



SteriIIGARD® e³

BAKER

Environments For Science™





SterilGARD® e3 Class II Microbiological Safety Cabinets

Energy-efficient and comfortable cabinets that help you make the world a better place.

- Industry's most durable and reliable cabinet means lower life-cycle costs and years of trouble-free operation.
- Multiple energy-saving features equal significant ongoing cost savings.
- Continuously safe work environment with self-adjusting motor technology.
- Comfortable user experience with low noise and heat generation.
- Enhanced productivity with ReadySAFE™ low-flow mode.
- Extended filter life means less user downtime and lower operational costs.
- Easier, faster maintenance.

SterilGARD

Welcome to a New Experience in Microbiological Safety Cabinets

SAFETY – always our top priority, safety is assured through a variety of features, including an audible and visual sash alarm system, power/processor fault alarm and an exclusive cable port to keep cables and tubing out of the way for proper viewscreen closure.

ENERGY EFFICIENCY – from the motor controller to the lighting, new patent-pending innovations provide significant annual cost savings while maintaining superior performance.

CONTAINMENT – maximum protection is achieved through six technologies working in concert: our exclusive momentum air curtain, high-velocity return air slots, aerodynamically designed airfoil, optimized downflow, and unique air bypass armrest.

COMFORT – with eight thoughtful features, from the viewscreen to the work environment and ergonomic design.

EASE OF USE – packed with convenient features and the largest, unobstructed, usable work area in the industry, there's plenty of room for lab equipment and less hassle when managing controls.

CLEANING – an exceptionally reliable membrane-sealed control panel, and a one-piece work surface/air intake grille featuring radiused, coved corners instead of seams, allows for easy and effective cleaning.

SERVICE AND CERTIFICATION – with an innovative electronic controller that provides diagnostic LEDs, detachable side panels, front-loading filters, and uniform downflow air, maintenance is quicker and easier.



Class II Applications

The SterilGARD® e3 is designed for many applications involving agents of low and moderate risk. Appropriate applications include, but are not limited to, sterile product preparation and biological experimentation.

Not sure which biosafety cabinet is right for you?

Scan code to the right or visit <http://hub.am/ZxbDic> to download our free guide to Class II Biosafety Cabinets.



Industry-Leading Technologies Provide Superior Protection and Maximum Efficiency

The SterilGARD® e3 offers your lab the highest level of performance, user convenience and comfort, along with energy-efficiency. Our exclusive technologies, including StediFLOW™, ReadySAFE™, and UniPressure™ Preflow Plenum, work together seamlessly to deliver unparalleled safety performance, less cabinet downtime for cleaning and maintenance, and increased productivity, all while reducing your equipment energy consumption and operating costs.

Electrical Cost Savings

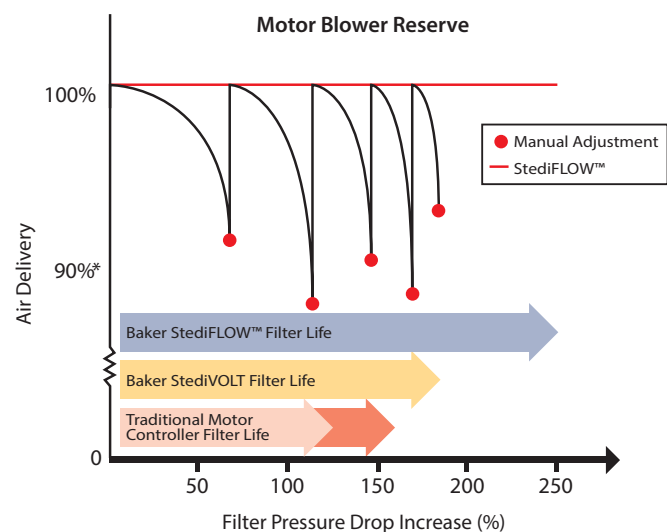
| Model | Previous 4' Model | SterilGARD® e3 4' model | Previous 6' model | SteriGARD® e3 6' model |
|----------------|-------------------|-------------------------|-------------------|------------------------|
| KW / day | 19.5 | 6.13 | 29.3 | 8.36 |
| \$ / day | €2.34 | €0.74 | €3.68 | €1.00 |
| \$ / year | €855.68 | €268.41 | €1342 | €366.17 |
| Annual Savings | | €587.27 | | €975.83 |

NOTE: Based on latest Eurostat national average cost of 12¢ per kilowatt-hour (http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_price_statistics). Based on 8-hour Working Mode, 16-hour ReadySAFE™ Mode of a 220 volt unit.

