

EXT CLASS 1 BIOHOOD

POLYPROPYLENE

Installation and Operations Manual



DFMZ
DESIGN FILTRATION MICROZONE

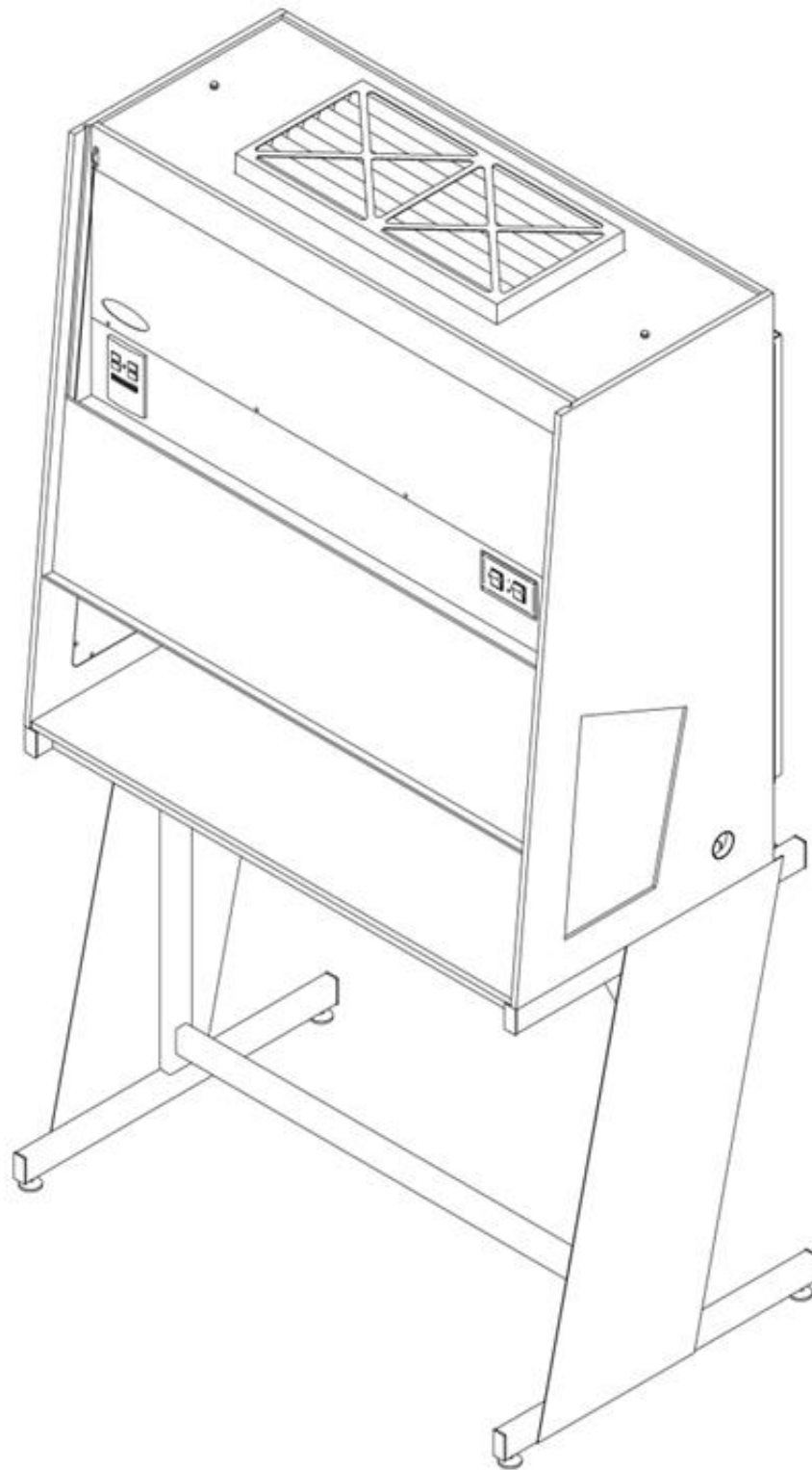


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Thank you for purchasing our CLASS 1 Biohood, with proper care and maintenance your hood will provide you with many years of trouble free performance. Please read instructions carefully before installing and operating your CLASS 1 Biohood.

WARNING: TO REDUCE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS PLEASE REVIEW THE FOLLOWING PRECAUTIONS.

- Do not expose your CLASS 1 Biohood to rain or moisture.
- Always disconnect the CLASS 1 Biohood from power supply when servicing, moving parts may cause serious injury.
- Always disconnect while grasping the plug, not the cord.
- Do not expose CLASS 1 Biohood to gaseous or explosive vapors. Motors normally spark and may ignite fumes.
- Do not block airflow to top of unit, allow at least 5" above unit
- Do not modify the plug of your hood if it will not fit in your duplex outlet. Have a proper outlet installed by a qualified electrician.
- Use only specified replacement parts recommended by Design Filtration Microzone.
- Use this equipment only in the manner intended by Design Filtration Microzone.

