

AirClean VFS-II

IAC INDUSTRIES

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VFS-II

Assembly Instructions

REV. (042318P65)

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Freight Claim Damage:

Your unit must be inspected for visible and concealed as soon as it is received. If the unit is damaged in any way by the carrier, including concealed damage, or because of miss handling during shipment you must file a freight claim with the freight carrier immediately. Taking pictures of any damage when the unit is received will help in documenting the type and extent of the damage and in freight claim process itself.

General Description:

All IAC AirClean Laminar Flow equipment is built to the highest standards of quality and workmanship to meet and perform to the standards of set forth in the IAC AirClean Operation Manual. IAC suggests you read this manual completely prior to assembly, installation and operation of the unit.

Customer Service Contact:

If for any reason you experience a problem with you AirClean unit please contact IAC Industries' customer service at 1-800-989-1422 and ask for technical service for AirClean units.



WARNING:

ALL PARTICLE BOARD USED IN IAC INDUSTRIES PRODUCTS ARE SOURCED ONLY FROM VENDORS THAT ARE CARB ATCM PHASE 2 AND TSCA TITLE VI COMPLIANT WITH VALID CERTIFICATES. Drilling, Sawing,

Sanding or Machining Wood products can expose you to wood dust, a substance known to the state of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask to other safeguards for personal protection. This product can expose you to chemicals, including formaldehyde, which is known to the state of California to cause cancer, and methanol, which is known to the state of California to cause birth defects or other reproductive harm. For more information please visit,

www.P65WARNINGS.CA.GOV/WOOD. COPY OF VENDOR CERTIFICATE AVAILABLE UPON REQUEST.

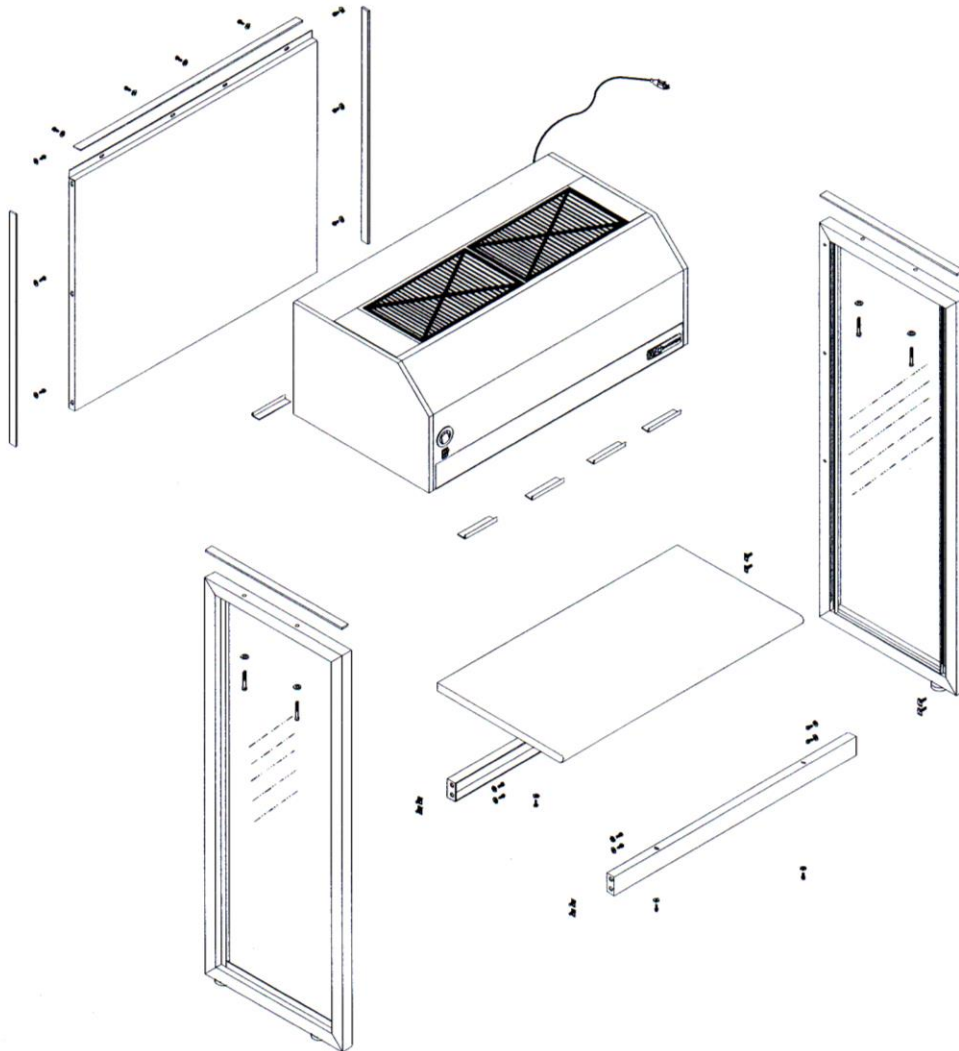
Unpacking and Installation:

All IAC AirClean units are packaged to factory specification which are approved by common carriers and insurance companies. Each AirClean unit is packed to stabilize movement during transit and is protected on all sides by a wooden create structure. Caution must be exercised when unpacking the unit.

