

## **CABINET CONSTRUCTION**

The cabinet of Chambers are 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



## **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 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
- 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
- Overload protector for safe guard the compressor
- 180 seconds Time delay for compressor switch ON

## **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, Speed, Standby systems and event management with less maintenance hence no moving parts.

- PLC with 4.3" touch screen and color Display
- 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
- Auto changeover of standby systems and other event managements
- Connectivity to LABTOP DATALINX central monitoring software
- High quality PT-100 Sensor for better accuracy
- Precise control of temperature using in PID control ( auto tuning type)
- Data logging capacity up to 1000 readings



## TEMPERATURE CONTROL SYSTEM

- Micro-controller controls the internal temperature within  $\pm 0.5$  °C.
- 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
- High quality PT-100 Sensor for better accuracy
- Temperature alarm system with adjustable high-low alarm limits.



## Salient features

- Specially designed Stainless steel Plasma basket ensure even temperature distribution.
- Caster wheels for ease of mobility
- Foamed in place CFC free PUF insulation ensures temperature stability and reduced power consumption
- PUF insulated sub door to avoid temperature loss
- Various accessories are available as option
- 7 days circular chart recorder to record the temperature

| Technical Specifications                             |                     |              |              |              |               |
|--|---------------------|--------------|--------------|--------------|---------------|
| <b>Temperature °C</b>                                | -40.0               |              |              |              |               |
| <b>Accuracy °C</b>                                   | ±1.0                |              |              |              |               |
| <b>Uniformity °C</b>                                 | Better than ±3.0    |              |              |              |               |
| <b>Volume ( Liters )</b>                             | 90                  | 170          | 350          | 450          | 600           |
| <b>Plasma Bags</b>                                   | 90                  | 170          | 350          | 450          | 600           |
| <b>No. of Trays</b>                                  | 2                   | 3            | 5            | 6            | 6             |
| <b>Control system</b>                                | Micro control / PLC |              |              |              |               |
| <b>Power (W)</b>                                     | 250                 | 300          | 400          | 500          | 500           |
| <b>Noise level (db)</b>                              | 65                  |              |              |              |               |
| <b>Voltage VAC</b>                                   | 230, 50/60 Hz       |              |              |              |               |
| <b>DIMENSIONS (W X D X H ) IN MM AND WEIGHT (KG)</b> |                     |              |              |              |               |
| <b>Inner Size</b>                                    | 420x380x570         | 490x420x850  | 585x600x1005 | 685x670x1005 | 750x790x1040  |
| <b>External Size</b>                                 | 580x625x1285        | 650x670x1565 | 740x850x1780 | 840x720x1780 | 910x1040x1850 |
| <b>Net Weight</b>                                    | 100                 | 125          | 200          | 250          | 300           |
| <b>Gross Weight</b>                                  | 150                 | 170          | 250          | 300          | 350           |

## Features for DATALINX Central Monitoring software

- Multiple Equipment data monitoring on single software.
- Reports in Tabular and Graphical form
- Mean Kinetic Temperature Report.
- Back up Provision
- Multi user environment
- Multiple level password with automatic expiry
- Electronic signature
- Audit trial report
- Mobile alert via SMS in case of any deviations
- Online and offline trends

# **OPTIONAL 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 communications for central monitoring software

## **Central monitoring Software**

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

## **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.

## **Power Backup**

Uninterrupted online power supply for PLC in case of power failure

## **Chart paper**

One packet (100 Nos.) 7 days circular chart suitable for temperature recorder

## **Fiber tip pen**

One packet (5 nos.) fiber tip disposable pen suitable for temperature recorder

## **Documentation**

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