

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
ISRO INERTIAL SYSTEMS UNIT (IISU)
THIRUVANANTHAPURAM**

**Tender for Air cooled Compact Thermostatic Chamber with Single
Phase**

Bids to be submitted online

**Tender No.: IISU/PURCHASE UNIT IX (IISU PURCHASE)/IU202400309901 dated
31-07-2024**

A. Tender Details

Tender No :	IISU/PURCHASE UNIT IX (IISU PURCHASE)/IU202400309901
Tender Date :	31-07-2024
Tender Classification:	GOODS
Purchase Entity :	PURCHASE UNIT IX (IISU PURCHASE)
Centre :	ISRO INERTIAL SYSTEMS UNIT (IISU)

Air cooled Compact Thermostatic Chamber with Single Phase

This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.

Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.

Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.

The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.

In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Only online tenders will be accepted. No manual / Postal / e-mail / fax offers will be entertained. No manual tender document will be issued. Parties interested to participate in this e-Tender are required to register themselves as vendors, if not already registered, in our e-procurement portal <https://eproc.vssc.gov.in> by downloading plugins and help demos listed on the home page of the e-

procurement link mentioned above to complete the vendor registration process. They can seek help from help desk 0471-2565454 also as provided in the home page of e-procurement portal in case of any problem for registration and subsequent process. Vendors may please note that without registering in our e-procurement portal, they will not be able to quote for this e-tender.

Important Notice : Tender will be automatically closed on the due date, if at least one offer is received. If the tender could not be opened on the first day due to any technical snag, it will be opened on the subsequent day as per the schedule.

This is a two part tender, Technical & Commercial Part (Part-I) and Price Part (Part-II) shall be submitted separately. The tenderers should not attach any documents containing Pricing information along with Technical & Commercial Bid (Part-I). We do not open PART-II (Price Bid), if PART-I (Technical & commercial Offer) does not meet with our technical specification requirements. Cost split up, other price details etc. shall be uploaded as a separate document under COMMERCIAL DOCUMENTS FROM VENDOR tab.

THE TECHNICAL DOCUMENTS NEED TO BE ATTACHED ONLINE AS A SINGLE PDF FILE WITHOUT ANY PRICE INFORMATION, TECHNICAL BID CONTAINING PRICE DETAILS WILL BE TREATED AS REJECTED.

Price bid opening date indicated in the schedule is tentative only. Actual date will determine after evaluation of techno commercial bid.

A.1 Tender Schedule

Bid Submission Start Date :	01-08-2024 18:15
Bid Clarification Due Date :	13-08-2024 10:00
Bid Submission Due Date :	27-08-2024 14:00
Bid Opening Date :	27-08-2024 15:00
Price Bid Opening Date :	12-09-2024 10:00

B. Tender Attachments

NA

Instructions To Vendors

1. Form No 20

1. INSTRUCTIONS TO TENDERERS

1. Quotation/Open Authorization shall be submitted online [only] complying specified schedule.
2. Late tenders and delayed tenders will not be considered.
3. Quotation should be valid for at least 90 days from the date of opening of the tender. [Mandatory]
4. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.
5. a) Your quotation should be valid for 90 days (Single Part Tender) / 180 days (Two Part Tender) from the date of opening of the tender. [Mandatory]
b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
6. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination/delivery at site.
7. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be attached along with the offer.
(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non acceptance of tender, the tenderer will have to remove the samples at his own expense.
(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.
(d) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.
8. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.
9. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income - Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle

concerned under the seal of his office, if required by the Purchaser.

10. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.

11. The authority of the person signing the tender, if called for, should be produced.

TERMS & CONDITIONS OF TENDER

1. DEFINITIONS :

(a) The term Purchaser shall mean the President of India or his successors or assigns.

(b) The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.

(c) The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

(d) The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an Officer duly authorized intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

2. PRICES:

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

3. SECURITY DEPOSIT:

On acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding three percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, SECURITY and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause 10(b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

4. GUARANTEE & REPLACEMENT :

(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

(b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser,

provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfill guarantee conditions outlined in clause 4 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 3% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

(g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser's site.

(h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in Para 4 (b) & (c) shall be the asked for guarantee period plus two months.

5. PACKING FORWARDING & INSURANCE :

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

6. DESPATCH :

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

7. TEST CERTIFICATE :

Wherever required, test certificates should be sent along with the despatch documents.

8. ACCEPTANCE OF STORES:

(a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality

requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

9. REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

10. DELIVERY:

(a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.

(b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.

(i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or

(ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or

(iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) & (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

11. EXTENSION OF TIME :

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchasers right to recover liquidated damages under clause 10 thereof.

