



Technical catalogue of Plant growth walk-in Chamber (Model-SET8THL)

1 Key Technical Specifications:

- 1.1 Climate simulation specifications:
 - 1.1.1 Interior dimension: 7.4'Lx7.4'Wx7.8'H
 - 1.1.2 Exterior dimension:8.0Lx8.0Wx8.0H
 - 1.1.3 Temperature range: 15° - 40°
 - 1.1.4 Relative humidity range between 21°~35°: 65%~85%RH
 - 1.1.5 Temperature accuracy: $\leq 1^\circ$
 - 1.1.6 Humidity accuracy: $\pm 3\%$ RH
 - 1.1.7 Growth Area in the shelves: 48 sq.ft.
 - 1.1.8 Growth Height between the light and shelf : 20 inches

2 Cabinet Structural Features:

- 2.1 Exterior shell materials of SET8THL: Pre Painted plate
- 2.2 Interior shell materials for SET8THL: Pre Painted plate
- 2.3 Interior Floor : Epoxy flooring/ Concrete floor provided by customer
- 2.4 Heat insulation materials: Hard Poly Urethane foamed plastic of 4" thickness
- 2.5 Single wing door with inner viewing window facility with lock and key and fitted with sweeping gasket and glass with light tight cover

3 Air-conditioning System:

- 3.1 Regulation and control: Dual discharge evaporator coils, re-circulated air in the room by distributed uniform horizontal through back wall Plenum
- 3.2 The conditioning system contains all necessary fans, heaters and valves
- 3.3 Heating: Stainless steel sheated heater(surface evaporating system)
- 3.4 Humidifier : Fogging humidification system

4 Lighting System :

- 4.1 Light intensity over each growth area is 300 Micromoles(20000 lux) measurable at six inches bottom of the canopy
- 4.2 Nine LED Lights (suitable spectrum for plants) in each canopy on each tier
- 4.3 Four Numbers of 3.0"L x 2.0"D x 6.0"H shelving systems each with two tier each and individual Light canopy for each tier
- 4.4 Stainless steel shelf and MCB protection is provided for Lights in control panel
- 4.5 Programming (Light/Dark) control for the Lamps will be by Controller
- 4.6 The lights will be controlled in Level mode (0 level-All tubes OFF, 1level-4tubes ON, 2level-5tubes ON, 3level-All tubes ON in each canopy)- NON DIMMABLE MODE.



5 Cooling System:

- 5.1 Single Scroll Compressor system for maintaining the temperature in chamber
- 5.2 Hot gas by pass system control is provided for precise climatic control
- 5.3 Condensing unit is charged with CFC free refrigerant
- 5.4 Refrigeration function monitored by controller including visual and audible alarm.

6 Control system:

- 6.1 Sampling sensor:
 - 6.1.1 Temperature sensor: Reading displayed will be average of two NTC sensors (which is more uniform and reliable)
 - 6.1.2 Humidity sensor: Electronic capacitive humidity sensor.
 - 6.1.3 Programmable PLC and Touch Screen controller
 - 6.1.4 Resolution: Temperature: 0.1°, Humidity: 0.1%RH
 - 6.1.5 Set-range: Temperature: 15°~40°; Humidity: 65%~85%RH; Light: 0~300
 - 6.1.6 Audible alarms are included based on user defined limits

7 Security protection system:

- 7.1 Over-temperature protection
- 7.2 Overload protection of motor
- 7.3 Fuse for control and lighting circuit
- 7.4 Flange Mount Disconnect for Power
- 7.5 Humidity water shortage protection

8 Equipment working condition:

- 8.1 Ambient Environment:
 - 8.1.1 Ambient temperature: 20°~35°, Relative humidity: ≤75%RH
- 8.2 Power supply requirement:
 - 8.2.1 Power voltage: AC415±10%V 50Hz, 3-phase + ground wire protection;
 - 8.2.2 Power switch: Air switch (knife-switch not allowed) Max. Current 20A.
- 8.3 Water & air requirement for Humidity:
 - 8.3.1 Water flux:5l/h, Water pressure: 0.5-2bar, Air pressure: 0-3 bar

9 After-sale service:

Charge-free warranty will last for 1 year from the date of equipment delivery. After the warranty period, the user will be charged properly. Irregular examination and life-long service are available.



Sreekara EnviroTech Pvt Ltd.

10 Technical training: Provide Charge-free training to two operators for each user (in user site after installation and commissioning of the equipment).

11 Accessories:

11.1 Warranty Certificate, Operation & Maintenance Manual Circuit diagram: one copy

