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UniFlow SE AirStream
High Performance
Energy Efficient
Laboratory Fume Hoods



UniFlow LE FM



Safety Equipment



Installation, Operation, Maintenance Manual CCS Containment Control System



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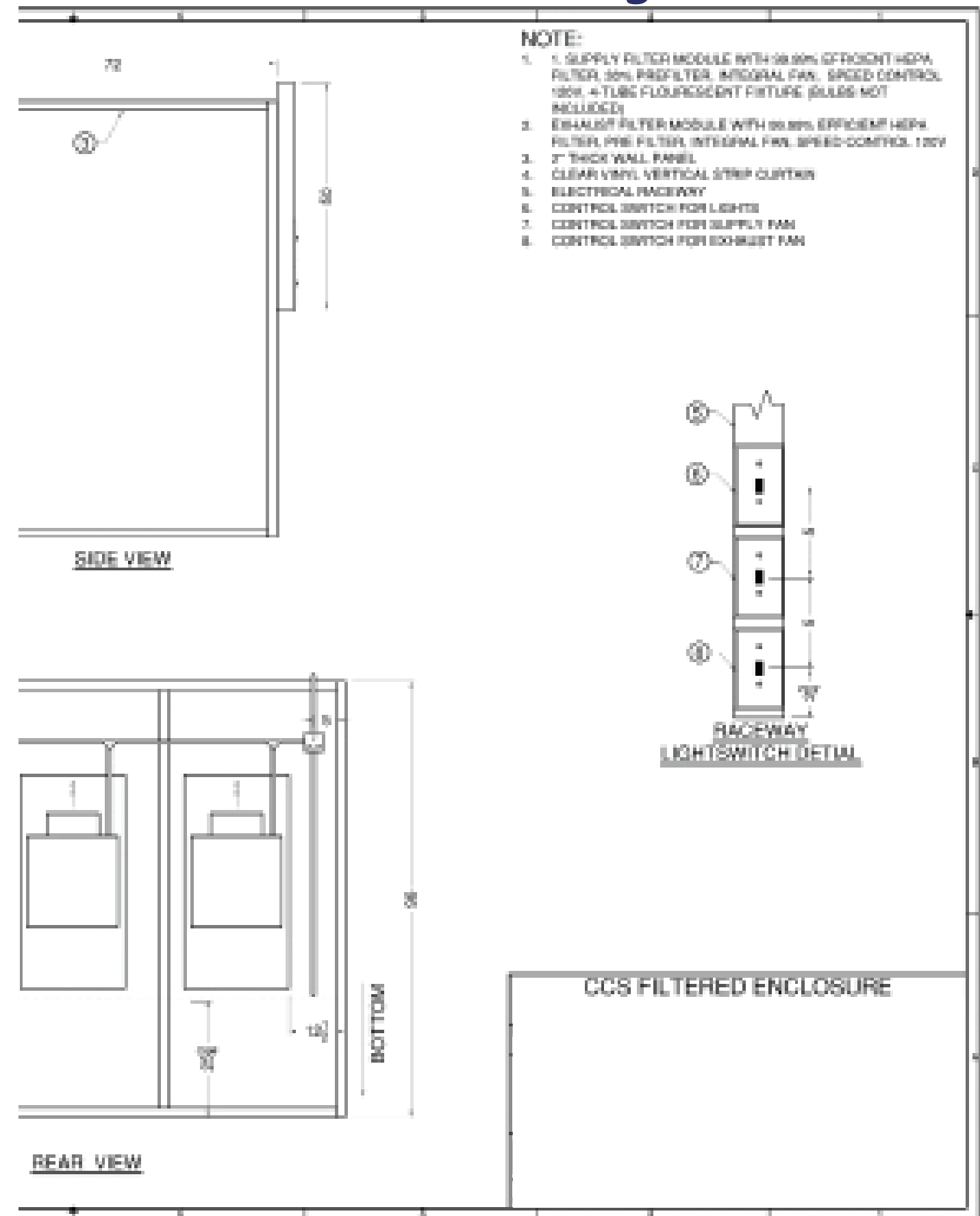
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Drawings:

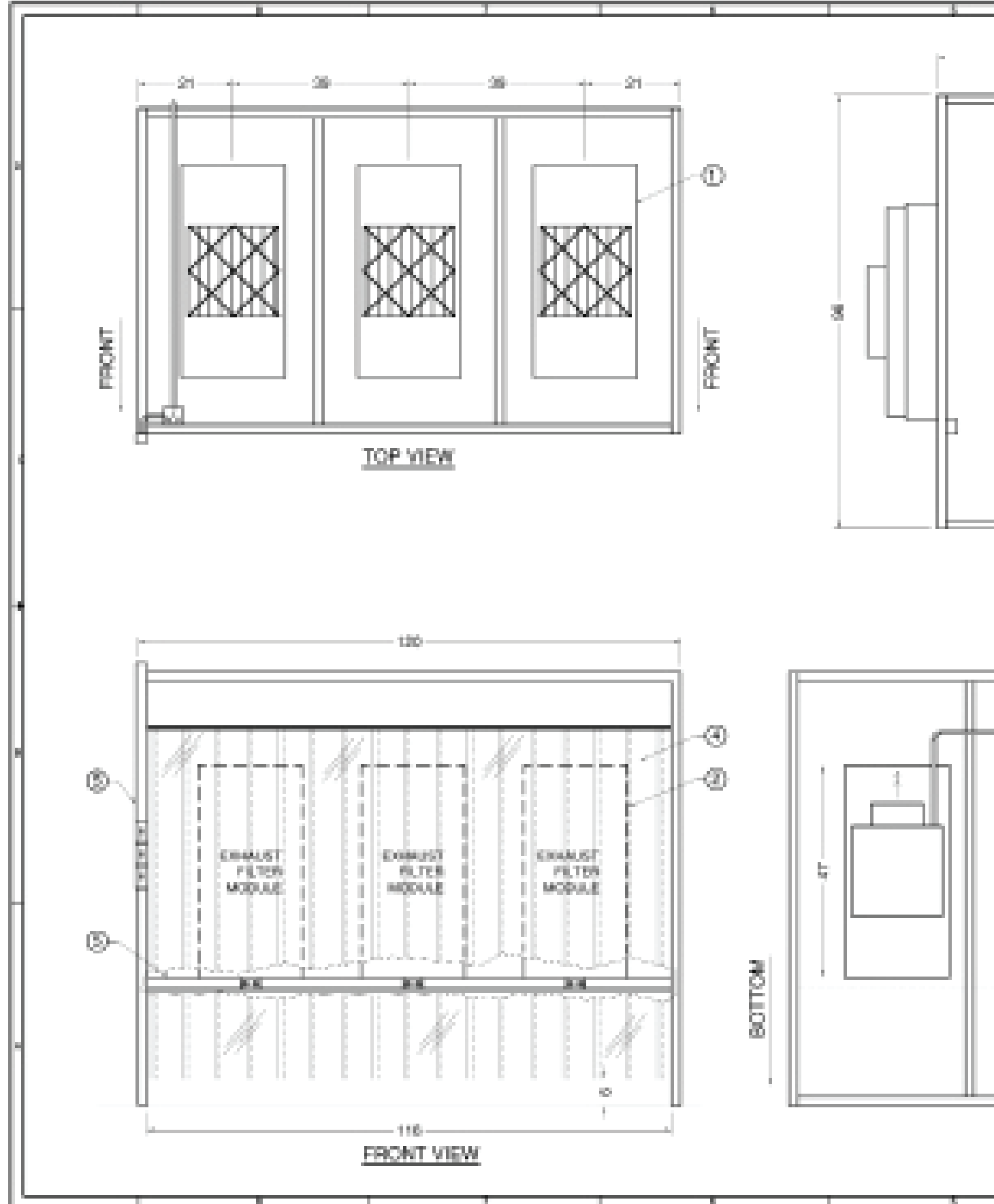


General System Description

CCS is constructed and equipped with:

- Modular Construction featuring wall panels that are 2" thick with chemical resistant composite resin surface skin panels.
- Structural framework to be clear of anodized aluminum extrusions.
- A rear varaflow baffle is mounted on the rear wall of hood.
- Top mounted exhaust collar(s).

Drawings:



Receiving and Inspecting Shipments

Transportation companies are responsible for shipment from the time that it is received by them until it is delivered. All shipments leaving our plant have been carefully inspected and loaded on the carrier's vehicle.

If a shipment arrives with the crating or packaging damaged, have the driver note the condition on the bill of lading and inspect the contents immediately for concealed damage. Due to the crate sizes and number of components HEMCO recommends that with **any** crate damage, even minor, that the bill of lading be signed for noting "crate damage...pending further inspection for concealed product damage"

If the equipment has been damaged in transit, immediately notify and file a claim with the carrier. Do not return to HEMCO. If this procedure is not followed, the carrier will reject the claim and the consignee will suffer the loss. Please notify HEMCO so that we may help you in anyway possible with evaluation, repair, replacement, and valuation of the damage that has occurred.

Preparation For Installation

- Read the Complete Manual
- Gather Required Tools/Equipment

Suggested Tool List

- Cordless screw driver/gun
- Forklift
- Gloves
- Thin flexible putty knife

Required Tool List

- 2 screwdriver
- 3/8 Open-end wrench
- Stepladders, 2 or more

2 or more people may be needed to safely construct the hood. Handle all contents with care, some parts may be sharp.

