



User's Manual

PuriCare™ Laboratory Animal Research Procedure Stations

Models

34800 Series

34802 Series

34810 Series

34812 Series

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*Protecting your
laboratory environment*

LABCONCO®

Labconco Corporation
8811 Prospect Avenue
Kansas City, MO 64132-2696
800-821-5525, 816-333-8811
FAX 816-363-0130
E-MAIL labconco@labconco.com
HOME PAGE www.labconco.com

Please read the User's Manual before operating the equipment.

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- Blood Drawing Chairs carry a ten year warranty.
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The United States Interstate Commerce Commission rules require that claims be filed with the delivery carrier within fifteen (15) days of delivery.

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If you have questions that are not addressed in this manual, or if you need technical assistance, contact Labconco's Customer Service Department or Labconco's 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.

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Chapter 1: Introduction

Congratulations on the purchase of a Labconco PuriCare Series Procedure Station. The PuriCare Cabinet is designed to protect you, the product and the laboratory environment from biohazardous aerosols. It is the result of years of experience in manufacturing biohazard cabinets, and users like you suggested many of its features to us.

The PuriCare Procedure Station offers many unique features to enhance safety, performance and ergonomics. To take full advantage of them, please acquaint yourself with this manual and keep it handy for future reference. If you are unfamiliar with how procedure stations operate, please review Chapter 4: Performance Features and Safety Precautions before you begin working in the cabinet. Even if you are an experienced procedure station user, please review *Chapter 5: Using the Procedure Station*, which describes its features so that you can use it efficiently.

This manual and other technical information is available in PDF format at our website: www.labconco.com.

Chapter 2: Prerequisites

Before you install the Procedure Station, you need to prepare the site for installation. Carefully examine the location where you intend to install the cabinet. You must be certain that the area is level and of solid construction. In addition, a dedicated source of electrical power must be located near the installation site.

Carefully read this chapter to learn:

- Location requirements.
- Electrical power requirements.
- Exhaust requirements.
- Service utility requirements.
- Space requirements.

Refer to Appendix C: Specifications, for complete electrical and environmental conditions, specifications and requirements.

Space Requirements

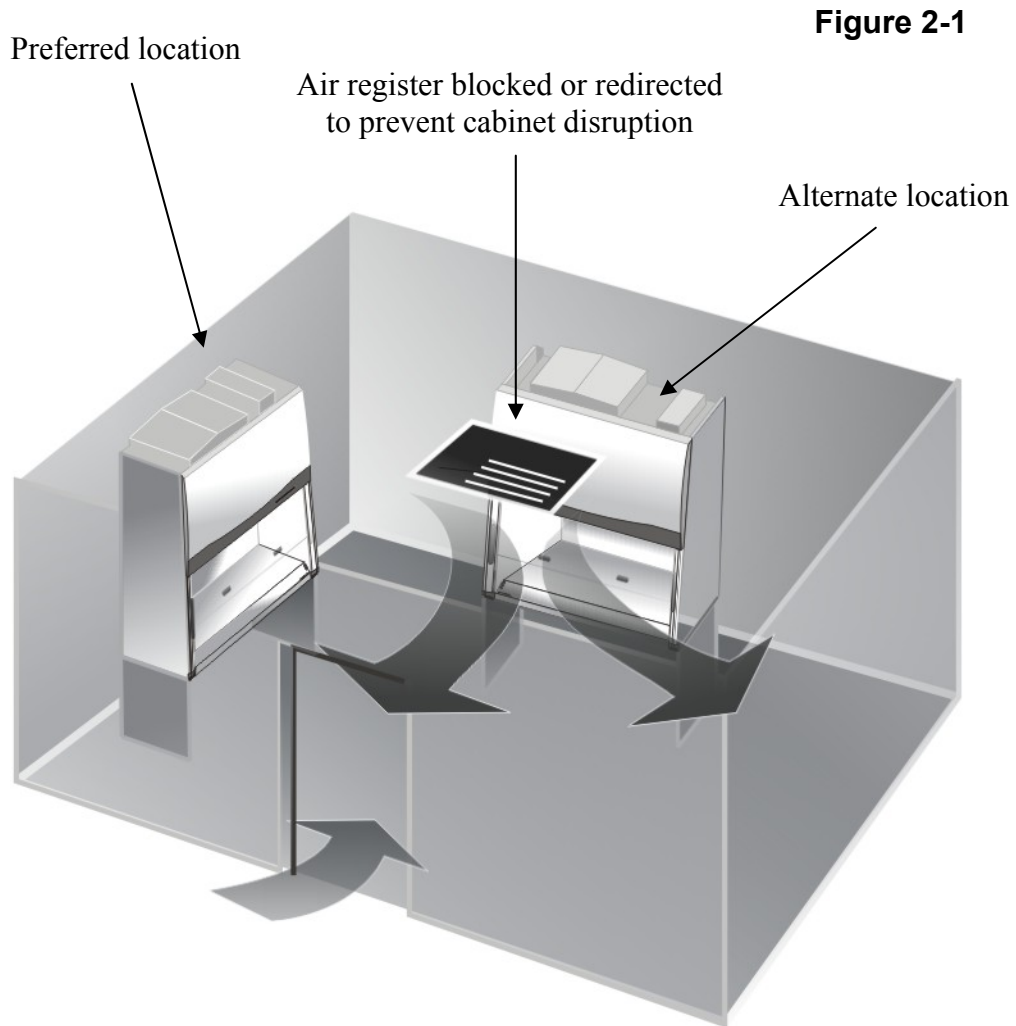
The dimensions for the different models are shown in Appendix B: Dimensions.

Clearance

Procedure Stations that exhaust their filtered air back into the room should have at least six inches (150 mm) clearance from any overhead obstructions when the cabinet is in its final operating position. A clearance of at least 6 inches (150 mm) should be maintained on both sides of the cabinet, as well as 12 inches behind the unit.

Location Requirements

Note: The Procedure Station should be located away from traffic patterns, doors, fans, ventilation registers, fume hoods and any other air-handling devices that could disrupt its airflow patterns. All windows in the room should remain closed. Figure 2-1 shows the preferred location for the Procedure Station. The preferred location is perpendicular to the door, to minimize the effect of opening and closing the door on the performance of the cabinet.



Exhaust Requirements

If you intend to connect the Procedure Station to the optional Canopy Connection Kit, first examine the location to ensure that it is compatible with the cabinet's exhaust duct. The area directly above the cabinet's exhaust port should be clear of structural elements, water and utility lines, or other fixed obstructions. There should be enough clearance to accommodate a 10-inch diameter duct. Avoid cabinet locations that require an elbow directly above the cabinet's exhaust connection or an excessive number of elbows in the exhaust system. For further information about the cabinet's exhaust system requirements, please refer to Chapter 3: Getting Started.

Electrical Requirements

The different Biosafety Cabinet models have the following electrical requirements:

Table 2-1

Model #	Requirements
3480000-3480009	115 VAC, 60 Hz, 12 Amps
3480200-3480209	115 VAC, 60 Hz, 12 Amps
3480010-3480019	100 VAC, 50/60 Hz, 12 Amps
3480210-3480219	100 VAC, 50/60 Hz, 12 Amps
3480020-3480029	230 VAC, 50/60 Hz, 6 Amps
3480220-3480229	230 VAC, 50/60 Hz, 6 Amps
3481000-3481009	115 VAC, 60 Hz, 16 Amps
3481200-3481209	115 VAC, 60 Hz, 16 Amps
3481010-3481019	100 VAC, 50/60 Hz, 12 Amps
3481210-3481219	100 VAC, 50/60/ Hz, 12 Amps
3481020-3481029	230 VAC, 50/60 Hz, 8 Amps
3481220-3481229	230 VAC, 50/60 Hz, 8 Amps

Note: A dedicated outlet with a circuit breaker rated at 20 amps should be located as close as possible to the right rear side of the cabinet, at a height even with, or higher than, the top of the supporting structure.

Note: On 115 VAC models, both electrical outlets are protected by a ground fault interrupter circuit (GFIC). Labconco does not recommend plugging the Procedure Station into a GFIC outlet.

Service Line Requirements

All utility service lines should be ¼ inch O.D., brass, copper, or stainless steel, and equipped with an easily accessible shut-off valve. If the service line pressure exceeds 100 PSI, it must be equipped with a pressure regulator to reduce the line pressure.

Note: The use of flammable gases or solvents should be avoided in the Procedure Station. Open flame in the cabinet will disrupt the laminar airflow in the cabinet and may damage the HEPA filters. Flammable gases or solvents may reach explosive concentrations in the cabinet or ductwork. If you feel that the procedure requires the use of an open flame or flammable materials, contact the institution's safety office.

The use of air or gases under high pressure should be avoided as they may seriously disrupt the airflow patterns in the cabinet.

Chapter 3: Getting Started

Now that the installation is properly prepared, you are ready to inspect, install, and certify the PuriCare Procedure Station. This chapter covers how to:

- Unpack and move the Procedure Station.
- Install the cabinet.
- Connect the electrical supply source.
- Connect the service lines.
- Connect to an exhaust system (optional).
- Arrange certification of the Procedure Station.

Tools required for installation include two 1/2" wrenches, a flat-blade screwdriver, a #2 Phillips screwdriver, and a carpenter's level.

Note: The Procedure Station models weigh between 500-700 lbs. (228-318 kg). The shipping pallet allows for lifting with a mechanical lift truck or floor jack. If you must lift the product manually, use at least six (6) persons and follow safe-lifting guidelines.

Note: The side panels must be removed to access the fasteners that secure the Procedure Station to the pallet. **DO NOT ATTEMPT TO LIFT BY THE SIDE PANELS; DAMAGE WILL OCCUR.**

Unpacking the Procedure Station

Carefully remove the outer carton and inspect it for damage that may have occurred in transit. If damaged, notify the delivery carrier immediately and retain the entire shipment intact for inspection by the carrier.

Note: United States Interstate Commerce Commission rules require that claims be filed with the delivery carrier within fifteen (15) days of delivery.

Do not return goods without the prior authorization of Labconco. Unauthorized returns will not be accepted.

If the cabinet was damaged in transit, you must file a claim directly with the freight carrier. Labconco Corporation and its dealers are not responsible for shipping damages.

Do not discard the carton or packing material until all of the components have been checked, installed and tested.

The cabinet is secured to the pallet in two places on each side. To access the nuts and bolts, remove the side panels by removing and keeping the two Phillips screws on both panels. Swing the front of each panel away from the cabinet, and lift it straight up to remove the panel from the cabinet.

Procedure Station Components

Labconco manufactures Procedure Stations with a 10-inch or a 12-inch sash opening. Each of these cabinets is available in a 4- or 6-foot model. Models are available in 115V or 230V. Locate the cabinet model you received in the following table. Verify that the components listed are present and undamaged.

Plus the following, located in a box underneath the work surface:

Part #	Component Description
3848301	User's Manual
	Drain Valve Assembly and fasteners
	Power Cord
	Product Registration Card

If you did not receive one or more of the components listed for the cabinet, or if any of the components are damaged, contact Labconco Corporation immediately for further instructions.

Catalog #	Procedure Station Description
3480000	4 foot Procedure Station, 10 inch sash opening, 115 VAC
3480001	4 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 115 VAC
3480010	4 foot Procedure Station, 10 inch sash opening, 100 VAC
3480011	4 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 100 VAC
3480020	4 foot Procedure Station, 10 inch sash opening, 230 VAC, UK Plug
3480021	4 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, UK Plug
3480022	4 foot Procedure Station, 10 inch sash opening, 230 VAC, Schuko Plug
3480023	4 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, Schuko Plug
3480024	4 foot Procedure Station, 10 inch sash opening, 230 VAC, China Plug
3480025	4 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, China Plug
3480026	4 foot Procedure Station, 10 inch sash opening, 230 VAC, US Plug
3480027	4 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, US Plug
3480200	4 foot Procedure Station, 12 inch sash opening, 115 VAC
3480201	4 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 115 VAC
3480210	4 foot Procedure Station, 12 inch sash opening, 100 VAC
3480211	4 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 100 VAC
3480220	4 foot Procedure Station, 12 inch sash opening, 230 VAC, UK Plug
3480221	4 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, UK Plug
3480222	4 foot Procedure Station, 12 inch sash opening, 230 VAC, Schuko Plug
3480223	4 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, Schuko Plug
3480224	4 foot Procedure Station, 12 inch sash opening, 230 VAC, China Plug
3480225	4 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, China Plug
3480226	4 foot Procedure Station, 12 inch sash opening, 230 VAC, US Plug
3480227	4 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, US Plug
3481000	6 foot Procedure Station, 10 inch sash opening, 115 VAC
3481001	6 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 115 VAC
3481010	6 foot Procedure Station, 10 inch sash opening, 100 VAC
3481011	6 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 100 VAC
3481020	6 foot Procedure Station, 10 inch sash opening, 230 VAC, UK Plug
3481021	6 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, UK Plug
3481022	6 foot Procedure Station, 10 inch sash opening, 230 VAC, Schuko Plug
3481023	6 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, Schuko Plug
3481024	6 foot Procedure Station, 10 inch sash opening, 230 VAC, China Plug
3481025	6 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, China Plug
3481026	6 foot Procedure Station, 10 inch sash opening, 230 VAC, US Plug
3481027	6 foot Procedure Station with UV lamp & fixture, 10 inch sash opening, 230 VAC, US Plug
3481200	6 foot Procedure Station, 12 inch sash opening, 115 VAC
3481201	6 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 115 VAC
3481210	6 foot Procedure Station, 12 inch sash opening, 100 VAC
3481211	6 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 100 VAC
3481220	6 foot Procedure Station, 12 inch sash opening, 230 VAC, UK Plug
3481221	6 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, UK Plug
3481222	6 foot Procedure Station, 12 inch sash opening, 230 VAC, Schuko Plug
3481223	6 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, Schuko Plug
3481224	6 foot Procedure Station, 12 inch sash opening, 230 VAC, China Plug
3481225	6 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, China Plug
3481226	6 foot Procedure Station, 12 inch sash opening, 230 VAC, US Plug
3481227	6 foot Procedure Station with UV lamp & fixture, 12 inch sash opening, 230 VAC, US Plug

Moving the Cabinet

Move the cabinet, attached to its pallet, by using a floor jack, or a furniture dolly underneath the unit. DO NOT move the cabinet by tilting it onto a hand truck.

Verify all Procedure Station components are included, and then move the cabinet to its final location.

Preparing the Procedure Station for Operation

Installation instructions (Labconco P/N 1056800) are attached to the sash; if these instructions are missing or unclear, contact Product Service at 800-821-5525 or 816-333-8811.

Installing the Procedure Station on an Existing Work Surface

Note: The Procedure Station is very top heavy. Use caution when lifting or moving it.

