



# COVER PAGE

## Bid Proposal # 2146

### INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM

Sealed bids and electronic submitted bids for the above will be received until **10:00 AM CST, Tuesday, September 19, 2017** and publicly opened in the City of Alexandria Council Chambers or Council Committee Room.

Please file bid by one of the following means:

**Hand-Delivered or Express Delivery:**

**Attention: Donna Jones, City Clerk  
City of Alexandria - City Hall  
915 Third Street, First Floor  
Alexandria, LA 71301  
Phone: 318-449-5090**

**Mailed via USPS:**

**Attention: Donna Jones, City Clerk  
City of Alexandria - City Hall  
PO Box 71  
Alexandria, LA 71309-0071**

**Electronic Bid Submission: Central Bidding**

Pursuant to Louisiana R.S. 38:2212 B.(6)(a) through E. (1-7) and R.S. 38:2212.1 B.(4)(a), vendors/contractors have the option to submit their bids and bid bonds electronically. Bids and bonds to be filed electronically shall be posted with **Central Bidding** at [www.centrauctionhouse.com](http://www.centrauctionhouse.com) (phone 1-225-810-4814). Registration will need to be completed prior to posting of bid.

Complete bid specifications are available for viewing and downloading at the City of Alexandria's website [www.cityofalexandriala.com](http://www.cityofalexandriala.com) ; on the left hand side of the opening page, go to the heading "*Business*" then drop down to "*RFP/RFQ/Bids*"; the current bids will be listed for your convenience.

<b>City of Alexandria Buyer Name:</b>	<u>Wilma Kelly, Senior Buyer</u>
<b>Phone Number:</b>	<u>(318) 441-6162</u>
<b>Fax Number:</b>	<u>(318) 619-3415</u>
<b>E-Mail Address:</b>	<u><a href="mailto:wilma.kelly@cityofalex.com">wilma.kelly@cityofalex.com</a></u>



Joe C. Despino  
Purchasing Manager

# City of Alexandria

Purchasing Department  
P.O. Box 71  
Alexandria, Louisiana  
71309-0071



Office: (318) 441-6180  
Fax: (318) 441-6185

Sealed bids will be received until **10:00 AM, Tuesday, September 19, 2017**, and publicly opened in the Council Chambers or Council Committee Room.

City of Alexandria Bid #**2146**  
Page: 1 of 24  
Date Specifications Prepared: July 18, 2017

Bid Bond Requirements: A bid bond or check for N/A% of the total amount of bid.

Performance Bond Requirements: In the event bid is accepted, a performance bond shall be required in the amount of N/A%.

**Please file bid with the following:**  
**Donna Jones, City Clerk**  
**City of Alexandria - City Hall**  
**915 Third Street**  
**P.O. Box 71**  
**Alexandria, LA 71309-0071**  
**Phone: 318-449-5090**

## INTRODUCTION

### **INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

It is the intent of the City of Alexandria to secure pricing on a minimum of one (1) Integrated Breathing Air Cylinder Recharging System, Bauer Compressor Mini **Unicus 13** CFM, 3 Phase, 230 volt with Electronic CO Monitor P2 6000 PSI Securis Filter and two (2) **DOT 6000 PSI** Storage Cylinders, or equal for use by the City of Alexandria Fire Department.

Unit shall be new, unused and of current model year manufacture. Unit shall be equipped with the manufacturer's equipment and accessories which are included as "standard" in the advertised and published literature for the same. No such item of equipment shall be removed or omitted for the reason that it was not specified in this bid document.

**The bid price shall include any and all freight charges.** All products are to be shipped F.O.B., freight prepaid, to the City of Alexandria Fire Station, 518 Lee Street, Alexandria, Louisiana.

**Completed bid packet should be returned as issued by the City of Alexandria with ALL PAGES intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, may result in the bidder's entire bid being rejected.**

Questions and/or clarifications of bid specifications are to be in written form only, either mailed, faxed, or emailed to the attention of Wilma Kelly, City of Alexandria Purchasing Department, PO Box 71, Alexandria, LA 71309-0071; Fax 318-619-3412; email to [wilma.kelly@cityofalex.com](mailto:wilma.kelly@cityofalex.com); and must be received by **4:00 PM, Thursday, September 7, 2017.**

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

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**GENERAL CONDITIONS FOR BIDDERS - PLEASE READ CAREFULLY**

1. Pursuant to LA R.S 38:2212.1. C.(1)(2), any manufacturer's preference in this proposal is descriptive, but non-restrictive, and is used only to indicate minimum requirement for type, grade and quality unless otherwise specified.
2. Pursuant to LA R.S. 38:2212 B.(1), the provisions and requirement of this bid shall not be considered as informalities and shall not be waived by the City of Alexandria. Therefore, conditions and specifications on this bid form shall be strictly enforced and any and all alterations, deviations, and non-compliance to said conditions and specifications, either on the bid form or by separate attachment, shall be grounds for immediate disqualification.
3. Preference shall be given to bidders quoting F.O.B. Destination (the City of Alexandria using department), FREIGHT PREPAID, unless otherwise requested.
4. Each bidder shall submit his proposal on the proposal form furnished by the City of Alexandria Purchasing Department. The complete bid package must be returned as issued by the City with all pages intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, shall result in the vendor's entire bid package being rejected.
5. Literature, brochures, and other related paperwork attached to the bid should be identified with the name of the bidder and bid item number.
6. In case of a mathematical discrepancy between unit price and extensions, the unit price shall prevail.
7. Pursuant to LA R.S. 38:2212 F., the bid specifications may contemplate a fixed escalation or de-escalation in accordance with the United States Bureau of Labor Statistic's Consumer Price Index or the Producer Price Index. Bids based on specifications which are subject to a recognized escalation index shall be legal and valid for any item of a public work, at the discretion of the City.
8. Pursuant to LA R.S. 38:2212.1. F., any public procurement unit may participate in a cooperative purchasing agreement with the City of Alexandria to acquire quantities of the above listed items under a contract with the City of Alexandria for items awarded by public bid, pursuant to the cooperative purchasing provisions of Part VII of Chapter 17 of Subtitle III of Title 39 of the Louisiana Revised Statutes of 1950, R.S. 39:1701 et seq.
9. The City of Alexandria reserves the right to award by item or by total bid, unless otherwise specified in the bid specifications. (Price(s) should be itemized.)
10. All erasures or corrections on the bid form must be initialed and the City of Alexandria may rely on the apparent authority represented by the initials.
11. The City of Alexandria reserves the right to reject for cause any and all bids or parts of bids, or accept bids most beneficial to the City.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

