

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
ISRO PROPULSION COMPLEX (IPRC)  
MAHENDRAGIRI**

**Tender for Replacement of AC plant for PS2/GS2 clean room facility**

**Bids to be submitted online**

**Tender No.: IPRC/PURGP2/IP202200039001 dated 08-06-2022**

## A. Tender Details

Tender No :	<b>IPRC/PURGP2/IP202200039001</b>
Tender Date :	<b>08-06-2022</b>
Tender Classification:	<b>GOODS</b>
Purchase Entity :	<b>PURGP2</b>
Centre :	<b>ISRO PROPULSION COMPLEX (IPRC)</b>

### Procurement of Replacement of AC plant for PS2/GS2 clean room facility

- This is a two-part bid. Price details shall NOT be mentioned in technical Bid/attachments, failing which the offer will be considered as invalid.
- 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.
  - a. The percentage of local content should be specifically mentioned in the offer, without which it will be summarily rejected.
  - b. Preference will be given to Class-I Local Supplier and in their absence, Class-II Local Supplier will be considered.
  - c. MSME preference is applicable only against the claim of the manufacturer and production of documentary evidence by the manufacturers for the registration of particular item under MSME.
- Last minute clarification on tenders will not be entertained.
- This is an e-Tender. Hence Postal/Fax/Email tenders will not be accepted.
- Acceptance of Guarantee / Warranty, PBG, SD, LD & AMC are mandatory. Quotations not accepting these conditions will not be considered. (AMC charges will be considered/loaded for cost comparative purpose for arriving the L1 price)
- Please mention your Government E market Place (GeM) Seller ID for our reference.

#### A.1 Tender Schedule

Bid Submission Start Date :	<b>10-06-2022 12:10</b>
Bid Clarification Due Date :	<b>16-06-2022 11:00</b>

Bid Submission Due Date : **05-07-2022 14:00**

Bid Opening Date : **05-07-2022 15:00**

Price Bid Opening Date : **26-07-2022 11:00**

## **B. Tender Attachments**

### **Technical Write-up/Drawings**

**Document : Annexure**

### **Instructions To Vendors**

#### **2. STANDARD TERMS AND CONDITIONS ( DOS PM:19)**

1.

a. 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 systems of unit must be furnished.

2. Arbitration in the event of any dispute or difference arising under these terms & conditions or any condition 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 of some other person appointed by him, and the dispute further processed in terms of the Arbitration & Conciliation Act, 1996. There will be no objection that the arbitrator is a Government Servant that he had to deal with matter which the Contract relates to or that in the course of his duties as Government Servant has expressed views on all or any of the matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this Contract.

3. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority ie., Department for Promotion of Industry and Internal Trade (DPIIT).

Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

4. b. Corrections, if any, in the quotation must be attested. All amounts shall be indicated both in

words as well as in figures. When there is difference between the amount quoted in words and figures, the amount quoted in words shall prevail.

5. GST/ other duties/levies, where legally leviable and intended to be claimed, should be distinctly shown separately in the tender.

6. Guarantee: The stores offered should be guaranteed for a minimum period of twelve months against defective stores design, operation or manufacture. For defects noticed during the guarantee period, replacement/repair should be arranged free of cost within a reasonable period of such notification. In cases where our specifications call for a guarantee period more than 12 months specifically, then such a period shall apply

7. If the arbitrator is a person appointed by the Head of the Purchase Office, In the event of his denying or neglecting or refusing to act, or resigning or being unable to act, for any reason, shall be lawful for the Head of the Purchase Office either to proceed with the reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator subject, as aforesaid, to the Arbitration and Conciliation Act, 1996, and the rules thereunder and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceeding under the 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 the Purchaser in his absolute discretion may determine. Work under the Contract shall, if reasonably possible, continue during Arbitration Proceedings.

8. If the arbitrator is the Head of the Purchase Office :

(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 the reference himself for to appoint another person as arbitrator, or In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Purchase Office to appoint another person as arbitrator

9. Late Tenders will not be considered

10. Model Certificate for Tenders:

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered

11. Packing and Forwarding: 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 to the Contractor.

12. Payment terms are full payment within 30 days from the date of receipt and acceptance of material ordered. Our Bankers are State Bank of India, Mahendragiri.

13. Quotation should be valid for at least 120 days from the date of opening of the tender.

14. Specifications: Stores offered should strictly conform to Purchasers specifications. Deviations, if any, shall 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 quotation. Test certificate, wherever necessary, should be forwarded along with supplies. Wherever options are called for in our specifications, the tenderer should address all such options, wherever specifically mentioned by us, and the tenderer could suggest changes to specifications with appropriate response for the same. Even in such case, the tenderer should state why he cannot meet our specifications and why he is suggesting the change.