When installing onto an existing work surface or benchtop, ensure that the structure can safely support the combined weight of the cabinet and any related equipment. The work surface should be at least as wide as the cabinet and 31 inches deep to properly support the unit.

The work surface should be level, smooth and durable. The surface should be nonporous and resistant to the disinfectants and chemicals used in conjunction with the Procedure Station. This will allow a proper seal to form between the bottom of the cabinet and the work surface.

A hole or notch may be cut in the supporting surface in the right front corner to accommodate the optional drain valve.

Installing the Cabinet on a Labconco Base Stand

Labconco offers accessory Base Stands in a variety of configurations to suit the particular needs. Stands can be ordered with adjustable telescoping legs or with a manually or electrically adjustable hydraulic lift.

Telescoping Base Stands

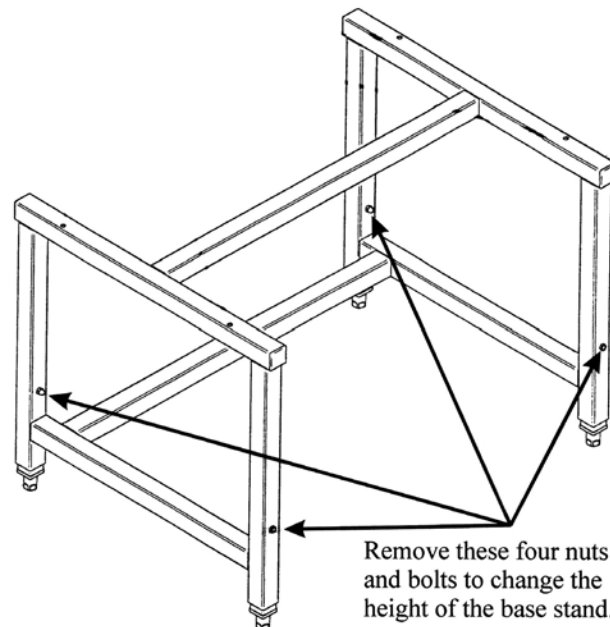
These stands are available with either fixed feet or casters. Adjust the leg height before installing the cabinet on top of the stand. The height can be set in 1-inch intervals between 27.5 to 33.5 inches, providing a cabinet work surface height from 30.0 to 36.0 inches. The Base Stands for each width cabinet are listed in Table 3-1 below.

Table 3-1

Width	Base Stand w/Feet Model #	Base Stand w/Casters Model #
4'	3730400	3730410
6'	3730600	3730610

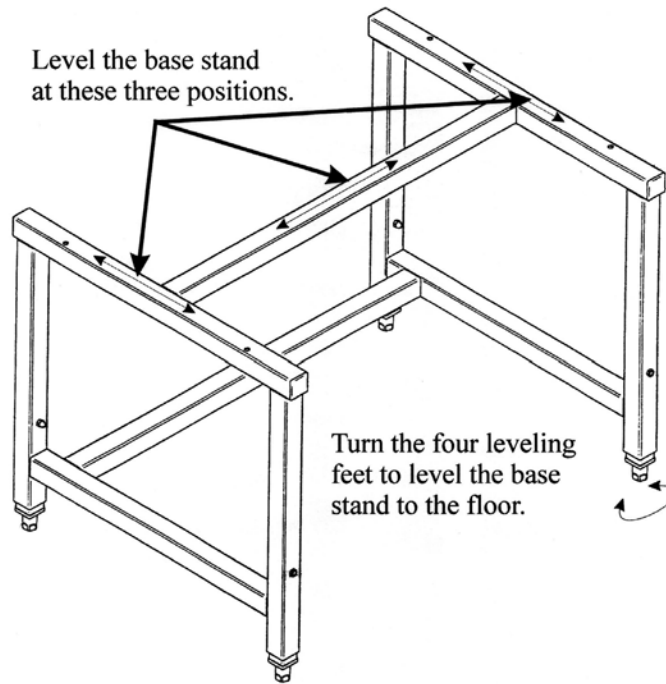
1. Before positioning the Telescoping Base Stand in its final location, adjust the height. A plastic bag containing the mounting bolts for the Procedure Station is shipped with the base stand. Remove and save it.
2. Select the height of the stand and slide four (4) leg extensions into base stand corner posts and attach with 2 ¼ inch long bolt, flatwasher, lockwasher and nut. Ensure that the same height hole is selected for each leg. Tighten the leg bolts securely. See Figure 3-1.

Figure 3-1



3. Move the base stand into its final location. Using a carpenter's level, adjust each leveling foot until the stand is level in both planes as shown in Figure 3-2. You are now ready to lift the Procedure Station onto its stand.

Figure 3-2



Manual or Electric Hydraulic Lift Base Stands

These base stands offer infinitely adjustable height between 25.5 and 33.5 inches, giving a cabinet work surface height of 28.0 to 36.0 inches. The height is adjusted either by a manual (hand crank) or electric pump that drives hydraulic rams in the legs of the stands. All of the hydraulic stands are equipped with fixed feet, but can be converted to caster wheels with the addition of Caster Kit #3784000. The Base Stands for each cabinet model is listed in Table 3-2 below.

Table 3-2

Width	Manual Lift Stand #	Electric (115V) Lift Stand #	Electric (230V) Lift Stand #
4'	3780201	3780101	3780104
6'	3780202	3780102	3780105

Note: When moving the cabinet on the hydraulic lift base stand, ensure that the hydraulic lines and the electrical cord are clear before installing the cabinet on the stand or operating the lift system.

Connecting the PuriCare Cabinet to Utility Service Lines

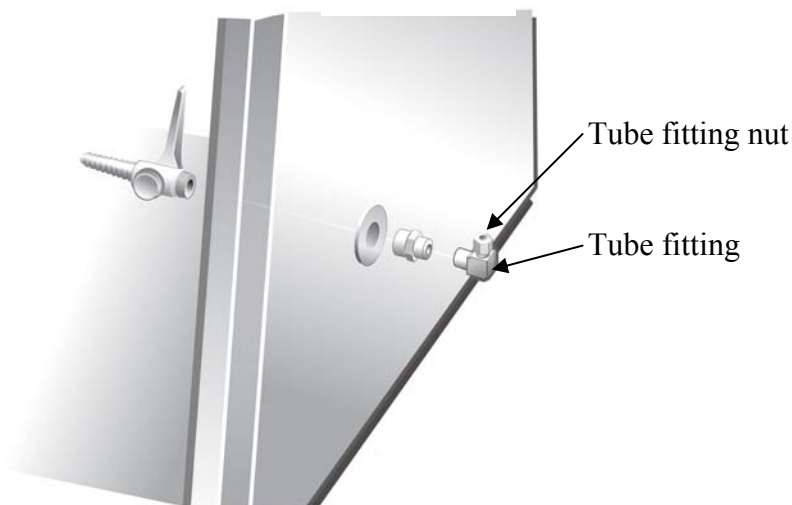
The service lines (if any) should be connected to the tube fitting(s) on the outside of the liner wall as shown in Figure 3-3. To install the tubing, follow these steps:

1. Ensure that the tubing is $\frac{1}{4}$ inch O.D., soft metal, and that the end has been deburred completely.
2. Route the tubing from the rear of the cabinet, ensuring that it will line up with the slot in the back of the side panel.

Note: Make sure that the tube routing will not contact any electrical wires. DO NOT loop service line tubing within the side panels of the Procedure Station.

3. Make sure that the nut on the tube fitting is loose, but do not remove it. Look inside the fitting to make sure the tube ferrule is there.
4. Push the tube into the fitting until it is properly seated. The tube will go approximately $\frac{3}{4}$ inch into the fitting.
5. Tighten the tube fitting nut hand tight and then, using a $\frac{7}{16}$ -inch wrench, tighten it at least $\frac{3}{4}$ turn more.
6. Close the service valve in the cabinet and then slowly open the shutoff valve on the service valve. Test all fittings for leakage. Tighten the tube nut slightly if needed.

Figure 3-3



Optional Exhaust System Connections

All Procedure Stations are shipped to recirculate their HEPA filtered exhaust air back into the laboratory.

Certain applications such as working with odorous products or volatile toxic materials will require the connection of the Procedure Stations to an exhaust system.

Note: The canopy connection, also referred to as a thimble or air gap connection, allows single or multiple biohazard cabinets to be connected to an exhaust system. During operation, the exhaust system draws all of the cabinet's exhaust air, plus a volume of room air (through the slots in the canopy) into the exhaust duct. Canopy connections function as a "shock absorber" allowing the system to function properly during changes in room air pressure.

For information on selecting a canopy connection, go to *Chapter 7: Accessorizing the Cabinet*.

Warning: If the research involves the use of toxic compounds or volatile materials, contact the facility's safety officer or Labconco to ensure that the Procedure Stations and its exhaust system are compatible with the materials you will be working with.

Drain Valve Installation

In order to prevent damage during shipping, the drain valve assembly has not been installed. If desired, the valve should be installed after the cabinet is in its final location.

To install the valve assembly, follow these steps:

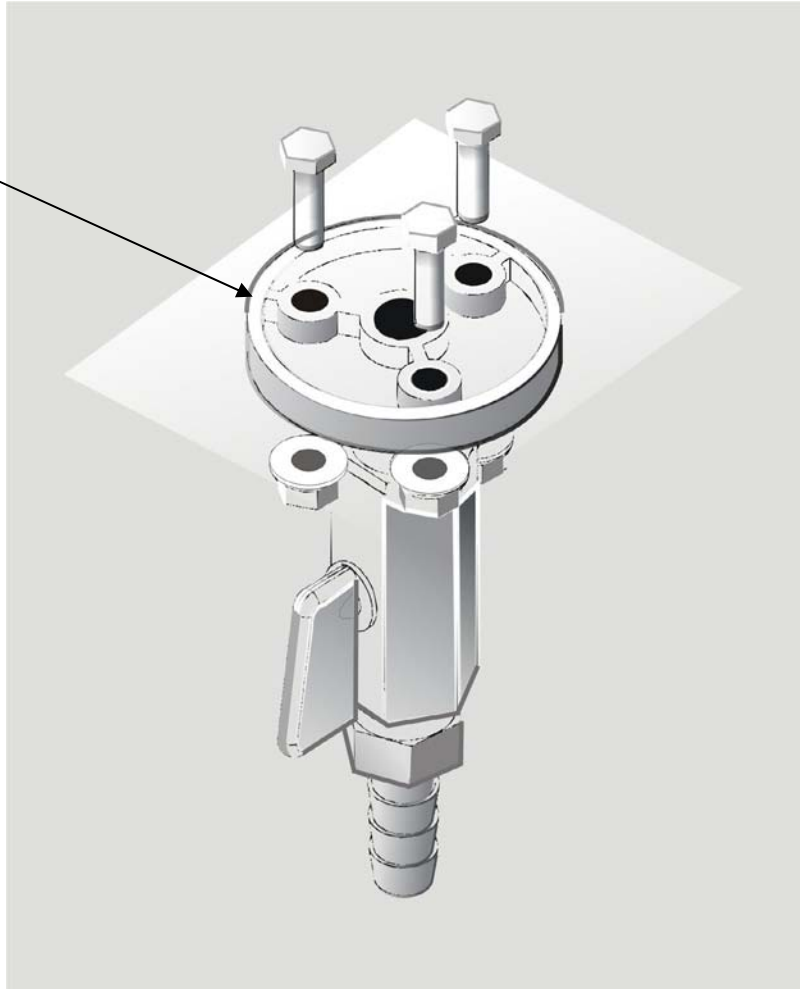
Note: The work surface is heavy. Use caution when handling it.

1. Lift the work surface out of the Procedure Station by lifting on the knobs at the front of the work surface. Steady the work surface while pulling it straight out the front of the cabinet.
2. Using a putty knife, remove and discard the stainless steel cover that is sealed over the drain mounting holes. Scrape out remaining sealant that is around the holes.
3. Apply a light coating of silicone sealant (user supplied) to the mounting surface of the drain assembly. Attach the drain assembly under the bottom of the cabinet as shown in Figure 3-4. Wipe off any excess sealant from the cabinet bottom. Ensure that the center drain hole is unobstructed.
4. Make sure the drain valve is in the closed position.

5. Reinstall the work surface.
6. Allow the silicone sealant to cure for at least eight hours before exposing it to liquid.

Figure 3-4

Apply a light coat of silicone sealant to this surface of the connector, aligning the three holes in the connector with the three holes in the Procedure Station liner.



Initial Certification

Prior to use, a qualified certifier should certify all Procedure Stations. Under normal operating conditions, the Procedure Station should be recertified at least annually and when relocated or serviced. The certifier should perform the following tests, as recommended in ANSI/NSF International Standard Number 49 in effect when the cabinet was manufactured:

- Downflow Velocity Profile Test
- Inflow Velocity Test
- Airflow Smoke Patterns
- HEPA Filter Leak Test
- Vibration Test *
- Noise Level Test *
- Lighting Intensity Test *

*These tests are user comfort related tests and may be omitted at the user's or certifier's discretion.

If you have any questions regarding certification agencies or need assistance in locating one, contact Labconco's Product Service Department at 1-800-522-7658 or 816-333-8811.

Chapter 4: Performance Features and Safety Precautions

All PuriCare Series Procedure Stations operate using the following principles:

- Filtration and retention of particulates by High Efficiency Particulate Air (HEPA) filter(s)
- Laminar airflow
- Directional airflow

The major components are:

- The HEPA filter(s)
- The motor/blower to force air through the cabinet
- Cabinet air intakes (grilles), ductwork and air balance controls

HEPA Filters

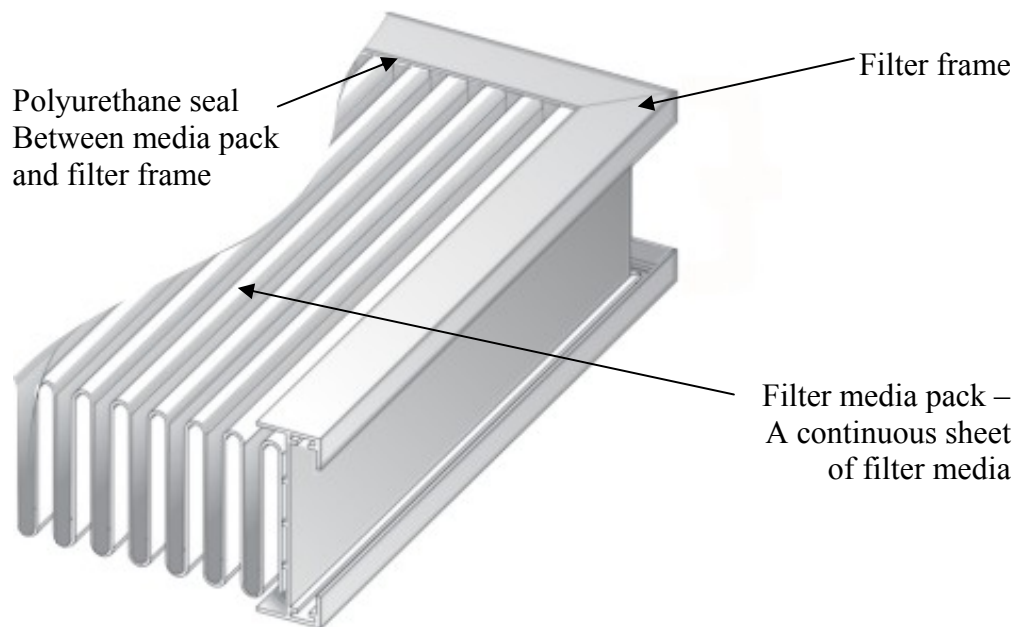
HEPA filters are disposable, dry-type particulate filters. The filter material or media is typically made of borosilicate microfibers formed into a thin sheet, in a process similar to the production of paper. This sheet is folded, or pleated to increase its surface area. The pleats are held in place by aluminum diffusers or by beads of glue that add rigidity to the media pack. The pack is then set into a frame, and sealed as shown in Figure 4-1.

