



User's Manual

PuriCare™ Open Access Stations

Models

3820000

3820020



Labconco's Mascot,
Labby the LABster



*Protecting your
laboratory environment*

LABCONCO®

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CHAPTER 1

INTRODUCTION

Congratulations on your purchase of a Labconco PuriCare Series Open Access Station. Your PuriCare product is designed to protect you, your product and your laboratory environment from aerosols. It is the result of Labconco's years of experience manufacturing laboratory equipment, and many of its features were suggested to us by users like you.

The PuriCare 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 Open Access Stations operate, please review *Chapter 4: Theory of Operation and Safety Precautions* before you begin working in the station. Even if you are an experienced Open Access Station user, please review *Chapter 5: Using Your Open Access Station*; it describes your PuriCare's features so that you can use the station efficiently.

About This Manual

This manual is designed to help you learn how to install, use, and maintain your Open Access Station. Instructions for installing optional equipment on your station are also included.

Chapter 1: Introduction provides a brief overview of the Open Access Station, explains the organization of the manual, and defines the typographical conventions used in the manual.

Chapter 2: Prerequisites explains what you need to do to prepare your site before you install your Open Access Station. Electrical and service requirements are discussed.

Chapter 3: Getting Started contains the information you need to properly unpack, inspect, install, and certify your Open Access Station.

Chapter 4: Theory Of Operation And Safety Precautions explains how the PuriCare operates and the appropriate precautions you should take when using the station.

Chapter 5: Using Your PuriCare discusses the basic operation of your station. Information on how to prepare, use and shut down your PuriCare are included.

Chapter 6: Maintaining Your PuriCare explains how to perform routine maintenance on your Open Access Station. Information on how to safely disinfect the interior of your station and replace the lamps are included.

Chapter 7: Modifying Your Open Access Station describes how to install the optional equipment on the station.

Chapter 8: Troubleshooting contains a table of problems you may encounter while using your Open Access Station including the probable causes of the problems and suggested corrective actions.

Appendix A: PuriCare Components contains labeled diagrams of all of its components.

Appendix B: Open Access Station Dimensions contains comprehensive diagrams showing all of the dimensions for the PuriCare model.

Appendix C: Open Access Station Specifications contains the electrical requirements for the Open Access Station. Wiring diagrams for both the 115V and 230V models are also included.

Appendix D: PuriCare Accessories lists the part number and descriptions of all of the accessories available for your Open Access Station.

Appendix E: Quick Chart for the PuriCare Open Access Station provides useful operating specifications.

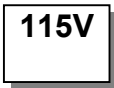
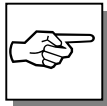
Appendix F: References lists the various resources available that deal with biosafety.

Typographical Conventions

Recognizing the following typographical conventions will help you understand and use this manual:

- Book, chapter, and section titles are shown in italic type (e.g., *Chapter 3: Getting Started*).
- Steps required to perform a task are presented in a numbered format.
- Comments located in the margins provide suggestions, reminders, and references.
- Critical biosafety information is presented in boldface type in paragraphs that are preceded by the biosafety icon. Failure to comply with the information following a biosafety icon may result in illness or death.





- Critical information is presented in boldface type in paragraphs that are preceded by the exclamation icon. Failure to comply with the information following an exclamation icon may result in injury to the user or permanent damage to your Open Access Station.
- Critical information is presented in boldface type in paragraphs that are preceded by the wrench icon. These operations should only be performed by a trained certifier or contractor. Failure to comply with the information following a wrench icon may result in injury to the user or permanent damage to your Open Access Station.
- Important information is presented in capitalized type in paragraphs that are preceded by the pointer icon. It is imperative that the information contained in these paragraphs be thoroughly read and understood by the user.
- Information that is specific to a particular model of Open Access Station is preceded by a number icon. The 115V icon indicates the text is specific to the 115 volt models. The 230V icon indicates the text is specific to the 230 volt models.

Your Next Step

If your PuriCare needs to be installed, proceed to *Chapter 2: Prerequisites* to ensure your installation site meets all of the requirements. Then, go to *Chapter 3: Getting Started* for instructions on how to install your Open Access Station and make all of the necessary connections.

If you would like to review how the Open Access Station operates, go to *Chapter 4: Theory Of Operation And Safety Precautions*.

For information on the operational characteristics of your Open Access Station, go to *Chapter 5: Using Your PuriCare*.

If your Open Access Station is installed and you need to perform routine maintenance on the station, proceed to *Chapter 6: Maintaining Your PuriCare*.

For information on making modifications to the configuration of your unit, go to *Chapter 7: Modifying Your Open Access Station*.

Refer to *Chapter 8: Troubleshooting* if you are experiencing problems with your PuriCare.

CHAPTER 2

PREREQUISITES

Before you install your Open Access Station, you need to prepare your site for installation. Carefully examine the location where you intend to install your station. 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:

- the location requirements for your installation site.
- the electrical power requirements for your installation site.
- the exhaust requirements for your installation site.
- the space requirements for your installation site.

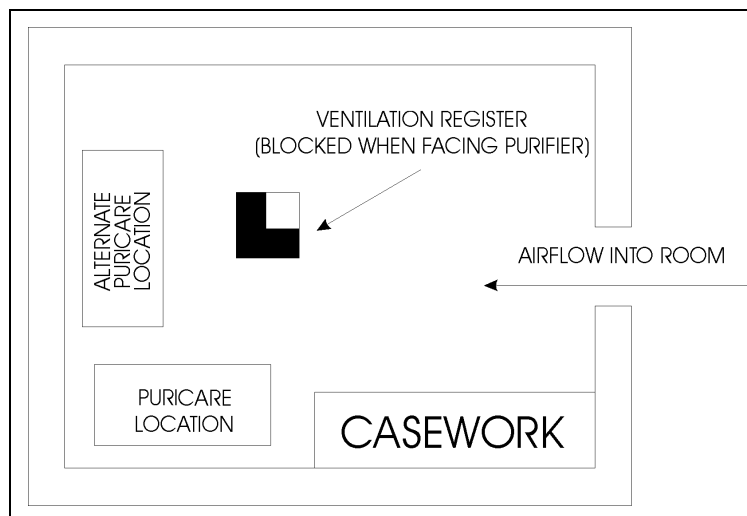
Refer to *Appendix C: Open Access Station Specifications* for complete station electrical and environmental conditions, specifications and requirements.

Location Requirements

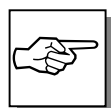


The PuriCare should be located away from traffic patterns, doors, fans, ventilation registers, fume hoods and any other air-handling device that could disrupt its airflow patterns. All windows in the room should be closed. Figure 2-1 shows the optimum location for the PuriCare.

Figure 2-1



Exhaust Requirements



THE OPEN ACCESS STATION DISCHARGES ITS FILTERED EXHAUST AIR UNDERNEATH THE UNIT. IT SHOULD BE PLACED AT LEAST 12 INCHES AWAY FROM ANY VERTICAL OBSTRUCTION TO OPERATE PROPERLY.

Electrical Requirements

The different PuriCare models have the following electrical requirements:

Table 2-1

Model #	Requirements
38200- 00-09	115 VAC, 60 Hz, 12 Amps
38200- 20-29	230 VAC, 50 Hz, 6 Amps

All PuriCare Stations with model numbers ending in –00 to –09 are designed for operation at 115 volts 60Hz, alternating current. PuriCare Stations with model numbers ending in –20 to –29 are designed for operation at 230 +/- 20 volts, 50 Hz alternating current. A dedicated outlet with a circuit breaker rated at 20 Amps for 115 volt models and 10 Amps for 230 volt models, should be located within 25 feet of the station for 115 volt models or within 10 feet for 230 volt models.



Always follow the plug manufacturer's instructions for the proper assembly and testing of the plug and power cord.

115V

THE ELECTRICAL OUTLETS OF THE 115 VOLT PURICARE IS PROTECTED BY A GROUND FAULT INTERRUPTER CIRCUIT (GFIC). LABCONCO DOES NOT RECOMMEND INSTALLING A GFIC ON THE OUTLET THAT THE PURICARE PLUGS INTO.

Space Requirements

The dimensions for the different models are shown in *Appendix B: Open Access Station Dimensions*.

Overhead Clearance

In order for the Open Access Station to operate properly, at least six inches (150 mm) clearance from any overhead obstructions is required when the station is in its final operating position.

Your Next Step

After you have determined that the location you have selected accommodates the installation and operational requirements of your Open Access Station, you are ready to begin installation. Proceed to *Chapter 3: Getting Started*.

CHAPTER 3

GETTING STARTED

Now that the site for your Open Access Station is properly prepared, you are ready to unpack, inspect, install, and certify it. Read this chapter to learn how to:

- unpack and move your PuriCare.
- set up the station.
- connect the electrical supply source.
- arrange certification.

Depending upon which model you are installing, you may need common tools in addition to two 1/2" wrenches, a flat-blade screwdriver, and a Phillips screwdriver.

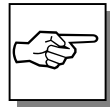


The PuriCare models weigh approximately 450 lbs. (205 kg). The carton allows for lifting with a mechanical lift truck or floor jack.

Unpacking Your Open Access Station

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

Carefully unpack your PuriCare and inspect it for damage that may have occurred in transit. If your unit is damaged, notify the delivery carrier immediately and retain the entire shipment intact for inspection by the carrier.



DO NOT RETURN GOODS WITHOUT THE PRIOR AUTHORIZATION OF LABCONCO. UNAUTHORIZED RETURNS WILL NOT BE ACCEPTED.

IF YOUR STATION 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 for your PuriCare until you have checked all of the components and installed and tested the unit.



Do not remove the PuriCare from its shipping skid until it is ready to be placed into its final location. Move the unit by placing a flat, low dolly under the shipping skid, or by using a floor jack.

Do not move the station by tilting it onto a hand truck.

PuriCare Components

Labconco manufactures Open Access Stations for use with 115 volts or 230 volts.

Locate the station model you received in the following group of tables. Verify that the components listed are present and undamaged.

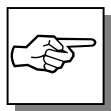
Catalog #	PuriCare Description
3820000	Open Access Station, 115 VAC, 60 Hz
3820020	Open Access Station, 230 VAC, 50 Hz

Plus the Following:

Part #	Component Description
3792200	User's Manual

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

Preparing the Station for Operation



ASSEMBLY INSTRUCTIONS FOR THE STATION (LABCONCO P/N 1058400) ARE ATTACHED TO THE FRONT PANEL OF THE PURICARE. IF THESE INSTRUCTIONS ARE MISSING OR UNCLEAR, CONTACT LABCONCO AT 800-821-5525.

