Smart Climate Chamber 420 or 1000 L, 0-22,000 lx Three-Sided Light, 50-95% RH, Wi-Fi and Ethernet

Model **MSICB-CC420TSWISS,MSICB-CC1000TSWISS** | Brand **Master Science**







The Master Science Smart Artificial Climate Chamber controls temperature, humidity, light intensity and wind speed together, so plant growth conditions can be programmed hour by hour. Three-sided lighting reaches up to 22,000 lux and is dimmable from 0 to 100%, enough for light-hungry crops.

KEY HIGHLIGHTS

- High light for demanding plants
- Four variables controlled
- Monitor from anywhere
- Clean chamber between trials

AT A GLANCE

0-65°C lights off; 10-50°C lights on TEMPERATURE RANGE	**420 / 1000 L** CAPACITY
≤±0.5°C (420 L); ≤±1°C (1000 L) TEMPERATURE UNIFORMITY	**±0.1°C (420 L); ±0.3°C (1000 L), at 25°C / 50% RH** TEMPERATURE FLUCTUATION

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

Temperature runs from 0 to 65°C with lights off and 10 to 50°C with lights on. Ultrasonic humidification gives 50 to 95% RH across 10-50°C, and internal fan speed can be set from 30 to 100%. Thirty programs of up to 99 segments each simulate day and night or seasonal change. An Ethernet port, Wi-Fi, USB and IoT functions allow remote monitoring and data export. Two sizes: 420 and 1000 litres.

> For frost-free chambers with layered grow lights, see our plant climate chamber 253-1022 L alongside the Master Science Smart Artificial Climate Chamber.

> Many chambers lack enough light or remote control for modern plant studies. The Master Science Smart Artificial Climate Chamber addresses:

Key Benefits

High light for demanding plants
The Master Science Smart Artificial Climate Chamber delivers up to 22,000 lux from three sides.

Four variables controlled
Temperature, humidity, light and airflow are all programmable.

Monitor from anywhere
Wi-Fi, Ethernet and IoT functions allow remote access.

Clean chamber between trials
UV sterilization switches off automatically after the set time.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSICB-CC420TSWISS,MSICB-CC1000TSWISS
SKU	MSICB-CC420TSWISS,MSICB-CC1000TSWISS
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SKU	MSICB-CC420TSWISS, MSICB-CC1000TSWISS
Capacity	**420 / 1000 L**
Illumination	Three-sided, 0-22,000 lux (higher on request), 0-100% dimming
Temperature range	**0-65°C lights off; 10-50°C lights on**
Temperature fluctuation	±0.1°C (420 L); ±0.3°C (1000 L), at 25°C / 50% RH
Temperature uniformity	≤±0.5°C (420 L); ≤±1°C (1000 L)
Humidification	Ultrasonic
Air circulation	Internal fan 30-100%; adjustable external ventilation
Programs	30 programs, 1-99 segments each
Electricity	AC 220 V, 50 Hz; 10 A / 16 A
General	Max. power consumption: 1200 / 2500 W
Communication	RJ45 Ethernet, Wi-Fi, USB, IoT
Sterilization	UV with auto-off timer
Defrost	Automatic timed, on demand
Door	Panoramic glass inner door
Shelving	Adjustable pull-out mesh system

ENVIRONMENT

Humidity range, 420 L	**50-95% RH (10-50°C); 50-80% (50-55°C); 50-60% (55-60°C); below 50% (60-65°C)**
Humidity range, 1000 L	**50-95% RH (10-50°C); 50-70% (50-55°C); below 50% (55-60°C); below 40% (60-65°C)**
Humidity fluctuation	±2% RH (420 L); ±3% RH (1000 L)

DIMENSIONS & WEIGHT

Internal dimensions	635 × 560 × 1165 / 1415 × 560 × 1165 mm
External dimensions	762 × 765 × 1900 / 1552 × 765 × 1940 mm

GROWTH RESEARCH PROBLEMS THE MASTER SCIENCE SMART ARTIFICIAL CLIMATE CHAMBER SOLVES	
Too little light for crops	Three-sided lighting reaches 22,000 lux.
Fixed conditions only	Programs vary temperature, humidity, light and wind.
Need to be on site to check	Remote access via Wi-Fi and Ethernet.
Contamination between trials	Timed UV sterilization cleans the chamber.

Applications

The Master Science Smart Artificial Climate Chamber is used for: Plant physiology and crop breeding research Seed germination and seedling growth Tissue culture and microbial culture Insect rearing under controlled light Climate change simulation studies

Climate control

- PID control with high-precision sensors
- Ultrasonic humidification with internal circulation
- Internal fan 30-100% plus manual ventilation
- Automatic timed defrost

Light and programs

- Three-sided lighting, 0-22,000 lux
- 0-100% light dimming
- 30 programs × 99 segments for day-night simulation

Safety and connectivity

- Leakage, fault circuit, over-temperature, compressor and current overload protection
- Door-open, over-limit and sensor failure alarms
- Power-off recovery
- Ethernet, Wi-Fi, USB and IoT

Standard Accessories Included

- Smart climate chamber with glass inner door
- Pull-out mesh shelving

Optional Accessories

- Higher illumination on request