The HEPA filter manufacturer establishes the efficiency of the filter by challenging it with an aerosol of known particle size. The number of particles that penetrate the filter are quantified, and this establishes the efficiency of the filter. Thus, the filters used in the PuriCare Series Procedure Stations are at least 99.99% efficient in removing particles 0.3 micron.

Note: The HEPA filter media is very fragile. DO NOT touch the media. If you think the media of a HEPA filter is damaged, DO NOT USE THE CABINET. Have the HEPA filter integrity tested by a certifier before using the cabinet.

Note: HEPA Filters are only effective against particulate material. Gases will pass through the filter.

Figure 4-1



Laminar Airflow

Laminar airflow is defined as the movement of a body of air in a single direction, with a uniform velocity. In practice, the laminar downflow of air in the cabinet captures any aerosol generated in the work area of the cabinet, and directs it to the HEPA filters. In order to be true laminar downflow, a number of individual downflow velocity test points (The Downflow Velocity Profile) must be ± 16 feet per minute of the average of all the test points. This is illustrated in Figure 4-2.

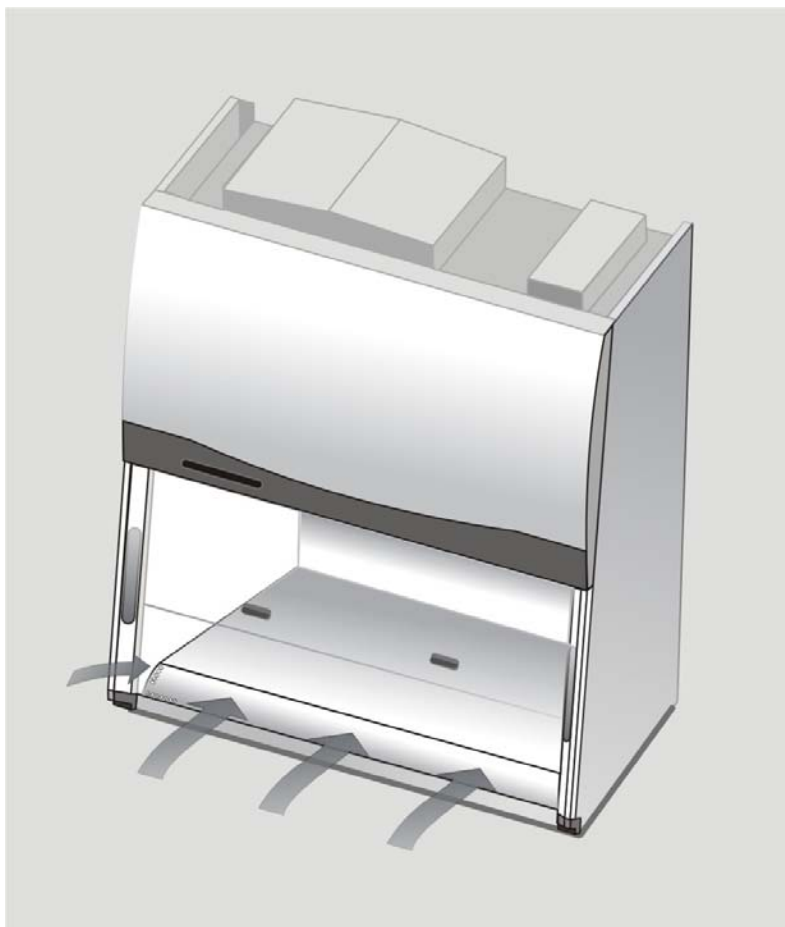
Figure 4-2



Directional Airflow

Directional airflow also plays a key role in performance. Air is drawn into the front of the cabinet at the front grille. This “curtain” of air makes it more difficult for aerosols to escape out of the work area of the cabinet and into the outside environment. This airflow is often calculated and referred to as the **Inflow Volume** or **Average Inflow Velocity**. This is illustrated in Figure 4-3.

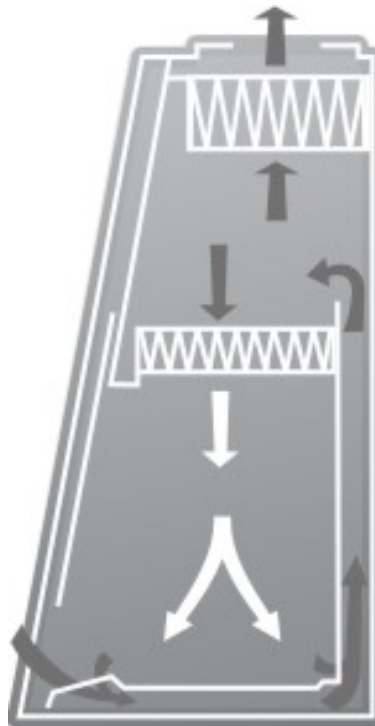
Figure 4-3



Motor/Blower

The motor/blower assembly pulls air into the front of the cabinet, and recirculates it internally. During its recirculation, the air is split into two separate streams. One path leads through the exhaust HEPA filter and out of the unit. The second path flows through the supply HEPA filter, which then flows down through the work area, as shown in Figure 4-4. The motor in the PuriCare Series Procedure Station is an electronically commutated motor (ECM). The ECM is a brushless DC motor that includes its own power supply to convert the incoming alternating current to direct current, as well as its own microprocessor to control and measure the motor's operation. The motor is preprogrammed to deliver a consistent volume of air, even as the filters load over time.

Figure 4-4



Cabinet Air Intakes (Grilles), Ductwork and Air Balance Controls

The location, size, and pattern of the grilles at the front and rear of the work area affect cabinet containment and performance.

Note: Never block or obstruct the grilles of the Procedure Station.

The internal ductwork conveys the air from the work area to the blower, and then from the blower to the filters. The positive pressure rigid plenum is designed to deliver a more uniform airflow to both HEPA filters, optimizing filter loading and operational life.

Ultraviolet (UV) Lamp

The optional UV lamp generates a primary wavelength of light of 254nm. A secondary emission is in the visible (blue) wavelength, resulting in the characteristic blue color while operating. UV light with a wavelength of 254 nm is biocidal, primarily by creating thymine dimers in DNA. These dimers prevent the correct transcription of the DNA into RNA, resulting in cellular death or viral inactivation. In order to be effective, the UV light must directly strike the nucleic acid, and its effectiveness can be diminished or negated by dissolved proteins or metals, or by other UV-opaque substances protecting the target nucleic acid.

Because of its limitations, UV light should be used as an adjunct to good surface disinfection practices. In order to get optimum performance from the UV light, it should be replaced after 6,000 hours of operation or less, and the exterior surface of the lamp should be kept clean and free of dust.

Note: The Procedure Station records the number of hours of operation of the UV light. You can program in the number of hours (in 100-hour increments) it will operate before a replacement message is displayed.

Note: UV irradiation is absorbed by the tempered safety glass of the sash. Independent research has shown that the level of UV irradiation on the outside of the cabinet's sash is equal to background radiation levels.

Note: The UV sensitivity of a target organism varies, depending on the UV output of the lamp, the genus and species of the organism, the medium the agent is suspended in, etc. Contact the facilities Health and Safety Officer at your facility for UV light use and recommendations.

Roughing Prefilter

The Procedure Station is equipped with a Prefilter attached to the Towel Catch (located in the lower-rear of the work area). The filter is intended to remove large debris often associated with the handling of animals such as hair and bedding. Capture of these large particles prevent them from accumulating on the HEPA filters, thereby extending their lives.

The cabinet has been validated to operate properly with or without the Prefilter installed.

Postfilter

The Procedure Station has an activated carbon postfilter installed. The carbon filter is suitable for the removal of low level odors that may be generated within the cabinet. It has a finite capacity however and may not adequately reduce all volatile chemicals/gasses used in animal procedures.

NOTE: Do not rely on the carbon post-filter to remove hazardous chemicals from the exhaust flow. For applications using toxic volatile chemicals, the Procedure Station must be connected to an external exhaust blower.

The cabinet will operate properly with or without the post-filter installed.

The life of the activated carbon is solely dependent upon the amount of odor/chemicals adsorbed; not time. Replace the filter when odors become intolerable.

Safety Precautions

The PuriCare Procedure Station should be certified by a certification technician before its initial use. The cabinet should be recertified whenever it is relocated, serviced or at least annually thereafter.

Some internal components may become contaminated during operation of the unit. Only experienced personnel competent in decontamination procedures should decontaminate the cabinet before servicing these components. If you have any questions regarding certification agencies, or need assistance in locating one, contact Labconco's Product Service Department at 800-821-5525 or 816-333-8811.

Ensure that the cabinet is connected to electrical service in accordance with local and national electrical codes. Failure to do so may create a fire or electrical hazard. Do not remove or service any electrical components without first disconnecting the Procedure Station from electrical service.

Avoid the use of flammable gases or solvents in the Procedure Station. Care must be taken to ensure against the concentration of flammable or explosive gases or vapors. An open flame should NOT be used in the Procedure Station. Open flames may disrupt the airflow patterns in the cabinet, burn the HEPA filter and/or damage the filter's adhesive. Gases under high pressure should not be used as they may disrupt the airflow patterns in the cabinet.

HEPA filters only remove particulate matter. Operations generating volatile toxic chemicals or radionuclides must be evaluated carefully.

The media of HEPA filters is fragile and should not be touched. Avoid puncturing either HEPA filter during installation or normal operation. If you suspect that a HEPA filter has been damaged, DO NOT use the cabinet; contact a local certification agency or Labconco at 800-821-5525 or 816-333-8811 for re-certification information.

The HEPA filters in the Procedure Station will gradually accumulate airborne particulate matter from the room and from work performed in the cabinet. The rate of accumulation will depend upon the cleanliness of the room air, the amount of time the cabinet is operating and the nature of work being done in the cabinet. In typical usage HEPA filters will last approximately five years or more before requiring replacement. The Filter Gauge accurately displays the amount of filter life remaining.

Proper operation of the cabinet depends largely upon its location and the operator's work habits. Consult the Installation and Normal Operation sections of this manual for further details.

Avoid direct exposure of plastic or coated materials to ultraviolet (UV) radiation. Never bypass the UV safety interlock that only allows the UV light to work when the sash is closed.

When surface disinfecting the Procedure Station:

- Avoid splashing the disinfecting solution on skin or clothing.
- Ensure adequate ventilation.
- Carefully follow the disinfectant's safety instructions
- Always dispose of disinfecting solutions in accordance with local and national laws.
- DO NOT allow disinfectants with high concentrations of free chlorine to contact the stainless steel components for a long period of time. Free chlorine will corrode stainless steel after extended contact.

On 115V models, the electrical receptacle cover may be removed to facilitate surface decontamination. In the event of gross contamination, the cover should be removed, sterilized and/or decontaminated as required and discarded. Order Replacement Receptacle Cover #3843601. See *Appendix A: Components* for a list of service parts.

Procedure Stations should be decontaminated for any of the following reasons:

- Before maintenance work requiring entry into contaminated areas.
- Before HEPA filter changes.
- Before performing certification tests requiring entry into contaminated areas.
- Before relocating the cabinet.
- Before changing research programs.
- After the gross spill of biohazardous material.

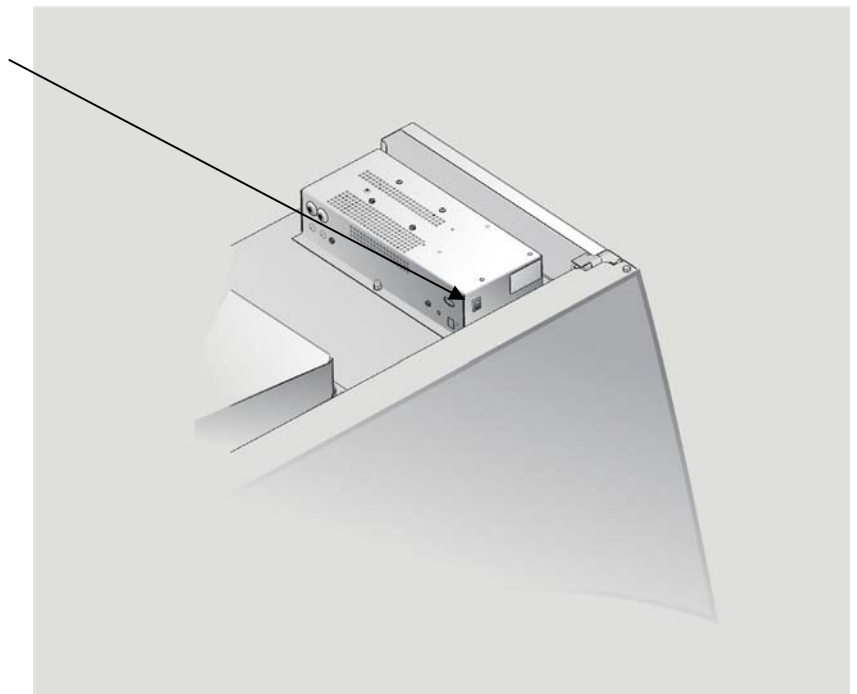
Chapter 5: Using the Cabinet

System Reset Switch

The Procedure Station has a system reset switch for resetting the microprocessors. The switch is located on the front of the electronics module, on top of the cabinet, as shown in Figure 5-1. Ensure that the switch is in the “ON” (up) position before attempting to operate the cabinet.

