

MANUAL – INSTALLATION

Ultrasuite +Structure Traditional Operating Room

Ultrasuite with Modular, Bolt-Together Structural Support
for Ceiling Mounted Medical Equipment

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PRICE[®]

ULTRASUITE +STRUCTURE TRADITIONAL OPERATING ROOM

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ULTRASUITE +STRUCTURE TRADITIONAL OPERATING ROOM

PRODUCT OVERVIEW

Introduction

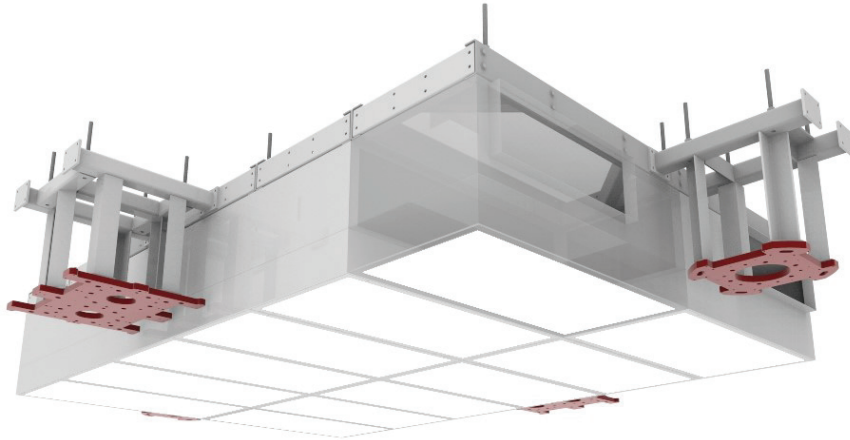
This manual will provide information regarding:

- Product Overview
- Pre-installation instructions and checklists
- Luminaire mounting and installation instructions.
- Post-installation checklist

Product Overview

The Price Ultrasuite Assembly (Pat. 10,401,049) with integrated aluminum structure (USASA, Patent Pending) luminaire system will be an array of module assemblies that either ships from the factory as one complete assembly or as multiple module assembly sections that are to be connected together on the job site.

MODULE ARRAY ▼



The luminaire is identified with a model code of USA-XX, where XX is the approximate footprint area (square feet) of the luminaire. The identification label for a luminaire with a footprint area of 4 square feet is shown.

LABEL USA-04 ▼

price® Pat. 10,401,049		
MODEL USA-04	PRODUCT USASA	SERIAL 1234567-000-000
SUITABLE FOR AIR HANDLING USE/CONVIENT AU TRAITEMENT DE L'AIR		
TYPE IC / TYPE IC	INHERENTLY PROTECTED/ PROTECTION INÉHRENTE	
VENTILATED OR COOLED AIR ONLY/ AIR DE VENTILATION OU AIR REFROIDI SEULEMENT		
VAPOR BARRIER MUST BE SUITABLE FOR 90°C/ LE PARE-VAPEUR DOIT CONVENIR POUR 90°C		
SUITABLE FOR DRY AND DAMP LOCATIONS/ CONVIENT AUX ENDROITS SECS ET HUMIDES		
ACCESS ABOVE CEILING REQUIRED / ACCÈS REQUIS AU-DESSUS DU PLAFOND		
RELAMP WITH/UTILISER UNE AMPOULE DE REPLACEMENT DE: LED LINEAR VARIOLED HYDRA HD25 W827-W835/W927-W935 IP67		
ASSEMBLE PART USA ONLY WITH URDC/ASSEMBLER LA PIÈCE USA SEULEMENT AVEC LA PIÈCE URDC		

The luminaire will come with a remote LED driver cabinet with pre-wired driver connections. The quantity of the drivers varies with the size of the luminaire system. Please refer to URDC installation manual for more information.

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INSTALLATION INSTRUCTIONS

Pre-Installation Instructions and Checklist

Read and Save These Instructions

Warning

To reduce the risk of fire, electrical shock, or injury to persons, observe the following:

- Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- Unit must be used in supply applications only, and access above the ceiling is required.

Before you start

- Inspect all cartons and boxes for flaws and shipping damage. If anything is found to be damaged, contact the shipping company and file a freight claim.
- Review Price project specific submittals to ensure booms are located in the correct locations.
- Review the job specific submittal and ensure there is a supplemental structural support for the suspension points shown on the job specific submittal.
- If drywall perimeter is installed prior to the system, ensure that the opening is cut to the correct dimensions (as per the submittal), and is square on all corners.
- Ensure all tools (as listed below) are on site and ready for use.
- A minimum of two (2) people will be required to install this system.

