



# COOLING INCUBATOR

**Labtop Cooling Incubator** are specially designed to conduct life cycle testing , Shelf life studies , general incubation and refrigerated storage. Temperature range adjustable from 5.0°C to 60.0°C with Micro controller based temperature controller. Chambers are exclusively used for seed testing, Biological studies etc..

## 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, 0.8 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.

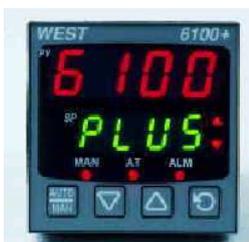


- CFC free eco friendly refrigeration system
- Inner grooved copper tubes and slit aluminum fins for superior heat transfer
- Filter drier for moisture and dirt protection
- Safety and control devices for better system protection
- Thermally protected and permanently lubricated fan motors

## SAFETY FEATURES

- Miniature 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
- Safety cut off when temperature crosses 60.0°C.
- Overload protector to safe guard the compressor
- 180 seconds Time delay for compressor switch ON

## PID CONTROL SYSTEM



- Micro-control based Temperature controller
- 4 digit, 7 segment LED display
- Password protected keypad lock
- Visual alarm for faulty Sensor
- Display of set value and process value
- High quality PT-100 Sensor for better accuracy
- Programmable temperature Hi-low alarm setting

# 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
- Temperature controlled by PLC
- 1- 999 Minutes 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
- 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

## SALIENT FEATURES :

- Foamed in place CFC free PUF insulation ensures temperature stability and reduced power consumption.
- Unidirectional air flow system assures even temperature distribution and quick recovery after door openings
- Specially designed solid stainless steel wire mesh trays ensure even temperature distribution.
- Chamber illumination with fluorescent LED light
- U shaped Stainless Steel Nichrome wire heater
- Caster wheels for ease of mobility
- High quality PT-100 Sensor for better accuracy

TECHNICAL SPECIFICATIONS									
Cat. No.	LCI -100	LCI - 200	LCI-300	LCI - 400	LCI - 600	LCI - 800	LCI - 1000	LCI - 1500	LCI - 2000
	LCI-100G	LCI-200G	LCI-300G	LCI-400G	LCI-600G	LCI-800G	LCI-1000G	LCI-1500G	LCI-2000G
	LCI -100P	LCI - 200P	LCI-300P	LCI - 400P	LCI - 600P	LCI - 800P	LCI - 1000P	LCI - 1500P	LCI - 2000P
	LCI-100GP	LCI-200GP	LCI-300GP	LCI-400GP	LCI-600GP	LCI-800GP	LCI-1000GP	LCI-1500GP	LCI-2000GP
<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>	5.0 - 60°C								
<b>Accuracy</b>	± 0.5°C								
<b>Uniformity</b>	± 1.0°C								
<b>Control system</b>	Micro control / PLC								
<b>No. Doors</b>	Single	Single	Single	Single	Single	Double	Double	Double	Double
<b>No. Of tray</b>	2	3	4	4	4	8	8	10	10
<b>Power</b>	775 W	775 W	775 W	800 W	1150 W	1500 W	2300 W	2300 W	2300 W
<b>Voltage</b>	230 VAC , 50/60Hz								
<b>Dimensions (W x D x H) in mm and weight</b>									
<b>Internal Dim</b>	435x400x600	505x400x1005	565x450x1205	635x530x1205	745x670x1205	1120x600x1205	1150x670x1300	1300x890x1300	1500x1030x1300
<b>External 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>	120	145	200	255	280	310	335	360	380
<b>Gross Weight</b>	175	225	275	325	350	400	425	450	480

Note: P Models are with Programmable logic control (PLC)  
 G Models are made out of Stainless steel 304 (GMP)

## LABTOP DATALINK 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.
- Web 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

### 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

### Data Scanner

Eight/Sixteen 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.

### Stand by Refrigeration system

Ready to use stand by refrigeration system if the regular system fails. This includes Compressor, Evaporator, condensers and other accessories.

### 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 communication.

### Software

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

### Timer

Micro controller based programmable cyclic timer of 999 Hrs for controlling of various conditions.

### Light bank

Chamber illumination with LED lights bank for photosynthesis studies

### Ultra violet lamp

Chamber illumination with UV-C lamp to sterilize the interior

### Mobile alert

Mobile alert via GSM Technology in case of system failure.

### Door access

Biometric magnetic door access for secured door opening and closing with PC interface communication.

### 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

## DOCUMENTATION

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

## 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).

## SERVICE AND SUPPORT

The training undertaken by our Channel partners and engineers is of the highest standard in the industry, ensuring that our customers are supported by the highest level of technical expertise and as such can be assured that their equipment will perform to the standards required at all times.

Our wide network of Engineers/Technicians enables us to respond to any technical query, ensuring that our customers receive the maximum benefit from their equipment.

NB: Specifications are subject to change without prior notice.

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