

Domestic Tender Notification for High Temperature Horizontal Tube Furnace (1800°C, Single Zone) with Programmable Temperature Controller

This is an RFQ (Request for Quote) for supply and installation of High Temperature Horizontal Tube Furnace (1800°C, Single Zone) with Programmable Temperature Controller at Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc), Bangalore.

1	Section 1	Bid Schedule	
2	Section 2	Eligibility Criteria	As specified by IISc
3	Section 3	Terms and conditions	As specified by IISc
4	Section 4	Technical Specifications	As specified by IISc
5	Section 5	Technical Bid	Annexure 1: Details of the Bidder
			Annexure 2: Declaration regarding experience
			Annexure 3: Declaration regarding track record
			Annexure 4: Declaration for acceptance of terms and conditions
			Annexure 5: Details of items quoted
6	Section 6	Commercial Bid	Quotation with Price, Technical specifications of the equipment
7	Section 7	Check List	

Section 1- Bid Schedule

1	Tender No	CeNSE/Domestic_tender_SG_Furnace/2026
2	Tender Date	25 th August 2026
3	Item Description	Supply and installation of High Temperature Horizontal Tube Furnace (1800°C, Single Zone) with Programmable Temperature Controller
4	Tender Type	Two-bid system Technical Bid (Part A) Commercial Bid (Part B)
5	Place of tender submission	Chairperson Office, Attn: Prof. Sreetosh Goswami Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012
6	The Last Date and Time for submission of the tender	15 th September 2026 5:00 PM
7	For further clarification	Sreetosh Goswami Associate Professor Centre for Nano Science and Engineering Indian Institute of Science, Bangalore – 560012, India. Email: sreetosh@iisc.ac.in

Section 2 – Eligibility Criteria

Pregualification criteria:

1. The Bidder should belong to either Class-1 or Class-2 suppliers, distinguished by their “local content” as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.
 - a) Class-1 supplier: Goods and services should have local content equal to or more than 50%.
 - b) Class-2 supplier: Goods and services should have local content equal to or more than 20% and less than 50%.
2. The quotations should be on FOR-IISc Bangalore basis in INR only.
3. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR 2017 for such details.
4. Quote should come only from the Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor / dealer. A Letter of Authorization from the OEM, specific to this tender, must be enclosed.
5. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 or Class-2 local suppliers by claiming services such as transportation, insurance, installation, commissioning, training, and other after-sales support like AMC / CMC, etc., as local value addition.
6. Purchase preference as defined by the recent edits to GFR (within the “margin of purchase preference”) will be given to the Class-1 supplier.
7. The order will be placed only on the bidder who participated in the bid. The Bidder’s firm should have existed for a minimum of 1 year (enclose Company Registration Certificate).
8. An undertaking from the OEM is required stating that they will facilitate the bidder on a regular basis with technology / product updates and extend support for the warranty period.
9. The equipment offered must be a model from the current serial production range of the manufacturer. Customized or one-off manufactured models will not be accepted. The offer should be supported with a printed catalogue and depiction on the company website.
10. Manufacturers are requested to provide an ISO certificate and a Declaration of CE Conformity with a minimum of 3 valid directives. These certificates must be uploaded / submitted in the Statutory Cover.
11. The bidder must have supplied at least 5 High Temperature Tube Furnaces of comparable specification to Government of India research organizations (such as IISc, IITs, IISERs, etc.). Please attach purchase order copies and installation reports.
12. The Bidder should have qualified technical service personnel for the instrument(s) based in India. The bidder must provide details of the service setup and the manpower responsible for after-sales support, with a guaranteed response time within 24 hours.
13. Non-compliance with tender terms, non-submission of required documents, lack of clarity in the specification, or contradiction between the bidder’s specification and supporting documents may lead to rejection of the bid.
14. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per Annexure 4.

