



# **BLOOD BANK REFRIGERATED CENTRIFUGE**

LABTOP Programmable Logic Controlled (PLC) Blood Bank Refrigerated centrifuges are designed for separating blood components from whole blood like platelet, plasma, RBC and cryoprecipitate and it is ideal for Blood bank, Hospital, clinical research laboratories, pharmaceutical industries, research laboratories, Biotechnology and vaccine manufacturing industry.

## CABINET CONSTRUCTION

The centrifuges Chambers are insulated with high density CFC free **Poly Urethane Foam**. Interior of chamber is stainless Steel (304 SS, 2 mm thick). The exterior is white powder coated (3.0 mm thick) mild steel. An electronic motorised double door lock and facility to open the door in case of power failure.

## REFRIGERATION SYSTEM

The cooling is effected by CFC free refrigeration system with a condensing unit located inside the chamber. Labtop condensing units are characterised by high-efficiency heat transfer and low power consumption.



- CFC free refrigeration with time delay to safe guard the compressor
- Inner grooved copper tubes and slit aluminium fins for superior heat transfer
- Filter drier for moisture and dirt protection
- Safety and control devices for better system protection
- Thermally protected and permanently lubricated fan motors

## SAFETY FEATURES

- Miniature circuit breaker to protect electronic components in case of abnormal power supply
- Overload cut off relay for compressor
- 180 seconds time delay for compressor switch on
- Audio visual alarm for abnormal conditions
- Imbalance cut off with alarms and error messages
- Lid opening and closing with the help of pneumatic hinges
- Safety door interlock to prevent door opening during centrifugation

## PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEM

A **programmable logic controller (PLC)** is a digital computer used for automation of controlling electromechanical processes, such as **control** of Temperature, Relative Humidity, Standby systems and event management with less maintenance hence no moving parts.



- PLC with 4.3" touch screen and color Display
- Password protected **Human Machine Interface (HMI)**
- Data storage to record set values, process values, date & time with variable time intervals
- Display of set value and process value
- High speed Ethernet connectivity
- Precise control of temperature and Speed by using in PID control ( auto tuning type)
- Connectivity to **LABTOP DATAWARE** central monitoring software
- Log report of alarms and event management
- Temperature and Speed is controlled by PLC
- 1- 99 Minutes timer
- 99 program memory
- Self diagnostic system with error messages
- Data logging capacity up to 200000 readings
- High quality PT-100 sensor for better accuracy
- Programmable alarms with event management

### SALIENT FEATURES

- Menu driven programmes
- In built pre cooling programmes
- Facility to Set RPM and RCF
- Maintenance free Brush less induction motor
- Variable frequency drive
- Motorised double door lock for better safety
- Minimum Acceleration time
- Imbalance cut off with error messages
- Castor wheel for ease of mobility
- 10 acceleration and deceleration programs
- Adjustable Levelling jack



### TECHNICAL SPECIFICATIONS

Cat No.	LBC – 12	LBC – 8	LBC – 6
Maximum Speed (rpm)	4600	4600	4600
Speed accuracy (rpm)	±50		
Maximum RCF (g)	7060	7060	6680
Temperature Range(°C)	-20 to 40 (depend on speed)		
Temperature accuracy (°C)	± 1. 0		
Timer (min)	1-99		
Type of Rotor	Wind shield swing out		
Noise level (dB)	Less than 58		
Number of Blood bag Carrier	12	8	6
Plastic inserts	Two sets		
Number of Blood Bags	12 x 450 ml	8 x 450 ml	6 x 450 ml
Connectivity	Ethernet		
Data Storage Capacity (lines )	20000		
Power (W)	4000	4000	3000
Input voltage (VAC)	230, 50/60Hz		
Dimensions WxDxH (mm)	960x 860x1200	960x 860x1200	730x 840x1220
Packing Size WxDxH (mm)	1087x987x1327	1087x987x1327	857x970x1350
Net Weight (kg)	400	350	250
Gross Weight (Kg)	475	425	325

## OPTIONAL ACCESSORIES

### Software

“LABTOPWARE” CFR 21 Part 11 compliance communication software for data management. Complete with RS-485 multi dropping to monitor multiple chambers to one software

### DOCUMENTATION

LABTOP offers IQ, OQ and PQ validation with documentation, reports, calibration and test reports

### CALIBRATION

The equipment is calibrated with the help of master calibrator, which is certified for its accuracy by Electronics Regional Testing Laboratory (ERTL West) Government of India recognized testing laboratory with traceable reference to National Physical Laboratories (NPL).

### SERVICE AND SUPPORT

The training undertaken by our Channel partners and engineers is of the highest standard in the industry, ensuring that our customers are supported by the highest level of technical expertise and as such can be assured that their equipment will perform to the standards required at all times.

Our wide network of Engineers/Technicians enables us to respond to any technical query, ensuring that our customers receive the maximum benefit from their equipment.

NB: Specifications are subject to change without prior notice.