

PLANT GROWTH CHAMBER

IG-PGC Series



IGENE LABSERVE

Innovative • Interactive • Intuitive

FEATURES & SPECIFICATIONS

Our Plant Growth Chamber are designed to create extremely stable temperature and Plant Growth environments to analyse the effects of pre-specified conditions on life saving drugs, biological samples, electronic components and industrial parts etc.

DESCRIPTION

Construction: The overall Plant Growth Chamber is built on a rigid stainless steel frame. Thick gauge of stainless steel 304 or 316 is used. High density PUF insulation is filled between inner and external chambers. Each chamber is provided with suitable number of steel wire mesh cable trays (removable) 4 to 8 or more.

Temperature & Humidity: The temperature range of our Plant Growth chambers is 10°C to 60°C; while the Humidity range is 35% to 95% RH. As per ICH guidelines our chambers are ideal for storage conditions 25°C at 60% RH, 40°C at 75% RH, 30°C at 65% RH and 25°C at 40% RH.

Refrigeration System: For refrigeration, we equip our Plant Growth Chamber with branded CFC free compressors that are hermetically sealed and feature quiet operation.

The adjustable high/low-temperature controls with audible & visual alarms. The controller will shut down the chamber and restart when the temperature returns to normal. The system will restart automatically when the internal temperature is normal. The system shuts down power if the temperature exceeds the set range and resets automatically when it returns to normal.

Heating: SS tubular air heaters are used to generate warm temperature inside the chamber.

Humidity system: Stainless steel tank and ISI mark immersion heater features automatic water filling and low water safety device.

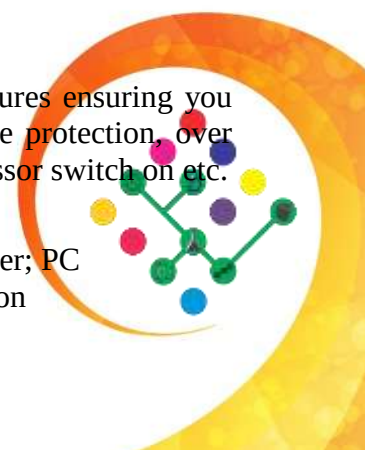
Air circulation: Air circulation is mandatory function to maintain uniform temperature and Humidity across the chamber; therefore, we equip our stability test chambers with motorized blower assembly which features quiet operation and long service life.

Control System: Our Plant Growth Chamber are equipped with self-programmed PID controllers, which feature set value (SV) and process value (PV). In addition, we also use PLC based HMI controller which is advance system and features colour touch screen, various error display, data logging and data transfer to pen drive or direct printout. We can also program and configure HMI control system as per user demand

Illumination: Interior illumination is done by LED/fluorescent light which can be supported by cyclic timer if required. It controls the ON/OFF timing of light for a week.

Safety Features: Each Plant Growth chamber is equipped with many safety features ensuring you working with a trustable machine. Each chamber is fitted with over temperature protection, over current protection and low and high temperature limits and time delay for compressor switch on etc.

Data logging: We also provide data logging feature with our Plant Growth Chamber; PC interface with RS485 communication and also 21 CFR part 11 software as an option



SPECIFICATIONS

Temperature Range	(Lights ON) 4°C – 44°C (±0.5°C stability) (Lights OFF) 2°C – 44°C (±0.5°C stability)
Temperature accuracy	±1°C
Temperature controller	Microprocessor PID controller Display of SV & PV Low / High buzzer
Humidity Range	40% to 95% RH
Humidity accuracy	±3% RH
Intensity	Programmable from 5% – 100% (Dimmable) with 240 µmoles/m ² /s per tier
Humidity controller	Microprocessor PID controller Display of SV & PV Low / High buzzer
Chamber Illumination	Fluorescent white light
Construction	Double walled
Insulation	PUF insulation
Exterior	Powder coated GI sheet
Interior	Stainless steel 304
Door	Solid insulated door with lock and key
Inner door	Glass door fitted in steel frame for full access to the chamber interior with a magnetic gasket
Shelves / trays	2 to 5 steel wire mesh trays (height adjustable)
Air Circulation	Axial fan / blower
Refrigeration	CFC Free compressor with condenser, motor and relay complete unit
Growing area and height	30 cm per tier in four-tier mode
Humidity system	SS tank with heater Low water buzzer Auto filling water system
Self-contained	Air-cooled condensing unit with hot gas bypass system for continuous compressor operation. Ceiling-mounted evaporator coil with twin air circulation fans in an aluminium housing for experiment protection. Top-mounted refrigeration system for easy maintenance access.
Optional	Stainless steel exterior (GMP) PLC based HMI controller w/ USB interface UV light Storage racks Validation port Caster wheels with brake Single-board controller for Manual, Diurnal, and MultiStep Programming

STANDARD SIZE

Model	Volume (Liters)	Inner Chamber size (mm)	Trays
IG-225PGC	225 Liters	600 x 600 x 600	2
IG-324PGC	324 Liters	600 x 600 x 900	2
IG-450PGC	450 Liters	600 x 600 x 1250	3
IG-600PGC	600 Liters	600 x 800 x 1250	3
IG-850PGC	850 Liters	800 x 800 x 1250	4
IG-1200PGC	1200 Liters	1260 x 1000 x 1940	4

