HOB®

AIRPUMP

HEPA Equipped

Z0156A1

User Manual

Revision 01

Table of Contents

User Manual

Operating Instructions

Symbols on EHOB Air Pump

SN	SERIAL NUMBER		FOLLOW INSTRUCTIONS FOR USE
REF	CATALOGUE NUMBER		CAUTION
MD	MEDICAL DEVICE		NOT MR SAFE
	TEMPERATURE LIMIT		MANUFACTURER
	HUMIDITY LIMITATION		DATE OF MANUFACTURE
	ATMOSPHERIC PRESSURE LIMITATION		MULTI-PATIENT MULTI-USE
	PROTECTIVE EARTH (GROUND)		SGS NORTH AMERICA LISTED MARK
	TYPE BF APPLIED PART		KEEP DRY
	ALTERNATING CURRENT		THIS SIDE UP
	FRAGILE, HANDLE WITH CARE		

Symbols on BAM Air Product Family

LOT	BATCH CODE		SINGLE PATIENT MULTIPLE USE
MR	MR SAFE		CONSULT INSTRUCTIONS FOR USE
	DO NOT WASH		DO NOT BLEACH
	DO NOT TUMBLE DRY		DO NOT IRON
	DO NOT DRY CLEAN	#	CATALOGUE NUMBER
	COUNTRY OF ORIGIN		

Intended Use and Precautions

The EHOB Air Pump provides two airflow options to inflate EHOB's Air Assisted Transfer, Lift, and Positioning Devices.

Intended Care Settings

Hospitals, Long-Term or Extended Care Facilities

Intended Users

Nursing or Hospital staff who have been trained in the usage of the EHOB Air Pump and any accessory products.

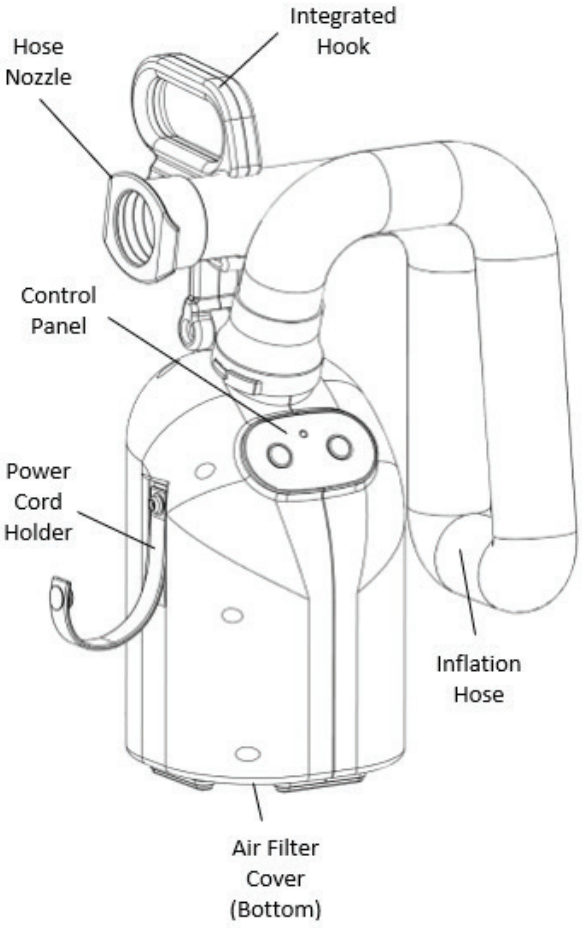
Intended Use

- The caregiver/operator is the individual handling the equipment.
- The patient is not the intended operator of the equipment.

Cautions

- Avoid blocking air intake of Air Pump.
- Never leave patient unattended on an inflated device.
- Use this product only for its intended purpose.
- Only use attachments or accessories that are authorized by EHOB, Inc.
- Reference operating instructions for more operate details.
- WARNING: The EHOB Air Pump is not compatible with DC Power Supplies.
- WARNING: Do not open the air supply; no modification of this equipment is allowed.

