EN

DeVilbiss® PulmoMate® Compressor/Nebulizer

Model 4650D

CAUTION– *Federal (U.S.A.) law restricts this device to sale by, or on the order of a physician.*

Made in U.S.A. of U.S. and Imported Parts

LATEX Not made with natural rubber latex.

Model 4650D Intertek ETL Certified to UL 1431 Std.

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IEC SYMBOLS

	Consult Instruction for Use		Double Insulated
	Alternating Current	REF	Catalog/Model Number
	Type BF Applied Part	SN	Serial Number
	On		Date of Manufacture
	Off		This device contains electrical and/or electronic equipment that must be recycled per EU Directive 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)

IMPORTANT SAFEGUARDS

When using electrical products, especially when children are present, basic safety precautions should always be followed. Read all instructions before using. Important information is highlighted by these terms:

DANGER– Urgent safety information for hazards that will cause serious injury or death.
WARNING– Important safety information for hazards that might cause serious injury.
CAUTION– Information for preventing damage to the product.
NOTE– Information to which you should pay special attention.

READ ALL INSTRUCTIONS BEFORE USING.

DANGER

To reduce the risk of electrocution:

1. Always unplug this product immediately after using.
2. Do not use while bathing.
3. Do not place or store product where it can fall or be pulled into a tub or sink.
4. Do not place in or drop into water or other liquid.
5. Do not reach for a product that has fallen into water. Unplug immediately.

WARNING

To reduce the risk of burns, electrocution, fire or injury to persons:

1. The product should never be left unattended when plugged in.

2. Close supervision is necessary when this product is used by, on, or near children or physically incapacitated individuals.
3. Use this product only for its intended use as described in this guide. Do not use attachments not recommended by the manufacturer.
4. Never operate this product if:
   a. It has a damaged power cord or plug.
   b. It is not working properly.
   c. It has been dropped or damaged.
   d. It has been dropped into water.

   Return the product to an authorized DeVilbiss service center for examination and repair.
5. Keep the power cord away from heated surfaces.
6. Never block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair, and the like.
7. Never use while drowsy or asleep.
8. Never drop or insert any object into any opening or hose.
9. Do not use outdoors. This product is for household use only.
10. Do not use in an oxygen enriched environment. Do not operate where other aerosol (spray) products are being used.
11. Connect this product (for grounded models) to a properly-grounded outlet only. See Grounding Instructions.
12. Do not use this product with a DC to AC converter, or with any AC voltage and/or frequency other than specified.
13. Do not operate unit in a backpack or carrying bag.
14. Care should be taken when this product is used in the vicinity of other electronic equipment concerning the possible interference between them. They may need to be moved apart.

NOTE– *This unit employs a temperature and/or current limiting device that will shut off the entire product should a malfunction occur or in the event of product misuse, abuse, or abnormal operation. Contact your qualified DeVilbiss provider for a replacement unit if necessary.*

NOTE– *The exterior surfaces of the unit and the air outlet connector may become slightly warm to the touch during use. Warm air can also be felt exiting the vents on the sides of the case of the unit. This is normal.*

MODEL 4650D GROUNDING INSTRUCTIONS

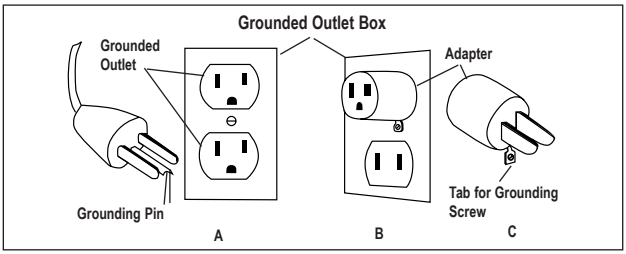
This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

DANGER

Improper use of the grounding plug can result in the risk of electric shock.

If repair or replacement of the cord or plug is necessary, contact your qualified DeVilbiss provider.

1. This unit is for use on a nominal 115V circuit and has a grounding plug. A temporary adapter, which looks like the adapter illustrated in Figures B and C, may be used to connect this plug to a 2-pole receptacle (as shown in Figure B) if a properly grounded outlet is not available. The temporary adapter should be used only until a qualified electrician can install a properly grounded outlet (Figure A). The grounding ear, lug, or wire extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by the metal screw.
2. If it is necessary to use an extension cord, use only a 3-wire extension cord that has a three-blade grounding plug, and a 3-slot receptacle that will accept the plug on the unit. If power cord is damaged do not use unit, and contact a qualified DeVilbiss provider.



