

THE BAKER COMPANY

SterilchemGARD® III Advance° Offers 100% Total Exhaust With Integrated HEPA Supply and Exhaust Filters to Set the Industry's Highest Standards for Comfort, Performance and Safety.

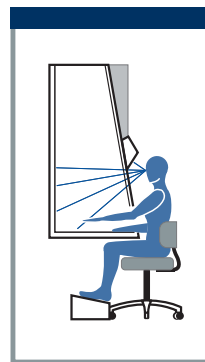
SterilchemGARD® III Advance°



*The SterilchemGARD® III Advance° Class II, Type B2 total exhaust cabinet produces a HEPA-filtered, particulate-free airflow throughout the work area. Typical applications include toxicology laboratories and similar facilities where microbiology, cell culture and pharmaceutical procedures are common.
Model SterilchemGARD® III Advance° SG403A TX shown.*

Class II, Type B2, 100% Exhaust Vertical Flow Biological Safety Cabinet

In the laboratory environment, safety is everything. Now, with the introduction of SterilchemGARD® III Advance°, The Baker Company offers a new adaptive ergonomic design, combined with a unique airflow management system and proven containment technology to improve comfort, increase productivity and reduce the cost of ownership.



SterilchemGARD® III Advance° is a collective design, representing an esteemed reputation for performance, reliability and craftsmanship associated with The Baker Company worldwide for over 50 years.

SterilchemGARD® III Advance° starts with a simple idea: a better angle. From your first experience with the 10° slanted viewscreen, you'll appreciate how easy this cabinet is to use. Your work is easy to reach. There's more functional room inside. Eye-level controls are easy to see. There is less glare. As you work, your head, neck, arms and elbows remain in the most natural position, less tiring than before.



Meets NSF Standards



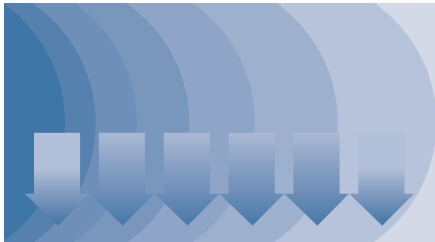
Underwriter Laboratories Listed



UniPressure™ Preflow Plenum

Concealed behind the attractive front panels, you'll find another Baker exclusive, the UniPressure™ Prewflow Plenum, an elegantly simple yet effective air management system that puts more uniform air pressure on the supply filter for better vertical flow across the work surface. A simple idea, to be sure, but by moving the blower/motor to a horizontal orientation from vertical, we've created a more efficient, less demanding and quieter airflow system.

And years later, if it comes time for maintenance, your certifier will find the cabinet easy to seal and easy to decontaminate. Our new direct-to-plenum filter mounting technique puts the HEPA filter within easy reach, easy to change.



UniPressure™ Prewflow Plenum

SterilchemGARD® III Advance° is the most exciting development in biological safety cabinets in years. Consider the angle. Learn more about SterilchemGARD® III Advance°. It's what you would expect from The Baker Company.

Design and Performance Features

SterilchemGARD® III Advance° incorporates UniPressure™ Prewflow, the Baker exclusive high performance airflow system which extends filter life and reduces cost of ownership. This high performance airflow system provides optimum protection from particulates, 100% exhaust, with no air recirculation to the work area.

- The unique UniPressure™ Prewflow Plenum design apportioned and distributes air across, then through the HEPA supply filter, improving downflow

SterilchemGARD® III Advance°

Advantages

Comfortable and Easy to Work In

Ergonomic Features and Benefits

- The slanted viewscreen is sloped 10° to create the most natural head and elbow positions when working, minimizing arm extension required to reach the work surface and reducing glare.
- The eye-level control panel is positioned to face down toward the user for greater visibility and easier access.
- Reduced front grille depth and a slim profile lower plenum combine to move the work surface closer to the front and your lap for better arm position.
- Our new UniPressure™ Prewflow Plenum delivers quieter, more efficient performance.
- Petcocks are offset, not one on top of the other, for easier access and use.
- An armrest across the cabinet front improves support and comfort.
- A telescoping stand allows the work surface height to be adjusted to 28½" or 36%", nominal.

More Space for Your Work, Your Equipment and You

- SterilchemGARD® III Advance° offers the largest unobstructed, useable work area in the industry.
- Depth of the front grille is minimized to bring the work closer to the user.
- A straight back wall maximizes available work area and accommodates lab equipment and apparatus commonly used in the biological safety cabinet.

Easy to Clean and Maintain

- One-piece work surface and air intake grille is easily removed for cleaning.
- A unitized, unobstructed drain pan with radius corners facilitates cleaning.
- Streamlined design of the sliding viewscreen simplifies sealing prior to total cabinet decontamination.
- The UniPressure™ Prewflow Plenum simplifies filter changing.
- All electrical control components are consolidated on a panel behind the hinged canopy for singular access outside the containment area.
- The innovative horizontal blower/motor assembly is easily removed and replaced.

The SterilchemGARD® III Advance° design is based on extensive anthropometric data, and was developed by The Baker Company in cooperation with ergonomics researchers at a leading university.

uniformity, extending useful filter life and reducing noise.

- The UniPressure™ Prewflow filter housing is surrounded by negative

pressure to improve containment; any possible gasket leaks are contained under negative pressure.

