Plant Growth Chamber

Model No: ATI-126

ACMAS Technologies Inc.

CE | An ISO 9001:2000 Company

OBROMAX

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The plant growth chambers are compact laboratory equipments that provide highly precise control of various environmental parameters, facilitating their use for a wide variety of teaching, research and testing applications. These controlled environment systems offer a wide temperature range and lighting patterns and are used for the cultivation of all types of crop plants, cereals and trees. They find widespread usage in agricultural and research laboratories and educational institutes and are commonly employed for plant physiology and plant pathology research, drug development and testing applications and bioengineering studies. The flexible configuration of these plant growth chambers allows their use for basic day to day laboratory applications as well as highly complex and demanding research applications with considerable ease. These equipments are designed for highly versatile applications and also find their use for multiple research programs.

Salient Features:

- Energy Efficient
- robust construction
- Low maintenance
- Reliable
- CFC free cooling (Optional)
- Customizable
- Thermal Efficient Insulation

Construction :-

- Inner chamber is made up of high grade stainless steel SS-304 (SS-316 is optional)
- Outer chamber is made up of epoxy coated mild steel (SS-304 is optional)
- Tray is also supplied to make the shelves inside the chamber.
- Glass Wool Insulation: reduces heat losses in cabinet for better sensitivity and economical operations with minimal impact on the environment.
- Forced air circulation in the chamber by a blower ensures uniform temperature and humidity inside the chamber.
- Door: is provided with magnetic door closer and its outer body is made of powder coated MS and inner is made of SS-304.

Heating: is done with ISI marked strip type heaters placed around the inner chamber. The warm air is evenly distributed throughout the chamber through efficient motor fans ensuring very good temperature sensitivity

Cooling: We use energy efficient ISI marked high end CFC free compressors conforming to latest international standards and guidelines.

Humidity Range : 20 % to 80% Humidity range according to the humidity temperature graph attached)

Humidification: Humidity is achieved by generating of steam by immersion type water heater in water reservoir & its subsequent condensation in the circulating air.

Humidity Sensitivity: Humidity is controlled by imported Humidistat and is indicated by round hygrometer with an accuracy of + 3%

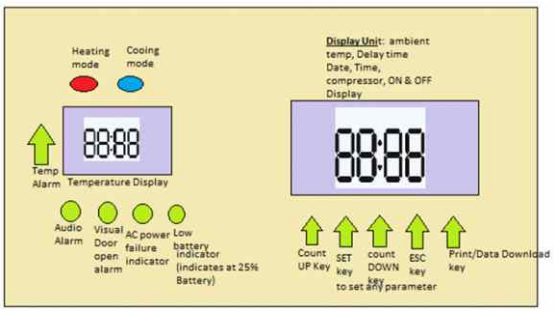
Temperature Control: The temperature inside our chambers is controlled through programmable micro-processor based temperature controller cum indicator.

Temperature Range : Temperature range of cabinet would be 4 deg Celsius to 60 deg C.

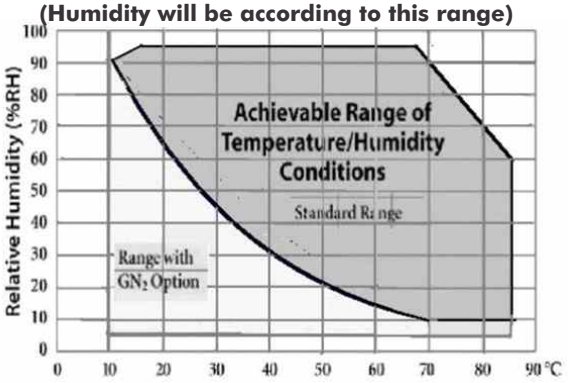
Temperature Sensitivity: Temperature inside our chambers is controlled with a sensitivity of + 0.5o c or better.

Air Circulation: circulated by ISI mark silicon winded motors which are connected to balanced blowers.

Microcontroller Based Control Panel



Temperature Vs Humidity Graph
(Humidity will be according to this range)



Technical Specifications

Construction	Inner	SS-304
	Outer	Powder coated MS
	Door	Inner SS-304 and outer MS
Temperature	Range	4 to 60 deg C
	Deviation	+ 0.5 degree C
	Readability	+ 0.5 degree C
	Sensor	PT-100
Shelves	Number	2
	Dimension	According to inner size of cabinet
	Maximum load	20 kg
Humidity range		20 % to 80%
Controller		PID controller
Display		LED or LCD
Serial Data Port		RS 232
Power consumption		230 V, 50 Hz
Castors		Lockable
Dimensions (Inner chamber)		775x900x775
Water reservoir		22 ltrs
Light Control	Readability or Set ability	10%
	Light intensity (Middle chamber)	180 micro mol
	Both sides	100-150 micromol
Optional Accessories		
	Timer	1-999 hours
	Insp. window	In door
	LCD display	2 * 24 character display
	Adj. alarm limits Real time program	Visual and acoustic

Standard size: 10/12/20/20 cu.ft. (Customizable)

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