



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

Request for Quotation

RFO NUMBER
77900044

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
MICHAEL AUSTIN
304-558-2402

JAN 20 2009

VENDOR

*709025221 269-983-5531
LECO CORPORATION
3000 LAKEVIEW AVE

SAINT JOSEPH MI 15086

SHIP TO

DIVISION OF HIGHWAYS
TRAFFIC SERVICES COMPLEX

190 DRY BRANCH ROAD
CHARLESTON, WV
25306 **304-558-8984**

| | | | | |
|-----------------------------------|--------------------------------|--------------------------------|------------------------------|---------------------------------|
| DATE PRINTED 01/14/2009 | TERMS OF SALE <i>Net 30</i> | SHIP VIA <i>UBS Freight</i> | F.O.B. <i>Destination</i> | FREIGHT TERMS <i>Prepaid</i> |
|-----------------------------------|--------------------------------|--------------------------------|------------------------------|---------------------------------|

BID OPENING DATE: **01/28/2009** BID OPENING TIME **01:30PM**

| LINE | QUANTITY | UOP | CAT NO | ITEM NUMBER | UNIT PRICE | AMOUNT |
|---|----------|-----|--------|-------------|------------|-----------|
| 0001 | 1 | EA | | 285-02 | 33,120.00 | 33,120.00 |
| <p>LECO THERMOGRAVIMETRIC ANALYZER-TGA-701S OR EQUAL</p> <p>TO PROVIDE LECO THERMOGRAVIMETRIC ANALYZER - TGA 701S OR EQUAL FOR THE WEST VIRGINIA DIVISION OF HIGHWAYS. PER THE ATTACHED SPECIFICATIONS.</p> <p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.:</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p> | | | | | | |

RECEIVED
2009 JAN 27 AM 10:32
WV PURCHASING DIVISION

| | | | |
|---|---------------------------|-----------------------------------|--|
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS | | | |
| SIGNATURE <i>James Bartol</i> | TELEPHONE 269-983-5531 | DATE 1/26/09 | |
| TITLE Sales Manager | FEIN 38-0738518 | ADDRESS CHANGES TO BE NOTED ABOVE | |

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

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



LECO CORPORATION

3000 Lakeview Avenue St. Joseph, MI 49085-2396 U.S.A.
Phone: (269) 985-5496 Facsimile: (269) 982-8977

Quote No.: SJ8 25895

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Charleston WV 25305-0130

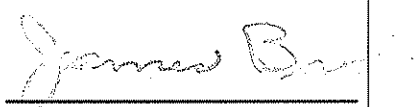
Reference: RFQ # 77900044
Date: 1/26/2009
Terms: Net 30 Days
Currency: U.S. Dollars
Valid Thru: 3/12/2009
Delivery: 7-8 Weeks ARO

Attention: Michael Austin

Phone: 304-558-2402

Page 1

Prices quoted are valid for domestic end use only.

| Part No. | Product Description | Quantity | Unit Price | Total |
|-------------|---|----------|------------|------------------|
| TGA701S4C | TGA701 Thermogravimetric Analyzer Package Includes: Single Furnace Unit; 230v, 50/60Hz Ceramic Carousel (19 positions) 20 Ceramic Crucibles and Lids Windows-based operating software External PC Tower, keyboard, and mouse 19" Flat Panel Monitor Integral four-place balance (0.0001g) Operating supplies and site installation ***** Note: Reference Materials are not included ***** <u>PROVIDED AT NO CHARGE:</u> Smartline: Internet-Based Remote Diagnostics Package (requires internet installed to instrument) | 1 | 33,120.00 | 33,120.00 |
| 710-198-B/O | | | | |
| | | | | 33,120.00 |
| | FOB Destination (Shipping Prepaid) | | | <u>33,120.00</u> |
| | LECO CORPORATION  James Bartoe | | | |

Shipping charges will be paid by LECO Corporation.

Please feel free to contact Anthony Centofanti at 304-542-0543 or Melissa Rogers at 800-292-6141.

Continued



| Part No. | Product Description | Quantity | Unit Price | Total |
|----------|---------------------|----------|------------|-------|
|----------|---------------------|----------|------------|-------|

TERMS AND CONDITIONS

Payment/Title Retention

Net 30 days from the invoice date, subject to approved credit. Purchaser's delay in installation shall not extend the payment due date. Beneficial and legal title shall remain with LECO Corporation until payment is made by the purchaser.

Shipment

F.O.B. Shipping point. Freight charges are the responsibility of the purchaser.

Pre-installation*

Prior to installation, the purchaser will receive a pre-installation guide. This guide provides a list of requirements to be met prior to installation of the unit(s) by a qualified LECO representative.

Installation*

The quoted price includes installation, start-up and on-site training for the purchaser's staff by a qualified LECO representative. Prior to installation of the LECO product, the purchaser will be contacted to (1) assure that the pre-installation guidelines have been completed and (2) arrange for the installation of the LECO product.

Upon completion of the installation, the purchaser will be presented with a copy of the Acceptance Report.

Warranty

The following applies to products purchased from the LECO Corporation.

