Frost-Free Plant Climate Chamber 253-1022 L, 30-90% RH Cold Humidification, Layered LED, 30 Steps

Model **MSICB-CC253YCSWISS,MSICB-CC412YCSWISS,MSICB-CC722YCSWISS,MSICB-CC1022YCSWISS** | Brand **Master Science**









The Master Science Frost-Free Plant Climate Chamber is designed for long growth trials where temperature, humidity and light have to stay stable for weeks. Frost-free refrigeration removes the swings caused by defrost cycles, and cold (non-heated) humidification adds moisture without warming the air around plants and animals.

KEY HIGHLIGHTS

- No defrost disturbance
- Humidity without heat
- Even light on every layer
- Simulate a full day

AT A GLANCE

±0.8 to ±1°C (by model) TEMPERATURE FLUCTUATION	**30-90% RH** HUMIDITY RANGE
253 / 412 / 722 / 1022 L CAPACITY	**2300 / 2875 / 4025 / 4370 W** POWER CONSUMPTION

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

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Overview

Grow lights sit at the top of the chamber and on shelf-mounted lamp holders, so light falls vertically on every layer instead of from the side, which avoids plants bending towards the wall. Light is set in five levels up to 320 µmol/m²/s at 15 cm. A fuzzy PID controller runs 30-segment, 99-cycle programs or a 24-hour real-time schedule. Four sizes run from 253 to 1022 litres.

For smaller trials with standard heated humidification, see our climate chamber 173-516 L beside the Master Science Frost-Free Plant Climate Chamber.

Long plant trials suffer from drift, uneven light and dry air. The Master Science Frost-Free Plant Climate Chamber addresses:

Overview

- Frost-free refrigeration
- Hot gas bypass regulation
- Diffusion-type air duct
- Three-speed circulation fan

Key Benefits

No defrost disturbance
The Master Science Frost-Free Plant Climate Chamber keeps temperature and humidity steady over long trials.

Humidity without heat
Cold humidification suits plants and insects.

Even light on every layer
Top and shelf lamps light plants vertically.

Simulate a full day
24-hour real-time programs follow natural cycles.

Technical Specifications

GENERAL

General	Specifications of the Master Science Frost-Free Plant Climate Chamber range:
Brand	Master Science
Model Number	MSICB-CC253YCSWISS,MSICB-CC412YCSWISS,MSICB-CC722YCSWISS,MSICB-CC1022YCSWISS
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SKU	MSICB-CC253YCSWISS, MSICB-CC412YCSWISS, MSICB-CC722YCSWISS, MSICB-CC1022YCSWISS
Capacity	**253 / 412 / 722 / 1022 L**
Circulation	Forced convection, balanced type
Temperature range	**Smallest model: 5-50°C lit, 0-50°C unlit; larger models: 10-50°C lit, 5-50°C unlit**
Resolution	0.1°C
Temperature fluctuation	±0.8 to ±1°C (by model)
Humidification	Cold humidification
Light intensity	320 µmol/m²/s at 15 cm, 5 levels
Standard shelves	2 / 3 / 3 / 3, SUS304, height adjustable
Controller	Fuzzy PID; 30 segments × 99 cycles or 24-hour real-time mode
Fan	Three speeds
Test port	Ø40 mm with silicone plug
Refrigeration protection	Compressor overheat, over-current, over-pressure; condenser fan overheat
Electrical protection	Phase sequence and loss, leakage, short-circuit, overload, water shortage
Lamp holders	Shelf-type, 2 or 3 layers
Data	USB for printer or flash drive

DIMENSIONS & WEIGHT

Internal dimensions (W×D×H)	640 × 460 × 860 / 560 × 530 × 1390 / 980 × 530 × 1390 / 980 × 750 × 1390 mm
External dimensions (W×D×H)	800 × 780 × 1570 / 1025 × 810 × 1735 / 1445 × 810 × 1735 / 1445 × 1030 × 1735 mm

ENVIRONMENT	
Humidity range	**30-90% RH**
Humidity fluctuation	±3 to ±5% RH
Operating ambient temperature	5-30°C

POWER	
Power supply	AC 220 V, 50 Hz
Power consumption	2300 / 2875 / 4025 / 4370 W

GROWTH TRIAL PROBLEMS THE MASTER SCIENCE FROST-FREE PLANT CLIMATE CHAMBER SOLVES	
Drift during defrost	Frost-free design keeps conditions steady.
Plants bending to the light	Vertical, layered lighting gives even exposure.
Heat from humidifiers	Cold humidification avoids warming the chamber.
Unnatural constant conditions	Real-time programs simulate a full day.

Applications

The Master Science Frost-Free Plant Climate Chamber is used for: Plant cultivation and growth studies Microbial and tissue cell culture Insect and small animal rearing Seed germination under day-night cycles Crop breeding research

Light and humidity

- Cold humidification, 30-90% RH
- Top light plus shelf-type lamp holders
- Full-spectrum plant growth lamps, 5 levels

Control and build

- Fuzzy PID with 30-segment, 99-cycle or 24-hour modes
- Temperature, humidity and water level alarms
- USB data recording
- Four-point locking door handle; welded steel base; locking casters

Standard Accessories Included

- Climate chamber
- SUS304 shelves (2 or 3)
- Shelf-type lamp holders (2 or 3 layers)