

VACUCELL®

Laboratory Ovens with Vacuum



MMM Group

NEW



Drying in vacuum with the possibility of air displacement using inert gas is offered by the VACUCELL® line, usable for temperature-unstable and oxidation-sensitive substances (powders, granulates, ...) as well as for shape-complicated parts with hardly accessible holes and threads. It is ideal for drying of samples so as to reach constant weight. Special application of the device is possible mainly in the field of plastics processing, in pharmaceutical, chemical, electro-technical and other industries.

Internal volume: 22, 55, 111 litres
Temperature range: from 5°C above the ambient temperature and up to 200°C on ECO, 250°C on EVO (300°C as option for EVO)
Door window
Port Ø 40 mm with opening in the extension
Inert gas connection
Needle valve for fine dosing / automatic vacuum regulation
Pressure-resistant internal chamber
Large-area door overpressure valve „Ventiflex“
Internal chamber: stainless steel DIN 1.4571 (AISI 316 Ti)

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	22	55	111
	width	mm	340	400	540
	depth	mm	260	320	410
	height	mm	300	430	480
External dimensions ((including door, handle, legs)	width	max. mm	560	620	760
	depth	max. mm	500	560	650
	height	max. mm	780	910	960
Package – basic package only ECO	width	approx mm	720	780	930
	depth	approx mm	660	730	830
	height (including palette)	approx mm	920	1050	1100
Package - case	width	approx mm	720	780	930
	depth	approx mm	660	730	830
	height (including palette)	approx mm	960	1095	1150
Trays	maximal number	pc	5	7	8
	standard equipment	pc	2	2	2
	minimal distance between trays/shelves	mm	36	43	43
	usable area	mm	280x236	340x296	480x386
Maximal allowed loading of trays	per 1 tray	kg	20	25	25
	inside the device - in total	kg	35	45	65
Weight	net	approx kg	65/68	98/101	130/133
	gross (cartoon)	approx kg	76/91	111/186	145/218
Electric data – mains 50/60 Hz	max. input	kW	0,8	1,2	1,8
	stand by input	W	5/11	5/11	5/11
	current for voltage *)	A	3,5	5,2	7,8
	current for voltage *)	A	7	10,4	15,6
IP Code			IP20	IP20	IP20
Temperature data					
Operation temperature	from 5°C above ambient temperature	to°C	200/250	200/250	200/250
Temp. deviations acc. to DIN 12 880 from working temperature (Al racks, pressure 5-10 mbar)**)	in space at 100°C	± °C	2	2	3
	in space at 200°C	± °C	5	6	7
	in time	± °C	0,4	0,4	0,4
Temp. deviations acc. to DIN 12 880 from working temperature (stainless racks, pressure 5-10 mbar)**)	in space at 100°C	± °C	10	10	11
	in space at 200°C	± °C	18	23	26
	in time	± °C	0,5	1	1
Time of rise onto 98% voltage 230 V – Al racks, pressure 5-10 mbar	onto temp. 100°C	min	60	65	110
	onto temp. 200°C	min	80	85	130
Time of rise onto 98% voltage 230 V – stainless racks, press 5-10 mbar	onto temp. 100°C	min	130	140	170
	onto temp. 200°C	min	170	180	220
Heat emission	at 100°C	W	150	260	370
	at 200°C	W	300	520	750
Device noise level (without air pump)		db	0	0	0
Inert gas or air connection	Needle valve ECO	Ø mm	8	8	8
	Programmable filling EVO	Ø mm	8	8	8
Vacuum connection	vacuum connection	DN mm	16	16	16
	measuring feedthrough	DN mm	40	40	40
	max. attainable vacuum	mbar	5.10-4	5.10-4	5.10-4
	chamber untightness	mbar.l.s ⁻¹	<5.10-3	<5.10-3	<5.10-3

Note:
 VACUCELL® ECO Line/VACUCELL® EVO Line
 All the technical data apply to 22°C of ambient temperature and ± 10% voltage oscillation (unless stated otherwise).

- *) Mains voltage is specified on type label of the device.
- **) Transport of heat to materials on the shelves is – in vacuum – performed by leads in the shelves and that is why the specified temperature variations apply to temperatures on shelves surface. The measuring temperature sensors must have perfect conductive contact with the shelf surface. Objects placed on shelves must also be in perfect contact with shelves, the temperature of objects depends mainly on their physical characteristics and on contact with the shelf.

The values may differ depending on specific charge and media parameters.
 Changes in the design and make reserved.