Exhaust System Requirements

The Open Access Station discharges its HEPA filtered exhaust air beneath the unit.



Maintain at least 12 inches clearance between the station and any vertical obstruction on all sides of the unit.

Initial Certification

Prior to use, all PuriCare stations should be certified by a qualified certifier. Under normal operating conditions, the PuriCare stations should be recertified at least annually or when serviced. The certifier should perform the following tests:

- HEPA Filter Leak Tests
- Downflow Velocity Profile Test*
- Inflow Volume Test
- Airflow Smoke Patterns

*There is no tolerance on the downflow profile values.

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.

Your Next Step

After your PuriCare has been installed and certified, you are ready to proceed to *Chapter 4: Theory Of Operation And Safety Precautions*.

CHAPTER 4

THEORY OF

OPERATION AND

SAFETY

PRECAUTIONS

The Open Access Station operates using the following principles:

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

The major components in the Open Access Station are:

- The HEPA filters
- The impellers and motor/blower to force air through the unit
- A speed controls for the impellers and motor
- Station air intakes (grilles)

HEPA Filters

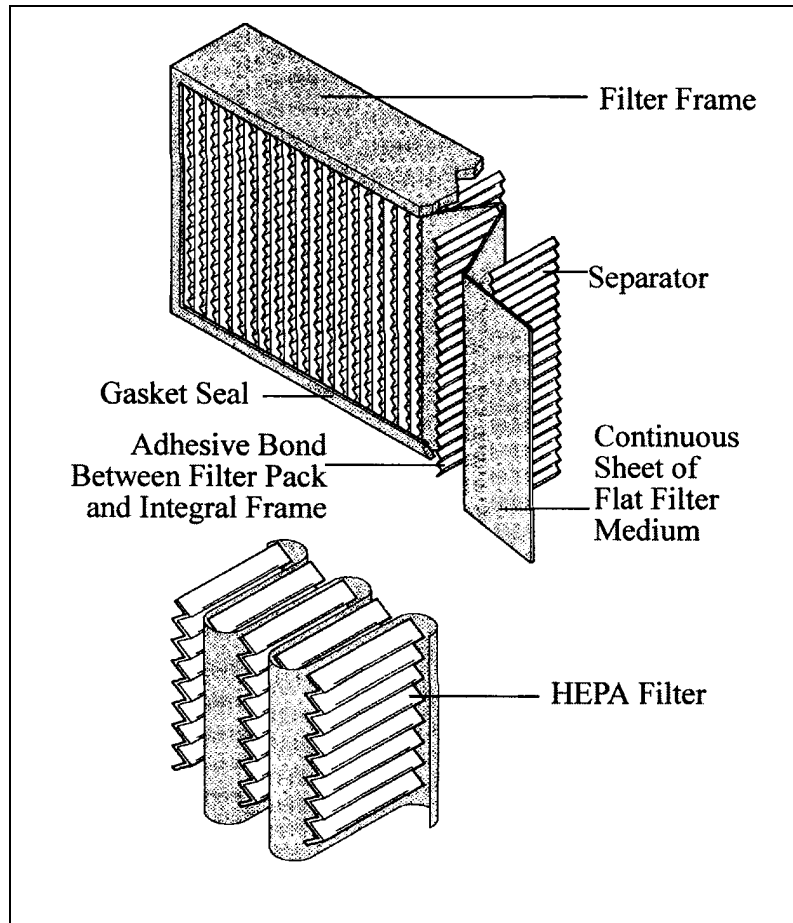
HEPA filters are disposable, dry-type particulate filters. The filter material or media is typically made of borosilicate microfibers that are made into a thin sheet, in a process similar to the production of paper. This sheet is folded, or pleated to increase its surface area. The pleats are held in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



The HEPA filter media is very fragile. Do not touch or contact the media surface. If you think the surface of a HEPA filter is damaged, DO NOT USE THE STATION. Have the HEPA filter integrity tested by a qualified certifier before using the station.

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

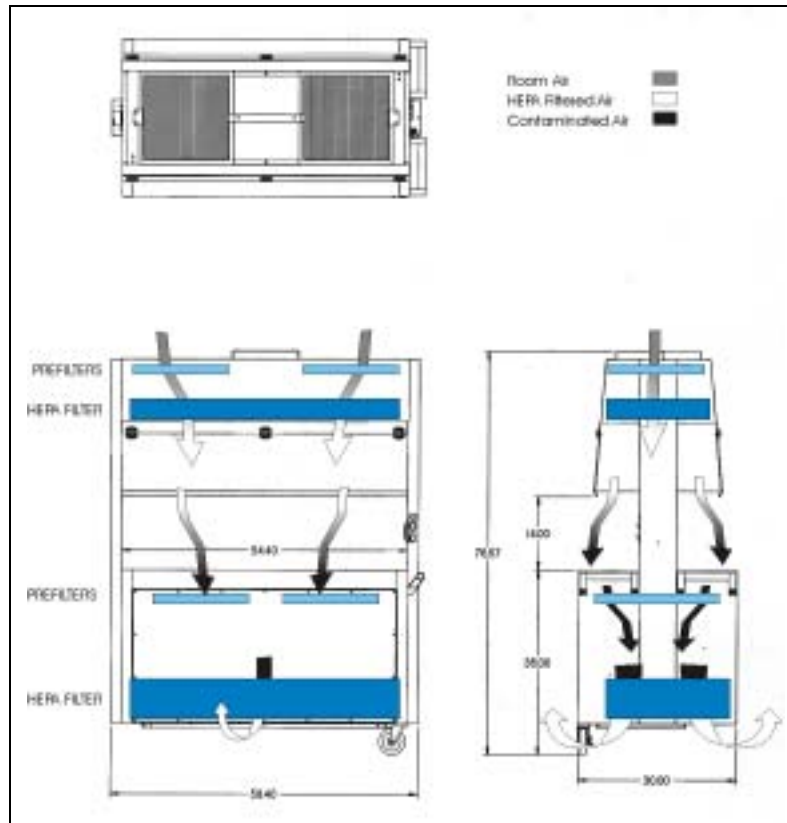
Figure 4-1



Directional Airflow

Directional airflow plays a key role in the Open Access Station's performance. Sterile, HEPA filtered air flows downward throughout the work area, protecting the animals inside from external and cross contamination. All of this "supply" air and some room air is drawn into both sides of the station at the grilles. These "curtains" of air make it difficult for aerosols to escape out of the work area and into the outside environment.

Figure 4-2



Impellers and Motor/Blower

The Open Access Station uses two air handling systems to direct air through it. In the top of the station twin motorized impellers draw room air in through prefilters, and then force the air through the upper (supply) HEPA filter. Below the worksurface there are another set of prefilters, a heavy duty motor blower and the exhaust HEPA filter.

Speed Controls



The speed controls should only be adjusted by a qualified certifier.

The speed controls are electronic circuits that allow the certifier to set the speed of the motors by adjusting their voltage. The PuriCare speed controls are rated for 10 Amps current each, far in excess of the motor's normal current draw, to allow for greater reliability.

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

The station's containment and performance are affected by the location, size, and pattern of the grilles at the front and rear of the work area.



Never block or obstruct the grilles of the PuriCare.

The internal ductwork of the PuriCare conveys the air from the work area to the blower, and then from the blower to the filters. The exhaust filter plenum of the PuriCare is unique in the industry, utilizing perfect manifold technology to deliver a more uniform airflow to the exhaust HEPA filter, optimizing filter loading and operational life.

Safety Precautions



The PuriCare Open Access Station is NOT a biosafety cabinet. Do not use this device for the containment of biohazardous, toxic, flammable, or explosive materials. If you have questions regarding the operation of this device, contact Labconco at 800-821-5525 or www.labconco.com.



When transporting over rough surfaces the station lift system must be in the lowest position.

HEPA filters are only effective for the entrapment of particulate matter. Manipulations which generate gases or vapors, i.e., toxic chemicals or radionuclides, should not be performed in this station.



The PuriCare Open Access Station should be certified by a qualified certification technician before its initial use. The station should be recertified whenever it is serviced or at least annually thereafter.

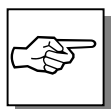


Some components of the PuriCare Open Access Station should only be serviced by a qualified certification technician. Some internal components of the PuriCare may become contaminated with allergenic materials during operation of the unit. Only experienced personnel competent in decontamination procedures should decontaminate the station before servicing contaminated components. If you have any questions regarding certification agencies, or need assistance in locating one, contact Labconco's Product Service Department at 800-522-7658 or 816-333-8811.

Ensure that the unit 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 PuriCare from electrical service.

Avoid the use of flammable gases or solvents in the PuriCare. 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 PuriCare. Open flames may disrupt the airflow patterns in the station, burn the HEPA filter and/or damage the filter's adhesive. Gases under high pressure should not be used in the PuriCare station, as they may disrupt the airflow patterns of the station.

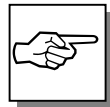
The surface of the HEPA filters are fragile and should not be touched. Care must be taken to avoid puncturing either HEPA filter during installation or normal operation. If you suspect that a HEPA filter has been damaged, DO NOT use the station; contact a local certification agency or Labconco at 800-821-5525 or 816-333-8811 for recertification information.



THE HEPA FILTERS IN THE PURICARE STATION WILL GRADUALLY ACCUMULATE AIRBORNE PARTICULATE MATTER FROM THE ROOM AND FROM WORK PERFORMED IN THE STATION. THE RATE OF ACCUMULATION WILL DEPEND UPON THE CLEANLINESS OF THE ROOM AIR, THE AMOUNT OF TIME THE STATION IS OPERATING AND THE NATURE OF WORK BEING DONE IN THE STATION.



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



WHEN SURFACE DISINFECTING THE PURICARE STATION:

- AVOID SPLASHING THE DISINFECTING SOLUTION ON SKIN OR CLOTHING.
- ENSURE ADEQUATE VENTILATION.
- CAREFULLY FOLLOW THE MANUFACTURER'S SAFETY INSTRUCTIONS WHEN HANDLING DISINFECTANTS AND ALWAYS DISPOSE OF DISINFECTING SOLUTIONS IN ACCORDANCE WITH LOCAL AND NATIONAL LAWS.

DO NOT ALLOW DISINFECTANTS WITH FREE CHLORINE TO CONTACT THE STAINLESS STEEL COMPONENTS OF THE PURICARE FOR A LONG PERIOD OF TIME. FREE CHLORINE WILL CORRODE STAINLESS STEEL AFTER EXTENDED CONTACT.



