



# White Paper

## Disassembling the Performance Climate Changer™ Air Handler - Model UCCA

### Executive Summary

While our Performance Climate Changer air handler model UCCA is smaller than our model CSAA, there are still space-restricted areas that require the unit be disassembled to get into the space. It is critical to follow step-by-step instructions to minimize risk of incorrect assembly and reduce the amount of labor involved.

### Problem

There are often instances that will require the equipment to fit through tight spaces in the building before it gets to the intended installation location. This becomes a greater challenge as the number of retrofits increase.

### Solutions

On the Performance air handler UCCA, if a mixing box or mixing box with filter is ordered, it will ship separately from the unit. If a flat filter is ordered, it will ship attached to the unit. The main section of the unit is a fan and coil. There cannot be a shipping split for this section. If this section is still too big to get through the access area, the air handler will have to be broken down to some extent to accommodate the space requirements.

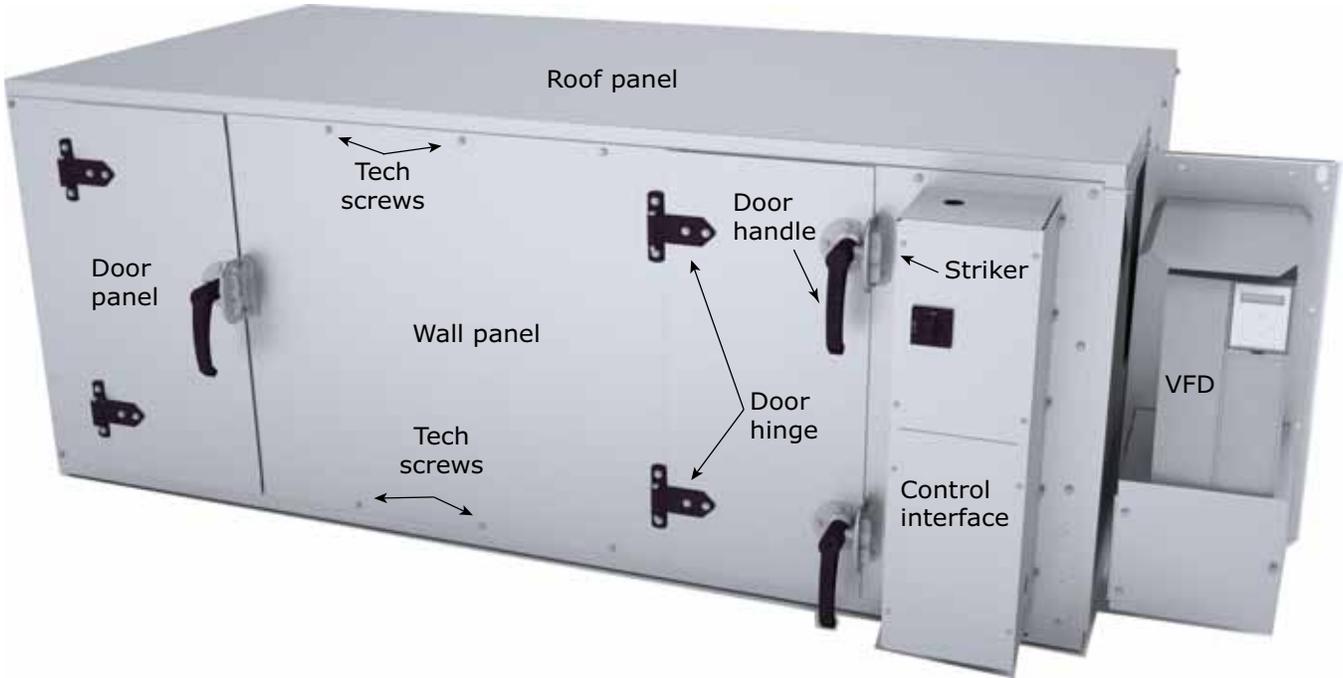
### Performance UCCA Air Handler Disassembly

There are some key points to remember before attempting to disassemble a Performance UCCA air handler.

- Plan your work prior to beginning.
- Mark the panels before disassembly begins. A sticker could be applied and a unique number written.
- Make a quick sketch of the layout of the unit with the numbers of the panels listed in relation to airflow.
- Be careful not to strip the sheet metal on the panels when removing and attaching tech screws. In the event the metal strips out, change affected fastener to a larger tech screw. The standard tech screw is 10-16 x 0.75 self driller (5/16-inch hex head).

If you follow these steps prior to performing the unit breakdown, you will minimize the man hours it will take, plus eliminate confusion of assembling unit.

