# वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद् Council of Scientific & Industrial Research राष्ट्रीय वांतरिक्ष प्रयोगशालाएं National Aerospace Laboratories



CSIR - NAL Estd. 1959 ISO 9001 : 2015 Certified Organization

#### INVITATION FOR BIDS/NIT

#### Tender No: CCFP/PUR/2K20/45

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research (CSIR), an autonomous body under Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

| SI.No.                      | Description of Items                              |  | Unit | Quantity |
|-----------------------------|---|--|------|----------|
| 1                           | Compressed air unit as per attached specification |  |      | 1        |
| Single / Double Bid Single  |   |  |      |          |
| Bid Security (EMD) (in INR) |   | Bid Securing Declaration Form to be submitted. |      |          |

01.Tender Documents May be downloaded from Central Public Procurement Portal <u>https://www.etenders.gov.in</u>. Aspiring Bidders who have not enrolled/ registered in e- procurement should enroll/ register before participating through the website <u>https://www.etenders.gov.in</u>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

02.Tenderers can access tender documents on the website (For searching in the NIC site <u>https://www.etenders.gov.in</u>, kindly go to Tender Search option, select tender type and select 'Council of Scientific and Industrial Research' in organization tab and select NAL-Bengaluru-CSIR' in department type Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <u>https://www/etenders.gov.in</u> as per the schedule given in the next page.

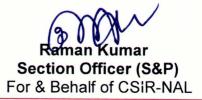
03.Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. To maintain sanctity of tendering system, one Indian Agent cannot represent two different foreign principals in one tender.

04.Unsolicited / conditional / unsigned tenders (Quotations) **shall not** be considered. Quotations received after the due date and time **shall be summarily rejected**.

05. The amount of the **Performance Security** shall be **10% of the contract value** to be submitted within 21 days from the date of Purchase Order valid up to 60 days after the date of completion of performance obligations including warranty obligations.

06.The Bidder shall comply the terms and conditions of the tender, failing which; the offer shall be liable for rejection.

07.The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.



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purchaseccadd@nal.res.in

## Technical specifications for compressed air plant

1) Application

The new compressed air plant will be used to supply instrument air on continuous duty.

- Plant capacity 100 Nm<sup>3</sup>/h @ 8 kg/cm<sup>2</sup>, -40°C dew point Capacity control limits: 0 – 50% - 100%
- 3) Type of compressor Reciprocating, non-lubricating
- 4) Compressor make Chicago Pneumatic/ Ingersoll Rand
- 5) Compressor motor

4 Pole, Squirrel cage Electric Motor in TEFC enclosure and suitable for 440 V, 5%, 50 Hz, 3 phase electric supply, SF 1.2, with 40 °C ambient and 'F' class insulation.

6) Compressor cooling

Water cooling (open system with water circulation)

#### 7) Components of the unit

- Air compressor
- After cooler
- Air receiver
- Compressed air coalescing filters along with particulate filters
- Desiccant type air dryer
- Pressure switches, isolation valves and interconnection piping
- Safety valves
- Electrical control panel with starter
- Associated instrumentation, hoses, cable trays etc.,
- 8) Mounting

All the components shall be mounted on channel frames in a compact layout while also ensuring convenient access for operation

- 9) Air receiver specification
  - At least 0.5 m<sup>3</sup> capacity
  - Air receiver design to comply with IS 2825 specifications
  - Material of construction as per IS 2062 with welded supporting stand, inspection opening with cover, with screwed connections for 1No. pressure gauge, suitable safety valve, auto drain trap duly mounted on the Deck.
- 10) Air piping

All interconnecting air-piping within battery limits including non-return valves & isolation valves are in the scope of supplier.

- 11) Safety interlocks
  - Compressor loading and unloading
  - Compressor high temperature trip
  - Receiver high pressure trip
    - And other necessary interlocks

12) Electrical control panel requirements

- PLC based control for the compressor
- The panel shall have an independent MCCB (L&T/ Siemens make) of appropriate rating with shunt trip and shall have at least 50kA short handling capacity.
- Panel shall have ELR with CBCT etc.,
- Bus bars shall be of copper and with cooling fan etc.,
- The panel shall be fully enclosed to prevent ingress of atmospheric dust.
- Provision of proper cable entry and glanding arrangement for the incoming power cable with appropriate space for larger bending radius.
- Main MCCB shall have external rotary handle to operate.
- Double copper earthing shall be provided.
- Control/power cabling shall be connected using appropriate lugs for termination.
- 13) Address for supply & installation

Centre for Carbon fibers and Prepregs (CCFP), CSIR-National Aerospace Laboratories – Belur, NAL Wind Tunnel road, Bangalore – 560037.

