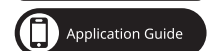




GridSet Pro Hard Ceiling Mount Unit

Installation, Operation & Maintenance Manual



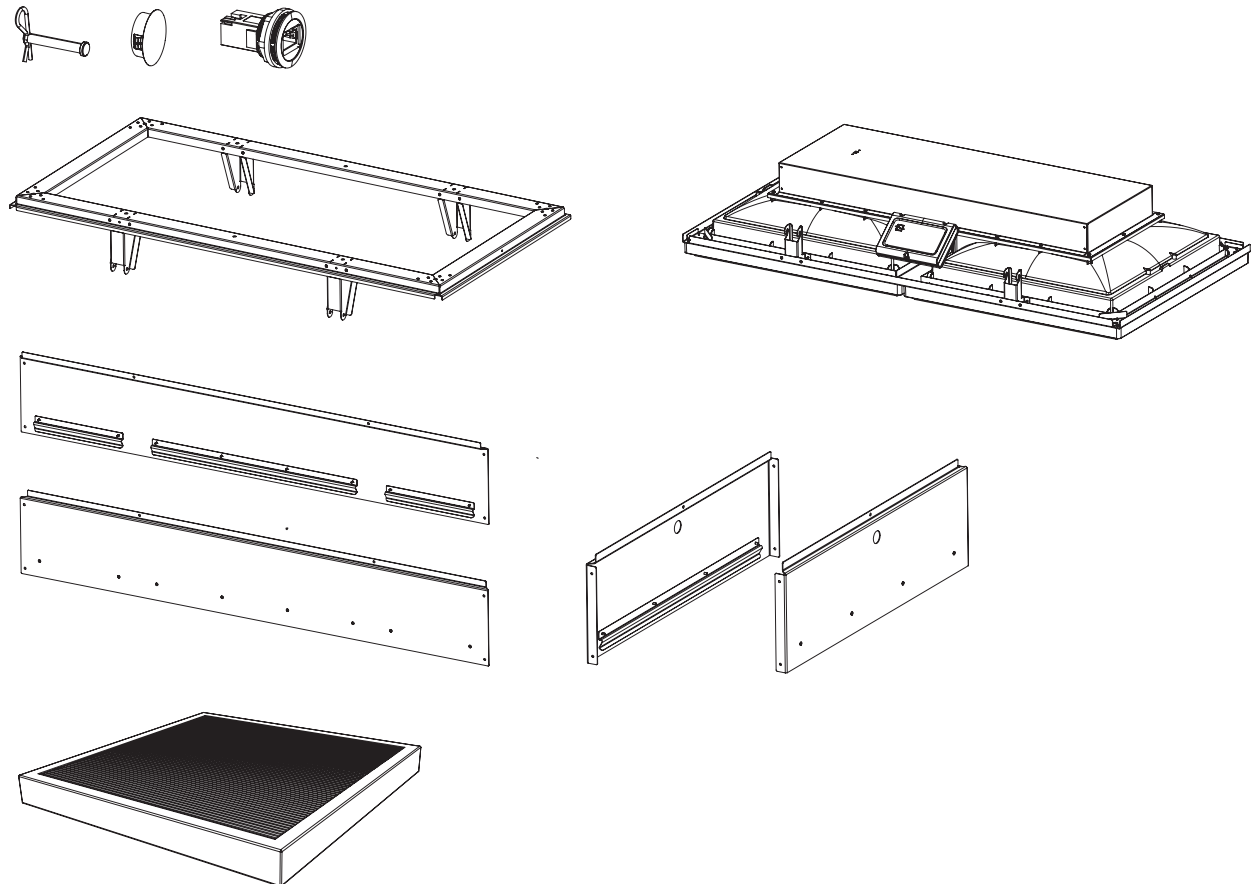
Please read entire manual before use.

Thank you for purchasing a smartIAQ® GridSet™ from GPS Air.

What's Included

Before you start, confirm the contents of your shipment. Each smartIAQ GridSet (GridSet) will consist of the following:

1. GridSet Ceiling Mount
2. Lower frame with GridSet
3. One CompleteAQ Filter
4. 2 End Panels
5. 2 Side Panels
6. 4 Clevis Clips
7. Internal Cat 5e Cable
8. RJ45 Port Connector
9. Fasteners for assembling enclosure
10. Installation, Operation & Maintenance Manual.



What's Not Included

The following items are required and can be purchased separately from GPS Air:

1. smartIAQ Hub-4/Hub-4 Pro
2. An external Plenum Rated Cat 5e cable with RJ45 male connectors at each end for power and communications purposes (max. length - 300ft)
3. Hardware for securing mounting frame to hard ceiling

Safety Instructions

WARNING - RISK OF ELECTRICAL SHOCK

These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

- SmartIAQ GridSet requires a 48 VDC power supply. Do not connect it to AC mains or to a supply voltage other than 48 VDC.
- Failure to apply the correct supply voltage can cause electrical shock or equipment damage not covered under warranty.
- Use the GridSet Hub-4 power supply for SmartIAQ installations.
- All wiring must comply with local electrical codes and standards.
- Ensure the power supply is grounded as required by the installation environment and applicable codes
- Disconnect power supply before servicing
- SmartIAQ GridSet is designed for indoor use only
- The ceiling mounting frame is designed ONLY to be installed into wood studs, solid concrete or concrete block.
- The hard ceiling must be capable of supporting five times the weight of the frame and wall mount gridset unit combined.

Installation

CAUTION - The SmartIAQ GridSet communication interface is not Ethernet based. Do not connect the unit to an Ethernet switch, router, or PoE source

General guidance:

- Connect the GridSet to the appropriate smartIAQ Hub-4 using plenum rated Cat 5e cabling.
- Verify that the correct GridSet port and cabling are being used before applying power.
- Do not connect the unit to PoE equipment or any non-GridSet network infrastructure.

