



CEM Corporation

3100 Smith Farm Road, P.O. Box 200, Matthews, NC 28106- 0200 USA
Phone 800-726-3331 or 704-821-7015 • FAX 704-821-7894

RECEIVED
04/13/21 10:10:01
WJ PURCHASING DIVISION

Solicitation No. CRFQ 1400 AGR2100000017

Bid Type Cost

Bid Opening & Time April 13, 2021 at 1:30 PM (ET)



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

State of West Virginia
Centralized Request for Quote
Miscellaneous

Proc Folder: 853852			Reason for Modification:
Doc Description: Microwave Digestion System			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2021-03-26	2021-04-13 13:30	CRFQ 1400 AGR2100000017	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code:

Vendor Name : CEM CORPORATION

Address :

Street : 3100 SMITH FARM ROAD

City : MATTHEWS

State : NC

Country : USA

Zip : 28104

Principal Contact : JENNIFER BRYANT

Vendor Contact Phone: 704-821-7015

Extension: 1199

FOR INFORMATION CONTACT THE BUYER

Jessica S Chambers
(304) 558-0246
jessica.s.chambers@wv.gov

Vendor Signature X *Jennifer Bryant*

DocuSigned by:

FEIN# 56-1019741

DATE April 12, 2021

215A8A1B8D4942B...

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

ADDITIONAL INFORMATION

The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Agriculture, R.E.A.D. to establish a contract for the one time purchase of a Microwave Digestion System per the terms and conditions and specifications as attached.

INVOICE TO	SHIP TO
AGRICULTURE DEPARTMENT OF ADMINISTRATIVE SERVICES 1900 KANAWHA BLVD E CHARLESTON WV 25305-0173 US	AGRICULTURE DEPARTMENT OF MOOREFIELD FIELD OFFICE 60B INDUSTRIAL PARK RD MOOREFIELD WV 26836-0302 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Microwave Digestion System	1.00000	EA	\$31.545.00	\$21.941.50

Comm Code	Manufacturer	Specification	Model #
41100000			

Extended Description:
Microwave Digestion System

INVOICE TO	SHIP TO
AGRICULTURE DEPARTMENT OF ADMINISTRATIVE SERVICES 1900 KANAWHA BLVD E CHARLESTON WV 25305-0173 US	AGRICULTURE DEPARTMENT OF MOOREFIELD FIELD OFFICE 60B INDUSTRIAL PARK RD MOOREFIELD WV 26836-0302 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Shipping	1.00000	EA	\$ 350.00	\$ 0.00

Comm Code	Manufacturer	Specification	Model #
78121603			

Extended Description:
Shipping

INVOICE TO

AGRICULTURE DEPARTMENT OF
ADMINISTRATIVE SERVICES
1900 KANAWHA BLVD E
CHARLESTON WV 25305-0173
US

SHIP TO

AGRICULTURE DEPARTMENT OF
MOOREFIELD FIELD OFFICE
60B INDUSTRIAL PARK RD
MOOREFIELD WV 26836-0302
US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Installation/Validation	1.00000	EA	\$ 515.00	\$ 0.00

Comm Code	Manufacturer	Specification	Model #
41100000			

Extended Description:

Installation/Validation

INVOICE TO

AGRICULTURE DEPARTMENT OF
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1900 KANAWHA BLVD E
CHARLESTON WV 25305-0173
US

SHIP TO

AGRICULTURE DEPARTMENT OF
MOOREFIELD FIELD OFFICE
60B INDUSTRIAL PARK RD
MOOREFIELD WV 26836-0302
US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Training	1.00000	EA	\$ 515.00	\$ 0.00

Comm Code	Manufacturer	Specification	Model #
41100000			

Extended Description:

Training

INVOICE TO

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1900 KANAWHA BLVD E
CHARLESTON WV 25305-0173
US

SHIP TO

AGRICULTURE DEPARTMENT OF
MOOREFIELD FIELD OFFICE
60B INDUSTRIAL PARK RD
MOOREFIELD WV 26836-0302
US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Warranty	1.00000	EA	N/C	N/C

Comm Code	Manufacturer	Specification	Model #
41100000			

Extended Description:

Warranty

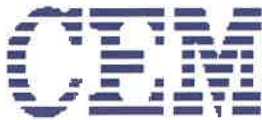
SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	TECHNICAL QUESTION DEADLINE	2021-04-02

	Document Phase	Document Description	Page
			5
AGR2100000017	Final	Microwave Digestion System	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions



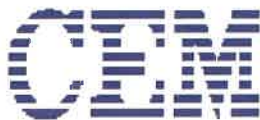
CEM Corporation
Innovators in Microwave Technology

3100 Smith Farm Road, P.O. Box 200, Matthews, NC 28106-0200 USA
Phone (704) 821-7015 * Fax (704) 821-5185 * Email: sales@cem.com * Web: <http://www.cem.com>

QUOTATION

Name	Matthew Sites	Created Date	4/9/2021
Phone	(304) 538-2397	Quote Number	00022981
Email	mattsites@ag.state.wv.us	Expiration Date	3/1/2021
Bill To Name	West Virginia Department of Agriculture	Account Name	West Virginia Department of Agriculture
Bill To	60B Industrial Park Road Moorefield, WV 26836 United States	Please verify Billing Address and Enter Shipping Address below if different from Billing Address:	
		Contact	
		Address	
		City	State/Province
		Zip	Country
		Phone	Fax

Product Code	Product	Product Description	Sales Price	Discount	Quantity	Total Price
927500	Microwave Accelerated Reaction System, Model MARS6, 230V/60 Hz	230V/60Hz An 1800 Watt laboratory microwave instrument including 2 magnetrons-1000 Watt primary magnetron and 800 Watt secondary magnetron, LCD glass capacitive touchscreen and speakers, a 1.8 cubic feet fluoropolymer coated cavity, corrosion resistant exhaust system, solid steel door construction with spring loaded quadruple safety door latch, direct drive alternating turntable with optical sensor, 5 USB ports, 2 Ethernet ports, 1 RS232 port, internal microSD RAM for backup of methods and data, preprogrammed OneTouch methods, 2 color LED cavity lamp and detachable power cord. Includes operation manual. Conforms to globally harmonized EN61010-1.	\$17,585.00	30.00%	1.00	\$12,309.50
		THIS UNIT INCLUDES NO SYSTEM CONTROLS. THESE APPEAR AS SEPARATE LINE ITEMS.				
512195	Xpress / IR Option	Used for control of MarsXpress vessels ONLY, this option controls the temperature of ALL vessels in each batch to the maximum number of MarsXpress vessels - 40. This option effectively utilizes up to 40 control vessels, rather than the standard single control vessel. Allows verification of each vessel achieving setpoint. Control consists of 2 NIST traceable calibrated temperature sensors accurately controlling the internal temperature of every vessel to a maximum vessel number of 40 per run and onboard instrument installed electronics allowing full monitoring of all MarsXpress	\$4,730.00	30.00%	1.00	\$3,311.00