- An innovative telescoping filter mount provides a direct seal of the filter to the UniPressure™ Preflow Plenum, and simplifies filter replacement.
- Front accessible supply and exhaust HEPA filters are rated at 99.99% minimum efficiency in capturing 0.3 micrometer particulates.
- The Baker exclusive *momentum air curtain* contains particulates within the work area and inhibits migration of room air into the front access opening.
- High velocity return air slots located along the side walls of the work area and along the top of the viewscreen maximize the biological safety cabinet protective capabilities by preventing the escape of particulates, ensuring that no unfiltered air enters the work area, and preventing gases, vapors or particulates from migrating up behind the viewscreen and escaping into the operator's environment.
- An aerodynamically designed airfoil at the front opening facilitates the flow of room air into the front grille, ensuring that no room air flows into the work area.
- An Air Bypass Padded Armrest provides ergonomic comfort and allows air to enter the front opening when the viewscreen is closed.
- A microprocessor controller with touchpad membrane control panel simplifies operation; controls are more reliable, easy to use and easy to clean. The controller is also equipped with diagnostic LEDs for easier troubleshooting.
- An audible/visual sash alarm system warns of unsafe viewscreen opening and is interlocked with the supply motor/blower.
- The airflow monitor warns of insufficient exhaust air flow.
- Detachable side panels offer greater flexibility for plumbing considerations; the reinforced panel design reduces the number of fasteners and simplifies removal and replacement.
- The front panel is lighter and easier to remove for filter changing.

SterilchemGARD® III Advance° Design Features

- 1 Slanted viewscreen sloped 10° for the most comfortable head and elbow position when working; minimizes arm extension required to reach the work surface.
- 2 Low profile, unitized drain pan beneath the work surface allows for best arm position above the user's lap.
- 3 Eye-level controls face down toward the user for greater visibility and easier access.
- 4 Microprocessor controller with touchpad membrane control panel simplifies operation.
- 5 Stand with telescoping legs allows work surface to be adjusted from 30 $\frac{1}{8}$ " to 38 $\frac{5}{8}$ ".
- 6 Audible/visual sash alarm with timer and mute switch encourages safe operation.
- 7 Airflow monitor warns of insufficient exhaust airflow.
- 8 High velocity return air slots maximize protective capabilities.
- 9 Easy access HEPA supply and exhaust filters, 99.99% minimum efficiency for 0.3 micrometer particulates.
- 10 StediVOLT® voltage regulator automatically adjusts for low and high voltage situations to maintain proper airflow.
- 11 Energy-saving fluorescent lighting with solid-state ballasts reduces flicker, minimizes heat output, improves eye comfort and extends lamp life by as much as 50%.
- 12 Non-glare work surface improves comfort and reduces eye fatigue.
- 13 Ground-fault circuit interrupt (GFCI) outlets with self-resetting circuit breaker for user safety; trip light warns circuit has been disconnected because of ground-fault error.
- 14 Straight back wall easily accommodates lab apparatus and instrumentation.



SterilchemGARD® III Advance° SG403A TX

Class II, Type B2 Applications

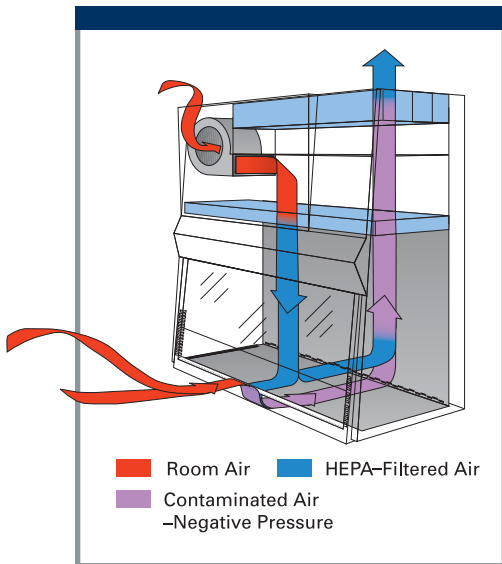
Applications include biological testing and product preparation involving low to moderate risk agents (Biosafety Levels 2 and 3) where chemical effluent is present and clean air is essential.

Because there is no recirculation within the work area, the cabinet may be useful for work with chemicals and gases if required as an adjunct to the microbiological studies that are being conducted.

Total Exhaust, No Recirculation

The SterilchemGARD® III Advance° is ideal for applications which generate small amounts of chemical vapors or gases. The cabinet incorporates a unique negative pressure enclosure which provides additional containment capability.

- Room air enters through a washable, reusable prefilter and passes through a blower/motor in the top of the cabinet, then to a HEPA supply filter into the work area as vertical unidirectional airflow.
- Descending air splits and flows through the perforated front and rear grilles into the space below the work surface.



SterilchemGARD® III Advance° Airflow

- Simultaneously, room air entering through the front access opening is also pulled through the front perforated grille and all air is immediately exhausted.

SterilchemGARD® III Advance° Containment and Protection

	Type B2	Type B2
	Exhausted to untreated facility exhaust system	Exhausted to treated facility exhaust system
Protection From Particulates	Protects personnel, product and the environment	Protects personnel, product and the environment
Protection From Gases and Vapors	Protects personnel and product	Protects personnel, product and the environment

Installed to the facility exhaust system by a hard connection, the SterilchemGARD® III Advance° provides particulate protection, plus additional protection of personnel and product from vapors and gases. If the facility exhaust system is specially treated with activated charcoal, scrubbing or catalytic conversion, protection from exhausted vapors and gases is extended to the environment.

