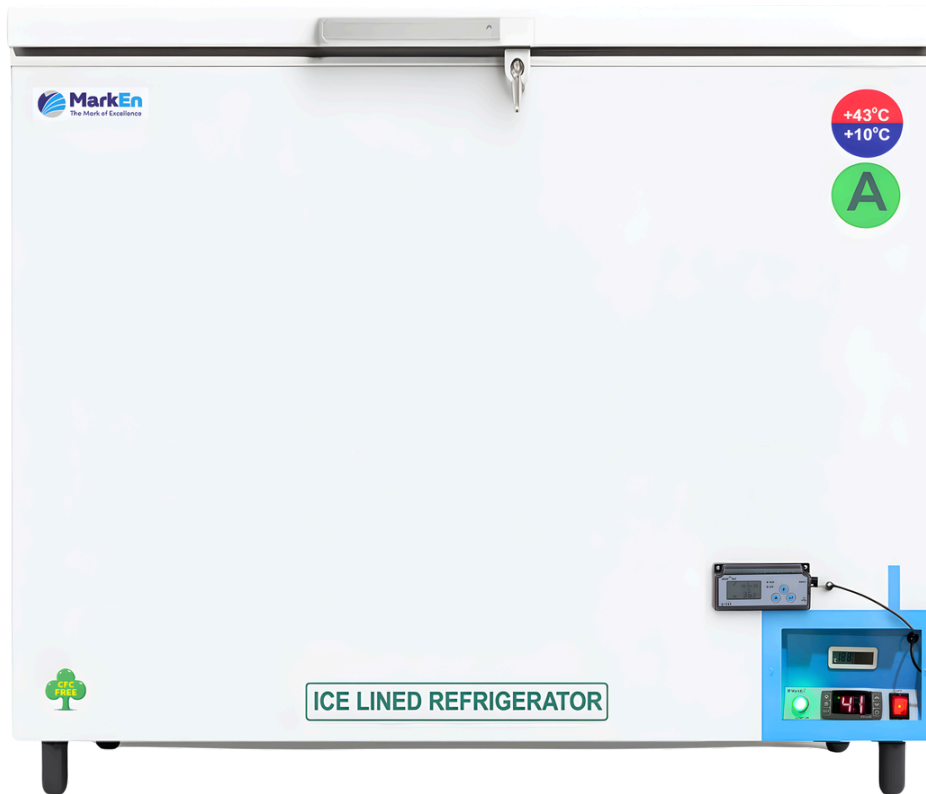




ICE LINED REFRIGERATOR



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 30 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 +30°C to +55°C when ILR is inactivated 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 – 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 (optional)



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



Corrosion resistance – Internal and external cabinet, 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.



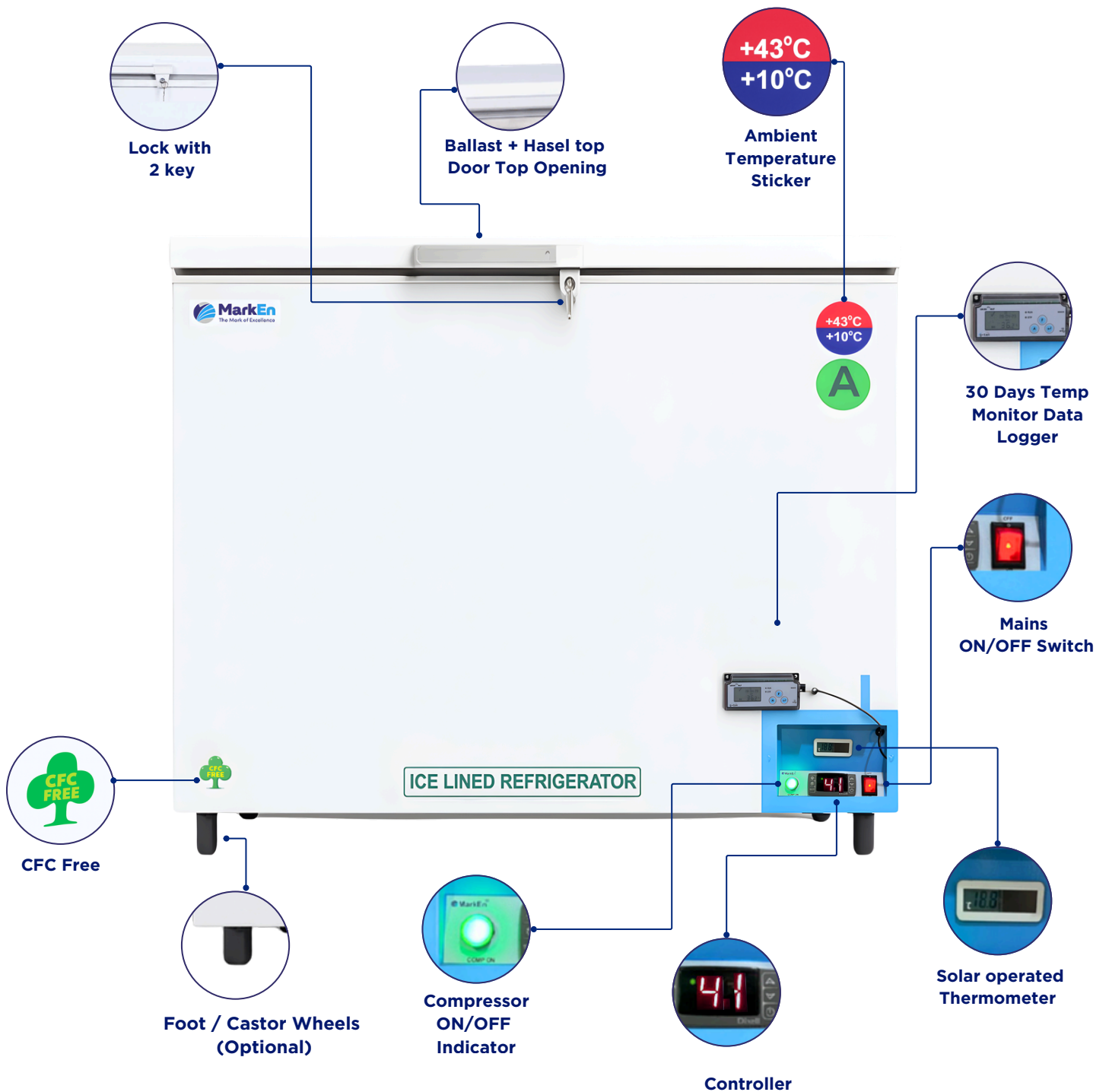
Refrigerator Compartment: Vaccine load is remained within the acceptable temperature range during any continuous ambient temperature or day/night cycling temperature.



