



JB0112-016 VACUTEC 800 EV2 ASPIRATOR USER MANUAL

SAVE THIS MANUAL FOR FUTURE USE.

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INTRODUCTION

The Vacutec 800 EV2 Aspirator is a professional medical suction device that produces a maximum vacuum of 560 mmHg. The unit is equipped with an 800 cc collection bottle and has been designed for convenient and reliable use. Following the recommended operating and maintenance procedures outlined in this user manual will maximize the life of this product. Refer to the diagrams on the following pages.

INTENDED USE

The Vacutec 800 EV2 Aspirator is a vacuum suction device intended for the collection of nonflammable fluid materials in medical applications only.

⚠ WARNING: Improper use during medical applications can cause injury or death.

FEATURES

- HEPA filter design helps prevent contamination
- Mid-size aspirator for medium-duty use
- Quiet and compact, quick recovery time
- Automatic shut-off
- Designed for single-patient use
- Oil-free, permanent lubrication
- High reliability and superior performance allow continuous operation

SAFETY GUIDELINES—READ BEFORE USE

Read all instructions before using. Note the following special statements, used throughout this manual, and their significance. There are additional safety statements in other chapters or sections, which may be the same as or similar to the following, or specific to the operations.

- ⚠ DANGER:** Indicates a potential hazard situation or unsafe practice that, if not avoided, will result in death or serious personal injury.
- ⚠ WARNING:** Indicates a potential hazard situation or unsafe practice that, if not avoided, could result in death or serious personal injury.
- ⚠ CAUTION:** Indicates a potential hazard or unsafe practice that, if not avoided, could result in minor or moderate personal injury.
- ▲ NOTICE:** Indicates a potential hazard or unsafe practice that, if not avoided, could result in product or property damage.

Info: *Provides application recommendations or other useful information to ensure that you get the most from your product.*

- ⚠ Federal law (USA)** restricts this device to sale by or on the order of a physician.
- ⚠ DANGER:** To reduce the risk of electrocution:
 - **DO NOT** use this product while bathing.
 - **DO NOT** place or store product where it can fall or be pulled into a tub or sink.
 - **DO NOT** place this product in or drop into water or other liquid.
 - **DO NOT** reach for a product that has fallen into water. Unplug it immediately.
- ⚠ WARNING:** To reduce the risk of burns, electrocution, fire or personal injury:
 - Close supervision is necessary when this product is used by, on, or near children or those who need extra care.
 - Use this product only for its intended use as described in this guide.
 - 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, or
 - d. it has been dropped into water.
- ▲ NOTICE:** Return the product to a Graham-Field authorized distributor for examination and repair.
 - Keep the power cord away from heated surfaces.
 - **NEVER** use this product while drowsy or asleep.
 - This device is for use by one person only; in order to avoid infection, do not share it.
 - **TO REDUCE THE RISK OF ELECTRICAL SHOCK OR PERSONAL INJURY, DO NOT DISASSEMBLE THIS UNIT.** Disassembly or attempted repairs, if accomplished incorrectly, can create electrical shock hazard. **ONLY** qualified technicians should service this aspirator. Contact your Graham-Field authorized distributor for service.
 - Unauthorized modification or the use of non-Graham-Field replacement parts could change the structure of the aspirator, void the warranty, and create a hazardous condition resulting in serious personal injury.
 - GF Health Products, Inc. ("Graham-Field") specifically disclaims responsibility for any personal injury or property damage which may occur during any use which does not comply with federal, state, or local laws or ordinances.

UNPACKING

Info: Check ALL parts for shipping damage. If shipping damage is noted, DO NOT use this product. Contact your Graham-Field authorized distributor for further instruction.

SETUP

WARNING: FOR ALL MEDICAL APPLICATIONS:

- All suction should be done in strict accordance with appropriate procedures that have been established by a licensed medical authority.
- Some attachments or accessories may not fit the tubing supplied. All attachments or accessories should be checked prior to use to assure proper fit.

AC POWER SOURCE


▲ NOTICE: The JB0112-016 uses a power supply allowing operation on AC voltage (115 VAC, 60 Hz). However, the correct power source must be used to connect to adaptable wall power. Before use, check the specification label on the side of the aspirator to ensure that the voltage and current indicated on the unit match the voltage and current available.