12. ERECTION OF PLANT & MACHINERY :

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

13. PAYMENT :

Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

14. MODE OF PAYMENT :

Normally payment will be made for the accepted stores within 30 days from the date of receipt of the materials.

15. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

16. INDEMNITY :

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.

17. ARBITRATION :

In the event of any question, dispute or difference arising under these conditions or any conditions

contained in the Purchase Order or in connection with this Contract (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Purchase office or some other person appointed by him. It will be no objection that the arbitrator is a Government servant, that he had to deal with matter to which the Contract relates or that in the course of his duties as Government servant he has expressed views on all or any other matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this Contract.

If the arbitrator be the Head of the Centre/Unit

(i) In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in-office either to proceed with reference himself, or to appoint another person as arbitrator, or

(ii) In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Centre/Unit to appoint another person as arbitrator.

If the arbitrator be a person appointed by the Head of the Purchase Office

In the event of his dying, neglecting or refusing to act or resigning or being unable to act, for any reason, it shall be lawful for the Head of the Centre/Unit either to proceed with the reference himself or appoint another person as arbitrator in place of the outgoing arbitrator.

Subject as aforesaid the Arbitration & Conciliation Act 1996 and the rules there under and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this Clause. The Arbitrator shall have the power to extend with the consent of the purchaser and the Contractor the time for making and publishing the award. The venue of arbitration shall be the place as purchaser in his absolute discretion may determine. Work under the Contract shall, if reasonably possible, continue during arbitration proceedings.

In the event of any dispute or difference relating to the interpretation and application for the provisions of the Contracts, such dispute or difference shall be referred by either party to Arbitration of one of the Arbitrations in the Department of Public Enterprises. The Arbitration Act 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute provided however any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs. Ministry of Law & Justice, Govt. of India. The parties to the dispute will share equally, the cost of arbitration as intimated by Arbitrator.

18. COUNTER TERMS AND CONDITION OF SUPPLIERS :

Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

19. SECURITY FOR PURCHASE OF MATERIALS :

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

2. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender, only if the bidder is registered with the Competent Authority.

Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

2. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

3. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

3. PPP Make in India(Non- Divisible Items-Class I & II Local Suppliers Only)

1. A committee (with an external expert from a practicing cost accountant or practicing chartered accountant, if required) constituted for independent verification shall verify the self-declarations & auditor's / accountant's certificates on random basis, as per the requirements.

2. a) The subject item falls under Non-divisible category. b) The offers sought only from Class-I & Class-II local suppliers

3. Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: i. Equal to or more than 50%: Class-I local supplier. ii. More than 20% but less than 50%: Class-II local supplier. iii. Less than or equal to 20%: Non-local supplier.

4. False declarations will be in breach of code of the integrity for which a bidder or its successor's will not be eligible/debarred for purchase preference from further tenders / pending tenders for two years along with other actions as may be applicable.

5. In case of a complaint received from any local supplier indicating a need for review / verification of Local content of successful vendor / awarded vendor, for accepting a complaint from such complainant (w.r.t the false declaration given by the successful vendor on the local content), a complaint fee of Rs.2Lakhs or 1% of the locally manufactured items being procured (subject to a maximum Rs. 5Lakhs), whichever was higher, to be paid by demand draft by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

6. In cases the quoted price is in excess of Rs.1000 Lakhs (including duties, taxes and freight & Insurance) the 'Class-I & II local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing

chartered accountant (in case of suppliers other than companies) giving the percentage of local content.

7. In line with Public Procurement (Preference to Make in India), Order 2017 & its amendments issued by Govt. of India from time to time with a view to support the Indian industries, ISRO has implemented "Purchase Preference Policy". The "Purchase Preference" is applicable for the "Class-I Local Supplier" for the goods/ services/ works covered in this tender, subject to the following terms & conditions:-

8. 'L1' means the lowest technically accepted tender / bid / quotation (i.e. lowest landed cost including duties, taxes and freight & Insurance).

9. 'Local content' means the amount of value added in India (i.e. indigenous items/services added in the offered products/ services/ works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent.

10. 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 (landed cost).

11. Purchase Preference Policy:- Goods/Works which are not divisible (ie., required quantity is 1 or as a package) and Services:

a) If L1 is from a 'Class-I local supplier', the contract will be awarded to L1 bidder.

b) If L1 is not from a 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference (i.e. 20%) and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price (inclusive of duties, taxes and freight & insurance).

c) In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on, and order/contract shall be awarded accordingly. In case where none of the 'Class-I local supplier' within the margin of purchase preference agree to match the L1 price, then the order/contract shall be awarded to the original L1 Bidder.