Section 3 – Terms and Conditions

A. Submission of Tender:

1. All documentation in the tender should be in English.
2. Tenders should be submitted in two envelopes (two bid systems).
 - a. **Technical Bid (Part-A)** – The technical bid consists of all technical details and a checklist for technical specifications. The technical bid **must not contain** any price information. The technical proposal should include a technical compliance table with five columns. The first column must list the technical requirements in the order given in the technical specifications below. The second column should provide instrument specifications against the requirement. Please provide quantitative responses wherever possible. The third column should describe your compliance with a “YES” or “NO” only. Ensure that the entries in column 2 and column 3 are consistent. The fourth column should state the reasons/explanations/context for deviations, if any. The fifth column can contain additional remarks from the Indian Original Equipment Manufacturer (OEM) or their distributors. You can use this opportunity to highlight technical features, qualify responses of previous columns, provide additional details, compare your solution with your competitors, or provide details as requested in the technical requirements table below. Any additional capabilities or technical details you would like to bring to the attention of the purchase committee can be listed at the end of the technical table. **Tender documents must have technical compliance documents to be considered.** Technical capabilities of any suggested accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits. Vendors are encouraged to highlight the advantages of their tools over comparable tools from competitors. Items, in addition to those listed in the technical table that the vendor would like to bring to the attention, such as datasheets, technical plots, etc., can be listed at the end of the compliance table. Vendors are also encouraged to highlight the advantages of their tools over comparable tools from competitors. The technical proposal will be evaluated against the technical requirements. Deviations from the technical specifications requested are allowed. Such deviations must be highlighted and justified. Their acceptance or rejection will be left to the discretion of the technical committee. Only the vendors adjudged by the committee to be suitable to meet the technical requirements will be considered for the commercial negotiation.
 - b. **Commercial Bid (Part-B)** – Indicating item-wise price for the items mentioned in the technical bid, as per the format of quotation provided in the **tender**, and other commercial terms and conditions. The commercial bid should contain the Itemized cost of the system and required accessories, such as software, power supply, etc. All accessories needed for the instrument to function as per the technical specification must be listed. Itemized cost, as an option, for any suggested accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits. Please indicate the warranty provided with the tool. A warranty of 1 year or more is preferred. Provide itemized costs for required/expected spares for 1 year of operation. For the sake of this calculation, the vendor may assume active tool usage of 40 hours/week. This number will be used to estimate the life cycle cost of the tool. The cost of an annual maintenance contract (AMC). The details of AMC are given below. This number will be used to estimate the life cycle cost of the tool. The length of time that the tools will be supported with service and spares from the date of installation. Our requirement is that the tools be supported for at least 4 years from the date of installation. To quote the lowest price, vendors often quote for obsolete or soon-to-be obsolete

equipment. This is NOT acceptable. For a user facility like CeNSE, it is vital that the equipment be serviceable and supported in the foreseeable future. The length of guaranteed support will be used to estimate the life cycle cost of the tool. The commercial bid should indicate the following separately: equipment price, optional items, Freight and insurance cost, Shipping cost, and the Total cost. The quotations should be in INR only.

3. The technical bid and commercial bid should be placed in separate sealed covers, superscripting the tender no. and the due date on both envelopes. These sealed covers should be placed in a bigger cover, which should be sealed and duly superscripted with the Tender No, Tender Description, and Due Date.
4. The SEALED COVER superscripting tender number / due date and should reach the Chairperson Office, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, on or before the due date mentioned in the tender notice. If the due date is 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.
5. All queries are to be addressed to the person identified in "Section 1 – Bid Schedule" of the tender notice.
6. GST/other taxes, levies, etc., should be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document (Indian Bidders only).
7. The bid will only be accepted if the price is quoted in the Commercial Bid as per the format provided in the tender document.
8. The vendor should have qualified technical service personnel for the equipment based in India and assure a response time of <48 hours.
9. The technical proposal must include references of at least three previous installations done in India within the last five years of similar equipment from the manufacturer. Please provide the names and contact addresses of the three independent referees so the committee can contact them independently to get references. Please provide the installation report.
10. A pre-tender meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
11. A technical evaluation by the purchase committee may include a demonstration to verify the functionalities and capabilities of the system quoted. The purchase committee reserves the right to reject the bids based on their technical evaluation of the quality of data, capability demonstration, and service. The bid will be rejected if the data/requested capability demonstration does not happen within a stipulated timeframe. Any discrepancy between the promised specifications and measurements will be deemed as technical non-compliance. Imported items should be shipped on a C.I.P. Bangalore basis (by Air Freight only), and all components and accessories 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.
12. 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 before the award of the contract without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
13. Incomplete bids will be summarily rejected.
14. The decision of the 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:

1. To accept OR reject the lowest tender or any other tender or all the tenders.
2. To accept any tender in full or in part.
3. To reject the tender, offer not confirming to the tender terms.