1. SHIPPING AND UN-CRATING

Design Filtration Microzone assembles and factory tests each unit prior to shipping. On occasion, damage can occur during the transportation of your new CLASS 1 Biohood. You should inspect your unit for damage that may have been caused and report it immediately to your transportation company.

The CLASS 1 Biohood is shipped to your facility strapped onto a skid. Remove the protective plastic and/or cardboard from the exterior of the unit, and carefully cut the nylon strapping with a sharp knife or scissors. Remove all pieces from the skid and place near installation area.

All shipments are F.O.B. Design Filtration Microzone. All claims for damage due to shipping should be filed with the carrier. Design Filtration Microzone and its dealers are not responsible for shipping damages.

Your CLASS 1 Biohood has been factory tested and set for appropriate airflows, however all HEPA filtered equipment should be certified by a qualified technician prior to use.

2. INSTALLATION

Once in location it is recommended that your hood be re-tested for airflows and leaks by an independent testing organization with technicians trained in the evaluation and maintenance of HEPA filtered equipment. Always use safe lifting guidelines when installing your hood on a base frame or existing work bench.

Do not use a lift truck when moving your CLASS 1 Biohood. Leave your hood on the shipping skid until it is in its final installation location. Never lift from the center of the hood. Allow hood to acclimatize to room temperature, before installation.

3. INSTALLING HOOD ON A BASE FRAME

Design Filtration Microzone offers an optional base frame for our CLASS 1 Biohoods. Assemble base frame as per instructions. Connect all cross bars to side base panels as shown using supplied 5/32" hex key and 1-1/4" bolts. Place "L" brackets using the 3/4" self-taping screws align and tighten "L" bracket to aluminum base frame using pilot holes provided. Make sure base frame is level by adjusting leg levelers. See Figure 3.1.