StediFLOW™ VFD Motor Controller Automatically Achieves Optimum Performance

Baker's StediFLOW™ variable frequency drive (VFD) motor controller uses less energy, reduces heat output, and operates more quietly. VFD is state-of-the-art technology in HVAC systems for performance and energy savings. The SterilGARD® e3 cabinet can automatically handle an increase in pressure drop of more than 300% across the filter without reducing total air delivery more than 10%.*

- Maintains precise airflow - automatically compensates for normal power line variations, air disruptions, and filter loading.
- Provides constant air volume - reduces risk of performance degradation, which can compromise personnel and product protection.
- Extends filter life - minimizes filter replacement and decontamination costs.
- Uses less energy without sacrificing performance.
- Operates more quietly with less vibration.
- No manual speed control required.



*Manual adjustment may occur above or below 90%.

*Performance testing performed on an SG403 (115 V unit) in the Baker laboratory. Data available on request.

ReadySAFE™ Low Flow Mode Makes Your Job Easier and Reduces Energy Consumption



ReadySAFE™ mode – Unique bypass armrest allows cabinet to continue operation with closed viewscreen

Utilizing the exclusive ReadySAFE™ low-flow mode in the SterilGARD® e3 significantly reduces energy consumption. ReadySAFE™ is automatically engaged when the user closes the sash of the biosafety cabinet – the motor switches to a reduced flow mode and the light in the cabinet turns off. Upon opening the sash the motor switches to its normal operating speed and the cabinet light turns back on. Product protection and containment are maintained. This mode can be used during meetings, work breaks and overnight.

- In ReadySAFE Mode, SterilGARD e3 provides product and personnel protection in accordance with the requirements of EN 12469:2000 and NSF International / ANSI 49 as well as delivers ISO Class 4 criteria for air cleanliness Consumes 50–75% less energy than when operating in the standard mode.
- Increases productivity by allowing user to have instantly safe working conditions upon opening the viewscreen and ongoing work can be left in the cabinet without fear of contamination.

See the results for yourself!

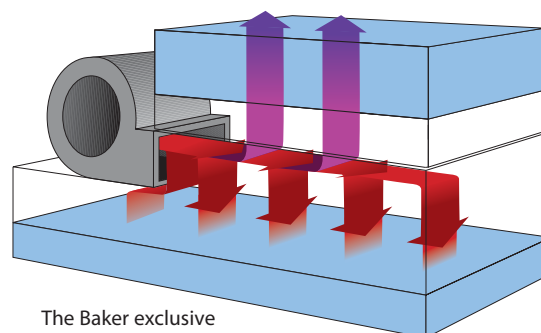
Scan the code to the right or visit <http://hub.am/10nB7SC> to download the ReadySAFE™ white paper!



Innovative UniPressure™ Preflow Plenum

The SterilGARD® e3 incorporates Baker's exclusive UniPressure™ Preflow Plenum high-performance airflow system that saves energy and extends filter life by loading filters evenly.

- Creates negative pressure surrounding the positive-pressure plenum to ensure containment; any possible gasket leaks are contained under negative pressure and returned to the ULPA filters.
- Apportions and distributes air across, then through, the ULPA supply filter, improving downflow uniformity, reducing noise, and increasing reserve blower/motor capacity.
- Telescoping filter mount provides direct seal of ULPA filters to plenum and simplifies filter replacement.
- Closed-cell neoprene gasket forms airtight seal around filter periphery. Force is applied to full perimeter of filter rather than point force.
- Internal damper simplifies airflow balance and cabinet sealing for decontamination.



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



A more efficient, less demanding, and quieter airflow system when combined with StediFLOW™.

Craftsmanship and Innovative, Versatile Design Ensures Quality and Performance

Baker cabinet designs represent many years of experience in fabrication and craftsmanship. The SterilGARD® e3 includes design features to improve safety, productivity, performance, and serviceability.



Double-wall construction captures and contains contaminated air under negative pressure.

