

Walk in Freezer



Environmentally friendly walk in Freezer powered by Meditech Technology

Temp. Range /Accuracy - (-) 40°C to (+) 60°C /± 0.1°C

Temp Uniformity : ± 1°C

- **Standard features include:**

- Temperature uniformity ±0.1°C
- Temperature gradient of 1.0°C Max.
- No-waste, custom-cut wall panels
- Average 70dBA maximum noise level
- Digital temperature controls with Touch Screen
- Narrow-range chart recorder, accurate to ±0.5% of the -100 to 100°C spare on demand
- Intelligent, active high/low alarms
- CFC Free insulated panels with SS304 inside and Galvanneled Mild steel with powder coated Outside (or) SS304 inside and outside

- **Complete utilization of costly space**

Unlike vendors which provide a limited number of standard-size rooms, Meditech insulated panels can be made to fit each installation exactly. This means your limited space will be fully utilized for productive activity. In some cases, particularly where structural columns must be surrounded by the room enclosure, Meditech custom-cut panels can increase floor space by more than 15% over rooms built with restrictive, standard size panels.

- **Surface finish**

Standard surface finishes for walk in freezer include baked white enamel powder coated Mild Steel, with SS extrusions to join panels. For exceptionally corrosive environments SS panels are available as best option. These options are usually avoided except in extreme cases.

- **Air Flow Pattern**

Our center-mount, low velocity air handler provides an "umbrella airflow" pattern which envelopes the room with conditioned air, providing maximum uniformity (1.0°C or better) without the need for lay-in ceiling tiles which are difficult to clean and represent a prime location for mold and spore growth over time. All walk in freezer are equipped with precision 100 ohm, 3-wire platinum RTD (Band 5) temperature sensors and thin-film polymer capacity humidity sensors with hermetically sealed microprocessor transmitters, representing the latest in sensor technology

- **Eliminate product stability problems**

Temperature deviations at the working height can make compounds unstable and research results unpredictable. Meditech walk in freezer meet and surpass uniformity requirements of ±0.5°C and maximum temperature gradients of 1.0°C. The temperature is constant even when transient heat loads occur from process equipment and door openings.

- **Comfortable work environment**

Productive research and manufacturing requires exceptional illumination and a quiet environment. Meditech cold rooms are equipped with recessed fluorescent lighting fixtures, which deliver a full 70 to 100 foot candle illumination at the working surface. Air handling systems are designed with components sized to limit noise to an average maximum of 70dBA – the level of normal human conversation.

- **Intelligent, active alarms**

Unlike passive systems, Meditech alarm circuits take action to mitigate an out-of-spec condition. For example, if temperature is too low, all cooling is automatically shut down while the system provides visual and audible warning of the problem. Such intelligent alarms ensure that basic corrective measures are taken immediately.

Reliable, trouble-free operation

Meditech Walk in Freezer is equipped with extra equipment capacity for unusual peaks in cooling and heating loads. Also, all Meditech refrigeration systems have safety features such as automatic compressor restarts. Such robust design-features help ensure continuous reliability of Meditech mechanical systems.

SPECIFYING Walk in Freezer

Walk In Freezer can be designed to maintain virtually any temperature required for life science and food storage applications. To ensure the room meets your particular requirements, consider these issues as you develop your specification

Active alarms = no loss of product

Alarms advise walk in freezer operators of fault conditions, but when specified, these circuits can provide other useful functions.

For example, if the room goes above the high alarm set point, the door heaters, lights, fans, and hot gas valves should be shut off automatically. Active alarms can help prevent “runaway” conditions rather than just announcing that a problem is occurring, and should be clearly specified by the designer in critical applications.

Meditech also provides SMS features that can be incorporated to send SMS to officer in case of alarms and emergency.

Humidity control

In most walk in freezer, humidity control is not essential. In those cases, the designer should avoid specifying a defined humidity level in order to minimize equipment costs. There are, however, two reasons end users sometimes include humidity control in the specification: to reduce excessive defrost cycles or to avoid problems with humidity-sensitive products.

Walk in Freezer systems operate at temperatures cold enough to freeze water on heat transfer surfaces. This frost must be melted off when it begins to block air flow. When the system defrosts, the air handler shuts down, and room temperature can rise slightly above set point for 5 to 12 minutes. This occurs about four times in 24 hours. In other circumstances, sensitive materials demand a uniform humidity.

Benefits of humidification in food and produce cold stores include:

Raising the relative humidity inhibits moisture loss. The right humidity level ensures that product quality is maintained.

Fresh, just picked appearance increases value. Improved profitability through maintained product weight.

