



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 1

[List View](#)

General Information [Contact](#) [Default Values](#) [Discount](#) [Document Information](#) [Clarification Request](#)

Procurement Folder: 1435610

SO Doc Code: CRFQ

Procurement Type: Central Purchase Order

SO Dept: 1400

Vendor ID: VS0000002427

SO Doc ID: AGR2500000002

Legal Name: Technology International Inc

Published Date: 7/16/24

Alias/DBA:

Close Date: 7/22/24

Total Bid: \$65,250.00

Close Time: 13:30

Response Date: 07/22/2024

Status: Closed

Response Time: 12:49

Solicitation Description: BIOLOGICAL SAFETY CABINETS - MOOREFIELD

Responded By User ID: tii123

Total of Header Attachments: 1

First Name: Shaji

Total of All Attachments: 1

Last Name: Habib

Email: tii@tii-usa.com

Phone: 4073592373



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder: 1435610
Solicitation Description: BIOLOGICAL SAFETY CABINETS - MOOREFIELD
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2024-07-22 13:30	SR 1400 ESR07222400000000573	1

VENDOR
VS0000002427
Technology International Inc

Solicitation Number: CRFQ 1400 AGR2500000002
Total Bid: 65250
Response Date: 2024-07-22
Response Time: 12:49:15
Comments:

FOR INFORMATION CONTACT THE BUYER
Larry D McDonnell
304-558-2063
larry.d.mcdonnell@wv.gov

Vendor		
Signature X	FEIN#	DATE

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	TOTAL OVERALL COSTS	1.00000	EA	65250.000000	65250.00

Comm Code	Manufacturer	Specification	Model #
41103517			

Commodity Line Comments:

Extended Description:

See attached documentation for further details.



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Request for Quote
Miscellaneous

Proc Folder: 1435610			Reason for Modification: Addendum No. 1
Doc Description: BIOLOGICAL SAFETY CABINETS - MOOREFIELD			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2024-07-16	2024-07-22 13:30	CRFQ 1400 AGR2500000002	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name : Technology International, Inc.

Address : 1331 South International Parkway,

Street : Suite 2251,

City : Lake Mary

State : Florida **Country :** USA **Zip :** 32746

Principal Contact : Rifat Habib

Vendor Contact Phone: 407-359-2373 **Extension:**

FOR INFORMATION CONTACT THE BUYER
Larry D McDonnell
304-558-2063
larry.d.mcdonnell@wv.gov

Vendor Signature X *Rifat Habib* **FEIN#** 650342335 **DATE** 07/22/2024

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

Addendum No.1 issued to provide responses to vendor questions. See attached pages.

The bid opening remains on 7/22/2024 at 1:30 pm.

No other changes.

INVOICE TO		SHIP TO	
AGRICULTURE DEPARTMENT OF ADMINISTRATIVE SERVICES 1900 KANAWHA BLVD E CHARLESTON WV US		AGRICULTURE DEPARTMENT OF MOOREFIELD FIELD OFFICE 60B INDUSTRIAL PARK RD MOOREFIELD WV US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	TOTAL OVERALL COSTS	1.00000	EA	\$65,250.00	\$65,250.00

Comm Code	Manufacturer	Specification	Model #
41103517	***Please see our Equipment Proposal TII/WV/0724/37845 attached.		

Extended Description:
See attached documentation for further details.

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Vendor Questions Due by 2:00PM EST	2024-07-15

SOLICITATION NUMBER: CRFQ AGR2500000002

Addendum Number: 01

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- ☐ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☒ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☐ Other

Description of Modification to Solicitation:

1. To provide responses to vendor questions. See Attachment A.
2. The bid opening remains on 07/22/2024 at 1:30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

CRFQ AGR2500000002
ATTACHMENT A
ADDENDUM NO. 1

Questions:

- Q1: Can we submit a bid for part of the RFQ? We would like to quote the 3 x Class II A2 cabinets and their assembly, but do not offer Class II B2 or the blower and relay kit.
- A1: The awarded vendor for this solicitation must be able to provide all mandatory contract items. Bids submitted that are not responsive to all mandatory contract items will be disqualified.
- Q2: Do you understand that having a B2 unit that it needs to be on its own duct work and the unit cannot be linked to any other power source?
- A2: Yes, we are replacing the current hoods. Replacement of current hoods is not part of this solicitation.
- Q3: Is this new construction or a renovation?
- A3: The solicitation is for the replacement of existing cabinets.
- Q4: Height of the A2 unit? 10inch was quoted since it is most common.
- A4: Assuming that you are talking about the sash height, 10 inches would meet the requirements.
- Q5: Do you know if the WV-96 form is required for this bid?
- A5: A WV-96 form would not be required at time of bid submission and would only be necessary if the vendor is proposing alternative terms and conditions that include certain prohibited contract clauses by State law.

Other Information:

1. The bid opening remains on 7/22/2024 at 1:30 pm.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ AGR2500000002

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Technology International, Inc.

Company

Rifat Habib

Authorized Signature

07/22/2024

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Request for Quote
Miscellaneous

Proc Folder: 1435610			Reason for Modification: Addendum No. 1
Doc Description: BIOLOGICAL SAFETY CABINETS - MOOREFIELD			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2024-07-16	2024-07-22 13:30	CRFQ 1400 AGR2500000002	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name : Technology International, Inc.

Address : 1331 South International Parkway,

Street : Suite 2251,

City : Lake Mary

State : Florida **Country :** USA **Zip :** 32746

Principal Contact : Rifat Habib

Vendor Contact Phone: 407-359-2373 **Extension:**

FOR INFORMATION CONTACT THE BUYER

Larry D McDonnell
304-558-2063
larry.d.mcdonnell@wv.gov

Vendor Signature X *Rifat Habib* **FEIN#** 650342335 **DATE** 07/22/2024

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION
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The bid opening remains on 7/22/2024 at 1:30 pm.
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INVOICE TO	SHIP TO
AGRICULTURE DEPARTMENT OF ADMINISTRATIVE SERVICES 1900 KANAWHA BLVD E CHARLESTON WV US	AGRICULTURE DEPARTMENT OF MOOREFIELD FIELD OFFICE 60B INDUSTRIAL PARK RD MOOREFIELD WV US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
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41103517	***Please see our Equipment Proposal TII/WV/0724/37845 attached.		

Extended Description:
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SCHEDULE OF EVENTS		
<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Vendor Questions Due by 2:00PM EST	2024-07-15

	Document Phase	Document Description	Page 3
AGR2500000002	Final	BIOLOGICAL SAFETY CABINETS - MOOREFIELD	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

☒ A pre-bid meeting will not be held prior to bid opening

☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted emails should have the solicitation number in the subject line.

Question Submission Deadline: July 15, 2024 by 2:00PM EST

Submit Questions to: Larry D. McDonnell
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-3970
Email: larry.d.mcdonnell@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted on or before the date and time of the bid opening listed in section 7 below. Vendors can submit bids electronically through wvOASIS, in paper form delivered to the Purchasing Division at the address listed below either in person or by courier, or in facsimile form by faxing to the Purchasing Division at the number listed below. Notwithstanding the foregoing, the Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via email. Bids submitted in paper or facsimile form must contain a signature. Bids submitted in wvOASIS are deemed to be electronically signed.

Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason.

For Request for Proposal ("RFP") Responses Only: Submission of a response to a Request for Proposal is not permitted in wvOASIS. In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal prior to the bid opening date and time identified in Section 7 below, plus _____ convenience copies of each to the Purchasing Division at the address shown below. Additionally, the Vendor should clearly identify and segregate the cost proposal from the technical proposal in a separately sealed envelope.

Bid Delivery Address and Fax Number:

Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130
Fax: 304-558-3970

A bid submitted in paper or facsimile form should contain the information listed below on the face of the submission envelope or fax cover sheet. Otherwise, the bid may be rejected by the Purchasing Division.

VENDOR NAME:

BUYER:

SOLICITATION NO.:

BID OPENING DATE:

BID OPENING TIME:

FAX NUMBER:

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: July 22, 2024 at 1:30PM EST

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. ALTERNATE MODEL OR BRAND: Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

☐ This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

11. EXCEPTIONS AND CLARIFICATIONS: The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and must include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

15A. RECIPROCAL PREFERENCE: The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37 and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women- owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

19. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform or lacks the integrity and reliability to assure good-faith performance.”

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

21. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

22. WITH THE BID REQUIREMENTS: In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

23. EMAIL NOTIFICATION OF AWARD: The Purchasing Division will attempt to provide bidders with e-mail notification of contract award when a solicitation that the bidder participated in has been awarded. For notification purposes, bidders must provide the Purchasing Division with a valid email address in the bid response. Bidders may also monitor WV OASIS or the Purchasing Division's website to determine when a contract has been awarded.

24. ISRAEL BOYCOTT CERTIFICATION: Vendor's act of submitting a bid in response to this solicitation shall be deemed a certification from bidder to the State that bidder is not currently engaged in, and will not for the duration of the contract, engage in a boycott of Israel. This certification is required by W. Va. Code § 5A-3-63.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☐ **Term Contract**

Initial Contract Term: The Initial Contract Term will be for a period of _____. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to _____ successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

☐ **Alternate Renewal Term** – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

☐ the contract will continue for _____ years;

☐ the contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's Office (Attorney General approval is as to form only).

☒ **One-Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Construction/Project Oversight:** This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

☐ **Other:** Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☐ **Open End Contract:** Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☒ **One-Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

☐ **Construction:** This Contract is for construction activity more fully defined in the specifications.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One-Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:

☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

☐☐☐☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

☒ **Commercial General Liability Insurance** in at least an amount of: 1,000,000.00 per occurrence.

☒ **Automobile Liability Insurance** in at least an amount of: 1,000,000.00 per occurrence.

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: _____ per occurrence.

☐ **Cyber Liability Insurance** in an amount of: _____ per occurrence.

☐ **Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

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9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. VENUE: All legal actions for damages brought by Vendor against the State shall be brought in the West Virginia Claims Commission. Other causes of action must be brought in the West Virginia court authorized by statute to exercise jurisdiction over it.

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

☐ _____ for _____.

☐ Liquidated Damages Contained in the Specifications.

☐ Liquidated Damages Are Not Included in this Contract.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence regarding all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in www.state.wv.us/admin/purchase/privacy.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR NON-CONFLICT: Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☒ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open hearth, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
 1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
 2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a “substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES: This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Rifat Habib Business Development Exec.

(Address) 1331 South International Parkway, Suite 2251, Lake Mary, Florida 32746

(Phone Number) / (Fax Number) 407-359-2373 / 407-359-2372

(email address) tii@tii-usa.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Technology International, Inc.

(Company) Rifat Habib

(Signature of Authorized Representative)

Rifat Habib Business Development Exec. 07/22/2024

(Printed Name and Title of Authorized Representative) (Date)

407-359-2373 / 407-359-2372

(Phone Number) (Fax Number)

tii@tii-usa.com

(Email Address)

REQUEST FOR QUOTATION
Biological Safety Cabinets
CRFQ AGR25*02

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Agriculture-Moorefield Animal Health located at 60-B Moorefield Industrial Road, Moorefield, WV 26836 to establish a contract for the one-time purchase and assembly of Biological Safety Cabinets, as more fully described in these specifications.
2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
 - 2.1 **“Contract Item”** means Biological Safety Cabinets as more fully described by these specifications.
 - 2.2 **“Pricing Page”** means the pages attached as Exhibit A, upon which Vendor should list its proposed price for the Contract Items.
 - 2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
3. **GENERAL REQUIREMENTS:**
 - 3.1 **Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.
 - 3.1.1 **Biological Safety Cabinets Class II A2**
 - 3.1.1.1 Biological Safety Cabinets must be a 4-foot Class II A2. Class II, type A2 Biosafety Cabinet provides personnel, product, and environmental protection through filtered air, laminar or unidirectional air, and a motor blower. The exhaust airflow of the A2 type safety cabinet is discharged back to the room after high-efficiency filtration.
 - 3.1.1.2 Biological Safety Cabinets must be National Sanitation Foundation (NSF) Listed for NSF Standard Number 49. Vendor will need to provide documentation upon request.

REQUEST FOR QUOTATION
Biological Safety Cabinets
CRFQ AGR25*02

- 3.1.1.3** Biological Safety Cabinets must provide personnel, product, and environmental protection from hazardous particulates such as agents that require Biosafety Level 1, 2 or 3 contaminants.
- 3.1.1.4** Class II Biosafety Cabinets must have high-efficiency particulate air (HEPA)-filtered, vertical, unidirectional airflow within the work area and have a front access opening with carefully maintained inward airflow.
- 3.1.1.5** Biological Safety Cabinets must include adjustable base stand.
- 3.1.1.6** Biological Safety Cabinets power requirements must be North American 110V to 120V.
- 3.1.1.7** Biological Safety Cabinets must have a minimum 8-inch sash opening.
- 3.1.1.8** Biological Safety Cabinet must have maximum width 54.3 inches; maximum depth 31.2 inches; maximum height 63.4 inches.
- 3.1.1.9** Biological Safety Cabinets must have built in UV light, and service fixture.

