INSTRUCTION MANUAL
LABCONCO FUME ADSORBER
MODEL NO'S
69000 69200 69000-02 69200-02

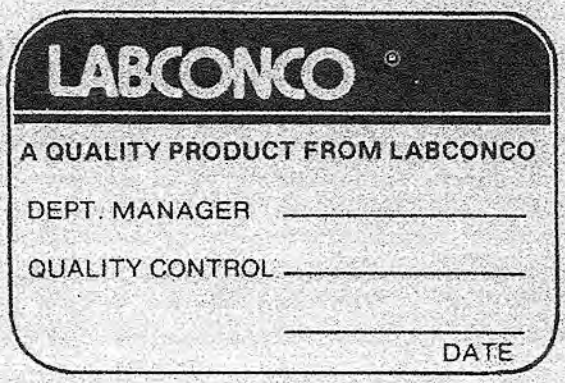
LABCONCO

LABCONCO CORPORATION, 8811 PROSPECT, KANSAS CITY, MO. 64132, 816—333-8811

Dear Customer:

This letter is to ensure that you get the best performance from your Labconco product. We want to be sure you are satisfied. If damage has occurred in shipping, the customer must file a claim with the carrier **IMMEDIATELY! DO NOT** return any items to Labconco Corporation without written authorization from the factory. Contact Labconco Corporation directly for assistance on your equipment.

A great deal of care has gone into the engineering, production and ultimate quality control of your Labconco product. That is why we affix this badge to our products. Your satisfaction is of great concern to us.



We know that even the best products require service from time to time. So if this is ever true of your Labconco product, call the Labconco Service Dept. directly at (816) 333-8811, and ask for our service manager for all of the assistance that you need.

We suggest you keep all of this material together. It's nice to know you are protected, even though you may never need it.

WARNING: THE DISPOSAL OF SUBSTANCES USED IN CONNECTION WITH THIS EQUIPMENT MAY BE GOVERNED BY VARIOUS FEDERAL, STATE OR LOCAL REGULATION. ALL USERS OF THIS EQUIPMENT ARE URGED TO BECOME FAMILIAR WITH ANY REGULATIONS THAT APPLY IN THE USERS AREA CONCERNING THE DUMPING OF WASTE MATERIALS IN OR UPON WATER, LAND OR AIR AND TO COMPLY WITH SUCH REGULATIONS.

Sincerely,

LABCONCO CORPORATION

TABLE OF CONTENTS

Introduction 1
General Description 1
Warning/Applications 1
Labeled Diagram, Models 69000, 69000-02 2
Labeled Diagram, Models 69200, 69200-02 3
Installation 4
Installation Factors 4
Specifications 4
Normal Operation 5
Carbon Filter Element Replacement 5
Maintenance 6
Acrylic Hood Cleaning 6
Replacement Parts List & Diagram, Models 69000, 69000-02 7
Replacement Parts List & Diagram, Models 69200, 69200-02 8
Charcoal Adsorbsion Chart 9

Product Designs Are Subject to Change Without Notice

©1988 LABCONCO CORP.

FORM 69024 REV. D / ECO 6257 / PRINTED IN U.S.A.

