

Tube Furnace with Inert Gas flow: Specifications

- The furnace should be able to withstand prolonged operation (upto 10 days without interruption) at 1350°C. The furnace should be able to reach 1400°C for short periods of time (~1 hr).
- The furnace ceramic tube (high purity alumina) should have an Inner diameter of 50mm and a length of ~50cm. Tube should be horizontal.
- The tube and the heating coils should be able to withstand prolonged operation at 1350°C and should be able to withstand sudden power cuts.
- The constant temperature zone should be 15 cm long.
- Thermocouple should be provided at the centre of the constant temperature zone.
- Heating element: SiC.
- Gas purging system: end flanges of aluminum having O-rings, fly nuts and bolts, with nozzles for gas purging on both sides with a port to insert thermocouple. Cooling coil arrangement in both sides required.
- Casing: rigid casing made of Mild steel sheet frame work painted with heat resistance paint.
- Insulation: multiple layers of thick insulation (ceramic fibre) to prevent heat losses.
- Temperature controller:
The temperature should be controlled by fully automatic microprocessor based dual digital display. PID programmer with at least 16 steps. Multiple programs needed.
- Power: 230V AC single phase. Voltage stabilizer should be provided with the furnace.

Only one of the selected brands as below should be quoted for:

Sandvik Asia Private Ltd., India (Kanthal Brand), Mahendra Scientific Instruments Mfg. Co., India (Mahendra brand), Bysakh and Co., India (Okay brand), Thermo Fisher Scientific Inc., USA (Thermolyne brand), Nabertherm GmbH, Germany.

Please note that the technical bid should clearly specify against each of the specification, the value offered by the proposed unit as well as clearly mention whether the unit complies or does not comply with each of the specifications. If any specification is left unaddressed or unspecified, the bid would be considered as unresponsive and would not be considered for further processing.

FREE SUPPLY:

The following material should be supplied free along with the unit:

- a) Two sets of O-rings.
- b) One additional thermocouple.
- c) Two heating filaments.

Design or diagram of the system should be given along with the technical bids. All components/parts/equipment should be new.

Method of Submitting Quote:

Submit technical and commercial bid in two separate sealed envelopes. The name “technical bid” or “commercial bid” should be clearly mentioned on each envelope. The technical bid should not mention prices. If the technical bid is found to mention prices, the bid will be disqualified. The two sealed bids (technical and commercial) should then be sealed together in another bigger envelop. All the envelopes i.e. the technical bid envelop, price bid envelop and the main envelop should clearly mention the Tender Number at the top.

Warranty: ONE year onsite warranty required (from date of installation, against all manufacturing defects and faulty workmanship)

Installation: the price should be inclusive of installation on site with full functionality.

Delivery time: 10 weeks maximum from the date of purchase order.

Payment: As per IIT Kanpur Norms.

Quotation should be valid for two months. All envelopes should be marked with enquiry number. All quotes should be in Indian Rupees (INR) with total cost (including taxes as applicable).

Quote: Two bit quote (separate technical and commercial bid in sealed separate covers required) should reach the address as below by 10 Sept 2013 5:00pm:

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