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907389	MARS Xpress TFM Vessel Starter Set, 24 place, 75 mL	vessels to 330°C. Vessel overtemperature protection (TempGuard) is included with this option for MarsXpress vessel technologies only. The starter set contains (24) MarsXpress TFM Vessels,(1) Vessel Rack and (1) 40-place turntable with (24) composite sleeves for use with a Mars Xpress capable system Only. MARSXpress TFM vessels are High throughput High Performance vessels with maximum temperature capabilities of 300 C. NOTE: MarsXpress vessels can be used for acid digestion or solvent extraction; however, it is very important that each vessel set is designated for either acid digestion or solvent extraction.	\$9,030.00	30.00%	1.00	\$6,321.00
APP-Analytical	Applications & Technical Support (Analytical)	Lifetime applications support from CEM chemists and microwave experts who are conveniently located in Charlotte, NC. Contact by phone toll free at (800) 726-3331 or by email at analytical.support@cem.com Application notes and journal article references are also freely available via customer sign in to www.cem.com	\$0.00		1.00	\$0.00
921000	Installation & Training, 1/2 Day (MARS/STAR/SP-D)	This service provides a one-half day training session for users on operation, routine maintenance, and basic applications for the instrumentation platform.	\$1,030.00	100.00%	1.00	\$0.00
Shipping - MARS (Analytical)	Shipping - MARS (Analytical)	Ground Shipping/Handling within the Continental US.	\$350.00	100.00%	1.00	\$0.00

Sales Rep	Melissa Dean	Subtotal	\$32,725.00
		Savings	(\$10,783.50)
		Total Price	\$21,941.50

Currency & Shipping Terms

Currency is US Dollars.

Warrenty extended to 2 years

USA Shipping Terms: FOB Destination - Standard Delivery is 28 days ARO

Purchase Order

Note: This quote can be used as a purchase order by entering purchase order number and signing

Please sign here: _____ Date: _____ PO Number: _____

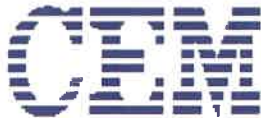
Tax Status: If Account is Tax-Exempt, please provide a Tax-Exemption or Resale Certificate along with the Purchase Order. Otherwise, the order will be processed as taxable.

If Account is Partially Exempt for this order, please send Partial Exemption Certificate.

Standard Terms & Conditions

For information on leasing CEM products, contact Marissa Reinhardt at CEM Financial Services
 Phone 973-292-0025 x412, mreinhardt@captivelease.com

Standard Terms & Conditions



CEM Corporation

Innovators in Microwave Technology

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Phone (704) 821-7015 * Fax (704) 821-5185 * Email: sales@cem.com * Web: <http://www.cem.com>

1. Payment - Make all checks payable to CEM Corporation and mail to Accounts Receivable at the below address:

12750 COLLECTIONS CENTER DRIVE, CHICAGO IL 60693 United States

2a. (USA) General - Net 30 Days; FOB / ExWorks Matthews, NC. Freight is prepaid and added to invoice. Clerical errors are subject to corrections.

2b. (Canada) General - Net 30 Days; Canada Shipping Terms: ExWorks Matthews, NC USA. Clerical errors are subject to corrections.

3. All orders subject to shipping and handling charges.

4. Taxes - All prices are quoted excluded of any sales, excise, use, or similar tax. The amount of tax applicable is the buyers responsibility.

5. Renters Casualty - Renter shall bear the risk of loss or damage to the equipment from delivery to customer site until it is returned to CEM.

6. Warranty - All new instruments are warrantied against defects in workmanship or material for one (1) year from date of shipment unless noted otherwise in the product description above. All refurbished/demo instruments are warrantied against defects in workmanship or material for six (6) months from date of shipment unless noted otherwise in the comments section above.

7. Returns - All returns must be authorized with an RMA# by the CEM Customer Service Department. Call (800) 726-3331 for authorization.

8. Quantity - Any changes to quantities other than complete instruments will not effect the validity of this quote.

EEO Clause

If applicable to this purchase order, subcontract, or bill of lading, the affirmative action clause for disabled workers (41 CFR § 60-741.4), the equal opportunity clause in Section 202 of Executive Order 11246 (41 CFR § 60-1 through 60-50), and the affirmative action clause for covered veterans (41 CFR 6-300) are hereby incorporated herein by reference. Further, if applicable, seller agrees to file Standard Form 100 (EEO-1) and the VETS-100A report. The contractor agrees to comply with 29 CFR Part 471, Appendix A to Subpart A.

This contractor and subcontractor shall abide by the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

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

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

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

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

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

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

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

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

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

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting
Revised 03/15/2021

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 nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: April 2, 2021 at 9:00 AM (ET)

Submit Questions to: Jessica Chambers

2019 Washington Street, East

Charleston, WV 25305

Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)

Email: Jessica.S.Chambers@wv.gov

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

6. BID SUBMISSION: All bids must be submitted electronically through wvOASIS or 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 electronic submission via wvOASIS, 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

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:

BUYER: Jessica Chambers

SOLICITATION NO.: CRFQ AGR2100000017

BID OPENING DATE: 4/13/2021

BID OPENING TIME: 1:30 PM (ET)

FAX NUMBER: (304)558-3970

Revised 03/15/2021

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to a Request for Proposal is not permitted in wvOASIS.

For Request For Proposal ("RFP") Responses Only: 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: (This only applies to CRFP)

☐ 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 confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: April 13, 2021 at 1:30 PM (ET)

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

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

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

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

equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

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

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

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

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

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

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

<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

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

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(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 contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

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

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

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

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

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

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

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

22. INTERESTED PARTY DISCLOSURE: West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

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

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

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of a Award Document 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. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

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

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

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

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

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

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

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

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

☐ **Term Contract**

Initial Contract Term: This Contract becomes effective on _____ and the initial contract term extends until _____.

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

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

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

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

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for _____ year(s) thereafter.

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

☐ **Other:** See attached _____

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

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

☐ **Open End Contract:** Quantities listed in this Solicitation 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. 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.

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

☐ **BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid 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 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

☐ **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 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. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

☐ **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.

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

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

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

Vendor must maintain:

☒ **Commercial General Liability Insurance** in at least an amount of: \$100,000.00 per occurrence.

☒ **Automobile Liability Insurance** in at least an amount of: \$100,000.00 per occurrence.

