



Shown With Optional Stand

Vertical Laminar Flow Hood D-Series



Our clean benches are useful for mycology, food microbiology, plant and mammalian cell culture, clinical pharmacy and hospital protocols, cleanrooms, semiconductor assembly, pharmaceutical, aerospace and medical devices industries, where product protection is required.

General

Our laminar flow clean benches incorporate a number of features to ensure operator comfort and enhanced productivity.

The clean bench work surface is constructed of stainless steel, making the work zone easy to clean. The interior surface will not chip, rust or generate particles.

The spillage-retention work top design with a recessed central area ensures that all liquid spills are contained (not applicable for GAV-6F-D).

The ergonomically designed work surface with a curved front edge is designed for maximum operator comfort.

Built-in warm white, electronically ballasted, 5000k lighting provides excellent illumination of the work zone and reduces operator fatigue. The reliable lighting system is zero-flicker and instant start.

Construction

All clean benches products are manufactured for the most demanding laboratory applications.

All components are designed for maximum chemical resistance and enhanced durability for a long service life.

The main body of the clean bench is constructed of industrial-grade electro-galvanized steel.

All cabinet components are clean room compatible.

Isocide eliminates 99.9% of surface bacteria within 24 hours of exposure.

Transparent tempered glass side panels enhance visibility and create a more comfortable work environment for the operator. (**Stainless Steel Available)

Tempered glass is scratch and abrasion resistant, does not create particulates, and is easy to clean.

Filter

The enhanced filtration system on the vertical flow clean bench is designed to provide the highest level of air quality within the work zone, meeting all relevant standards (see technical specifications for details).

All laminar flow clean benches provide ISO Class 3 air cleanliness within the work zone as per ISO 14644.1, significantly cleaner than the usual Class 5 classification on cabinets offered by the competition.

High quality ULPA filters, utilizing an improved mini-pleat separation technique to maximize surface area (improving efficiency and extending the life of the filter), operate at a typical efficiency of >99.999% at 0.1 to 0.3 micron sizes, providing superior protection over conventional HEPA filters.

An additional disposable pre-filter on all models traps large particles in the inflow air prior to reaching the main filter, protecting it against damage and prolonging its life.

Vertical flow clean benches incorporate Auto-Purge™ slots at the back of the work zone which eliminate turbulence and enhance product protection.

Blower Efficiency

Our laminar flow clean benches incorporate permanently lubricated direct drive centrifugal blowers.

The energy efficient external rotor motor design reduces operating costs and has extremely low noise and vibration.

The intelligent blower system compensates airflow as the filter becomes loaded, ensuring optimum efficiency and product protection.

Controller

The Sentinel™ microprocessor-based control system supervises all cabinet functions. The controls are easily configurable to meet user requirements and come equipped with a number of enhanced features.

Vertical Laminar Flow Cabinets

Accurate true airflow velocity sensing technology, measures all critical cabinet airflow parameters allowing superior monitoring. Temperature compensated sensors ensure increased accuracy.

Built-in solid state variable speed controller is superior to conventional “step” controllers and offer infinite adjustment from zero to maximum setting.

Audible and visual alarms ensure product protection by alerting the user in the event of low airflow.

A bright, easy-to-read, LED display provides continuous monitoring of clean bench airflow.

Safety

All components used in the products meet or exceed all applicable safety requirements.

Each cabinet is individually factory tested for safety and performance in accordance with international standards.

UL listed or UL recognized, electrical components ensures superior electrical safety for the operator.

All laminar flow clean benches meet general safety requirements set by independent testing laboratories (see technical specifications for details).

All GAH models have been type tested to the EN 12469:2000 for cross contamination and product protection using microbiological testing methods.

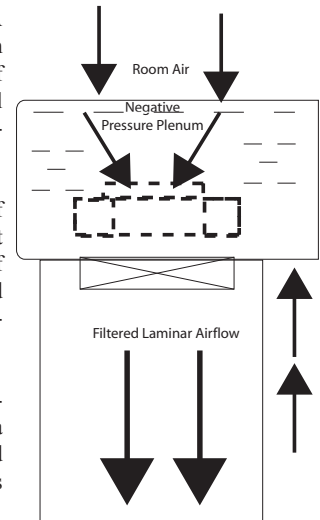
Cabinet Airflow Profile

Room air is taken in from the top of the cabinet through a disposable pre-filter with 85% arrestance; this serves to trap larger particles and increase the life of the main filter.

Air is forced evenly across the ULPA filter(s); the result is a stream of clean laminar air within the work zone of the cabinet; this dilutes and flushes all airborne contaminants from the interior.

A nominal filter face velocity of 0.45 m/s or 90 fpm ensures that there is a sufficient number of air changes within the enclosed area of the cabinet in order to maintain cleanliness.

The purified air travels across the internal work zone of the cabinet in a horizontal, unidirectional stream and leaves the main work chamber across the entire open front of the cabinet.



Specs	GAV-3F-D	GAV-4F-D	GAV-5F-D	GAV-6F-D
External Dimensions (Width x Depth x Height)	40.7" x 30" x 50.4"	52.8" x 30" x 50.4"	64.8" x 30" x 50.4"	76.8" x 30" x 50.4"
Internal Work Zone Width x Depth x Height	38" x 30" x 28.3"	50" x 30" x 28.3"	62" x 30" x 28.3"	74" x 30" x 28.3"
Air Volume	977 cmh (+/-109 cmh) 575 cfm (+/-64 cfm)	1295 cmh (+/-144 cmh) 762 cfm (+/-85 cfm)	1614 cmh (+/-180 cmh) 950 cfm (+/-106 cfm)	1930 cmh (+/-218 cmh) 1136 cfm (+/-130 cfm)
Laminar Airflow Velocity	Average of 0.45 m/s or 90 fpm at initial Set Point			
Main Filter Type	ULPA filter with integral metal guards and filter frame gaskets; fully compliant with EN1822 and IEST-RP-CC001.3 requirements			
Main Filter Efficiency Rating	99.999% at particle size between 0.1 to 0.3 microns			
Pre-Filter	Disposable and non-washable polyester fibers with 85% arrestance / EU3 rated			
Sound Emissions Per IEST-RP-CC002.2*	<56.5 dBA	<57.5 dBA	<58 dBA	58.5 dBA
Light Intensity	>1075 Lux >100 Foot Candles	>1260 Lux >117 Foot Candles	>1000 Lux >93 Foot Candles	>1100 Lux >102 Foot Candles
Main Body Construction	1.2mmt / 0.05" / 18 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish			
Side Window Construction	1.5 mm (0.06") 18 gauge stainless steel, grade 304			
Work Surface Construction	UV absorbing tempered glass, 5 mm (0.2"), colorless and transparent			

Standard Compliance	Cabinet Performance	Air Quality	Filtration	Electrical Safety
	En 12469 IEST-RP-CC02.2, Worldwide	ISO 14644, 1Class 3, Worldwide	IEST-RP-CC001.3 IEST-P	UL 61010-1 USA