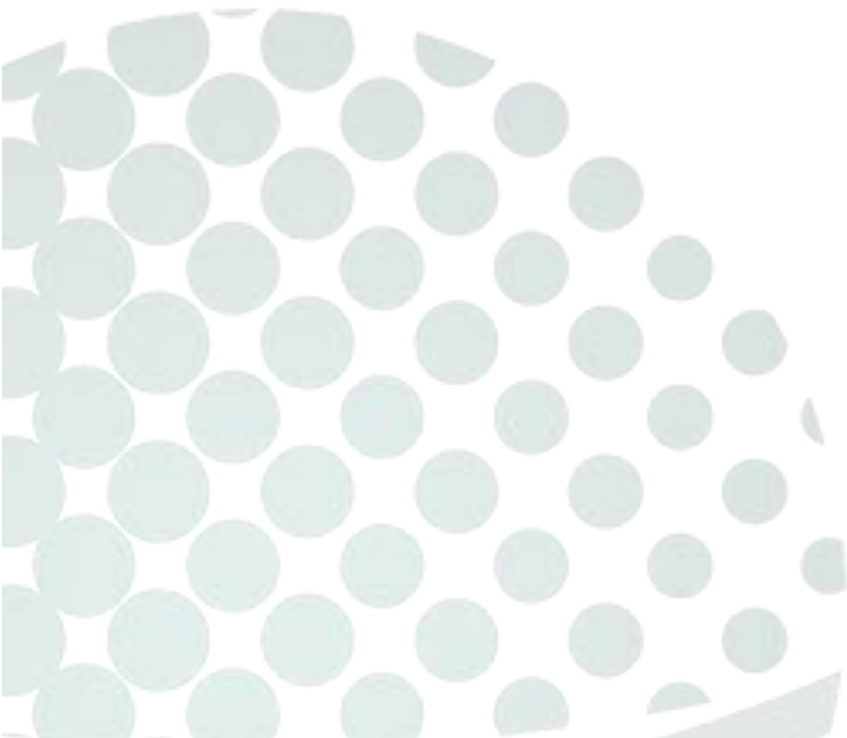


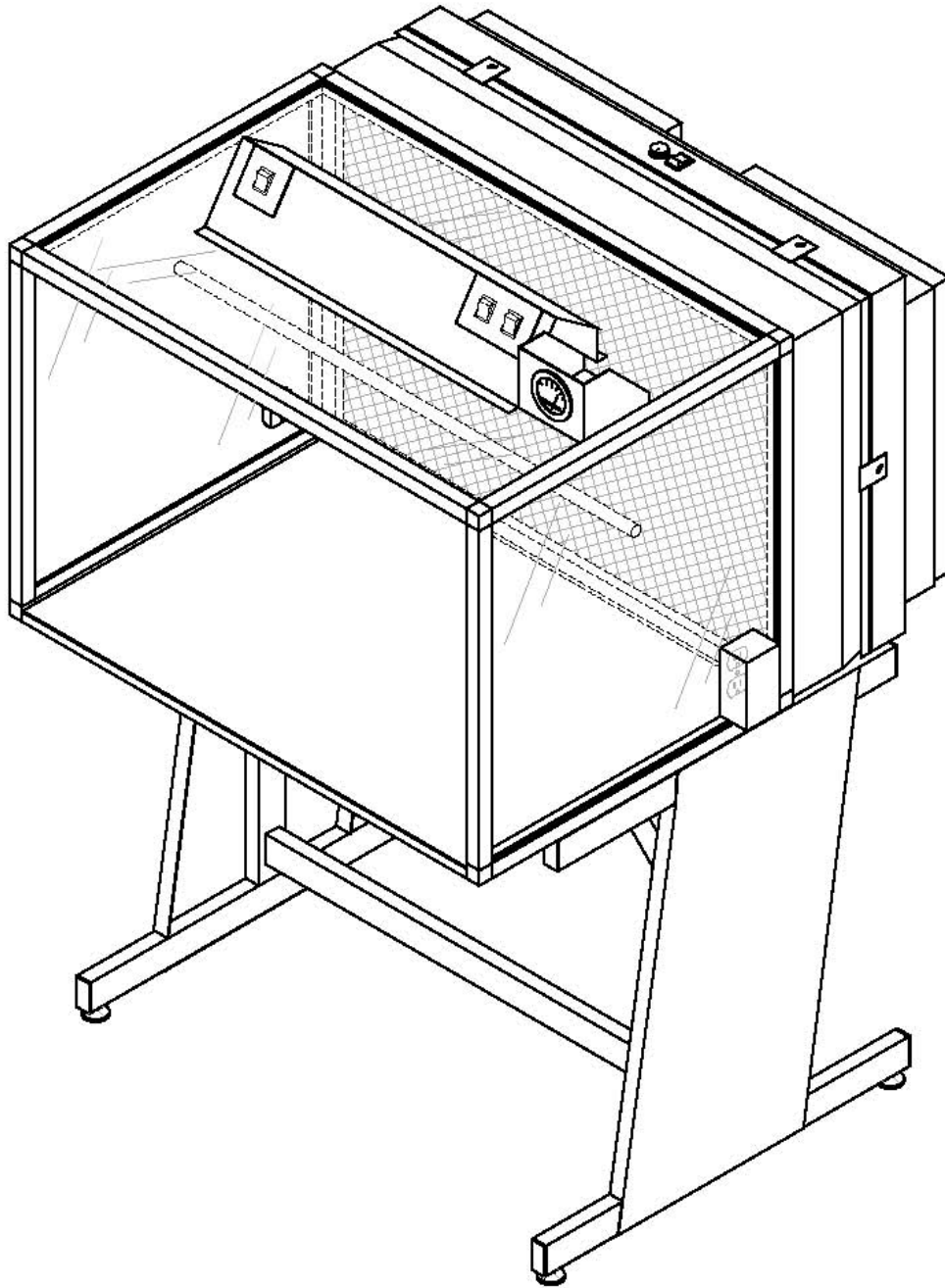


# CLEAN AIR WORKSTATION – HORIZONTAL FLOW

Installation and Operations Manual



**DFMZ**  
DESIGN FILTRATION MICROZONE



## MODELS COVERED

CAW2H	CAW3H
CAW4H	CAW5H
CAW6H	CAW8H

## TABLE OF CONTENTS

MODELS COVERED .....	2
1. SHIPPING AND UN-CRATING .....	3
2. HOW CAWs WORK .....	4
3. ASSEMBLY .....	5
4. SPEED CONTROL .....	6
5. DUPLEX OUTLET .....	6
6. HEPA FILTER .....	7
7. ULPA FILTER.....	7
8. CHANGING HEPA / ULPA FILTERS .....	8
9. MOTOR / ELECTRICAL .....	8
10. MAINTENANCE.....	9
11. ELECTRICAL REQUIREMENTS.....	9
12. DIMENSIONS .....	9
13. REPLACEMENT PARTS .....	10
14. WARRANTY .....	10

Thank you for purchasing our Clean Air Workstation (CAW), with proper care and maintenance your CAW will provide you with many years of trouble free performance. Please read instructions carefully before installing and operating your Clean Air Workstation.

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

- Do not expose your Clean Air Workstation to rain or moisture.
- Always disconnect the Clean Air Workstation from power supply when servicing, moving parts may cause serious injury.
- Always disconnect while grasping the plug, not the cord.
- Do not expose Clean Air Workstation to gaseous or explosive vapors. Motors normally spark and may ignite fumes.
- Do not block airflow to top or back of unit, allow at least 4" above unit (4" behind unit for Horizontal flow workstations).
- 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.

**WARNING:** CAWS workstations provide clean HEPA / ULPA filtered air to your work zone and offers excellent protection for your samples or processes. However, CAWS workstation does not provide protection to the operator.

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## 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 Clean Air Workstation. You should inspect your unit for damage that may have been caused and report it immediately to your transportation company.

The Clean Air Workstation 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 Clean Air Workstation 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. HOW CAWs WORK

The Clean Air Workstation draws ambient air in through the pre-filter, which captures the larger dust and dirt. The motorized impeller then directs the air through a HEPA filter providing the work zone with ultra clean air, see Figure 2.1. All CAWs feature the Design-Aire Fan Filter Unit to provide CLASS 100 (ISO 5) HEPA filtered conditions to the work zone.

