

Invitation for e-Bids / Notice Inviting e-Tender

Tender No. NAL/PUR/ PR/130/2024

Date: 20-01-2025

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

The Director, CSIR-NAL invites e-bids from the Manufacturers, their distributors and Indian Agent of Foreign Principals, if any, for the procurement of the following Goods/Services for its day-to-day research

Sr. No.	Tender No.	Brief Description of material (s)	Quantity	Type of Bid	Mode of Procurement
1	NAL/PUR/PR/130/2024	Controller for Axial Flux permanent Magnet (as per the specification attached.)	02 Nos	Two Bid <i>Simple Stape</i>	Open Tender

1. E-Bids are invited through the electronic tendering process and the Tender Document can be downloaded from the e-Tender Central Public Procurement Portal (CPPP) of Government of India, <https://etenders.gov.in> **The submission of e-Bids will be only through the e-Tender portal <https://etenders.gov.in>. Bids will not be accepted in any other form.**
2. Interested bidders may obtain further information from the office of the:
Stores & Purchase Officer
Purchase Section
CSIR- National Aerospace Laboratories
NWTC-Belur, Bengaluru – 560037
Karnataka-India
Tel #: 080 25051548 / 1636
Email : sauravkumar@nal.res.in/shoba@nal.res.in
3. The prospective bidders should adhere to deadlines specified in Tender Details Screen corresponding to this Tender on E-Tender portal <https://etenders.gov.in>.

4. The Schedule for Submission of e-Bids and Opening of e-Bids is as follows:

Date & Time of Submission of e-Bid		Date and Time of Opening of e-Bid	
Date	Time (IST)	Date	Time (IST)
20-02-2025	11.00	21-02-2025	11.30

5. **Bid Security (BS) / Earnest Money Deposit (EMD):**

The bidders have to furnish/submit BID SECURING DECLARATION as per the FORMAT, in the name of “The Director, National Aerospace Laboratories, Bengaluru”, without which the bid is liable to be rejected.

6. **Performance Security (PS)**

- 6.1 Performance Security shall be submitted by the successful bidder within 21 days of receipt of the notification of award / Purchase Order for the amount specified in the Purchase Order, valid for 60 days beyond the fulfilment of all contractual obligations including warranty.
- 6.2 The Performance security shall be in the form of a Bank guarantee (format shall be provided along with the Purchase Order) or stand-by Letter of Credit issued by a Nationalized / Scheduled bank located in India or a bank located abroad.
- 6.3 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations. In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.

7. **Open Tender enquiry:**

Only Local suppliers with prescribed local content as detailed in DIPPT Order No. P-45021/2/2017-PP (BE-II) dated 16th Sep, 2020 and subsequent orders issued by Ministry of Finance, Government of India from time to time, are eligible for bidding. Bidders must enclose the certificate declaring the local content of supplies as per the format.

8. **Global Tender Enquiry:**

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 authorisation letter from their principal. To maintain sanctity of tendering system, one Indian Agent **cannot** represent **two** different foreign principals in one tender.

- (a) In case of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry.

One manufacturer can also authorize only one agent/ dealer. There can be only one bid from the following:

i)	The Principal manufacturer directly or through one Indian agent on his behalf; and
ii)	Indian/foreign agent on behalf of only one principal.

(b) Foreign bidders' must disclose the name and address of agent and representative in India and Indian bidders' must disclose their foreign principal or associates.

(c) If bidders' is Indian Agent of Foreign Principal, the following instruction shall be complied and as amended from time to time as on the date of issue of Tender:

i)	Bidders must necessarily comply with conditions of "Make in India" Order No. F-45021/2/2017-PP (BE-II) dated 16-Sep-2020 of Ministry of Commerce and Industry, Government of India, as amended from time to time on the date of issue of Tender.
ii)	The bidders shall comply with restrictions under Rule 144(xi) of the GFR 2017 related to restrictions on participation of Foreign bidders' and their Authorised Indian Agent/Dealer in terms of Order No.P-45021/112/2020-PP(BE-II) (E-43780) dated 24-Aug-2020 of the Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, as amended from time to time as on the date of issue of Order.