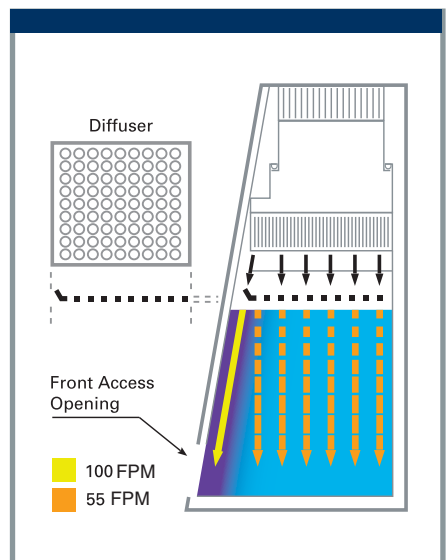
- Contaminated air entering the front and rear grilles is drawn under negative pressure through the stainless steel plenum at the sides and rear of the cabinet, through the exhaust HEPA filter, and out to the building exhaust system.
- The exhaust removes 100% of air within the work area; all air is pulled into the facility exhaust system for appropriate treatment; there is no recirculation.

- Airflow over the center of the work surface is relatively slower at a nominal 50-55 FPM (403ATX/603ATX).
- The resulting air curtain, high velocity return air slots, aerodynamically contoured front opening surfaces, and optimum air intake velocity combine to minimize turbulence and prevent migration of airborne contaminants into or out of the work area.

Momentum Air Curtain Increases Protection Without Restricting User Access

SterilchemGARD® III Advance° employs a unique *momentum air curtain* which offers an added measure of containment, personnel and product protection exclusive to the Baker design.

- This unique airflow design creates a more impenetrable air barrier or *momentum air curtain* at the front of the cabinet, increasing the protective capabilities of the cabinet.
- The strategic position of the stainless steel diffuser just below the supply filter creates a faster airflow of a nominal 100 FPM at the front of the work zone.



Momentum Air Curtain

High Velocity Return Air Slots Capture Unfiltered Air

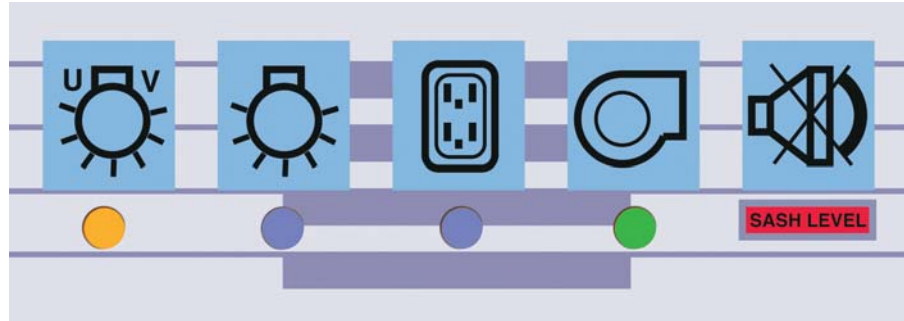
Containment and cleanliness are accomplished with precise control of airflow volumes and velocities. High velocity return air slots, unique in the Baker cabinet design, have been proven to maximize the biological safety cabinet protective capabilities.

- High velocity return air slots are located behind the top and on both sides of the viewscreen to prevent gases, vapors or particulates from migrating up behind the viewscreen and escaping into the operator's environment, and to prevent room air from migrating down behind the viewscreen and contaminating the work area.
- Air is drawn into these slots at 1,000 FPM (nominal), preventing the escape of particulates and ensuring that no unfiltered air enters the work area.

Negative Pressure Double-Wall Plenums Enhance Safety

The all-metal, double-wall design in SterilchemGARD® III Advance° creates base, side and rear wall plenums which capture and contain contaminated air under negative pressure. This unique Baker design feature prevents contaminated air from escaping into the laboratory environment in the event of a puncture or leak in the cabinet.

- Any plenum which contains contaminated air under positive pressure is completely surrounded by negative pressure areas.
- Because of negative pressure under the worksurface, side and rear walls, the work area is completely surrounded by negative pressure.



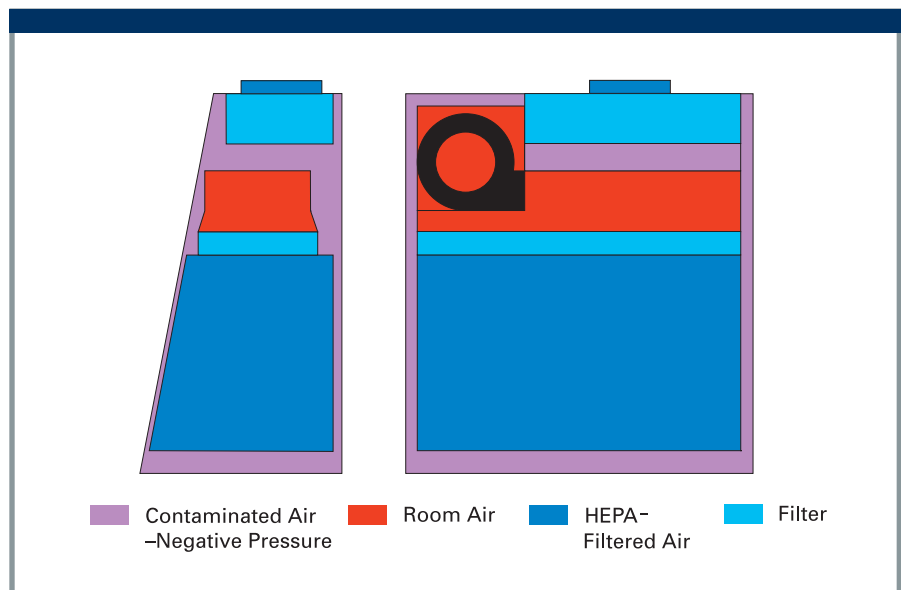
The microprocessor-based membrane control panel simplifies operation.

Microprocessor Controls

The SterilchemGARD® III Advance° microprocessor control system incorporates a unique membrane control panel which is easily cleaned, moisture-proof and exceptionally reliable with no mechanical relays or switches to corrode or fail. A variety of important safety features have been designed into the control system.