## Common Terminology Used for Performance UCCA Air Handler



### Roof Panel

Remove 5/16-inch hex head tech screws that are used to attach the roof panel to the side walls and/or center of unit (COU) wall along the perimeter of the panel.

Figure 1. Remove roof panel



### Tech Screw Details

Figure 2. Top corner of unit



Figure 3. Bottom of unit



## Low Voltage Harness

If low voltage harness is installed loosen the metal clad tape that is holding on the panel to free harness for removal. This is important to eliminate possible damage to the harness while removing roof.

Figure 4. Remove low voltage harness



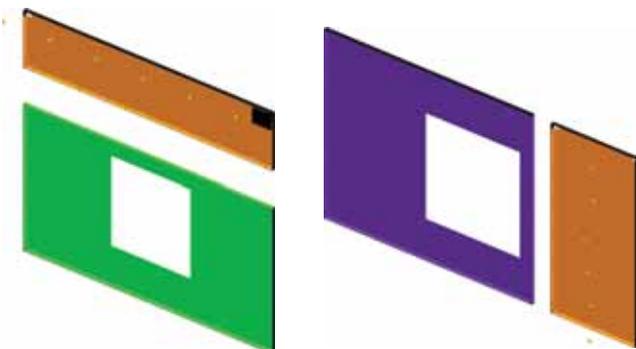
## Internal Walls and Blockoffs

Remove screws on internal components that are attached to the walls and roof panels from the inside of unit.

Figure 5. Filter blockoff      Figure 6. Coil blockoff



Figure 7. DDP fan COU panel



## Roof Panel

Once tech screws are removed from perimeter of the roof the panel can be lifted off.

Figure 8. Lift the roof panel off

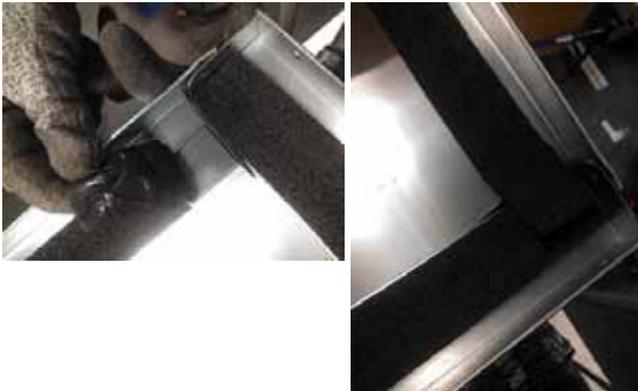


There is gasket along top of the unit at the COU panel and wall panels. The gasket should be in good condition to be reused, but if not, the gasket will need to be replaced. The door flange will have gasket along top and bottom as shown above and not on the top like wall and COU panels.

Figure 9. Replace gasket if needed



Figure 10. Gasket details at top corner



## Wall Panels

Remove tech screws from the wall panels along the perimeter of the panel. 5/16-inch hex head along bottom and sides of panels.

Figure 11. Remove the wall panels



## Base Panel

Figure 12. Base panel with wall and roof panels removed.



## Fan Removal

### **⚠ WARNING**

#### **Hazardous Voltage!**

Failure to disconnect power before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized.

The second level fan section of a vertical unit can be removed to maneuver the unit into the space. Removal will require field-supplied lifting lugs (part # LUG00180).

1. Remove screws located in front and rear panels of second level fan portion.

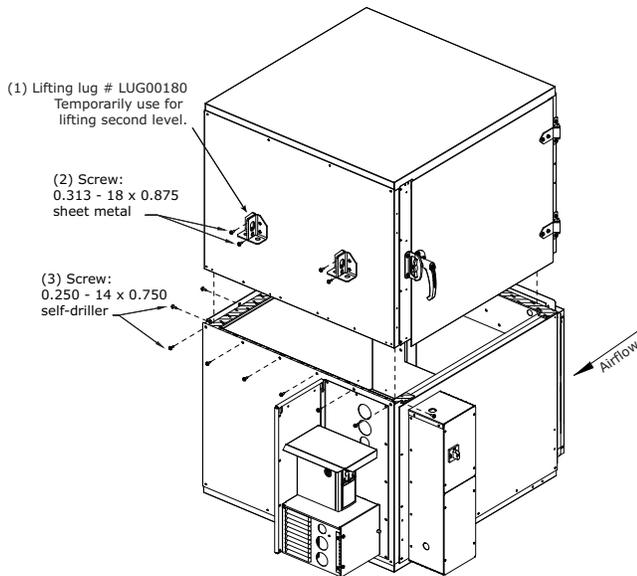
### **⚠ WARNING**

#### **Risk of Unit Dropping!**

Do not use skid tie down brackets to lift the unit. Tie down brackets are designed only to secure the unit to the floor, housekeeping pad, or platform. Improper use of the tie down brackets could result in unit dropping and crushing technicians which could result in death or serious injury, and equipment damage.

