VACUCELL

with vacuum

MMM Group

Temperature sensitive, easy decomposable or oxidative materials can be dried very tenderly in VACUCELL vacuum drying ovens, where there is the opportunity of extrusion of air by inert gas. Also complicated components with hardly accessible hollow spaces are drying quick and affectively in VACUCELL ovens.

Volume:
22, 55, 111 litres
Working temperature: 5°C above ambient temperature up to 200 °C
Door window
Intergrated duct for sensors etc. (∅ 40 mm)
Inert gas connection
Needle valve for fine dosing
Pressure resistant inner chamber
Safety valve-door VENTIFLEX
Interior:
stainless steel, mat. No.1.4571 (AISI 316 Ti)

The versatile standard line with microprocessor control unit

- 3 adjustable programs
- RS 232 – interface for printer or PC-communication
- delayed heating start and stop function
- acoustic and visual alarm in error state
- time range 99 hours 59 minutes
- digital safety thermostat

Options

- cbase box Vacustation
- chemicaly resistant vacuum pump
- chemicaly resistang vacuum pump with inlet separator and exhaust condenser
- external vacuum control system
- special software WarmComm
- separate PT 100 sensor
- stainless steel casing of the devices

... standard line

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

- 6 adjustable 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 of error state
- time range 0–40 years with 1 min-intervals
- digital safety thermostat
- real time
- programming temperature ramps
- heating sequences
- programme cycles

Options

- base box Vacustation
- chemicaly resistant vacuum pump
- chemicaly resistant vacuum pump with inlet separator and exhaust condenser
- built-in vacuum control system
- special software WarmComm
- BMS relay alarm contact
- separate PT 100 sensor
- stainless steel casing of the device
- electronic measurement of pressure with indication on a display

... comfort line

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Specifications			Model	22	55	111
Interior of stainless steel material DIN 1.4571 (AISI316TI)	volume		cca litres	22	55	111
	width		cca mm	340	400	540
	depths		cca mm	260	320	410
	height		cca mm	300	430	480
Shelves	Shelves guides-impressions in the chamber side walls		number max.	5	8	9
	number		Pieces suppl	2	2	2
Shelves distance	height		mm	40	40	40
Usefull dim. of shelf	width x depths		mm	280 x 236	340 x 296	480 x 386
Max. permissible load of the shelves	one shelf		kg	20	25	25
	totally per unit		kg	35	45	65
External dimensions (including door and handle)	width		cca mm	560	620	760
	depths		cca mm	490	550	640
	height		cca mm	700	830	880
Package dimensions (three layers carton)	width		cca mm	740	830	830
	depths		cca mm	615	635	730
	height		cca mm	915	1010	1070
Weight	netto		cca kg	65	98	130
	brutto		cca kg	76	110,5	144,5
Electric parameters – mains 50/60 Hz	max. input		kW	0,8	1,2	1,8
	input in stand by mode		W	5	5	5
	current		A	3,5	5,2	7,8
	nominal voltage		V	230	230	230
Temperature data Working temp (regulation start)	from 5 °C over ambient temp to °C			200	200	200
Temp. deviations acc. to DIN 12 880 from working temp – Al shelves pressure 5–10 mbar**	at 100 °C	accuracy	do ± °C	2	2	3
	at 200 °C	in space		<5	<6	<7
		accuracy in time	do ± °C	0,4	0,4	0,4
Temp. deviations acc. to DIN 12 880 from working temp – Al shelves pressure 5–10 mbar**	at 100 °C	accuracy	do ± °C	10	10	11
	at 200 °C	in time		18	23	*
		accuracy in time	do ± °C	0,5	1,0	1,0
Time of rise onto 98 % voltage 230 V – (Al shelves 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 – steel shelves, pressure 5–10 mbar	onto temp 100 °C		min	130	140	170
	onto temp 200 °C		min	170	180	220
Heat radiation	at 100 °C		W	150	260	370
	at 200 °C		W	300	520	750
Vacuum connection	vacuum connection measuring		DN mm	16	16	16
	feedthrough needle valve for		DN mm	40	40	40
	inert gas or air		∅ mm	8	8	8
	max. reached vacuum		mbar	5.10^{-4}	5.10^{-4}	5.10^{-4}
	chamber leakage		mbar.l.s^{-1}	5.10^{-3}	5.10^{-3}	5.10^{-3}

* not measured

** The heat in vacuum is transferred to the goods on the shelves by conduction in the shelves, therefore the mentioned temperature deviations are valid for temperatures on the surface of the shelves, there must be a perfect heat-conducting contact between the temperature sensors and the shelf surface. Goods placed on the shelves must also be in a perfect contact with the shelves, the goods temperature depends especially on their physical properties and on the contact with the shelf.

MMM Group

MMM Medcenter
Einrichtungen GmbH
Semmelweisstraße 6
D-82152 Planegg / München

tel.: +49 89 89 92 26 20
fax: +49 89 89 92 26 30
e-mail: medcenter@mmmgroup.com
http://www.mmm-medcenter.com

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