

**Microzone Corporation Clean-Ceil
Hardwall (HWCR series) Cleanroom Specification**

PART 1 GENERAL

PART 1.01 GENERAL INFORMATION

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

1. This specification covers the requirements as per federal standard 209, and ISO 14644-1
2. All model types and styles are covered by this specification.
3. This specification sets the intent for quality, performance and appearance.
4. Supply and install as scheduled in laboratory schedule and drawings.
5. Coordinate installation with other trades to avoid onsite conflicts.
6. Reference related sections within the specification document in conjunction with the following specifications to insure total requirements for the referenced Hardwall Cleanrooms are provided.

1.02 QUALITY ASSURANCE

1. The manufacturer shall maintain a testing facility at their place of business for the performance testing of Cleanrooms. Both the enclosure and installation shall be in conformance to good construction practice and approved by the owner/user. The test facility as well as the manufacturing facility must be available for owner/user inspection and its quality control procedures. All enclosures to be wired for 115 volts, 60 Hz shall be built to meet or exceed the minimum requirements listed.

1.03 REFERENCES

1. The Hardwall Cleanroom enclosures shall conform to the following regulations and standards:
Federal Standard 209 and ISO-14644-1

1.04 SUBMITTALS

1. Hardwall Cleanroom specification sheets and product manuals shall be submitted by the manufacturer upon request. The work station supplier shall submit shop drawings when necessary for clarification.
2. Provide a detailed copy of the test results conducted prior to shipping to ensure compliance with Federal Standard 209 shall be shipped with each enclosure.

1.05 DELIVERY AND STORAGE

1. Hardwall Cleanroom enclosures shall be delivered in unopened crated packages adequately protected from damage during shipment.
2. Exercise extreme care in handling all enclosures to prevent any damage.
3. Store materials within the building in the space designated for 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.

1.06 WARRANTY

1. Manufacturer's warranty against defects in material or workmanship on its enclosures for 1 year from date of shipping, shall include replacement of parts (except prefilters, HEPA or ULPA filters and lamps) and labor. The 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 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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PART 2 - PRODUCTS

2.01 PRODUCT NAME

Clean-Ceil Hardwall Cleanrooms. All model numbers as scheduled in laboratory schedule and drawings.

2.02 ACCEPTABLE MANUFACTURER

Microzone Corporation,
Laboratory Equipment 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, Email: sales@microzone.com

2.03 MATERIALS OF CONSTRUCTION/ FABRICATION

1. Support framework shall be constructed from factory assembled heavy duty all modular anodized 2" square aluminum with integral corner inserts and pre-drilled gusset support straps. An integral foot pad with either a leveler or casters is available. View laboratory schedule, and drawings for model type.
2. Exterior combination panels shall be constructed from aluminum pre-finished Cleanroom panels with honeycomb core on the bottom with clear viewing acrylic panels on the top section. One end section of panel system to feature a swing entrance/exit walk through area.
3. Single entrance/exit swing door with integral hinges, push/pull hardware
4. Factory assembled aluminum ceiling framework "T" grid shall be 2" with pre-gaskated standard 24" x 48" openings to accept standard ceiling components, with medium duty support struts integrated between ceiling panels with limited ceiling loading. The outer perimeter frame shall be supplied with pre-drilled attachment hardware to connect frames to base support framework.
4. Air delivery to the enclosure shall be via Clean-Ceil FAN/HEPA filters with a minimum of 99.99% efficient on all particles 0.3µm. HEPA filters shall be industry-standard size metal-free separatorless type. These shall be integral to the ceiling grid and terminate in standard power cord. Filter quantity as scheduled in laboratory schedule, room classification and drawings.
5. Integral fluorescent Cleanroom all sealed ceiling 24" x 48" terminating in standard power cord. Lighting shall provide 80 to 100 foot-candles. Light quantity as scheduled in laboratory schedule, room classification and drawings.
6. Electrical termination shall be via a remote mounted single point terminal control box for all lights and fan filters with on/off feature, constant pressure minihelic gauges per filter module which monitor system pressure. This system reports the static condition of the integral filter systems both visual and audible with an alarm feature in the event of drop in static, motor failure or increased pressure.
7. All services factory plumbed and wired for easy single point field connection.
8. Overall exterior dimensional information on Clean-Ceil Hardwall Cleanrooms is as described in the laboratory schedule, room classification and drawings.
9. Clean-Ceil Hardwall Cleanrooms shall be constructed such that all rooms are positive pressure design.
10. All enclosures shall be pre-wired terminating in an electrical service outlet ready for connection to a suitable 115 volt service.

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PART 3 - EXECUTION

3.01 INSPECTION

1. Carefully check the contents of the carton for damage that might have occurred in transit.

3.02 PREPERATION

1. Verify equipment rough in before proceeding with work.
2. Coordinate with other trades for the proper and correct installation of plumbing and electrical rough in and for rough opening dimensions required for the installation of the enclosure.

3.03 INSTALLATION

1. Install according to manufacturer's instructions.
2. Install according to standards required by authority having jurisdiction.
3. Install equipment plumb, square and straight with no distortion and securely anchor as required.
4. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.
5. Touch up minor damaged surfaces caused by installation. Replace damaged components as directed by Architect.

3.04 FIELD QUALITY CONTROL

1. A qualified independent certifier should certify the enclosure before use. The certifier should perform tests as recommended in the manual.

3.05 CLEANING

1. Clean equipment surfaces as recommended by the manufacturer, rendering all work in a new and unused appearance.
2. Clean adjacent construction and surfaces, which may have been soiled in the course of installation of work in this section.

3.06 PROTECTION

1. Provide all necessary protective measures to prevent exposure of equipment and surfaces from exposure to other construction activity.
2. Advise contractor of procedures and precautions for protection of material from damage by work of other trades.

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