3.1.2 Biological Safety Cabinets Class II B2

- 3.1.2.1** Biological Safety Cabinet must be a 4-foot Class II B2. The Class II, type B2 Biosafety Cabinets provide personnel, product and environmental protection from hazardous particulates such as agents that require Biosafety Level 1, 2, or 3 containments. The exhaust airflow of the B2 type safety cabinet is discharged outdoors after high-efficiency filtration.
- 3.1.2.2** Biological Safety Cabinet must be National Sanitation Foundation (NSF) Listed for NSF Standard Number 49. Vendor will need to provide documentation upon request.

REQUEST FOR QUOTATION
Biological Safety Cabinets
CRFQ AGR25*02

- 3.1.2.3** Biological Safety Cabinet must provide personnel, product and environmental protection from hazardous particulates such as agents that require Biosafety Level 1, 2 or 3 contaminants.
- 3.1.2.4** Class II Biosafety Cabinets must have high-efficiency particulate air (HEPA)-filtered, vertical, unidirectional airflow within the work area and have a front access opening with carefully maintained inward airflow.
- 3.1.2.5** Biological Safety Cabinet must include adjustable base stand.
- 3.1.2.6** Biological Safety Cabinet electrical requirements must be North American 110V to 120V.
- 3.1.2.7** Biological Safety Cabinet must have a minimum 8-inch height sash opening.
- 3.1.2.8** Biological Safety Cabinet must have maximum width 54.3 inches; maximum depth 31.2 inches; maximum height 72.6 inches.
- 3.1.2.9** Biological Safety Cabinet must have built in UV light, and service fixture.
- 3.1.2.10** Biological Safety Cabinet with a compatible Dry Contact Relay Kit.
- 3.1.2.11** Biological Safety Cabinet must have Coated Steel Blower with Motor Type: Traditional Belt Driven Motor; minimum of 2 Horsepower; Inlet maximum 12.25 inches and Outlet maximum 13.5 inches; Cubic Feet per Minute (CFM) minimum 1000; Revolutions Per Minute (RPM) Range minimum 828; Electrical requirements: 230V, 5.8amps.

3.1.3 Assembly

- 3.1.3.1** Non-mechanical installation (assemble on site and set in place) of (3) 4-foot A2 and (1) 4-foot B2 Biological Safety Cabinets with adequate hallway/doorway clearance of minimum 79" height, 34.5" width.

REQUEST FOR QUOTATION
Biological Safety Cabinets
CRFQ AGR25*02

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price for the Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 Pricing Page: Vendor should complete Exhibit A pricing page to specify the total overall cost, the Catalog Number; Product Description, Quantity, along with the Unit Price and Extended Amount. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery.

Vendor should complete Exhibit A pricing page in full as failure to complete Exhibit A pricing page in its entirety may result in Vendor's bid being disqualified.

Vendor should type the information into the Pricing Page to prevent errors in the evaluation.

Vendor should only enter total overall costs in wvOASIS. Total overall cost in wvOASIS must match total overall costs as listed in Exhibit A pricing page.

5. PAYMENT:

5.1 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1 Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within 40 working days after receiving a purchase order or notice to proceed. Contract Items must be delivered to Agency at:

WV Department of Agriculture-Animal Health
60-B Moorefield Industrial Park
Moorefield, WV 26836

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if the shipment of the Contract Items will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the Contract, and/or obtaining the Contract Items from a third party.

REQUEST FOR QUOTATION
Biological Safety Cabinets
CRFQ AGR25*02

Any Agency seeking to obtain the Contract Items from a third party under this provision must first obtain approval of the Purchasing Division.

- 6.3 Delivery Payment/Risk of Loss:** Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery.
- 6.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.
- 6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7. VENDOR DEFAULT:

7.1 The following shall be considered a vendor default under this Contract.

- 7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.
- 7.1.2** Failure to comply with other specifications and requirements contained herein.
- 7.1.3** Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
- 7.1.4** Failure to remedy deficient performance upon request.

7.2 The following remedies shall be available to Agency upon default.

REQUEST FOR QUOTATION
Biological Safety Cabinets
CRFQ AGR25*02

- 7.2.1** Immediate cancellation of the Contract.
- 7.2.2** Immediate cancellation of one or more release orders issued under this Contract.
- 7.2.3** Any other remedies available in law or equity.

Exhibit A - Pricing Page
Biological Safety Cabinets
 CRFQ AGR25*02

		PRICING PAGE			
Section	Catalog Number	Product Description	Quantity	Unit Price	Extended Amount
3.1.1		4-foot (width opening) Biological Safety Cabinets Class II A2	3	\$15,250.00	\$45,750.00
3.1.2		4-foot (width opening) Biological Safety Cabinets Class II B2	1	\$19,500.00	\$19,500.00
3.1.2.11		Coated Steel Blower 2HP	1	Included	Included
3.1.2.10		Dry Contact relay Kit	1	Included	Included
3.1.3		Assembly	1	Included	Included
		Failure to use this form may result in disqualification		TOTAL OVERALL COST	\$65,250.00
		Bidder / Vendor Information			
Name:		Technology International, Inc.			
Address:		1331 South International Parkway, Suite 2251,			
		Lake Mary, Florida 32746			
Phone:		407-359-2373			
Email Address:		tii@tii-usa.com			
Authorized Signature:		<i>Rifat Habib</i>			

***Please see our Equipment Proposal TII/WV/0724/37845 attached.



Technology International, Inc.
1331 South International Pkwy, Suite 2251
Lake Mary, FL 32746
Tel: (407) 359-2373
Fax: (407) 359-2372
E-mail: tii@tii-usa.com
Website: www.tii-usa.com

Equipment Proposal

Description: Biological Safety Cabinets - Moorefield

Solicitation #: CRFQ 1400 AGR2500000002

Agency: State of West Virginia

TII Ref: TII/WV/0724/37845

Date: 07/22/2024

In response to your quote request for Biological Safety Cabinets - Moorefield, Technology International, Inc. is pleased to submit the following for consideration:

ITEM NO.	QTY	DESCRIPTION/ MODEL NO.	UNIT PRICE	EXTD. PRICE
1	3	SterilGARD e3 4ft, w/ Channel Stand and UV Light	\$15,250.00	\$45,750.00
2	1	4' BioChemGARD Class II Type B2 BSC (total exhaust)	\$19,500.00	\$19,500.00
3	1	Coated Steel Blower 2HP	Included	Included
4	1	Dry Contact relay Kit	Included	Included
5	1	Assembly	Included	Included
See attached data sheets				
<u>Total.....\$65,250.00</u>				

Warranty: Manufacturer's standard warranty applies.

Delivery:

- Estimated delivery is **16 Weeks** after receipt of order and approved submittal.
- Please note, due to COVID-19 there may be unanticipated disruptions and delays in the supply chains globally, for parts, components, equipment and internal manufacturing services such as engineering, production allocation, and logistics. This may result in manufacturing & delivery delays out of our control. We will do our best to communicate all such impacts and reduce the effects of any such delays.
- All delivery dates quoted are subject to manufacturer's confirmation at time of order.
- Submittal data will be provided for approval after receipt of order (if applicable)
- Customer to provide equipment and personnel to unload
- TII will provide MSO at time of payment confirmation. Customer is responsible for all titling and registration of trailer (If Applicable)

Freight: Included to Moorefield, WV 26836.

Payment Terms: NET 30

Prompt Payment discount: 1/4 % 10 days

Quote Validity: 90 days.

***** Notes:**

- Quoted price is not available on a line item basis. This is an offer for a lump sum contract.
- Country of Origin: USA.

Technology International, Inc. Corporate data:

We are a small business and our Tax Payer Identification Number (TIN): 650342335. The price quoted does not include any sales, excise or similar taxes.

We trust that this proposal will meet your requirements and we look forward to hearing from you.

If you have any questions or need more information, please contact us by phone at 407-359-2373, fax at 407-359-2372 or email us at tii@tii-usa.com

Respectfully submitted,



Rifat Habib
Business Development Exec.
Technology International, Inc.



SterilGARD® Class II Type A2 Biological Safety Cabinet

Standard Features

- One-piece, corrosion-resistant, stainless steel fabrication with smooth radius coved corners
- Negative pressure double-wall plenum
- NSF-listed and patent pending cable port on the right side
- Right side Petcock Valve - VAC
- Internal GFCI protected duplex outlets located on each sidewall
- Right side prepiped penetration
- Power/processor fault alarm to alert of a power outage or micro-controller fault
- Unique momentum air curtain for increased containment and protective capabilities
- High velocity return air slots
- Patent pending air bypass padded armrest
- Non-glare, removable work surface
- Mini analog pressure gauge
- Energy saving features
 - ReadySAFE™ low-flow mode
 - StediFLOW™ motor controller
 - UniPressure™ Preflow Plenum airflow system

Additional Options

(Any of these options already quoted are listed above)

- ☐ Exhaust Options: FlexAir™ Canopy Exhaust Connection w/HVAC Alarm
- ☐ Exhaust Connection Options: 12" Airtight Damper, Inline Dampers and Duct Reducers
- ☐ Controls/Electrical Options: UV Light, BMS Pkg., Particle Counting Pkg., Cabinet Monitor
- ☐ Stand and Lift Options: Channel Stand, Casters, Cradle Lift and Ergo Lift
- ☐ Ergonomic Options: IV Bar, Biofit Chair, Sit/Stand stool, Footrest and Storage Bins
- ☐ Wall and Floor Anchors and Seismic Restraint (PE Approved) Options
- ☐ All Stainless-Steel Options: 304 SS and 316 SS
- ☐ Additional Plumbing and Petcock Service Valve Options
- ☐ Documentation Options: IQ/OQ
- ☐ Modification Options: Please discuss with your Sales Representative
- ☐ Extended Warranty: 3 years

[SterilGARD® Product Brochure](#)

SterilGARD® e3

Leading the way in safety
and reliability



 Baker



The SterilGARD® e3 increases lab productivity & user comfort

SterilGARD® e3
NSF Class II Type A2
Biosafety Cabinet

Our high-performance laboratory equipment is built with you in mind, with industry-leading ergonomics, energy-efficient engineering, and the lowest life cycle costs available. Baker products help you work more comfortably, boost productivity, save money and minimize environmental impact.

The most reliable, comfortable and safe A2 cabinet in the industry.

With the optimum balance of performance and energy efficiency, our biological safety cabinets protect personnel, product and the environment, all while increasing lab productivity and user comfort.



Baker builds it better

As the pioneer and leading innovator of air containment, contamination control and precision cell culture products, Baker doesn't take shortcuts when it comes to protecting you or your research.

RESEARCH APPLICATIONS

- Pharmaceutical Compounding
- Cell Biology & Biomedical Research
- Clinical / Diagnostic Testing



PRODUCT OVERVIEW

- **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.
- **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.
- **Energy efficiency**
From the motor controller to the lighting, new patent-pending innovations provide significant annual cost savings while maintaining superior performance.
- **Comfort**
With eight thoughtful features, from the viewscreen to the work environment and ergonomic design.
- **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.
- **Service & 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.
- **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.



SterilGARD® e3

NSF Class II Type A2 Biosafety Cabinet

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.

PRODUCT HIGHLIGHTS

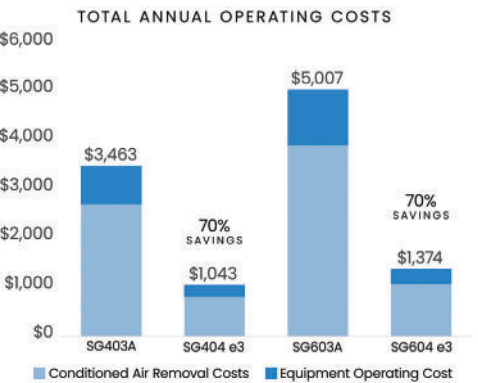
- Multiple energy-saving features equal significant ongoing cost savings.
- Continuously safe work environment with self-adjusting motor technology.
- Comfortable user experience with low noise and heat generation.
- Enhanced productivity with ReadySAFE™ low-flow mode.
- Extended filter life means less user downtime and lower operational costs.
- Easier, faster maintenance.



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 to deliver unparalleled safety and performance, less cabinet downtime for cleaning and maintenance, and increased productivity.

A significant reduction in energy consumption and heat rejection yields a 70% savings in annual operating costs.