- 1) Instruments and Equipment manufactured by LECO Corporation are warranted to be free from defects in material and workmanship for a period of six months from date of shipment, unless otherwise stated in writing by LECO. LECO will repair or replace, free of charge, any part(s) which prove to be defective. This obligation does not necessarily include labor or travel expense to repair or replace defective part(s), nor does it cover failure due to accident, abuse, neglect or misuse per instruction provided.
- 2) Instruments and Equipment distributed by LECO Corporation will be covered by LECO to the extent of the warranty provided by the original manufacturer. Complete warranty information is provided with the product(s). Copies of warranties may be requested (in writing) in advance of any purchase or shipment.

* Applies only to Analytical Instrumentation



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

Request for Quotation

| |
|------------|
| RFQ NUMBER |
| 77900044 |

| |
|------|
| PAGE |
| 2 |

| |
|--|
| ADDRESS CORRESPONDENCE TO ATTENTION OF |
| MICHAEL AUSTIN 304-558-2402 |

VENDOR

*709025221 269-983-5531
 LECO CORPORATION
 3000 LAKEVIEW AVE

 SAINT JOSEPH MI 15086

SHIP TO

DIVISION OF HIGHWAYS
 TRAFFIC SERVICES COMPLEX

 190 DRY BRANCH ROAD
 CHARLESTON, WV
 25306 304-558-8984

| | | | | |
|--------------|---------------|----------|--------|---------------|
| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B. | FREIGHT TERMS |
| 01/14/2009 | | | | |

BID OPENING DATE: 01/28/2009 BID OPENING TIME 01:30PM

| LINE | QUANTITY | UOP | CAT. NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|---|----------|-----|----------|-------------|------------|--------|
| NO. 1 | | | | | | |
| NO. 2 | | | | | | |
| NO. 3 | | | | | | |
| NO. 4 | | | | | | |
| NO. 5 | | | | | | |
| <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p style="text-align: center;"> <i>James Bartoe</i> SIGNATURE <i>LECO Corporation</i> COMPANY <i>1/26/09</i> DATE </p> | | | | | | |
| REV. 11/96 | | | | | | |
| NOTICE | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| | | |
|-----------|-----------|-----------------------------------|
| SIGNATURE | TELEPHONE | DATE |
| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE |

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



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

Request for Quotation

| |
|------------|
| RFQ NUMBER |
| 77900044 |

| |
|------|
| PAGE |
| 3 |

| |
|--|
| ADDRESS CORRESPONDENCE TO ATTENTION OF |
| MICHAEL AUSTIN 304-558-2402 |

VENDOR

*709025221 269-983-5531
 LECO CORPORATION
 3000 LAKEVIEW AVE

 SAINT JOSEPH MI 15086

SHIP TO

DIVISION OF HIGHWAYS
 TRAFFIC SERVICES COMPLEX

 190 DRY BRANCH ROAD
 CHARLESTON, WV
 25306 304-558-8984

| | | | | |
|--------------|---------------|----------|--------|---------------|
| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B. | FREIGHT TERMS |
| 01/14/2009 | | | | |

BID OPENING DATE: **01/28/2009** BID OPENING TIME **01:30PM**

| LINE | QUANTITY | UOP | CAT NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|--|----------|-----|---------|-------------|------------|--------|
| <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: 33</p> <p>RFQ. NO.: 77900044</p> <p>BID OPENING DATE: 1/28/09</p> <p>BID OPENING TIME: 1:30 P.M.</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: 269-982-8977</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY): Melissa Rogers</p> | | | | | | |

| | | | |
|---|-----------|-----------------------------------|--|
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS | | | |
| SIGNATURE | TELEPHONE | DATE | |
| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE | |

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



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

Request for Quotation

| |
|------------|
| RFQ NUMBER |
| 77900044 |

| |
|------|
| PAGE |
| 4 |

| |
|--|
| ADDRESS CORRESPONDENCE TO ATTENTION OF |
| MICHAEL AUSTIN 304-558-2402 |

RECEIVED

*709025221 269-983-5531
 LECO CORPORATION
 3000 LAKEVIEW AVE

 SAINT JOSEPH MI 15086

SHIP TO

DIVISION OF HIGHWAYS
 TRAFFIC SERVICES COMPLEX

 190 DRY BRANCH ROAD
 CHARLESTON, WV
 25306 304-558-8984

| | | | | |
|--------------|---------------|----------|-------|---------------|
| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B | FREIGHT TERMS |
| 01/14/2009 | | | | |

BID OPENING DATE: **01/28/2009** BID OPENING TIME **01:30PM**

| LINE | QUANTITY | UOP | CAT. NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|--|----------|-----|----------|-------------|------------|-----------|
| ***** THIS IS THE END OF RFQ 77900044 ***** TOTAL: | | | | | | 33,120.00 |

| | | | |
|---|-----------|-----------------------------------|--|
| SEE REVERSE SIDE FOR TERMS AND CONDITIONS | | | |
| SIGNATURE | TELEPHONE | DATE | |
| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE | |

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

The following minimum specifications pertain to the Thermogravimetric Analyzer.