Note: Kindly refer to the first page of Notice Inviting Tender for tender type/mode of procurement [i.e. Limited Tender Enquiry (LTE) / Open Tender Enquiry (OTE) / Global Tender Enquiry (GTE)] and submit the bid accordingly

9. The Bid should be valid for **90 (ninety) days** from the date of opening of Bid (Technical bid in case of two-bid system). In exceptional circumstances, the bidder may be requested in writing for an extension to the period of bid validity without modifying their bid.

10. Documents comprising Single Bid

10.1 All the documents (**as applicable**) specified in **Annexure A to F** should be submitted in Single E-Bid along with BOQ- Price bid.

11 Documents comprising Two Bid (Technical Bid & Price Bid)

11.1 **Technical bid** should comprise documents (**as applicable**) specified in Annexure A, B, D, E and F along with the technical specification.

11.2 **Price Bid** should comprise of BOQ and Annexure-C.

12. The bids of those bidders failing to comply the following clauses will be summarily rejected.

(a) The bidders proposing to supply finished products directly/indirectly from bidders of Countries sharing the land border with India should submit copy of registration done with the Ministry of Home Affairs and Ministry of External Affairs.

(b) If the products supplied are not from bidders of Countries sharing Land border with

India, the bidders should enclose a declaration

- (c) The debarment of a bidder in this tender, if any.
13. As per Govt. of India procurement policies,
- a) The purchaser intends to give purchase/service preference to local supplies (Preference to Make in India) in case the cost of procurement is up to ₹ 50.00 (fifty) lakhs.
- b) The procuring entity intends to give purchase/service preference to products/goods manufactured by micro, small and medium enterprises.
14. Bidders are requested to refer to the instructions regarding Procurement Policies for "Make in India", issued by Ministry of Commerce and Industry, Department of Industrial Policy and Promotion dated. 28-May-2018, and 4-Jun-2020 and guidelines as and when issued.
15. Printed conditions, if any, submitted along with the quotation shall not be binding on us.
16. Bidders have to certify that the quoted price is not higher than the price quoted with other Government Institution for similar specifications and quantity during the current financial year.
17. **Terms of Payment:**
- 17.1 The method and conditions of payment to be made to the Supplier under this Contract shall be as specified below:

I	Payment for Goods and Services supplied from abroad
	Payment of foreign currency portion shall be made in currency of the Contract by opening irrevocable Letter of Credit for 100% value of Purchase Order in the following manner:
(a)	On Shipment: Ninety (90%) percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Supplier in a bank in its country, upon submission of documents
(b)	On Acceptance: Ten (10%) percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods and successful installation & commissioning, upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the Performance security, if any.
(c)	The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the FOB / FCA value.
(d)	The LC will be confirmed at the suppliers cost, if requested specifically by the supplier. All bank charges abroad shall be to the account of the beneficiary i.e. supplier and all bank charges in India shall be to the account of the opener i.e. Purchaser. If LC is requested to be extended/ reinstated for reasons not attributable to the Purchaser, the charges thereof would be to the supplier's account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.
II	Payment for Goods and Services supplied from India
	The payment shall be made in Indian Rupees, as follows:

(a)	In case of supplies where installation & commissioning is not required 100% payment will be made within 30 days from receipt of items by purchaser as per purchase order contract.
(b)	In case of supplies where installation & commissioning is required
	On shipment : Eighty (80%) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents. On Acceptance: The remaining twenty (20%) percent of the Contract value shall be paid to the Supplier within thirty (30) days after the date of the acceptance certificate issued by the Purchaser subject to submission of performance security, if any.
(c)	Payment in Indian Rupees may also be made by opening irrevocable inland Letter of Credit for 100% value of Purchase Order with stage payments mentioned in (a) or (b) above.
(d)	E-Payment: CSIR-NAL prefers to make Electronic Transfers (RTGS) through State Bank of India, NAL Branch, Bengaluru
III	Payment for Annual Maintenance Contract
The payment shall be made on quarterly basis after completion of the work/services and certification by the Indenting Officer	