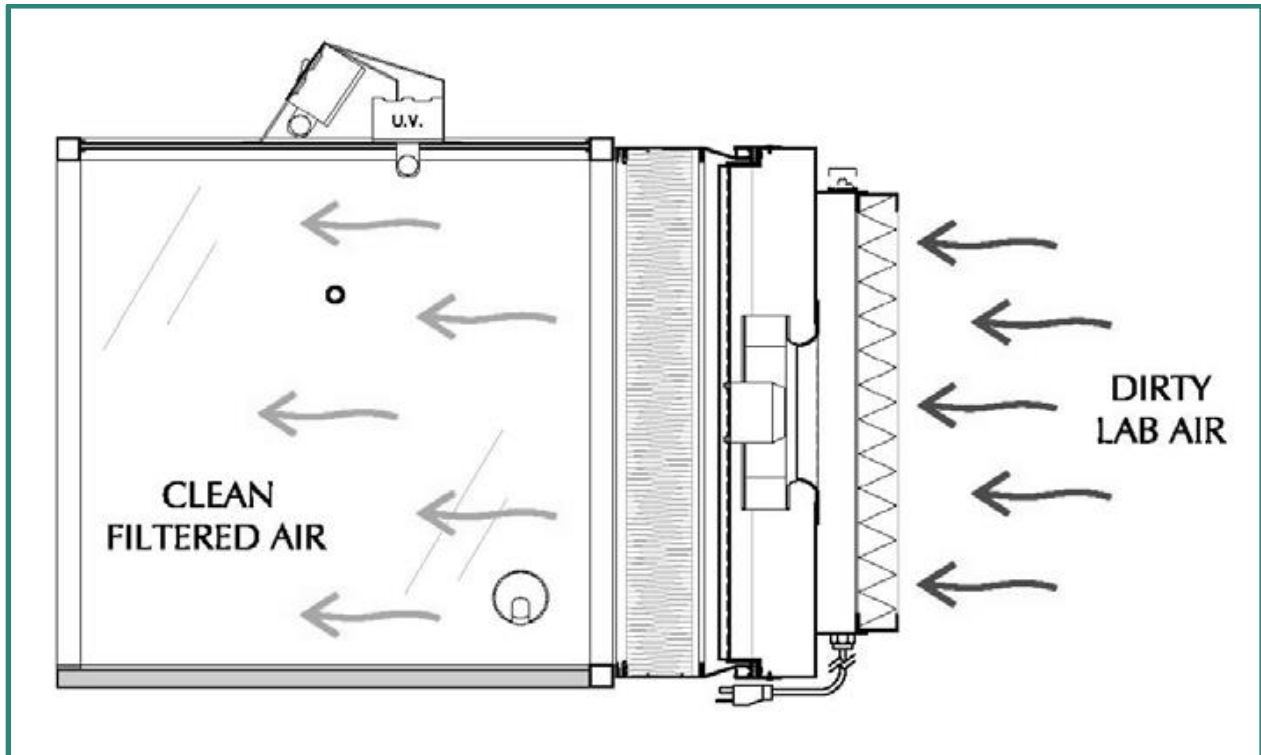


Figure 2.1

### 3. ASSEMBLY

CAWs are available with many optional accessories; the following assembly instructions are general and may not necessarily apply to your workstation. See Figure 3.1.

- After removing the CAWs from its shipping material, place work zone onto the painted steel base frame. Using supplied 5/8" screws join the base to the work zone.
- Carefully place the Design-Aire unit on to the back of the work zone setting it onto the aluminum frame. Carefully clamp the fan unit to the back of the workstation using supplied catches.
- If your unit is equipped with a fluorescent light fixture, it should be plugged into the duplex located on the housing of the Design-Aire unit see Figure 5.1.
- Carefully move your workstation to its desired location and plug the Design-Aire unit into a standard 115-volt receptacle. Ensure that the back of the unit is a minimum of 4" away from any wall or surface.