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

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

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

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

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

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

☐☐☐☐

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

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

10. [Reserved]

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

☐ _____ for _____

☐ Liquidated Damages Contained in the Specifications

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

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

14. PAYMENT IN ARREARS: 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.

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

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

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

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

34. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer 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 Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer 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 or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer 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.

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

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

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

37. PURCHASING AFFIDAVIT: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE: This Contract may be utilized by 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"), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

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

40. 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.

41. 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.

Revised 03/15/2021

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

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

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open hearth, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. 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
- d. 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.

43. 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.

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

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

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

Jennifer Bryant Technical Sales Manager
(Name, Title)
Jennifer Bryant, Technical Sales Manager
(Printed Name and Title)
3100 Smith Farm Road, Matthews, NC 28104
(Address)
(704) 821-9366
(Phone Number) / (Fax Number)
jennifer.bryant@cem.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

CEM Corporation
(Company)

Jennifer Bryant
(Authorized Signature) (Representative Name, Title)

Jennifer Bryant - Technical Sales Manager
(Printed Name and Title of Authorized Representative)

4/12/2021
(Date)

(704) 821-9366
(Phone Number) (Fax Number)

REQUEST FOR QUOTATION
Microwave Digestion System

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Agriculture, R.E.A.D. to establish a contract for the one time purchase of a Microwave Digestion System.
2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
 - 2.1 **“Contract Item”** means a Microwave Digestion System as more fully described by these specifications.
 - 2.2 **“Pricing Page”** means the pages, contained in wvOASIS or attached as Exhibit A, upon which Vendor should list its proposed price for the Contract Items.
 - 2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
3. **GENERAL REQUIREMENTS:**
 - 3.1 **Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.
 - 3.1.1 **Microwave Digestion System**
 - 3.1.1.1 Microwave Digestion System must have a dual magnetron system with a minimum magnetron output of 950W or equivalent with continuous and PID-controlled microwave emission at all power levels.
 - 3.1.1.2 Microwave Digestion System must have a self resealing pressure responsive door with automatic locking system or equivalent.
 - 3.1.1.3 Microwave Digestion System must be completely corrosion resistant.
 - 3.1.1.4 Microwave Digestion System must have a 24 position high throughput high performance rotor including PTFE-TFM vessels or equivalent with a maximum temperature capability of at least 300°C.

REQUEST FOR QUOTATION
Microwave Digestion System

3.1.1.5 Microwave Digestion System must have a built-in individual temperature and pressure control mechanism for vessels or equivalent.

3.1.1.6 Microwave Digestion System must have installation and training included.

3.1.1.7 The system must be fully operational upon receipt. Delivery of the instrument may be outside of the facility.

3.1.1.8 System must have a minimum warranty of two years on all parts and service.

4. CONTRACT AWARD:

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

4.2 Pricing Page: Vendor should complete the Pricing Page by indicating the Model No./Brand Name along with the Unit Price and Extended Amount. Vendor should complete the Pricing Page in full as failure to complete the Pricing Page in its entirety may result in Vendor's bid being disqualified.

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

5. PAYMENT:

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

REQUEST FOR QUOTATION
Microwave Digestion System

6. DELIVERY AND RETURN:

6.1 Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order. Vendor shall deliver the Contract Items within 12 weeks after receiving a purchase order. Contract Items must be delivered to Agency at West Virginia Department of Agriculture-Moorefield Field Office, R.E.A.D., 60B Industrial Park Road, Moorefield, WV 26836.

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

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

6.3 Delivery Payment/Risk of Loss: Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location.

6.4 Return of Unacceptable Items: If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5 Return Due to Agency Error: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7 VENDOR DEFAULT:

REQUEST FOR QUOTATION
Microwave Digestion System

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

7.1.1 Failure to provide Contract Items in accordance with the requirements contained herein.

7.1.2 Failure to comply with other specifications and requirements contained herein.

7.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

7.1.4 Failure to remedy deficient performance upon request.

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

7.2.1 Immediate cancellation of the Contract.

7.2.2 Immediate cancellation of one or more release orders issued under this Contract.

7.2.3 Any other remedies available in law or equity.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: 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 exceeds 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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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: CEM CORPORATION

Authorized Signature: _____

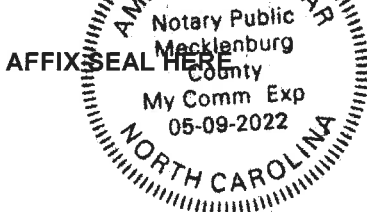
Date: 4/12/2021

State of North Carolina

County of Mecklenburg, to-wit:

Taken, subscribed, and sworn to before me this 12th day of April, 2021

My Commission Expires May 9, 2022



NOTARY PUBLIC Amanda Dolman



CEM Corporation

3100 Smith Farm Road, P.O. Box 200, Matthews, NC 28106- 0200 USA
Phone 800-726-3331 or 704-821-7015 • FAX 704-821-7894

Solicitation No. CRFQ 1400 AGR2100000017

Bid Type Technical

Bid Opening & Time April 13, 2021 at 1:30 PM (ET)



CEM Corporation

3100 Smith Farm Road, P.O. Box 200, Matthews, NC 28106- 0200 USA
Phone 800-726-3331 or 704-821-7015 • FAX 704-821-7894

April 7, 2021

Ms. Jessica Chambers
Agriculture Department of Moorefield Field Office
60B Industrial Park Road
Moorefield, WV 26836

Re: Solicitation # CRFQ 1400 AGR2100000017

Dear Ms. Chambers,

CEM is pleased to respond to Solicitation # CRFQ 1400 AGR2100000017 for a Microwave Digestion System with our MARS™ 6 Microwave Accelerated Reaction System. The MARS™ 6 package can digest a full range of samples including sediment samples. The MARS 6 digestion system we are offering meets or exceeds all technical specifications.

CEM was the first manufacturer of microwave sample preparation equipment and is the world leader in terms of sales and support of these systems. CEM Corporation manufactures this instrument in Matthews, North Carolina and provides the systems and service through representatives directly employed by CEM. CEM would be happy to perform a live or virtual demo with your samples to demonstrate the capabilities of the system and ease of use.

System Specifications	
Microwave Digestion System must have a dual magnetron system with a minimum magnetron output of 950W or equivalent with continuous and PID-controlled microwave emission at all power levels.	The MARS™ 6 system has a total power of 2,000 watts generated by dual magnetron producing 950 watts each. The MARS 6 uses CEM's PowerMAX Technology to automatically maximize the amount of microwave energy to the reaction for a complete digest regardless of the number of vessels and sample size. PowerMAX dynamically adjusts the power throughout the run, providing the control necessary for complete digests, while preventing exothermic reactions.
Microwave Digestion System must have a self resealing pressure responsive door with automatic locking system or equivalent.	The system features a heavy-duty spring-loaded door. If vessel over-pressurization occurs, the system will automatically relieve the pressure with a slight opening of the MARS door. The door will then immediately re-seal via the spring operation. This maintains a safe environment at all times.
Microwave Digestion System must be completely corrosion resistant.	The MARS 6 is corrosion resistant having a large, rugged, high-grade 316 solid stainless steel cavity. The system also features a large multi-layered Teflon® coated cavity.