The electrical receptacle cover, because of its construction, may be difficult to surface decontaminate. In the event of gross contamination, the cover should be removed, sterilized and/or decontaminated as required and discarded. The receptacle cover should then be replaced with the repair part listed in *Appendix A: PuriCare Components*.

Your Next Step

After you understand the theory of operation and safety precautions, you are ready to proceed to *Chapter 5: Using Your PuriCare*.

CHAPTER 5

USING YOUR PURICARE

Operating the Sashes

Because of the PuriCare's spring loaded, self-locking sash mechanisms, it will take only a few pounds of force to lift the sashes up or down, and you can lock either of the sashes in the fully open position.

1. To start the PuriCare, close both sashes completely.



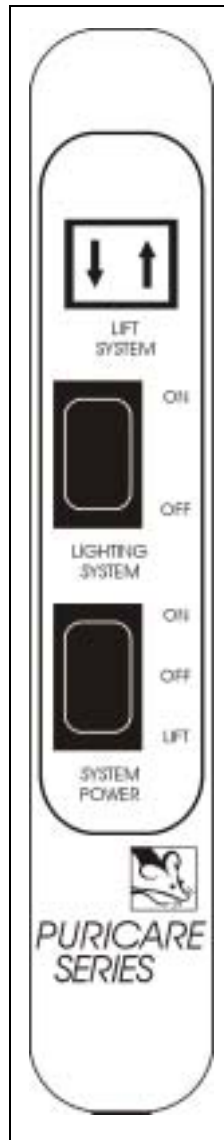
Both sashes must be completely closed for the PuriCare to contain properly.

2. Turn the blower and light switches to the 'On' position, as shown in Figure 5-1.
3. Depress the system lift switch as shown in Figure 5-1 to either raise or lower the Open Access Station until it is at an appropriate height. When adjusted properly the grille should be at the operator's beltline.



THE LIFT SYSTEM WILL ONLY OPERATE WHEN THE SYSTEM POWER SWITCH IS "ON."

Figure 5-1



Using the Electric Lift System



During operation, the electric lift system may cause a slight vibration in the station. This is normal and does not impact the operation of the unit.



The lift system is designed for intermittent operation only. Continuous operation of the lift system for more than one out of each 10-minute interval may cause the lift system's thermal override to activate. If this occurs, allow the lift system to cool for at least 10 minutes and then adjust the height.

To raise the station, press and hold the “UP” arrow of the LIFT SYSTEM Switch. Keep the switch depressed until the front edge of the air intake is even with the operator's beltline.

To lower the station, press and hold the “DOWN” arrow of the LIFT SYSTEM Switch. Keep the switch depressed until the front edge of the air intake is even with the operator's beltline.

Using the Retractable Power Cord

115V



The retractable power cord is equipped with a safety brake, to prevent the rapid retraction of the cord if released. In order to release the brake, pull the cord out until the ratcheting sound stops, then hold the cord horizontally to guide it back into the station.

The 26-foot long cord is housed in a retractable housing located in the top of the unit. To retract the cord, pull it slowly out of the station. To “set” the cord at a specific length, slowly pull on the cord until a ratcheting sound is heard. This means the cord will stay at this length when released.

To retract the cord, grasp the cord near the station, and slowly pull it out until the ratcheting sound stops. Holding the cord horizontally, guide the cord back into the station.

Working In Your PuriCare

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 station is in use.

Start-up

- Turn on fluorescent light and station blower.
- Adjust the height of the station by depressing the “lift system” switch until the grille is at the operator’s beltline.
- Check the return air grilles for obstructions, and note the pressure gauge reading.
- Allow the station 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

- Pivot the sashes to their full open position.
- Wipe down the interior surfaces of the station with 70% ethanol, or a suitable disinfectant, and allow to dry.
- Slowly close the sashes.

Loading Materials and Equipment

- Only load the materials required for the procedure. Do not overload the station.
- Do not obstruct the grilles on the front, back or side so the work area.
- Large objects should not be placed close together.

Work Techniques

- Keep all materials at least 4 inches inside of the sash, and perform all contaminated operations as close to the center 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 one zone work area.
- Avoid the use of an open flame.
- Use proper aseptic technique.
- Avoid using techniques or procedures that disrupt the airflow patterns of the station.
- If there is a spill or splatter during use, all objects in the station should be surface decontaminated before removal. Thoroughly disinfect the working area of the station WHILE IT IS STILL IN OPERATION. This will prevent the release of contaminants from the station.

Final Purging

- Upon completion of work, the station 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 station.
- All open trays or containers should be covered before being removed from the station.

Wipe-Down

- Wipe down the interior surfaces of the station with 70% ethanol, or a suitable disinfectant, and allow to dry.
- Periodically lift the work surface and wipe down the area beneath it.
- Inspect the prefilters located beneath the work surface, beneath the work pan. Replace them if necessary.

- Dispose of rubber gloves appropriately, and have lab coat laundered properly.
- Wash hands and arms thoroughly with germicidal soap.

Shutdown

- Lower the station to its lowest position, turn off the fluorescent light and station blower, close the sashes.

Your Next Step

After you understand how to operate and work in the Open Access Station, you are ready to proceed to *Chapter 6: Maintaining Your PuriCare*.

CHAPTER 6

MAINTAINING YOUR PURICARE

Now that you have an understanding of how to work in the Open Access Station, we will review the suggested maintenance schedule and the common service operations necessary to maintain your PuriCare for peak performance.



Many of the service operations should be performed only by trained and experienced certification technicians after the station has been properly decontaminated. DO NOT attempt to perform these operations if you are not properly trained. The service operations that require qualified certifiers are preceded by the wrench icon.

Routine Maintenance Schedule

Weekly

- Using 70% ethanol, or a suitable disinfectant, surface disinfect the inside of the station, and the work surface.

- Using an appropriate optical plastic cleaner and cloth, clean the sash.
- Operate the station blowers, noting the pressure readings in an operational log.
- Lift the work surface and inspect the prefilters.

Monthly (or more often as required)

- Using a damp cloth, clean the exterior surfaces of the station, particularly the front, back and top of the unit, 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 prefilters for retained materials.
- Replace the prefilters as needed.
- All weekly activities.

Annually

- Have the station recertified by a qualified certification technician.
- All monthly activities.

Biannually

- Replace the fluorescent lamps.

Service Operations

Work Surface Removal:

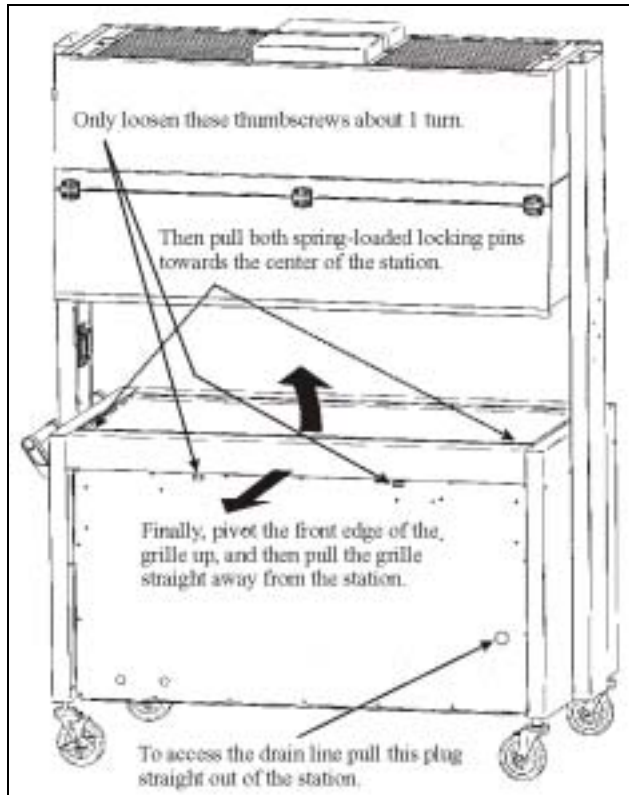
1. Lift the front edge of the work surface up and pull it out of the station work area.

Grille Removal:

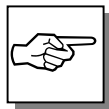
1. Remove the work surface as described earlier.
2. *Only loosen* the two black thumbscrews under the grille, as shown in Figure 6-1.
3. Locate the two spring-loaded locking pins located underneath the front corners of the grille.
4. Simultaneously pull both pins towards the center of the grille and then pivot the front edge of the grille up approximately $\frac{1}{4}$ of an inch. Release the locking pins.

5. Grasp the grille and pull it straight away from the station.
6. To install the grille, reverse the above steps.

Figure 6-1



Drain System



THE PURICARE STATION HAS A DRAIN LOCATED IN THE CATCH PAN UNDER EACH GRILLE. THESE DRAINS ARE CONNECTED TO A SINGLE DRAIN LINE.

Accessing the Drain Line:

1. Locate the drain line plug located on the rear panel of the station, as shown in Figure 6-1.
2. Pull the plug straight out of the panel. The plug will remain in the drain line.
3. Placing the drain line over an appropriate container, pull the drain plug out of the line.

4. When the drainage is complete, reinstall the plug into the drain line and press the drain plug back into the rear panel.

Prefilter Removal:

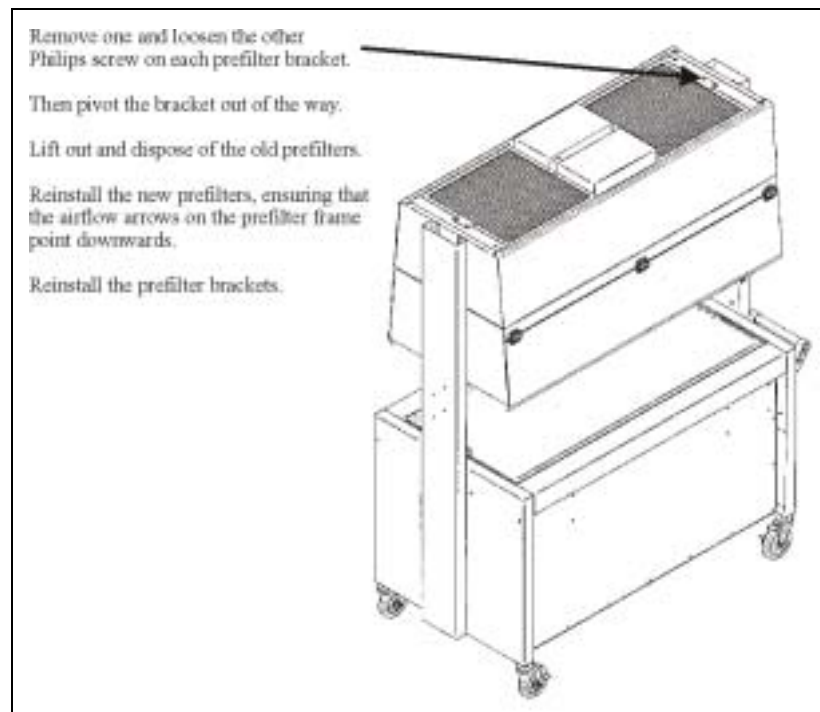


The prefilters may be contaminated with allergenic material. Take appropriate precautions when removing and handling the prefilters to prevent exposure. The prefilters are disposable and cannot be cleaned.