Negative-Pressure Double-Wall Plenums with Cable Ports Enhance Safety

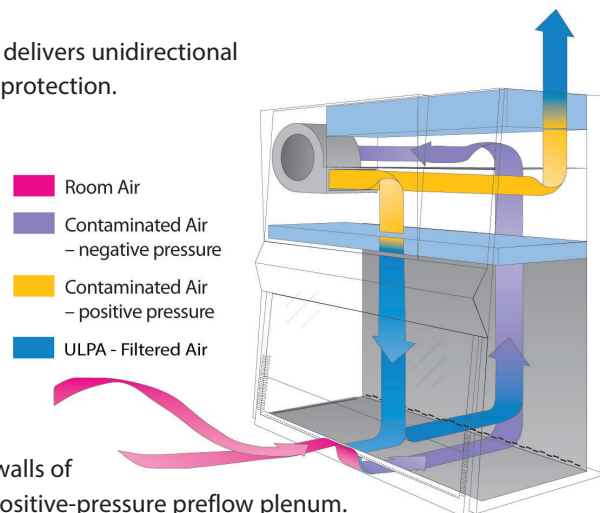
The unique all-metal, double-wall design of the SterilGARD® e3 cabinet creates base, side, and back wall plenums that capture and contain contaminated air under negative pressure. This prevents contaminated air from escaping into the lab in event of damage to the cabinet walls.

Our TUV Nord certified cable ports are an industry exclusive. They can be located in the side walls of the cabinet, and provide a safe and ergonomic way of introducing cables or siphoning tubes into the work area without interfering with the viewscreen opening.

Balanced Airflow and Exhaust Ensure Uniformity

The SterilGARD® e3 cabinet features a unique airflow design that delivers unidirectional downflow air over the work area for maximum containment and protection.

- Filtered air descends from top to bottom of the work area in a unidirectional flow. Near the back of the work surface, the air current divides – a portion of the downflow air is pulled through the back wall grille and the remainder is pulled through the front grille.
- Simultaneously, room air is pulled through the front opening and into the front grille. It does not enter the work area.
- All air combines under the work surface and is pulled under negative pressure through the back and side double walls of the cabinet into the blower/motor, which blows it into the positive-pressure preflow plenum.
- From the positive-pressure plenum, approximately 30% of the air exits the system through the exhaust filter. The remaining 70% passes through the supply filter and re-enters the work area as particulate-free air.



Exclusive Designs Simplify Certification and Testing

Several SterilGARD® e3 design features help simplify certification and maintenance, reducing downtime and improving life-cycle costs.

- Telescoping plenum assembly puts supply and exhaust ULPA filters within easy reach from the front of the cabinet, and allows filters to be clamped directly to plenum against closed-cell neoprene gasket.
- All components critical to cabinet operation, as well as exhaust and supply filters, are easily accessible from the front panel.
- Internal damper regulates balance between exhaust and supply to maintain proper air circulation ratios. Damper can be adjusted by certifier to compensate for changing resistance of the filters as they load with particles.

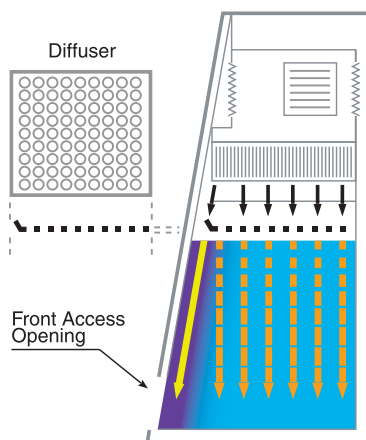
High-Velocity Return Air Slots Capture Unfiltered Air

Containment and cleanliness are achieved with precise control of airflow volumes and velocities. A unique feature in the Baker cabinet design, the high-velocity return air slots have been proven to maximize the microbiological safety cabinet's protective capabilities.

- Prevents contaminants from migrating up behind the viewscreen or around the side wall and escaping into operator's environment.
- Prevents room air from migrating down behind the viewscreen or around the side wall and contaminating work area.



High-velocity return air slots capture unfiltered air.



Momentum Air Curtain Increases Protection

The SterilGARD® e3 cabinet employs a unique momentum air curtain that offers an added measure of containment and protection exclusive to the Baker design.

- Creates strong air barrier, or momentum air curtain, at front of cabinet, increasing protective capabilities for both products and personnel.
- Strategic position of a stainless steel diffuser creates faster airflow at front of work area. Airflow over center of work surface is gentle.
- Resulting air curtain combines with high-velocity return air slots, aerodynamically contoured front-opening surfaces, and optimum air intake velocity to minimize turbulence and prevent migration of airborne contaminants into or out of work area.