Microwave Digestion System must have a 24 position high throughput high performance rotor including PTFE-TFM vessels or equivalent with a maximum temperature capability of at least 300°C.	The MARS™ 6 system is designed to be extremely versatile and can accommodate 1-40 vessels at high temperatures and pressures to run a variety of vessel types depending on customer's sample types and throughput. The MARSXpress 75mL TFM Starter Set comes with 24 vessels and a 40-position turntable. The MARSXpress TFM vessels are high throughput/high performance vessels with maximum temperature capabilities of 300°C.
Microwave Digestion System must have a built-in individual temperature and pressure control mechanism for vessels or equivalent.	The MARS 6™ provides contactless, in-situ temperature measurement of each vessel in real-time. This option effectively utilizes up to 40 control vessels, rather than the standard single control vessel. Allows verification of each vessel achieving set-point.
Microwave Digestion System must have installation and training included.	Included in this submission is an installation and training session. The session includes training for users on operation, routine maintenance, and basic applications for the instrument platform. The customer will be trained on the hardware and software of the system. During installation and training, samples are tested to familiarize the customer with system operation and method development.
The system must be fully operational upon receipt. Delivery of the instrument may be outside of the facility.	The MARS 6 system will be fully operational upon receipt.
System must have a minimum warranty of two years on all parts and service.	The system has a warranty of 2 years on all parts and service.

I believe you will find this package to be attractive and competitive. The MARS 6 is designed to be a straightforward and adaptable "plug and play system" featuring a built-in video library which includes training videos. The MARS 6 features onboard One-Touch Technology with over 100 pre-loaded methods, and the ability to create and save custom methods as needed.

CEM has 30 Field Service Technicians strategically located throughout the USA for rapid onsite response as well as 24/7 toll-free telephone technical support. Additionally, CEM offers free application and technical assistance from our analytical chemists for the lifetime of the system.

Enclosed for your review is the MARS™ 6 product brochure. Thank you for your consideration of CEM equipment.

Sincerely,

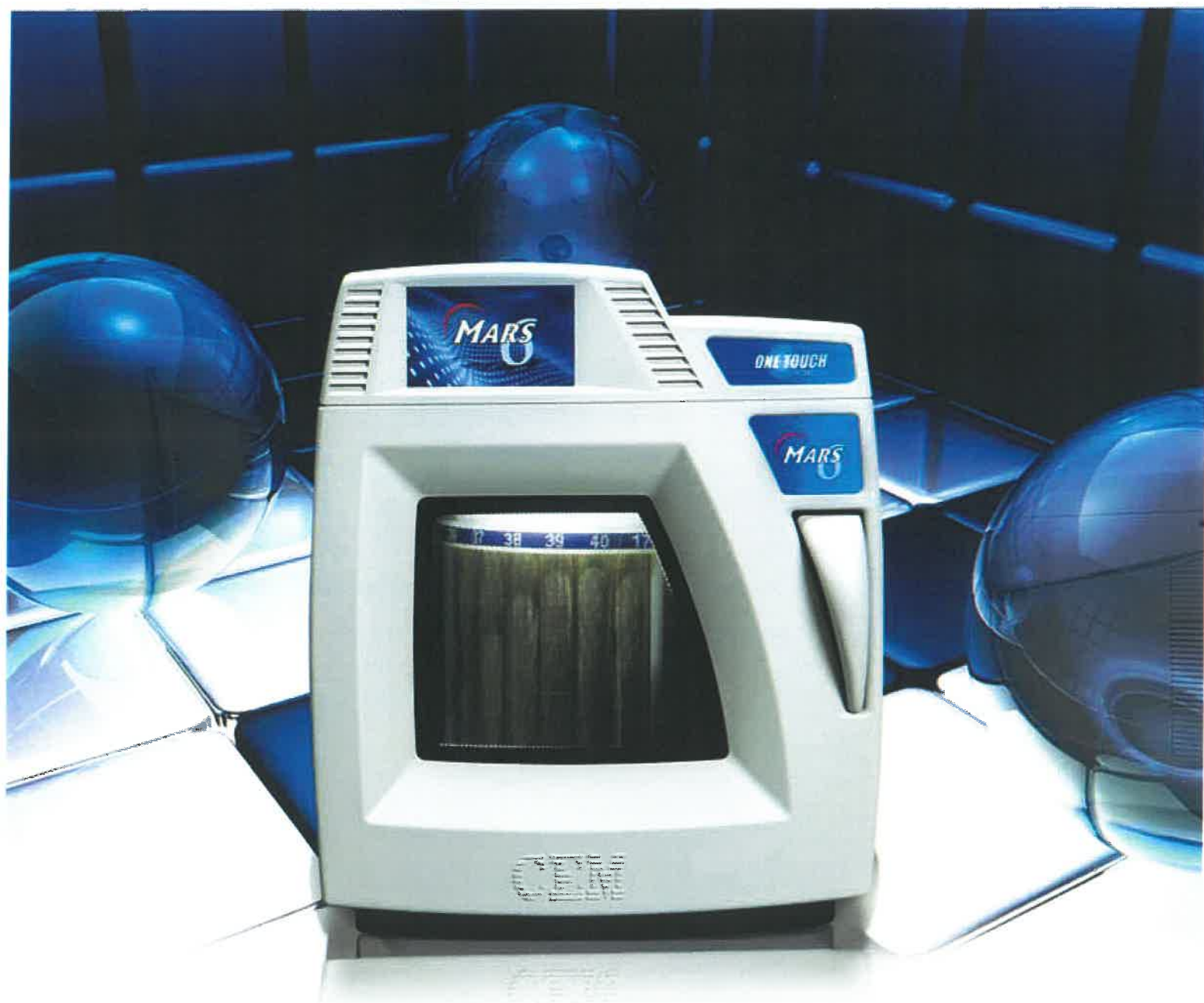
Jennifer B Bryant

Jennifer Bryant
Technical Sales Manager
CEM Corporation
704-821-9366 ext. 1199
jennifer.bryant@cem.com
Enclosures

MARS 6

MICROWAVE REACTION SYSTEM

SOLUTIONS MADE SIMPLE



CEM

Tomorrow's Science Today



Versatility

The MARS 6 is incredibly versatile and can be configured for digestion, extraction, or both. It can also perform a variety of other chemistries including parallel or batch synthesis, hydrolysis, and evaporation/concentration.



