

BASIC™ HOOD
INSTRUCTION MANUAL
Models

2247300	2246300	2246600	2246700
2247301	2246301	2246601	2246701
2247400	2246400	2246602	2246702
2247401	2246401	2246603	2246703
2247500	2246500	2246604	2246704
2247501	2246501	2246605	2246705
		2246606	2246706

Product designs are subject to change without notice
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4851200 Revision D, ECO C065
Printed in U.S.A.

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Components Shipped

Carefully check the contents of the carton for damage that might have occurred in transit. Do not discard the carton or packing material until all components have been checked against the following component list and the equipment has been installed and tested.

As shipped, the carton should contain one of the following:

Catalog #	Description
2247300	Basic 47 Fume Hood with blower and incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2247301	Basic 47 Fume Hood with blower and incandescent vapor-proof light. 220 volt, single phase, 50 Hz.
2247400	Basic 47 Fume Hood without blower, with incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2247401	Basic 47 Fume Hood without blower, with incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2247500	Basic 47 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 115/230 volt, single phase, 60 Hz.
2247501	Basic 47 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 220 volt, single phase, 50 Hz.
2246600	Unassembled Basic 47 Fume Hood without blower, with incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2246601	Unassembled Basic 47 Fume Hood without blower, with incandescent vapor-proof light. 220 volt, single phase, 50 Hz.
2246602	Unassembled Basic 47 Fume Hood without blower, with explosion-proof incandescent light. 115/230 volt, single phase, 50/60 Hz.
2246603	Unassembled Basic 47 Fume Hood with blower and incandescent light. 115 volt, single phase, 60 Hz.
2246604	Unassembled Basic 47 Fume Hood with blower and incandescent light. 220 volt, single phase, 50 Hz.
2246605	Unassembled Basic 47 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 115/230 volt, single phase, 60 Hz.
2246606	Unassembled Basic 47 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 220 volt, single phase, 50 Hz.
2246300	Basic 70 Fume Hood with blower and incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2246301	Basic 70 Fume Hood with blower and incandescent vapor-proof light. 220 volt, single phase, 50 Hz.

INTRODUCTION

2246400	Basic 70 Fume Hood without blower, with incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2246401	Basic 70 Fume Hood without blower, with incandescent vapor-proof light. 220 volt, single phase, 50 Hz.
2246500	Basic 70 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 115/230 volt, single phase, 60 Hz.
2246501	Basic 70 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 220 volt, single phase, 50 Hz.
2246700	Unassembled Basic 70 Fume Hood without blower, with incandescent vapor-proof light. 115 volt, single phase, 60 Hz.
2246701	Unassembled Basic 70 Fume Hood without blower, with incandescent vapor-proof light. 220 volt, single phase, 50 Hz.
2246702	Unassembled Basic 70 Fume Hood without blower, with incandescent vapor-proof light. 115/230 volt, single phase, 50/60 Hz.
2246703	Unassembled Basic 70 Fume Hood with blower with incandescent light. 115 volt, single phase, 60 Hz.
2246704	Unassembled Basic 70 Fume Hood with blower with incandescent light. 220 volt, single phase, 50 Hz.
2246705	Unassembled Basic 70 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 115/230 volt, single phase, 60 Hz.
2246706	Unassembled Basic 70 Fume Hood with explosion-proof blower and explosion-proof incandescent light. 220 volt, single phase, 50 Hz.

General Description

The Labconco Basic Hood has been engineered to effectively contain and remove toxic, noxious, or other harmful materials. With its low overall profile and 25-inch depth, the fume hood will fit on most work surfaces and in areas with lower ceiling restrictions, which do not allow the use of taller laboratory fume hoods.

The Basic Hood features epoxy-coated steel construction that resists corrosion, impact, cracking and peeling.

