



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

Solicitation

NUMBER
AGR1427

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
DEAN WINGERD 304-558-0468

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE
Consolidated Sterilizer Systems
76 Ashford Street
Boston, MA 02134

SHIP TO

DEPARTMENT OF AGRICULTURE
 JOBSITE
 SEE SPECIFICATIONS

DATE PRINTED
04/30/2014

BID OPENING DATE: 05/22/2014 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		465-90	\$38,395.30	\$38,395.30
GRAVITY AND VACUUM STEAM STERILIZER						
<p>THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WV DEPARTMENT OF AGRICULTURE, IS SOLICITING BIDS FOR THE ONE-TIME PURCHASE OF A GETINGE 533LS GRAVITY AND VACUUM STEAM STERILIZER OR EQUAL, PER THE ATTACHED SPECIFICATIONS.</p> <p>ATTACHMENTS INCLUDE:</p> <ol style="list-style-type: none"> 1. INSTRUCTIONS TO VENDORS SUBMITTING BIDS. 2. GENERAL TERMS AND CONDITIONS. 3. AGR1427 SPECIFICATIONS. 4. CERTIFICATION AND SIGNATURE PAGE. 5. PURCHASING AFFIDAVIT. 6. VENDOR PREFERENCE FORM. <p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p> <p>05/22/14 09:34:08AM West Virginia Purchasing Division</p>						

SIGNATURE <i>Kate K</i>	TELEPHONE 617-782-6072 x20	DATE 5/20/14
TITLE Sales Assistant	FEIN 04-2060296	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

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

 - 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 person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify 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 in order 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 non-binding.

Question Submission Deadline: May 14, 2014 at 5:00pm

Submit Questions to: Dean Wingerd

2019 Washington Street, East

Charleston, WV 25305

Fax: (304) 558-4115

(Vendors should not use this fax number for bid submission)

Email: Dean.C.Wingerd@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including that made 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 signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. 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. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include hand delivery, delivery by courier, or facsimile. The bid delivery address is:

Department of Administration, Purchasing Division

2019 Washington Street East

Charleston, WV 25305-0130

The bid should contain the information listed below on the face of the envelope or the bid may not be considered:

SEALED BID: _____
 BUYER: _____
 SOLICITATION NO.: _____
 BID OPENING DATE: _____
 BID OPENING TIME: _____
 FAX NUMBER: _____

In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus _____ convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: Technical
 Cost

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 time stamped by the official Purchasing Division time clock.

Bid Opening Date and Time: May 22, 2014 at 1:30pm

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.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Purchase Order signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid 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 "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods and services requested in the Solicitation.
 - 2.3 "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.
 - 2.4 "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.
 - 2.5 "Purchase Order" 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 successful bidder and Contract holder.
 - 2.6 "Solicitation" means the official solicitation published by the Purchasing Division and identified by number on the first page thereof.
 - 2.7 "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
 - 2.8 "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: This Contract becomes effective on

and extends for a period of _____ year(s).

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 must be submitted to the Purchasing Division Director 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. Renewal of this Contract is limited to _____ successive one (1) year periods. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Reasonable Time Extension: At the sole discretion of the Purchasing Division Director, and with approval from the Attorney General's office (Attorney General approval is as to form only), this Contract may be extended for a reasonable time after the initial Contract term or after any renewal term as may be necessary to obtain a new contract or renew this Contract. Any reasonable time extension shall not exceed twelve (12) months. Vendor may avoid a reasonable time extension by providing the Purchasing Division Director with written notice of Vendor's desire to terminate this Contract 30 days prior to the expiration of the then current term. During any reasonable time extension period, the Vendor may terminate this Contract for any reason upon giving the Purchasing Division Director 30 days written notice. Automatic extension of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases, but Attorney General approval may be required.

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

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

Other: See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Purchase Order will be considered notice to proceed

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 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.

6. **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.

7. **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 a 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.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

BID BOND: All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

PERFORMANCE BOND: The apparent successful Vendor shall provide a performance bond in the amount of . The performance bond must be issued and received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

LABOR/MATERIAL PAYMENT BOND: The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be issued and delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable.

MAINTENANCE BOND: The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

WORKERS' COMPENSATION INSURANCE: The apparent successful Vendor shall have appropriate workers' compensation insurance and shall provide proof thereof upon request.

INSURANCE: The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

Commercial General Liability Insurance:
or more.

Builders Risk Insurance: builders risk – all risk insurance in an amount equal to 100% of the amount of the Contract.

The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

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

9. LITIGATION BOND: The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

10. ALTERNATES: Any model, brand, or specification listed herein 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.

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. LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount
for

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.

- 13. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Purchase Order, upon receipt.
- 14. 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.
- 15. 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.
- 16. 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.
- 17. PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To."
- 18. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.
- 19. DELIVERY:** All quotations are considered freight on board destination ("F.O.B. destination") unless alternate shipping terms are clearly identified in the bid. Vendor's listing of shipping terms that contradict the shipping terms expressly required by this Solicitation may result in bid disqualification.
- 20. INTEREST:** Interest attributable to late payment will only be permitted if authorized by the West Virginia Code. Presently, there is no provision in the law for interest on late payments.
- 21. PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Resident Vendor Certification form has been attached hereto to allow Vendor to apply for the preference. Vendor's

failure to submit the Resident Vendor Certification form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

- 22. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid on or after July 1, 2012, in accordance with West Virginia Code §5A-3-37(a)(7) 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 submission of its bid 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.
- 23. 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.
- 24. 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 cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.
- 25. 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.
- 26. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.
- 27. 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.
- 28. COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendors acknowledge that they have reviewed, understand, and will comply with all applicable law.
- 29. PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at <http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx>. Vendor shall be responsible for ensuring compliance with prevailing wage requirements and determining when prevailing wage

requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

- 30. 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.
- 31. 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). **No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.**
- 32. 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.
- 33. 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.
- 34. 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. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.
- 35. 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.
- 36. 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.
- 37. BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

38. [RESERVED]

- 39. 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 <http://www.state.wv.us/admin/purchase/privacy/default.html>.
- 40. DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code § 29B-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. In addition, a legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

- 41. LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, 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. 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.
- 42. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Purchase Order 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.

- 43. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid for the same material, supplies, equipment or services; (2) that its bid is in all respects fair and without collusion or fraud; (3) 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; and (4) that it has reviewed this RFQ in its entirety, understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid also affirms that neither it nor its representatives have any interest, nor shall 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.

The individual signing this bid on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

- 44. PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

- 45. 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.

- 46. 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.

- 47. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of \$1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.
- 48. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.
- 49. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire any 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.
- 50. 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.requisitions@wv.gov.
- 51. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information

to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

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.

52. 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 heath, basic oxygen, electric furnace, Bessemer or other steel making process.

The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

- a. 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
- b. 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.

53. 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.

REQUEST FOR QUOTATION
AGR1427 -- Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Agriculture to establish a contract for the one time purchase of steam sterilizer for life science applications.
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 **"Desired Item"** means Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent.
 - 2.2 **"Bid Evaluation Page"** means the page upon which Vendor should list its proposed price for the Desired Items in the manner requested by thereon. The Desired Item is either included on the last page of this RFQ or attached hereto as Exhibit A.
 - 2.3 **"RFQ"** means the official RFQ published by the Purchasing Division and identified as AGR1427.
3. **GENERAL REQUIREMENTS:**
 - 3.1 **Mandatory Desired Item Requirements:** Desired Item must meet or exceed the mandatory requirements listed below.
 - 3.1.1 Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent
 - 3.1.1.1 Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent must be a sterilizer that employs gravity/downward displacement with positive pulse conditioning and pressure/vacuum pulsing for dynamic air removal; reaches and maintains 133°C or above.
 - 3.1.1.2 Steam sterilizer must be compatible with the standard safety features and comply with standards and codes of the Getinge 533LS Gravity and Vacuum Steam sterilizer (or equivalent).
 - 3.1.1.3 Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent must have a single power door on cabinet style;

REQUEST FOR QUOTATION
AGR1427 -- Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent

- 3.1.1.4 Control panel on unit (English language);
- 3.1.1.5 Maximum Dimensions: 21" X 21" X 38"; 9.7 Cu ft. (275L) for large volume flask sterilization;
- 3.1.1.6 Electrical: 120V 1Ph 50/60 Hertz;
- 3.1.1.7 Vacuum Source/Piping: Ejector with copper/brass piping and valves;
- 3.1.1.8 Steam source: 30 kilowatt (kW) steam boiler (carbon steel) with automatic feed water pump;
- 3.1.1.9 Boiler control and safety device (Control and Safety Devices-1), satisfies local American Society of Mechanical Engineers requirement for secondary low water cut-off;
- 3.1.1.10 Include load car with interior track;
- 3.1.1.11 Include a transfer trolley.