C. Validity of the offer:

The offer shall be **valid for 90 Days** from the commercial bid's opening date.

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 the 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 regarding acceptance and/or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and the decision in this regard shall be binding on the bidders.
4. The contract award 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. The lowest bid will be calculated based on the total price of all items tendered for Basic equipment, along with accessories selected for installation, operation, pre-processing, and post-processing, optional items, recommended spares, warranty, and annual maintenance contract.

E. Pre-requisites:

The bidder will provide the equipment's prerequisite installation requirements along with the technical bid.

F. Warranty:

The complete system is to be under a minimum warranty period of 1 year, including a free supply of spare parts and software from the date of functional installation. The vendor should include the 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.

G. Annual Maintenance Contract (AMC)

An annual maintenance contract for a period of 3 years post-warranty should be provided on completion of the warranty period. If this is not possible, ample justification is needed.

H. Purchase Order:

1. The order will be placed on the bidder whose bid is accepted by IISc Bangalore based on the terms and conditions mentioned in the tender document.
2. The quantity of the items in the 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 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.

I. Delivery, Installation, and Training:

1. The bidder shall provide the lead time for delivery, and make it functional at IISc, Bangalore, from the date of receipt of the purchase order.
2. The system should be delivered and made functional **within three months** from the date of receipt of the purchase order.
3. The supply of the items will be considered as effective only on satisfactory inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore.
4. After successful inspection, the date of taking over of the entire system by the IISc, Bangalore, shall be taken as the start of the warranty period.
5. No partial shipment is allowed.
6. The bidder should provide onsite application training for the local facility technologists and users.
7. As an option, please provide itemized costs for any suggested accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits under the optional items.
8. Clarify if periodic (preventive) maintenance be done by a trained on-site engineer or requires a specialist from the OEM.
9. If maintenance requires OEM, as an additional option, provide the cost of an annual maintenance contract (AMC) for three years, post-warranty. The AMC must cover one scheduled and one emergency visit per year. It must also indicate who will service the AMC, whether it is an Indian agent or the OEM. The AMC cost must also include an itemized list of spares that are essential for the scheduled visits.
10. Spare parts of the system must be available for at least seven years.

J. Payment Terms:

100% payment shall be released after satisfactory delivery and installation of the equipment at the Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc), Bengaluru.

K. Statutory Variation:

Any statutory increase in the taxes and duties subsequent to the 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.

L. 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.

M. General:

1. All amendments, time extensions, 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 that 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 the 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.