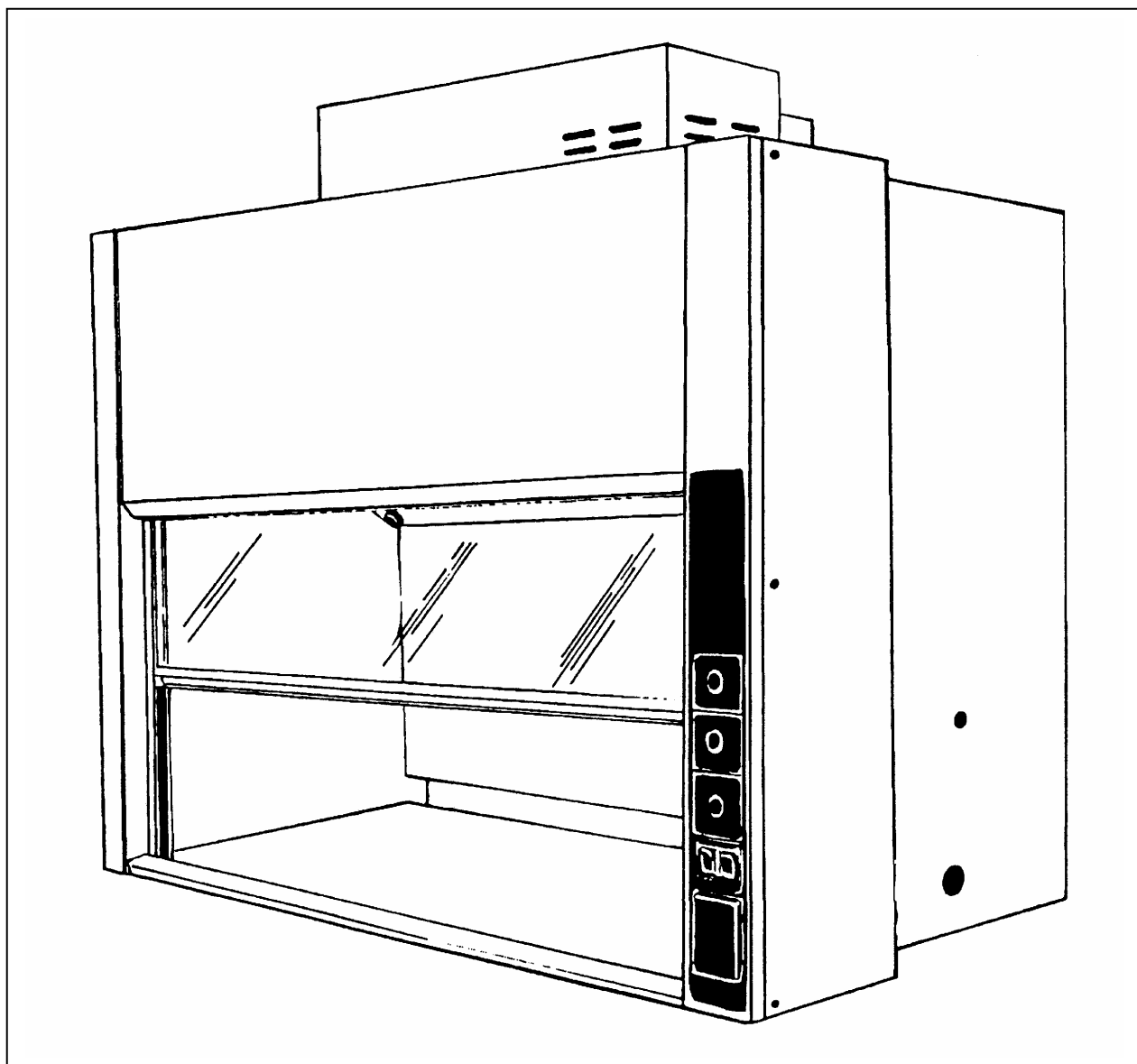


Figure 1

INTRODUCTION

Performance

The Basic Hood maximizes work area due to its unique single wall design. The hood is available with or without a blower and in both an assembled or unassembled configuration.

The hood features by-pass airflow design that allows the hood face velocity to remain relatively stable as the sash is lowered to different working heights. Airflow is diverted to behind the front panel and under the sash foil to help minimize face velocity increases as the sash is lowered to the working position the operator chooses.

Component Identification

1. **Sash Foil.** The sash foil is located directly underneath the sash opening of the fume hood. The aerodynamic shape of the foil directs a smooth flow of air into the hood with minimum turbulence. The sash foil is also part of the air by-pass system on the hood, which allows a portion of the room air to flow under the foil and into the fume hood when the sash is partially to fully closed. This allows a more uniform face velocity across the sash opening of the fume hood as the sash is lowered to various working positions.
2. **Adjustable Baffle.** Epoxy-coated steel baffle features an adjustment slot to change the internal airflow patterns within the hood. The slot adjustment is regulated by loosening the baffle retaining knobs located directly on the baffle and then pushing the upper portion of the lower baffle inward to expose the slot opening in the baffle.
3. **Tempered Safety Glass Sash.** A vertical rising tempered safety glass sash assembly allows the hood operator the flexibility of positioning the sash at any suitable height for various procedures that he may perform within the fume hood.
4. **Light Fixture.** The hood interior is illuminated by a single vapor-proof incandescent light fixture. An explosion-proof incandescent light fixture is also featured on the explosion-proof models. Both light assemblies are suitable for use with a 100-watt light bulb.
5. **Exhaust Connection.** The hood features an epoxy-coated steel exhaust outlet ring sized to accept either the built-in motor/blower assembly or a ten-inch diameter plastic duct. When used with a remote blower, the exhaust duct slips down directly over the exterior of the exhaust connection. The duct is then attached directly to the exhaust connection ring using sheet metal screws and caulking. When the built-in motor/blower is used, the exhaust duct is connected directly to the exhaust connection on the blower itself. The ductwork should be secured to the blower by using sheet metal screws and caulking.

WARNING: The weight of the exhaust ductwork should be supported independently of the hood structure as excess weight could cause damage to the hood structure.

6. **Blower Assembly (not shown).** A fractional horsepower motor/blower assembly comes complete with a coated metal blower housing, exterior cover and aluminum impeller wheel. Depending upon your specific application or preference, the motor/blower assembly can be mounted directly in the top of the fume hood or located externally in your duct run or on the roof itself.