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**General Conditions for Bidders - Please Read Carefully (Continued)**

12. Any bid submitted which contains additions, conditional or alternate bids, or irregularities which may make the proposal incomplete, indefinite, or ambiguous as to its meaning, thus requiring clarification after the specified date and time of bid opening shall be rejected.
13. Bids shall be opened publicly in the City Council Chambers or Council Committee Room.
14. Cash discounts may be accepted, but SHALL NOT be considered in making award.
15. Regarding a bid for purchase of materials, supplies or services, not to include construction of any public works, a written notice of acceptance mailed or otherwise furnished to the successful bidder shall result in a binding contract without further action by either party.
16. When any bid is accepted for the construction or doing of any public works, a written contract shall be executed by and between the City of Alexandria and the Contractor. No contract shall be binding upon the City until it has been executed by the City and delivered to the successful bidder. Should the bidder to whom the contract is awarded fail to execute the contract, the award shall then be made to the next lowest responsible bidder, or re-advertised for public bid, said decision to be in the sole judgment of the City of Alexandria. This action may result in the loss of bidding privileges for a period of one (1) year.
17. The City of Alexandria shall schedule for payment the invoices for articles or services purchased under this bid within thirty (30) days after due and proper delivery accompanied by invoice.
18. The City of Alexandria is exempt from all sales taxes. A sales tax exempt form shall be furnished by the City of Alexandria Purchasing Department, if requested.
19. Bidder(s) awarded item(s) by the City of Alexandria shall be responsible for supplying all products at the awarded price(s). Failure may result in the City's cancellation of the remaining items awarded.
20. Regarding Service Contracts and Procurement Contracts, the terms of the contract shall be binding upon any and all parties involved until goods and supplies are delivered, services have been rendered, and/or work has been completed and accepted by the Mayor on behalf of the City of Alexandria and all payments required to be made to the Contractor have been made. However, a contract may be terminated under any and all of the following conditions:
  - (a) By mutual agreement and consent of either party upon thirty (30) days written notice to the other party;
  - (b) By the Mayor, on behalf of the City of Alexandria, as a consequence of the failure of the Contractor to comply with the terms and conditions of the contract or the progress or quality of work to be performed in a satisfactory manner, proper allowance being made for circumstances beyond the control of the Contractor; or
  - (c) By satisfactory completion of all services and obligations described in the contract.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**General Conditions for Bidders - Please Read Carefully (Continued)**

If the contract is terminated for any of the terms and conditions authorized in sub-paragraph (b) above, Contractor shall be formally notified in writing by the City of Alexandria Purchasing Department by means of certified mail informing him of cancellation of the contract, giving specific reasons for said cancellation. Contractor shall have the right to appeal to the City Council within ten (10) days from the date that said notification is placed in the U.S. Mail. Contractor's appeal shall be accomplished by means of a letter addressed to the City Council and delivered to the City Clerk, stating that an appeal to the decision of cancellation is desired. The City Council shall thereafter hold a hearing on the appeal, giving all parties the opportunity to present any and all evidence concerning the decision of cancellation. After hearing the appeal, the city Council may, by a majority vote, sustain, modify, or reverse the findings for said decision and shall provide, if requested by Contractor, a written determination of its findings.

21. Contractors submitting bids for Public Works construction projects in excess of \$1.00 must show his Contractor's License Number on the front of the bid envelope, except for certain projects for which a Contractor's License Number is not required by the State Contractor's Licensing Board. Failure to comply with this directive shall result in automatic bid rejection, furthermore, any Contractor who submits a bid for a type of construction for which he is not properly licensed shall be acting in violation of LA R.S. 37:2163, and shall be subject to all provisions for violation and penalties thereof. Contractors who are owned by, and are submitting a bid as a subsidiary of a parent company, whose name is listed in the State of Louisiana's Roster of Licensed Contractors, may do so by including a letter of proof of ownership from the parent company with the submitted bid package. The letter must be signed as per LA R.S. 38:2212 B.(5)(a)(b)(c) (see Item #22 below).

22. All bids submitted via USPS (registered or certified), overnight courier or hand delivered, shall be signed by hand and in ink by an authorized company representative per LA R.S. 38:2212 B.(5)(a)(b)(c), which states:

(c)(i) Evidence of agency, corporate, or partnership authority shall be required for submission of a bid to the division of administration or the State of Louisiana. The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable if any of the following conditions are met:

(aa) The signature on the bid is that of any corporate officer listed on the most current annual report on file with the Secretary of State, or the signature on the bid is that of any member of a partnership or partnership in commendam listed in the most current partnership records on file with the Secretary of State.