CEM brings a remarkable intelligence and ease of use to microwave sample preparation with the new MARS 6 System. Totally redesigned with an impressive list of features and capabilities, MARS 6 was developed to make microwave sample preparation virtually effortless.

- Choose from simple CEM One Touch™ Technology* or MARS Classic method programming
- PowerMAX™ power control technology delivers maximum energy to the sample for more complete digestions
- 1800 Watts - more power delivery than any other microwave digestion system
- Large (7") wide-format, high-resolution, acid-resistant touchscreen – no external controllers needed
- Remarkably easy-to-use, intuitive onboard software
- Advanced sensor technology for vessel recognition, temperature and pressure control
- Improved connectivity – 5 USB, 1 USB-B, 2 Ethernet, 1 RS-232 allow connections to multiple peripherals such as keyboards, printers, or computers

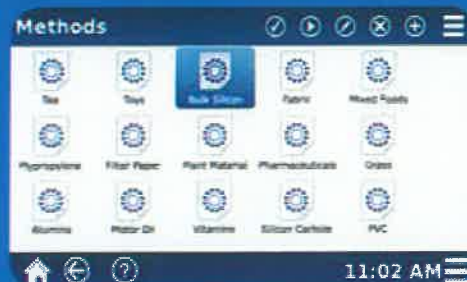
*Worldwide patents pending

Easy as 1, 2, 3

1 LOAD YOUR SAMPLES.



2 CHOOSE YOUR SAMPLE TYPE.



3 Press "Start."



CEM's innovative One Touch Technology does the rest.



MICROWAVE REACTION SYSTEM

Features

HIGH-RESOLUTION, FULL COLOR TOUCHSCREEN WITH SPEAKERS

Large 7" (800 x 480) glass capacitive LED screen serves as controller and display

8-GIGABYTE ONBOARD CONTROLLER

No need for a laptop or external controller

POWERMAX™ POWER CONTROL

Delivers maximum energy to the sample, ensuring complete digestions

ONE TOUCH OR MARS CLASSIC METHOD PROGRAMMING

Select which program is best for you

ACID- AND IMPACT-RESISTANT COMPOSITE SHELL

Better system protection in a laboratory environment than a metal wrap

I/O PORT

Standard 0.500" I.D. port or optional 0.3125" I.D. ports for 6mm tubing allows for introduction of multiple components into the cavity

METHOD LIBRARY

Pre-loaded with USEPA and other internationally recognized methods

DATA AT A GLANCE

Touchscreen interface provides easy access to stored methods, real-time data, results of past runs, and training videos

CONNECTIVITY

Available ports: 5 USB, 1 USB-B, 2 Ethernet, and 1 RS-232

TOUCHSCREEN TRAINING VIDEOS

Learn more about your system, how to use different vessel sets and options, and running samples right on the MARS 6.



INTEGRATED PRINTER

Print graphs and data for documentation

MICROWAVE REACTION SYSTEM

ISOLATION TRANSFORMER

Filters variations of incoming line current to protect electrical components

REACTIGUARD SENSOR

Constantly monitors cavity for vessel problems

SPECIALLY DESIGNED WAVEGUIDES

Ensures microwave uniformity and eliminates the need for motor-driven diffusers or mode stirrers

SEQUENTIAL MAGNETRONS

1800 watts of delivered energy, providing the power needed for difficult samples and high throughput vessel sets

LARGE MULTI-LAYERED TEFLON®-COATED CAVITY

RUGGED, HIGH-GRADE 316 SOLID-STEEL CAVITY

UP TO 40-VESSEL CAPACITY

HEAVY-DUTY, SPRING-MOUNTED, PRESSURE RELIEVING DOOR WITH SAFETY INTERLOCKS

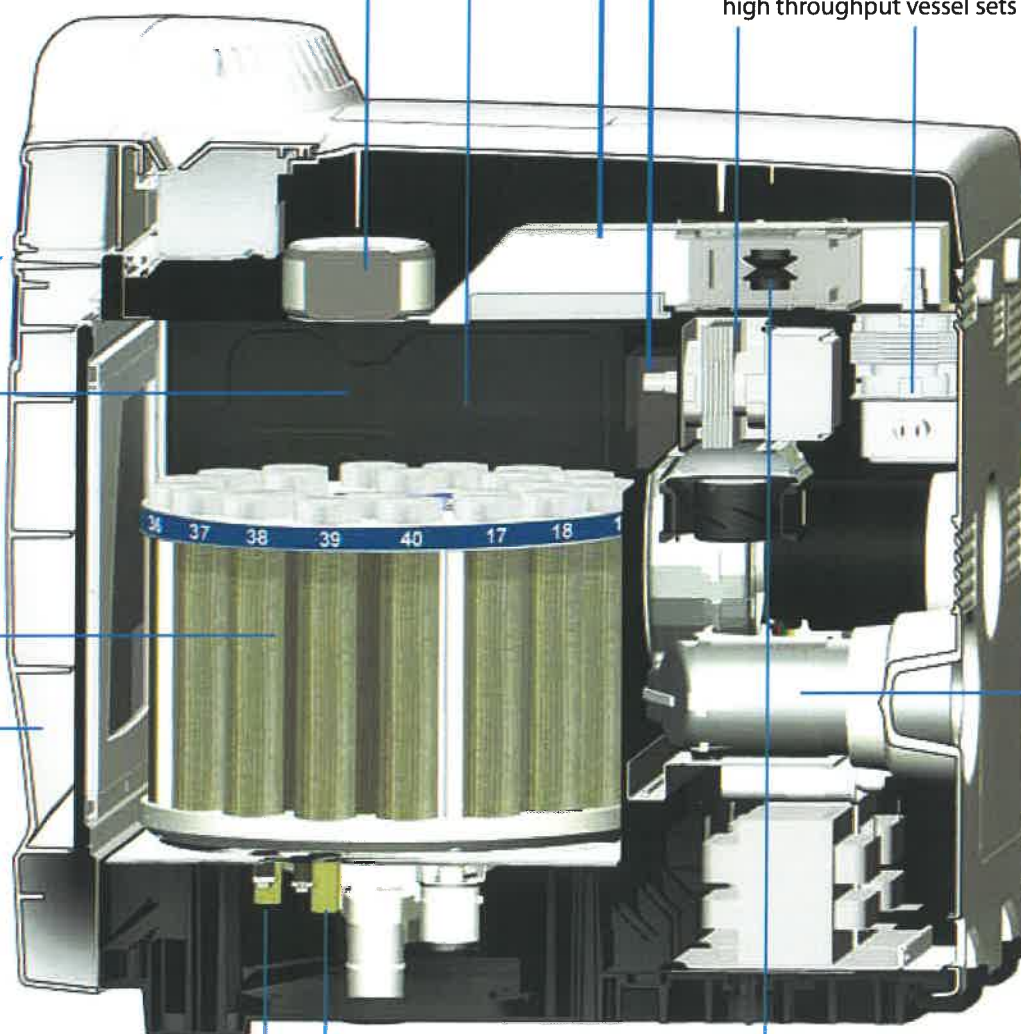
HIGH-CAPACITY EXHAUST

FLOOR-MOUNTED IR SENSORS

- Temperature
- Vessel Recognition
- Vessel Counting

PATENTED ISOLATOR

Absorbs reflected microwave energy prior to reaching magnetron and allows magnetrons to run at 100% power





