



MANUAL – INSTALLATION

Hospital Grade Common Plenum Ceiling System

HGP Series

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PRICE[®]

HOSPITAL GRADE COMMON PLENUM CEILING SYSTEM

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HOSPITAL GRADE COMMON PLENUM CEILING SYSTEM

PRODUCT OVERVIEW

Before you start

- Inspect all cartons and boxes for flaws and shipping damage
 - If anything is discovered to be damaged, contact the shipping company and file a freight claim.
- Review Price project specific submittals to ensure booms and Unistrut have been located in the correct locations (recommended to measure and chalk outline of ceiling system on floor).
- If drywall perimeter is being installed prior to the ceiling 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+) 8ft ladders or scaffolding
- Laser level
- Cordless drill/impact
- #12 self tapping (3/4 in. length recommended - HGP/Unistrut connections)
- Screwdriver bit(s) to suit self-tapping screws
- Damp Cloth(s) (for cleaning)
- Utility Knife
- Chalk Line
- Pliers with wire cutter
- Tape Measure
- Clamps/Locking Plier
- Pre-stressed 12 ga. Suspension wire (or approved alternative) with necessary equipment to hang wire

Price supplied

- Job specific submittal drawing showing all sizes and dimensions of integrated plenum sections and unistrut locations (if applicable)
- Integrated Plenum Sections (refer to job submittal drawing for quantity and sizes)
- HGWC Perimeter ceiling sections (if applicable)
- 1/32" x 3/4" (t x w) white gasket tape – For between tee sections (Part Number 042373-004)
- Bolt/metal washer/rubber washer/lock nut assembly for bolting Integrated Plenum Sections together

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INSTALLATION INSTRUCTIONS

Preparation

NOTE: Unistrut must be installed prior to installation of HGP system. Confirm that installed locations and lengths of installed Unistrut matches dimensions and locations shown on Price's project specific submittals.

NOTE: Check to ensure that the perimeter drywall (if installed), Unistrut or any other type of support struts, and all other equipment are installed at the correct heights using laser level.

Step 1: Snap chalk line to mark locations and sizes of integrated plenum sections outline.

Step 2: Unpack integrated plenum sections and lay them out on the floor as per the job specific submittal package.

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

ASSEMBLY EXAMPLE:

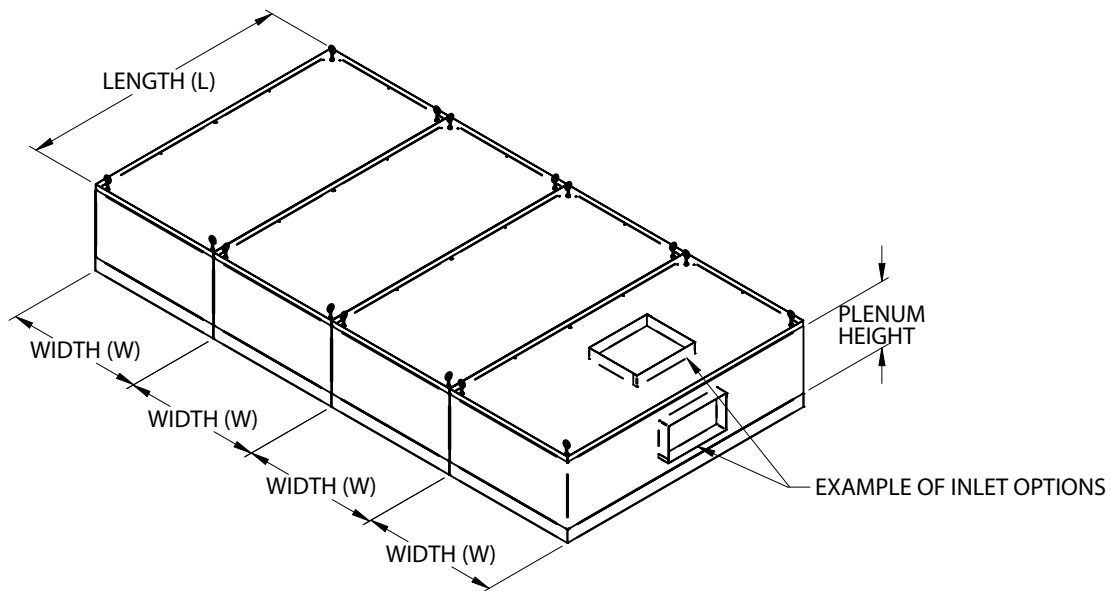


Fig. 1: Example HGP Layout

NOTE: Ensure that adjacent integrated plenum sections have mated inlets in the correct locations.

