

Ceiling Systems

Unitee HDCR Series

Heavy Duty Cleanroom Ceiling System



Product Overview

Design Objectives

Unitee HDCR Series is a heavy duty suspension ceiling system with gasket that prevents air leakage between the ceiling plenum and the occupied space below, thereby preventing the flow of contaminants into or out of the clean zone.

The Unitee HDCR is designed with heavy duty extruded aluminum T-bars factory welded in large sections. The sections are to be bolted or clipped together in the field by others. Maximum available size of a section is 10' x 5'. Modules use a factory installed continuous length of gasket with a single butt joint per module. Also extra gasket is supplied for field installation along the perimeter and field joints.

Plaster perimeter ceiling is recommended for ease of installation.

Applications

Unitee Cleanroom Ceilings can be used for pharmaceutical labs, computer chip and electronics manufacturing, hospital laboratories, isolation rooms and hospital operating rooms - any situation demanding strict clean air control.

Finish

The standard finish for Unitee HDCR Series is B11 Sterile White-Thermal Setting.

For less stringent applications, Price regular B12 White Powder Coat can be ordered.

Other finishes are available on request.

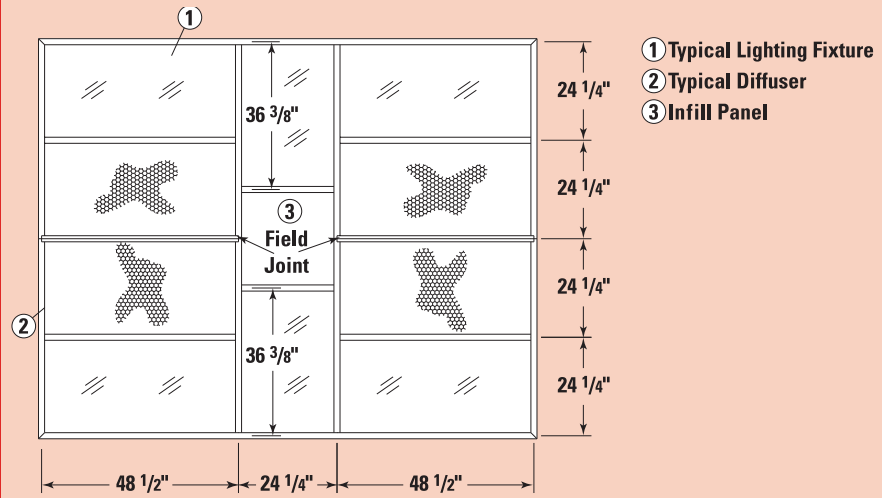
Ceiling Panels

Painted metal panels are available in various styles to suit the application and match adjacent diffusers. Panels with gasketed access opening are also available, see page E150 for specifics.

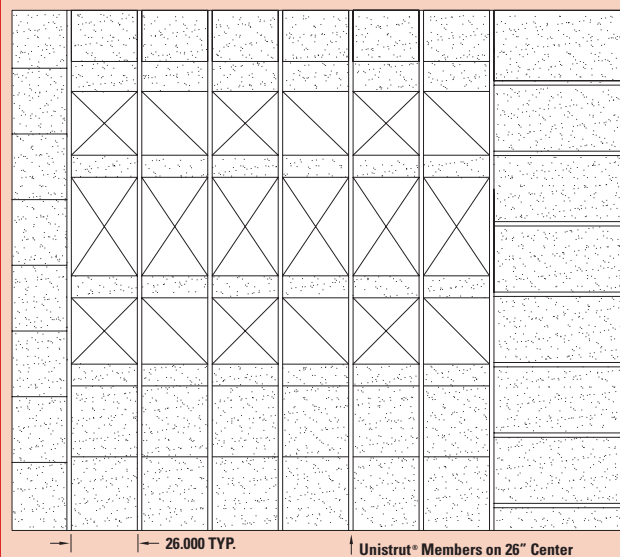
Features/Benefits

- Heavy duty construction.
- Durable 1 1/2" w x 1 9/16" h x 1/8" t aluminum extruded profiles.
- Factory welded corners.
- Easy installation with factory supplied choice of bolts or "u" spring clips.
- Factory installed continuous gasket around corners with single butt joint per module.
- Choice of infill panels to match adjacent diffusers.
- Access panel option available.
- T-bars factory prepunched at 4.850" (123) o/c for hanger wires supplied by others.

Example Layout:



The hospital operating room shown beside, has PRICE HORD and LFD air diffusers integrated into the system. Integrated systems have the advantage of providing single source responsibility for component performance and for the proper interface of individual components.