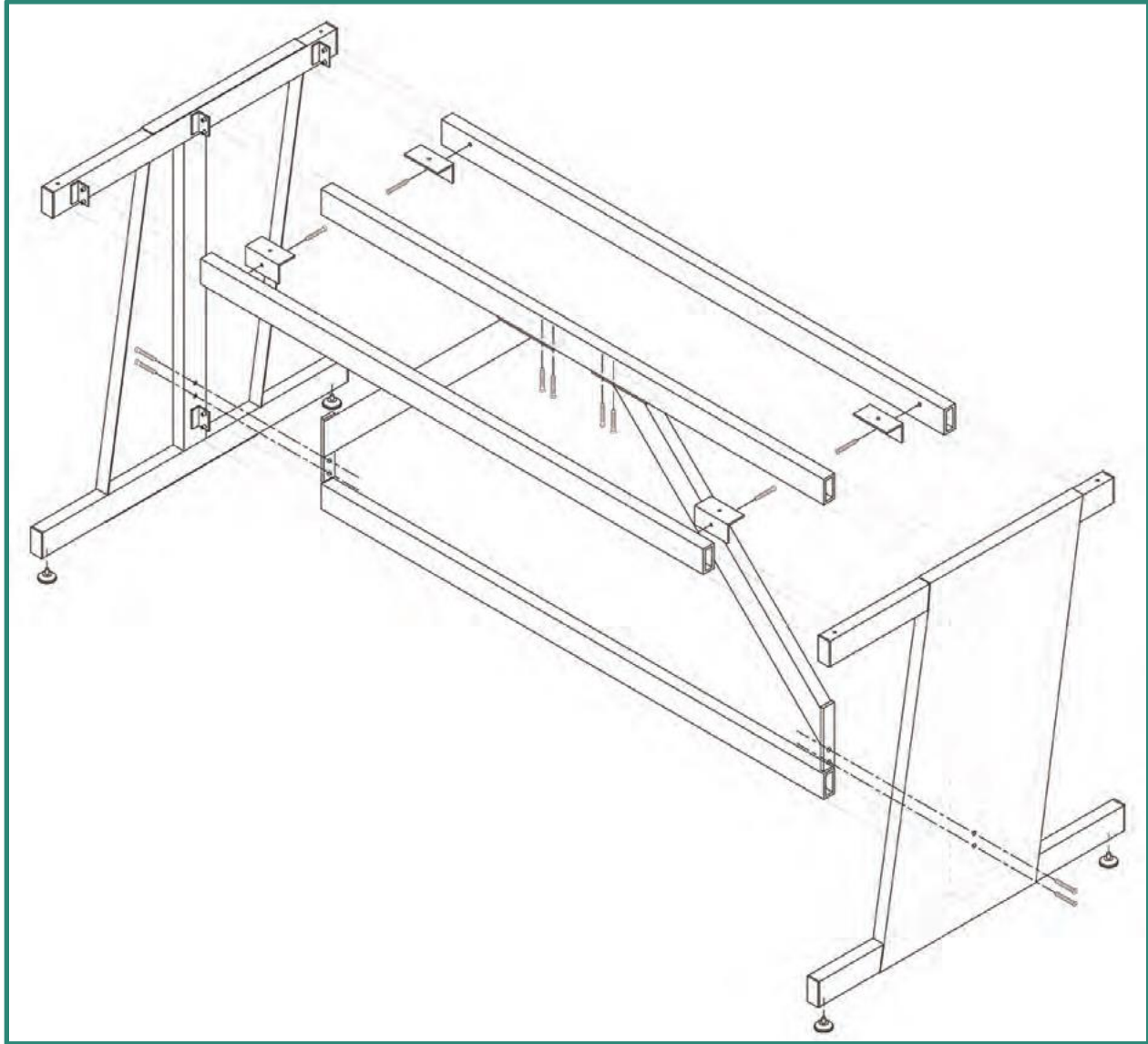


Figure 3.1

Once frame is fully assembled lift the hood on top of the base frame making sure any electrical cords are clear before placing on base frame, see Figure 3.2. The CLASS 1 Biohood is top-heavy, use caution when lifting in to place, or moving. Always use safe lifting guidelines when placing hood on top of frame.

Once hood is in place on base frame, line the holes on the "L" brackets up with the threaded insert located on the bottom of the work surface. Tighten the $\frac{3}{4}$ " bolts supplied from the bottom into the threaded insert. Make sure all 4 bolts are used for safety.

SUPPLIED PARTS:

- Qty. 16 – $\frac{1}{4}$ " x 20 x 1 $\frac{3}{4}$ " bolts
- Qty. 4 – #8 - $\frac{3}{4}$ " self-tapping
- Qty. 4 – $\frac{3}{4}$ " bolt
- Qty. 1 – $\frac{5}{32}$ " hex key
- Qty. 4 – "L" brackets

WARNING:

ALLOW 24 HRS. FOR HOOD TO ACCLIMATIZE BEFORE INSTALLATION, TO PREVENT DAMAGE TO HOOD.

WARNING:

ALWAYS LIFT FROM THE OUTSIDE EDGES OF THE HOOD TO PREVENT DAMAGE. DO NOT USE FORK LIFE ON CENTER OF HOOD.