ONE TOUCH MAKES ALL THE DIFFERENCE

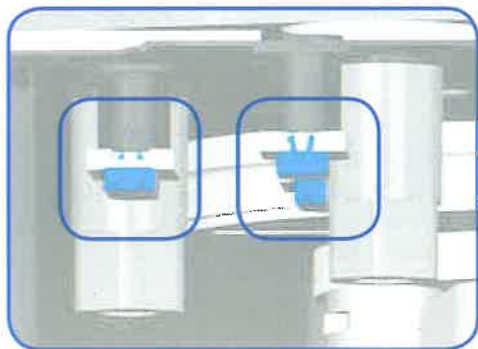
CEM's patent-pending **One Touch Technology** brings intelligent simplicity to microwave sample preparation. It's like having a CEM applications chemist built into the system. CEM's One Touch combines more than 30 years of microwave chemistry experience with today's most advanced software and hardware technologies to give laboratories the easiest-to-use microwave sample preparation system ever designed.

One Touch Methods

CEM's One Touch takes the guess work out of sample preparation. Simply choose from more than 70 preinstalled methods and the MARS 6 does the rest. One Touch automatically determines all of the parameters, adjusts power output, and performs the digestion for all major sample types including environmental and regulatory, foods, plant and animal tissues, inorganic chemicals, oils and plastics, organic compounds, semiconductors, pharmaceuticals, and more.

One Touch Sensor Technology

The MARS 6 features integrated sensor technologies designed to make the system so simple to operate, it's virtually effortless. Located in the top and bottom of the cavity, CEM's One Touch vessel recognition and vessel counting sensors automatically recognize the type and number of vessels that have been placed in the cavity. Based on this information, optimum digestion conditions for sample type and number of vessels are selected and temperature and pressure sensors monitor the reaction and adjust the microwave power to ensure a complete digestion.



One Touch Vessel Technology

One Touch samples can be digested in the MARSPress and EasyPrep families of vessels. The simple-to-use MARSPress and MARSPress Plus are the easiest-to-assemble vessels on the market and are ideal for high-throughput labs. The simplest to assemble high-temperature and high-pressure vessels available are the EasyPrep and EasyPrep Plus, which are well suited for large or difficult applications.

One Touch Sample & Vessel Preparation Technology

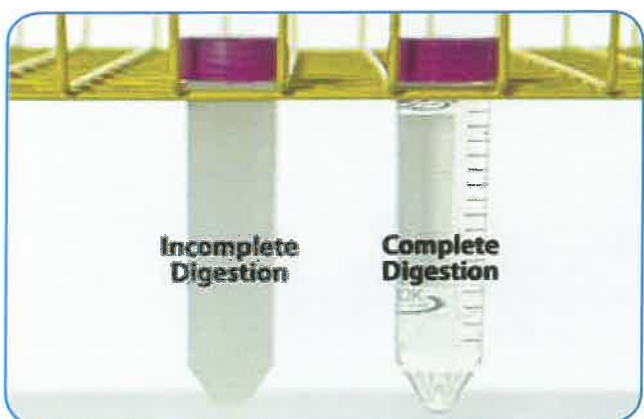
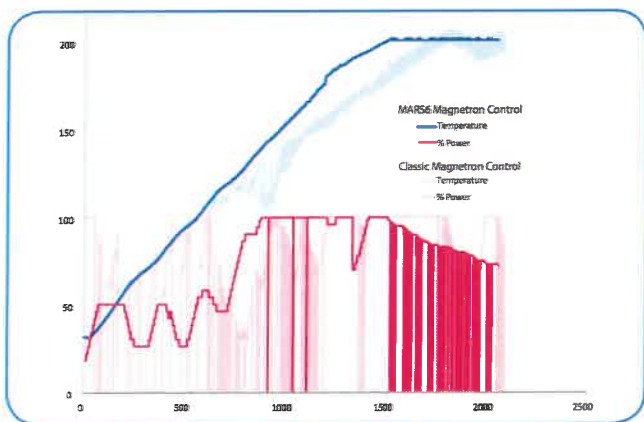
With the MARS 6, operators of all levels will be able to achieve complete digestions of even their most difficult samples. Every One Touch method contains recommendations for sample mass, acid type and volume, and preparation, as well as tips to ensure complete and safe digests every time. The MARS 6 also features onboard training videos for sample preparation, vessel assembly, system use, and maintenance that are viewable on the high resolution touchscreen.



PowerMAX™

Automatic Power Control

Consistent results every time. Traditional microwave systems introduce an excessive amount of power to the sample, causing fluctuations in temperature that result in the magnetron shutting down for significant amounts of time. This frequently results in incomplete digestions. The MARS 6 uses CEM's PowerMAX Technology to automatically maximize the amount of microwave energy to the reaction for a complete digest regardless of the number of vessels and sample size. PowerMAX dynamically adjusts the power throughout the run, providing the control necessary for complete digests, while preventing exothermic reactions.



1800 Watts of Delivered Microwave Energy

The MARS 6 employs sequential magnetrons to precisely deliver an industry-leading 1800 watts to completely digest even the most difficult matrices. These sequential magnetrons work with CEM's PowerMAX Technology to help fine tune and maximize microwave power throughout the runs.

Wave Guide Power Delivery Ensures Microwave Uniformity

CEM engineers designed precisely tuned wave guides for the MARS 6, eliminating the need for motor driven diffusers or attenuators. The MARS 6 wave guides deliver microwave energy directly to the center of the cavity and disperse it uniformly across the vessels, ensuring reproducible results every time.