Components and Features



Air Pump Interface Functions

LOW: For use for assisting in Turning, Boosting, or ensuring the patient is centered on the product prior to movement.

The LOW setting is not to be used for Lateral Transfers.

HIGH: For use for Lateral Transfers, Boosts, or when more lift is needed.

Product Specifications

Dimensions	11.5 x 6.5 x 5.5 inches (29.21 x 16.51 x 13.97 cm)	**Weight**	8.9 lb (4.03 kg)
Enclosure Material	ABS Plastic	**Power Input**	120 Vac, 60 Hz, 10 A (North American Rated)
Power Cord Length	15 feet (457 cm) Hospital Grade	**Service Life**	3 Years
Enclosure Classification	IPX0	**Accessories** (Not User Serviceable)	HEPA Filter (Z0156C1) HEPA Filter Cover (Z0156F1) Air Hose (Z0156E1) 25' Air Hose (Z0156J1) Handle-Hook (Z0156D1)
ME Equipment Device Classification	Class I	**Applied Part Classification**	BF
Pollution Degree	2	**Overvoltage Category**	II
Applied Part	BAM® Air Product Family; BAM Air, BAM Air+, BAM Air LC		

NOT MADE WITH NATURAL RUBBER LATEX

Operating Conditions

Use Temperature: 10 °C to 38 °C
Use Humidity: 10 % to 85 % RH, non-condensing
Use Altitude: Up to 9842 ft (3000 m)
Max Operation Atmospheric Pressure Range: 700 to 1060 hPa

Transport Conditions

Storage/Shipping Temperature: -40 °C to 70 °C
Storage/Shipping Humidity: 10 % to 100 % RH
Storage/Shipping Atmospheric Pressure: 500 hPa to 1060 hPa

Storage Instructions

Before Storing:

- Ensure the air pump is disconnected from the power supply.
- Ensure the air tube is disconnected from the repositioning sheet.
- Ensure the air pump and air tube have been cleaned per facility's protocol.

To Store:

- If using the EHOB Air Pump Cart, place the air pump on the cart.
- Wrap the power cord neatly and carefully and drape it over the Power Cord Hook.
- Wrap the air tube around the pump and secure it to the air tube holder.
- Place the cart in your facility's preferred storage area.

Instructions For Use

Product Set Up

1. 1. EHOB Air Pump should remain in the EHOB Air Pump Cart or be hung securely off the end of the bed using the Integrated Hook
   a. Do not place EHOB Air Pump in an unstable location or where power cord is overstretched when plugged in.
   b. Ensure that the plug is not blocked by any object to ensure ease of unplugging during an emergency.
2. Plug the EHOB Air Pump power cord into an electrical outlet. Green light will display indicating that the pump is in Standby mode.

Inflation

1. Patient should be placed in a supine position prior to any movement.
2. Place the repositioning sheet under the patient using facility approved protocol and ensure the patient is centered on the repositioning sheet.
3. Raise or lower the surface to an appropriate height for both caregivers.
4. Lock all wheels.
5. Insert the EHOB Air Pump Hose into one of the two orange Quick Connect Ports located at the foot end of the repositioning sheet.
6. Ensure that the fastener is tight around the hose prior to inflation.
7. Press either the “LOW” or “HIGH” button on the EHOB Air Pump to turn it on.
8. Lower the bed rails so that they do not interfere with patient positioning.
9. Allow the product to fully inflate prior to any movement.
10. Perform the patient positioning in accordance with the product instruction for use.
11. Press the same button that turned the pump on to stop air flow.
12. Once the patient has returned to the surface of the bed, turn off and remove the pump from the repositioning sheet.

NOTE: If more lift is needed, two EHOB Air Pumps may be used simultaneously

NOTE: When on, the air pump emits 80 dBA, and should not remain in prolonged use.

NOTE: In case of emergency, turn off device by pressing the same button that turned the pump on or by unplugging the device from the outlet.