15. Successful tenderer will have to furnish in the form of a Bank Guarantee or in any other form as called for by the Purchaser towards adequate security for the materials/property provided by the purchaser for the due execution for the Contract.

16. TERMS AND CONDITIONS OF TENDER:

Price quoted should be on the basis of FOR IPRC, Mahendragiri or delivery at site

The Purchaser will not pay separately for transit insurance, and the risk and cost during transit shall be exclusively the responsibility of the Contractor and the purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

17. The Contractor shall at all times indemnify the Purchaser against all claims which may be in respect of the stores for infringement of any right protected by Patent, Registration or design or Trade Mark and shall take all risks of accidents or damage which may cause a failure of the supply from whatever causes arising and the entire responsibility for the sufficiency of all means used by him for the fulfilment of the Contract

18. The Purchaser reserves the right to accept or reject any quotation fully or partly without assigning any reason therefore.

19. 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 not later than the date specified therein, and failure to do so, without adequate justification, may involve cancellation of the Contract at the discretion of the Purchaser.

20. Vendors may please note that in case of two-part tender, the price details shall be mentioned only in the price-bid template. If the price details either in part or full are indicated in the technical bid, the bid will be disqualified.

21. Where counter terms and conditions/printed or cyclostyled conditions of sale have been offered by the tenders, the same shall not be deemed to have been accepted by the Purchaser unless the Purchaser's specific written acceptance thereof is obtained

### **3. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA**

1. 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.

2. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority ie., Department for Promotion of Industry and Internal Trade (DPIIT).

3. Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

#### **4. Model Certificate for Tenders**

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered

5. 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.

#### **4. GENERAL TERMS AND CONDITONS**

1. a) Facility of after sales service to be confirmed with details.
- b) Permanent Account Number (PAN) allotted by Income-Tax authorities shall be furnished with documentary proof. Otherwise, documentary proof for having applied for PAN should be provided. Also PAN should be in the name of Company/Firm, if quoted by the Company/Firm and in the name of Individual, if quoted by individual.
- c) GST No.
- d) PAN No.
- e) Local office in Tirunelveli / Nagercoil is preferable.

Note: (b) to (e) are applicable for Indian Companies only.

2. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.

3. GST where legally leviable and intended to be claimed should be distinctly shown separately in the tender. As per Notification No.45/2017 Central Tax(Rate) or Notification No. 47/17 Integrated TAX(Rate) of 14/11/17, We are eligible for availing Concessional GST@5% against certificate issued by an officer not below the rank of Dy. Secretary to Govt. of India

4. Guarantee / Warranty period as applicable shall be indicated, along with the quote. Guarantee/Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the contract/purchase order.

5. If an Indian agent submits bid on behalf of the Principal/OEM, the same Indian agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product

6. In a tender, either the Indian Agent on behalf of the Principal/OEM or Principal/ OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

7. In case of imported items (stores), Ex-Works/FOB/FCA prices should be indicated. In case of indigenous stores the quotation should be on FOR-Destination / Door delivery basis.

8. In case the vendor falls in the category of Small Scale Industries(SSIs), who are registered with NSI, Public Sector Undertakings (PSUs) and Micro & Small Enterprises (MSMEs) the same shall be mentioned in their quote for evaluation.

9. Indian Agents while quoting on behalf of their principals shall attach necessary authorization letter from their Principals along with the bid.



10. IPRC reserves the right to accept or reject any quotation in full or part thereof by recording the reasons.

11. IPRC shall not be responsible for failure of vendors in submitting bids online caused due to technical reasons at vendor end such as network or power failures, computer failure, internet-browser, mistakes / errors in filling the bids on line by vendor etc.

12. ISRO PROPULSION COMPLEX (IPRC) is exempted from payment of Customs Duty under Notification No. 50/2017-Customs dated 30.06.2017 and as amended by Notification No.5/18 Customs dt:25/1/18. For imported items IPRC will provide Customs Duty Exemption Certificate for availing Concessional CD and IGST.

13. Last minute request for the extension of the due date w.r.t. any technical issue at Vendors/Suppliers side will not be considered. You may submit your quotation online well in advance instead of waiting till the last date to ensure that Internet problem and network condition does not cause problem

14. LIQUIDATED DAMAGES: Delivery is the essence of the contract. Items shall be delivered within stipulated period. If delivery is delayed beyond the stipulated delivery period mentioned in the purchase order or any extension thereof, an amount equal to 0.5% per week shall be recovered, subject to a maximum of 10% of the order value shall be deducted from your bills due.

15. Offers sent through post, telegram, fax, e-mail, courier will not be considered. Partially completed / incomplete tenders shall not be considered.

16. Only authorized dealers/agents or their accredited representatives for original manufacturers have to submit the quotation with documentary evidence.

