug is inserted in a power outlet. Unplug then reinsert the plug if necessary.
	Power is not present in the power outlet socket	Check that there is power in the power outlet, also check the power present is same type as instructed in the machine bottom panel
The device is abnormally loud	Air filter is covered or dirty	Attach the air filter cover correctly
The device is very hot	Compressor are covered, ventilation slots are blocked	Do not cover the compressor with any type of cover during use. Do not block the ventilation slots.
No Nebulization or low nebulization rate, when the power is on and machine is working	No or low medicine in medicine cup	Add the correct amount of medication to the medication tank.
	Baffle missing or not assembled correctly (not applicable in nebulizer bottle with baffle integrated)	Attach the vaporizer head correctly.

	Nebulizer kit is assembled incorrectly	Assemble the nebulizer kit correctly.
	Nozzle is blocked	Make sure that the nozzle is free of blockages.
	Nebulizer kit is tilted at a sharp angle	Make sure that the nebulizer kit is not tilted at an angle of more than 45 degrees.
	The air tube is folded, creased or damaged or blocked	Make sure that the air tube does not contain kinks. Make sure that air tube is free of blockages
	Air filter is dirty	Replace the air filter with a new one.

 Note: If the suggested remedy does not solve the problem, do not try to repair the device. Shut off the device for about 1 hour and then restart the machine. If the problem persists contact your authorized service provider. Do not disassemble the unit yourself, no user serviceable parts inside, risk of electric shock.

 Before servicing by authorized service personnel. To completely isolate the device from the power source unplug the plug from the power source.

## TECHNICAL SPECIFICATIONS

Power	220 V AC, 50Hz
Power max	100 VA
Compressor air output	2.5 bar, 8 LPM approximate
Medicine Bottle capacity	8 ml / max, 2ml - 7ml recommended
Nebulization rate	0.2 ml / min - 0,4 ml / min typical (Weight loss Method)

Particle size (MMAD)	Approx 2-5 $\mu\text{m}$
Aerosol Output // Rate	0.3ml (2ml, 1% NaF) // 0.15ml/min (2ml, 1% NaF)
Noise level (At 1 m )	55 dBA
Operation cycles	30 min on then 30 min. off
Operating requirements	Temperature min. +10°C - max 40°C humidity min. 30-85% RH, Pressure min. 600 hPa, max. 1060 hPa
Storage & transport requirements	Temperature min. -10°C - max 60°C requirements humidity min. 10%, max 95% RH Non condensing, Pressure min. 600 hPa, max. 1060 hPa
Dimension of compressor (L x W x H)	140mm x 146mm x 101mm
Products weight	1.35 Kg approximate
Standard accessories	Compressor nebulizer machine Adult mask Child mask Filter 2 pcs Air tube Medical cup Mouthpiece

\* The specifications and the outer design are subject to change for improvement reasons without previous notice.

## **Electromagnetic compatibility**






This aerosol therapy unit is designed to meet the current requirements for electromagnetic compatibility. However if you suspect that the unit is interfering with the operation of your TV, radio or other electrical appliance, try relocating the unit until the interference ceases. Alternatively try plugging the unit into a different power socket. The manufacturer reserves the right to introduce technical changes. Do not use devices that generate strong electromagnetic fields near this device. It may result in incorrect operation and potentially hazardous situation.







This medical device confirms to EN60601-1-2:2007 standard for electromagnetic immunity and emissions.

Guidance and manufacturer's declaration (electromagnetic emissions)		
The nebulizer intended for use in the electromagnetic environment specified below. The customer or user of the nebulizer must ensure device usage in such an environment.		
Emission tests	Compliance	Electromagnetic Environment - Guidance
Harmonic emissions IEC 61000-3-2	Class A	The nebulizer is suitable for use in any premises, including residential and those that directly connected to the public low-voltage power supply network, which is used to supply homes and buildings.
Voltage fluctuations/ flicker IEC 61000-3-3	Complies	
Emissions RC CISPR 14-1	Complies	Nebulizer is not intended for the accession of other equipment.

This equipment consists only of simple electrical components that do not contain any electronic circuits that generate or use frequencies above 9 kHz, and therefore cannot obstruct or interfere with the devices functioning nearby.

## SYMBOL INFORMATION

SYMBOL	REFERENT
	Refer to the User Manual
	Manufacturer
	Manufacturing date
	Serial number
	Caution, consult accompanying documents

	Not for general waste
	Type B
	European representative
	CE mark
	Keep dry
	Double Insulated

Degree of safety in the presence of flammable anesthetics or oxygen:  
No AP/APG (not suitable for use in the presence of flammable anesthetics or oxygen).

## WARRANTY

This device is guaranteed for 2 years from the date of purchase. The warranty does not cover the accessories supplied with the device and those parts subject to normal wear and tear. The warranty is only valid upon presentation of the warranty card with purchase date and stamp of trade organization.

- Should the unit be damaged due to user misuse or negligence, the manufacturer or authorized dealers shall not be responsible for it.
- All assembly, extension, adjustment or repair of this unit must be performed only by the authorized service center of **iHerz**<sup>®</sup> distributor in your country.
- For repairs or spare parts, please, contact the authorized service center of **iHerz**<sup>®</sup> distributor in your country.