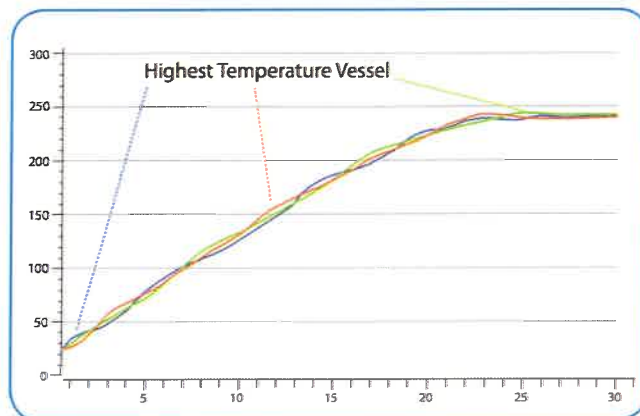
DuoTemp™ Control

DuoTemp & MARSXpress DuoTemp

All Vessel Temperature Control

The patented DuoTemp technology provides the ultimate control by automatically choosing the "Control Vessel" based upon reaction conditions. The control vessel will dynamically change during the run to always control the temperature based on the most reactive vessel, providing reproducible, safe digests every time without excessive venting or exothermic reactions. DuoTemp's combination of fiber optic and IR temperature sensors with the innovative built-in software controls of the MARS 6 creates a temperature control option that is unmatched.

Control Vessel Shifts to Most Reactive



Patented DuoTemp Control automatically measures the temperature in each vessel and dynamically controls the run based on the most reactive vessel.

SENSORS AND CONTROLS

CEM offers a complete line of sensors and control options to meet the sample preparation needs of your laboratory.

Direct Fiber Optic Temperature Sensor of the Reference Vessel

The fiber optic temperature probe is the gold standard in temperature measurement. Unlike metal thermocouples, which can self-heat in the microwave and give imprecise readings, CEM's fiber optic temperature probe provides accurate measurement every time. An optional NIST-traceable fiber optic temperature probe is also available.

Single Vessel Reference Pressure Sensor

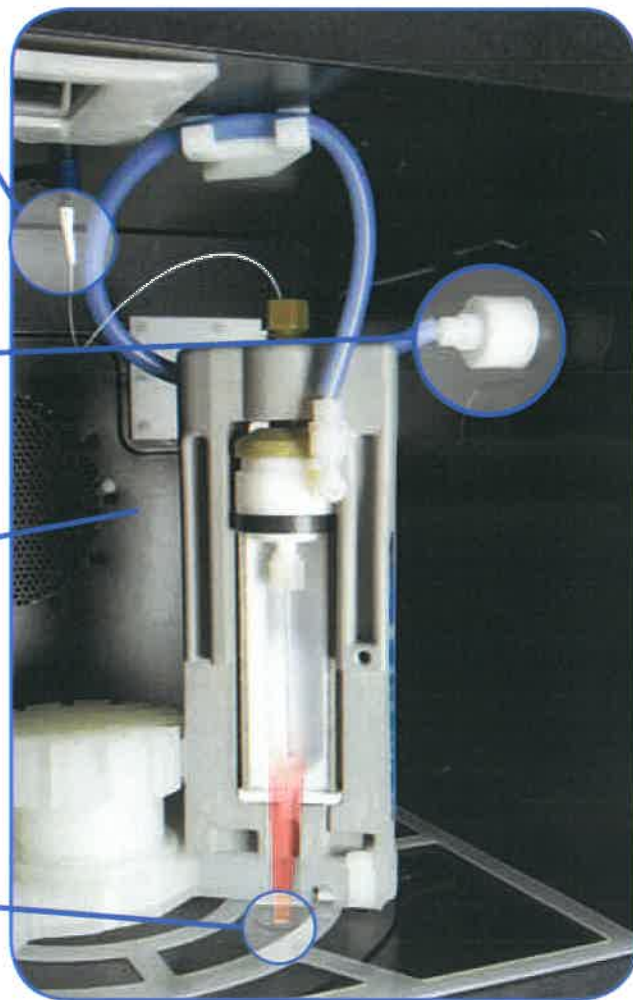
Accurate and simple to use, the ESP-1500 Plus is a simple pop-in device that can be immediately removed from the cavity after the run for fast processing of multiple vessel racks. It measures and controls pressure up to 1500 psi.

Contactless Pressure Sensor

CEM's UPS Sensor provides pressure control for every vessel by monitoring the exhaust system. This controller is not limited to NO_x fumes, but can identify small quantities of all acid vapors. It will automatically reduce power or turn off the magnetron based upon the concentration of gas in the cavity.

Contactless All-Vessel Temperature Sensors

The MARS 6 features patented, NIST-traceable, calibrated, dual IR sensors with the shortest path length to the vessel, ensuring more accurate readings and better control than systems with side-mounted IR sensors.



SOFTWARE CONTROL & FLEXIBILITY

The MARS 6 can be controlled using the onboard touchscreen interface.

Simple Method Programming

MARS 6 gives you the flexibility to select the method programming style which best suits your needs. With over 70 to choose from, One Touch methods take the guess work out of sample preparation by automatically determining the digestion parameters and performing the digestion. If you need to set your own method parameters, you can choose a Classic Method and quickly develop a program that contains your unique method parameters. The choice is yours.

Graphical Output

The large, high-resolution, full color touchscreen provides a convenient, built-in interface. Easily monitor an active run from the graphical output of the touchscreen. Navigate between screens to view temperature, pressure, and microwave power, or view the relative temperature of all vessels with the temperature viewer.

Easily Manage System Settings

The Tools and Settings menus can be easily accessed from anywhere in the software. Set up Administrator and User login privileges, check and calibrate temperature and pressure sensors, and customize your MARS 6 by selecting from seven language settings.

Data Management

Data management is easy with the MARS 6. Import or export methods, instrument settings, and data using any of the 6 USB ports or print results and reports with the internal printer or by connecting to an external printer.

Onboard Help and Training Videos

Have a question about your MARS 6 or vessel assembly? Watch detailed training videos or access the Operator's Manual right on the touchscreen of the MARS 6.



MICROWAVE REACTION SYSTEM

VESSEL TECHNOLOGY

As the proven innovator in CAD-designed vessel technology, CEM led the way with the original patented vent-and-reseal vessel for our first generation MDS-81D in 1985. Since then, we have designed and improved upon a wide variety of vessels for an array of chemistries. Our revolutionary open architecture, closed vessel design cools faster than any other microwave vessel — no need for chillers, water baths or external cooling systems — and our composite vessel sleeves give added strength, ensuring that you can depend on CEM vessels to be strong and effective. Our newest vessel designs continue to improve upon our vent-and-reseal technology, providing the most reliable mechanism available without the cost or maintenance of springs or membranes.

Vessels for CEM's One Touch Technology

The introduction of the MARS 6 adds two new vessels to the CEM line of microwave digestion accessories. These vessels may be utilized with CEM's One Touch Methods or MARS Classic Methods.



