Clean AIR PRODUCTS

Series 560 Vertical Flow Hardwall Modular Cleanrooms ■

Technical Data

General Description

General specifications for the Series 560 modular cleanrooms.

Construction

The cleanroom modules shall be constructed of heavy gauge steel panels that are screwed and welded together to form the bolt together modular sections. These sections are equipped with reinforcing bracing to ensure strength and eliminate harmonic vibration.

Finish

The CRS parts are free from sharp edges. Welded surfaces are ground smooth. The parts are degreased, phosphorous etched and painted with a white baked enamel finish.

Air Handling System

Motors

The motors are efficient 3 phase, 1725 RPM open drip proof. They shall have pre-lubricated ball bearings, 1.15 service factor and shall be recognized by UL for its construction. The voltage can be 208,230 or 460 volts 60 Hz which is standard, other voltages and 50 Hz are available. The particular operating voltage must be specified.

Blowers

The blowers shall be forward curved centrifugal squirrel cage double inlet belt drive type. The blowers shall be equipped with pre-lubricated ball bearings.

Air Flow Control

The motor shall be equipped with a variable pitch pulley to control the speed of the blower. This allows for adjusting the blower CFM and pressure to the system as the filters load over time.

Air Flow

The air flow shall be 90 LFPM+/-20 LFPM average uniformly at the filter face as defined by Federal Standard 209B.

Filters

The HEPA filters shall be a 6 inch thick filter of a standard size. They shall have a glass fiber media pleated over aluminum separators and glued to the outer frame by a non-hardening adhesive. It shall be rated 99.99% efficient on 0.3 micron and larger particles utilizing a DOP smoke test. The frame shall be 3/4 inch fire retardant particle board.

Other filter options are available upon request.

Prefilters

The prefilters shall be a disposable pleated style of a standard industrial size. The filter shall utilize a non-woven cotton fabric reinforced with a wire mesh backing. The filter shall have a rigid Kraft board frame. The filter shall have a 40% efficiency rating.

Series **560**

Lighting

The lighting shall be fluorescent type with the individual tubes spaced evenly below the HEPA filters. The lighting shall be a minimum of 90 foot candles illumination. The lights shall have an egg crate grill to provide glare free lighting. The grill shall also serve to protect the HEPA filter.

Greater lighting levels are available upon request.

Sound Attenuation (Optional)

Parts of the units shall be lined with acoustical duct liner to assist in sound attenuation.

Wiring

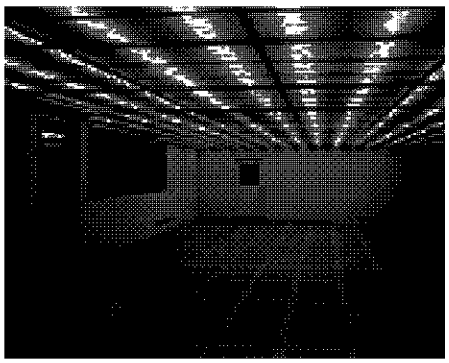
The wiring shall conform with the National Electric Code and all components shall be UL listed.

Vibration

The blower/motor shall be vibration isolated from the cleanroom utilizing the VIBO-STAT isolation system.

Environmental Control

The temperature and humidity control can utilize the house air



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conditioning system or can be provided with the cleanroom in one of the following methods. DX (direct expansion) Freon refrigeration system or chilled water coils. The chilled water coils can utilize 45 degrees F inlet customer provided water or a water chiller can be provided.

F = Flush light mounted below the filter.
R = Recessed lights mounted between the filters.

In the Series 561 the blower is located on the end of the filter module.
T = Low profile blower housing. The motor blower housing is longer but provides greater clearance under the blower housing.
B = The motor is mounted below the blower housing. The blower housing is smaller, but sticks down further below the underside of the unit.

The Series 562 blower is located on the top of the unit.
A = The blower is blowing directly into the plenum chamber.
U = The blower blows into a supply duct prior to going into the air plenum and has a cooling coil located down stream from the blower. Blow thru cooling system.
E = The blower blows into a supply duct prior to going into the air plenum but has no internal cooling coils.

Extra sound attenuation can be built into the Series 562 units in which the blowers blow into a supply duct prior to going into the air plenum.

The additional features can be specifically specified.

Light Diffuser Grill – is used with units that have flush mount lights. It is an egg crate grill that diffuses the light while protecting the lights and HEPA filters from damage. The grills can be polystyrene or clear anodized or painted aluminum.

A/C Inlet Collar – would allow for an outside air conditioning system to be connected to the cleanroom for cooling and other environmental control.