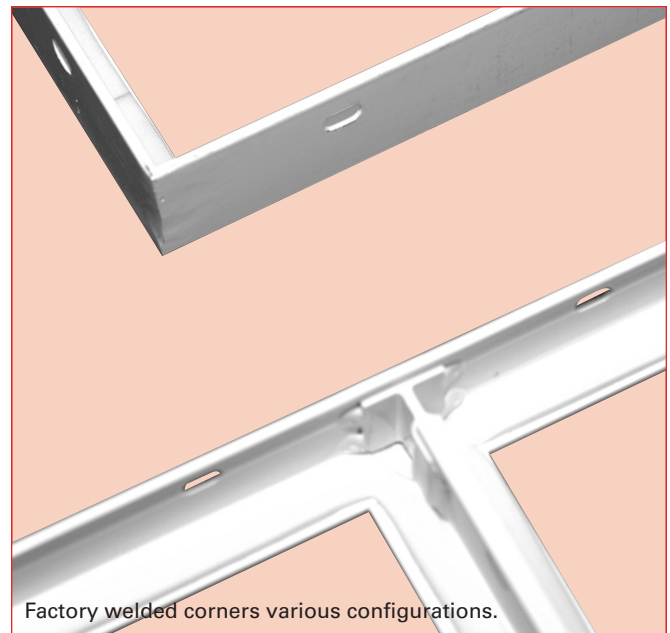
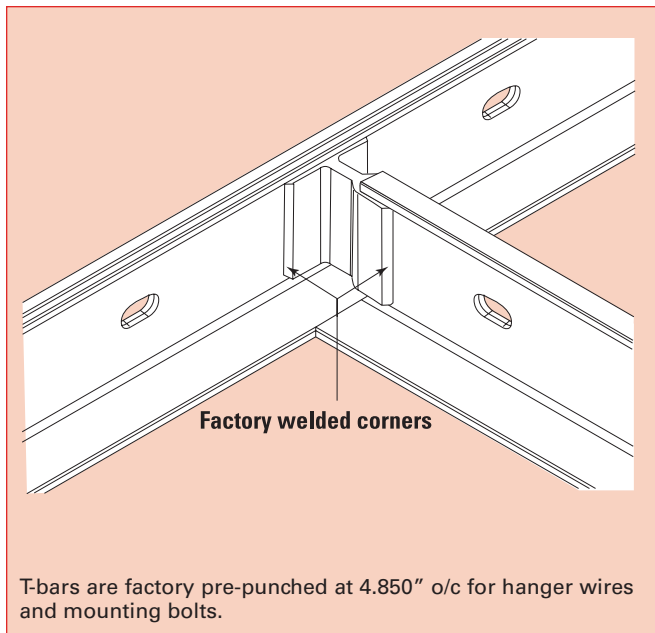
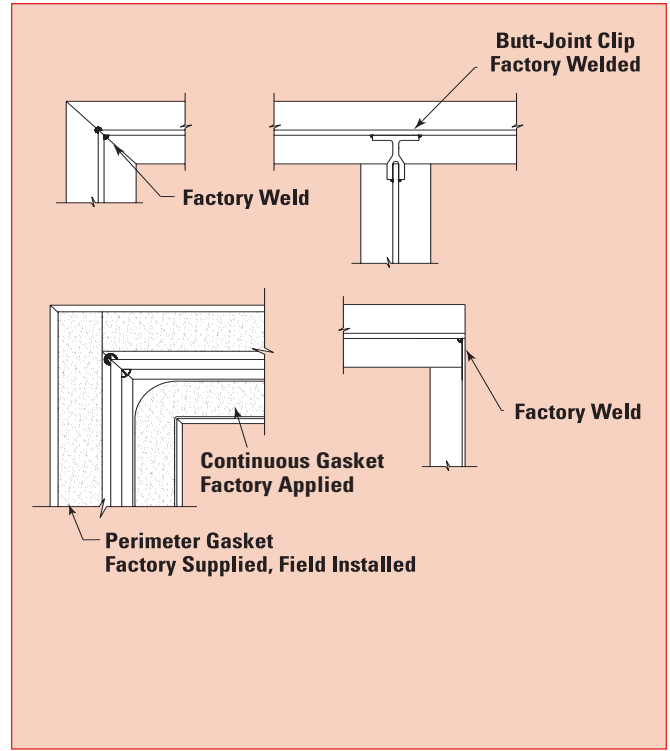
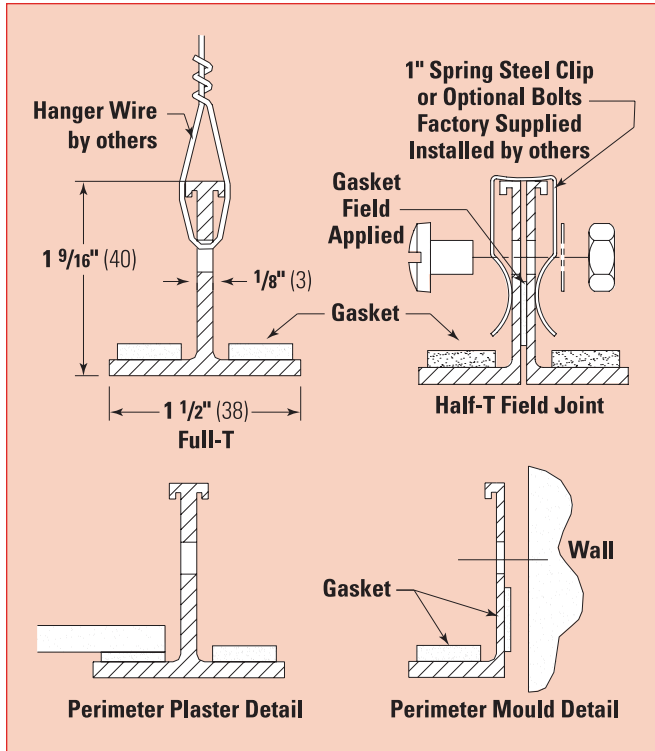


