CLIMACELL

with forced air convection, cooling and controlled humidity

MMM Group

The CLIMACELL series was specially developed for applications, in which as far as possible exact and reproducible simulation of various environmental conditions is important, e.g. stability testing of components, packaging materials, food or chemicals, germination studies, plant cell or tissue cultures, insect cultures.

Volume:
111, 222, 404, 707 litres
Working temperature:
without humidity 0 °C up to 99.9 °C,
with humidity: 10 °C up to 90.0 °C
Refrigerant: R 134a
Water quality for generating the humidity:
distilled water, drinking water (max. 50 mg Ca/l)
Controlled humidity: 10 %–90 % RH
Microprocessor controlled humidifying/dehumidifying system
Inner glass door
Interior:
stainless steel, mat. No. 1.4301 (AISI 304)

The high-tech comfort line with multi-functional microprocessor control unit

- 6 programs
- chip card system for individual program storage
- RS 232- interface for printer or PC-communication
- delayed heating start and stop function
- acoustic and visual alarm
- time range 0-16 years with 1 min-intervals
- digital safety thermostat class 3
- real time
- programming temperature ramps
- heating sequences
- programme cycles
- adjustable ventilation rate 10 to 100 %

Options

- –9,9 °C with cooled incubators
- interior lighting – a wide offer of various luminary sources
- access ports ∅ 25, 50,100 mm
- keyboard lock (prevents the access of unauthorised persons)
- automatic door lock
- left door versions (excluded volume 404 and 707 liters)
- timer programmable water protected inner socket
- exposure/stimulating lighting (white/day light) 6 000–13 000 Lx (according to volume) with digitally adjustable light 10–100 %
- exposure illumination in shelves, especially for photo-stability tests (according to ICH Guideline CPNP/ICH279/95)
- potential-free alarm contact
- measurement of materialęs temperature with an independent movable sensor PT 100 (with indication on a display or PC)
- communication software WarmComm
- check of the door opening (microswitch) during the program with the possibility of the record by means of a printer or software
- stainless steel casing of the device

...comfort line

CLIMACELL

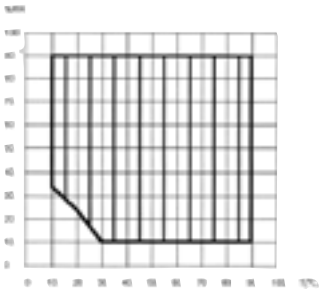
CE

Technical data		Model	111	222	404	707
Inter dimensions	volume	l	111	222	404	707
Chamber, stainless steel	width	mm	540	540	540	940
	depth	mm	370	520	520	520
	height	mm	530	760	1410	1410
Volume of the steam space		cca l	163	299	524	876
Trays, stainless steel *)	number	max./usual	7/2	10/2	19/2	19/2
Min. distance between trays		mm	70	70	70	70
Storage area	(w x d)	mm	520x338	520x485	520x485	920x485
Number of outer metal doors		No.	1	1	1	2
Number of inner glass doors		No.	1	1	1	2
Admissible weight of trays	together inside the oven	kg	50	70	100	130
	per 1 tray	kg	20	30	30	50
Electricity data	max. power consumption	W	2050	2100	3150	3400
	mains 50/60 Hz	V	230	230	230	230
Protective system			IP 20	IP 20	IP 20	IP 20
Temperature data						
Working temperature	from 0 °C	to °C	99,9	99,9	99,9	99,9
Temperature accuracy						
in space	at 10 °C	± °C	< 0,5	< 0,5	< 1	< 1
	at 37 °C	± °C	< 0,5	< 0,5	< 1	< 1
in time		± °C	< 0,2	< 0,2	< 0,3	< 0,4
Heating/up time to 37 °C from the ambient temperature		min	24	25	26	27
Cooling/down time from 22 °C to 10 °C		min	< 21	< 21	< 21	< 21
Recovery time after	at 37 °C	min	4	4	4	4
1 min. door open	at 50 °C	min	4	4	4	4
Relative humidity	range	%	10–90	10–90	10–90	10–90
Heat emission	at 37 °C	W	70	97	123	148
Outer dimensions (incl. door and handle, and Rollers)	width	max. mm	760	760	1010	1460
	depth	max. mm	640	790	790	790
	height	max. mm	1100R	1330R	1910R	1910R
Weight	net	cca kg	101	132	230	270
	gross	cca kg	131	169	270	316

*) Approx. 50 % of the tray area can be filled in a way a uniform air circulation is enabled inside the chamber.
Note: All technical data are related to 22 °C of ambient temperature and ±10 % voltage swing
Changes in the design and make reserved.

Setting operating conditions of temperature and relative humidity and their limitations

cabinet without door lighting



cabinet with door lighting