



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

Header 4

General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 725336

Procurement Type: Central Purchase Order

Vendor ID: VS0000007072

Legal Name: American Ecotech, LC

Alias/DBA:

Total Bid: \$36,020.40

Response Date: 05/19/2020

Response Time: 17:27

SO Doc Code: CRFQ

SO Dept: 0313

SO Doc ID: DEP2000000037

Published Date: 5/11/20

Close Date: 5/26/20

Close Time: 13:30

Status: Closed

Solicitation Description: Continuous Sulfur Dioxide (SO2) Analyzers DAQ20-10

Total of Header Attachments: 4

Total of All Attachments: 4



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

**State of West Virginia
 Solicitation Response**

Proc Folder : 725336

Solicitation Description : Continuous Sulfur Dioxide (SO2) Analyzers DAQ20-10

Proc Type : Central Purchase Order

Date issued	Solicitation Closes	Solicitation Response	Version
	2020-05-26 13:30:00	SR 0313 ESR0519200000006806	1

VENDOR
VS0000007072 American Ecotech, LC

Solicitation Number: CRFQ 0313 DEP2000000037

Total Bid : \$36,020.40 **Response Date:** 2020-05-19 **Response Time:** 17:27:14

Comments:

FOR INFORMATION CONTACT THE BUYER
 Guy Nisbet
 (304) 558-2596
 guy.l.nisbet@wv.gov

Signature on File	FEIN #	DATE
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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	Continuous Sulfur Dioxide (SO2) Analyzers Model T100 or equa	2.00000	EA	\$11,947.400000	\$23,894.80

Comm Code	Manufacturer	Specification	Model #
41113100			

Extended Description : (2) Continuous Sulfur Dioxide (SO2) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100 or equal. If bidding an or equal vendor MUST identify by Brand and Model at time bid submission.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Continuous Sulfur Dioxide (SO2) Analyzers Model T100U or equ	1.00000	EA	\$12,125.600000	\$12,125.60

Comm Code	Manufacturer	Specification	Model #
41113100			

Extended Description : (1) Continuous Sulfur Dioxide (SO2) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100U or equal. If bidding an or equal vendor MUST identify by Brand and Model at time bid submission.



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

State of West Virginia
 Request for Quotation
 23 – Laboratory

Proc Folder: 725336

Doc Description: Continuous Sulfur Dioxide (SO2) Analyzers DAQ20-10

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2020-05-11	2020-05-26 13:30:00	CRFQ 0313 DEP2000000037	1

BID RECEIVING LOCATION


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

VENDOR

Vendor Name, Address and Telephone Number:
 American Ecotech L.C.
 100 Elm Street, Factory D
 Warren, RI 02885
 401-247-0100

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
 (304) 558-2596
 guy.l.nisbet@wv.gov

Signature X  FEIN # 02-0596781 DATE May 19, 2020

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

ADDITIONAL INFORMATION:

Request for Quotation
(WV DEP Sulfur Dioxide Analyzer)

In accordance with WV Code 5A-3, The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Environmental Protection, Division of Air Quality to establish a contract for the one-time purchase of three (3) Continuous Sulfur Dioxide (SO2) Analyzers with expendable supplies per the bid requirements, specifications and terms and conditions as attached hereto.

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 601 57TH ST SE CHARLESTON WV25304 US		ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 131A PENINSULA ST WHEELING WV 26003 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Continuous Sulfur Dioxide (SO2) Analyzers Model T100 or equa	2.00000	EA	\$11,947.40	\$23,894.80

Comm Code	Manufacturer	Specification	Model #
41113100	Ecotech	Serinus 50 SO2 Analyzer	E020050

Extended Description :

(2) Continuous Sulfur Dioxide (SO2) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100 or equal. If bidding an or equal vendor MUST identify by Brand and Model at time bid submission.

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 601 57TH ST SE CHARLESTON WV25304 US		ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 601 57TH ST SE CHARLESTON WV 25304 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Continuous Sulfur Dioxide (SO2) Analyzers Model T100U or equ	1.00000	EA	\$12,125.60	\$12,125.60

Comm Code	Manufacturer	Specification	Model #
41113100	Ecotech	Serinus 50T SO2 Trace Analyzer	E020050Trace

Extended Description :

(1) Continuous Sulfur Dioxide (SO2) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100U or equal. If bidding an or equal vendor MUST identify by Brand and Model at time bid submission.