FlexAIR™ Exhaust Connection - Saves Energy and Provides Safer Biosafety Cabinet Performance

Baker's FlexAIR™ canopy exhaust connection combines the safety of a traditional canopy (thimble) exhaust connection with the lower exhaust flows of a traditional hard exhaust connection. Now, energy savings can be realized without sacrificing safety cabinet performance.

How It Works: Baker's new FlexAIR™ works by having dynamic closure panels. The front panel automatically opens in the event of exhaust system slowdown or failure, allowing the cabinet to maintain Class II biosafety cabinet performance. Only the minimum amount of air necessary to achieve cabinet exhaust containment is used, compared to traditional canopy exhaust connections that exhaust an additional 20% conditioned air from the room. FlexAIR™ reduces exhaust air volume for significant energy and cost savings.



FlexAIR™ system includes an alarm feature to let workers know when the house exhaust system has slowed down or stopped. This may be important if your work includes the use of volatile organic solvents, gases, or vapors (which are not captured by ULPA filters).



See the FlexAIR™ in action!

Scan the code to the right or go to <http://hub.am/10nMh9N> to watch the FlexAIR™ video!

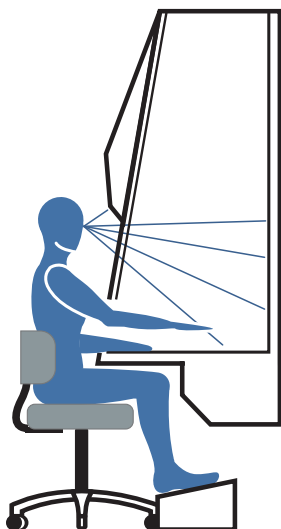
An Industry-Leading Approach to Ergonomics Creates a New Level of Productivity and User Comfort

The SterilGARD® e3 includes design features to improve safety, productivity, user-comfort, and performance throughout a range of tasks performed on a daily basis. Our cabinets are designed with the user in mind so that routine tasks can be done comfortably, efficiently, and with less fatigue.

Working Environment Offers Optimum Ease of Use and Comfort

A variety of convenient enhancements make the SterilGARD® e3 one of the most comfortable working environments.

- Unobstructed, usable work area is the largest in the industry and can accommodate more lab equipment.
- Reduced front grille depth moves work surface closer to front for better arm position, which helps improve posture.
- Low-profile, unitized drain pan beneath work surface allows more leg room.
- Air bypass padded armrest provides support and comfort.
- Eye-level control panel offers greater visibility and easier access.
- Non-glare work surface and cool-white fluorescent lamps reduce eyestrain.
- Optional stand with telescoping legs allows for an adjustable work surface height.
- Convenient built-in timers for lights and outlets come standard, minimizing risks and reducing energy consumption.
- Plumbing and drainage connections are strategically placed for convenience and proper air management.
- A programable ultraviolet germicidal lamp with safety interlock ensures that UV illumination occurs only when the viewscreen is fully closed. The UV light switch and cabinet lighting cannot be turned on simultaneously.



Slanted Viewscreen Offers Comfort and Safety

The SterilGARD® e3 cabinet has a slanted sliding viewscreen that minimizes glare and makes the cabinet easier to use and more comfortable to work in.

- Allows operator more comfortable head and elbow position, reducing fatigue.
- Provides safe, highly visible and easily accessible work area for wide range of procedures.
- Rugged, easy-to-use counterweight allows easy opening and closing of viewscreen.
- Maximum opening simplifies equipment and instrument loading and unloading.
- Integrated alarm audibly and visually warns of improper viewscreen position.
- Viewscreen-level mute button silences alarm for 5 minutes when viewscreen is raised for cleaning, loading, or unloading.
- Laminated safety-glass construction.
- Stainless steel edge protector prevents chipping and cracking.

Craftsmanship Ensures Quality

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 glare-reducing satin-finish interiors combine to improve comfort, simplify cleaning, and maintain proper containment.