(bb) The signature on the bid is that of an authorized representative of the corporation, partnership, or other legal entity and the bid is accompanied by a corporate resolution, certification as to the corporate principle, or other documents indicating authority which are acceptable to the public entity.

(cc) The corporation, partnership, or other legal entity has filed in the appropriate records of the Secretary of State in which the public entity is located, an affidavit, resolution, or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. Such document on file with the Secretary of State shall remain in effect and shall be binding upon the principal until specifically rescinded and canceled from the records of the office.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

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**General Conditions for Bidders - Please Read Carefully (Continued)**

23. In-State preferences shall not apply to procurements involving federal funds.
24. Pursuant to LA R.S. 38:2212 O.(2)(a)(b), any modifications of plans and specifications will be made through an addendum. No addendum shall be issued within seventy-two (72) hours of the bid opening, excluding weekends and legal holidays, without the extension of the bid opening date. An extension of at least seven (7) but no more than thirty (30) working days is required but, re-advertising is not required. The addendum shall be transmitted by any one of the following methods: (1) facsimile transmission; (2) e-mail; (3) by hand; or (4) posted on the City of Alexandria's website ([www.cityofalexandria.com](http://www.cityofalexandria.com)) and posted on Central Bidding's website ([www.centralauctionhouse.com](http://www.centralauctionhouse.com)) if applicable.
25. All Federal Transit Administration (FTA) funded procurements, including operating assistance funding contracts, are to follow the *Master Agreement*, to include all applicable federal clauses.
- a. Any bidder that is found listed on the Federal Government's *System for Award Management* (SAM) website, at [www.sam.gov/portal/sam](http://www.sam.gov/portal/sam) , under the advanced search feature for *Excluded Parties List System* (EPLS), shall automatically be rejected for the award of this bid, by Category and/or in its entirety. This applies to any portion of the bid that is a procurement funded by FTA.
26. Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. The *AFEAT* Program should be inquired about through the Division of Finance.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

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***Alexandria Fairness, Equality, Accessibility, and Teamwork Program (AFEAT)***

Dear Vendor:

Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. The AFEAT Program should be inquired about through the Division of Finance. The goals for qualifying disadvantaged, minority and female owned business in the use of professional service agreements with prime contractors will help effectuate the goals of increasing: the competitive viability of small business, minority, and women business enterprise by providing contract, technical, educational, and management assistance; business ownership by small business persons, minority persons, and women (including professional service opportunities); and the procurement by the City of professional services, articles, equipment, supplies, and materials from business concerns owned by small business concerns, minority persons, and women.

Prime contractors offering subcontracting should take specific action to ensure that a bona fide effort is made to achieve maximum results towards meeting the established goals. Primes shall document efforts and shall implement steps at least as extensive as the following in a good faith effort to reach or exceed the established goals:

- A. *Establish and maintain a current list of minority and female owned businesses in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- B. *Document and maintain a record of all solicitations of offers for subcontracts from minority or female construction contractor and suppliers in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- C. *Secure listing of minority and women owned businesses from the City of Alexandria Purchasing Department, the Central Louisiana Business Incubator, and the State of Louisiana Department of Minority Affairs.*
- D. *Participate in associations which assist in promoting minority and women owned businesses such as the Central Louisiana Business League, the Central Louisiana Business Incubator, and the Entrepreneurial League System.*
- E. *Designate a responsible official to monitor all activity made in the effort to achieve or exceed the established goals; record contacts made, subcontracts entered into with dollar amounts, and other relevant information.*

For more information on AFEAT and the City of Alexandria's Diversity in Action Initiative, and to explore a local and statewide directory of minority businesses, please visit [www.diversityinaction.org](http://www.diversityinaction.org).

Should you have any questions or comments, please do not hesitate to contact our Finance Department at 318-449-5091 or our Purchasing Department at 318-441-6180.

Sincerely,

City of Alexandria

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**BID SPECIFICATIONS**

**SCOPE:** The following bid specifications are to be used as minimum and maximum standards for an Integrated Breathing Air Cylinder Recharging System, Bauer Compressor Mini Unicus 13 CFM, 3 Phase, 230 volt with Electronic CO Monitor P2 6000 PSI Securis Filter and two (2) DOT 6000 PSI Storage Cylinders or EQUAL, to be delivered and installed. All bid products shall either meet or exceed the following specifications.

Unless otherwise stated, the use of manufacturer's name and product numbers are for descriptive purposes and to establish general quality levels only, they are not intended to be restrictive.

Prospective bidders are required to state exactly what they intend to furnish, otherwise, it is fully understood that they shall furnish all items as stated. Bidder should indicate in the space provided below, under "*Bidder's Response*:", the necessary information to indicate he/she is conforming with the bid specifications for each item as written. If Bidder is in complete compliance with each bid specification item as written, please write "Comply" in the space provided; if not, please indicate in this space, the necessary information on the product you are proposing. Each specification response is necessary to ensure the proper evaluation and tabulation of this bid. If each "*Bidder's Response*" section is not filled in or completed, your bid may be rejected.