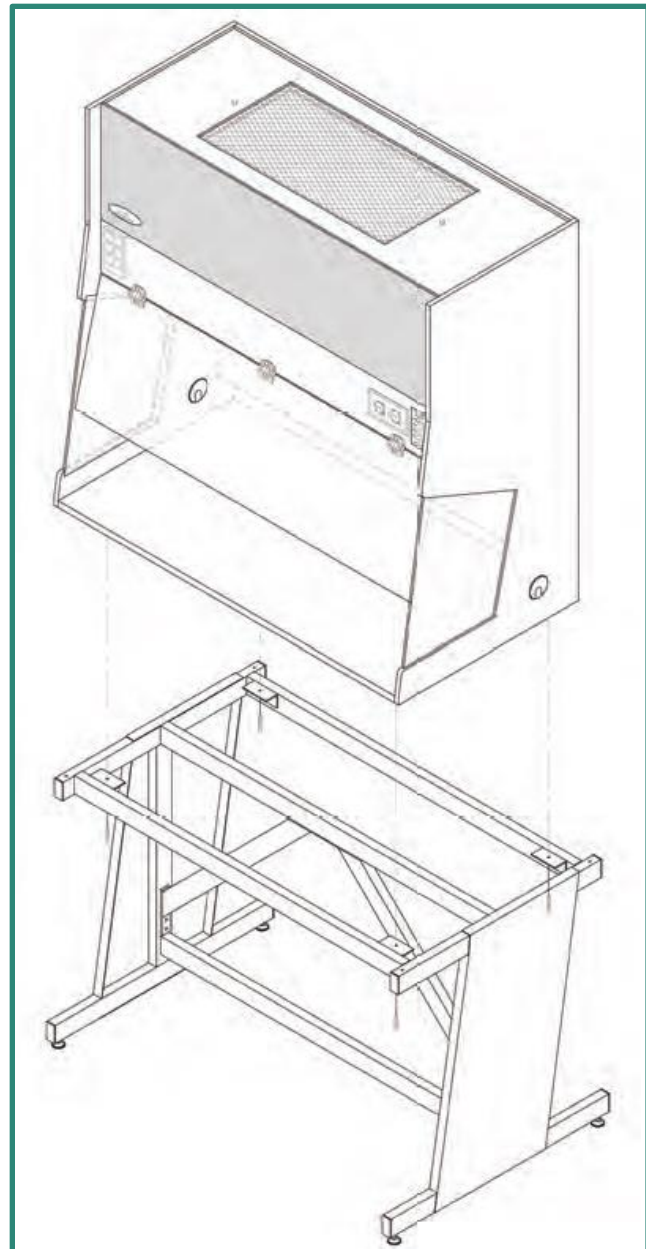


Figure 3.2

4. PRE-FILTER

Your CLASS 1 Biohood is equipped with disposable pre-filters, which are manufactured from a bonded synthetic media set into a moisture resistant beverage board. Pleated pre-filters carry an efficiency rating of MERV 7 (Minimum Efficiency Reporting Value). The filters also provide an Average Atmospheric Dust Spot Efficiency of 25-30% to ASHRAE Test Standard 52.1.

5. PRE-FILTER MAINTENANCE

Check your pre-filters on a monthly basis and change as necessary. To change your pre-filters leave your hood running. Always wear gloves when changing pre-filters. Simply pull the release levers on either side of the interior baffle. This will lower the top portion of the baffle and expose the pre-filter. While keeping one hand under the pre-filter rotate the plastic retaining buttons. Gently grasp the pre-filter and place in garbage bag. Do not remove the pre-filter from the hood before placing in plastic garbage bag. Make sure garbage bag is tied up before removing from hood.

Put the new pre-filter in place; please be sure the airflow arrow is facing up. Move baffle back into place making sure the release levers are secured to the side of the hood.

WARNING: ALWAYS WEAR GLOVES WHEN CHANGING PRE-FILTERS. LEAVE UNIT RUNNING.

6. HEPA FILTER

Your CLASS 1 Biohood features a 3.06" deep aluminum-frame filter with a separator-less type filter to provide excellent even airflow. The wet laid glass media is set into the frame with a urethane seal. Efficiency is 99.99% at 0.3-micron particle size and larger. HEPA filters cannot be cleaned and must be replaced when necessary, consult factory for replacement filters.

7. ULPA FILTER

The optional ULPA filter is rated 99.9995% at 0.12-micron particle size and larger. Other features as per HEPA filter. ULPA filters cannot be cleaned and must be replaced when necessary.

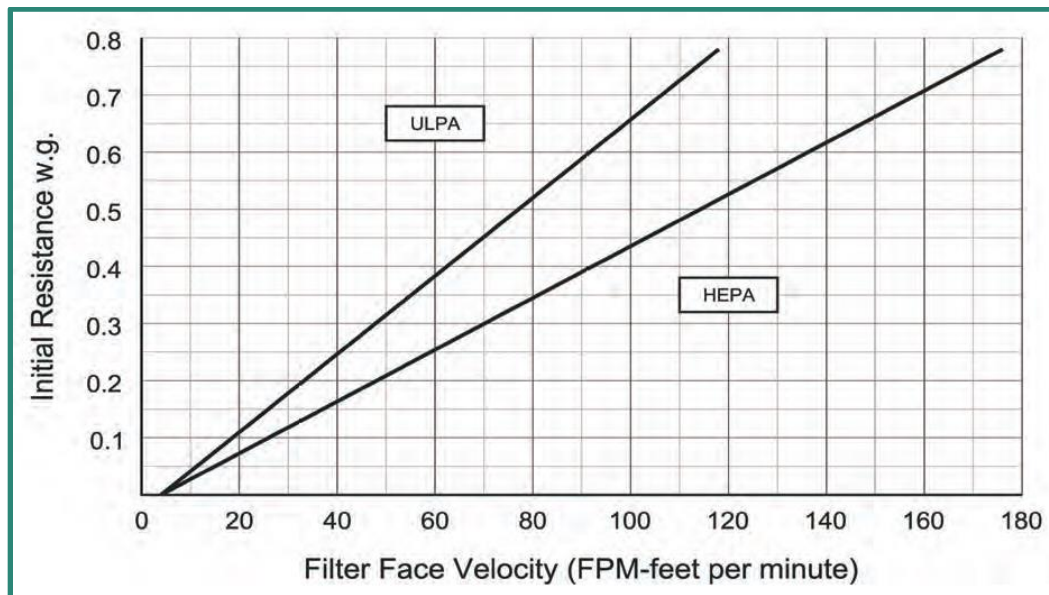


Table 1

8. CHANGING HEPA/ULPA FILTERS

Always disconnect unit from power supply prior to changing HEPA filters. Unscrew and remove front access panel to reveal interior compartment, see Figure 8.1. Remove acorn nuts located on the top of you CLASS 1 Biohood. Remove support ribs. Using a $\frac{7}{16}$ socket wrench, lower the filter housing assembly enough to remove the filter, see Figure 8.2.