After your unit has been transported to the point of assembly and inspected for any damage caused during transit, observe the following procedures:

1. Carefully remove the AirClean unit from its wooden create structure and examine it for damage.
2. Review all parts to be sure they are all accounted for.
3. Locate the hardware kits should be packed with the VFS-II uprights and the other items.

VFS-II AirClean Exploded View:



VFS-II AirClean Assembly:

Assembly of VFS-II AirClean units will take two to four people depending on how the unit is to be erected. Care must be taken during the assembly process to avoid damaging the unit, causing injury to the assemblers or damaging the surrounding area. IAC Industries is not responsible for injuries to assemblers or damage to the unit or the surrounding that may occur during the assembly process. If you have any questions regarding the assembly methods please contact IAC Industries customer service and ask for technical assistance for AirClean Units.

VFS-II Assembly

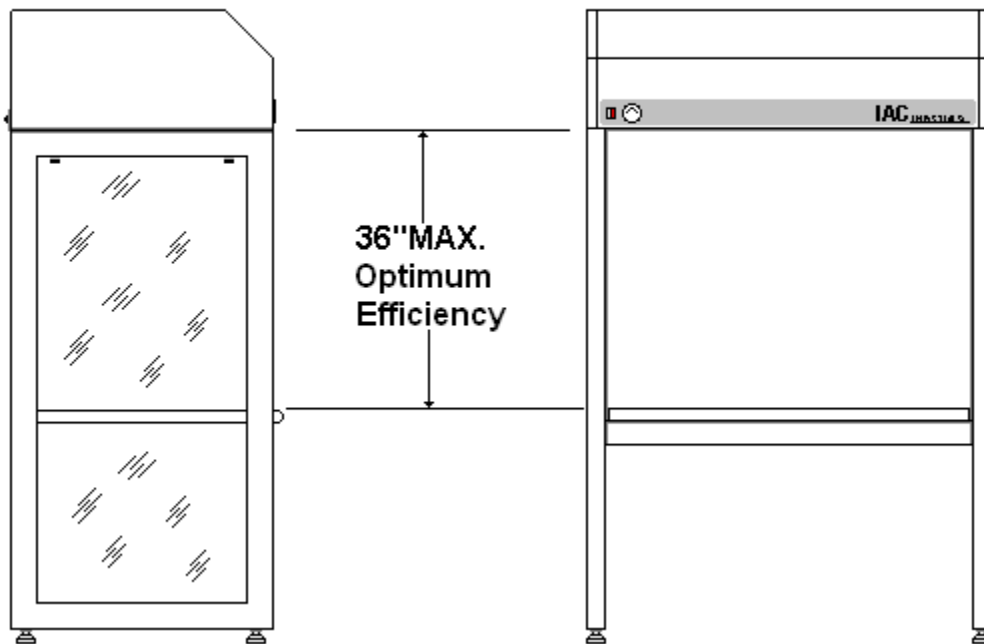
Item	Description	Qty.	Item	Description	Qty.
1	VFS-II Cabinet Sub-Assy	1	6	Beam Sub-Assy Front	1
2	VFS-II UPRT RT	1	7	Beam Sub-Assy Rear	1
3	VFS-II UPRT LT	1	8	Egg Crate Diffuser	3
4	VFS-II Work Surface STD / ESD	1			
5	VFS-II Back Panel with or w/o Elect	1			

Hardware Kit HWR240

Item	Description	Qty.	Item	Description	Qty.
A	Bolt 1/4-20x.75 Hex Head	22	F	Bracket VFS-II Egg Crate	8
B	Washer 1/4 Flat	22	G	Tape Foam Gasket 1/4x1.5x25'	1
C	Nut 1/4-20 Unistrut	8			
D	Bolt 3/8-16x 3.00 Hex Head	4			
E	Split Washer 3/8 Flat	8			

Before beginning the assembly of the AirClean unit the worksurface height needs to be determined. For optimum efficiency IAC recommends that the worksurface is placed no more than 36 inches from the bottom of the AirClean housing. The support beams will be installed 1.25" below the desired finished height of the worksurface.