- Deliver components to erection site and segregate. Note identification markings on each panel and inside aluminum extrusions.

Note: Insertion of the wall panels into the base may be aided by utilizing a thin flexible putty or spackling knife to guide the panel into the track.

Note: Be very careful as sub-assemblies and wall sections can be very heavy, particularly the rear wall section. Use dollies or mechanical means to carry items over any distance.

Note: left and right would be determined by facing front of enclosure and the drawing set.

- Be sure wall panels are seated fully into the structural channels and plumb and square.
Secure with provided #10 sheet metal screws. **NOTE: Some pictures shown are from different but similar style projects.**

NOTE: Quick ratchet bar clamps to stepladder may be used to partially support the initial panel until other panels can be permanently secured.

Maintenance of the hood:

- For all composite surfaces use a general purpose non-abrasive cleaner, For glass surfaces use a formula glass cleaner. (Windex, etc.). For painted or powder coated metal surfaces use a general-purpose nonabrasive cleaner. For anodized surfaces use a general-purpose non-abrasive cleaner. For acrylic surfaces use a mild detergent and soft damp cloth
- Keep the horizontal door track clean and clear of obstructions to ensure movable door operation.
- Explosion proof light fixtures can accommodate 100 - 300 watt bulbs.
- Check to make sure that the duct and baffle slots are free of obstructions.
- Check exhaust for correct airflow on a yearly basis.

1 Year Warranty

HEMCO Corporation warrants this custom project to be free from defects in material and workmanship for a period of one year from the date of shipment.

Product manufactured and built to customer design and approved engineering drawing. Installation and use of product is by others and not covered by this warranty.

This guarantee is made expressly in place of all other guarantees or warranties, expressed or implied, with respect to quality, merchantability, or fitness for a particular purpose.

Laboratory Safety for Chemical Fume Hoods

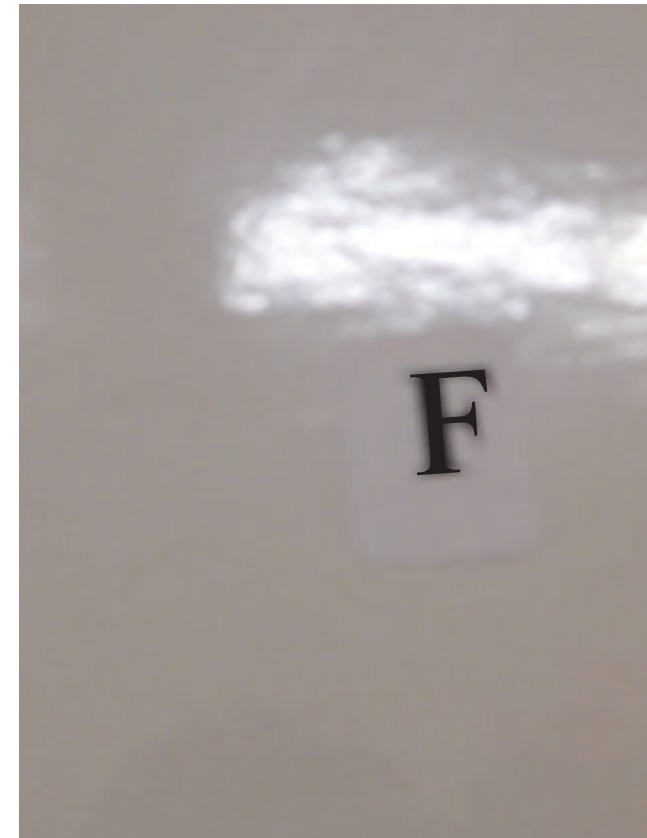
The Fume Hood is often the primary control device for protecting laboratory workers when working with toxic and/or flammable chemicals. OSHA's Laboratory Standard (29 CF 1910.1450) requires that fume hoods be maintained and function properly when used.

Before using the Fume Hood:

- Make sure that you understand the operation of the hood enclosure.
- You should be trained to use it properly.
- Know the hazards of the chemical you are working with; refer to the chemical (MSDS) Material Data Safety Sheet if you are unsure.
- Ensure that the exhaust system is turned on for operation.
- Make sure that the doors are closed for operation. The hinged doors are open only when equipment is being set up or when samples are being loaded.

When using the Fume Hood:

- Do not walk in or put your head inside the vertical plane of the hood door opening when fumes are present.
- Use appropriate safety protection.
- Be sure that nothing blocks the airflow through the baffles or through the air inlet grills.
- Elevate large equipment above the floor to allow air to flow underneath.
- Keep all materials inside the hood at least (8) inches from the door opening. When not working in the hood, or when a process is in operation, keep the doors closed.
- Do not permanently store chemicals inside the hood.
- Promptly report any hood that is not functioning properly to your supervisor. The doors should be closed and the hood "tagged" and taken out of service until repairs can be completed.
- When using extremely hazardous chemicals, understand your laboratory's action plan in case an emergency.
- Wipe up spills immediately.
- Minimize drafts and turbulence in front of the hood.
- Routinely validate airflow.