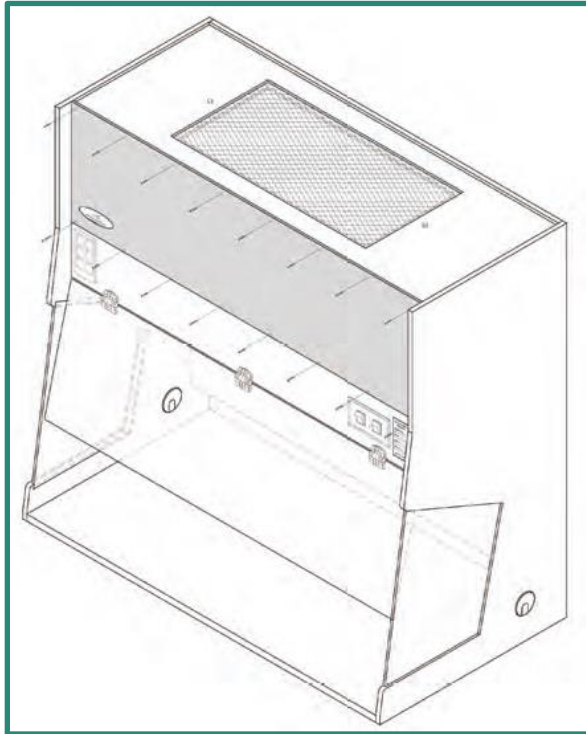


Figure 8.1

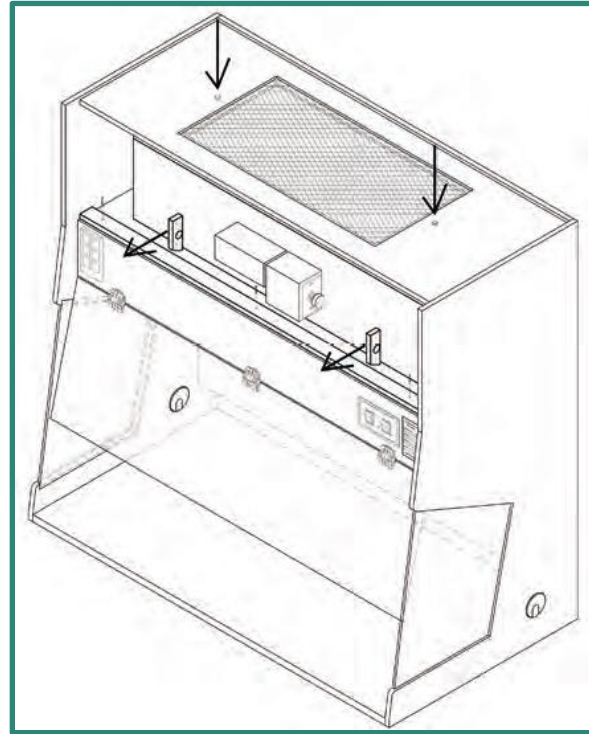


Figure 8.2

Carefully remove your new HEPA from the shipping crate. Lift by the edges and slide back into the hood, avoid touching the media during this process. Do not over tighten filter assembly section.

Once entire unit is re-assembled it should be tested by a qualified technician trained in the evaluation and maintenance of HEPA filtered equipment.

9. CHANGING THE FLUORESCENT LIGHT

Wear gloves when changing the fluorescent light. Dispose of tube in plastic bag. The light is located at the front of the hood. Gently reach in and change as you would a normal fluorescent tube.

10. SPEED CONTROL

The speed control should only be adjusted by a qualified service technician. Adjusting the airflow will affect the operation of your hood. Open the front access panel.

When adjusting the speed control, turn clockwise to increase the speed. After adjustment of the speed control, airflow should be checked to ensure $90\text{fpm} \pm 20\%$ using calibrated test equipment, see Figure 10.1. Refer to IES standard IES -R P-CC -002.2.

