

LOCAL TENDER NOTICE

Co-Axial 15Kg Thrust Test and Balancing Bench for Electric Propulsion System



TENDER DOCUMENT

AE/UG/0001

Department of Aerospace Engineering
Indian Institute of Science, Bangalore

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Bid Schedule

1	Tender Number	AE/UG/0001
2	Tender date	04-09-2026
3	Item description	Co-Axial 15Kg Thrust Test and Balancing Bench for Electric Propulsion System – 1 unit
4	Tender type	Two bid system: a. Technical Bid (Part A) b. Commercial Bid (Part B)
5	Place of tender submission	Department of Aerospace Engineering, Indian Institute of Science, Bangalore - 560012
6	Last date and time for tender Submission	25-09-2026@ 5.00 P.M
7	For further clarification	Department of Aerospace Engineering, Indian Institute of Science, Bangalore - 560012 airl.aero@iisc.ac.in

Eligibility Criteria

Prequalification criteria:

1. The Bidder's firm should have existed for at least 3 years. The bidder should enclose company registration certificate.
2. Supplier Credibility:
 - a. The Bidder/Vendor Must have supplied minimum 3 similar orders to reputed Government Organizations in INDIA. Copies of Purchase Orders to be enclosed along with the Technical Bid as proof.
 - b. Please enclose User list in INDIA along with the contact details and performance certificate.
 - c. The bidder/vendor shall have a yearly turnover of at least 3 Cr for the past three years.
 - d. Vendor shall have local service engineers available to attend maintenance /troubleshooting/ breakdown etc within 48hrs from the date of complaint registration. Details of local service engineers with their experience shall be shared along with the proposal. Vendor Shall ensure spares and service support for the quoted model for next 5 years.
 - e. The supplier shall have prior experience in handling turnkey projects involving thrust test and dynamic balancing bench. Supplier should have supplied, installed & commissioned at least 3 systems of co-axial 15Kg thrust test and balancing bench in India and details to be indicated in technical offer with supporting documents. Contact information of personnel from the organizations of installation to be given.
 - f. IISc team may contact/visit the customers and obtain feedback regarding the installed systems.
3. The Bidder should belong to either class 1 or class 2 supplier distinguished by their "local content" as defined by recent edits to GFR (please refer to annexure 1 attached). They should mention clearly which class they belong to in the cover letter.
 - a. Class 1 supplier: Goods and services should have local content of equal to or more than 50%.
 - b. Class 2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
 - c. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
 - d. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to the Class-1 supplier.
 - e. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.
3. The Bidder must not be blacklisted/banned/suspended or have a record of any service related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.
4. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per Annexure 4.
5. The bidder should provide a support certification as per Annexure 6
6. The Bidder should have qualified technical service personnel for the instrument(s) based in India.
7. INR quotes should be on a FOR-IISc Bangalore basis.
8. The order will be placed only on the bidder who participated in the bid.
9. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.

Terms and conditions

A. Submission of Tender:

1. All documentations in the submission should be in English.
2. The bid should be submitted in the two-cover system, i.e., technical bid and commercial bid separately in sealed covers.
 - a. Technical Bid (Part-A) – The technical proposal should contain a compliance table besides the technical specifications listed in the description section below.