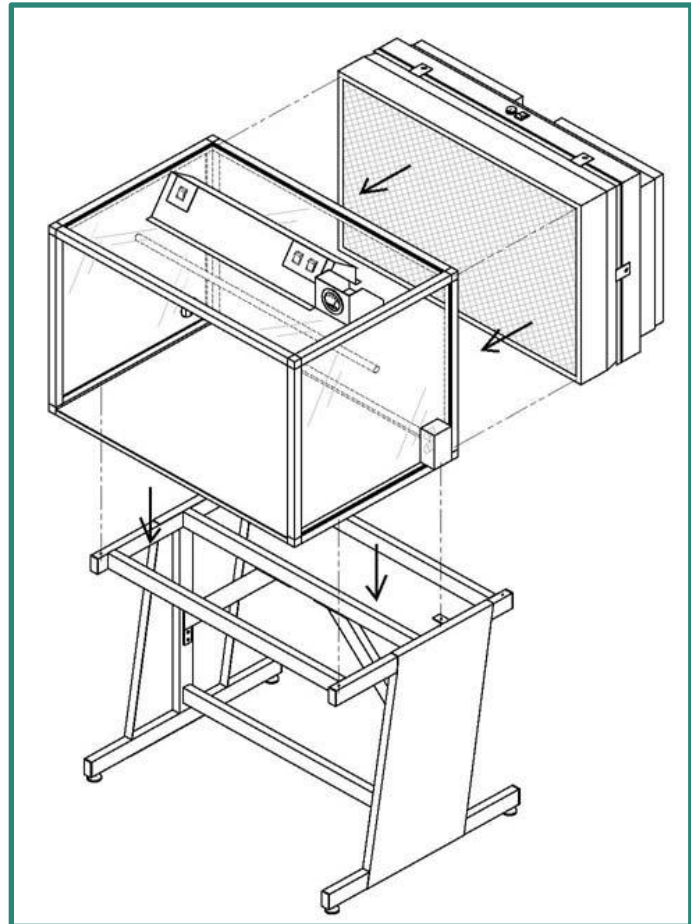


Figure 3.1

- Your Design-Aire unit has been factory set to provide you with appropriate airflow, however all workstations should be certified by a qualified technician prior to use.

#### 4. SPEED CONTROL

Clean air is provided by Design-Aire, which comes equipped with a standard variable speed control that enables airflow adjustments within the recommended airflow range. The variable speed control knob is located on the side of the pre-filter housing, next to the duplex outlet. Adjustment of the speed control should only be completed by a certified technician. See Figure 4.1.

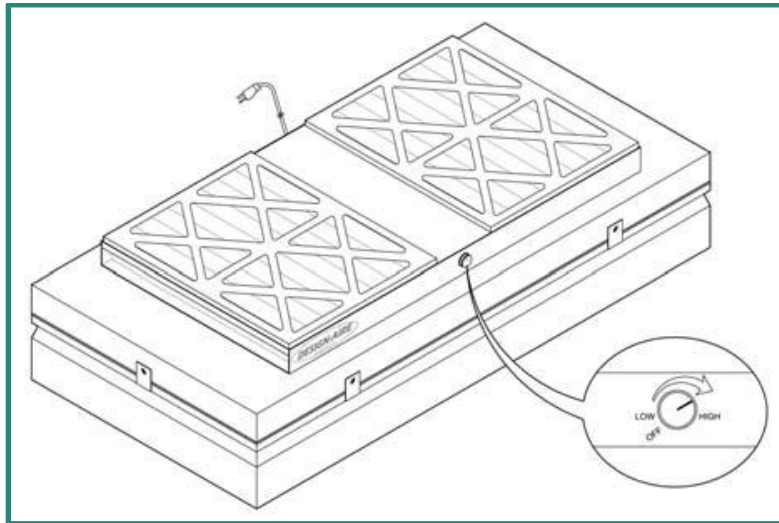


Figure 4.1

#### 5. DUPLEX OUTLET

Your CAW comes complete with a duplex outlet located on the pre-filter housing next to the variable speed control, see Figure 5.1. The duplex can be used for additional power requirements that do not exceed 10-amps.