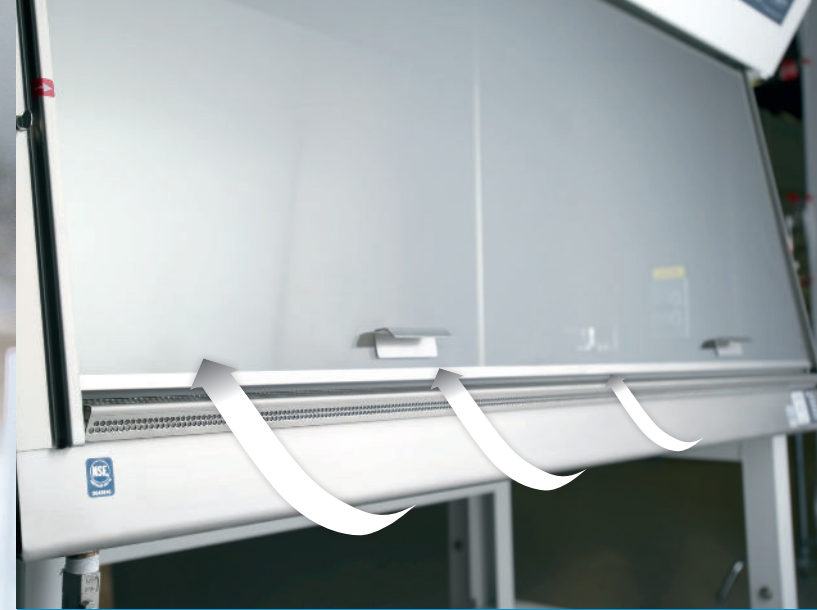


NOTE: Assumes U.S. Department of Energy national average cost of 17¢ per kilowatt-hour (<http://www.eia.doe.gov/fuelelectric.html>) and \$5/CFM/year. SterilGARD® e3 data based on 8-hour Working Mode, 16-hour ReadySAFE™ Mode of a 115 volt unit.

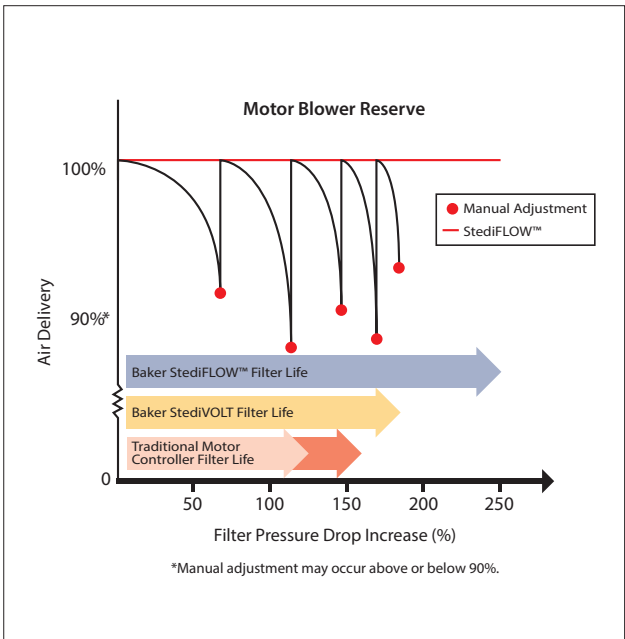
STEDIFLOW™

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%.*



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



- 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.

READYSAFE™

Low flow mode makes your job easier and reduces energy consumption

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.

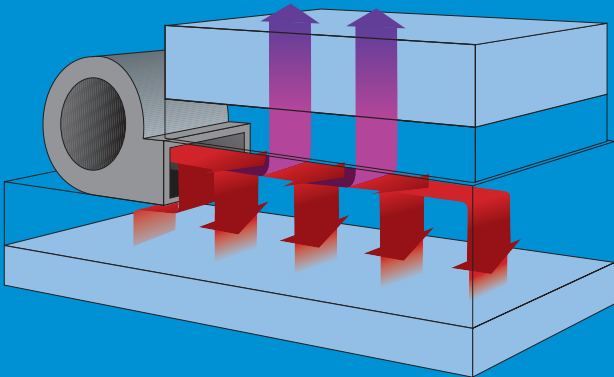
- Meets NSF 49 and ISO class 4 criteria in ReadySAFE™ mode.
- Consumes 50–75% less energy than when operating in the standard mode.
- Increases productivity by allowing user to have instantly safe working conditions upon opening the viewscreen and ongoing work can be left in the cabinet without fear of contamination.

*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.

**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 HEPA filters.
- Telescoping filter mount provides direct seal of HEPA 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.
- Apportions and distributes air across, then through, the HEPA supply filter, improving downflow uniformity, reducing noise, and increasing reserve blower/motor capacity.
- Internal damper simplifies airflow balance and cabinet sealing for decontamination.



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



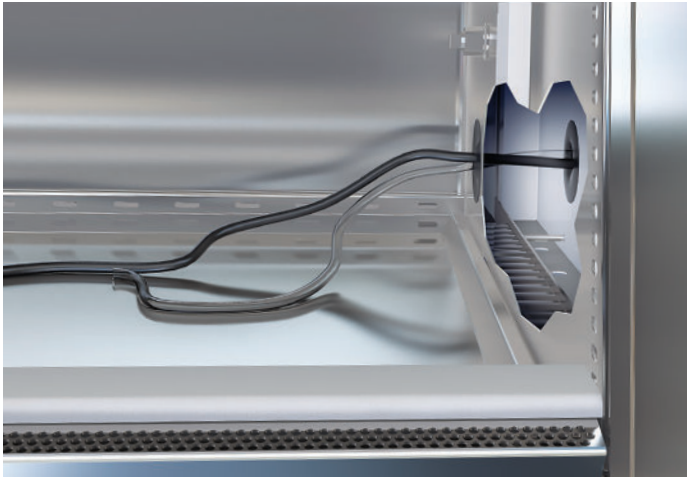
A more efficient, less demanding, and quieter airflow system when combined with StediFLOW™.



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 NSF-approved 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.



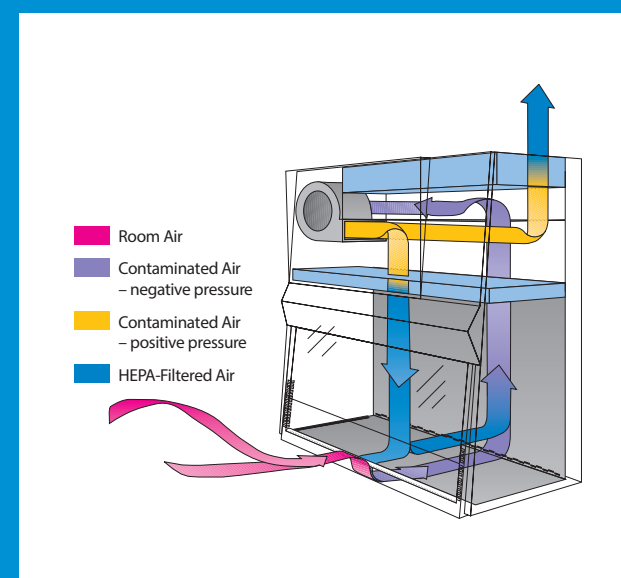
Double-wall construction captures and contains contaminated air under negative pressure.



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 HEPA 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.



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.





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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 biological 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.

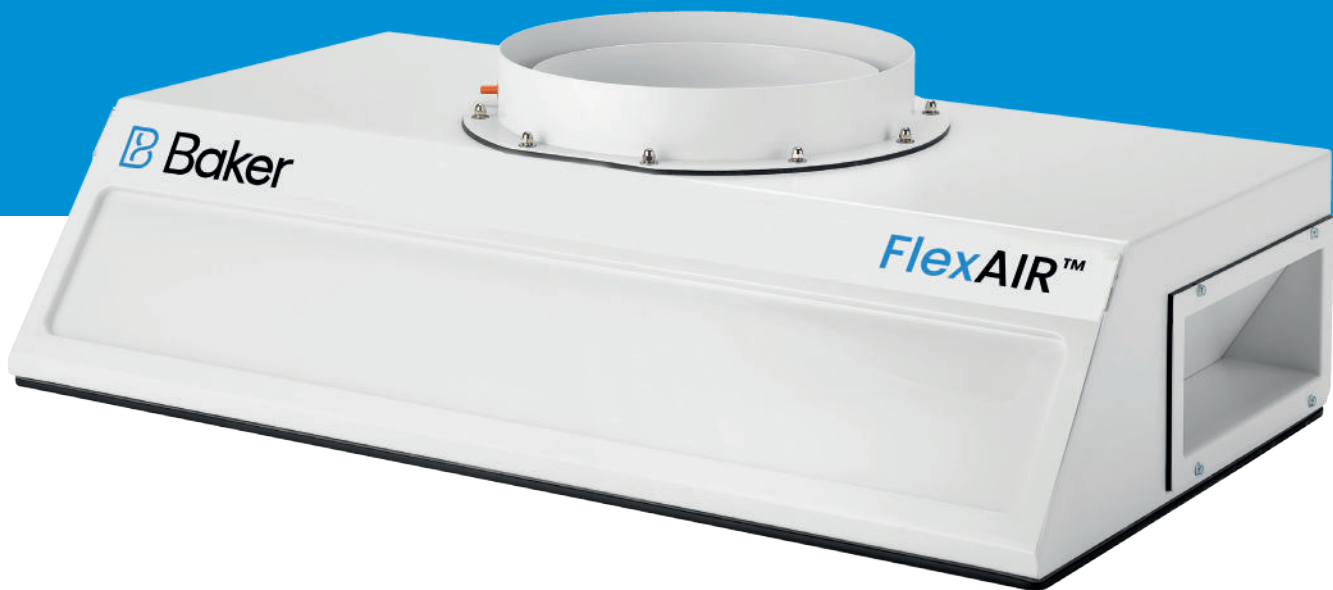
FlexAIR™ Exhaust Connection

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, Type A2 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 HEPA filters).



Scan the QR code and see the FlexAIR™ in action.





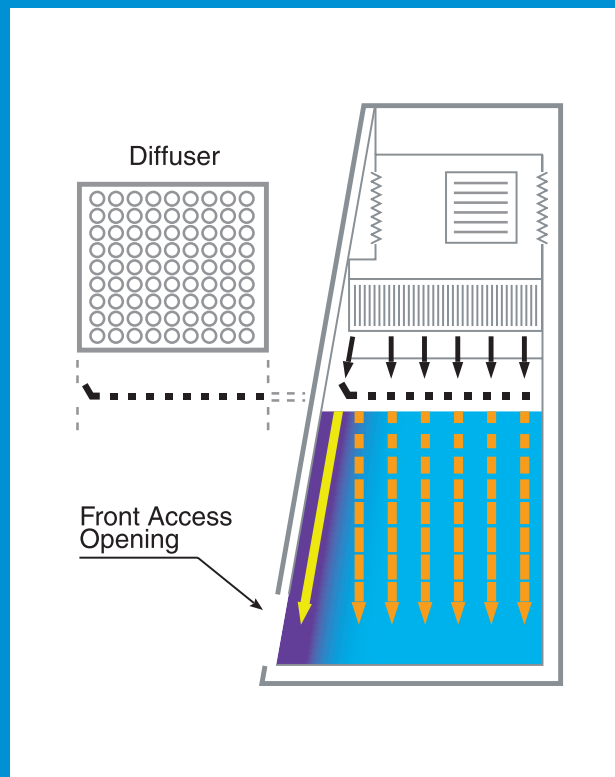
AN INDUSTRY-LEADING APPROACH TO ERGONOMICS CREATES A NEW LEVEL OF PRODUCTIVITY AND USER COMFORT

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 LED lighting 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.





MOMENTUM AIR CURTAIN INCREASES PROTECTION

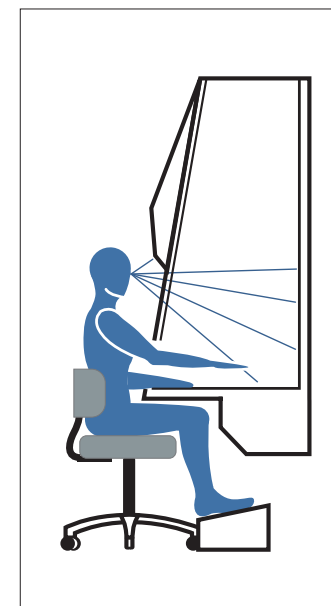
The SterilGARD® e3 cabinet employs a unique momentum air curtain that offers an added measure of containment and protection exclusive to the Baker design.

- 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.

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.

- Viewscreen sash opening: 10" or 12" (8" is standard on all models)
- Stainless steel IV bar
- Additional petcocks
- Ultraviolet germicidal lamp with safety interlock and programmable timer
- FlexAIR™ canopy exhaust connection
- Reinforced work surface
- Seismic restraints (California OSHPD pre-approved per CBC 2013)
- Stands available with telescoping legs, casters, or electric hydraulic lifts
- Remote-controlled petcocks
- Auxiliary wiring package (for monitoring blower switch, sash alarm, power loss alarm, and ReadySAFE™)
- ULPA filters
- Plastic storage bins
- Plumb to back
- Ergonomic adjustable footrest
- Available in 100 V (50/60Hz) and 220 V (50/60 Hz) models

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!



