

User Manual

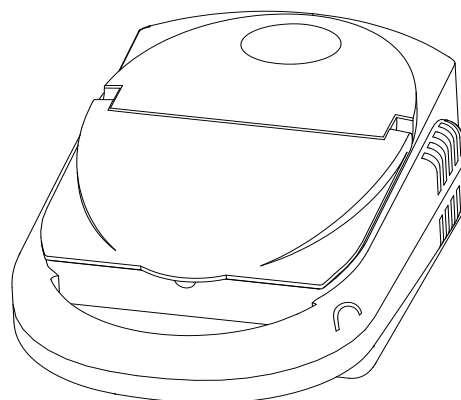
**INSTRUCTION
MANUAL**

Piston Compressor Nebulizer

MODEL: JLN-2305AS

Revision: V1.2

Date: February 05, 2018



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Piston COMPRESSOR NEBULIZER

MODEL NO. : JLN-2305AS

INDEX

1. Introduction -----	Page 3
2. Product Identification -----	Page 4
3. Important Safeguards -----	Page 4
4. Operating Your Compressor Nebulizer -----	Page 6
5. Cleaning -----	Page 7
6. Distinfection-----	page 7
7. Replacement Parts & Optional Accessories-----	Page 8
8. Guidance and Manufacturer's Declaration -----	Page 8
9. Specifications -----	Page 11

1. INTRODUCTION

Thank you for purchasing the HOMED Piston Compressor Nebulizer. It is a compact medical device designed to efficiently deliver physician prescribed medication to the bronchial lung passages. With proper care and use, it will provide you with many years of reliable treatment.

It is intend for use in the treatment of asthma, COPD and other respiratory ailments in which an aerosolized medication is required during therapy. It is single use or reusable for single patient. The device is for pediatric and adult population.

Your Homed Piston Compressor Nebulizer should be used under the supervision of a licensed physician and/or a respiratory therapist. We encourage you to thoroughly read this guidebook to learn about the features of this product. Any use of this product other than its intended use should always be avoided.

2. PRODUCT IDENTIFICATION

Your Piston Compressor Nebulizer comes with the following components:

Compressor (Main Unit)

AC Adapter

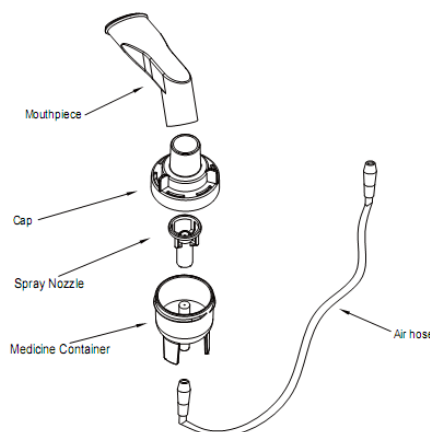
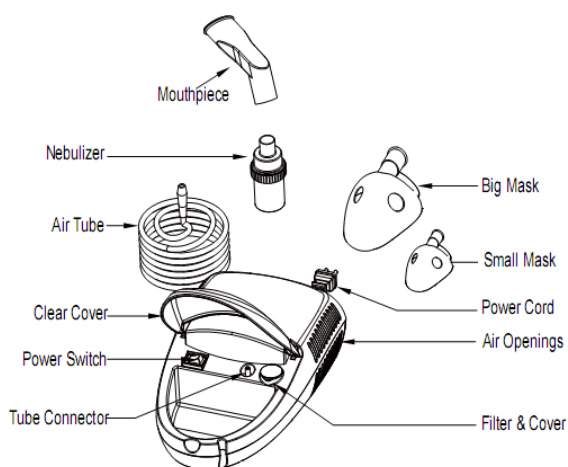
Nebulizer

Air Filter

Air tube

Mouthpiece

Big Mask / Small Mask



3. IMPORTANT SAFEGUARDS

Note: Please read this instruction manual thoroughly before using the product. The following basic precautions are needed when using an electrical product:

Caution: Failure to read and observe all precautions could result in personal injury or equipment damage.