Note: Panels Are marked with Location Labels



Note: Bottom of Walls sit in an aluminum channel.



Attach Panel (Left Side Back Wall A) to (Back Wall B). Secure From back with #10 sheet metal screws.



Attach Panel (Left Side Front Wall A) to (Left side Back Wall A). Secure From back with #10 sheet metal screws.

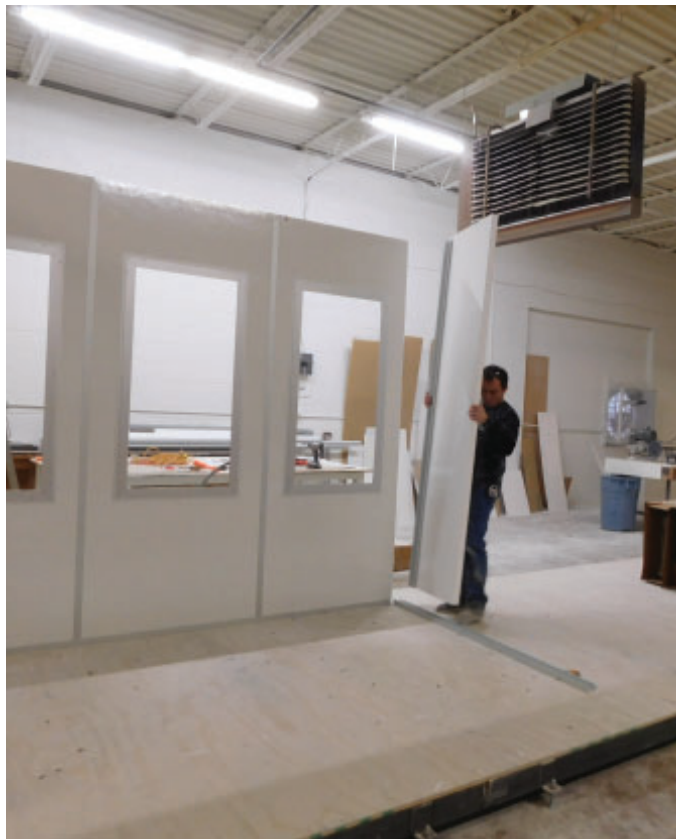
Notes:



Attach Panel (Back Wall C) to (Back Wall B). Secure From back with #10 sheet metal screws.



Attach Panel (Back Wall D) to (Back Wall C). Secure From back with #10 sheet metal screws.



Attach Panel (Right Side Back Wall E) to (Back Wall D). Secure From back with #10 sheet metal screws.



Attach Panel (Right Side Front Wall E) to (Right Side Back Wall E). Secure From back with #10 sheet metal screws.

Notes:



Brackets on top of Right and Left Front Walls for Headers to attach to.



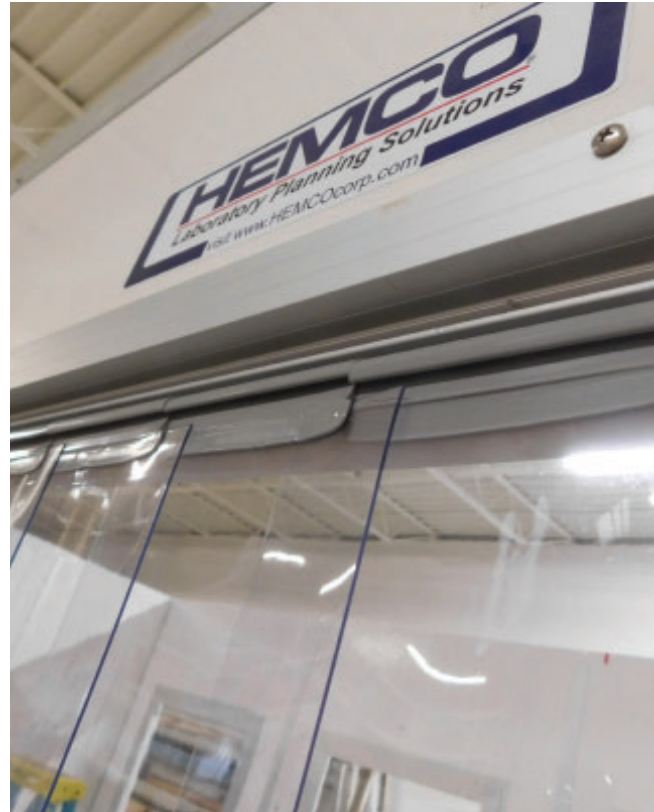
Attach (Header F) to top of Right and Left Front Walls.