Required Tools/Parts

To be supplied by contractor:

- (2+) 8 ft. ladders or scaffolding
- Mechanical lift with load rating appropriate for the weight of the ceiling system being suspended
- Torque wrench capable of achieving 23 ft-lbs (+/-3ft-lbs) for a 3/8" hex bolt and nut
- Laser level
- Cordless drill/impact
- #8 self-tapping screws (1/2 in. maximum length)
- Screwdriver bit(s) to suit self-tapping screws
- 3/16 in. Allen key
- Damp cloth(s) (for cleaning)
- Utility knife
- Chalk line
- Tape measure
- Clamps/locking plier
- 5/8 in. Grade 55 threaded rod for suspending the system ($F_{Y,MIN} = 55KSI$)

Supplied by Price:

- Job specific submittal drawing showing all sizes and dimensions of module assembly sections
- Luminaire module sub-assembly sections (refer to job submittal drawing for quantity and sizes)
- Remote driver cabinets (refer to job specific submittal drawing for quantity, sizes and field wiring connection details)
- Dimmer switches (refer to job specific submittal drawing for quantity and field wiring connections)
- HGWC Perimeter ceiling sections (if applicable)
- 1/32 in. x 3/4 in. (t x w) white gasket tape – for between modules (Part Number 042373-004)
- The following supplied for bolting module assemblies together:
 - Bolt
 - Metal washer
 - Lock nut

ULTRASUITE +STRUCTURE TRADITIONAL OPERATING ROOM

INSTALLATION INSTRUCTIONS

Luminaire Mounting and Installation

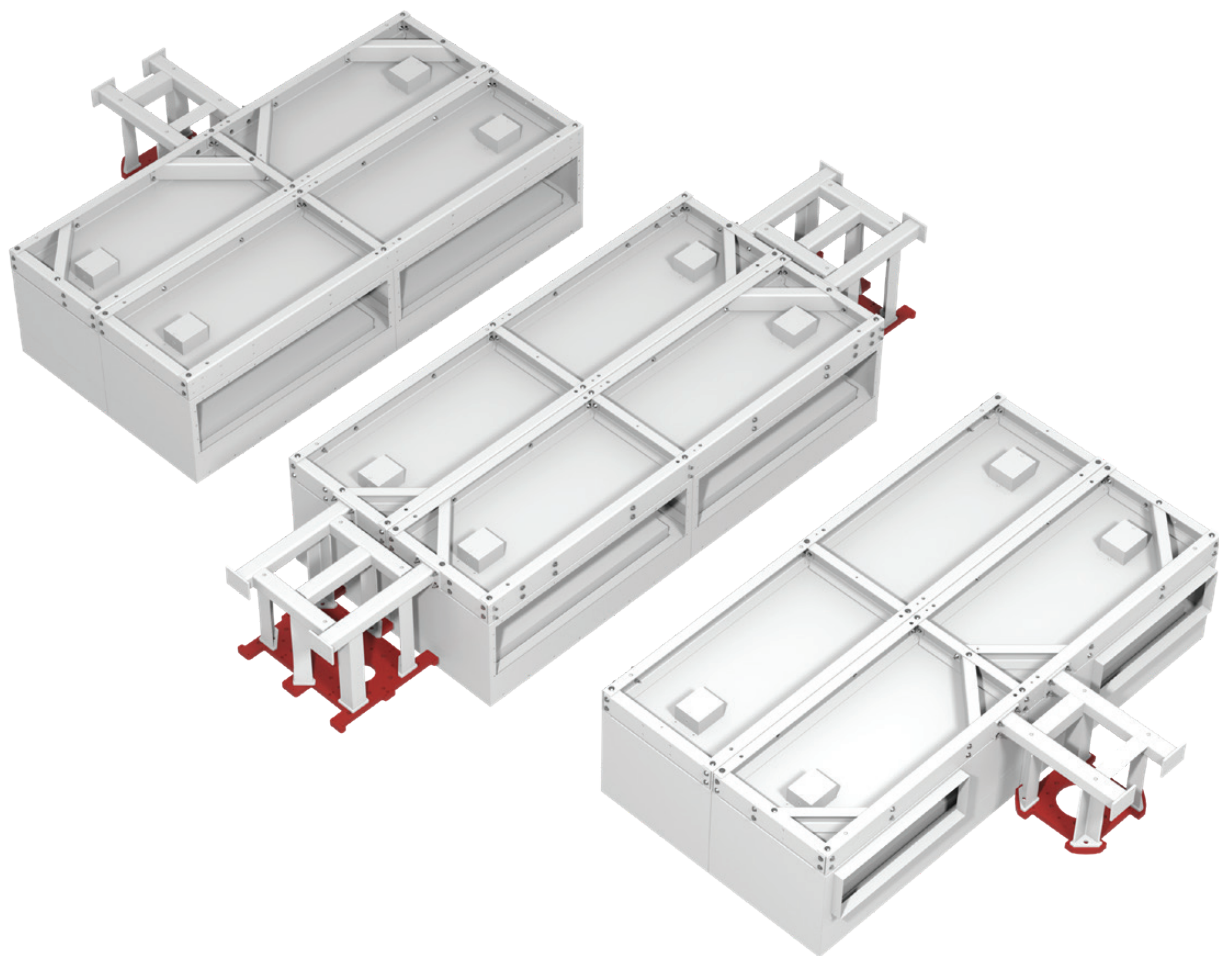
Step 1: Snap chalk line on the floor to outline locations and sizes of module assembly sections.