- The control panel is positioned to face down toward the user for greater visibility and easier access.

- The audible alarm mute button overrides the alarm for 5 minutes when the sash is raised for cleaning, loading or unloading.
- UV light cannot be activated unless fluorescent light is off and sash is closed.
- The membrane switch panel is just 0.038" thick, with a smooth surface for cleanability.
- Large buttons with icons are easy to identify and operate.



The SterilchemGARD® III Advance° has a unique negative pressure enclosure which provides additional containment capability. The cabinet work area and plenums containing contaminated air under positive pressure are surrounded by negative pressure areas.

High Visibility Viewscreen With Sash Alarm

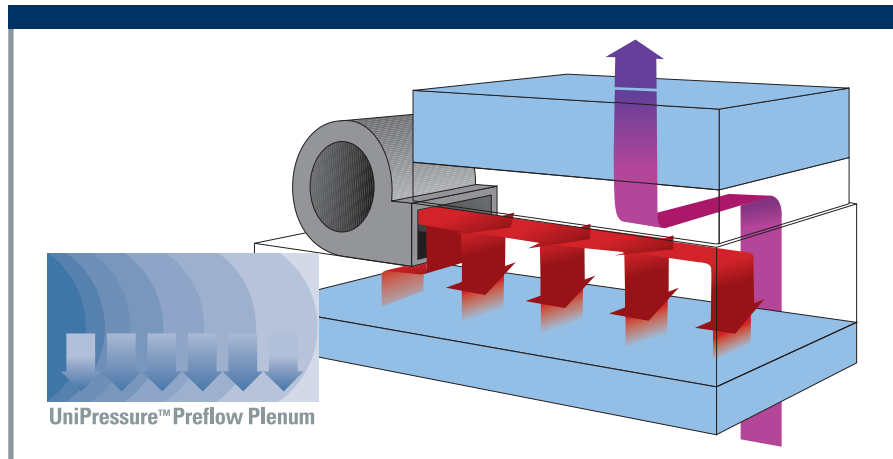
SterilchemGARD® III Advance° has a streamlined 10° slanted sliding viewscreen which makes the cabinet easier to use and more comfortable to work in.

- The operator's head, neck, arms and elbows remain in the most natural positions to improve comfort and reduce fatigue.
- All work is within reach; the angled viewscreen design provides a safe, highly visible and easily accessible work area for a range of procedures.
- The slanted sliding viewscreen minimizes glare.
- The vertical lift viewscreen is counterweighted for easier use and is constructed of ¼" safety plate glass.
- The sash has an 8" working opening with an average calculated air intake velocity of 100 FPM to 110 FPM.
- A maximum viewscreen sash opening of 20" simplifies equipment and instrument loading and unloading.
- An integrated viewscreen sash alarm includes an audible and visual indicator to warn of improper sash opening above or below the 8" opening.
- The viewscreen sash alarm timer and audible alarm mute button override the alarm for five minutes when the sash is raised for cleaning, loading or unloading.

UniPressure™ Preflow Advanced Filter Plenum Design

UniPressure™ Preflow, a revolutionary air delivery system, offers significant benefits through unique integration of supply and exhaust HEPA filter assemblies, an all-steel plenum and a new horizontal blower/motor configuration.

- The supply air plenum is configured to provide more uniform airflow to the supply filter, while reducing noise and increasing motor reserve capacity.



The Baker exclusive UniPressure™ Preflow Plenum provides quieter, more efficient operation.

- The all-steel plenum clamps the supply HEPA filter in place. Force is applied to the full perimeter of the filter rather than point force.
- A closed-cell neoprene gasket forms an airtight seal around the filter periphery.
- The horizontal blower assembly creates more uniform air direction to the supply HEPA filter.

Supply and Exhaust HEPA Filter Performance

Because HEPA filters remove microorganisms and airborne particulates (generally called aerosols) from the air, the quality, performance and useful life of supply and exhaust filters are critical considerations in the biosafety environment.

- Each HEPA filter in a Baker cabinet is scan tested for leaks and tested for overall efficiency by the manufacturer, then individually leak tested by Baker after installation to assure leak-free performance.
- Minimum HEPA filter efficiency is 99.99% for particulates of 0.3 micrometers, with increased efficiency for particulates greater and smaller than 0.3 micrometers.

- Both exhaust and supply HEPA filters can be inserted and removed from the front of the cabinet. This time-saving feature is useful since the SterilchemGARD® III Advance° must be connected to an exhaust system.
- A closed-cell neoprene gasket provides an airtight seal between the filter assembly and the metal plenum.

Blower/Motor System Helps Extend Filter Life

Baker has selected an optimum blower/motor combination to assure performance and to provide for an average filter life of 7 to 10 years, the longest life in the industry. The Baker split capacitor blower/motor can provide a constant volume of air despite increases in resistance due to filter loading, resulting in extremely long filter life as verified by simulated filter loading tests.

Extended filter life minimizes filter replacement and decontamination costs and diminishes the hazard to personnel by reducing the frequency of opening the contaminated areas of the cabinet. The more filter resistance the blower/motor system can overcome, the longer between filter changes.

- As particulates fill the filter media, resistance to airflow increases.
- The Baker blower/motor is a direct drive permanent split capacitor motor designed to deliver the maximum amount of filter life for each cabinet.
- The blower/motor automatically compensates for filter loading above the initial pressure drop across the filter (see table below). Beyond that point the blower/motor has a manual speed control which can be turned up to achieve even longer filter life.
- The filters do not need to be changed until the blower/motor system cannot deliver adequate air volume to maintain the nominal setpoint, ± 5 FPM.
- Blower/Motor switch (with additional pole for interlocking exhaust system).