12. The 'Class-I & II local supplier' should provide a "Self Certification" along with technical offer indicating that the item offered meets the minimum local content [as per Sl. No.(3)] as called for in the tender and provide the percentage of local content along with details of the location(s) at which the local value addition is made. In case of two bid tenders, it is mandatory to indicate compliance to MLC(minimum Local Content) in technical bid zone.

13. The ink-signed certificate shall be provided on vendors letter head along with the offer (in case of online tender, copy of ink-signed certificate shall be uploaded along with your offer under concerned tab. Original in Hard copy shall be produced on request). In case of non-submission of certificate, the

purchase preference shall not apply.

14. The margin of Purchase Preference shall be up to 20%.

15. The Public Procurement (Preference to Make in India), Order 2017 issued by Govt. of India indicates that if there are any general or specific restrictive clauses to restrict participation of Indian companies in those countries procurement tenders, reciprocity clause need to be invoked as per the order. Hence, if ISRO or Govt. of India come across that Indian suppliers of an item are not allowed to participate and / or compete in procurement by your government, the bid submitted by you will be not be considered and excluded from eligibility for procurement. Please note this point.

16. Works means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'. Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

C. Bid Templates

C.1 Technical Bid - Air cooled Compact Thermostatic Chamber with Single Phase

1. THERMAL CHAMBER - Air cooled Compact Thermostatic Chamber with Single Phase details as per Annexure-1

Item specifications for THERMAL CHAMBER

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	As per Annexure-1		-		

Document : Annexure-1

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Chamber Construction-1	Interior Stainless steel 304 grade stainless steel with completely welded finish.	Yes / No / Explain		
2	Chamber Construction-2	No joints and sharp edges inside workspace.	Yes / No / Explain		
3	Chamber Construction-3	All the joint are leak proof for prevent air & water leakage	Yes / No / Explain		
4	Chamber Construction-4	Exterior GI sheet with electrostatic powder coated finish.	Yes / No / Explain		
5	Chamber Construction-5	CNC based made outer body with fine finishing joints without any projection of fixtures.	Yes / No / Explain		
6	Chamber Construction-6	Built in control panel provided on exterior body without any projection.	Yes / No / Explain		
7	Chamber Construction-7	All Hinges & door locks are stainless steel finish.	Yes / No / Explain		
8	*Test Space Volume	60 - 65 litres	Yes / No / Explain		

9	Test Space Dimensions (WXDXH)	at least 350 mm X 350mm X 400 mm	Yes / No / Explain		
10	External dimensions	Max of 630mm x 970mm x 1180mm (Approx)	Yes / No / Explain		
11	Performance range	Temperature testing at atmospheric pressure	Yes / No / Explain		
12	Temperature Range	-20° C to + 150° C	Yes / No / Explain		
13	Temperature fluctuation in Time	Lesser than or equal to ±0.5	Yes / No / Explain		
14	*Rate of Heating	1 to 3° C/min or more as per IEC 60068-3-5 average measured in the supply air. Rate of Heating to be configurable.	Yes / No / Explain		
15	*Rate of Cooling	1 to 3° C/min or more as per IEC 60068-3-5 average measured in the supply air. Rate of Cooling to be configurable.	Yes / No / Explain		
16	*Door & Inspection window	Hinged, lockable, optimum contact pressure, one-handed operation with multipane inspection window 230X 230 mm size approx.	Yes / No / Explain		
17	Insertion shelf	Qty: Min 1 No inset shelves to be provided with chamber as standard	Yes / No / Explain		
18	*Access ports	1 lateral porthole (diam. 50 to 80 mm) preferably on the right side with soft silicon sealing plugs along with steel flange with clamp	Yes / No / Explain		
19	Measurement sensors (Temperature)	PT 100 Platinum Temperature Sensor.	Yes / No / Explain		
20	*Condensor	Air condensor	Yes / No / Explain		