DEP2000000037	Document Phase Final	Document Description Continuous Sulfur Dioxide (SO2) Analyzers DAQ20-10	Page 3 of 3
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: American Ecotech LC Address: 100 Elm Street, Factory D
Warren, RI 02885

Name of Authorized Agent: Andrew Tolley Address: 100 Elm St., Factory D, Warren RI 02885

Contract Number: Solicitation #CRFQ 0313 DEP2000000037 Contract Description: Continuous Sulfur Dioxide Analyzers

Governmental agency awarding contract: WV Environmental Protection Division of Air Quality

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

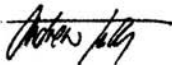
2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

Ambient Monitoring Technologies

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

Signature: 

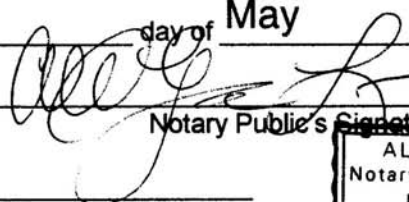
Date Signed: May 19, 2020

Notary Verification

State of Rhode Island, County of Bristol:

I, Andrew Tolley, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 19 day of May, 2020.

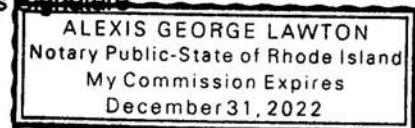

Notary Public's Signature

To be completed by State Agency:

Date Received by State Agency: _____

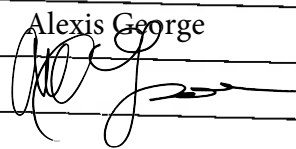
Date submitted to Ethics Commission: _____

Governmental agency submitting Disclosure: _____



WV DEP Sulfur Dioxide Analyzers - Exhibit A Pricing Page

ITEM	SPEC. REF. #	DESCRIPTION	Brand/Model Bid if 'or Equal'	UNIT of MEASURE	QUANTITY	UNIT COST	EXTENDED COST
1	3.1.2	Continuous Sulfur Dioxide (SO ₂) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100 or equal	Ecotech Serinus 50 SO2 Analyzer	each	2		0.00
2	3.1.3	Continuous Sulfur Dioxide (SO ₂) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100U or Equal	Ecotech Serinus 50T SO2 Trace Analyzer	each	1		0.00
TOTAL BID AMOUNT							0.00

Company: American Ecotech LC
 Name: Alexis George
 Signature: 

Date: May 19, 2020

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(f), 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.

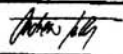
"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' 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 §81-5-3) 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: American Ecotech L.C.

Authorized Signature:  Date: May 20, 2020

State of Rhode Island

County of Bristol, to-wit:

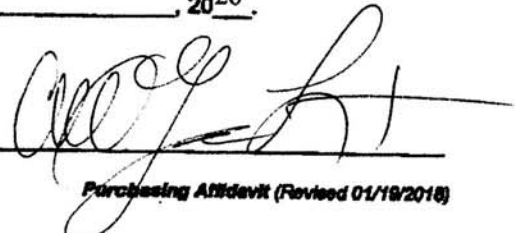
Taken, subscribed, and sworn to before me this 19 day of May, 2020.

My Commission expires December 31, 2022.

AFFIX SEAL HERE

ALEXIS GEORGE LAWTON Notary Public-State of Rhode Island My Commission Expires December 31, 2022

 NOTARY PUBLIC


Purchasing Affidavit (Revised 01/19/2018)

VENDOR PREFERENCE CERTIFICATE

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

1. **Application is made for 2.5% vendor preference for the reason checked:**
____ Bidder is an individual resident vendor and has resided continuously in West Virginia, or bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia, for four (4) years immediately preceding the date of this certification; **or**,
____ Bidder is a resident vendor partnership, association, or corporation with at least eighty percent of ownership interest of bidder held by another entity that meets the applicable four year residency requirement; **or**,
____ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,
2. **Application is made for 2.5% vendor preference for the reason checked:**
____ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,
3. **Application is made for 2.5% vendor preference for the reason checked:**
____ Bidder is a nonresident vendor that employs a minimum of one hundred state residents, or a nonresident vendor which has an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia and employs a minimum of one hundred state residents, and for purposes of producing or distributing the commodities or completing the project which is the subject of the bidder's bid and continuously over the entire term of the project, on average at least seventy-five percent of the bidder's employees or the bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years and the vendor's bid; **or**,
4. **Application is made for 5% vendor preference for the reason checked:**
____ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,
5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
____ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,
6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
____ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.**
____ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.
8. **Application is made for reciprocal preference.**
____ Bidder is a West Virginia resident and is requesting reciprocal preference to the extent that it applies.

