

COMMODITY DESCRIPTION

H.S. Code	Item No	Description	Unit	Quantity
		Plant Growth Chamber	SET	1

A. Model Name : JSGC-420C

B. Product Description : Plant Growth Chamber

C. Manufacturer / Origin : JS Research Inc. / Rep. of KOREA

D. Application :

JSGC-Series Top Illumination Plant Growth Chamber provides reliable controlled climatic condition of temperature, humidity, lighting and CO₂ concentration. Ideal to growing plant, plant tissue culture or any other laboratory experiments needs controller climatic simulation. Various choice of capacity from 432L ~ 1512 L suitable to growing larger plants up to 1.2 m. Light bank on the top with HQI and fluorescent lamps provide light intensity up to 40,000 LUX.

E. Photo



JSGC-420C Plant Growth Chamber

F. Feature

Controller (JSC-4CP Programmable Controller)

- ✓ High precision Digital PID Microprocessor controls temperature, humidity, lighting and CO₂ concentration in one integrated unit with easy to use 4-line back-light LCD display interface
- ✓ Programmable operation capability of various climatic conditions of temperature, humidity, light intensity and CO₂ conc. with time duration up to 11 Segments 999 cycles or unlimited repeating operation
- ✓ Temperature, humidity, light intensity, CO₂ conc. calibration and auto-tuning function
- ✓ Class A Pt-100 Ω temperature sensor
- ✓ Precision electronic humidity sensor
- ✓ Built-in LUX Meter in chamber to measure and display light intensity
- ✓ The most accurate NDIR-Diffusion (Infra Red) CO₂ Sensor
- ✓ Automatic defrost cycle

Construction

- ✓ Durable epoxy powder coated metallic casing
- ✓ Corrosion resistant Stainless Steel 304 chamber
- ✓ Durable Stainless Steel 304 Sheath Heater and Copper-Aluminum fin evaporator
- ✓ Removable and height adjustable shelf
- ✓ Built-in humidifier and automatic water supply
- ✓ Double layer vacuum tempered safety glass ceiling on light bank

Performance

- ✓ Forced air circulation of controlled temperature and humidity to achieve excellent thermal uniformity
- ✓ Durable Stainless Steel 304 Sheath Heater and copper-aluminum finned evaporator
- ✓ Temperature control within ± 0.1 °C resolution
- ✓ Humidity control within $\pm 1.0\%$ RH resolution
- ✓ Lighting control from 0 ~ 40,000 Lux by 6 Step light intensity for photoperiodic Day-Night simulation
- ✓ Lamp-on-Delay System by turn on lamp one by one which provides gradual increase of light to eliminate sudden light intensity change
- ✓ CO₂ concentration control within ± 1 ppm (1%) resolution
- ✓ Separate heating and cooling compartment prevents contamination and maintenance free
- ✓ Cooling system with hermetically sealed compressor

Convenience

- ✓ Outer door with self adhesive magnetic packing
- ✓ Door glass window for easy observation of sample during experiment.
- ✓ Removable and height adjustable shelf by 25mm spacing

- ✓ Easy to access Light Bank System for convenient maintenance
- ✓ Corrosion resistant Stainless Steel 304 (ASTM 304) chamber
- ✓ Auto-defrost system, user settable interval and time
- ✓ Built-in casters for easy transport

Safety

- ✓ **DUAL OVER TEMP. CUT-OFF**
Digital system cut-off heater and AUDIO VISUAL ALARM in case +2 °C above set temperature
Analog system cut-off heater 10% above set temp.
- ✓ **MAX TEMP CUT-OFF heater and AUDIO VISUAL ALARM** when +1 °C above maximum limit
- ✓ **OVER COOLING. CUT-OFF**
Digital system automatically cut-off compressor in case -3 °C below set temperature
- ✓ **SENSOR DISCONNECTION ALARM**
- ✓ **LOW WATER LEVEL ALARM AND CUT-OFF**
- ✓ **HUMIDIFIER DRY-BURN PROTECTION**
- ✓ **OVER CURRENT CUT-OFF : Electric Leakage Breaker**

G. Specifications

Chamber Volume (Capacity)	432 Liters
Inner Dims. (W x D x H)	600 x 600 x 1200 mm
Outer Dims. (W x D x H)	1180 x 850 x 2080 mm
No. of Shelves included	3 EA
No. of Shelf position	37 EA by 25 mm spacing
Heating	Forced Air Convection
Cooling	CFC Free air cooled compressor
Control	Program Mode 1 Patterns Memory 11 Segments Manual Mode Fixed Temp. operation with timer
Temp. Range	+0°C ~ +60°C (light off) / +10°C ~ +60°C (light on) without humidification
Accuracy	±0.3 °C at +20°C, 60% RH Light off
Uniformity	±1.0 °C at +20°C, 60% RH Light off
Sensor	Class A PT-100 Ω Sensor
Humidity Range	30% ~ 85% RH
Accuracy	±3.0% at 60% RH
Uniformity	±6.0% at 60% RH
Sensor	Electronic Humiral Sensor

Illumination Range	0 ~ 40,000 Lux by 6-step combination
Lamp configuration	2 ea x 150 Watt HQI Lamp 4 ea x 55 Watt fluorescent tube
Sensor	Built-in LUX Meter in chamber
CO2 Conc. Range	ambient ~ 5,000 ppm (~ 0.5 %)
Accuracy	±50 ppm
Sensor	NDIR-Diffusion (Infra Red) CO ₂ Sensor
<i>Remark : CO2 control available only when optional CO2 control OHC-100 is included</i>	
Safety	Over-Temperature Cut-Off Low water level Cut-Off Over Current Cut-Off
Material	Body : Epoxy Powder Coated Steel Chamber : Stainless Steel 304
Electrical Requirement	220 ± 10% VAC, 50/60Hz, 1-Phase
Heater Capacity	4.0 kW
Power Rating	25 amps
Plug Configuration	30 AMP Plug
Net Weight	240 kg
Shipping Weight	360 kg
Shipping Dims. (W x D x H)	1380 x 1030 x 2240 mm, wooden crating

H. Standard Accessories

- PVC Coated Wire Shelf : 3 EA
- Shelf Support : 12 EA
- Instruction Manual : 1 EA
- Warranty Card : 1 EA

I. Options & Accessories

Art No.	Descriptions
OHC-100	Optional CO2 Control amb. ~ 5,000 ppm with NDIR CO2 Sensor
OHC-101	2 Stage CO2 Gas Regulator
OHC-102	Flow Meter
OHC-103	Metering valve
PHS-C13	PVC Coated Wire Shelf, W570 x D580 mm
PHS-A99	Shelf Support, Set of 4 EA

J. Warranty

1 Year full coverage warranty