- 1) Instrument should use a twenty position, ceramic carousel that is not susceptible to warping at temperatures up to 1000°C.
- 2) Instrument should be capable of performing up to nineteen samples during one analysis, and up to (38) using a dual-furnace configuration.
- 3) Instrument must use ceramic crucibles capable of holding macro sample sizes (50 mg to 5 g).
- 4) Instrument should use an integrated four-place balance that is shielded and protected from any interference from other internal components.
- 5) Instrument must provide balance readability to 0.0001 g.
- 6) Instrument should perform a standard weight-loss for an inert sample with a precision of $\delta 0.02\%$ standard deviation. This test should be performed at various temperatures, flowrates, and atmospheres.
- 7) Instrument should provide a temperature range from ambient to 1000°C
- 8) Instrument should provide temperature resolution of $\pm 2^\circ\text{C}$ from 100 to 1000°C.
- 9) Instrument should provide temperature readings at the location of the crucible.
- 10) Instrument should provide a dedicated over-temp protection thermocouple for safety protection.
- 11) Instrument must provide variable temperature ramp rate capabilities up to 50°C per minute.
- 12) Instrument should provide service accessibility from the front of the instrument.
- 13) Instrument should have a loading height of less than 14" from the bottom of instrument.
- 14) Instrument should use a pneumatic carousel mechanism for accurate crucible placement.
- 15) Instrument should use a Windows®-based operating software that supports compliance to 21 CFR Part 11 regulations, contains an on-board help manual, and controls up to two separate furnace units.

16) Freight charges are the responsibility of the vender.

17) Instrument vendor should provide remote service diagnostics with a separate software package that is designed specifically to connect the user with the Instrument vendor's service personnel.

NIA

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 Resident Vendor Preference, if applicable.

- 1. Application is made for 2.5% resident vendor preference for the reason checked: Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. Application is made for 2.5% resident 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% resident vendor preference for the reason checked: Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. Application is made for 5% resident 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% resident 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% resident 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.

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

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

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

Bidder: _____ Signed: _____

Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT****VENDOR OWING A DEBT TO THE STATE:**

West Virginia Code §5A-3-10a provides that: 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code**. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the **West Virginia Code** may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will 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 the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors 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 agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

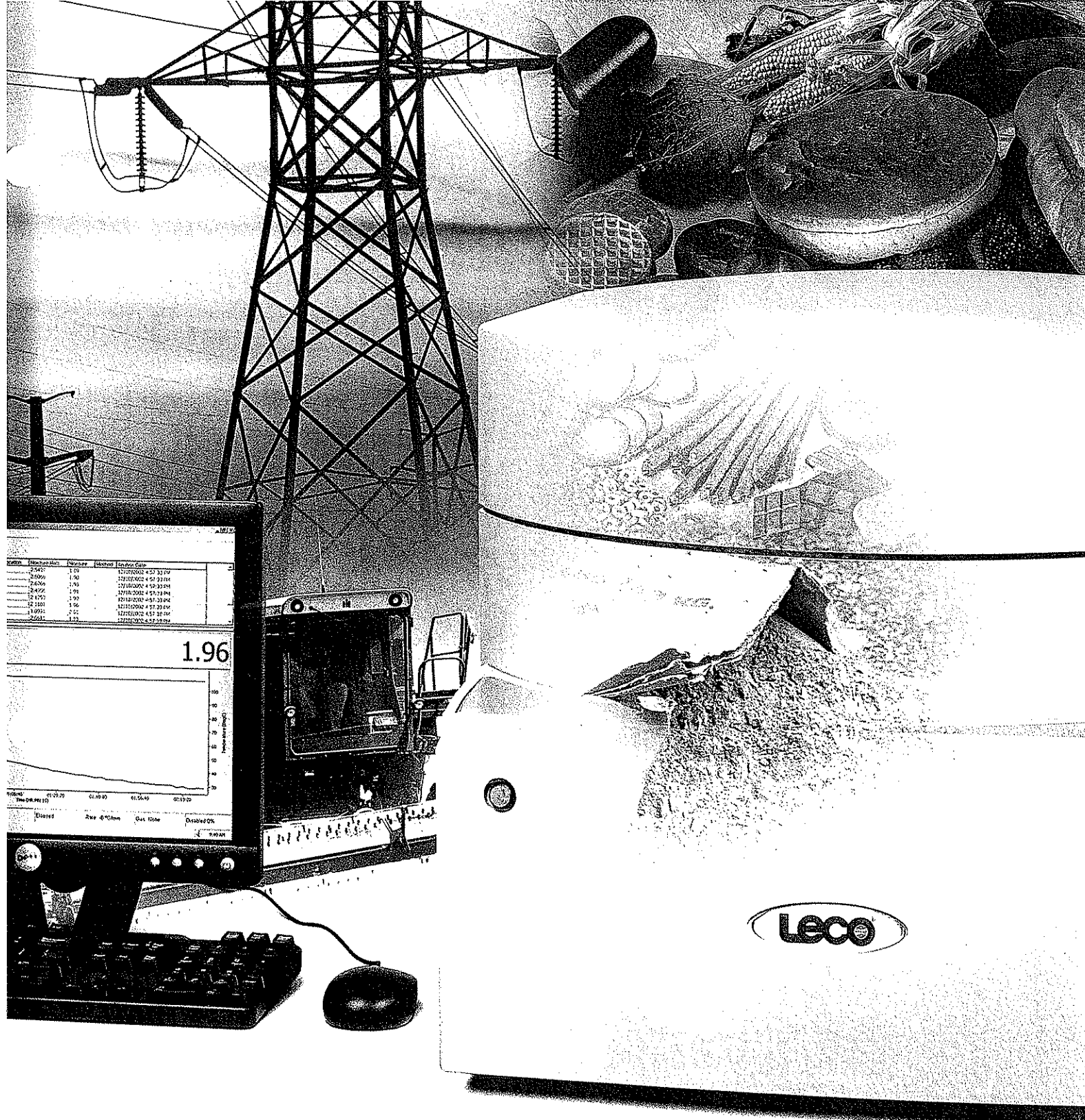
The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure 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/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (**West Virginia Code** §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: LECO Corporation