Step 2: Unpack module assembly sections and lay them out on the floor as per the job specific submittal package and determine remote driver cabinet mounting location. Ensure adequate wire length is available to wire to the remote cabinet. Refer to the [URDC Installation manual](#) for the cabinet mounting and installation, electrical connections and wiring diagrams.

NOTE: Ensure floor surface is clean and free of debris that could damage the product finish.

NOTE: Ensure that adjacent module assembly sections have mated inlets in the correct locations.

MATED INLET ALIGNMENT VERIFICATION ▼



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INSTALLATION INSTRUCTIONS

Step 3: Refer to the "Suspension Layout" page on the job specific submittal to identify the suspension locations and anchorage details.

EXAMPLE SUSPENSION LAYOUT DETAIL ▼

ULTRASUITE[®] + STRUCTURE

OPERATING ROOM DIFFUSER SYSTEM WITH INTEGRATED LED LIGHTING AND ALUMINUM STRUCTURAL SUPPORT

STRUCTURAL DETAILS - PAGE 2 OF 6 - SUSPENSION LAYOUT - TRADITIONAL OR

ANCHORING AND SUSPENSION

- DESIGN OF ANCHORAGE TO BUILDING STRUCTURE, INCLUDING DETAILED DESIGN OF HANGERS AND BRACING TO BE CARRIED OUT BY A DESIGN PROFESSIONAL.
- VERIFYING THE ADEQUACY OF THE MAIN BUILDING STRUCTURE TO RESIST LOADS IMPARTED BY THE SUSPENDED FRAME IS THE RESPONSIBILITY OF OTHERS.
- THE STRUCTURAL PERFORMANCE OF THE SUSPENDED FRAME HAS BEEN VERIFIED BASED ON A NOMINAL SUSPENDED ANCHORAGE AND BRACING DESCRIBED HERE.
- PROVIDE STRUCTURAL ATTACHMENTS AND BRACES TO SATISFY THE ASD HANGER AND HANGER BRACE FORCES IN TABLE 1 BELOW.

HANGERS	TENSION	COMPRESSION
S1, S4, S5, S6, S7, S10	450	300
S2*, S3*, S8*, S9*	1,100	650
S11-S14	2,550	2,050
S15-S18	4,150	3,150
S19-S22	2,550	2,050
S23-S26	4,150	3,150

HANGER BRACES**	TENSION	COMPRESSION
B1-B4	400	400
C1-C8	350	250
D1-D8	600	400

* SUSPENSION LOCATION REQUIRES HANGER BRACKET REINFORCEMENT (JOB SPECIFIC)
 ** HANGER BRACE AXIAL FORCES BASED ON 45 DEGREE ANGLE TO HORIZONTAL PLANE
 *** FOR ASD LOAD COMBINATIONS PER DESIGN REPORT 2024032-DR01

5. HANGERS ARE DESIGNED AS 5/8" GRADE 55 THREADED ROD AND COULD REQUIRE STIFFENING TO ATTAIN SUFFICIENT COMPRESSIVE CAPACITY FOR ROD LENGTHS EXCEEDING 12 INCHES (DESIGN BY OTHERS)
 6. DESIGN OF HANGERS AND HANGER BRACES ASSUME UNRESTRAINED ROTATIONS (PINNED CONDITION) SUITABLE FOR EMBEDDING IN CONCRETE; ALTERNATE HANGER/BRACE DESIGN CAN BE EVALUATED UPON REQUEST.