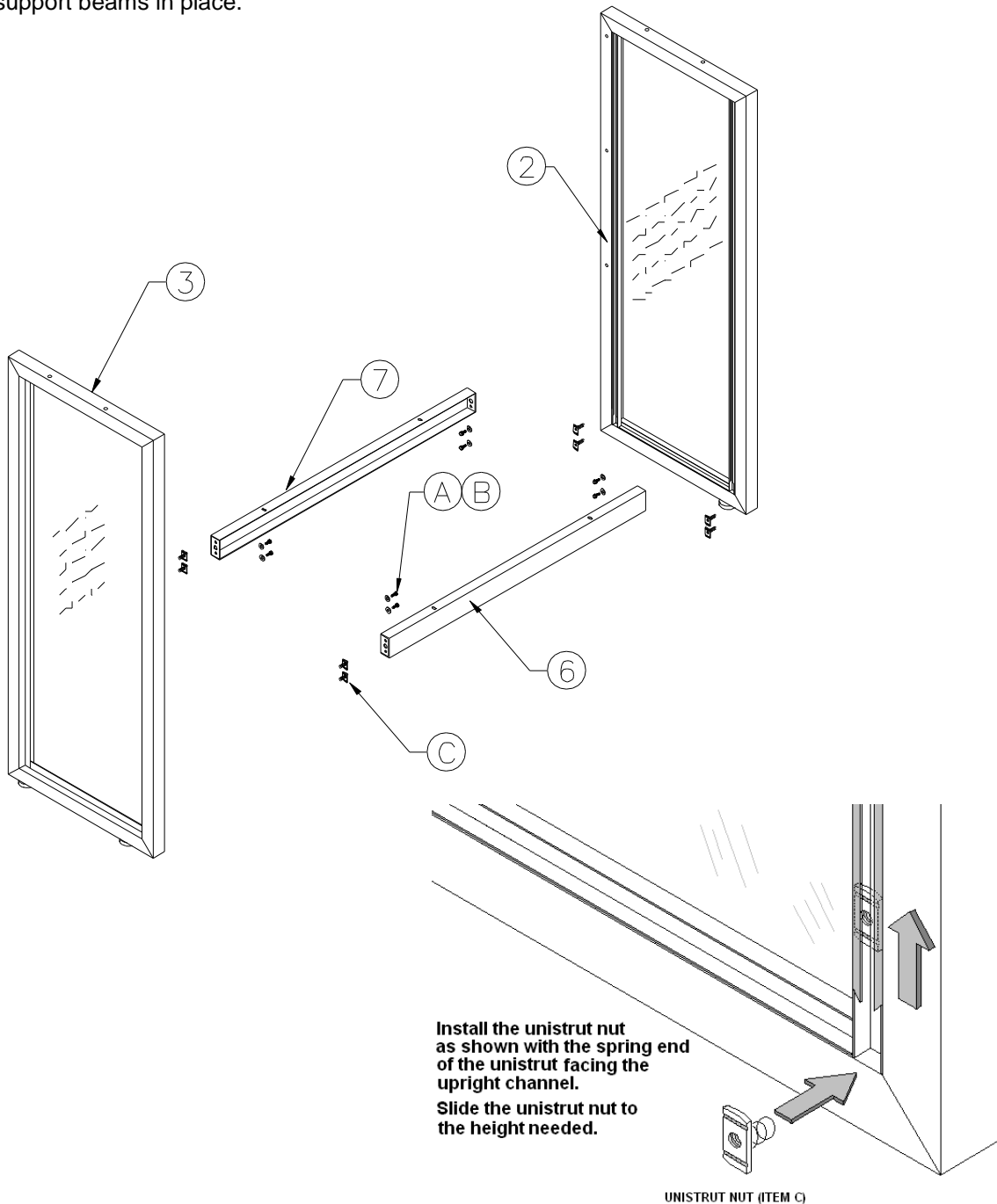
VERTICAL FLOW (VFS) AIRCLEAN WORKSTATION



VFS-II AirClean Assembly:

Step 1:

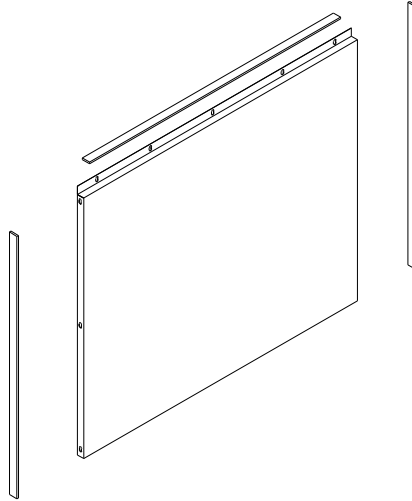
Install 2 each unistrut spring nuts into the opening of the upright sub-assembly nut channel located at the bottom as shown. Slide the unistrut nuts up the nut channels to the approximate desired support beam location. Adjustments can be made at a later time to position the worksurface at the desired finished location. Stand the two upright sub-assemblies up with the nut channels facing each other and with the threaded inserts for attaching the back panel at the rear. Install the two support beams by lining up the holes in the end of the support beams with the unistrut nuts in the upright assemblies and attach using the 1/4-20 x .75 hex head bolts item A and 1/4 flat washers item B. Tighten this hardware only enough to hold the support beams in place.



VFS-II AirClean Assembly: Cont:

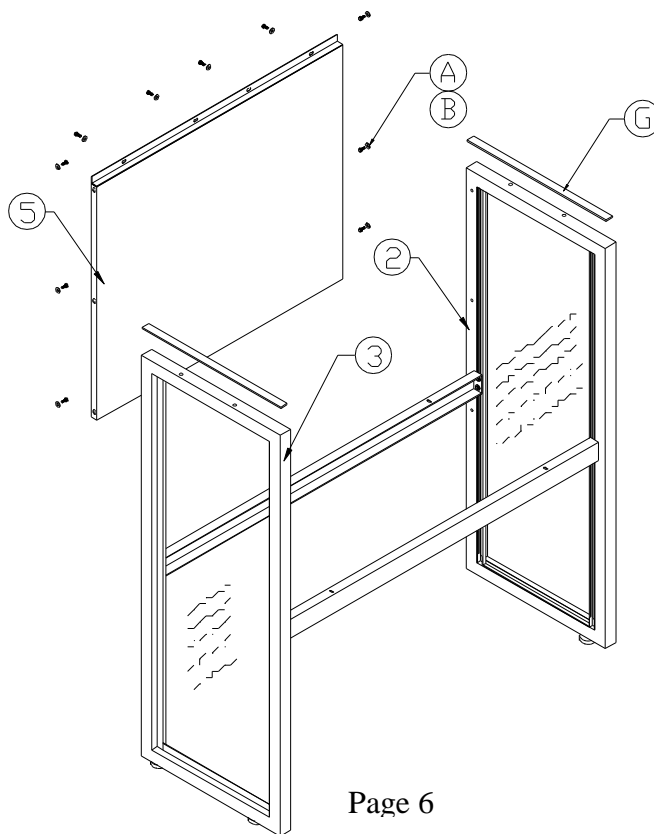
Step 2:

Install the foam gasket tape to the flanges on the sides and top of the back panel by cutting the tape to the length needed, removing the wax paper from the tape and sticking it to the back panel. Cut holes in the foam gasket where the mounting slots are so that the bolts will go through.



Step 3:

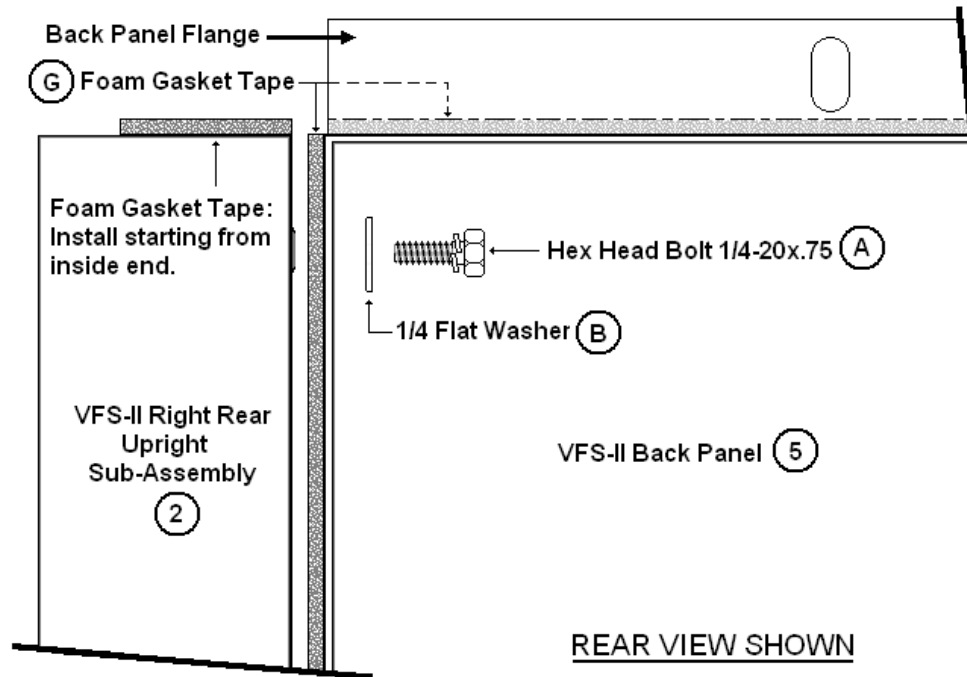
Align the slots in the side flanges of the back panel with the inserts in the upright sub-assemblies as shown and attach it using the 1/4-20 x .75 hex head bolts item A and 1/4 flat washers item B. Do not tighten hardware at this time. Install the foam gasket to the top of the upright sub-assemblies toward the inside half of the upright sub-assembly tubes as shown. Cut holes in the foam where the mounting holes for the AirClean housing are located.