=====

***Bidder's Response:***

**1. GENERAL**

- 1.1 No bid may be withdrawn for at least thirty (30) days after the scheduled closing time for the receipt of bids. Bid prices shall remain firm until product(s) have been accepted by the City of Alexandria as delivered and installed. \_\_\_\_\_
- 1.2 Products shall be new, un-used, and of current model year manufacture. Bids will be accepted for any make or model that is equal or superior to the Recharging System specified. Decision of equivalency will be the sole Interpretation of the City of Alexandria. Bidder must be prepared to demonstrate a unit similar to the one bidding, if requested. \_\_\_\_\_
- 1.3 Where applicable, bids for "optional" equipment shall be listed in the appropriate spaces provided on the bid specifications "Price Page". Option bids shall not be a basis for bid award and shall not be included in the total bid price. \_\_\_\_\_
- 1.4 Product shall supply purified air that meets or exceeds the requirements of CGA Pamphlet G-7, Compressed Air for Human Respiration, ANSI-CGA G-7.1 Commodity Specification for Air, Grade E and all Applicable standards for respirable air. \_\_\_\_\_



**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**1.0 General: (Continued)**

**Bidder's Response:**

1.5 Two hard copies and one DVD copy of the Parts Manual, Service Manual and Operator's Manual for all products listed in these bid specifications, to include sub-contracted components, shall be furnished by the successful bidder at the time of delivery.

\_\_\_\_\_

1.6 Successful bidder shall notify the City of Alexandria Fire Dept., Mickey Christy @ 318-441-6631 within a minimum of twenty-four (24) hours prior to delivery.

\_\_\_\_\_

1.7 **Unit shall be delivered F.O.B., freight pre-paid and installed** at the City of Alexandria Fire Station, 518 Lee Street., Alexandria, LA. Unit shall be fully serviced with all the lubricants and fluid levels necessary for normal operation prior to delivery.

\_\_\_\_\_

1.8 Products shall not be considered delivered until Product Specification Compliance Inspection has been performed by representatives of the City of Alexandria using department, and the successful bidder.

\_\_\_\_\_

1.9 Each bidder should attach to the bid, complete descriptive literature on product being bid. Any item(s) appearing in the manufacturer's regularly published specifications as "standard" equipment are assumed to be included in the bid.

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1.10 Each respective bidder shall be responsible for ensuring that his/her product meets or exceeds specifications as described herein.

\_\_\_\_\_

**2. PRODUCT WARRANTY**

2.1 Successful bidder should furnish complete warranty information for product(s) being bid, to include all sub-contracted components installed by vendor as well as vendor warranted components.

\_\_\_\_\_

2.2 The successful bidder shall supply a copy of the warranty information to the City of Alexandria at the time of delivery. Products delivered without the complete warranty information, for vendor as well as sub-contracted components, will not be accepted.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**2.0 PRODUCT WARRANTY: (Continued)**

***Bidder's Response:***

2.3 Warranty work that cannot be performed at the City of Alexandria Fire Station, shall be performed at the dealer's repair facility that is listed on the Price Page of this bid packet. The transportation to and from the dealer's facility shall be the responsibility of the successful bidder with NO cost incurred by the City of Alexandria.

\_\_\_\_\_

2.4 The entire unit shall have a minimum warranty of twelve (12) months on the entire unit.

\_\_\_\_\_

2.5 Components that have been installed on this unit and are not designated as sub-contracted by the successful bidder, shall be covered under the minimum one (1) year warranty with all warranty work for these components being the sole responsibility of the successful bidder.

\_\_\_\_\_

**3.0 EQUIPMENT SPECIFICATIONS:**

3.1 The breathing air station shall be comprised in part of a high pressure compressor and purification system, storage system, fill control panel and containment fill station.

\_\_\_\_\_

3.1.1 The station shall be designed for a maximum working pressure of 6,000 PSIG.

\_\_\_\_\_

3.1.2 System shall have two (2) storage tanks.

\_\_\_\_\_

3.1.3. Two additional 6000 psi DOT cylinders may be OPTIONAL purchase.

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3.2 The breathing air station shall be supplied on a steel base frame of welded construction.

\_\_\_\_\_

3.3 The frame shall be designed for both the static and dynamic loads of the system and of sufficient size to adequately accommodate all of the station's components.

\_\_\_\_\_

3.4 The Mini Unicus, base frame shall include four brackets to facilitate securing the leveled unit to a concrete floor using expansion anchors; or equal design.

\_\_\_\_\_

3.5 The compressor, purification system, fill station and all tubing shall be incorporated into an appliance-like enclosure complete with sound attenuation.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**3.0 EQUIPMENT SPECIFICATIONS: (Continued)**

3.6 The enclosure panels shall be equipped with a slam-action latches and lift-off hinges making it simple to facilitate inspection and maintenance; or equal design.

\_\_\_\_\_

3.7 The enclosure and base frame shall be finished with a baked on Polyester powder coat paint for the ultimate in durability, corrosion resistance, and long life.

\_\_\_\_\_

3.8 The station shall be designed for against-the-wall installation, operation, maintenance and single-point operator control from the front of the station.

\_\_\_\_\_

3.9 The design of the station shall permit unrestricted cooling air flow to the compressor and motor when installed against a wall.

\_\_\_\_\_

3.10 All system instrumentation, controls and access to the containment Fill Station shall be located at the front of the station.

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3.11 The compressor package shall fit through a standard 36" doorway.

\_\_\_\_\_

3.12 The station shall be designed for operation indoors with room temperatures ranging between 40°F and 115°F.

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3.13 Installation shall not require a special foundation; however, it is the responsibility of the City of Alexandria to ensure the installation site has a solid and level foundation that can support the weight of the station, the availability of a qualified source of air for the intake of the compressor and adequate ventilation.

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3.14 All piping and tubing shall be properly supported and protected to prevent damage from vibration during shipment, operation, or maintenance.