14) Space available for installation

The plant will be located indoors on concrete floor in the space indicated below. 5 m length x 3 m width X 8 m height

15) Utilities available at NAL site Cooling water @ 3 kg/cm<sup>2</sup> Electrical power 440V +/- 5%, 50 Hz

#### Note to the Supplier

- The scope is design, supply, unloading, erection, installation, commissioning and performance demonstration
- NAL will provide suitable Aluminium cable for termination by the supplier at the electrical control panel for the unit
- The supplier has to submit Single Line Drawings for NAL's concurrence along with their offer.
- Separate cable tray to be laid for instrument cables and power cables
- Supplier must supply and install 2" SS pipes (along with bends, flanges etc) for connecting the plant output to the compressed air header line at a distance of nearly 20 m from the unit.
- Supplier should include the comprehensive warranty of two years.



#### **Bid-Securing Declaration Form**

| Date:   |  |
|---------|--|
| Bid No. |  |

To (insert complete name and address of the purchaser)

I/We, The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

| a) | have withdrawn/modified/amended, impairs or derogates from the tender, my/our<br>Bid during the period of bid validity specified in the form of Bid; or  |  |  |  |  |
|----|--|--|--|--|--|
| b) | Having been notified of the acceptance of our Bid by the purchaser during the period of bid validity   |  |  |  |  |
| 5, | <ul> <li>I. fail or reuse to execute the contract, if required, or</li> <li>II. fail or refuse to furnish the Performance Security, in accordance with the<br/>Instructions to Bidders.</li> </ul> |  |  |  |  |

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown) in the capacity of (insert legal capacity of person signing the Bid Securing Declaration).

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of : (insert complete name of Bidder) Dated

on\_\_\_\_\_(insert date of signing)

Corporate Seal (where appropriate)

Note:

- 1. In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)
- 2. Bid Security declaration must be signed in by the Proprietor/CEO/MD or equivalent level of Officer of the company.

## CCFP/PUR/2K20/45

### SCHEDULE CUM CRITICIAL DATE SHEET

| 1  | Name of Organization   | CSIR-National Aerospace Laboratories, Bengaluru  |          |  |
|----|--|--|----------|--|
| 2  | Tender Reference No  | CCFP/PUR/2K20/45   |          |  |
| 3  | Tender Type<br>(Open/Limited/EOI/Auction/Single)   | Open Tender  |          |  |
| 4  | Type/Form of Contract (Work / Supply /<br>Auction / Service / Buy / Empanelment / Sell)    | Supply   |          |  |
| 5  | No of Covers (One/Two/Three/Four)  | One  |          |  |
| 6  | Tender Category (Services/Good/Works)  | Good   |          |  |
| 7  | Allow Resubmission (Only in online mode within scheduled period)                           | Yes  |          |  |
| 8  | Allow Withdrawal (Only in online mode within scheduled period)                             | Yes  |          |  |
| 9  | Allow Offline Submission   | No   |          |  |
| 10 | Work Item Title  | Compressed air unit  |          |  |
| 11 | Work Description   | Compressed air unit as per attached specification  |          |  |
| 12 | Delivery Schedule  | 90 days  |          |  |
| 13 | Product Category (Civil Works / Electrical Works<br>/ Fleet Management / Computer Systems) | R & D Equipment  |          |  |
| 14 | Is Multi Currency Allowed  | No   |          |  |
| 15 | a) Tender Publishing Date -  | 19 Aug 2020  | 1800 Hrs |  |
|    | b) Document download start Date:   | 19 Aug 2020  | 1800 Hrs |  |
|    | c) Bid Submission Start Date   | 19 Aug 2020  | 1800 Hrs |  |
|    | d) Bid Submission End Date-  | 10 Sep 2020  | 1000 Hrs |  |
|    | e) Bid Opening Date-   | 11 Sep 2020  | 1100 Hrs |  |
| 16 | Bid Validity Days  | 90 days  |          |  |
| 17 | Address for communication  | Stores and Purchase Officer<br>CSIR-National Aerospace Laboratories,<br>HAL Airport Road, Kodihalli,<br>Bengaluru - 560017   |          |  |
| 18 | Inviting Officer   | Director, CSIR-NAL   |          |  |
| 19 | Contact No   | 25086097, 25086710   |          |  |
| 20 | E-mail Address   | purchaseccadd@nal.res.in/spo@nal.res.in  |          |  |
| 21 | Detailed specification of item   | Invitation for bids / NIT  |          |  |
| 22 | Tender Terms & Conditions &<br>Instruction for online bid submission                       | The prospective bidders are requested to refer to the Standard Tender Document available on NAL internet( <u>www.nal.res.in</u> ) under the icon Tender-Purchase before formulating and submitting their bids. |          |  |