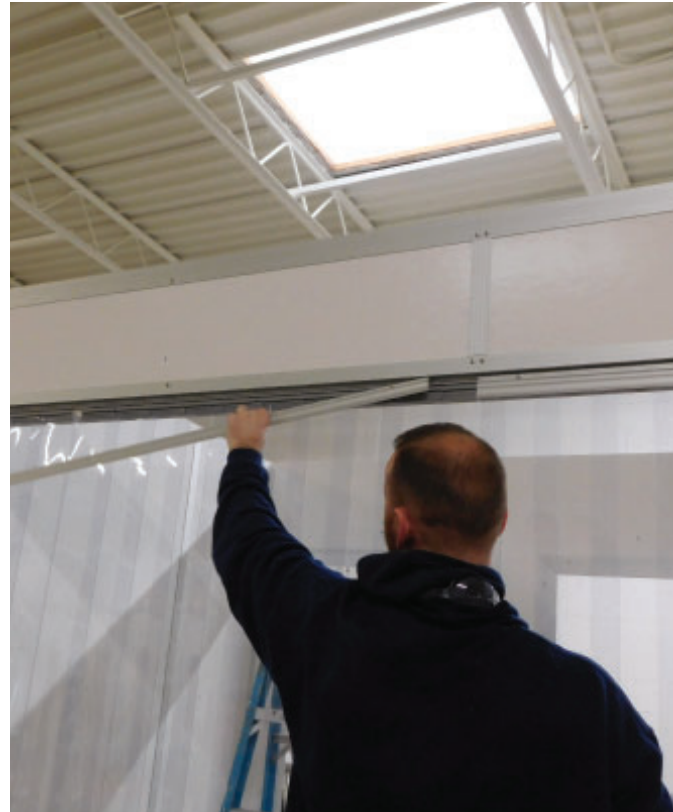
Secure from inside with provided #10 sheet metal screws.



Install aluminum channels to top of headers above door frame. Secure with provided #10 sheet metal screws.



Assemble Strip Curtains by inserting individual strips gray end into groove on bottom of Header.



Install Aluminum Covers (2) over tops of gray ends to keep in place. Secure with provided #10 sheet metal screws.



Install aluminum channels to top of Right Wall. Secure with provided #10 sheet metal screws.



Install aluminum channels to top of Back Wall. Secure with provided #10 sheet metal screws.



Completed Unit

- Seal any air gaps and joints of the enclosure not previously sealed with silicone sealant. Typical air gaps would be walls to ceiling, floor perimeter, etc.
- General clean up of site, installation of any other equipment, etc
- Note: All explosion proof electrical components are required to be wired by local certified electrician to comply with local codes.



Interior view of HEPA filtration ceiling



Mount covers (3) for HEPA filtration ceiling.



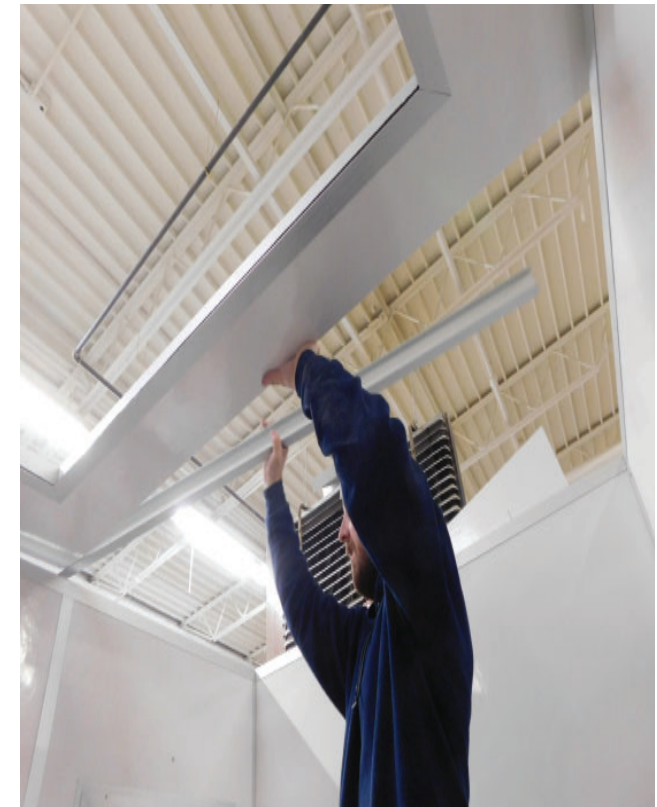
Install aluminum channels to top of Left Wall.
Secure with provided #10 sheet metal screws.