Cathereterization labs (as shown) and hospital rooms present unique challenges to ceiling design due to the specialized equipment required. This equipment is typically hung from a metal framing support system (example Unistrut®) mounted in the ceiling and requires close coordination to ensure fitment. Contact Price for design assistance.

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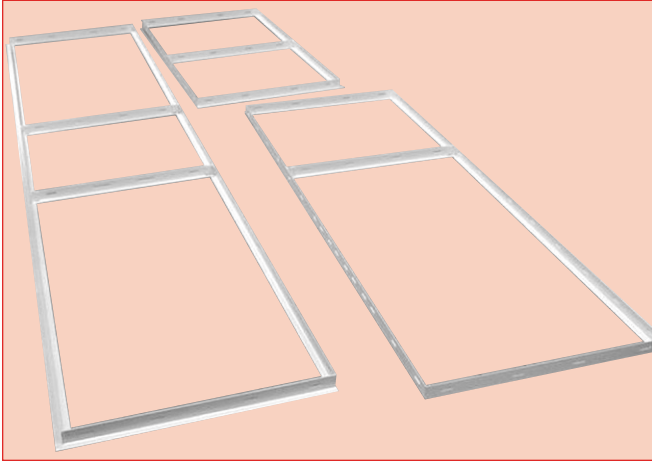
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Components



PRICE CRITICAL ENVIRONMENTS PRODUCTS

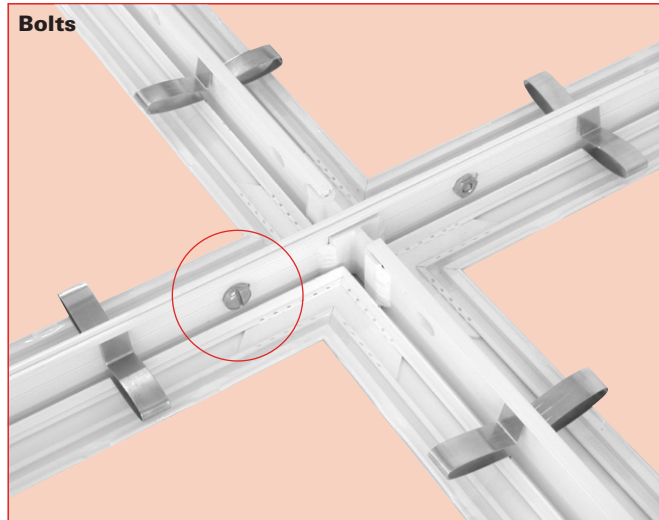
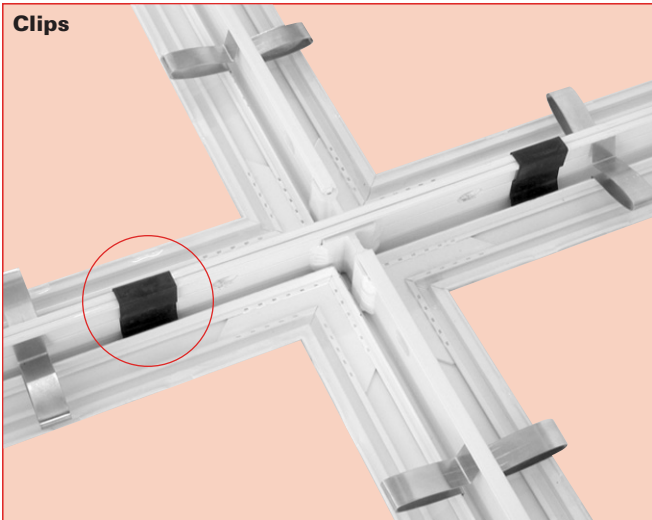
System Details