Section 4 - Technical specifications

1.	Temperature	Maximum continuous operation temperature: $\geq 1700^{\circ}\text{C}$ and Maximum operating temperature: $\geq 1800^{\circ}\text{C}$.
2.	Furnace construction /design	High temperature tube furnace designed for horizontal mode operation. Rectangular housing with holes for convection cooling. Furnace with separate control box with 3m cable, plug and socket.
3.	Heating elements	MoSi_2 heating elements installed in rectangular housing and hanging vertically that can be easily replaced.
4.	Heating zone	Single zone.
5.	Configuration	Horizontal mode
6.	Insulation	Low thermal mass ceramic fibre insulation. High grade insulation material with low thermal conductivity consisting of ceramic fibre inner insulation, ceramic fibre case insulation and ceramic fibre end insulation. Installed in a rectangular housing to provide low energy consumption and high heating rates.
7.	Thermocouple	High grade type B thermocouple
8.	Over Temperature Protection Control	Over Temperature Protection Control to protect load or furnace during unattended operation.
9.	Programmable temperature controller	Colour touch screen controller offering Setpoint control, Program profile control, ≥ 10 unique program profiles saved in memory, ≥ 24 segments per unique program, ethernet communication, Panel mounted USB socket, Data logging to a USB memory stick in a .csv file format, Real time clock, Program schedule start, Program status indication with estimate end time & date, 2 Events indication, Control power indication, User level security, Single point temperature calibration that can be set as ramp, step or dwell and can be configured to control relays.
10.	Heated length	Heated tube length (mm): ≥ 300 Uniform length $\pm 5^{\circ}\text{C}$ (mm): ≥ 150
11.	Furnace dimensions	Furnace external H x W x D (mm): $\leq 620 \times \leq 590 \times \leq 520$, weight: ≤ 65 kg Control module dimensions H x W x D in mm: $\leq 850 \times \leq 550 \times \leq 700$ Control module weight: ≤ 60 kg
12.	Work tube for operation of the furnace in inert gas	Work tube: - Recrystallised Alumina (799) material work tube with 70 mm outer diameter, 60 mm inner diameter & 1115 mm length. - A set of radiation shields - Two insulation sleeves - Water cooled high vacuum flanges - Furnace mounted flange holders - Inert gas inlet valve with flowmeter - Small vacuum parts and - Over pressure valve
13.	Flow meter for Oxygen	Specially designed O_2 flow meter with flow rate 2 - 20 litres per hour, flow meter should be used up to 100% Oxygen.

14.	Programmable controlled Valve	Automated gas valve
15.	Power supply and maximum power (W)	Three phase, ≤ 6400 W
16.	CE Certificate	CE Certificate to be submitted along with the tender.

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 Chairperson,
Attn: Prof. Sreetosh Goswami
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India
Email: sreetosh@iisc.ac.in

Annexure-1:**Details of the Bidder**

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

Details of the Bidder

Sl No.	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach 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.	Contact Person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

(Signature of the Bidder)

Name
Designation, Seal

Date:

Annexure-2:

Declaration regarding experience

To,
The Chairperson,
Centre for Nanoscience and Engineering,
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No:

Dated:

Supply and installation of High Temperature Horizontal Tube Furnace (1800°C, Single Zone) with
Programmable Temperature Controller at CeNSE, IISc Bangalore

Sir/Madam,

I've carefully gone through the Terms and Conditions contained in the above referred tender. I hereby
declare that my company/firm has _____ years of experience in supplying and installing _____

(Signature of the Bidder)

Name
Designation, Seal

Date:

Annexure-3:**Declaration regarding track record**

To,
The Chairperson,
Centre for Nano Science and Engineering
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No:

Dated:

Supply and installation of High Temperature Horizontal Tube Furnace (1800°C, Single Zone) with Programmable Temperature Controller at CeNSE, IISc Bangalore.

Sir/Madam,

I've carefully gone through the Terms and Conditions contained 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

Sl. 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 Chairperson,
Centre for Nano Science and Engineering
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No:
Dated:

Supply and installation of High Temperature Horizontal Tube Furnace (1800°C, Single Zone) with Programmable Temperature Controller at CeNSE, IISc Bangalore.

Sir/Madam,
I've carefully reviewed the Terms and Conditions mentioned in the referred tender document above. 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 detailed technical specifications of the quoted product/s.
- 2. The bidder should attach product brochures along with the technical bid.
- 3. Bidders should indicate compliance or non-compliance with the technical specifications in the tender document.

Section 6 – Commercial Bid

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

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

Any additional items

Sl. No	Description	Cat.	Number Quantity	Unit Price	Subtotal

Addressed to
The Chairperson,
Attn: Prof. Sreetosh Goswami
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India Email: sreetosh@iisc.ac.in

Section 7 – Checklist

(This should be enclosed with a 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
2. A copy of this tender document duly signed by the authorized signatory on every page and sealed.

B. Sealed Envelop “B”: Commercial Bid

Section 6: **Commercial Bid**

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

Thanking you,
Prof. Sreetosh Goswami
Associate Professor
Centre for Nano Science and Engineering
Indian Institute of Science, Bangalore, India 560012.
E-mail: sreetosh@iisc.ac.in