Authorized Signature: _____

Date: 1-26-09



TGA701 Thermogravimetric Analyzer

TGA701 Thermogravimetric Analyzer

Your total solution for fast, robust elemental and macro-constituent analysis

The TGA701 is LECO's latest generation of thermal analysis technology. It determines weight loss—as total moisture, ash, volatile content, or LOI—in various organic, inorganic, and synthetic materials. Complying with AOAC, AACC, and ASTM-approved methodologies, the TGA701 can be used in various industries and applications, including coal/coke, cement, catalysts, foods, feeds, and milling products.

Thermogravimetric analysis replaces traditional analytical techniques that require vacuum ovens, muffle furnaces, or microwave ovens. The TGA701 itself is an integration of the many benefits associated with previous-generation LECO models (MAC-400/500, TGA-500/501/601). It offers enhanced capabilities such as accurate, high-throughput weight measurements, and simultaneous control of system temperature—improving overall instrument reliability, functionality, and robustness. Simply program the TGA701 to match your current method for thermal analysis, and allow it to automatically operate with minimal user interaction.

TGA701 Advantages

High Sample Throughput

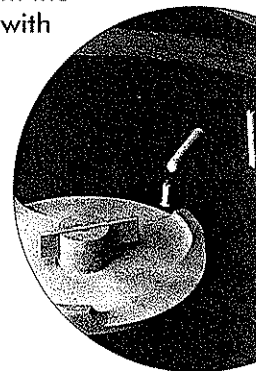
- Perform batch thermogravimetric analyses without the required desiccator time of manual methods
- Obtain multiple thermogravimetric analyses such as moisture, volatile matter, and ash from one sample
- Dual configuration analyzes up to 38 samples simultaneously

Improved Accuracy and Precision

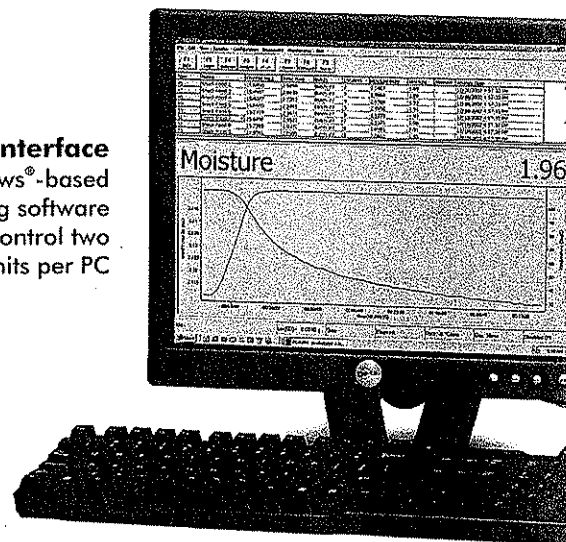
- Patented temperature prediction algorithm standardizes unit-to-unit heating
- Integrated balance reduces noise and drift
- Pneumatic carousel control mechanism increases long-term reliability by eliminating oscillation and increasing position accuracy

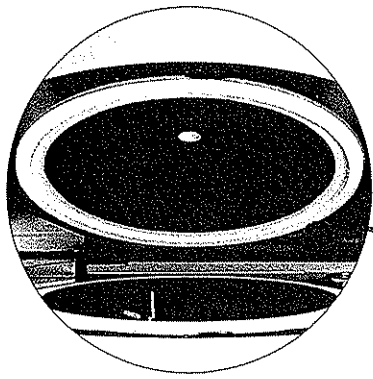
User-Friendly Windows®-Based Software

- Simplified data handling with convenient storage, customizable reporting, and data exporting capabilities
- Flexible user-defined methods
 - Temperature starting, ending, and ramping
 - Atmosphere types and flow
 - Fields for automatic calculations using custom formulas
- Expanded real-time service diagnostics
 - Ambient charts of instrument temperatures, flows, and balance readings
 - Manual control of solenoids and switches
 - Network and communications diagnostics
 - Automated system check
- Compatible to **SmartLine**® Remote Diagnostics application
- Supports compliance to FDA regulation 21 CFR Part 11 for a closed analytical system