Upper Prefilter Removal:

1. Remove one and loosen the other Phillips screws that secure the two upper prefilter brackets as shown in Figure 6-2.
2. Swing the upper prefilter brackets until the prefilters can be lifted out of the top of the units.
3. Replace the prefilter elements, ensuring the air flow direction arrow on the prefilter frame points down.

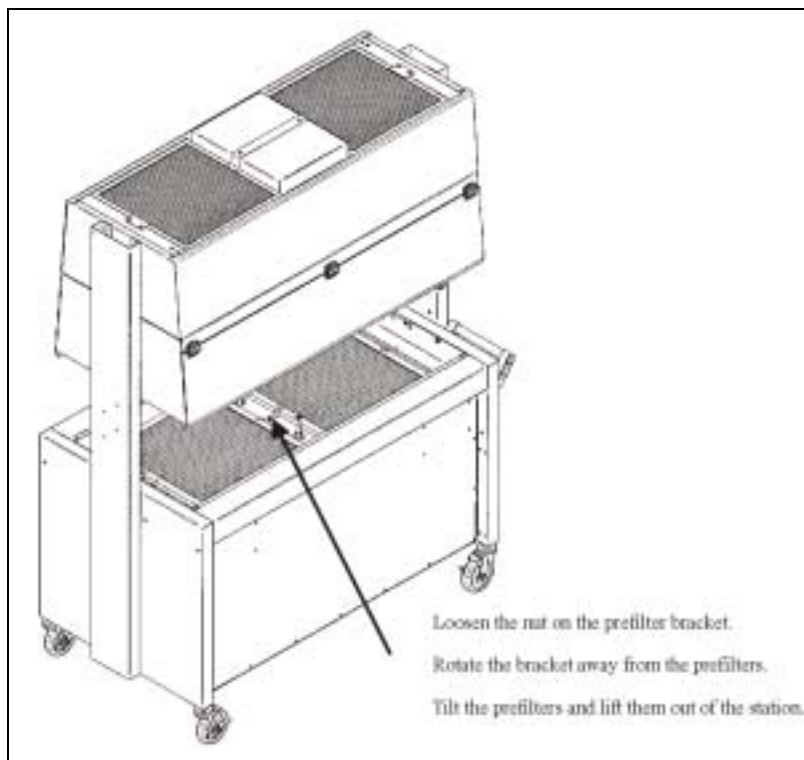
Figure 6-2



Lower Prefilter Removal:

1. Remove the work surface as described earlier.
2. Only loosen the lower prefilter brackets as shown in Figure 6-3.
3. Swing the lower prefilter brackets until the prefilters can be lifted out of the unit.
4. Replace the prefilter elements, ensuring the air flow direction arrow on the prefilter frame points down.

Figure 6-3



Changing the Fluorescent Lamps:

1. Unplug the station.
2. Swing up both sashes.
3. Remove the fluorescent lamps by rotating them 90 degrees and pulling them straight down and out of their sockets.
3. Install the new lamps by reversing the removal procedure.

Resetting a Circuit Breaker:

To reset any of the circuit breakers located on the top of the unit near the power cord outlet, depress the white button until it sets.



The service operations listed in the rest of this chapter should only be performed by a qualified certifier.



Downflow Velocities

The average downflow velocity for all Open Access Stations should be set at 55 ± 5 FPM.

Downflow Velocity Grid Patterns

The downflow velocity test grid for all Open Access Stations is as follows:

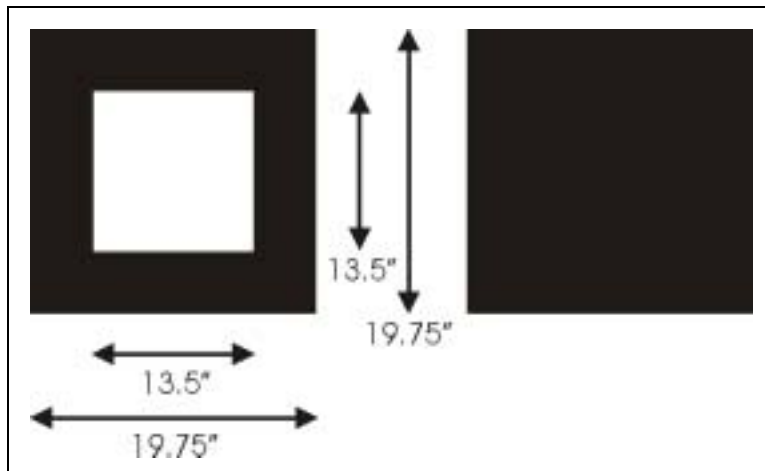
The downflow test pattern is a grid of three rows of 8 test points per row, yielding a total of 24 test points. A line running from side to side at the center of the work surface and two additional lines 6.00 inches on either side of the centerline define the rows. Individual test points on each row are 6.00 inches in from the vertical uprights on both sides, and 6.07 inches apart from point to point. All points are read at the bottom edge of the sash.

Inflow Volume Calculation - Primary Method

The Inflow Volume can be measured directly, using a Direct Inflow Measurement (DIM) meter, using the following method:

1. Turn the station off and raise the sashes.
2. Remove the work surface and the lower prefilters as described earlier.
3. Using rigid cardboard, or fiberboard, cut two patterns as shown in Figure 6-4.
4. Place the solid pattern over the prefilter hole on the right side (when facing the control switches). Seal the pattern to the prefilter shelf with duct tape if necessary.
5. Place the pattern with the hole over the other prefilter hole. Seal the pattern to the prefilter shelf if necessary.
6. Place the DIM upside down over the hole in the second pattern. Seal the DIM to the pattern with duct tape if necessary.
7. Start the Station and let it run for at least two minutes. Turn on the DIM and take at least 10 readings of the inflow volume. Average the readings.
8. The average inflow volume, corrected for local conditions, should be 750-770 CFM.

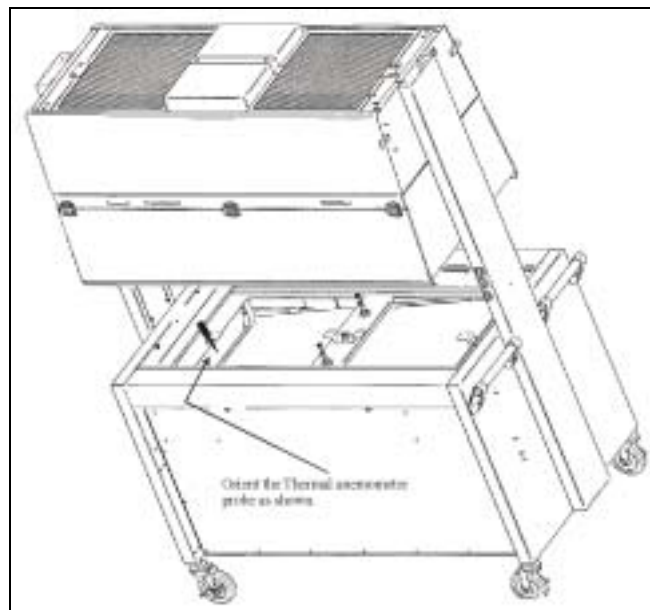
Figure 6-4



Inflow Volume Calculation - Secondary Method

1. Turn the station off and raise the sashes.
2. Remove the work surface and the lower prefilterers as described earlier.
3. If the thermal anemometer has a time coefficient, set it at 5 to 10 seconds.
4. Orient the thermal anemometer probe so that it points downward and place the body of the probe against the front of the prefilter retaining bracket. The sensor element of the probe should be positioned in the middle of the opening between the flat and angled pans (1 $\frac{3}{4}$ inch below the flat pan and oriented so that the air will flow directly towards the left side of the unit as shown in Figure 6-5).
5. Take 10 sequential readings and multiply the average by the correction factor of 1.12. this will yield the inflow volume in CFM.
6. The average inflow volume, corrected for local conditions, should be 750-770 CFM.

Figure 6-5



Speed Control Adjustments



The Open Access Station blower speeds should only be adjusted by a qualified certification technician. Adjustment of the impeller and/or blower speeds will affect the containment of the unit.



The Open Access Station uses two independent speed controls to control the upper impellers (Supply Air) and the lower Motor/Blower (Exhaust Air)

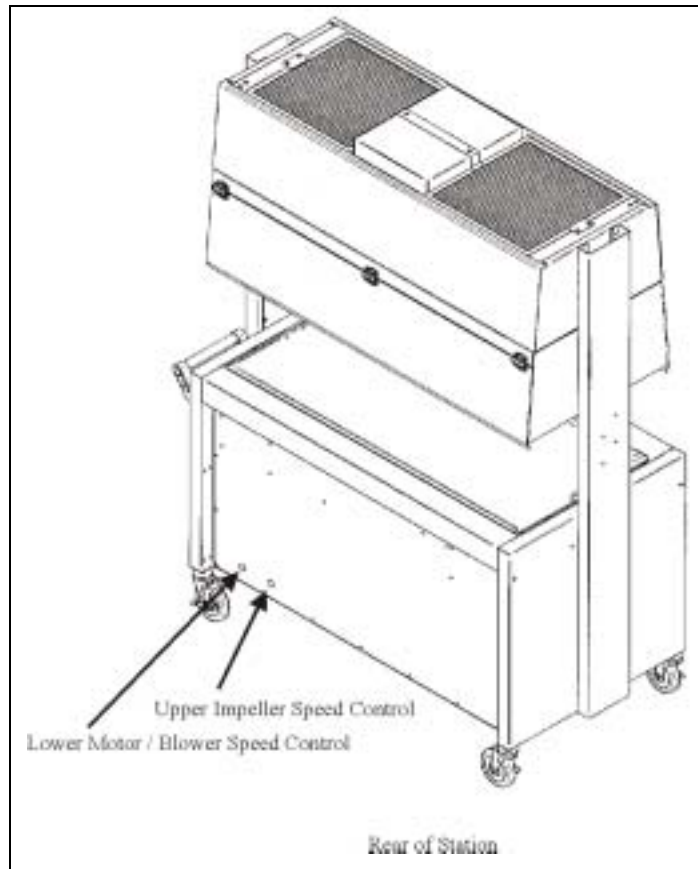
1. Locate the two plugged speed control access holes located on the lower rear panel as shown in Figure 6-6.
2. Gently pry out the chrome plugs to gain access to the speed control adjustment screws. The screw on the left side controls the lower Motor/Blower, the one on the right controls the upper impellers.
3. Turn the screw(s) counterclockwise to increase the speed, clockwise to decrease it.