Scan the QR code to access all the SterilGARD® e3 resources



Technical Specifications – 115 Volt

Model Number	SG304	SG404	SG504	SG604
Nominal Size	3'	4'	5'	6'
Interior Dimension (w x d x h)	27 3/4 x 22 9/16 x 27 7/16"	46" x 24 9/16" x 27 7/16"	58" x 24 9/16" x 27 7/16"	70" x 24 9/16" x 27 7/16"
Usable Workspace (w x d)	25 3/4 x 17 5/8"	44" x 19 5/8"	56" x 19 5/8"	68" x 19 5/8"
Exterior Dimensions (w x d x h)	35 5/8 x 30 11/16" x 61 3/4"	53 3/4" x 30 11/16" x 61 3/4"	65 3/4" x 30 11/16" x 61 3/4"	77 3/4" x 30 11/16" x 61 3/4"
Cabinet Weight (lbs)	397	582	714	771
Shipping Weight (lbs)	497	785	940	1,020
Opening Max.	20"	20"	20"	20"
Working Access Opening Height (8" standard)	8" / 10" / 12"	8" / 10" / 12"	8" / 10" / 12"	8" / 10" / 12"
Operating Amperage†				
Normal Operating Mode (Amps)	2.4 / 2.0 / 1.1	3.6 / 4.0 / 4.2	4.1 / 4.7 / 5.2	5.6 / 6.4 / 6.8
ReadySAFE™ Mode (Amps)	1.1	1.8	1.9	2.1
Power Consumption††				
Normal Operating Mode (Watts)	240 / 230 / 242	414 / 460 / 483	472 / 541 / 598	644 / 736 / 782
ReadySAFE™ Mode (Watts)	126	207	219	242
Heat Generation‡				
Normal Operating Mode (BTU/hr)	819 / 785 / 826	1,413 / 1,570 / 1,649	1,612 / 1,845 / 2,042	2,199 / 2,512 / 2,670
ReadySAFE™ Mode (BTU/hr)	432	706	747	826
Electrical Service Requirements‡‡	115V AC, 20 A, 60 Hz	115V AC, 20 A, 60 Hz	115V AC, 20 A, 60 Hz	115 V AC, 20 A, 60 Hz
Noise (dBa)	59	61 / 62 / 65	64 / 65 / 66	65 / 67 / 67

Exhaust and static pressure requirements (with FlexAIR® Canopy Exhaust Connection)

Model Number	SG304	SG404	SG504	SG604
8" Working Access Opening Height				
Concurrent Balance Value (CFM min/max)	260 / 370	290 / 663	360 / 750	460 / 845
8" Exhaust Duct Diameter (* W.G. min/max)	-0.02 / -0.08	-0.10 / -0.32	-0.15 / -0.62	-0.15 / -0.74
10" Exhaust Duct Diameter (* W.G. min/max)	-0.01 / -0.06	-0.04 / -0.17	-0.05 / -0.16	-0.07 / -0.18
12" Exhaust Duct Diameter (* W.G. min/max)	-0.01 / -0.06	-0.03 / -0.08	-0.04 / -0.12	-0.06 / -0.13
10" Working Access Opening Height				
Concurrent Balance Value (CFM min/max)	N/A	360 / 701	450 / 820	550 / 945
8" Exhaust Duct Diameter (* W.G. min/max)	N/A	-0.15 / -0.62	-0.18 / -0.60	-0.20 / -0.78
10" Exhaust Duct Diameter (* W.G. min/max)	N/A	-0.05 / -0.18	-0.09 / -0.35	-0.11 / -0.24
12" Exhaust Duct Diameter (* W.G. min/max)	N/A	-0.04 / -0.10	-0.05 / -0.16	-0.09 / -0.16
12" Working Access Opening Height				
Concurrent Balance Value (CFM min/max)	N/A	415 / 871	560 / 850	644 / 1,114
8" Exhaust Duct Diameter (* W.G. min/max)	N/A	-0.17 / -0.75	-0.22 / -0.74	-0.30 / -0.79
10" Exhaust Duct Diameter (* W.G. min/max)	N/A	-0.07 / -0.30	-0.09 / -0.24	-0.14 / -0.36
12" Exhaust Duct Diameter (* W.G. min/max)	N/A	-0.05 / -0.25	-0.07 / -0.17	-0.11 / -0.30





Scan the QR code to access all the SterilGARD® e3 specifications

Purchase Specifications

SterilGARD® e3 Class II, Type A2 Biological Safety Cabinet, Vertical Flow, 115 V, 110V, and 220 V versions

Performance

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 – a higher velocity of downflow behind the viewscreen relative to downflow velocity over the work surface – for added personnel and product protection.
3. High-velocity return air slots shall be located at each end of the front access opening. These slots help to prevent contaminated 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.
4. High-velocity return air slots shall also be located behind the viewscreen on the top edge for enhanced containment and product protection.
5. Cabinet shall be capable of automatically handling a 300% minimum increase in filter loading without reducing total air delivery by more than 10%. Test data to verify these capabilities shall be available upon request.
6. Intake velocity through the front access opening shall be a minimum of 105 FPM. Standard opening for all models is 8" (203 mm); 10" (254mm) and 12" (305mm) openings are also available.
7. 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 operator's manual shipped with the unit.
8. The unit shall have standard HEPA filters for a protection effectiveness of 99.99% on 0.3 micron size particles by DOP test. Filters shall be serviceable from front of cabinet.
9. The cabinet shall have a low flow mode (ReadySAFE™), which is active when the viewscreen is closed. This mode of operation shall reduce energy consumption by at least 50% and still meet the product and personnel protection testing requirements of NSF/ANSI 49. Particle testing while the cabinet is in this mode shall exceed the requirements for ISO Class 5 conditions for 0.3 micron particles. A connection shall be provided for indicating the ReadySAFE™ status to the facility building management system.

Construction

1. The vertical sliding viewscreen shall be slanted at an angle of 10° from vertical, capable of moving to a fully closed position during shutdown periods.
2. Viewscreen shall be constructed of ¼" (6.35mm) UV-resistant laminated safety plate glass, with a maximum opening of 20" (508 mm) for equipment loading.
3. 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.
4. Interior work area shall be 27 1/16" (697 mm) high.
5. Cabinet shall have Baker's exclusive UniPressure™ Preflow Plenum, designed to provide more uniform airflow to the supply filter.
6. Supply and exhaust filters shall be front-loading.
7. A telescoping plenum assembly shall be provided to allow the filters to be directly clamped to the plenum against a closed-cell neoprene gasket. Plenum applies force to full perimeter of filters, rather than point force.
8. The unit will feature an audible alarm and flashing LED to warn of an unsafe viewscreen position. An alarm mute switch on the front cabinet panel allows temporary muting. The alarm resets after 5 minutes if the viewscreen remains unsafe. The cabinet will also signal power loss with visual and audible alarms.
9. Cabinet exterior construction: seal panels and dress panels of 16-gauge cold-rolled steel, powder coated finish, painted PermaWhite.™
10. Cabinet Interior (work area) construction: one-piece, 16 gauge, Type 304 stainless steel, with a smooth, 7/16" (11mm) radius between rear and side walls, and easily cleanable, radiused corners on the work surface tray.
11. 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.
12. Cabinet shall be double-wall construction with negative-pressure airflow between the walls, from drain pan to top, surrounding the sides and back of work area and cable port.
13. Bottom of access opening shall be aerodynamic airflow design directing airflow into the front grille to improve access opening containment capability and bypass armrest.
14. Cabinet shall have a unitized drain pan with 7/16" (11mm) radius on all sides and a fully removable work surface and work surface supports to facilitate cleaning.
15. Cabinet shall be equipped with a stainless steel ball valve to allow safe and effective draining of spills.

16. Stainless steel air diffuser and filter protector provided in work area. Filter protector on top of cabinet is cold-rolled steel with powder coat finish.
17. Externally adjustable internal damper shall be provided to compensate for changing resistance of exhaust and supply filters during certification.
18. One petcock and one plugged penetration are provided as standard on the right side wall. Left side wall is prepunched for optional/additional plumbing connections.
19. All external plumbing connections to the petcocks shall be made through the bottom or back of the cabinet and not the sides, allowing zero clearance between the unit and the building walls or equipment to its right and left.
20. The unit has 3 optional stands available.
21. Channel Stand with adjustable legs for work surface elevations from 27" [686mm] to 38 5/8" [981 mm]
22. Channel Stand with 4" [102mm] diameter casters and wheel locks with a work surface elevation maximum at 31 ½" [800mm]
23. Electric Hydraulic Lift for a continuously adjustable work surface elevation from 20" [508mm] to 38 5/8" [981 mm]. Custom upper and lower heights available.
24. Viewscreen guide design shall be a counterweighted pulley system allowing ease of movement up and down.

Electrical

1. Complete unit shall be listed as certified by Underwriters Laboratory (cULus) for electrical, fire, and personal safety.
2. Cabinet shall have a microprocessor-based control system with an easy-to-clean membrane control panel mounted on the front of the cabinet.
3. Cabinets shall have adjustable timers for LED lights, outlets, and optional UV lights. Timers operate in 15-minute intervals.
4. Work area shall be provided with two GFCI-protected duplex outlets, with drip-proof covers and shall be protected by a self-resetting circuit breaker.
5. A single 14' power cord and plug (NEMA 5-20P) shall be provided for electrical power source. For 100V model, a single 4 m power cord and plug (listed for the destination country) shall be provided for electrical power source.
6. If equipped with optional UV light, includes a shutoff safety feature when the viewscreen is raised.
7. If equipped with UV light, unit shall have electric ballasts for UV lighting to provide longer life and lower heat output. If Japan model, unit shall have ballasts for fluorescent lighting as well.
8. Unit shall be equipped with LED lamp, UL Type B. Japan models use fluorescent lights. The UV light and work area light are interlocked to prevent simultaneous operation.

Caution

A Class II, Type A2 biological safety cabinet is suitable for work with agents in the absence of volatile toxic chemicals and volatile radionuclides per NSF 49.

With proper ventilation to the outside, a Class II, Type A2 biological safety cabinet is suitable for work with agents assigned to biosafety levels 1, 2 or 3, treated with minute quantities of volatile toxic chemicals and trace amounts of radionuclides required as an adjunct to microbiological studies, that will not interfere with the work when recirculated in the downflow air (as stated in NSF/ANSI #49).

Note: 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.

72 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 seventy-two months from the invoice date. Seventy-two month warranty is only available in the United States; international warranty is twelve months.

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.

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.)



SterilGARD® e3
Leading the way in safety
and reliability

SafeGARD Solutions

NCB™ e3

Class II Type B1 Biosafety Cabinet. Developed to exceed the National Cancer Institute's Expectations... and yours.

- 1. All exhaust air is removed directly from the work area and pulled through a dedicated exhaust duct into the facility's separate exhaust system
- 2. Vapors and gases emitted from vessels or work behind the air split approximately half way back from the cabinet front - are removed and not recirculated
- 3. Dual supply HEPA filters assure that all positive pressure areas are free of particulate contamination. Recirculated air is HEPA-filtered immediately below the work surface before it is passed through a HEPA supply filter above the work area



BioChemGARD® e3

Class II Type B2 Biosafety Cabinet. The most energy efficient, comfortable and safe B2 cabinet in the industry.

- 1. A 70% reduction in electrical power compared to traditional B2 cabinets
- 2. Increased motor blower reserve extends filter life for less downtime
- 3. Continuously safe work environment with self-adjusting motor technology enhances productivity
- 4. Optional fume hood package for versatile laboratory design



IsoGARD®

Class III Glovebox. Designed to Handle Hazardous Microbiological Agents or Pharmaceutical Potent Compounds.

- 1. Pass-through and main chamber incorporate uniform unidirectional airflow to flush away any generated particles while bathing the work surface in HEPA-filtered air
- 2. Constructed with thick safety glass, solid closed-cell silicone gaskets and supplied with hypalon gloves
- 3. Stainless steel glove port design with one-piece sleeve-and-glove assembly allows gloves to be replaced or changed without breaking containment



AeroPROTECT 360°

Aseptic Contamination Enclosure. Optimum personnel & environment protection.

- 1. 360° visibility to the work area for easy monitoring
- 2. 8" [203mm] sash opening allows access to the work surface and is the primary means of access to ensure user protection
- 3. Front facing controls and gauges within easy reach when standing from both sides
- 4. Dual force hinged front view screen and rear access, offering easy equipment loading



BioPROTECT® e3

Walk-in Equipment Containment Enclosures. Designed expressly for high volume robotic and equipment applications.

- 1. Flexible modular design for high-volume robotic and automated equipment applications
- 2. Accommodates high-through put robotic systems (including ancillary devices), ultra-centrifuges, flow cytometers, aerosol generators and other large laboratory equipment
- 3. Ideal for high-throughput screening, combinatorial chemistry, immunology, tissue culture, clinical research, drug discovery, molecular biology, and quality control assays



AniGARD® e3

Animal Transfer Station. Confidence you can rely on.

- 1. Spacious, easily accessible work areas accommodate a variety of cage sizes and activities
- 2. Ergonomic design with efficient lighting increases user comfort and visibility
- 3. Designed for easy movement and maneuverability throughout the laboratory
- 4. Offers up to ISO Class 4 (Class 10) protection by delivering HEPA-filtered, particulate-free air



The Best Protection

EdgeGARD® HF

Horizontal-Flow Clean Bench designed with you in mind. Baker's exclusive technology maximizes product protection and helps meet up to ISO Class 4 (Class 10) air cleanliness requirements.

- 1. High-performance airflow system provides uniform airflow to the worksurface, extends filter life and minimizes maintenance costs
- 2. HEPA supply filter with 99.99% minimum efficiency in capturing 0.3 micrometer particulates
- 3. Spacious, easily accessible work areas accommodate multiple users and a variety of applications and instrumentation



EdgeGARD® VF

EdgeGARD® Vertical-Flow provides vertical, unidirectional and controlled airflow over the entire work surface, while reducing energy consumption, noise and airflow turbulence.