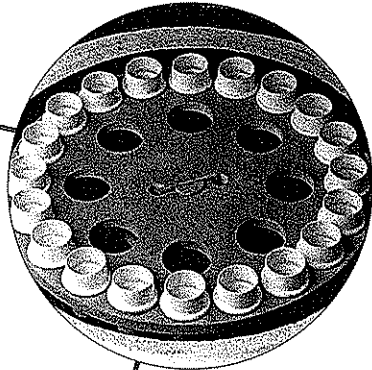
User Interface
Windows®-based operating software can control two units per PC





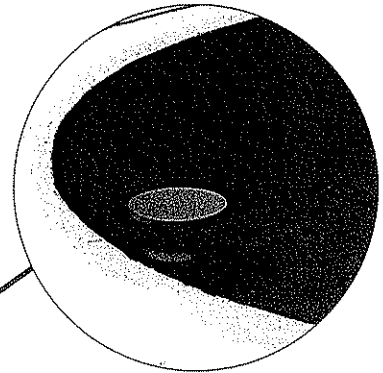
Embedded Heating Elements and Furnace Lids

- Temperature control up to 1000°C
- Provides uniform heat with enhanced ramping and temperature control



Ceramic Carousel and Pneumatic Carousel Mechanism

- 20 positions—for high throughput analysis
- Robust ceramics—will not warp under temperature stress (unlike metal)
- Pneumatic carousel—improves crucible placement accuracy and decreases balance noise

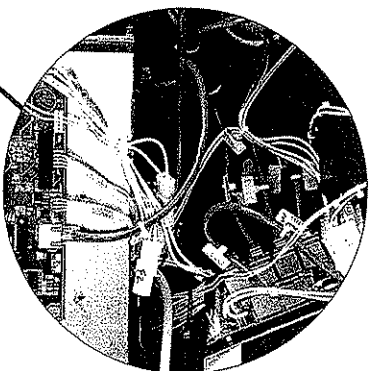
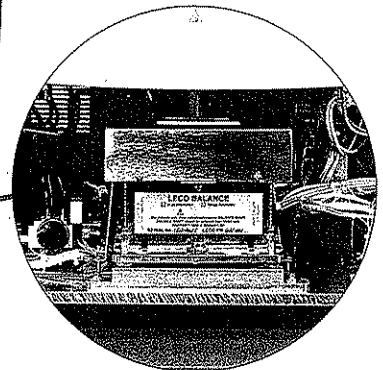
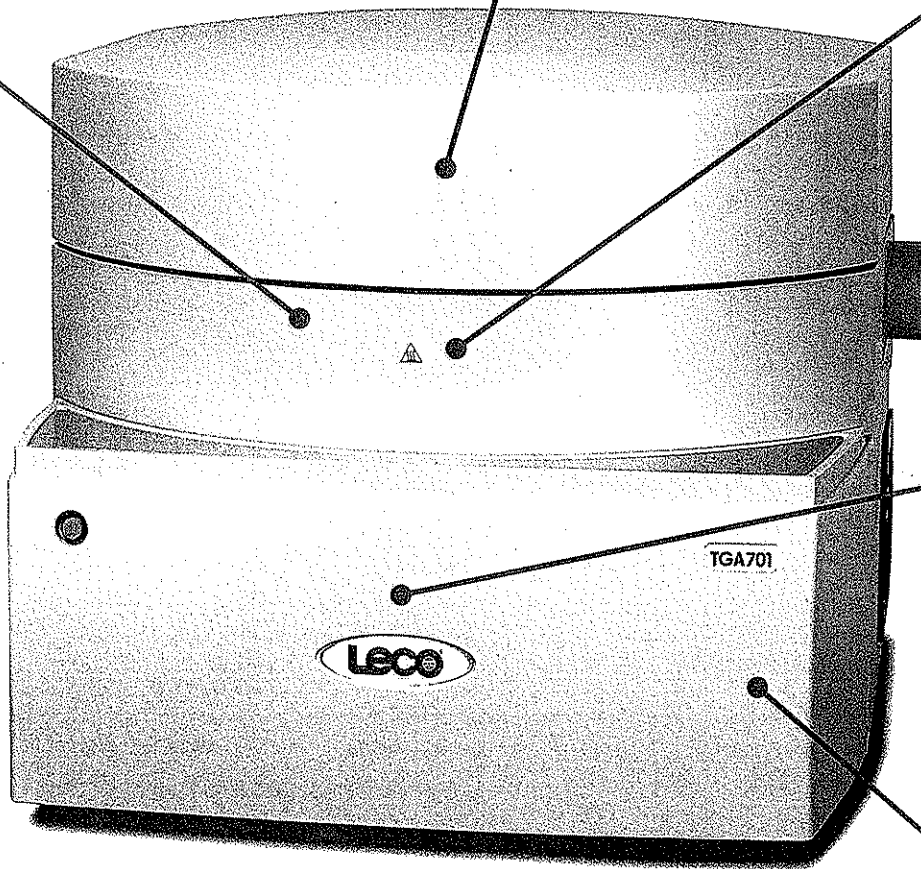


Integrated Balance and Pedestal

Four-place sensitivity with a robust pedestal to hold ceramic crucible

Dual Thermocouples

- Patented technique accurately predicts temperature inside the crucible
- Provides over-temp protection