The compliance table should include all the items and in the same order. The first column should describe your compliance in a “Yes” or “No” response. The second column should state the extent of deviation if the answer was no or describe the exact specifications if the answer is yes. The “third” column should state the reasons for the deviation if the answer was No. The fourth column can be used to compare your solution with that of your competitors or provide details as requested in the technical requirements table below. Suppliers who include any indication of prices in the technical bid will be automatically disqualified.
 - b. Commercial Bid (Part-B) – Commercial bid indicating item wise price breakdown for the items mentioned in the technical bid, as per the format provided in tender, and other commercial terms and conditions. The price should be inclusive of all discounts and installation and training.
 - c. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description & Due Date.
 - d. The SEALED COVER superscripting tender number / due date should reach the address mentioned above on or before due date mentioned in the tender notice. In case the due date happens to be a holiday, the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
3. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document and provide a copy of both documents (Indian Bidders only).
4. If price is not quoted in Commercial Bid as per the format provided in tender document the bid is liable to be rejected.
5. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
6. A technical evaluation by the purchase committee may include a demonstration at the Indian Institute of Science to verify the functionalities and capabilities of the system quoted. The technical/ purchase committee reserves the right to decide the time frame within which the demonstration must be completed. The technical/purchase committee also reserves the right to reject the bids based on their technical evaluation of the quality of data, capability demonstration, and service. If the data/ requested capability demonstration does not happen within a stipulated timeframe, the bid will be rejected. Any discrepancy between the promised specifications and measurements will be deemed as technical non-compliance.
7. All components and accessories should indicate component-wise and itemized breakup. Provide certificates for the country of origin of manufacturing for each line item. The price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (installed and ready to use) in our facility.

8. The purchase committee reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
9. Incomplete bids will be summarily rejected.
10. The decision of purchase committee will be final.

B. Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.
- c. To reject the tender, offer not confirming to the tender terms.

C. Validity of the offer:

The offer shall be valid 90 Days from the date at the time of submission.

D. Evaluation of the offer:

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.
4. The award of contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
 - a. Non-submission of complete offers.
 - b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).
 - c. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.
7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. Lowest bid will be calculated based on the total price of all essential items and selected optional items tendered for basic equipment along with accessories selected for installation, operation, pre-processing and post processing, optional items, recommended spares, warranty, annual maintenance contract. Hence, the bidder should provide best price for all essential and optional items asked in the tender under technical specifications.

E. Pre-requisites:

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

List of customers and references: *The Bidder should have supplied similar equipment in Central Universities/govt research labs, preferably in centrally Funded Technical Institutes/Research labs (IITs, IISC, IISER, NIT, HAL, NAL, DRDO Labs). Please provide the details, performance certification from customer and contact information.*

F. Warranty:

The complete system is to be under warranty as listed in the technical specifications below including free supply of consumables, spare parts, and data analysis software from the date of functional installation. Vendor should include cost of any spares that are expected to be needed during the warranty period, including electronics, subcomponents, and software. If the instrument is found to be defective, it must be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

Warranty period: One year and continued maintenance support with necessary spare parts for five years.

G. Purchase Order:

1. The order will be placed on the bidder whose bid is accepted by IISc Bangalore based on the terms & conditions mentioned in the tender document.
2. The quantity of the items in tender is only indicative. IISc Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc Bangalore reserves the right to cancel or amend the contract.
4. After the award of the purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order

H. Delivery, Installation and Training:

The bidder shall provide the lead time to delivery, installation and made functional at IISc Bangalore from the date of receipt of purchase order. The system should be delivered, installed, and made functional within 4-5 months from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc Bangalore. After successful installation and inspection, the date of taking over of entire system by the IISc Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed. The bidder should also arrange for technical training to the local facility technologists and users. The bidder should provide onsite application training for the local facility technologists and users. The bidder should also arrange technical training for the local facility technologists and users.

I. Payment Terms:

For INR quotes, 100% payments will be released after completion of delivery, satisfactory installation, and qualification, subject to TDS as per rules. As per GFR no advance payment can be made to domestic vendors. For INR quotes, the price must be on FOR IISc Bangalore basis only.

J. Statutory Variation:

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc Bangalore.

K. Dispute and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

L. General:

1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.
2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.
3. The bidder may visit the installation site before submission of tender, with prior intimation.
4. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc Bangalore.
5. Vendors are encouraged to highlight the advantage of their system over their competitors.