21	Refrigerant	Environmental friendly refrigerants or with better GWP to be used. As the chamber is completely installed in the clean room class100, suitable refrigerants to be selected. Details to be mentioned in the quote.	Yes / No / Explain		
22	Provisions-1	i) Display Console: Touch Screen >7inch Controller Fully Automatic Programmable Controlling.	Yes / No / Explain		
23	Provisions-2	ii) USB Data cable should be provided to connect the chamber to PC more than 3m.	Yes / No / Explain		
24	Provisions-3	iii) Provisions to program the chamber and switch ON/OFF the chamber via PC, Ethernet port for Remote access to operate the chamber through network.	Yes / No / Explain		
25	Operation	Able to work continuously for 10 days without a break & chamber should start automatically in the event of power failure	Yes / No / Explain		
26	Load Capacity-1	Per shelf 15 Kg or better (equally distributed)	Yes / No / Explain		
27	Load Capacity-2	Load on test space floor 15 Kg or better (Equally distributed)	Yes / No / Explain		
28	SUPPORTING TABLE WITH WHEELS(Chamber fixed on the table)	The chamber to be fixed on the table. It should be ergonomic for operations (Approx height: 340mm). Table should have castor wheels for mobility.	Yes / No / Explain		
29	*Noise level	Noise level should not exceed 57 dBA(measured at 1 m from the front wall in a non reverberating room) - Test certificate shall be provided.	Yes / No / Explain		
30	*Heat compensation at +25°C	500 watts or lesser	Yes / No / Explain		

31	*Utilities-1	i) Chamber interior inspection lamp.	Yes / No / Explain		
32	*Utilities-2	ii) Air flow: Air inlet via perforated floor element and Air outlet suction should be at the rear side of chamber.	Yes / No / Explain		
33	*Utilities-3	iii) Adjustable stainless steel internal rack with shelf.	Yes / No / Explain		
34	*Utilities-4	iv) No. 1 auxiliary free contact (Specimens)	Yes / No / Explain		
35	*Utilities-5	v) No break power unit for PLC	Yes / No / Explain		
36	*Utilities-6	vi)Unlimited real time recording of temperature and humidity versus time (LOG).	Yes / No / Explain		
37	*Utilities-7	vii) Ethernet port for connection to the remote control system and RS232	Yes / No / Explain		
38	*Utilities-8	viii)A trend chart for recorded variables available with a scale from -50°C to +200°C.	Yes / No / Explain		
39	*Utilities-9	ix) Messages on scheduled maintenance activities.	Yes / No / Explain		
40	*Utilities-10	x) Synoptic graphs for the chamber, low and high stage refrigeration.	Yes / No / Explain		
41	Safety-1	a) MCCB for mains and individual MPCBs for over current protection. Earthing protection.	Yes / No / Explain		
42	Safety-2	b) Permanently Memorized Overheating safety thermostat: A steady state overheating safety thermostat is installed that automatically switches off the unit if the test chamber's maximum temperature range is exceeded.	Yes / No / Explain		

43	Safety-3	c) Test Chamber protection: Safety temperature limiter for protection against over temperature in the test chamber.	Yes / No / Explain		
44	Safety-4	d) Overload protection, Phase reversal/missing protection for compressors and motors.	Yes / No / Explain		
45	Safety-5	e)HP/LP auto cut off protection for compressors. f} Over/under voltage protection for the controller.	Yes / No / Explain		
46	Safety-6	g)MPCB and solid state relays for heaters.	Yes / No / Explain		
47	Safety-7	h)Audio visual alarm to be provided which can be controlled by ON/OFF switch.	Yes / No / Explain		
48	Control and Programming	Controller should able handle all the functions necessary for control programming and communication with PC. It should coordinate, monitor all functions and provide information on operating failures.	Yes / No / Explain		
49	Multichamber remote control	Multichamber software to be installed on a PC and connection kit for controlling several chambers (up to 16) from the same PC station to be provided.	Yes / No / Explain		
50	Program Memory	Memory capacity > 100 cycles with suitable segments	Yes / No / Explain		
51	Program Controller	Start parameters for program: Immediately, Delayed, Real time, Pause.	Yes / No / Explain		
52	a) PID Controller	Special control algorithms defined according to test tasks.	Yes / No / Explain		
53	b) Password Protection	Two levels, to prevent accidental settings	Yes / No / Explain		

54	c) Limit value monitoring system	For temperature	Yes / No / Explain		
55	d) Fault Diagnosis	Diagnostic system information on operating times and possible operating failures diagnostic display to monitor parameters, pressure, input/outputs. Help menu. Alarm History.	Yes / No / Explain		
56	*Power Supply	i) 230V±10%/50Hz, Single Phase AC power supply ii) Nominal power rating ≤3 KW & Nominal current ≤12 A iii) Protection class: Electrical compartment & Control unit: IP 54.	Yes / No / Explain		
57	Documentation (Hard / Soft copy)-1	Three sets of following documents in English to be provided in hard and soft copy	Yes / No / Explain		
58	Documentation (Hard / Soft copy)-2	i) *Operation and programming manual in English.	Yes / No / Explain		
59	Documentation (Hard / Soft copy)-3	ii) *Maintenance manual in English.	Yes / No / Explain		
60	Documentation (Hard / Soft copy)-4	iii) Circuit drawings, Electrical wiring & machine assembly drawings.	Yes / No / Explain		
61	Documentation (Hard / Soft copy)-5	iv) Preventive maintenance check list, guidelines, troubleshooting charts.	Yes / No / Explain		
62	Documentation (Hard / Soft copy)-6	v) Machine test charts.	Yes / No / Explain		
63	Documentation (Hard / Soft copy)-7	vi) spare parts list	Yes / No / Explain		
64	Chamber Calibration Certificate	Calibration Certificate of the Chamber (by NABL approved agency) during installation & commissioning to be provided.	Yes / No / Explain		