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

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

Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: American Ecotech L.C.

Signed: 

Date: May 18, 2020

Title: Administrative Assistant



Air Pollution Monitoring Systems

426 Metacom, Factory D (PO Box 311), Warren RI 02885
 EIN: 02-0596781
 Tel : 401-247-0100 , Fax : 401-537-9166
 Email : sales@AmericanEcotech.com
 Web : www.AmericanEcotech.com

Quotation

Date	Estimate #
5/18/2020	M14247

Purchaser
West Virginia Dept of Env. Protection Division of Air Quality 601 57th Street, SE Charleston, WV 25304 ATTN: Guy Nisbet (304-558-2596)

Item	Description	Qty	U/M	Per Unit	Total
	Response to Solicitation #CRFQ 0313 DEP2000000037.				
Serinus 50 Group					
E020050	SERINUS 50 SO2 ANALYZER (NON-TRACE): Ecotech Serinus 50 Sulfur Dioxide (SO2) analyzer with particulate filter (USEPA Equivalency Method EQSA-0809-188). Ability for analog signal output and internal scrubber also included (no external scrubber necessary).	2		10,312.00	20,624.00
E020101	PCA (Ethernet) Network Port for data download and remote control. Above analyzer also includes USB, RS232, MODBUS, Bluetooth, and analog as standard.	2		190.00	380.00
E020106	Internal Pump Option, for Serinus 50 analyzers.	2		1,090.00	2,180.00
	SUB-TOTAL				23,184.00
Equipmt Disc 5%	5% discount on above line items.			-5.00%	-1,159.20
E020204	Annual Maintenance Kit for Serinus 50 SO2 analyzers.	2		267.00	534.00
F010006-03	5 Micron filter element 47mm (25 ea.) for Serinus series analyzers.	4		201.00	804.00
C050014	Desiccant, 5 gram pack.	24		3.00	72.00
P031005	Internal pump repair kit.	2		130.00	260.00
Shipping-Std	Packing, shipping, and insurance.	2		100.00	200.00
	SUBTOTAL SERINUS 50 SO2 ANALYZER (NON-TRACE):				23,894.80
Serinus 50 Group					
E020050	SERINUS 50 SO2 ANALYZER (TRACE): Ecotech Serinus 50 Sulfur Dioxide (SO2) analyzer with particulate filter (USEPA Equivalency Method EQSA-0809-188). Ability for analog signal output and internal scrubber also included (no external scrubber necessary).	1		10,312.00	10,312.00
E020126	Trace level Serinus 50 configuration.	1		842.00	842.00
E020101	PCA (Ethernet) Network Port for data download and remote control. Above analyzer also includes USB, RS232, MODBUS, Bluetooth, and analog as standard.	1		190.00	190.00
E020106	Internal Pump Option, for Serinus 50 analyzers.	1		1,090.00	1,090.00
	SUB-TOTAL				12,434.00
Equipmt Disc 10%	10% discount on above line items.			-10.00%	-1,243.40
E020204	Annual Maintenance Kit for Serinus 50 SO2 analyzers.	1		267.00	267.00
F010006-03	5 Micron filter element 47mm (25 ea.) for Serinus series analyzers.	2		201.00	402.00
C050014	Desiccant, 5 gram pack.	12		3.00	36.00
P031005	Internal pump repair kit.	1		130.00	130.00
Shipping-Std	Packing, shipping, and insurance.	1		100.00	100.00
	SUBTOTAL SERINUS 50 SO2 ANALYZER (TRACE):				12,125.60
T&C-2015-12-31_Crdt	Payment Terms: Net 30 days from date of invoice. NOTE: warranty period extended to two years. All other terms and conditions apply. Full terms and conditions : http://americanecotech.com/AE_TermsandConditionsV1-2.pdf				0.00T
Total					USD 36,020.40

Serinus[®] 50

SULFUR DIOXIDE ANALYSER



The Serinus[®] 50 sulfur dioxide (SO₂) analyser delivers precise and reliable performance at excellent value. It uses proven pulsed UV fluorescent radiation technology to measure SO₂ in ambient air (LDL < 0.3 ppb, range 0 to 20 ppm).