5/8" THREADED ROD WITH HARDWARE (PROVIDED BY OTHERS)

THREADED ROD DETAILS (STRUCTURAL FRAME)

5/8" THREADED ROD WITH HARDWARE (PROVIDED BY OTHERS)

HANGER BRACKET (JOB SPECIFIC)

CORNER BRACKET

CROSS BEAM

5/8"-16 BOLTING HARDWARE (TYP.)

HANGER BRACKET DETAILS

5/8" THREADED ROD WITH HARDWARE (PROVIDED BY OTHERS)

HANGER BRACKET (JOB SPECIFIC)

HANGER BRACKET (ISO VIEW)

5/8" THREADED ROD WITH HARDWARE (PROVIDED BY OTHERS)

45° TYP.

HANGER BRACE (TYP.)


5/8" THREADED ROD WITH HARDWARE (PROVIDED BY OTHERS)

THREADED ROD DETAILS (BOOM MOUNT)

5/8" THREADED ROD WITH HARDWARE (PROVIDED BY OTHERS)

DETAIL A BOOM MOUNT SUSPENSION (CLOSE-UP VIEW)

MEMBER NAME	PROFILE
HANGER BRACKET	
MATERIAL	ALUMINUM 5052-H32 3/16" THICK



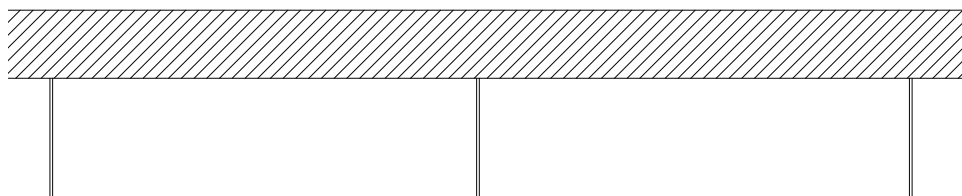
price | **CRITICAL ENVIRONMENTS**

Project: _____

276328	Revision: 3A	05-17-2024
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Use a laser level to project and create the required suspension drops using 5/8 in. Grade 55 threaded rods to suspend the USASA module assembly being raised.

THREADED ROD DROPS FROM SUPPLEMENTAL STEEL STRUCTURE ▼



Step 4: Remove the polycarbonate diffuser face by disengaging the flat head drive quarter turn fastener.

POLYCARBONATE DIFFUSER FACE REMOVAL ▼



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INSTALLATION INSTRUCTIONS

Step 5: Using a 3/16 in. Allen key, unscrew the damper mounting screw to release the aperture plate damper for access to the plenum.

