

Product Name :
Environmental Test Chamber**Product Code :**
EVL0001 LAB ENGINEERING**Description :**

Environmental Test Chamber

Technical Specification :

Double walled, inside chamber stainless steel, outer body made of CRC/G.I. - powder coated, Temp. Range from ambient +5° C to 60° C controlled by Dual Display Microprocessor based Digital Temp. Controller with +/- 0.5° accuracy, Humidity range from atmospheric humidity to 95 % controlled by Dual display Microprocessor based Digital Temp. Controller (Dry and Wet bulb method) with + 3 % RH. Inner water tank made of stainless steel with ball cock valve. Front door has a full view glass observation window. Chamber Size(cm) Cu. Trays Ft. H W D 45 X 45 X 45 3 2 71 X 45 X 45 6 3 90 X 60 X 60 12 3 OPTIONAL FITTINGS Microprocessor based direct RH digital controller in place of Digital Temp. controller. Hygrometer(0 - 100%) Environmental Test Chamber WITH REFRIGERATION SYSTEM : With Refrigeration System. Double walled, inside chamber stainless steel, outer body made of CRC/G.I. - powder coated, Temp. Range from 10° C to 60° C controlled by Dual display microprocessor based Digital temp. indicator cum controller with $\pm 0.5^{\circ}$ C accuracy or better. Cooling system consist of high efficiency Kirloskar Make compressor with relevant accessories. Humidity range from atmospheric humidity to 95 % controlled by Dual display Microprocessor based Digital Temp. Controller (Dry and Wet bulb method) with accuracy + 3 % RH or better. Inner water tank made of stainless steel with ball cock valve. Front door has a full view glass observation window. Chamber Cu. Trays Size Ft. H W D 45 X 45 X 45 3 2 70 X 50 X 50 6 3 90 X 60 X 60 12 3 OPTIONAL FITTINGS AT EXTRA COST : Illumination by 2 nos. fluorescent tubes. Digital Environmental controller (Direct % RH Type) Temp. range (dry) 5 to 60°C. Humidity range upto 95% Digital controller (Direct % RH Type) Temp. range (dry) above ambient to 60°C. Humidity range upto 95% with Printer interface to connect any dot matrix line printer. Features : Microprocessor based, programmable - date, time, humidity/temp., print interval. Data memory storage capable of storing data upto 30 days. High/Low deviation alarms, low water level electronic cut-off with visual alarm. Shared printing compatibility with other

Humidity Ovens. Computer Software (HControl) provided Digital Controller with printer interface installed to monitor from computer in remote location. Single software for three Humidity Oven.(however, cabling shall be charged extra) 01) 4 Point Temp. + 4 point Humidity data logger with sensors placed at specific points in chamber with printer interface and memory. 02) Voltage Stabilizer for above 6 KVA The above Humidity Oven can be converted into PLANT GROWTH CHAMBER by using 4 fluorescent tube light provided with 24 hours ON/OFF programmable timer for Day /Night effect. Temp. range 15° to 60° C. At extra cost. Environmental Test Chamber FOR STABILITY STUDIES : Construction : Double wall construction interior fabricated of stainless steel(S.S.304). Exterior of corrosion resistant galvanized sheet, finished in powder coated epoxy paint. Full size glass inner door to inspect samples without affecting the chamber temp. outer double walled metal door with magnetic gasket and lock. Unit mounted on castor wheels for easy movement. Insulation : 70mm polyurethane insulation (PUF) to ensure better insulation and less leakage of temperature or 10% RH from inner body to the surroundings. Air Circulation : Temperature is maintained by a quiet running blower circulation air through out the chamber. Forced air circulated vertically down and re circulated through out the chamber for uniform temperature and humidity. Humidity : Humidity created by steam injection method. The boiler tank is fitted in the back side of the chamber for better servicing, Electro magnetic switch for controlling the wet heater from burning off if water level is not adequate. Float valve provided to control water level in the boiler tank. Heating & Cooling System : Long lasting SS tubular heaters used as heating element. The stainless steel tins provided to ensure better heat transfer. Hermetically sealed compressor CFC free compressor (134 A gas) coupled with evaporation coil and condensor. Trays : Removable perforated trays provided made of S.S. Control : Microprocessor based temp and direct RH digital PID controller. Humidity directly measured in % RH by electronic sensor. Temp. Range : 10 to 70°C, Accuracy +/- 0.5°C Humidity Range : 40% RH to 90% RH Accuracy +/- 3% RH ICH Guidelines : As per ICH Guide lines, stability studies to be carried out under the following conditions. Long Term : At 25°C (+/- 2°C) & 60% RH (+/- 5% RH) STANDARD MODEL : Chamber size Cu. Trays H W D Ft. 45 X 45 X 45 3 2 70 X 50 X 50 6 3 90 X 60 X 60 12 3 125X 60 X 60 16 4 GMP MODEL Documents : IQ/OQ/PQ documents required as per ICH guidelines. Calibration certificate for controller and standard operating procedure (SOP). Chamber size Cu. Trays H W D Ft. 45 X 45 X 45 3 2 70 X 50 X 50 6 3 90 X 60 X 60 12 3 125X 60 X 60 16 4 Validation ; Validation of the chamber (Heat Mapping) will be done at 8 zones in the chamber using 8 channel scanner (4 works and printout of the result will be provided. For on site validation charges extra. OPTIONAL FITTINGS AT EXTRA COST : Digital Controller with Printer Interface to connect EPSON dot matrix line printer. Print Interval programmable, can print date, time, temp. and humidity. Also with standard PC software and connectivity. * 21 CFR Part 11 Compliance Software Datalogger : 4 point temp. + 4 point humidity datalogger with sensors placed at specific points in chamber with printer interface and memory of 5000 readings per channel. 21 CFR Part 11 Compliance Software Additional high temperature safety system to cut-off all heaters with audio-visual alarm ensuring temp. within chamber doesn't exceed +70°C Voltage Stabiliser for above unit. EPSON dot matrix 80 column Printer with stand. Standby Humidity and Refrigeration system. 10 Ltr. capacity aspirator bottle(PP) for storage of Mineral water and to serve as input water source for the Water tank/ Steam boiler of Oven Silicon rubber tubing - 3 meter for water supply from reservoir to Boiler (Option h and i are compulsory - either customer should have his own arrangement or should be ordered alongwith the Humidity Oven) PRE INSTALLATION MANDATORY REQUIREMENT : Distilled water OR DM water continous supply with tap for boiler input of 1/2" BSP at 3 feet height. Room temperature around machine preferably @ 25°C. with air conditioning or a well ventilated room with exhaust fan. However, surrounding temperature should not exceed 30 Deg.C. Stabilized Input Voltage of 230V AC 20 Amps. Use of Servo Controlled Stabilizer is recommended. Water drain line with 1/2" nozzle to be provided at floor level..

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