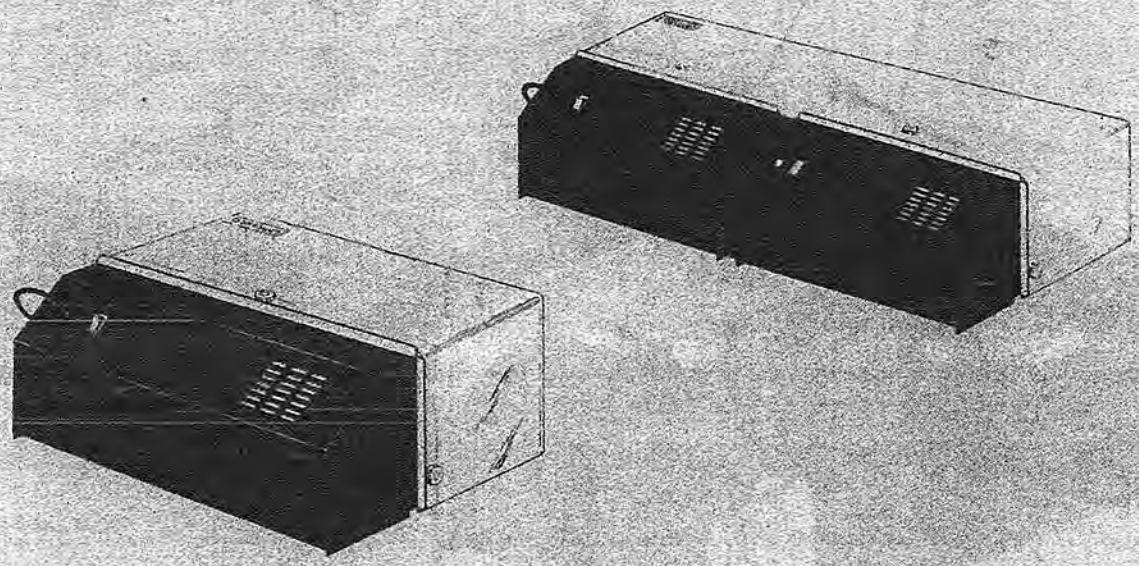
INTRODUCTION

General Description

The Labconco Fume Adsorber provides a spacious and enclosed workstation for histology and scientology procedures, and other laboratory operations in which nauseas odors and harmful vapors are produced.

Annoying vapors, such as Xylene or Toleyne fumes used in cover slipping operations, are removed quickly and efficiently by the Fume Adsorber's activated carbon filter.

Solvent vapors are trapped in the capillary-like channels of the carbon filter while clean air is recirculated into the laboratory. No venting or ducting is necessary.



Performance

Warning/Application

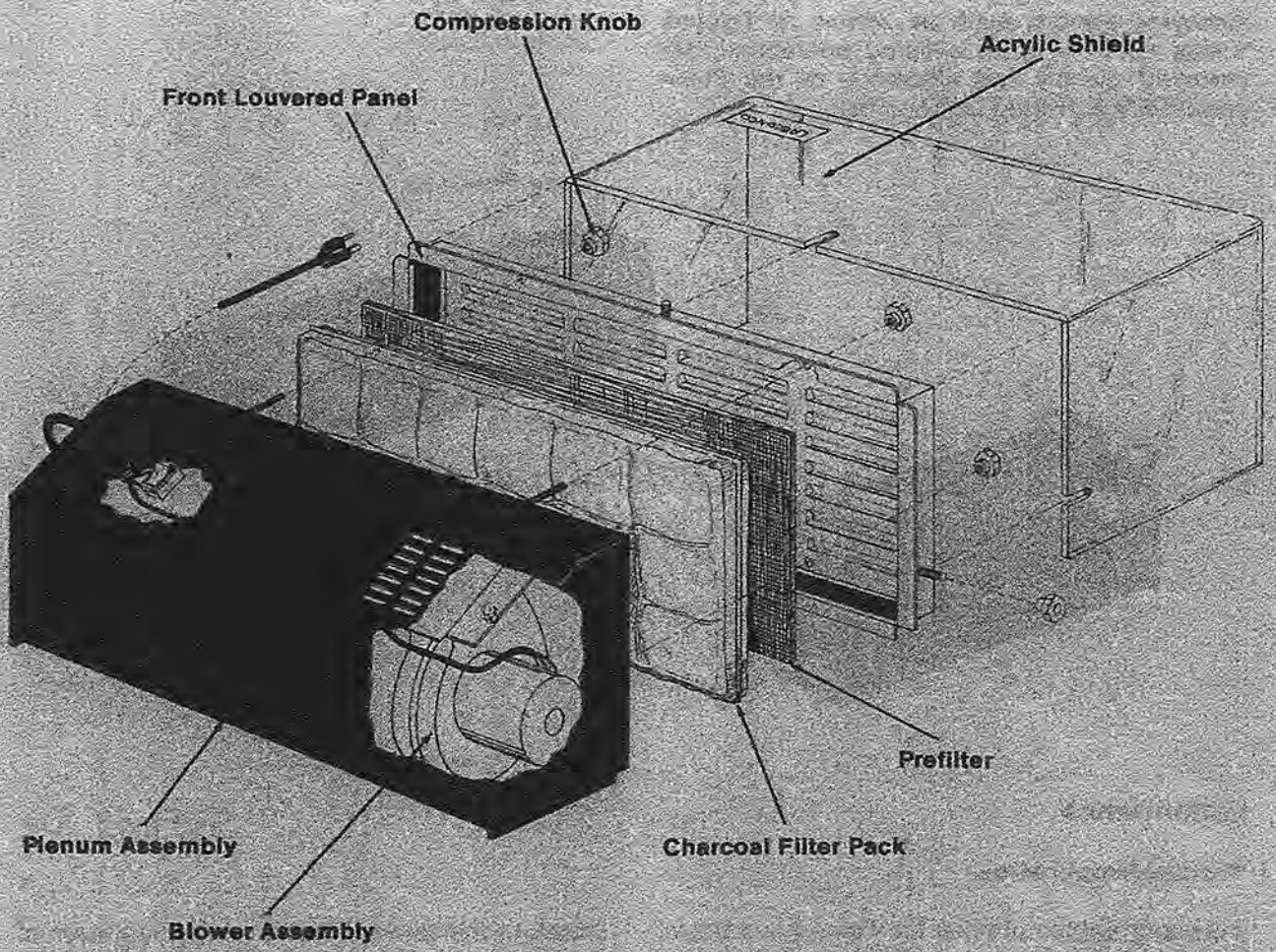
It is important to note that the Fume Adsorber is not intended for use as a general purpose laboratory fume hood. Since adsorption is used to trap vapors rather than discharging them to the building exterior, special consideration must be given to the procedures performed in the Fume Adsorber. It is a specialized enclosure that should have the approval of the local laboratory safety officer or careful pre-evaluation by the responsible laboratory technician before its use.

