

REQUEST FOR BID: Ross Air Compressors

RFB Posted: **March 10, 2020**

Question Posted: **March 20, 2020 2:00 P.M.**

Bid Due Date: **March 27, 2020 2:00 P.M.**

The South Dakota Science and Technology Authority (SDSTA) is requesting bids for two new air compressors to support increasing underground construction activities at the Sanford Underground Research Facility, located in Lead South Dakota. Entities interested in bidding on this project are responsible for providing bids for the following options:

- Option 1 Oil Flooded Compressor Bid: Provide SDSTA with a bid for two properly sized oil flooded air compressors that meet the requirements listed in this document
 - Include option for the purchase of 2 additional identical units
- Option 2 Oil Free Compressor Bid: Provide SDSTA with a bid for two properly sized oil free air compressors (ISO 8573 Class 0 or equivalent) that meet the requirements listed in this document
 - Include option for the purchase of 2 additional identical units

SDSTA will select option 1 or option 2 but not both.

Documents included in this request for bid include:

- A. This request for bid
- B. Draft Contract 2020-14

The RFB is organized as follows:

- Section 1.0 – SDSTA Requirements
- Section 2.0 – Scope of Work & Technical Specifications
- Section 3.0 – Bid Submission Requirements

1.0 SDSTA Requirements

SDSTA has several requirements for the new compressors that must be met at a minimum. SDSTA's requirements are:

- Provide SDSTA with 2-week notice before delivery of compressors.
- Meet the items & specifications listed in section 2.0 at a minimum
- Provide 1 session of training to a group of up to 4 people on the use and operation of the compressors including general maintenance items.

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2.0 Scope of Work and Technical Specifications

The primary scope of work for this project will be to provide SDSTA with two bids:

- Option 1 Oil Flooded Compressor Bid: Provide SDSTA with a bid for two properly sized oil flooded air compressors that meet the requirements listed in this document
 - Include option for the purchase of 2 additional identical units
- Option 2 Oil Free Compressor Bid: Provide SDSTA with a bid for two properly sized oil free air compressors (ISO 8573 Class 0 or equivalent) that meet the requirements listed in this document
 - Include option for the purchase of 2 additional identical units
- Bids must state the compressors corrected flow (ACFM) at the operating conditions below

SDSTA will select option 1 or option 2 but not both. SDSTA does not require dryers or oil separators for these bids. All bids must meet or exceed the specifications listed in the sections below.

*Bidders shall assume that the ambient air supplying the compressors meets ISO 8573 Class 0 or equivalent without extra filtration to begin with.

2.1 Compressed Air Flow Rate Requirements

Compressed air flow rates are listed in Standard Cubic Feet per Minute (SCFM). The vendor will be responsible for ensuring the selected compressors will provide adequate (corrected) flow at the Actual Cubic Feet per Minute (ACFM) conditions listed:

SCFM Conditions:

- Total demand = 800 SCFM
- Elevation = Sea Level 14.7 psia
- Max Ambient Temp = 70 F
- Relative Humidity = 0%
- Maximum Pressure (high set point) = 110 psig
- On-Load pressure = 100 psig
- Compressors needed = 2 operating at 400 SCFM each

ACFM Conditions:

- Elevation = 5355 ft 12.2 psia
- Max Ambient Temp = 95 F
- Max Relative Humidity = 60%

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- Maximum Pressure (high set point) = 110 psig
- On-Load pressure = 100 psig
- Compressors needed = 2 operating at the corrected ACFM

2.2 Electrical/Software Requirements for Compressors

- Available Power = 480-volt 3 phase
- All compressors shall be demand sensing and equipped with a variable frequency drive that can match the air flow requirements of the compressed air system as demand increases and decreases
- Compressors shall be capable of being monitored over the local network
- Multiple compressors shall be capable of running in a lead-lag configuration for up to 4 identical compressors.

2.3 Additional Requirements

- The air compressors will be installed inside the Ross headframe sheltered from moisture. However, the headframe is not heated, these compressors must be capable of operating at temperatures down to -15 F (fifteen degrees Fahrenheit below zero).
- Air cooled while operating at full load at the elevation and maximum temperature listed in section 2.1
- Sound pressure level under full load shall be less than 70 dBa
- Bidders shall select the most efficient units possible. In addition, compression shall take place across 2 stages at a minimum.
- Compressors shall be easily serviced with quick access panels and user maintainable components where possible

2.4 Optional Requirements

- Provide SDSTA with information and costs about any compressor maintenance programs you may offer. Include these items as a separate line items in the bid.

3.0 Bid Submission Requirements

The vendor shall submit an electronic copy (.pdf format) of the bid no later than 2:00 p.m. **March 27, 2020**, to: mbaumann@sanfordlab.org. Late submissions will not be accepted.

Questions must be submitted in writing by email no later than 2:00 p.m. MDT **March 18, 2020 2:00 P.M.**, to mbaumann@sanfordlab.org. Answers will be emailed to all prospective bidders and posted to the sanfordlab.org website no later than **March 20, 2020**.

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The bid period may be extended at the discretion of SDSTA based on the quantity and/or complexity of questions. Any notices of extension of time to respond will be distributed to all prospective bidders by SDSTA.

All communications regarding this procurement between RFB release and award shall be directed by email to mbaumann@sanfordlab.org. Communications with other SDSTA staff regarding this procurement in advance of the award are not allowed.