17. PAYMENT: 100% through RTGS within 30 days from the date of receipt and acceptance of items at our site is the normal payment for Indigenous supply. In the case of direct Import, normal terms of payment are by Sight Draft / Wire Transfer after receipt of items. However, other terms of payment like establishment of Letter of Credit may be considered by the Purchaser on such terms and conditions as may be agreed upon.

18. PERFORMANCE BANK GUARANTEE :

The Supplier shall guarantee the successful and satisfactory performance/commissioning of equipment/machinery under the conditions specified in the Purchase Order. As a performance security, the SUPPLIER shall furnish a performance bank guarantee (format enclosed) from Nationalized Bank/Scheduled Bank for an amount equal to the sum of 3% of the order value ensuring the due performance of equipment/machinery in accordance with all the specifications and terms specified in the Purchase Order herein valid for the warranty period. On due performance, the performance bank

guarantee shall be automatically cancelled and returned to the Supplier within 30 days after expiry of the Warranty period. The performance bank guarantee shall have claim period of six months.

19. SECURITY DEPOSIT : Security Deposit @ 3% of order value shall be submitted in the form of DD/FDR duly endorsed in favour of Accounts Officer, IPRC or by way of Bank Guarantee (in the prescribed format) within 20 days after receipt of order and valid up to the successful execution of the order.

20. The goods or material offered should be strictly as per our specifications. Change(s) in specifications, if any, should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials or equipment offered. Vague terms such as Best Indian, Best Indigenous and Imported make should not be used.

21. The offer should be valid for a minimum period of 120 days from the date of opening of the bids (Technical bid in case of 2-part tender).

22. 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 tenderer shall supply the same at the rates quoted.

23. Wherever the tenderer is asked to submit sample for evaluation of tenders, the same shall be submitted along with your quote.

## C. Bid Templates

### C.1 Technical Bid - Replacement of AC plant for PS2/GS2 clean room facility

**1. AIR CONDITIONING PLANTS - Dismantling of existing plant including 2 Nos reciprocating compressor and motor, 2 nos cooling tower, 1 Nos fresh air blower, 1 Nos cement plastered AHU, 2 Nos blowers etc. Details are as per Annexure-I.**

**2. AIR CONDITIONING PLANTS - Supply of factory assembled, Air - cooled, scroll chiller packages of minimum capacity of 40 TR (120000 Kcal/hr). Technical details are as per Annexure-II.**

#### Item specifications for AIR CONDITIONING PLANTS

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Capacity	Minimum 40 TR (120000 KCal/hr)	Yes / No / Explain		
2	Type of chiller	Air cooled scroll chiller	Yes / No / Explain		
3	Approved make of chiller	Blue Star / ETA / Voltas / Carrier / Climaveneta / Swegon Blue Box / Daikin McQuay	Yes / No / Explain		
4	Refrigerant piping	Seamless copper pipe	Yes / No / Explain		
5	Refrigerant	R134a / R410A / R407C or equivalent Eco-friendly refrigerant.	Yes / No / Explain		
6	Control Panel	Microprocessor based unit control center in a fully enclosed steel cabinet.	Yes / No / Explain		
7	Soft Starter	Chiller shall be equipped with reputed make soft starter.	Yes / No / Explain		

8	Pedestal	Chiller shall be placed on RCC pedestal. Above RCC pedestal suitable size ISMB or ISMC shall be placed for further support to pedestal. Suitable spring type vibration isolator shall be provided for unit.	Yes / No / Explain		
9	Power Supply	415 +/- 10% V, 50 Hz, 3 Phase	Yes / No / Explain		
10	Warranty	1 year from the date of commissioning	Yes / No / Explain		
11	Special Note	The entire chiller package shall be tested in the manufacturer premises by the manufacturer in the presence of the Contractor and Department officials.	Yes / No / Explain		

**3. AIR CONDITIONING PLANTS - Supply of suitable model pump set of horizontal split case pump. The pump shall handle minimum 365 lpm of water against head of minimum 25M. Details are as per Annexure-III.**

#### **Item specifications for AIR CONDITIONING PLANTS**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Application	Chilled water circulation for HVAC system	Yes / No / Explain		
2	Type of Pump	Horizontal split case pump	Yes / No / Explain		
3	RPM	1450 RPM (Approx)	Yes / No / Explain		
4	Power	Minimum 5 HP	Yes / No / Explain		
5	Capacity	Minimum 365 LPM	Yes / No / Explain		
6	Head	Minimum 25 M	Yes / No / Explain		

