



LABTOP SHAKERS AND SHAKING INCUBATORS

TRUST KEEPS US IN UPTIME MODE

LABTOP SHAKING INCUBATORS

LABTOP Programmable logic controlled (PLC) Orbital shakers and shaking incubators are designed for a wide range of applications including solubility studies and cell cultures that require accurate and reproducible results. The shaking system delivers exceptional speed control, accuracy, and durability while continuously monitoring shaking speed and set point, even under changing loads. The variable speed micro control provides consistent, uniform mixing action.

CABINET CONSTRUCTION

The cabinet of Labtop Shaking incubators are insulated (3" Thick) with high density CFC free Poly Urethane Foam. Interior of chamber is dull 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 a glass front which enables the user to see the samples without opening the chamber. Customized models are also available on request.

REFRIGERATION SYSTEM

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



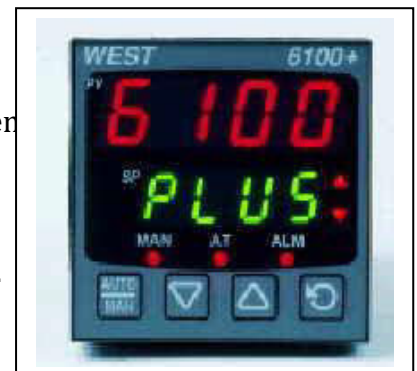
- ❖ CFC free refrigeration with time delay to safe guard the compressor
- ❖ Inner grooved copper tubes and slit aluminium fins for superior heat transfer
- ❖ Filter drier for moisture and dirt protection
- ❖ Safety and control devices for better system protection
- ❖ Thermally protected and permanently lubricated fan motors
- ❖ Overload protector for safe guard the compressor

SAFETY FEATURES

- ❖ Main circuit breaker to protect electronic components in case of abnormal power supply
- ❖ Overload cut off relay for compressor
- ❖ 180 seconds time delay for compressor switch on
- ❖ Smooth acceleration and deceleration

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 faulty Sensor
- ❖ Display of set temperature and process temperature
- ❖ Temperature alarm system with adjustable high-low alarm limits.



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.



ALERT MANAGEMENT:

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

- ❖ 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
- ❖ 1- 99 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
- ❖ 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
- ❖ Data storage capacity up to 200000 readings
- ❖ Self diagnostic system with error messages

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

ORBITAL SHAKING INCUBATORS

LABTOP offers the largest selection of shaking incubators in the industry to meet a diverse range of culture and Industrial requirements. Wide speed range, with options for incubation, refrigeration, photosynthetic lighting, UV germicidal lighting and in-flask gassing.



SALIENT FEATURES

- ❖ Universal Platform to accommodate for conical flasks , round bottom flask, volumetric flask and test tube rack
- ❖ Auto- restart at set rpm when power resume
- ❖ Forward and Backward rotation programs
- ❖ Maintenance free Brushless Induction motor
- ❖ Variable frequency drive (VFD)
- ❖ Permanently lubricated bearing for noise less operation
- ❖ Quadruple eccentric drive with counter balanced mechanism for smooth and uniform mixing
- ❖ Unique air flow system ensures even distribution of Temperature
- ❖ Stationary tray for keeping Petri dishes and conical flasks
- ❖ Adjustable leveling jack
- ❖ Caster wheel for ease of mobility

TECHNICAL SPECIFICATIONS

Cat. No.	LSI-150	LSI-150R	LSI-300D	LSI-300DR	LSI-400D	LSI-400DR
	LSI-150G	LSI-150GR	LSI-300GD	LSI-300GDR	LSI-400GD	LSI-400GDR
Temperature (°C)	RT+5 to 60	5 to 60	RT+5 to 60	5 to 60	RT+5 to 60	5 to 60
Accuracy (°C)	± 0.5					
Accuracy (rpm)	± 5					
Control System	Micro Control / PLC (optional)					
Shaking motion	Orbital					
Amplitude (mm)	Ø 50					
Timer (hrs)	1 - 999					
Input Voltage	230 VAC / 50Hz					
MOC of Shaking platform	Aluminum powder coated					
Platform size(mm)	465 x 465				660x 520	
No. of Platform	1			2		
Shaking speed (rpm)	30 - 350		30 - 300		30 -250	
Inner Size	580x480x560		750x610x660		111x56x174	
External Size (mm)	720x980x1260		890x105x1450		1250x1060x1740	

OPTIONAL ACCESSORIES

Universal Platform

Universal platform with adjustable bars for different size of flask and bottles

Illumination bank

Light bank for photosynthesis studies

Ultra violet lamp

UV-C lamp to sterilize the interior

Gas purging

Gas purging facility for inserting CO₂ or any other gas

Data scanner

8 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.

PLATFORM CONFIGURATION								
Cat. No.	Platform Size (mm)	No. of Platform	100 ml	250 ml	500 ml	1000ml	2000 ml	5000 ml
LOS-60	620x620	1	64	36	25	16	9	5
LOS-90	900x620	1	117	54	40	24	15	6
LOS-120	1240x620	1	128	72	50	32	18	9
LOS-150	1590x1120	1	234	150	108	70	48	24
LOS-90D	900x620	2	234	108	80	48	30	12
LOS-120D	1240x620	2	256	144	100	64	36	18
LOS-150D	1590x1120	2	468	300	216	140	96	48
LOS-120T	1240x620	3	384	216	150	96	54	27
LOS-150T	1590x1120	3	702	450	324	210	144	72
LSI-150	465x465	1	36	25	16	9	4	2
LSI-150R	465x465	1	36	25	16	9	4	2
LSI-300D	465x465	2	72	50	32	18	8	2
LSI-300DR	465x465	2	72	50	32	18	8	2
LSI-600D	940x465	2	144	100	64	36	16	4
LSI-600DR	940x465	2	144	100	64	36	16	4
LSI-150E	465x465	1	36	25	16	9	4	2
LSI-300DE	465x465	2	72	50	32	18	8	2
LSI-600DE	940x465	2	144	100	64	36	16	4

DOCUMENTATION

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