

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

Tender for Thermal and Humidity Chamber

Bids to be submitted online

**Tender No.: IISU/PURCHASE UNIT IX (IISU PURCHASE)/IU202400358601 dated
13-08-2024**

A. Tender Details

Tender No : **IISU/PURCHASE UNIT IX (IISU PURCHASE)/IU202400358601**

Tender Date : **13-08-2024**

Tender Classification: **GOODS**

Purchase Entity : **PURCHASE UNIT IX (IISU PURCHASE)**

Centre : **ISRO INERTIAL SYSTEMS UNIT (IISU)**

Thermal and Humidity Chamber

Thermal and Humidity Chamber

A.1 Tender Schedule

Bid Submission Start Date : **14-08-2024 14:36**

Bid Clarification Due Date : **19-08-2024 16:00**

Bid Submission Due Date : **11-09-2024 14:32**

Bid Opening Date : **11-09-2024 15:00**

B. Tender Attachments

NA

Instructions To Vendors

1. 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.

2. 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.

3. 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.

C. Bid Templates

C.1 Technical Bid - Thermal and Humidity Chamber

1. Climatic Chambers - Thermal and Humidity Chamber

Item specifications for Climatic Chambers

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Inside Capacity (Nominal)	200 to 250 Liters	Yes / No / Explain		
2	Temperature range Min.	- 70 to -75°C	Yes / No / Explain		
3	Temperature ranges Max.	180°C to 200°C	Yes / No / Explain		
4	Temperature fluctuation	±0.3°C	Yes / No / Explain		
5	Humidity Range	10 to 98% RH	Yes / No / Explain		
6	Humidity fluctuation	± 2.5%RH	Yes / No / Explain		
7	Humidity variation in space	± 10%RH	Yes / No / Explain		
8	Heat up rate	4 to 6° K/Min	Yes / No / Explain		
9	Pull down rate	4 to 6° K/Min	Yes / No / Explain		
10	Cable port	80 to 100 mm diameter	Yes / No / Explain		
11	Inside Dimensions, Nominal (W x H x D) mm	≥ 700 x 800 x 400 mm	Yes / No / Explain		
12	Power supply	AC 400V, 3 Phase, 50Hz	Yes / No / Explain		
13	Max load current	≤ 25A	Yes / No / Explain		
14	Voltage fluctuation	±10% of rated voltage	Yes / No / Explain		
15	Noise level	< 60dB	Yes / No / Explain		

16	Construction Exterior Materials	Stainless steel plate (18Cr-stainless steel with hairline finish)	Yes / No / Explain		
17	Test area material	Stainless steel plate (18Cr-8Ni stainless steel with BA finish)	Yes / No / Explain		
18	Insulation	Glass wool + Foamed phenol	Yes / No / Explain		
19	Test vessels	Temperature and humidity control chamber + Test area	Yes / No / Explain		
20	Temperature and humidity control chamber	Air circulator, heater, cooler and Dehumidifier, boil-dry protector, humidifier water supply/drain ports, suction grille	Yes / No / Explain		
21	Test area	Dry-bulb temperature sensor, Wet-bulb temperature sensor, wick pan, cable port, drain port, drain port cover, ceiling panel	Yes / No / Explain		
22	Shelf bracket max.load capacity (including shelf weight)	≥ 50kg	Yes / No / Explain		
23	Floor load capacity(Evenly distributed load)	≥ 50kg	Yes / No / Explain		
24	Door	Single door (right handle, left- Hinged, with key), door dew tray, Controller (color LCD setting by touch panel), operating switches, overheat protector	Yes / No / Explain		
25	Electrical compartment	Main power switch (load switch or leakage breaker), specimen power supply control terminal,time signal terminal, communication port, specimen temperature input terminal	Yes / No / Explain		

26	Water circuit chamber	Water supply pump for humidifying water, wick pan water supply pump, humidifier drain pump, machinery compartment ventilation slit (on the ceiling)	Yes / No / Explain		
27	Machinery compartment	Refrigerant unit, refrigerator dew tray, condenser fan, chamber opening dew tray, drain tube, machinery compartment ventilation slit (rear side), water tank condenser filter.	Yes / No / Explain		
28	Power connection port	Rear side	Yes / No / Explain		
29	Weight	< 425kg	Yes / No / Explain		
30	Heater	Nichrome strip wire heater 3.5Kw(1.75kwx2)	Yes / No / Explain		
31	Refrigeration unit	Mechanical cascade and compression refrigeration	Yes / No / Explain		
32	Heater capacity (kW)	1.75 to 2.5	Yes / No / Explain		
33	Humidifier capacity (kW)	1.8 to 2.2	Yes / No / Explain		
34	Relative humidity	Up to 75%RH	Yes / No / Explain		
35	Allowable heat loads Max.	≤ 350W (@25°C to 95°C)	Yes / No / Explain		
36	Compressor	Rotary	Yes / No / Explain		
37	Rated motor power	1.0 to 2.2Kw	Yes / No / Explain		
38	Refrigerant	R404a ,R508a or equivalent	Yes / No / Explain		
39	Display unit LCD	Touch panel, preferred to have std. 7.0 inches size minimum	Yes / No / Explain		
40	Casters	4 Free rolling type & free turning wheel	Yes / No / Explain		