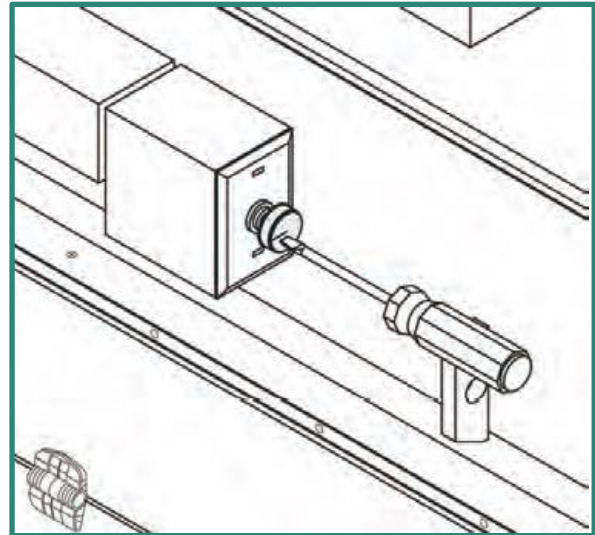


Figure 10.1

11. CHANGING MOTOR

Always disconnect unit from power supply prior to changing the motor. Loosen the screws located on the hinges at the front panel, and remove front panel from hood. Remove acorn nuts located on the top of your CLASS 1 Biohood. Remove support brackets. Using a $5/8$ socket lower and remove the filter housing assembly. Unscrew polypropylene saddle mount and change motor, as shown in Figure 11.1.

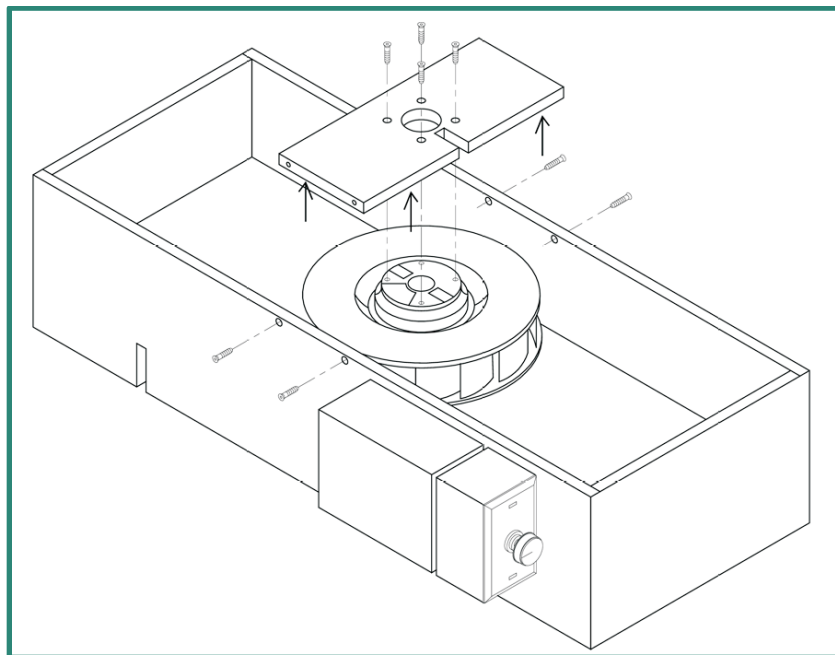


Figure 11.1

12. ALARM PACKAGE (OPTIONAL)

Some units are fitted with an optional alarm package. Your alarm has been pre-set at the factory to alarm when the airflow falls below 45-65 FPM. The audible alarm and red indicator light will turn on on approximately 6 seconds after alarm conditions are detected.

To silence alarm, press and then release the “TEST / RESET” button. Note that after an alarm has been detected the red indicator will stay on. The audible alarm and red indicator will return to normal once the airflow return to normal.

13. MODEL NUMBER

The model number is located on the front panel in the lower right hand corner. The serial number and electrical information is also included on this label, as shown in Figure 13.1.

Refer to these numbers when contacting the manufacturer.