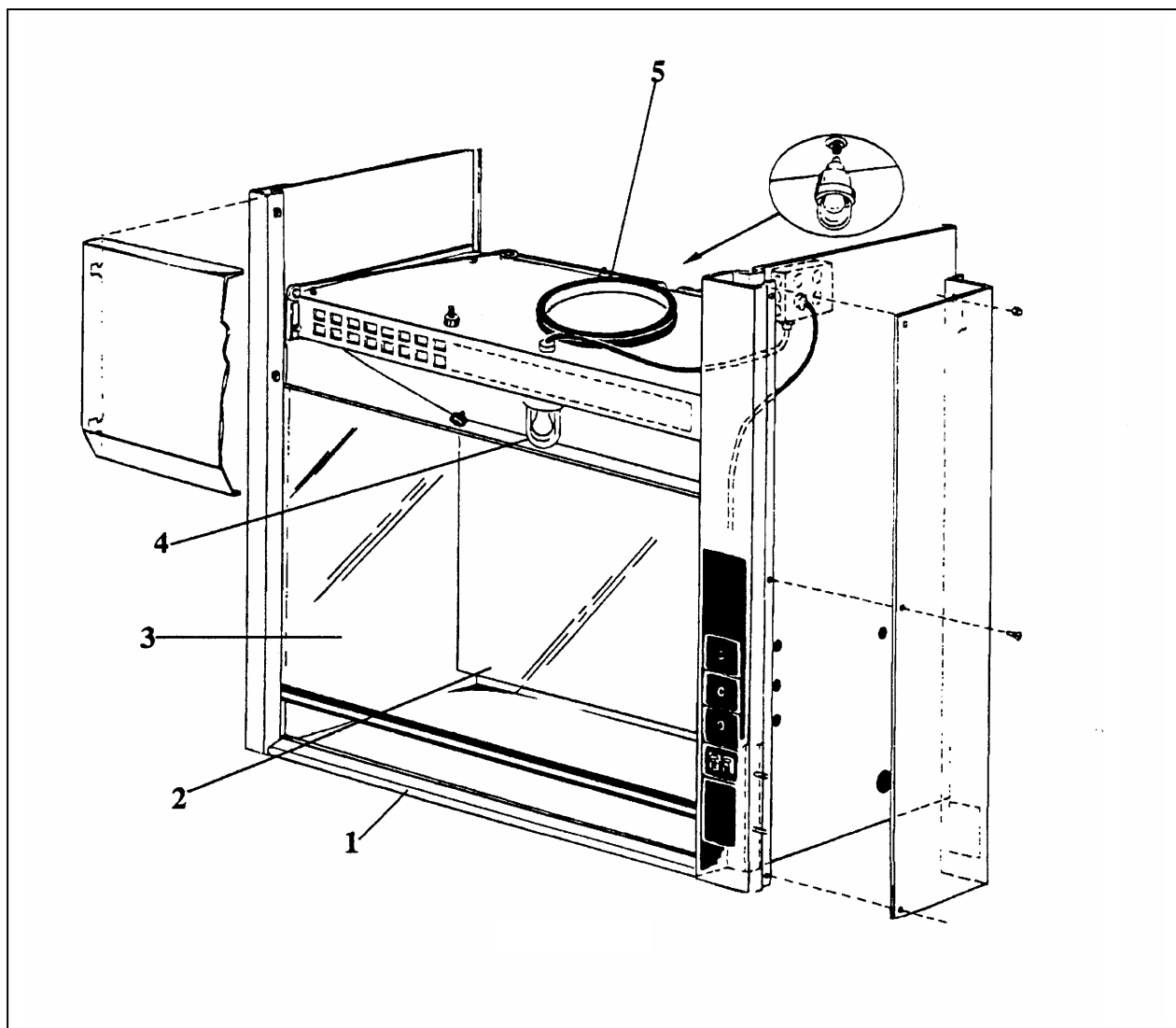


Figure 2

INSTALLATION

Preparation

The assembled Basic Hood is shipped to you in one carton. The unassembled Basic Hood is shipped with the hood structure in one carton and the blower, if ordered, in a separate carton.

Inspect the hood thoroughly prior to installation and report any damage that may have occurred in transit directly to the freight carrier. When reporting damage on your hood, you should provide both the hood model number and serial number. The hood's serial tag is located behind the front panel in the upper left hand corner.

Location

Your Labconco laboratory hood should be positioned in the laboratory so that it is out of the main traffic pattern and away from air disturbances such as doors, windows, air conditioning, ventilation supply, or other return outlets. Hood location is very important as extraneous air currents can disturb the airflow within the hood.

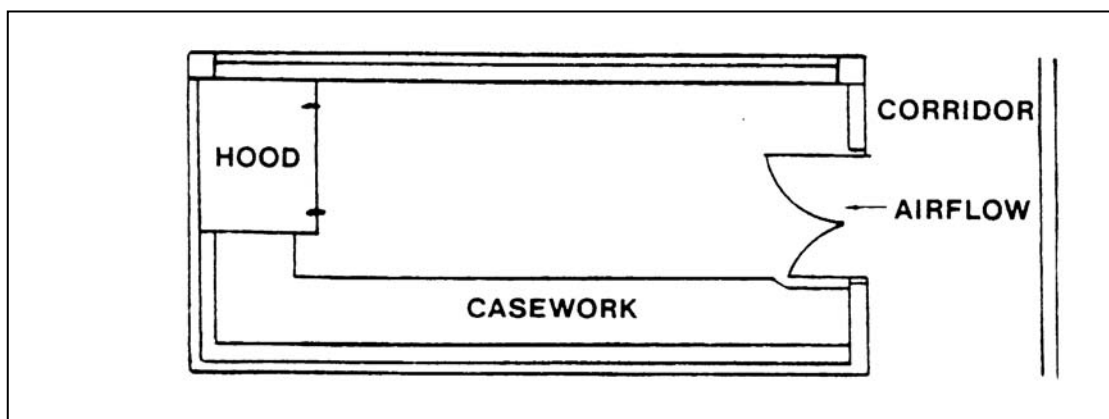


Figure 3

Installation Factors

In addition to providing the proper location for the hood, you will also need to provide the following:

1. Supporting structure, such as a base cabinet or stand, for the hood with a chemical resistant work surface.
2. 115 volt, single-phase, 60 Hz, or 220 volt, 50 Hz electrical service.
3. Availability of vacuum, air, gas, and water services piping for optional service fixtures as required on the hood structure.
4. 10" diameter exhaust ductwork to be used for connection to the 4-foot models. 12" diameter exhaust ductwork should be used with the 6-foot models.

WARNING: When lifting the hood superstructure, lift the hood ONLY by the sides and back panel to avoid damage to the hood. DO NOT LIFT THE HOOD BY THE SASH FOIL, as it is not directly attached to the hood structure.