\_\_\_\_\_

3.15 Piping and tubing shall be installed in a neat and orderly arrangement, adapting to the contours of the station.

\_\_\_\_\_

3.16 All instrument tubing shall be 300 series stainless steel.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**4.0 PERFORMANCE TABLE:**

Model	FAD <sup>2</sup> SCFM	Charging Rate <sup>3</sup> SCFM	H P	RPM	Compressor Model	Purification System	Air Processing Capability <sup>4</sup> (cu ft)
MINI-UNI/13	10.8	13.0	10	1420	K12.14 II	P2 Securus	67,000

**5.0 COMPRESSOR:**

5.1 The compressor shall be an air-cooled, oil lubricated, four stage, three cylinder, reciprocating compressor.

5.2 The crankcase shall be cast of a high strength, aluminum alloy.

5.3 The crankshaft shall be of a single piece forged steel construction, and supported in the crankcase by three long-life roller bearings.

5.4 The connecting rods shall be of single piece design and constructed of a high strength aluminum alloy.

5.5 Each connecting rod shall incorporate a roller bearing at the crank end and needle bearing at the pin end.

5.5 The pistons shall be constructed of an aluminum alloy.

5.6 Piston rings on the second and third stage are of cast iron; first and fourth stage rings shall be of a high strength polymide.

5.7 The final stage shall incorporate a ringed, free-floating, aluminum piston, which is driven by a guide piston and the previous stage's discharge pressure.

5.8 The cylinders shall be of cast iron construction with deep cooling fins on the external surface for optimum heat dissipation.

5.9 The cylinders shall be arranged in a "W" configuration with the first and second stage sharing one common stepped cylinder.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**5.0 COMPRESSOR: (Continued)**

**Bidder's Response:**

5.10 Each cylinder shall be located directly in the cooling fan's blast.

\_\_\_\_\_

5.11 The cylinders shall be removable from the crankcase.

\_\_\_\_\_

5.12 The compressor's flywheel shall be of cast iron construction.

\_\_\_\_\_

5.13 A multi-wing, high velocity cooling fan shall be integral to the flywheel.

\_\_\_\_\_

5.14 An intercooler shall be provided after each stage of compression and an aftercooler shall be provided after the final stage of compression.

\_\_\_\_\_

5.15 The coolers shall be individually detachable from the compressor, located directly in the cooling fan's blast and made of a stainless steel.

\_\_\_\_\_

5.16 The aftercooler shall be designed to cool the discharge air to within 18°F of ambient temperature.

\_\_\_\_\_

5.17 A cool-down cycle shall not be required prior to stopping the compressor.

\_\_\_\_\_

5.18 A separator shall be supplied after the second and third stages of compression, and a coalescing separator shall be supplied at the discharge of the compressor.

\_\_\_\_\_

5.19 An automatic condensate drain (A.C.D.) system shall be supplied for all of the separators.

\_\_\_\_\_

5.20 The drain solenoid shall be controlled by the PLC and shall be factory preset to drain the separators approximately every fifteen minutes for approximately six seconds.

\_\_\_\_\_

5.21 The A.C.D. system shall unload the compressor on shutdown for unloaded restart.

\_\_\_\_\_

5.22 An exhaust muffler and condensate reservoir shall be supplied.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**5.0 COMPRESSOR: (Continued)**

5.23 The condensate reservoir shall be manufactured of a non-corrosive polymide and shall be equipped with a high liquid level indication system to provide system shutdown and to alert the operator that the condensate reservoir is at capacity.

\_\_\_\_\_

5.24 The operator shall be alerted that the reservoir is at capacity via a scrolling text display message on the panel mounted operator / compressor interface.

\_\_\_\_\_

5.25 Manually operated valves shall be supplied to override the automatic operation of the A.C.D. system for test and maintenance purposes.

\_\_\_\_\_

5.26 The compressor shall be lubricated by a combination splash and low pressure lubrication system.

\_\_\_\_\_

5.27 The final stage of compression shall be lubricated by a pressurized lubrication circuit.

5.27.1 The other stages and the driving gear shall be splash lubricated.

\_\_\_\_\_

5.28 The low-pressure lubrication circuit shall include a positive displacement oil pump, gear driven by the crankshaft, a non-adjustable oil pressure regulator, and a full-flow oil filter with replaceable element.

\_\_\_\_\_

5.29 Two highly visible sight glasses shall be included, one on each of the crankcase to check the oil level.

\_\_\_\_\_

5.30 The oil drain hose shall be of sufficient length to reach the outside of the compressor cabinet.

\_\_\_\_\_

5.31 The final stage and oil pressure gauges shall be mounted on the instrument panel.

\_\_\_\_\_

5.32 The compressor shall be equipped with an inlet filter with a replaceable particulate element.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**6.0 PRIME MOVER AND V-BELT DRIVE:**

6.1 The **three phase** electric motor shall be of the open drip-proof (ODP) design.

\_\_\_\_\_

6.2 The compressor and motor shall be mounted on a common base that is vibration isolated from the station's main frame.

\_\_\_\_\_

6.2.1 The compressor and motor shall be arranged in a vertical design.

\_\_\_\_\_

6.3 Power from the motor shall be transmitted to the compressor by a v-belt drive.

\_\_\_\_\_

6.3.1 The v-belt drive shall be designed to tension the drive belts automatically. Rotation arrows shall be affixed in a conspicuous place on the compressor.

\_\_\_\_\_

**7.0 ELECTRICAL CONTROL AND INSTRUMENTATION:**

7.1 The compressor control panel (CCP) shall include an across-the-line magnetic motor starter, fused transformer and PLC controller.