ELECTRICAL Compressor

If the overload protector shuts off the motor frequently, you may have a low voltage situation. Low voltage can also be suspected when:

1. The motor does not get up to full power or speed.
2. Other motor-operated appliances fail to operate properly. Too many motor-operated appliances on same circuit.

Info: The aspirator's compressor motor has a thermal overload protector. If the motor overheats, the overload protector will shut off the motor. If this occurs, turn the ON/OFF switch to the OFF position and allow the motor to cool (approximately 5 minutes). Restart aspirator. If the aspirator fails to start, wait an additional 5 minutes before attempting to restart. If this fails, inspect your aspirator fuse (and replace if necessary). If the unit still does not restart, contact your Graham-Field authorized distributor immediately.

 WARNING: Proper operation of this product is necessary to avoid physical harm. Improper use can cause personal injury and/or tissue damage. This product should not be used unless the operator has been instructed by a physician or another qualified healthcare professional.

1. Familiarize yourself with this unit, illustrated below.
2. Place unit on table and push down hard so that suction feet hold unit firmly in place.
3. Ensure the ON/OFF switch is in the OFF position.

▲ NOTICE: DO NOT attempt to start a cold unit; let the unit reach room temperature first.

PARTS / COMPONENTS

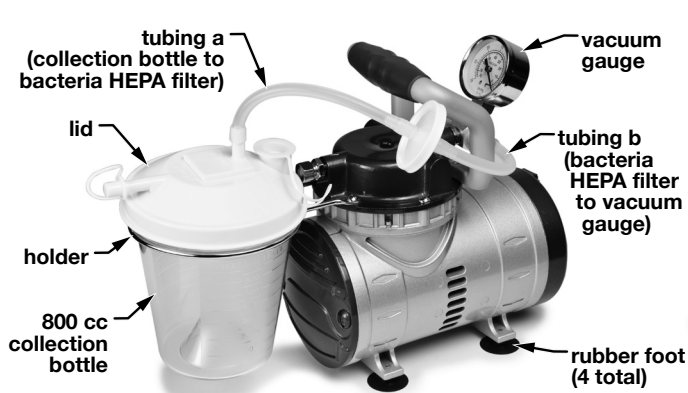


Figure 1



Figure 2

1. Connect both pieces of tubing:
 - a. Connect one end of tubing a to the top of the collection bottle connector and the other end to the bacteria HEPA filter, as shown in Figure 1.
 - b. Connect one end of tubing b to the open end of the bacteria HEPA filter and the other end to the vacuum gauge, as shown in Figure 1.
2. Connect the suction tubing to the top of the collection bottle at the outlet labeled "patient", as shown in Figure 2. Ensure that all connections are secure and without leaks before use.
3. Before use, check the specification label on the side of the aspirator to ensure that the voltage and current indicated on the unit match the voltage and current available. Make sure the ON/OFF switch shown in Figure 2 is in the OFF position before connecting the unit to a power source.

Read the following **SETUP WARNINGS** before continuing.

⚠ SETUP WARNINGS:

- ⚠ WARNING:** This device is equipped with a three-prong (grounding) plug for protection against possible shock hazard. Plug only into a properly grounded three-prong wall receptacle. Where a two-prong wall receptacle is encountered, contact a licensed professional to have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the National Electrical Code. **DO NOT** modify the plug in any way.
- ⚠ WARNING:** If an extension cord must be used, use a three-conductor cord with the same or higher electrical rating as the aspirator cord, with ground, properly wired, in good electrical condition, and keep it as short as possible.
- ⚠ WARNING:** Locate all cords so that they will not be stepped on, tripped over, or otherwise subjected to damage or stress.

OPERATION

⚠ WARNING: Read SAFETY GUIDELINES and the following OPERATION section before use.

⚠ WARNING: Unplug the aspirator when not in use.

Before proceeding, ensure that all instructions in the previous **SETUP** section have been followed.