Electrical Connection

Prior to connecting any electrical wiring to the fume hood superstructure, first refer to the hood identification plate for the proper electrical characteristics of your specific model. Both the identification plate and electrical connection boxes are accessible from the front of the fume hood by removing the front panel.

WARNING: The building electrical supply system for Basic Hoods should include overload protection. A switch or circuit breaker should be in close proximity to the equipment and within easy reach of the operator. The switch or circuit breaker is to be marked as the disconnecting device for the equipment. Consult the NEC-2002 for proper installation.

The electrical wiring of your hood is dependent upon your exact model. Review the wiring diagrams for your specific hood located on pages 13 and 14 prior to installation. All wiring should be done in accordance with the National Electrical Code.

If your hood is an explosion-proof model, it will not be internally wired. All wiring for the enclosure **MUST** be done by a licensed electrician and conform to all local codes. In most cases, the hood will require the use of conduit shielding to protect the wiring being brought into the hood and the grounding connection of the wiring shall be made in such a manner that the terminal box cover may be removed without disturbing the electrical connections.

Sash Weight Release

The sash weight has been secured in the sash weight tracks located on the back of your fume hood during shipment. The weight has been strapped to the bottom of the hood back panel through the use of two plastic wire ties. Cut and remove these ties to release the weight. Next, remove the cardboard packing material placed behind the weight for shipment. Then slide the sash weight up to the top position and attach the two sash cables directly into the slots provided on the weight to begin proper operation.

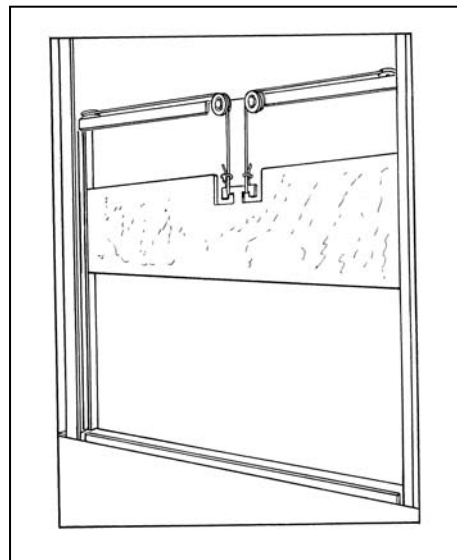


Figure 4

INSTALLATION

Sealing the Fume Hood

Once the Basic Hood has been set into position and all the plumbing and exhaust ducting has been completed, it should be sealed to its work surface. The sealing of the hood structure to the work surface will prevent any spilled materials from collecting underneath the walls of the fume hood. Silicone sealant is normally used for this purpose, and can be purchased locally or directly from Labconco.

Exhaust Connection for Hoods with Built-In Blower

The exhaust connection on your Basic Hood with built-in blower features a round exhaust outlet sized to accept ten-inch diameter PVC ducting. The exhaust duct size allows for a minimum of static pressure loss through the hood at normal face velocities and generates a sufficient transport velocity through the duct to safely exhaust the toxic materials being handled in the laboratory hood.

The exhaust duct used on this hood will be under positive pressure during operation. It is essential that all duct joints be sealed properly to eliminate the possibility of leaking exhaust contaminants into your laboratory.

WARNING: The weight of the exhaust duct system must be supported independently of the fume hood structure. Do not allow the weight to be supported by the hood structure as damage to the hood structure may result.

Exhaust Connection for Hoods with Remotely Located Blower

The exhaust connection on your Basic Hood, when not using the built-in blower, features a coated steel outlet ring connection sized to accept ten inch diameter PVC ducting. The exhaust duct size allows for a minimum of static pressure loss through the hood at normal face velocities and generates a sufficient transport velocity through the ducting to safely exhaust the toxic materials being handled in the laboratory hood.

WARNING: The weight of the exhaust duct system must be supported independently of the fume hood structure. Do not allow the weight to be supported by the hood structure as damage to the hood structure may result.

Baffle Adjustment

The Basic 47 and Basic 70 Fume Hood features an adjustable baffle that allows you to change the airflow patterns within the hood. The hood may be used with the baffle fully open, fully closed or in any interim position.

Simply loosen the baffle adjustment knobs and push the lower section of the baffle inward to open the baffle slot. To lessen or fully close the baffle slot you would again loosen the adjustment knobs and pull the lower baffle section back toward you using the adjustment knobs.

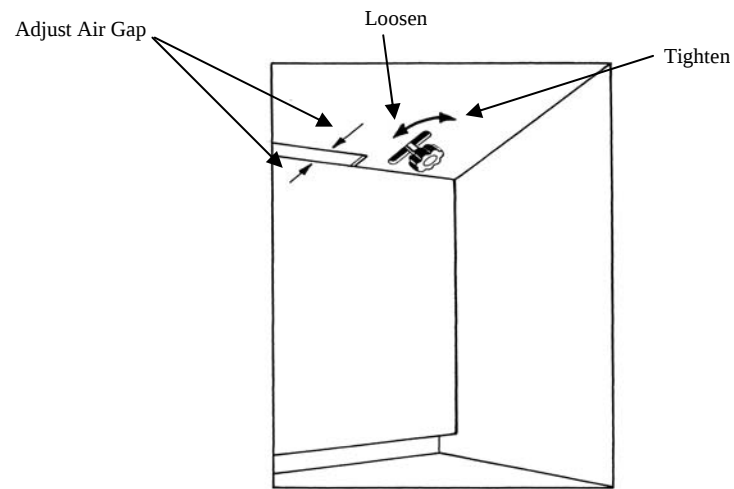


Figure 5

SAFETY PRECAUTIONS

- The weight of the exhaust duct system must be supported independently of the fume hood structure. Do not allow the weight to be supported by the blower scroll and housing or hood structure as damage may result.
- When lifting the hood structure, lift the hood ONLY by the sides and back panel to avoid damage to the hood. DO NOT LIFT THE HOOD BY THE SASH FOIL, as it is not directly attached to the hood. The sash foil should be removed when lifting the hood.
- The disposal and/or emission of substances used in connection with this equipment may be governed by various federal, state or local regulations. All users of this equipment are urged to become familiar with any regulations that apply in the user's area concerning the dumping of waste materials in or upon water, land or air and to comply with such regulations.

