

SEED GERMINATION CHAMBER

IG- SGC SERIES



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ABOUT THE COMPANY

iGene Labserve Pvt. Ltd. is gaining recognition by offering resilient, innovative solutions in laboratory instrumentation across healthcare, genomics, drug discovery, biopharma, and food & beverage sectors. We strive to enhance lab efficacy and reduce challenges through advanced technologies and a diverse product portfolio tailored to our customer's needs.

DESCRIPTION

A Seed Germination chamber is a machine used for the germination of different types of seeds in laboratories. These machines are specifically designed growth chambers that create an artificial environment using temperature, humidity and light responsible for the germination of seeds. These chambers play an important role in crop production respectively.

FEATURES

- **Chambers:** Our seed germinators are constructed in single chamber and dual chamber designs. Dual chamber machine has two adjacent chambers and each chamber has individual temperature and humidity control system.
- **Construction:** Inner chamber of each machine is made of thick sheet of stainless steel 304; while the exterior is made of GI sheet which is powder coated for corrosion resistance surface. Each jointed is nicely moulded and arc welded.
- **Control system:** When using seed germinator accuracy is a prime requirement; therefore, we use powerful PID based temperature and humidity control system supported by high accuracy PT100 RTD sensor and capacitive sensor.

In addition, we also use PLC based HMI controller which features color touch screen, data monitoring and recording and data transfer into computer on user demand. It can be further customized to any level of comfort.

- **Cooling System:** The cooling system in our seed germinator machines are done using branded CFC free and hermetically sealed compressor with R134A refrigerant. It is long life compressor and plays important role in maintaining low temperature.
- **Humidification:** The humidification system consists of a stainless-steel tank and an ISI mark immersion heater. It also features automatic water filling device, when water goes below the low level, this device opens the valve for water re-filling.
- **Heating:** For heating system, we use tubular air or wire bead heater that are non-corrosive and feature fast heat up.
- **Air circulation:** In order to achieve uniform temperature and humidity level in every corner of the chamber forced air circulation is needed and in our seed germinator we use high quality motorized blower assembly for this purpose. This assembly not only distributes temperature and humidity uniformly all over the chamber but also offers quiet and vibration-free operation for long years.
- **Illumination:** Good seed growth mostly depends upon sufficient illumination inside the chamber; therefore, we equip our seed germination machines with high LUX fluorescent LED lights (customizable) that are controlled through a microprocessor-controlled cyclic timer. This timer controls both light and dark cycle.

SPECIFICATIONS

MODEL	IG- SGC SERIES
Temperature range	5°C to 60°C
Temperature controller	Digital PID controller
Temperature accuracy	±1%
Temperature sensor	PT-100
Humidity range	50% to 90% RH
Humidity controller	Digital PID controller
Humidity accuracy	±3%
Photosynthetic Photon Flux Density (PPFD)	150-170 $\mu\text{mol}/\text{m}^2/\text{s}$
Light timer	24x7 weekly digital timer (optional)
Construction	Double walled
Exterior	Mild steel powder coated
Interior	Stainless steel 304
Outer door	Single or double solid doors with lock & key (optional)
Inner door	Glass door to view samples
Shelves	03 to 12 (Height adjustable)
Safety	Audio / visual alarm for temperature deviation
Optional Features	• Exterior made of stainless steel 304 / 316 • PLC with HMI interface • Data logger with USB interface • Password protection for controller • Caster wheels
Power supply	220 Volts / 50 Hz

ORDERING INFORMATION

Model	Dimensions (W × D × H) (mm)	Volume (L)
IG-400SGC	650 × 600 × 1150	400
IG-600SGC	800 × 600 × 1250	600
IG-1KSGC	1074 × 765 × 1240	1000



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