



**DEPARTMENT OF BIOTECHNOLOGY**  
**Indian Institute of Technology, Madras, Chennai, 600 036.**  
Telephone No.22574126, 22574101, FAX No.22574102

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Dr. D. KARUNAGARAN

Professor and Head

Date: 11.02.2016

Ref: BT/RAYA/2015/034/SPL

Dt. 11.02.16

Due Dt.23.02.16

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.

## **-150 deg.C Cryogenic Freezer Specifications**

- Cryogenic Freezer (-150 deg.C) should be designed for long term storage of biologicals at uniform temperatures of -140 Deg.C and -150 Deg.C without LN2 as a cooling medium.
- Top to bottom temperature uniformity should be maintained when compared to LN2 Vapour.
- Ample interior volume with capacity of around 13,000 biological samples.
- 100% of the interior space should be usable, with stored samples maintained below critical temperatures.
- Lower operating cost than LN2 Freezers of smaller capacity.
- Should be more safer, more convenient than LN2.
- Revolutionary single compressor, orbital refrigeration system designed for cryogenic storage.
- Specially mixed CFC/HCFC free refrigerants maximise cooling and minimize environmental impact.
- Downfeed evaporator provides efficient refrigerant flow for higher system efficiency and better cabinet temperature uniformity.
- Washable condenser filter should keep fins free of dust to maintain peak cooling efficiency, no tools should be required for removal.
- Comes standard with RS232 output and access port on rear of unit.
- Microprocessor control system with touchpad data entry and digital display should be provided for intuitive operation.
- Set-point security system for main power and alarm locks in temperature and alarm set-points for increased sample protection.
- Incident monitor should provide visual and audible warnings of system abnormalities for increased sample protection.

- **Specifications:**  
Operating Temperature : -150°C  
Capacity cu ft/liters : 6.8 (193 litres)  
Exterior : 42.8 x 29 x 58 (in)  
1068 x 737 x 1474 (mm)  
Interior : 26.5 x 19 x 23.5 (in)  
674 x 484 x 597 (mm)  
Weight : 374 kg  
Voltage : 220-240V, 50 Hz
- Cryo box rack : Dimensions in. (cm) :  
5.5 x 26.5 x 5.5 (14 x 67.3 x 14)
- 180 Litres LN2 Supply Tank.

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**HEAD OF THE DEPARTMENT**