

## Ice Lined Refrigerator



Environmentally friendly Ice Lined refrigerator powered by Meditech Technology for safe storage of vaccines between 2°C to 8°C . Meditech Refrigerators with Anti-Freeze technology ensure perfect temperature control with no risk of freezing.

### Features

- Reliable temperature between +2°C to +8°C
- Only 2.5 hrs. of electricity needed per 24 hrs. at 43°C AMB
- Self-regulating cooling system
- Air flow system in vaccine compartment
- External cabinet and internal liner pre-painted galvanized steel
- Cooling coil of copper
- CFC-free refrigerant and insulation
- Compressor made for use in the tropics
- Solid lid with handle and lock
- 3 baskets for organized storage
- Available in 220V-240V 50/60Hz + 115V 60Hz
- Delivered in solid, wooden crate



### Temperature Variations Prevented

The Meditech Series is designed to minimize cold air loss even with frequent door openings.

**Separated inner doors** minimize the chamber air leakage during door openings.

Foamed-in-place insulation in the walls and magnetic sealed outer doors prevent chamber air leakage and promote complete door closings

### User Friendly Design

Selectable storage system **LED interior lamp** with ON/OFF switch and provide a clear view of stored items

Eye Level Digital display is easy to see, and is calibratable through the control panel Filterless construction eliminates bothersome filter cleaning

### Alarm and Safety Functions

To ensure the safety of precious blood supply, the Meditech Series provides the following safety functions

**Audible and flashing LED visual alarms** with remote alarm contacts, in case of power failure, high or low temperature

Temperature-maintained defrost designed with thermal sensors and heaters in the evaporator, all under precise microprocessor control.

Electronic thermostat, airflow system and the specially designed icelining ensure stable temperature control in range from +2°C to +8°C. The actual temperature is readily checked on the external digital thermometer. Effective insulation and the icelining ensure long hold-over time in case of power cut. The galvanised steel cabinet protects against corrosion. Baskets included for organized storage.



### Multi air-flow plenum system

ensures excellent temperature uniformity in larger capacity models.

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### Why choose Meditech Refrigerators with Anti-Freeze technology?

- **Guaranteed never to freeze vaccines:** Research suggests that 75% to 100% of vaccine shipments are exposed to freezing temperature at some point during their time in the cold chain. Meditech Anti-Freeze technology guarantees never to freeze vaccines. The unique technology limits the temperature variation in the cabinet to less than 1°C. This eliminates the stratification and freezing problems found in conventional vaccine refrigerators and ensures vaccines are kept at a constant safe temperature.
- **Minimises thermal shock:** Damage can occur to vaccines through a single exposure to heat when there is a power outage. It can also occur through several short exposures to heat when standard equipment fails to meet the twin challenges of high ambient temperatures and unreliable electricity supply. Meditech Medical Refrigerators with Anti-Freeze technology are different. They deliver outstanding performance with as little as 2½ hours of electricity per day at high ambient temperatures. If the power goes off completely, Meditech can keep vaccines at a safe temperature for 3 days or more, even with the refrigerator in normal use.
- **Patented Anti-Freeze technology:** Sure Chill works on the principle that water is at its densest at 4°C. Water, not ice, surrounds a Sure Chill refrigeration compartment. When power is supplied to the refrigerator, the water cools and ice is formed above the compartment leaving only water at 4°C cooling the contents. When the power is switched off, the water warms and rises while the ice begins to melt. This keeps only water at a perfect 4°C cooling the contents of the compartment. The system can operate like this, without any power whatsoever, for many days
- **A sound investment:** Vaccines are a major investment. Over the course of its lifetime millions of dollars worth vaccines will be stored in it. Thousands of lives will depend on its performance. It makes sense to invest in a vaccine refrigerator that can ensure the safe storage of vaccines even under the most challenging conditions. An inferior refrigerator is a false economy and one that could cost lives.

## Ice Lined Refrigerator



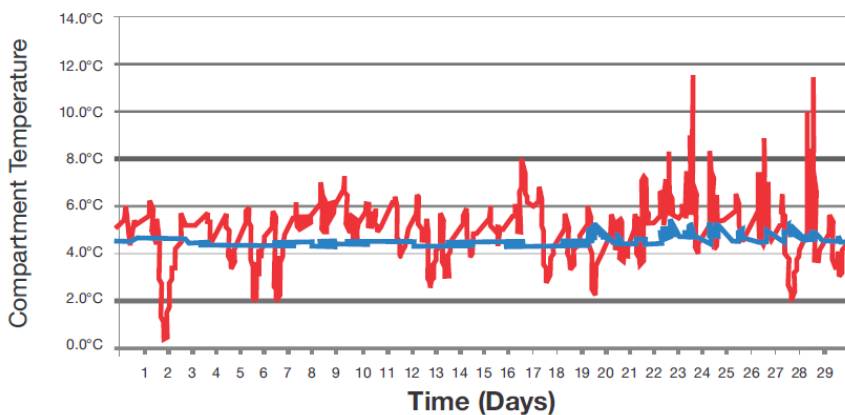
Environmentally friendly Ice Lined refrigerator powered by Meditech Technology for safe storage of vaccines between 2°C to 8°C . Meditech Refrigerators with Anti-Freeze technology ensure perfect temperature control with no risk of freezing.