Product Maintenance

Cleaning

In between patient uses, wipe down the EHOB Air Pump with one of the following fluids:

- Water
- 91% Isopropyl Alcohol
- 0.9% NaCl
- Wipes with active ingredients up to 55% isopropyl, 0.25% n-alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride, and 0.25% n-Alkyl (60% C14 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chlorides *such as Super Sani wipes*
- Wipes with active ingredients with up to 17.2% isopropanol with 0.28% Diisobutylphenoxyethyl dimethyl benzyl ammonium chloride *such as Cavi Wipes*

CAUTION: Do not use Quaternary Ammonium Cleaners with Air Pump to not damage the pump shell.

Follow cleaning manufacturer's instructions to ensure proper cleaning and disinfection has occurred. Avoid spraying cleaner directly on surface as motor damage could occur.

Preventive Maintenance

Prior to use, inspect the air supply to ensure there is no visible damage that may impact the performance of the air pump. If any damage is found, the pump should be returned to EHOB, Inc. for repair.

Service Personnel

The EHOB Air Pump has NO USER SERVICABLE PARTS. Only qualified service personnel shall perform repairs on the EHOB Air Pump. EHOB, Inc will provide service personnel who have been trained in repairing any aspect of the EHOB Air Pump.

Replacing the EHOB Air Pump HEPA Filter

The filter should be replaced when it is clogged or damaged. Qualified service personnel will check HEPA filter yearly to ensure clogging or damage is not present on the HEPA filter.

Contact EHOB, Inc if you believe that your EHOB Air Pump HEPA Filter needs to be replaced.

Infection Control

When used in a patient room where isolation protocols need to be observed, follow facility protocol for medical equipment.

In between uses with an isolation patient, disinfect, or replace the air filter if facility protocol requires.

WARNINGS

WARNING: Do not attempt to change the power cord if damaged, as this can result in fire.

NOTE: CHECK YOUR LOCAL / STATE / FEDERAL / INTERNATIONAL GUIDELINES BEFORE DISPOSAL. The treatment and disposal of waste medical devices should be carried out in accordance with relevant laws, regulations and industry standards. It can be recycled, repaired, destroyed or disposed of by contacting a professional company. Please contact your EHOB Representative for disposal.

Electromagnetic Compatibility Chart

Guidance and manufacturer's declaration – electromagnetic emissions

The EHOB Air Pump is intended for use in the electromagnetic environment specified below.
The customer or the user of the EHOB Air Pump should be sure that it is used in such an environment.

Emission Test	Compliance	Electromagnetic Environment-Guidance
RF Emissions CISPR 11	Group 1	The EHOB Air Pump 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 A	The EHOB Air Pump 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	Compliance	

Guidance and manufacturer's declaration – electromagnetic immunity

The EHOB Air Pump is intended for use in the electromagnetic environment specified below.
The customer or the user of the EHOB Air Pump should be sure 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	± 6 kV contact ± 8 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
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 Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV differential mode Not applicable	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 s	<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 s	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50, 60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	The EHOB Air Pump power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE: UT is the ac mains voltage prior to application of the test level.

Electromagnetic Compatibility Chart

Guidance and manufacturer's declaration – electromagnetic immunity

The EHOB Air Pump is intended for use in the electromagnetic environment specified below.
The customer or the user of the EHOB Air Pump should ensure 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 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	3 Vrms 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the EHOB Air Pump, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. a Recommended separation distance: $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2.5 GHz 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 meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. b Interference may occur in the vicinity of equipment marked with the following symbol: 
NOTE 1: At 80 MHz and 800 MHz, 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.			

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the EHOB AIR PUMP is used exceeds the applicable RF compliance level above, the EHOB AIR PUMP should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the EHOB AIR PUMP.

b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Electromagnetic Compatibility Chart

Recommended separation distance between portable and mobile RF communications equipment and the EHOB Air Pump

The EHOB Air Pump is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the EHOB Air Pump can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the EHOB Air Pump as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	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.