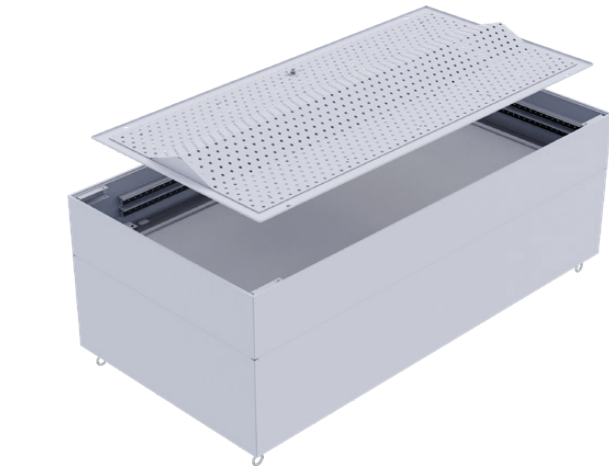
LOOSEN DAMPER MOUNTING SCREW ▼



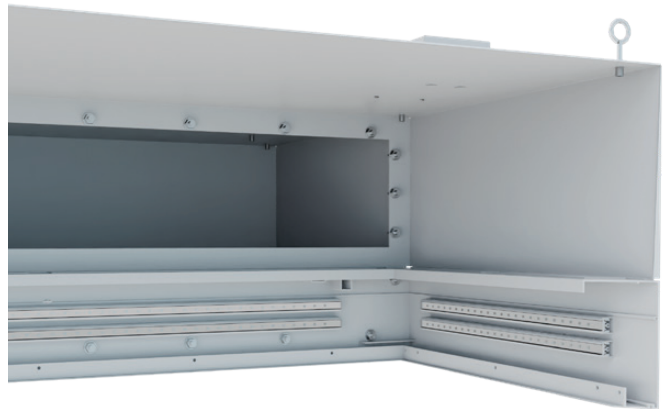
REMOVE DAMPER MOUNTING SCREW ▼



APERTURE PLATE DAMPER REMOVAL ▼



OPEN PLENUM (DAMPER REMOVED) ▼



Step 6: Use an appropriate lifting system to raise the first USASA module assembly and use the threaded rod drops to suspend the system.

Use a laser level to level the USASA module assembly.

ULTRASUITE +STRUCTURE TRADITIONAL OPERATING ROOM

INSTALLATION INSTRUCTIONS

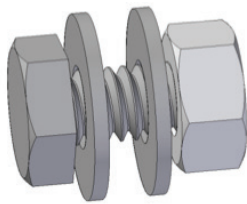
Step 7: Repeat the step above to raise and suspend the adjacent USASA module assembly.

Ensure bottom of the module assemblies are flush and level.

Fasten the the two adjacent modules assemblies laterally using the 1/4 in.-20 hardware that has been provided to connect the plenum system together. Use the 3/8 in.-16 hardware to connect the structural aluminum framing of the two adjacent modules together. Access through access doors provided in the plenums may be required to perform the connection for the structural connections for the aluminum framing above the plenums.

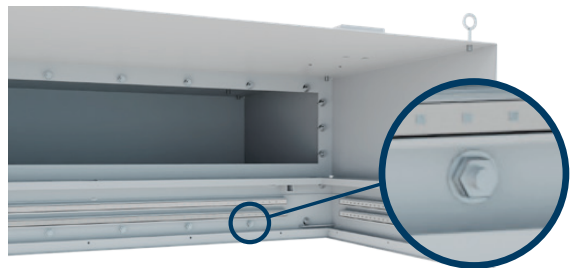
NOTE: Ensure the 3/8 in. bolting hardware is torqued to 23 ft-lbs (+/-3ft-lbs).

HARDWARE ▼



1/4 in.-20 for plenum connections and 3/8 in.-16 for structural aluminum framing

SECTION VIEW OF MODULES BOLTED TOGETHER ▼



STRUCTURAL SECTION CLOSE-UP ▼

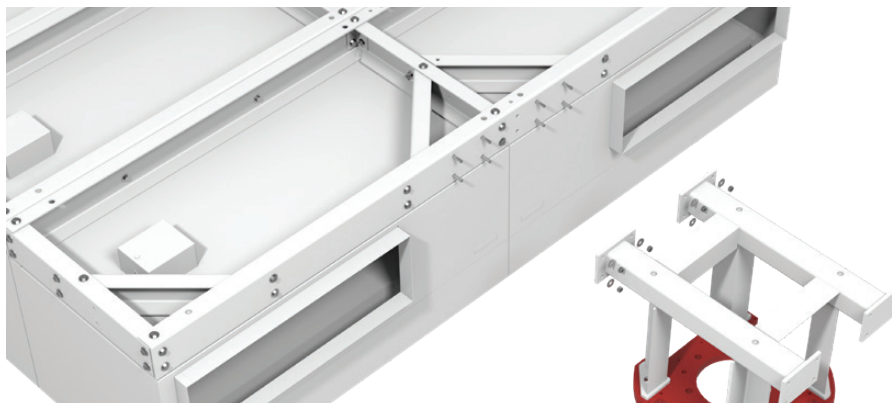


Step 8: Repeat step 7 unit all sections are installed.

Step 9: If the system comes with integrated support for medical booms, attach the boom mount support to the aluminum framing using the mounting holes provided on the aluminum structural framing.

NOTE: Ensure that the perimeter drywall (if installed) and other equipment are installed at the correct heights using a laser level.