Location

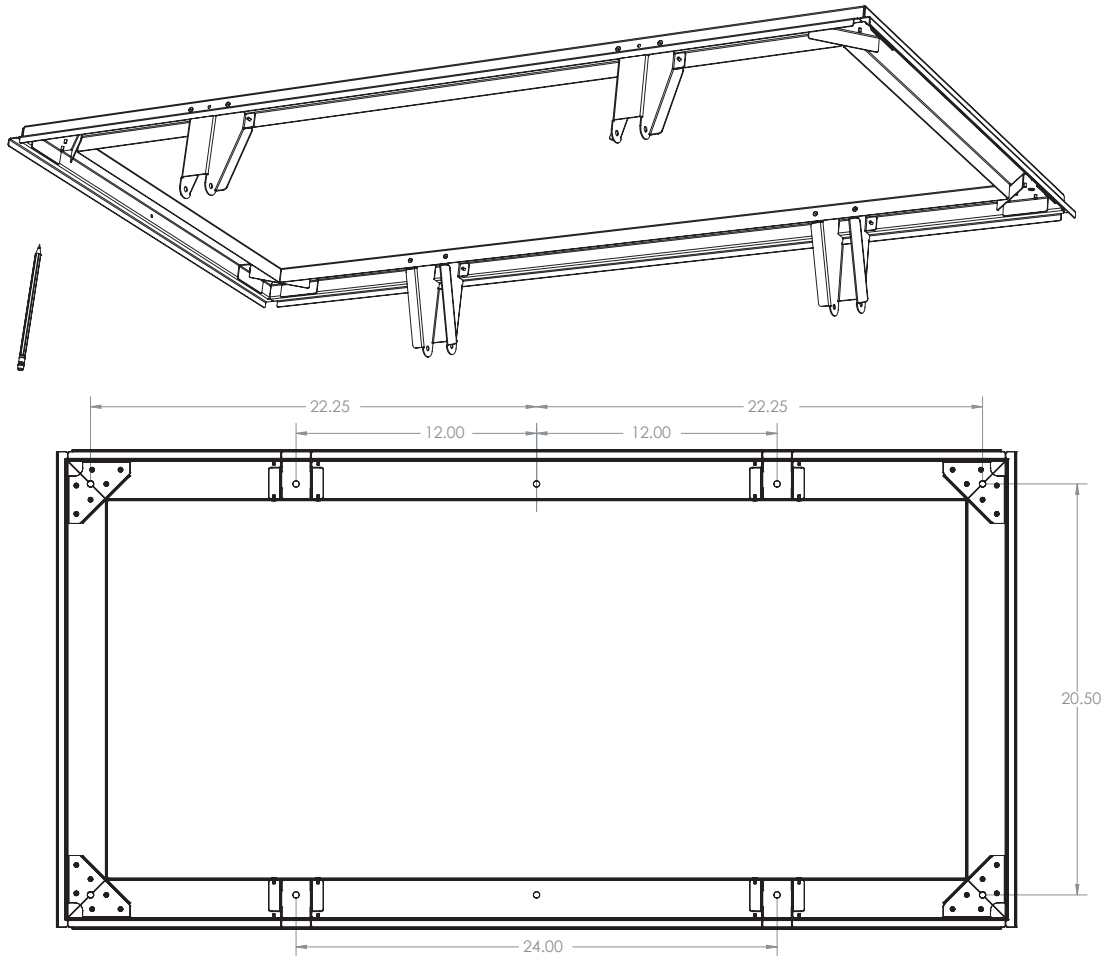


- Mount directly onto a drop ceiling. The GridSet unit is designed not to exceed the weight limit for direct drop-ceiling installation.
- The GridSet modules shall be installed such that they are at least 7.5' above the floor.
- Use the optional integrated mounting features at the corners of each unit for additional support if desired.
- Installation must comply with all local electrical and building regulations.
- Do not allow any obstructions to block the fan or diffuser grille.
- Installation and maintenance must be performed by a trained professional.

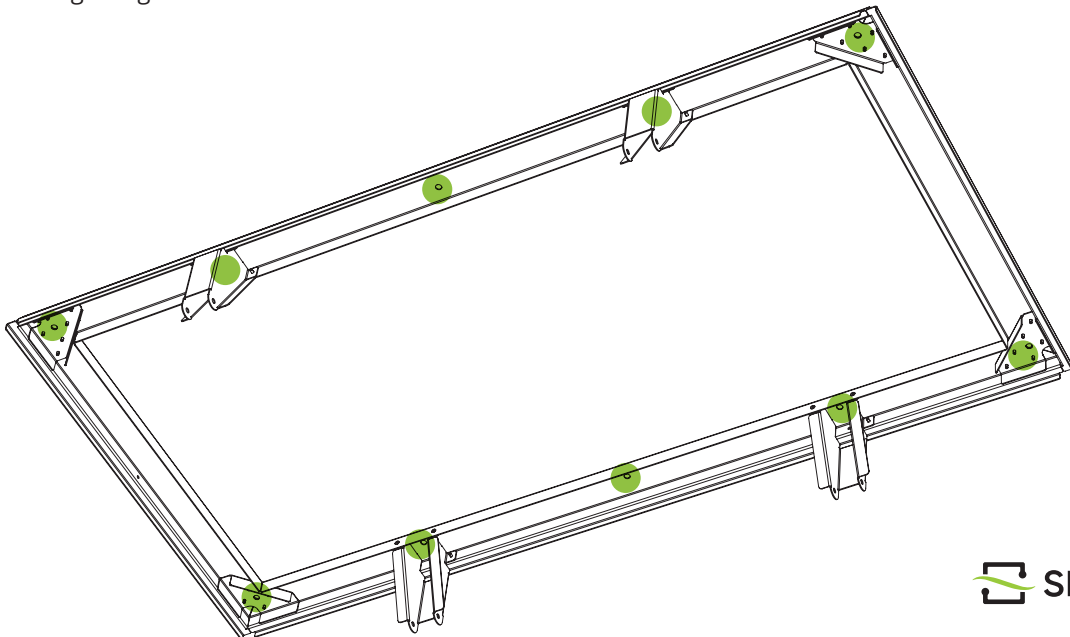
Mount the wallmount bracket to the wall.

