**Price HGP Hospital Grade Common Plenum Ceiling System**

***Division 23 – Heating, Ventilating, and Air Conditioning***

***Section 23 37 13 – Diffusers, Registers, and Grilles***

The following specification is for a defined application. Price would be pleased to assist in developing a specification for your specific need.

**PART 1 – GENERAL**

**1.01 Section includes**:

1. Hospital Grade Common Plenum

**1.02 Related Requirements**

1. Section 01 30 00 – Administrative Requirements
2. Section 01 40 00 – Quality Requirements
3. Section 01 60 00 – Product Requirements
4. Section 01 74 21 – Construction/Demolition Waste Management and Disposal
5. Section 01 78 00 – Closeout Submittals
6. Section 01 79 00 – Demonstration and Training

**1.03 Reference Standards**

A. AAMA Standard 611-98 – Voluntary Specification for Anodized Architectural Aluminum; 1998

B. ASHRAE Standard 62.1 – Ventilation for Acceptable Indoor Air Quality; 2016

C. ASHRAE Standard 170 – Ventilation of Health Care Facilities; 2008

D. ASTM D1308 – Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes; 2013

E. ASTM D4752 – Standard Practice for Measuring MEK Resistance of Ethyl Silicate (Inorganic) Zinc-Rich Primers by Solvent Rub; 2015

F. ASTM C636 – Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2013

G. FGI Guideline 2010 – Facility Guidelines Institute, Guidelines for Design and Construction of Health Care Facilities; 2010

**1.04 Administrative Requirements**

A. Pre-installation Meeting: Conduct a pre-installation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

B. Sequencing: Ensure that utility connections are achieved in an orderly and efficient manner.

**1.05 Submittals**

A. See Section 01 30 00 – Administrative Requirements for submittal procedures.

B. Product Data: Provide data indicating configuration, general assembly, and materials used in fabrication.

C. Shop Drawings: Indicate configuration, general assembly, and materials used in fabrication.

D. Manufacturer's Installation Instructions: Indicate support and hanging details, installation instructions, recommendations, and service clearances required.

E. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, maintenance and repair data, and parts lists.

F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 01 60 00 - Product Requirements for additional provisions.

**1.06 Quality Assurance**

1. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum ten years of documented experience.
2. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

**1.07 Warranty**

1. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
2. Price Industries warrants that, at the time of shipment, the HGP will be free from defects arising from manufacturing, workmanship, or a failure to adhere to Price Industries’ published catalog specifications and specified material. If Price Industries is notified in writing of any such defect within (1) year from the date of shipment, Price Industries will, at its sole option, repair, replace, or refund the purchase price paid by the Representative for the Product. Such remedies are the exclusive remedies available under this warranty.

**PART 2 – PRODUCTS**

**2.01** **Hospital Grade Common Plenum**

1. Basis of Design: Price Industries, Inc.
2. Hospital Grade Common Plenum: Model HGP
3. General:
   1. The integrated plenum ceiling system shall incorporate laminar flow diffusers, ceiling grid, and a common plenum all into a single modular assembly design, to act as a single large diffuser array. The common pressurized plenum design results in fewer inlet connections, and reduced plenum height.
   2. The integrated plenum ceiling system shall incorporate laminar flow diffusers, ceiling grid, and a common plenum all into a single modular assembly design, to act as a single, large diffuser array. The quantity of inlet connections and plenum height are reduced through the common pressurized plenum.
   3. All components of the integrated ceiling system shall be from a single manufacturer and shall be in accordance with ASHRAE Standard 170 and FGI 2010.
4. Hospital Grade Common Plenum: [Price Model HGP]:
   1. Common Plenum Construction:
      1. The integrated plenum shall be provided with 14 gauge aluminum construction and spot welded assembly.
      2. The integrated plenum shall incorporate laminar flow diffusers, providing non-aspirating, unidirectional airflow above the sterile zone, complete with room side adjustable inlet dampers.
      3. The integrated plenum system shall incorporate laminar flow diffuser face screens, complete with four (4) quarter turn fasteners and stainless steel retaining cables.
      4. Laminar modules will come [with] or [without] high efficiency filters, providing non-aspirating, unidirectional airflow above the sterile zone.
      5. Each integrated plenum diffuser module shall include four (4) eye bolts for hanger wire support.
      6. The integrated plenum inlet collars shall be sized based on airflow requirements for the intended space.
      7. Modules shall be factory assembled up to 48 inches x 120 inches for attachment to additional modules in the field by others.
   2. Paint finish (**select one**):
      1. The ceiling system finish shall have a [B12 or B25] white baked-on powder coat finish matching the laminar flow diffusers and fill-in panels.
         1. The paint finish must demonstrate no degradation when tested in accordance with ASTM D1308 (covered and spot immersion) and ASTM D4752 (MEK double rub) paint durability tests.
         2. The paint film thickness shall be a minimum of 2.0 mils.
         3. The finish shall have a hardness of 2H.
         4. The finish shall withstand a minimum salt spray exposure of 1000 hours.
         5. The finish shall have an impact resistance of 80 in-lb.
      2. The ceiling system finish shall have a clear, anodized finish in accordance with AAMA 611-98.

**PART 3 – EXECUTION**

**3.01 Examination**

A. Verify that conditions are suitable for installation.

B. Verify that field measurements are as shown on the drawings.

**3.02 Installation**

1. Verification of the ceiling rough opening dimensions and all mechanical and electrical work by the installing contractor shall be completed prior to installation of the integrated ceiling system.
2. Install the ceiling system components in accordance with manufacturer’s instructions, and per ASTM C636.
3. See drawings for the size(s) and locations of heavy duty cleanroom ceiling system.
4. Do not support components from ductwork.

**3.03 Adjusting**

1. Verify that field measurements are as shown on the drawings.

**3.04 Field Quality Control**

1. See Section 01 40 00 – Quality Requirements for additional requirements.

**3.05 Cleaning**

1. See Section 01 74 19 – Construction Waste Management and Disposal for additional requirements.

**3.06 Closeout Activities**

1. See Section 01 78 00 – Closeout Submittals for closeout documentation requirements.
2. See Section 01 79 00 – Demonstration and Training for additional requirements.