Longer storage and greater shelf life reduce waste. Direct room humidification ensures the right humidity level evenly around the store, maintaining produce quality throughout.

Close humidity control means the right humidity for the right product

Refrigeration controls

To avoid any confusion among suppliers, the room designer should clearly specify PID temperature controls when the uniformity requirement is $\pm 0.1^{\circ}\text{C}$. This will alert the vendor that controls suited only for cold storage rooms are not acceptable. Meditech uses PLC based touch screen controller for the application.

Software

- 21 CFR part 11 USFDA compliant software with validation documents.
- Secured audit Trail.
- Multi level security password with aging and history.
- Electronic signature.
- Web based (Ethernet) online remote monitoring
- GSM alarm system (mobile alert)
- Data of door access security system in software with remote options.
- All the events, utility, working status, all the alarms are logged in the software.
- Records in graphical and in tabular form.
- Reports of mean Kinetic Temperature Reading.
- Works on 230V AC single phase 50Hz (country specific).
- Complete with extensive DQ, IQ, OQ and PQ protocols as per the International guidelines along with calibration certificates.

Web Based Software (SAIFIN53) – Walk in Freezer and Room Management

Access Anywhere Anytime!! Around the Globe

Instantly connect and control your Walk in Freezer and Rooms without installing software

For more than a decade, Meditech SAIFIN53 software has gained popularity among operators and end users for its reliability and ease. SAIFIN53 is available remotely via a web browser using internet facility. SAIF53 is designed to meet the increasing demands for improved efficiencies. This web based software also adds extra capabilities of data logging, user-configuration and features of all alarm notifications via SMS and Email.

Features

- Eliminate the need for multiple software installations and Qualifications
- Web based software accessible through browser
- Compatible with server-based OS, android, Windows-7/8/9/10
- Ensure one-time software installation on your plants server and access the software anytime, anywhere through a web browser from any Desktop/Laptop (same LAN Network)
- View Status, take printouts or execute any of your tasks from anywhere
- Department wise segregation of users, equipment & Data
- Harmonization of reporting format (header, footer, etc) and other such operations through the plant

Centralized user defined Alarms, alerts and Notifications through SMS & emails

Configure the type & no. of alarms to be sent via email/SMS & configure delay time too

Running time calculation of MKT and Moving Average Component running hours to determine the shelf-life of major components

Real-time display of all connected equipment in single screen

Automatic data backup facility

System Diagnosis for troubleshooting via Team Viewer

Ethernet communication with chambers

Complying US FDA 21 CFR Part 11

Key Features

- A Truly innovative data handling and communication options
- Plug and Play fashion via Ethernet to connect local or plant networked PC or Laptop
- One can view LIVE system parameters and historical graphs as well as receive alarms, reports, data log files over email
- Settings with just a standard browser
- Access live or stored data remotely within the facility (LAN network) or from anywhere in the world

Technical Data

Standard Model(S): Inside S.S.304 with mirror polish & outside mild steel powder coated.

GMP Model(G): Inside and outside with SS 304 matt buff.

Temp. Range /Accuracy - (-) 40°C to 60°C /± 0.1°C

Temp Uniformity : ± 1°C

		Dimensions in meters					
Models	Capacity	Internal			External		
		W	D	H	W	D	H
MTBBR	ltrs.						
MTBBR80	8000	2	2	2	2.16	2.95	2.16
MTBBR125	12500	2.5	2.5	2	2.7	3.45	2.16
MTBBR187	18750	2.5	3	2.5	2.7	3.95	2.7
MTBBR225	22500	3	3	2.5	3.16	3.95	2.7



Secure audit trails
 -Audit protection
 -Provide certified proof of process control

FEATURES AND FUNCTIONS

A REVOLUTIONARY MONITORING & ALARM SYSTEM

Say No To Manual Recording

- Error Free
- Separate signatures for data reviews & data approval
- No mistake in record maintaining
- Data analysis
- Tabular and graphical data representation