1. After finding a suitable location for the placement of the Hard Ceiling Mounted variant of smartIAQ GridSet, secure the mounting frame to the ceiling surface:

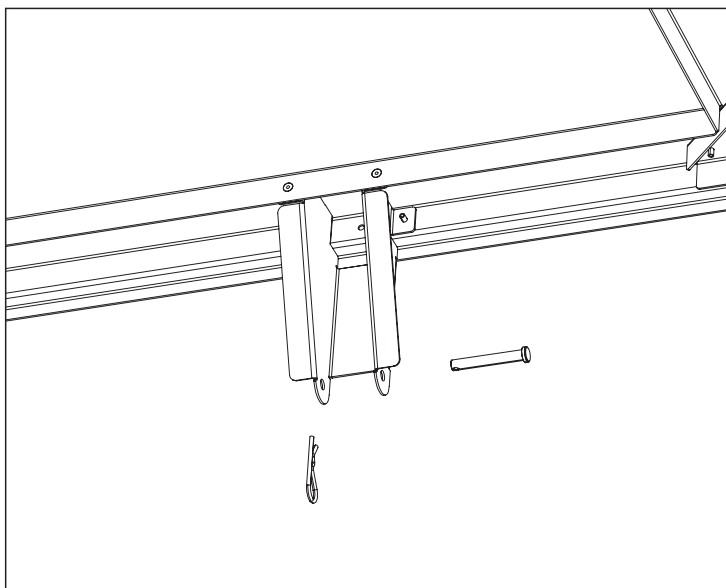
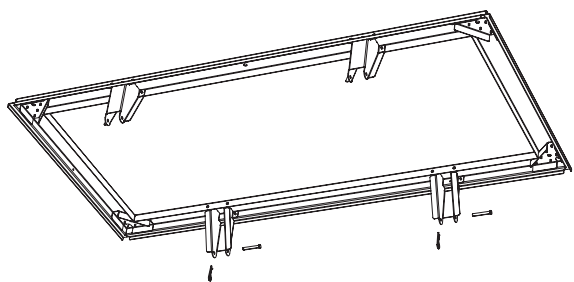
- For wooden joist installations, use appropriately sized lag bolts, (do not secure against drywall alone).
- For concrete wall/block installations, be sure to use anchors along with lag bolts.



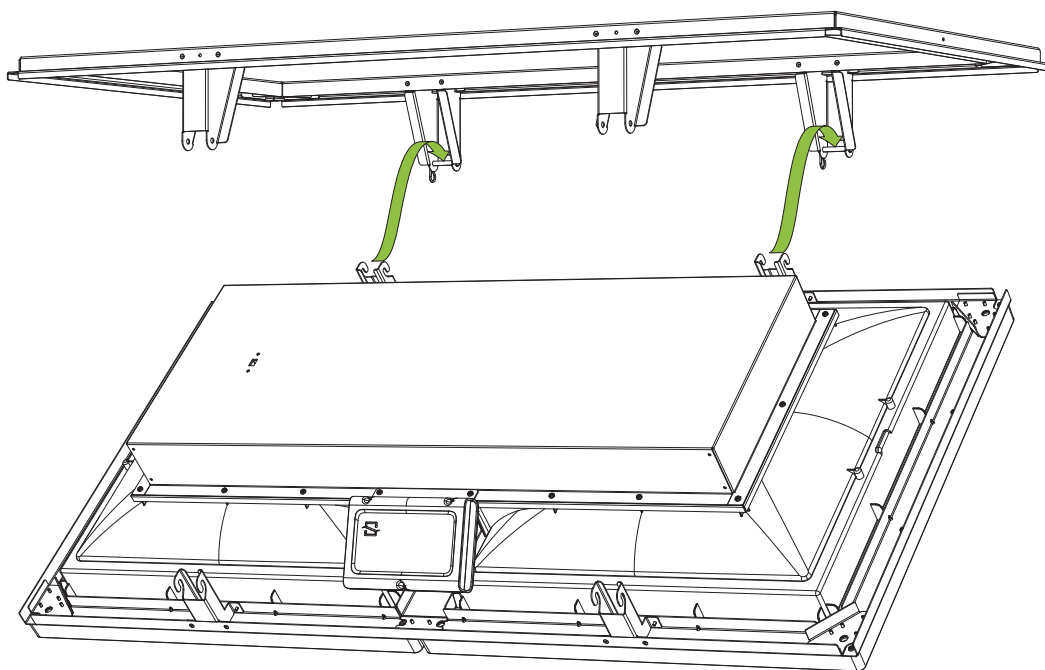
2. Secure to ceiling using fasteners in all 10 hole locations indicated



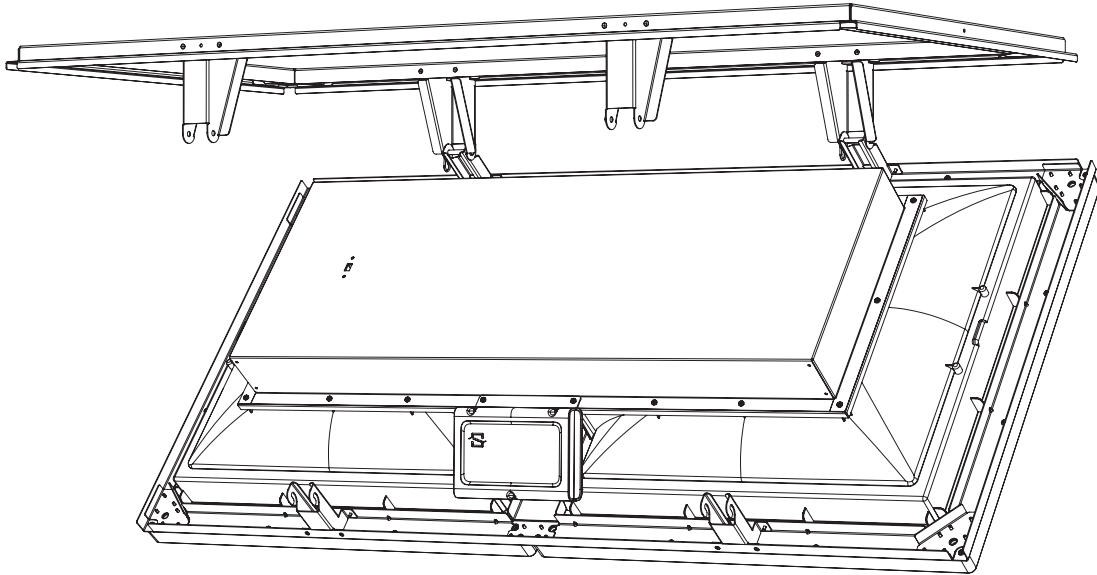
3. With the mounting frame secured flush to the hard ceiling, thread clevis pins into the drop bracket on one side of the frame. Secure the pins with the supplied retaining clips.