Product cautions:

1. To avoid electrical shock:
 - Do not connect the AC adapter terminal using wire or other metallic conductors.
 - Do not use the compressor (main unit) or AC adapter while they are wet.
 - Keep the unit away from water.
 - Do not use or store the device in humid locations, such as a bathroom. Use the device within the operating temperature and humidity.
 - Use only the AC adapter designed by Homed for this device. Use of any other AC adapter may damage the device.
 - Do not immerse the power cord or the unit in liquid
 - Do not use while bathing
 - Do not reach for a unit that has fallen into water – immediately unplug the unit.
 - Do not overload power outlets. Plug the AC adapter into the appropriate voltage outlet.
2. Never operate the unit if it has any damaged parts (including power cord), if it has been dropped or submersed in water. Promptly send it to a service center for examination and repair.
3. The unit should not be used where flammable gas, oxygen or aerosol spray products are being used.
4. Disconnect the unit from the electrical outlet before cleaning, filling and after each use.

Operating Cautions:

1. Connect this product to an appropriate voltage outlet for your model.
2. Never operate it if this unit has a damaged cord or plug, if it has been dropped, or in any way, into water, if it does not work properly. Return it to a service center for repair.
3. If any abnormality occurs, discontinue use immediately until the unit has been examined and repaired.
4. If you feel anything unusual during use, stop using the device immediately and consult your physician.
5. Do not cover the compressor with a blanket, towel, or any other type of cover during use. This could result in the compressor overheating or malfunctioning.

6. Always unplug the product immediately after use.
7. Never block the air openings of the main unit or place it where the air openings may be obstructed.
8. The compressor and power cord are not waterproof. If liquid spills on these parts, immediately unplug the power cord and wipe off the liquid with gauze or other soft absorbent material.
9. Do not use a cellular phone near the device. It may result in an operational failure.
10. Do not use extension cords. Plug the power cord directly into the electrical outlet.
11. For type, dose, and regime of medication follow the instructions of your licensed physician and/or respiratory therapist.
12. Do not add more than 8ml of medication to the medication cup.
13. Do not use the device if the air tube is bent.
14. Clean and disinfect the nebulizer, air tube, mouthpiece or masks before using them for the first time after purchase.
15. Provide close supervision when this device is used by, on, or near infants, children or compromised individuals.
16. Make sure the air filter is clean. If the air filter has changed color or has been used on average for more than 30 days, replace it with a new one.
17. Make sure the air tube is correctly connected to the compressor and the nebulizer. Air may leak from the air tube during use if not securely connected.
18. Use only Homed authorized parts and accessories. Parts and accessories not approved for use with the device do not perform the expected specification or it may damage the unit.
19. To avoid the medication residue on the face. After nebulization, be sure to wipe the face after removing the optional masks.
20. Do not use the device where the device may be exposed to flammable gas or vapors

Storage Cautions:

1. Do not store the unit under direct sunlight, high temperature or humidity. Store the device within the storage temperature and humidity.
2. Keep the unit out of reach of small children.
3. Always keep the unit unplugged while not in use.
4. Store the device and the components in a clean, safe location.
5. Do not wrap the power cord around the compressor (main unit) and AC adapter.

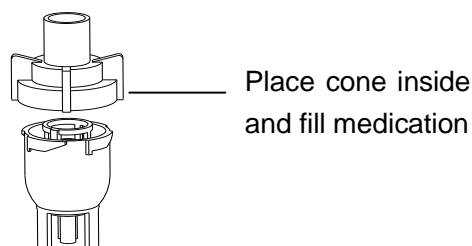
Cleaning Cautions:

1. Do not immerse the unit in water. It may damage the unit.
2. Disconnect the unit from the electrical outlet before cleaning.
3. Clean all necessary parts after each use as instructed in this guidebook.

