Price HDCR-PL

PART 1 – GENERAL

Price HDCR-PL is an integrated plenum design incorporating multiple diffusers resulting in a system that requires fewer duct connections. The HDCR-PL is ideal for use in areas that require high capacity air distribution but also accommodates space and cost constraints.

PART 2 – PRODUCTS

2.01 HDCR HEAVY-DUTY CEILING SYSTEM WITH INTEGRATED PLENUM

Laminar flow diffuser manufacturer shall furnish custom engineered plenum system with integrated extruded aluminum framing to support supply diffusers, blank-off panels, and light fixtures (by others). Plenums shall have a 12” tall low profile design, maximizing ceiling space for additional equipment and minimizing obstructions.

Integrated plenum provided shall be 14-gauge aluminum construction and have internal Unistrut for support and for suspension from structure above. Inlet collars shall be sized based on airflow required for the intended space.

Integrated plenum shall incorporate laminar flow diffusers, with or without high efficiency filters, providing non-aspirating, unidirectional airflow above the sterile zone. Diffusers shall incorporate an adjustable damper that is accessible from the room side.

The perforated distribution plate shall be attached to the diffuser frame using snap-in, non-slip quarter-turn fasteners for easy removal. Two stainless steel retainer cables shall be used to prevent accidental dropping of the diffuser face.

Diffusers shall be room-side accessible to allow for cleaning of all internal surfaces per ASHRAE Standard 170-2008 and for access to high efficiency filters (if applicable).

The finish of the Integrated Plenum System shall be B12 baked-on powder coat to match laminar flow diffusers and fill-in panels. Paint finish must demonstrate no deterioration when tested in accordance with ASTM D4752 (MEK double rub) paint durability tests.

2.02 FILL-IN PANELS

As part of the HDCR system, the diffuser manufacturer shall provide fill-in panels to be used where ceiling penetrations and/or access panels are indicated on drawings. Fill-in panels used where ceiling penetrations are present shall be field-cut by installing contractor. Finish of the fill-in panels shall match the appearance of the laminar flow diffusers.

2.03 HDCR HEAVY-DUTY WELDED CEILING SYSTEM

Ceiling tees shall have be 1.5” wide and be fully welded. Minimum wall thickness of full tees shall be 0.125 wide with a minimum weight of 0.45lbs. per linear ft. (full tee). All tee and half tee extrusions should include channels along the top side of the stack to support hold-down clips for fill-in panels.

The ceiling suspension system shall be provided in factory heli-arc welded sub-assemblies not to exceed 4’x 8’. Framed sub-assemblies shall be mechanically fastened in the field with adjacent sub-assemblies being butted together along the half tees with factory supplied bolts or spring steel U-clips. Optional closed-cell polyethylene gasket placed between butted half tees or silicone applied to top of butted half tees is recommended to minimize any potential pathways from interstitial space.

All tees and half tees shall be pre-punched on 4.85” centers for attachment to minimum 12 gauge pre-stressed suspension wire on 48” centers. Systems shall be designed to support 15lbs/ft² when installed per ASTM C636.

Manufacturer shall provide 0.125” thick, closed-cell polyethylene gasket tape to be field applied to all tees and half tees that support diffusers, fill-in panels, and light fixtures. Fill-in panels to be held down using factory supplied spring clips to ensure a tight seal against the closed cell gasket.
PART 3 – EXECUTION

3.01 General
   A. Install and coordinate system and components per manufacturer’s recommended guidelines and per ASTM C636.

3.02 Inspection
   B. Integrated Ceiling manufacturer shall provide on-site inspection of space, both above and below the ceiling, ensuring there are no interferences with structural supports or other components that could cause project delays, prior to release of manufacturer’s product. Factory personnel shall be involved in all trade coordination meetings as they pertain to integrated ceiling manufacturers’ products/systems.
   C. Per instructions from integrated ceiling manufacturer, the installing contractor shall confirm all trades are prepared for installation of integrated ceiling system and verify that all rough openings in the hard lid are dimensionally correct per approved submittals.

3.03 INSTALLATION
   A. Integrated Ceiling manufacturer’s factory trained personnel shall be on-site to supervise the installation of the ceiling system. Services to include: identification of products and placement verification per submittal drawings, instructions for proper measuring and field cutting of product where indicated, and instructions for attaching framing sub-sections to ceiling level Unistrut®.
   B. Suspended ceiling hangers shall be plumb and shall not interfere with other objects within the ceiling space that is not part of the supporting structural or integrated ceiling system. Contractor must confirm in writing that the intended space is ready for installation.