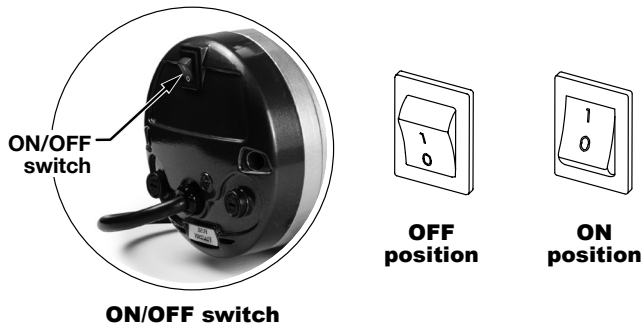


Figure 3

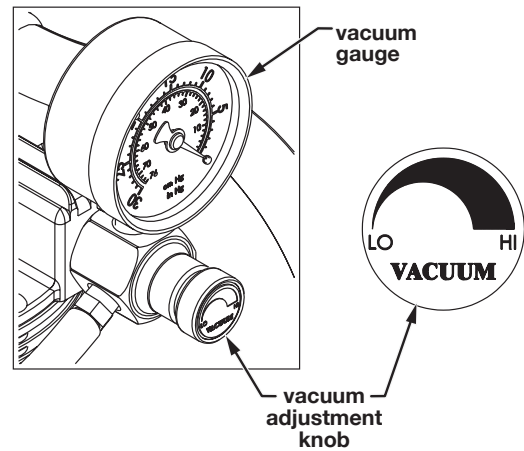


Figure 4

1. **Ensure the ON/OFF switch located on the side of the unit is in the OFF position (Figure 3).** Plug the aspirator into a properly grounded power outlet.

2. Switch the ON/OFF switch to "I" position (ON) (Figure 3); the unit will start running.

3. Adjust the vacuum level from 0 to 560 mmHg by turning the vacuum adjust knob (clockwise to increase vacuum and counter-clockwise to decrease vacuum) (Figure 4). Refer to the vacuum gauge while setting the desired vacuum level. To accurately read the gauge, block the patient end of the hose or cap off the collection bottle and allow the gauge to reach a stable vacuum reading.

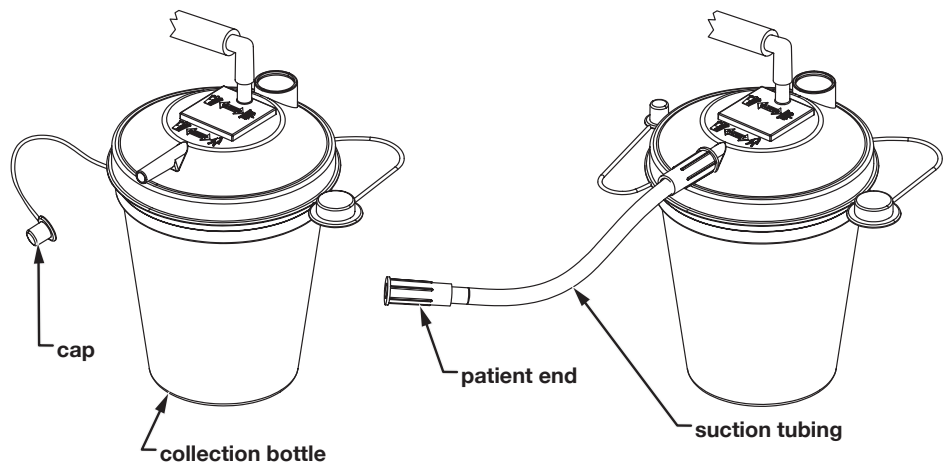


Figure 5

4. Position the suction tubing appropriately for patient and begin suction (Figure 5).

5. When the liquid in the collection bottle reaches the safe full level (800 cc), the float shut-off will activate automatically and suction will stop (Figure 6).