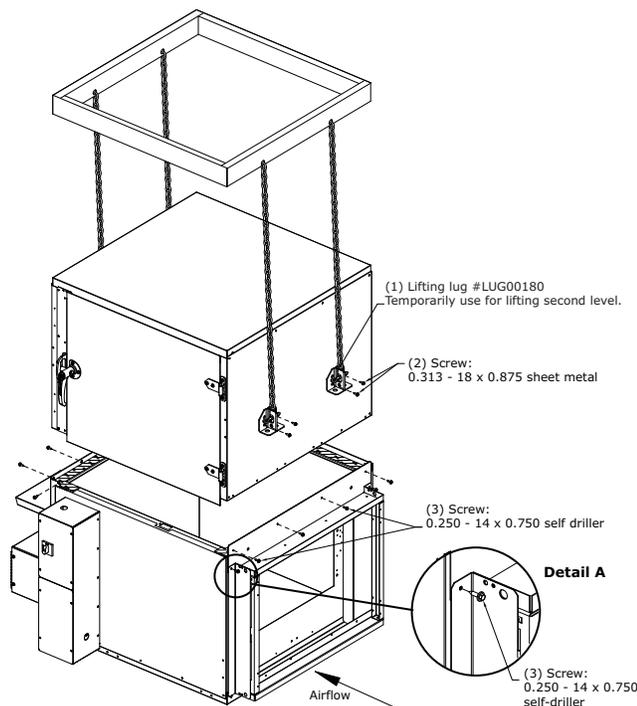
2. Install four lifting lugs. Install two on front panel and two on rear panel of second level fan using screws. See [Figure 13](#).

**Figure 13. Install temporary lifting lugs**



3. Use field-provided spreader bars and slings to rig as shown [Figure 14](#). Straps can be used but careful consideration must be taken not to damage equipment panels.

**Figure 14. Use spreader bars to lift top unit**



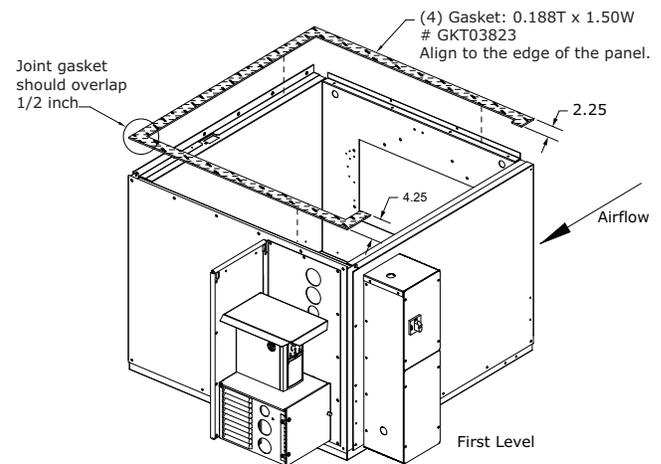
4. Remove screws around parameter lip where second level is attached to first level.

5. If unit is equipped with optional filter rack, insert screws in vertical flanges on each side of the filter rack (See detail A in [Figure 14](#)). Screws installed to support filter rack are temporary and must be removed after reassembly.
6. Lift second level fan portion vertically to clear perimeter lip on first level top panels.

Repeat steps 1-6 in reverse order to reinstall second level fan portion on the first level portion of unit.

Lifting lugs should be removed once reassembly is complete. Check gasket between the two sections. In the event the gasket between the two sections is damaged, replace with new gasket (Part # GKT03823). See [Figure 15](#).