SAVE THESE INSTRUCTIONS

INTRODUCTION

Your doctor has prescribed a liquid medication to treat your respiratory condition. To best utilize this liquid medication, he has prescribed a DeVilbiss brand compressor/nebulizer. Your DeVilbiss compressor/nebulizer works to convert the medication to a high-quality mist of fine particles that penetrates deep into the lungs.

Be sure that you read and understand the information in this instruction guide. By following these simple instructions and the advice of your physician, your compressor will become an effective addition to your therapeutic routine.

Statement of Intended Use

The DeVilbiss compressor/nebulizer includes an AC powered air compressor that provides a source of compressed air for home health care use. The compressor is used in conjunction with a jet (pneumatic) nebulizer to convert certain inhalable drugs into an aerosol form for inhalation by a patient. The device can be used with adult or pediatric patients.

NOTE– *If using a nebulizer other than one distributed by DeVilbiss, verify that the pressure and/or flow characteristics of the nebulizer (while driven by the DeVilbiss compressor) meet the nebulizer manufacturer's recommendation.*

IMPORTANT PARTS

DeVilbiss 4650 Compressor

1. Storage compartment
2. Storage compartment door with operating instructions
3. Power switch
4. Filter cap
5. Air-outlet connector
6. Carrying handle
7. Power cord storage
8. Nebulizer holder

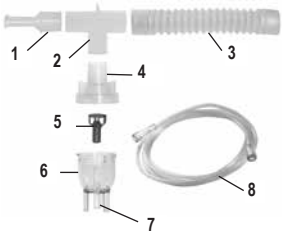
NOTE– *Model 4650D is equipped with a three-prong plug and must be grounded.*

4650 Series

Disposable Nebulizer

1. Mouthpiece
2. T-piece
3. Corrugated Tubing
4. Cap
5. Baffle
6. Medication Cup
7. Nebulizer Air-Inlet Connector
8. Tubing

Nebulizer parts are not sold separately. Additional nebulizers (part #3655D-621) are available through your DeVilbiss provider.



Disposable Nebulizer

NOTE–*Your neb may look different than pictured.*

DeVilbiss also offers reusable nebulizers that can be cleaned and reused for an extended period of time.

HOW TO OPERATE YOUR COMPRESSOR

NOTE– *Before initial operation, your nebulizer should be cleaned following cleaning instructions, or as recommended by your physician or DeVilbiss provider.*

1. Place compressor on a level, sturdy surface so that the controls can be easily reached when seated. Never block the air openings of the product or place it on a soft surface, such as a patient's lap or a bed or couch where the air openings may be blocked.
2. Open door to storage compartment.
3. Make sure the power switch is in the "Off" position (Fig. 1). Unwrap power cord and plug power cord into an appropriate wall outlet (refer to Specifications). Plug model 4650D into a grounded wall outlet (refer to Grounding Instructions).

Figure 1

DANGER

DeVilbiss compressor/nebulizer must be operated on the specified power source to avoid risk of electric shock and damage to the compressor.

4. Wash hands.
5. Connect one end of the nebulizer tubing to the compressor air-outlet connector.

NOTE– *During high-humidity weather conditions, condensation (water build up) can occur in the nebulizer tubing. If this occurs, dry the tubing by operating the unit with the tubing connected but without the nebulizer.*

6. Assemble clean nebulizer and add prescribed medication (Fig. 2).
7. Assemble mouthpiece, t-piece and corrugated tubing (if applicable) and insert into the top of the nebulizer cap. If using an aerosol mask, insert the bottom part of the mask directly into the top of the nebulizer cap.
8. Attach tubing to nebulizer air-inlet connector (Fig. 3).
9. Press the power switch "On" to start the compressor (Fig. 1).
10. Begin treatment by placing the mouthpiece between teeth. With mouth closed, inhale deeply and slowly through mouth as aerosol begins to flow, then exhale slowly through the mouthpiece (Fig. 4). If treatment needs to be interrupted, simply press power switch "Off."

NOTE–*Your physician may recommend a specific breathing pattern during treatment. If so, follow his/her recommendations.*

11. If an aerosol mask is used, place the mask over mouth and nose (Fig. 5). As aerosol begins to flow, inhale deeply and slowly through mouth, then exhale slowly.
12. When treatment is complete, turn unit off by pressing the power switch to the "Off" position. Unplug the unit from the wall power outlet.