APPROVALS

- US EPA approval (EQSA-0809-188)
- EN approval TÜV (936/21221977/B)
- EN approval MCERTS (MC100168/07)
- Australian Standard (AS 3580.4.1-2008)
- Russian approval (56054-13)
- French approval LSCQA

BENEFITS

The Serinus[®] range of analysers have been designed using our experience and knowledge gained from operating large air quality monitoring networks for more than 40 years. The result, instruments that integrate seamlessly into continuous monitoring networks.

- Reliable performance complemented with a two year warranty
- Minimise time spent on site performing maintenance through superior remote instrument control, diagnostic viewing and calibration
- Comprehensive data logging and remote viewing of over 200 operational parameters
- Versatile interfacing through RS232, USB, Bluetooth, analog and digital I/O and optional TCP/IP
- Easy setup through an intuitive menu system, advanced GUI and a large alphanumeric keypad with tactile keys
- Instant status indication via illuminated instrument status light buttons on the front panel
- Removable flash memory stores ~10 years of data, including up to 12 individual parameters and event logs. Operational parameters can also be transferred to memory for easy retrieval
- Latest firmware updates can easily be installed using the USB flash memory drive
- Programming, viewing, downloading and emailing of data is made even simpler using Bluetooth connectivity combined with the “ECOTECH Serinus Remote” Android App
- Built-in digital display measuring values and having function of measuring values transferred to graphical trend display
- Enhanced operator safety through the use of 12 VDC internal voltages
- Reduced cost of spare parts, accessories and consumable items through extensive use of standard components across the Serinus[®] range
- Rack slide design makes accessing internal components and removing the analyser from a rack cabinet easy
- AQMS power usage can be reduced due to the instrument’s low power demand and its ability to operate over a wide temperature range.

SPECIFICATIONS

Ranges:	0 - 20 ppm (autoranging)
Concentration units:	mg/m ³ , µg/m ³ , ng/m ³ , ppm, ppb or ppt
Noise:	< 0.15 ppb
Lower detectable limit:	< 0.3 ppb or 0.2 % of concentration whichever is greater
Linearity:	< 1 % of full scale
Precision:	0.5 ppb or 0.5 % of reading whichever is greater
Zero drift:	24 hours: < 0.5 ppb 7 days: < 0.5 ppb
Span drift:	24 hours: < 0.5 % of reading or < 0.5 ppb whichever is greater
Response time:	60 seconds to 95 %
STP reference:	0 °C, 20 °C, 25 °C at 101.3 kPa
Sample flow rate:	725 cc/min
Temperature range:	0 to 40 °C
Operating power:	100 - 240 VAC, 50 - 60 Hz (autoranging)
Power consumption:	255 VA (max at start-up) 180 VA (nominal)
Dimensions:	429 x 175 x 638 mm
Rack Spacing:	3.5 RU
Weight:	18.1 kg

COMMUNICATION

- #1 RS232 port (supports all protocols*)
- #2 RS232 port (supports all protocols* and multidrop)
- USB port (Advanced protocol only)
- Bluetooth (Advanced protocol only)
- TCP/IP network port (optional, supports all protocols*).

*Available protocols: Modbus (RTU/TCP), Bayern Hessen, EC9800 or Advanced

COMMUNICATION ANALOG & DIGITAL I/O PORT:

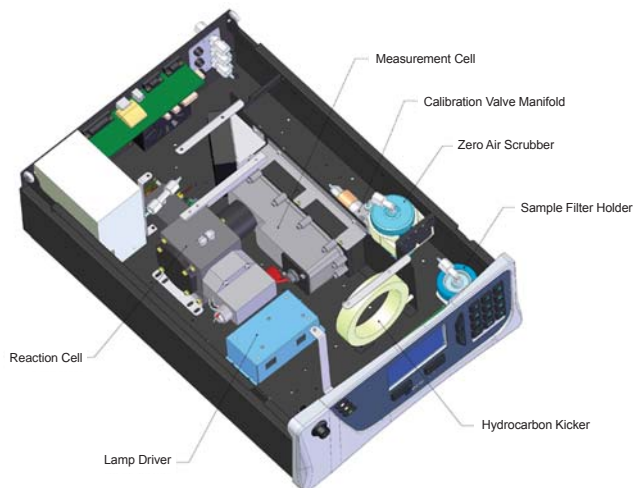
- 3 x analog outputs (current or voltage), 12 bit resolution user definable range (between two user specified points)
Current range: 0 - 20 mA, 2 - 20 mA or 4 - 20 mA
Voltage range: 0 - 5 V, 0 - 10 V (voltage offset of 0 V, 0.25 V or 0.5 V)
- 3 x analog inputs (scalable), 0 - 5 V, 16 bit resolution
- 8 x logic level digital control inputs
- 8 x open collector digital status outputs.

DATA LOGGING

- 8 GB removable USB flash memory drive that stores the internal data logger, event log, automatic/manual configuration backup and automatic/manual parameter list save
- Internal data logger (can log up to 12 of 200+ parameters)
- Logger interval (1 second to 24 hours)
- Storage capacity ~ 10 years (set to 1 minute interval).

OPTIONS & ACCESSORIES

- TCP/IP Network Port
- Dual Sample (particulate) Filter
- High Pressure Span (for direct cylinder calibration)
- High Pressure Zero (for direct cylinder calibration)
- Test Lamp (for PMT diagnostics)
- Internal DC Pump (long life, low power, minimal maintenance)
- Metric Fitting Kit (to connect 6 mm tube to rear ports)
- 19" Rack Mount Kit
- External Pump (240 or 110 VAC)
- Annual Maintenance Kit
- Printed User Manual (a soft copy of the user manual is supplied on the ECOTECH resources USB stick with each analyser).



AMERICAN ECOTECH
100 Elm Street, Factory D, Warren, RI 02885
(877) 247-0403 info@americanecotech.com www.americanecotech.com

**AMERICAN
ECOTECH**
Air Pollution Monitoring Systems

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Serinus® 50T

TRACE SULFUR DIOXIDE ANALYSER



The Serinus® 50T Trace Sulfur Dioxide (SO₂) analyser delivers precise and reliable performance at excellent value. It uses proven pulsed UV fluorescent radiation technology to measure SO₂ in ambient air (LDL 100 ppt, range 0 - 2000 ppb).

APPROVALS

The Serinus® 50T is based on the Serinus® 50 design which has the following approvals:

- US EPA approval (EQSA-0809-188)
- EN approval TÜV (936/21221977/B)
- EN approval MCERTS (MC100168/08)
- Australian Standard (AS 3580.4.1-2008)
- Russian approval (56054-13)
- French approval LSCQA
- Ukraine approval (12/3/B/24/295-17)
- Chinese Pattern Approval (JJF1523-2015)

BENEFITS

The Serinus® range of analysers have been designed using our experience and knowledge gained from operating large air quality monitoring networks for more than 40 years. The result, instruments that integrate seamlessly into continuous monitoring networks.

- Reliable performance complemented with a two year warranty
- Minimise time spent on site performing maintenance through superior remote instrument control, diagnostic viewing and calibration
- Comprehensive data logging and remote viewing of over 200 operational parameters
- Versatile interfacing through RS232, USB, Bluetooth, analog and digital I/O and optional TCP/IP
- Easy setup through an intuitive menu system, advanced GUI and a large alphanumeric keypad with tactile keys
- Instant status indication via illuminated instrument status light buttons on the front panel
- Removable flash memory stores ~10 years of data, including up to 12 individual parameters and event logs. Operational parameters can also be transferred to memory for easy retrieval
- Latest firmware updates can easily be installed using the USB flash memory drive
- Programming, viewing, downloading and emailing of data is made even simpler using Bluetooth connectivity combined with the “ECOTECH Serinus® Remote” Android App
- Enhanced operator safety through the use of 12 VDC internal voltages
- Reduced cost of spare parts, accessories and consumable items through extensive use of standard components across the Serinus® range
- Rack slide design makes accessing internal components and removing the analyser from a rack cabinet easy
- AQMS power usage can be reduced due to the instrument’s low power demand and its ability to operate over a wide temperature range.