4. OPERATING YOUR COMPRESSOR NEBULIZER

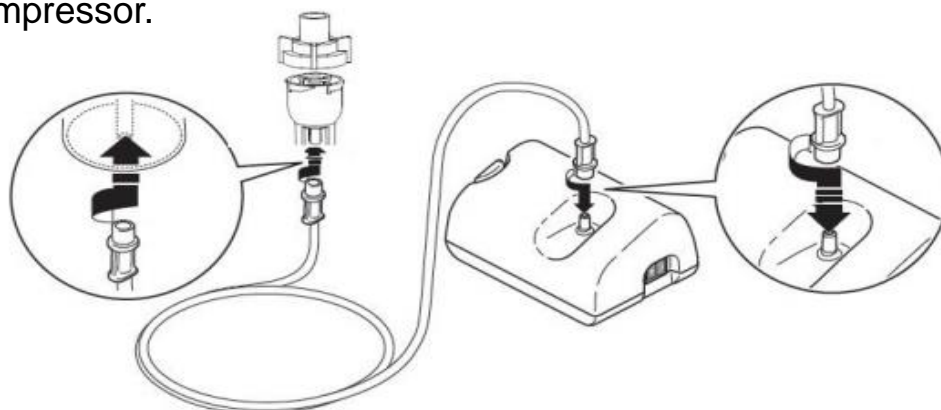
Note: Prior to initial operation, the nebulizer should be thoroughly cleaned referring to the “Cleaning Procedures” in the manual.

1. Place your Piston Compressor Nebulizer on a flat and stable surface. Be sure that you can easily reach the controls when you are seated.
2. Open the clear cover and remove the inside accessories.
3. Gently twist the top part of the nebulizer counter-clockwise to disassemble the nebulizer.
4. Fill the bottom section of the nebulizer with the medication prescribed by your



physician. Be sure that the cone is put inside the bottom section.

5. Gently twist the top part clockwise to re-assemble the nebulizer. Be sure the two sections fit well.
6. Attach one end of air tube to the base of the nebulizer.
7. Attach the other end of air tube to the air tube connector located on the front of the compressor.



CAUTION

- Make sure the nebulizer is correctly assembled, the air filter is properly installed, and the air tube is correctly connected to the compressor and the nebulizer . Air may leak from the air tube during use if not securely connected.
 - Do not use the device if the air tube is bent.
8. Attach mouthpiece or mask per your choice to the top section of nebulizer.
 9. Plug the power cord into an appropriate electrical outlet. Make sure at this stage, the power switch is at “OFF” status.
 10. Press power switch to begin your prescribed treatment.

Important:

The compressor motor has a thermal protector which will shut off the unit before the unit is overheated. When the thermal protector shuts the unit off, please:

- a. Switch off the unit.
- b. Unplug the unit from the electrical outlet.
- c. Wait 30 minutes for the motor to cool down before another treatment.

Make sure the air openings are not obstructed.

11. When treatment is finished, shut off the unit and unplug it from the electrical outlet.

5. CLEANING

Rinsing (after each treatment)

1. Disconnect the air tube, nebulizer, mouthpiece and mask.
2. Gently twist the nebulizer to open it.
3. Discard remaining medication in the nebulizer.
4. Rinse the nebulizer, mouthpiece and mask with water.
5. Dry them with clean soft towel or let it air dry.
6. Reassemble the nebulizer when completely dry and put these parts in a dry, sealed container.

6. DISINFECTION

Please follow the following steps to disinfect your nebulizer unless otherwise specified by your physician. It is suggested that the unit is disinfected after the last treatment of the day.

1. Use one part white vinegar with three parts distilled water. Make sure mixed solution is enough to submerge the nebulizer, mouthpiece and mask.
2. Complete Rinsing Steps 1-3.
3. Wash nebulizer, mouthpiece and mask in warm water and a mild detergent. Then wash them in hot tap water.
4. Submerge these parts in the vinegar and water solution for thirty minutes.
5. Complete Rinsing Steps 3-5.

Cleaning the compressor

1. Clean the casing of the main unit by using a soft cloth moistened with water or a mild detergent.
2. Do not use abrasive cleaners.
3. Dry the casing immediately using a soft clean cloth.