MARSXpress™ & MARSXpress™ Plus

The easiest-to-use, high-throughput vessel on the market, this patented three-piece vessel assembles in seconds. The open turntable design and composite sleeves allow for quick cooling. MARSXpress









EasyPrep™ & EasyPrep™ Plus

The gold standard in high-temperature, high-pressure reaction vessels. Simple-to-use EasyPrep vessels have fewer pieces to assemble and do not require membranes or springs for reliable pressure control.

vessels have a self-regulating pressure control to eliminate the risk of over pressurization. MARSXpress vessels work in conjunction with CEM's patented Contactless All-Vessel Temperature Control and now MARSXpress Plus with DuoTemp combines the fiber optic and IR temperature sensors in a high throughput format.

Process up to 12 samples simultaneously. EasyPrep vessels feature a control cover with an integrated thermowell for an all TFM-wetted surface, while EasyPrep Plus vessels feature a control cover that utilizes a sapphire thermowell for greater temperature control.

MARS 6 Digestion Vessels

						
	MARSXpress TFM	MARSXpress PFA	MARSXpress Plus	MARSXpress Plus w/ DuoTemp	EasyPrep	EasyPrep Plus
Number of Vessels	8 to 40	8 to 40	8 to 24	1 to 24	1 to 12	1 to 12
Temperature Control	IR	IR	IR	IR and Fiber Optic	IR and Fiber Optic	IR and Fiber Optic
Thermowell	n/a	n/a	n/a	Sapphire	TFM-encased Sapphire	Sapphire
Liner Material	TFM	PFA	TFM	TFM	TFM	TFM
Volume	55 mL	10, 20, 55, or 75 mL	110 mL	110 mL	100 mL	100 mL
Max Design Pressure	1020 psi/70 bar	1020 psi/70 bar	1020 psi/70 bar	1020 psi/70 bar	2040 psi/141 bar	2040 psi/141 bar
Max Pressure	500 psi/35 bar	500 psi/35 bar	500 psi/35 bar	500 psi/35 bar	1500 psi/103 bar	1500 psi/103 bar
Max Design Temperature	310 °C	260 °C	310 °C	310 °C	310 °C	310 °C
Max Temperature	260 °C	230 °C	260 °C	260 °C	310 °C	310 °C
HF Resistant	yes	yes	yes	yes	yes	yes
Typical Applications	Plant materials, animal tissues, foods, fertilizers, feed grains, ores, filters, pharmaceuticals, some precious metals and alloys, polyethylene, propylene, and extractions, soils, motor oil, mixed edible oils, polymers, wastewater				MARSXpress samples plus ceramics, soils, precious metals and alloys, oils, plastics, electrical boards, coal, slags, high-temperature inorganics, & more.	



MARS Classic Vessel Technology

Designed with flexibility in mind, MARS 6 also runs all previous vessels from the CEM MARS and MDS vessel families.

Service & Support

All CEM Systems are backed by our experienced applications support team and award-winning service department. CEM's factory-trained field technicians and in-house service team are well known in the industry for their prompt response and problem-solving capabilities.

About CEM

Since 1978, CEM has been the world's leading provider of microwave laboratory systems with a complete portfolio of award-winning instruments and industry-leading, CAD-designed technology for the analytical laboratory, synthetic chemistry, bioscience, and process control markets.

CEM systems can be found in Fortune 500 companies, leading universities, and research facilities around the world. From ceramics to organic materials to moon rocks, chances are we already have an application method for your sample. If not, we will work diligently with you to solve any of your sample preparation questions. Our commitment to you does not end when your system is shipped; it begins.



SPECIFICATIONS

Overall Instrument Dimensions	63.5 cm (25 in.) height x 53.3 cm (21 in.) width X 63.5 cm (25 in.) depth
Weight	63.6 kg (140 lbs.)
Touchscreen	7" (800 x 480) TFT-LED glass capacitive touchscreen display
One Touch	A combination of vessel recognition and vessel counting sensor technology, software technology, and applications knowledge that enables a user to select a One Touch method that matches their sample type. Based on the sample type, One Touch Technology determines the vessel type and count, digestion temperature, ramp and hold times, and microwave power input.
PowerMAX	Power control technology provides the maximum amount of energy to the sample to ensure complete digestions.
Ports	5 USB, 1 USB-B, 2 Ethernet, 1 RS-232
Sensors	All sensors, including pressure and temperature sensing devices located within the microwave cavity, are microwave-transparent or shielded to ensure accurate readings and to eliminate arcing (ignition) hazards.
Languages	Software available in English, German, French, Italian, Spanish, Chinese, and Japanese.
Sample Stirring	In-vessel magnetic stirring of samples at three levels of speed.
Turntable Design	PerfectCircle™ design provides absolute radial symmetry. Turntable operates in alternating or continuous mode.
Inlet/Outlet Ports	Standard 0.500" I.D. port or optional 0.3125" I.D. ports for 0.250" (6mm) tubing
Microwave Cavity	Heavy-duty, multi-layer Teflon® coating
Electrical Requirements	200/208/230 VAC (200-253 VAC), 60 Hz, 15A @ 230 VAC 220/240 VAC (202-250 VAC), 50 Hz, 15A @ 240 VAC
Magnetron Frequency	2455 MHz
Power Output	1800 W – Continuous power available at all power levels to provide more control for reactions. (IEC 705 Method – 1988)
Magnetron Protection	Solid-state isolator (US patent 4,835,354) to protect magnetron from reflected energy, ensuring constant power output.
Speakers	8 Ω, 2 W, 86 dB
Printer	Onboard thermal printer and USB-B compatible printer port
Safety Features	Three independent door safety interlocks, including an interlock monitoring system plus three independent thermal switches, are used in each instrument to prevent instrument operation and microwave emissions in case of improper door closure or misalignment. The instrument complies with HHS standards under 21 CFR, Part 1030.10, Subparts (C)(1), (C)(2) and (C)(3). Reactiguard continuously monitors the cavity and disables the magnetron if disturbances occur inside the cavity.
Emissions and Safety Approvals	Europe/Global Community Conforms to EN61010-1 (Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use Part 1) Conforms to EN61326-1 (EMC requirements for Electrical, Control and Laboratory Use) United States Complies with FCC Part 18 regulations (47CFR part 18: Industrial, Scientific and Medical Equipment) US Safety Approval to UL61010-1 (ETL Testing Laboratories) Canada Complies with FCC Part 18 regulations (47CFR part 18: Industrial, Scientific and Medical Equipment) Canadian Safety Approval to CAN/CSA C22.2 No. 61010.1
Patents	CEM microwave systems and vessel designs may be covered by any one of the following US patents: 04835354, 04080168, 05369034, 04672996, RE034373, 05230865, 04877624, 04672996, 05206479, 05427741. Other patents pending.

Teflon® is a registered trademark of DuPont. TFM® is a registered trademark of Hoechst A.G.

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