SPECIFICATIONS

Range:	0 - 2000 ppb (autoranging)
Concentration units:	mg/m ³ , µg/m ³ , ng/m ³ , ppm, ppb or ppt
Noise:	< 50 ppt
Lower detectable limit:	< 100 ppt (with Kalman filter enabled)
Linearity:	± 1 % of full scale
Precision:	500 ppt or 0.5 % of reading whichever is greater
Zero drift:	24 hours: < 200 ppt
Span drift:	24 hours: < 0.5 % of reading or 1 ppb whichever is greater
Response time:	60 seconds to 90 %
STP reference:	0 °C, 20 °C, 25 °C at 101.3 kPa
Sample flow rate:	750 cc/min
Temperature range:	0 - 40 °C
Power:	100 - 240 VAC, 50 - 60 Hz (autoranging)
Power consumption:	255 VA (max at start-up) 180 VA (nominal)
Dimensions:	429 x 175 x 638 mm
Rack Spacing:	3.5 RU
Weight:	18.1 kg

COMMUNICATION

- #1 RS232 port (supports all protocols*)
- #2 RS232 port (supports all protocols* and multidrop)
- USB port (Advanced protocol only)
- Bluetooth (Advanced protocol only)
- TCP/IP network port (optional, supports all protocols*).

*Available protocols: Modbus (RTU/TCP), Bayern Hessen, EC9800 or Advanced

COMMUNICATION ANALOG & DIGITAL I/O PORT:

- 3 x analog outputs (current or voltage), 12 bit resolution user definable range (between two user specified points)
Current range: 0 - 20 mA, 2 - 20 mA or 4 - 20 mA
Voltage range: 0 - 5 V, 0 - 10 V (voltage offset of 0 V, 0.25 V or 0.5 V)
- 3 x analog inputs (scalable), 0 - 5 V, 16 bit resolution
- 8 x logic level digital control inputs
- 8 x open collector digital status outputs.

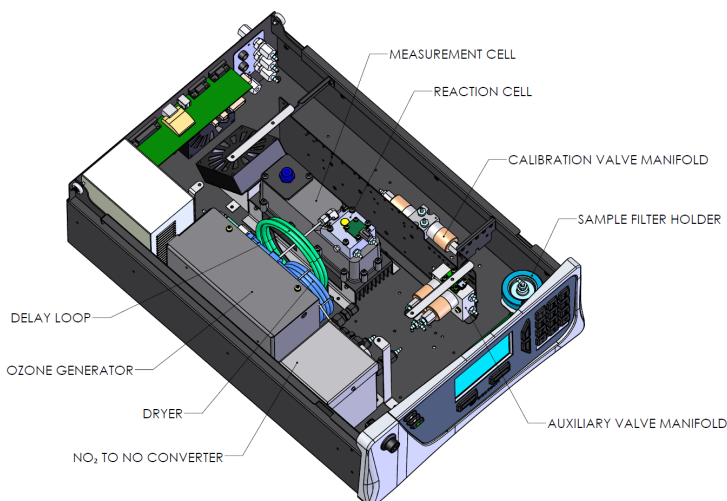
DATA LOGGING

8 GB removable USB flash memory drive that stores the following:

- Internal data logger (can log up to 12 of 200+ parameters)
- Event log
- Automatic/Manual configuration backup
- Automatic/Manual parameter list save
- Logger interval (1 second to 24 hours)
- Storage capacity ~ 10 years (set to 1 minute intervals).

OPTIONS & ACCESSORIES

- TCP/IP Network Port
- Dual Sample (particulate) Filter
- High Pressure Span (for direct cylinder calibration)
- High Pressure Zero (for direct cylinder calibration)
- Test Lamp (for PMT diagnostics)
- Internal DC Pump (long life, low power, minimal maintenance)
- Metric Fitting Kit (to connect 6 mm tube to rear ports)
- 19" Rack Mount Kit
- External Pump (240 or 110 VAC)
- Annual Maintenance Kit
- Printed User Manual (a soft copy of the user manual is supplied on the ECOTECH resources USB stick with each analyser).



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 **AMERICAN
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Air Pollution Monitoring Systems