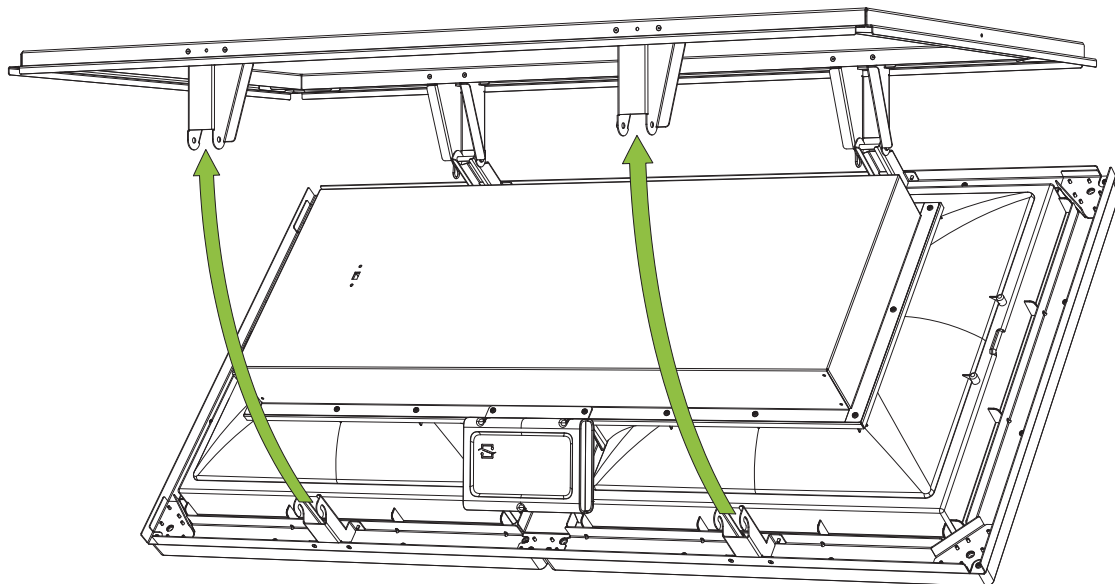
4. Attach the smartIAQ GridSet by latching the hooks on one side of the GridSet over the installed clevis pins.



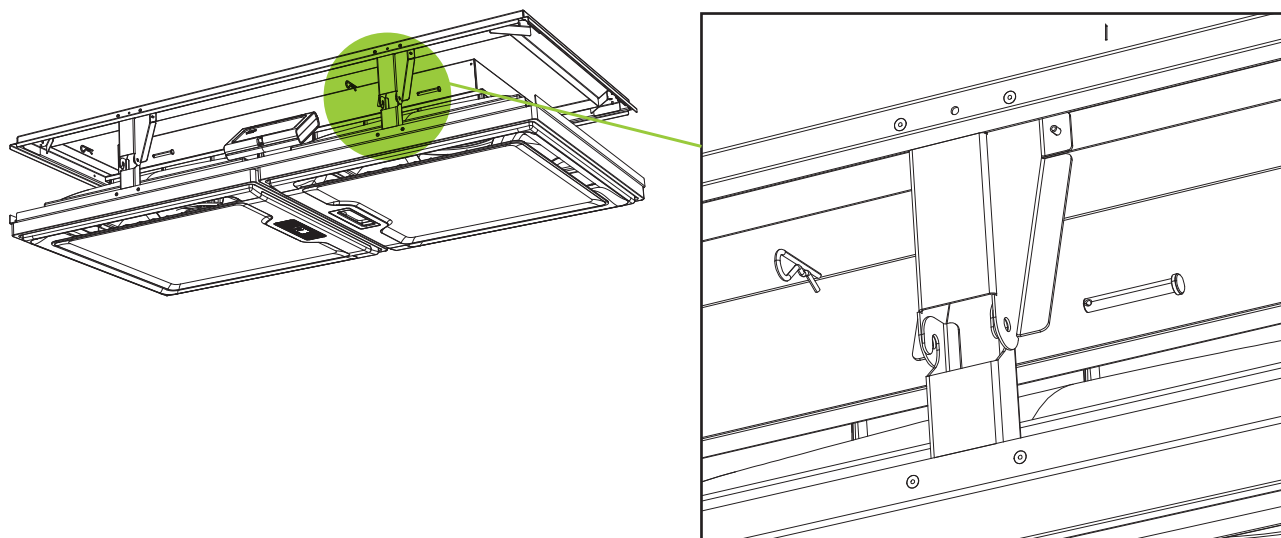
5. The GridSet should now be supported by the frame but should not be left in this state.



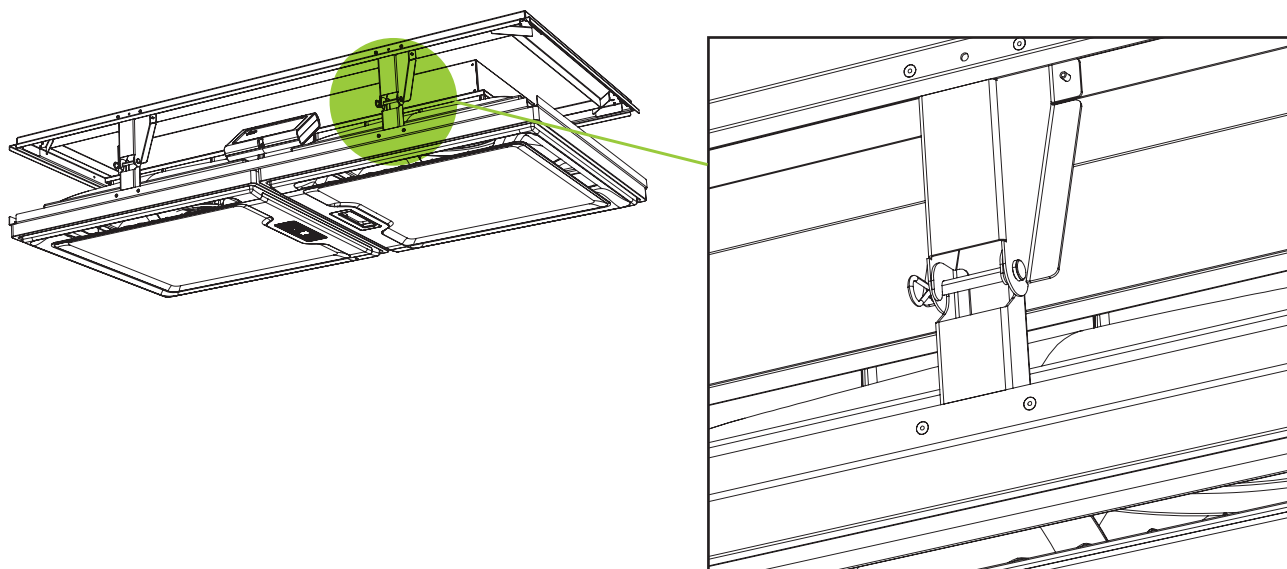
6. Rotate the GridSet unit up so that the hooks on the free side line up with the holes on the remaining frame drop brackets.