The Fume Adsorber is not for use with pathogenic hazards, as the internal charcoal filters have not been designed for these specific applications.

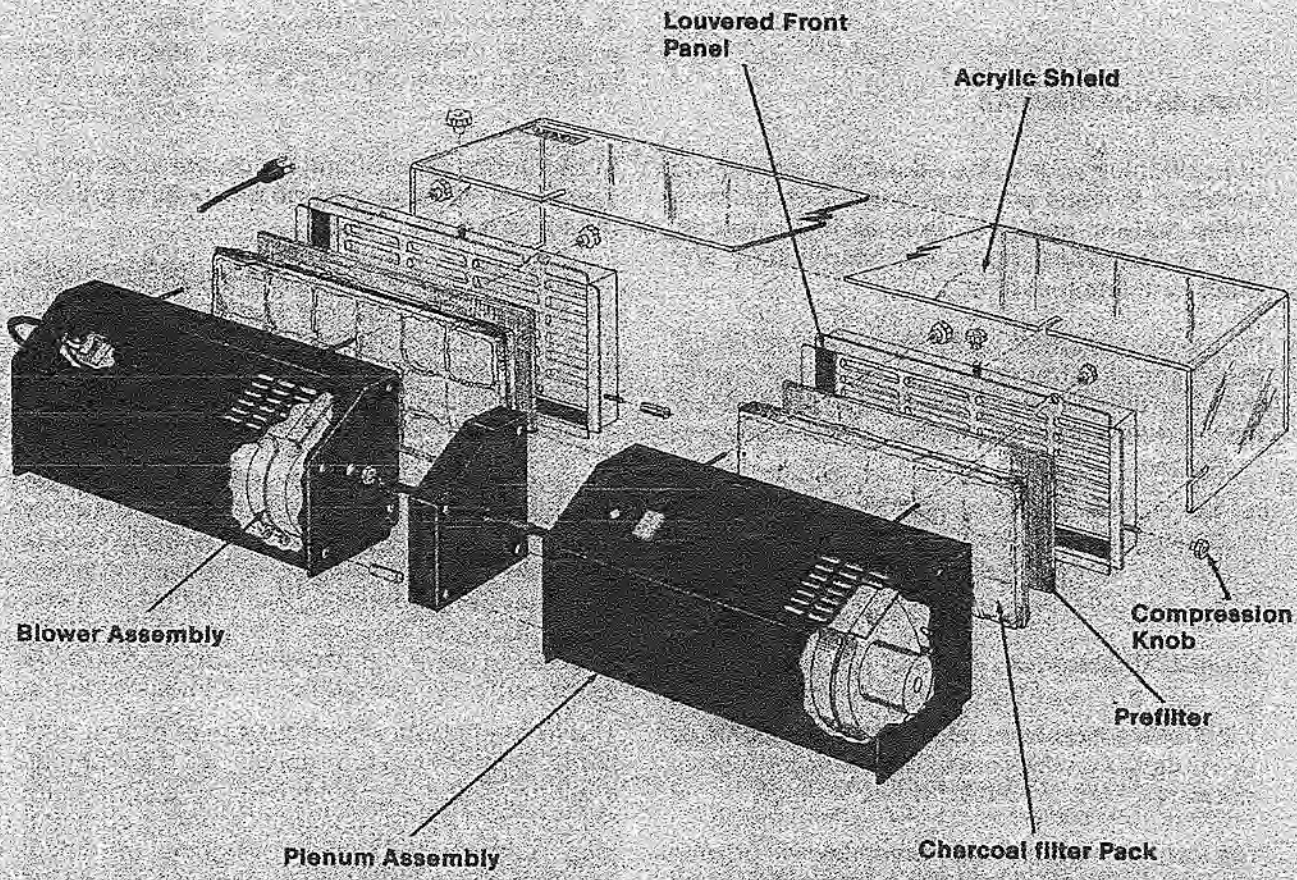
Careful consideration was given in the design of the Fume Adsorber. It's size, by design, is limiting in order to proclude its use for certain laboratory procedures. The use of hot plates, distillation apparatus, or other similar equipment is not recommended. This type of equipment should generally indicate the use of a laboratory fume hood.