Turning the speed control adjustment screw all the way counterclockwise will shut the speed control circuit off and the motor(s) will stop. If this occurs, turn the screw clockwise until the motor(s) start running again.

4. After adjusting the appropriate speed control, measure the downflow velocities or Inflow Volume as needed.

Figure 6-6



Front Panel Removal:



1. Unplug the station.
2. Remove the two upper prefilters as described earlier in this chapter.
3. Remove the two screws that secure the upper front panel as shown in Figure 6-7.
4. Remove the screw that secures the cord reel cover to the front dress panel.
5. Carefully swing the front dress panel forward, letting the cord reel cover rest on the upper plenum.

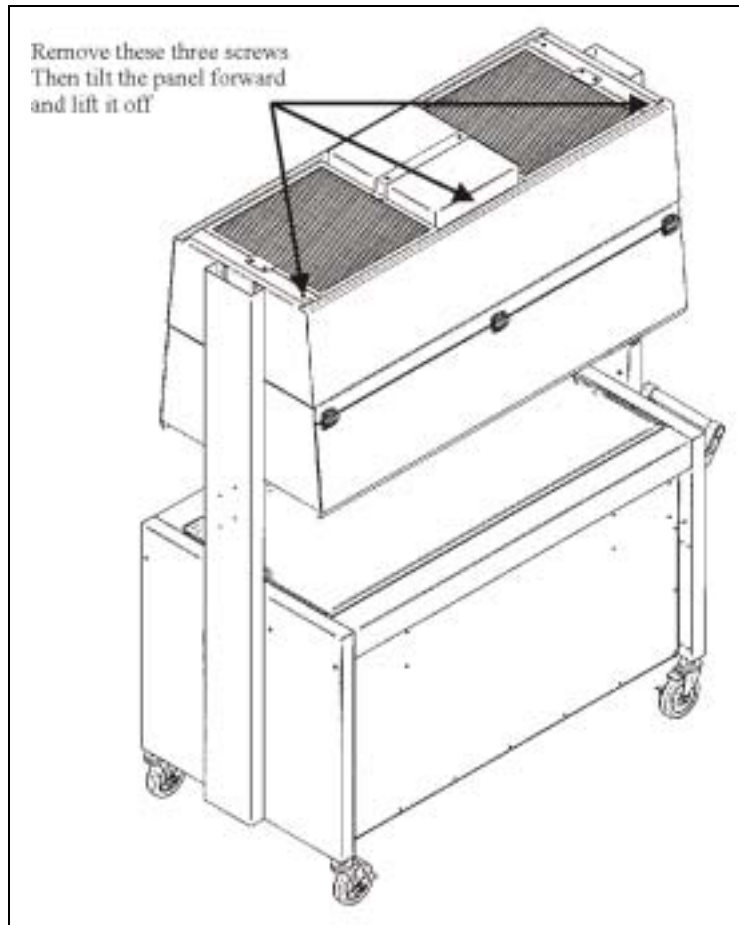
Supply HEPA Filter Replacement



The HEPA filters should only be serviced by a qualified certification technician. Following replacement of a HEPA filter, the station MUST be recertified by a qualified certification technician.

1. Unplug the station.
2. Remove the two upper prefilters as described earlier in this chapter.
3. Remove the two screws that secure the upper front panel as shown in Figure 6-7.
4. Remove the screw that secures the cord reel cover to the front dress panel.
5. Carefully swing the front dress panel forward, letting the cord reel cover rest on the upper plenum.
6. Locate the four locking bolts that secure the upper plenum. They are located in each corner of the plenum, and they thread through the upper bracket and down onto the top of the plenum. Loosen each bolt at least $\frac{1}{2}$ inch.
7. Locate the four plenum lift bolts that raise the upper plenum. They are located in each corner of the plenum, next to the locking bolts, and they thread into the top of the plenum. Tighten each bolt until there is approximately $\frac{1}{4}$ inch clearance between the top of the HEPA filter and the bottom of the plenum.
8. Slide the Supply HEPA filter straight out of the station.
9. Ensure the replacement HEPA filter matches the performance specifications of the original filter, in particular the efficiency and the flow rate at a given pressure drop.
10. Install the replacement HEPA filter by reversing the disassembly steps.
11. Plug in the station and have it recertified before use.

Figure 6-7

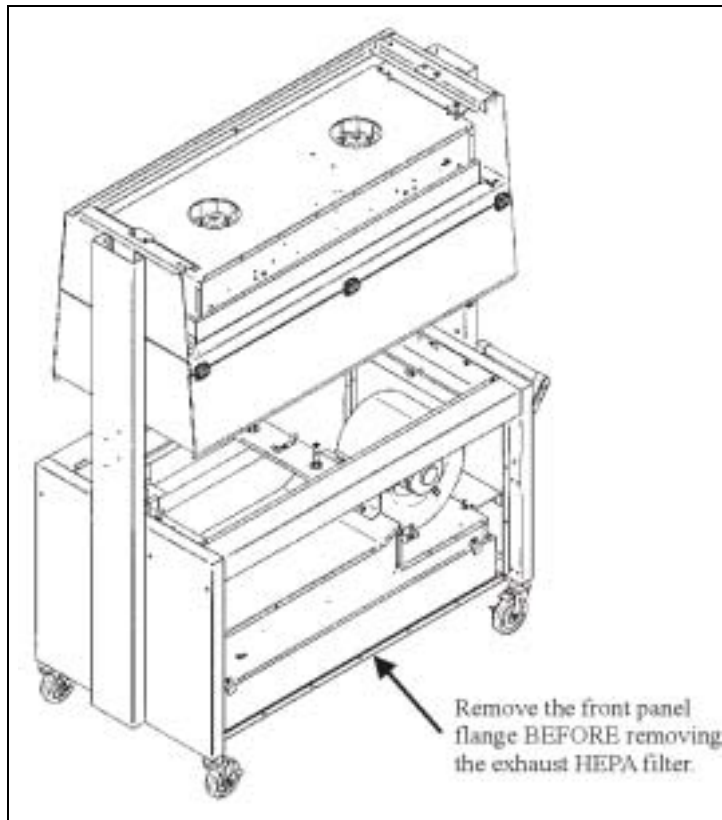


To Remove the Exhaust HEPA Filter:



The exhaust HEPA filter is awkward to handle and heavy. Use appropriate lifting techniques to remove and handle it. Use two people to remove the filter if possible.

Figure 6-8



Exhaust HEPA Filter Replacement

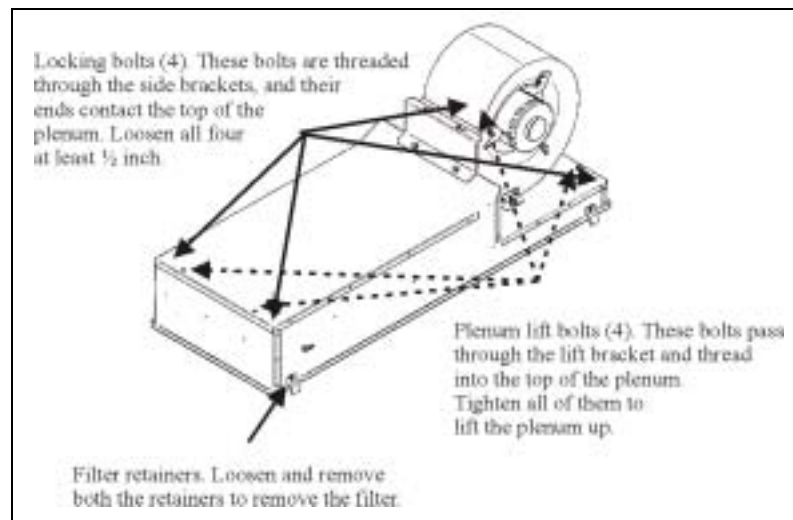


Ensure that the station is in its lowest position before removing the Exhaust HEPA Filter.

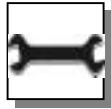
1. Lower the unit to its lowest position and then unplug it.
2. Remove the lower front panel by removing the #2 Phillips screws on the perimeter of the panel.
3. Remove the work surface and two lower prefilters as described earlier in this chapter.
4. Remove the front panel flange as shown in Figure 6-8.

5. Locate the four locking bolts that secure the lower plenum. They are located in each corner of the plenum and they thread through the lower bracket and down onto the top of the plenum, as shown in Figure 6-9. Loosen each bolt at least $\frac{1}{2}$ inch.
6. Locate the four plenum lift bolts that raise the lower plenum. They are located in each corner of the plenum, next to the locking bolts and they thread into the top of the plenum. Tighten each bolt until there is approximately $\frac{1}{4}$ inch clearance between the top of the HEPA filter and the bottom of the plenum.
7. Remove the two filter retainers and then slide the Exhaust HEPA filter straight out of the station.
8. Ensure the replacement HEPA filter matches the performance specifications of the original filter, in particular the efficiency and the flow rate at a given pressure drop.
9. Install the replacement HEPA filter by reversing the disassembly steps.
10. Plug in the station and have it recertified before use.

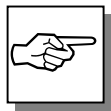
Figure 6-9



Impeller and Motor/Blower Maintenance and Replacement



The motor/blower should be serviced by a qualified certification technician.



The stations blower motor and impeller bearings are sealed and require no lubrication. DO NOT attempt to lubricate them.

To replace an Impeller:

1. Unplug the unit.
2. Remove the two upper prefilters as described earlier in this chapter.
3. Remove the two screws that secure the upper front panel as shown in Figure 6-7.
4. Remove the screw that secures the cord reel cover to the front dress panel.
5. Carefully swing the upper front dress panel forward, letting the cord reel cover rest on the upper plenum. Repeat the procedure for the rear dress panel.
6. Locate the four locking bolts that secure the upper plenum. They are located in each corner of the plenum, and they thread through the upper bracket and down onto the top of the plenum. Loosen each bolt as far as it will go.
7. Locate the four plenum lift bolts that raise the upper plenum. They are located in corner of the plenum next to the locking bolts, and they thread into the top of the plenum. Tighten each bolt until the top of the plenum contacts the lift brackets.
8. Slide the Supply HEPA filter straight out of the station.
9. Disconnect the wiring for the impeller to be replaced.

