

## Notice Inviting e-Tender

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**SUPPLY OF BLOOD-BANK EQUIPMENTS IN THE HOSPITALS AND MEDICAL COLLEGES OF THE GOVERNMENT OF WEST BENGAL.**

(Submission of Bid through *online*)

**Bid Reference No.: WBMSCL/NIT- 48 /2014**

**Dated- 02.08.2014**

**The following amendment have been made in the tender document,**

### **Amendment XIV**

#### **SCHEDULE I**

#### **UPDATED TECHNICAL SPECIFICATION**

#### **BLOOD BANK REFRIGERATOR**

1. **Purpose of Equipment:** A refrigerator for storing whole blood or red cell packs in a blood bank.
2. **Type of Equipment:** Compression type refrigerator that uses CFC-free refrigerant gas/ green gas.
3. **Capacity:** 600 blood bags of about 450 ml. each
4. **Construction:**
  - o Internal: Stainless steel (min. 22g).
  - o External: Corrosion Resistant (CR at least 1mm thickness).
  - o CFC-free insulation.

- Drawers: Roll out type, Stainless steel scratch resistant material, perforated on the bottom for perfect and homogeneous distribution of cold air. The separators, if provided in the drawers, should be such that blood bags are held in a vertical position with the label side visible.
- Door:
  - Glass door, Automatic closing of the front door below opening angle of 90° and opening angle limited to 110°.
  - Insulation and gasket should be silicone.
  - Polyurethane Insulation should be minimum 80 mm.
  - Door opening audio and visual display alarm.

**5. Temperature range:**

- 2°C to 6°C and adjustable with setting accuracy of  $\pm 0.1^\circ\text{C}$  with set temperature of 4°C.
- User Parameter settings: set point, high alarm point, low alarm point, buzzer off time, C/F Temperature choice.

**6. Electrical Characteristics:** Input voltage: 220/240V 50Hz.

- Equipment meets electrical safety specifications such as that of IEC (Class I).
- A line voltage corrector of appropriate rating will form part of standard configuration.

**7. Minimum Compressor Starting Voltage:** 22% below nominal voltage.

**8. Internal Temperature Control:**

- Electronic temperature control, range +2 °C to +6 °C with setting accuracy of  $\pm 1^\circ\text{C}$  whatever the load.
- Fan air cooling.

**9. External Ambient Temperature:** Performs in an ambient temperature of +10 to +40 °C

**10. Hold-Over Time\*:** A full load of blood packs at +4 °C ( $\pm 1^\circ\text{C}$ ) takes at least 30 minutes to rise to above +6 °C

**11. Internal temperature hold over time in case of power failure** should be at least 1.5 hours.

12. **Cooling Down Time\***: A full load of blood packs at +25 °C takes a maximum of 13 hrs for all the packs to reach below +6 °C.

13. **Temperature Monitoring:**

- Digital temperature (LED) display with 0.1 °C graduation.
- Microprocessor based temperature controller with integrated audio visual temperature and power alarm function with digital monitoring display.
- Independent safety thermostat to avoid negative temperatures.
- At least 2 Temperature Sensors: Sensor for temperature monitoring shown on front display, Sensor for managing use of compressor.

14. **Temperature recording device**

- Visual and audible alarm system indicating unsafe temperatures.
- Battery backup for alarm and temperature recording device.
- Facility for remote alarm contact.
- Seven days graphic temperature recorder with range of -10°C to +20°C with data logger, with supply of free charts for a period of warranty.
- Ideal compressor running time of 27% at room temperature.
- Door locks should be available.
- Audio and visual alarm for variation in temperature.
- Interior lighting.
- External ambient temperature +10°C to +40°C.
- Auto defrosting.
- Cooling time – Maximum 13 hours for all the packs to reach below +6°C.

15. **Certifications:**

- Product certification: CE Class II A or US FDA certified.
- Quality Certification: ISO certified.
- Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I).