Microzone Corporation Clean-Ceil
Laminar Flow Work Station Specification

PART 1 GENERAL

PART 1.01 GENERAL INFORMATION

This Section specifies all requirements necessary to furnish and install a Clean-Ceil laminar flow work station including, but not limited to the following:

1. This specification covers the requirements for a Class 100 (ISO Class 5) as per federal standard 209, for laminar flow work stations.

2. Nominal 2 and 4-foot widths 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 laminar flow work stations are provided.

1.02 QUALITY ASSURANCE

1. The manufacturer shall maintain a testing facility at their place of business for the performance testing of laminar flow work stations. Both laminar flow work stations 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 work stations to be wired for 115 volts, 60 Hz shall be built to meet or exceed the minimum requirements of federal standard 209, CLASS 100(ISO Class 5)

1.03 REFERENCES

1. The Clean-ceil laminar flow work stations shall conform to the following regulations and standards:
   Federal Standard 209 and ISO-14644-1

1.04 SUBMITTALS

1. Clean-Ceil Laminar flow work station 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, ISO-14644-1 and IES-RP-CC-002-86 shall be shipped with each cabinet.

1.05 DELIVERY AND STORAGE

1. Clean-Ceil laminar flow work stations shall be delivered in unopened crated packages adequately protected from damage during shipment.

2. Exercise extreme care in handling all Clean-Ceil laminar flow work stations 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 work stations for 1 year from date of shipping, shall include replacement of parts (except prefilters, HEPA or ULPA filters and lamps) and labor. The cabinet 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.

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PART 2 - PRODUCTS

2.01 PRODUCT NAME

Clean-Ceil Laminar Flow Work Stations, Vertical and Horizontal in console or bench top Type. 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
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2.03 MATERIALS OF CONSTRUCTION

1. Support framework shall be constructed from factory assembled heavy duty all modular anodized 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. Rear and sidewall construction shall include back panel wall constructed from white laminated inlay panels framed into an aluminum tube steel frame, with inlay clear acrylic side panels. Exterior panels shall be constructed without exposed bolts or nuts.

3. The work surface with integral molded front lip shall also be constructed from white laminated material. View laboratory schedule, and drawings for countertop type.

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 enclosure and terminate in standard power cord.

5. An optional integral fluorescent all sealed light fixture terminating in standard power cord shall be available. Lighting shall provide a minimum of 80 to 100 foot-candles.

6. Electrical termination shall be via a remote mounted single point terminal control box for all lights and fan filters with on/off feature, an optional constant pressure minihelic gauge which monitors system pressure is also available. 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. Speed control shall be solid state and load rated for motor voltage and shall be set and adjusted electronically.

8. Motor shall be maintenance free, permanently lubricated ball bearing armature motor with single inlet centrifugal fan.

9. All services factory plumbed and wired for single point field connection.

10. A range of optional accessories included base support stand, gas, vacuum and air turrets, duplex electrical outlets, IV bars and special lighting. View laboratory schedule, and drawings for required accessories.

2.04 FABRICATION

1. Overall exterior dimensional information on Clean-Ceil laminar flow work stations is as described in the laboratory schedule, and drawings.

2. The support framework shall be constructed from factory assembled heavy duty all modular anodized square aluminum with integral corner inserts and pre-drilled gusset support straps complete with a removable front access panel with sufficient structural reinforcement to provide a rigid, stable unit.

3. Rear and sidewall construction shall include back panel wall constructed from white laminated inlay all sealed panels framed into an aluminum tube steel frame, with inlay clear acrylic side panels. Exterior panels shall be constructed without exposed bolts or nuts, with removable access service panels.

4. Provide a full width and depth solid work surface with integral molded front lip as described in the laboratory schedule, and drawings.

5. Cabinet assembly shall be constructed such that all positive pressure plenums shall be all sealed, with all cabinet major service operations performed from the front of the cabinet.

6. Supply metal free HEPA filters rated 99.99% efficient on all particles 0.3µm shall be secured in the upper cabinet assembly by filter hold down frame clamped. HEPA filters shall be removable from the front of the cabinet.

7. All major electronic components (speed control, ballasts, starters, switches, motor capacitors, circuit breakers) shall be housed in a removable module for service or testing, located in the front valence of the cabinet.

8. Motor mounting system shall be a permanent part of the motor housing.

9. The cabinet shall be pre-wired terminating in an electrical service outlet located on the rear head section ready for connection to a suitable 115 volt service.

10. Integral service utilities including, switched duplexes, air, gas or vacuum outlets or any other special accessories as described in the laboratory schedule, and drawings.

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 hood.

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.

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3.04 FIELD QUALITY CONTROL

1. A qualified independent certifier should certify the cabinet 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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