Technical specifications

S. No	Specification	Technical Requirement
Co-Axial 15Kg Thrust Test and Balancing Bench for Electric Propulsion System – 1 unit		
Measurement Information		
1.	Thrust Range	± 150 N
2.	Thrust Resolution	At least 0.02 N or better
3.	Thrust Accuracy	At 0 -10 N: at least ± 0.075 N or better; At 10 - 150 N: at least 0.75% of the measured value or better
4.	Torque Range	At least ± 8 Nm or better
5.	Torque Resolution	At least 0.001 Nm or better
6.	Torque Accuracy	At 0 - 2 Nm: ± 0.02 Nm or better; At 2 - 8 Nm: 1% of the measured value or better
7.	Voltage Range	0 to 180 V
8.	Voltage Resolution	At least 0.001 V or better
9.	Voltage Accuracy	At least 1% measured value from 5 to 180 V or better
10.	Current Range	0 to 150 A
11.	Current Resolution	At least 0.001 A or better
12.	Current Accuracy	At least 1% measured value from 5 to 150 A or better
13.	RPM Range	Up to 30K RPM
14.	RPM Resolution	At least 0.1 RPM
15.	RPM Accuracy	At least ± 1 RPM
16.	Temperature Range (contact based)	-40°C to 100°C
17.	Temperature Resolution (contact based)	At least 0.1 K
18.	Temperature Accuracy (contact based)	At least ± 0.5 K
19.	Temperature Range (non-contact based)	-40°C to +80°C for sensor temperature -70°C to +380°C for object temperature
20.	Temperature Resolution (non-contact based)	At least 0.02°C
21.	Temperature Accuracy (non-contact based)	At least 0.02°C
22.	Airspeed Sensor Range	2 to 28 m/s
23.	Airspeed Sensor Resolution	At least 0.1 m/s
24.	Airspeed Sensor Accuracy	At least $\pm 2.25\%$ of measured value
25.	Sampling Rate	At least 1 Khz
26.	Accelerometer Range	At least 8 G

General Information		
27.	Analog Input	At least 2 ports
28.	Output	At least 4 ports
29.	Control Signal Protocol	Standard PWM; DShot; OneShot; Multishot; CAN
30.	Calibration and Measurement Standard	Should Conform to ASTM E74 and ISO 21940-11 Standards
31.	Software	Must be compatible with SDK, that allows: Replay of flight data, Endurance test, Automation test, Automated test report generation Data export to Excel Support for Python and C++ and MATLAB workflows Necessary Software license to operate the thrust test and balancing bench on yearly basis: 1 License Required
32.	Accessories	Necessary cables and connectors for operations.
33.	Delivery period	Shall be within 15 weeks from date of the P.O.
34.	Training	Onsite training on equipment operation and preventive maintenance should be provided after installation of the equipment.
35.	Installation	The supplier shall be responsible for the installation, commissioning and handing over to end user.
36.	Documentation	Hard and soft copies of operation manuals, troubleshooting (With electrical and mechanical diagrams), Maintenance manuals including OEM's manual in English language should be provided along with service log book, drawing and test reports. Calibration certificate, warranty certificate.
37.	Sufficiency clause	The supplier as a part of this contract shall ensure completeness of the total system for installation and operation as per the above specifications for both hardware and software. The supplier shall ensure that all the necessary items for this total turnkey project are supplied and installation,

		commissioning of the system is ensured as per the stipulated delivery schedule.
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Section 5- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and be submitted to

**The Chair,
Department of Aerospace Engineering,
Kind Attn: Prof. Gopalan Jagadeesh / Prof. Suresh Sundaram
Indian Institute of Science, Bengaluru - 560012, Karnataka, India.**

*Direct all questions concerning the acquisition to addresses to **Prof. Suresh Sundaram at:***
airl.aero@iisc.ac.in

Annexure-1: Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

S No	Item	Details
1	Name of the bidder	
2	Nature of Bidder (Attach an attested copy of certificate of Incorporation/ Partnership Deed)	
3	Registration No/ Trade License, (attach attested copy)	
4	Registered Office Address	
5	Address for communication	
6	Email ID	
7	Website	
8	Contact person- Name and Designation	
9	Telephone No	
10	PAN No. (attach copy) For Indian Vendor only	
11	GST No. (attach copy) For Indian Vendor only	

Signature of the bidder

Name

Designation, Seal

Date

Annexure-2: Declaration regarding experience

To,

The Chair,
Department of Aerospace Engineering,
Kind Attn: Prof. Gopalan Jagadeesh / Prof. Suresh Sundaram
Indian Institute of Science,
Bengaluru - 560012, Karnataka, India

Ref: Tender No: XXXXXXXXXX
Dated: XXXXX

Dear Sir/Madam,

I've carefully reviewed the Terms & Conditions in the above-referred tender. I hereby declare that my company/firm has -----years of experience in supplying and installing the proposed equipment.