\_\_\_\_\_

7.1.1 The CCP shall be built in accordance with UL 508A, the standard for Industrial Control Panels and shall be affixed with a UL label.

\_\_\_\_\_

7.2 The PLC compressor control system consists of a programmable logic controller for the monitoring, protection and control of the compressor systems.

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7.3 Standard features of the CCP include:

7.3.1 A NEMA type 4 electrical enclosure

\_\_\_\_\_

7.3.2 UL electrical panel

\_\_\_\_\_

7.3.3 Human Machine Interface (HMI) with **Multi-Color Touch Screen Display** incorporating vivid TFT (Thin Film Transistor) Technology and NOT limited by touch cells (Optional mounting configurations available-up to 25 ft remote)

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**7.0 ELECTRICAL CONTROL AND INSTRUMENTATION: (Continued)**

- 7.3.4 Emergency Stop Palm Button \_\_\_\_\_
- 7.3.5 Home screen customizable with distributor contact information \_\_\_\_\_
- 7.3.6 Real Time Clock (time and date) \_\_\_\_\_
- 7.3.7 Compressor on / off \_\_\_\_\_
- 7.3.8 Digital Display of Compressor Final Pressure \_\_\_\_\_
- 7.3.9 Digital Display of Compressor Oil Pressure \_\_\_\_\_
- 7.3.10 Digital Display of current Compressor Run Time \_\_\_\_\_
- 7.3.11 Digital Display of Final Separator Cycle Count \_\_\_\_\_
- 7.3.12 Compressor High Temperature Shutdown and Alarm \_\_\_\_\_
- 7.3.13 Full support of the Automatic Condensate Drain system (interval and duration set points adjustable thru the HMI – password protected) \_\_\_\_\_
- 7.3.15 Digital Display of time to next ACD Cycle \_\_\_\_\_
- 7.3.16 Condensate Drain Reservoir full alarm \_\_\_\_\_
- 7.3.17 Full support of CO monitor alarm functions (optional) \_\_\_\_\_
- 7.3.18 Full support of SECURUS purification system moisture monitor warning and alarm functions \_\_\_\_\_
- 7.3.19 Built in overtime timer set at 5 hours - optional times available \_\_\_\_\_
- 7.3.20 Maintenance Timer (selectable between real time or compressor run time) to give Digital Display of all needed Preventative Maintenance Evolutions \_\_\_\_\_



**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**7.0 ELECTRICAL CONTROL AND INSTRUMENTATION: (Continued)**

7.3.21 Motor overload alarm \_\_\_\_\_

7.3.22 Non-resettable hour meter \_\_\_\_\_

7.3.23 Recoverable Run History (last 5 run periods) \_\_\_\_\_

7.3.24 Recoverable Alarm History (last 5 fault shutdowns) \_\_\_\_\_

7.3.25 Support of up to 5 Languages (to be specified at time of order; includes English, French, Spanish & Portuguese) \_\_\_\_\_

7.3.26 Operator choice of display in BAR or PSI \_\_\_\_\_

**7.4 For ease of Maintenance and Repair:**

7.4.1 PLC has removable Terminal Blocks for all functions \_\_\_\_\_

7.4.2 Diagnostic EEPROM (Electrically Erasable Programmable Read-Only Memory) Capability \_\_\_\_\_

7.4.3 Support of Two (2) Communication Protocols (optional) \_\_\_\_\_

7.4.4 Ethernet Connection \_\_\_\_\_

7.4.5 Analog Phone Modem \_\_\_\_\_

7.4.6 Wiring shall be encapsulated within a split corrugated type loom. \_\_\_\_\_

7.4.7 Each wire end connection shall be machine crimped and numbered. \_\_\_\_\_

7.5 The HMI shall have 22 adjustable system parameters secured by password protection. The HMI will provide display of all safety / fault shutdowns with a text read-out of up to three potential causes for the fault / shutdown. \_\_\_\_\_

7.6 The compressor oil pressure shall be monitored by a pressure transmitter and digitally displayed on HMI. \_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**7.0 ELECTRICAL CONTROL AND INSTRUMENTATION: (Continued)**

7.6.1 The compressor shall shut down and a fault will be indicated on the HMI should the compressor's oil pressure drop below the factory preset value during operation.

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7.6.2 The oil pressure transmitter shall be by-passed during start-up to permit the oil pump to achieve the normal operating pressure.

\_\_\_\_\_

7.6.3 The low oil pressure and final air pressure transmitters shall be equipped with sealed electrical connectors.

\_\_\_\_\_

7.6.4 The analog pressure sensors for oil pressure and final pressure shall have adjustable set point and dead-band thru the HMI (password protected).

\_\_\_\_\_

7.7 A temperature switch shall be supplied on the head of the final stage of compression.

\_\_\_\_\_

7.7.1 The compressor shall shutdown and a fault will be indicated on the HMI should the final stage temperature exceed the tamper-proof set point during operation.

\_\_\_\_\_

7.8 Fault shut downs shall not affect the ability to fill SCBA cylinders from the storage system as long as there is sufficient pressure in the storage to fill them.

\_\_\_\_\_

**8.0 PURIFICATION SYSTEM:**

8.1 The purification system shall purify high pressure air to a quality that meets or exceeds the requirements of CGA Pamphlet G-7, Compressed Air for Human Respiration, ANSI/CGA G-7.1, Commodity Specification for Air, Grade E, and all other recognized standards for breathing air.

