'ACUCELL®															MM	
boratory Ovens with Vacuum			_				_		_	_	_	_				
														_	MMM Group	



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: VACUCELL[®] Eco: from 5°C above the ambient temperature up to 200°C VACUCELL[®] Evo: from 5°C above the ambient temperature up to 250/300°C Door window Port \varnothing 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 •
- 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) •



- 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
- WiFi, USB Host and Ethernet (RJ 45) as a part of the communication module (optional equipment)

VACUCELL®

Technical data							
	volume	1	22	55	111		
	width	mm	340	400	540		
Inner space	depth	mm	260	320	410		
	height	mm	300	430	480		
	width	max. mm	560	620	760		
External dimensions (including door, handle, legs)	depth	max. mm	500	560	650		
Excernar annensions (meraanig aoor, nanare, regs)	height	max. mm	780	910	960		
Package – basic package	width	approx. mm	720	760	910		
Tackage basic package	depth	approx. mm	660	730	830		
only ECO	height (including palette)	approx. mm	920	1050	1100		
	width	approx. mm	720	760	910		
Package – case	depth	approx. mm	660	730	830		
Tackaye – case	height (including palette)	approx. mm	960	1095	1150		
	maximal number	рс	5	7	8		
	standard equipment	pc	2	2	2		
Trays	minimal distance between trays/shelves	mm	36	43	43		
	usable area	mm	280×236	43 340×296	480×386		
	per 1 tray	kg	2002230	25	25		
Maximal allowed loading of trays	inside the device – in total	kg	35	45	65		
	net		65/68	98/101	130/133		
Weight	brut (cartoon)	approx. kg	76/91		145/218		
		approx. kg kW	0,8	111/186			
Flastvia data	max. input	W	5/11	1,2	1,8		
Electric data	stand by input			5/11	5/11		
– mains 50/60 Hz	current for voltage 230 V *)	A	3,5	5,2	7,8		
	current for voltage 115 V *)	А	7	10,4	15,6		
IP Code			IP20	IP20	IP20		
Temperature data	from F°C ob and the state to see the	4- 90	200/250 (200)	200/250 (200)	200/250 (200)		
Operation temperature	from 5°C above ambient temperature	to °C	200/250 (300)		200/250 (300)		
Temp. deviations acc. to DIN 12 880 from working	in space at 100°C	±°C	2	2	3		
temperature (Al racks, pressure 5-10 mbar) **)	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	· ·	±°C	10	10	11		
temperature (stainless racks, pressure 5-10 mbar)	in space at 200°C	±°C	18	23	26		
	in time	±°C	0,5	1	1		
Time of rise onto 98% voltage 230 V –	onto temp. 100°C	min	60	65	110		
Al racks, pressure 5-10 mbar	onto temp. 200°C	min	80	85	130		
Time of rise onto 98% voltage 230 V –	onto temp. 100°C	min	130	140	170		
stainless racks, press 5-10 mbar	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	Ømm	8	8	8		
	Programmable filling EVO	Ømm	8	8	8		
	vacuum connection	DN mm	16	16	16		
Vacuum connection	measuring feedthrough	DN mm	40	40	40		
Account connection	max. attainable vacuum	mbar	5.10-4	5.10-4	5.10-4		
	chamber untightness	mbar.I.s ⁻¹	<5.10-3	<5.10-3	<5.10-3		

Note:

VACUCELL® ECO Line/VACUCELL® EVO Line

All the technical data refer to 22°C ambient temperature and 230 V supply voltage.

The stated deviations of temperature are valid for the device in standard version without options, measured according to DIN 12880 in a steady state with an empty chamber.

The other parameters may also vary depending on the optional options added and the media used. The standard design of ECO Line is up to 200°C and of EVO Line up to 250°C.

*) 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.

Changes in the design and make reserved.



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