Returns and Repairs

All products being returned to EHOB, Inc. should be authorized by EHOB Customer Service. Returned products should be sent to:

EHOB, Inc.
250 N. Belmont Ave.
Indianapolis, IN 46222
Tel: (800) 899-5553
Fax: (317) 972-4625
www.ehob.com

OPERATING INSTRUCTION

Removing the Handle Hook Attachment

1. Locate the Shoulder Screw and Lock Nut on the Handle Hook Attachment.

2. Using a Size 4 (Metric) Allen Wrench and a 10 mm (Metric) Socket Wrench, loosen and remove the shoulder screw and lock nut from each other.

Instructions for Removing the Handle Hook Attachment continue on next page. ►

3. Holding the rest of the pump in place, firmly pull the handle hook attachment away from the pump until completely separated.

Replacing the Handle Hook Attachment

1. Locate the rubber attachment piece on the back side of the pump. Slide the new Handle Hook attachment onto the rubber piece, making sure that the "C" shaped hose-holder is able to face the same direction as the front of the pump, the "Hanger" part of the handle that contains the rubber pad is facing down, and the holes of the rubber and Handle Hook attachment are lined up, as shown below.

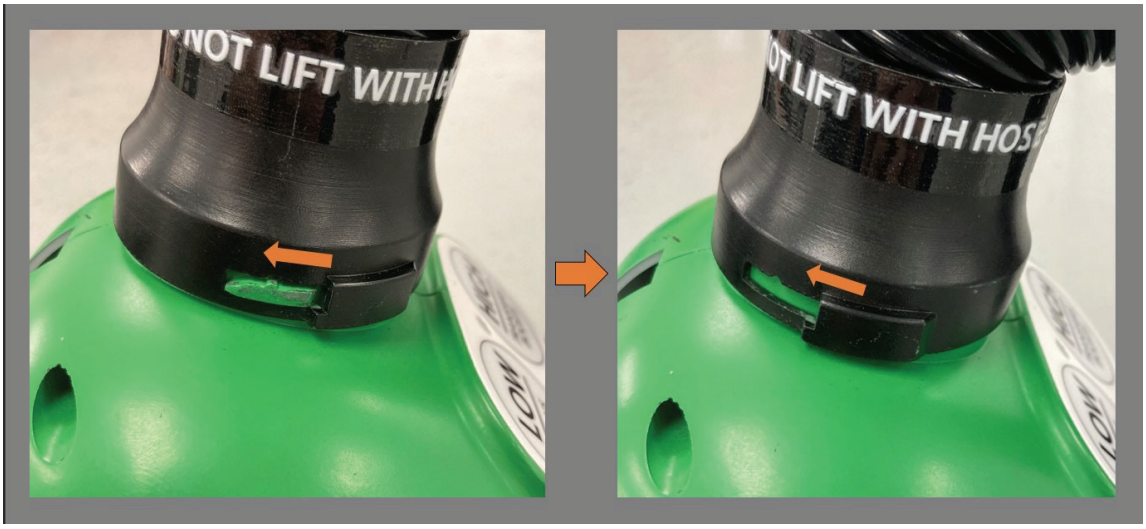
Instructions for Replacing the Handle Hook Attachment continue on next page. ►

2. Insert the Shoulder Screw through the holes on the Handle Hook Attachment and rubber piece on the back of the pump. Once the Shoulder Screw is fully inserted, place the Lock nut onto the Shoulder Screw and tighten with your hands until it becomes difficult to continue turning.

3. Using a Size 4 (Metric) Allen Wrench and a 10 mm (Metric) Socket Wrench, continue screwing the shoulder screw into the lock nut until you reach the desired tightness.

Removing the Hose Attachment

1. Firmly gripping the plastic neck of the Hose Attachment, rotate the Hose Attachment clockwise until the protruding green piece of plastic in the slot of the attachment is completely hidden.

