



# STABILITY STUDIES ?

Thermolab is a one stop solution for all your stability requirements



**SERVICE** 

Walk in Stability Chamber



### WALK-IN STABILITY CHAMBERS

#### **BUY-STABILITY STORAGE**

Thermolab Stability testing chambers are designed to meet, if not exceed, stringent quality standards recognized internationally. Offering all temperature and relative humidity conditions specified in **ICH guidelines** as below:

• 25 °C / 60% RH • 30 °C / 65% RH • 30 °C / 70 % RH • 30 °C / 75% RH

● 40 °C / 75% RH ● 25 °C / 40% RH ● 30 °C / 35% RH ● 40 °C / NMT 25% RH

Today, other than Pharma and Bio-pharma products, stability studies are required for Alternate medicines, Food & Beverages, Medical devices, Cosmetics and other items to check the environmental effects on the product.

#### **RENT- STABILITY STORAGE**

Thermolab group also offers world class stability storage facility and Analytical testing laboratory. Thermolab Analyticals is a NABL accredited laboratory with FDA and ISO 9001:2015 certifications.

#### SERVICE- STABILITY CHAMBERS

Thermolab provides a worldwide service network of trained engineers who can take care of calibration, validation, repairs and maintenance contract of chambers.



#### STANDARD FEATURES

- Prefabricated modular structure with PUF / Rockwool insulated panels and reinforced floor panel.
- Interior Stainless Steel and Exterior PPGI / Stainless Steel finish.
- Adequate illumination inside the chamber.
- Glass view panel with specially designed leak proof door.
- Racks and trays made of Stainless Steel with adjustable tray heights.
- CFC free refrigeration systems.

#### Man, Machine, Product and Environmental Safety

- Safety system to cut off the power supply in case of overshoot and undershoot of Temperature and Humidity conditions giving audio visual alarms.
- Additional safety thermostat to cut off the power supply in case of temperature overshoots.
- Low water level alarm for humidity system.
- Emergency push button inside the chamber to de-energise magnetic lock.
- Panic switch inside the chamber with audible alarm outside.
- Manual unlocking mechanism for door from inside the walk-in chamber.
- Environment friendly processes and refrigerants used.



### HYDRONIC COOLING SYSTEM

- Thermolab has innovated a unique chilled water circulation system which reduces the electrical consumption by 60% and water consumption by 90%.
- Factory assembled refrigeration system, avoiding on-site piping work.
- This unique design enables maintenance of optimum cooling coil temperatures depending on the chamber conditions and resultant Dew Point.
- The life of compressor increases as the running time of compressor has enormously decreased.
- Compact plug and play design and can be placed behind the chamber or in the technical area.



# AIR PROCESSING UNIT (APU)





- Designed to achieve optimum energy utilization with Integrated Cooling, Heating and Humidifying system.
- The airflow is designed to have uniform conditions throughout the chamber.
- Custom designed supply and return air ducts particularly for chambers having larger storage volumes.
- Sleek APU design resulted in increased storage volume.

# **CONTROL PANEL**

- Newly designed control panel as per international electrical safety standards.
- PLC based control system with 7" colour HMI and front mounted compact design.
- Country specific electrical panel design to comply with local electrical standards.
- Works on 110 / 220 / 440 Volts and 50 / 60 Hz.







### **ADDITIONAL FEATURES**

- Windows based SCADA software for data management having support for 21 CFR Part 11 compliance.
- 100% redundant refrigeration & humidity systems with automatic changeover.
- 8 point temperature and 8 point relative humidity monitoring sensors for online mapping.
- Standby temperature and humidity sensors.
- Printer interface and data storage facility.
- Email and mobile alert systems.
- Ethernet communication protocol.
- Door Access Security system.
- Remote audio visual alarm.

## TECHNICAL SPECIFICATIONS

Temperature Control Accuracy / Uniformity :  $\pm 0.2$ °C /  $\pm 1$ °C Humidity Control Accuracy / Uniformity :  $\pm 2$ % RH /  $\pm 3$ % RH

### **CAPACITIES**

#### STANDALONE STABILITY CHAMBERS

90 L, 200 L, 325 L, 400 L, 600L, 800L, 1000L & 2000 Litres.

#### Walk-in Stability Chambers

3000 L , 4500L , 8000L , 12,500L, 18,500L , 28,000L, 36,000L, 50,000L, up to 700,000 Litres.

Note: Other Walk-In sizes are available on request. Low RH chambers can be specially designed as per user specifications.