**Figure 15. Replace gasket between sections if necessary**

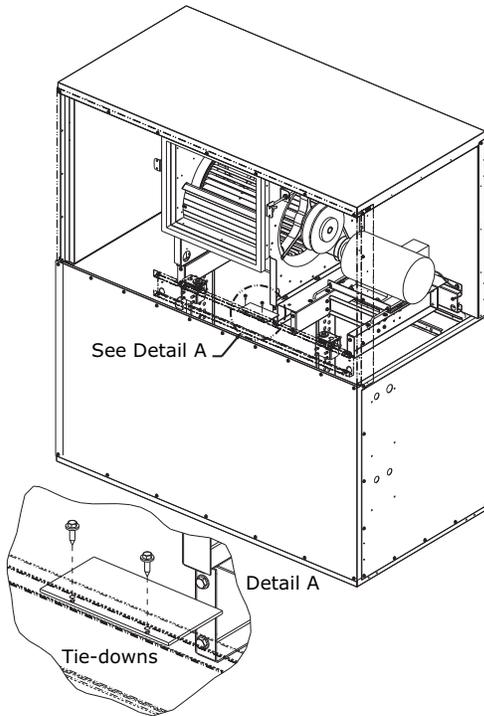


*Note: If unit is equipped with a control interface, VFD or electric heat, disconnect electrical wiring. Wiring between fan motor and contactor or VFD can be disconnected via quick connects in the control interface or VFD box respectively. Electric heat wiring should be disconnected from switch in control interface box. Any controls low voltage end devices located in second level fan portion should be disconnected via quick connects at each device.*

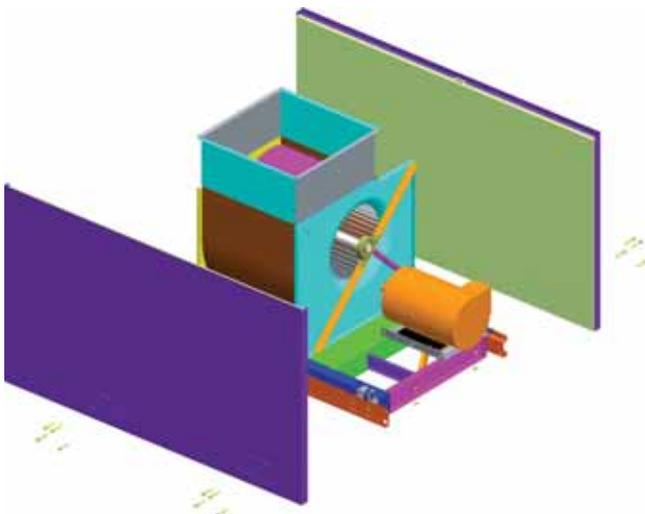
### Vertical Fan Removal from Walls

1. Remove screws attaching shipping protection brackets from center of isolation base to casing mounting bracket.
2. Remove shipping protection brackets through door.

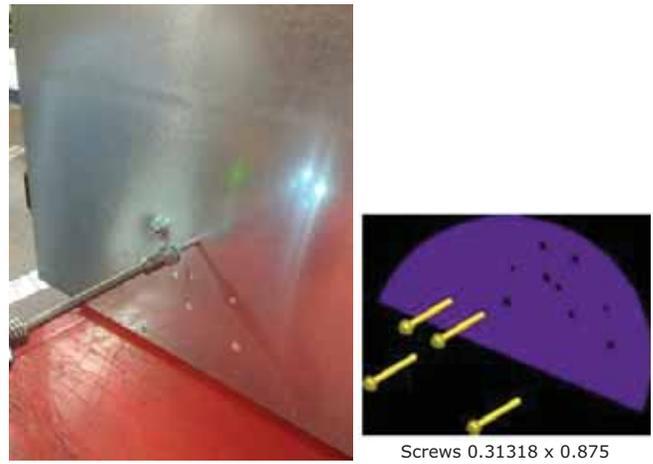
**Figure 16. Remove screws attaching shipping tie-downs**



**Figure 17. Isolation channels**



**Figure 18. Remove screw to remove isolation bracket**



Remove any screw ties from the walls that might be supporting high voltage wiring harness prior to removal of interior ½-inch screws on isolation channel.

**Figure 19. Remove screw ties holding high voltage wiring harness**



The walls and fan need to be supported when the ½-inch screws are removed.

*Note: Caution the walls will fall if not supported during the removal of screws.*

**Figure 20. Support walls to prevent falling**



## Electrical Component Consideration

There are many different electrical components that may have to be removed during disassembly. Only qualified electrical personnel should work with electrical components.

Low voltage harnesses are labeled, but distinguishable markings should be added where multiple harnesses exist such as electrical tape. This will eliminate the chance for cross wiring.

## Final Steps

- Remove all the remaining wall panels.
- Replace any damaged gasketing
  - Foam gasketing 0.188T x 1.50W (GKT03823)
- Reassemble in the reverse order as the instructions above. Remember to start with panels on one side to use as a guide and structural support for the internal components that are added next.

## Action

If space constraints are an issue, it's important to be proactive early in the ordering process to determine how best to get the air handler to fit into the space.

Determine the size of the space that the air handler will have to fit through in the building, including hallways, elevators, stairs, doorways, etc.

If the unit must be broken down at the job site, it is important to follow the method described in this White Paper to minimize risk and reduce the amount of labor involved.

### **WARNING**

#### **Live Electrical Components!**

Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury. When necessary to work with live electrical components, have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks.



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