Install (Ceiling Panel D) into Aluminum channels on
top of walls. Secure with provided #10 sheet metal
screws.



Install (Ceiling Panel C) into Aluminum channels on top of
walls. Secure with provided #10 sheet metal screws.



Place Aluminum Channels between Ceiling Panels.



Install aluminum channels to top of Back Wall to secure Ceiling panels. Secure with provided #10 sheet metal screws.



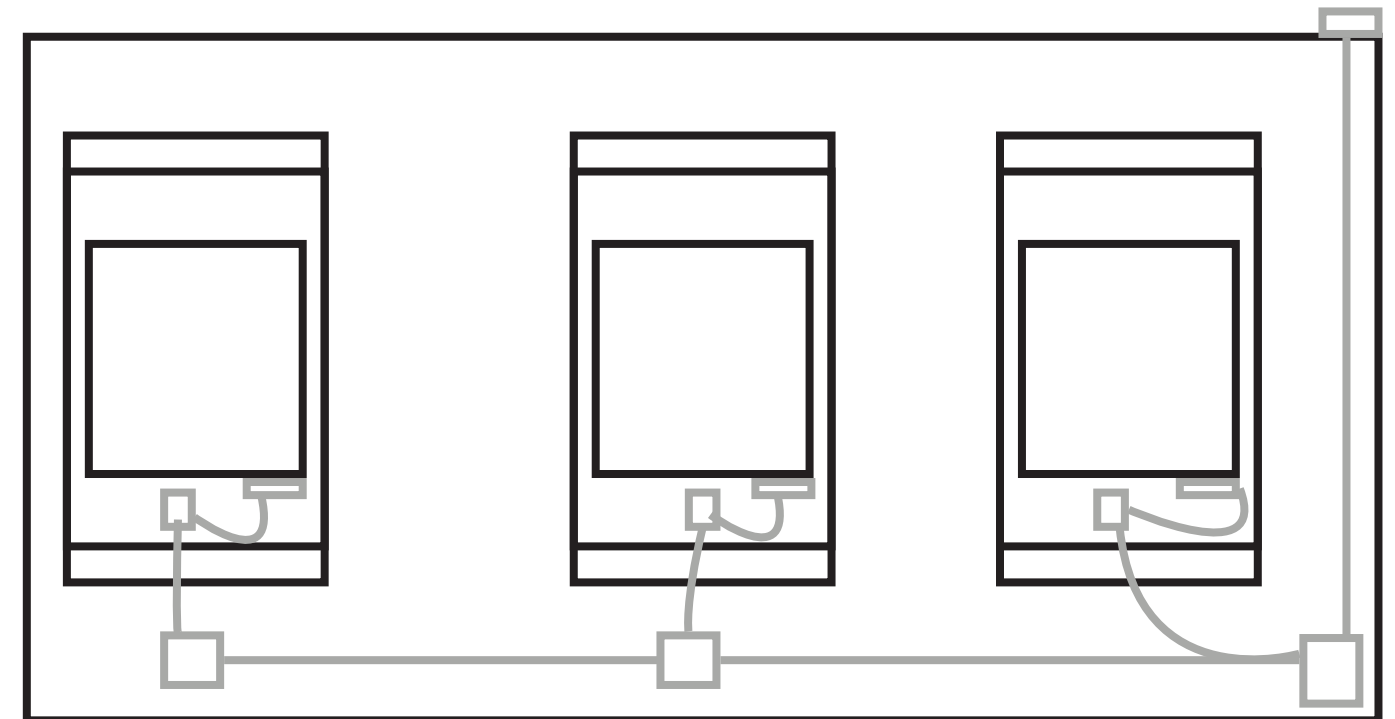
Install aluminum channels to top of Left Walls to secure Ceiling panels. Secure with provided #10 sheet metal screws.



Install aluminum channels to top of Front Wall to secure Ceiling panels. Secure with provided #10 sheet metal screws.



Install (Electrical Chase G) to (Front of Left Wall A) Secure with provided #10 sheet metal screws.



Top View of Conduit run on top of Hood.



Note: Electrical Box on back of HEPA filtration unit located on back.



Note: Electrical Box on back of HEPA filtration unit located on back.



