



Department of Electrical Engineering
Indian Institute of Technology, Delhi
Hauz Khas, New Delhi 110016

NIQ no. IITD/EE/PLN03-BEEN/chamber-rev2

Due Date: **19.3.2014, 5 PM**

Notice inviting quotations for
Constant temperature chamber

Sealed quotations are invited for Constant temperature chamber. The required specifications are given below. The purchase will be made through a two part bidding process. Technical and Financial bids have to be made separately. Complete technical information should be provided along with the Technical bid. Please refer to the last page on Terms and Conditions for details on how and when to submit Technical and Financial bids.

Required Specifications

1. Temperature range of -40°C to 125°C .
2. Temperature accuracy of $\pm 1^{\circ}\text{C}$.
3. Internal chamber size of at least $25\text{ cm} \times 25\text{ cm} \times 25\text{ cm}$.
4. The unit should have a form factor of bench or table-top.
5. Cooling should be with the help of a double-stage CFC-free refrigeration system. The compressors should be Emerson Copeland or Tecumseh or Danfoss. Indicate the specific compressor used along with its technical specifications.
6. Heating and cooling rate should be at least 1°C per minute.
7. The unit should have a microprocessor based cyclic programmable PID controller with temperature indicator.
8. Weight of the unit can be at most 80 kg.
9. The interior of the chamber should be stainless steel, polished.
10. The exterior of the chamber should be mild steel, powder coated.
11. The chamber should have a double-door, with the inside lined with stainless steel.
12. The unit will be used for testing electronic circuits. For this an access port (hole) of 2.5 cm (1 inch) diameter on any one of the sides, is required. A silicone or rubber plug should also be provided for this access port.

13. All seams on the interior should be welded. There should be continuous, double seal rings of silicone/rubber to insulate the interiors at the location of the access port.
14. The unit will be used to test live loads of upto 10 Watts.
15. There should be forced air circulation in the chamber to ensure uniformity of temperature.
16. There should be a display of the temperature in the chamber, with a resolution of 0.1 °C.
17. The unit can consume a maximum of 3 kW.
18. Calibration certificate traceability to NABL standards should be provided.
19. Warranty of 1 year.

Installation and commissioning

1. There will not be any fork-lifting facility during installation. Installation should include moving the unit to the 2nd floor by stairs.
2. The unit should operate on single-phase AC 220/240 Volts. No special 3-phase supply will be provided for this purpose.

Terms and Conditions

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as “Technical Bid” and “Financial Bid” respectively. Both the sealed envelopes should be sent in a single sealed envelope, clearly marked as “Quotation for Constant temperature chamber”. The quote should reach the following address on or before **19.3.2014, 5 PM**.

Dr. S. Chatterjee, IV-201
Department of Electrical Engineering
IIT Delhi, Hauz Khas
New Delhi, 110016
2. Please quote prices for FOB New Delhi, inclusive of all taxes and duties.
3. Quote should be in Indian Rupees for agents of Indian manufacturers, or in foreign currency, for agents of foreign manufacturers, and needs to be valid for at least three months.
4. Attach all the technical literature and a list of similar installations done in India.
5. If the quote is being submitted by a representative of the manufacturer, a valid agency-ship or dealership certificate authorizing the agent to quote to IIT Delhi on behalf of the manufacturers should be enclosed.
6. Either the Indian agent on behalf of the principal/OEM, or the principal/OEM can bid, but both cannot bid simultaneously.
7. Complete set of manuals for the operation of the equipment should be given.
8. Clearly specify the installation requirements - such as space, power, frequency, environment etc.
9. If the item quoted is proprietary in nature, please enclose proprietary certificate from the principals stating, “Certified that _____ is a proprietary item of M/s _____ and no other manufacturer makes this item.”
10. Please attach a signed and stamped compliance chart for the specifications. The format of the compliance chart is attached to this document.
11. Please specify all of your terms and conditions clearly, including delivery period.
12. Mode of payment for purchases in foreign currency are through irrevocable letter of credit, or through wire transfer on delivery. Only bank charges within India are payable by IIT Delhi, all bank charges outside India are the responsibility of the seller. For purchases in INR, payment is on delivery.
13. The Institute reserves the right to accept or reject any or all quotations without assigning any reasons thereof.

Dr. S. Chatterjee
(Chairman, purchase committee)