VFS-II AirClean Assembly: Cont:

Step 4:

When all bolts are installed in the back panel raise the back panel up so that the top of the back panel flange is flush with the top of the uprights sub-assemblies and the foam gasket is above the top of the upright tubes. Tighten the bolts at the top of the back panel only.



Step 5:

Carefully raise or lower the support beams to the desired worksurface height minus 1.25" and tighten support beam hardware. Do not over tighten. Do not install the worksurface at this time. Tighten the bolts on the back panel at this time. Clean and wipe down all the exposed surfaces of the inside of the frame system at this time using lint free cleaning materials and alcohol or a non adhesive solvent such as 3M Scotch-Grip Solvent No. 4-F.

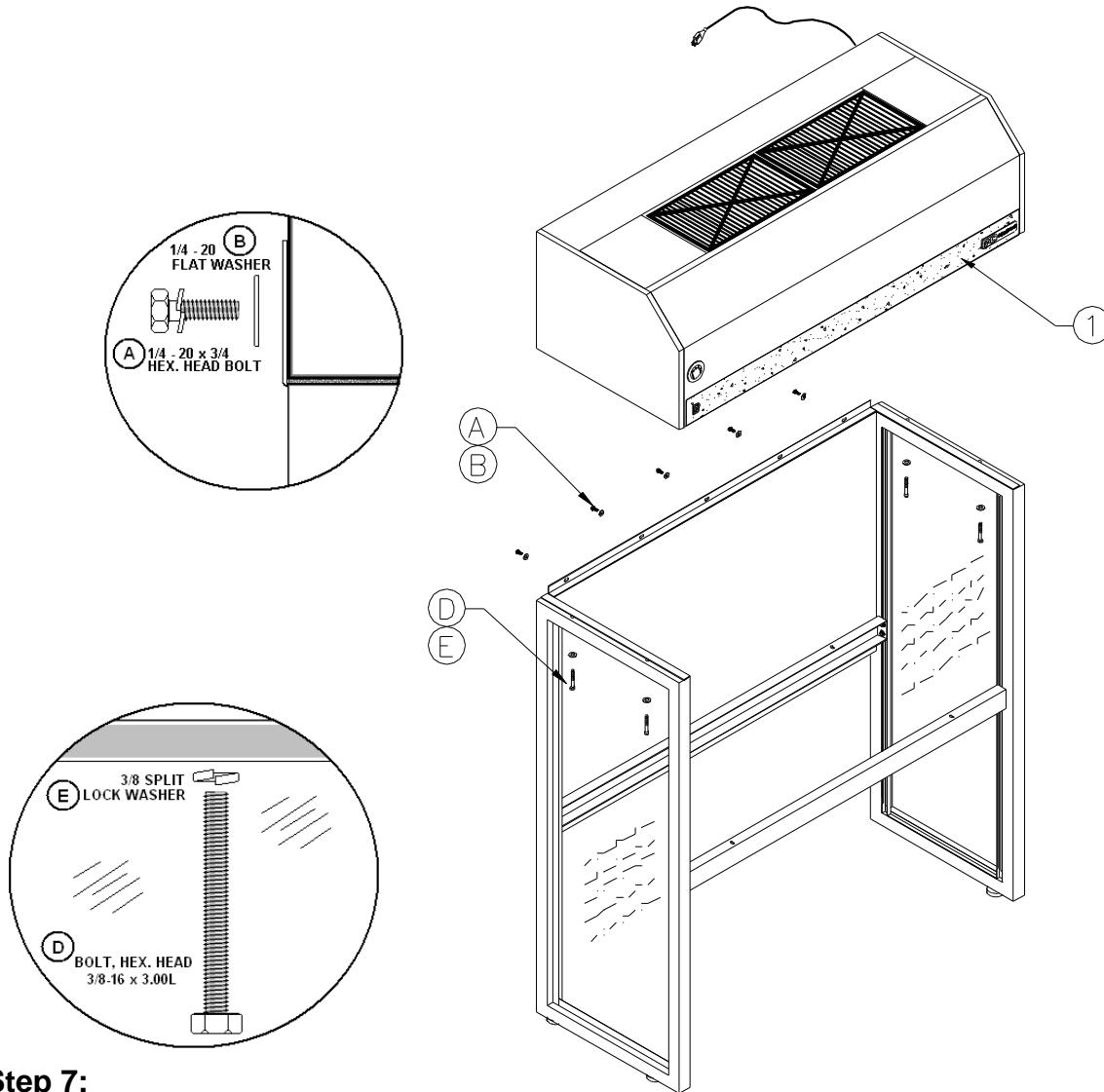
Cautionary Notes and Warnings:

At this point of the assembly it is very important that every precaution possible is taken to make sure no individuals are injured and that there is no damage to the AirClean housing itself or surrounding property. IAC strongly recommends the use of powered lifting equipment such as a forklift or similar device. The lifting device must be positioned correctly so that it does not damage the AirClean housing. Extreme care must be taken during the lifting and positioning of the AirClean housing. The AirClean housing must be protected from possible damage caused by the support systems of the lifting device. Only qualified lifting device operators should be allowed to lift the AirClean housing into place. Failure to use proper lifting equipment and expertise could result in injury to assisting individuals, the AirClean housing and/or surrounding property. IAC Industries is not responsible for any injuries sustained or damage to the AirClean housing and it's contents and/or damage to surrounding property caused during the proper or improper assembly of the AirClean unit.

VFS-II AirClean Assembly: Cont:

Step 6:

Using the proper lifting device carefully place the AirClean housing onto the lifting device supports and secure it as needed. Protect the AirClean housing from damage by placing some kind of padding on the lifting device supports as needed. Carefully lift the AirClean housing and position it above the upright assemblies aligning it as closely to its final resting place as possible. Slowly lower the AirClean housing onto the upright assemblies being sure that no part of the lifting device supports come in contact with the AirClean framing. Depending on the length of the lifting device supports it will be necessary to place the AirClean housing onto the upright assemblies and then manually move it into its final position.



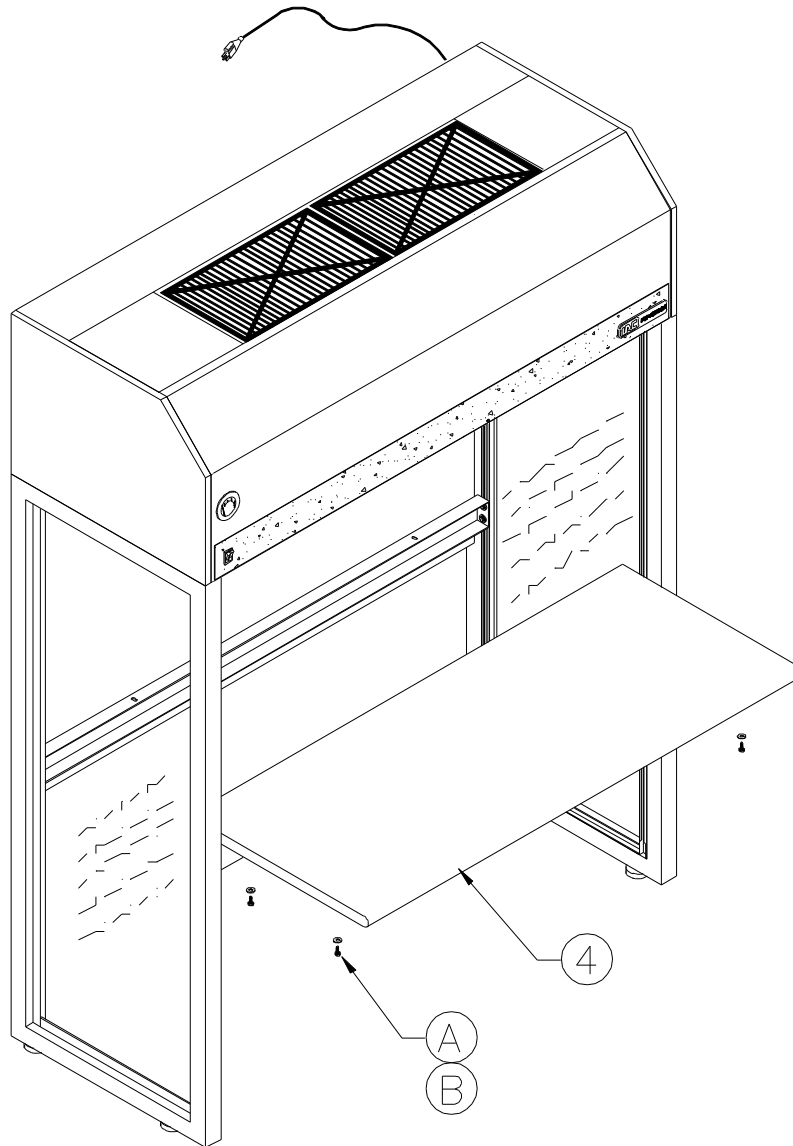
Step 7:

When the AirClean housing is in place attach it to the upright assemblies by feeding the 3/8-18 x 3 bolts item D and 3/8 split washers item E through the holes in the upright assemblies and threading them into the AirClean housing. Do not tighten these bolts. Attach the back panel to the housing using 1/4-20 x .75 hex head bolts item A and 1/4 flat washers item B. When all hardware is installed tighten the bolts in the back panel and then the bolts in the upright assemblies.

VFS-II AirClean Assembly: Cont:

Step 8:

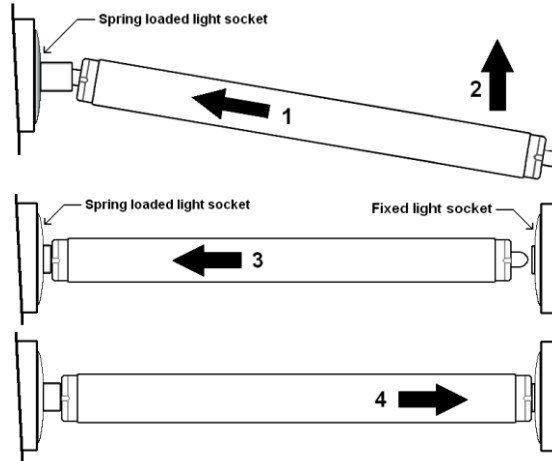
Install the worksurface item 4 by carefully placing the back of the worksurface onto the front support beam of the AirClean frame and very carefully sliding it onto the rear support beam. The worksurface must be pushed against the back panel of the AirClean frame. Attach the worksurface by threading the 1/4-20 x .75 hex head bolts item A and 1/4 washers item B into the threaded inserts in the bottom of the worksurface. Tighten these bolts only after all hardware is installed. Do not over tighten.



The surface cleans easily with a damp cloth and soapy water. A mild chemical cleaner with no abrasives can be used for stubborn spots. Remove glue and grease with a non-flammable adhesive solvent such as 3M Scotch-Grip Solvent No. 4-F.

VFS-II AirClean Tube Installation:

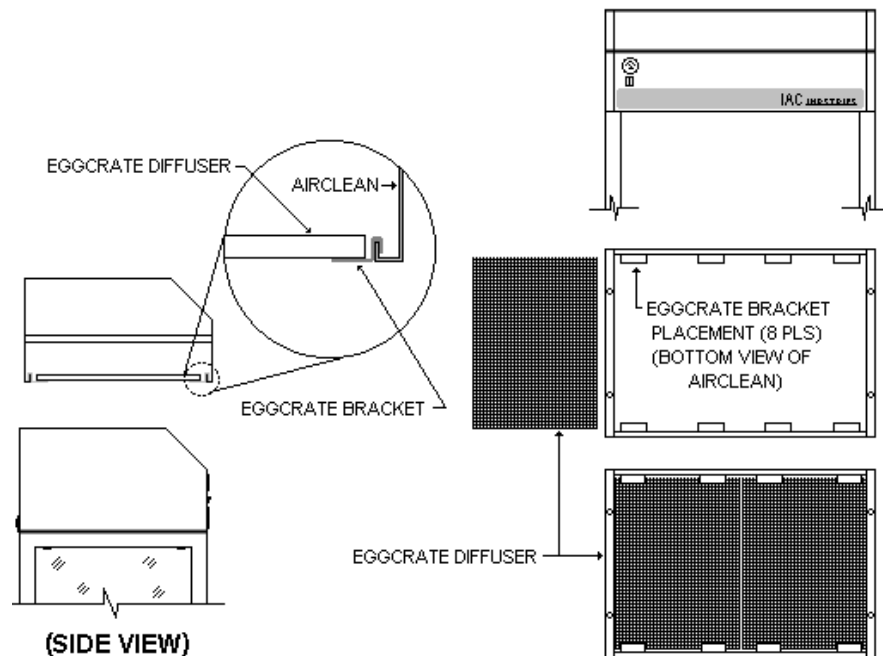
Install the light tubes by installing the left end of the tube into the spring loaded light socket found on the inside of the unit at the left end and pushing the light tube to compress the spring loaded socket. Lift the right end of the light tube and place it into fixed socket on the right side of the unit. Carefully release the compression on the spring loaded socket so the tube slides into the fixed light socket.