10. Remove the four ¼ inch bolts and nuts that secure the impeller bracket to the plenum. Remove the impeller/bracket assembly.
11. Remove the impeller from the bracket by removing the four 5 mm screws that secure the impeller to the bracket.
12. Install the new impeller by reversing the disassembly steps.

To replace the Lower Motor/Blower:

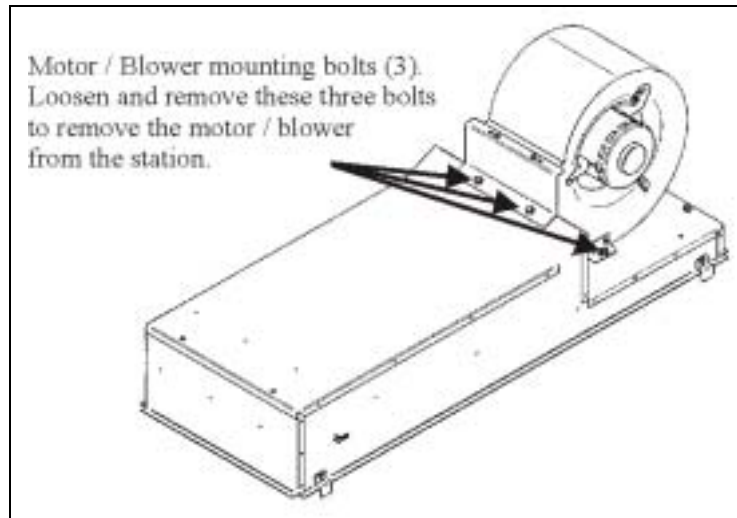
1. Unplug the station.
2. Remove the lower front panel.
3. Using a screwdriver, disconnect the motor ground wire from the blower housing.
4. Disconnect the motor leads from the wiring harness by pulling apart each of the 4 connectors.
5. Using a 1/2-inch wrench, remove the two upper and one lower blower mounting bolts, as shown in Figure 6-10.



**The motor/blower assembly is heavy.
Handle with care.**

6. Pull the assembly straight out the plenum.
7. To replace the motor/blower assembly, reverse the above procedure. Before installing the blower chamber cover, ensure that the motor rotates in the correct direction when turned on.
8. Plug in the station and have it recertified before use.

Figure 6-10



Diffuser Removal



Bending or distorting the diffuser may affect the airflow in the station. Use care when handling it.

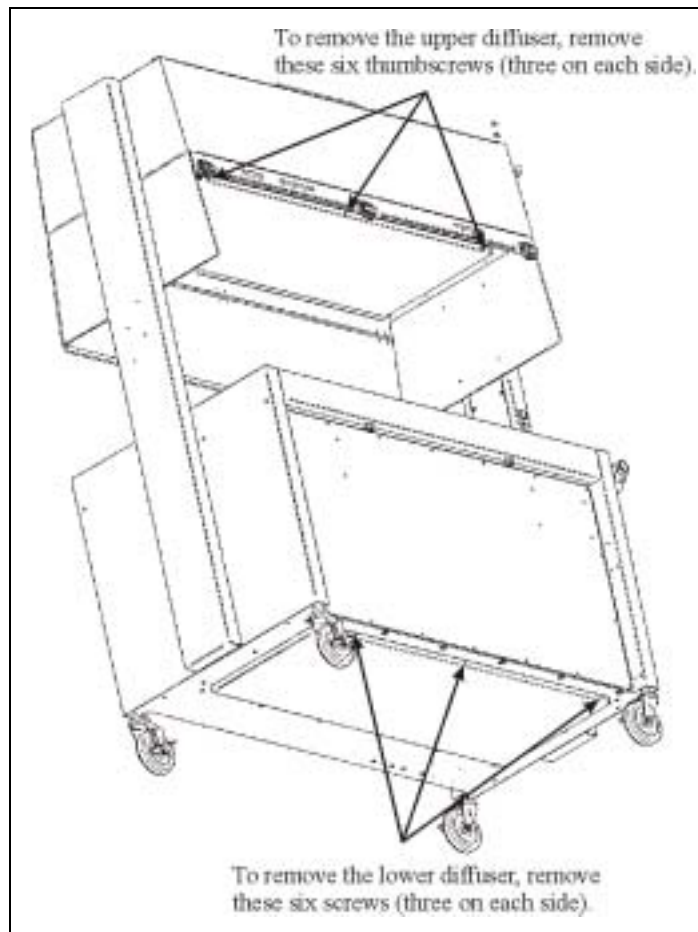
Upper Diffuser Removal

1. Swing both sashes up until they are in their locked position.
2. Remove both fluorescent lamps, as described earlier.
3. Locate and remove the six screws that secure the upper diffuser to the station as shown in Figure 6-11, starting with the corner screws. Support the diffuser when removing the last two center screws and lower the diffuser straight down.

Lower Diffuser Removal

1. Raise the station to its maximum height.
2. Locate and remove the six screws that secure the lower diffuser to the station as shown in Figure 6-11, starting with the corner screws. Support the diffuser when removing the last two center screws and lower the diffuser straight down.

Figure 6-11



Storage

If the PuriCare is to be left unused for more than one month, the unit should be prepared for storage.



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

1. Lower the sashes completely and seal work area, the bottom edge and the exhaust outlet with plastic sheeting.
2. Unplug the unit.
3. Ensure that the station will not be moved or disturbed while in storage.

Your Next Step

After you understand the maintenance procedures, you are ready to proceed to *Chapter 7: Modifying Your Open Access Station*.

CHAPTER 7

MODIFYING YOUR OPEN ACCESS STATION

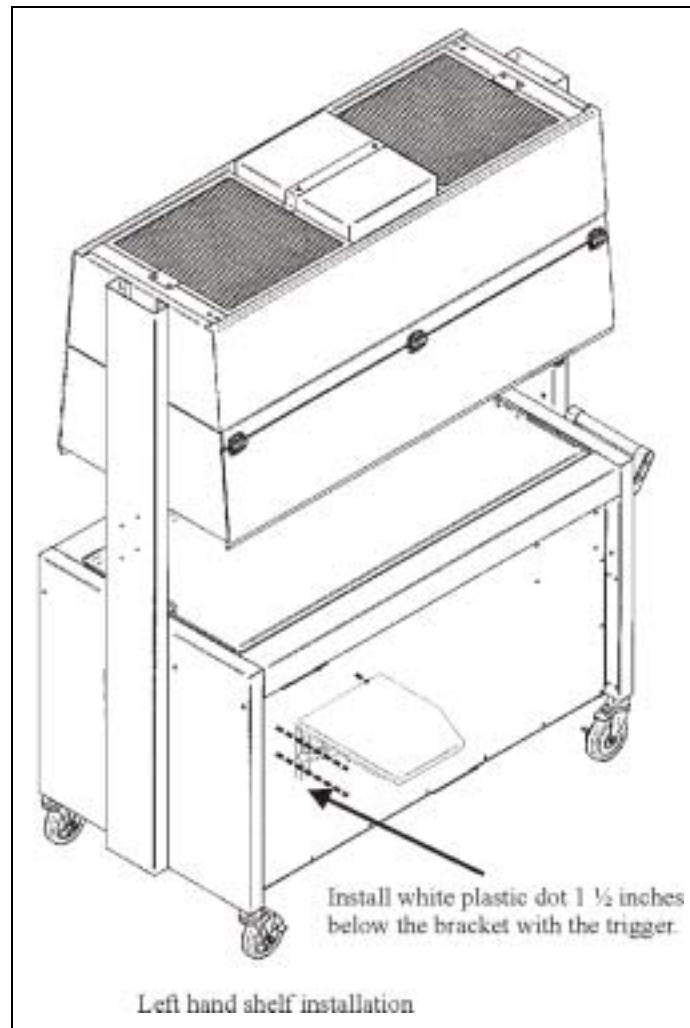
There are several ways to modify your PuriCare for your individual requirements. One of these includes the addition of a shelf.

Installing a Shelf

1. Ensure that the shelf kit you have is the proper one. Kits for mounting on the operator's left side are #3794900. Kits for mounting the shelf on the operator's right side are #3794901.
2. Remove the four plastic plugs on the appropriate side of the lower panel, as shown in figure 7-1.
3. Lower the shelf brackets on the shelf and align them with the holes in the panel.
4. Secure the shelf to the panel using the four screws included in the shelf kit.
5. Identify which bracket has the trigger to release the shelf from its upright position. Remove the adhesive backing of the white plastic dot included in the shelf kit.

6. Place the dot on the lower panel, 1 ½ inches directly below the bottom of the bracket with the trigger. This will prevent the trigger from scratching the lower panel.

Figure 7-1

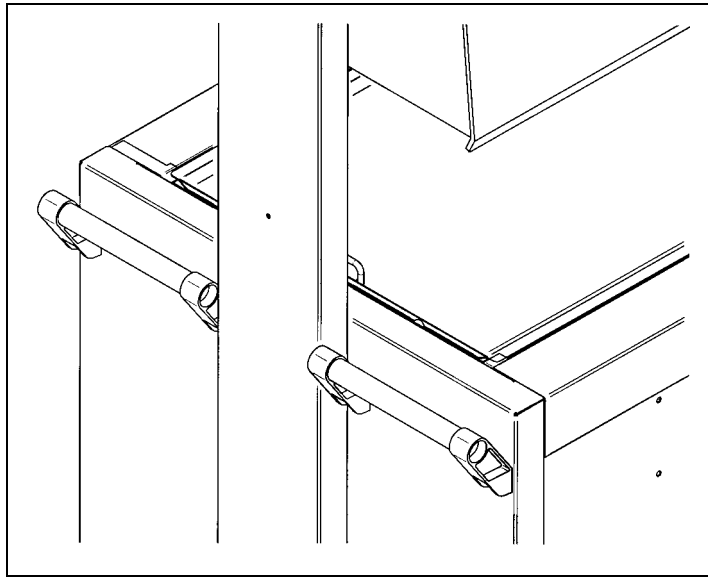


Installing the Handle Kit

1. Turn the PuriCare off.
2. Remove the work surface.
3. Locate and remove the four black plastic plugs on the side of the Open Access Station. The handle bolts will go through these holes. Remove the plastic plugs by pressing them out from the inside.