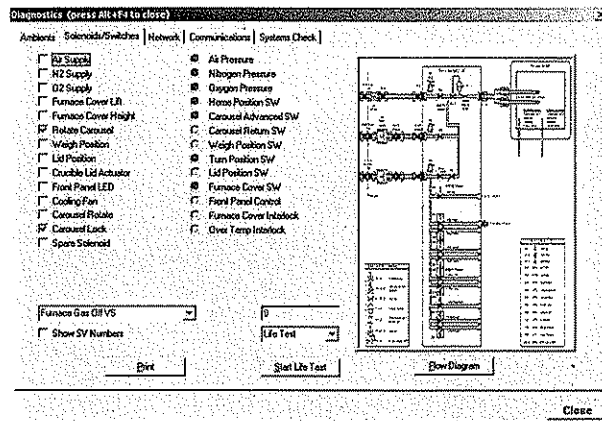
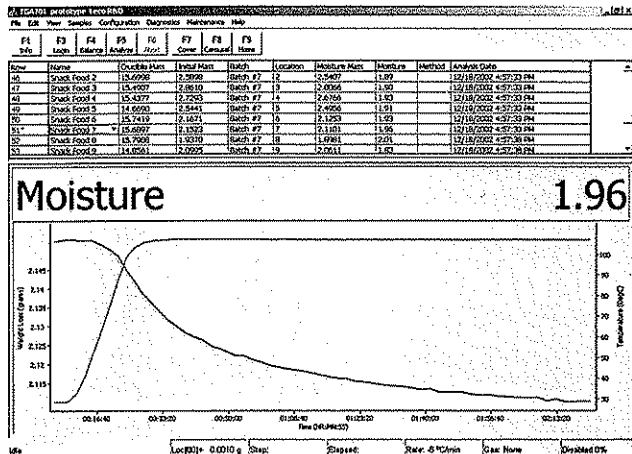


ECLIPSE Network Protocol

Links internal system electronics for improved reliability and serviceability; exceeds FCC and CE requirements

Easy-To-Use Windows®-Based Operating Software

With virtually unlimited storage space and compatibility with various Laboratory Information Management Systems (LIMS), this software is designed for seamless interaction with any operator or customer environment. A convenient on-board help manual allows you to quickly access information without leaving your instrument.



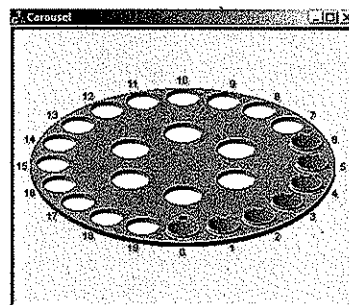
Expanded interactive service diagnostic screens help increase your uptime.

Manage data and graphs seamlessly.

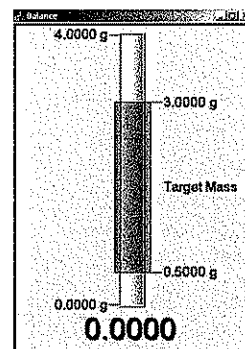
The method configuration screen allows users to define and customize parameters for their specific application. The table below shows the configuration for 'Method: Canada Seeds - Both Moisture & Ash'.

| Step Name | Covers | Start Temp | End Temp | Ramp Rate | Ramp Time | Hold Time | Total Time | Idle Time |
|-----------|--------|------------|----------|-----------|-----------|-----------|------------|-----------|
| Moisture | No | 25 | 135 | 6 | 00:18 | 00:50 | 01:08 | 01:15 |
| Ash | No | 135 | 600 | 25 | 00:18 | 01:00 | 01:18 | 02:00 |

Customize method parameters to your application.



Monitor sample mass and positions graphically.



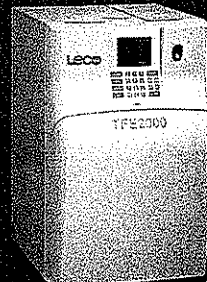
TGA701 Software supports compliance to strict FDA regulations (21 CFR Part 11) for a closed analytical system.

LECO Organic Analysis—Working With You

TruSpec® Series
Elemental
Determinators



TFE2000 Fat
Determinator



3000 Lakeview Avenue • St. Joseph, MI 49085 • Phone: 800-292-6141 • Fax: 269-982-8977
info@leco.com • www.leco.com • ISO-9001 • No. FM 24045 • LECO is a registered trademark of LECO Corporation.

LECO
Delivering the Right Results
© 2007 LECO Corporation

TGA701 Thermogravimetric Analyzer

Specification Sheet

| | |
|--------------------------|--|
| Sample Size | 5 grams (maximum) |
| Number of Samples | 19 (+1 reference) |
| Precision | 0.02% RSD (1 σ , 1 g inert sample) |

| | |
|-------------------------|-------------------|
| Balance | |
| Resolution | 0.0001 g |
| Oven Temperature | Ambient (minimum) |

| | |
|----------------------------|--|
| Temperature Control | |
| Minimum | 100°C |
| Maximum | 1000°C |
| Accuracy | 2% of setpoint, or $\pm 2^\circ\text{C}$; whichever is greater |
| Stability | 2% of setpoint, or $\pm 2^\circ\text{C}$; whichever is greater |

| | |
|--------------------------|-----------|
| Maximum Ramp Rate | |
| Ambient to 104°C | 15°C/min. |
| 104°C to 1000°C | 50°C/min. |

| | |
|----------------------|----------|
| Gas Flow Rate | |
| Low | 3.5 lpm |
| Medium Low | 5.0 lpm |
| Medium | 7.0 lpm |
| Medium High | 8.5 lpm |
| High | 10.0 lpm |

| | |
|---------------------|------------------|
| Gas Pressure | |
| Air | 45 psi (3.1 bar) |
| Nitrogen | 35 psi (2.4 bar) |
| Oxygen | 35 psi (2.4 bar) |