- 1. ISO Class 4 (Class 10) cleanliness (for 0.5 micrometer particles)
- 2. One-piece stainless steel work surface helps prevent surface contamination
- 3. Easy to move and maneuver when configured with mobile stand, casters and pull bars
- 4. Slanted 10° viewscreen for operator comfort and direct line-of-sight viewing
- 5. Well-lighted workspace reduces eyestrain



SteriISHIELD®

Compounding Aseptic Isolator (CAI). Designed specifically for ultimate product protection of non-hazardous drugs.

- 1. Offers a contained, pressurized work area for pharmacy applications
- 2. One of the most comfortable isolators in the industry, with oval gloveports that offer easy reach to interior surfaces, and adjustable height stand
- 3. HEPA-filtered, unidirectional airflow with better than ISO Class 5 (Class 100) air cleanliness conditions to prevent contaminants from entering the work area



ChemoSHIELD®

Compounding Aseptic Containment Isolator (CACI). Offers a contained, pressurized work area for pharmacy applications.

- 1. One of the most comfortable isolators in the industry, with oval gloveports that offer easy reach to interior surfaces, and adjustable height stand
- 2. Slanted, top-hinged view screen allows for full opening for loading and unloading of pharmacy instrumentation or equipment
- 3. HEPA-filtered, unidirectional airflow with better than ISO Class 5 (Class100) air cleanliness conditions to prevent contaminants from entering the work area



Air Sentry Chemical Fume Hood POWERED BY LAB CRAFTERS

Fume hoods designed for unparalleled safety for critical laboratory applications.

- 1. Substantially reduces roll effect (fluctuations in the airflow that may cause harm to the worker)
- 2. Offers a streamlined, unobstructed work area
- 3. Minimizes lingering concentrations above and behind the view screen
- 4. Reduces contaminant concentrations near the edge of the sash (window), reducing potential exposure hazard to personnel



Baker's portfolio of contamination control solutions can be found within many industries, for a wide variety of applications in research and clinical care. Please consult your biosafety professional to understand what is right for you and your application.



93
Sales Professionals



675
Service Technicians



74
B2B Partners



3
Locations



No Minimum Anything

Our global headquarters houses our core operations: manufacturing, engineering and design, research, testing, quality control, technical support, and customer service.

No Shortcuts

The construction of Baker laboratory equipment is marked by a focus on function, user comfort, durability – and always safety. Testing is rigorous, setting us apart in the industry.

We take it Personally

Our employees, from our engineers to our customer service representatives, are motivated by the trust our customers have placed in us to protect life – your life, the life of your research, and ultimately the lives you save through discovery and healing.

Make the World a Better Place

In research and clinical care, you are dedicated to making the world a better place. We not only share your passion for your work, but the wider mission of dedication to principles of sustainability and responsibility.

A Passion for Real value

Baker products have earned a reputation for maximum return on investment through lower life cycle costs and more years of trouble-free operation than those of any other manufacturer.



BioChemGARD® Class II Type B2 Biological Safety Cabinet

Standard Features

- One-piece, corrosion-resistant, stainless steel fabrication with smooth radius coved corners
- Negative pressure double-wall plenum
- Audible/visual airflow alarm warns when the exhaust airflow decreases
- Mini analog pressure gauge
- Internal GFCI protected duplex outlets located on each sidewall
- NSF-listed and patent pending cable ports
- Right side Petcock Valve- VAC
- Right side pre-piped penetration
- Unique momentum air curtain for increased containment and protective capabilities
- High velocity return air slots
- Patent pending air bypass padded armrest
- Non-glare, removable work surface
- ExchangeSAFE™ bag-out, sealed access filter exchange system
- Efficient cool-white fluorescent lights and electronic ballasts
- Low noise level – cabinet is less than 50 decibels
- Energy saving features
 - ReadySAFE™ low-flow mode
 - StediFLOW™ motor controller
 - UniPressure™ Preflow Plenum airflow system

Additional Options

(Any of these options already quoted are listed above)

- ☐ Exhaust Connection Options: 12" Airtight Damper, Inline Dampers & Duct Reducers
- ☐ Controls/Electrical Options: UV Light, Particle Counting Pkg., Cabinet Monitors
- ☐ Stand and Lift Options: Casters and Hydraulic Lift
- ☐ Ergonomic Options: IV Bar, Biofit Chair, Sit/Stand stool, Footrest and Storage Bins
- ☐ Wall and Floor Anchors and Seismic Restraint (PE Approved) Options
- ☐ All Stainless-Steel Options: 304 SS and 316 SS
- ☐ Additional Plumbing and Petcock Service Valve Options
- ☐ Documentation Options: IQ/OQ
- ☐ Modification Options: please discuss with your Sales Representative
- ☐ Extended Warranty: 3 years

MODEL NUMBER	BCG401	BCG601
Size	4'	6'
Interior Dimensions (w x d x h)	46"x22 ⁷ / ₈ " x 27 ⁵ / ₈ "	70"x22 ⁷ / ₈ " x 27 ⁵ / ₈ "
Usable Workspace (w x d x h)	44 ⁵ / ₈ " x 18" x 27 ⁵ / ₈ "	68 ⁵ / ₈ " x 17 ⁵ / ₈ " x 27 ⁵ / ₈ "
Exterior Dimensions (w x d x h [min to max])	53 ⁷ / ₈ " x 33 ⁵ / ₈ " x [86" to 94 ¹ / ₂ "]	77 ⁷ / ₈ " x 33 ⁵ / ₈ " x [86" to 94 ¹ / ₂ "]
Cabinet Weight	720 lbs.	850 lbs.
Shipping Weight	850 lbs.	1020 lbs.
Sash Height	8"	8"
Opening Max.	20"	20"
Operating Amperage		
Normal Operating Mode	1.0 Amps	1.4 Amps
ReadySAFE™ Mode	0.3 Amps	0.3 Amps
Power Consumption		
Normal Operating Mode	115 Watts	161 Watts
ReadySAFE™ Mode	35 Watts	35 Watts
Heat Generation (note: 100% exhausted)		
Normal Operating Mode	392 BTU/hr	549 BTU/hr
ReadySAFE™ Mode	118 BTU/hr	118 BTU/hr
Electrical (requires 20 Amp outlet)	115V AC, 20 A, 60 Hz	115V AC, 20 A, 60 Hz
Noise, exhaust & cabinet, NSF International	59 dBA	60 dBA
Noise, cabinet	< 50 dBa	< 50 dBA

CONCURRENT BALANCE VALUE

Exhaust Flow Rate (Total CFM)		
Normal Operating Mode	664 CFM	993 CFM
ReadySAFE™ Mode	300 CFM	300 CFM
Exhaust Static Pressure Adjusted Value (Per NSF 49)		
12" Diameter Exhaust Collar (standard)	-1.6" W.G.	-1.7" W.G.
10" Diameter Exhaust Collar (optional)	-1.7" W.G.	-1.8" W.G.
8" Diameter Exhaust Collar (optional)	-1.9" W.G.	-2.3" W.G.

MODEL NUMBER	BCG401	BCG601
Nominal Size	1.2 m	1.8 m
Interior Dimensions (w x d x h)	1,168 mm x 581 mm x 701 mm	1,778 mm x 581 mm x 701 mm
Usable Workspace (w x d x h)	1,132 mm x 457 mm x 701 mm	1,742 mm x 448 mm x 701 mm
Exterior Dimensions (w x d x h [min to max])	1,369 mm x 854 mm x [2,184 mm to 2,400 mm]	1,978 mm x 854 mm x [2,184 mm to 2,400 mm]
Cabinet Weight	327 kg	386 kg
Shipping Weight	386 kg	463 kg
Sash Height	203 mm	203 mm
Opening Max.	508 mm	508 mm
Operating Amperage		
Normal Operating Mode	0.5 Amps	0.7 Amps
ReadySAFE™ Mode	0.1 Amps	0.1 Amps
Power Consumption		
Normal Operating Mode	110 Watts	154 Watts
ReadySAFE™ Mode	22 Watts	22 Watts
Heat Generation (note: 100% exhausted)		
Normal Operating Mode	375 BTU/hr	526 BTU/hr
ReadySAFE™ Mode	75 BTU/hr	75 BTU/hr
Electrical (requires 20 Amp outlet)	220 V AC, 16 A, 50/60 Hz	220 V AC, 16 A, 50/60 Hz
Noise, exhaust & cabinet, NSF International	59 dBA	60 dBA
Noise, cabinet	< 50 dBA	< 50 dBA

CONCURRENT BALANCE VALUE

Exhaust Flow Rate		
Normal Operating Mode	313 L/sec	469 L/sec
ReadySAFE™ Mode	142 L/sec	142 L/sec
Exhaust Static Pressure Adjusted Value (Per NSF 49)		
305 mm Diameter Exhaust Collar (standard)	-399 Pa	-423 Pa
254 mm Diameter Exhaust Collar (optional)	-423 Pa	-448 Pa
203 mm Diameter Exhaust Collar (optional)	-473 Pa	-573 Pa

Delivering an optimum balance of performance and energy efficiency.



BioChemGARD®



BioChemGARD® e3

Class II Type B2 Biological Safety Cabinet

Based on six decades of research and innovation, the BioChemGARD® e3 is the most advanced biological safety cabinet engineered specifically for laboratories that need containment and removal of vapors, mists, and particulates.

With the optimum balance of performance and energy efficiency, the BioChemGARD® e3 protects personnel, product, and the environment, all while increasing lab productivity and user comfort. Each cabinet is precisely engineered to deliver a lower life cycle cost, the latest ergonomic design, and a revolutionary airflow management system.

Greater Versatility and Safety



BCG401



BCG601

Exclusive filter exchange system decreases downtime and increases safety

Our patented ExchangeSAFE™ Sealed Access Filter Exchange System permits filter bagging and exchanges within the work surface, providing improved access, a simpler process, and an overall reduction in maintenance time while still minimizing exposure to contaminants by running the exhaust during the filter change.

Innovative fume hood option offers greater versatility in the lab

With our optional Fume Hood Package, the BioChemGARD® e3 meets the UL requirements for Electrical/Mechanical Safety (UL 61010-1) and the UL requirements for Material Flammability and Effectiveness of Airflow Characteristics (UL 1805). The cabinet has been tested in accordance with ANSI/ASHRAE 110-1995. Usage should be determined by a professional industrial hygienist or safety officer.

Overview

- The BioChemGARD® e3 offers superior performance, versatility, energy savings, and simpler maintenance.
- Industry's most durable and reliable cabinet means lower life-cycle costs and years of trouble-free operation.
- Most energy-efficient operation available. A 70% reduction in electrical power compared to traditional B2 cabinets.
- Increased motor blower reserve extends filter life for less downtime.
- Continuously safe working environment with self-adjusting motor technology enhances productivity.
- ExchangeSAFE™ Sealed Access Filter Exchange System minimizes exposure to contaminants and allows faster, simpler maintenance.
- Quieter operation and ergonomic design with slanted viewscreen, cool-white lights for easier viewing and reduced heat generation.
- Meets and exceeds NSF/ANSI Standard 49 Class II and ISO class 4 criteria.
- Optional fume hood package for versatile laboratory design.

Research Application



Research / Life Sciences

Certificates



Meets NSF Standards



Underwriter Laboratories Listed



An Optimum Balance of Energy Efficiency

Precision engineering and our exclusive technologies work in concert to achieve an optimum balance of energy efficiency with high performance.

The BioChemGARD® e3 is the only total exhaust biosafety cabinet that offers your lab this level of high performance, user convenience and comfort, with such significant operational savings.

Our exclusive technologies –StediFLOW™, ReadySAFE™, UniPressure™ Preflow Plenum, and innovative motor/blower system – work seamlessly together to deliver unparalleled safety performance, less cabinet downtime for cleaning and maintenance, and increased productivity, all while reducing your equipment operating and conditioned air removal costs.

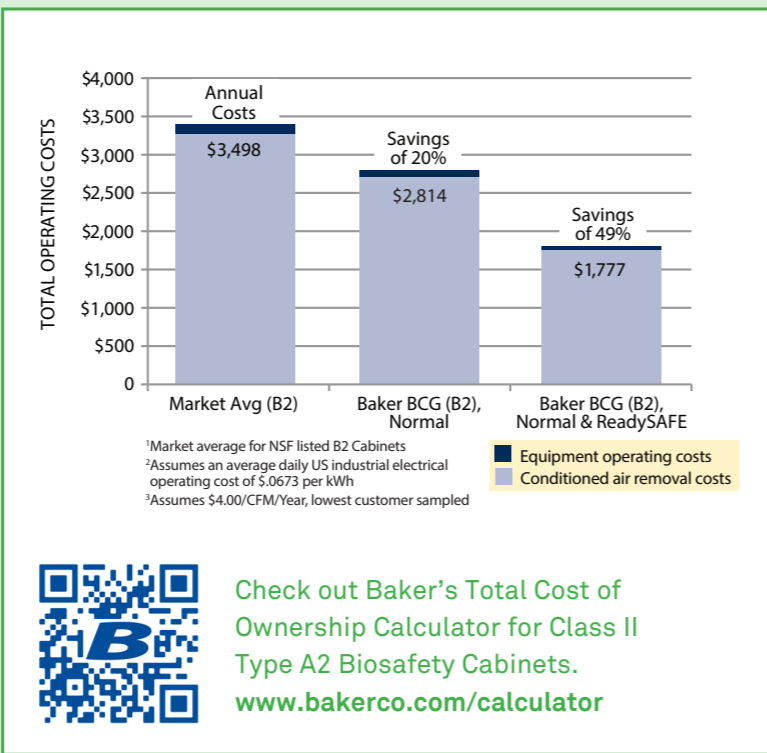


Scan the QR code to access all the BioChemGARD® e3 resources.