\_\_\_\_\_

8.2 Purification shall be achieved by mechanical separation of condensed oil and water droplets, adsorption of vaporous water by a desiccant, adsorption of oil vapor and elimination of noxious odors by activated carbon and conversion of carbon monoxide to respirable levels of carbon dioxide by catalyst.

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**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**8.0 PURIFICATION SYSTEM: (Continued)**

8.3 The high pressure purification chamber shall have a working pressure of 6000 PSIG.

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8.3.1 The purification system shall utilize a replaceable cartridge.

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8.3.2 The purification system shall be designed so that the replacement of the cartridge can be accomplished without disconnecting system piping.

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8.3.3 The design of the chamber shall preclude the possibility of operating the system without the cartridge installed or with an improperly installed cartridge.

\_\_\_\_\_

8.3.4 A bleed valve shall be provided to vent the purification system to facilitate replacing the cartridge.

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8.3.5 A pressure maintaining valve and a check valve shall be supplied downstream of the purification system to increase the efficiency of the purification system by maintaining a positive back pressure.

\_\_\_\_\_

8.3.6 A check valve shall be supplied between the coalescing separator on the compressor's discharge line and the purification system to maintain the positive pressure in the purification system when the compressor shuts down.

\_\_\_\_\_

8.4 The purification system shall include Bauer's patented Securus Electronic Moisture Monitor System.

\_\_\_\_\_

8.4.1 A sensor shall be located in the Securus purifier cartridge for direct monitoring of moisture levels.

\_\_\_\_\_

8.4.2 The Securus system shall warn the operator, in advance, of the impending expiration of the Securus cartridge via a scrolling text display message on the panel mounted operator / compressor interface.

\_\_\_\_\_

8.4.3 The compressor shall shut down automatically and the operator notified via scrolling text display message on the panel mounted operator / compressor interface should the operator fail to change the Securus cartridge within the warning period.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**8.0 PURIFICATION SYSTEM: (Continued)**

8.4.4 The compressor shall not be capable of restarting until the used cartridge is replaced with a new one.

\_\_\_\_\_

8.4.5 The moisture monitoring system shall be of a fail-safe design.

\_\_\_\_\_

a. Should the electrical contact between the display module and sensor be disconnected, an immediate fault shut down shall be effected.

\_\_\_\_\_

b. For absolute safety and highest quality breathing air, no manual override shall be supplied for the moisture monitor.

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**9.0 FILL CONTROL/INSTRUMENT PANEL:**

9.1 A steel instrument panel affixed with a non-glare Lexan overlay shall be installed on the front of the station. The overlay shall contain an embedded airflow schematic.

\_\_\_\_\_

9.2 The instrument panel shall include a storage pressure gauge, an LCD Operator / Compressor Interface, and an emergency stop switch.

\_\_\_\_\_

9.3 The instrument panel shall be located and arranged for visibility and easy access by the operator and for accessibility for inspection and maintenance.

\_\_\_\_\_

9.4 All components installed in the instrument panel shall be securely supported to eliminate vibration and undue force on instrument piping and to prevent damage during shipment, storage, operation, and maintenance.

\_\_\_\_\_

9.5 The fill control / instrument panel shall be hinged for easy maintenance and accessibility.

\_\_\_\_\_

9.6 The air management control panel shall be factory piped as a Priority Refill System. This system shall simplify the operations panel by eliminating cascade control valves and gauges.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**9.0 FILL CONTROL/INSTRUMENT PANEL:**

9.6.1 The Priority Refill System shall be supplied with a series of pneumatic valves that will direct the air flow directly from the compressor to the SCBA or air storage cylinder.

\_\_\_\_\_

9.7 When the storage system pressure drops to the current level of the compressor output, flow from the storage system stops and the compressor alone finishes filling the SCBA bottles.

\_\_\_\_\_

9.7.1 A bypass valve shall be panel mounted allowing the system operator to manually select whether the compressor output shall be directed to the Priority Refill System or directly to the SCBA cylinders, thus giving the operator maximum control of the fill process.

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9.7.2 Systems without a bypass valve shall not be deemed acceptable as they do not give the operator the flexibility of selecting the air source.

\_\_\_\_\_

9.8 The control panel shall include, at a minimum, an adjustable regulator for SCBA cylinder fill pressure complete with a pressure gauge for inlet and regulated pressure and a relief valve to protect the SCBA cylinders from overfilling, a manual control valve and pressure gauge for each fill position, the manual bypass direction valve to allow the operator to select SCBA filling from either the Priority Refill System or the compressor, provisions for factory or field modification to allow a different fill pressure at each fill position.

\_\_\_\_\_

9.9 All control panel mounted pressure gauges shall have a 2 1/2" diameter and be liquid filled.

\_\_\_\_\_

**10.0 AIR STORAGE SYSTEM:**

10.1 The air storage rack shall be in a vertical configuration that is an integral part of the breathing air systems frame.

\_\_\_\_\_

10.1.1 The rack shall be designed and equipped with four (4) 6000 psi rated DOT air storage receivers.

\_\_\_\_\_

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**10.0 AIR STORAGE SYSTEM:**

10.1.2 Each receiver shall be built to accommodate 509 cubic feet of air at maximum pressure.

\_\_\_\_\_

10.1.3 Each receiver shall include a service valve and burst disc.

\_\_\_\_\_

10.1.4 The rack shall be designed to support the receivers in a secure manner and permit visual inspection of the receivers' external surface.

\_\_\_\_\_

**11.0 CONTAINMENT FILL STATION:**

11.1 The front-loading, two position; containment fill station shall totally enclose the SCBA or SCUBA cylinders during the refilling process.

