

## Salient Features

- Full fill the storage conditions of ICH guidelines such as 25° C-60% RH, 40.0C-75% RH, 30.0C-65% RH.
- Storage conditions such as 25°C -40% RH,40°C-25% RH, 30° C-35% RH are available on request..
- Non Condensing steam injection type humidity system .
- Specially designed solid stainless steel wire mesh trays ensure even temperature distribution.
- High quality PT-100 Sensor for better accuracy .
- Unidirectional air flow system ensures even temperature distribution and quick recovery after door openings.
- Chamber illumination with LED light.
- Various accessories are available as option .
- User friendly height adjustable trays .



## REFRIGERATION SYSTEM

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



- CFC free refrigeration with time delay to safe guard the compressor .
- 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
- 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.

- 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.
- Display of set value and process value.
- 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.
- Individual Alfa numeric user ID and password.
- User operation will be recorded and saved in memory.
- Online and offline Log reports on HMI.

- 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 .

## SAFETY FEATURES

- Miniature circuit breaker to protect electronic components in case of abnormal power supply
- Audio visual alarm for temperature, humidity variations from set Values
- Safety includes shut off of boiler and air heaters in case of temperature overshoots or undershoots beyond specified limits with alarms
- Low water level alarm and power cut off to safeguard the boiler heater
- 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

Technical Specifications									
<b>Volume</b>	100 Liters	200 Liters	300 Liters	400 Liters	600 Liters	800 Liters	1000 Liters	1500 Liters	2000 Liters
<b>Temperature range</b>	20.0 – 60.0 °C								
<b>Accuracy</b>	± 0.2 °C								
<b>Uniformity</b>	± 2.0 °C								
<b>Humidity Range</b>	40 – 98% RH								
<b>Humidity Accuracy</b>	± 2 % RH								
<b>Uniformity</b>	± 3 % RH								
<b>Control System</b>	PLC								
<b>No. of tray</b>	2	3	4	4	4	8	8	10	10
<b>No. of Doors</b>	Single	Single	Single	Single	Single	Double	Double	Double	Double
<b>Power</b>	1500W	1750W	1750W	1750W	2000W	2500W	3500W	3500W	3500W
<b>Voltage</b>	230V AC / 50/60 Hz								
Dimensions (W x D x H) in mm and weight (kg)									
<b>Internal Dim</b>	435x400x600	505x400x1005	565x450x1205	635x530x1205	745x670x1205	1120x600x1200	1150x670x1300	1300x890x1300	1500x1030x1300
<b>Internal Dia</b>	580x845x1275	650x880x1680	710x935x1885	780x1010x1880	890x1150x1960	1370x1075x1920	1400x1145x1920	1550x1365x1920	1750x1505x1920
<b>Packing Size</b>	707x972x1478	777x1007x1883	837x1062x2088	907x1137x2083	1017x1277x2163	1497x1202x2123	1527x1272x2123	1677x1492x2123	1877x1632x2123
<b>Net Weight</b>	125	150	205	260	285	315	340	365	385

<b>Gross Weight</b>	180	230	280	330	355	405	430	460	485
---------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----

## 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 and Humidity Data Scanners

8 /16 Channel programmable Data Scanner (4 temperature and 4 humidity) 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

### 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.

### 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). **Service and Support**