4. CONTRACT AWARD:

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

4.2 Bid Evaluation Page: Vendor should complete the Bid Evaluation Page by including all product specifications, features, applications, time requirements for delivery and all expenses related to the product and inside delivery. Vendor should complete the Bid Evaluation Page in full as failure to complete the Bid Evaluation Page in its entirety may result in Vendor's bid being disqualified.

Notwithstanding the foregoing, the Purchasing Division may correct errors as it deems appropriate. Vendor should enter the information into the Bid Evaluation Page to prevent errors in the evaluation.

REQUEST FOR QUOTATION
AGR1427 -- Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent

5. PAYMENT:

5.1 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. Methods of acceptable payment must include the West Virginia Purchasing Card. Payment in advance is not permitted under this Contract.

6. DELIVERY AND RETURN:

6.1 Shipment and Delivery: Vendor shall ship the Desired Items immediately after being awarded this Contract and receiving a purchase order. Vendor shall deliver the Desired Items within 8 weeks after receiving the awarded purchase order. Desired Items must be delivered to Agency at 313 Gus R. Douglass Lane, Charleston, WV 25312. The product must be delivered inside the building in the specific room where it will be installed.

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if the shipment of the Desired 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 Desired Items from a third party.

Any Agency seeking to obtain the Desired 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 Desired Items F.O.B. destination to the Agency's location.

6.4 Return of Unacceptable Items: If the Agency deems the Desired Items to be unacceptable, the Desired 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.

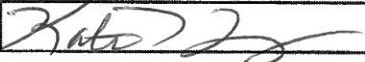
6.5 Return Due to Agency Error: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall

REQUEST FOR QUOTATION
AGR1427 -- Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent

be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

AGR1427

PRICING PAGE

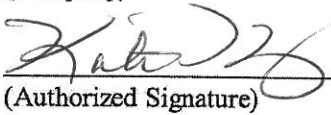
Item No.	Description	Model No/Brand Name	Quantity	Unit Price	Extended Amount
	Getinge 533LS Gravity and Vacuum Steam sterilizer or equivalent Consolidated Sterilizer Systems	3AV-ADVPRO	1	\$ 38,395.30	\$38,395.30
	Failure to use this form may result in disqualification			GRAND TOTAL	\$38,395.30
	Bidder / Vendor Information				
Name:	Consolidated Sterilizer System				
Address:	76 Ashford Street				
	Boston, MA 02134				
Phone:	617-782-6072 20				
Email Address:	katie@consteril.com				
Authorized Signature:	 (katie Kenney)				

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety, understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Consolidated Sterilizer Systems

(Company)



(Authorized Signature)

Katie Kenney - Sales Assistant

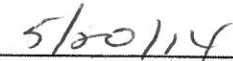
(Representative Name, Title)

617-782-6072 x20

617-7875865

(Phone Number)

(Fax Number)



(Date)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Consolidated Sterilizer Systems

Authorized Signature: *Kate King* Date: 5/19/14

State of Massachusetts

County of Suffolk, to-wit:

Taken, subscribed, and sworn to before me this 19th day of May, 2014.

My Commission expires March 30, 2018.

AFFIX SEAL HERE

NOTARY PUBLIC *Lissa J. Davidson*

Purchasing Affidavit (Revised 07/01/2012)



LISSA J. DAVIDSON
Notary Public
Commonwealth of Massachusetts
My Commission Expires
March 30, 2018

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. Application is made for 2.5% vendor preference for the reason checked:

Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,

Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,

Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,

2. Application is made for 2.5% vendor preference for the reason checked:

Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

3. Application is made for 2.5% vendor preference for the reason checked:

Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

4. Application is made for 5% vendor preference for the reason checked:

Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,

5. Application is made for 3.5% vendor preference who is a veteran for the reason checked:

Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,

6. Application is made for 3.5% vendor preference who is a veteran for the reason checked:

Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.

Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Consolidated Sterilizer Systems

Signed: 

Date:  5/2/14

Title: Katie Kenney - Sales Assistant



**CONSOLIDATED
STERILIZER SYSTEMS**

Simple. Reliable. Sterile.

May 20, 2014

Dean C. Wingerd
State of West Virginia
Dept. of Administration, Purchasing Division
2019 Washington Street, East
Charlestown, WV 25312

RE: RFQ No. AGR1427

Dear Dean,

Thank you for your interest in Consolidated Sterilizer Systems. We are pleased to present the attached bid for your review. We have one exception and that is our sliding door is a manual door and not a power door.

Enclosed are the following documents:

1. Bid Quote Form
2. Consolidated's Quote No. 5388
3. General Sterilizer Brochure
4. Sterilizer Product Specification Sheet
5. Sustainable Steam Sterilizers Brochure

Consolidated's products are designed and manufactured in the USA. Every sterilizer is built to order, and all models can be custom configured to best fit your space and your needs. Our Consolidated is dedicated to delivering personalized solutions and keeping your maintenance costs low.

Value-Added Features & Service:

Consolidated's sterilizers use high quality, **non-proprietary parts** that can be easily obtained from local suppliers, resulting in low cost of ownership and minimum downtime. Should your facility require training, maintenance, or service assistance, Consolidated's nationwide network of authorized and factory-trained service representatives is ready to help. In addition, factory service training classes are available throughout the year at our facility in Boston, MA.

CONSOLIDATED MACHINE CORPORATION

P.O. BOX 297 | 76 ASHFORD STREET | BOSTON, MA 02134-0003

P: 617.782.6072 | F: 617.787.5865 | CONSTERIL.COM | INFO@CONSTERIL.COM

Ecofriendly Features:

Consolidated incorporates a number of ecofriendly features into its standard sterilizer design, which add up to significant utility savings for your facility. Every ADV-PRO and ADV-PLUS equipped model comes with an EcoCalendar™ auto start/stop program. This program ensures that the unit will start up and shut down at pre-programmed times, thereby saving water and electricity.

All Consolidated sterilizers come with a non-electric waste-water cooling system to reduce water consumption. For additional water savings, Consolidated recommends a WaterEco® Water Conservation System that can reduce water consumption as much as 98%, saving your facility up to 500,000 gallons of water per year and millions of gallons over the life of the sterilizer.

If further information is needed, or if there are any questions, please do not hesitate to contact us or our local sales representative, Doug Kelly who can be reached by phone at (724) 600-6445 or email at doug.kelly@daiscientific.com.

Sincerely,



Katie Kenney
Sales Assistant
Consolidated Sterilizer Systems
617-782-6072 x20
Katie@consteril.com



**CONSOLIDATED
STERILIZER SYSTEMS**

Simple. Reliable. Sterile.

COMPANY SIGNATURE RESOLUTION LETTER

January 2, 2014

CONSOLIDATED STERILIZER SYSTEMS AUTHORIZES AND RECOGNIZES THE FOLLOWING EMPLOYEES TO SIGN, FILL OUT BID FORMS, REQUEST BID TABULATIONS, AND RECEIVE BID AWARDS.

1. KATIE KENNEY
2. KARA L. BERRY
3. LISSA DAVIDSON
4. KIM SHEPARD
5. ARTHUR TRAPOTSIS
6. JIM DESPO

THIS SIGNATURE LETTER IS VALID FROM THE DATE OF THE LETTER THROUGHOUT DECEMBER 31, 2014 AND WILL AUTOMATICALLY RENEW ITSELF EACH YEAR IF A NEW NAMED LIST IS NOT SUBMITTED. PLEASE ACCEPT THIS AS RECOGNITION THAT THE ABOVE NAMED ARE AUTHORIZED TO SIGN FOR LEGAL PAPERWORK REQUIRED BY BID FORMATS/FORMS.