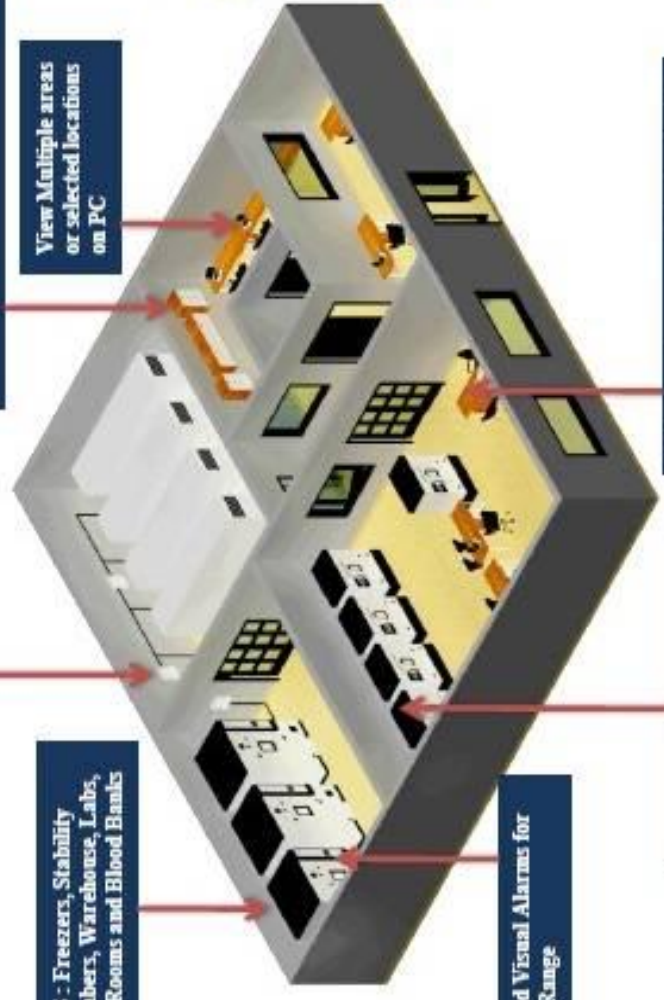


Wireless Display with Humidity, Temperature CO2 Sensors for Visibility and audit

USES : Freezers, Stability Chambers, Warehouse, Labs, Cold Rooms and Blood Banks

Record and alarm Temperature, Relative Humidity, Flow, Differential Pressure, CO2, O2, LN2, Status and Contacts

View Multiple areas or selected locations on PC



Audio and Visual Alarms for Settable Range

Compact size chart recorders and alarms system

Data recorders are easy to relocate and swap for service and calibration



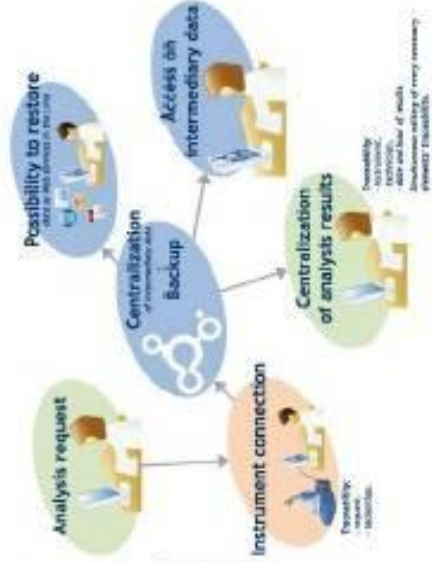
View Data from Any part of the World
 -Browser base application software
 -view from PC, smart phones and tablets



Alarms
 Alarms for parameter deviation
 SMS Alerts
 Alarm log with acknowledgement and user comments
 Email alerts for supervisor



Receive SMS and Email alarm notification.



Traceability

- Instant response to data request
- Continues Data saving
- Data Protection and backups



Supervisor Function

Alerts users for pending activity
 Escalates unattended issues to higher authority

Screen Shots of Touch Screen Controller










ISO 9001:2008, ISO 14001, ISO 13485
WHO-GMP & CE Certified Company

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16/02/15		PARAMETERS		17:50:31	
DESCRIPTION	VALUE	UNIT	DESCRIPTION	VALUE	UNIT
Heater On Time	±99999	Min			
Temp Set RTD1	±9999.9	°C			
Temp Set RTD2	±9999.9	°C			
Comp. Sel.	Comp1				
Comp 1 Time	±9999.9	Min			
Comp 2 Time	±9999.9	Min			