Starters and Disconnects – can be provided mounted on the units or can be assembled on a pre-wired control panel. The pre-wired control panels would have main disconnects, step down control transformers, starters, indicating lights, start stop controls, etc. all pre-wired and tested. This system would eliminate much of the on-site wiring.

Emergency shut down and computer controlled off-hour controls are also available.

Temperature control can be a comfort control of +/- 3 degrees F or can be more precise control of +/- 0.5 degrees F at the filter face.

Humidity Control

Humidity control can control both the minimum and/or maximum depending on the systems used. Control types 1) supply upper control, no humidity will be added, 2) upper and lower control with humidity being added by an electric steam humidifier. The control limit of +/- 5% RH is typical but can be controlled to +/-2% RH. Consult the factory on particular applications.

Sizes

Widths	4 ft.	50-1/2 in.
	6 ft.	71-1/2 in.
	8 ft.	98-1/2 in.
Lengths	4 ft.	50-1/2 in.
	6 ft.	75-1/2 in.
	8 ft.	94 in.
	10 ft.	119-3/8 in.
	12 ft.	114 in.
	14 ft.	169-5/8 in.
	16 ft.	194-1/8 in.

Sizes are for the filter section only and do not include the blower/motor or cooling coil sections.

Models

Note: The *** following the CAP would be either the Series 561 with the blowers on the end or the Series 562 with the blowers mounted on the top. See individual spec sheets for options and configurations.

CAP***-404	CAP***-604	CAP***-804
406	606	806
408	608	808
410	610	810
412	612	812
414	614	814
416	616	816

Two units can be joined together using spanning brackets to form spans up to 32 feet. Longer spans available upon request.

Example: The CAP 561ft-412 has a 4 ft wide x 12 ft filter area with the blower located on the end of the unit.

The CAP = Clean Air Products

The next 3 numbers are the model number 561 or 562.

The letters following the model are unit style options.

The numbers following the dash are the nominal dimension of the filter area in feet. The first number being the width and the second two being the length.

Fire Sprinklers – water or Halogen as well as smoke, heat infrared fire detection equipment can be provided to meet your requirements.

Walls and Support Legs – can be provided to meet your requirements. Support legs can be made to meet any internal height requirements.

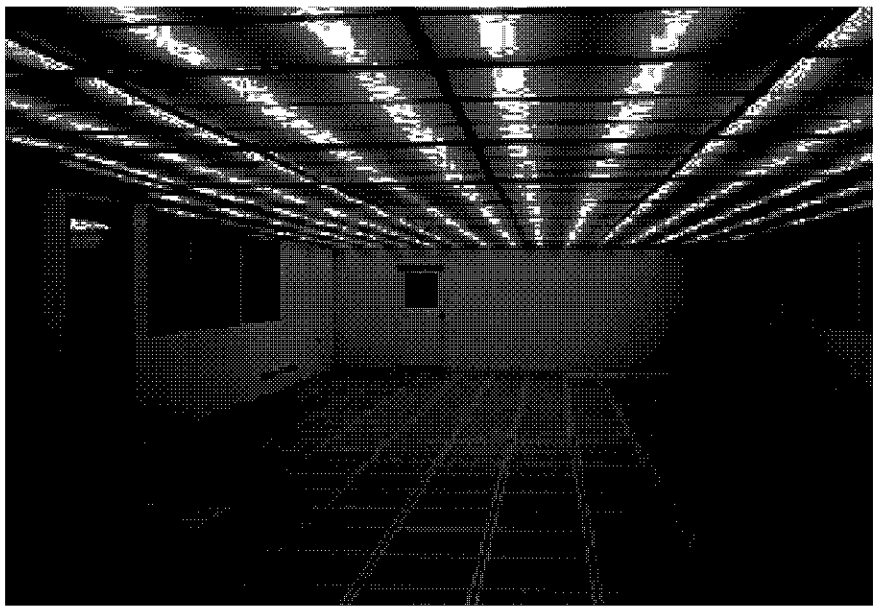
The walls can be insulated or non-insulated and can be furnished in a variety of materials.

- Aluminum
- Painted Aluminum
- Painted Steel
- Vinyl Covered Steel
- Vinyl Curtains
- Conductive Curtains
- Other materials available upon request.

Temperature Control – can be provided from comfort cooling to precise temperature +/- 0.5 degrees F and humidity control to +/- 2% RH.

Chilled water or DX coils can be built into the filter modules, saving on the cost and valuable space taken up by a ducted air cooling system.

Additional options or features that may be required to fit your particular needs are available upon request.



Specifications subject to change. Please contact factory for details.

Clean AIR PRODUCTS

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