41	Ethernet port (LAN port)	100 base TX	Yes / No / Explain		
42	Chamber illumination	Must be available	Yes / No / Explain		
43	External memory Interface	USB 2.0	Yes / No / Explain		
44	Data log interval	1 sec. or better	Yes / No / Explain		
45	Viewing window (Nominal)	Front	Yes / No / Explain		
46	Control panel	Color, LCD touch panel capable of controlling Operating modes, changing ranges, external memory function, etc.	Yes / No / Explain		
47	PC interface / Software	Software shall be provided by vendor with life time license in the name of IISU. Programmable minimum 20 programs shall be stored.	Yes / No / Explain		
48	Controller	---	Yes / No / Explain		
49	Unit function	Touch panel 7.0 inches color LCD, Back light LED, display type -TFT, No.of pixels- 800 x 480(WVGA),status, indicator -LED	Yes / No / Explain		
50	Control function	PID control ,temperature input-thermo couple type-T, humidity input – thermocouple T type, setting resolution – up to one decimal.	Yes / No / Explain		
51	Operation modes	constant, program, remote, stop	Yes / No / Explain		
52	Setting constant value mode	Temp. -80 to 185°C, Humidity – 0 to 100%.	Yes / No / Explain		

53	Setting programe mode	temperature gradient, humidity gradient, exposure time , pause, start condition, completion mode selection, counter (A,B), programe name setting, programe list	Yes / No / Explain		
54	Language	English	Yes / No / Explain		
55	Accessory functions	Standard function, option- RS485, RS232C, Standard function, option- RS485, RS232C, external alarm output setting	Yes / No / Explain		
56	External memory function	USB 2.0 mass storage class supported file formate - FAT 16/FAT32, sampling setting, program pattern writing patter manager lite	Yes / No / Explain		
57	Network function	Ethernet port (100 base TX) web application, monitor setting operation, data collection management, maintenance, e-mail notification supporter browser	Yes / No / Explain		
58	PC communication	Ethernet port can be connected to one PC	Yes / No / Explain		
59	Operating environment	Performance guaranteed environment- Temp. +23°C ±5°C Humidity- 30%rh to 90%rh operation guaranteed environment- temp. 0°C to 60°C, humidity 30%rh to 90%rh storage environment- -20°C to 70°C humidity 20%rh to 95%rh	Yes / No / Explain		
60	Temperature indication	At ambient temp. of 23°C ±1°C, accuracy ±0.3°C, Display accuracy ±0.07% F.S + 1 digit	Yes / No / Explain		

61	Accessories	--	Yes / No / Explain		
62	Key	2 For door (except wide-view door option)	Yes / No / Explain		
63	Cable port plug	2 (80 to 100 mm) silicone sponge rubber	Yes / No / Explain		
64	Breaker handle stopper	1 No	Yes / No / Explain		
65	Shelf brackets	1set	Yes / No / Explain		
66	Thermocouple type T	1No	Yes / No / Explain		
67	Wet bulb wick	1Box (24 wicks)	Yes / No / Explain		
68	Cartridge fuse	Class B , 250V, 0.4A, 5A, 8A – 1each	Yes / No / Explain		
69	Operation manual	1 Installation guide, CD Operation manual	Yes / No / Explain		
70	Warranty period	Minimum 3 Years	Yes / No / Explain		

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Warranty	Minimum 3 years	Yes / No / Explain		

Supporting Documents required from Vendor

1. PC Software Installation with life time license

2. Operation instruction manual and warranty certificate

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	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	
2	Delivery period: (Please specify the applicable delivery period including the time period required for installation/ commissioning.)	Yes / No / Explain	
3	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	
4	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	
5	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	
6	Supplier shall submit 3% of order value along with Purchase order acknowledgement as FDR/ Insurance Surety Bonds/ Account Payee Demand Draft/ Fixed Deposit Receipt/ Banker Cheque or Bank Guarantee from any of the commercial banks or payment online in an acceptable form safeguarding of the purchasers interest in all respects. In case of FDR, lien shall be marked in favour of Sr. Accounts Officer, IISU, Trivandrum. In case of Bank Guarantee, it shall be executed on Rs.200/- non-judicial stamp paper and shall be valid for sixty days beyond the date of completion of all the terms and conditions of PO. Security Deposit shall be provided within 21 days from the date of release of PO	Yes / No / Explain	

7	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. For import cases, we are having authorised freight forwarder, who will collect the items on Ex Works/ FOB basis)	Yes / No / Explain	
8	Payment Term: (Our standard payment term is 100% within 30 days from the date of receipt & acceptance of items at our Site for indigenous orders and 100% through Sight Draft for import orders.)	Yes / No / Explain	
9	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.	Yes / No / Explain	
10	Foreign vendors are not permitted to quote. Only Class I and Class II Local suppliers as per Make in India Policy are eligible to participate in the bid.	-	
11	The percentage of Local content should specifically mentioned in the offer, without which it will be summarily rejected. Preference will be given to Class I Local supplier and in their absence Class II Local suppliers will be considered.	-	
12	Quote Validity: Minimum 120 days	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	Climatic Chambers - Thermal and Humidity Chamber	1.00 Nos.		-		

Common charges (Applicable for all items)

Freight charge	
P&F Charges	