



Ecozell Eco

Natural Gravity Air Convection

Heating & Drying Ovens



ECOCELL® natural gravity convection ovens produce no noise or vibration while providing exceptional temperature uniformity.

Applications for the ECOCELL® include drying glassware, light powders, textiles, soils, and non-flammable chemicals. The ECOCELL® is also used in hospitals and animal care facilities for warming blankets and bedding.

Industrial uses of the ECOCELL® include material quality and durability testing of components and substances, ageing studies, Earth sciences and drying of substances in the energy industry.



Sterilization of compounds, powders, glassware, and devices



Material quality and durability testing of components and substances; ageing tests



Drying of components, parts, and media



ECO Controller

3" LCD display

Fuzzy Logic algorithm constantly monitors chamber conditions and continuously optimizes parameters.

(9) programs with (2) segments each for varying loads and parameters

Audible & visual alarms – temperature & time

Data capture from device with addition of optional Warmcomm software

USB flash, device & RS232 ports. Optional Ethernet port

Integrated USB 30-day data logger for temperature measure: 222, 404, 707

Exhaust port

Digital control sensor and independent safety sensor

Delayed heating and start function

Temperature Range:

5°C above ambient up to 125°C

- 300°C temperature option available

Patented Door Locks:

4-point patented door locking mechanism for exceptional seal of the door to the chamber

Chamber Volumes:

22 (.8 ft³) • 55 (2 ft³) • 111 (4 ft³) • 222 (8 ft³) • 404 (14.3 ft³) • 707 (25 ft³)

Chamber Construction: Double Wall

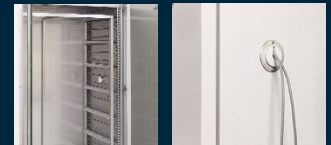
- AISI 304 stainless steel (AISI 316 stainless steel option available)
- Seamless main chamber with full removable inner chamber

Electrical Data:

115V 50/60Hz: 22, 55, 111, 222; 230V 50/60Hz: 222, 404, 707

Optional Heavy Load Chamber & Ports:

- Heavy load internal frame
- Heavy load shelves
- 2" (50mm) port

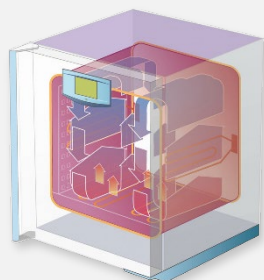


Optional Equipment:

- Access port, protected with INTERPON 50mm (2")
- Heavy load chamber
- Ethernet communication port
- Rolling carts for 22, 55, 111 & 222 models
- 4-20mA & BMS contacts
- Door sensor and alarm
- Automatic and key door lock
- Warmcomm data acquisition software:
 - ✓ 4.0B – Receive data
 - ✓ 4.0P – Receive data and control the device
 - ✓ 4.0F – FDA 21 CFR part 111 compliant
- BMS – Building monitoring alarm contact
- Flexible PT 100 sensor
- 304 or 316 AISI stainless steel exterior
- USB Flash drive, 30-day data logging: 22, 55, 111
- Inner electrical socket 230V
- IQ / OQ protocols with 9pt or 27pt temperature mapping

EcoCell Technical Data		Model	22	55	111	222	404	707
Interior Dimensions Chamber: AISI 304 stainless steel (AISI 316 stainless steel option available)	Volume	ft ³	0.8	1.9	3.9	7.8	14.3	25
		liters	22	55	111	222	404	707
	Width	inches	9.4	15.7	21.3	21.3	21.3	21.3
		mm	240	400	540	540	540	940
	Depth	inches	13.8	14.6	14.6	20.5	20.5	20.5
		mm	350	370	370	520	520	520
	Height	inches	11.8	13.8	20.9	29.9	55.7	55.7
		mm	300	350	530	760	1415	1415
Exterior Dimensions (Including door and handle)	Width	inches	16	24.4	29.9	29.9	29.9	45.7
		mm	406	620	760	760	760	1160
	Depth	inches	22	26.8	26.8	32.7	31.1	31.1
		mm	560	680	680	830	790	790
	Height (Legs L, Casters C)	inches	24	26.8	33.9	42.9	75.2	75.2
		mm	610L	680L	860L	1090L	1910C	1910C
Shipping Dimensions	Width	inches	18.31	27.98	33.46	33.46	33.46	49.21
		mm	465	710	850	850	850	1250
	Depth	inches	26.18	28.35	28.38	33.86	33.86	35.83
		mm	665	730	730	860	860	860
	Height	inches	25.79	35.43	42.52	52	84.65	84.65
		mm	655	900	1080	1320	2150	2150
Shelves: Stainless Steel	Capacity: # of shelf guides in chamber side walls	Maximum #	4	4	7	10	19	19
		# Included	2	2	2	2	2	2
Shelf Distance	Min. distance between trays	Inches	2.8	2.8	2.8	2.8	2.8	2.8
		mm	70	70	70	70	70	70
Useable Shelf Area	Width x Depth	Inches	7.3x10.4	15x13.2	20.5x13.2	20.5x19.1	20.5x19.1	36.2x19.1
		mm	185x265	380x335	520x335	520x485	520x485	920x485
Maximum Shelf Load	Per shelf	lbs	22	44	44	66	66	110
		kg	10	20	20	30	30	49.9
	Total Per Unit	lbs	55	110	110	154	220	286
		kg	24.9	49.9	49.9	69.9	99.8	129.7
Doors		No.	1	1	1	1	1	2
Operation Temperature	From 5°C above ambient	Up to °C	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)	250 (300)
Temperature Deviation From Operation Temperature	Temperature Distribution	± % Temp.	2.7	2	2	2	2.5	3.5
	Uniformity	± °C	1.0	0.3	≤0.8	≤0.8	≤1	≤1
Time to Reach Temperature of 250°C with closed flap and 230V Power		Min	54	59	60	99	85	95
Air Exchange @ 250°C		Per Hour	6	8	12	5	4	3
Heat Emission		W	300	590	760	990	1940	2550
Noise Level of Complete Device		dB	0	0	0	0	0	0
Electrical Data	Max Consumption 50/60Hz	kW	.92	1.2	1.8	1.8	3.6	4.5
		W	920	1196	1806	1806	3611	3128
		A	8	10.4	15.6	15.6	15.7	13.6
		V	115	115	115	115/230**	230 3P	230 3P
IP Code			IP20	IP20	IP20	IP20	IP20	IP20
Weight	Net	lbs	68.34	121.25	165	221	331	474
		kg	31	55	75	100	150	215
	Gross	lbs	79.37	134.5	185	258	364	514
		kg	36	61	84	117	165	233
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**230V for 300C models: 222, 404, 707



Natural Gravity Convection System

Natural gravity convection heating system operates with no noise or vibration and provides gentle airflow and even temperature distribution throughout the chamber. The lack of a fan inside the chamber also reduces particle movement and power consumption.