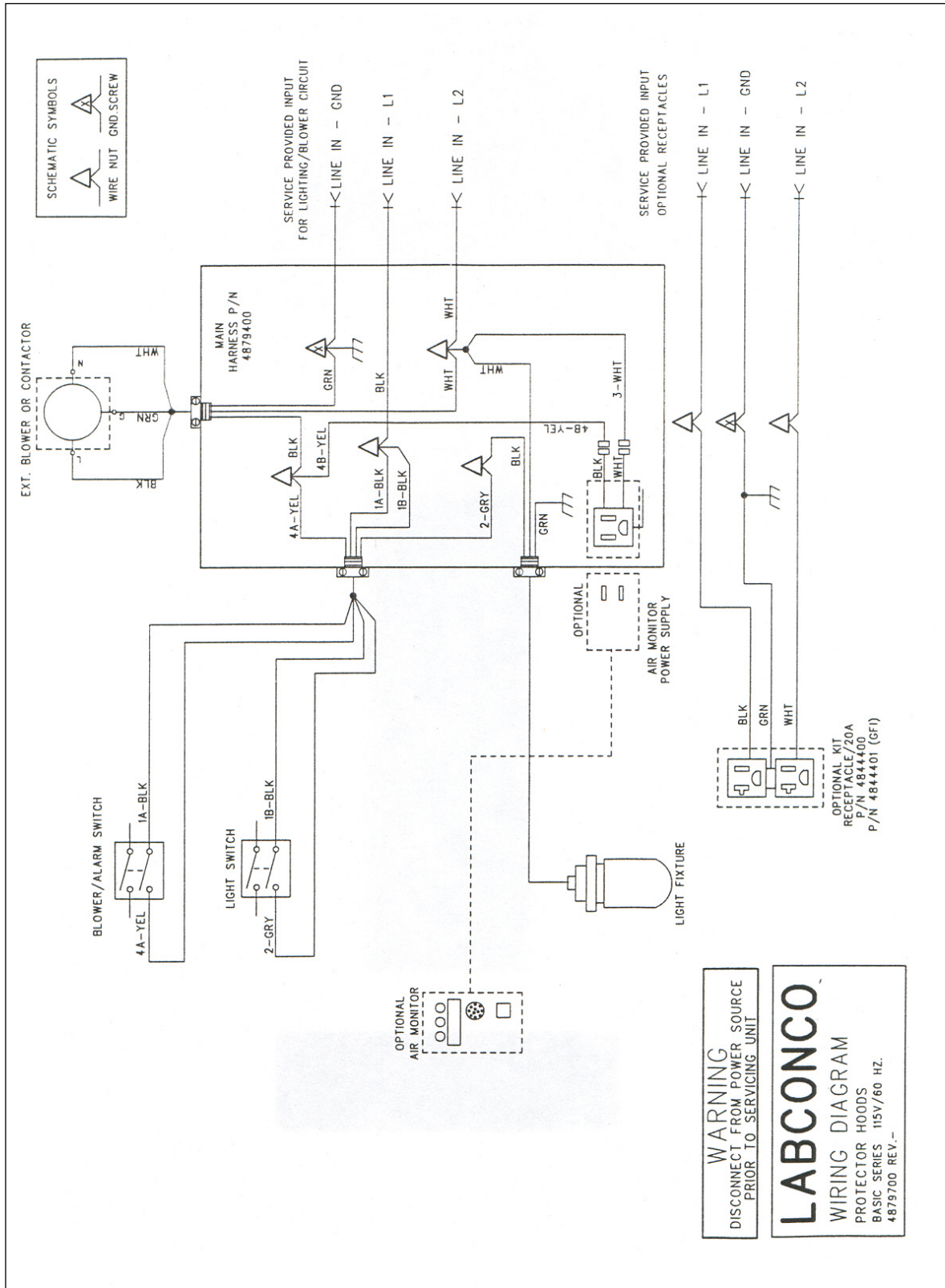
NORMAL OPERATION

Although the laboratory hood has been engineered to maintain the optimum in operator safety, caution should always be used while working in the hood. Good general housekeeping procedures with the following specific recommendations should allow you to operate your laboratory hood safely.