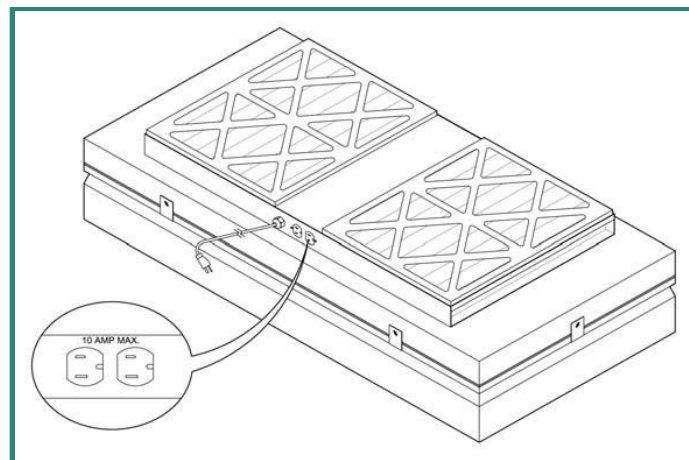
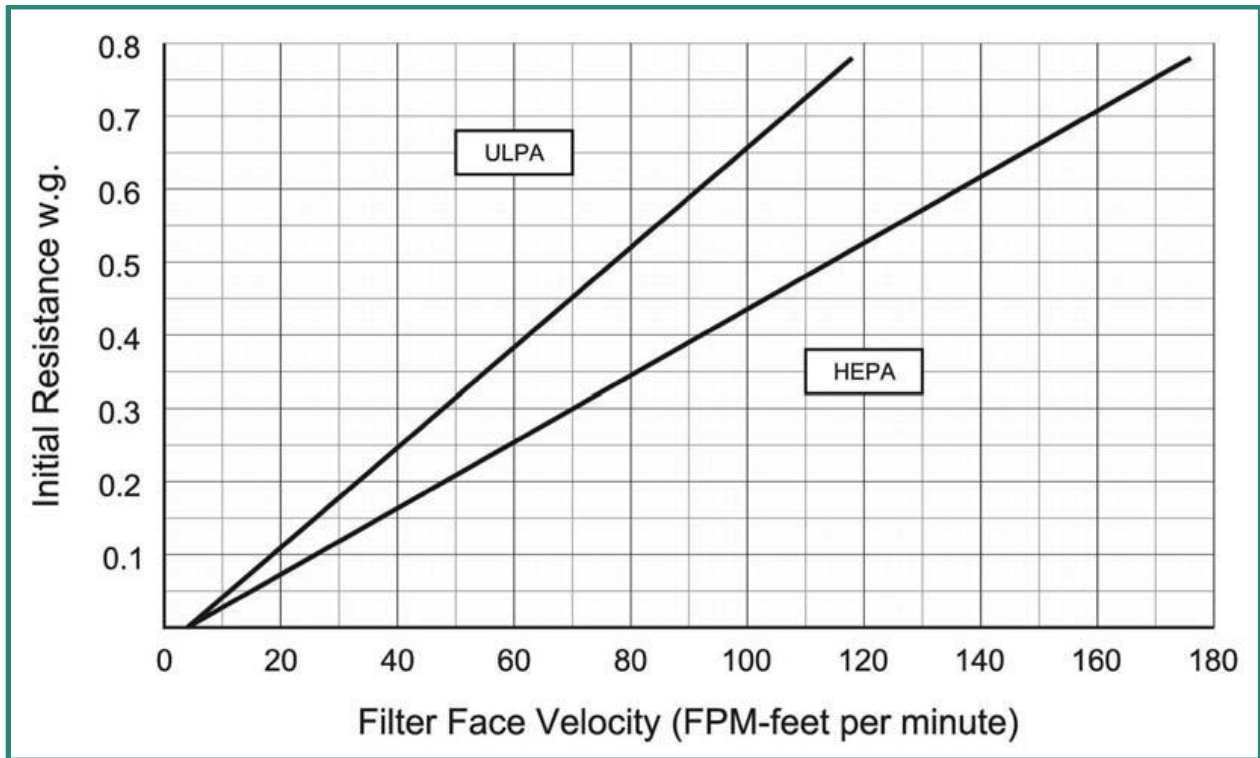


Figure 5.1

## 6. HEPA FILTER

The HEPA filter features a 5.88” deep anodized aluminum frame with a protective painted screen located on the filter face. The mini-pleat 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.



## 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.

All HEPA/ULPA filters are factory tested prior to shipping. It is recommended that your workstation be tested for leaks by a certified technician prior to use, and at least once per year thereafter.