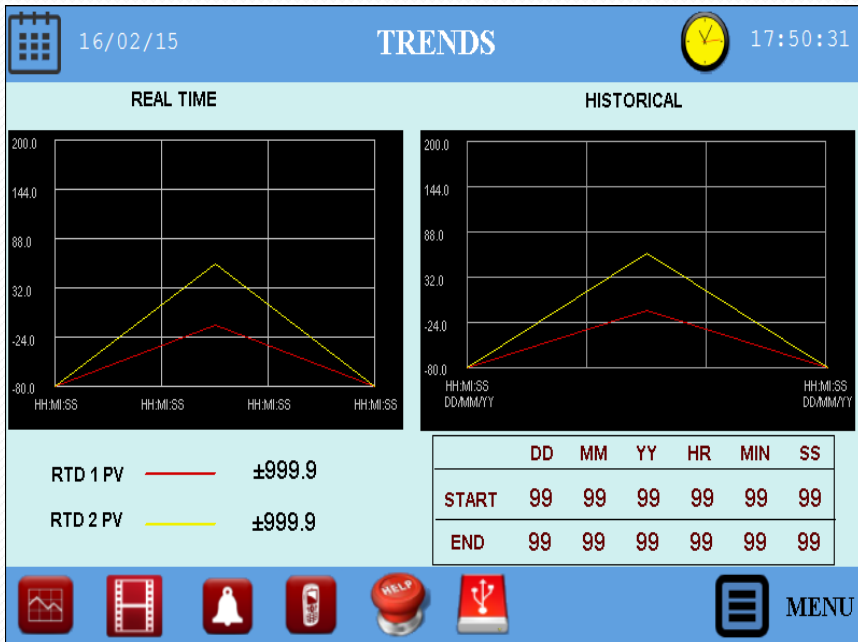
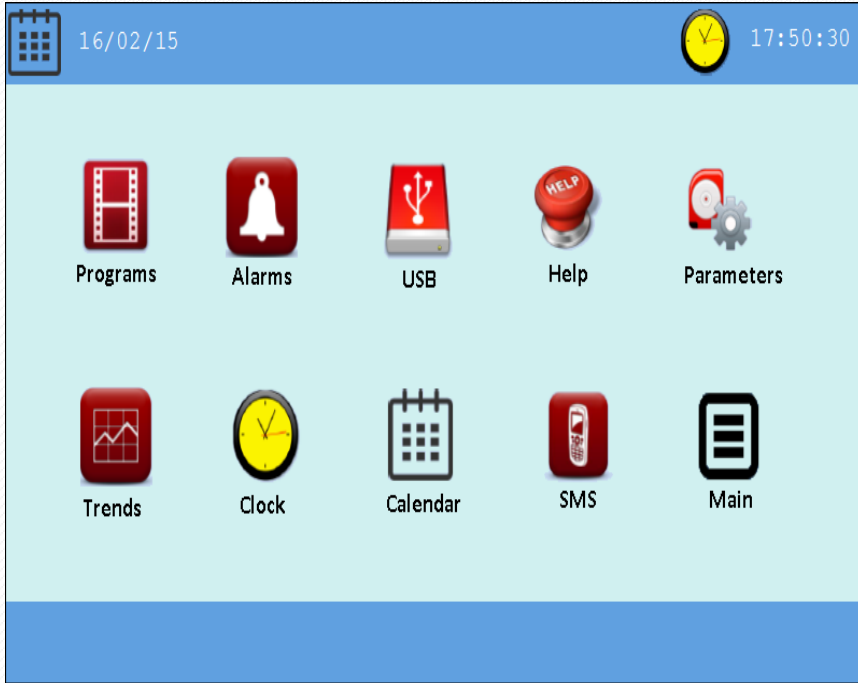
 MENU

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Screen Shots of Touch Screen Controller



Screen Shots of Touch Screen Controller

The screenshot shows the SMS interface. At the top, the date is 16/02/15 and the time is 17:50:32. The title is 'SMS'. Below the title, there is a field labeled 'ENTER MOBILE NO:-' with a placeholder of 12 hash symbols. Below this is a 'SEND SMS:-' button with a mobile phone icon. Underneath is a 'RECEIVE MESSAGES' button. At the bottom, there is a large blue box containing 24 hash symbols. A bottom navigation bar contains icons for Home, Camera, WhatsApp, SMS, a red 'HELP' button, a USB icon, and a 'MENU' button.

The screenshot shows the 'ALARMS - REALTIME' interface. At the top, the date is 16/02/15 and the time is 17:50:33. Below the title is a table with four columns: 'ALARMS', 'ON DATE TIME', 'OFF DATE TIME', and 'Y/N'. The table contains 20 rows of data, each starting with 'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'. The 'ON DATE TIME' and 'OFF DATE TIME' columns contain date and time strings in DD/MM/YY HH:MM:SS format. The 'Y/N' column contains 'Y' or 'N'. Below the table are three buttons: 'ACK', 'ACK ALL', and 'HISTORICAL'. A bottom navigation bar is identical to the one in the SMS screenshot.

ALARMS	ON DATE TIME	OFF DATE TIME	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
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XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	DD/MM/YY HH:MM:SS	DD/MM/YY HH:MM:SS	Y/N

Screen Shots of Touch Screen Controller