(Signature of the Bidder)

Printed Name

Designation, Seal

Date:

Annexure-3: Declaration regarding track record

To,

The Chair,
Department of Aerospace Engineering,
Kind Attn: Prof. Gopalan Jagadeesh / Prof. Suresh Sundaram
Indian Institute of Science,
Bengaluru - 560012, Karnataka, India

Ref: Tender No: XXXXXXXX

Dated: XXXXX

Dear Sir/Madam,

I've carefully reviewed the Terms & Conditions in the above-referred tender. I hereby declare that my company/ firm is not currently debarred/blacklisted by any Government / Semi-Government organizations/institutions in India or abroad. I further certify that I'm a competent officer in my company/firm to make this declaration.

Or

I declare the following

S No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted/debarred by Government / Semi Government/ Organizations/ Institutions	Reason	Since when and for how long

(NOTE: In case the company/firm was blacklisted previously, please provide the details regarding the period for which the company/firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure – 4: Declaration for acceptance of terms and conditions

To,

The Chair,
Department of Aerospace Engineering,
Kind Attn: Prof. Gopalan Jagadeesh / Prof. Suresh Sundaram
Indian Institute of Science,
Bengaluru - 560012, Karnataka, India

Ref: Tender No: XXXXXX

Dated: XXXX

Dear Sir/Madam,

I've carefully reviewed the Terms & Conditions mentioned in the above-referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure – 5: Details of items quoted

- a. Company Name
- b. Product Name
- c. Part / Catalogue number
- d. Product description / main features
- e. Detailed technical specifications
- f. Remarks

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with the technical bid.
3. Bidders should clearly indicate compliance or non-compliance with the technical specifications provided in the tender document.

Annexure 6 – Support Certification

Declaration for instrument support

The Chair,
Department of Aerospace Engineering,
Kind Attn: Prof. Gopalan Jagadeesh / Prof. Suresh Sundaram
Indian Institute of Science,
Bengaluru - 560012, Karnataka, India

Ref: Tender No: XXXXXX
Dated: XXXX

Dear Sir/Madam,

I've carefully reviewed the Terms & Conditions mentioned in the above-referred tender document. I declare that the model quoted has not been discontinued by our organization and the repair parts will be available for at least another ten years. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name
Designation, Seal

Date:

Section 6 – Commercial Bid

S. No.	Description	Cat. Number	Quantity	Unit Price	Sub Total
1	Essential items noted in the technical specification				
1a	...(details of essential items)				
1b	...				
2	Optional items noted in the technical specifications				
2a	...(details of Optional items)				
2b	...				
3	Accessories for operation and installation				
4	All Consumables, spares and software to be supplied locally				
5	Warranty (1 year)				
6	Cost of Insurance and freight				
7	CIP/CIF/FOR IISc, Bengaluru				

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

Any additional items

S. No.	Description	Cat. Number	Quantity	Unit Price	Sub Total

Addressed to

The Chair,
Department of Aerospace Engineering,
Kind Attn: Prof. Gopalan Jagadeesh / Prof. Suresh Sundaram
Indian Institute of Science,
Bengaluru - 560012, Karnataka, India

Section 7 – Checklist

(This should be enclosed with technical bid - Part A)

The following items must be checked before the Bid is submitted:

A. Sealed Envelope “A”: Technical Bid

1. Section 5 - Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:

- a. Annexure 1: Bidders details
- b. Annexure 2: Declaration regarding experience
- c. Annexure 3: Declaration regarding clean track record
- d. Annexure 4: Declaration for acceptance of terms and conditions
- e. Annexure 5: Details of items quoted
- f. Annexure 6: Support Certification

2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

B. Sealed Envelope “B”: Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.