



Technical Specifications							
Volume	6000	8000	10000	12000	15000	18000	22500
Temperature range	5.0 – 60.0 °C						
Accuracy	± 0.2 °C						
Uniformity	± 2.0 °C						
Door Size	750 x1800 mm						
Observation window	300 x 1400						
Wall Thickness	80 mm						
Density	40 kg /m3						
Inner size (WxDxH) cm	200 x 150 x 200	200 x 200 x200	200 x 250 x 200	200 x 300 x 200	200 x 300 x 250	250 x 300 x 250	300 x 300 x 250
Outer size (WxDxH) cm	216 x 166 x 216	216 x 216 x 216	216 x 266 x 216	216 x 316 x 216	216 x 316 x 266	266 x 316 x 266	316 x 316 x 266
Number of Racks	4	4	6	6	8	10	10
Number of trays	16	24	32	48	48	48	48
Tray size	600x600	600x900	700x600	900x600	900x600	900x600	900x600
Power	4000 W	5000 W	5000 W	6000 W	6000 W	7000 W	9000 W
Voltage	230 / 415 VAC, 50/60 Hz						



REFRIGERATION SYSTEM

The cooling is effected by CFC free refrigeration system with split type condensing unit located outside the room. Laptop condensing units are characterised by high-efficiency heat transfer and low power consumption.

- CFC free refrigeration with time delay to safe guard the compressor .
- Powder coated body to make the units UV and corrosion resistant.
- Inner grooved copper tubes and slit aluminium 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.
- Smaller footprint for ease of handling and installation.

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.

- 7" 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.
- Display of set value and process value.
- High speed Ethernet connectivity .
- 1 min- 999 hrs timer.
- 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.
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- 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.



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 .

SAFETY FEATURES

- Miniature circuit breaker to protect electronic components in case of abnormal power supply
- Audio visual alarm for temperature variations from set Values
- Safety includes shut off air heaters in case of temperature overshoots or undershoots beyond specified limits with alarms
- Overload load protector to safe guard compressor.
- Provision for mobile alert via GSM technology for any abnormal conditions
- Self closing mechanism ensures that the door remains closed
- Facility to open the door from inside in case of door locked with emergency alarm having switch inside chamber

GMP Model: Inside and outside chamber is made stainless steel 304

Standard Model: Inside stainless steel 304 and outside galvanised Iron pre painted

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.

- **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

- **Gas purging**

Gas purging facility for inserting Co2 or any other gas

- **Stand by Refrigeration system**

Ready to use stand by refrigeration system if the regular system fails (for 600 litres and above). This includes Compressor, Evaporator, condensers and other accessories.

- **Light bank**

Chamber Illumination LED light bank for photosynthesis studies

- **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 rack and 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

- **Documentation**

LABTOP offers IQ, OQ, PQ and DQ validation with documentation, reports, calibration and test certificates.

- **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 traceable reference to National Physical Laboratories (NPL).