- Work surface and walls are one-piece, corrosion-resistant, stainless steel with smooth radius corners for easy cleaning. White powder finish protects cold-rolled steel cabinet exterior.
- Work surface and supports are easily removed to facilitate cleaning drain pan.
- Stainless steel air diffuser/filter protector shields downflow filter in work area and provides uniform downflow and momentum air curtain.
- Protective grille under negative-pressure side walls prevents wipes and other paper materials from being inadvertently drawn into blower system, eliminating costly servicing, decontamination and downtime.
- Entire cabinet is airtight. Each component is welded, gasketed, or assembled with hermetically sealed joints. Each cabinet is bubble-tested under pressure – at the factory prior to shipping – to verify integrity of seals.

Options and Accessories

Most options, accessories, and modifications are factory installed and should be specified when ordering. Common options are listed below.

- Additional petcocks
- FlexAIR™ canopy exhaust connection
- Remote-controlled petcocks
- Auxiliary wiring package (for monitoring blower switch, sash alarm, and ReadySAFE™)
- Plastic storage bins
- Plumb to back
- Ergonomic adjustable footrest

For additional information, contact Baker or your local sales representative.

More Resources

If you are interested in learning more about the SterilGARD® e3, a variety of resources are available at www.bakerco.com including:

- Purchasing, technical and master specifications
- Revit® files and standard details
- Videos, white papers and more!



Learn More!

Scan the code to the right or visit <http://hub.am/1fX3oAC> to access all the SterilGARD® e3 resources!



Technical Specifications

220 Volt



| MODEL NUMBER | SG403AHE-EN | SG603HE-EN |
|---------------------------------|-------------------------|-------------------------|
| Size | 1.2 m | 1.8 m |
| Interior Dimension (w x d x h) | 1,168 x 624 x 697 mm | 1,778 x 624 x 697 mm |
| Usable Workspace (w x d) | 1,117 x 513 mm | 1,726 x 499 mm |
| Exterior Dimensions (w x d x h) | 1,345 x 776 x 1,568 mm | 1,977 x 776 x 1,568 mm |
| Cabinet Weight (kg) | 270 | 339 |
| Shipping Weight (kg) | 329 | 417 |
| Opening Max. | 508 mm | 508 mm |
| Working Access Opening Height | 203 mm / 305 mm | 203 mm / 254 mm |
| Operating Amperage [†] | | |
| Normal Operating Mode (Amps) | 1.8 / 2.9 | 2.6 / 3.4 |
| ReadySAFE™ Mode (Amps) | 0.8 / 0.8 | 1.1 / 1.1 |
| Power Consumption | | |
| Normal Operating Mode (Watts) | 396 / 638 | 572 / 748 |
| ReadySAFE™ Mode (Watts) | 176 / 176 | 242 / 242 |
| Heat Generation [‡] | | |
| Normal Operating Mode (BTU/hr) | 1,351 / 2,177 | 1,952 / 2,552 |
| ReadySAFE™ Mode (BTU/hr) | 601 / 628 | 826 / 826 |
| Electrical Service Requirements | 220V AC, 16 A, 50/60 Hz | 220V AC, 16 A, 50/60 Hz |
| Noise (dBa) | 60 / 64 | 65 / 66 |

[†]Amperage for new cabinet with clean filters

[‡]Calculated maximum based on operating amperage

EXHAUST AND STATIC PRESSURE REQUIREMENTS (with FlexAIR™ Canopy Exhaust Connection)

| | SG403-HE-EN | SG603-HE-EN |
|---|-------------|-------------|
| 203 mm Working Access Opening Height | | |
| Concurrent Balance Value (L/sec min/max) | 137 / 313 | 217 / 399 |
| 203 mm Exhaust Duct Diameter (Pa min/max) | -25 / -80 | -38 / -185 |
| 254 mm Exhaust Duct Diameter (Pa min/max) | -10 / -43 | -18 / -45 |
| 305 mm Exhaust Duct Diameter (Pa min/max) | -8 / -20 | -15 / -33 |

Caution

The adequacy of this containment cabinet for the user's personal safety, as with any containment cabinet, should be determined by an industrial hygienist or safety officer. Site preparation information, architectural drawings, detailed dimensions and purchase specifications are available.

12 Month 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 twelve 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 that proved defective in material or workmanship. No claim may be made for any incidental or consequential damages.

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P. O. Drawer E, Sanford, ME 04073 • (207) 324-8773 • (800) 992-2537 • Fax: (207) 324-3869 • www.bakerco.com

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