Airflow Monitor, Automatic Shut-Off

- An audible/visual mass airflow alarm system warns when the exhaust decreases to 20% of the set operating rate (per 2007 NSF/ANSI Standard 49).
- If the low flow condition remains for more than 6 seconds, the alarm will terminate power to the supply blower to prevent pressurization of the work area.
- If the audible and visual alarm indicates inadequate exhaust flow, all work should be suspended until proper flow is restored.

Easier On-Site Certification and Testing

Several SterilchemGARD® III Advance° design features combine to simplify certification and maintenance for qualified service personnel, thus reducing downtime and improving life cycle costs.

- The cabinet design puts the supply and exhaust HEPA filters within easy reach.
- Both exhaust and supply filters can be easily inserted and removed from the front of the cabinet. This time-saving feature is useful since the SterilchemGARD® III Advance° must be connected to an exhaust duct.
- An optional, external airtight damper (ATD) shall be used only for cabinet decontamination. This damper provides a positive seal for decontamination and should be positioned full open during normal operation. An inline damper downstream of the ATD or a variable exhaust speed controller shall be used to regulate the balance between intake and downflow air and upon setting the low flow exhaust alarm by certifier.
- A manual speed controller allows the certifier to increase blower/motor speed to compensate for supply filter loading.

StediVOLT® Motor Speed Controller Maintains Optimum Performance

The Baker exclusive StediVOLT® motor speed controller reduces the risk of performance degradation and possible product loss due to line voltage fluctuations.



- StediVOLT® minimizes changes in cabinet performances due to routine voltage fluctuations, as well as voltage changes caused by high-demand brownout conditions.
- StediVOLT® “reads” incoming voltage, automatically compensates for low and high voltage and maintains proper blower speed.

Comfortable Lighting Improves Visibility, Reduces Heat

Ergonomic benefits of the SterilchemGARD® III Advance° include “flicker-free” fluorescent lamps and electronic ballasts which provide better visibility, less heat at the face (front) of the cabinet and improved user comfort.

- Lamps provide a minimum of 100 foot-candle illumination at the work surface.
- Electronic ballasts eliminate fluorescent lamp “flicker,” minimizing eyestrain and improving productivity.
- The warm, natural illumination is brighter and exhibits better color fidelity.

Motor Loading Capacity

Model	Pressure Drop Increase	Maximum Increase With Manual Blower Speed Control
SG403A TX, 4'	200%	300%
SG603A TX, 6'	100%	180%

Optional Ultraviolet Lamp Includes Safety Interlock

An optional ultraviolet germicidal lamp assists in contamination control.

- The UV light interlock assures that UV illumination occurs only when the sash is fully closed.
- For added safety, the UV germicidal light switch and cabinet lighting cannot be turned on simultaneously.

Cabinet Construction Enhances Performance, Minimizes Downtime

Baker cabinet designs represent many years of experience in stainless steel fabrication and craftsmanship.

Design considerations such as wide radius corners, aerodynamically shaped surfaces and non-glare satin finish interiors combine to improve comfort, simplify cleaning and maintain proper containment.

- SterilchemGARD® III Advance° includes a corrosion-resistant, 16-gauge, Type 304 stainless steel work surface with smooth radiused corners to permit easy cleaning. The recessed work surface tray retains spills.
- The satin finish work surface diminishes harsh light reflection.
- A protective grille located at the bottom of the rear and side return air plenums prevents wipes and other paper materials from being inadvertently drawn into the exhaust system. This eliminates costly decontamination and downtime to extract materials from or replace the exhaust filter.
- Work area side walls and rear wall are one-piece, 16-gauge stainless steel construction with $\frac{7}{16}$ " radiused corners for cleaning convenience.

Telescoping Stand

SterilchemGARD® III Advance° features a stand with telescoping legs which allows the cabinet to be adjusted to standard work surface heights of 30" or 38½", nominal.

	Knee Space Height	Work Surface Height	Overall Height
Minimum Setting	28 $\frac{3}{8}$ "	30 $\frac{3}{8}$ "	92 $\frac{3}{8}$ " – 94 $\frac{7}{8}$ "
Maximum Setting	36 $\frac{5}{8}$ "	38 $\frac{5}{8}$ "	98 $\frac{3}{8}$ " – 100 $\frac{7}{8}$ "

- The position of the stainless steel supply air diffuser/filter protector located below the supply filter in the work area creates the *momentum air curtain* at the front opening and provides filter protection.
- The 16-gauge cold-rolled steel exterior sealing panels are protected with a white baked enamel finish.
- The entire cabinet is airtight. Each component is welded, gasketed or assembled with hermetically sealed joints. Each cabinet is bubble tested under pressure to ensure the integrity of the seals.
- To facilitate cleaning the drain pan, the work surface and supports are easily removed and the drain pan has large $\frac{7}{16}$ " radii on all sides.

Electrical System Offers Safety and Convenience

The SterilchemGARD® III Advance° electrical system is designed for safety and convenience when using most commonly required laboratory apparatus and instrumentation. A single ground-fault circuit interrupter (GFCI) protects a pair of duplex outlets mounted on the work area left and right side wall.

- Each outlet is provided with a drip-proof cover.
- The internal work area outlets are on a separate circuit from the cabinet lights and blower/motor so that an overload caused by research equipment will not affect cabinet function.

- Hermetically sealed bulkhead connectors are used to provide reliable containment protection for electrical connectors which penetrate the cabinet contaminated areas.
- For safety reasons, the SterilchemGARD® III Advance° cabinet utilizes a single power cord and plug arrangement. This assures that a second power source is not left on if maintenance functions are necessary.
- The SterilchemGARD® III Advance° is cULus listed for electrical safety and integrity.