6. Switch the ON/OFF switch to the OFF position to shut off the suction motor (Figure 3).

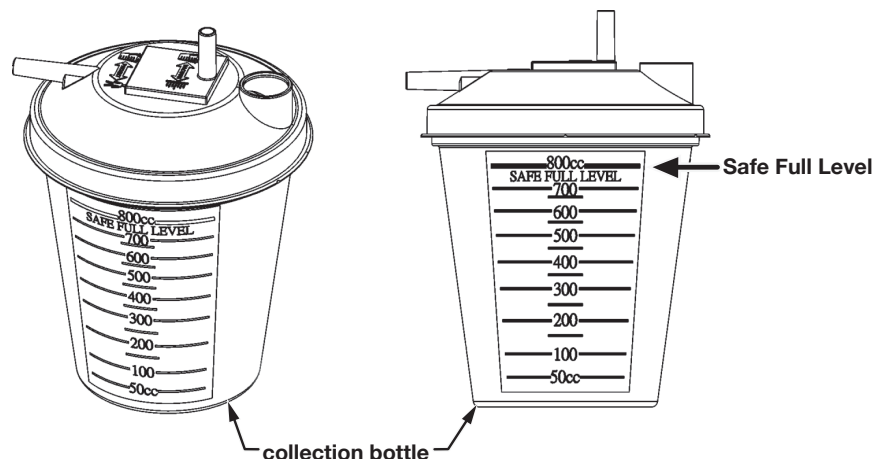


Figure 6

7. Remove the liquid from the collection bottle after the motor stops turning completely. (Refer to the following "CLEANING INSTRUCTIONS" section for directions to clean the collection bottle).
 8. Switch the ON/OFF switch to the ON position and start to run the aspirator again.
- ▲ **NOTICE: If the unit sustains a severe drop, the validity of the gauge must be checked. Inspect the float shut-off to ensure it still functions properly when the liquid in the collection bottle reaches the safe full level.**
- ▲ **NOTICE: ALWAYS transport unit with vacuum adjust knob rotated fully clockwise in case the unit is dropped.**
- ▲ **NOTICE: When automatic float shut-off is activated, empty the contents of the collection bottle immediately. Further suction could cause damage to the vacuum pump.**
- ▲ **NOTICE: Should fluid be aspirated back into the unit, contact your Graham-Field authorized distributor for a detailed inspection, as the vacuum pump may have been damaged.**

CLEANING AND MAINTENANCE

CLEANING INSTRUCTIONS

Clean Collection Bottle:

1. Turn off the aspirator, allow vacuum to drop, then disconnect AC power source.
2. With the collection bottle still in the holder, remove the collection bottle lid. The bottle can now be taken out of the holder to be emptied.

Info: Empty the collection bottle immediately after each use.

3. Clean the collection bottle after each use by using one of the following three methods:
 - a. Wash in a hot water and mild detergent solution and rinse with clean, hot tap water. Then wash in one part vinegar to three parts hot water solution. Rinse with hot tap water and air dry.
 - b. Wash with rubbing alcohol and air dry.
 - c. Wash with a commercial (bacterial-germicidal) disinfectant; follow disinfectant manufacturer's recommended instructions and dilution rates carefully.

Clean Aspirator and Collection Bottle Lid:

1. Disconnect the aspirator from all external power sources.
2. Wipe the aspirator housing and collection bottle lid with a clean cloth and any commercial (bacterial-germicidal) disinfectant.

▲ **NOTICE: DO NOT submerge unit in water as this will result in severe damage to the vacuum pump.**



Figure 7

Clean the Tubing

1. Disconnect the tubing from the unit.
2. Rinse the tubing thoroughly after every use by running hot tap water through it, followed by a solution of one part vinegar to three parts hot water.
3. Rinse with hot tap water and air dry.
4. Keep the outer surface of the tubing clean by wiping with a clean, damp cloth.

⚠ WARNING: The waste in the collection bottle, which could cause respiratory infection, must be handled according to medical waste disposal regulations. The operator must wear gloves and a medical-class mask before cleaning the collection bottle and tubing or handling the waste unit and/or accessories

MAINTENANCE

Inspect suction tubing and collection bottle for leaks, cracks, etc. before each use. If found, discontinue aspirator use immediately and contact your Graham-Field authorized distributor.

⚠ DANGER: Electric shock hazard - DO NOT attempt to open or remove the suction cabinet. If service is required, contact your Graham-Field authorized distributor.

Change the Bacteria HEPA Filter

1. Replace the bacteria HEPA filter when either of the following two conditions occurs:
 - a. the filter is dirty and the aspirator has lost suction, or
 - b. there is liquid in the filter assembly as result of extended use or overflow. If overflow occurs, change the filter immediately.
2. Remove the filter by disconnecting it from the tubing connected to the vacuum gauge and the tubing connected to the collection bottle lid assembly.
3. Replace with a new bacteria HEPA filter and connect it to the tubing connected to the vacuum gauge and the tubing connected to the collection bottle lid assembly, as formerly positioned. Additional filters can be purchased from your Graham-Field authorized distributor.