***Air Ventilation Requirements** 70 to 160 CFM adjustable
(33 to 75 lps)

***Duct Size** 4 inch (100 cm)

***Note:** The TGA701 must be vented to an external exhaust. For moisture-only applications in which the furnace temperature does not exceed 150°C, and the distance from the right side of the TGA701 to the external exhaust is less than 10 feet (3 meters), a passive connection to a 3-inch (75 cm) duct is acceptable.

Optional External Blower

| | |
|-------|---|
| Flow | 140 cfm (65 l/s) |
| Power | 115 V~ ($\pm 10\%$), single phase, 60 Hz, 1.6 A 230 V~ ($\pm 10\%$), single phase, 50/60 Hz, 0.6/0.8 A |

Operating Temperature 15°C to 35°C

Humidity 20% to 80%
non-condensing

Minimum Gas Purity

| | |
|----------|----------------------|
| Air | 99.5%; dry, oil-free |
| Nitrogen | 99.9% |
| Oxygen | 99.5% |

Electrical Power Requirements

| | |
|--------|---|
| TGA701 | 230V~ ($\pm 10\%$; at max load), 50/60 Hz, single phase, 25 A 19,700 BTU/hr |
|--------|---|

Dimensions

| | |
|--------|-------------------|
| Height | 20.5 inch (52 cm) |
| Width | 24 inch (61 cm) |
| Depth | 22 inch (56 cm) |
| Weight | 180 lb. (82 kg) |

Total Shipping Weight

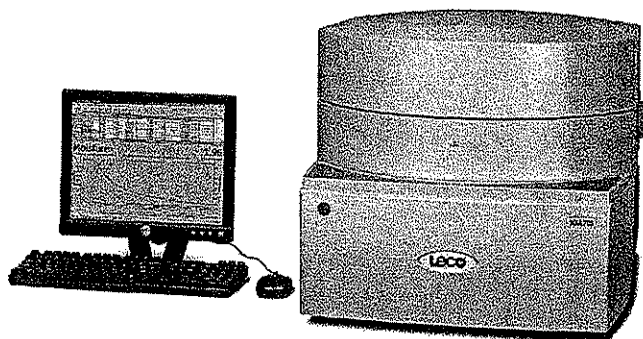
245 lb. (111 kg)

Part Numbers

TGA701S4C TGA701 with PC tower, Windows®-based operating software, and flat panel monitor

TGA701D4C TGA701 Dual Furnace Configuration with PC tower, Windows®-based operating software, and flat panel monitor

V~ denotes VAC.



Theory of Operation

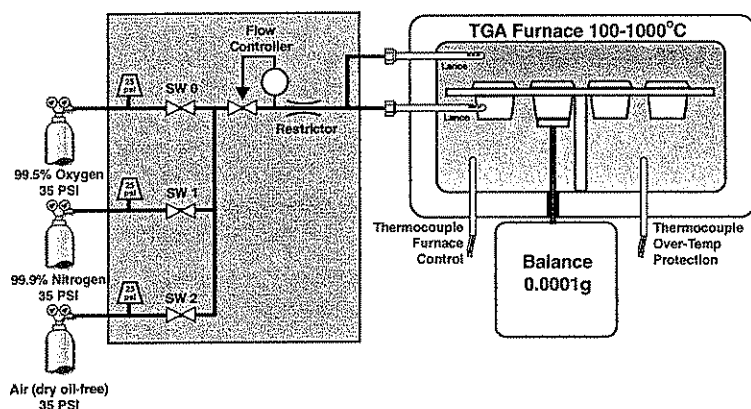
The TGA701 Thermogravimetric Analyzer is used to determine the composition of organic, inorganic, and synthetic materials. It measures weight loss as a function of temperature in a controlled environment. The instrument consists of a computer and a multiple sample furnace that allows up to 19 samples to be analyzed simultaneously.

After an analysis method has been selected, empty crucibles are loaded into the furnace carousel. The analysis method controls the carousel, furnace, and balance operation. On completion of crucible tare, each crucible is presented to the operator for sample loading. The starting sample weight is measured and stored automatically. Once all the crucibles have been loaded, analysis begins. The weight loss of each sample is monitored and the furnace temperature is controlled according to the selected analysis method. The percent weight loss for each sample is reported at the end of each analysis step.