Recommended light tubes are F(xx) T8/TL841 PLUS . The "xx" refers to the nominal length of the light tube which must correspond to the nominal length of the VFS-II AirClean unit.

VFS-II AirClean Diffuser Installation:

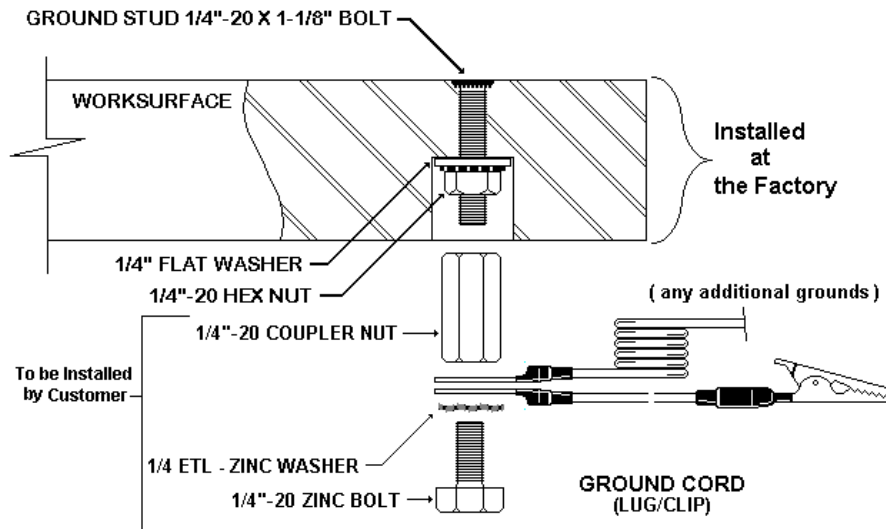
Install the egg crate diffusers by installing eight egg crate brackets to the AirClean inside lip as shown below. Install the egg crates diffusers as shown.



ESD Ground Attachment

Hardware Kit HWR014

ESD refers to the OPTIONAL static dissipative laminate used on the bench. The laminate has a conductive material that comes in contact with the factory installed grounding bolts in the worksurface. The ESD grounding kit, including the 10 ft grounding wire must be properly grounded to your facility earth ground. (See below for grounding cautions!) The eyelet slips over the bolt end and the alligator clip attaches to ground. When tested with a meg ohm meter the ground bolts should measure $1 (1 \times 10^6)$ to $1000 (1 \times 10^9)$ in accordance with EOS/ESD standards prescribed in EOS/ESD document S4.1-1990 Worksurface-Resistive Characterization. For specific details on grounding the bench consult EOS/ESD document S6.1-1991 Grounding - Recommended Practice.



GROUNDING CAUTIONS:

- 1.) Ground each bench individually to ground, NEVER to each other in a continuous daisy chain.
- 2.) ISOLATED ground receptacles should not be used to derive an ESD ground.
- 3.) The green wire in a standard wall duplex can be used if it has been absolutely determined that the green wire is attached to earth ground in your facility, thereby providing a real earth ground.
- 4.) Each component of an ESD station should be connected to the same common ground point. In other words, use only ONE of the ground bolts as a path to ground. There are 2 installed for convenience only, or in the event you purchase a continuous resistance monitor.
- 5.) DON'T use power tools to install the nuts for the grounding kit. HAND TIGHTEN ONLY. If you attempt to spin the ground bolt, the serrated teeth under the head of the bolt might strip the thin conductive layer.

NOTE: If benches are moved to another location, the ground bolts in the Worksurfaces should be re-tested. Refer to EOS/ESD document S4.1-1990 Worksurface-Resistive Characterization for proper testing methods. If ground has been distributed between the bolt and the static dissipative laminate, DO NOT OVER TIGHTEN ground bolts to achieve proper ground. If ground cannot be reestablish loosen nuts underneath bolt and remove ground bolt from hole. It may be necessary to hold the threads of the bolt with a small screwdriver in order to stabilize it to remove the nuts. Paint a thin layer of CONDUCTIVE ADHESIVE or CONDUCTIVE PAINT on the small "ledge" of conductive laminate where the bolt head rests and underneath THE HEAD of the ground bolt. Set bolt back into the while liquid is still wet and test ground immediately. At the point ground is reestablished, let the liquid dry before reattaching the ground wire.