7	Approved makes	Beacon Weir / Kirloskar / Crompton / KSB / Mather & Platt / Grundfoss / Bell & Gossett / Armstrong / Lubi	Yes / No / Explain		
8	Documents to be submitted for approval	Pump Datasheet, Pump performance curve, Power consumption with operating points.	Yes / No / Explain		
9	Warranty	Minimum 1 Year	Yes / No / Explain		

**4. AIR CONDITIONING PLANTS - Supply of dia 100 MS C class pipe with insulations. Details are as per Annexure - IV.**

**5. AIR CONDITIONING PLANTS - Supply of dia 50 mm MS C Class pipe with insulation (Drain pipe). Details are as per Annexure-IV.**

**6. AIR CONDITIONING PLANTS - Supply of dia 32 MS C class pipe with insulation (Expansion tank pipe). Details are as per Annexure-IV.**

**7. AIR CONDITIONING PLANTS - Supply of Dia 100 mm butterfly valve. Details are as per Annexure-IV.**

**8. AIR CONDITIONING PLANTS - Supply of Dia 100 mm Motorized butterfly valve. Details are as per Annexure-IV.**

**9. AIR CONDITIONING PLANTS - Supply of 100 mm dia manual balancing cum flow measurement valve (Advance make or equivalent). Details are as per Annexure-IV.**

**10. AIR CONDITIONING PLANTS - Supply of 100 mm dia flexible pipe connector. Details are as per Annexure-IV.**

**11. AIR CONDITIONING PLANTS - Supply of 100 mm dia Y strainer. Details are as per Annexure-IV.**

**12. AIR CONDITIONING PLANTS - Supply of 100 mm dia non return valve. Details are as per Annexure-IV.**

13. AIR CONDITIONING PLANTS - Supply of 80 mm dia 3 way modulating valve with motor and thermostat. Details are as per Annexure-IV.

14. AIR CONDITIONING PLANTS - Supply of 80 mm dia globe valve. Details are as per Annexure-IV.

15. AIR CONDITIONING PLANTS - Supply of 100mm dia pressure guage (with pet cock/gate valve). Details are as per Annexure-IV.

16. AIR CONDITIONING PLANTS - Supply of differential pressure switch. Details are as per Annexure-IV.

17. AIR CONDITIONING PLANTS - Supply of dial type temperature guage. Details are as per Annexure-IV.

18. AIR CONDITIONING PLANTS - Supply of Automatic air Vent. Details are as per Annexure-IV.

19. AIR CONDITIONING PLANTS - Supply of drain plug. Details are as per Annexure-IV.

20. AIR CONDITIONING PLANTS - Supply of suitable GRP panel expansion tank as per attached specification of size 0.75 m x 1.0 m x 1.0m (0.75 cubic metre capacity) insulated with 40 mm thick polyurethane foam. Details are as per Annexure - I.

21. AIR CONDITIONING PLANTS - Supply of Automation for AC plants as per Annexure - I.

22. AIR CONDITIONING PLANTS - Supply of electrical panel catering to 1 nos Aircooled scroll chiller packages and 2 nos Chilled water Pumps as per Annexure - V.

23. AIR CONDITIONING PLANTS - Supply of double skin 34000 CMH clean room AHU with 100 mmwc static pressure and standby motor as per Annexure-VI.

#### Item specifications for AIR CONDITIONING PLANTS

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Air Handling type	Floor mounted double skin type	Yes / No / Explain		
2	Fan Type	DIDW Backward curved centrifugal fan	Yes / No / Explain		
3	Service Area	100000 Class Clean room	Yes / No / Explain		
4	Minimum Capacity of Chilled water coil	40 TR (120000 KCal/Hr)	Yes / No / Explain		
5	Supply air quantity	34000 CMH	Yes / No / Explain		
6	Minimum coil face area	4.2 SqM	Yes / No / Explain		
7	Maximum coil face velocity	137 mpm	Yes / No / Explain		
8	Static Pressure	Minimum 100 mmwc	Yes / No / Explain		
9	Minimum rows of cooling coil	8	Yes / No / Explain		
10	ADP of cooling coil	10 Degree C	Yes / No / Explain		
11	Approved makes of AHUs	Blue star / ABB / carrier / Boopathy / Citizen / ETA / Zeco / Voltas / Edge tech / VTS / Systemair / Lufttek / Flaktwoods / Crescendo India with Nicotra / Comefri / Kruger / Greenheck / VTS fans	Yes / No / Explain		
12	Approved makes of centrifugal blowers	Nicotra / Comefri / Kruger / Duvent / ACCO / NADI / Greenheck / Flaktwoods / Humidin	Yes / No / Explain		
13	Approved makes for electrical motors	ABB / Siemens / Crompton Greaves / Kirloskar / NGEF / Jyothi / Bharat Bijlee / GE / Laxmi hydraulics Pvt Ltd	Yes / No / Explain		
14	Mixing Box	Mixing Box shall be provided with fresh air and return air dampers	Yes / No / Explain		