## 8. CHANGING HEPA / ULPA FILTERS

Disconnect the Design-Aire from the power source prior to servicing your unit. Remove your Design-Aire from the workstation. Remove the #8-32 Philips tooth lock screws from the catches holding the plenum to the HEPA filter, as shown in Figure 8.1. These are located on the lower edge of the plenum housing and catch along the upper edge of the HEPA filter.

Once the screws and catches are removed, simply lift the plenum housing from the HEPA filter. Remove your new filter from the container and visually inspect it for signs of damage. Carefully line up the plenum housing with the new HEPA filter and re-attach the catches and screws.

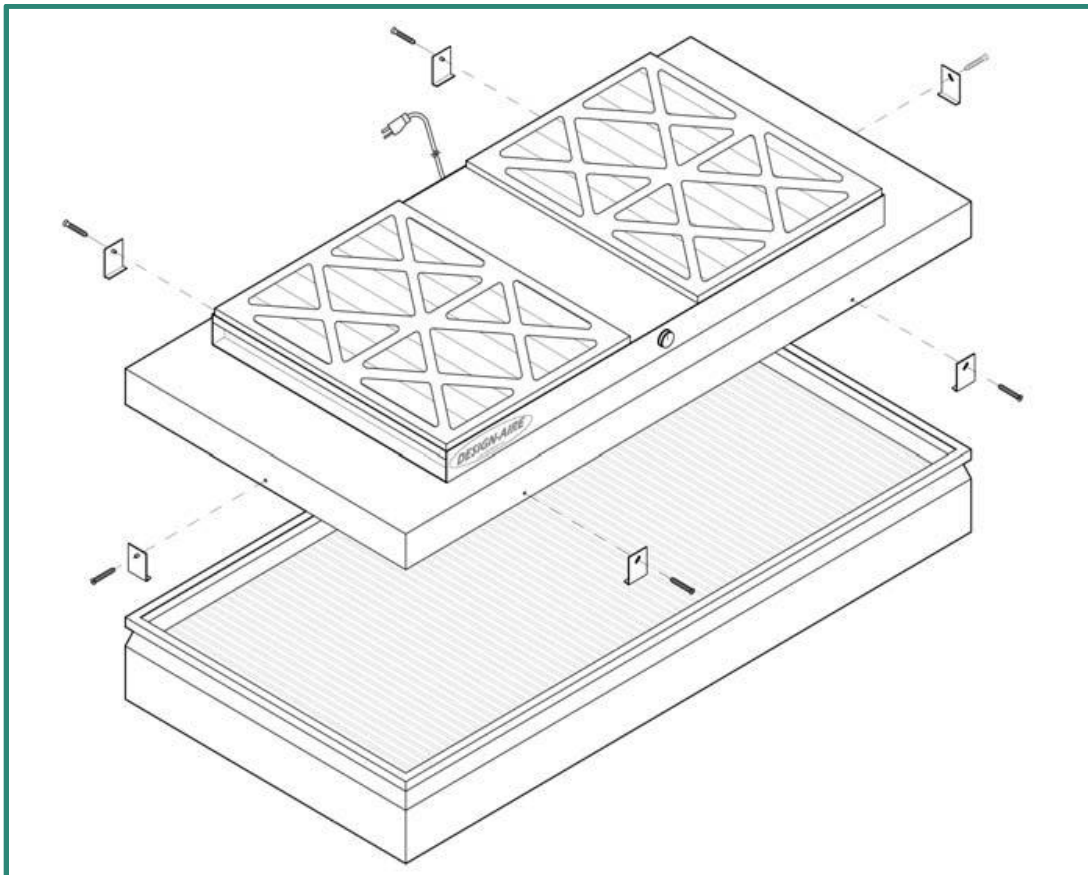


Figure 8.1

## 9. MOTOR / ELECTRICAL

CAWs use a 115-volt, 160-watt energy efficient backward curved impeller to provide excellent airflow distribution, quieter noise levels and low heat loads, only 545 BTU/hour. Two motors are used on units larger than 4-feet.