Refer to the normal operation section of this manual for technical information regarding the normal operation of the Fume Adsorber.

LABELED DIAGRAM
SINGLE UNIT #69000, 69000-02



LABELED DIAGRAM
DOUBLE WIDE UNIT #69200, 69200-02



Installation

Your Fume Adsorber has been shipped to you fully assembled and ready for immediate use and installation. The plastic shroud should be locked into position by the three knobs located on the Fume Adsorber plenum assembly, prior to use.

Inspect your Fume Adsorber and all accessoried pieces of equipment thoroughly prior to installation. Report any damage that may occurred in transit to your authorized laboratory supply dealer, or directly to Labconco Corporation at 1-816-333-8811, immediately.

Installation Factors

In positioning your Fume Adsorber, care should be taken to make sure that it is out of the main traffic pattern, and away from air disturbances, such as windows, doors, air conditioning and other ventilation outlets.

Proper ventilation for your Fume Adsorber is very important, as extraneous air currents can disturb the inward flow and the overall operating performance that you will experience with this piece of equipment.

In addition to determining the proper location for your Fume Adsorber, you will also need to provide the following:

1. Supporting base structure either with or without a chemically resistant worksurface.
2. Electrical service requirement of 115 V, single phase 60 Hz.

Specifications

The Fume adsorber measures 27 ⅝" by 20 ⅜" by 12 ¼" high, and the double wide Fume Adsorber measures 55 ¾" by 20 ⅜" by 12 ¼" high.

The integral motor/blower assembly will provide a face velocity of 25 feet per minute (55 cfm) on the single wide Fume Adsorber and 110 cfm on the double wide Fume Adsorber. The individual units incorporate a replaceable six pound activated carbon filter which measures 26" by 1" by 10 ½" to retain chemical and solvent fumes. The motor/blower and carbon filter are housed in an epoxy coated steel plenum that features a louvered front panel for efficient air flow.

The front enclosure is comprised of a clear, one piece shatter resistant acrylic ⅜" thick shield. The unit itself is also completely wired complete with internal switch, 5 ½ foot grounded cord and plug assembly. The shipping weight for the model 69000 is 45 pounds and the shipping weight for the double wide Fume Adsorber model number 69200 is 90 pounds.

