



# ICE LINED REFRIGERATOR



## Quality, Management, Environment, Health & Safety Standards



CDSCO MD 5 License



USFDA Listed



European CE



ISO 9001: 2015  
IAF



ISO 13485:2016  
NABCB/IAF



ISO 45001 : 2018  
IAF



7 Electric Safety Certifications  
IEC 60335-1 and IEC 60335-2-24, IEC 61010-1,  
IEC 61010-2-020 and 61010-2-101, IEC 61326-1,  
IEC 61326-2-6

## INTRODUCTION

The **MarkEn Ice Lined Refrigerator (ILR)** is engineered to deliver precise temperature control within the range of +2°C to +8°C, ensuring complete protection of vaccines against accidental freezing. Its energy-efficient design supports a temperature holdover capacity more than 58 hours during power outages and operates reliably with only 08 hours per day power supply followed by 16 hours without power, as per intermittent profile testing in hot zone conditions. Equipped with a high-tech energy management system and an optimized refrigeration mechanism, the ILR provides superior temperature stability, even in challenging field conditions, making it a dependable choice for vaccine storage and distribution.



## KEY FEATURES



**Optimal Temperature Control** – Maintains +2°C to +8°C at ambient temperatures ranging up to + 43°C at 5 - 95% Relative humidity.



**Reliable in Unstable Power Conditions** – Ideal for areas with inconsistent electricity supply where standby power is unavailable.



**Tropical Climate Ready** – Built with green-based technology for superior performance in warm environments.



**Anti-Condensation Hot Line** – Prevents moisture buildup around the cabinet opening.



**Energy-Efficient Refrigeration** – Compression cycle system ensures efficient and consistent cooling.



**Remote Temperature Monitoring (Optional)**– Integrated GPS-enabled monitoring device sends temperature deviation alerts via SMS and email to relevant authorities. A QR code allows tracking via the manufacturer's app.



**Thermal Insulation** – Uses Cyclopentane as the foaming agent for superior Insulation and energy efficiency.



**Corrosion resistance** – Internal and external cabinet, recyclable components & integrated icelining including lid and frame are designed with anti-corrosion protection for enhanced durability.



**Superior Build Quality** – All suction, freezer, and condensing tubing made from 99.90% pure copper for durability and efficiency.



**Automatic & Manual Defrosting** – Waste water drainage system prevents ice buildup and maintains temperature stability.



**Vaccine Protection Technology** – Vaccine Protection Technology – NTC thermostat prevents vaccine freezing, with a capillary inlet positioned outside the PUF body.



**Long-Lasting & Reliable** – Designed for a minimum lifespan of 10 years, with assured spare parts availability.

## INCLUDED ACCESSORIES



**Stem Alcohol Thermometers (2 Units) as per WHO specifications** – Ensures accurate temperature readings.



**Optional Vaccine Storage Basket** – Organized storage for easy vaccine access.



**Servo-Controlled Voltage Stabilizer** – Protects against power fluctuations with automatic high-low voltage cut-off and time delay restart.

### Technical Specifications

<b>Make</b>	MarkEn	
<b>Capacity</b>	314 L	
<b>Type of Cabinet</b>	Vertical / Upright	
<b>Color</b>	White	
<b>Outer Body Material</b>	Corrosion Resistance GI Powder-Coated Steel, Prepainted Galvanized Steel (18 SWG) / Rotomould	
<b>Inner Chamber Material</b>	Stainless Steel 304 / Corrosion Resistance GI Powder-Coated Steel, Prepainted Galvanized Steel / Rotomould	
<b>Insulation Material</b>	CFC-Free PUFF Insulation / Cyclopentane	
<b>Insulation Thickness</b>	<b>Cabinet:</b> 60 -100 mm	<b>Door:</b> 60 -100 mm
<b>Dimensions (W x D x H) in mm</b>	<b>Outer:</b> 670 x 670 x1530 mm	<b>Inner:</b> 580 x 580 x 940 mm
<b>Ground Clearance</b>	100 mm with Additional Support For Uneven Floors	
<b>Door Lock Mechanism</b>	Front-Opening Door, Single Lid, Equipped with Lock and Handle, Supplied With Two Keys Per Unit.	
<b>Castor Wheel</b>	4 Castor Wheels, Out of Which 2 are Lockable (Optional)	
<b>Ballast Boxes</b>	Top-mounted	
<b>Compressor</b>	Hermetically sealed compressor	
<b>Refrigerants</b>	CFC-HCFC free, Compressors Operating On Green Refrigerants R600a.	
<b>Condensing</b>	Skin Condensing and Inner and Air-Cooled Grooved Aluminum Fins	
<b>Holdover time with full load</b>	More than 58 hours, During Power Failure Without Any Outside Power Backup, Digital temperature Display Remains Operational during Power Failure.	
<b>Freezer Protection Classification</b>	Grade "A"	
<b>Operating Temperature Range</b>	+2°C to +8°C Adjustable With Setting Accuracy $\pm 0.1^{\circ}\text{C}$	
<b>Temperature uniformity</b>	$\pm 1^{\circ}\text{C}$	
<b>Cooling Coil Material</b>	High-conductivity Copper Coil	
<b>Control System</b>	On/Off Switch, Power Indicator, Built In Fully Programmable Microprocessor-Controlled With a Digital Display, Membrane Keypad and Password-Protected facility.	
<b>Display</b>	LED/LCD Display With $\pm 0.1^{\circ}\text{C}$ Resolution	
<b>Alarms</b>	Audible and Visual Alarm System For Over and Under-Temperature, Sudden Power Failure, and Low Battery	
<b>Battery Backup (Optional)</b>	12-Hours Battery Backup for Digital Display and Total Alarm System. Temperature Recording System With Auto- Recharging Facility.	
<b>Noise Level</b>	<50 db	
<b>Power Supply</b>	220V AC, 50 Hz	

## ALL-IN-ONE SOLUTION FOR

Cold Chain Solution  
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Blood Bank Equipment

Hospital & Scientific Equipment  
Hospital Furniture & Infrastructure  
Commercial Refrigeration



**25+**

Years of Excellence



**400+**

Product Range



**500+**

Service center



**1000+**

Committed Engineers



**1,00,000+**

Satisfied Users

## CERTIFICATION



10 products tested by a WHO-PQS accredited laboratory



Intertek



ISO 14001: IAF



WHO GMP



BIFMA Certified, BIFMA Level 3



ASTM- Corrosion Free Products



ISO 2409

EN 13523-26,  
ISO 13849-1,  
IP 69, IP 65

& MANY OTHER...

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