- Uncompromised cooling
- Anti-Freeze technology limits temperature variation within the cabinet to less than 1°C and guarantees never to freeze vaccines
- The technology provides exceptionally long holdover times to cope with periods of no power
- Ice never forms on the cabinet walls - no risk of freezing and no need to ever defrost the refrigerator

### Compliant with International Standards

- All models are being independently tested for WHO prequalification
- All models are extensively tested to simulate the harshest environmental conditions
- Independent study confirms Anti-sure technology provides dependable cooling - protecting life saving vaccines

30 day compartment temperature monitoring study



Other Ice Lined Refrigerators

Meditech ice Lined Refrigerators

Saving lives around the world

- Sure Chill technology is in use in over 30 countries across the world

Trusted by Ministries of Health

- *“meditech Anti Freeze Ice Lined Refrigerator has not only ensured that our vaccines are stored at the right temperature even without power for a long time, but also relieved us of the tension of getting the valuable vaccines spoiled due to regular outage of power and ambient temperatures.”*

“WORLD HEALTH ORGANISATION”

# PLC Based Controller



## LED INDICATION

1. Line In
2. Power
3. Comp On
4. Heater On
5. Battery On
6. Battery Low
7. Temp High
8. Temp Low
9. Power Fail
10. Sensor Fail
11. System On

## Scrolling LIVE Data logger on LED screen











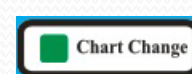

1. Temperature
2. Incoming Voltage
3. Ambient Temperature
4. Time in hours of revolution chart
5. Current Date
6. Current Time
7. Battery Voltage

## User Friendly Settings

1. Date
2. Time
3. High Temp Alarm
4. Low Temp Alarm
5. Hysteresis
6. Compressor Delay










Model	MTBTS01	MTBTS02	MTBTS03
Dimensions (WxDxH) mm	795 x 750 x 1220	795 x 750 x 1820	795 x 750 x 1820
Gross Storage Capacity (L)	57.7	121	276
Vaccine Storage Capacity (L)	46.5	99	225
Energy Consumption Stable Running	0.56 kWh/ 24 hours	0.75 kWh/ 24 hours	1.1 kWh/ 24 hours
Energy Consumption Cool Down Test,	0.64 kWh/ 24 hours	1.90 kWh/ 24 hours	2.60 kWh/ 24 hours
Refrigerant	R134a		
PQS Code	E003		
Weight (Kg)	125	160	185
Quality Standard	ISO 9001:2008		
Holdover Time Holdover	3+ days		
Controller	Adanvce LED Controller		

## 6.0 LED Indicators

Sl.No	Photos	Function Indication
1.		This LED is on when there is a power supply to the machine from the main source
2		This LED is on when the Controller is in working condition.
3		This LED is on when the compressor is in working condition
4		This LED is on when the heater is in working condition
5		This LED is on when the battery is in working condition
6		This LED is on when the battery is discharged
7		This LED is on when the inside compartment temperature of the refrigerator is high above the set temp
8		This LED is on when the inside compartment temperature of the refrigerator is Low below the set temp
9		This LED is on when there is power failure.
10		This LED is on when there is sensor fail
11		This LED is on when after 162 hours of charge change ( 6 hours before the completion of 7 days)
12		This LED is on when all functions of the System is in working condition

# 7.0 Keypad Functions



Sl.No	Photos	Function Indication
1		The Menu button is pressed to enter into MENU option.
2		The Enter button is pressed to enter into “ENTER” option.
3		The Up Arrow button is pressed to go Upwards in the menu option.
4		The Down Arrow button is pressed to go Downwards in the menu option.
5		The data logger is pressed to get the data from the PLC to the computer
6		The MUTE button is pressed to MUTE any Alarms and sounds
7		The Door Open LED is activated along with the buzzer sound indicating the Door Open function
8		The ON button is pressed to switch on the refrigerator
9		The USB is provided to connect the Refrigerator to the computer system.