Step 3: Attach lengths of pre-stressed 12 ga. suspension wire to the slab or structural steel above the ceiling according to ASTM C636.

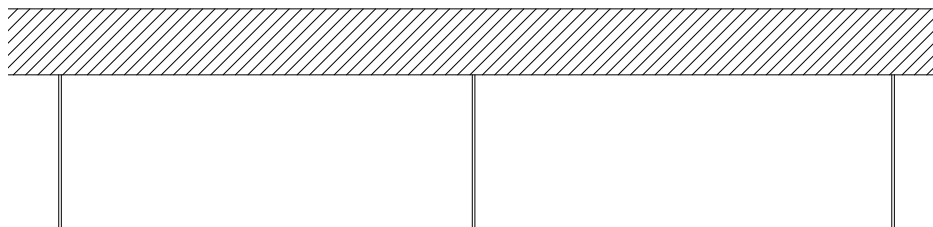


Fig. 2: Suspension Wire Attached to Structure

Step 5: Extend hanger wires 6" below the top of the plenum (refer to job specific submittal for plenum height) and snip to length as required.

Step 6: Apply gasket (part Number 042373-004) to one outside (vertical) surface of the half tee. The gasket is supplied in rolls – measure and cut the gasket as required.

For more details on proper gasket installation on HGWC half tees, please refer to the HGWC manual available at [HGWC manual](#)

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Diffuser Face and Aperture Damper Removal

Step 1: Remove diffuser face by turning quarter turn fasteners with slotted screw driver.



Fig. 3: Diffuser Face Removal

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Loosen Knurled Thumb Screw



Rotate Latch

Step 2: Unscrew black knurled thumb screws holding latches to release the aperture damper assembly for access to the plenum. Be sure to rotate latch out of the way to facilitate removal of the baffle damper assembly.

NOTE: Open plenum will look image as seen in Fig. 5, with the face and baffle/damper assembly removed.

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Fig. 5: Open Integrated Plenum

Module Installation

The following sections are separated based on the use of ceiling level Unistrut. See Subsection A on this page for installation without ceiling level Unistrut and see Subsection B on page 8 for installation with ceiling level Unistrut.

A) Installation without ceiling level Unistrut

The following section shows installation instructions for installations where Unistrut is not used.

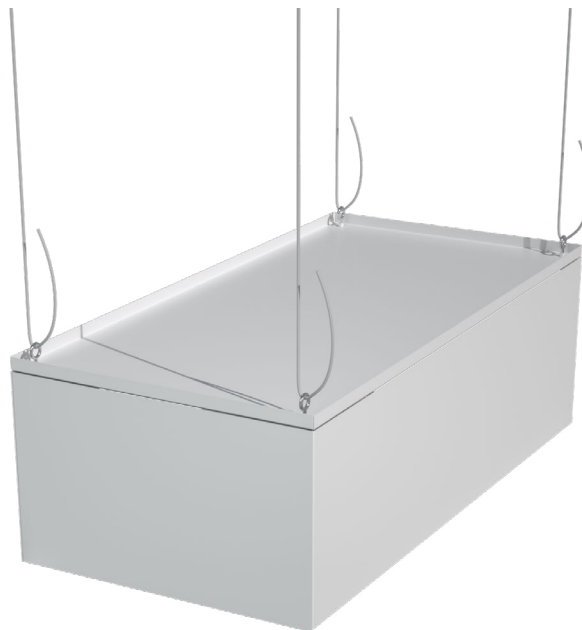


Fig. 6: Temporary Hanger Wire Support

Step 1: Raise the first module, temporarily supporting it using hanger wire. Do not twist the wires at this stage; bend in loose, 180 degree loops allowing leveling of the ceiling system once all modules are in place.