## 10. MAINTENANCE

Your new Clean Air Workstation comes complete with pleated disposable pre-filter. The pre-filter should be inspected once a month, or as room conditions dictate. The pre-filter should be replaced as necessary. The HEPA filter should be checked yearly, or as necessary by a local testing agency to ensure proper performance. For replacement of the HEPA filter please see Figure 8.1.

## 11. ELECTRICAL REQUIREMENTS

Model	Motor / Blower	Light Fixture
CAW2H	115-volts, 1.08 amps, 60 Hz	115-volts, 0.17 amps, 60Hz
CAW3H	115-volts, 2.16 amps, 60 Hz	115-volts, 0.23 amps, 60Hz
CAW4H	115-volts, 2.16 amps, 60 Hz	115-volts, 0.27 amps, 60Hz
CAW5H	115-volts, 3.24 amps, 60 Hz	115-volts, 0.27 amps, 60Hz
CAW6H	115-volts, 4.32 amps, 60 Hz	115-volts, 0.27 amps, 60Hz
CAW8H	115-volts, 4.32 amps, 60 Hz	115-volts, 0.54 amps, 60Hz

## 12. DIMENSIONS

Model	External Dimensions – W x D x H	Work Zone – W x D x H
CAW2H	24" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (610 x 1010 x 730mm)	22" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (559 x 610 x 578mm)
CAW3H	36" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (914 x 1010 x 730mm)	34" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (863 x 610 x 578mm)
CAW4H	48" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (1219 x 1010 x 730mm)	46" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (1168 x 610 x 578mm)
CAW5H	60" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (1524 x 1010 x 730mm)	58" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (1473 x 610 x 578mm)
CAW6H	73" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (1854 x 1010 x 730mm)	71" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (1803 x 610 x 578mm)
CAW7H	85" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (2159 x 1010 x 730mm)	83" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (2108 x 610 x 578mm)
CAW8H	97" x 39 <sup>3</sup> / <sub>4</sub> " x 28 <sup>3</sup> / <sub>4</sub> " (2464 x 1010 x 730mm)	95" x 23f" x 22 <sup>3</sup> / <sub>4</sub> " (2413 x 610 x 578mm)

### 13. REPLACEMENT PARTS

Part	Order Number
24" x 24" x 5.88" HEPA filter – 99.99% at 0.3 microns	10HE0520
24" x 36" x 5.88" HEPA filter – 99.99% at 0.3 microns	10HE0522
24" x 48" x 5.88" HEPA filter – 99.99% at 0.3 microns	10HE0524
24" x 24" x 5.88" ULPA filter – 99.9995% at 0.12 microns	10HE0521
24" x 48" x 5.88" ULPA filter – 99.9995% at 0.12 microns	10HE0525
Disposable pleated pre-filter nominal 15.5" x 19.5" x 1.75"	10PR0110
115-volt motorized impeller	17MI0006
230-volt motorized impeller	17MI0003
Speed controller – 115-volt	17SW0052
Speed controller – 230-volt	17SW0056
8mf capacitor for 115-volt motor	17MI0006
3mf capacitor for 230-volt motor	17MC0005
17-watt, T8 fluorescent tube	17LT0016
25-watt, T8 fluorescent tube	17LT0018
32-watt, T8 fluorescent tube	17LT0020
Blue switch for fluorescent light fixture – 120-volt	17SW0058
Green switch for motor/blower – 120-volt	17SW0059

### 14. WARRANTY

Design Filtration Microzone warrants the equipment to be free of defects in materials and workmanship from the date of invoice. The Clean Air Workstation (CAW) shall be warranted against defects for a period of two years. 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 and carbon filters carry no warranty against loading. UV and Fluorescent lights carry no warranty. Any modifications or changes made to equipment by customer without written consent of Design Filtration Microzone will void the warranty.

Model number and serial number located on your CAW must be provided to verify invoice date. Failure to provide will void warranty.

**FOR FURTHER INFORMATION, PLEASE CONTACT US DIRECTLY.**

Design Filtration Microzone Inc., 86 Harry Douglas Drive, Ottawa, ON. K2S 2C7  
 T: 1-888-636-8609 (Canada & USA), T: 1-613-831-8318, F: 1-613-831-8321  
[info@dfmzgroup.com](mailto:info@dfmzgroup.com)