BEST REGARDS,
KARA L. BERRY
NATIONAL SALES MANAGER
CONSOLIDATED STERILIZER SYSTEMS
617-782-6072 X 24
MOBILE: 617-800-5665
KARA@CONSTERIL.COM
76 ASHFORD STREET
P.O. BOX 297
BOSTON, MA 02134



CONSOLIDATED STERILIZER SYSTEMS

PROPOSAL

State of West Virginia

Quote #: 5388

May 19, 2014



Quote #	5388	Quote Date	May 19, 2014
Sales Rep	Doug Kelly	CSR	Katie Kenney

Sold to:

State of West Virginia
 Dean C Wingerd
 Dept of Administration, Purchasing Division
 2019 Washington Street, East
 Charleston, WV
 25312
 US
 Phone:
 Email: Dean.C.Wingerd@wv.gov

Ship to:

State of West Virginia
 RFQ No. AGR1427
 313 Gus R. Douglas Lane
 Charleston, WV
 25312
 US
 Phone:
 Email:

We are pleased to submit the following quotation for your consideration:

Line #	Qty	Description	Unit Price	Ext Price
1	1	<p>Consolidated Model 3AV-ADVPRO: 20" x 20" x 38" Sterilizer with the following:</p> <ul style="list-style-type: none"> *Chamber/Jacket Material: Standard - 316L Stainless Steel Chamber, Carbon Steel Jacket *Air Removal Method: Standard Hi-Vacuum System with Water Ejector (Model SSR-2A, SSR-3A, SR-24A ONLY) 45 PSI dynamic required! *Paneling Configuration: Standard - Stainless Steel Cabinet Mounting *Shelving Configuration: Standard - Stationary Bottom Shelf and Upper Shelf with 1 Angle Shelf support in the center *Standard Model SSR Generator - Integral Electrically Heated Steam Generator (ASME Stamped and CSD-1 Compliant) with automatic water fill, feed water pump, and low water cutoff protection. Please provide: Voltage _____, Phase _____ *EcoCalendar: Ability to program energy efficient on/off control of steam supply to autoclave for 'night and weekend set-back' *Loading Configurations: SSR-3A Cart & Carriage Allen-Bradley Micrologix PLC Control System (Controls Mounted on the Left-side) Touchscreen 6" Color Display Alpha Numeric Thermal Printer Ethernet Communication Port Surge Suppressor for Controls Emergency Manual Override Door Safety Lock ASME (American Society of Mechanical Engineers) U-1 Code Stamping 1/2" Thermocouple Port Electrical Specifications: Controls - 110 Volts, 1Phase UL, cUL Listed EZ-Glide Vertical Sliding Door with Non-Stick Gasket Whisper-Quiet, On-Board Air Compressor (Supplied if house air is not available. Please advise if air is available). Automatic Wastewater Cooling System to Bring Temperature of Waste to 140 Degrees F End-of-Cycle Vacuum Drying Fully Opening Front Service Panel 	\$36,195.30	\$36,195.30



*FOB Destination

2	1	Installation	\$2,200.00	\$2,200.00
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*Service: Installation Level 3A - Includes sterilizer uncrating, setting in place, leveling, final assembly, final utility connections, permits and or inspections, start up and end user training. Does not include receiving the unit

Subtotal	Shipping	Total
\$38,395.30	\$0.00	\$38,395.30



**CONSOLIDATED
STERILIZER SYSTEMS**



www.consteril.com

Thank you for your interest in Consolidated Sterilizer Systems!

TERMS AND CONDITIONS:

Quote Valid: Thirty (30) days. This period may be extended upon confirmation.

PO Information: Consolidated Sterilizer Systems, P.O. Box 297, Boston, MA 02134-003, USA. Send via email to sales@consteril.com or fax to 617.787.5865.

Remittance: Consolidated Sterilizer Systems, P.O. Box 297, Boston, MA 02134-0003, USA. To wire the funds, or to send your payment electronically, please contact accountsreceivable@consteril.com.

Delivery: Standard lead time is 90-120 days from receipt of order and signed submittals (if applicable), shipped via common carrier unless otherwise stipulated. If ordering nickel-clad chamber option, please allow up to 120 days for delivery. Delivery delayed beyond agreed shipping date will necessitate a price increase of one and one-half percent (1½%) for each month delay. For international orders, lead-time begins upon receipt of order along with Letter of Credit or prepayment.

Payment Terms: Net 30 days with approved credit. Credit cards accepted; 3% fee added for credit card payment. A service charge of one and one-half percent (1½%) per month will be imposed on all invoices not paid within thirty (30) days. For international orders: payment terms are Letter of Credit or Prepayment.

Pricing: Equipment pricing is F.O.B. Factory (76 Ashford Street, Boston, MA 02134, USA). Excludes all international, U.S. Federal, State, City, or Local Manufacturers Sales Use or Other Taxes.

Freight: Prepaid and added to the invoice, unless sent collect.

Installation: Installation pricing assumes all utilities must be in accordance with sterilizer rough-in drawings/specifications provided by CSS and accessible within five (5) linear feet of the unit. If installation is not performed by a CSS authorized rep, the cost of "equipment start-up and training", by an authorized CSS rep, may be added to the invoice. Customer must engage authorized CSS rep to perform final sign-off and activate warranty.

Warranty: The equipment is protected by a one (1) year warranty against manufacturing defects, defective parts and labor, excluding consumables, and fifteen (15) years on Consolidated sterilizer-chamber and/or Consolidated generator pressure vessel when maintained by a CSS authorized service group. Warranty is contingent upon the customer following manufacturer's recommendations for installation, proper use, and preventative maintenance. The warranty start date will be the date of installation of the equipment or fifteen (15) months from the ship date, whichever occurs first.

Cancellation: Cancellation is subject to a fee of ten percent (10%) of the purchase order after receipt of PO, thirty-five percent (35%) after approved drawings or submittal package, and up to ninety percent (90%) after fabrication has begun.

Title: The title and ownership of said material shall remain vested with Consolidated Sterilizer Systems until the entire purchase price has been paid in full in cash.

Modifications: Consolidated Sterilizer Systems must approve any changes to the above terms.



www.consteril.com



**Designed for maximum uptime,
simplified maintenance, easy user interface
and low cost of ownership.**

The Consolidated Model 3AV EZ-Glide™ sliding door sterilizer offers 8.8 cu.ft. (250 liters) of spacious, high performance sterilizing capacity in a minimal footprint. The new Model 3AV includes multiple engineering and ergonomic features developed to simplify operation, improve serviceability and document sterilization function for record keeping.

EZ-Glide™ Sliding Door

- The EZ-Glide™ sliding door steam sterilizer simplifies chamber access with a sliding counterbalanced door that seals safely against an air actuated non-stick gasket. The non-stick gasket design provides a longer service life than a conventional steam-actuated gasket.
- The gasket is recessed into a precision-machined slot and will maintain a secure seal even in the event of a total utility loss. The gasket is easy to replace and does not require special tools or lubrication.
- The door sealing mechanism includes redundancy for added security; a safety lock prevents the door from opening if the chamber is under pressure.
- Ergonomic benefits include a wide-grip handle and smooth, vertical open/close action on a counterbalanced assembly that is easy-to-operate with one-hand access.

ProGEN™ Steam Generator

When house steam is not available or inadequate, the Consolidated ProGEN™ electric steam generator serves as the steam source. Developed to fit directly below the sterilizer chamber within the chassis, the ProGEN™ is designed to deliver a high rate of steam to the chamber without lag time between cycles. This increased steam capacity accelerates recovery and achieves cycle setpoints more quickly to yield the most efficient turn-around time possible.

The ProGEN™ includes front-access to open-source heating elements for quick replacement over the life of the sterilizer, as well as:

- Larger than normal steam capacity, resulting in faster up-time.
- Large service opening for easy generator maintenance and inspection.
- Whisper-quiet automatic feed water pump, pressure regulator and electronic water level control.
- Standard voltages 208, 240, 480 in single phase or three phase.
- Capacities from 20 kW to 45 kW.
- Optional automatic blowdown.
- Available for retrofit to existing sterilizer systems.

Model	Chamber Dimensions (w x h x f-b)	Volume (cu. ft. / liters)	Ship Weight (lbs/kg)	Overall Dimensions (w x h x f-b)
Sliding Door Model				
3AV				
3AV	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	8.8 cu. ft. 250 liters	1,650 lbs 750 kg	39.375" x 71" x 47" 100 x 180.3 x 119.4 cm


*Specify Advantage Series™ ADV-PRO™, ADV-PLUS™ or ADV-PB™ when ordering.
Available with optional ProGEN™ integral electric steam generator.*



Model 3AV-ADV-PRO



Designed for Maximum Up-Time




Feature	Benefit
Unique non-stick door gasket*	Specially formulated to eliminate sticking and to avoid door jamming
Air-actuated gasket	Minimizes steam exposure to greatly extend gasket working life
Whisper-quiet, integrated air compressor	Minimizes noise, eliminates need for facility air supply, supplies constant air pressure to gasket
Side-mounted controls	Avoids steam exposure to electronics and extends touchscreen life
Front access swing-out assembly	Simplifies serviceability, assures access to all components
Counterbalanced sliding door	Simplifies working footprint, lifts without the complexity of pneumatics or service-prone hydraulics
Low-mounted counter pulleys	Prevents steam exposure to pulley system, minimizes corrosion on pulley cables
One style solenoid valve used throughout sterilizer*	Simplifies maintenance, non-proprietary valve reduces cost
Integrated post-vac drying cycle	Vacuum drying phase eliminates steam and removes moisture from the load (i.e. reduces wet-packs)
Front-mounted chamber drain	Simplifies access to the chamber drain strainer for easy cleaning
Pressure gauge calibration	Permits periodic calibration to maintain accuracy, extend component life
Customizable design*	All sliding door sterilizers are custom made to exact configuration, functionality and options
 WaterEco™ Conservation System**	Significantly reduces sterilizer water usage

*CSS Exclusive

**Optional

Advantage Series™ PLC Controls

The EZ-Glide™ can be ordered with any of the Consolidated Advantage-Series Sterilizer Controllers including ADV-PRO™, ADV-PLUS™ and ADV-PB™.