15	Drain Pan	One-piece drain pan shall be constructed of minimum 1.0 mm stainless steel welded joints with necessary slope to facilitate fast removal of condensate water.	Yes / No / Explain		
16	Drain Pipe	Drain pipe shall be provided to AHU for removing of condensate water at location specified by department.	Yes / No / Explain		
17	Drift Eliminator	Drift eliminator shall be provided in AHU.	Yes / No / Explain		
18	Vibration isolators	Suitable vibration isolators shall be provided with minimum of 90% vibration isolation efficiency.	Yes / No / Explain		
19	Warranty	1 year from date of commissioning	Yes / No / Explain		

**24. AIR CONDITIONING PLANTS - Supply of Fresh air double skin AHU without cooling coil 4420 CMH, 100 mmwc static pressure as per Annexure VI.**

**Item specifications for AIR CONDITIONING PLANTS**

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Air Handling Unit Type	Double skin floor mounted fresh air AHU without cooling coil.	Yes / No / Explain		
2	Minimum Capacity	4420 CMH	Yes / No / Explain		
3	Static Pressure	Minimum 100 mmwc	Yes / No / Explain		
4	Approved makes of AHUs	Blue star / ABB / carrier / Boopathy / Citizen / ETA / Zeco / Voltas / Edge tech / VTS / Systemair / Luftek / Flaktwoods / Crescendo India with Nicotra / Comefri / Kruger / Greenheck / VTS fans	Yes / No / Explain		



5	Approved makes of centrifugal blower	Nicotra / Comefri / Kruger / Duvent / ACCO / NADI / Greenheck / Flaktwoods / Humidin.	Yes / No / Explain		
6	Approved makes of electrical motors	ABB / Siemens / Crompton Greaves / Kirloskar / NGEF / Jyothi / Bharat Bijlee / GE / Laxmi hydraulics Pvt Ltd.	Yes / No / Explain		
7	Vibration isolator	Suitable vibration isolators shall be provided with minimum of 90% vibration isolation efficiency	Yes / No / Explain		
8	Warrantee	1 year from date of commissioning	Yes / No / Explain		

**25. AIR CONDITIONING PLANTS - Supply of Five micron filters for prefiltration of air down to 5 microns at an efficiency of 98.5% plus. Each filters shall be as size as 610 x 610 x 150 mm and as per Annexure - I.**

**26. AIR CONDITIONING PLANTS - Supply of HEPA filters of minimum size 610 x 610 x 300 mm (inclusive of 6 mm gasket on both side) to filter 1700 cmh of air to 0.3 micron as per Annexure - I.**

**27. AIR CONDITIONING PLANTS - Supply of aluminium ducting (site fabricated / prefabricated) for supply and return air of 1 mm thickness as per Annexure - VII.**

**28. AIR CONDITIONING PLANTS - Supply of aluminium ducting (site fabricated/prefabricated) for supply and return air of 1.8 mm thickness as per Annexure - VII.**

**29. AIR CONDITIONING PLANTS - Supply of nitrile rubber (closed cell) thermal insulation for supply and return air duct with minimum 19 mm thick as per Annexure - I.**

#### **Item specifications for AIR CONDITIONING PLANTS**

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Thermal Conductivity	Maximum 0.033 W/(mK)	Yes / No / Explain		

**30. AIR CONDITIONING PLANTS - Supply of volume control dampers in supply air duct made of extruded aluminium complete with linkage, lever, fixing arrangement etc compatible for clean room standards.**

**31. AIR CONDITIONING PLANTS - Supply fresh air louver made of extruded aluminium with bird/insect screen provided with intake louver.**

**Item specifications for AIR CONDITIONING PLANTS**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Note	The lowest louvers of the assembly shall extend out slightly to facilitate disposal of rain water without falling on the door / wall on which it is mounted and complete with all aluminium construction volume control dampers.	Yes / No / Explain		

**32. AIR CONDITIONING PLANTS - Supply of duct silencer to be provided in SA and RA duct. The silencer shall be designed to attenuate noise to meet NC-50 curve in cleanrooms.**

**Item specifications for AIR CONDITIONING PLANTS**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Note	Material of construction of silencer internal and external shall meet as per cleanroom standard. Silencer shall consist of non combustible, inorganic, inert non shedding glass fibre as acoustic fill to obtain sufficient density for the above noise reduction.	Yes / No / Explain		

**33. AIR CONDITIONING PLANTS - Supply of factory fabricated motorized fire & smoke dampers with the actuators in supply and return air path as per Annexure - I.**

**34. AIR CONDITIONING PLANTS - Supply of heating kit. The minimum capacity of heating kit shall be 33 Kw. The heating kit shall be as per Annexure-I.**