\_\_\_\_\_

11.2 The fill station's outer enclosure and door assemblies shall be constructed of formed ¼ inch thick plate steel.

\_\_\_\_\_

11.3 Venting shall be provided in the bottom of the fill station to allow the rapidly expanding air from a ruptured cylinder to escape from the fill station.

\_\_\_\_\_

11.4 The fill station shall be ergonomically designed for maximum operator convenience and safety for refilling cylinders.

\_\_\_\_\_

11.5 The fill station door and cylinder holder assembly shall tilt out towards the operator 45 degrees, providing unobstructed access to the cylinder holder to load and unload the cylinders.

\_\_\_\_\_

11.6 A heavy-duty gas spring shall be incorporated into the design of the fill station to assist the operator in opening and closing the fill station door. It shall take no more than approximately eighteen pounds of force to open or close the fill station door thereby eliminating operator fatigue.

\_\_\_\_\_

11.7 Each cylinder holder shall be lined to prevent scuffing the outer surface of the SCBA cylinders.

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**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**11.0 CONTAINMENT FILL STATION: (Continued)**

11.8 For complete operator protection, the fill station shall include a safety interlock system that will prevent refilling SCBA cylinders unless the fill station door is closed and secured in the locked position.

11.8.1 The automatic interlock will require no actuation of secondary latching mechanism on the outside of the fill station.

11.9 Two fill hoses shall be located within the fill station.

11.9.1 Each fill hose shall be equipped with a bleed valve and SCBA fill adapter of choice.

11.9.2 Fill hose retainers shall be provided to anchor the fill hoses when not in use.

**12.0 TESTING AND PREPARATION FOR SHIPMENT:**

12.1 The breathing air station shall be tested by the manufacturer prior to shipment. A copy of the manufacturer's test report shall be available upon request.

12.2 A manufacturer's nameplate shall be placed on the interior of the electric panel. The nameplate shall include, at a minimum, manufacturer's name, model number, serial number, compressor block number, and date of manufacture.

12.2.1 Voltage, phase / frequency, and amperage are located on another label inside the electrical panel.

12.3 The station shall be suitably prepared for motor freight transport.

12.3.1 The station shall be bolted to a wooden pallet, wrapped in sheet plastic, and fully protected by a wooden crate.

12.3.2 The compressor intake and similar openings shall be suitably covered.

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**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**Bid Specifications (Continued)**

**Bidder's Response:**

**12.0 TESTING AND PREPARATION FOR SHIPMENT:**

12.3.3 Component parts, loose parts or associated spare parts shall be packaged separately and shipped on the same pallet if feasible.

\_\_\_\_\_

**13.0 DOCUMENTATION:**

13.1 A documentation package shall be supplied with the station. The Documentation package shall include, at a minimum, an operation Manual on CD, recommended spare parts list, warranty information and a start-up / warranty registration form.

\_\_\_\_\_

13.2 The Operator's Instruction and Maintenance Manual for the breathing Air station shall be as detailed as possible, outlining all operation and Maintenance instructions.

\_\_\_\_\_

13.2.1 The manual shall include detailed illustrated drawings for the Compressor block and all system components along with a Complete parts listing for all illustrated components.

\_\_\_\_\_

13.2.2 Warnings and safety precautions shall be identified clearly in the manual.

\_\_\_\_\_

**14.0 Included Accessories**

14.1 The Integrated Breathing Air Cylinder Recharging System shall include the following:

14.1.1 Interstage pressure gauges locally mounted on the compressor.

\_\_\_\_\_

14.1.2 Carbon monoxide monitor with calibration kit.

\_\_\_\_\_

14.1.3 Remote Fill with bulkhead fitting, regulator, pressure gauge, line valve, a quick connect coupling.

\_\_\_\_\_

14.1.4 Dual pressure cylinder refill system.

\_\_\_\_\_

Option: Cascade Trailer 4 each 6000 PSI Dot Cascade Cylinders

\_\_\_\_\_

**END OF BID SPECIFICATIONS**



**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:  
INTEGRATED BREATHING AIR CYLINDER RECHARGING SYSTEM**

**PRICE PAGE**

Bid price for a minimum of one (1) Integrated Breathing Air Cylinder Recharging System, Bauer Compressor Mini Unicus 13, 230 volt with Electronic CO Monitor P2 Securis Filter and two (2) DOT 6000 PSI Storage Cylinders or equal, new and unused, complete unit installed and ready for use.

TOTAL Bid Price installed \$ \_\_\_\_\_

OPTIONAL: Two 6000 psi DOT Cylinders (Additional) \$ \_\_\_\_\_

Manufacturer Name: \_\_\_\_\_

Model Name/Number: \_\_\_\_\_

Approximate delivery/installation time after receipt of purchase order: \_\_\_\_\_/days

Bid price will be held firm for a maximum of \_\_\_\_\_ months from date of bid opening to accommodate any further purchases.

=====

**Warranty Emplacement/Service Site:**

**Please list your factory authorized warranty emplacement or service site below.**

Company Name: \_\_\_\_\_

Street Address: \_\_\_\_\_ City/State/Zip: \_\_\_\_\_

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

Attention: \_\_\_\_\_ Title: \_\_\_\_\_

=====

**Bidder Information:**

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone #: (\_\_\_\_\_) \_\_\_\_\_ Fax #: (\_\_\_\_\_) \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Authorized Printed Name and Title: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Email Address (optional): \_\_\_\_\_

**(Per LA R.S. 38:2212(A)(c)(i) - See General Conditions Item #22, Page 5 of these bid specifications.)**