Controller Models	Display	Key Features
ADV-PRO™		6" or 10" Color Touchscreen 22+ Cycles Pre-Vac Capability Password Protection BSL-3 Compatible
ADV-PLUS™		6" Monochrome Touchscreen 12 Cycles Pre-Vac Capability
ADV-PB™		3" Monochrome Touchscreen 2 Cycles



SteriNET® Remote Access Features

Advantage™ controllers can integrate with a suite of SteriNET® state-of-the-art monitoring, troubleshooting, supervisory control and data acquisition solutions required to meet specific laboratory and/or facility requirements.

- SteriNET® **DataPort**, data downloading to a local computer or facility monitoring system.
- SteriNET® **Connex** for live factory diagnostics.
- SteriNET® **APPs**, third party monitoring applications for mobile devices.
- SteriNET® **SCADA**, connects to a Supervisory Control and Data Acquisition System.



- A. Hinged front panels for easy access
- B. EZ-Glide™ vertical sliding door
- C. ProGEN™ electric steam generator (optional)
- D. Advantage Series™ control column

Model 3AV (Front View) Service access panels on left- and right-hand hinges place all interior components and plumbing within easy reach and front access. Controls, printers, communications, electrical, mechanical and plumbing circuits are positioned for proactive maintenance.



**CONSOLIDATED
STERILIZER SYSTEMS**

P.O. BOX 297 | 76 ASHFORD STREET | BOSTON, MA 02134-0003

P: 617.782.6072 | F: 617.787.5865 | CONSTERIL.COM | SALES@CONSTERIL.COM



Consolidated Sterilizers

Designed to Transform Your Laboratory

Small Lab Series Steam Sterilizers EZ-Glide™ Series General Specifications

General Specification

Steam Sterilizer, Vertical Sliding Door,
Single Chamber, Double Wall

Consolidated EZ-Glide™ Series Sterilizers are designed to sterilize at temperatures between 212° F and 275° F (100° C and 135° C) through the use of steam. Choose from a stainless steel vessel construction in a variety of programmable control options for pre-vacuum or gravity operation. Consolidated sterilizers offer a range of performance options to meet the most demanding applications in clinical, animal and life science, biotechnology, pharmaceutical, and commercial/industrial applications.

Features and Benefits

Simplified Maintenance, Low Cost of Ownership.

All Consolidated sterilizers are manufactured in the USA and built from commonly available parts to allow quick and cost effective field-level service and maintenance.

Serviceability.

Easy access to replaceable components, local component availability and common electrical and plumbing parts permit qualified facility or area service companies to maintain the sterilizer.

Control Flexibility.

A choice of programmable controllers allows a broad range of performance functions, complete with alarm, monitoring and communications required for internal or third-party compliance.

Performance Cycles—Basic to Advanced.

The fully-jacketed sterilizer design permits vacuum and pressure control when configured for pre-vacuum, post-vacuum, and more sophisticated functions such as air-over-pressure. Consolidated sterilizers are ideal for sterilizing wrapped and unwrapped goods, liquids, waste, and other applications. All cycles are easily managed and documented.

Green and Environmentally Friendly.

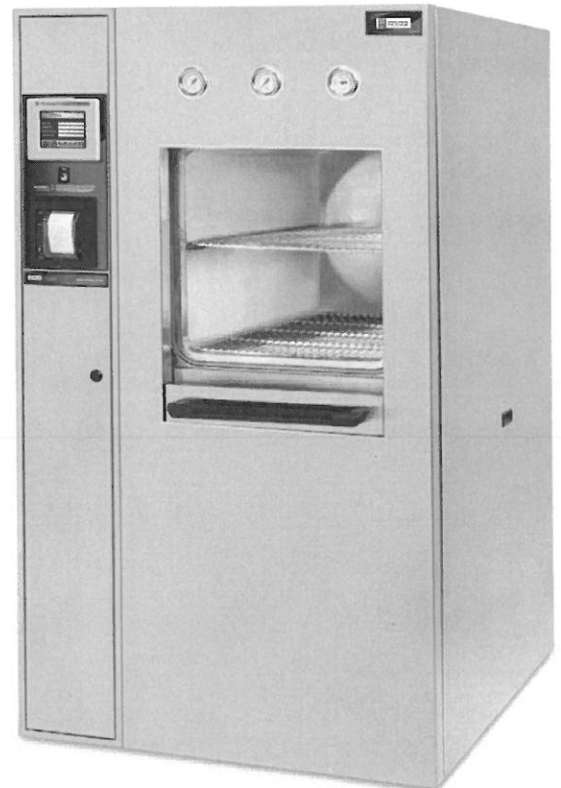
Unique, new water-saving technologies reduce water consumption without compromising performance.

Model	Chamber Dimensions (w x h x l-b)	Volume (cu. ft. / liters)	Ship Weight (lbs/kg)	Overall Dimensions (w x h x l-b)
Sliding Door Model				

3AV



3AV	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	8.8 cu. ft. 249 liters	1,650 lbs 750 kg	39.375" x 71" x 47" 100 x 180.3 x 119.4 cm
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Consolidated EZ-Glide™ Series Sterilizers are available in single door models. A versatile control system offers a range of performance options to meet the most demanding applications in clinical, life science, biotechnology, pharmaceutical, and commercial/industrial applications. Model 3AV-ADV-PRO shown with ADV-PRO programmable logic controller.



High Performance Sterilization

Consolidated sterilizers are used in a wide range of applications including clinical, animal and life science, biotechnology, pharmaceutical, and commercial/industrial markets. Consolidated sterilizers are suitable for conventional or pre-vacuum sterilization for quality control, safety and regulatory compliance. In addition, all units can be customized to suit any unique requirements and applications of a particular facility.

Consolidated uses only commonly-available, open-source parts in all phases of sterilizer design and construction, thereby permitting quick, economical and locally-managed service throughout the life of the product. With maximum uptime engineered into the product, Consolidated sterilizers offer a superior return on investment as demonstrated through thousands of installations worldwide.

Sterilization Cycles, Functional Performance

Consolidated sterilizers can be easily configured for numerous cycles and functions. Each cycle is customizable to meet user specific requirements. All cycle parameters are easily viewed prior to and during the cycle run. The following cycles are pre-configured and installed on all gravity and pre-vacuum sterilizers:

Gravity with Post-Vacuum Drying.

Available on gravity and pre-vacuum units. A post-vacuum (or drying) cycle draws a vacuum following sterilization and significantly decreases drying time. This cycle is usually used for wrapped goods, fibers, rubber, bedding and similar loads. The operator may select a sterilization temperature anywhere between 212° F and 275° F (100° C and 135° C), as well as sterilization time and optional vacuum dry time (see Figure 1).

Liquids.

Available on gravity and pre-vacuum units. The liquid cycle prevents boil-over when vented liquids are sterilized. The controller is factory-configured to automatically release steam pressure at an adjustable exhaust rate. The operator may select a sterilization temperature anywhere between 212° F and 275° F (100° C and 135° C), as well as sterilization time (see Figure 2).

In addition to the gravity and liquids cycles, all pre-vacuum sterilizers are preconfigured to also include the following cycle:

Pre-Vacuum.

Available only on pre-vacuum units. This cycle performs a series of steam pulses and vacuum draws prior to sterilization to assure that air has been removed from the load. This also permits the ability to vacuum dry. The number of pulses, pulse steam pressure, vacuum pulse pressure, sterilization time and temperature, and dry time are customizable for each cycle (see Figure 3).

Sterilizer Cycle Selection

Gravity with Post-Vacuum Drying. (Figure 1)

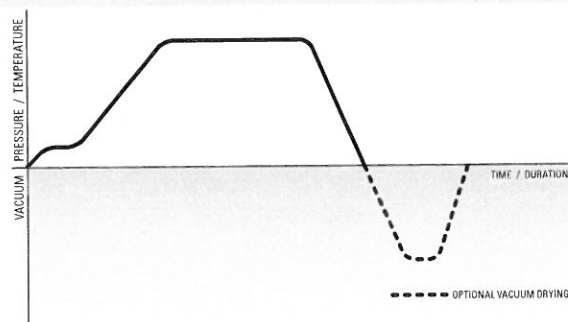
Steam flows through the sterilizer; temperature and pressure ramps slightly to a continuous flow purge.

The controller closes the exhaust valve and interior temperature and pressure ramp up to desired setpoint.

The program maintains dwell until desired time is reached, when pressure is released.

A vacuum system draws the interior atmosphere through ambient to negative pressure, accelerating drying time as programmed.

Once completed the vacuum is released and the load is restored to ambient pressure.