Normal Operation

Each Fume Adsorber filter element contains six pounds of high grade (type AC) activated charcoal, and has the capacity to remove from the air many types of odiferous vapors. It's primary strength is in the removal of organic vapors with boiling points above room temperature, including essential oils, solvents, organic immediates, and organic waste materials.

The filter will hold 20% to 50% of its own weight of these vapors down to levels undetectable by the sense of smell. Since in general, concentrations of adsorbable vapors below the threshold of smell are well below the flammability level (by a factor of about 100 to 1), if you smell it it should not be a fire hazard.

The Occupational Safety and Health Administration has set the limit for an employee exposure to Xylene at 100 parts per million over an eight hour work day. When operated as directed the Fume Adsorber will remove Xylene content to well below these levels.

Carbon Filter Element Replacement

The most practical and economical method of determining the service life of activated charcoal filters for most applications is by the sense of smell. The amount of odor breakthrough after it is detected usually continues at a low level for a period of time. The first breakthrough usually occurs on days of high humidity. One should be able to predict life expectancy after two or three replacements period. Due to the wide variety of potential vapors used, frequency of adsorber use, relative humidity and also varied olfactory sensitivity to particular odors, it is not possible to predict service life with a high degree of accuracy.

Usually, replacement of the activated charcoal filter is indicated after the first odor breakthrough. While the nose is not a quantitative apparatus, it is a first line gas detection unit. It is in the most opportune orientation between the Fume Adsorber and the operator to selectively judge odor threshold.

1. Remove acrylic shield from louvered frame assembly.
2. Set super structure on its back with the louvered panel facing upward.
3. Remove the four filter compression knobs.
4. Slip the louvered front panel up and away from the plenum area, exposing the roughing pre-filter.
5. Remove prefilter and set aside.
6. Remove carbon filter and discard.

CAUTION: Used filter elements will be loaded with adsorbent materials. Use suitable techniques for safe handling and disposal.

7. Place new carbon filter element on the plenum assembly and locate between the four filter frame studs.
8. Clean the roughing prefilter as required and place back on top of the carbon filter element.
9. Reinstall the front louvered panel over the plenum assembly.

10. Lightly tighten the four compression knobs to hold the louvered panel in place.

11. Set the superstructure upright on the flat worksurface, align the filter frame assembly and snug down all four compression nuts starting at the bottom two first and tightening the top two last.

12. Reinstall acrylic hood on the front of the Fume Adsorber unit.

MAINTENANCE

The Fume Adsorber utilizes a brushless motor and non-sparking blower wheel. Every six months the motor should be lubricated with 10 to 20 drops of SAE 10W or 20W non-detergent oil (ML type) or with electrical motor oil.

CAUTION: Make sure Fume Adsorber is disconnected from electrical service prior to servicing.