Mandatory fields in Tax Invoice and Receipt Vouchers	
Invoice Number and Date	Name, address and GSTIN of the supplier
Shipping and billing Address	Customer Name & GSTIN [CSIR-NAL]
HSN Code/SAC Code	Place of Supply
Taxable value and discounts	Item details i.e. description, quantity (number), unit, the total value
Signature of the Supplier	Rate and amount of taxes i.e. CGST/SGST/IGST
Bank details	

- 17.2 While claiming the payment, the supplier should certify in the bill/invoice that the payment is being claimed strictly in terms of the contract and all obligations on the part of the supplier for claiming the payment have been fulfilled as required under the contract.
- 17.3 Payment shall be made in currency as indicated in the contract.
- 17.4 All payments due under the Contract shall be paid after deduction of statutory levies at source (like Income Tax, etc.), wherever applicable.
18. Kindly, note **CSIR-NAL GST No.29AAATC2716R1ZB**. The bidders are requested to furnish their GST no. in their invoice, failing which NAL will not be able to make the timely payment.
19. Delivery Terms:

For Goods and Services supplied from abroad	FOB, FCA, Ex-Works, CIP, etc.
For Goods and Services supplied from abroad	FOR, Destination
Annual Maintenance Contract	On-site

20. The Delivery Schedule shall be *05 months* from the date of Purchase Order

21. Unsolicited / conditional / unsigned Quotations/Quotations received after the due date and time shall be summarily rejected. The bidders shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
22. The prospective bidders are requested to refer to the Standard Terms and Conditions available on NAL Internet (www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids.
23. The warranty period shall be **12 months** from the date of acceptance.
24. The Director, CSIR-National Aerospace Laboratories (NAL), Bengaluru, India reserves the right to accept or reject any bids or accept all tenders either in part or in full or to split the order, or to annul the bidding process without assigning any reasons there for.

Thanking you,

Yours faithfully

Handwritten signature in blue ink, appearing to be 'Shubh', followed by the date '21/07/25'.

PPS / In-Charge (S&P)
For and on behalf of CSIR-NAL

General Instructions to Bidders: -

01. For participation in e-procurement all bidders (including Foreign Bidders) need to enroll themselves on the CPP Portal (<https://www.etenders.gov.in>) Only enrolled/registered bidders in the CPP portal shall be eligible to participate in the e-tendering process.
02. 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 the instructions provided at '**Instructions for online Bid Submission**'.
03. 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.
04. The bidders should have Java 8 update 231 version-32 bit for uploading the bid in the CPP Portal.
05. Purchase Section, CSIR-NAL neither operates nor manages the CPP Portal where online bids are submitted and. Therefore, will not be responsible for any technical issues related to bid submission (viz., not being able to upload bid, blank/missing/part documents etc.). If the bid is incomplete on account of these issues, it will be treated as such and evaluated further. For any technical queries/issues related to online bid submission, the bidders must directly approach support service of CPP Portal as per the details given on the CPP website.

Motor controller for PMAC motor - Specifications

Specifications for motor controller is given below.

Sl. No.	Description	Parameter Value
1	DC Input Voltage range	100-650 Volts DC
2	High Voltage side input Voltage (max)	800V DC
3	High Voltage side input Current (max)	280Amps
4	External DC Control / auxiliary supply voltage range	12-16 Volts DC and current \leq 3amps
5	Continuous AC Current (rms)	300 A _{rms} and above
6	Output continuous power	135KVA and above, 3-Phase, 1 X UVW
7	Maximum switching frequency	8-14 kHz and above
8	Max Electric RPM	100000 rpm
9	Motor Control algorithm	FOC algorithm / sinusoidal commutation
10	Control Methods	Input throttle control for motor speed, torque (Current Mode), or combination of both
11	Full load efficiency	>94%
12	Motor rotor position feedback interface	Support different types of motor position/ speed sensors like encoders, resolvers and HALL sensors.
13	Communication protocols	CAN communication for adjustment of settings
14	Cooling method	Liquid Cooling
15	Protection functions/features	<ul style="list-style-type: none">• Hardware and software over voltage, over current, under voltage, power stage and motor temperature protection, low and high battery protection features to be inbuilt with the controller.• Position/speed sensor error detection, motor stall protection and safe motor shutdown
16	Motor temperature interface	Winding temperature sensors of type KTY or NTC interface
17	Operating temperature and altitude	-20° C to +65° C & 2km and above
18	Storage Ambient temperature	-20° C to +85° C
19	Enclosure Protection	IP65
20	Weight and dimension	Should be \leq 8.5 kg, standard catalogue product and compact in size with liquid cooling fittings

