



Series 560

Vertical Flow Hardwall Modular Cleanrooms

The Series 560 modular cleanroom systems are prefabricated, pre-engineered vertical flow cleanrooms that offer a viable alternative to costly conventional cleanroom construction. These cleanroom systems feature easy-toassemble self-contained modular sections that are designed to allow for future expansion. Remove and re-configure sections for a process change or completely disassemble and relocate to another facility if desired.

The pre-engineered rooms are free-standing and require only a solid, level floor for their support. They are available with a solid or raised floor and come in a variety of sizes and styles to allow a system to be tailored to meet individual space configuration requirements.

The modules utilize a full HEPA filter ceiling bank to ensure an even airflow which greatly reduces the air turbulences and eddy air currents. This provides a uniform laminar airflow throughout the work zone.

Each model incorporates the HEPA-N-SEAL double-gasket seal to provide a "zero leak" ceiling system. This system keeps the primary HEPA filter high pressure seal under a negative pressure to prevent gasket seal leaks. Gasket leaks can occur over time on both clamped and liquid gel systems; the negative pressure safety seal prevents these leaks from entering the cleanroom.

Features

- Prefabricated, pre-engineered, modular cleanroom systems
- Temperature/humidity control enclosures
- ✤ Laminar flow benches
- Modular wall and ceiling systems
- Custom cleanroom design services

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Construction

The cleanroom modules are constructed of heavy gage 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.

Motors

The motors are efficient 3 phase, 1,725 RPM open drip proof. They have pre-lubricated ball bearings, 1.15 service factor and are recognized by UL for 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 are forward-curved, centrifugal, squirrel-cage, double-inlet, belt-drive type. The blowers shall be equipped with pre-lubricated ball bearings. Optional direct-drive blowers are available.

Airflow 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. Selected units use direct drive blowers with a variable frequency drive.

Airflow

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The airflow shall be 90 LFPM+/-20 LFPM average uniformly at the filter face

as defined by Federal Standard 209E.

Filter

The final filter is 99.99% effective on 0.3 micron and larger particles. Standard final filters have an aluminum anodized frame, painted white metal faceguard and mini-pleated filter media construction. Filters are removable through the table top enclosure area. Optional ULPA filters, 99.999% on .12 micron are available.

Standard units have an upstream gasket seal. Optional gel seal filters are available upon request.

Prefilters

The prefilters are a disposable pleated style of a standard industrial size. The filter utilizes a non-woven cotton fabric reinforced with a wire mesh backing. The filter has a rigid Kraftboard frame. The filter has a 40% efficiency rating.

Lighting

The lighting is fluorescent type with the individual tubes spaced evenly below the HEPA filters. The lighting is a minimum of 70 footcandles illumination. The lights have an egg crate grill to provide glare free lighting. The grill also serves to protect the HEPA filter.

Greater lighting levels are available upon request.

Optional teardrop lights positioned between the removable filter grills are also available.

Sound Attenuation (Optional)

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

Wiring

The wiring conforms with the National Electric Code and all components are UL listed.

Vibration

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

Environmental Control

The temperature and humidity control can utilize the house air 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° 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; teardrop lights

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-through cooling system.
- E = The blower blows into a supply duct prior to going into the air plenum but has no internal cooling coils.

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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.

These additional features can be specifically specified:

A/C Inlet Collar – allows 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.

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 noninsulated 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° 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.

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.

Guarantee

A written 1 year Warranty is furnished with each room.

Specifications subject to change. Please contact factory for details.

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