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INSTALLATION INSTRUCTIONS

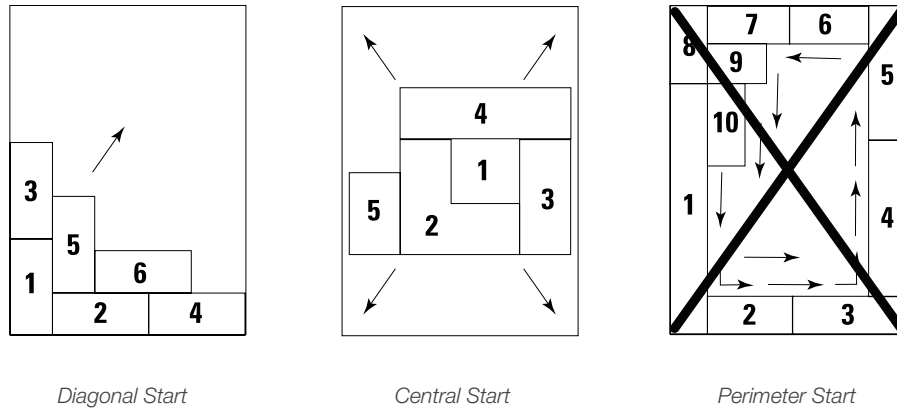


Fig. 7: Recommended Installation Method

NOTE: It is recommended to start working at the center of the room and working outwards (central start - middle image above), this method allows for the contractor to trim or shim the drywall if they are not perfectly square. Do not start by installing the perimeter first (perimeter start - right image above); no ceiling modifications are possible in this configuration.

Step 2: Raise adjacent module, temporarily supporting with hanger wire. Using Price supplied bolt/lock washer/lock nuts fasten modules together. Integrated plenum sections will have slotted holes for fastening. Bottom of tees should be flush and level prior to fastening together.



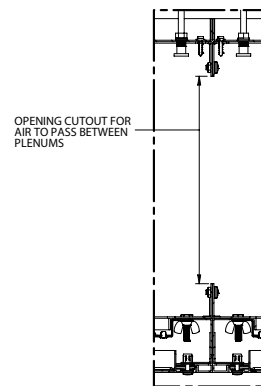
Sample Fastener



Module Section Close-up



Modules Bolted Together



Inside Plenum Connection

Fig. 8: HGP Module Connections

Step 3: Repeat previous step 2 until all sections are installed.

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Step 4: Pull down the perimeter modules to tension the wires, and adjust the wire to minimize settling and movement of the system. Ensure that they are at the correct height, system is level, and there is no slack in the hanger wires.

NOTE: The 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 full perimeter tee. A full perimeter or half tee can be used, see Finishing the Installation for more information.

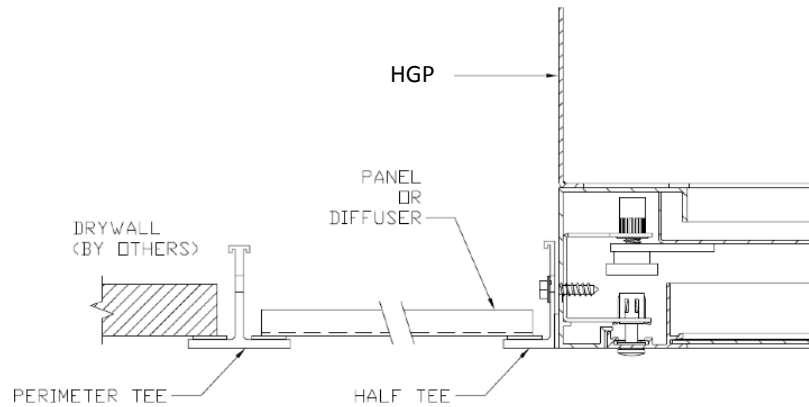


Fig. 9: HGP with Perimeter HGWC and Drywall Elevation View

Step 5: Tighten hanger wire by twisting and securing per ASTM C636 and/or local codes. Once finished, proceed to section: Installing the Filter and Aperture Damper

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B) Installation with Unistrut

Step 1: Raise the first module between two Unistrut rails, temporarily supporting it using hanger wire. Do not twist the wires at this stage; bend in loose, 180-degree loops allowing leveling of the ceiling system once all modules are in place.

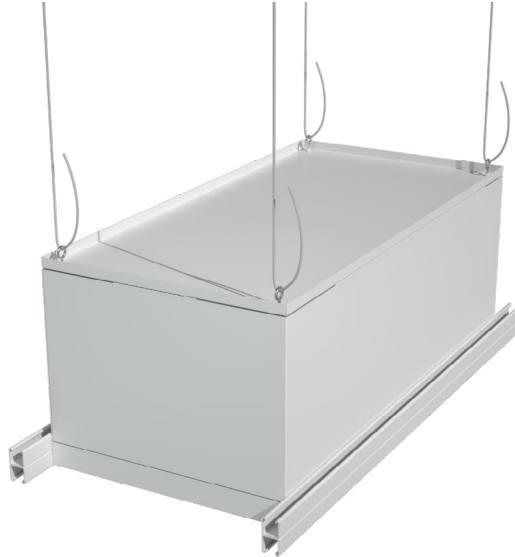


Fig. 10: Recommended Installation Order with Unistrut

Step 2: Raise adjacent module, temporarily supporting it using hanger wire. If adjacent module is installed between the same Unistrut rails as the previous module, fasten modules together using Price supplied hardware. Refer to Step 1 and 2 of “Installation without Unistrut” on Page 5 and 6 of this manual for further details.