Reduce Your Annual Operating Costs

The BioChemGARD® e3 is engineered to operate with a reduced-exhaust airflow and resistance. This minimizes noise, cuts the electrical power and static pressure requirements, while significantly reducing the volume of conditioned air exhausted from the laboratory.

Operating at only 664 CFM, the BioChemGARD® e3 offers a 23% reduction in exhausted conditioned air compared to traditional B2 cabinets. Together, Baker’s exclusive technologies deliver an average reduction of 49% in a lab’s annual operating costs.



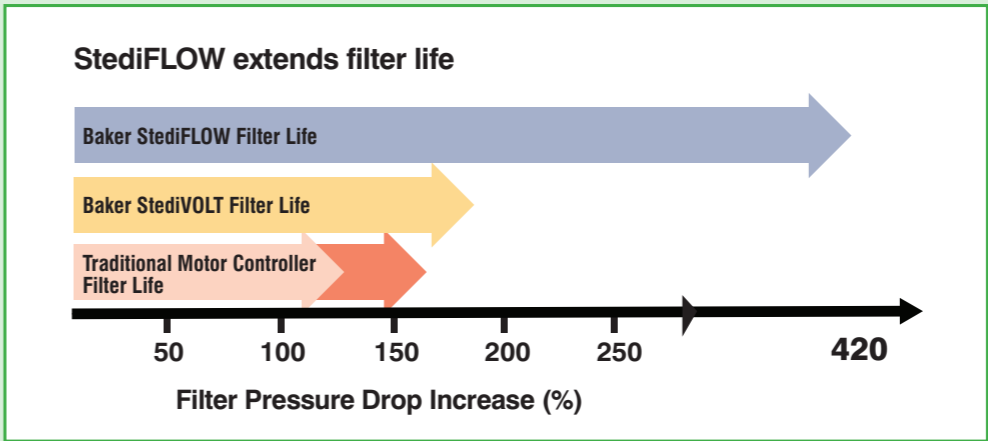
Ask us how to realize these savings in your own laboratory!

StediFLOW™ VFD Motor Controller Automatically Achieves Optimum Performance

Baker’s StediFLOW™ VFD (variable frequency drive) 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 BioChemGARD® e3 cabinet was shown to automatically handle an increase in pressure drop of more than 420% across the filter without reducing total air delivery more than 10%.* There is no need for manual speed control.

- Maintains precise airflow and motor draws only 0.6 Amps – a 90% reduction in the draw of traditional B2 cabinets.
- Automatically compensates for normal power line variations, air disruptions, and filter loading.
- Constant air volume reduces risk of performance degradation, which can compromise personnel and product protection.
- Controls the ReadySAFE™ operating mode.



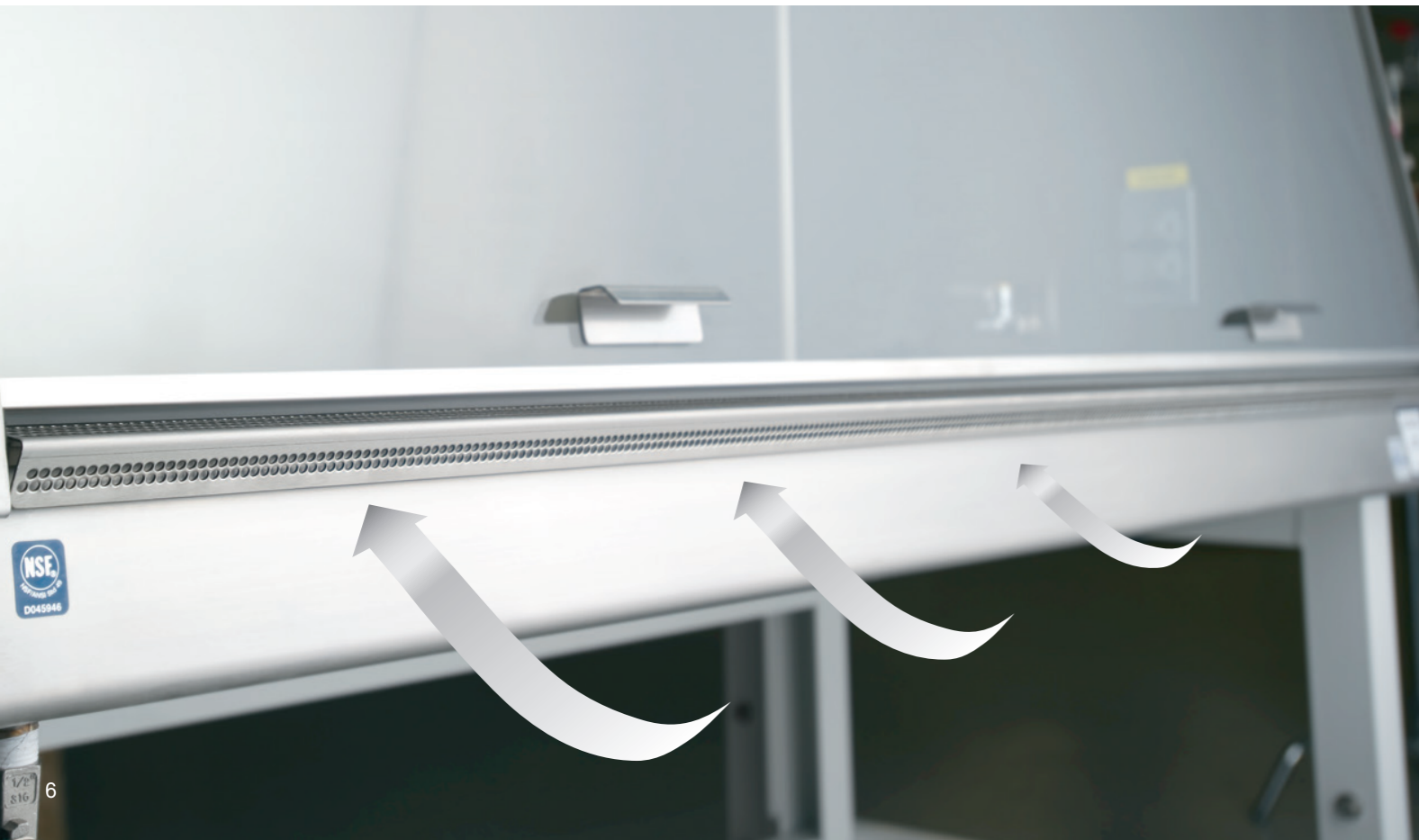
*Test was performed on a BCG401 (115 V unit) in the Baker laboratory. Data available on request.

ReadySAFE™ – A Versatile Low Flow Mode to Make Your Job Easier

This versatile mode can be used during meetings, work breaks, and overnight to maintain safe conditions, create a quieter work environment, and significantly reduce energy usage, compared to leaving the cabinet in operating mode 24 hours per day.

- The BioChemGARD® e3 meets and exceeds NSF/ANSI Standard 49 Class II and ISO class 4 criteria in ReadySAFE™ mode. When the viewscreen is closed, which results in a 50% reduction in the electricity draw and a 55% reduction in exhaust airflow.
- Reduces laboratory air-conditioning requirements with less heat generation.
- 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.
- Reduces cabinet noise levels in laboratory environment; measured at 43 decibels (excluding exhaust system).
- Meets and exceeds NSF/ANSI Standard 49 Class II and ISO class 4 criteria.

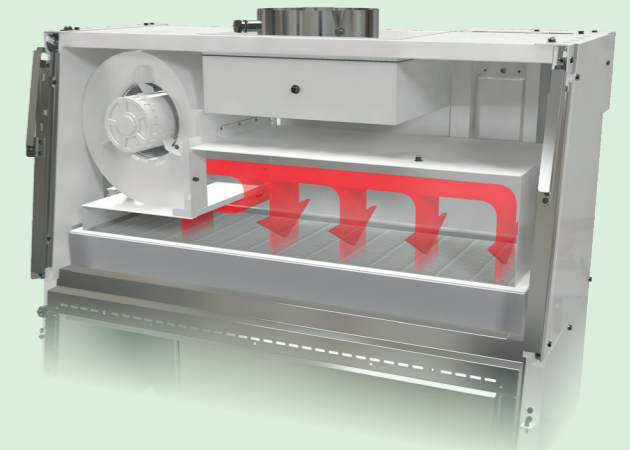
ReadySAFE™ mode – Unique bypass armrest allows cabinet to continue operation with closed viewscreen



Innovative UniPressure™ Preflow Plenum

The BioChemGARD® e3 biological safety cabinet incorporates Baker's exclusive UniPressure™ Preflow Plenum high-performance airflow system that saves energy and extends filter.

- Apportions and distributes air across, then through, the HEPA supply filter, improving downflow uniformity, reducing noise, and increasing reserve blower/motor capacity.
- Filter mount provides direct seal of HEPA filters to plenum, and simplifies filter replacement.



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

Motor/Blower System Extends Filter Life

Baker's optimum blower/motor design ensures performance and extends filter life at least an additional 50% over our previous cabinets – the longest life in the industry – with a range of over 10 years. (High levels of background particulates may shorten HEPA filter life.)

- Provides consistent volume of air despite increases in resistance due to filter loading, resulting in extremely long filter life.
- Extended filter life minimizes filter replacement and decontamination costs, reduces use of toxic fumigants, and produces less waste in the environment.
- Requires no manual adjustment over filter's life. All filter reserve is automatic.





Craftsmanship and Innovative, Versatile Design Ensures Quality and Performance

Baker cabinet designs represent many years of experience in stainless steel fabrication and craftsmanship. The BioChemGARD® e3, like all Baker cabinets, includes design features to improve safety, productivity, user-comfort, and performance throughout a range of repetitive tasks performed on a daily basis.



Innovative Fume Hood Option Offers Greater Versatility in the Lab

With our optional Fume Hood Package, the BioChemGARD® e3 meets the UL requirements for Electrical/Mechanical Safety (UL 61010-1) and the UL requirements for Material Flammability and Effectiveness of Airflow Characteristics (UL 1805). The cabinet has been tested in accordance with ANSI/ASHRAE 110-1995. Usage should be determined by a professional industrial hygienist or safety officer.

Exclusive ExchangeSAFE™ Sealed Access Filter Exchange System Decreases Downtime and Increases Safety

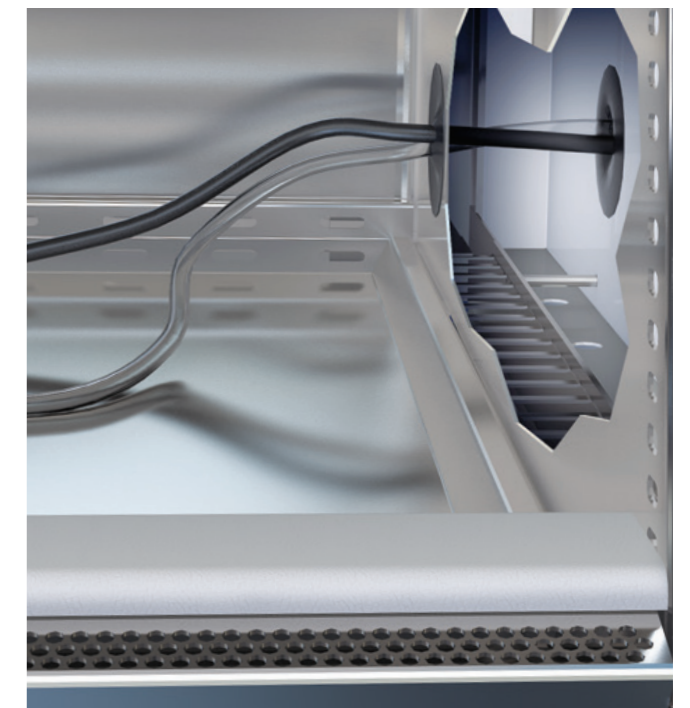
Many traditional bag-in/bag-out (BIBO) filter systems, which are typically located overhead the cabinet's work surface, have complex and time-consuming procedures that can result in a higher risk of exposure to contaminants.

Our patented ExchangeSAFE™ Sealed Access Filter Exchange System permits filter bagging and exchanges within the work surface, providing improved access, a simpler process, and an overall reduction in maintenance time while still minimizing exposure to contaminants by running the exhaust during the filter change.



