

**MICROZONE CORPORATION CLEANROOM CEILING SYSTEMS
SECTION 09500**

SECTION 1 GENERAL

1.01 GENERAL INFORMATION

This Section specifies all requirements necessary to furnish and install a complete Cleanroom Ceiling System including, but not limited to the following:

1. Cleanroom ceiling system, as indicated on the drawings, including all installation hardware.
2. Cleanroom ceiling panels including selected core material including panel finish.
3. Extrusions, fasteners, trim finishing coves and angles necessary to maintain ceiling system structural integrity and airtight installation.
4. Filtration modules and light assemblies with hardware installed as scheduled in section 14000 electrical and 15000 mechanical, and drawing ceiling schedule.
5. Fire protection cut outs and site coordination with section 15000.
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 Cleanroom ceiling system.

1. Section 10000 - Cleanroom Flooring
2. Section 13000 - Cleanroom Modular Wall System

1.03 SUBMITTALS

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

1.04 QUALITY ASSURANCE

1. Award the work to a firm who has a minimum of 5 years experience in the manufacturing and installation of Cleanroom walk-able ceiling system components.

1.05 DELIVERY, STORAGE, AND HANDLING

1. Deliver materials in unopened crated packages.
2. Exercise extreme care in handling all cleanroom ceiling system components to prevent any damage.
3. Store materials within the building in the space designated for cleanroom component storage. Store materials in such manner as 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 job-site prior to installation.

"Simply Building Better Environments For Advanced Technology & Life Sciences"

Microzone Corporation, 86 Harry Douglas Drive, Ottawa, Ontario, Canada K2S 2C7

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Email: sales@microzone.com Web Site: www.microzone.com

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1.06 WARRANTY

Modular Cleanroom Ceiling Systems shall be warranted against defects and workmanship for a period of one (1) year from date of original shipment. Modular Cleanroom 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.

1.07 TECHNICAL SERVICES

Modular Cleanroom Ceiling 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

Microzone Cleanroom Ceiling System

2.02 MANUFACTURER

Microzone Corporation - Cleanroom Services Group
86 Harry Douglas Drive,
Ottawa, Ontario, Canada, K2S 2C7
Phone: 613-831-8318, or Toll Free: 1-877-252-7710
Fax: 613-831-8321, E-mail: sales@microzone.com

2.03 PRODUCT DESCRIPTION

1. General Description: The Microzone Series Cleanroom Ceiling System is designed to provide a clean and reliable ceiling system for either a new or existing Cleanrooms, ensuring quality and performance geared to the expectations for which the cleanroom is being designed. The ceiling panels shall be installed providing a smooth, flush ceiling finish by using either a pre-finished (coil coating process) sheet construction with a selected surface and core finish as shown on layout drawings, or a white lay-in ½" gypsum board substrate with 2 mil vinyl face and back with all sealed edges. All components are fabricated with non-out gassing materials.
All wall to ceiling connections shall be covered with curved aluminum extrusions, with all ceiling openings and junctions finished and sealed.
The cleanroom ceiling system design shall require no cutting or drilling in the cleanroom during assembly.
The cleanroom ceiling support framing components shall be an integral aluminum extrusion with anodized finish. The attachment and stud shall fasten together tightly via compression creating a double sealed joint connection and secure alignment of grid.
Integral lighting and filtration modules shall be included in the ceiling design.
Materials and connections shall be manufacturer's standard, capable of assembly without the use of any special tooling.

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2. Support/attachment mechanism: Integral support aluminum strut extrusion shall be anodized, with a clear finish and supplied on all four sides of the panel for easy attachment to adjustable ceiling support track.
3. Cleanroom ceiling panel/core construction options: All cleanroom ceiling panel systems shall be constructed from one or a combination of the types listed below. Refer to system schedule on drawings for panel selection.
Steel or aluminum panel with honeycomb core – Steel or aluminum panels shall be laminated to both sides of a paper or aluminum honeycomb core.
Steel or aluminum panel with polystyrene core – Steel or aluminum panels shall be laminated to both sides of a polystyrene core.
2mil white vinyl face and back with gypsum board core with all sealed edges.
4. Additional panel constructions available - Consult factory for specifications
5. Panel Thickness: The total panel and support/attachment mechanism shall not exceed total thickness shown on drawing schedule.
6. Standard manufacturer's panel color is white.
7. Modular Cleanroom Ceiling System shall be capable of incorporating a integral flush one side light fixture with bottom glass panel constructed complete with an all sealed 1/4" tempered safety glass panel. (consult drawing schedule for location and size)
8. Modular Cleanroom Ceiling System shall be capable of incorporating filtration modules. Provide either integral room side replaceable modules (RSM) or ducted ceiling modules.(consult drawing schedule for location and type)

SECTION 3 EXECUTION

3.01 INSTALLATION

Final installation of Cleanroom 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 within the cleanroom area and shall interface with all mechanical and electrical work in a clearly preplanned modular installation.

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 Cleanroom site protocol conditions have been provided.

3.03 MATERIAL INVENTORY

Inspect all materials upon arrival to job-site 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.

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3.04 SITE ASSEMBLY

1. Verify dimensions of supporting structure by field measurements so that cleanroom ceiling will be accurately designed, fabricated, and fitted to the structure.
2. Coordinate cleanroom ceiling work 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 of the cleanroom ceiling in accordance with the manufacturer's written instructions and recommendations.
4. Assemble all component parts within the factory recommended tolerances.
5. Assemble all trim component parts of the cleanroom ceiling during erection only with the approval of the manufacturer in accordance with their recommendations. All cutting of trim to be done outside the cleanroom area.
6. 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. The cleanroom project protocol requires that special attention to minimizing potential contamination of the fully developed cleanroom environment. Daily cleanup and vacuuming of the work area is essential to an ongoing control of contaminants, especially as the cleanroom fit-up progresses.

3.06 PROTECTION

1. Protect the cleanroom ceiling 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.
3. Remove protection when no longer required.

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