Functional Utilities With Petcocks, Valves and Plumbing Connections

Plumbing and drainage connections are strategically placed for both convenience and proper air management within the airflow plenums.

- One petcock and one plugged penetration are located in the right work area side wall.
- Petcocks and penetrations are offset, not one above the other, for easier access and use.

- External plumbing connections are made to the bottom (or as a factory option through top or back) of the cabinet rather than through its sides. This arrangement allows installation next to building walls or furniture to the right or left of the cabinet, saving valuable lab space.
- A stainless steel ball valve provides safe and effective drainage of the drain pan.

Options and Accessories

For convenience, most options, accessories and modifications are factory installed and should be specified when ordering. Commonly requested options are listed. For detailed information on accessories and modifications, refer to The Baker Company Accessories literature or contact The Baker Company.

- UV germicidal lamp
- Stainless steel IV bar
- Additional petcock (specify label and location)
- Additional plug penetration (please specify location)
- Plumb to rear
- Plastic storage bins
- Magnehelic gauge
- Ergonomic adjustable footrest
- Airtight damper assembly
- Lab stool
- Bench model
- Seismic restraints
- 12" round exhaust collar
- Additional cable port

To Order

For ordering information, terms and conditions of sale, contact Baker or visit the Baker Web site at www.bakerco.com for the name of your authorized Baker Company representative.

Caution:

A Class II, Type B2, 100% total exhaust biological safety cabinet is suitable for work with low to moderate risk (Biosafety Levels 2 and 3) biological agents. It may also be used with biological agents treated with toxic chemicals and radionuclides required as an adjunct to microbiological studies (as stated by National Sanitation Foundation, NSF/ANSI Standard #49).

Note: The adequacy of this containment cabinet should be determined by an industrial hygienist or safety officer.

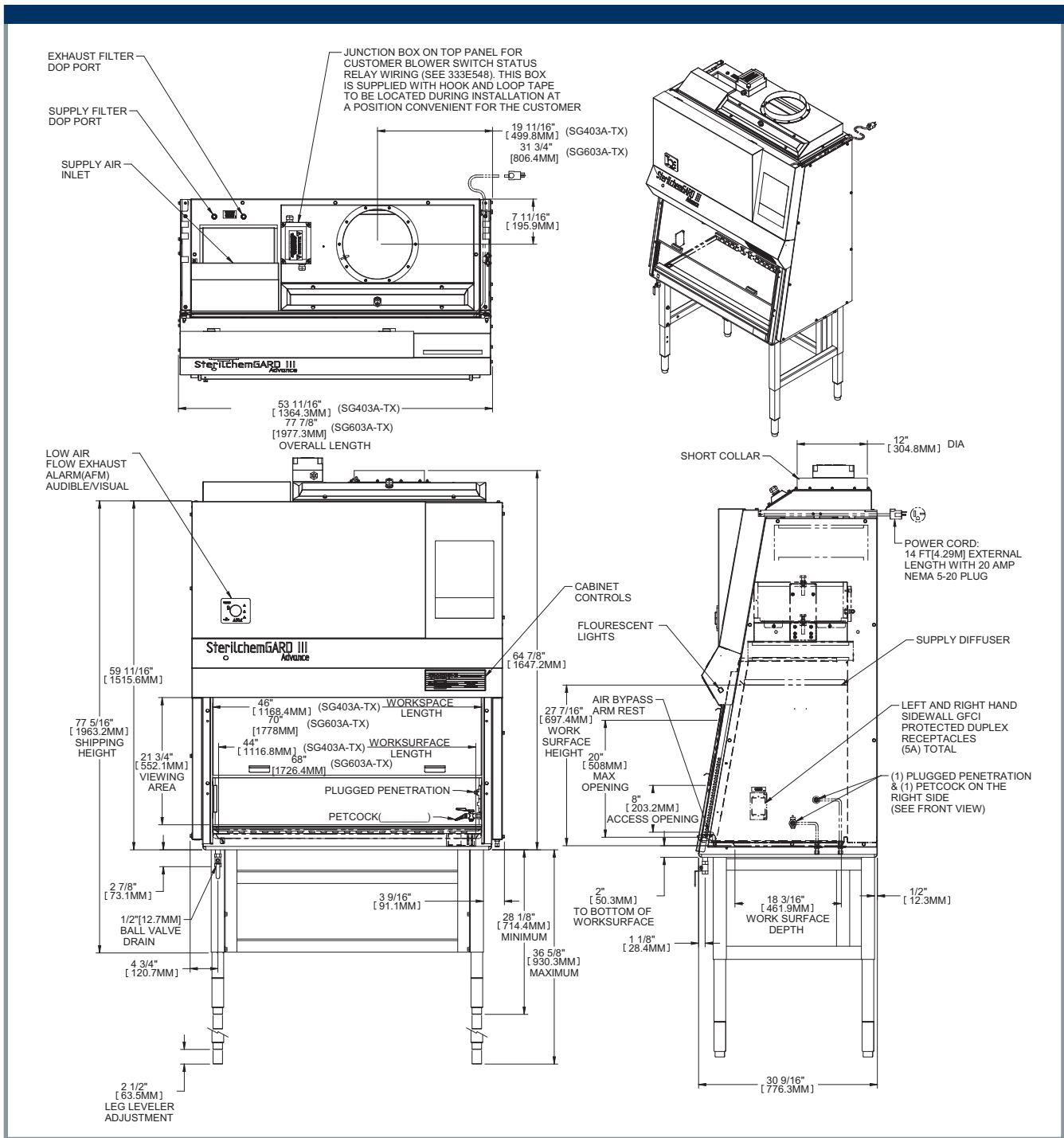
Site preparation information, architectural drawings, detailed dimensions and purchase specifications are available.