Figure 5-1

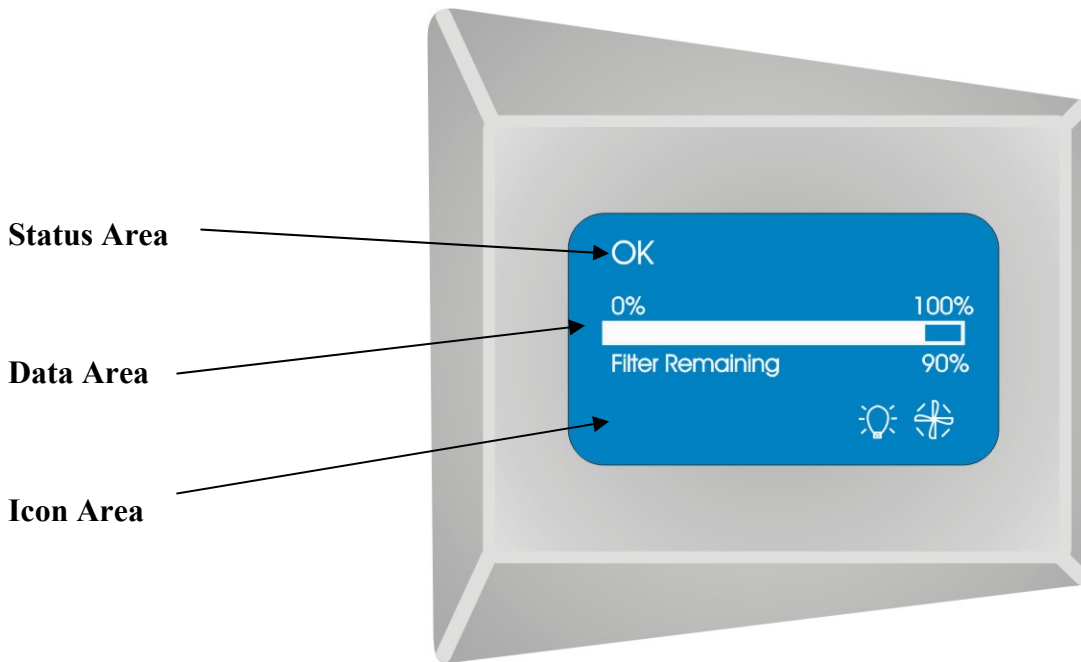
The System Reset
Switch



Information Center

The Information Center is an LCD display located on the right side wall at eye level. The center's display is divided into three separate areas, as shown in Figure 5-2, below.

Figure 5-2



Status Area

The Status Area displays the system's condition during operation. This line can display any of the following messages:

OK

The motor is operating properly, and the sash is not open too far.

Sash is too high

The sash is open too far for safe operation.

Airflow Alert

The airflow patterns in the cabinet have changed, resulting in a sudden change in the motor speed. This is most likely due to a blockage of the grille or the exhaust filter outlet. It may also be caused by removal of the work surface while the cabinet is in operation.

System Error

The motor and display circuit board are not communicating properly.
DO NOT USE THE CABINET UNTIL THE PROBLEM HAS BEEN CORRECTED.

Data Area

The Data Area displays the Filter Gauge. This bar graph directly indicates the percent of remaining filter life. When the cabinet is new, or after the HEPA filters are replaced, the gauge will be “full”, or display approximately 100%. As the filters load, or if the grille or exhaust discharge are blocked, the bar graph will show a reduced filter life.

The graph is user-selectable as a bar graph with percentage displayed, a bar graph only, or a semi-circular graph showing filter life remaining.

When the optional airflow sensor is installed and calibrated, the inflow and calculated downflow velocities are also displayed during operation.

Icon Area

The Icon Area displays icons for those features selected or in operation. The Icons are:



Normal blower operation –

In this mode the cabinet blower is operating normally.



NightSmart™ blower operation

When NightSmart is selected, the blower will slow to idle speed when the sash is closed, to maintain the cleanliness of the air in the work area. When the sash is opened, the blower will resume normal operation.



Fluorescent light

In this mode the fluorescent lights are operating. When the sash is fully closed, the fluorescent lights will automatically turn off.



UV light

In this mode the UV (germicidal) light is operating. When the sash is fully closed, the UV light can be programmed to automatically turn on. When the sash is raised, the light will automatically turn off, to protect the laboratory from UV irradiation.



Timer

When either the interval or stopwatch timer mode is active, this icon appears.



Security Lock

When the security lock is activated this icon is activated, and the keypad will not respond to any buttons until the proper sequence of keystrokes is entered.



Mute

When this icon is on, the audible alarm will be muted for approximately 5 minutes.

Operating the Sliding Sash

The counterbalanced, anti-racking sash mechanism requires only a few pounds of force to move the sash up or down. You can open or close the sash smoothly with one or two hands positioned on either handle.

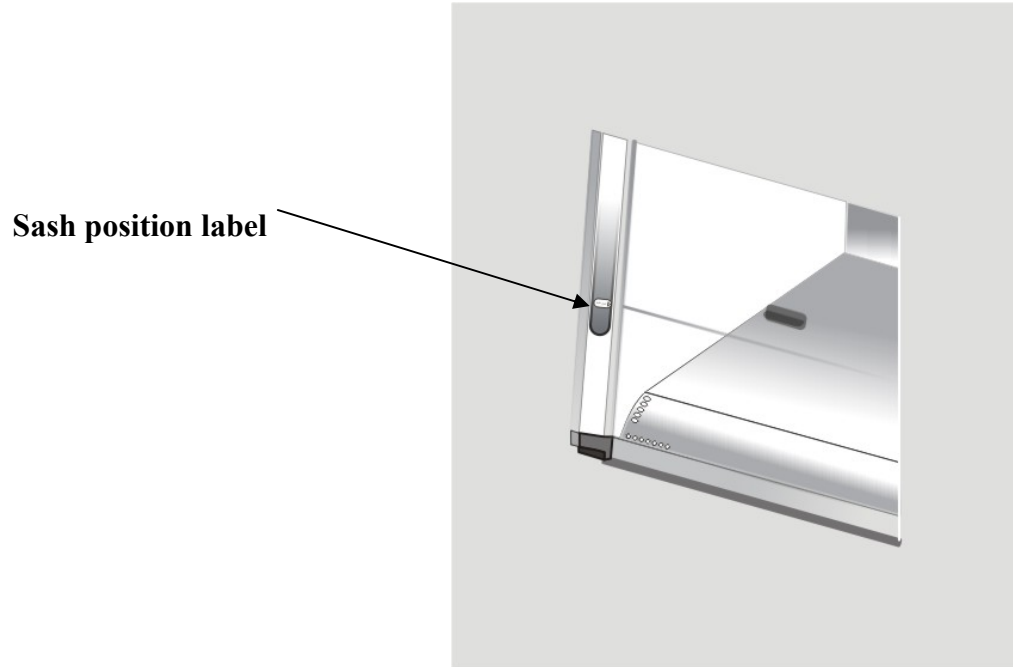
The sash position alarm and safety interlock system senses the sash position and acts appropriately. The Procedure Station has been programmed to operate at either a 10- or 12-inch sash opening, depending on model. Raising the sash above its operating height will activate the audible and visual alarms. The audible alarm can be temporarily muted (for approximately five minutes) by depressing and releasing the Mute/OK button. Closing the sash back to its operating position will reset the alarm and defeat the muting of the alarm. The safety interlock system senses when the sash is closed and allows the optional ultraviolet (UV) lamp to operate only when the sash is closed, to protect the operator from irradiation.

Starting the Procedure Station

1. To start, raise the sash until its bottom edge aligns with the sash position label on the left corner post. The decal is shown in Figure 5-3.
2. Press the Blower button to start the unit. The unit will run a self-test for approximately fifteen seconds. If the alarm sounds, recheck the sash position. If the sash is too high, the sash audible alarm and the LCD display will indicate the sash is too high.
3. To turn the optional UV light on, the sash must be completely closed to prevent the escape of any UV radiation. Push the UV light button to activate the UV light.

Note: The sash must be completely closed for the UV light to activate.

Figure 5-3



The Touchpad Controls

The touchpad of the Procedure Station is shown in Figure 5-4. Take a moment to get familiar with the buttons, their location and function. Also familiarize yourself with the display located on the right side wall. The display will report system functions, such as filter capacity, timer displays, alarm or error messages, as well as icons that illuminate when cabinet functions such as UV light and blower are operational

Figure 5-4

Blower Button – Starts or stops the cabinet blower. When the blower is in SmartStart™ mode, closing the sash will turn the blower off. When the sash is raised, the blower will restart automatically. In NightSmart™ mode, when the sash is closed, the motor will slow to idle to maintain air cleanliness in the work area. When the sash is reopened, the blower will resume normal operation. Pressing this button will override SmartStart™ and NightSmart™ operation.

Light Button – Turns the fluorescent lamps on or off. Closing the sash will automatically turn the lights off. When the lights are in SmartStart™ mode, if the sash is raised, the lights will turn on automatically.

UV Light Button – Turns the optional UV lamp on or off. When the UV lamp is in SmartStart™ mode, closing the sash will turn the light on for the programmed period of time. When the sash is raised, the lights will turn off automatically.

Timer Button – Allows you to select either a repeating interval timer, or an elapsed timer (stopwatch).

Mute/OK Button – Mutes all audible alarms for approximately 5 minutes, unless it is a system error alarm. When in the Menu mode, this button is used to select an option.

Menu Button – This button toggles the display between the display and menu modes. When in the menu mode, pressing this button will return you to the previous menu level.

Select Buttons – Allow you to choose different options in the menu mode.

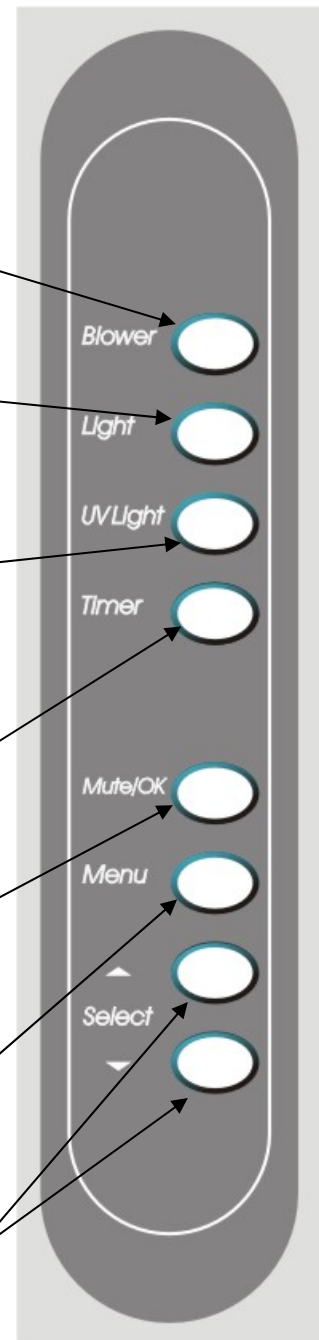
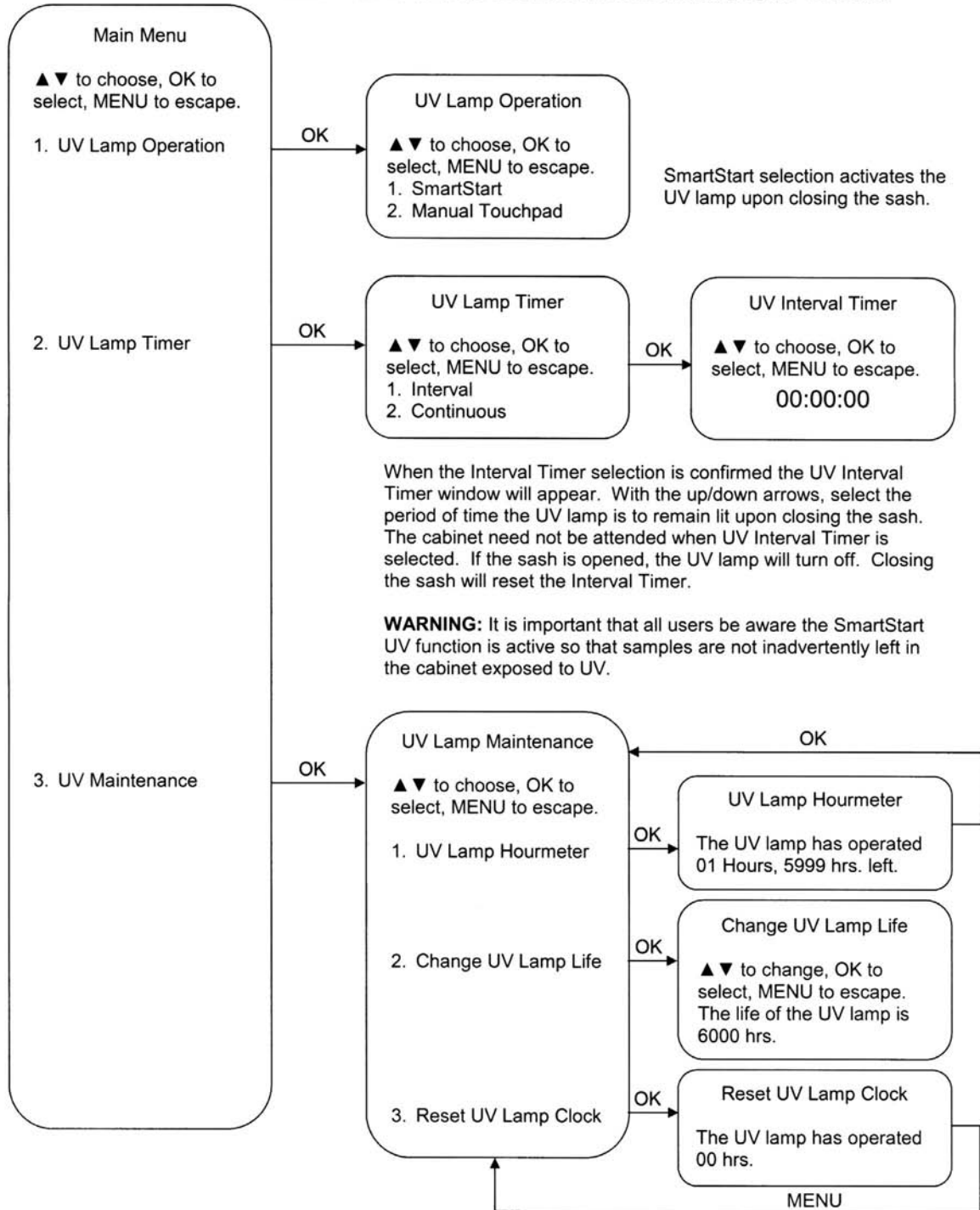


