

### **Specifications of High speed Refrigerated Centrifuge (Floor Model)**

- Maximum speed (rpm) 26,000 to 29,000
- Maximum RCF (x g) 70,000 to 100,000
- Maximum capacity (tubes x ml) 6 x 1000 in swing bucket or fixed angle.
- Drive motor: High-torque brushless high-frequency motor
- Imbalance tolerant drive
- Temperature range must be (°C): -10 to +40
- Controls: Microprocessor based, Touch-screen interface (can be used with gloved hand). Memory-based programmed operation 30 programmed operations possible.
- Acceleration/ deceleration profile: Nine stage variable acceleration. Nine stage braked deceleration, plus free deceleration
- Refrigeration system : CFC/ HCFC free with 5-year non-prorated warranty
- Run Time : 99hrs; Hold
- Programmability : 30 programs or more
- Actual run timer
- Temp. Control Accuracy :  $\pm 2^{\circ}\text{C}$  of set temperature
- Speed control accuracy :  $\pm 20$  rpm
- Speed control range : 100 to 26,000 rpm or 500 to 29,000rpm
- Machine should be compatible with continuous flow operation (for future upgradation)
- RCF calculation RCF integrator, RTC(real time control),over speed detector facility
- Automatic rotor lock/self-locking system
- Automatic rotor identification system
- Ambient temperature for operation:  $2^{\circ}\text{C}$  to  $40^{\circ}\text{C}$
- Non Contact imbalance protection
- Pre cooling chamber
- Power : 200-240 VAC, 50 Hz, 30 A, single phase
- Mandatory 2 rotors to be quoted with the specifications mentioned below.
- Should be supplied with suitable 10KVA Servo Voltage Stabilizer.
- Warranty: Comprehensive 5 years on both machine and rotor from the date of installation directly certified by the manufacturers.
- In addition during the entire warranty period 2 maintenance service visits by engineers is a must.
- Proven after sales service records.
- Company should provide user list with email and Phone numbers of orders placed in the last 2years.
- F.O.R. UDSC price to be quoted which includes, custom duty & clearance charges (if pricing is in foreign currency) as well as transportation charges to site of installation.
- Price should be inclusive of supply of equipment, transportation, installation including necessary electrical fittings and any other requirement for **site preparedness** for smooth operations during warranty period.
- Earnest money in the form of Demand draft in the favour of “Director, South campus” for the amount of ₹ 40,000/- must be enclosed with technical bid.
- Separate technical and financial bid must be submitted to the specified address above within 3 weeks of the above notification.

The centrifuge must provide automatic and instant rotor identification, completed upon installation of the rotor into the centrifuge, before the run is started and a fast, simple, and secure mechanism to automatically lock the rotor onto the drive adapter, eliminating the need for a tool or to hand tighten.

The centrifuge must have a vacuum system, with a HEPA filter option, which only operates when needed and can be user selected for high performance or for energy saving. The centrifuge must be able to run

without the use of a partial vacuum to protect sensitive samples in microplates, as well as other tubes and bottles.

The centrifuge must have an energy savings mode ("sleep mode") to reduce power consumption up to 15% by turning itself off if idle after a period of time. The centrifuge must be able to satisfy cULus and CE safety requirements without being bolted to the floor, to provide flexibility to relocate within the facility.

**Required Rotors:**

1. Fixed angle rotor 8x50ml RPM 25,000 and above and RCF 75,000 x g or above with Polyallomer 50ml tubes and adapter for 10 ml along with tubes (minimum 50 tubes of each volume should be quoted in main offer)
2. Swing Bucket rotor 4x500ml RPM 5,300 or above and RCF 6,800 x g or above with adapters for 50ml conical tubes, 15ml conical tubes and MTP's carrier.

**Optional Rotor:**

1. Fixed angle rotor 6x1000ml RPM 8,000 and above and RCF 15,900xg and above should be quoted along with PC bottles.

**All Rotors should be quoted in main offer along with the centrifuge**