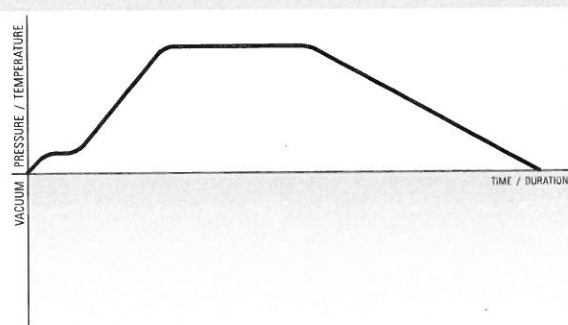


Liquid. (Figure 2)

Steam flows through the sterilizer; temperature and pressure ramps slightly to a continuous flow purge.

The controller closes the exhaust valve and interior temperature and pressure ramp up to desired setpoint.

The program maintains dwell until desired time is reached. Pressure is gradually released to allow dissolved gases to reach equilibrium to prevent boil-over.



Pre-Vacuum with Post-Vacuum Drying. (Figure 3)

Steam flows through the sterilizer; temperature and pressure ramps slightly to a continuous flow purge.

The controller closes the exhaust valve and interior temperature and pressure ramp to an intermediate setpoint without dwell.

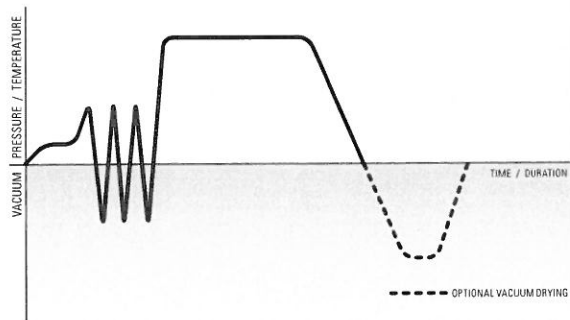
A vacuum system draws the interior atmosphere to negative pressure to remove latent air from concealed pockets within the load.

The process is repeated per program and protocol. Following the final pre-vacuum pulse, the sterilizer ramps to desired setpoint.

The program maintains dwell until desired time is reached, when pressure is released.

If a post-vacuum program is used, a vacuum system draws the interior atmosphere through ambient to negative pressure, accelerating drying time as programmed, after which the vacuum is released and the load is restored to ambient pressure.

If a post-vacuum program is not used, the load is restored to ambient pressure.



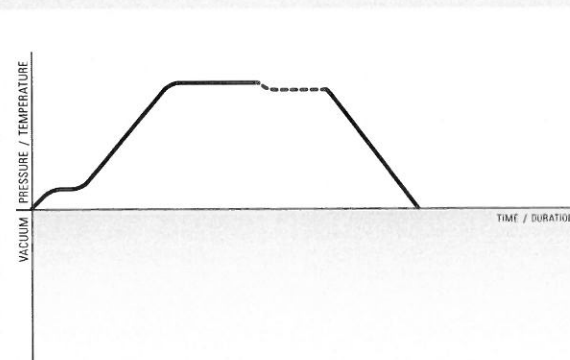
Liquid, Air-Over-Pressure. (Figure 4)

Usually used with smaller amounts of media to prevent liquid loss.

The air-over-pressure function operates identically to the liquid cycle except that pressurized air is injected to cool the load while maintaining pressure to displace steam.

After sterilization, air is injected, pressure is maintained, this prevents boil-over and minimizes evaporation.

Air pressure is then released and the load is restored to ambient pressure.



Additional Sterilization Cycles (available upon request)

Liquids with Load Probe.

Available on gravity and pre-vacuum units. This cycle uses a temperature probe placed within the liquid load to detect, display and print temperature. Applications include sterilization of temperature-sensitive liquids or large volume liquid sterilization (i.e. >2 liter flasks).

Bowie-Dick (Air Removal Test).

Available on pre-vacuum units. This air-removal test cycle validates the vacuum function using ad hoc test packs as per requirements listed in AAMI ST-8.

Vacuum Leak Test.

Available on pre-vacuum units. This cycle provides easy verification of vacuum depth, vacuum seal and chamber piping integrity. Detects leaks greater than 1 mmHg (1 Torr) per minute.

Air-Over-Pressure.

Available on gravity and pre-vacuum units. This cycle uses compressed air to maintain chamber pressure at the sterilization pressure until the liquid has cooled to 212° F (100° C). The rate of exhaust is adjustable. This is useful for small volumes of liquid susceptible to boil-over (see Figure 4).

Low Temperature (Isothermal).

Available on gravity and pre-vacuum units. Typically used for temperature-sensitive goods, this function creates a zero-pressure, temperature only cycle between 190° F and 212° F (88° C and 100° C).

Rapid Cooling.

Available on gravity and pre-vacuum units. Useful for rapidly cooling the liquid media, or any type of load, via an interior water spray mechanism or via a water cooled jacket.

F₀ Cycle.

Available on gravity and pre-vacuum units. Useful for heat-sensitive liquid media.

Pressure Ramping.

Available on gravity and pre-vacuum units. Allows the user to specify a) the amount of time it takes for the load to rise to sterilization temperature/pressure and b) the amount of time it takes to exhaust the sterilizer chamber post-cycle. Ideal for loads that are sensitive to rapid pressure changes.

Compliance and Certifications

Depending on desired application, Consolidated sterilizers can be certified for compliance to the following standards for performance and safety. Selected models qualify as a medical device by the FDA.

- ASME (American Society of Mechanical Engineers): Section VIII, Division I (Unfired Pressure Vessel) code.
- ASME: Section I Code (Power Boilers).
- CRN (Canadian Registration Number): requirements for pressure vessels.
- IEC (International Electrotechnical Commission):
 - EN 61010-1:96—Safety requirements for electrical equipment for measurement, control, and laboratory use.
 - EN 61010-2-041:96—Specific requirements for steam autoclaves.
- UL and cUL (Underwriters Laboratory): Standard 61010-1 and 61010-2.
- US NEC (National Electrical Code) and National Plumbing Code.
- EN ISO 111345-R-8/93—AAMI (Association for the Advancement of Medical Instrumentation) Industry Standard for Moist Heat Sterilization.
- 21 CFR Part 11 (US Code of Federal Regulations, Section 21—Food and Drugs; Electronic Records; Electronic Signatures).
- ANSI/AAMI ST-8: Hospital Steam Sterilizers.

Heavy-Duty Construction

Sterilizer Chamber.

Consolidated steam sterilizer vessels are manufactured with an inner chamber and a full outer jacket. The inner chambers are available in Type 316L stainless steel construction. Jacket construction is available in either carbon steel, Type 304L stainless steel or Type 316L stainless steel. Material selection is directly related to the chemical properties of available water supply and intended application. Pressure vessels are welded in compliance with ASME Section VIII, Division I.

EZ-Glide™ Sliding Door.

- The EZ-Glide™ sliding door steam sterilizer simplifies chamber access with a sliding counterbalanced door that seals safely against an air actuated non-stick gasket. The non-stick air activated gasket design provides a longer service life than a conventional steam-actuated gasket.
- The gasket is recessed into a precision-machined slot and will maintain a secure seal even in the event of a total utility loss. The gasket is easy to replace and does not require special tools or lubrication.
- The door sealing mechanism includes redundancy for added security; a safety lock prevents the door from opening if the chamber is under pressure.
- Ergonomic benefits include a wide-grip handle and smooth, vertical open/close action on a counterbalanced assembly that is easy-to-operate with one-hand access.

Chamber Door and Gasket System.

Consolidated's sterilizer doors are designed with redundant, and independent mechanical and software features to ensure maximum safety. Door design specifications meet all ASME code requirements.

- Door engagement is clearly visible to confirm closure.
- An electrical door switch ensures that the door is fully closed and locked prior to the start of the cycle. If the signal is lost during a sterilizing cycle, the cycle is automatically aborted.
- The door is mechanically locked during a cycle to prevent inadvertent opening.

Components.

- Piping, fittings, and valves are available in stainless steel or brass/bronze. All parts and components subject to repair are publicly available (i.e. non-proprietary) from open market sources, including controls, valves and fittings.
- Safety relief valves and drains are integral to the plumbing configuration.
- Baffled steam inlets minimize direct condensate on the load, reduce load wetting, and help assure proper steam uniformity within the chamber.
- Cabinet insulation retains heat and minimizes heat loss (see Table 1) to the room. The sterilizer jacket and all steam service piping include a minimum 1" fiberglass-based insulation.
- An integral wastewater cooling function reduces discharge temperature to the drain to less than 140° F (60° C).
- One style solenoid valve used throughout the sterilizer simplifies maintenance. Non-proprietary valve reduces cost.
- On units equipped with steam generators, an ASME CSD-1 pressure switch is included to back up the safety relief valve by automatically shutting down the steam generator if an overpressure condition exists.
- Easy-to-read and calibrate pressure gauges ensure simple and safe operation.
- Other components required for the intended application may include a steam generator, vacuum pump, etc. depending on the options chosen.

