

CLIMACELL®

Laboratory Incubators with Forced Air Convection, Cooling and Controlled Humidity



NEW



Conditioned chambers of the CLIMACELL® line provide complex conditions for precise and reproducible simulation of various climatic conditions. E.g. for tests of stability of parts, food products or chemical packages. Research of germs, plant or tissue cultures and insects. The devices offer an interesting alternative to expensive testing chambers and testing rooms. Microprocessor-controlled system of moisturizing and de-moisturizing together with high-performance lighting system allows excellent homogenous parameters for tests and growth conditions.

Internal volume: 111, 222, 404, 707, 1 212 litres
Temperature range: no humidity: from 0,0°C to 100°C,
with humidity: from 10°C to 95°C
Range up to 70°C for the volume of 1 212 litres
CLC EVO as optional equipment up to -20°C
CLC EVO as optional equipment of chamber decontamination up to 160°C
(except for the volume of 1 212 litres)
Cooling medium: R 134a (R449a for -20°C)
Input medium for humidity development: demi water
Range of humidity: 10% – 98% RH
Microprocessor-controlled humidity
CO₂ concentration (CLC EVO as optional equipment): 0,2% up to 20%
Internal glass door
Internal chamber: stainless steel DIN 1.4301 (AISI 304)

Eco line



- Intuitive control
- Microprocessor process control Fuzzy logic
- Multi-lingual communication
- Acoustic and visual alarm
- LED indicator of device functionality
- LCD display – 3 inches (7,6 cm)
- Transflective brilliant FSTN display, using COG technology (it is backlit and it uses external lighting reflection – higher intensity of external light increases the display readability)
- Adjustable display contrast depending on device placement
- Exceptionally wide vision angle
- Large signs on the display visible from afar
- Current values (eg. temperature, humidity for CLIMACELL®, pressure for VACUCELL®) during the device operation are enlarged for easy readability
- Resistant foil keyboard with SoftTouch surface (pleasant to touch)
- Mechanic response of keys
- Lit symbols integrated directly in the foil keyboard
- Keyboard lock to block unauthorised access – adjustable by multiple pressing
- Real time programming and cycling (ramps as optional equipment)
- Up to 9 programs, 2 segments for each program and up to 99 cycles.
- USB Host port for flash disc connection for easy export of the relevant data (optional equipment)

Evo line



- Intuitive control
- Microprocessor process control Fuzzy logic
- Multi-lingual communication
- Acoustic and visual alarm
- LED indicator of device functionality
- LCD display – 5,7 inches (14,5 cm)
- Graphic displaying of a new program
- Control through colour icons
- Touch display lock – protection from unauthorised access by a password
- Multi-level administration of users (corresponding to FDA 21 Part 11)
- Data coding and no-manipulability (according to FDA 21 Part 11)
- Up to 100 programs and up to 100 segments for each program
- Programming of temperature ramps, real time and cycling
- Annual data recording in graphic and numeric form
- Data export in online and offline mode
- Pre-set service programs for prompt diagnostics of failures
- Easy service diagnostics including remote access
- SD memory card, USB Host and interface RS 232 – included as a standard
- Connection: WiFi, USB Device or Ethernet interface with proper IP address for remote data transfer, control and diagnostics (optional equipment)