Step 3: Raise next adjacent module and temporarily support it using hanger wire. If there is a Unistrut rail between two adjacent modules, use the Price supplied L-brackets to create a manifold between the two modules over the Unistrut. Line up the L-brackets along the opening of each module. Make sure the flange on each side of the L-bracket is **inside** the HGP plenum of each respective side (see illustration). Use #12 self-tapping screws to secure the L-brackets to both HGP modules. Apply silicone or sealant on the L-bracket’s flange to seal the manifold.



Fig 11: Plenum Manifold connection detail

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Fig 12: Manifold connection exploded view

Step 4: Repeat previous steps 2 and 3 until all sections are installed.

Step 5: Pull down the perimeter modules to tension the wires, then adjust the wire to minimize settling and movement of the modules. Ensure that the modules are at the correct height with respect to the offset height between finished ceiling and Unistrut rails (refer to medical equipment drawings for this height offset). Make sure that there is no slack in the hanger wires.

Step 6: Use #12 self-tapping screws to fasten the modules to the Unistrut from the inside of the lower plenum of the HGP.

Step 7: Tighten hanger wire by twisting and securing per ASTM C636 and/or local codes.

Installing the Filter and Aperture Damper

Step 1: If applicable, install the HEPA filters. For details on installing HEPA filters, please refer to: [roomside replaceable filter quick start guide](#)

Step 2: After installing the HEPA filter, replace the aperture damper assembly and re-attach by rotating latches and tightening black knurled knob.

Step 3: Connect ductwork and proceed to the next section on balancing the HGP Modules



Replacement of Damper Assembly 1



Replacement of Damper Assembly 2

Fig 13: Reinstalling damper assembly

Step 4: Replace face and secure in place by tightening quarter turn fasteners

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INSTALLATION INSTRUCTIONS

Adjusting Aperture Damper, Balancing and Installing Diffuser Face

Step 1: Before balancing the ductwork, make sure that all aperture dampers in the HGP are wide open.

To operate the aperture dampers, loosen the shoulder thumb screw in the middle of the damper assembly so that the damper can slide freely within the assembly. **Do not loosen the thumb screw too much as the screw may fall out.**

