



## Vacucell *Eco + Evo* Servotherm Conductive Heating



### Vacuum Ovens



The VACUCELL® vacuum drying oven is perfect for temperature sensitive, easily decomposable, or oxidative materials that must be carefully dried under vacuum, along with drying-off solvents from chemicals and powders, quality and durability testing of components and materials, and drying complex components with inaccessible spaces.

The patented Servotherm conductive shelf heating systems dries media quickly, safely, and effectively.

The VACUCELL® is designed to be connected to a central vacuum source or can be equipped with a vacuum pump such as the BMT Vacustation for a complete stand-alone system.



Sterilization and drying of glassware and devices



Quality and durability testing of materials and components; ageing tests



Drying of compounds, components, and media



#### ECO Controller

- 3" LCD digital display
- Fuzzy Logic algorithm constantly monitors chamber conditions & optimizes parameters.
- (9) programs with (2) segments each for varying loads and parameters
- Audible & visual alarms
- USB flash, device & RS232 ports. Optional Ethernet port
- Integrated USB 30-day data logger for temperature & time
- Digital control sensor and independent safety sensor
- Delayed start and heating
- Analogue vacuum manometer 0.0 - 1.0mbr
- Manual pump control



#### EVO Controller

- 5.7" LCD touch digital display
- Fuzzy Logic algorithm constantly monitors chamber conditions & optimizes parameters.
- (100) programs with (100) segments each for varying loads and parameters
- Audible & visual alarms
- Automatic digital control and display: 10 - 1100 mbar / 7.500 - 825 torr
- USB device, RS232
- Integrated SD card 30-day data logger & multi-level secure user authentication
- Digital control sensor and independent safety sensor
- Delayed start and heating
- Automated pump control

#### Temperature Range:

ECO 5°C above ambient up to 200°C  
EVO 5°C above ambient up to 300°C

#### Chamber Pressure

pressure to 0.005mbr / 0.00375 Torr

#### Safety Door & Patented Door Closing:

- Safety door designed with VENTIFLEX safety glass along with
- 4-point patented door locks for exceptional seal of the door

#### Chamber Volumes:

22 (.8 ft<sup>3</sup>) • 55 (2 ft<sup>3</sup>) • 111 (4 ft<sup>3</sup>)

#### Chamber Construction:

AISI 316 stainless steel

#### Electrical Data:

115V 50/60Hz

#### Additional Features:

- Inert gas or air connection
- Needle valve for fine dosing
- Integrated duct for sensors etc. (40 mm)
- Connecting kit DN 16
- (2) Aluminum shelves included. Optional Stainless steel

#### Optional Equipment:

- Vacustation lower cabinet for housing the vacuum pump
- Ethernet communication port
- ECO Plus, increase to 8 programming segments
- Door sensor and alarm
- Warmcomm data acquisition software:
  - ✓ 4.0B - Receive data
  - ✓ 4.0P - Receive data and control the device
  - ✓ 4.0F - FDA 21 CFR part 11 compliant
- BMS - Building monitoring alarm contact
- Flexible PT 100 sensor
- 304 or 316 AISI stainless steel exterior
- Vacuum Pump specific to users' application
- Programmable 115V inner electrical socket
- IQ / OQ protocols with 9pt or 27pt temperature mapping
- Digital vacuum display 10 - 1,100 mbr (ECO)
- Digital vacuum display 0.1 to 1,100 mbr (EVO)

VacuCell Technical Data		Model	22	55	111
<b>Interior Dimensions</b> <b>Chamber:</b> AISI 304 stainless steel (AISI 316 stainless steel option available)	Volume	ft <sup>3</sup>	.8	1.9	3.9
		liters	22	55	111
	Width	inches	13.4	15.7	21.3
		mm	340	400	540
	Depth	inches	10.2	12.6	16.1
		mm	260	320	410
	Height	inches	11.8	16.9	18.9
		mm	300	430	480
<b>Exterior Dimensions</b> (Including door and handle)	Width	inches	22.1	24.4	29.9
		mm	560	620	760
	Depth	inches	19.7	22.1	25.6
		mm	500	560	650
	Height	inches	30.7	35.8	37.8
		mm	780	910	960
<b>Vacuum Connection</b>	Vacuum Connection	DN mm	16	16	16
	Measuring Port	DN mm	40	40	40
	Max. Attainable Vacuum	mbar	5.10 <sup>-4</sup>	5.10 <sup>-4</sup>	5.10 <sup>-4</sup>
	Chamber Leakage	mbar.l.s <sup>-1</sup>	<5.10 <sup>-3</sup>	<5.10 <sup>-3</sup>	<5.10 <sup>-3</sup>
<b>Inert Gas or Air Connection</b>	Needle Valve (ECO)	Ø mm	8	8	8
	Programmable Filling (EVO)	Ø mm	8	8	8
<b>Shelves: Stainless Steel</b>	Capacity: # of shelf guides in chamber side walls	Maximum #	5	8	9
		# Included	2	2	2
<b>Shelf Distance</b>	Min. distance between trays	Inches	1.41	1.7	1.7
		mm	36	43	43
<b>Useable Shelf Area</b>	Width x Depth	Inches	11x9.3	13.4x11.7	18.9x15.2
		mm	280x236	340x296	480x386
<b>Maximum Shelf Load</b>	Per shelf	lbs	44.1	55.1	55.1
		kg	20	25	25
	Total Per Unit	lbs	77.2	99.2	143.3
		kg	35	45	65
<b>Doors</b>		No.	1	1	1
<b>Working Temperature</b>	From 5°C above ambient	Up to °C	200/300	200/300	200/300
<b>Temperature Deviation From Working Temperature with Aluminum Shelves</b> (Pressure 5-10 mbar)	Temperature Distribution @ 100°C	± °C	2	2	3
	Temperature Distribution @ 200°C	± °C	5	6	7
	Uniformity	± °C	0.4	0.4	0.4
<b>Temperature Deviation From Working Temperature with Stainless Steel Shelves</b> (Pressure 5-10 mbar)	Temperature Distribution @ 100°C	± °C	10	10	11
	Temperature Distribution @ 200°C	± °C	18	23	26
	Uniformity	± °C	0.5	1	1
<b>Time to Reach Temperature with Aluminum Shelves &amp; 230V Power</b>	Up to 100°C	min	60	65	110
	Up to 200°C	min	80	85	130
<b>Time to Reach Temperature with Stainless Steel Shelves &amp; 230V Power</b>	Up to 100°C	min	130	140	170
	Up to 200°C	min	170	180	220
<b>Heat Emissions</b>	@ 100°C	w	150	260	370
	@ 200°C	w	300	520	750
<b>Noise Level of Complete Device</b>		dB	0	0	0
<b>Electrical Data (230V Option)</b>	Max Consumption 50/60Hz	kW	0.8	1.2	1.8
		W	805	1208	1806
		A	7	10.5	15.7
		V	115	115	115
<b>IP Code</b>			IP20	IP20	IP20
<b>Weight</b>	Net	lbs	143.3/149.9	216.1/222.6	286.6/293.2
		kg	65/68	98/101	130/133
	Gross	lbs	167.5/200.6	244.7/410.1	319.7/480.6
		kg	76/91	111/186	145/218