**Item specifications for AIR CONDITIONING PLANTS**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Note	Heating kit shall be comprising of strip heaters, safety thermostat, contactors, including cabling and interconnections.	Yes / No / Explain		
2	Heating kit	Heating kit shall be comprise of 3 equal capacity thermostat heater, Humidistat heater and manual heater.	Yes / No / Explain		

**35. AIR CONDITIONING PLANTS - Stainless steel pan humidifier kit of minimum 9 Kw capacity for seasonal operation as per Annexure - I.**

**Item specifications for AIR CONDITIONING PLANTS**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Note	Pan Humidifier shall be comprising immersion of heater, float valve assembly, inlet, make up and drain water connections, connection to duct, stand for wall or floor mounting, cabling and earth connection etc	Yes / No / Explain		

**36. AIR CONDITIONING PLANTS - Supply of VFD of 20 Kw capacity for clean room AHU fan speed control as per Annexure - I.**

**37. AIR CONDITIONING PLANTS - Supply of electrical panel catering to Cleanroom AHU and FA AHU etc as per Annexure-V.**

**38. AIR CONDITIONING PLANTS - Civil work comprising of pedestal for 1 nos of chiller, 2 Nos**

of pumps and 1 Nos of cleanroom AHU and 1 Nos of Fresh air AHU as per Annexure-I.

**39. AIR CONDITIONING PLANTS - Painting of all above mentioned equipments as per Annexure - I**

**40. AIR CONDITIONING PLANTS - Installation, testing, balancing and commissioning of all the equipments mentioned above and validation of 1,00,000 class cleanroom as per Annexure - I.**

**Common Specifications (Applicable for all items)**

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Period of completion	8 Months	Yes / No / Explain		
2	Warranty	Overall warranty for every equipment for 1 year from date of commissioning.	Yes / No / Explain		
3	Testing and commissioning	Testing and commissioning of the AC plant shall be as per mentioned in the Annexure-I.	Yes / No / Explain		
4	Payment terms	For supply items 90% payments shall be done after acceptance at IPRC stores, balance 10% shall be done after installation, commissioning and testing.	Yes / No / Explain		
5	Note	While selecting catalogue products, specification or related equipment will be changed accordingly. It is responsibility of contractor to take care of such changes in the specification.	Yes / No / Explain		

6	Copy of Work order / Purchase order along with completion certificate of previous work experience with minimum capacity of 30 TR AC plant with 1,00,000 class cleanroom.	To be submitted by supplier.	Yes / No / Explain		
7	Since the scope of work is replacement of AC plant and then commissioning , the work can not be split. Hence overall L1 only will be considered.	Confirmation of acceptance	Yes / No / Explain		

**Supporting Documents required from Vendor**

- 1. Copy of Work Order / Purchase Order along with completion certificate of previous work experience with minimum capacity of 30 TR AC plant with 1,00,000 class clean room.**
- 2. Conformity to supply all the equipments / materials of approved makes only as mentioned in Annexures.**
- 3. Technical details for quoted equipments (Chiller, Pump and AHUs)**

5 additional documents can be uploaded by the vendor

## C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	General Layout drawing consist of all equipments of AC plant shall be prepared and send for approval.	Yes / No / Explain	
2	Technical datasheet for all the equipments shall be submitted to department to take prior approval before supply of equipments/materials.	Yes / No / Explain	
3	Product catalogue, operation and maintenance manual has to be send along with supply of applicable materials.	Yes / No / Explain	
4	Warrantee certificate shall be send along with supply of materials	Yes / No / Explain	
5	Product test certificate shall be send for along with equipments for applicable equipments.	Yes / No / Explain	
6	Validity of Offer (specify)	Yes / No / Explain	
7	Delivery Period (specify)	Yes / No / Explain	
8	Delivery Terms: Normal delivery terms - FOR Destination (i.e., IPRC, Mahendragiri)	Yes / No / Explain	
9	Payment Terms: 100% within 30 days after receipt and acceptance of items (No advance payment is acceptable). Specify your Payment Terms.	Yes / No / Explain	