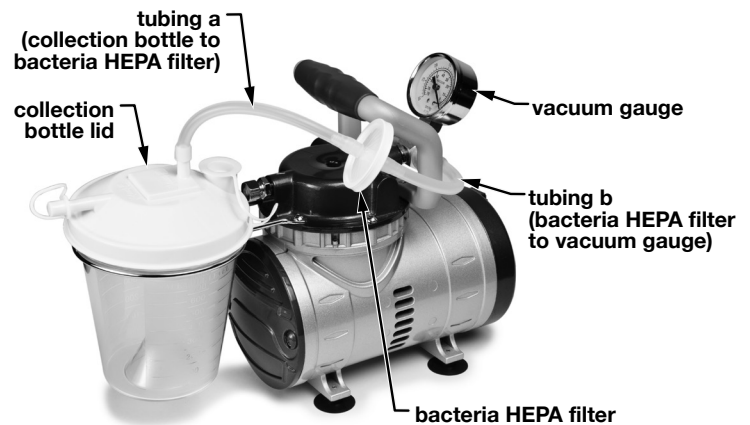


Figure 8

▲ NOTICE: Failure to use filter or replace filter as needed will cause damage to the aspirator.

⚠ WARNING: Use only Graham-Field filters. DO NOT substitute any other material for this bacteria HEPA filter. Improper substitution may lead to contamination or poor performance.

Change the Fuse

1. Use only the same type and size of fuse to replace the broken fuse.
2. Fuse specification: Miniature Glass Fuse 5 x 20 mm, Fast Blow (Quick Acting), F2A / 250V.

⚠ WARNING: When this unit or its accessories reach the end of their useful lives (dependent on conditions of use), residue in the collection bottle, tubing and filter could cause respiratory infection. Dispose of the collection bottle, tubing and filter appropriately according to medical waste disposal regulations.

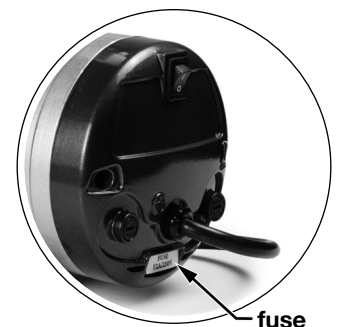


Figure 9

TROUBLESHOOTING

⚠ WARNING: The aspirator contains no user-serviceable parts. If you believe your unit is not working properly, before you contact your Graham-Field authorized distributor for service, take a few moments to check for these possible causes:

PROBLEM	ACTION
Unit does not turn on	Check power source and connection
	Ensure that the wall outlet is live
	Check power cord for damage
Motor runs, but no vacuum	Verify tubing connection security
	Check for leaks or tubing kinks
	Ensure that float shut-off is not activated
	Check for bottle leaks and cracks
Low vacuum	Use vacuum adjust knob to increase vacuum level
	Check system for leaks
	Adjust vacuum adjust knob and release
Motor overheats and motor overload protector shuts off motor	Turn ON/OFF switch OFF, allow motor to cool for approximately 5 minutes, then restart aspirator
	Inspect fuse and replace if necessary
	Contact your Graham-Field authorized distributor if unit still does not start up
Blown fuse	Replace fuse with same size and type (Miniature glass fuse, 5 x 20 mm, fast blow (quick acting), F2A / 250 V)

If you are unable to resolve the problem, contact your Graham-Field authorized distributor.

SPECIFICATIONS

Medical Equipment Standard Compliance	EN60601-1	
Dimensions (L x W x H)	15.3 in x 4.9 in x 10 in (389 mm x 124 mm x 254 mm)	
Weight	11.6 lb (5.3 kg)	
Vacuum Range	0 - 560 mmHg	
Operating Flow Range	0 - 40 LPM	
Sound Level	< 55 dBA	
Electrical Requirements	AC 115V 60Hz 1/16 hp	
Power Consumption	60 watts	
Bacteria Filter	Type	HEPA
	Pore Size	0.2 microns
Collection Bottle Capacity	800 cc	
Operating Environment	Temperature	32° ~ 104°F (0° ~ 40°C)
	Humidity	95% RH
	Atmospheric Pressure	10.2 ~ 15.4 psi (70 ~106 kPa)
Storage Environment	Temperature	14° ~ 158°F (-10° ~ 70°C)
	Humidity	0 ~ 95% RH
	Atmospheric Pressure	7.3 ~ 15.4 psi (50 ~106 kPa)
Fuse Specification	Miniature glass fuse, 5 x 20 mm, fast blow (quick acting), F2A / 250 V	
Equipment Classification	Class I	
Replacement Parts	JB0112-016F: Replacement bacteria HEPA filter	
	JB0112-016B: Collection bottle	
	JB0112-016S: Suction tube	

LIMITED WARRANTY

SCOPE OF WARRANTY

GF Health Products, Inc. ("GF") warrants to the original purchaser only that it will replace or repair components, at GF's sole discretion, that are defective in material or workmanship under normal use and service. All warranties are conditioned upon the proper use of the products strictly in accordance with good commercial practice and applicable GF instructions and manuals, including proper use and maintenance. To the extent that a third party warrants a component, GF conveys all of its rights under that warranty to the original purchaser, to the extent permitted.