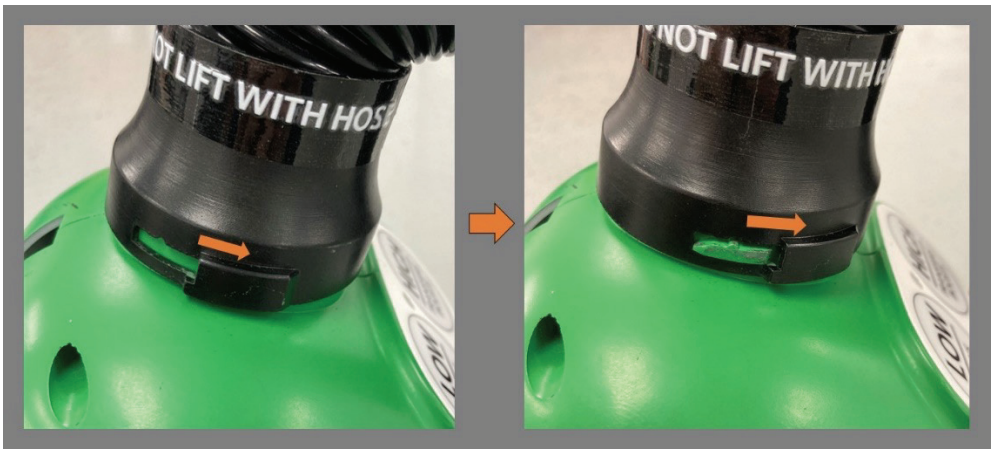


2. Firmly gripping the plastic neck of the Hose Attachment, pull up on the attachment until fully separated from the neck of the pump.

Replacing the Hose Attachment

1. Slide the neck of the new Hose Attachment down onto the neck of the pump, making sure to line up the protruding black part of the hose attachment with the piece of green plastic protruding from the neck of the pump.

2. Firmly gripping the plastic neck of the Hose Attachment, rotate the Hose Attachment counterclockwise until the piece of green plastic protruding from the neck of the pump is completely revealed and resting in the open slot on the neck of the Hose Attachment.



Removing the HEPA Filter

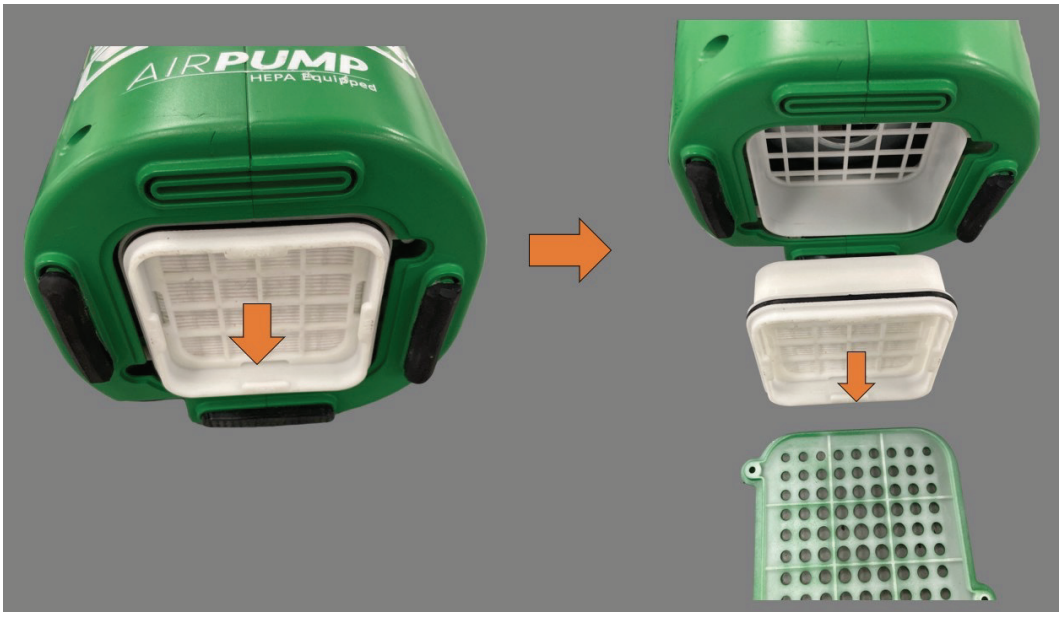
1. Rotate the pump so that it lies flat on its back, revealing the HEPA Filter Cover.