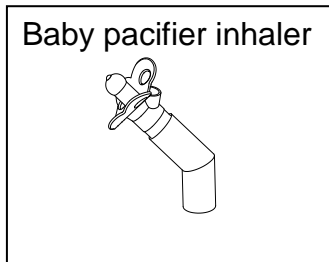
Changing The Air Filter

1. Do not use cotton or any other materials. Do not wash or clean the filter. Use

- only Homed's filters. And do not operate without a filter.
2. Change the filter every 30 days or when the filter turns gray.
 3. Before inserting the new air filter make sure the air filter is clean and free of dust. Do not operate the device without the air filter. Use only the Omron air filter designed for this device.
 4. Changing procedure:
 - A. Pull the air filter cover to remove from the back side of the compressor
 - B. Remove the dirty air filter
 - C. Replace the used filter with a new one.
 - D. Put the air filter cover back on the compressor.

7. REPLACEMENT PARTS & OPTIONAL ACCESSORIES

Replacement parts are available through your local retailer or they can be ordered by mail. Optional accessories include adult mask and baby pacifier inhaler. The pacifier inhaler allows baby to receive aerosol treatment easily through normal breath.



8. GUIDANC AND MANUFACTURER'S DECLARATION


Guidance and manufacturer's declaration – electromagnetic emissions		
The JLN-2305AS is intended for use in the electromagnetic environment specified below. The customer or the user of the JLN-2305AS should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The JLN-2305AS uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The The JLN-2305AS is suitable for use in all establishments including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity			
The JLN-2305AS is intended for use in the electromagnetic environment specified below. The customer or the user of the JLN-2305AS should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6kV Contact ±8kV Air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %. If ESD interfere with the operation of equipment, counter measurements such as wrist strap, grounding shall be considered.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for Power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1kV differential mode ±2kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	<5% UT for 0.5 cycle 40% UT for 5 cycles 70% UT for 25 cycles <5% UT for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the JLN-2305AS requires continued operation during power mains interruptions, it is recommended that the JLN-2305AS be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Guidance and manufacturer's declaration – electromagnetic immunity –for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration – electromagnetic immunity

The JLN-2305AS is intended for use in the electromagnetic environment specified below. The

customer or the user of the JLN-2305AS should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3V	<p>Portable and mobile RF communications equipment should be used no closer to any part of the JLN-2305AS, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = 1.2 \sqrt{P}$ $d = 1.2 \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = 2.3 \sqrt{P} \quad 800 \text{ MHz to } 2,5 \text{ GHz}$ <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range.</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3V/m	

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM –For EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between Portable and mobile RF communications equipment and the JLN-2305AS	
The JLN-2305AS is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the JLN-2305AS can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the JLN-2305AS as recommended below, according to the maximum output power of the communications equipment.	
Rated maximum output power of	Separation distance according to frequency of transmitter m

transmitter W	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

9. SPECIFICATIONS

Power	AC 230V 50 Hz
Power	40W-65W
Flow	≥ 8 L/min
Medication Capacity	2-8ml
Particle Size	0.5-6uM
MMAD	4.014 um
Sound Level	≤ 63 dB
Working pressure	69-110Kpa
Max Pressure	≥ 230 Kpa
Working temperature	10°C-40°C
Working humidity	30%-75%RH
Storage Temperature	-25°C-70°C
Storage Humidity	10%-95%RH
Atmospheric pressure	700 hPa -1060hPa
Dimension (L x W x H)	11.8" x 7.1x 4.5"mm
Weight	1.65kg
Transportation condtions	-25°C-70°C, 10%-95% RH
Standard requirements	Comply with EN 60601-1-2,EN60601-1 and EN60601-1-11

Protection against electric shock



- Type B applied parts



- Class II

protection against harmful ingress of water

-IPX0(ordinary)

degree of safety in the presence of flammable anesthetics or oxygen

-No AP/APG(Not suitable for use in the presence of flammable anesthetic or oxygen)

Symbol	Explanation
	Manufacturer
	Authorised representative in the European Community
	Lot Number
	Serial Number
	Date of Manufacture
	Caution
	Batteries or electronic instruments must be disposed of in accordance with the locally applicable regulations, not with domestic waste.
	Intertek Semko AB



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