Air Removal

Depending on the application and required cycle, air removal may be achieved by gravity displacement or mechanical assistance through vacuum for pre- and post-cycle use as required.

- For gravity air removal, the control system automatically opens and closes valves on demand.
- For pre-cycle vacuum, Consolidated offers a choice of a water-ejector vacuum system, or a water-minimizing liquid ring vacuum pump.
- For post-cycle vacuum where drying assistance is desired, the sterilizer can use a water-ejector vacuum system, that utilizes the sterilizer water supply, or a water-minimizing liquid ring vacuum pump.
- Following completion of the post-vacuum function and throughout return to ambient pressure equilibrium, the returning air is filtered through a 0.3 micron bacteria-retentive filter.



- A. Hinged front panels for easy access
- B. EZ-Glide™ vertical sliding door
- C. ProGEN™ electric steam generator (optional)
- D. Advantage Series™ control column

Model 3AV (Front View) Service access panels on left- and right-hand hinges place all interior components and plumbing within easy reach and front access. Controls, printers, communications, electrical, mechanical and plumbing circuits are positioned for proactive maintenance.

Steam Sources

Consolidated sterilizers can operate on house steam or steam produced by integral or remote steam generators. Incoming water quality is always a primary consideration in selection of a steam generator (see Table 4).

Selection of the steam source is based on facility steam availability and other factors associated with sterilizer use and throughput.

House Steam Option.

In most situations standard house steam, when available is adequate. An inlet filter may be required to clean the steam prior to injection into the sterilizer plumbing system.

ProGEN™ Steam Generator.

When house steam is not available or inadequate, the Consolidated ProGEN™ electric steam generator serves as the steam source. Developed to fit directly below the sterilizer chamber within the chassis, the ProGEN™ is designed to deliver a high rate of steam to the chamber without lag time between cycles. This increased steam capacity accelerates recovery and achieves cycle setpoints more quickly to yield the most efficient turn-around time possible.

The ProGEN™ includes front-access to open-source heating elements for quick replacement over the life of the sterilizer, as well as:

- Larger than normal steam capacity, resulting in faster up-time.
- Large service opening for easy generator maintenance and inspection.
- Whisper-quiet automatic feed water pump, pressure regulator and electronic water level control.
- Standard voltages 208, 240, 380, 480 in single phase or three phase.
- Capacities from 20 kW to 45 kW.
- Optional automatic blowdown.
- Available for retrofit to existing sterilizer systems.

Steam-to-Steam Generator.

A steam-to-steam generator offers another steam option to deliver clean steam to the chamber. Contact Consolidated for details and ordering information.

Generator Blowdown Option.

In facilities where water quality is poor, a generator blowdown function is required to flush impurities from the system and prevent collection of contaminants on the heating elements. The blowdown function can be initiated manually or ordered as an automatic blowdown function if desired.

Sterilizer Installation

Consolidated sterilizers are available for installation as floor-standing cabinet-enclosed units with a stainless-steel superstructure to conceal plumbing and wiring. These sterilizers are also available for installation as recessed in one or two walls. Hook-ups for utility connections can be located anywhere on the unit as required, however house connections must be within 5 feet of the unit unless otherwise specified prior to installation.

Consolidated Sterilizer Systems Controller Options – The Advantage Series™ Programmable Logic Controllers

Catalog Number	ADV-PRO™	ADV-PLUS™	ADV-PB™
Description	Color Touchscreen Display	Monochrome Touchscreen Display	Monochrome Touchscreen Display w/ Push Buttons

Operator Interfaces

Display	6" 18 bit color	10" 18 bit color	6" Monochrome	3" Monochrome
Resolution	320 x 240 pixels	640 x 480 pixels	320 x 240 pixels	128 x 64 pixels
Mounting Options	Swing-Arm, Front and Remote Panel		Front and Remote Panel	Front and Remote Panel
Chamber Process Gauges	Pressure (psig, kg/cm ²) Vacuum (inHg, mmHg)		Pressure (psig, kg/cm ²) Vacuum (inHg, mmHg)	Pressure (psig, kg/cm ²) Vacuum (inHg, mmHg)

Industry Standard and Custom Sterilizer Cycles

Gravity	Yes	Yes	Yes
Liquids w/Auto Jacket Blowdown	Yes	Yes	Yes
Liquids w/Controlling Load Probe	Optional	Optional	
Pre-Vacuum	Optional	Optional	
Post-Vacuum	Optional	Optional	Optional
Low Temperature (Isothermal)	Optional	Optional	
Bowie-Dick (Air Removal Test)	Optional	Optional	
Vacuum Leak Test	Optional	Optional	
Air-Over-Pressure	Optional		
Effluent Decontamination	Optional		
F ₀ w/Controlling Load Probe	Optional		
Total Programmable Cycles	Up to 22	Up to 12	2

Green Features

Energy Saver Calendar for Scheduled ON/OFF Steam Supply	Standard	Standard	
WaterEco™ System for Reduced Water Consumption	Optional	Optional	Optional

Sterilizer Control and Process Integrity

Configurable Cycle Parameters	Standard	Standard	Standard
Improper Parameter Rejection	Standard	Standard	Standard
Multi-layered Password Security for Configuration Protection	Standard	Standard	
Two-Point Calibration of Sensors	Standard	Standard	Standard
Automatic Condensate Exhaust Management for all Cycles	Standard	Standard	Standard
Memory Backup of Configuration	Standard	Standard	Standard

Sterilizer Cycle Quality Reporting

Graphic Display of Cycle Progress	Standard	Standard	Standard
Thermal Printer (48 characters/line)	Standard	Optional	
Impact Printer (48 characters/line)	Optional	Standard	Standard

Printed Documentation of Sterilizer Cycles

User Defined Cycle Name	Yes		
Start Time and Date	Yes	Yes	Yes
Cycle Type	Yes	Yes	Yes
Chamber Temperature/Pressures	Yes	Yes	Temperature Only
Cycle Summary	Yes	Yes	Yes

Audible Alarms (also displayed on touchscreen)

Cycle Completed, Recycle, Over Temperature, Over Pressure, Time Limit, Chamber Drain, Jacket/Chamber Flow Failure	Standard	Standard	Standard
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SteriNET® Remote Monitoring, Troubleshooting, Supervisory Control and Data Acquisition

SteriNET® Connex	Optional	Optional	Optional
SteriNET® Apps	Optional	Optional	Optional
SteriNET® Dataport	Standard Ethernet, Optional RS-232 or RS-485	Standard Ethernet, Optional RS-232 or RS-485	
SteriNET® SCADA	Optional		

¹ Optional audible warning buzzer available; contact Sales for information.
For information about controllers required for FDA applications contact Consolidated Sterilizers direct.

Control and Monitoring System

Consolidated offers a variety of control system options for programmed, automatic and semi-automatic operation. Controllers are built from industry standard, open source components for international availability of parts and service. Consolidated's Advantage Series™ controllers offer proven reliability. Controllers are based on the Allen-Bradley® PLC platform specifically programmed for Consolidated sterilizers, complete with intuitive touchscreen displays and real-time operating systems (see chart on page 6).

- Permits industry standard and custom sterilizer cycles.
- Simplifies operation with intuitive operator interfaces.
- Assures quality control and process integrity.
- Features sterilizer cycle quality reporting and printed documentation.
- Audible and visual alarms warn of cycle or other deviations.

Printer.

An impact printer or thermal printer can be integrated into the main control panel. Printout includes all important information regarding the sterilization cycle recorded at user-defined intervals. Information includes: operator identification code, cycle type, cycle stage, time, chamber and jacket pressure and/or temperature, alarms or messages and cycle completion status.

Alarms.

Detailed performance and function alarms are based on the control system selection. Regardless of control system used, however, standard safety alarms are included in all Consolidated sterilizers.

Cycle Safeguards.

Depending on the controller selected, a range of cycle safeguards helps assure safe operation.

- No cycle can start unless the door is properly closed and locked.
- Control inputs automatically reject incorrect cycle parameters.
- Chamber gauges are installed on the operating end of the sterilizer to display pressure in psig and vacuum in inches-Hg.
- Exhaust is automatically condensed and cooled to a safe drainage temperature.
- Manual adjustment of condensing water flow offers economy in water consumption (see Table 2) and lower operating costs.

Calibration.

Sterilizers can be calibrated by a two-point software method on all sensor circuits. In this process, atmospheric transducer readings will be acquired and chamber transducers are offset at an equal level.

Options and Accessories

Consolidated offers a range of options and accessories to optimize and customize your sterilizer, to meet requirements for internal or third-party compliance, and to improve workflow. Some options are factory installed and must be specified when ordering. Contact Consolidated for detailed information on any of the following:

Steam Generator.