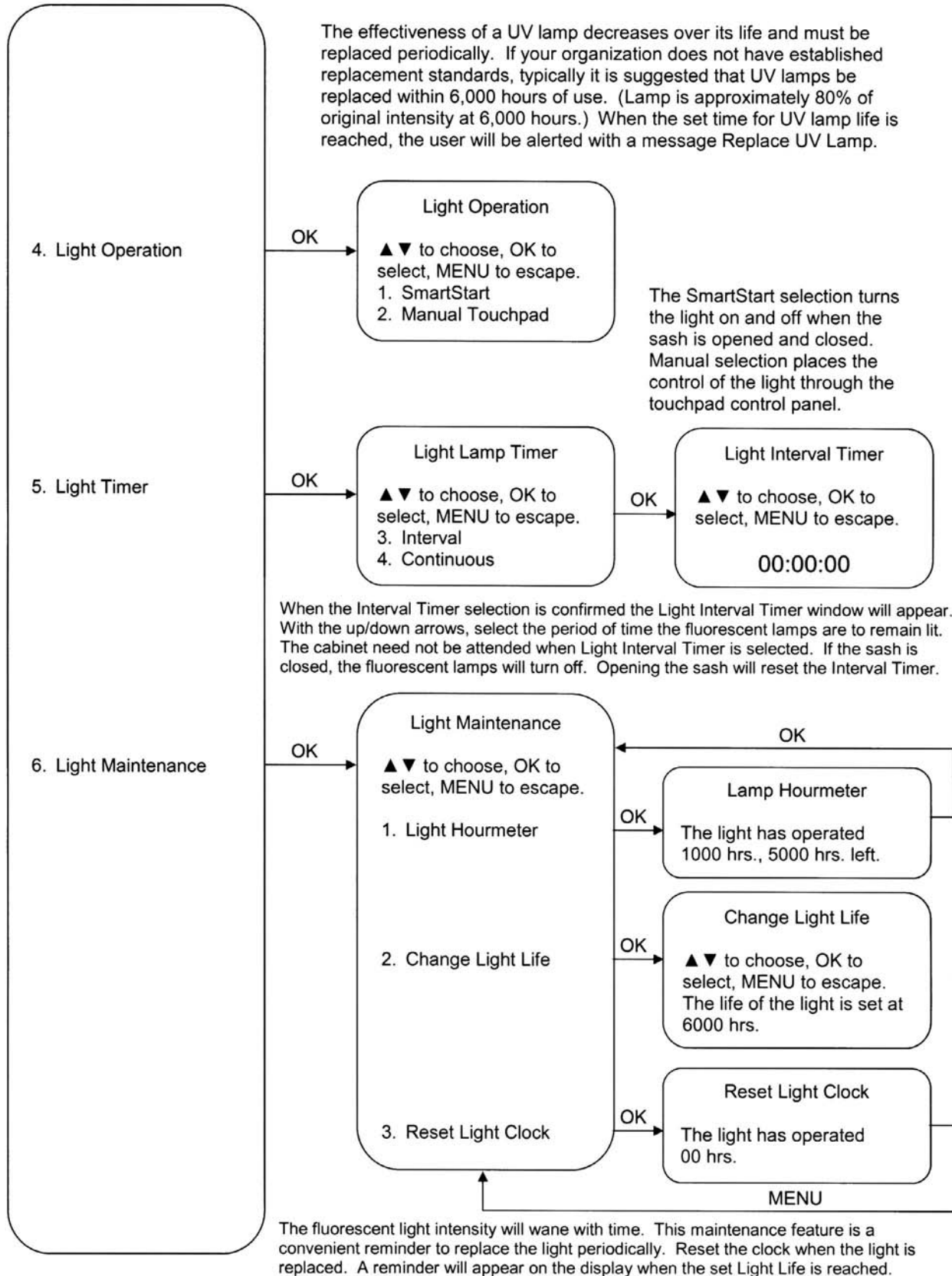
Figure 5-5

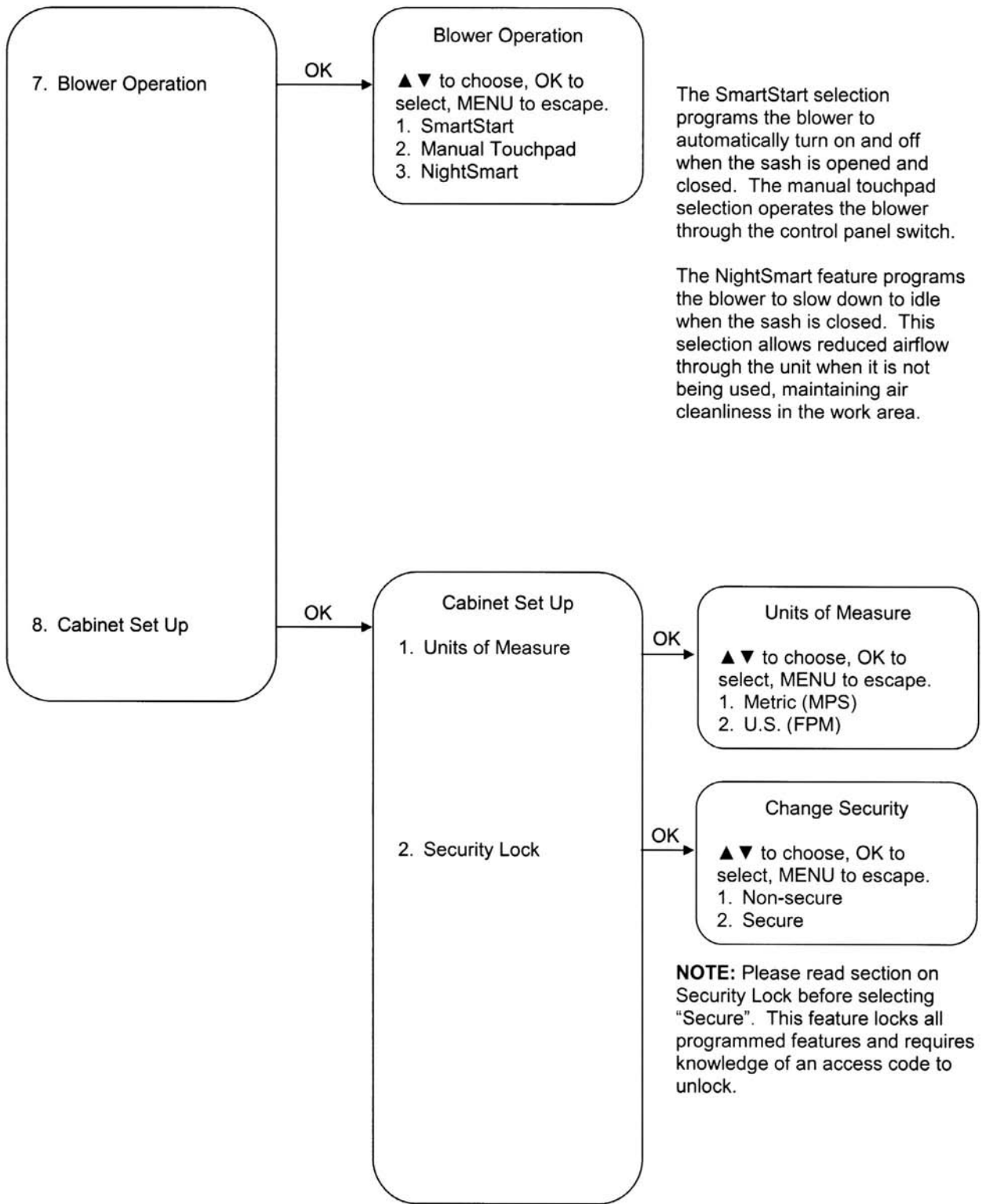
Menu Instructions

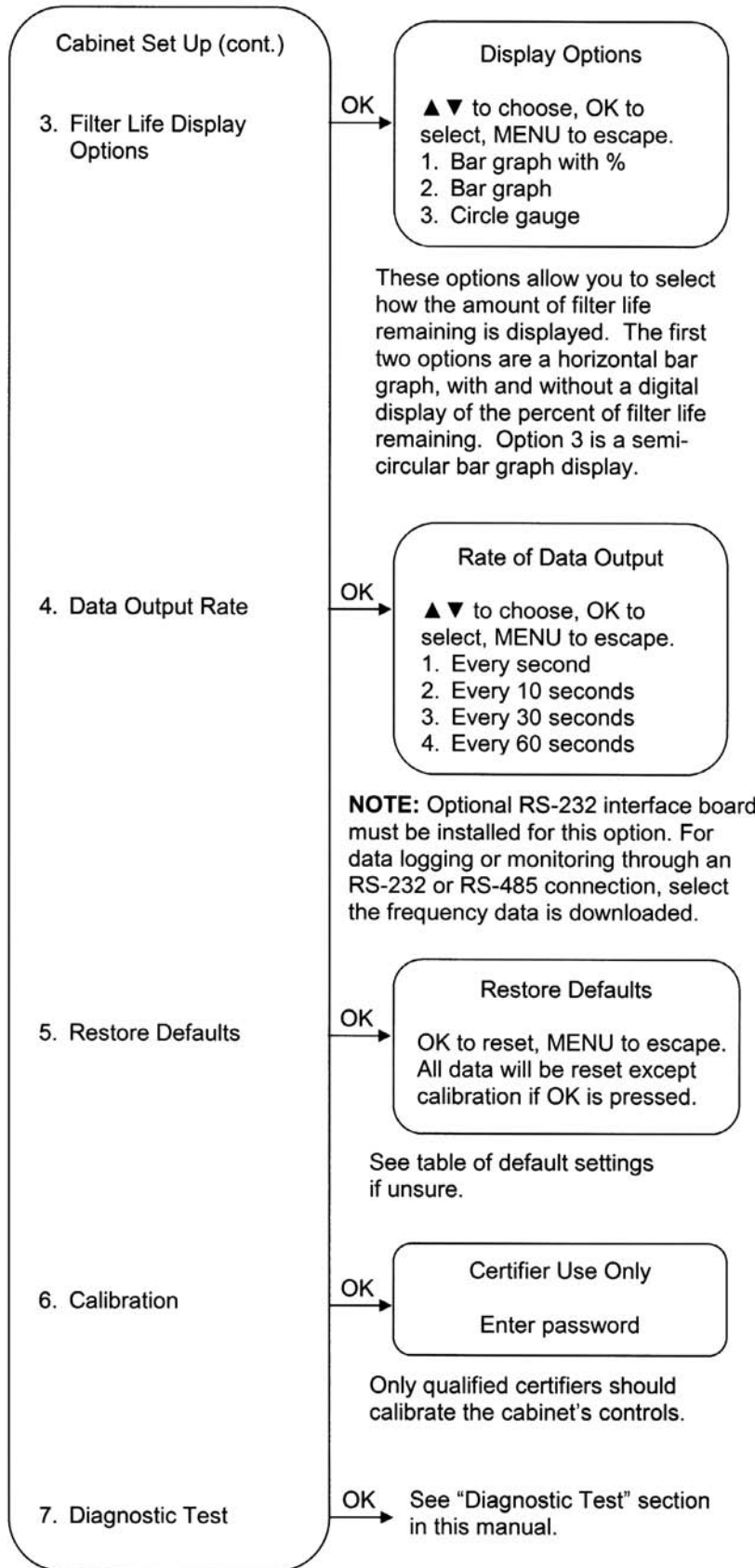
Press MENU button to access Main Menu...

NOTE: Pressing OK button confirms selection. Pressing MENU button returns to the previous Menu without changing the selection.









User Selectable Features

The PuriCare Series Procedure Station offers the user unparalleled flexibility and convenience. The operation of the blower, fluorescent and UV lights can either be operated manually, or you may choose to use the SmartStart™ or NightSmart™ features that activate functions automatically when the sash is opened or closed.

The UV lamp can be programmed to operate for a given time interval when the sash is closed, before it shuts off.

NOTE: During the first fifteen seconds of operation, the Cabinet performs an auto-diagnostic routine to check the operation of the microprocessor. You cannot access the menu during this time.

NOTE: When you are in the menu mode, if a selection is not made within 30 seconds, the display will reset back to display mode.

NOTE: Pressing the appropriate touchpad button will override SmartStart™ or NightSmart™ selections.

To access the menu, press the “MENU” button. The display panel will show the first level menu. To select from the various menu options press the “▲” or “▼” buttons until the selected option is displayed. Press “OK” to accept that option, or press “MENU” to return to the previous menu level.

For further explanation of the menu and its options, please refer to figure 5-4.

Timer Operation

NOTE: The timer button allows activation of an interval (countdown) or stopwatch (elapsed) timer. The timers cannot be operated simultaneously.

To access the main timer menu, press the “Timer” button anytime during normal operation. The main timer menu is shown on the LCD display. Use the “▲” and “▼” buttons to highlight the Interval or Stopwatch Timer. Press the “OK” button to select the highlighted timer function.

Interval Timer Operation

1. When selected, the Interval Timer menu is displayed on the LCD. The timer defaults to 0:00:00.
2. Press and hold the “▲” or “▼” buttons to increase or decrease the timer interval.
3. When the proper interval is entered on the display, press the “OK” button to start the timer.
4. When the timer reaches 0:00:00, an audible alarm will sound, and the timer will reset itself and repeat the countdown .
5. Press the “OK” button to pause the timer.
6. Press the “Menu” button to clear the interval timer and return to the main timer menu.

Stopwatch Timer Operation

1. When selected, the Stopwatch Timer menu is displayed on the LCD. The timer defaults to 0:00:00.
2. Press the “OK” button to start the timer.
3. Press the “OK” button again to zero the timer.
4. Press the “Menu” button to clear the stopwatch timer and return to the main timer menu.

Menu Options

UV Lamp Operation

This menu option allows you to select whether the UV light will turn on automatically every time the sash is completely closed.

SmartStart

When the “SmartStart” option is selected, the UV light will turn on every time the sash is closed.

Manual

When the “manual touchpad” option is selected, the UV light must be turned on and off at the touchpad.

UV Lamp Timer

The UV Lamp Timer allows you to decide whether the UV lamp will operate continuously or for a time period that you select.

Interval

When the “Interval” option is selected, the UV Interval Timer menu is displayed.

UV Interval Timer

This window lets you set the amount of time the UV lamp stays lit when activated. Use the “▲” and “▼” buttons to select the amount of time you need, then press the “OK” button to set the interval.

NOTE: Raising the sash will reset the timer to its original setting. Pressing “UV Light” will turn the light off, pressing “Mute/OK” will pause the timer.

Continuous

In the continuous mode, the UV light will remain lit until the “UV Light” button is pressed, or the sash is raised.

UV Lamp Maintenance

This selection allows you to check how many hours the UV lamp has burned. It also allows you to set the number of hours you want the lamp to last, and to reset the UV lamp hourmeter.

UV Lamp Hourmeter

This display only shows how many hours the UV lamp has been lit, and how many hours remain until you will receive a warning to replace the lamp.