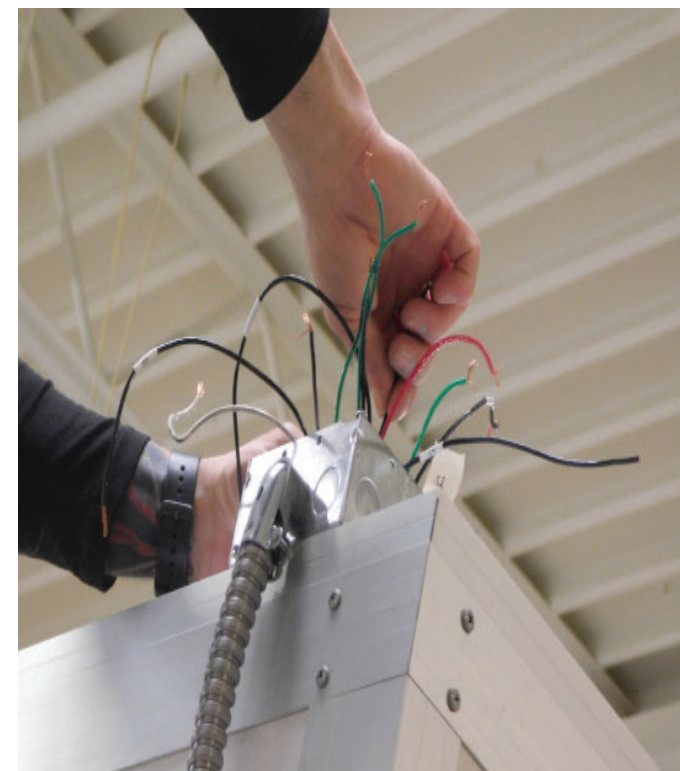
Install covers on front of (Electrical Chase G).



Install aluminum channels to top of Right Walls to secure Ceiling panels. Secure with provided #10 sheet metal screws.



Secure cover on junction box.



Note: Electrical Box on top of Hood located on back left corner.



Install (HEPA Filtration unit B) using a forklift to move it into place



Install (HEPA Filtration unit B) into place



Install (HEPA Filtration unit C) using a forklift to move it into place



Install (HEPA Filtration unit C) into place



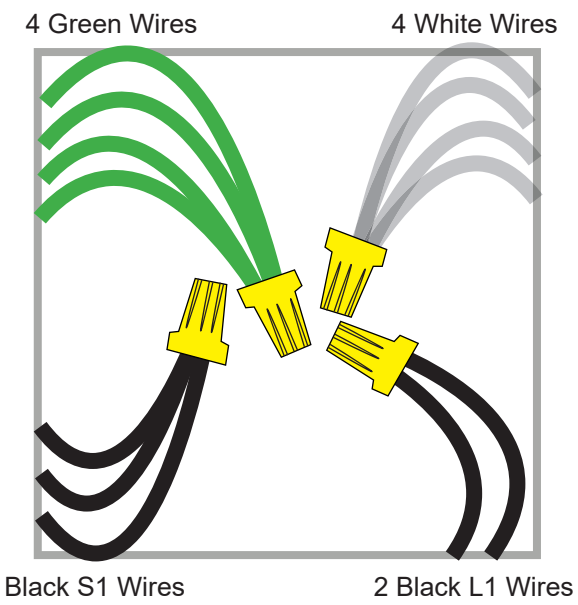
Install (HEPA Filtration unit D) using a forklift to move it into place



Mount prefilter covers for HEPA filtration back wall on inside.



Note: Electrical Box on back of Hood located on back right corner.



Wiring Connections in Back Box



Note: back view of conduit connections.



Installed (HEPA Filtration unit C).



Installed (HEPA Filtration unit D).



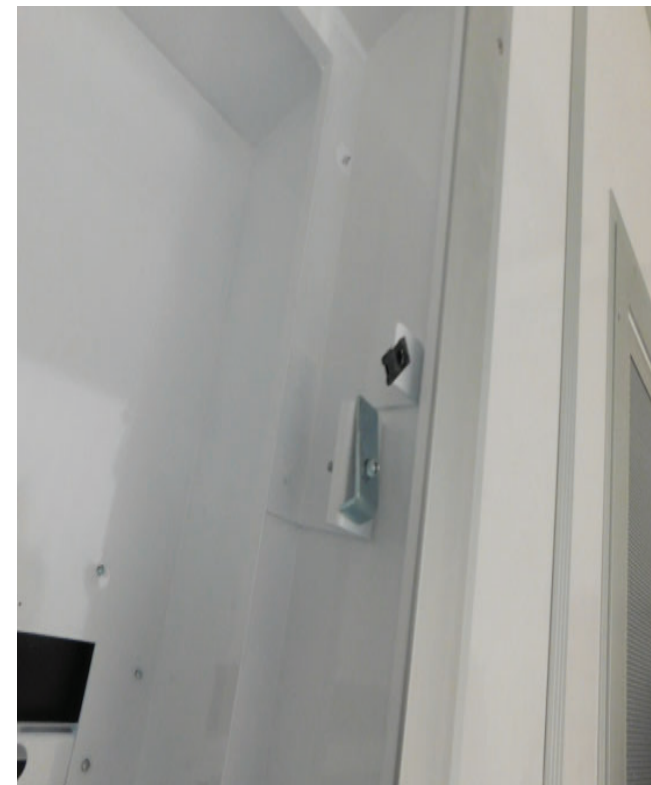
Install (HEPA Filtration unit D) into place



Detail from top view of (HEPA Filter unit).