The instrument contains an easy-to-follow menu-driven Windows®-based software program that allows analysis methods to be tailored to satisfy most analytical applications. Temperature, temperature ramp rate, and atmosphere are selectable for each step. Analysis methods can be entered to perform moisture, volatile, ash, or combinations of these three stages. If volatile results tend to be curvilinear, a non-linear regression technique can be used to improve accuracy. Other menus allow on-screen plotting of sample weight loss with hard copy selection after the screen review. Built-in diagnostic functions can be performed via menu selections.

The key to the automated analysis capability is the LECO multiple sample furnace. The 19-position sample carousel and balance pedestal are located in the furnace. One-half to five gram samples are contained in ceramic crucibles. The samples are automatically indexed to the position above the balance pan. The carousel is lowered to place a sample crucible onto the pedestal and the weight is recorded. The cycle continues throughout the entire program. All weighing is performed automatically.

Flow Diagram



Specifications and part numbers may change.
Consult LECO for latest information.

World Headquarters/United States
In United States (800) 292-6141
(269) 985-5496
Outside U.S.A. (269) 983-5531

International Offices/Subsidiaries
Africa • LECO Africa (Pty.) Ltd.
Kempton Park, South Africa
Ph: 27-11-974-1681 • Fax: 27-11-974-1848

Argentina • LECO Argentina S.A.
Buenos Aires, Argentina
Ph: 54-114-523-8077 • Fax: 54-114-523-8873

Australia • LECO Australia Pty. Ltd.
Castle Hill, NSW, Australia
Ph: 61-2-9894-5955 • Fax: 61-2-9894-5247

Brazil • LECO Instrumentos Ltda.
Rio De Janeiro, Brazil
Ph: 55-212-538-4250 • Fax: 55-212-538-4299

Canada • LECO Instruments Ltd.
Mississauga, Ontario Canada
Ph: 905-564-6577 • Fax: 905-564-6582

China • LECO Corp/Beijing Office
Beijing, China
Ph: 86-10-6512-8877 • Fax: 86-10-6528-0373

Czech Republic • LECO Instrumente Plzeň s.r.o.
Plzeň/Czech Republic
Ph: 420-37-751-0811 • Fax: 420-37-725-9304

France • LECO France
GARGES-Les-GONESSE, Cedex, France
Ph: 33-134-45-4600 • Fax: 33-139-86-4105

Germany • LECO Instrumente GmbH
Mönchengladbach, Germany
Ph: 49-2166-687-0 • Fax: 49-2166-687-100

Hong Kong • LECO Instruments Hong Kong Ltd.
Kowloon, Hong Kong
Ph: 852-2387-7028 • Fax: 852-2708-4388

Italy • LECO Italy, S.R.L.
Milan, Italy
Ph: 39-02-953-43391 • Fax: 39-02-953-43461

Japan • LECO Japan Corporation
Tokyo, Japan
Ph: 813 (5782) 7800 • Fax: 813 (5782) 7801

Korea • LECO Korea Co. Ltd.
Gyeonggi-Do, Korea
Ph: 82-31-478-2441 • Fax: 82-31-478-2440

Malaysia • LECO Instruments (M) Sdn. Bhd.
Selangor, D.E. Malaysia
Ph: 60-3-7805-2100 • Fax: 60-3-7805-2212

Mexico • LECO Mexico S.A. de C.V.
Monterrey, NL CP 64900 Mexico
Ph: 52-81-83-49-3927 • Fax: 52-81-83-49-6485

The Netherlands • LECO Europe B.V.
Geleen, The Netherlands
Ph: 31-46-4747473 • Fax: 31-46-4747333

Poland • LECO Polska Sp. z o.o.
Katowice, Poland
Ph: 48-32-2000-760 • Fax: 48-32-2000-536

Russia • Z.A.O. LECO Center Moscow
Moscow, Russia
Ph: 7495-710-3818 • Fax: 7495-710-3826

Spain • LECO Instrumentos S.A.
Madrid, Spain
Ph: 3491-803-1250 • Fax: 3491-804-0577

Sweden • LECO Corporation Svenska AB
Upplands Väsby, Sweden
Ph: 468-594-11000 • Fax: 468-594-11011

Taiwan • LECO Instruments Taiwan Ltd.
Taipei, Taiwan R.O.C.
Ph: 886-22-518-4699 • Fax: 886-22-518-4671

Thailand • LECO Instruments (Thailand) Ltd.
Bangkok, Thailand
Ph: 66-2-886-4350 • Fax: 66-2-886-4351

United Kingdom • LECO Instruments (U.K.) Ltd.
Stockport, Cheshire, England
Ph: 44-161-487-5900 • Fax: 44-161-456-0969

Venezuela • Instrumentos LECO Venezuela, C.A.
Puerto Ordaz, Edo. Bolívar, Venezuela
Ph: 58-286-994-4835 • Fax: 58-286-994-1570

Vietnam • LECO (Vietnam) Co., Ltd.
Ho Chi Minh City, Vietnam
Ph: 848-829-8979 • Fax: 848-829-8978

3000 Lakeview Avenue • St. Joseph, MI 49085 • Phone: 800-292-6141 • Fax: 269-982-8977
info@leco.com • www.leco.com • ISO-9001 • No. FM 24045 • LECO is a registered trademark of LECO Corporation.

209-149-001

5/08-REV3

LECO Corporation



Delivering the Right Results

© 2008 LECO Corporation