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

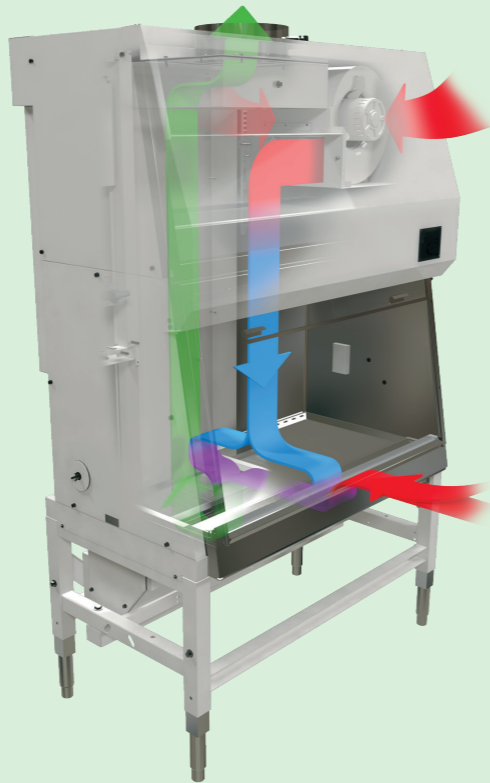
- Baker's unique all metal, double-wall design of the BioChemGARD® e3 cabinet creates base, side, and back wall plenums that capture and contain contaminated air under negative pressure. This prevents contaminated air from escaping into the laboratory environment in the event of damage to the cabinet walls.
- Our optional patent-pending cable ports are an industry exclusive, can be located in both the left and right side walls of the cabinet, and are NSF-approved. They provide a safe and ergonomic way of introducing cables or siphoning tubes into the work area without interfering with the viewscreen opening.



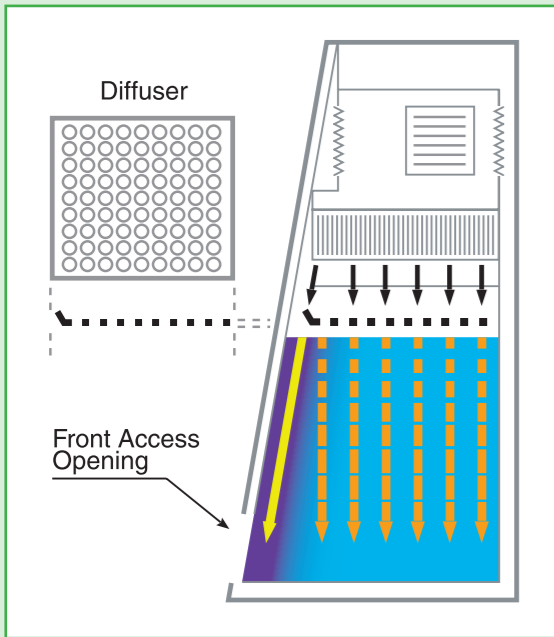
Cable ports allow cables/tubing to exit side walls rather than the front work area

Unique Airflow Design Reduces Energy Requirements

- The airflow of the BioChemGARD® e3 is designed to provide a work area that protects the experiment from the environment, and both the environment and researcher from the experiment.
- Room air is pulled through the front opening and into the front grille. HEPA-filtered downflow air and room air mixes in the exhaust plenum, flows through the exhaust HEPA filter and into the building exhaust system.
- The BioChemGARD® e3 operates with a reduced exhaust airflow and resistance. This minimizes noise and reduces the volume of conditioned air that is exhausted from the laboratory.
- Operating at only 664 CFM, electrical power requirements are 70% less compared to traditional B2 cabinets. The combined savings in electricity and conditioned air removal reduces the overall annual cost of operation by 49%.



Momentum Air Curtain and High-Velocity Return Air Slots Increase Protection



Momentum Air Curtain

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

- Creates a strong air barrier, or momentum air curtain, at the front of the cabinet, increasing protective capabilities for both products and personnel.
- 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 the work area.

Supply and Exhaust Filters Perform Optimally

Because filters remove microorganisms and airborne particulates (e.g. aerosols) from the air, the quality, performance, and useful life of downflow and exhaust HEPA/ULPA filters are critical biosafety considerations



High-velocity return air slots maximize protection

- Leak-free performance is verified through scan tests conducted at the factory prior to shipping and is confirmed at the cabinet's initial certification.
- Closed-cell EPDM Gasket provides an airtight seal between the filter assembly and the metal plenum.
- VFD motor system and large-sized filters yield the longest filter life in the industry.
- An audible/visual airflow alarm and automatic shut-off system called the Airflow Monitor (AFM) warns when the exhaust airflow decreases.



Superior Technologies and an Industry-Leading Approach to Ergonomics Ensure a New Level of Productivity and User Comfort

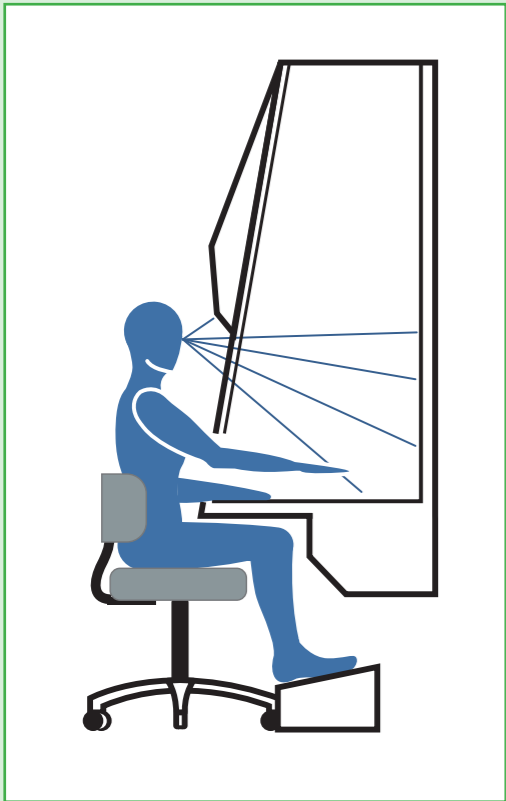
The BioChemGARD® e3, like all Baker cabinets, includes design features to improve safety, productivity, user-comfort and performance throughout a range of tasks performed on a daily basis. Our cabinets are designed with the user in mind so that routine tasks can be done more comfortably, efficiently,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

Reduced Noise Levels

The unique airflow design inside the cabinet, combined with the lower exhaust requirements, result in quieter operating noise levels. In standard operating mode, the BioChemGARD® e3 emits an average of 50 dB*, a 30% decrease in noise compared to our previous Type B2 cabinet. This drops to 43 dB when the cabinet is in ReadySAFE™ mode.

		Rustle of Leaves	Library	Average Office	BioChemGARD® e3	Normal Conversation	Traditional B2 Cabinet	Power Mower
Decibels	10	20	30	40	50	60	70	80
Relative loudness	1/32	1/16	1/8	1/4	1/2	1	2	4

*Average tested noise level. Noise level of cabinet is influenced by the building exhaust system



Slanted Viewscreen

The slanted sliding viewscreen minimizes glare and makes the cabinet easier and more comfortable to use. A counterbalancing feature allows the user to open and close the laminated safety glass viewscreen effortlessly, which can also be fully closed for ReadySAFE™ mode, system shutdown, or UV light operation.

- Maximum opening of up to 20" simplifies equipment and instrument loading and unloading and allows for placement of large items more easily.
- Allows operator more comfortable head and elbow position, reducing fatigue.
- Provides safe, highly visible, and easily accessible work area for a wide range of procedures.
- Laminated safety glass with a stainless steel edge.

Highly Productive Work Environment

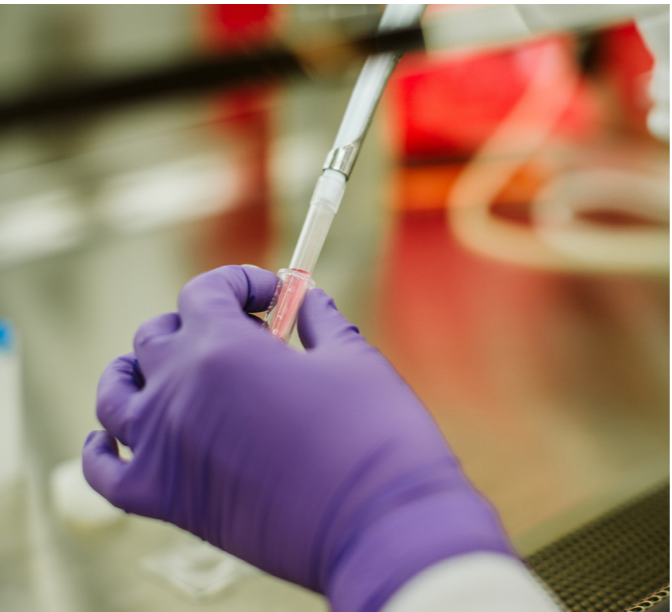
Design considerations such as wide radius corners, aerodynamically shaped surfaces, and non-glare satin finish interiors combine to improve comfort, simplify cleaning, and maintain proper containment.

- Large unobstructed, usable work area can accommodate more lab equipment because of the rear grille being parallel to the straight back wall.
- A reduced front grille depth moves the work surface area closer to front of the cabinet for better arm position and less back strain.
- Consolidated electrical controls on panel behind hinged light canopy offer unique access outside containment area.
- The fluorescent lights, UV light, and the electrical outlets can all be programmed in 15-minute or hour-long intervals to delay the time they power down.
- Petcocks, valves, and plumbing connections are strategically placed for convenience and proper air management.
- Work surface and walls are one-piece, corrosion-resistant, stainless steel with smooth radius corners for easy cleaning. White powder-coated finish protects cold-rolled steel cabinet exterior.



Efficient Lighting

The work area is illuminated by one external fluorescent lamp with an electronic ballast. The cool-white lights use less energy, produce less heat, and provide better color fidelity.



Options and Accessories

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

- Low exhaust static pressure kit
- 5" casters with brakes
- Fume Hood UL 1805
- ULPA filters
- VHP decon ports
- Ergonomic adjustable footrest
- Stainless steel IV bar
- Remote-controlled petcocks
- UV germicidal lamp
- Auxiliary wiring package (for monitoring blower switch status)
- Floor/wall seismic restraints
- Digital Display Package (DDP)
- Additional cable port
- 220V, 50 Hz Electrical NSF/ANSI 49 & UL listed
- Plastic storage bins

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



Ordering

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



Scan the QR code to access all the BioChemGARD® e3 resources.

Technical Specifications – BioChemGARD® e3

Console Models

MODEL NUMBER	BCG401	BCG601
Size	4'	6'
Interior Dimensions (w x d x h)	46" x 22⅞" x 27⅞"	70" x 22⅞" x 27⅞"
Usable Workspace (w x d x h)	44⅝" x 18" x 27⅞"	68⅝" x 17⅝" x 27⅞"
Exterior Dimensions (w x d x h [min to max])	53⅞" x 33⅝" x [86" to 94½"]	77⅞" x 33⅝" x [86" to 94½"]
Cabinet Weight	720 lbs.	850 lbs.
Shipping Weight	850 lbs.	1020 lbs.
Sash Height	8"	8"
Opening Max.	20"	20"
Operating Amperage		
- Normal Operating Mode	1.0 Amps	1.4 Amps
- ReadySAFE™ Mode	0.3 Amps	0.3 Amps
Power Consumption		
- Normal Operating Mode	115 Watts	161 Watts
- ReadySAFE™ Mode	35 Watts	35 Watts
Heat Generation (note: 100% exhausted)		
- Normal Operating Mode	392 BTU/hr	549 BTU/hr
- ReadySAFE™ Mode	118 BTU/hr	118 BTU/hr
Electrical (requires 20 Amp outlet)	115V AC, 20 A, 60 Hz	115V AC, 20 A, 60 Hz
Noise, exhaust & cabinet, NSF International	59 dBA	60 dBA
Noise, cabinet	< 50 dBa	< 50 dBA
CONCURRENT BALANCE VALUE		
Exhaust Flow Rate (Total CFM)		
- Normal Operating Mode	664 CFM	993 CFM
- ReadySAFE™ Mode	300 CFM	300 CFM
Exhaust Static Pressure Adjusted Value (Per NSF 49)		
- 12" Diameter Exhaust Collar (standard)	-1.6" W.G.	-1.7" W.G.
- 10" Diameter Exhaust Collar (optional)	-1.7" W.G.	-1.8" W.G.
- 8" Diameter Exhaust Collar (optional)	-1.9" W.G.	-2.3" W.G.