BOOM MOUNT ATTACHMENT DETAILS ▼

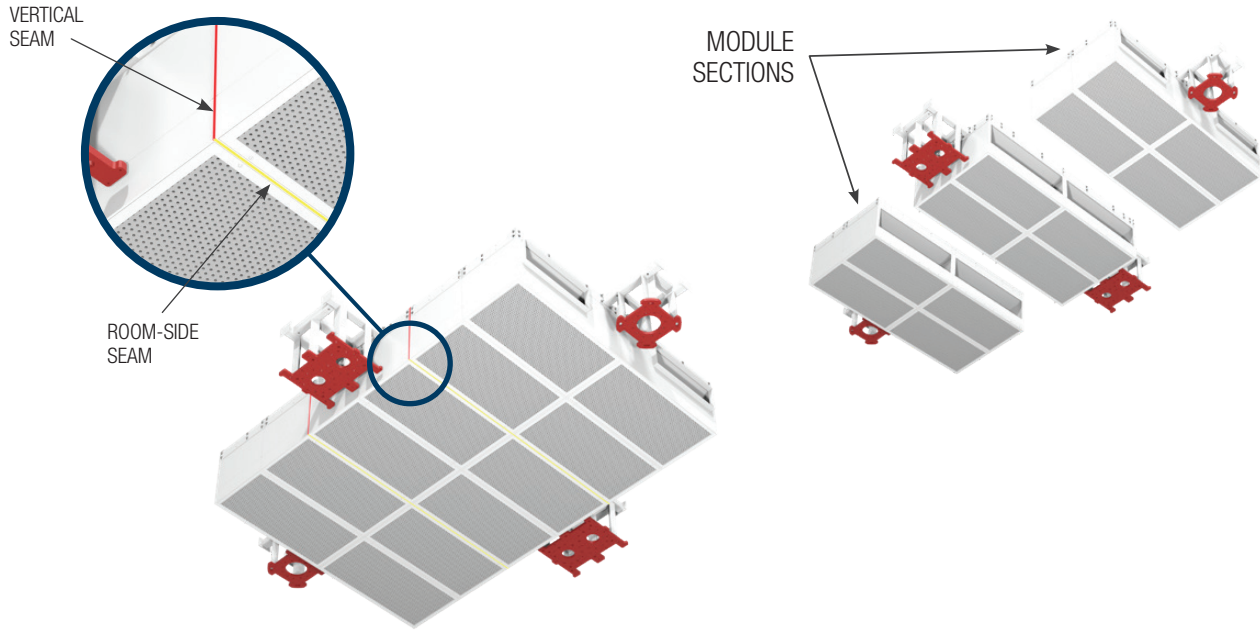


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INSTALLATION INSTRUCTIONS

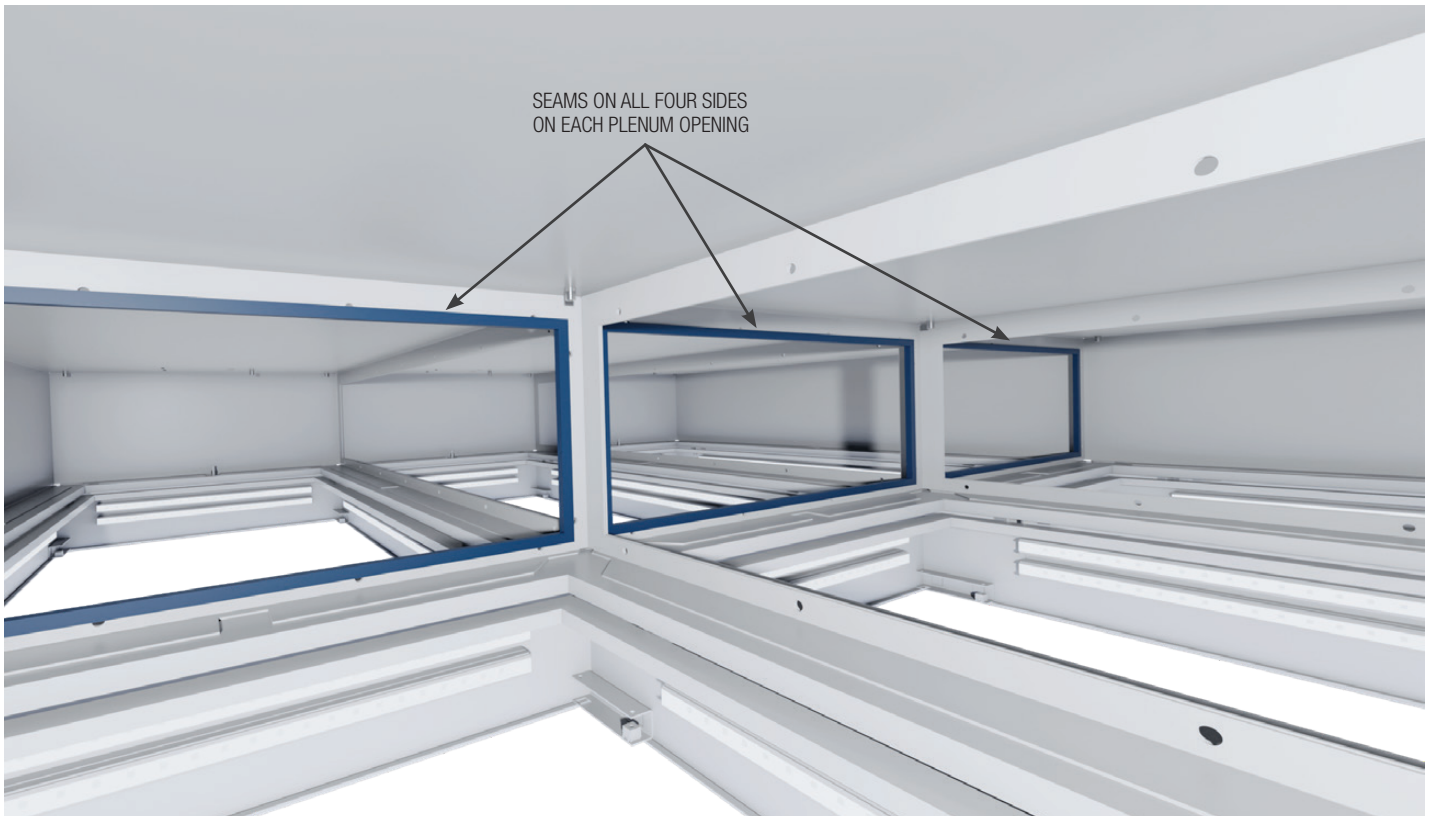
Step 10: Apply adhesive sealant at the locations shown below, for connections done on-site.

