# MarkEn<sup>®</sup>

### MARK ENTERPRISES Blood Bank Refrigerator

Make: MarkEn Model: MBBR-04

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IEC 60529-2004, IP69, ISO:45001:2018, ISO 14001:2015, ISO 9001:2015, BIFMA INTERNATIONAL, BIFMA, CE, ISO 13849-1:2015, ISO 13485:2016, WHO-GMP,USFDA,

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#### Blood Bank Refrigerator Make: MarkEn Model: MBBR-04

When storing blood and plasma it's important to choose a refrigerator or freezer that is designed specifically for the demands of blood and plasma storage. Whether it's a concern with temperature variation impacting sensitive materials, size, sound, energy use, Clean Room compliance, or all of the above and more, we have the blood and plasma storage solutions for your blood bank.





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#### Blood Bank Refrigerator Make: MarkEn Model: MBBR-04

The MarkEn Blood Bank Refrigerator is designed to store 350 pcs of 450ml blood bags by stable and reliable temperature control utilizing MarkEn original technology A special highly efficient compressor designed and developed by MarkEn provides rapid cooling and quiet performance for each model. Ideally suited for whole blood storage with stable and reliable temperature control for various inventory loads.



MarkEn Blood Bank Refrigerators with a highly efficient compressor that provides superior temperature recovery, rapid cooling and quiet performance for each model. Designed with all the features for blood product preservation such as superior uniformity, microprocessor control, and large flexible storage capacity. Whatever your preservation needs are, MarkEn provides the right equipment to meet your exact needs.



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### Blood Bank Refrigerator Make: MarkEn Model: MBBR-04

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#### Features:

- Internal corners are rounded for easy cleaning and internal bottom is tray type to contain spills
- Cabinet High density polyurethaneinsulation 80 mm
- Door High density polyurethaneinsulation 80 mm with glass door.

The door is also fitted with aspiring loaded automatic closing device for less than 90° opening of the door with door lock and a special door switch that stops the internal ventilation when the door is opened to reduce the loss of cold air

- A line voltage corrector of appropriate rating.
- The Drawers are divided internally into 4 columns and fitted with 6 adjustable dividers for ease of storage
- Control panel: Microprocessor operating with soft-touch pads and LED display. The main functions of the control panel are :
  - Digital temperature display with setting accuracy of ±0.1°C
  - Keyboard: password protected with automatic locking
  - Back-up for Temperature Display and Power Alert Battery withautomatic recharging
  - Muting facilities for the acoustic alarms
  - Alarms memory not deletable for the last 30 alarm conditions
  - Events memory with the possibility of checking from the display, defrosting, door openings, relays status, etc
  - Internal ventilation setting
  - Icon based menu
  - Real-time graphical temperature chart



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Cooling unit : Condensing unit compounded by hermetically sealed compressor and a finned air cooled condenser

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- USFDA/CE-EU Approved product
- Refrigeration: Controlled-air circulation for constant temperature distribution
  - Defrosting: Completely automatic, thermostat controlled
    - Temperature Sensor: PT100
    - Safety thermostat is provided to avoid negative temperature
- Temperature Holdover Time: 1.5 Hrs
- RS485 Interface/USB For Computer Interface.
- Combi-Condenser: Skin condenser on inner lining of external body + Air- cooled type condenser with grooved Aluminum fins for effective heat transfer.
- Features:
  - Extra wire shelf
  - Stainless steel removable shelves
  - Front top fordrawers
  - Safety Fuse for Equipment
  - Safety door lock withkey
  - Graphic Temperature chart recorder
  - Data-logging function through USB port with direct download of Excel file
  - User parameter setting set point ,high alarm point ,low alarm point ,buzzer off time, C/F Temperature Choice
  - Power Switch:- Regular ON/OFF Switch
  - Cable port with cover
  - Interior lighting
  - Independent Safety thermostat to avoid negative temperature.



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### **@MarkEn**<sup>™</sup>

Technical Specification of Blood Bank Refrigerator	
O Make	MarkEn
O Model	MBBR-04
<ul> <li>Capacity of Blood Bags (450 ml)</li> </ul>	350 Bags
<ul> <li>Internal Dimensions (WxDxH) in mm</li> </ul>	660x650x1440
<ul> <li>External Dimensions (WxDxH) in mm</li> </ul>	820x960x2050
<ul> <li>Construction Type</li> </ul>	Vertical (Upright)
<ul> <li>Temperature Range</li> </ul>	+2°C to +6°C adjustable with setting accuracy of ±0.1°C
<ul> <li>Ambient Temperature Range</li> </ul>	-10°C to 43°C
<ul> <li>Temperature Control</li> </ul>	Microprocessor Based Controlled
O Display	Digital Monitoring LED/LCD
<ul> <li>No of Drawers</li> </ul>	04-06 Stainless steel 304 removable
<ul> <li>Temperature</li> </ul>	Preset at 4°C ± 0.1°C
<ul> <li>Temperature Alarm</li> </ul>	High 6°C & Low 2°C, Audio Visual Alarm
<ul> <li>Internal Body Material</li> </ul>	Stainless Steel 304 18 gauge ( AISI Grade, Non Corrosive, Non Magnetic )
<ul> <li>External Body Material</li> </ul>	Corrosion Resistance Powder Coated CRCA Steel
<ul> <li>Refrigerant</li> </ul>	CFC free
O Panels-	polyurethane foam insulation 80 mm
O Chart Recorder	7 Days Inkless Chart Recorder with range of -10°C to +20°C
○ Illumination	Fluorescent Lamp
<ul> <li>Noise Level</li> </ul>	Less Than 65 db(A)
<ul> <li>Battery Backup for Display and alarm monitoring system</li> </ul>	4 Hours In-Built Battery back-up
○ Alarm	Audible and visual alarm system for over and under temperature, sudden power failure, system failure, Door open and battery low
<ul> <li>Castor Wheel</li> </ul>	Four Lockable castor wheel
○ Electrical	220-240 Volts, 50 Hz, SINGLE PHASE

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