HEPAire Products Corporation
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MODULAR CEILING GRID SYSTEMS - SECTION 132113

2" CEILING GRID SYSTEMS TECHNICAL SPECIFICATIONS

SECTION 1 GENERAL

1.01.1 GENERAL INFORMATION

This Section specifies all requirements necessary to furnish and install complete all modular aluminum ceiling grid, blank panels, lights, and filtration devices including, but not limited to the following:

1. All modular 2" aluminum ceiling system, completely factory prepared, and product assembled as indicated on the drawings, including all installation support hardware.
2. Ceiling blanks constructed from selected core and finish as per schedule on drawings.
3. Extrusions, fasteners, trim finishing, and angles necessary to maintain system structural integrity and provide air restrictive installation.
4. Light and filtration assemblies as per schedule on drawings.
5. Provide all sealed cut outs and coordinate with fire protection as per schedule on drawings.
6. Coordinate installation with other trades to avoid onsite conflicts.

1.02 RELATED SECTIONS

The Sections listed below shall be used in conjunction with the following specifications and related contract documents to establish the total requirements for the referenced System.

Division 5 – Metals for structural elements required to support ceilings.
Division 9 – Finishes for metal studs to support liner wall panels.
Division 21 – Fire Suppression Systems.
Division 22 – Plumbing.
Division 23 – Heating Ventilation and Air Conditioning.
Division 26 – Electrical.

1.03 REFERENCE STANDARDS

This Section specifies standard requirements necessary to furnish and install ceiling grid including, but not limited to the following:

1. ASTM D 3273 Standard Test Method for Resistance to growth of mold on the surface coatings.
2. ASTM D 3274 Standard Test Method for evaluating degree of surface disfigurement of paint films by fungal or algal growth, or soil and dirt accumulation.
3. ASTM E 84 Standard test method for surface burning characteristics of building materials.

1.03.1 SUBMITTALS

1. Manufacturer's literature, specifications, details, and installation instructions for each component proposed for use, including technical data as may be required to show compliance with the specifications.
2. One sample of system components with specified finish, and connectors. Include any other components as necessary to illustrate a completed assembly.

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1.03.2 QUALITY ASSURANCE

1. Award the work to a firm who has a minimum of 5 years experience in the manufacturing and installation of ceiling grid systems.

1.03.3 DELIVERY, STORAGE, AND HANDLING

1. Deliver materials in unopened crated packages.
2. Exercise extreme care in handling all System components to prevent any damage.
3. Store materials within the building in the space designated for storage. Store materials to prevent any damage or intrusion of foreign matter. Any damaged materials must be noted and scheduled with the job site installation foreman for removal and replacement from the jobsite prior to installation.

1.03.4 WARRANTY

Ceiling system and modular components shall be warranted against defects and workmanship for a period of one (1) year from date of original shipment. The Ceiling System supplier shall not be responsible for or liable for any modifications, alterations, misapplication, or repairs made to the products in the field after product final acceptance from owner.

1.03.5 TECHNICAL SERVICES

Ceiling System Supplier must offer technical service support from both the factory and field representative for all services regarding layout, design, and product selection, as well as suggested specifications.

SECTION 2 PRODUCTS

2.01 PRODUCT NAME

ASI Series nominal 2" Ceiling Grid consisting of the following modules:
Wall Perimeter Ladder Framing - Part Number C-PS13
Main Support Tee – Part Number – C-MS14
Cross Tee – Part Number – C-CD16

2.02 MANUFACTURER / SUPPLIER

Manufacturer: Aluminar Systems Inc.
157 Forest Plain Road, Oro-Medonte, Ontario, Canada L3V 0R4

Supplier: HEPAIRE PRODUCTS (1986) CORPORATION, Controlled Environments Group
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2.03 PRODUCT DESCRIPTION ASI. SERIES 2" ALUMINUM CEILING GRID

1. General Description: ASI. Series - Extruded aluminum 2" Ceiling Grid Series is designed to provide a clean and reliable system for a range of applications ensuring quality and performance geared to the expectations for which the product is being designed. The ceiling grid shall be manufactured of extruded alloy 6063 temper T5 with a clear anodized or optional epoxy white powder coat finish. Wall perimeter ladder framing starts consisting of primary perimeter framing part#C-PS13 complete in ladder direction of cross tees part#C-CD-16, with secondary main support tee's part#C-MS14. The grid profile shall have continuous integral top "U" channel notch lock for placement of attachment hardware or suspension adjustable hardware barrel locknut for the attachment to threaded rod and turn buckles to facilitate ease of field installation in suspended applications. All cross tees to have both ends factory pre-set with grid-to-grid "T" part#C-3WAY attachment hardware to insure face alignment with wall perimeter ladder framing with part#2-WAY corner connectors. All grid members to have factory applied grey PVC precision cut with overhanging edges on cross tees to insure complete seal at all grid intersections.