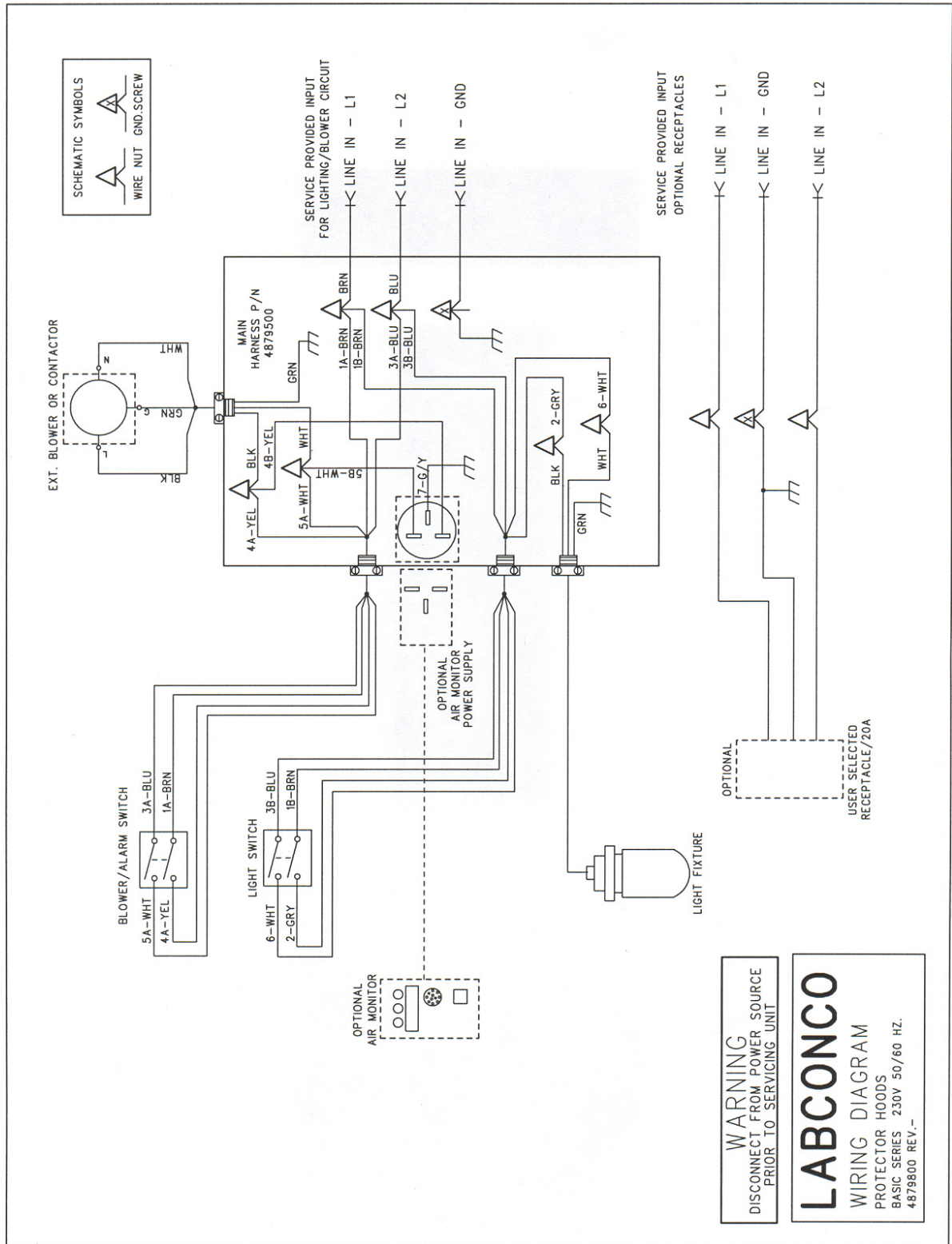
- Do not overload the work surface with apparatus or work material. The safe operation of the laboratory hood is based upon having proper airflow through the structure.
- Do not store containers or supplies against the baffle, as this will affect airflow through the hood. Blocking the bottom of the baffle will change the airflow pattern in the hood causing turbulence and possible leakage at the face of the hood.
- Using flammable or explosive materials in this hood, unless it has been equipped with explosion-proof components, is not recommended.
- Do not work with or store chemicals in this hood without operating the exhaust system.
- Perchloric acid should **not** be used in this hood.
- Radioisotope materials are not recommended for use in this hood.
- The use of heat generating equipment in this hood without operating the exhaust system may cause damage to the hood liner.
- Seal all duct joints properly to prevent the leakage of any exhaust contaminants from the duct.

WIRING DIAGRAM

115 VAC Models



230 VAC Models



ROUTINE MAINTENANCE

- The exhaust blower motor has been factory lubricated for two years of service. After this period 20 to 30 drops of SAE 20 automotive oil annually is sufficient. Reference the nameplate on the motor for additional oiling instructions.
- Periodically check the belt tightness on the motor/blower assembly for proper adjustment.
- The belt on the motor/blower has been factory set at a desired tension level. The tension on the belt can be measured by the amount of pressure exerted to deflect the belt 1/2" from its normal position and this should be approximately 5 pounds.

Your Labconco laboratory hood has been designed to allow you the flexibility of setting your own face velocity based upon the work being performed inside of the hood. The combination of your laboratory hood, exhaust duct, and exhaust blower enables you to achieve this flexibility by regulating airflow across the sash opening.

To determine the actual face velocity through the sash opening, airflow velocity readings will need to be taken. This should be done across the sash opening of the hood in accordance with the section on laboratory hoods in Industrial Ventilation.

