

Series 556

Vertical Flow Modular Hardwall / Softwall Cleanrooms

The Series 556 vertical flow softwall cleanroom system is designed to provide superior cleanroom performance. Its modular design combines functionality with flexibility to create systems that will meet your cleanroom needs of today and into the future.

Sampling Station

This cleanroom can be used as a pharmaceutical sampling station with minor construction modifications. Please specify sampling station as your application.

Features

- ❖ All feature full-ceiling HEPA filter plenum sections for superior cleanroom performance
- ❖ All metal construction
- ❖ Designed for easy wipe down
- ❖ Very energy efficient
- ❖ Modular sections
- ❖ Easily maintained

Overview

The Series 556 softwall cleanrooms consist 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 100% of the ceiling's available surface area.

Series 556 softwall cleanrooms utilize the Series 150 ceiling HEPA filter plenum sections. These sections are available in various styles which divide the Series 556 into specific models to meet your specific application.

The Series 556 is constructed from heavy-duty 16 gage cold-rolled steel with a white baked-enamel finish.

The Series 556 is a softwalled 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.

Air Handling System

Air handling for the Series 556 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, 1,725 RPM open drip-proof. They have pre-lubricated ball bearings, 1.15 service factor and are recognized by UL for their construction. The voltage can be 208, 230 or 460 volts, 60 Hz which is standard; other voltages and 50 Hz are available. The specific 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.

An optional solid-state motor speed control is also available.

Airflow

The airflow is 90 LFPM+/-20 LFPM average uniformly at the filter face as defined by Federal Standard 209E.

Airflow CFM and pressure adjustments can be made as the filters load over time. The motor is 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 are 3 in. thick and are of standard size. They have a glass fiber media pleated over aluminum separators and are glued to the outer frame by a non-hardening adhesive. Filters are rated 99.99% efficient on 0.3 micron and larger particles. The frame is extruded aluminum.

Filters are changed from the underside of the filter unit.

Other filter options are available upon request.

Prefilters

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

Lighting

The lighting is fluorescent, and individual lights can be spaced evenly below the HEPA filter or positioned between them. The lighting has a minimum of 90 footcandles illumination. The lights 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 are lined with acoustical duct liner to assist in sound attenuation.

Electrical

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

Vibration

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

Environmental Control

An optional temperature and humidity control can utilize the house airconditioning 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 utilize 45°F inlet customer provided water or a water chiller can be provided.

Filter Section Sizing

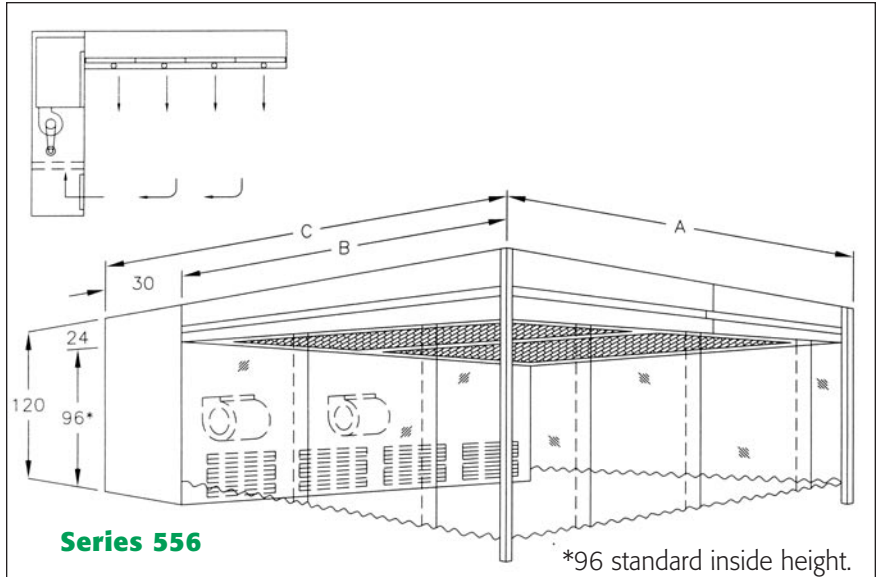
The following sizes are for the filter section only and do not include the blower/motor or optional cooling coil sections.

NOTE: 4, 5 and 6 ft. widths. Two units can be joined together using spanning brackets to form spans up to 32 ft. Longer spans available upon request.

Options

- Fire sprinklers – water or Halogen as well as smoke, heat infrared fire detection equipment can be

- provided to meet your requirements
- Hardwall – 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 the cost and valuable space taken up by a ducted air cooling system.
- 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 556 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 airconditioning system to be connected to the cleanroom for cooling and other environmental control.
- Starters and disconnects – can be



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Nominal Inside	A	B	C
4 x 6	50 1/2	76 1/8	106 1/8
4 x 8	50 1/2	94 1/8	124 1/8
6 x 6	74 1/2	76 1/8	106 1/8
6 x 8	74 1/2	94 1/8	124 1/8
6 x 10	98 1/2	119 1/8	149 1/8
8 x 6	98 1/2	76 1/8	106 1/8
8 x 8	98 1/2	94 1/8	124 1/8
8 x 10	98 1/2	119 1/8	149 1/8
8 x 12	98 1/2	144 1/8	174 1/8
12 x 6	149	76 1/8	106 1/8
12 x 8	149	94 1/8	124 1/8
12 x 10	149	119 1/8	149 1/8
12 x 12	149	144 1/8	174 1/8

Measurements are in inches.

- 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

Guarantee

A written 1 year warranty is furnished with each cleanroom.

Specifications subject to change. Please contact factory for details.



Solutions Built to Your Specifications.

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