For installations where house steam is not available, a variety of integral or remote mounted steam generators is available. Consolidated will assist with selection according to site preparation requirements. Generators are available in electric, gas or steam-powered configurations. Integral generators are factory installed and must be specified when ordering.

Automatic Generator Blowdown.

Recommended to remove accumulated impurities from the steam generator when used with low quality incoming water. Factory installed. Specify when ordering.

Steam Inlet Filter.

Recommended to clean dirty steam from facility steam sources. Specify when ordering.

Shelving.

Shelves, carts and other accessories are available to suit specific applications. Shelves and racks are constructed of electro-polished Type 316L stainless steel. Interior shelving options include:

- Standard: One (1) stationary full-length wire-grid bottom shelf and one (1) upper stationary shelf suspended in the middle of the chamber on shelf brackets.
- Option 1: One (1) stationary full-length wire-grid bottom shelf and one (1) upper extendable shelf suspended in the middle of the chamber on shelf brackets.
- Option 2: One (1) stationary full-length wire-grid bottom shelf and two (2) upper extendable shelves suspended in the middle of the chamber on shelf brackets.
- Option 3: A loading cart, mounted on rollers, with two stainless steel shelves and a wheeled transfer carriage. The transfer carriage mates to interior guide rails to ease loading and unloading of sterilization loads up to 500 lbs evenly distributed.





SteriNET® Remote Monitoring, Troubleshooting, Data Acquisition.

Choose from four SteriNET® options: Connex, Apps, Dataport, and SCADA. SteriNET® Connex permits Consolidated engineers to provide quick, accurate and economical offsite diagnosis of operation problems through a standard phone line or Ethernet connection. This option is ideal for facilities located in remote areas where service assistance is hours or days away. This option includes one year of free, remote-transmitted software upgrades from the Consolidated technical support center. SteriNET® Apps allows for remote monitoring through a hand-held device like an iPhone or iPad. SteriNET® DataPort allows the user to record time, temperature, and pressure data from the sterilizer in real time, with the proper data-acquisition software package. SteriNET® SCADA maximizes the usefulness of monitoring, logging, and controlling one or multiple sterilizers from a central location in your facility. The SCADA System allows for uniform operator interface across multiple platforms, including Microsoft Windows® CE, Microsoft Windows XP®, and Vista®. Specify when ordering.

RS-232 Port.

Connects the control system to data logging/monitoring equipment. Factory installed. Specify when ordering.

RS-485 Port.

Connects the control system to data logging/monitoring equipment. Factory installed. Specify when ordering.

Steril-Q™ Validation Services & Documentation.

Protocols and templates are available for Factory Acceptance Testing (FAT), Installation Qualification (IQ), Operation Qualification (OQ), and Performance Qualification (PQ) in accordance with 21 CFR (US Code of Federal Regulations, Section 21—Food and Drugs) Part 11. Specify when ordering.

Validation Port.

Required for insertion of thermocouple(s) to chamber interior for temperature profiling and validation. Ports are located on the left side of the chamber and range from ½" to 2" diameter. Specify when ordering.

Load Probe, Controlling.

Includes a temperature probe with lead wire permitting placement in the load to be sterilized such as liquid, red-bag or other. Sterilization cycle time is based on load temperature instead of chamber temperature. Factory installed. Specify when ordering.

Load Probe, Non-Controlling.

Includes a temperature probe with lead wire permitting placement in the load to be sterilized such as liquid, red-bag or other. User can monitor the temperature of the load during a cycle. Factory installed. Specify when ordering.

Temperature Probe Sealing Gland.

Multi-port gland permits safe installation of thermocouples or other probes inside the chamber. Factory installed. Specify desired quantity and location when ordering.

Automatic Jacket Blowdown.

Recommended for liquid cycles. This option is used to exhaust steam in the chamber as well as the jacket to prevent liquid loads from boiling over. Factory installed. Must be specified when ordering.

Multi-Rate Liquid Exhaust.

Prevents boil-over of liquids by optimizing exhaust rate and reducing total cycle time. User selects an exhaust rate above and below an adjustable temperature set-point. Standard feature and available only on ADV-PRO control systems.

Low-Temp Control.

Often referenced as an "isothermal" or "inssipation" cycle, a low temperature control is recommended when sterilizing heat-sensitive loads. In this application the sterilizer operates at a relatively low temperature and pressure. Factory installed. Specify when ordering.

Uninterruptible Power Supply (UPS).

Allows the control system to remain on in the event of a brief power loss or brownout. Specify when ordering.

Vermin Seal.

The vermin seal is welded to the periphery of the sterilizer before recessing to prevent rodents from compromising the installation. Factory installed. Specify when ordering.

Effluent Decontamination Control.

Exclusively from Consolidated, this effluent decontamination system traps bacteria within the autoclave chamber and sterilizes it prior to release into the drain (Consolidated Patented Process). Any liquid effluent is held in the chamber for the duration of the sterilization cycle. All aerosol effluent passes through a 0.2 micron hydrophobic HEPA filter with >99.999% efficiency. The steam that sterilizes the products in the chamber also sterilizes the bacteria held by the filter. Filters are easily changed after use. Factory installed. Specify when ordering.

Seismic Mounting Brackets.

Required to meet certain local codes in seismically active areas. Contact your facility manager for information. Factory installed. Specify when ordering.

Sump Pump.

Required when gravity drain is not available. Provides positive pump to remove condensate effluent to hard-plumbed drain. Specify when ordering.

Form C Dry Contacts.

Choose from 0–5V, DC or 4–20 mA output. Offers direct connection to building monitoring system. Specify desired outputs when ordering.

Flood Switch.

In the event of excessive liquid in the chamber or jacket, an alarm will sound and a message will be displayed warning the user about the flood condition. Factory installed. Specify when ordering.

Chamber Finish.

- High polish (mirror finish), less than 10Ra.
- Electropolish.

Specify when ordering.

Stainless Steel Piping.

- Full—Type 316 stainless steel for all wetted piping.
- Partial—Type 316 stainless steel for wetted components from the steam generator to chamber inlet only.

Specify when ordering.

RO/DI Water Purification System.

A high-purity water system is available for facilities that do not meet the minimum water purity requirements (see Table 4). A continuous flow reverse osmosis (RO) water filtration system designed to pre-treat water to the autoclave or for general laboratory use can be supplied. Contact Consolidated for information.

WaterEco™ Water Saving Systems

The Consolidated WaterEco™ Water Saving Systems reduce water consumption to the autoclave by up to 99%. Factory or field installed. Available on gravity and pre-vacuum units in the following configurations:

- **WaterEco™ Gravity Basic:** Reduces cooling water by up to 90% without the use of electricity.
- **WaterEco™ Gravity Plus:** Choose this feature if facility chilled-water circulation system is readily available. This option reduces cooling water usage by up to 99%.
- **WaterEco™ Vacuum Basic:** Steam sterilizer vacuum systems require a relatively high flow of cold water to function properly. This option reduces vacuum and cooling water consumption up to 50% on pre-vacuum sterilizers.
- **WaterEco™ Vacuum Plus:** Choose this feature if facility chilled-water circulation system is readily available. The full recovery system reduces waste water from the vacuum system by up to 99%.

SterilCARE™.

The SterilCARE™ *Proactive Maintenance Program (PMP)* is designed to help keep your autoclave running at top performance for many years. Choose from several SterilCARE™ plans, or contact us to arrange for a custom configured maintenance program.

Water Quality Compatibility, Stainless Steel vs. Non-Stainless Selection

Materials that contact the water supply to the sterilizer, including the steam generator, water-cooled devices, water-actuated accessories, valves and piping must be compatible with the purity of the water.

- If deionized or distilled water or water with a purity greater than 1 MΩ/cm is supplied, then all such points of contact must be of stainless steel construction.
- If softened water, water purified by reverse osmosis or tap water with purity of less than 1 MΩ/cm is supplied, then such points of contact must be of carbon steel, bronze or brass construction, as appropriate.

Site Preparation and Utilities

Utilities of ample capacity required for operation of the sterilizer shall be provided at the place of installation at the facility. Key considerations include electric power availability, steam source, water type and flow capacity, and compressed air. For information on required utilities and locations refer to the sterilizer architectural drawing.

- Effluent drain and exhaust considerations include wastewater and the facility air exhaust system.
- Clearances include door and cart allowances, recommended 18–24" for access to plumbing, adequate load-bearing capacity of floor at installation site, and biointegrity.
- Contact Consolidated or your Consolidated sales representative for planning and selection assistance.

Installation Options

Consolidated offers a choice of installation options to accommodate the facility schedule. In general, Consolidated can arrange for any of the following installation preferences:

- Consolidated turn-key installation, complete.
- Consolidated on-site supervision of facility designated labor.
- Inside delivery is available, with an additional option of removal of shipping and crating materials. Contact Consolidated for details.