4. Assemble the handle by pushing two bolts through the holes on either side of the handle.
5. Thread on a lock nut on the end of each bolt. While holding the bolt head with a ½ inch wrench or socket, use another ½ inch wrench to tighten the nut. Ensure that all bolts are tightened securely.
6. Reinstall the work surface.

Figure 7-2



Your Next Step

After you understand the maintenance procedures, you are ready to proceed to *Chapter 8: Troubleshooting*.

CHAPTER 8

TROUBLESHOOTING

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

PROBLEM	CAUSE	CORRECTIVE ACTION
Station blower and lights won't turn on	Unit not plugged into outlet	Plug the PuriCare into appropriate electrical service.
	Circuit breakers tripped	Reset circuit breakers.
Blower(s) won't turn on but lights work	Blower(s) wiring is disconnected	Inspect blower(s) wiring.
	Blower(s) motor is defective	Replace blower(s) motor.
Station blower turns on but lights don't work	Lamp(s) not installed correctly	Inspect lamp installation.
	Lamp(s) is defective	Replace lamp(s).
	Lamp wiring is disconnected	Inspect lamp wiring.
	Defective lamp ballast	Replace lamp ballast.

PROBLEM	CAUSE	CORRECTIVE ACTION
Slight increase in pressure reading	HEPA filter loading	The pressure reading will steadily increase as the unit is used.
	Prefilter loading	Check the prefilters for obstruction(s). Clean if necessary.
	Blockage or restriction under the work surface	Ensure that the plenum beneath the work surface is unobstructed.
	Blockage of the exhaust outlet	Ensure that the exhaust outlet is not blocked or restricted.
Contamination of work in the station	Improper technique or procedure for the Open Access Station	See “Use of the Open Access Station” section in the manual.
	Restriction of the grille – blockage of the exhaust outlet	Ensure that all return air slots, grilles and the exhaust outlet are unobstructed.
	External factors are disrupting the station’s airflow patterns or acting as a source of contamination	See “Installation” section of this manual.
	Station is out of adjustment/HEPA filter(s) are defective	Have station recertified.

APPENDIX A

PURICARE

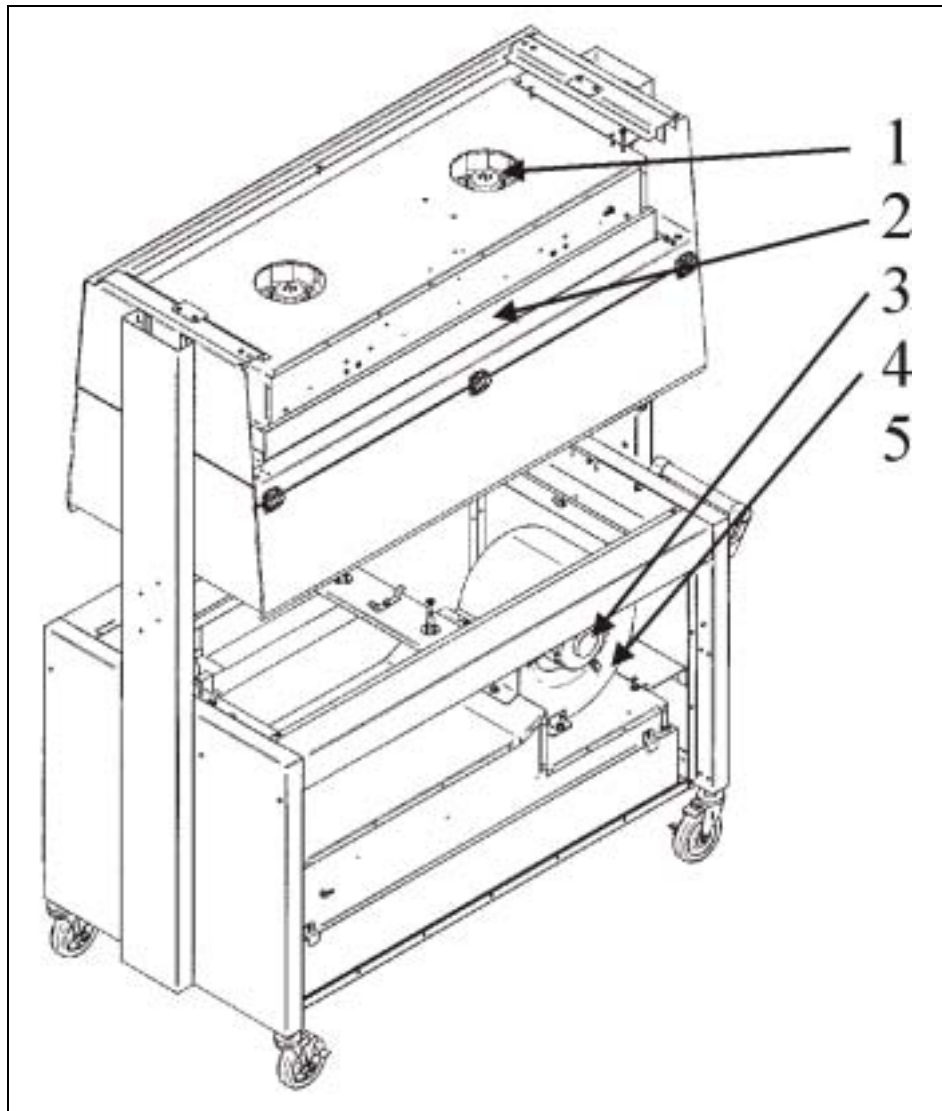
COMPONENTS

Illustration A-1 indicates the location of the following service parts:

PuriCare Replacement Parts

Item	Quantity	Part No.	Description
1	2	3717400	Impeller, 115 Volt
1A	2	3717500	Impeller, 230 Volt
2	1	3803100	Supply HEPA Filter
3	1	1211200	Motor, 115 VAC 4-foot
3A	1	1210502	Motor, 230 VAC 4-foot
4	1	3731101	Motor/Blower Assembly, 115 VAC 4-foot
4A	1	3751901	Motor/Blower Assembly, 230 VAC 4-foot
5	1	3759600	Exhaust HEPA Filter
6	2	3768900	Prefilter, Upper (not shown)
7	2	3789300	Prefilter, Lower (not shown)
8	2	9721900	Lamp, Fluorescent (not shown)
9	2	1287900	Receptacle Cover (not shown)

A-1

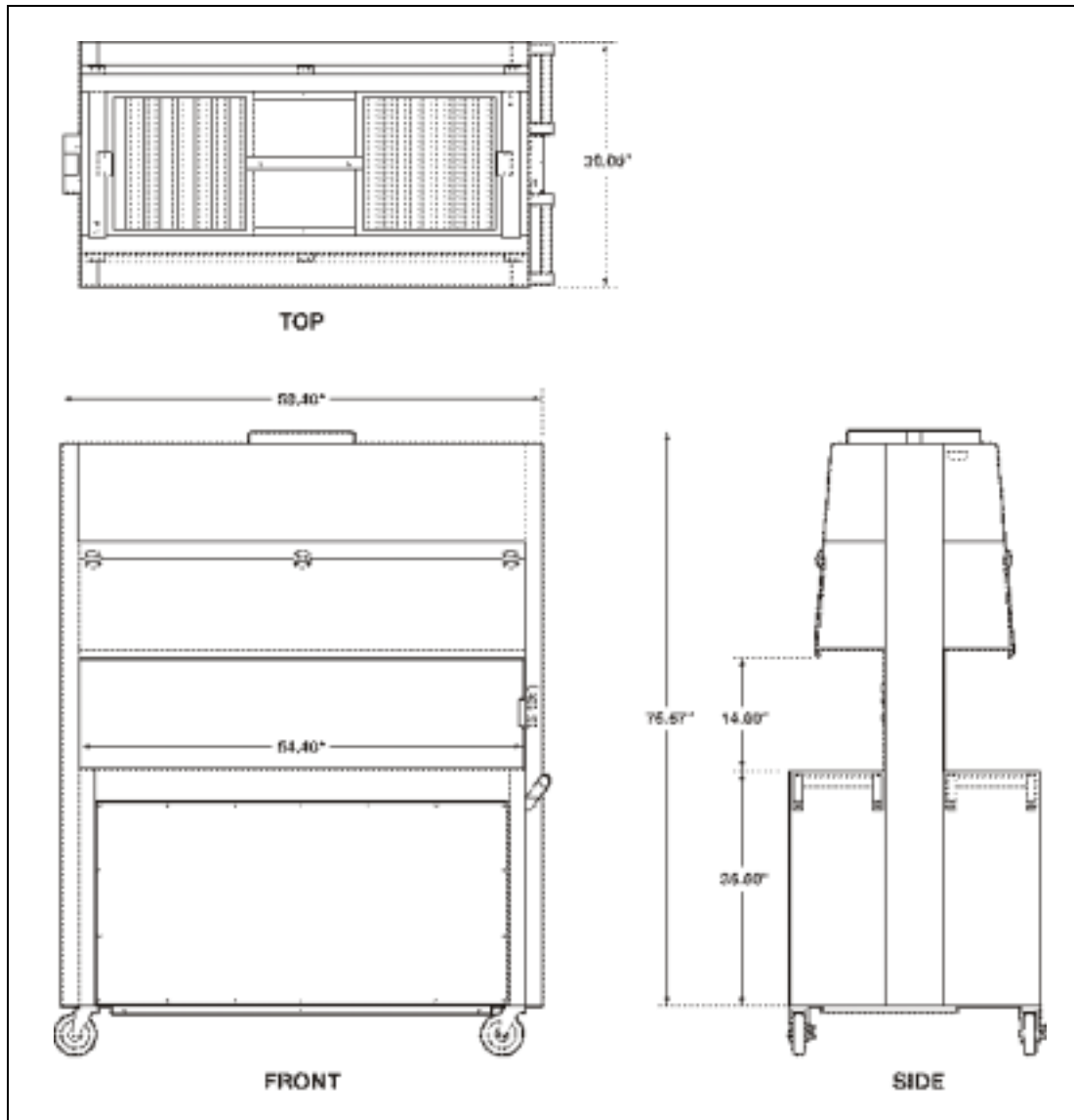


APPENDIX B

OPEN ACCESS

STATION DIMENSIONS

B-1



APPENDIX C

OPEN ACCESS

STATION

SPECIFICATIONS

Electrical Data

Station Model	Electrical Requirements
3820000 to -09	115 VAC – 60 Hz, 1 Phase – 12 Amps