65	*Training	During commissioning supplier's Engineer should provide training to IISU Personnel's on the equipment for its operation, programming and maintenance at IISU-Trivandrum	Yes / No / Explain		
66	*Chamber compatibility	The chamber to be compatible for clean room class 100 (The chamber should not produce particles more than 0.5micron during operation or storage).	Yes / No / Explain		
67	Installation & Commissioning	Installation & Commissioning to be done by the vendor at IISU - Trivandrum.	Yes / No / Explain		
68	Warranty	Minimum 1 year from the date of installation and commissioning	Yes / No / Explain		
69	General-1	Party should furnish the list contains details of the similar chambers supplied to the organisations. Noise level measured test certificate for the supplied system.	Yes / No / Explain		
70	General-2	AMC charges for 3 years may be indicated.	Yes / No / Explain		
71	General conditions	Payment shall be made after installation, commissioning and first level training.	Yes / No / Explain		
72	* means	Mandatory clause to be met	Yes / No / Explain		

Supporting Documents required from Vendor

1. Source of Manufacturer to be specified during tendering.

2. Detailed description of the item to be provided during tendering.

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	The item should be supplied to IISU and training to be provided.	Yes / No / Explain	
2	Tax as applicable will be paid extra. All Tax invoices shall invariably bear your GST registration No (GSTIN), the HSN code of the particular item and the applicable GST rates. In the absence of which the invoices shall not be processed for payment. IISU GST No.32AAAGI0068M1ZI.	Yes / No / Explain	
3	Installation/ Commissioning/ training: (Installation/ Commissioning & training at IISU shall be under the scope of the supplier)	Yes / No / Explain	
4	Delivery period: (Please specify the applicable delivery period including the time period required for installation/ commissioning & training.)	Yes / No / Explain	
5	Liquidated Damages: (L/D clause @ 0.5% per week subject to a maximum of 10% of the order value is applicable for delays beyond the promised delivery schedule.)	Yes / No / Explain	
6	Delivery Term: (Please accept our preferred delivery term i.e., FOR IISU. In case of Ex Works, please mention the applicable freight/ P&F values for delivering upto IISU Thiruvananthapuram. Being a Govt of India Dept., insurance is not required at our cost. Please ensure safe delivery of the ordered item with proper worthy packing.	Yes / No / Explain	
7	Security Deposit: (In the event of placement of order, for PO value above INR 5.0 lakh, you should submit Security Deposit at 3% of the order value of the P.O. The Security Deposit shall valid for a period of 60 days beyond the date of completion and acceptance of P.O/Contract. The Security Deposit will be discharged without any interest after completion and acceptance of the Contractual obligations.)	Yes / No / Explain	

8	Warranty: (The items supplied against this purchase order shall be covered under warranty for a period of 1 year from the date of receipt of items at our Stores.)	Yes / No / Explain	
9	Performance Bank Guarantee: (Supplier shall provide a Performance Bank Guarantee for 3 % of the PO value, valid upto 60 days beyond the date of completion of guarantee/ warranty period for ensuring the due performance of the supplied items during the warranty period.)	Yes / No / Explain	
10	Payment Term: (Our standard payment term is 100% within 30 days from the date of installation & acceptance at our Site).	Yes / No / Explain	
11	Make/ Country of Origin: (Please mention make of the quoted product and Country of Origin for import components)	Yes / No / Explain	
12	Local Content: Indicate the percentage of local content in the quote. Please certify the same in your letterhead and enclose the same with bid documents	Yes / No / Explain	
13	PO ordering address in full with Contact Person Name, E-mail id, Phone No. [also attach your Quotation in PDF format]	Yes / No / Explain	
14	Quote Validity: Minimum 90 days	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	THERMAL CHAMBER - Air cooled Compact Thermostatic Chamber with Single Phase details as per Annexure-1	3.00 Nos.		-		

Common charges (Applicable for all items)

Freight charge	
P&F Charges	