REPLACEMENT PARTS

BASIC HOODS

<u>Ref. No.</u>	<u>Description</u>	<u>Qty.</u>	MODEL SERIES	
			<u>47" Models</u>	<u>70" Models</u>
2	Wall Plate Blank	2	9818300	9818300
3*	Switch	2	1302300	1302300
4	Sash Assembly	1	4847900	4847901
5*	Globe, Vapor Proof	1	1272900	1272900
6	Knob	2	1879400	1879400
7	Mount, Vibration	4	4847800	4847800
8	Sash Pulley	6	1861400	1861400
9	Gasket, Outlet	1	4850200	4850200
10	Explosion-Proof Light Fixture	1	1270301	1270301

***These items are not used on explosion-proof models.**

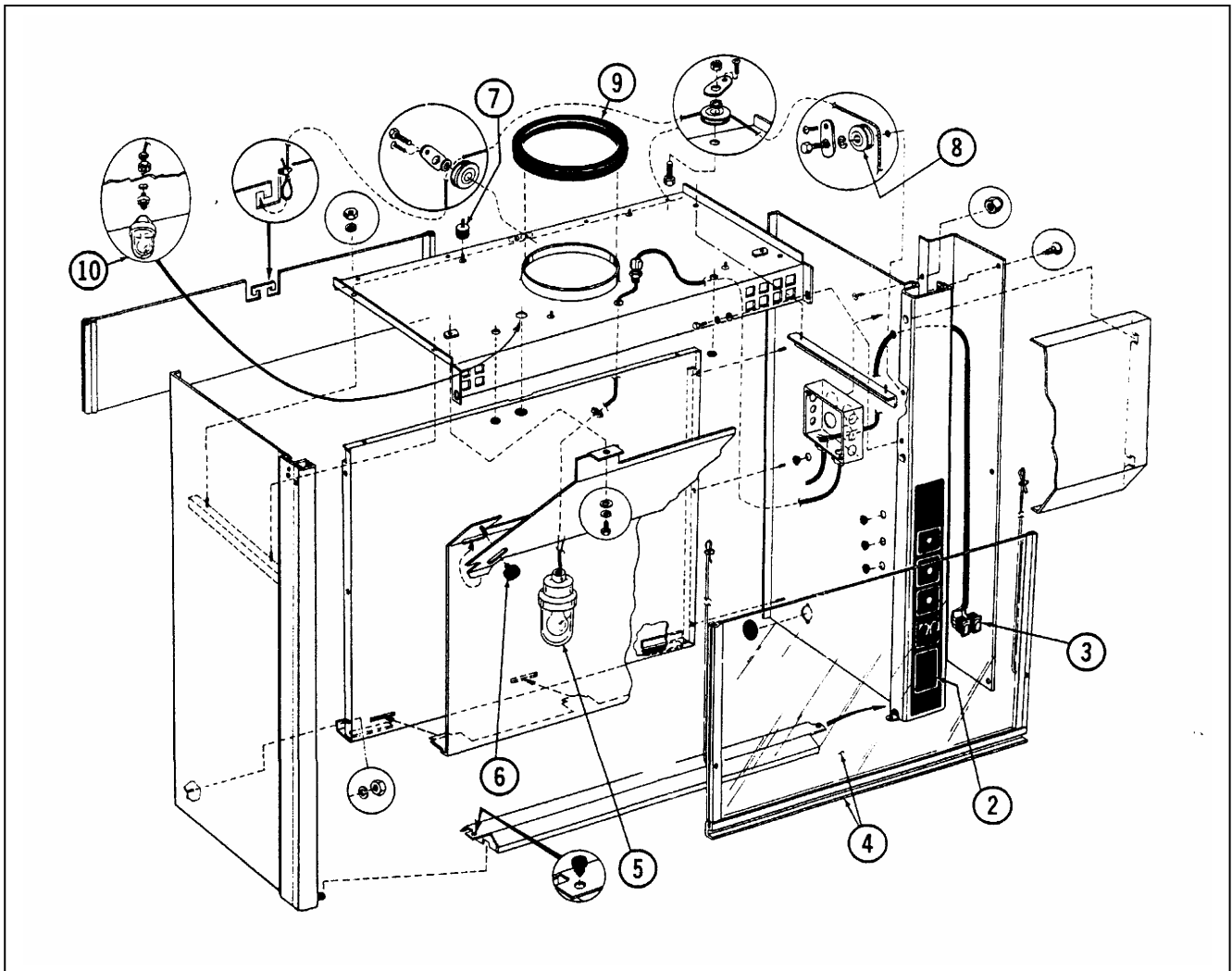


Figure 8

REPLACEMENT PARTS

Blower Assembly

<u>Ref. No.</u>	<u>Description</u>	<u>Qty.</u>	<u>Catalog No.</u>	<u>47" Blower Assembly</u>	<u>70" Blower Assembly</u>
1	Motor – 1/3 HP 115/60 Hz	1	1211400	4844500	
	Motor – ½ HP 110/220/50 Hz	1	1211300	4844501	
	Motor – 1/3 HP 115/230 60 Hz	1	1206600	4844502	
	Motor – 1/3 HP 110/220 50 Hz EP	1	1211000	4844503	
	Motor – ¾ HP 115/60 Hz	1	1204100		4844700
	Motor – ¾ HP 110/220 50 Hz	1	1211500		4844701
	Motor – ¾ HP 115/230 60 Hz	1	1201800		4844702
	Motor – ¾ HP 110/220 50 Hz	1	1211600		4844703
2	Sheave, Variable	1	1860000	All models	
		1	1858200		All models
3	V-Belt 3L340	1	1862900	4844500 4844502	
	V-Belt 3L330	1	1863600	4844501 4844503	
	V-Belt 4L360	1	1860900		4844700 4844702
	V-Belt 4L350	1	1853100		4844701 4844703
4	Sheave, Fixed	1	1859700	4844500 4844502	
		1	1850800	4844501 4844503	
		1	1859400		4844700 4844702
		1	1863700		4844701 4844703
5	Pillow Block	2	1863000	All models	All models
6	Cover	1	4849000	All models	All models
7	Housing Assembly	1	2264301	All models	All models
8	Adapter, Inlet	1	4850800	All models	All models
9	Wheel Assembly	1	4897300	All models	All models
10	Transition	1	4852300	All models	All models