VERTICAL AND ROOM-SIDE SEAMS AT THE MODULE SECTION CONNECTIONS DONE ON-SITE ▼



NOTE: Wipe off excessive sealant and allow it to dry before installing the faces.

PLENUM OPENING SEAMS AT THE MODULE CONNECTIONS DONE ON-SITE ▼



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INSTALLATION INSTRUCTIONS

Step 11: Once entire system is suspended, ensure the threaded rod hardware is appropriately fastened.

NOTE: Perimeter drywall must be installed slightly above the height of the rest of the ceiling, as it needs to rest on the backside of the perimeter tee.

Step 12 (Filtered Option Only): Remove new filter from packaging. Only handle filters by the aluminum frame, as any contact with filter media will damage the filter and impact filter effectiveness. Install filter gel seal on plenum knife-edge and secure in place using the four corner tabs. Tighten tabs with Allen key.

NOTE: Two people are recommended for filter installation.

Step 13: Re-install damper assembly and tighten the damper mounting screws.

REPLACE DAMPER APERTURE PLATE ▼



TIGHTEN DAMPER MOUNTING SCREW ▼

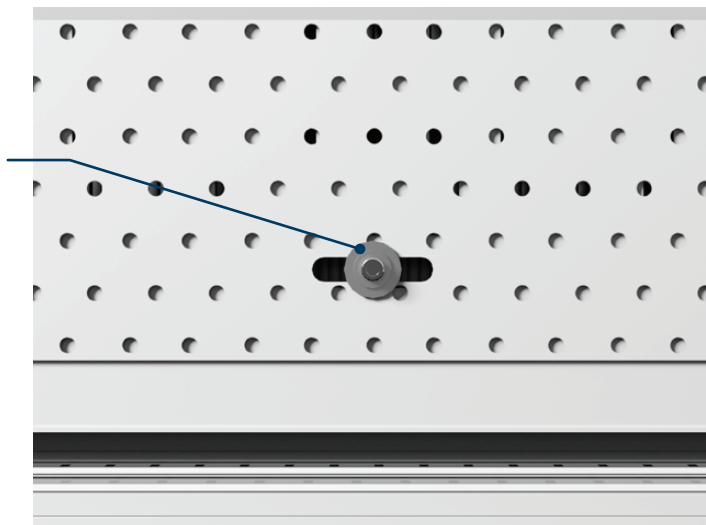


Step 14: Connect ductwork and balance the Ultrasuite system inlet accordingly.

