

# VENTICELL®

Laboratory Ovens with Forced Air Convection



MMM Group



Thanks to patented system of forced air convection, the VENTICELL® line guarantees homogenous temperature distribution in all the drying and heating processes. Higher speed and precision of all the tempering procedures guarantees economical operation. Suitable mainly for high-humidity materials.

**Internal volume:** 22, 55, 111, 222, 404, 707, 1212 litres (pass-through version except for the volume 22, 1212 l)  
**Temperature range:** from 10°C above the ambient temperature up to 250/300°C  
**Internal chamber:** stainless steel DIN 1.4301 (AISI 304)  
Clean premises version – on request.

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

Technical data														
Inner space	volume		22	55	55-2	111	111-2	222	222-2	404	404-2	707	707-2	1212
	width	mm	240	400	400	540	540	540	540	540	540	940	940	3x540
	depth	mm	320	370	370	370	370	520	520	520	520	520	540	520
	height	mm	300	350	350	530	530	760	760	1410	1410	1410	1410	1410
External dimensions (including door, handle, legs N or casters K)	width	max. mm	406	620	620	760	760	760	760	760	760	1160	1160	2175
	depth	max. mm	560	640	660	640	660	790	806	790	806	790	806	845
	height	max. mm	610N	680N	680N	860N	860N	1095N	1110N	1910K	1910K	1910K	1910K	1910
	ventilation neck diameter – internal / external	mm	52/49	52/49	52/49	52/49	52/49	52/49	52/49	52/49	52/49	52/49	52/49	52/49
Package – basic package	width	approx. mm	500	700	700	830	830	860	860	830	830	1230	1230	2360
	depth	approx. mm	720	730	730	730	730	860	860	860	860	860	860	1020
	height (including palette)	approx. mm	810	875	875	1060	1060	1260	1260	2085	2085	2085	2085	2100
Package – case	width	approx. mm	720	780	780	810	810	920	920	910	910	1335	1335	2360
	depth	approx. mm	780	800	800	910	910	960	960	970	970	1060	1060	1020
	height (including palette)	approx. mm	835	900	900	1085	1085	1310	1310	2123	2123	2163	2163	2240
Package – wooden crate	width	approx. mm	-	780	780	900	900	900	900	910	910	1310	1310	-
	depth	approx. mm	-	800	800	800	800	940	940	940	940	940	940	-
	height (including palette)	approx. mm	-	870	870	1090	1090	1270	1270	2120	2120	2120	2120	-
Trays / shelves	maximal number	pc	4	4	4	7	7	10	10	19	19	19	19	3x19
	standard equipment	pc	2	2	2	2	2	2	2	2	2	2	2	6
	minimal distance between trays/shelves	mm	60	70	70	70	70	70	70	70	70	70	70	70
	usable area	mm	185x265	380x335	380x335	520x335	520x335	520x485	520x485	520x485	520x485	920x485	920x485	520x485
Maximal allowed loading of trays *)	per 1 tray	kg	10	20	20	20	20	30	30	30	30	50	50	30
	per 1 shelf	kg	10	20	20	20	20	30	30	30	30	20	20	30
	inside the device – in total	kg	25	50	50	50	50	70	70	100	100	130	130	300
Number of external metal door	pc	1	1	2	1	2	1	2	1	2	2	4	3	
Weight	net	approx. kg	31	55	60	75	80	100	105	150	160	215	230	475
	brut (cartoon)	approx. kg	36	66	71	87	92	116	121	175	185	240	255	525
Electric data – mains 50/60 Hz	max. input	kW	0,96	1,3	1,9	1,9	2,5	1,9	3,7	3,7	5,5	4,9	7,3	11,3
	stand by input	W	5	5	5	5	5	5	5	5	5	5	5	5
	current for voltage **)	A	4,2	5,6	8,3	8,3	10,6	8,3	5,6	5,6	8,3	7,8	15,6	2*15,7/17,7
		V	230	230	230	230	230	230	400/3NPE	400/3NPE	400/3NPE	400/3NPE	400/3NPE	400/3NPE
	current for voltage **)	A	8,4	11,3	16,6	16,6	21,2	16,6	19	19	28	28	42	-
		V	115	115	115	115	115	115	115/3PE	115/3PE	115/3PE	115/3PE	115/3PE	-
IP Code		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	
Temperature data														
Operation temperature	from 10°C above ambient temperature	to °C	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)
Variations from operation temperature with closed flap and door (DIN 12 880 part 2)	space	± % temp.	1,1	1	2	1	1	1	1,2	1,5	1,8	2,5	2,5	4
	time	±°C	0,3	0,3	1,2	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,74	1,3
Time to reach temperature of 250°C with closed flap and voltage 230 V		min	28	49	-	53	-	70	33	58	43	64	50	68
Number of air exchanges at 250°C		h <sup>-1</sup>	45	45	45	49	49	24	24	18	18	12	12	16
Heat losses	at 250°C	W	420	590	590	760	760	990	990	1940	1940	2550	2550	5920
Device noise level		dB	<55	<55	<55	<55	<55	<55	<55	<58	<58	<58	<58	<58

Note:

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

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

Changes in the design and make reserved.

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