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

NEBULIZER CLEANING

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

WARNING

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:

1. With power switch in the "Off" position, unplug power cord from wall outlet.
2. Disconnect tubing from the air-inlet connector and set aside.
3. Disassemble mouthpiece or mask from cap. Open nebulizer by turning cap counterclockwise and removing baffle.
4. Wash all items, except tubing, in a warm water/dishwashing detergent solution. Rinse under warm tap water for 30 seconds to remove detergent residue. Allow to air dry.

Disinfect Daily:

1. Using a clean container or bowl, soak items in three parts warm water (131˚F-149ºF/55˚C-65˚C) to one part white vinegar (>=5% acetic acid concentration) for 30 minutes (Fig. 6) OR use a medical bacterial-germicidal disinfectant available through your provider. Be sure to follow manufacturer's instructions carefully.
2. With clean hands, remove items from disinfectant solution, rinse under warm tap water, and air dry on a clean paper towel. Store in a zip-lock bag.

NOTE– *Do not towel dry nebulizer parts; this could cause contamination.*

WARNING

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

3. 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– *The disposable nebulizer will last at least 15 days and possibly longer, depending on usage. Proper cleaning will also help extend the life of the nebulizer. Because it is disposable, we recommend that an extra nebulizer be kept on hand at all times.*

COMPRESSOR CLEANING

1. With power switch in the “Off” position, unplug power cord from wall outlet.
2. Wipe outside of the compressor cabinet with a clean damp cloth every few days to keep dust-free.

DANGER

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

FILTER CHANGE

1. Filter should be changed every 6 months or sooner if filter turns completely gray in color.
2. Remove filter cap by grasping it firmly and pulling out of the unit
3. Remove dirty filter with fingers and discard.
4. Replace with a new DeVilbiss filter (part #5650D-602). Additional filters should be purchased from your DeVilbiss provider.
5. Push filter cap with new filter into position.

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

NOTE– *An extra filter is packaged with the 4650 series units.*

MAINTENANCE

All maintenance must be performed by a qualified DeVilbiss provider or authorized service center.

DANGER

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

SPECIFICATIONS

Size	7” W x 3.8” H x 13” D (18 cm x 10 cm x 33 cm)
Weight	5.3 lbs. (2.40 kg)
Electrical Requirements	2.5 amps, 115 VAC (±10%) 60 Hz
Sound Level	53-57 dBA
Power Consumption	140 watts maximum
Maximum Compressor Pressure	35 psig (241 kPa)*
Compressor Free Air Flow	13 lpm*
Operating Temperature Range	+40° to +104°F (+5 to +40°C)
Operating Humidity	up to 95% non-condensing
Storage/Transport Temperature Range	-40° to +158°F (-40° to +70°C)
Storage/Transport Humidity	up to 95% non-condensing
Supplied Nebulizer Capacity	10 ml (cc)
Supplied Nebulizer Nebulization Rate	0.15 ml/min or greater*
Supplied Nebulizer MMAD	5 microns or less**

**Conditions may vary based on altitude above sea level, barometric pressure, and temperature.*
***Value determined with minimum flow rate through the nebulizer (20°C, sea level).*

There are no hazardous materials used in the construction of this unit, therefore, there are no known risks associated with disposal of the equipment.

FIVE-YEAR LIMITED WARRANTY ON COMPRESSOR PARTS

All DeVilbiss Compressor models are warranted to be free from defective workmanship and material for a period of five years from the date of purchase. Any defective part(s) will be repaired or replaced at DeVilbiss's option if the unit has not been tampered with or used improperly during that period. Make certain that any malfunction is not due to inadequate cleaning or failure to follow the instructions. If repair is necessary, contact your authorized DeVilbiss provider

NOTE— This warranty does not cover providing a loaner compressor, compensating for costs incurred in compressor rental while said unit is under repair, or costs for labor incurred in repairing or replacing defective part(s).

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THE EXPRESS LIMITED WARRANTY AND TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL AND INCIDENTAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE LIMITATION OR EXCLUSION OF CONSEQUENTIAL OR INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

MANUFACTURER'S NOTE

Thank you for choosing a DeVilbiss compressor/nebulizer. We want you to be a satisfied customer. If you have any questions or comments, please send them to our address on the back of this manual.

For Service Call Your Authorized DeVilbiss Provider:

_____

_____

_____

Phone _____

Purchase Date_____

Serial # _____