Change UV Lamp Life

In this option, you can set the number of operating hours before receiving the replace UV lamp warning. For most UV lamps, the output of UV light decreases at a constant rate. Typically, after 6,000 hours of operation the lamp will output 80% of the UV light it did when it was new. This option allows you to set the warning at a life you prefer, in 100 hour increments.

Reset UV Lamp Clock

This option lets you reset the UV hourmeter to 0 whenever the lamp has been replaced.

Light Operation

This menu option allows you to select whether the fluorescent lights will turn on automatically every time the sash is opened.

NOTE: The fluorescent lights will automatically turn off when the sash is closed, no matter what its setting is.

SmartStart

When the “SmartStart” option is selected, the fluorescent lights will turn on every time the sash is opened.

Manual

When the “manual touchpad” option is selected, the fluorescent lights must be turned on and off at the touchpad.

Light Timer

The fluorescent Lamp timer allows you to decide whether the fluorescent lamps will operate continuously or for a limited time period that you select. This may be desired for energy-savings as well as a safeguard for light-sensitive materials or animals.

Interval

When the “interval” option is selected, the Light Interval Timer menu is displayed.

Light Interval Timer

This window lets you set the amount of time for the fluorescent lamps to stay lit once activated. Use the “▲” and “▼” buttons to select the amount of time, then press the “OK” button to set the interval.

NOTE: Closing the sash will reset the timer to its original setting. Pressing “Light” will turn the lights off, pressing “Mute/OK” will pause the timer.

Continuous

In the continuous mode, the fluorescent lights will remain lit until the “light” button is pressed, or the sash is closed.

Light Maintenance

This selection allows you to check how many hours the fluorescent lamps have burned. It also allows you to set the number of hours before replacement and to reset the light hourmeter.

Light Hourmeter

This display only shows the hours the fluorescent lamps have been lit and how many hours remain until you receive a warning to replace the lamps.

Change Light Life

In this option, you can set the hourmeter before you get the replace light warning. For most fluorescent lamps, the output of light decreases at a constant rate. Typically, after 6,000 hours of operation the lamp will output less light than it did when it was new. This option allows you to set the warning at what ever level you prefer, in 100 hour increments.

Reset Light Clock

This option resets the light hourmeter to 0 after the fluorescent lamps have been replaced.

Blower Operation

This selection allows you to choose to operate the blower in SmartStart, Manual Touchpad, or in NightSmart modes.

SmartStart

When the “SmartStart” option is selected, the blower will turn on every time the sash is opened. When the sash is closed, the blower will shut off.

Manual Touchpad

When the “Manual Touchpad” option is selected, the blower must be turned on and off at the touchpad.

NightStart

When the “NightStart” option is selected, the blower will turn on every time the sash is opened. When the sash is closed, the blower speed will decrease, to deliver 20-30% of the volume of air during normal operation.

Cabinet Set Up

These selections allow for the customization of the display and the cabinet operation.

Units of Measure

When equipped with the optional airflow sensor, this option allows you to select the air velocity units of measure. When “Metric” is selected, the air velocities will be displayed in meters-per-second. When “US” is selected, the velocities will be displayed in feet-per-second.

Security Lock

NOTE: The security lock automatically reactivates and locks out the keypad every time the blower is shut off, by the keypad or by closing the sash. After the initial auto diagnostic screen is cleared, the security lock reactivates.

The security lock feature prevents operation of the Biosafety Cabinet by unauthorized users. To engage the security lock, access the Security Lock submenu, as described in Figure 5-4. Select the “secure” option, and press the “OK” button. A ‘lock’ icon appears on the LCD display. Once engaged, the operator must enter the proper sequence of keystrokes to operate the cabinet. The proper sequence to unlock the Security Lock is:

Press the “▼” keypad 3 times within 2 seconds.

After successful entry of the unlock code, the lock icon disappears from the display, and the user has full access to the keypad functions.

To disable the Security Lock, enter the Security Lock submenu and select the non-secure mode. The lock is completely disabled.

Filter Life Display Options

This menu selection determines how the filter life remaining gauge is displayed. When “Bar Graph with %” is selected, the gauge will be displayed as a horizontal bar graph with the filter life remaining shown graphically and digitally. When “Circle Graph” is selected, the gauge is displayed as a semicircular bar graph, including a digital display.

Data Output Rate

Note: This selection will only work if the optional RS-232 board is installed.

This menu option selects the rate that the RS-232 board outputs data. Data can be output at a rate of once per second, once every 10 seconds, once every 30 seconds, or once per minute.

Restoring Software Default Settings

To restore the default settings to their original configuration:

1. Access the Menu, and select “Cabinet Set Up”. Press “Mute/OK”
2. In the Cabinet Set Up submenu, select “Restore Defaults”. Press “Mute/OK”
3. Press “Mute/OK” again to restore the software defaults. Pressing “Menu” will escape this submenu without restoring the defaults.

Table of Default Settings

UV Lamp:	Smart-Start, Continuous, Reset UV Lamp Hourmeter, Set UV Lamp Life to 6000 hours.
Fluorescent Lamp:	Smart-Start, Reset Lamp Hourmeter, Set Fluorescent Lamp Life to 6000 hours.
Blower:	Smart-Start
Units of Measure:	Ft / Min
Security Lock:	Non-secure
Data Output Rate:	Every second

Calibration

This selection is for the use of qualified certifiers only to adjust the blower speed, or the display of the filter life remaining gauge.

Diagnostic Test Operation

When the “Diagnostic Test” menu is selected, the LCD allows keypad/hardware testing to help troubleshoot any malfunction.

Keypad Testing

When keypad testing is selected, the LCD shows when each key is pressed, to confirm the touchpad is working. In addition, when the “Light” and “UV Light” keys are pressed, the associated relays are energized, so the lamps should work. The Timer button energizes an auxiliary relay. When “Mute/OK” is pressed, the audio alarm should work. When the “▲” key is pressed, the Airflow Alarm relay is energized. When the “▼” key is pressed, the Blower On relay will be energized. Finally, the sash position switches can be checked in this mode as the LCD displays the sash position information that the controller is receiving.

If An Airflow Alert Activates

The most common causes of an airflow alert are:

- Blockage of the inlet grilles or exhaust outlet.
- Removal of the work surface or grille during operation.

Note: If the alarm sounds during use, immediately take appropriate action to prevent contamination to you and other personnel in the area.

Resetting the Airflow Alert System

The Airflow Alert will automatically reset to normal operation once the motor speed has stabilized.

Working In the Procedure Station

Planning

- Thoroughly understand procedures and equipment required before beginning work.
- Arrange for minimal disruptions, such as room traffic or entry into the room while the cabinet is in use.

Start-up

- Turn off UV light if included.
- Slowly raise the sash until the bottom of the sash aligns with the sash indicator decal located on the left side of the work area.
- Turn on fluorescent light and cabinet blower if the SmartStart features have not been activated.
- Check the air grilles for obstructions, and note the filter gauge reading.
- Allow the cabinet to operate unobstructed for 5 minutes.
- Wash hands and arms thoroughly with germicidal soap.
- Wear a long sleeved lab coat with knit cuffs and over-the-cuff rubber gloves. Use protective eyewear. Wear a protective mask if appropriate.

Wipe-Down

- Raise the sash to its full open position (approximately 21.75 inches/ 55.25 cm). Mute the alarm by depressing the "Alarm Silence" switch.
- Wipe down the interior surfaces of the cabinet with 70% ethanol, or a suitable disinfectant, and allow to dry.

Loading Materials and Equipment

- Only load the materials required for the procedure. Do not overload the cabinet.
- Do not obstruct the front, side, or rear return air grilles.
- Large objects should not be placed close together.
- Slowly close the sash until it is in the correct operating position.
- After loading the cabinet, wait two to three minutes to purge airborne contaminants from the work area.

Work Techniques

- Keep all materials at least 4 inches (10.16 cm) inside from the sash, and perform all contaminated operations as far to the rear of the work area as possible.
- Segregate all clean and contaminated materials in the work area.
- Arrange materials to minimize the movement of contaminated materials into clean areas.
- Keep all discarded contaminated material to the rear of the work area.
- Avoid moving materials or the operator's hands and arms through the front access opening during use.
- Avoid the use of an open flame. Use disposable lab ware or an electric incinerator as alternatives.
- Use proper aseptic technique.
- Avoid using techniques or procedures that disrupt the airflow patterns of the cabinet.
- If there is a spill or splatter during use, all objects in the cabinet should be surface decontaminated before removal. Thoroughly disinfect the working area of the cabinet WHILE IT IS STILL IN OPERATION. This will prevent the release of contaminants from the cabinet.

Final Purging

- Upon completion of work, the cabinet should be allowed to operate for two to three minutes undisturbed, to purge airborne contaminants from the work area.

Unloading Materials and Equipment

- Objects in contact with contaminated material should be surface decontaminated before removal from the cabinet.
- All open trays or containers should be covered before being removed from the cabinet.

Wipe-Down

- Wipe down the interior surfaces of the cabinet with 70% ethanol, or a suitable disinfectant, and allow to dry.
- Periodically lift the work surface and wipe down the area beneath it.
- Inspect and clean the towel catch located at the rear of the work area, beneath the work pan.
- Dispose of rubber gloves appropriately, and have lab coat laundered properly.
- Wash hands and arms thoroughly with germicidal soap.

Shutdown

- Lower the sash to turn off the fluorescent light and cabinet blower and activate the UV light if appropriate.

Chapter 6: Maintaining the Cabinet

The common service operations necessary to maintain the Procedure Station for peak performance are listed below.

Routine Maintenance Schedule

Weekly

- Using 70% ethanol, or a suitable disinfectant, surface disinfect the inside of the cabinet and the work surface.
- Using an appropriate glass cleaner, or LabSolutions Glass & Surface Wipes, Labconco part # 1570000; clean the sash and the surface of the UV lamp, if so equipped.
- Operate the cabinet blower, noting the percent filter life remaining in an operational log.

Monthly (or more often as required)

- Using a damp cloth, or LabSolutions Glass & Surface Wipes, Labconco part # 1570000; clean the exterior surfaces of the cabinet, particularly the front and top of the cabinet, to remove any accumulated dust.
- Disinfect and lift the work surface. Surface disinfect the lower plenum with a solution of 70% ethanol, or a suitable disinfectant. Check the towel catch and prefilter for retained materials. Replace prefilter if necessary.
- Check all service valves, if so equipped, for proper operation.
- Check the UV and fluorescent light hourmeters, and record their readings in an operational log.
- All weekly activities.

Semiannually or Annually

- Have the cabinet re-certified by a qualified certification technician.
- All monthly activities.

Service Operations

Work Surface Removal:

Note: The work surface of the cabinet must be thoroughly decontaminated before removing it.

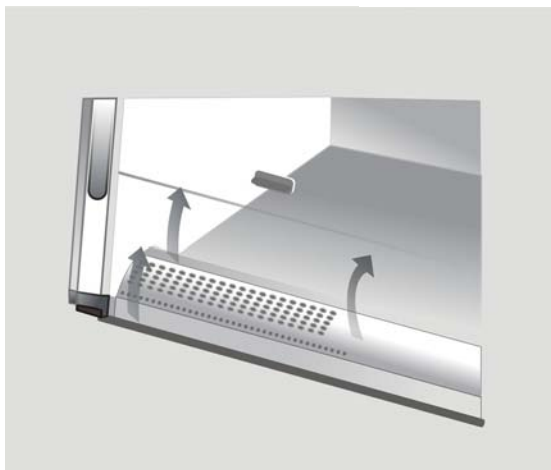
1. Lift the front edge of the work surface straight up by grasping the knob handles at either front corner.
2. Pull the work surface straight out, letting its rear edge rest on the center support underneath.
3. Reinstall the work surface by resting the bottom on the center rail while pushing it back into the cabinet. Be sure to engage the tabs on the back corners of the work surface with the slots on the rear wall of the work area.

Front Grille Removal:

Note: The grille must be thoroughly decontaminated before removing it.

1. Remove the work surface as described earlier.
2. At one end of the grille, grip the front of grille with one hand, and the back with the other hand. Pivot that end of the grille upward and inward, paralleling the angle of the sash, as shown in Figure 6-1.
3. Pull the other end of the sash up and away from the bottom edge of the cabinet.
4. Reinstall the grille by reversing the above sequence, ensuring that the grille properly engages the bottom edge of the cabinet.

Figure 6-1



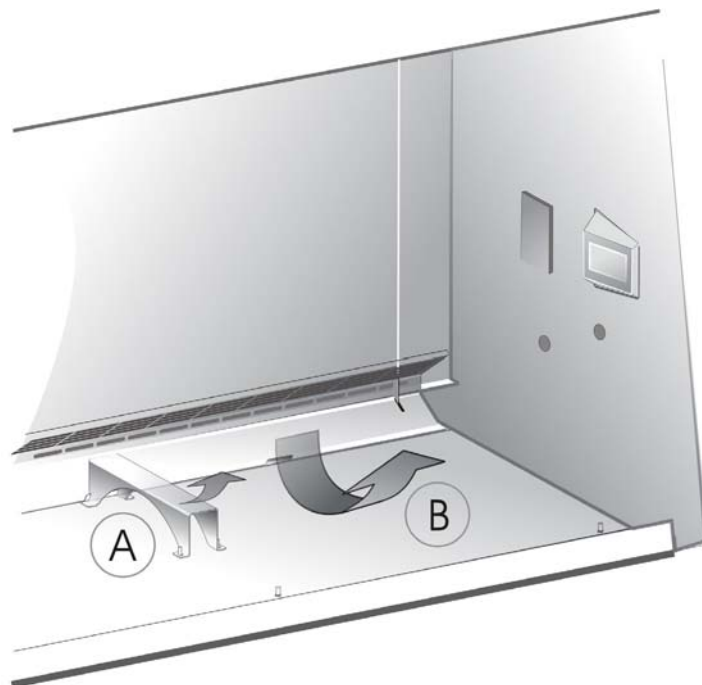
Towel Catch and Prefilter Removal:

The towel catch should be removed periodically for inspection.

Note: The work surface and the towel catch must be thoroughly decontaminated before removing either from the cabinet.

1. Remove the work surface as described above.
2. Lift the front end of the center support straight up to release it from the locating pins (A). Set the support aside in the work area.
3. Remove the towel catch by pivoting the bottom out toward you (B).
4. Inspect the roughing prefilter. Disinfect, clean or replace as necessary. Surface decontaminate the towel catch before removing it.
5. Reinstall the towel catch by sliding it back into position, ensuring that the two slots on either end of the towel catch properly engage the rails on the rear of the duct, as shown in Figure 6-2. Also ensure that the DOP Sampling Line (the clear tube with a black cap) either passes through a hole in the towel catch, or passes along the outside edge of the catch without being kinked.

