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## Header 2

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

Procurement Folder: 1037558

Procurement Type: Central Purchase Order

Vendor ID: VS0000040902

Legal Name: Cannon Instrument Company

Alias/DBA:

Total Bid: \$44,205.52

Response Date: 07/07/2022

Response Time: 13:22

Responded By User ID: Cannon2022

First Name: George

Last Name: Callahan

Email: gcallahan@cannoninstrumer

Phone: 8006766232

SO Doc Code: CRFQ

SO Dept: 0803

SO Doc ID: DOT2300000003

Published Date: 7/6/22

Close Date: 8/3/22

Close Time: 13:30

Status: Closed

Solicitation Description: ADDENDUM NO\_1 Bending Beam Rheometer (7722021)

Total of Header Attachments: 2

Total of All Attachments: 2



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

State of West Virginia  
Solicitation Response

**Proc Folder:** 1037558  
**Solicitation Description:** ADDENDUM NO\_1 Bending Beam Rheometer (7722021)  
**Proc Type:** Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2022-08-03 13:30	SR 0803 ESR07072200000000116	1

**VENDOR**  
VS0000040902  
Cannon Instrument Company

**Solicitation Number:** CRFQ 0803 DOT23000000003  
**Total Bid:** 44205.51999999999679857864975 **Response Date:** 2022-07-07 **Response Time:** 13:22:50  
**Comments:**

**FOR INFORMATION CONTACT THE BUYER**  
John W Estep  
304-558-2566  
john.w.estep@wv.gov

<b>Vendor</b>		
<b>Signature X</b>	<b>FEIN#</b>	<b>DATE</b>

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Bending Beam Rheometer	1.00000	EA	44205.520000	44205.52

Comm Code	Manufacturer	Specification	Model #
41112502			

**Commodity Line Comments:**

**Extended Description:**

Bending Beam Rheometer

CANNON Instrument Company  
2139 High Tech Road  
State College PA 16803-1733  
UNITED STATES



Phone: 814-353-8000  
Fax: 814-353-8007

Quote Number: 91397

QUOTE

Page: 1 of 2

<b>Quote To:</b> Shawn Jack West Virginia D.O.T. 190 Dry Branch Dr Charleston WV 25306-6616 UNITED STATES  <b>Phone:</b> 304-282-1532 <b>Fax:</b> <b>Email:</b> shawn.d.jack@wv.gov	<b>Date:</b> 2/23/2022 <b>Expires:</b> 8/7/2022 <b>Reference:</b> <b>Sales</b> Mike Fogarty <b>Email:</b> MFogarty@cannoninstrument.com <b>Phone</b>
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*The unit requires a computer for operation. This may be purchased from Cannon or supplied by your company.*

**TO ORDER:**

*Place your POs with our Order Entry Dept, AND reference the quote/proforma number, at:*

**SALES@CANNONINSTRUMENT.COM**

*Phone: 814-353-8000*

*Fax 814-353-8007*

*If your company is tax exempt, please send the certificate with your PO*

*Refer to the quote number when placing your order.*

*INCO Terms 2020*

*EXW: Charleston, WV via TForce Trucking*

*Ships approx. within: 4-6 Weeks ARO*

*Terms: Net 30 Days*

*US Dollars*

Line	Part	Description	Expected Qty	Unit Price	Ext. Price
1	9728-V30	TE-BBR SD THERMO BEND BEAM 115V 50/60 Hz	1.00EA	38,891.99	38,891.99
2	93.6000	Mini Shuttle PC w/Windows 10 Professional, PCIe ports, monitor, and	1.00EA	2,369.52	2,369.52

**QUOTE - Miscellaneous Charge -**

Description	Ext. Price
1.) Install/Training	2,650.00
2.) Freight Charge	294.01

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Page: 2 of 2

Lines Total	41,261.51
Line Miscellaneous Charges	0.00
Quote Miscellaneous Charges	2,944.01
Quote Total	44,205.52

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.  
-Cannon Instrument Company

CANNON TE-BBR SD is a thermoelectrically cooled bending beam rheometer for testing flexural creep of asphalt binders from ambient to  $-40^{\circ}\text{C}$  ( $\pm 0.03^{\circ}\text{C}$ ). A crack seal option provides for low temperature characterization of crack seal "creep" under load for 0.5 inch thick specimens.

TE-BBR SD meets or exceeds ASTM, AASHTO and SHRP provisions for flexural creep testing of asphalt binders.

#### Common Applications

- Flexural creep of asphalt binders
- Low temperature characterization of crack seal under load

# TE-BBR SD

## Thermoelectric Bending Beam Rheometer

For Low Temperature Flexural Creep Testing of Asphalt Binders  
ASTM D6648; AASHTO T 313, SHRP Binder Provisions

### Product Features & Benefits

#### Precise, Repeatable Results

- Meets or exceeds ASTM, AASHTO and SHRP requirements for low temperature flexural creep testing of asphalt binders including ASTM D6648 and AASHTO T 313
- Instrument sample supports feature specimen support strips  $3\text{ mm} \pm 0.30\text{ mm}$  in top radius
- Temperature range: ambient to  $-40^{\circ}\text{C}$ . Temperature stability:  $\pm 0.03^{\circ}\text{C}$  with resolution of  $\pm 0.01^{\circ}\text{C}$ .
- Resolves specimen beam deflection to  $0.155\text{ }\mu\text{m}$  ( $1,550\text{ }\text{\AA}$ )
- Resolves force to within  $0.147\text{ mN}$  ( $0.015\text{ g}$ )