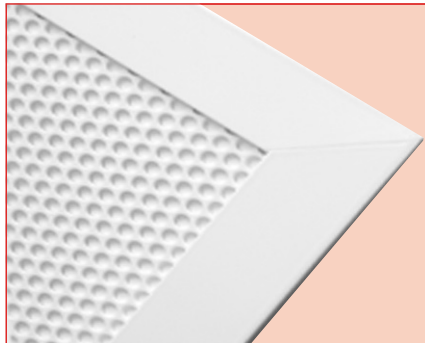
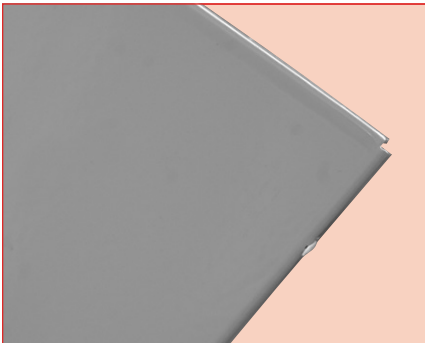
Unitee HDCR is manufactured in large factory-welded sections maximum 5' x 10' size is available. Corners are heli-arc welded with reinforcing brackets welded in where required to add strength and hold right angles.

Continuous gasket is factory applied around corners.

PRICE CRITICAL ENVIRONMENTS PRODUCTS



Sections are to be field assembled with either heavy duty spring clips or bolts as chosen by the customer.



Solid or perforated face panels are available with hold down clips factory supplied for attachment.

Suggested Specification Price Critical Environments Products

Unitee Series HDCR

Unitee HDCR

Heavy Duty Gasketed Cleanroom Ceiling System

General

The integrated ceiling shall be Price Unitee HDCR heavy duty cleanroom ceiling system. The ceiling shall be designed to prevent air leakage between the ceiling plenum and the occupied space below the ceiling.

Scope (if an architectural specification)

Supply and install the specified integrated ceiling system, complete with:

- Suspension system
- Infill Panels
- Supply only of HORD and/or LFD/LFDC air diffusers for installation by the mechanical contractor.

or

Scope (if a mechanical specification)

Supply and install the specified integrated ceiling system, complete with:

- Suspension system
- Infill panels
- HORD and/or LFD/LFDC air diffusers

Submittal Drawings

Prior to commencement of work, furnish a complete set of submittal drawings for approval.

Product

Suspension System

- The suspension system shall consist of Price extruded aluminum main and cross tees complete with integral gasket along all flanges.
- The system shall consist of extruded aluminum T-bars with factory welded corners in sections up to 10 feet (3048mm) x 5 feet (1524mm). Tees located around the perimeter of each section shall be half tees to allow connection to adjacent sections and/or to the wall. Welded sections shall be field joined using factory supplied heavy duty spring steel clips or bolts. Clips shall be located no more than 24" apart along the length of the perimeter tee.
- Gasket shall be continuous along the entire length of the T-bar grid and make 90° continuous turn at T-bar corners. A single butt-joint is used to seal each module.
- The finish on all exposed surfaces shall be Price B11 sterile white – thermal setting finish which will withstand cleaning and high concentration cleaning solutions and agents.

Infill Panels

Infill panels shall be (Select one: Price SC Series lay-in type, 0.040" unperforated aluminum or stainless steel, or Price SPB Series perforated panel with border consisting of 0.040" perforated aluminum (or stainless steel) faceplate with 0.040" solid aluminum backing with B11 finish, or stainless steel and MILL finish.

Panels to be available with locking panel clips to prevent clips from springing off and being lost during access to maintenance in the ceiling.

Air Diffusers

Air diffusers shall be Price _____. (use spec from HORD, LFD, LFDC or other Price product.)

Light Fixtures

Light fixtures, as specified by the designer, and must be suitable for the width of T-bar grid selected.

Execution

Installation

- Install all components in accordance with the manufacturer's instructions and in accordance with ASTM C 636.
- Main grid members are to be suspended on pre-stressed hanger wire at 4' (1200 mm) centers. Minimum gauge for the hanger wire shall be 12 gauge.
- Maximum allowable deflection shall not exceed L/360.
- Install ceilings to heights indicated on the plans and specifications to a tolerance of 1/8" in 12'-0" (3.2 mm in 3660 mm).
- Installation of the ceiling shall take place only after the temperature is maintained at normal occupancy temperature and relative humidity is maintained below 40%.