# FLAMEPROOF CHAMBERS

 $Detailed \ technical \ specifications \ of \ Thermolab \ Flame \ proof \ chambers \ can \ be \ provided \ on \ request.$ 

# COLDROOMS FOR STABILITY TESTING

Thermolab offers a wide range of cold rooms (2°C - 8°C) for stability testing of drug substances intented for storage in a refrigerator as per ICH guidelines.



# STABILITY CONTROL SYSTEM SOFTWARE

21 CFR Part 11 requires that all appropriate electronic records are attributable, legible, contemporaneous, original, and accurate and maintained with integrity. Our software guarantees just that.

#### **SALIENT FEATURES:**

- Third party validated software
- Complies with GAMP 5 category 4
- Guaranteed Data Integrity
- Password protection
- Audit trails
- Secured electronic records
- Electronic signature
- MKT calculations
- Event logging report
- Door access report
- Auto Back-up and restore facility
- Complete with IQ, OQ, PQ documents.

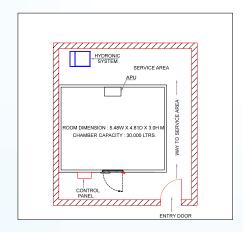


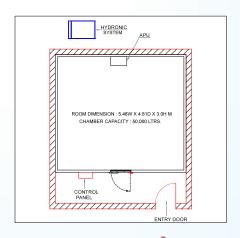


### DOCUMENTATION

Complete with IQ, OQ, PQ documents, Operation and Maintenance manuals

# WALK-IN STABILITY CHAMBER LAYOUT OPTIONS





#### **AWARDS**

• Award for Leaders in Sustainable Stability Chambers For reducing electrical consumption by 60% and water consumption by 90%

India Design Mark Award

#### **CERTIFICATIONS AND APPROVALS**









#### **SALIENT FEATURES** [CONTD...]

- · Stand by refrigeration and humidity system.
- · Complete safety and alarm system.
- GSM mobile alert system.
- Door access security system.
- Alternative PLC with touch screen display with ethernet.
- · Web based online remote monitoring.
- · Utility management system.
- Extensive DQ, IQ, OQ and PQ protocols.
- Works on 440V AC three phase 50Hz.

#### **TECHNICAL DATA**

Standard Model (S) : Inside stainless steel matt finish & outside mild steel powder coated.

GMP Model (G) : Inside and outside stainless steel matt polish.

Temp. Range / Accu. :  $20^{\circ}$ C to  $50^{\circ}$ C /  $\pm$  0.2°C Temp. Uniformity :  $\pm$  2.0°C

Humidity Range / Accu. : 40% to 90% RH / ± 2.0% RH Humidity Uniformity : ± 3.0% RH

Models	Capacity	Dimensions in mtrs.						No. of Trays
		Internal			External			No. of Hays
(S) OR (G)	Ltrs.	W	D	Н	W	D	Н	
TH 20 S/G	2000	1.76	0.95	2.00	2.22	1.11	2.16	10
TH 45 S/G	4500	2.45	0.95	2.00	2.91	1.11	2.16	14
TH 80 S/G	8000	2.00	2.00	2.00	2.16	2.95	2.16	24
TH 125 S/G	12500	2.50	2.50	2.00	2.70	3.45	2.16	28
TH 187 S/G	18750	2.50	3.00	2.50	2.70	3.95	2.70	36
TH 225 S/G	22500	3.00	3.00	2.50	3.16	3.95	2.70	40

#### Note:

Other sizes are available on request.

- a. Above chambers are suitable for conditions such as 25°C / 60% RH, 40°C / 75% RH and 30°C / 65% RH.
- b. Low RH chambers are also available for conditions of 25°C / 40% RH, 40°C / 25% RH and 30°C / 35% RH.

Biggest Walk-In Stability Chamber manufactured, installed and validated is of 2,67,500 ltrs volume with size of W X D X H = 11.89 X 7.5 X 3.0 mtrs.



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