

CABINET CONSTRUCTION

The cabinet of Labtop Chambers is insulated with high density CFC free Poly Urethane Foam. Interior of the chambers are mirror finish stainless Steel (304 SS, 1.0 mm thick). The exterior is white powder coated (1.0 mm thick) mild steel and the door has magnetic gasket with a keyed door lock. Specially designed solid stainless steel wire mesh trays ensure even temperature distribution and storage inside. GMP models are in total stainless steel (Inside S. S 304 with mirror finish and outside. S.S 304 dull finish and inner S.S 316 is also available on request at extra cost) and the unit is mounted on caster wheels for ease of mobility.



REFRIGERATION SYSTEM

The cooling is effected by CFC free refrigeration system with a condensing unit located inside the chamber. Labtop condensing units are characterised by high-efficiency heat transfer and low power consumption.



- CFC free eco friendly cascade refrigeration system
- Inner grooved copper tubes and slit aluminum fins for superior heat transfer
- Filter drier for moisture and dirt protection
- Safety and control devices for better system protection
- Thermally protected and permanently lubricated fan motors

SAFETY FEATURES

- Main circuit breaker to protect electronic components in case of abnormal power supply
- Audio visual alarm when temperature deviates from set temperature
- Provision for mobile alert via GSM Technology
- 180 seconds Time delay for compressor switch ON
- Overload protector for safe guard the compressor

PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEM

A **programmable logic controller (PLC)** is a digital computer used for automation of controlling electromechanical processes, such as control of Temperature, Relative Humidity, Standby systems and event management with less maintenance hence no moving parts.



- 4.3" HMI with color Display and touch screen
- Configurable access for 72 users
- Privilege based grouping
- Multi level Password protected Human Machine Interface (HMI)
- Data storage to record set values, process values, date & time with variable time intervals
- High speed Ethernet connectivity
- Incorrect password attempt and user lock
- Online data can be printed with date and time stamp
- Non operational screen auto logout
- Configurable maintenance reminder pop up alarm
- Individual Alfa numeric user ID and password
- User operation will be recorded and saved in memory
- Online and offline Log reports on HMI
- Safety cut off for over shoot and under shoot
- Programmable alarms with event management
- Precise control of temperature by using PID control Action
- Data storage capacity up to 200000 readings
- Self diagnostic system with error messages



ALERT MANAGEMENT:

- SMS alert message can be send to 5 users with notifications
- Email alert can be sent to 15 users with notifications
- Call alert can be send to 5 users with voice messages with notifications

TEMPERATURE CONTROL SYSTEM

- Micro-control based Temperature controller
- 4 digit, 7 segment LED display
- Audio visual alarm when the temperature deviates from the set temperature.
- Password protected keypad lock
- Visual alarm for Sensor faulty
- Display of set temperature and process temperature
- Temperature alarm system with adjustable high-low alarm limits.
- Micro-controller controls the internal temperature within $\pm 1.0^{\circ}\text{C}$. .



SALIENT FEATURES

- Foamed in place CFC free PUF insulation ensures temperature stability and reduced power consumption.
- Specially designed adjustable solid stainless steel wire mesh trays ensure even temperature distribution.
- High quality PT-100 Sensor for better accuracy
- Caster wheels for ease of mobility
- Various accessories are available as option
- High quality PT-100 Sensor for better accuracy

Technical Specifications				
Temperature Range (°C)	-40 to -80.0			
Accuracy (°C)	± 1.0			
Uniformity (°C)	± 5.0			
Control system	Micro control / PLC			
Volume (Liters)	90	170	290	350
Trays	2	3	3	4
Power (W)	400	600	750	1000
Voltage (VAC)	230 , 50/ 60Hz			
DIMENSIONS (W X D X H) IN CM AND WEIGHT (KG)				
Inner Size	42x38x57	49x42x85	58x50x102	58x57x106
External Size	67x71x141	75x76x169	83x83x190	83x90x197
Size with packing	82x86x156	90x91x184	98x98x205	98x105x212
Net Weight	125	150	175	225
Gross weight	150	200	225	250

NB:

P- Models are with Programmable logic control (PLC)

G- Models are made out of Stainless steel 304 (GMP)

LABTOP DATALINX SOFTWARE

Title 21 CFR Part 11 is the part of Title 21 of the Code of Federal Regulations that establishes the United States Food and Drug Administration (FDA) regulations on electronic records and electronic signatures (ERES). Part 11, as it is commonly called, defines the criteria under which electronic records and electronic signatures are considered trustworthy, reliable, and equivalent to paper records.

- 21CFR-PART 11 compliance.
- Browser based software
- Multiple chamber data acquisition on single software.
- Reports in Tabular and Graphical form
- Mean Kinetic Temperature Report.
- Automatic Back up Provision.
- Privilege based Group creation
- Privilege based user creation
- Trend analysis report
- Equipment audit trial report
- User ID with Alfa numeric password protection
- Multi user environment (LAN)
- Multiple level password with automatic expiry
- Electronic signature
- Separate reports for alarm and events
- Remote integrations with Control systems.
- Software audit trial report
- Email, SMS and call alert in case of system failure
- Online and offline trends

OPTIONAL ACCESSORIES

- **Temperature Data Scanners**

8 /16 Channel programmable temperature Data Scanner for record, store and print the data online and off line with variable print time intervals, suitable for 80 col. Dot matrix printer.

- **PLC system**

Programmable Logic Control with Safety controller, auto changeover of Standby systems & other event managements With 4.3” Color HMI with touch screen, Ethernet connectivity and security lock for prevention of unauthorized tampering.

- **PC interface**

communication Micro controller based PID controller to record, store and print the set values, process values, Date & time with variable print time intervals with RS-485 communications for PC interface.

- **Software**

LABTOP “DATALINX” CFR 21 Part 11 compliance communication software for data management. Complete with RS- 485 multi dropping to monitor multiple chambers to one software.

- **Mobile alert**

Mobile alert via GSM Technology in case of system failure.

- **Power Backup**

Uninterrupted online power supply for PLC in case of power failure.

- **Trays**

Additional tray suitable for above equipment as per your requirement.

- **Door access**

Biometric magnetic door access for secured door opening with software to maintain log record

- **Calibration**

The equipment is calibrated with the help of master calibrator, which is certified for its accuracy by Electronics Regional Testing Laboratory (ERTL West) Government of India recognized testing laboratory with reference to National Physical Laboratories (NPL).

- **Documentation**

For GMP complaint models LABTOP offers IQ, OQ and PQ validation with documentation, reports, calibration and test certificates.