| Technical data | | | | | | | |
|--|--|-----------|-------------|-------------|-------------|-------------|--------------|
| Inner space | volume | l | 111 | 222 | 404 | 707 | 1212 |
| | width | mm | 540 | 540 | 540 | 940 | 3x540 (1905) |
| | depth | mm | 370/380 | 520/530 | 520/530 | 520/530 | 520/530 |
| | height | mm | 530/535 | 760/765 | 1415 | 1415 | 1415 |
| External dimensions (including door, handle, legs N or casters K) | width | max. mm | 760/780 | 760/780 | 1060/1100 | 1460/1500 | 2435/2530 |
| | depth | max. mm | 750/755 | 900/885 | 860/885 | 860/885 | 870/898 |
| | height | max. mm | 1140K/1215K | 1370K/1450K | 1905K/1890K | 1905K/1890K | 1905/1921K |
| Package – basic package - case ECO (except 1212) - wooden crate EVO + ECO 1212 | width | approx mm | 830/992 | 830/1120 | 1130/1332 | 1530/1682 | 2742 |
| | depth | approx mm | 830/954 | 970/952 | 900/1062 | 900/1064 | 1137 |
| | height (including palette) | approx mm | 1320/1650 | 1550/1746 | 2090/2200 | 2090/2190 | 2240 |
| Volume of the steam space | | cca l | 163/167 | 299/305 | 524/530 | 876/878 | 1753 |
| Trays / shelves | maximal number | pc | 7 | 10 | 19 | 19 | 3x19 |
| | standard equipment | pc | 2 | 2 | 2 | 2 | 6 |
| | minimal distance between trays/shelves | mm | 70 | 70 | 70 | 70 | 70 |
| | usable area | mm | 520x335 | 520x485 | 520x485 | 920x485 | 520x485 |
| Maximal allowed loading of trays *) | per 1 tray | kg | 20 | 30 | 30 | 50 | 30 |
| | per 1 shelf | kg | 20 | 30 | 30 | 20 | 30 |
| | inside the device - in total | kg | 50 | 70 | 100 | 130 | 300 |
| Number of external metal door | | pc | 1 | 1 | 1 | 2 | 3 |
| Number of inner glass doors | | pc | 1 | 1 | 1 | 2 | 3 |
| Weight | net | approx kg | 104/110 | 135/147 | 236/240 | 272/280 | 541/567 |
| | brut (cartoon) | approx kg | 146/220 | 184/263 | 285/390 | 331/500 | 861/887 |
| Electric data – mains 50/60 Hz | max. input **) | kW | 1,7/2 | 1,85/2,2 | 2,7 | 3 | 3,5 |
| | stand by input | W | 5/11 | 5/11 | 5/11 | 5/11 | 5/11 |
| | current for voltage ***) | A | 7,4/8,7 | 8,1/9,5 | 12 | 13,8 | 15,7 |
| | current for voltage ***) | A | 15,8/18,4 | 16,8/19,6 | 23,9 | 25,9 | 31,2 |
| IP Code | | | IP20 | IP20 | IP20 | IP20 | IP20 |
| Temperature data | | | | | | | |
| Operation temperature | from 0°C (-10°C) / 0°C(-20°C) | to°C | 100 | 100 | 100 | 100 | 70 |
| Temperature accuracy | in space at 10°C | ±°C | <0,5 | <0,5 | <1 | <1 | <0,9 |
| | in space at 37°C | ±°C | <0,5 | <0,5 | <1 | <1 | <0,5 |
| | in time | ±°C | <0,2 | <0,2 | <0,3 | <0,4 | <0,2 |
| Heating up time to 37°C from the ambient temperature | | min | <11 | <11 | <22 | <13 | <30 |
| Cooling down time from 22°C to 10°C | | min | <21 | <17 | <19 | <21 | <21 |
| Recovery time after door opened for 30 s according to DIN 12880 | at 37°C | min | <4 | <3 | <3 | <6 | <10 |
| | at 50°C | min | <5 | <6 | <7 | <6 | <10 |
| Relative humidity | range | % | 10–98 | 10–98 | 10–98 | 10–98 | 10–98 |
| Accuracy RH (T _{CHAMBER} ≥ 21°C) | in time | % | < 2 | < 2 | < 2 | < 2 | <2 |
| Heat emission | at 37°C | W | 70 | 63 | 123 | 148 | 200 |
| Noise level of complete device | | db | 46 | 50 | 56 | 58 | 60 |

Note:

CLIMACELL® ECO Line/CLIMACELL® EVO Line

All the technical data apply to 22°C of ambient temperature and ± 10% voltage oscillation (unless stated otherwise).

*) The trays may be covered to approximately 50% of their surface and if possibly in such a way so as the air may evenly flow inside the chamber space.

**) Automatics + compressor + condenser + electromagnetic valves + ventilator (s) + 1/2 heating of the chamber + steam generator heating.

***) Mains voltage is specified on type label of the device.

The values may differ depending on specific charge and media parameters.

Changes in the design and make reserved.



MMM Medcenter Einrichtungen GmbH,
Sammelweisstrasse 6, D-82152 Planegg / München
Tel.: +49 89 8992 2620, Fax.: +49 89 8992 2630,
E-mail: medcenter@mmm-medcenter.de,
www.mmm-medcenter.de