Summary Specification

SterilchemGARD® III Advance° Class II Type B2 Biological Safety Cabinet, Vertical Flow

Model No.	Size	Operational Opening (Maximum)	Electrical	Amps/Breaker	Interior Dim.	Exterior Dim.	Net Weight	Ship Weight
SG403A TX	4'	8" (20")	115V, AC	9.0/20	46" W x 22 ³ / ₁₆ " F-B x 27 ⁷ / ₁₆ " H (usable depth 18 ³ / ₁₆ ")	53 ¹¹ / ₁₆ " W x 30 ⁹ / ₁₆ " F-B x 64 ⁷ / ₈ " H	596 lbs	798 lbs
SG603A TX	6'	8" (20")	115V, AC	12.4/20	70" W x 23 ⁷ / ₁₆ " F-B x 27 ⁷ / ₁₆ " H	77 ⁷ / ₈ " W x 30 ⁹ / ₁₆ " F-B x 64 ⁷ / ₈ " H	811 lbs	1063 lbs



SterilchemGARD® III Advance

Model Number:
 SG403A TX, 4'
 SG603A TX, 6'

NSF Classification:
 Class II, Type B2
 Cabinet Type: Console

Site Preparation Electrical System

- IISV-I Phase, 60 Hz.
- One 14' power cord with 20-amp plug, NEMA 5-20P.
- Unit is cULus listed for electrical, fire and personal safety.

- Two ground-fault circuit interrupt protected interior duplex receptacles at 3.0 total amps, controlled by a circuit breaker switch.

Filtration System

- Exhaust and supply filters are standard HEPA filters with an efficiency of 99.99% when filtering particles of 0.3 micrometers.

Exhaust Transition (ET) for Hard Connection

The Exhaust Transition (ET) provides a hard connection, or airtight mating of the cabinet to the exhaust duct.

The ET403A TX and ET603A TX are designed for the 4' and 6' cabinets, respectively. The Exhaust Transition incorporates the following features:

- Rectangular base is easily installed on top of the cabinet over the exhaust filter, requiring only six fasteners to provide an airtight seal.
- Design enables accurate exhaust filter leak checking through a convenient access panel on the sloping front surface.
- Standard exhaust connection collar is 12" diameter.

Exhaust Requirements

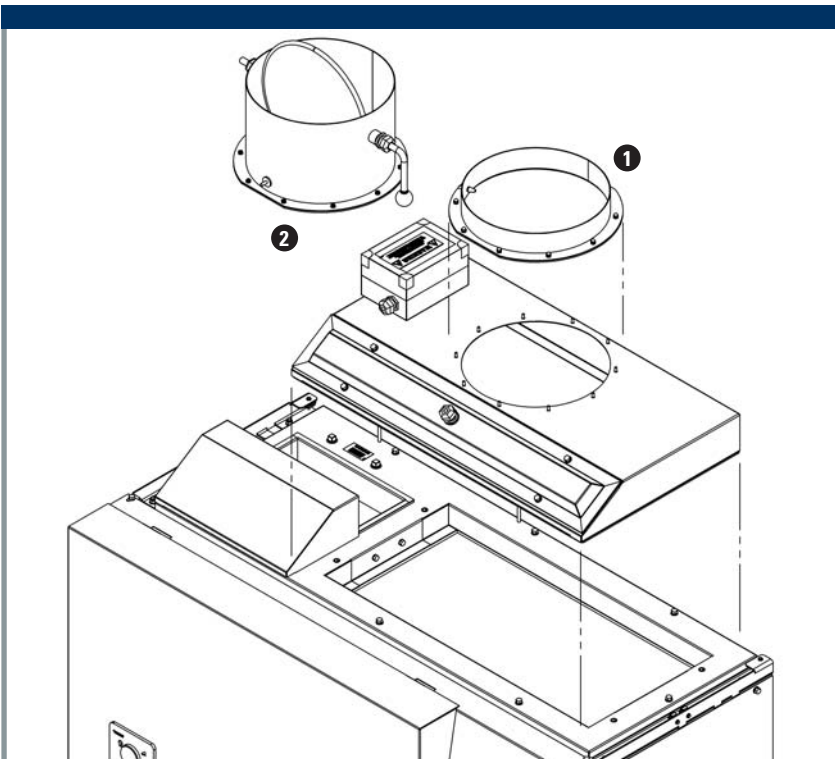
Cabinet Models	Duct Diameter	Sash Height	Exhaust Flow (CFM)	Pressure Requirement (wc)*	
				Clean	50% Loaded
SG403A TX	12"	8"	700-800	1.0"	1.7"
SG603A TX	12"	8"	1000-1150	1.3"	2.0"

*Water column (wc) suction is measured directly above the exhaust transition before any dampers, elbows or other restrictions.

Warranty

The Baker Company, Inc., expressly represents and warrants all goods (a) to be as specified (and described) in The Baker Company catalogs and literature, and (b) to be free under normal use, service and testing (all as described in The Baker Company catalogs and literature) from defects in material and workmanship for a period of thirty-six months from the invoice date. The exclusive remedy for any breach or violation of this warranty is as follows: The Baker Company, Inc., will F.O.B. Sanford, Maine, furnish without charge repairs to or replacement of the parts or equipment which proved defective in material or workmanship. No claim may be made for any incidental or consequential damages.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE UNLESS OTHERWISE AGREED IN WRITING SIGNED BY THE BAKER COMPANY. (THE BAKER COMPANY SHALL NOT BE RESPONSIBLE FOR ANY IMPROPER USE, INSTALLATION, SERVICE OR TESTING OF THE GOODS.)