A. Remove acrylic hood from louvered filter frame.

B. Set super structure on its back (filter frame pointed upward).

C. Remove the four filter compression knobs.

D. Slip filter fram louvered front panel, exposing the roughing prefilter.

E. Remove prefilter and set aside.

F. Remove carbon filter element, then set aside.

G. Lubricate motor per above description.

H. Reassemble the Fume Adsorber in reverse order.

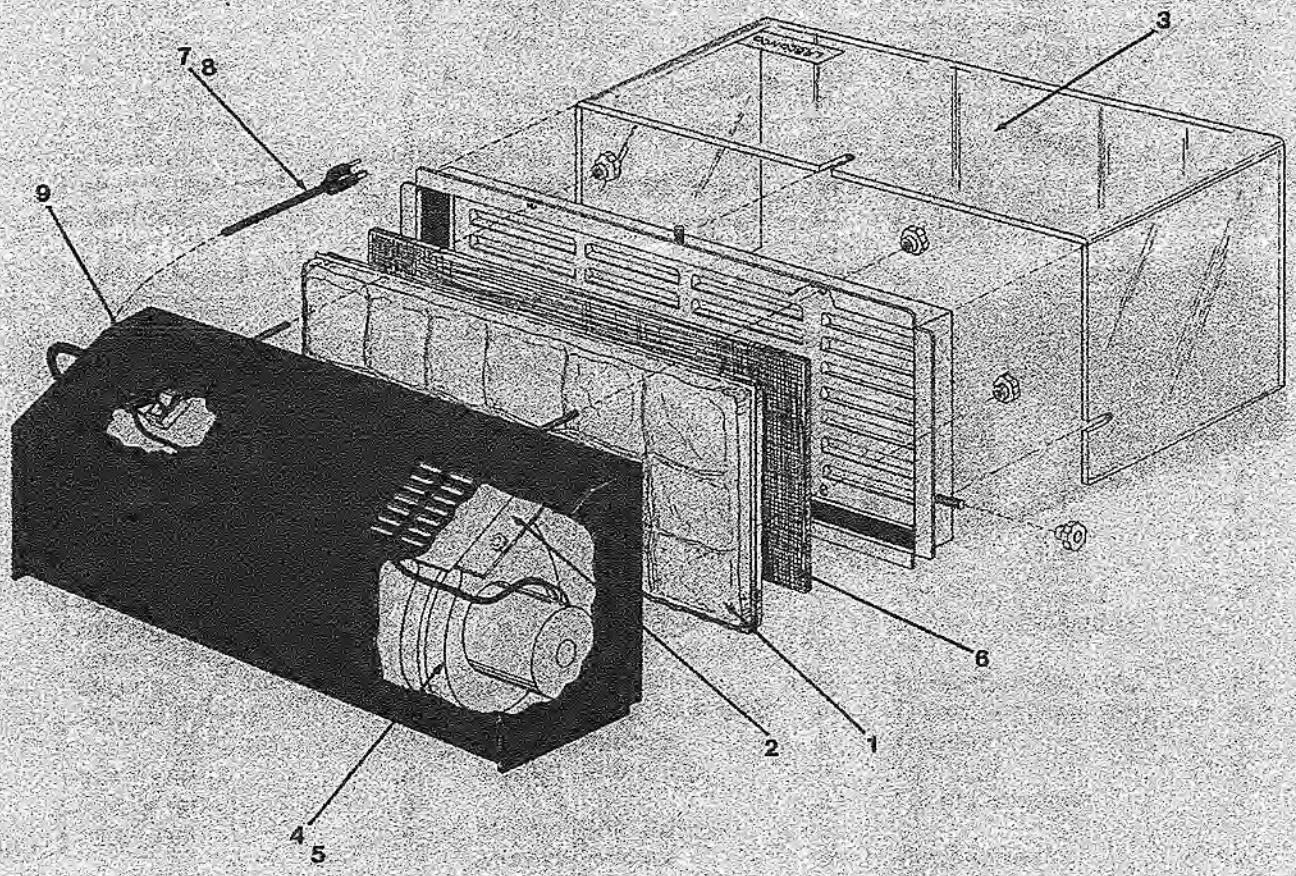
It is often convenient to lubricate the motor assembly and replace the carbon filter element both at the same time.

ACRYLIC HOOD CLEANING

To clean the acrylic hood, wash with a non-abrasive soap or detergent and water, using bare hands to feel and dislodge dirt. A soft grip free cloth, sponge or chamois may be used to dry the enclosure. And occasional application of paste wax to the edges of the enclosure will inhibit solvent attack.