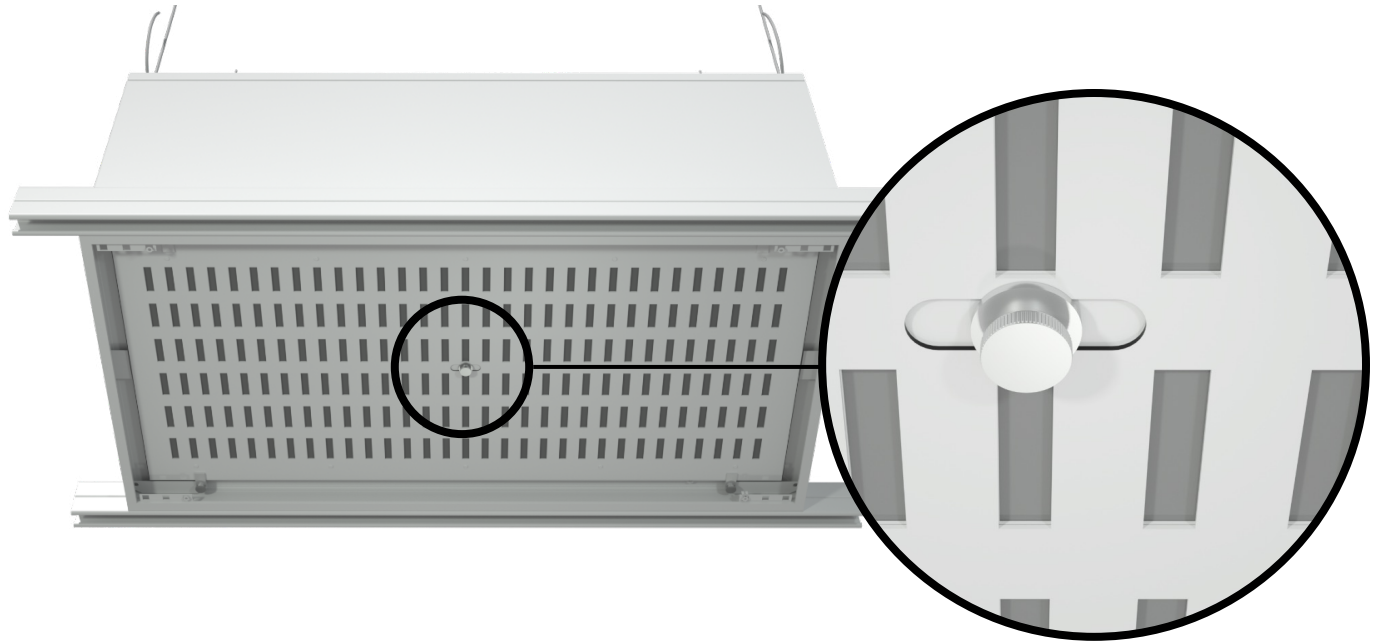


Fig 14: Aperture Damper Assembly and close-up of thumb screw

Step 2: Balance the ductwork feeding the HGP System. Make sure to confirm that the ductwork have the correct airflow volume and velocities.

Step 3: Check airflows per module. If minor airflow adjustments are required, adjust the aperture dampers per diffuser accordingly. Tighten aperture damper thumb screw to secure damper position.

Step 4: Replace the diffuser face and secure in place by tightening the quarter turn fasteners.

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INSTALLATION INSTRUCTIONS

Finishing the Installation

Step 1: For perimeter integration, fasten half tee or HGWC section as shown on Figures 15 and 16.



Fig 15: HGP and half tee assembly

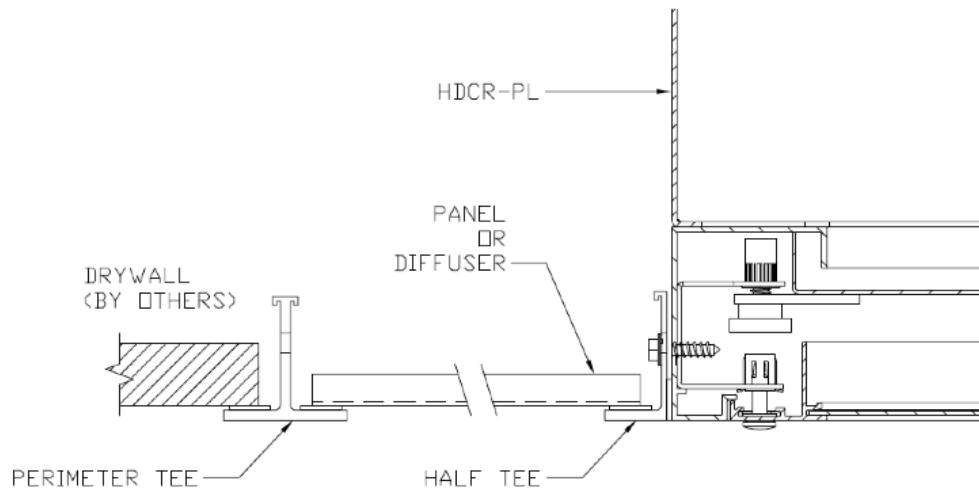


Fig. 16: HGP with Perimeter HGWC and Drywall Elevation View

This completes the instruction for non-Unistrut installations. For Unistrut applications, please continue to the following step for closure strip installation.

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Step 2: To seal exposed Unistrut openings, installation of closure strips is required. To determine length of closure strips required, measure distances between breaks in Closure Strip between equipment rails, as well as end of Unistrut.



Fig 17: Closure Strip Installation to Unistrut

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Step 3: Cut closure strips to required lengths. Where Unistrut ends, it is recommended that the closure strip extends 5/8" past the Unistrut, and vertical snap-in pieces should be coped by around 1" to allow flush installation of half-tee against the end of Unistrut. Refer to Fig 18 for further detail.



Fig 18: Coped closure strip and side view of assembly (request new render of closure strip with coped ends)

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Step 4: Insert closure strip, ensuring that it is tight against the fixing block.

Step 5: Apply thin layer of caulking to seal between fixing block and closure strip



Fig 19: Sealing fixing block/closure strip

NOTE: For further information on installation of the HGWC system, please refer to the HGWC installation instructions available on the Price website www.priceindustries.com.

For any questions or concerns with installation please contact criticalenvironments@priceindustries.com or call (204) 669-4220 and ask to speak with a ceiling specialist.

This document contains the most current product information as of this printing.
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