



Dr. Ashis Kumar Sen  
Assistant Professor

213, Hydroturbomachines Lab  
Department of Mechanical Engineering  
Indian Institute of Technology Madras  
Chennai – 600 036, INDIA

## **Form for Inviting Quotations**

**Reference No. AS/RFTP/CELLCULT/2016**

**Date: 15.02.2016**

**Subject:** Supply and Installation of equipments for lab use by Indian Institute of Technology Madras

**Quotation Due Date: 15.03.2016**

Dear Sirs:

Quotations are invited for supply and installation of two equipments as per details in Annexure-I under the following terms and conditions.

### **Terms and Conditions (Foreign Vendors/Suppliers):**

1. The total amount indicated is Ex. Works / FOB / CIF. Madras Value.
2. The consignment to be addressed to **Dr. Ashis Kumar Sen, 213 Hydroturbomachines Lab, Department of Mechanical Engineering, I.I.T. Madras, Chennai – 600 036, India.**
3. Quotations for either of the items in Annexure-1 can be submitted separately or together (with single shipment charges).
4. Selection of vendor/vendors will be based on the technical and financial comparison (including shipment charges)
4. The consignment to be dispatched by surface / Air Post Parcel / Ocean Freight / Air Freight.
5. Please send three advance copies of Invoice direct to us immediately after dispatch to avoid delay in clearance. DEMURRAGE CHARGES, IF ANY, PAYABLE ON ACCOUNT OF DELAY IN RECEIPT OF ADVANCE COPIES OF INVOICE WILL BE DEBITED TO YOUR ACCOUNT.
6. The following set of documents is required in all cases:
  - a. Complete set of Clean Bill of Lading / Airway Bill / Air or surface Parcel Receipt, showing that the goods have been shipped and freight prepaid.
  - b. Insurance Policies / Certificates in duplicate covering Marine Insurance as per Institute Cargo Clauses (All risks) and perils as per Institute Strikes, Riots and Civil Commotion Clauses, War risks as per Institute, Clauses. Cover for CIF value plus 10 percent.

### **General Terms and Conditions:**

1. The Quotations duly sealed (2-bid system) and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
2. The Quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
3. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.



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4. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expense.
5. Local Firms: Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
6. Firms outside Madras: Quotations should be for F.O.R. Madras. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
7. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
8. Goods should be supplied carriage paid and insured.
9. Goods shall not be supplied without an official supply order.
10. Payment : Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later



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### ANNEXURE-I

Sl. No.	Name of Equipment	Minimum Requirements	Quantity
01	CO <sub>2</sub> Incubator	<p>The quoted CO<sub>2</sub> Incubator for the biological cell culture and should have heat Sterilization Cycle. Entire chamber air volume is HEPA filtered within one minute of door closing. It should have rapid response Class 100 air quality and unique filtered air exchange condensation control system. In the CO<sub>2</sub> incubator, heating elements and insulation surrounded by all sides of the outer chamber wall, outer door is insulated to heat, with removable and cleanable inner door gasket , Stackable units and should have remote alarm contacts. Interior should be made with polished stainless steel and have 100% covered corners. Minimum four heavy-duty, perforated stainless steel shelves are required. Incubator should have unique outer door safety sensor. Quoted incubator should be UL Listed and CE Marked. Trolley for moving the incubator and a regulator for the CO<sub>2</sub> cylinder should be included in the quote.</p> <p><b>Specifications</b></p> <p><b>Capacity</b> Interior Volume : 6.5 cu ft (184.1 liters)</p> <p><b>Temperature</b> Control : +/-0.1 °C Range : 5 °C above ambient to 50 °C Uniformity : +/-0.3 °C @ 37 °C Tracking alarm : User-programmable low</p> <p><b>Over temperature</b> Sensor : Precision thermistor Setability : 0.1°C Function : Shuts off heat</p> <p><b>Temperature safety</b> Sensor : Independent thermostat Controller : Independent analog electronic</p> <p><b>Sterilization Cycle</b> Sensor : Precision thermistor Cycle Temperature : 140°C Cycle Length : 12 hours</p>	01



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		<p><b>CO<sub>2</sub></b></p> <p>Control : Better than +/-0.1%</p> <p>CO2 range : 0-20%</p> <p>Inlet pressure : 15 PSIG</p> <p>CO2 Sensor : T/C</p> <p>Readability &amp; Setability : 0.1%</p> <p>Tracking alarm : User-programmable, high/low</p> <p><b>Humidity</b></p> <p>RH : Ambient to 95%@ 37 °C</p> <p>Humidity Pan :3.0 liters standard</p> <p>Display(optional) : In 1% increments</p> <p><b>Dimensions</b></p> <p>Exterior(HxWxD) : 39.5 x 26.3 x 25.0 (in)</p> <p>Interior(HxWxD) :26.8 x 21.3 x 20.0 (in)</p> <p><b>Shelves</b></p> <p>Dimensions mm : 18.5 x 18.5(in) 470 x 470(mm)</p> <p>Construction : Perforated stainless steel</p> <p>Standard : 4</p> <p>Maximum : 15</p> <p><b>Construction</b></p> <p>Interior : Type 304,shiny stainless steel</p> <p>Exterior : 18 gauge, cold-rolled steel, Powder coated</p> <p>Outer door gasket : Four-sided, moulded, magnetic</p> <p>Inner door gasket : Feather, silicone</p> <p><b>Weight</b></p> <p>Net : less than 120 kg</p>	
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02	-86°C Ultra Low Temperature Freezer	<p>The deep freezer should work at ultra- low temperature to maintain a temperature of -86 °C, which can be used for storing biological samples and chemicals. The quoted freezer should made of heavy gauge, cold rolled steel cabinets with a power coat paint finish for a uniform exterior that resists chipping and rust. It should have at least 5” foamed-in-place polyurethane insulation. State-of-the-art, refrigeration system improves temperature control; increases reserve capacity for more stable temperature sample. Interior should be made up of stainless steel with sturdy stainless steel shelving. Deep freezer needs a vacuum relief port that permits easy access after door openings. Easily removable and washable filter should be provided to protect the condenser from dust, which will improve the performance of the freezer. It should be suitable for single hand operation with an easy-to-use padlock-compatible, ergonomic door handles with integrated key lock. Freezer should have door arrangements to reduce cold air loss and improve temperature recovery after door openings. Microprocessor control and monitoring system is required on the freezer with easy display and access of the controls. Freezer needs a Power Management System with low voltage surge protection and buck/boost.</p> <p><b>Specifications</b></p> <p>Temperature range : -50 °C to -86 °C Capacity cu ft/liters : 13.0/368.1 Cryo Box Capacity 2” : 240 Amps/Breaker : 12/16 European Max.Shelf Weight : &lt;67 kg Refrigeration HP : Two 1 HP(2545)BTUH each Dimensions (HxWxD) Exterior : 77.9 x 33.3 x 32.9 (in) Interior : 51.5 x 23.0 x 25.3 (in) Weight : &lt; 316 kg Voltage : 230V, 50/60 Hz</p>	01
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Thank you.

Sincerely,

Dr. Ashis Kumar Sen  
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