10	<p>Security Deposit: The Supplier shall provide Bank Guarantee for an amount equivalent to the 3% (THREE PERCENT) of the total Order value towards Security Deposit for the due performance of the Purchase Order. The Security Deposit can be submitted in the form of Bank Guarantee or Fixed Deposit Receipt obtained from any Nationalized/ Scheduled Bank and it shall be kept valid for a period of sixty days beyond the date of completion of the Purchase Order. This Security Deposit will be returned to the Supplier only upon successful completion of all the contractual obligations or shall be adjusted/ forfeited against non-fulfilment of any of the contractual obligations. The Security Deposit shall be submitted within 30 days from the date of receipt of Purchase Order.</p>	Yes / No / Explain	
11	<p>Confirm: Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA</p>	Yes / No / Explain	
12	<p>Liquidated Damages: The delivery period / completion period shall be the essence of the Purchase Order. If the Supplier fails to meet delivery date within the time specified above or any extension thereof, the Department will recover from the Supplier as Liquidated Damages (LD) a sum of 0.5% of the total order value for each calendar week of delay subject to a maximum of 10% of the total order value. Confirm your acceptance.</p>	Yes / No / Explain	
13	<p>Name, Address, Contact No, E-mail Id etc. (specify):</p>	Yes / No / Explain	
14	<p>Warranty / Guarantee Period: (specify)</p>	Yes / No / Explain	
15	<p>Taxes and other costs, if any: (specify). As per Notification No. 45/2017 - Central Tax and 47/2017- Integrated Tax (rate) dated 14/11/2017, we are eligible for concessional rate of GST @ 5%. Relevant Certificate shall be issued as and when required.</p>	Yes / No / Explain	

16	Performance Bank Guarantee: Performance Bank Guarantee (PBG) for 3% of the order value shall be submitted along with your Invoice/prior to final payment. It shall be valid till the warranty/ guarantee period and shall have an additional claim period of 60 days.	Yes / No / Explain	
17	Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid.	Yes / No / Explain	
18	Percentage of Local Content for the offered item / items shall be specified	Yes / No / Explain	
19	MSME preference is applicable only against the claim of the manufacturer and production of documentary evidence by the manufacturer for the registration of particular item under MSME.	Yes / No / Explain	
20	Bank Details (State Bank of India, Mahendragiri, Tirunelveli (Dist) - 627 133) Details of your bank shall be furnished.	Yes / No / Explain	
21	Any other terms	Yes / No / Explain	

### C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	AIR CONDITIONING PLANTS - Dismantling of existing plant including 2 Nos reciprocating compressor and motor, 2 nos cooling tower, 1 Nos fresh air blower, 1 Nos cement plastered AHU, 2 Nos blowers etc. Details are as per Annexure-I.	1.00 Lot		-		



2	AIR CONDITIONI NG PLANTS - Supply of factory assembled, Air - cooled, scroll chiller packages of minimum capacity of 40 TR (120000 Kcal/hr). Technical details are as per Annexure-II.	1.00 Each				
3	AIR CONDITIONI NG PLANTS - Supply of suitable model pump set of horizontal split case pump. The pump shall handle minimum 365 lpm of water against head of minimum 25M. Details are as per Annexure-III.	2.00 Each				
4	AIR CONDITIONI NG PLANTS - Supply of dia 100 MS C class pipe with insulations. Details are as per Annexure - IV.	100.00 m				
5	AIR CONDITIONI NG PLANTS - Supply of dia 50 mm MS C Class pipe with insulation (Drain pipe). Details are as per Annexure-IV.	30.00 m				

6	AIR CONDITIONI NG PLANTS - Supply of dia 32 MS C class pipe with insulation (Expansion tank pipe). Details are as per Annexure-IV.	35.00 m				
7	AIR CONDITIONI NG PLANTS - Supply of Dia 100 mm butterfly valve. Details are as per Annexure-IV.	8.00 Each				
8	AIR CONDITIONI NG PLANTS - Supply of Dia 100 mm Motorized butterfly valve. Details are as per Annexure-IV.	8.00 Each				
9	AIR CONDITIONI NG PLANTS - Supply of 100 mm dia manual balancing cum flow measurement valve (Advance make or equivalent). Details are as per Annexure-IV.	2.00 Each				
10	AIR CONDITIONI NG PLANTS - Supply of 100 mm dia flexible pipe connector. Details are as per Annexure-IV.	8.00 Each				

11	AIR CONDITIONI NG PLANTS - Supply of 100 mm dia Y strainer. Details are as per Annexure-IV.	2.00 Each		-		
12	AIR CONDITIONI NG PLANTS - Supply of 100 mm dia non return valve. Details are as per Annexure-IV.	3.00 Each		-		
13	AIR CONDITIONI NG PLANTS - Supply of 80 mm dia 3 way modulating valve with motor and thermostat. Details are as per Annexure-IV.	1.00 Each		-		
14	AIR CONDITIONI NG PLANTS - Supply of 80 mm dia globe valve. Details are as per Annexure-IV.	1.00 Each		-		
15	AIR CONDITIONI NG PLANTS - Supply of 100mm dia pressure guage (with pet cock/gate valve). Details are as per Annexure-IV.	8.00 Each		-		
16	AIR CONDITIONI NG PLANTS - Supply of differential pressure switch. Details are as per Annexure-IV.	1.00 Each		-		