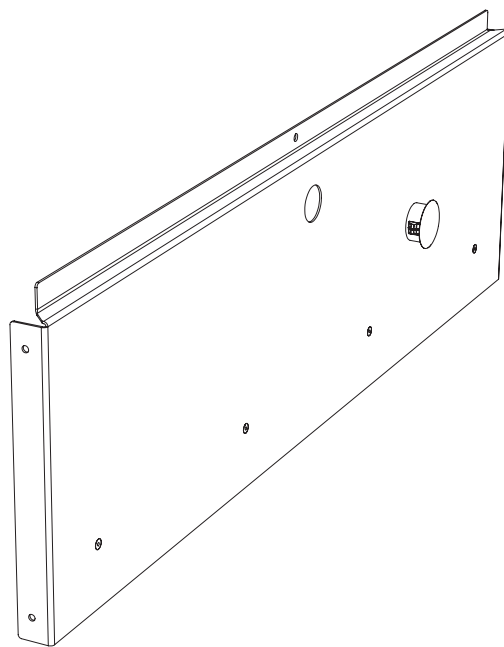
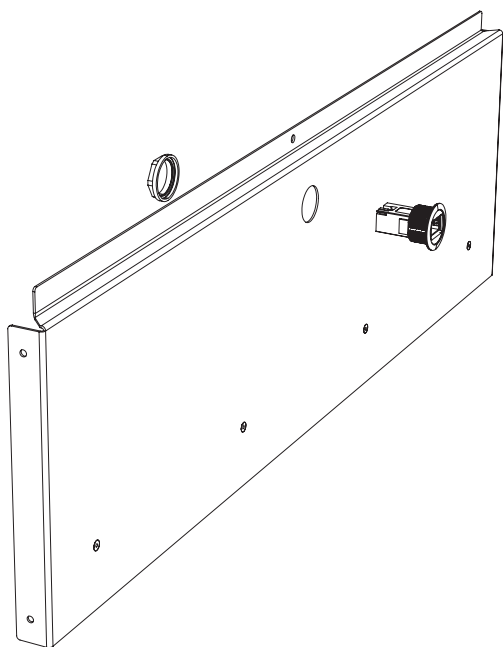
7. Slide clevis pins through the holes in the drop brackets, such that they also slide under the hooks on the GridSet unit.



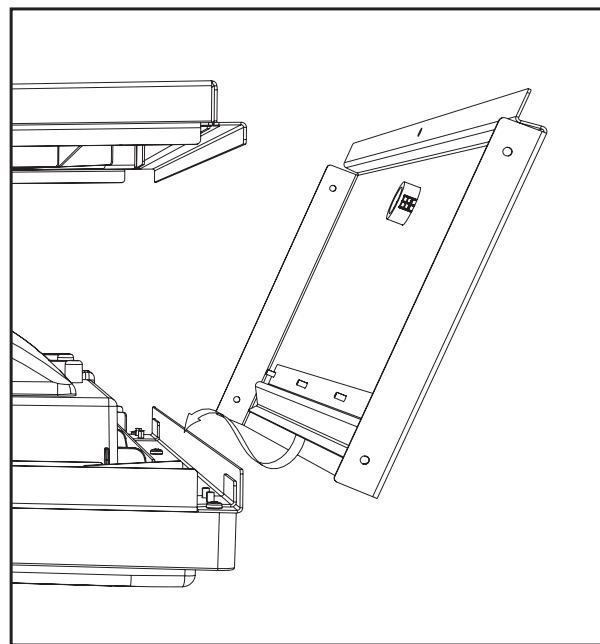
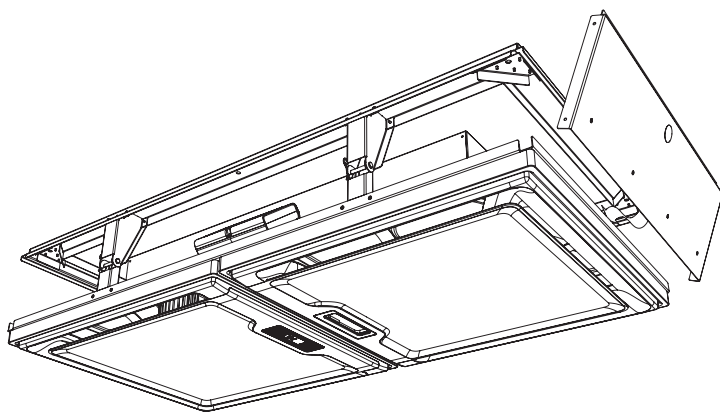
8. Secure the clevis pins using the retaining clips. The GridSet unit is now secure.



