

# Central Polytechnic College, Vattiyurkaavu (Purchase (P1) Section)

## SHORT TENDER NOTICE

No. P1/2962/23/CPTC (I)

Dated: 17.01.2024

Sealed Tenders are invited for the purchase of equipment s for Heat Engine lab under the Mechanical Engineering Department of this institution.

Sl.No	Tender No	Item
1		<p>I. PARALLEL FLOW AND COUNTER FLOW HEATEXCHANGER: Supplied with Rubber Bushes to support bottom panel, in place of MS Stand, Inner Pipe: Copper, 10mm ID 12.5mm O.D &amp; 1500 mm long Outer Pipe: GI, 40mm ID &amp; 1500mm-Long Asbestos Cloth / Rope, Geyser- 3 lite, 3 kW, Instantaneous, Measuring Jar with a digital stopwatch or Rota meters at extra cost). Digital Temperature Indicator, 0-199.9°C with Thermocouple selector switch. Teflon coated Cr –Al (K-type)-4 no., Plastic-1000ml, Digital stopwatch - 1/10 of a second Racer/Pacer Make, Experimental capability- overall Heat transfer Co-Efficient, Effectiveness- Self-explanatory Instruction manual with a sample calculation NIL</p> <p>NA One 60000 NA Thermal engineering lab Heat engine laboratory Central Polytechnic College</p> <p>AIR CONDITIONING TEST RIG Experimental capability To determine tonnage capacity, To determine actual and theoretical COP, To plot the P-H chart of the cycle. II. AIR CONDITIONING TEST RIG : Experimental capability To determine tonnage capacity, To determine actual and theoretical COP, To plot the P-H chart of the cycle. Compressor- hermetically sealed, Rotary type 1 TR with Thermostat Emerson / LG / Voltas / Equivalent. Forced convection air-cooled evaporator fan Centrifugal type. Filter- Molecular sieve type. Expansion device -Capillary Tube. Refrigerant R-22. Sling Psychrometer for air temperatures &amp; Digital Indicator for refrigerant temperatures--50</p>

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to 150°C with TSS Velocity By inclined tube manometer. Gauges- Pressure and Compound gauges for HP and LP with HP-LP cut-out Humidification A suitable capacity Steam generator and accessories with a spray Nozzle De- Humidification Finned Heaters with regulators are provided as Pre / Re heaters Supply 220-240 Volts, 50 Hz, and 1 phase. Input-power 1.2 kW Rated-current 6.0 Amps. Energy meter- 5 to 10 Amps (BHEL make). Provided for the compressor. Rota meters 0.4 to 4 lpm- Eureka / Equivalent for flow measurement Panel: 1.2 mm thick CRCA. Outer-finish Powder coating Self-explanatory Instruction manual with a sample calculation III. REFRIGERATION TEST RIG Experimental capability: To calculate refrigerant capacity, To Study the Vapour Compression refrigerator cycle. To Calculate the Coefficient of performance and draw P-H Diagram. Electric supply 5A-220 V AC, Water supply and drainage. Floor area: 1.5mx1m Compressor: Hermitically sealed compressor. Capacity 1/3 Ton, Kirloskar make. -Agitator: Compatible capacity. - Condenser: Air cooled compatible to 1/3 Ton compressor -Condenser cooling fan: Compatible capacity with the permanently lubricated motor-Evaporator: Made of Stainless Steel, Insulated with ceramic wool/P.U.F. - Rota meter: Eureka/Equivalent make - Range 6 to 60 LP - Expansion Device: Capillary Tube Refrigerant - FREON R134 A Gauges- Pressure and Compound gauges for HP and LP with HP-LP cut-out. – Safety Control: overload and over current protectors for compressor and Time delay circuit.- Temperature Sensor: RTD PT-100 Type.- Control Panel comprises of: Digital Voltmeter: 0-300 V, Digital Ammeter: 0-5 Amp, Temperature Measurement: Digital Temperature Indicator with multi-channel switch.- Thermo couples- Teflon coated Cr –Al (K-type)-5 no. Stop Watch- Digital, 1/10 of a second, Racer/Pacer Make. All Other

accessories like Hand shut off valves filter drier, and Thermostat. All the accessories should be mounted on a rigid base frame made of M.S. and it will be powder coated.