Station Model	Electrical Requirements
3820020 to -29	230 VAC – 50/60 Hz, 1 Phase – 7 Amps

Impeller Specifications

Station Model	Electrical Requirements
3820000 to -09	115 Volt – 60 Hz, 100 Watt, 2550 RPM Automatic Thermal Protection

Station Model	Electrical Requirements
3820020 to -29	230 Volt – 50/60 Hz, 100 Watt, 2550 RPM Automatic Thermal Protection

Motor Specifications

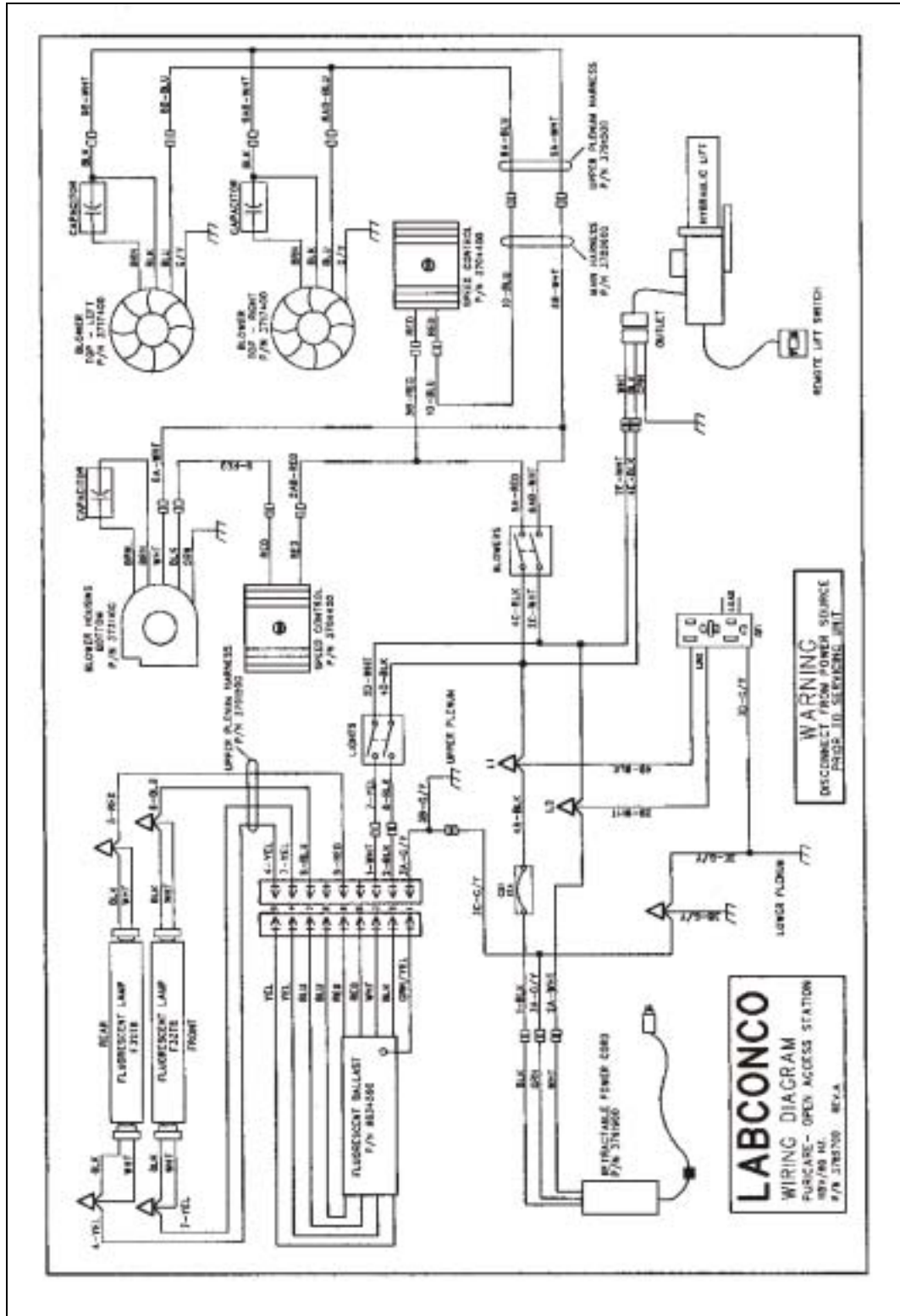
Station Model	Electrical Requirements
3820000 to -09	115 VAC – 60 Hz, 3.8 Full Load Amps 1/3 H.P. 1625 RPM Automatic Thermal Protection

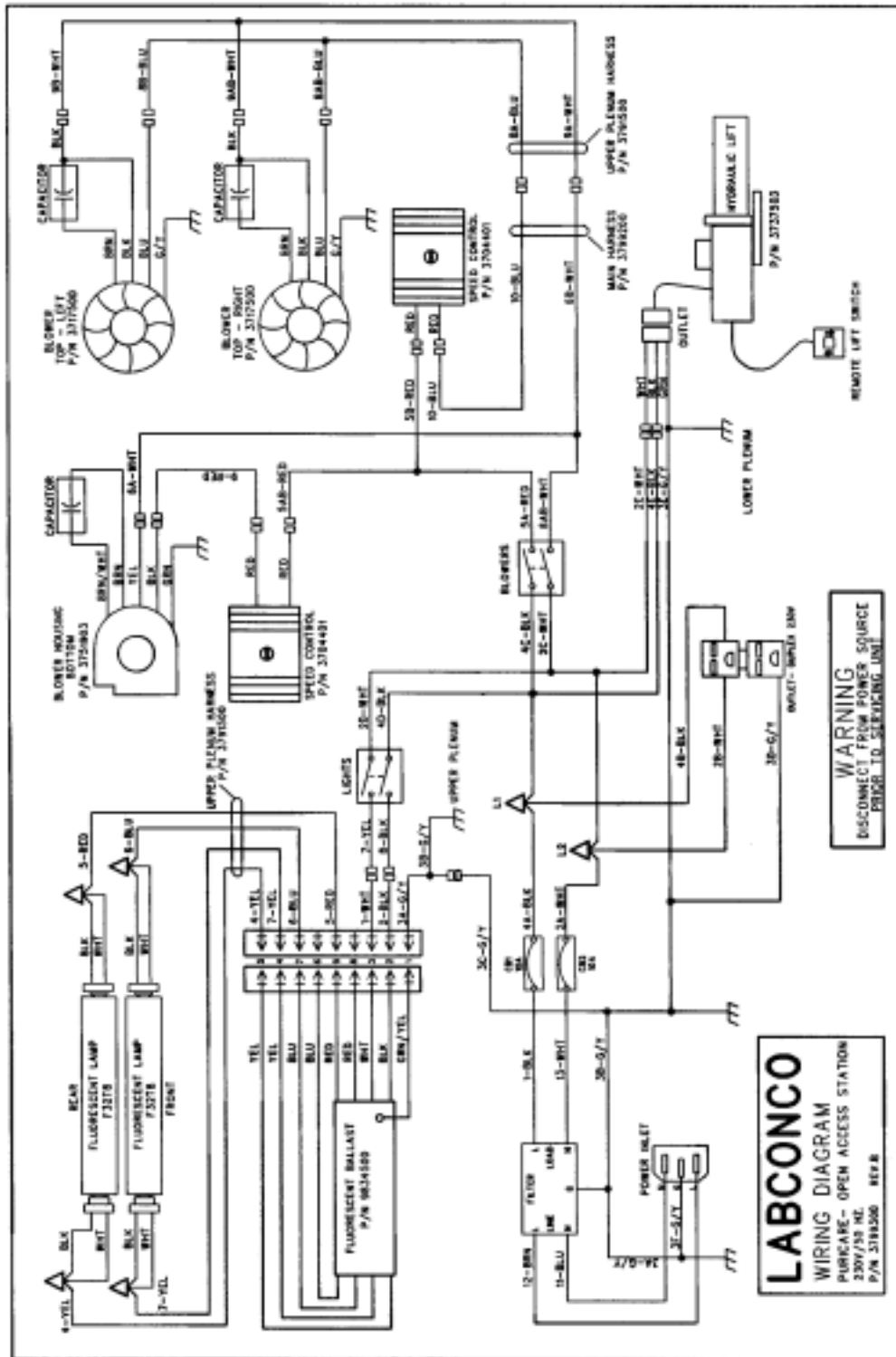
Station Model	Electrical Requirements
3820020 to -29	230 VAC – 50/60 Hz, 2.8 Full Load Amps 1/2 H.P. 1625 RPM Automatic Thermal Protection

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 ±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.

C-1





APPENDIX D

PURICARE

ACCESSORIES

Shelf Kit

Shelf kits are available for either the left side (part number 3794900) or the right side (part number 3794901). The shelves are suitable for mounting on either side of the station. The shelves have a capacity of 20 pounds, a trigger to release the shelf, and fold down flat when not in use.

Handle Kit

The Handle Kit (part number 3805000) allows for the installation of a second set of handle bars on the other side of the station.

APPENDIX E

QUICK CHART FOR

THE PURICARE

OPEN ACCESS

STATONS

Model	38200
Sash Height (inches)	14
Downflow (FPM)	50-60
Approximate Settings for new Filters	
Mag Gauge Reading	0.3-0.5
Supply Air Volume Displacement (CFM)	440
Number of Laskin Nozzles Needed	1
Exhaust Air Volume Displacement (CFM)	750-770
Number of Laskin Nozzles Needed	2
Supply HEPA Filter Dims. (in.)	48x18x3
Exhaust HEPA Filter Dims (in.)	48x18x6
Fluorescent Light(s)	2 each F32T8/TL741

*For further details on the secondary inflow method, consult the inflow velocity calculation – Secondary Method section of *Chapter 6: Maintaining Your PuriCare*.

Use the downflow velocity test grid as described in this manual when checking the downflow air velocity.

DECLARATION OF CONFORMITY

Application Council Directive(s): 73/23/EEC, 89/336/EEC

Standard(s) to which conformity is declared: EN61010, EN55022, EN50082-1

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 – PuriCare-Open Access Station

Model No:
3820020 4' Open Access HEPA Filtered PuriCare Enclosure.

Serial No.: Various – See Individual Declaration

Year of Manufacture: 2002 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)

*An individual version of this declaration is included with your shipping/customs documentation.

For more information, please contact us:

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[10700 Rockley Road](#)
[Houston, Texas 77099](#)
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[281-496-0900 \[voice\]](#)

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