Vaccine Protection Technology – NTC thermostat prevents vaccine freezing across the entire ambient operating temperature range while Programmable thermostats is password protected.



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



ACCESSORIES (OPTIONAL)



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

Make	MarkEn	
Capacity in Liters	Gross: 155 L	Net: 100 L
Type of Cabinet	Horizontal/Chest	
Color	White	
Dimensions (W × D × H) mm	925 × 690 × 925 mm	
Outer Body Material	Corrosion Resistance GI Powder-Coated Steel, Prepainted Galvanized Steel (18 SWG) / Rotomould	
Inner Chamber Material	Stainless Steel 304 / Corrosion Resistance GI Powder-Coated Steel, Prepainted Galvanized Steel / Rotomould	
Insulation Material	CFC-Free PUFF Insulation / Cyclopentane	
Insulation Thickness	Cabinet: 60 -100 mm	Door: 60 -100 mm
Ground Clearance	100 mm with Additional Support For Uneven Floors (Adjustable Foot)	
Door Lock Mechanism	Single Lid, Equipped with Lock and Handle, Supplied With a Minimum Of Two Keys Per Unit.	
Castor Wheel	4 Castor Wheels, Out of Which 2 are Lockable (Optional)	
Basket	> 2 Nos	
Compressor	Hermetically sealed compressor	
Refrigerants	CFC-HCFC free, Compressors Operating On Green Refrigerants R600a/R134a	
Condensing	Skin Condensing and Inner and Air-Cooled Grooved Aluminum Fins	
Holdover time with full load	More than 30 hours, During Power Failure Without Any Outside Power Backup, Digital temperature Display Remains Operational during Power Failure.	
Freezer Protection Classification	Grade "A"	
Operating Temperature Range	+2°C to +8°C Adjustable With Setting Accuracy ±0.1°C	
Temperature uniformity	±1°C	
Environmental Conditions	+30°C to 55°C when ILR is inactivated with humidity 5% to 95%RH	
Control System	On/Off Switch, Power Indicator, Built In Fully Programmable Microprocessor-Controlled With a Digital Display, Membrane Keypad and Password-Protected facility.	
Data Logger	30 Days Temperature Data Logger (WHO PQS Approved)	
Display	LED/LCD Display With ±0.1°C Resolution	
External Temperature Display	Cabinet-mounted, externally readable electronic display indicating current temperature and alarm status.	
Alarms	Audible and Visual Alarm System For Over and Under-Temperature, Sudden Power Failure, and Low Battery	
Battery Backup (Optional)	12-Hours Battery Backup for Digital Display and Total Alarm System. Temperature Recording System With Auto-Recharging Facility.	
Noise Level	<50 db	
Power Consumption Rate	Intermittent Cool Down: 0.557 kW/24Hrs, Stable Running Continuous : 0.239 kW/24Hrs, Stable Running Intermittent: 0.259 kW/hr	
Power Supply	220-240V AC, 50/60 Hz Supplied With 1KVA Single Phase Stabilizer	
Standard	Tested as per E003/RF 03.5 (From WHO PQS Approved Laboratory)	
Weight	90 Kg	

CERTIFICATIONS


 Intertek
 9 products tested by a WHO-accredited laboratory


ISO 14001: IAF



WHO GMP


 BIFMA Certified,
 BIFMA Level 3

 ASTM- Corrosion
 Free Products

 ISO 9001
 ISO 13849
 ISO 13485
 ISO 14001
 ISO 45001

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

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