21	Additional features	<ul style="list-style-type: none"> • GUI Software for user configuration of safety limits like motor temp, current, voltage, speed limits etc. and Initial motor parameter identification / tuning also to be provided. • Parameters which all to be communicated over CAN bus are to be (V, I, P, T, speed, Throttle etc.) specified in the datasheet. • Potential free contacts / Digital inputs for any safety interlocks to be provided. • Controller shall be support to universal PMSM motor control • Certification and Safety details shall be provided(EMC, Safety etc..)
----	---------------------	--

The vendor shall meet the additional requirements mentioned below:

Tender No.:

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)

Tender No.: _____

**Certificate of Local Content
(to be enclosed along with Technical Bid)**

We M/s. _____ (Name of Bidder) hereby certify that we meet the minimum

Local content for the Goods and services offered vide our offer/bid No. _____ dated _____ as specified below:

- Class-I Local Supplier with local content of 50% and above

OR

- Class-II Local Supplier with local content of 20% and above but less than 50%
(Tick appropriate category of Local Supplier)

We are not claiming the services such as transportation, insurance, installation, commissioning, training, after sales service (warranty or AMC/CMC support), consultancy and custom clearance including custom duty as local value addition.

We are aware that the false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules (Govt of India) for which we or our successors can be debarred for up to two years as per Rule 151 (iii) of the General Finance Rules along with such other actions as may be permissible under law.

Signed : [insert signature of person whose name and capacity are shown]
In the capacity of [insert legal capacity of person signing the Bid Submission Form]

Name : [insert complete name of person signing the Bid Submission Form]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

Tender No.:

**Certificate of Price break up of Local Content
(to be enclosed along with Price Bid)**

Ref: Clause 1.30.9 and Chapter-9(Part-A) of the Tender No. _____

We, M/s. _____ (Name of Bidder) hereby certify that we meet the minimum

Local content for the Goods and services offered vide our offer/bid No. _____ dated _____ as specified below:

- Class-I Local Supplier with local content of 50% and above

OR

- Class-II Local Supplier with local content of 20% and above but less than 50%
(Tick appropriate category of Local Supplier)

Minimum Local content is _____ % as per Price break up given below:

Component of Cost		Imported Product		Domestic value addition to product	
		In Foreign Currency US% or specify	In Rupees Exchanged Rate 1 US\$ - Rs.	In Rupees	Location of value addition
Goods					
i)	Material				
ii)	Equipment				
iii)					
	Total Quoted Price = [X + Y]		X=	Y=	

$$\% \text{ Local Content} = \left[\frac{Y}{X + Y} \times 100 \right]$$

We are not claiming the services such as transportation, insurance, installation, commissioning, training, after sales service (warranty or AMC/CMC support), consultancy and custom clearance including custom duty as Local value addition.

We are aware that the false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules (Govt of India) for which we or our successors can be debarred for up to two years as per Rule 151 (iii) of the General Finance Rules along with such other actions as may be permissible under law.