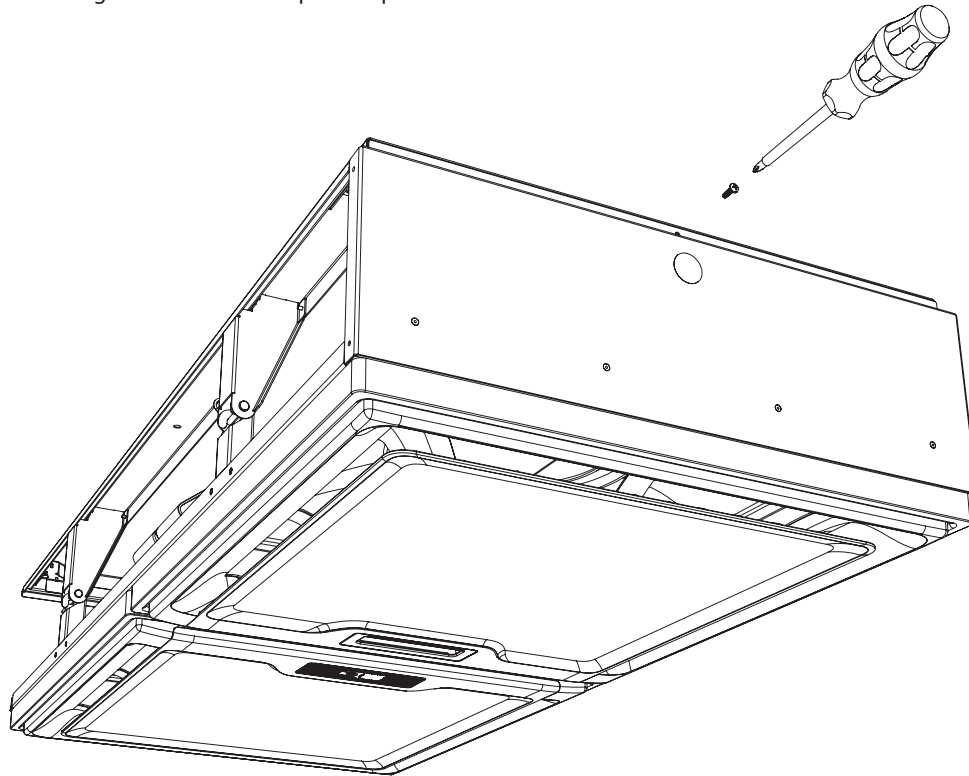
9. Take the two shorter end panels. Place a knock out plug into one, and attach the RJ45 port using the supplied locking nut.



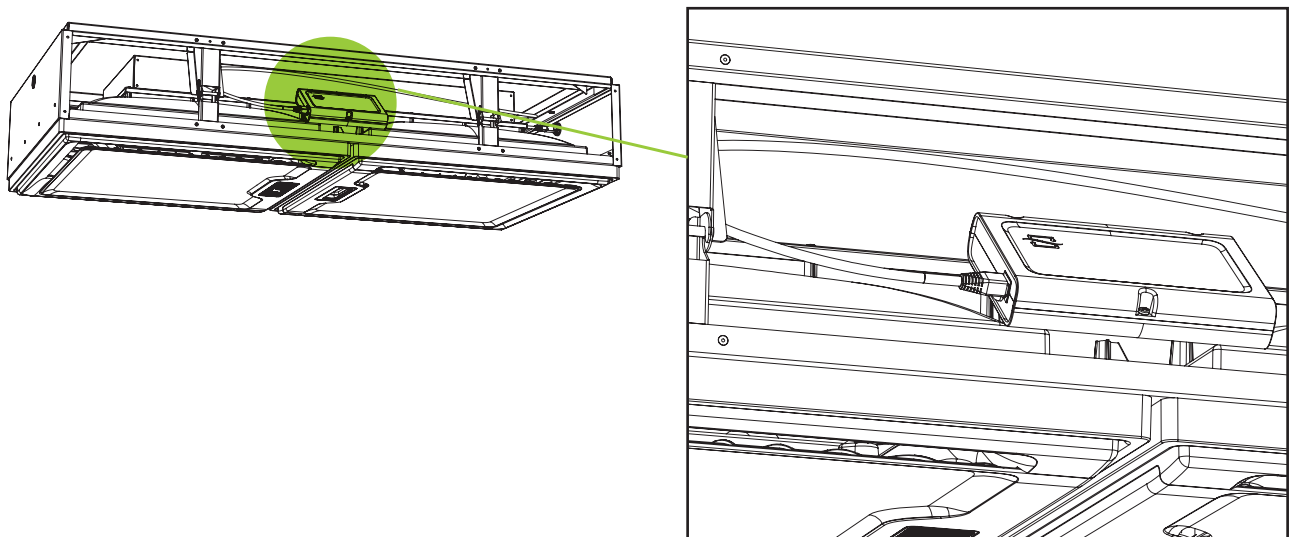
10. Place the end panels in accordance with your desired location for incoming Cat5E power/communication cable. Hook the support lip of the end panel over the corresponding lip on the GridSet unit.



11. Secure the panel using a fastener in the top of the panel.



12. Fit the supplied Cat5e cable between the control box and the RJ45 port fitted earlier.



Operation

During normal operation, SmartIAQ monitors air conditions, adjusts fan operation automatically, and reports status through the front-panel LED. In Auto mode, fan operation may be reduced or stopped when the space is unoccupied.

The unit enters Auto mode automatically after a normal bootup.

When power is applied first time (or after a forced power cycle), GridSet completes initialization in approximately 3 seconds. During boot, the LED may be off or briefly illuminate. After successful initialization:

- The LED will show **steady white**, indicating normal operation with a healthy filter.

After power-on, the device starts in the **occupied** state. This ensures the fan runs and ventilates the space immediately after installation or after a power interruption, without waiting for CO2 levels to rise or for presence to be detected.

Fan Control Modes

The SmartIAQ fan operates in two main modes. After any reboot, the device returns to **Auto** mode.

Auto Mode (Default)

In Auto mode, the fan speed adjusts continuously based on measured air quality. When the space is determined to be unoccupied, the fan shuts off automatically — this is normal, expected behavior and does not indicate a fault.

Manual Mode

Manual mode is available only through BACnet-enabled GridSet Pro systems. In Manual mode, the fan runs at a fixed speed selected through the external control system. In this mode, occupancy state is ignored.

Occupancy Detection

In Auto mode, SmartIAQ can use presence, CO2, and ambient light inputs to determine whether the space is occupied. When the space is unoccupied, the fan may shut off or reduce operation to conserve energy. The fan resumes automatically when occupancy is detected again.

