rycobel

CLIMACELL®

Laboratory Incubators with Forced Air Convection, Cooling and Controlled Humidity

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, 1212 litres
- Temperature range: no humidity: from 0°C to 100°C, with humidity: from 10°C to 90°C range up to 70°C for the volume of 1212 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 1212 litres)
- Cooling medium: R134a (R449a for -20°C)
- Input medium for humidity development: demi water
- Range of humidity: 10% – 98% RH
- Microprocessor-controlled humidity
- CO2concentration (CLC EVO as optional equipment): 0,2% up to 20%
- Internal glass door
- Internal chamber: stainless steel DIN 1.4301 (AISI 304)

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ECO line

- Intuitive control
- Microprocessor process control Fuzzy logic
- Multi-lingual communication
- Acoustic and visual alarm
- LED indicator of device functionality
- 3-inch (7.6 cm) LCD display
- Transflective brilliant FSTN display, uses COG technology (it is backlit and uses the reflection of external light - higher intensity of external light increases the readability of the display)
- Adjustable display contrast depending on the location of the device
- Extra wide viewing angle
- Large, remotely visible characters on the display
- Current information (e.g. temperature, relative humidity on the CLIMACELL® instrument, pressure on the VACUCELL® instrument) is increased during the program run for better readability
- Durable, foil keyboard using a pleasant SoftTouch surface
- Mechanical button response
- Backlit symbols integrated directly into the foil keyboard
- Keypad lock to protect against unauthorized access – by adjustable multi-press
- Real time programming and cycling (ramps as optional equipment)
- 9 programs, 2 segments in each program, up to 99 cycles
- RS232 and USB Device interface
- Ethernet (RJ 45) and USB Host (optional)

EVO line

- Intuitive control
- Microprocessor process control Fuzzy logic
- Multi-lingual communication
- Acoustic and visual alarm • LED indicator of device functionality • 5.7-inch (14.5 cm) LCD colour touch display
- Graphic representation of a new program
- Control via coloured icons
- Touch screen lock to protect against unauthorized access by password
- Multi-level user management (FDA 21 Part 11 compliant)
- Data encryption and non-manipulation (according to FDA 21 Part 11)
- Up to 100 programs and up to 100 segments for each program, a maximum of 500 segments in the device in total
- Programming of temperature ramps, real time and cycling
- Annual data recording in graphical and numerical form
- Export data in online and offline mode
- Preset service programs for quick fault diagnosis
- SD memory card, USB Device and RS232 interface
- USB Host and Ethernet (RJ 45) as a part of the communication module (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	895/885	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		approx. 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 230 V***)	A	7,4/8,7	8,1/9,5	12	13,8	15,7
	current for voltage 115 V***)	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	<13	<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 refer to 22˚C ambient temperature and 230 V supply voltage.

The stated deviations of temperature and humidity are valid for the device in standard version without options, measured according to DIN 12880 in

a steady state with an empty chamber and a fan at 100%. The other parameters may also vary depending on the optional options added and the media

used. The standard design is 0 to 100˚C.

*) 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.

Changes in the design and make reserved.