Cost of Tender Form (Original) : 700 + GST (18%) 126 =826/-  
Cost of Tender Form (Duplicate) : 400 + GST (18%) 72 =472/-

Last date and time of sale of tender form : 25/01/2024, 03 PM

Last date and time of receipt of tender : 26/01/2024, 11 AM

Date and time of opening of tender : 27/01/2024, 02 PM

Intending tenders may on application to the undersigned to obtain the requisite tender form on which tenders to be submitted. Filled Tenders along with Tender form number and date specified on sealed envelop to be submitted in the name of The Principal, Central Polytechnic College, Vattiyoorkavu, Thiruvananthapuram. Tenders received after the time fixed on due date mentioned in the tender notification is liable to be rejected. The tender forms are not transferable. Cost of tender form is only acceptable by money order or cash remittance to this office.

As per condition the tenderer should send along with his tender an agreement executed and signed in Stamp paper value of **Rs.220/-** (Rupees Two hundred and twenty only) issued by Kerala Government and **₹3400/-** (Rupees Three thousand four hundred and eighty only) to be deposited as Earnest money deposit through **Demand Draft** in favour of The Principal, Central Polytechnic College, Vattiyoorkavu, Thiruvananthapuram. Tenders without agreement and Earnest money deposit will be rejected.

**Cinimole KG**

Principal

## Terms and conditions

1. The bid prepared by the bidder shall comprise the following components
  - A. Technical Bid with Brochures /Documents of the Equipment
    - a. Scanned copy of preliminary agreement
    - b. Tender form
    - c. Detailed specification OEM's authorization certificate
    - d. Address and details of authorized service centers in Kerala /Tamil nadu state.
    - e. Terms and conditions of the bidder (if any)
  - B. Price bid
2. The price quoted must be inclusive of freight, loading and unloading, installation, and all types of taxes and duties.
3. The items ordered must be delivered at CPTC, Vattiyoorkavu
4. Warranty period: Minimum Two Years from the date of installation. Warranty conditions should include the following: (1) The Warranty period of the machine/equipment should be a minimum of 2 years and the warranty should include all the spare parts and labor charges complete. (2) Spares and services should be available through the expected lifetime of the machine /equipment.
5. The participating bidder must be the OEM/authorized distributor of the Equipment quoted and must produce a letter of authorization from the OEM. Any bids without a valid authorization letter would be summarily rejected.
6. The bidder must have a minimum of 5 years of experience in the field of supply, installation, and maintenance of equipment and hence furnish the supporting documents
7. The quoted equipment should have an authorized service center in the state of Kerala/Tamil Nadu. The authorized service center details should be attached.
8. The brand, Model, and specification of the Equipment should be clearly mentioned. Bids must be accompanied by a printed technical brochure/catalog with detailed specifications of equipment & compliance statement in accordance with the required technical specification
9. The Hard copy of all documents inclusive Preliminary Agreement in Kerala Stamp Paper worth Rs.220/- should be submitted before the date of opening of the Tender.
10. The Tender cost (Bidding Fee) and EMD should be submitted only through online.
11. Payment will be effected only after the **supply**, testing, and demonstration of the Equipment subject to the satisfaction of the undersigned regarding the performance of the product and confirmed to original specifications
12. **SSI/SME units those are availing Tender fee/EMD Exemption should produce certificate showing that the items/products quoted are manufactured by them.**



**Otherwise their offer will be rejected. They should also enclose a copy of registration certificate**

13. Replacement under warranty clause shall be made by the Vendor free of all charges at site including freight, insurance, cost of works and other incidental charges.
14. Firms black listed by Central or any state government departments are not eligible to participate in tender.
15. Demonstration of the equipment should be done within one week of installation.
16. Manuals for the operation and service of the equipment should be provided at the time of installation.
17. The successful tenderer shall supply the products within one month from the date of issue of purchase order. Liquidated damages as per rules should be recovered for delay in supply and performance for which supplier is responsible
18. No advance payment will be provided.
19. Price quoted should be inclusive of all taxes and other charges
20. Details can be obtained from this office on all working days.
21. Date of opening of tender: In case the proposed date declared is a holiday, the tender will be opened on the next working day.
22. The successful bidder should furnish an Agreement and Security Deposit in the form of Bank Guarantee/DD from a Nationalized Bank for an amount @ 5% of the order value addressed to "The Principal, Central Polytechnic College".
23. Any other matter not specified above will be rest with the undersigned
24. The Supplier further agrees not to make claims or assist any third party in any claim to the intellectual property rights
25. The right to cancel this Tender without further notice will rest with the undersigned.
26. If any of the equipment supplied by the tenderer is found to be substandard, refurbished, un-merchantable or not in accordance with the description /specification or otherwise faulty, the technical committee will have the right to reject the equipment or its part. All damaged or unapproved parts /goods shall be returned at the supplier's cost
27. Noncompliance of tender terms/specifications, nonsubmission of required documents, lack of clarity of specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of bid