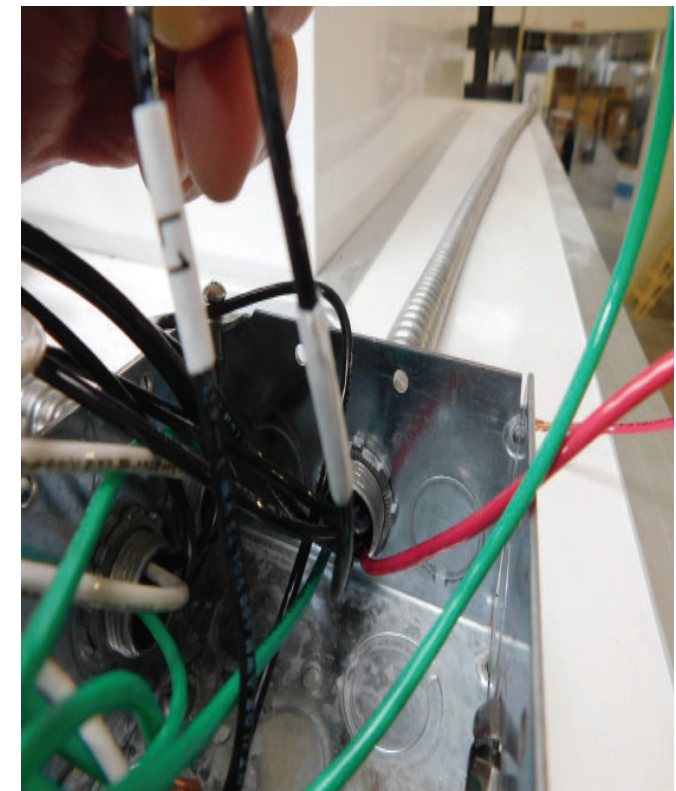
Interior view of HEPA filtration back wall.



Brackets to mount covers for HEPA filtration back wall.



Note: Electrical Box on top of Hood located on back left corner.



Note: Electrical Box on top of Hood located on back left corner.(note (2) L1 wires)



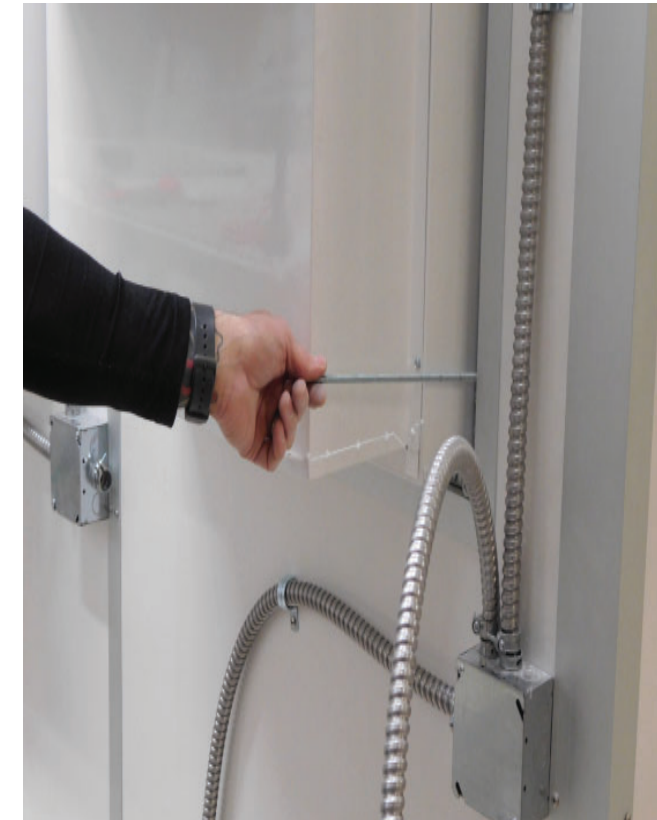
Note: Electrical Box on top of Hood located on back left corner.(note (2) L1 wires)



Detail from top view of (HEPA Filter unit).



Install (HEPA Filtration unit B) into back wall.



Install (HEPA Filtration unit B) attach using all thread.



Install (Electrical Chase) to back wall inside of hood. Secure with provided #10 sheet metal screws.



Install wires from electrical chase through back wall into electrical box on backside of wall.



Install (HEPA Filtration unit B) attach using all thread and brackets.



Installed (HEPA Filtration unit B).