SterilchemGARD® III Advance° Hard Connection Accessories

- Low profile, slanted front exhaust transition with filter access panel and standard 12" round exhaust collar.
- Optional airtight damper seals the cabinet during decontamination and increases the overall height by 7³/₄".
Optional airtight damper should not be used for balance/adjustment.

Purchase Specification
SterilchemGARD® III Advance°
Class II, Type B2
Biological Safety Cabinet

1. Manufacturer shall provide a certified copy of the personnel, product and cross-contamination (biological) tests, equivalent to or more demanding than as specified in NSF International Standard #49, performed on the unit selected from the corresponding statistical sample. Tests may be witnessed by a representative of the purchaser.

2. Cabinet shall have *Momentum Air Curtain* downflow velocity profile, i.e., a higher velocity of downflow behind the viewscreen relative to downflow velocity over the work surface.

3. Sliding sash high velocity air return slots shall be provided along the entire top edge of the work area to prevent migration of contamination behind the sliding glass zone.

4. High velocity return air slots shall be located at each end of the front access opening. These slots help to prevent air from being drawn into the work area along the edges of the side wall and from escaping the work area to the ambient environment.

5. The sliding viewscreen shall be slanted at an angle of 10° from vertical, capable of moving to a fully closed position during shutdown periods.

6. Viewscreen shall be constructed of ¼" safety plate glass, with a maximum opening of 20" for equipment loading. Viewscreen is counter-weighted for ease of operation.

7. All biologically contaminated ducts, plenums and work area side walls shall be permanent metal construction and maintained under negative pressure or enclosed within a negative pressure zone.

8. Cabinet shall be capable of automatically handling a 403A TX of 200% and a 603A TX of 100% minimum increase in supply filter loading without reducing total air delivery by more than 10%. With the use of the speed controller, the cabinet shall be capable of handling a 403A TX of 300% and a 603A TX of 180% increase in supply filter loading. Test data to verify these capabilities shall be available upon request.

9. Interior work area shall be 27⁷/₁₆" high.

10. Cabinet shall have UniPressure™ Preflow System, designed to provide more uniform airflow to the supply filter.

11. Supply and exhaust HEPA filters shall be front-loading.

12. A plenum assembly shall be provided to allow the supply filter to be directly clamped to the plenum against a closed-cell neoprene gasket. Plenum applies force to full perimeter of filter, rather than point force.

13. Complete unit shall be listed by Underwriters Laboratory cULus for electrical, fire and personal safety.

14. Audible and visual alarm system shall be provided to indicate low exhaust airflow, and shall be interlocked with unit supply blower to prevent pressurization of the work zone.

15. Cabinet shall have a microprocessor-based membrane control panel mounted on the front of the cabinet facing down toward the user when sitting at the unit.

16. Unit shall have an audible alarm and a flashing LED to indicate when the sliding viewscreen is in an unsafe position. An alarm mute switch shall be provided on the front-mounted cabinet control panel to allow the operator to mute the alarm tone for brief adjustments. The alarm shall automatically reset after five minutes if the viewscreen remains in an unsafe position.

17. Intake velocity through the 8" front access opening shall be minimum of 100 FPM.

18. Cabinet exterior construction: seal panels of 16-gauge cold-rolled steel and dress panels of 18-gauge cold-rolled steel, powder-coated.

19. Cabinet interior (work area) construction: one-piece 16-gauge, Type 304 stainless steel, with a smooth, ⁷/₁₆" radius between rear and side walls, and easily cleanable, radiused corners on the work surface tray.

20. Work area side walls and rear wall to be one-piece construction. A straight back wall shall be provided to maximize work area and easily accommodate laboratory equipment.

21. Work area shall be provided with two GFCI protected duplex outlets with drip-proof covers and circuit breakers.

22. Lower front work area airfoil shall be provided to improve access opening containment capability.

23. Cabinet shall have a unitized drain pan with ⁷/₁₆" radius on all sides and a fully-removable work surface and work surface supports to facilitate cleaning.

24. Stainless steel air diffuser filter protector provided in work area.

25. Unit must be listed by NSF International as meeting Standard #49.

26. Each unit, before shipping, shall have a complete physical test to assure cabinet meets Class II requirements. A copy of this test will be provided with the unit.

27. Speed controller shall automatically compensate for line voltage changes to maintain constant voltage to motor while allowing for manual adjustments to accommodate filter loading.

28. A single power cord and plug shall be provided for electrical power source.

29. One petcock shall be provided on the right wall inside the cabinet and one plugged penetration shall be provided for addition of a future petcock.

30. All external plumbing connections to the petcocks and the drain pan shall be made standard through the bottom of the cabinet and not the sides, allowing zero clearance between the unit and the building walls or equipment to its right and left. Factory option for plumbing through the back or top of cabinet.

31. Unit shall have standard HEPA filters with an efficiency of 99.99% when filtering particles of 0.3-micron size.

32. Unit shall have a washable, reuseable, intake prefilter.

33. Unit shall have (optional) ultraviolet light with a shutoff safety feature when the viewscreen is raised.

34. 4-foot unit shall exhaust no more than 800 CFM of air with an average 105 FPM calculated air intake through front access opening at 8" operating level. 6-foot unit shall exhaust no more than 1150 CFM of air with an average 105 FPM calculated air intake through front access opening at 8" operating level.

35. Unit shall have electronic ballasts for UV and fluorescent lighting to provide longer life and lower heat output.

36. Unit shall have a telescoping stand that allows the work surface height to be set at either 28⁵/₈" or 36⁵/₈", nominal.

37. Unit shall have a removable Air Bypass Padded Armrest across the cabinet front.

THE BAKER COMPANY

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