Price HGWC Hospital Grade Welded 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 Welded Ceiling System.

**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. ASHRAE Standard 170 – Ventilation of Health Care Facilities; 2013

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

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

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

E. 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 HGWC 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 Welded Ceiling System**

1. Basis of Design: Price Industries, Inc.
2. Hospital Grade Welded Ceiling Systems: Model HGWC
3. General:
	1. The heavy-duty gasketed and welded cleanroom ceiling system shall be supplied to prevent air leakage between the ceiling plenum and the occupied space below, preventing the flow of contaminants into or out of the clean zone.
4. Hospital Grade Welded Ceiling Systems: [Price Model HGWC]:
	1. Construction:
		1. Tees shall be heavy-duty extruded aluminum construction, factory welded in large sub-sections to support diffuser, fill-in panels, and light fixtures.
		2. Welded sub-sections shall be mechanically fastened in the field by the installing contractor.
		3. Ceiling tees shall have a 1.5 inch face width and 1.563 inch overall height.
		4. Minimum wall thickness of full tees shall be 0.125 inches wide with a minimum weight of 0.45 pounds per linear foot.
		5. All full tees shall be pre-punched on 6 inch centers for attachment to minimum 12 gauge, pre-stressed suspension wire on 48 inch centers.
		6. Half-tees will be fastened in the field with self-tapping screws (by others).
		7. Systems shall be designed to support 15 pounds per square foot when installed in accordance with ASTM C636.
		8. Access clips will be provided to hold panels in place and allow access to the ceiling plenum.
		9. Framed sub-assemblies shall be mechanically fastened in the field with adjacent sub-assemblies being butted together along the half tees and secured with self-tapping screws provided by others.
		10. The ceiling suspension systems shall be provided in factory heli-arc welded sub-assemblies not to exceed 5 feet x 10 feet.
		11. The ceiling system shall be provided with 0.125 inch thick, closed-cell polyethylene gasket tape to be field applied to the upper surface of all full and half tees.
			1. Fill-in panels shall be held in place using factory supplied access clips to ensure a tight seal against the gasket.
		12. 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.
	2. Paint finish:
		1. The ceiling system finish shall have a B12 white baked-on powder coat finish.
		2. 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.
		3. The paint film thickness shall be a minimum of 2.0 mils.
		4. The finish shall have a hardness of 2H.
		5. The finish shall withstand a minimum salt spray exposure of 1000 hours.
		6. The finish shall have an impact resistance of 80 in-lb.

**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 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.