Typical Utility Requirements

General.

- Steam (S): ¾" NPT, 50-80 psi dynamic.
- Electrical (E1): 110V, AC or 220V, AC, 1-phase, 15 amps—dedicated and isolated.
- Air (A): ¼" NPT, 45-80 psi dynamic (if available).
- Water (W2): ½" NPT, 45 psi dynamic minimum.
- Drain (D1): open drain to funnel connection in floor, diameter 2½" minimum.
- Backflow preventer not provided (unless specified).
- Economy, Post-Vac (W3): ½" NPT, 45 psi dynamic minimum.
- SteriNET®: Ethernet or analog phone line.

Optional Vacuum Systems (maximum one per unit).

- Hi-Vacuum with Water Ejector (W3): 1¼" NPT, 45 psi dynamic minimum.
- Hi-Vacuum with Vacuum Pump (W3, E3): ½" NPT, 45 psi dynamic minimum.

Electric Steam Generator Utilities:

- Power Supply (E2): available in 208/240/380/480V, single or three phase.
- Generator Feedwater (W1): treated water, ½" NPT, 45 psi dynamic minimum.
- Drain (D2): ¾" NPT.

Table 1. Comparative Heat Loss (Per Chamber)

Model	Chamber Dimensions (w x h x l-b)	Heat Source Options	Maximum Operating Weight (lbs) ¹	Peak Heat Loss (BTU/hr at 70° F (21° C))		
				Cabinet	Recessed	
					To Room	Front of Wall
3AV	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	Steam	1,800	7,000	2,500	4,500
		Electric	1,975	8,750	3,300	5,450

¹ Assuming chamber fully loaded with flasks filled 25% with water.

Table 2. Water Consumption (Per Chamber)

Model	Chamber Dimensions (w x h x l-b)	Air Removal Method	Water Consumption							
			Cold Water				Treated			
			Peak (gpm)	Per Cycle ² (gal/cycle)	Per Cycle with WaterEco™ ² Gravity Basic (gal/cycle)	Idle (gph)	Idle with WaterEco™ Gravity Basic (gph)	Peak (gpm)	Per Cycle ² (gal/cycle)	Idle (gph)
3AV	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	Gravity	6	15	1	7	1	1	4	1
		Ejector	6	145	130	7	1	1	4	1
		Vacuum	6	45	30	7	1	1	4	1

² Assuming 30 minute sterilizing time at 250° F (121° C) and 20 minute drying time.

Table 3. Power and Steam Usage

Model	Chamber Dimensions (w x h x l-b)	Air Removal Method	Electrically Heated				Steam Heated			
			Generator Size (kW)	Generator Current (amps) ²			Steam Consumption			
				208V	240V	380V	480V	Peak (lb/hr)	Per Cycle ¹ (lb/cycle)	Idle (lb/hr)
3AV	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	Gravity	25	69	60	37	30	180	20	7
		Vacuum	25	69	60	37	30	180	35	7

¹ Assuming 30 minute sterilizing time at 250° F (121° C) and 20 minute drying time.

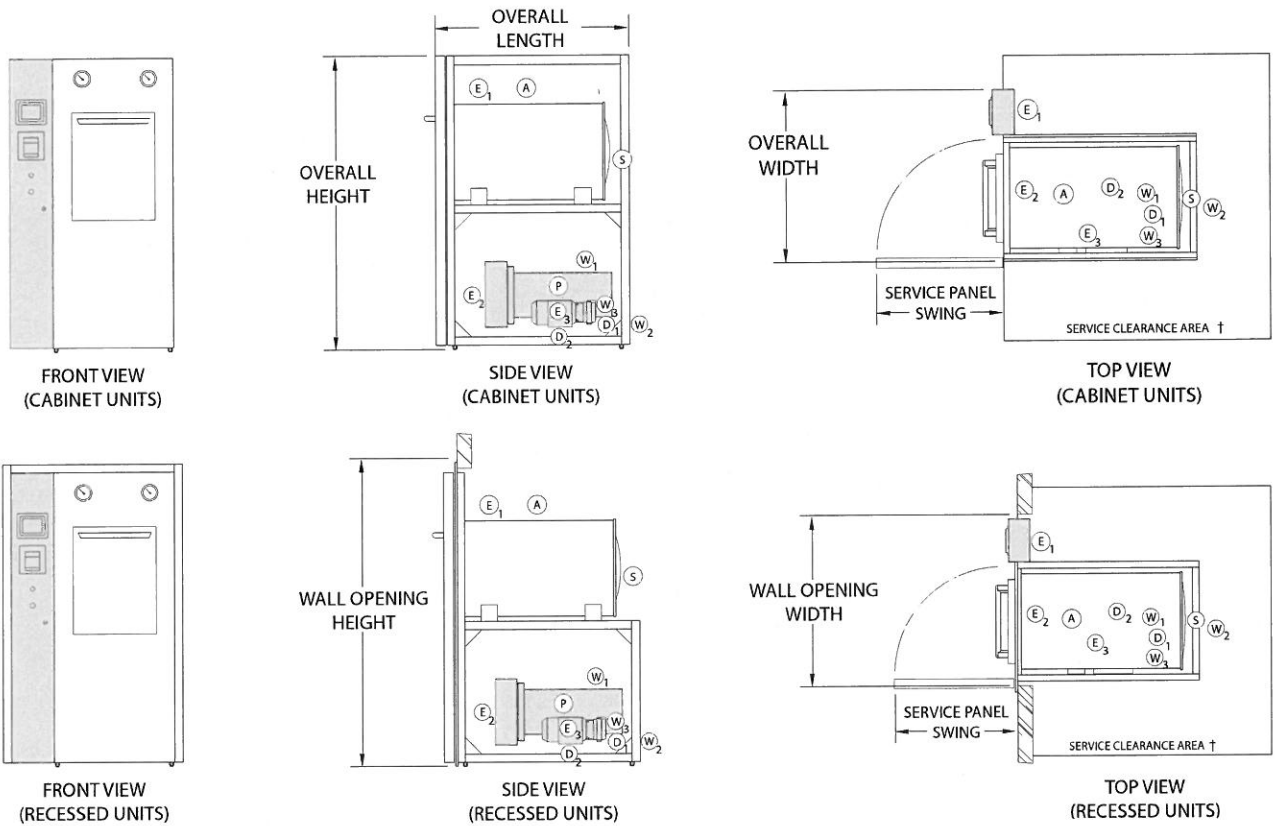
² Current drawn by generator. Local codes and regulations may affect breaker size.

Table 4. Water Feed Requirements, Carbon-Steel Steam Generators³

Characteristic	Recommended Condition	Maximum Condition
Temperature	As Supplied	140° F (60° C)
Total Hardness	0–17 mg/L	85 mg/L
Alkalinity	50–180 mg/L	350 mg/L
Total Dissolved Solids	0–150 mg/L	250 mg/L
pH	7.5–8.5	7.5–9.0
Total Silica	0.1–1.0 mg/L	2.5 mg/L
Resistivity	2,000–6,000 ohms/cm	26,000 ohms/cm ⁴

³ Stainless-steel generators require deionized water >1 MΩ/cm.

⁴ If water supplied is greater than 26,000 Ω/cm contact Consolidated for recommendation.



E Electrical
 D Drain
 W Water
 S Steam
 A Air (if applicable)
 P ProGEN™ Steam Generator

† Recommended service clearance is 18-24" both sides and back. If necessary, service clearance can be decreased or adjusted to one side to accommodate facility specific space constraints.

Notes

- Left side control housing (gray shaded area above), right side hinged front-panel shown. Standard control location is opposite hinge. Opposite mounting is available upon request.
- The control housing is shipped detached from the sterilizer to allow passing through doorways, reducing overall pre-installation width by 10.375". When the sterilizer is installed, the control housing and electrical connections are easily attached.
- Alternative controller mounting options are available at no charge for installations into smaller wall openings. Contact Consolidated to arrange a solution.
- Standard plumbing and utility access is primarily located on the same side as the door hinge. If location of plumbing is important to your installation contact Consolidated to arrange a solution.

Table 5.

Model	3AV
Chamber Dimensions (w x h x f-b)	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm
Volume (cu. ft.)	8.8 cu. ft. 249 liters
Overall Width (inches)	39.375" 100 cm
Overall Height (inches)	71" 180.3 cm
Overall Length (inches)	47" 119.4 cm
Wall Opening Width (inches)*	41.375" 105.1 cm
Wall Opening Height (inches)	72" 182.9 cm
Service Panel Swing (inches)	29" 73.7 cm

* Alternative controller mounting options are available at no charge for installations into smaller wall openings. Contact Consolidated or your Consolidated Sales Representative to arrange a solution.



**CONSOLIDATED
STERILIZER SYSTEMS**

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