

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. NAL/PUR/STTD/318/19-Y

Dated: 15-Nov-19

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.

Sl.No.	Description of Items	Unit	Quantity
1	Fatigue rated load cells for servo hydraulic actuators. Please refer Annexure for detailed specification.	Nos	9
Single / Double Bid		Single	
Bid Security (EMD) (in INR)		Bid Security Declaration should be enclosed with quotation	
Performance Security		10% of the purchase order value	

01. Tender Documents may be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders who have not enrolled/ registered in e- procurement should enroll/ register before participating through the website <https://www.etenders.gov.in>. 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 <https://www.etenders.gov.in>, 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 <https://www.etenders.gov.in> 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 Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
06. 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.


Raman Kumar
(Section Officer S&P)

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SCHEDULE CUM CRITICAL DATE SHEET

1	Name of Organization	CSIR-National Aerospace Laboratories, Bengaluru	
2	Tender Reference No	NAL/PUR/STTD/318/19-Y dated: 15-Nov-19	
3	Tender Type (Open/Limited/EOI/Auction/Single)	Limited Tender	
4	Type/Form of Contract (Work / Supply / Auction / Service / Buy / Empanelment / Sell)	Supply	
5	No of Covers (One/Two/Three/Four)	One	
6	Tender Category (Services/Good/Works)	Goods	
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	Fatigue rated load cells for servo hydraulic actuators.	
11	Work Description	Fatigue rated load cells for servo hydraulic actuators.	
12	Delivery Schedule	120 days from the date of purchase order	
13	Product Category (Civil Works / Electrical Works / Fleet Management / Computer Systems)	R & D Equipment	
14	Is Multi Currency Allowed	Yes	
15	a) Tender Publishing Date -	18-Nov-19	1800 Hrs
	b) Document Download Start Date-	18-Nov-19	1800 Hrs
	c) Bid Submission Start Date-	18-Nov-19	1800Hrs
	d) Bid Submission End Date-	09-Dec-19	1000 Hrs
	e) Bid Opening Date-	10-Dec-19	1100 Hrs
16	Bid Validity Days	90 days	
17	Address for communication	Stores and Purchase Officer CSIR-National Aerospace Laboratories, HAL Airport Road, Kodihalli, Bengaluru - 560017	
18	Inviting Officer	Director, CSIR-NAL	
19	Contact No	25086040, 25086041	
20	E-mail Address	purchasek@nal.res.in	
21	Detailed specification of item	Refer Invitation for bids / NIT	
22	Tender Terms & Conditions & Instruction for online bid submission	The prospective bidders are requested to refer to the Standard Tender Document available on NAL Internet (www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids	

Note:

- a) Participation in this tender is by invitation only and is limited to the selected bidders. Unsolicited offers are liable to be ignored. However, bidders who desire to participate in such tenders in future may bring it to the notice of Procuring Entity and apply for registration.
- b) To get registered as an approved bidder with the procuring entity please refer our website www.nal.res.in and submit.

ANNEXURE

1 Specification of load cells

1.1 General

Fatigue resistant load cell is required to accurately sense load and provide a precise electrical output signal, which is proportional to the load applied. Four arm strain gauge bridges should be used as sensing devices with dual bridge. The load cells should be suitable for mounting directly on actuators piston rod and suitable for tension, compression and fatigue loading. The technical specification of the required load cell is given below.

1.2 Operating capacity

<ul style="list-style-type: none"> Rated load capacity 	: a. 10 KN - 2 nos. b. 20 KN - 3 nos. c. 50 KN - 4 nos.
<ul style="list-style-type: none"> Static over load capacity 	: 200% of rated load capacity

1.3 Technical Details

<ul style="list-style-type: none"> Accuracy 	: +/- 0.02% to +/- 0.05% of full scale or +/-0.5% of the reading
<ul style="list-style-type: none"> Linearity 	: +/- 0.25% of full scale
<ul style="list-style-type: none"> Hysteresis (Max) 	: +/- 0.1% of full scale or better
<ul style="list-style-type: none"> Repeatability 	: +/- 0.02 % of full scale
<ul style="list-style-type: none"> Non repeatability (Max) 	: +/- 0.5 % of full scale
<ul style="list-style-type: none"> Output/Sensitivity 	: 1mv/v or more at full scale load
<ul style="list-style-type: none"> Resolution 	: infinite
<ul style="list-style-type: none"> Strain gage type/ bridge circuit 	: Bonded foil type, >350 ohms, Dual bridge

• Excitation, volts	: 10 V DC
• Zero balance	: +/- 1.0 %
• Insulation resistance	: > 4000 Mega Ohms
• Connector/Cable	: Any standard male mounting type connector & mating connector to be supplied
• Temperature effect on output	: +/- 0.02%
• Temperature effect on Zero	: +/- 0.02%
• Compensated Temperature Range	: 0° to 50° C
• Useable temperature Range	: 0° to 50° C

1.3.1 Mechanical

• Thread Size	: Metric threaded connection on both ends, thread details have to be provided along with the technical bid
• Tension Base	: To be provided
• Casing material	: Steel, sealed, Dust and water proof, shock proof upto 50g
• Operation	: Tension and Compression Fatigue
• Life Cycle	: 1 *10 ⁸ cycles minimum when operated between Zero and full scale Static Tension or compression rating, 0.5 *10 ⁸ cycles minimum when operated between full scale static tension or compression rating, >1 * 10 ⁸ cycles minimum when operated within the fatigue rating.
• Calibration Certificate	: To be provided to accredited traceable standard



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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 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
	(i) fail or reuse to execute the contract, if required, or
	(ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

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 the Bid Securing Declaration)

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

Dated on _____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: 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)