This limited warranty shall only apply to defects that are reported in accordance with the provisions set forth in this warranty document, within the applicable warranty period and which, upon examination by GF or its authorized representative, prove to be a warranty item. This limited warranty is not transferable.

The warranted components and time periods are set forth below:

- Aspirator: 2 (two) years
- * Labor is not included in the warranty.
- ‡ The warranty period is as designated above. If a part is replaced under warranty, the original warranty period will not be affected.

All other replacement parts will be subject to the warranty period specified.

The applicable warranty period shall commence from date of shipment to the original customer, unless there is an expiration date on the component in which case the warranty shall expire on the earlier of warranty period or the expiration date.

OBTAINING WARRANTY SERVICE

Customers located in the United States who wish to report a warranty issue, must contact GF directly by calling 1.770.368.4700 or by e-mailing a request to cs@grahamfield.com. Customers located outside the United States must contact the Distributor from whom they purchased the products. In both cases, further directions will be provided once the initial contact is made. This limited warranty shall only apply to defects that are reported within the applicable warranty period. Failure to abide by the specific directions will result in denial of the warranty claim.

The warranty does not cover and GF shall not be liable for the following:

- 1) Defects, damage, or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
- 2) Products which are not installed, used, or properly cleaned and maintained as required in the official manual for the applicable product;
- 3) Products considered to be of a non-durable nature including, but not limited to: filters, fuses, gaskets, lubricants, and charts;
- 4) Accessories or parts not provided by GF;
- 5) Matching of color, grain or texture except to commercially acceptable standards;
- 6) Changes in color caused by natural or artificial light;
- 7) Charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing, in advance, by GF;
- 8) Any labor or shipping charges incurred in the replacement part installation or repair;
- 9) Costs and expenses of regular maintenance and cleaning; and
- 10) Representations and warranties made by any person or entity other than GF.

ENTIRE WARRANTY, EXCLUSIVE REMEDY AND CONSEQUENTIAL DAMAGES DISCLAIMER

THIS WARRANTY IS GF'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. GF MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IF ANY MODEL OR SAMPLE WAS SHOWN TO THE CUSTOMER, SUCH MODEL OR SAMPLE WAS USED MERELY TO ILLUSTRATE THE GENERAL TYPE AND QUALITY OF THE PRODUCT AND NOT TO REPRESENT THAT THE PRODUCT WOULD NECESSARILY CONFORM TO THE MODEL OR SAMPLE IN ALL RESPECTS. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS. GF SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER, OR EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS. CERTAIN STATES MAY CONFER ADDITIONAL RIGHTS REGARDING WARRANTIES AND IN THOSE STATES GF'S LIABILITY AND THE LIABILITY OF GF'S SUPPLIERS, SHALL BE LIMITED TO THE FULLEST EXTENT PERMITTED BY LAW.

The warranties contained herein contain all the representations and warranties with respect to the subject matter of this document, and supersede all prior negotiations, agreements and understandings with respect thereto.

The recipient of this document hereby acknowledges and represents that it has not relied on any representation, assertion, guarantee, warranty, collateral contract or other assurance, except those set out in this document.

For additional information on this product or this warranty, please contact a GF Customer Service Representative.

NOTES:

- 1) Additional terms and conditions may apply. See GF's General Terms and Conditions on its website: www.grahamfield.com.
- 2) Freight claims must be notated on the appropriate shipping documents and must be made with immediacy. International, federal and state regulations govern specific requirements for freight claims. Failure to abide by those regulations may result in a denial of the freight claim. GF will assist you in filing the freight claim.
- 3) Claims for any short shipment must be made within three (3) days of the invoice date.



Manufactured For:
GF Health Products, Inc.
1 Graham-Field Way, Atlanta, GA 30340
Made in China

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