2. Using a Phillips head screwdriver, loosen and remove the screws that affix the HEPA Filter Cover to the bottom of the pump.

Instructions for Removing the HEPA Filter continue on next page. ►

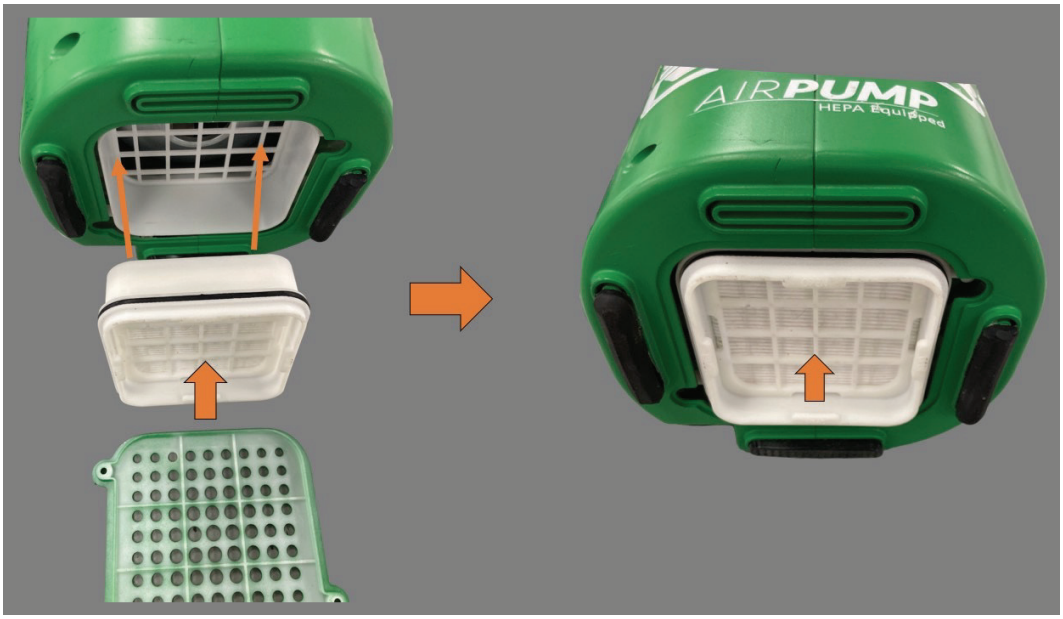
3. Remove the HEPA Filter Cover from the bottom of the pump.

4. Pull the HEPA Filter out of the bottom of the pump completely.



Replacing the HEPA Filter

1. Insert the New HEPA Filter into the bottom of the pump completely, ensuring that the longer end of the filter is the side being inserted into the pump.



2. Place the HEPA Filter Cover onto the bottom of the pump.

Instructions for Replacing the HEPA Filter continue on next page. ►

3. Using a Phillips Head screwdriver, insert and tighten the screws into the holes on the HEPA Filter Cover to affix the cover to the bottom of the pump.

Removing the HEPA Filter Cover

1. Using a Phillips head screwdriver, loosen and remove the screws that affix the HEPA Filter Cover to the bottom of the pump.

2. Remove the HEPA Filter Cover from the bottom of the pump.

Removing the HEPA Filter Cover

1. After removing the HEPA Filter Cover, place the HEPA Filter Cover onto the bottom of the pump.

2. Using a Phillips head screwdriver, tighten and attach the screws that affix the HEPA Filter Cover to the bottom of the pump.

- END OF OPERATING INSTRUCTION -

Manufactured in China for EHOB
250 North Belmont Avenue, Indianapolis, IN 46222
Ph. **800.899.5553** • Fx. **317.972.4625** • Web: **EHOB.com**