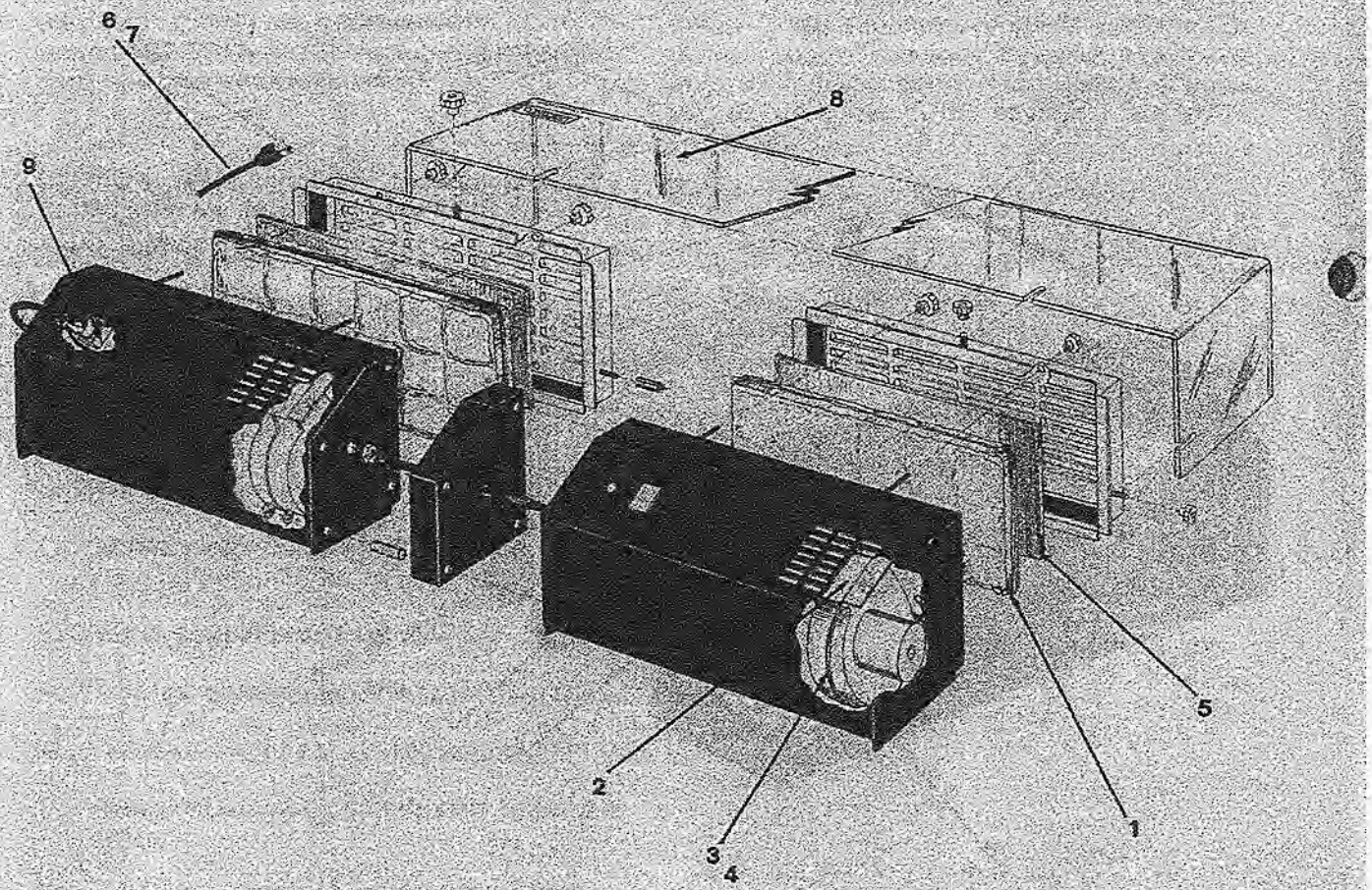
REPLACEMENT PARTS LIST
MODELS 69000, 69000-02

Description	Part Number
1. Description of Carbon Filter Element	69007
2. Blower Exhaust Gasket	69064
3. Exhaust Motor Blower (115V)	69060
4. Exhaust Motor Blower (230V)	69060-01
5. Roughing Prefilter	69022
6. Cord Assembly (115V)	69061
7. Cord Assembly (230V)	69070
8. Acrylic Hood (double wide unit)	69203
9. Switch-Power	13257



REPLACEMENT PARTS LIST
MODELS 69200, 69200-02

Description	Part Number
1. Description of Carbon Filter Element	69007
2. Blower Exhaust Gasket	69064
3. Acrylic Hood (single wide unit)	69016
4. Exhaust Motor Blower (115V)	69060
5. Exhaust Motor Blower (230V)	69060-01
6. Roughing Prefilter	69022
7. Cord Assembly (115V)	69061
8. Cord Assembly (230V)	69070
9. Switch-Power	13257



