Deep Freezer

LAB ICONICS

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Deep Freezer

Lab Iconics make Deep Freezer is the most versatile and reliable Freezer which is designed to maintain a constant temperature. Our Deep Freezers employ Microprocessor based temperature control along with Dual Digital display with Set and Actual Internal Temperature. Adjustable temperature range from -20˚C to -40˚C with an increment of 1˚C. High efficiency insulation plus cabinet and door-mounted gaskets contribute to energy-efficient performance.

Two types of Variants are available in the Deep Freezer - Upright Freezer (Vertical Type) and Chest Freezer (Horizontal Type).

Lab Iconics make freezers are designed for storage of biological materials, blood banks, hospitals, epidemic prevention services, research institutes, and biotech storage applications etc where long-term sample preservation at precise temperatures is essential. We provide Customizable extended warranties and preventive maintenance plans.

Features:

- *Microprocessor based, PID Digital Temperature Indicator and Controller.*
- *Easy-to-operate controller panel*
- *Large and bright LED display of temperature*
- *Equipped with Imported Compressor*
- *CFC free refrigerant*
- *Temperature Range: -20 °C to -40°*
- *Accuracy: ±3.0°C*
- *Resolution: ±0.1°C*
- *Capacity from 100 to 500 Litres*
- *Inner chamber made of Stainless Steel 304*

- *Outer surface made of Mild Steel with 7 Cycle powder process coats; SS Optional*
- *Safety lock to prevent unauthorized access*
- *High grade Polyurethane foam Insulation (PUF) insulation*
- *Inner sub doors made of Acrylic*
- *Adjustable Stainless Steel Shelf/ Trays*
- *Heavy duty castor wheels for easy movement.*
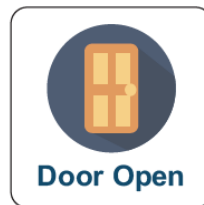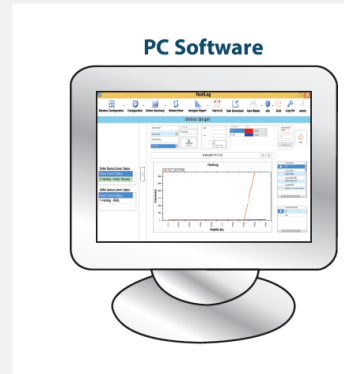- *Micro PLC controller and 21 CFR Part 11 Compliance software - optional*

Technical Specification

DEEP FREEZER	MODEL				
Vertical Type	LIT-DF-40L100	LIT-DF-40L150	LIT-DF-40L250	LIT- DF-40L350	LIT-DF-40L400
Horizontal Type	LIT-DF-40H100	LIT-DF-40H150	LIT-DF-40H250	LIT-DF-40H350	LIT-DF-40H400
Capacity in Litres	100	150	250	350	400
Temperature Range	Adjustable temperature ranges from -20°C to -40°C with an increment of 1°C.				
Resolution	±0.1°C				
Accuracy	±3.0°C				
Controller	Microprocessor Controller				
Construction	• Double Walled; • Exterior: Powder Coated Mild Steel / SS (Optional); • Interior: Stainless Steel				
Door	Main Door with durable magnetic rubber gasket and sealed with PPCP material				
Insulation	PUF insulation				
Trays	Perforated trays made of stainless steel				
Air Circulation	Forced air circulation				
Alarm	• Audio-visual alarm for high/low temperature. • Power Failure Alarm • Door Ajar Alarm				
Power	Single Phase 230 V AC, 50 Hz				

Optional Accessories

- Racks & Freezer Boxes
- Inbuilt Thermal Printer
- Chart Recorder
- Voltage stabilizer

- Digital Timer
- Datalogger with inbuilt storage.
- Touch Screen Micro PLC Controller and 21 CFR PART 11 Compliance Software

Micro PLC Controller and 21 CFR Part 11 Software

PC Software

Standby

Recording

SMS
SMS Alert

Door Open

Power Fail

Features

- *7" TFT, 65536 Color Touch Screen Display*
- *5 Temperature Channels for Control & Mapping*
- *Universal Input: Thermocouples, RTD Pt100, mA, V*
- *On-Off & Self Tune PID Temperature Control*
- *Settable 'Heat - Only', 'Cool - Only' & 'Heat + Cool' Control*
- *SSR or DC LINEAR (V / mA) Control Outputs*
- *Programmable Timer Delay for Compressor Switching*
- *In-built Programmable Timer*
- *Comprehensive Alarm System (Process Deviations, Door Open, Mains Fail)*
- *Standby Control Gadgets Interface (Optional Digital Outputs)*
- *Date / Time Stamped Process & Event Data Recording*
- *Password Protected Door Opening & Status Monitoring*
- *(Digital Input for Door Switch & Digital Output for Door Lock Solenoid)*
- *Mains-Fail Detection & Automatic Change Over to Battery / Inverter*
- *Serial Port for PC Interface with 21 CFR Compliant Software*
- *Optional GSM Interface Module for SMS Alert*

PC Interface with 21 CFR Compliant Software

Supported Operating Systems (OS)	• **Windows Vista, Windows 7, Windows 10** • **32 bit / 64 bit Windows 8 32 bit / 64 bit Pentium Dual Core**
Minimum PC Configuration Requirements	• 2.8 GHz Clock Speed 2 GB RAM • 40 GB Hard Disk
PC Software Features (21 CFR Part 11 Compliant) 	• Supports Multiple Equipment on Single Installation • Auto Start-up on PC Power-up • Online Display of Process Values & Stored Records in Graphical & Tabular Forms with Alarm Indications • SMS and/or Email Alerts on Alarm Conditions • Mean Kinetic Temperature (MKT) Computation • Automatic Periodic Downloading of Records Stored in controller • Access Control According to Authority Level • User Actions with Signing & Authorization • Automatic Password Expiry • Manual & Auto Back-up Facility with Archiving • Data Log Reports with User Configurable Title, Footer & Header • Data Log Report, Alarm Log Report, History Graph & Audit Trail • Report in PDF & EXCEL formats • Audit Trail History of Critical Events & User Actions
Data Recording	
Storage Device	• In-built Flash Memory
Record Capacity	• 5,000 Records
Recording Interval	• User Programmable (1 to 250 Minutes)

Recording Data (Date/Time Stamped)	• Process Values
	     • Measured Control & Mapping Temperatures
	 • Events
	     • Power-up
	     • Process Value Alarm Toggle
	     • Change in Control SP
	     • Change in Date/Time Settings
	     • Change in Recording Interval
	     • Equipment Door Open/Close
	     • Mains Power Fail/Resumption

Note : The product design and specification are subject to change.

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