Sensors & Monitoring

Overview

SmartIAQ GridSet can monitor, act on and report a range of indoor air quality and environmental readings, depending on model and installed hardware. This section describes the purpose of each reading

Measurements Summary

Measurements	Units	What it indicates	Availability
Formaldehyde (HCHO)	µg/m ³	Formaldehyde level associated with off-gassing from building materials and furnishings	All units
Temperature	°C	Indoor air temperature	All units
Barometric Pressure	Pa (hPa)	Ambient Atmospheric Pressure	All units
Ambient Light	lux	Light level that can support occupancy-related functions	All units
Human Presence	N/A	Presence input used in supported operating modes	All units
Relative Humidity	%RH	Moisture level in the air	Pro Units only
PM1.0 / PM2.5 / PM4.0 / PM10	µg/m ³	Airborne particle levels such as dust, smoke, and other fine particles	Pro Units only
TVOC	µg/m ³	Total volatile organic compounds from sources such as furnishings, cleaning products, and other indoor materials	Pro Units only
NOx Index	Index (1–500)	Relative level of nitrogen oxides commonly associated with combustion sources	Pro Units only
CO ₂	ppm	Carbon dioxide level, commonly used as an indication of ventilation adequacy and occupancy	Pro Units only

LED Indicator Reference

SmartIAQ GridSet has a single LED indicator located in the sensor array on the fan module. The LED displays one color and pattern at a time. Only the highest priority condition drives the LED.

During normal operation, if the space is occupied and the fan is operating, the colors indicated are as detailed below:

LED State	What it indicates	Action Required
White, steady	Normal operation; filter life is healthy	None
Yellow, steady	Filter life is low (less than 10% remaining)	Plan to replace the filter soon
Red, steady	Filter expired (less than 5% remaining), or a startup fault was detected	Replace filter and reset counter; see 'Filter Button'

Operating Buttons

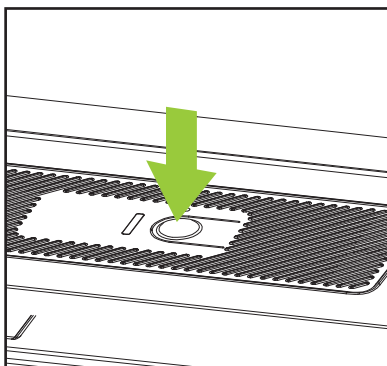
smartIAQ GridSet has two physical buttons:

Filter Button (Front Panel)

The Filter button is accessible on the front of the unit without tools (see below).

Hold duration	Action	Confirmation
5 seconds or more	Reset filter life counter to 100% after replacing the filter	Three quick white LED flashes

To reset the filter counter: install the new filter, then hold the Filter button for 5 seconds. Three white flashes confirm success.



Option Button (Pinhole - Requires a tool to operate)

The Option button is a recessed pinhole button on the unit. Use a straightened paperclip or similar tool to depress it.

Hold duration	Action	Confirmation
15 seconds or more	Factory reset — erases all settings, filter data, and calibration; device reboots	The LED will progress through: White (short flash) > Yellow > Red > Red fast blink.

Warning: *Factory reset cannot be undone. All custom parameters, filter life data, and calibration will be lost.*

Maintenance

Filter Life Monitoring

SmartIAQ tracks filter life automatically and retains filter status through power cycles. Replace the filter when the device indicates low or expired filter life, or at intervals appropriate for the installation site.

Important: *The filter life counter does not reset automatically when the filter is changed. The counter reset step must be performed each time a new filter is installed. Skipping this step will cause inaccurate filter life readings.*

Sensor Maintenance

SmartIAQ's onboard sensors are factory-calibrated and require no routine maintenance under normal operating conditions.

If sensor readings appear unusual, first confirm whether the space may actually have elevated pollutants, ventilation issues, or other real air-quality conditions affecting the readings. Readings that appear high are not necessarily a sensor fault.

If readings remain absent, invalid, or clearly implausible for the installation environment after the surrounding air conditions have been evaluated, contact support for further guidance.

General Maintenance

Recommended maintenance intervals depend on site conditions and the final approved installation requirements.

The following inspection items should be carried out at least as frequently as filters are changed

- Inspect the airflow inlet and outlet for obstructions or accumulated debris
- Wipe accessible exterior surfaces and check for physical damage
- Confirm the unit remains securely mounted

Troubleshooting

Symptom Quick Reference

Symptom	Possible Cause	Resolutions
Red LED - slow blink (~1 s cycle)	Motor Fault	Power cycle the unit
	Fan obstructed	De-energize unit and check for obstructions at the intake, outlet and fan
Red LED - fast blinking	Factory reset in progress	Wait for reboot to complete - this is normal
No LEDs at all	Unit not powered correctly, sensor board ribbon cable disconnected, or startup fault	Verify that a 48 VDC supply is connected and active
Fan not running	Unoccupied space (Auto mode)	The fan will resume automatically when occupancy is detected
	Motor fault	Power cycle the unit.
Fan running but air quality readings unavailable	Sensor connection issue	Reboot; if persistent, reseal ribbon cable

When to Contact Support

Contact support if any of the following conditions apply:

- A motor fault returns immediately after power cycling.
- The fan does not run and no fault condition (motor fault, degraded mode, or unoccupied) explains the behavior.
- Sensor readings are persistently absent or implausible after reseating the ribbon cable and rebooting.
- Physical damage to the unit, sensor board, or wiring is observed.
- The unit fails to boot after repeated power cycles.

Building Management System Integration

BMS communications (either Modbus or BACnet) are only available with smartIAQ GridSet Pro units, and are facilitated by the appropriate smartIAQ Hub-4 Pro.

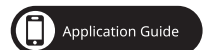
See smartIAQ Hub-4 Pro Installation, Operation and Maintenance Manual for further details.

Note: Points/Objects Lists are available from your Rep or directly from GPS Air on request. Information may also be accessed by scanning the QR code on either the GridSet Pro Unit or Hub-4 Pro Power Supply.

Product Documentation

The information provided in this manual is up to date at the time of printing. Any revisions to this document will supersede the content included. For the latest applicable version of this manual, visit our website or utilize the QR code.

QR code for application guidance. please contact GPS Air for additional assistance.