17	AIR CONDITIONI NG PLANTS - Supply of dial type temperature guage. Details are as per Annexure-IV.	8.00 Each		-		
18	AIR CONDITIONI NG PLANTS - Supply of Automatic air Vent. Details are as per Annexure-IV.	6.00 Each		-		
19	AIR CONDITIONI NG PLANTS - Supply of drain plug. Details are as per Annexure-IV.	6.00 Each		-		
20	AIR CONDITIONI NG PLANTS - Supply of suitable GRP panel expansion tank as per attached specification of size 0.75 m x 1.0 m x 1.0m (0.75 cubic metre capacity) insulated with 40 mm thick polyurethane foam. Details are as per Annexure - I.	1.00 Each		-		
21	AIR CONDITIONI NG PLANTS - Supply of Automation for AC plants as per Annexure - I.	1.00 Lot		-		

22	AIR CONDITIONI NG PLANTS - Supply of electrical panel catering to 1 nos Aircooled scroll chiller packages and 2 nos Chilled water Pumps as per Annexure - V.	1.00 Sets					
23	AIR CONDITIONI NG PLANTS - Supply of double skin 34000 CMH clean room AHU with 100 mmwc static pressure and standby motor as per Annexure-VI.	1.00 Each					
24	AIR CONDITIONI NG PLANTS - Supply of Fresh air double skin AHU without cooling coil 4420 CMH, 100 mmwc static pressure as per Annexure VI.	1.00 Each					
25	AIR CONDITIONI NG PLANTS - Supply of Five micron filters for prefiltration of air down to 5 microns at an efficiency of 98.5% plus. Each filters shall be as size as 610 x 610 x 150 mm and as per Annexure - I.	20.00 Each					

26	AIR CONDITIONI NG PLANTS - Supply of HEPA filters of minimum size 610 x 610 x 300 mm (inclusive of 6 mm gasket on both side) to filter 1700 cmh of air to 0.3 micron as per Annexure - I.	20.00 Each				
27	AIR CONDITIONI NG PLANTS - Supply of aluminium ducting (site fabricated / prefabricated) for supply and return air of 1 mm thickness as per Annexure - VII.	125.00 m2				
28	AIR CONDITIONI NG PLANTS - Supply of aluminium ducting (site fabricated/pre fabricated) for supply and return air of 1.8 mm thickness as per Annexure - VII.	25.00 m2				
29	AIR CONDITIONI NG PLANTS - Supply of nitrile rubber (closed cell) thermal insulation for supply and return air duct with minimum 19 mm thick as per Annexure - I.	160.00 m2				

30	<p>AIR CONDITIONING PLANTS  - Supply of volume control dampers in supply air duct made of extruded aluminium complete with linkage, lever, fixing arrangement etc compatible for clean room standards.</p>	10.00 m2		-		
31	<p>AIR CONDITIONING PLANTS  - Supply fresh air louver made of extruded aluminium with bird/insect screen provided with intake louver.</p>	4.00 m2		-		
32	<p>AIR CONDITIONING PLANTS  - Supply of duct silencer to be provided in SA and RA duct. The silencer shall be designed to attenuate noise to meet NC-50 curve in cleanrooms.</p>	6.00 m2		-		

33	AIR CONDITIONI NG PLANTS - Supply of factory fabricated motorized fire & smoke dampers with the actuators in supply and return air path as per Annexure - I.	6.00 m2					
34	AIR CONDITIONI NG PLANTS - Supply of heating kit. The minimum capacity of heating kit shall be 33 Kw. The heating kit shall be as per Annexure-I.	1.00 Sets					
35	AIR CONDITIONI NG PLANTS - Stainless steel pan humidifier kit of minimum 9 Kw capacity for seasonal operation as per Annexure - I.	1.00 Each					
36	AIR CONDITIONI NG PLANTS - Supply of VFD of 20 Kw capacity for clean room AHU fan speed control as per Annexure - I.	1.00 Each					



37	AIR CONDITIONI NG PLANTS - Supply of electrical panel catering to Cleanroom AHU and FA AHU etc as per Annexure-V.	1.00 Sets		-		
38	AIR CONDITIONI NG PLANTS - Civil work comprising of pedestal for 1 nos of chiller, 2 Nos of pumps and 1 Nos of cleanroom AHU and 1 Nos of Fresh air AHU as per Annexure-I.	1.00 Lot		-		
39	AIR CONDITIONI NG PLANTS - Painting of all above mentioned equipments as per Annexure - I	1.00 Lot		-		
40	AIR CONDITIONI NG PLANTS - Installation, testing, balancing and commissionin g of all the equipments mentioned above and validation of 1,00,000 class cleanroom as per Annexure - I.	1.00 Lot		-		