Blower Assembly

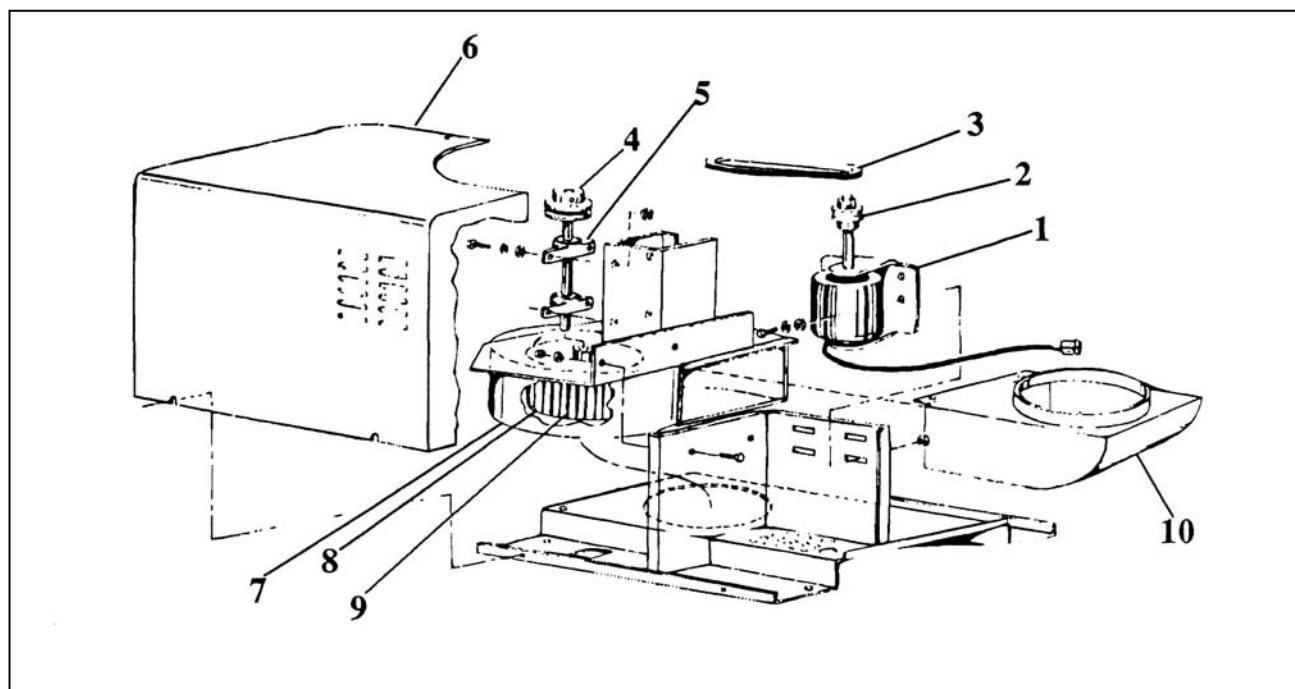


Figure 9

WARRANTY and CONTACTING LABCONCO

Warranty

Labconco provides a warranty on all parts and factory workmanship. The warranty includes areas of defective material and workmanship, provided such defect results from normal and proper use of the equipment.

The warranty for all Labconco products will expire one year from date of installation or two years from date of shipment from Labconco, whichever is sooner, except the following:

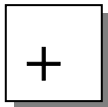
- Purifier® Delta® Series Biological Safety Cabinets carry a three-year warranty from date of installation or four years from date of shipment from Labconco, whichever is sooner.
- Carts carry a lifetime warranty.
- Glassware is not warranted from breakage when dropped or mishandled.

This limited warranty covers parts and labor, but not transportation and insurance charges. In the event of a warranty claim, contact Labconco Corporation or the dealer who sold you the product. If the cause is determined to be a manufacturing fault, the dealer or Labconco Corporation will repair or replace all defective parts to restore the unit to operation. Under no circumstances shall Labconco Corporation be liable for indirect, consequential, or special damages of any kind. This statement may be altered by a specific published amendment. No individual has authorization to alter the provisions of this warranty policy or its amendments. Lamps and filters are not covered by this warranty. Damage due to corrosion or accidental breakage is also not covered.

Limitation of Liability

The disposal and/or emission of substances used in connection with this equipment may be governed by various federal, state, or local regulations. All users of this equipment are required to become familiar with any regulations that apply in the user's area concerning the dumping of waste materials in or upon water, land, or air and to comply with such regulations. Labconco Corporation is held harmless with respect to user's compliance with such regulations.

Contacting Labconco Corporation



If you have questions that are not addressed in this manual, or if you need technical assistance, contact Labconco Customer Service Department or Labconco Product Service Department at 1-800-821-5525 or 1-816-333-8811, between the hours of 7:00 a.m. and 6:00 p.m., Central Standard Time.

Visit Labconco web site at: <http://www.labconco.com> or email Labconco at: labconco@labconco.com.

If a shipment is received in visibly damaged condition, be certain to make a notation on the delivering carrier's receipt and have their agent confirm the damage on your receipt. Otherwise, the damage claim may be refused.

If concealed damage or pilferage is discovered, notify the carrier immediately and retain the entire shipment intact for inspection. Interstate Commerce Commission rules require that the claim be filed with the carrier within 15 days after delivery.

NOTE: Do not return goods. Goods returned without prior authorization will not be accepted. Labconco Corporation and its dealers are not responsible for shipping damage. Claims must be filed directly with the freight carrier by the recipient. If authorization has been received to return this product, by accepting this approval, the user assumes all responsibility and liability for biological and chemical decontamination and cleansing. Labconco reserves the right to refuse delivery of any products, which do not appear to have been properly cleaned and/or decontaminated prior to return.