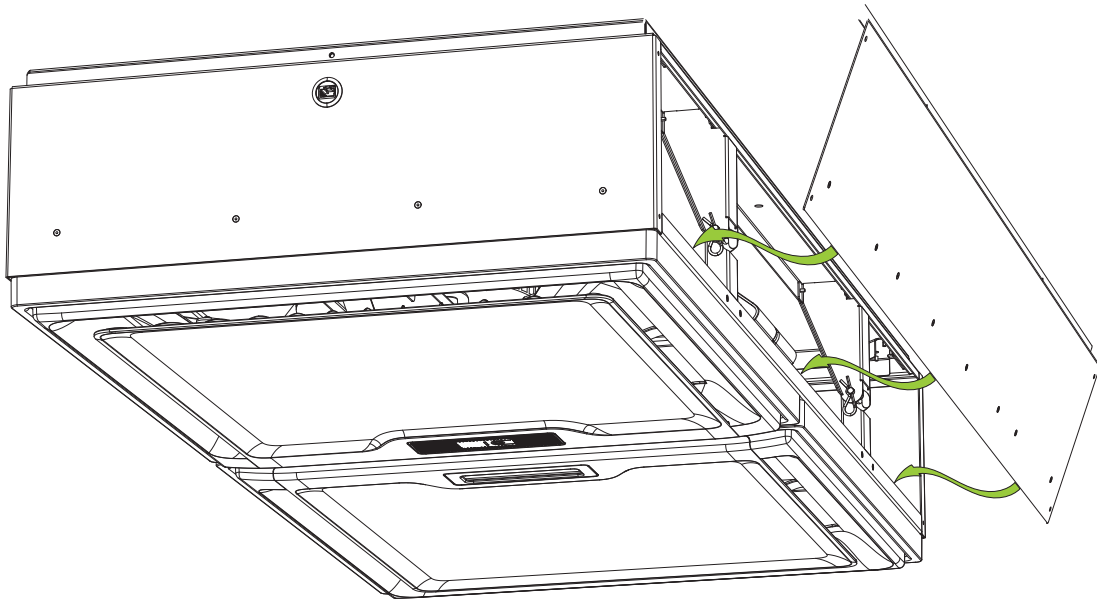




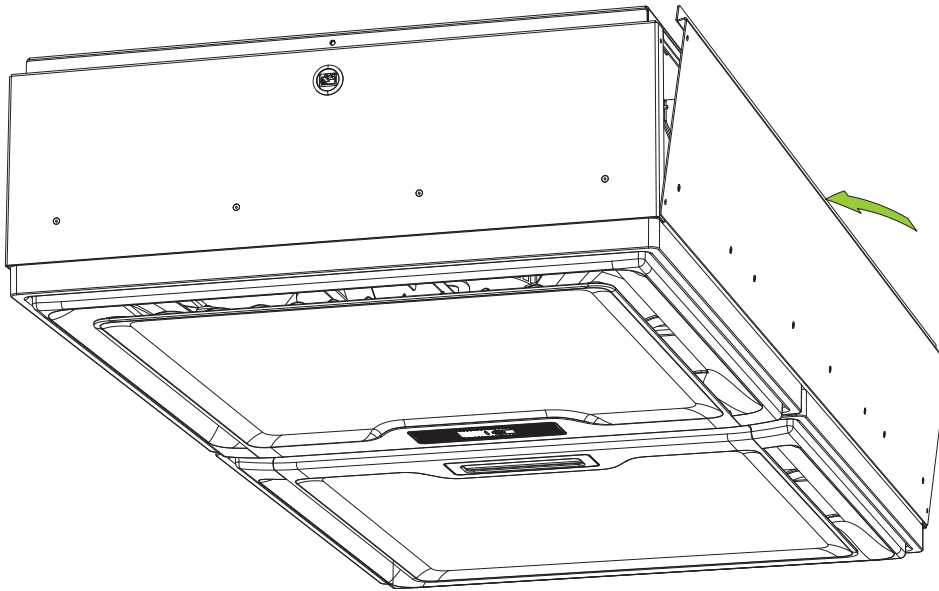
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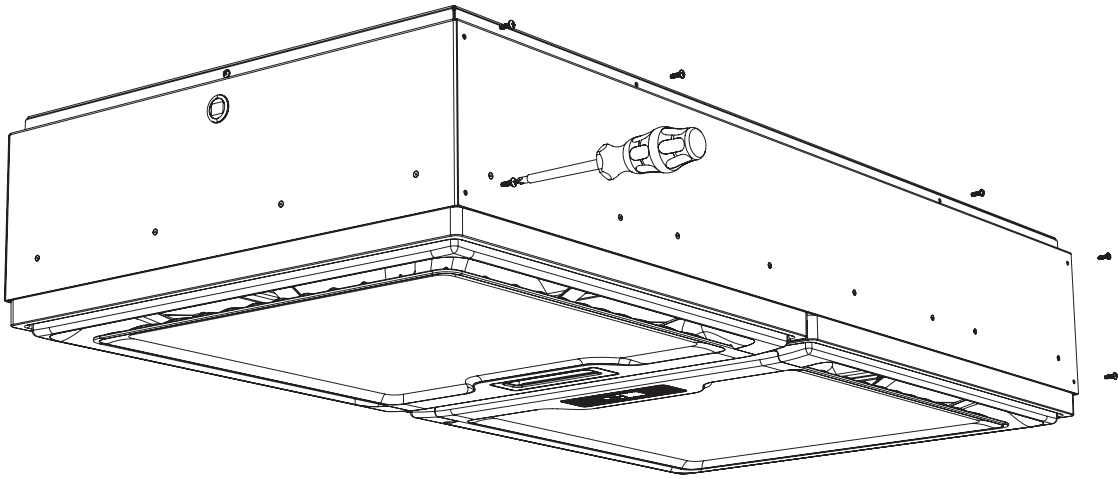
13. Hook the support lip of the side panels over the corresponding lips on the GridSet unit.



14. Rotate the side panels up so that they sit flush against the frame and the end panels.



15. Secure the side panels using fasteners, locking two in each end side (attaching to the end panels), and two more in the top of the panel (attaching to the frame)



16. Installation of the Hard Ceiling smartIAQ GridSet is now complete.