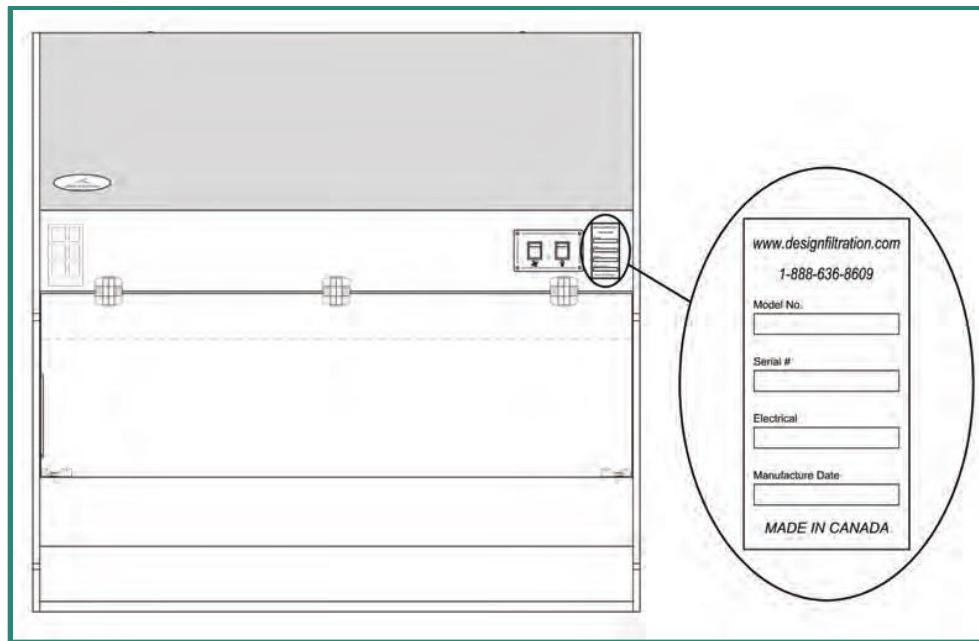


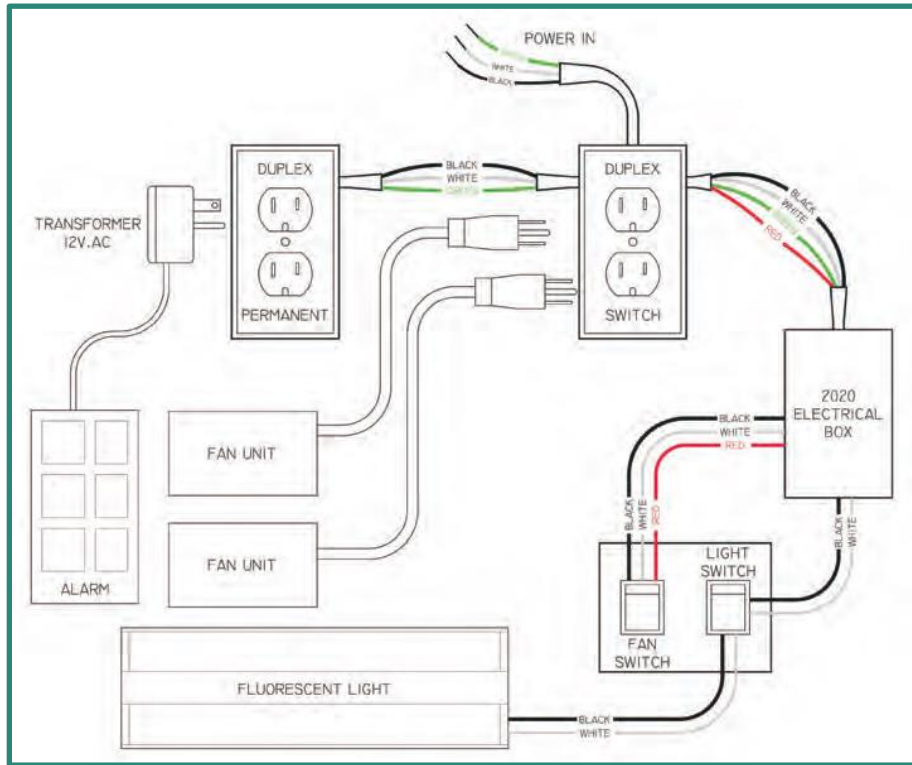
Figure 13.1

14. MOTOR/ELECTRICAL

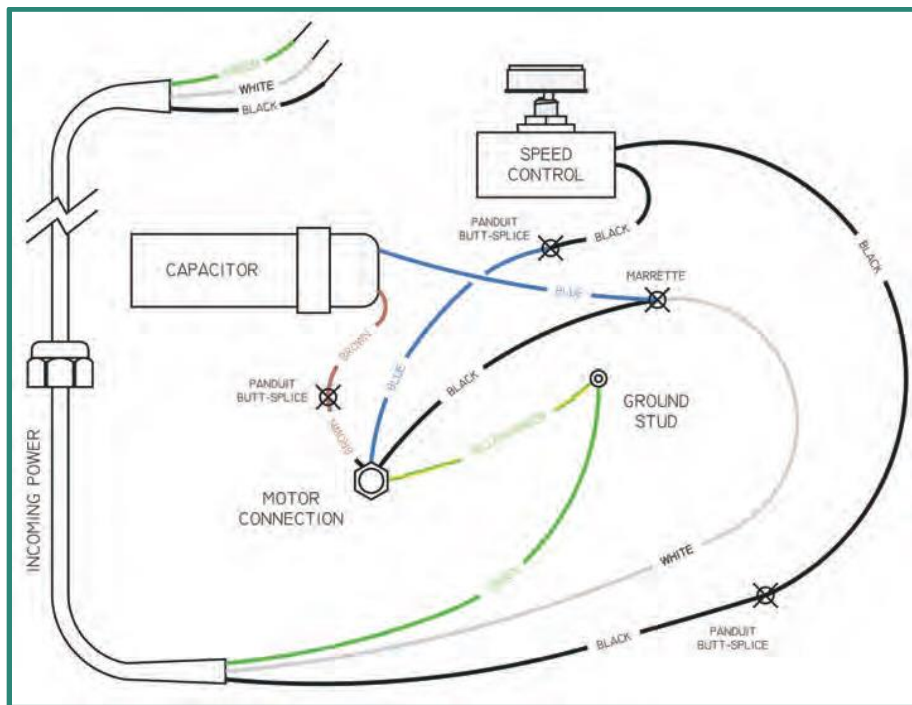
The CLASS 1 Biohood uses 115-volt, energy efficient motorized impeller to provide excellent airflow distribution, quieter noise levels and low heat loads.

