

General Description

The Series 550 consists of full ceiling HEPA filter plenum sections that provide filtered laminar flow air to clean areas. These sections are designed to deliver filtered air through 00% of the ceilings available surface area.

The Series 550 utilizes the Series 150 ceiling HEPA filter plenum sections. These sections are available in various styles which provide the Series 550 with specific models to meet your specific application.

The Series 550 is constructed from heavy-duty 16 gauge cold rolled steel with a white baked enamel finish as standard.

The following models are offered with the Series 550.

Models

Series 551

The Series 551 is designed as a cleanroom that consists of legs and soft walled vinyl curtains that are mounted to the Series 151 low profile filter plenum. The low profile plenum extends beyond the end of the cleanroom. The Series 551 can be building suspended with or without curtains.

Series 552

The Series 552 is a building suspended filter plenum. The blower and motor is mounted directly on top of the Series 152 filter plenum and blows directly into it. The Series 552 can be supplied with or without soft wall curtains and can also be supported with legs.

Series 556

The Series 556 is a soft walled cleanroom with an all stainless steel Series 150 filter plenum. The blowers and optional cooling coils are installed within the unit's vertical stainless steel support member.

Series 558

The Series 558 is a Series 150 filter plenum used to create a low profile tunnel section. The blower and optional cooling coils are installed in the vertical support member that forms the tunnel.

Standard Model Sizes

The following sizes are for the filter section only and do not include the

blower/motor or optional cooling coil sections. NOTE: The 4, 5 and 8 ft. widths can be combined with any combination of lengths.

Width	Length
4 ft. - 50-1/2 in.	4 ft. - 50-1/2 in.
6 ft. - 71-1/2 in.	6 ft. - 75-1/2 in.
8 ft. - 98-1/2 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.	

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



Series 552
Building suspended modular section



Series 558
Low profile tunnel section blowers in sidewalls

Series 550



Series 551
Soft-sided section supported by legs



Series 556
All stainless steel, smooth exterior for easy wipe down and cleaning

 For more information or to download or fax this product from the web, simply go to:

www.cleanairproducts.com/550

Model Number and Style Description

The Series 551, 552, 556, and 558 model numbers will include an extension consisting of (3) numbers followed by (2) alpha letters. These numbers describe the size and style and light configuration of the unit.

NOTE: The lights included with the Series 550 are configured either evenly spaced below or between the filters.

See individual specification sheets for options and configurations.

NOTE: The *** following 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 specification sheets for options and configurations.

(FORM 550 ref form 378 Page 1)

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

Example: The CAP 551FT-412 has a 4 ft. wide x 12 ft. filter area with the blower located on the end of the unit and the lights mounted below the filter.

- ❖ 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.

The following letters that follow model number describe the style

options:

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 between 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 in the air plenum but has no internal cooling coils.

Additional features can be specified.

Air Handling System

Air handling for the Series 550 is provided by the Series 150 ceiling HEPA plenum sections.

The Series 150 filter section assembly includes the following components.

Motor/Blower

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.

NOTE: Motor HP will vary depending on ceiling filter plenum size.

The blowers are belt driven by the motor at a fixed speed (1,725 RPM). A variable pitched pulley is installed on the motor. CFM and greater air velocities are achieved by moving the belt to another pulley on the motor.

Optional solid state motor speed control is also available.

Air Flow

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

Air flow CFM and pressure adjustments can be made as the filters load over time. 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.

Filters

The HEPA filters shall be 3 in. thick filters of 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 extruded aluminum.

Filters are changed from the under side of the filter unit.

Other filter options are available upon request.

Prefilters

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

Lighting

The lighting shall be fluorescent type. Individual lights can be spaced evenly below the HEPA filter or positioned between them. The lighting shall be a minimum of 90 foot candles illumination. The lights shall have a light diffuser grill to provide glare free lighting and provide protection for 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.

Electrical

The wiring shall conform with the National Electric Code and all components shall be UL listed. Voltage requirements will vary depending on the number of lights used.

Vibration

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

Environmental Control

Optional temperature and humidity control can utilize the house air conditioning system or can be supplied by Clean Air Products 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.

Options

- ❖ **Fire Sprinklers** – water or Halogen as well as smoke, heat infrared fire detection equipment can be provided to meet your requirements
- ❖ **Hard Wall** – 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 $\pm 0.5^\circ\text{F}$ and humidity control to $\pm 2\%$ 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 $\pm 5\%$ RH is typical but can be controlled to $\pm 2\%$ RH. Consult the factory on particular applications.

- ❖ **Extra Sound Attenuation** – 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.
- ❖ **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 hours controls
- ❖ ULPA filter 99.999% on 0.12 micron particles
- ❖ 230V, 460V, 50 Hz and other voltages
- ❖ Solid state speed control

Specifications subject to change. Please contact factory for details.