NOTE: If minor airflow adjustments are required, adjust damper by loosening and sliding the screw with a 3/16 in. Allen key.

DAMPER APERTURE PLATE ADJUSTMENT ▼

SLIDE DAMPER APERTURE PLATE FOR AIRFLOW ADJUSTMENT BY LOOSENING AND SLIDING THE SCREW WITH A 3/16 IN. ALLEN KEY.



CLOSED
FULL LEFT OR FULL RIGHT POSITION



OPEN
CENTER POSITION



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INSTALLATION INSTRUCTIONS

Step 15: Re-install face and secure in place by locking the quarter turn fastener.

Step 16: If perimeter welded ceiling grid (HGWC) is being used; apply gasket (Part Number 042373-004) to one outside (vertical) surface of the half tee where two modules meet. The gasket is supplied in 50ft rolls – measure and cut the gasket as required.

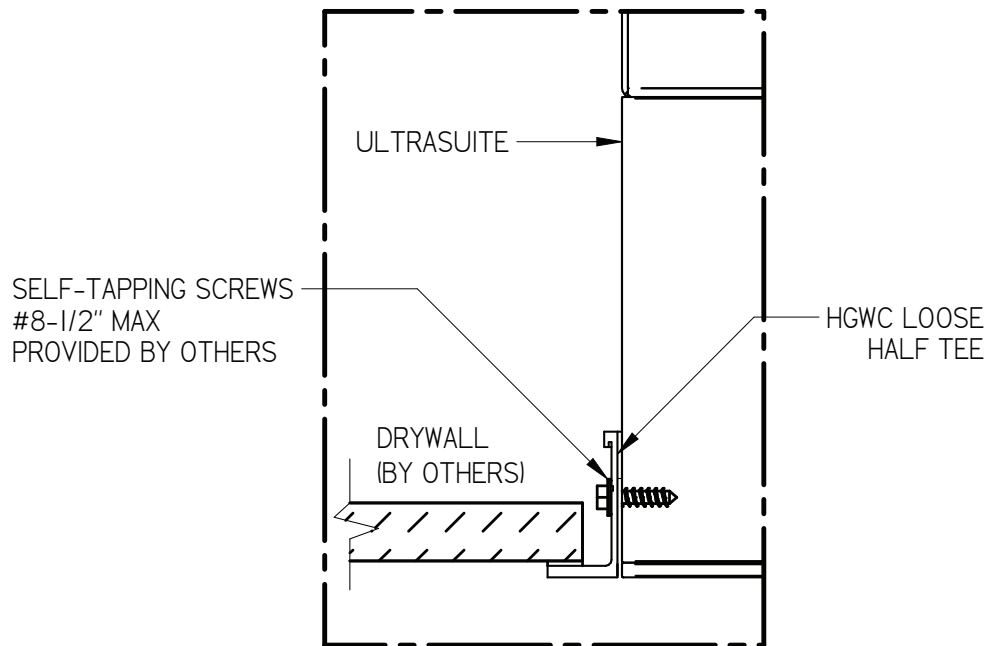
GASKET INSTALLATION CROSS SECTION ▼



NOTE: Gasket should be installed as close to the top of the tee as possible – do not extend past the top of the tee. Ensure that only one half tee has the gasket applied. Do not stretch gasket as it is being applied, as this will cause it to pull away from the tee over time.

Step 17: Screw half tees to the perimeter Ultrasuite module.

PERIMETER HALF TEE INTEGRATION ▼



Step 18: Refer to [HGWC Installation manual](#) (if applicable) for the remainder of the Hospital Grade Welded Ceiling (HGWC) system.

Step 19: Refer to the [URDC Installation manual](#) for instructions on installation and wiring of the Ultrasuite modules.

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POST-INSTALLATION CHECKLIST

Post-Installation Checklist

- Threaded rod suspension layout matches the requirements stated on job specific submittal.
- Hanger braces installed at the suspension locations specified by the job specific submittal.
- Boom mounts installed at the correct locations.
- 3/8 in.-16 hardware verified to have been torqued to 23ft-lbs (+/-3ft-lbs).
- Ceiling system elevation is leveled and meets the height requirement with respect to the floor.
- Sealant applied to the USASA module assemblies as per step 10.

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NOTES

A series of horizontal lines for taking notes, arranged in two columns.

This document contains the most current product information as of this printing.
For the most up-to-date product information, please go to priceindustries.com

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