



**DEPARTMENT OF BIOTECHNOLOGY**  
**Indian Institute of Technology, Madras, Chennai, 600 036,**  
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MUKESH DOBLE  
Professor and Head

Date: 05.11.2012

**Ref: BT/RBAS/2012/34/SPL**

**Dt. 05.11.12**

**Due Dt.19.11.12**

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed 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.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number 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. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. 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 expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates 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 certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **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.

## Specifications for a -80C freezer

Temperature Range	Up to -80°C
Capacity	500 Litre
Inner Size	1200 (H) x 620 (W) x 675 (D) mm
Inner Chamber	Made of Stainless Steel SS-304, 22 SWG
Outer Chamber	Made of Powder Coated CRCA sheet, 18 SWG
Powder Coating thickness	80 Microns after 7 tank process of phosphating
Insulation	150 mm thick Polyurethane Foam (PUF) insulation
Shelves / Trays	Stainless steel shelves made of SS-304 (22 SWG) and 5 compartments
Sub-doors	Made of Stainless Steel / Poly-acrylic sheet
Hot Line	Anti-moisture entry using hot line at the mouth of the cabinet
Compressors	Hermetically sealed compressors
Refrigerants	High Stage: R-404A & Low Stage: Suva 95
Heat Exchanger	Brazed Plate Heat Exchanger
Condenser	Air-cooled condensers with grooved Aluminium fins for effective heat transfer.
Copper coils	99.97% pure copper coils
Controller	Microprocessor based temperature controller with digital display
Sensor	Fast response Pt-100 RTD sensor
Alarm	Audio-visual alarm for deviation from set conditions
Safety	1. Safety controller for interlock between high and low stage. 2. MCB's for over load protection.
Accessories to be included	
Voltage Stabilizer	Automatic Voltage Stabilizer with High / Low voltage cut-off suitable for the equipment.
Cryo Racks	Suitable for storage of 12 Nos. of 2" Cryo Boxes. Quantity – 4 Nos.
Cryo Gloves	Mid-arm Cryo Gloves for safety in accessing cold temperature.
Temperature Back-up System	Maintenance-free, Cryo Coolant Cassettes back-up system for temperature back-up.
Other Parameters	
Catalogue	A printed catalogue in support of the technical specifications and accessories offered.
Performance	At least 5 installations along with performance statements from the end users

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