RELATIVE CAPACITY OF ACTIVATED CHARCOAL FOR VARIOUS CONTAMINANT

SOURCE: BARNEBEY-CHENEY

Acetic Acid	4	Dichloroethylene	4	Monochlorobenzene	4
Acetic Anhydride	4	Dichloromonofluormethane	3	Monofluorotrichlorome-	
Acetone	3	Dichloronitroethane	4	thane	4
Acrylic Acid	4	Dichloropropane	4	Naphtha	4
Acrylonitrile	4	Diethyle Ketone	4	Naphthalene	4
Amyl Acetate	4	Dimethylaniline	4	Nicotine	4
Amyl Alcohol	4	Dimethylsulfate	4	Nitro Benzenes	4
Amyl Ether	4			Nitroethane	4
Anesthetics	3	Dipropyl Ketone	4	Nitromethane	4
Aniline	4	Embalming Odors	4	Nitropropene	4
Antiseptics	4			Nitrotoluene	4
Benzene	4	Ethyl Acetate	4	Nonane	4
Borane	3	Ethyl Acrylate	4	Octalene	4
Bromine	4	Ethyl Alcohol	4	Organic Chemicals	4
Burned flesh, food, fat	4	Ethyl Benzene	4	Ozone	4
Butadiene	3	Ethyl Bromide	4	Palmitic Acid	4
Butanone	4	Ethyl Chloride	3	Paradichlorbenzine	4
Butyl Acetate	4		3	Pentane	3
Butyl Alcohol	4	Ethyl Formate	3	Pentanone	4
Butyl Cellosolve	4	Film Processing Odors	3	Perchloroethylene	4
Butyl Ether	4	Indole	4	Phenol	4
Butyric Acid	4	Inorganic Chemicals	4	Phosgene	3
Camphor	4	Iodine	4	Plastics	4
Cancer Odor	4	Iodoform	4	Propane	2
Caprylic Acid	4	Isophorone	4	Propionic Acid	4
Carbolic Acid	4	Isopropyl Acetate	4	Propyl Acetate	4
		Isopropyl Alcohol	4	Propyl Alcohol	4
Carbon Tetrachloride	4	Kerosene	4	Propyl Chloride	4
Cellosolve	4	Lactic Acid	4	Propyl Mercaptan	4
Cellosolve Acetate	4	Menthol	4	Putrescine	4
Chlorobenzene	4	Mercaptans	4	Pyridine	4
Chlorobutadiene	4	Mesityl Oxide	4	Resins	4
Chloroform	4	Methyl Acetate	3	Skatole	4
Chloronitropropane	4	Methyl Acrylate	4		
Chloropicrin	4	Metyl Alcohol	3	Stoddard Solvent	4
Cigarette Smoke Odor	4	Methyl Bromide	3	Styrene Monomer	4
Cleaning Compounds	4	Methyl Butyl Ketone	4		
Combustion Odors	3	Methyl Cellosolve	4	Tetrachloroethylene	4
Creosote	4	Methyl Cellosolve Acetate	4	Tobacco Smoke Odor	4
Crotonaldehyde	4	Methyl Chloride	3	Toluene	4
		Methyl Chloroform	4	Toluidine	4
Cyclohexanol	4		3	Trichlorethylene	4
Cyclohexanone	4	Methyl Ethyl Ketone	4		
Cyclohexene	4	Methyl Formate	3	Turpentine	4
		Methyl Isobutyl Ketone	4	Urea	4
Decaying Substances	4	Methyl Mercaptan	4	Uric Acid	4
Deodorants	4	Methylcyclohexane	4	Valeric Acid	4
Detergents	4	Methylcyclohexanol	4	Valericaldehyde	4
Dibromoethane	4	Methylcyclohexanone	4		
Dichlorobenzene	4	Methylene Chloride	4	Volatile Materials	3
Dichlorodifluoromethane	4	Mildew	3	Xylene	4
Dichloroethane	4				

KEY: 4 - High Capacity 3 - Satisfactory 2 - Not highly adsorbed 1 - Low capacity