#### Reliable and Versatile Performance

- Installed instruments in operation in asphalt testing labs throughout the world
- Performance verified through ASTM round-robin testing
- Pneumatic pressure regulators allow operator to adjust pressure on main input line, air bearing and load shaft support
- Capable of measuring specimen beam loads from  $0\text{ g}$  to  $450\text{ g}$
- Instrument provided with factory-calibration in an ISO 9001-registered laboratory
- Digital thermometer and probe included with instrument purchase, along with a one year warranty

#### Simple, Automated Testing

- Easy to use Windows-based operational software (included) controls the entire testing process and provides a visual display of stress and strain
- Simple data transfer via USB
- Reports and graphs can be printed on any Windows® compatible printer

#### Compact, Self-Contained Unit

- TE-cooled with solid-state Peltier elements. Requires no pressurized coolants (a separate air-water heat exchanger is included) and is environmentally friendly.
- An integrated, self-contained bath cools using methanol or ethanol as the bath medium.



2139 High Tech Road | State College | PA | 16803  
800-676-6232 | 814-353-8000 | Fax 814-353-8007

sales@cannoninstrument.com | cannoninstrument.com

# TE-BBR SD Thermoelectric Bending Beam Rheometer

## Ordering Information

TE-BBR SD Thermoelectric Bending Beam Rheometer consists of the bending beam rheometer with load unit, air/water heat exchanger, a complete precision calibration kit, a set of 6 aluminum molds with mylar separators, a digital thermometer with probe and data storage/management software. Computer sold separately.

Description	Part #
100 VAC, 50/60 Hz	9728-V31
120 VAC, 50/60 Hz	9728-V30
240 VAC, 50/60 Hz	9728-V35

## Accessories & Consumables

Description	Part #
TE-BBR SD precision calibration kit (D6648 update): rugged carrying case containing a high precision gage block, precision-cut stainless steel thin beam and NIST-traceable calibration certificates	9728-V63
Complete TE-BBR SD precision calibration kit: rugged carrying case containing a high precision gage block, precision-cut stainless steel thin beam, ¼" compliance beam, four 100 g weights and NIST-traceable calibration certificates	9728-V60
Silicone rubber mold for TE-BBR SD: simplifies the procedure for making asphalt beams	9728-V40
Aluminum mold for TE-BBR SD: simplifies the procedure for making asphalt beams	44.6200
Aluminum molds (6) for TE-BBR SD: simplifies the procedure for making asphalt beams	44.6205
Crack seal kit: includes set of 6 modified beam supports, thin and thick beam (for calibration), installation hardware and documentation	44.0675
Crack seal mold for TE-BBR SD	44.6262
Crack seal molds (set of 6) for BBR	44.6263
Plastic strip set: 12 each ¾" strips and 24 each ½" strips	44.6250
Strip, ½" x 7" Plastic	44.6250.2
Strip ¾" x 6 ½" Plastic	44.6250.3
Strip 1" x 7" Plastic	44.6260

## Product Specifications

Dimensions (W x D x H)	<b>Control Unit</b> 73.7 cm x 71.1 cm x 55.9 cm (29 in x 28 in x 22 in) <b>Load Unit</b> 58.4 cm x 48.3 cm x 68.6 cm (23 in x 19 in x 27 in) <b>Air/Water Heat Exchanger</b> 49.5 cm x 40.6 cm x 48.3 cm (19.5 in x 16 in x 19 in) *add 15 cm (6 in) to front and rear dimensions for connection and airflow allowance
Weight	<b>Control Unit:</b> 49.9 kg (110 lb) <b>Load Unit:</b> 15.9 kg (35 lb) <b>Air/Water Heat Exchanger:</b> 68.0 kg (150 lb)
Shipping dimensions (W x D x H)	<b>Control &amp; Load Units</b> 101.6 cm x 81.3 cm x 121.9 cm (40 in x 32 in x 48 in) <b>Air/Water Heat Exchanger</b> 61.0 cm x 53.3 cm x 66.0 cm (24 in x 21 in x 26 in)
Shipping weight (with all items)	136.4 kg (300 lb)
Max. throughput	6 results per hour
Sample capacity	1
Flexural creep stiffness range	20 MPa to 1 GPa
Sample supports	Specimen support strips 3 mm ± 0.30 mm in top radius
Bath volume	5 L (1.33 gal)
Temperature range	Ambient to -40 °C (± 0.03 °C stability; ± 0.01 °C resolution)
Sample dimensions	12.7 mm x 6.35 mm x 127 mm (0.5 in x 0.25 in x 5 in)
Operating conditions	15 °C to 30 °C, 10% to 75% relative humidity (non-condensing), Installation Category II; Pollution Degree 2
Electrical specifications	120 VAC, 50/60 Hz; 240 VAC, 50/60 Hz; 1,800 watts power consumption
Compliance	CE Mark; EMC directive (2004/108/EC); Low voltage directive (2006/95/EC); HI-POT (1900 VDC, 60 sec.); ROHS
Data output	USB

CANNON Instrument Company\* provides a variety of physical property testing equipment and consumables (vials, bath fluids, and reference materials) for your testing needs. To learn more, contact [sales@cannoninstrument.com](mailto:sales@cannoninstrument.com).



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