Figure 6-2



Postfilter Replacement:

If odors become noticeable from the exhaust of the cabinet, replace the carbon postfilter on top of the cabinet. To do so, carefully compress the perforated exhaust filter cover to pull the tabs out of one side of the exhaust filter brackets. Set the cover aside. Remove and dispose the old postfilter.

Note: When working around the exhaust HEPA filter, be careful to never touch the filter with hands or tools. If damaged, a qualified certifier must repair or replace the HEPA filter.

Carefully place a new postfilter between the exhaust filter brackets with the airflow arrows pointing up. Reinstall the perforated exhaust filter cover by inserting the tabs into the slots of the brackets.

Front Panel Removal and Installation:

Figure 6-3

1. Locate and remove the two Phillips screws that secure the front panel as shown in Figure 6-3. They are located on the bottom corners of the front dress panel.
2. Swing the bottom of the dress panel out to clear the fluorescent light and then lift the front dress panel straight up and away from the cabinet.

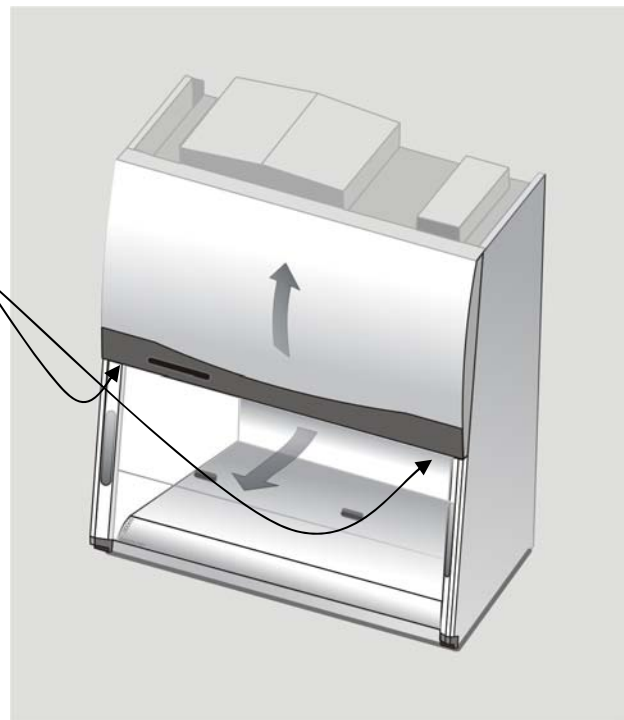


Figure 6-4

1. To reinstall the panel, reverse these steps, ensuring that the plastic pin in the top corners of the dress panel properly engage the corner posts.



Changing the Fluorescent Lamps:

1. Unplug the cabinet or turn the System Reset Switch, located on the top of the cabinet, off.
2. Remove the front dress panel as noted in Figure 6-3.
3. Remove the fluorescent lamps by pulling the lamp sockets straight off each end of the lamp, and releasing both lamps from the spring clips that secure them in place.
4. Install the new lamps by reversing the removal procedure.

Changing the Optional UV Lamp:

Note: For optimum performance, the UV lamp should be changed on an annual basis.

The UV lamp and the work area of the cabinet must be thoroughly decontaminated before removing the lamp.

1. Start the cabinet and let it operate for 5 minutes.
2. Raise the sash to its full open position.
3. Thoroughly surface decontaminate the UV lamp and the work area of the cabinet.

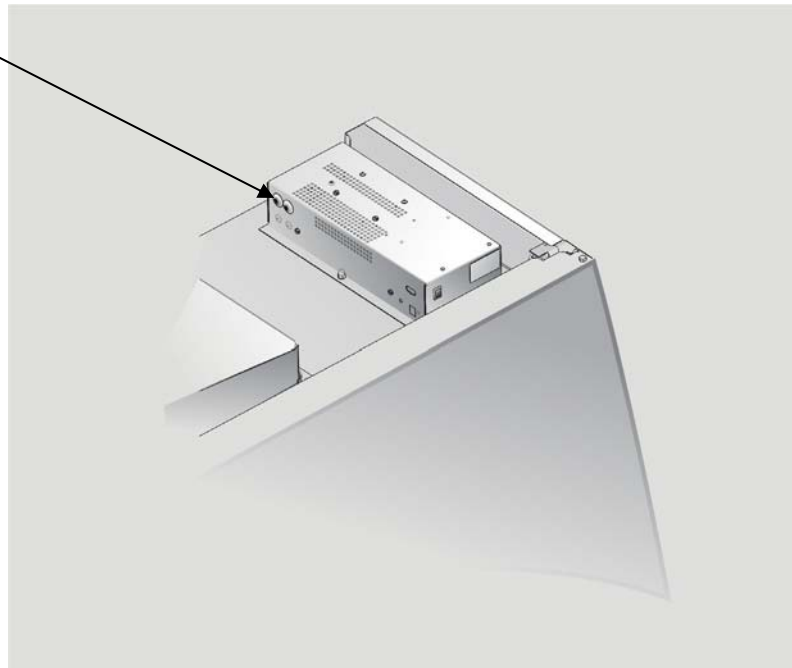
4. Unplug the cabinet or turn off the System Reset Switch, located on the top of the cabinet.
5. Remove the UV lamp by rotating it 90 degrees and lifting it straight up and out of its sockets.
6. Install new lamp by reversing the removal procedure.

Resetting a Circuit Breaker:

To reset any of the circuit breakers located on the left side of the electronics module, depress the white button until it sets.

Figure 6-5

Circuit Breakers- The front breaker protects the electrical outlets, the rear breaker protects the motor and lights.



Storage

If the Procedure Station is to be left unused for more than one month, it should be prepared for storage.

Note: The cabinet should not be stored in areas of excess humidity or temperature extremes. If the cabinet is moved during storage, it must be recertified before use.

1. Close the sash completely and seal the bottom edge and the exhaust outlet with plastic sheeting.
2. Unplug the cabinet.
3. Ensure that the cabinet will not be moved or disturbed while being stored.

Chapter 7: Troubleshooting

Refer to the following table if the Procedure Station fails to operate properly. If the suggested corrective actions do not solve the problem, contact Labconco for additional assistance.

PROBLEM	CAUSE	CORRECTIVE ACTION
Cabinet blower and lights won't turn on	Unit not plugged into outlet	Plug the cabinet into appropriate electrical service. Check connection to control box on top of cabinet.
	System Reset Switch is Off	Turn on the System Reset Switch.
	Circuit breaker(s) tripped	Reset circuit breakers.
	Keypad disconnected or defective	Run keypad diagnostics and check connections.
Blower won't turn on but lights work	Sash closed	Raise sash.
	Blower wiring is disconnected	Inspect blower wiring.
	Blower motor is defective	Replace blower motor.
	Keypad disconnected or defective	Run keypad diagnostics and check connections.

PROBLEM	CAUSE	CORRECTIVE ACTION
Cabinet blower turns on but lights don't work	Lamps not installed correctly	Inspect lamp installation.
	Lamp is defective	Replace lamp.
	Keypad disconnected or defective	Run keypad diagnostics and check connections.
	Lamp wiring is disconnected	Inspect lamp wiring.
	Defective lamp ballasts	Replace lamp ballasts.
	Keypad disconnected or defective	Run keypad diagnostics and check connections.
Airflow Alert goes off and/or there is a slight decrease in filter life remaining gauge	HEPA filter loading	The gauge reading will steadily decrease as the cabinet is used.
	Blockage of the return air slots or grille	Check all return air slots and grilles to ensure that they are not blocked or restricted.
	Blockage of the exhaust outlet	Ensure that the exhaust outlet is not blocked or restricted.
Blockage or restriction under the work surface	Ensure that the towel catch and plenum beneath the work surface are unobstructed.	

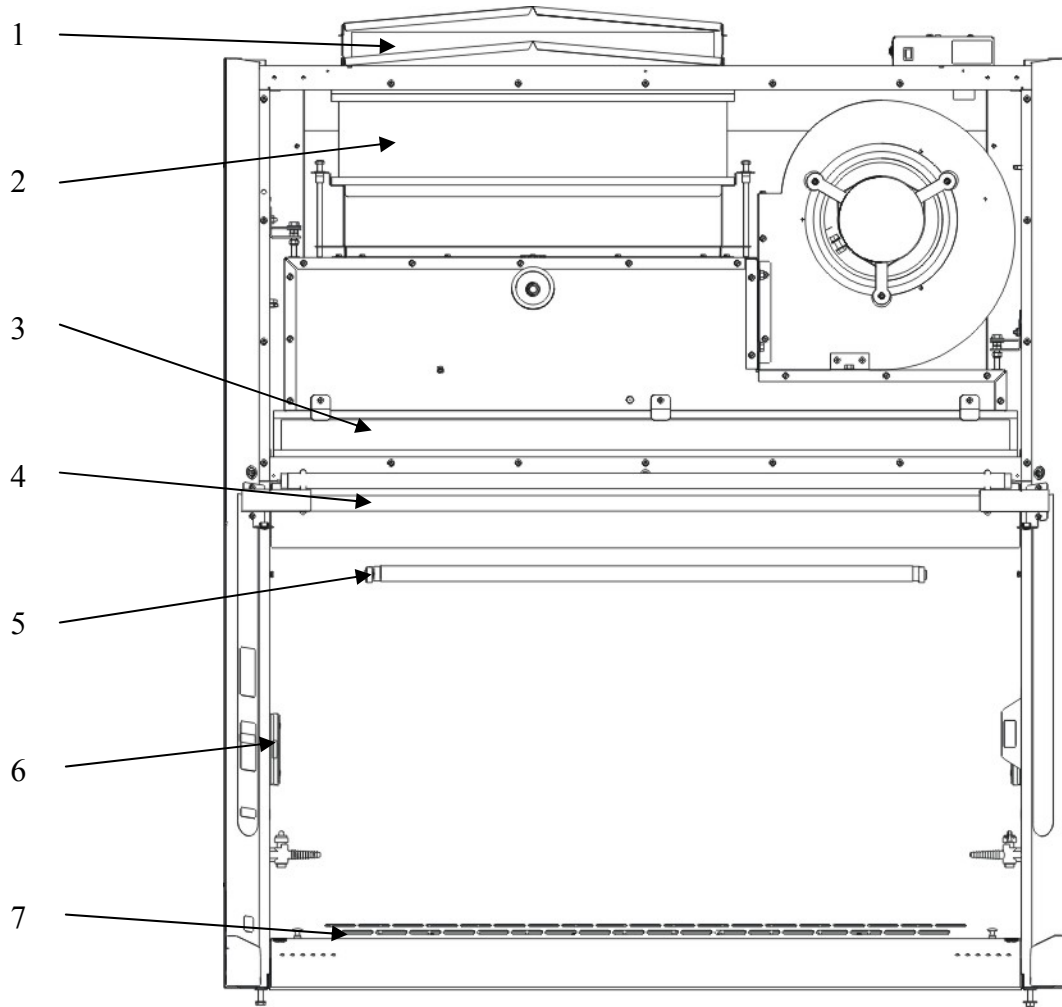
PROBLEM	CAUSE	CORRECTIVE ACTION
Contamination of work in the cabinet	Improper technique or procedure for the cabinet	See “Use of the Cabinet” section in the manual.
	Restriction of the return air slots or grille – blockage of the exhaust outlet	Ensure that all return air slots, grilles and the exhaust outlet are unobstructed.
	External factors are disrupting the cabinet airflow patterns or acting as a source of contamination	See “Installation” section of this manual.
	Cabinet is out of adjustment/HEPA filter(s) are defective	Have cabinet recertified.

Appendix A: Components

Illustration A-1 indicates the location of the following service parts, and replacement accessory parts:

Procedure Station Replacement Parts

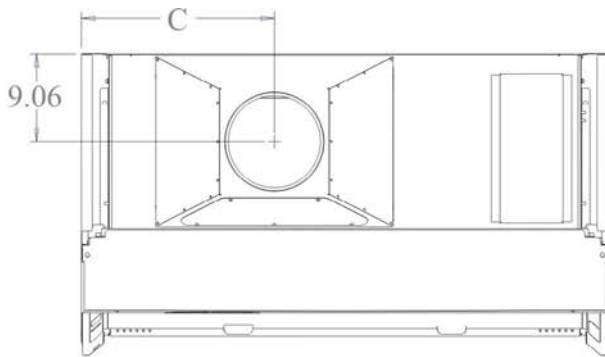
Item	Quantity	Part No.	Description
1	1	3837201	Postfilter for 4-foot models
	1	3837203	Postfilter for 6-foot models
2	1	3838501	Exhaust HEPA Filter 4-ft
	1	3838503	Exhaust HEPA Filter 6-ft
3	1	3838401	Supply HEPA Filter 4-ft
	1	3838402	Supply HEPA Filter 6-ft
4	2	9721900	Lamp, Fluorescent, 4-ft
	2	9721903	Lamp, Fluorescent, 6-ft
5	1	1271300	Lamp, UV (models with UV light only)
6	2	3843601	Receptacle Cover (115V only)
7	1	3858901	Prefilter for 4-foot models
	1	3858903	Prefilter for 6-foot models



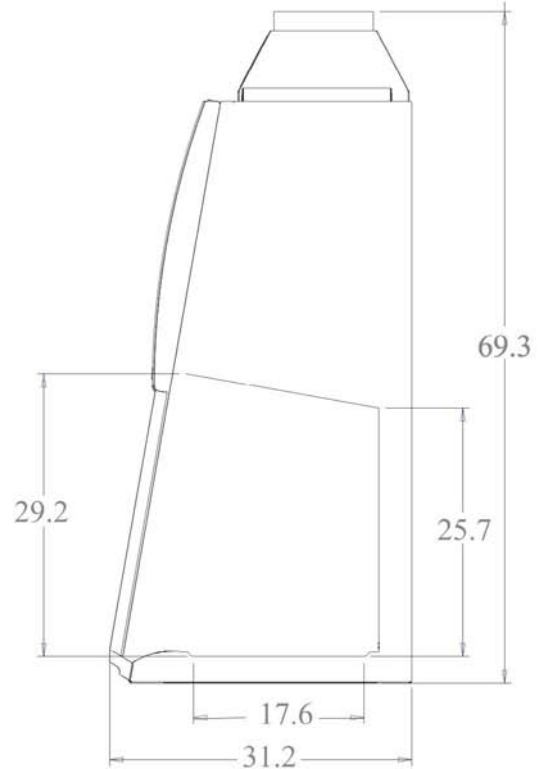
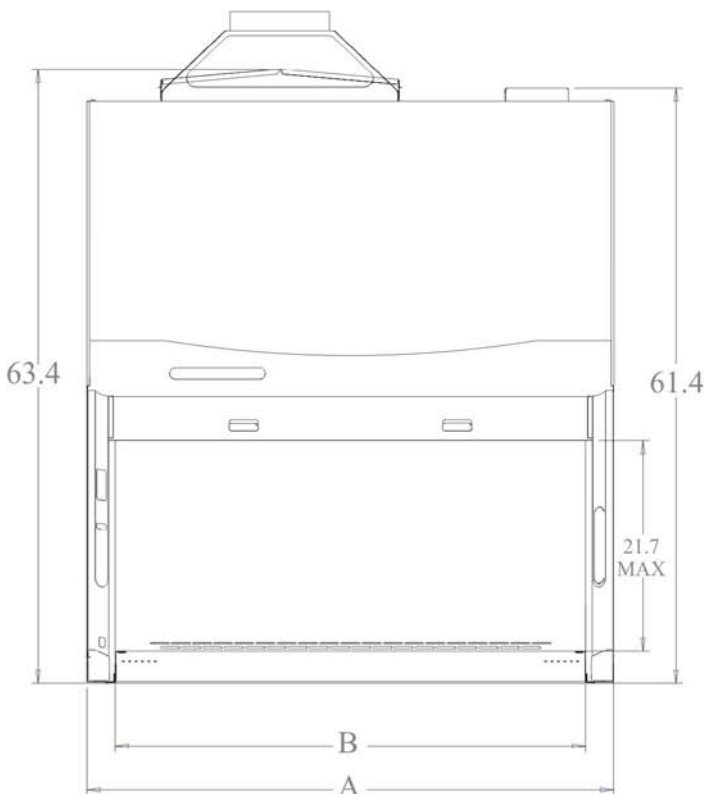
Appendix B: Dimensions

All dimensions in inches.