Purchase Specification

BioChemGARD® e3, Class II, Type B2 Biological Safety Cabinet, Vertical Flow

APPROVALS

The cabinet shall have the following approvals, listings, and/or certifications:

- 1. UL 61010-1, Second Edition: Electrical Equipment for Measurement, Control, and Laboratory Use For Electrical, Fire, and Personal Safety
- 2. NSF/ANSI 49, Biosafety Cabinetry: Design, Construction, Performance, and Field Certification
- 3. UL 1805, First Edition: Standard for Laboratory Hoods and Cabinets For Material Flammability and Effectiveness of Airflow Characteristics
- 4. ANSI/ASHRAE 110-1995: Method of Testing Performance of Laboratory Fumehoods

PERFORMANCE

- 1. The cabinet shall provide intake velocity through the front access opening of the cabinet at a minimum of 100 FPM.
 - 2. The cabinet shall incorporate higher-velocity airflow behind the viewscreen (momentum air curtain) for added personnel and product protection.
 - 3. The cabinet shall contain high-velocity return air slots in the sidewalls and top adjacent to the front access opening for enhanced containment and reduction of air turbulence at the sash opening.
 - 4. The cabinet shall incorporate a high-performance airflow system (UniPressure™ Preflow Plenum). This system apports and distributes air across and then through the HEPA supply filter.
 - 5. The bottom of the cabinet access opening shall be aerodynamically designed to direct airflow into the front grille to optimize containment.
 - 6. The cabinet exhaust requirements (Concurrent Balance Value per NSF/ANSI 49) for 12"-diameter exhaust collar, measured directly above the exhaust filter before any restrictions, elbows, or reductions, are:
 - a. BCG401 – 664 CFM at 1.6" W.G.
 - b. BCG601 – 993 CFM at 1.7" W.G.
 - 7. The cabinet sound level as measured per NSF/ANSI 49 shall be no more than:
 - a. 50 dBa – (BCG401 and BCG601) cabinet without background noise
 - b. 60 dBa – (BCG401 and BCG601) cabinet and exhaust system
 - 8. The cabinet shall have a reduced airflow energy-saving mode (ReadySAFE™), which is active when the viewscreen is closed. This mode of operation shall reduce energy consumption by at least 50% and still meet the product and personnel protection testing requirements of NSF/ANSI 49. Particle testing while the cabinet is in this mode shall exceed the requirements for ISO Class 5 conditions for 0.3 micron particles. A connection shall be provided for indicating the ReadySAFE™ status to the facility building management system.
 - 9. The cabinet shall use a variable frequency drive (VFD) and three-phase motor/blower system (StediFLOW™) that is capable of maintaining a constant air volume as filter resistance increases.
- The system shall:
- a. Be capable of automatically handling an increase in pressure drop across the filter of at least 420% (BCG401) without reducing total air volume by more than 10%.
 - b. Operate under normal conditions at a typical current of
 - BCG401 – 1.0 amp
 - BCG601 – 1.4 amps
 - c. Automatically compensate for normal power-line variations, air disruptions, and supply filter loading

10. The manufacturer can provide a representative copy of the personnel, product, and cross-contamination biological tests upon request. These tests are equivalent to, or more demanding than, the tests specified in NSF/ANSI 49. Detailed biological test reports can be provided at additional cost.

CONSTRUCTION

- 1. The cabinet's exterior construction is of seal panels and dress panels of 16-gauge cold-rolled steel, powder-coated finish, PermaWhite™.
- 2. Exterior dimensions (W x D x H) of the cabinets are:
 - a. BCG401 – 537/8 " x 335/8" x (86" to 941/2")
 - b. BCG601 – 777/8 " x 335/8" x (86" to 941/2")
- 3. Cabinet shall have permanent metal double-wall construction with negative-pressure airflow between the walls, from drain pan to top of the work area, surrounding all biologically contaminated areas.
- 4. The cabinet shall contain a vertical sliding viewscreen slanted at an angle of 10° for user comfort.
- 5. The cabinet shall have an adjustable stand. The available work surface elevations are:
 - a. 295/8" to 321/8"
 - b. 355/8" to 381/8"
- 6. The cabinet interior work area will be constructed as one piece. The material shall be 16-gauge, Type-304 stainless steel. The interior shall have smooth coved-corners to facilitate cleaning.

- 7. The interior dimensions (W x D x H):
 - a. BCG401 – 46" x 227/8" x 275/8"
 - b. BCG601 – 70" x 227/8" x 275/8"
- Usable workspace (W x D x H):
 - a. BCG401 – 445/8" x 18" x 275/8"
 - b. BCG601 – 685/8" x 175/8" x 275/8"
- 8. The cabinet shall feature a straight back wall to maximize work area and more easily accommodate laboratory equipment.
- 9. The cabinet shall have a cable port to allow passage of tubes and/or cables through the negative-pressure double-wall plenum sidewalls of the cabinet. Design shall meet Class 100 (ISO Class 5) air cleanliness immediately inside the opening in the work area. The cabinet feature must be approved per NSF/ANSI 49.
- 10. The unit shall have standard HEPA filters for a protection effectiveness of 99.99% on 0.3 micron size particles. The cabinet supply filter, exhaust filter, and test ports shall be accessible from the front of the cabinet.
- 11. The viewscreen shall be constructed of 1/4" laminated safety plate glass, with a maximum opening of 20" to optimize access to the interior of the cabinet.
- 12. The cabinet shall feature a counterweighted pulley system to reduce the effort of opening and closing the viewscreen.
- 13. The cabinet shall be equipped with a stainless steel supply-air diffuser and exhaust-filter protector .
- 14. The cabinet contains exhaust filters located directly below the work surface. This location facilitates particle capture close to the site of generation. Exhaust filters shall be designed for safe bagging and removal in the work area and shall be sized to fit in a standard Department of Transportation (DOT) container for removal in a manner appropriate to their level of contamination. (ExchangeSAFE™)
- 15. A plenum assembly shall be provided to allow the supply filters to be directly clamped to the plenum against a closed-cell neoprene gasket. The plenum applies even force, rather than point force, to the full perimeter of the supply filters.
- 16. The cabinet shall have a unitized drain pan with smooth coved-corners and a fully removable work surface and work-surface supports to facilitate cleaning and prevent microbial growth.
- 17. The cabinet shall have a bypass armrest for user comfort and to allow intake airflow when the cabinet is in ReadySAFE™ mode.
- 18. The standard cabinet shall contain one petcock and one plugged penetration on the right side wall. The left sidewall shall be pre-punched for optional/additional plumbing connections.
- 19. The cabinet shall be equipped with a stainless steel ball drain valve to allow for safe and effective removal of spills.
- 20. The supply motor blower shall be located in a clean zone of the cabinet that does not require any decontamination should maintenance or replacement be required.

ELECTRICAL

- 1. The cabinet shall have a microprocessor-based control system with an easy-to-clean membrane control panel mounted on the front of the cabinet.
- 2. The cabinet shall have adjustable timers for fluorescent lights, outlets, and optional UV lights. Timers shall be able to be set in 15-minute and one-hour increments.
- 3. The work area of the cabinet shall be provided with two GFCI-protected duplex outlets with drip-proof covers and shall be protected by a self-resetting circuit breaker.
- 4. A single 14' power cord with NEMA 5-20 plug shall be provided for electrical power connection.
- 5. The unit shall have an optional UV light. Operation of the UV light is only permitted when the viewscreen is in a closed/safe position.
- 6. The cabinet shall have electronic ballasts to provide more efficient operation for fluorescent lighting and optional UV lighting.
- 7. The cabinet shall have an externally mounted fluorescent light fixture capable of providing an average of more than 100 foot-candles of illumination at work surface.
- 8. The cabinet shall be provided with a low-exhaust-flow alarm. This alarm shall have audible and visual indicators of the alarm condition and be interlocked to shut down the cabinet supply blower, which minimizes pressurization of the work zone in the event of a low-exhaust-flow condition. An audible alarm mute function shall be provided. The alarm shall automatically reactivate after five minutes if the alarm condition persists.
- 9. The cabinet shall have an audible and visual alarm indicating that the sliding viewscreen is in an unsafe position. An alarm mute function shall be provided to allow the operator full access to the work area. The alarm shall automatically reactivate after five minutes if the viewscreen remains in an unsafe position.

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 volatile toxic chemicals and radionuclides required as an adjunct to microbiological studies (as stated by NSF International Standard, NSF/ANSI Standard #49).

Note: 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.

72 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 seventy-two 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.

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.)



SafeGARD Solutions

NCB™ e3

Class II Type B1 Biosafety Cabinet. Developed to exceed the National Cancer Institute's Expectations...and yours.

- All exhaust air is removed directly from the work area and pulled through a dedicated exhaust duct into the facility's separate exhaust system
- Vapors and gases emitted from vessels or work behind the air split approximately half way back from the cabinet front - are removed and not recirculated
- Dual supply HEPA filters assure that all positive pressure areas are free of particulate contamination. Recirculated air is HEPA-filtered immediately below the work surface before it is passed through a HEPA supply filter above the work area



BIOCHEMGARD® e3

Class II Type B2 Biosafety Cabinet. The most energy efficient, comfortable and safe B2 cabinet in the industry.

- A 70% reduction in electrical power compared to traditional B2 cabinets
- Increased motor blower reserve extends filter life for less downtime
- Continuously safe work environment with self-adjusting motor technology enhances productivity
- Optional fume hood package for versatile laboratory design



ISOGARD®

Class III Glovebox. Designed to Handle Hazardous Microbiological Agents or Pharmaceutical Potent Compounds.

- Pass-through and main chamber incorporate uniform unidirectional airflow to flush away any generated particles while bathing the work surface in HEPA-filtered air
- Constructed with thick safety glass, solid closed-cell silicone gaskets and supplied with hypalon gloves
- Stainless steel glove port design with one-piece sleeve-and-glove assembly allows gloves to be replaced or changed without breaking containment



AEROPROTECT 360°

Aseptic Contamination Enclosure. Optimum personnel & environment protection.

- 360° visibility to the work area for easy monitoring
- 8" [203mm] sash opening allows access to the work surface and is the primary means of access to ensure user protection
- Front facing controls and gauges within easy reach when standing from both sides
- Dual force hinged front view screen and rear access, offering easy equipment loading



BIOPROTECT® e3

Walk-in Equipment Containment Enclosures. Designed expressly for high volume robotic and equipment applications.

- Flexible modular design for high-volume robotic and automated equipment applications
- Accommodates high-through put robotic systems (including ancillary devices), ultra-centrifuges, flow cytometers, aerosol generators and other large laboratory equipment
- Ideal for high-throughput screening, combinatorial chemistry, immunology, tissue culture, clinical research, drug discovery, molecular biology, and quality control assays



ANIGARD® e3

Animal Transfer Station. Confidence you can rely on.

- Spacious, easily accessible work areas accommodate a variety of cage sizes and activities
- Ergonomic design with efficient lighting increases user comfort and visibility
- Designed for easy movement and maneuverability throughout the laboratory
- Offers up to ISO Class 4 (Class 10) protection by delivering HEPA-filtered, particulate-free air



THE BEST PROTECTION

EDGEGARD® HF

Horizontal Flow Clean Bench designed with you in mind. Baker's exclusive technology maximizes product protection and helps meet up to ISO Class 4 (Class 10) air cleanliness requirements.

- High-performance airflow system provides uniform airflow to the worksurface, extends filter life and minimizes maintenance costs
- HEPA supply filter with 99.99% minimum efficiency in capturing 0.3 micrometer particulates
- Spacious, easily accessible work areas accommodate multiple users and a variety of applications and instrumentation



EDGEGARD® VF

EdgeGARD® Vertical Flow provides vertical, unidirectional and controlled airflow over the entire work surface, while reducing energy consumption, noise and airflow turbulence.

- ISO Class 4 (Class 10) cleanliness (for 0.5 micrometer particles)
- One-piece stainless steel work surface helps prevent surface contamination
- Easy to move and maneuver when configured with mobile stand, casters and pull bars
- Slanted 10° viewscreen for operator comfort and direct line-of-sight viewing
- Well-lighted workspace reduces eyestrain



STERILSHIELD®

Compounding Aseptic Isolator (CAI). Designed specifically for ultimate product protection of non-hazardous drugs.

- Offers a contained, pressurized work area for pharmacy applications
- One of the most comfortable isolators in the industry, with oval gloveports that offer easy reach to interior surfaces, and adjustable height stand
- HEPA-filtered, unidirectional airflow with better than ISO Class 5 (Class 100) air cleanliness conditions to prevent contaminants from entering the work area



CHEMOSHIELD®

Compounding Aseptic Containment Isolator (CACI). Offers a contained, pressurized work area for pharmacy applications.

- One of the most comfortable isolators in the industry, with oval gloveports that offer easy reach to interior surfaces, and adjustable height stand
- Slanted, top-hinged view screen allows for full opening for loading and unloading of pharmacy instrumentation or equipment
- HEPA-filtered, unidirectional airflow with better than ISO Class 5 (Class100) air cleanliness conditions to prevent contaminants from entering the work area



AIR SENTRY CHEMICAL FUME HOOD POWERED BY LAB CRAFTERS

Fume hoods designed for unparalleled safety for critical laboratory applications.

- Substantially reduces roll effect (fluctuations in the airflow that may cause harm to the worker)
- Offers a streamlined, unobstructed work area
- Minimizes lingering concentrations above and behind the view screen
- Reduces contaminant concentrations near the edge of the sash (window), reducing potential exposure hazard to personnel



Baker's portfolio of contamination control solutions can be found within many industries, for a wide variety of applications in research and clinical care. Please consult your biosafety professional to understand what is right for you and your application.