   ASI. Series – Extruded aluminum Modular Ceiling Grid System is designed for easy ceiling placement with secondary support spacing of nominal 5' x 10'.

   The perimeter wall support framing components shall be a fully modular design with integral structure with wall and ceiling interface anchoring with supporting top side "U" channel placed integral to the grid with clear anodized or white powder coat finish.

   Materials and connections shall be manufacturer's standard, capable of assembly without the use of any special tooling.

2. Blank ceiling panel/core construction: All blank ceiling panel systems shall be constructed from the types listed below. Refer to cleanroom ceiling system schedule on drawings for panel selection.

   2.1 Gypsum core ceiling blanks with vinyl facings, sealed edges, fire retardant back facings.
   2.2 Aluminum honeycomb core ceiling blanks with prefinished white aluminum facing.
   2.3 Aluminum panels with prefinished white facing.
   2.4 Steel panels with white powder coat finish.
   2.5 PVC extruded core with white PVC facings.
   2.6 Clear polymer-based panels with protective coatings.

3. Panel thickness: The total panel shall not exceed 3/8" total thickness.

4. Panel width: Each panel shall be nominal 24" wide by 48" long, or as sizes listed on drawings.

5. Standard manufacturer's panel color is white.

6. Panels shall conform to ASTM E 84: for flame spread and a smoke developed.

7. Modular aluminum grid members manufactured from extruded alloy 6063/65 T5 with clear anodized or white powder coat finish. (Consult drawing schedule for location and type)

8. Suspension system to consist of grid connectors with 3/8" threaded rod – ASTM rated LH/RH to 12" length with integral turnbuckle (consult drawing schedule for location and type)

9. Modular ceiling system shall be capable of incorporating fire protection devices in grid members or blank ceiling panels. (Consult drawing schedule for location and type)

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10. Modular ceiling system shall be capable of incorporating cleanroom light fixtures along grid downstream surface side or flush integration with ceiling grid. (Consult drawing schedule for location and type)

11. Modular ceiling system shall be capable of incorporating cleanroom filtration devices. (Consult drawing schedule for location and type)

SECTION 3 EXECUTION

3.01 INSTALLATION

Final installation of ceiling system components shall assemble into a rigid structure with tight straight-line joints. Completed installation shall be free of exposed bolts, nuts, rivets, and fasteners.

3.02 CONDITIONS OF SURFACES

Examine all ceiling system surfaces and adjoining construction conditions under which work is to be installed. Do not proceed with the work until the proper site protocol conditions have been provided.

3.03 MATERIAL INVENTORY

Inspect all materials upon arrival to jobsite to ensure correct quantity, finishes, and quality of product. Report, in writing, any conditions to the materials that appear to have failed in general durability or any other form of apparent deterioration.

3.04 SITE ASSEMBLY

1. Verify dimensions of supporting structure by field measurements so that the System will be accurately designed, fabricated, and fitted to the proposed space.
2. Coordinate with the work of related sections and provide items to be placed during installation of other work at the proper time to avoid delays in the work.
3. Assemble all component parts in accordance with the manufacturer's written instructions and recommendations.
4. Assemble all component parts within the factory recommended tolerances.
5. Do not assemble members which are observed to be warped, bowed, deformed, or otherwise damaged or defaced to such as to impair strength or appearance. Remove and replace members damaged in the process of site assembly.
7. Set units' level, plumb and true to line with uniform joints.

3.05 CLEANING

1. Provide cleaning methods required for each component part as recommended by the respective manufacturers.
2. Cleaning methods shall be carefully selected, applied, and maintained so that finishes will not become uneven or otherwise impaired.
3. Project protocol requires that special attention to minimizing potential contamination of the fully developed environment. Daily cleanup and vacuuming of the work area is essential to an ongoing control of contaminants, especially as the project fit-up progresses.

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3.06 PROTECTION

1. Protect the System throughout the construction period in a clean and properly protected condition so that it will be without any indication of use or damage at the time of substantial completion.
2. All work must be protected during shipment, storage, assembly, and construction so as to avoid development of nonconformity of appearance or other deleterious effects in the work.