B-1



Width	"A"	"B"	"C"
4'	54.3	48.5	19.9
6'	78.3	72.5	32.9



Appendix C: Specifications

Electrical Data

Cabinet Model	Electrical Requirements
3480000-3480009	115 VAC, 60 Hz, 12 Amps
3480200-3480209	115 VAC, 60 Hz, 12 Amps
3480010-3480019	100 VAC, 50/60 Hz, 12 Amps
3480210-3480219	100 VAC, 50/60 Hz, 12 Amps
3480020-3480029	230 VAC, 50/60 Hz, 6 Amps
3480220-3480229	230 VAC, 50/60 Hz, 6 Amps

Cabinet Model	Electrical Requirements
3481000-3481009	115 VAC, 60 Hz, 16 Amps
3481200-3481209	115 VAC, 60 Hz, 16 Amps
3481010-3481019	100 VAC, 50/60 Hz, 12 Amps
3481210-3481219	100 VAC, 50/60 Hz, 12 Amps
3481020-3481029	230 VAC, 50/60 Hz, 8 Amps
3481220-3481229	230 VAC, 50/60 Hz, 8 Amps

Motor Specifications

Cabinet Model	Electrical Requirements
4-foot Cabinets, all Voltages	Electronically Commutated Motor (ECM) 120-277 VAC – 50/60 Hz, 7.7 Full Load Amps @115VAC 4.3 Full Load Amps @230VAC 1/2 H.P. 1500 RPM maximum Automatic Thermal Protection

Cabinet Model	Electrical Requirements
6-foot Cabinets, all Voltages	Electronically Commutated Motor 120-277 VAC – 50/60 Hz, 9.6 Full Load Amps @115VAC 6.8 Full Load Amps @230VAC 3/4 H.P. 1500 RPM maximum Automatic Thermal Protection

Environmental Conditions

- Indoor use only.
- Maximum altitude: 6562 feet (2000 meters).
- Ambient temperature range: 41° to 104°F (5° to 40°C).
- Maximum relative humidity: 80% for temperatures up to 88°F (31°C), decreasing linearly to 50% relative humidity at 104°F (40°C).
- Main supply voltage fluctuations not to exceed $\pm 10\%$ of the nominal voltage.
- Transient overvoltages according to Installation Categories II (Overvoltage Categories per IEC 1010). Temporary voltage spikes on the AC input line that may be as high as 1500V for 115V models and 2500V for 230V models are allowed.
- Used in an environment of Pollution degrees 2 (i.e., where normally only non-conductive atmospheres are present). Occasionally, however, a temporary conductivity caused by condensation must be expected, in accordance with IEC 664.

Appendix D: Accessories

Note: Accessories marked with an asterisk (*) require a qualified certifier to install and/or calibrate before use.

Telescoping Base Stands

These stands are available with either fixed feet or caster wheels. The user sets the height of these stands before installation. The height can be set from 27.5 to 33.5 inches in 1-inch intervals, providing a cabinet work surface height of 30.0 to 36.0 inches. The Base Stands for each Procedure Station model are listed below.

Width	Procedure Station Series #	Base Stand w/Feet Model #	Base Stand w/wheels Model #
4'	34800-xx	3730400	3730410
6'	34810-xx	3730600	3730610

Telescoping Base Stand Shelf Kit (# 3850100)

This 20 x 8-inch long shelf is specifically designed to hold the Aspirator Pump or other small accessories, and attaches to the lower right side of the base stand. The kit includes shelf, braces and self-drilling fasteners. **NOTE: A power drill with a 5/16-inch socket is needed to attach the fasteners to the base stand.**

Manual or Electric Hydraulic Lift Base Stands

These base stands offer infinitely adjustable height between 25.5 and 33.5 inches, giving a cabinet work surface height of 28.0 to 36.0 inches. The height is adjusted either by a manual (hand crank) or electric pump that drives hydraulic rams in the legs of the stands. All of the hydraulic stands are equipped with fixed feet, but can be converted to caster wheels with the addition of Caster Kit #3784000. The Base Stands for each Procedure Station model is listed below.

Width	Procedure Station Series #	Manual Lift Stand #	Electric (115V) Lift Stand #	Electric (230V) Lift Stand #
4'	34800-xx	3780201	3780101	3780104
6'	34810-xx	3780202	3780102	3780105

Hydraulic Base Stand Shelf Kit (# 3850200)

This 22 ¼ x 11 ¼-inch long shelf is specifically designed to hold the Aspirator Pump or other small accessories, and attaches to the lower left side of the base stand. The kit includes shelf and self-drilling fasteners. **NOTE: A power drill with a 5/16-inch socket is needed to attach the fasteners to the base stand.**

SoLo Electric Hydraulic Lift Base Stands

These base stands permit the Procedure Station to be lowered enough to be transferred through a standard doorway as low as 78 inches. Casters provide mobility and lock in place. The SoLo Stands for each Procedure Station model is listed below.

Width	Procedure Station Series #	115V SoLo Stand #	230V SoLo Stand #
4'	34800-xx	3780311	3780315
6'	34810-xx	3780313	3780317

*Service Valve Kit (# 3747500)

Includes serrated hose tip ball valve with quarter turn handle, hardware and instructions for plumbing to services mounts on left or right side interior. All cabinets are factory prepared to accept up to 4 fixtures. Shipping weight 4 lbs. (2 kg).

Ultraviolet Lamp Kits

Includes a 254 nm UV lamp and ballast.

Catalog #	For use with	Shipping Weight
3858500	All 115 VAC models	5 lbs. (2.3 kg)
3858501	All 100 VAC models	5 lbs. (2.3 kg)
3858502	All 230 VAC models	5 lbs. (2.3 kg)

IV Bar Kits

Bar supports intravenous solution bottles and bags. Kits include IV bar, mounting hardware, and four hangers.

Catalog #	For use with	Shipping Weight
3858601	4-foot Procedure Station	4 lbs. (1.8 kg)
3858602	6-foot Procedure Station	6 lbs. (2.7 kg)

Shelf (# 3859000)

The wire shelf measures 8 inches wide by 5 inches deep, with a weight capacity of 2.2 lbs. (1 kg) and mounts to the rear grille. Shipping weight 5.0 lbs. (2.3 kg).

Cord/Tubing Management System (# 3859100)

The kit includes three cord hooks and carabineers. The hooks mount to the rear grille, and the carabineers secure power cords and/or tubing along the rear wall of the work area. Shipping weight 5.0 lbs. (2.3 kg).

Prefilter

The prefilter is a sponge-type, adhesive-backed element that attaches to the towel catch, to prevent objects from being drawn into the blower or onto the HEPA filters.

Catalog #	For use with	Shipping Weight
3859201	All 4-foot Procedure Stations	1 lbs. (0.5 kg)
3859203	All 6-foot Procedure Stations	1 lbs. (0.5 kg)

Postfilter

The postfilter is a carbon-impregnated, cardboard-framed disposable filter.

Catalog #	For use with	Shipping Weight
3837201	All 4-foot Procedure Stations	5 lbs. (2.3 kg)
3837203	All 6-foot Procedure Stations	10 lbs. (4.6 kg)

*Canopy Kit

For thimble ducting the PuriCare Procedure Station to the outside.

Catalog #	For use with	Duct Dia.	Shipping Weight
3858701	4-foot Procedure Station	10"	15 lbs. (7 kg)
3858703	6-foot Procedure Station	10"	15 lbs. (7 kg)

*Air-Tight Damper (# 3776800)

The damper mounts atop the Canopy Connection Kit to adjust exhaust airflow. Shipping weight 13.0 lbs. (5.9 kg).

NOTE: This damper IS NOT prepared for the installation of the canopy alarm sensor. If you want a canopy airflow sensor, order #3859700, listed below.

***Air-Tight Damper with Canopy Alarm Sensor (# 3859700)**

This damper with integral canopy airflow sensor mounts atop the Canopy Connection Kit to adjust exhaust airflow. Includes wiring harness to connect with the Logic Control board. Shipping weight 13.0 lbs. (5.9 kg).

Backdraft Damper (# 3858800)

The backdraft damper mounts in a vertical run of duct to prevent the reverse pressurization of the exhaust system. Sized for 10-inch diameter ductwork. Shipping weight 5.0 lbs. (2.3 kg).

Remote Blowers

Labconco offers a full line of epoxy-coated steel remote exhaust blowers for use with its Procedure Stations. Please contact Labconco's Customer Service Department at 800-821-5525 for assistance with blower selection and sizing.

Ergonomic Chair with Armrests (# 3744000)

Lab chair has 6-way articulating seat and back control for personalized adjustment. Pneumatic mechanism adjusts seat height from 18 1/4" to 25 3/4". Five-leg black reinforced composite base rests on 2" ball bearing casters. Aluminum support ring. Removable arm rests. Black vinyl upholstery. Shipping weight 35 lbs. (15.9 kg).

Adjustable Footrest (# 3746000)

Elevates feet and permits angle repositioning while in use. 18 1/2"w x 11 1/2"d x 8"h. Shipping weight 6 lbs. (2.7 kg).

***Inflow/Downflow Sensor Kit**

Includes airflow sensor, hardware and wiring needed to display inflow and downflow on the Information Center LCD.

Catalog #	For use with	Shipping Weight
3859401	4-foot Procedure Station	5 lbs. (2.3 kg)
3859403	6-foot Procedure Station	5 lbs. (2.3 kg)

Aspirator Pump Kit (# 3850300 or 3850301)

Kit includes components required to outfit the cabinet with a system to safely aspirate fluids. The pump has an integrated 2L glass jar with fill limiter that seals to contain fluids. The chemically resistant diaphragm pump can be switched with the foot pedal provided. 10-ft. of clear tubing, filter as well as a sealed grommet for the cabinet wall is in the kit.

- 3850300 Vacuum Aspiration Kit (Logic) 110V
- 3850301 Vacuum Aspiration Kit (Logic) 220V

Turntable (#3852000)

The 12-inch diameter Turntable is intended to be utilized in the rear corners of the biosafety cabinet work area to provide quick access to supplies. Ball bearing hub and stainless steel upper and lower surfaces are autoclaveable.

***ULPA Supply Filters (# 3859500, 01, 02, 03)**

Rated at 99.999% efficiency with particles 0.12 microns.

***ULPA Exhaust Filters (# 3859600, 01, 02, 03)**

Rated at 99.999% efficiency with particles 0.12 microns.

Appendix E: Quick Chart

Model	34800	34802	34810	34812
Cabinet Size (in feet)	4	4	6	6
Sash Opening (inches)	10	12	10	12
Starting Serial # ¹	0705_	0705_	0705_	0705_
Supply HEPA Data				
Labconco P/N	3838401	3838401	3838403	3838403
Exhaust HEPA Data				
Labconco P/N	3838501	3838501	3838503	3838503
Motor/Blower Data				
Labconco P/N ²	3832201	3832201	3832203	3832203
Motor HP	1/2	1/2	3/4	3/4
Blower Size (inches)	10 x 8	10 x 8	10 x 8	10 x 8
Fluorescent/UV Lamp Data				
Fluorescent Lamps (2 each)	F32T8 TL741	F32T8 TL741	F40T8 SP41	F40T8 SP41
Light intensity (ft-candles) ³	90-100	90-100	90-100	90-100
UV Lamp	G30T8	G30T8	G30T8	G30T8
UV energy(uW-cm ²) ⁴	240	240	240	240
Prefilter Data				
Labconco P/N	3858901	3858901	3858903	3858903
Postfilter Data				
Labconco P/N	3859201	3859201	3859203	3859203
Canopy Data				
Labconco Canopy P/N	3858701	3858701	3858703	3858703

1. The primary serial tag is on the lower outside edge of the right corner post. The secondary serial tag is located on the front of the electronics module on the top right side of the cabinet. The first two digits of the serial number are the year of production, the next two are the month. The next 5 digits are the sequence of production, and the letter following the serial number is the revision level of the cabinet.
2. Each motor must be programmed by Labconco for the appropriate width cabinet.
3. As per ANSI/NSF Std. 49 with a background of 15 ft-candles.
4. Measured in the geometric center of the work surface.

DECLARATION OF CONFORMITY

Application Council Directive(s): 73/23/EEC, 89/336/EEC, 2002/95/EC (ROHS),
2002/96/EC (WEEE), 2004/108/EC

Standard(s) to which conformity is declared: EN61010-1, EN61326-1, EN55022,
EN61000-3-2/3

Manufacturer's Name: Labconco Corporation

Manufacturer's Address: 8811 Prospect Avenue
Kansas City, MO 64132 USA

Importer's Name: See Shipping/Customs Documents

Importer's Address: See Shipping/Customs Documents for your equipment

Type of Equipment: Laboratory Equipment

Model No: PuriCare Procedure Stations
348002x 4-foot wide
348102x 6-foot wide

Serial No.: Various – See Individual Declaration

Year of Manufacture: 2007 and subsequent

I, the undersigned, hereby declare that the equipment specified above conforms to the
above Directive(s) and Standard(s).

See individual Declaration of Conformity which
will be signed by the importer for your country.

Place: _____
(Signature)

Date: _____
(Full Name)

(Position)