Standard on your CLASS 1 Biohood is a FT2 type CSA-approved 3-prong electrical cord. Always unplug your hood when servicing.

15. WIRING DIAGRAMS



CLASS 1 Biohood Electrical Layout



Fan Unit Electrical Layout

16. DIMENSIONS

Model	Dimensions*	HEPA Filter Size	Electrical**	Weight***
EXT-3	32"W x 40"H x 23"D	23 ⁵ / ₈ " x 11 ⁵ / ₈ " x 3 ¹ / ₁₆ "	115V, 2.0A, 60Hz	380 lbs
EXT-4	44"W x 40"H x 23"D	35 ⁵ / ₈ " x 11 ⁵ / ₈ " x 3 ¹ / ₁₆ "	115V, 2.0A, 60Hz	530 lbs
EXT-6	68"W x 40"H x 23"D	23 ⁵ / ₈ " x 11 ⁵ / ₈ " x 3 ¹ / ₁₆ "	115V, 3.0A, 60Hz	640 lbs

*Height does not include base frame. **Includes motors and lights only. Duplex Outlets run on a separate circuit. ***Weight includes shipping and packing materials.

17. REPLACEMENT PARTS

Part	Order Number
HEPA filter for EXT-03 and EXT-06 (2)	D AF-1x2
HEPA filter for EXT-04	D AF-1x3
Pre-filter for EXT-03 and EXT-06 (2)	12-12242-113
Pre-filter for EXT-04	12-12362-113
Replacement motor - 115-volt D05-B5	17MI0006
Speed controller - 115-volt	17SW SC 11501
8mf capacitor for 115-volt motor	17MI0008

18. AIR FLOW DIRECTION

When the CLASS 1 Biohood is operating, the fan draws air into the hood from the front opening. The air travels around the baffle and up through the pre-filter and HEPA/ULPA filter, as shown in Figure 18.1.

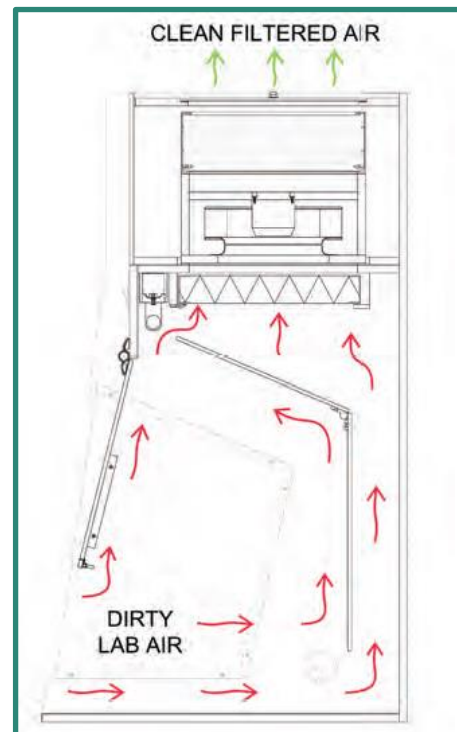


Figure 18.1

19. WARRANTY

Design Filtration Microzone warrants the equipment to be free of defects in materials and workmanship from the date of invoice. The CLASS 1 Biohood shall be warranted against defects for a period of one year. Any units or parts found to be defective during this period will be replaced or repaired at our discretion. The buyer agrees to assume all transportation charges prepaid for return of unit to factory for repair. Design Filtration Microzone will not accept charges for removal or re-installation.

Design Filtration Microzone will not accept any returned items without prior written consent. Design Filtration Microzone is not responsible for repair or replacement by misuse or abuse by incorrect operating procedures of its equipment. Pre-filters carry no warranty against loading. Any modifications or changes made to equipment by customer without written consent of Design Filtration Microzone will void the warranty.

The Model number and Serial number, located on the head section of your CLASS 1 Biohood, must be provided to verify invoice date. Failure to provide will void warranty.

FOR FURTHER INFORMATION, PLEASE CONTACT US DIRECTLY.

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