Signed : [insert signature of person whose name and capacity are shown]

In the capacity of [insert legal capacity of person signing the Bid Submission Form]

Name : [insert complete name of person signing the Bid Submission Form]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____,

TERMS & CONDITIONS

Tender No.		
Sr. No.	Approximate weight of the Consignment	Approximate dimensions of the consignment
1		
2	Indian Customs Tariff No. and HSN No. (ICT & HSN No.)	
3	Country of Origin	
4	Percentage of Local Content	
5	Annual Turnover	
6	Type of Supplier	
7	Mode of Shipment By Air / SEA / Road / e-download	
8	Port of Destination	Final Destination
9	Delivery Term (INCO Term), as the case may be	
10	Delivery Schedule including Supply, Installation, Commissioning, Training & Acceptance	
a)	Delivery of the Item BoQ/NIT [In weeks / Days / Months] from the date of PO / LC / ILC / Advance [Mention the appropriate term]	
b)	Installation & Commissioning from the date of Delivery of item [In weeks/Days/Months]	

Tender No.		
Sr. No.	Approximate weight of the Consignment	Approximate dimensions of the consignment
c)	Training from the date of Installation & Commissioning of item [In weeks/Days/Months]	
d)	Acceptance from the date of Training [In weeks/Days/Months]	
11	Installation & Commissioning (if any) Quoted Price inclusive or exclusive	
12	Training (if any) Quoted Price inclusive or exclusive	
13	Partial Shipment [If partial shipment required, the charges incurred towards partial shipment to be borne by Bidder]	
14.	Payment Term	
15	Currency of Bid/Quotation	
16	Statutory Levies [GST/IGST or any other taxes, duties] % of tax to be mentioned.	
17	Bidder GST No.	
18	Bidder Bank Details along with Cancelled cheque	
19	Insurance Coverage	
20	Warranty	
21	Agree to submit Performance Security, if any	
22	Validity of offer	
23	Order to be placed [Full address, Tel #, Fax #, Email Id, Contact Person]	

Tender No.		
Sr. No.	Approximate weight of the Consignment	Approximate dimensions of the consignment
24	Nature of the item [to be specified] Hazardous/Radio Active/ Perishable/ Dangerous/ Shelf-life or any other	
25	Bidder to mention in the quote, any special carrier requirement is necessary for transport viz., Special License, ODC etc.,	
26	Total Price quoted as per BoQ/Price Schedule/List of Deliverables exclusive of tax	
27	Total Price quoted as per BoQ/Price Schedule/List of Deliverables inclusive of tax	
Note:	Unit Price indicating currency FOB (named port of shipment or FCA (named place of delivery))	

ANNEXURE - E

Tender No.:

Format for declaration by the Bidder for Code of Integrity & Conflict of Interest (This declaration should be furnished on the Bidders Letter Head

Ref. No: _____

Date _____

To,

(Name & address of the Purchaser)

Sir/Madam,

With reference to your Tender No. _____ dated _____ I/We hereby declare that we shall abide by the Code of Integrity for Public Procurement as mentioned under Para 1.3.0 of ITB of your Tender document and have no Conflict of Interest.

The details of any previous transgressions of the Code of Integrity with any entity in any country during the last three years or of being debarred by any other Procuring Entity are as under:

- a)
- b)
- c)

We undertake that we shall be liable for any punitive action in case of transgression/contravention of this code.

Thanking you,

Yours Sincerely,

Signature
(Name of the Authorised Signatory)
Company Seal

Tender No.:

SELF CERTIFICATION

With reference to Clause No. 1.1.3, of this tender and GoI, Ministry of Finance Order No.: F. No. 6/18/2019-PPD, dated 23rd July, 2020, on "Restrictions under Rule 144 (xi), of the General Financial Rules (GFRs)", & OM No. F. No. 18/37/2020-PPD, dated 8th February, 2021, and as amended from time to time on the date of issue of Tender:

It is certified that

- We are not a bidder of a country which shares a land border with India.

OR

- We are a bidder of a country which shares a land border with India, however, we are eligible to bid in any procurement whether of goods or services as we are registered with the Competent Authority as specified in Ministry of Finance (GoI) Order No. 6/18/2019 – PPD, dated 23rd July 2020. Copy of valid registration is attached.
- Tick as applicable

Place:

Date:

Authorised Signatory Name:
Company Seal