



# **Refrigerated Centrifuge**

MarkEn Refrigerated Centrifuges are designed for centrifugation of temperature sensitive material and find application in routine and research work in auxiliary laboratories in industry, Educational & Research institutions, Bio Technology, Medical Laboratories, Hospitals, Blood Banks, Pharmaceutical & Clinical research laboratories.

MarkEn Refrigerated Centrifuge used for Centrifugation of Whole Blood for component separation like platelet concentrate, packed red Cells, Platelet rich plasma, Buffy coat and Cryoprecipitate.

#### **FEATURES:**

The absence of any excessive noise or vibration at highest speed at set temperature helps to maintain sample integrity and to extend the life of the Refrigerated Centrifuge and its Components.

Automatically detects the Installed rotor and adjusts the design settings prevents accidental over speeding and damages.

Designed for tropical climates.

Display of rotor cycle counter with alarm to flag end of operating life prevents accidental failure.

In built facility for User login, User ID tracking, Run logs, protocol tracking with Password Protection.

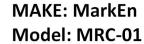
Designed for minimum 10 years life with assurance of spare parts availability.

### **QUALITY MANAGEMENT:**

ISO 9001:2015, SO 13485:2018.

### **QUALITY STANDARDS:**

IEC 61010-1, IEC 61010-2-020 and 61010-2-101, IEC 61326-1, IEC 61326-2-6, FCC part 15.



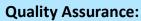












USFDA, IEC 60529-2004, ISO:45001:2018, ISO 14001:2015, ISO 9001:2015, ISO 13849-1:2015, ISO 13485:2016, BIFMA INTERNATIONAL, WHO-PQS, WHO-GMP, CE (European notified body 4 digit).





#### **TECHNOLOGY:**

Memory to which stores over 100 programs including Time, RPM, g-force and Temperature.

Results and yields are reproducible during each run due to function of automatically adjust the total Centrifugal Force accumulated on the samples during a run irrespective of whether the rotor is run at full capacity or partial capacity.

Provision for storage of run data &data management software for transferring of data to PC.

On-board real-time data logging, connectivity via RS 485 port data management software.

Log of latest 50 run records on display. Temper proof memory and last program recall.

Automatic rotor identification and indication. The smooth 10 Acceleration and 10 Deceleration profiles including coasting helps in clear separation for ensuring high quality component yield.

Flexible Timer Modes - At start, at speed, time start.

Automatic recovery of process in case of power interruption.

Facility for step runs of speed, time triplets with 15profiles.

Provision to run from 0 min- 99 min with 1 second increment along with HOLD function.

The refrigeration auto shut off when door opens for Power saving and environment friendly operation.



### Hygienic chamber

The centrifuge chamber is PUF Insulated made with medical grade stainless steel to maximize hygiene with the provision of both drain and condensed water collection container.

Automatic lid opening with Touch Button due to which safety interlock to prevent lid opening during Centrifugation Process with the feature of emergency lid opening provision in case of power failure.

Without a rotor windshield, users can clean the chamber thoroughly for a hygienic sample environment.

Castor wheels for free mobility.

Floor standing jacks for leveling and vibration free run.

Special eyelet window for quick calibration.

# **Quality Assurance:**

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# **Refrigerated Centrifuge**

Make: MarkEn Model: MRC-01







#### **ACCESSORIES:**

Wind Shielded Swinging bucket blood bank rotor with 06 nos Oval metal buckets having middle partition with 2000ml capacity to hold 02 Blood Bags each or 12 Quintuple blood bag systems of 450 ml with filters, with SAGM bag and empty satellite bags.

Removable plastic inserts with built in hook adapter and soft filters with provision to hold balancing weights at the sides of insert.

01 set of 02 plates each of 35g and 65g balancing weights to compensate big weight difference.

A quick-start manual and easy on-board tutorial videos to facilitate easy operation, standardization and maintenance.

10KVA Servo Controlled Voltage Stabilizer.

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Technical Specification of Refrigerated Centrifuge	
○ Make	MarkEn
O Model	MRC-01
O Max speed RPM	4200rpm with speed holding accuracy +10RPM.
O Max speed RCF	RCF 6000g
○ Type of Motor	Maintenance free brush less induction motor with frequency drive.
○ Control System	<ul> <li>7 inch wide Touch screen operating fully programmable microprocessor controlled/PLC base controller.</li> <li>Which can be used with Gloved hand.</li> <li>Displays both set and actual run conditions simultaneously.</li> <li>With the facility to set and indicate RPM or RCM.</li> <li>Self diagnosis of program errors.</li> </ul>
○ Safety	<ul> <li>User access control and security with Password Protection.</li> <li>Neutralizes loading imbalance up to 75grams.</li> <li>Detects excess imbalance and shut off.</li> <li>Safety key lock to prevent unauthorized use.</li> </ul>
O Maximum Noise level when working at 1	≤ 55db
meter distance in db  Operating Temperature	+22°C and +4°C along with setting range of -20°C to +40°C with setting accuracy of 1°C.
Ambient Temperature	Tropicalized to run from 0°C to +43°C and RH up to 95%
○ Alarm	<ul><li>Unwanted temperature rise,</li><li>Sudden power failure,</li><li>Imbalance.</li><li>Lid open.</li></ul>
O Power supply	230V AC, 50Hz
O Power consumption in watts	6000 VA
○ External Dimension in mm (WxDxH)	850x950x950 mm
○ Weight	350kg
○ Refrigerant	CFC free

Factory Add: Shed No.1, Plot No.93/2, Street No.17, Satpur, MIDC, Nashik-422007, Maharashtra. India. Contact us: Web: www.markent.co.in, Email: <a href="mailto:info@markent.co.in">info@markent.co.in</a>, Cont No.+91 9309967021