



Friocell ECO

Cooled Incubators



Temperature range:	0°C – 100°C (<i>-10°C min. temp. option available</i>)
Chamber volume:	2 cu.ft. (55 L) – 43 cu.ft. (1212 L)
Controller:	ECO standard microprocessor
Housing material:	Galvanized mild steel, painted
Chamber material:	AISI 304 stainless steel
Regulatory labels:	CE, UL, and CSA listed



ECO Controller:

- 3" LCD with keypad operation
- 9 programs, 2 segments each, up to 99 cycles
- Real-time programming, optional temperature ramp settings
- Cycle status display
- Acoustic and visual alarms: temperature and time
- Integrated USB 30-day data logger with Excel-formatted export
- USB, RS-232, optional Ethernet connectivity
- Keypad lock against unauthorized access

Standard Equipment:

- Patented forced air convection system with simultaneous vertical and horizontal airflow for precise temperature uniformity
- ECO standard microprocessor with Fuzzy Logic for real-time adaptive control
- AISI 304 stainless steel chamber, double-walled:
 - Seamless main chamber with rounded corners and fully removable inner chamber for ease of cleaning
- Five layers of insulation to minimize heat loss and efficiently maintain chamber conditions
- Shelving brackets embossed into inner chamber walls
- Patented 4-point door locking system securely seals the door to the chamber
- Inner glass door for viewing samples with minimal disruption to chamber conditions
- 2" (50 mm) stainless steel access port for routing sensors, probes, or external connections

Optional Equipment:

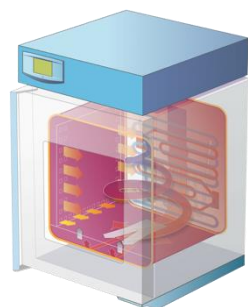
- Stainless steel exterior, AISI 304 or 316
- AISI 316 stainless steel chamber
- Additional stainless steel perforated shelf
- Additional stainless steel grated wire shelf
- -10°C minimum temperature
- Additional 1" (25 mm), 2" (50 mm), 4" (100 mm) stainless steel access port
- Flexible PT100 temperature sensor
- Ethernet communication port
- Automatic key and door lock
- Door sensor and alarm
- Observation window with 3 layers of insulating glass
- Interior electrical socket, 230 V
- Interior light
- Stacking frame: 111 only
- Rolling cart: 55, 111, 222
- BMS contacts (24 V, 1 A)
- IQ/OQ protocols with 9-pt. or 27-pt. temperature mapping
- WarmComm software:
 - 4.0B, data monitoring
 - 4.0P, data monitoring and control
 - 4.0F, supports FDA 21 CFR Part 11 compliance

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	Unit	55	111	222	404	707	1212
Temperature							
Working temperature	°C	0 – 100	0 – 100	0 – 100	0 – 100	0 – 100	0 – 100
Temperature uniformity @ 10°C	±°C	<0.5	<0.5	<0.5	<1	<1	<0.6
Temperature uniformity @ 37°C	±°C	<0.5	<0.5	<0.5	<1	<1	<0.5
Temperature stability	±°C	<0.2	<0.2	<0.2	<0.3	<0.4	<0.2
Time to reach 37°C from ambient	minutes	<11	<11	<11	<13	<13	<30
Cool-down time from 22°C to 10°C	minutes	<21	<21	<17	<19	<21	<21
Recovery from door open 30 sec. (37 / 50°C)	minutes	<5 / <6	<5 / <6	<2 / <3	<2 / <4	<6 / <6	<10 / <10
Heat emission @ 37°C	watts	55	70	63	123	148	200
Chamber							
Capacity	cu.ft. / liters	2 / 55	4 / 111	8 / 222	14.3 / 404	25 / 707	43 / 1212
Doors	#	1	1	1	1	2	3
Shelves (standard / max)	#	2 / 4	2 / 7	2 / 10	2 / 19	2 / 19	6 / 3x19
Shelf distance	in / mm	2.8 / 70	2.8 / 70	2.8 / 70	2.8 / 70	2.8 / 70	2.8 / 70
Usable shelf area (w x d)	in	15 x 13.2	20.5 x 13.2	20.5 x 19.1	20.5 x 19.1	36.2 x 19.1	20.5 x 19.1
Maximum shelf load	lb / kg	44 / 20	44 / 20	66 / 30	66 / 30	44 / 20	66 / 30
Maximum unit load	lb / kg	110 / 50	110 / 50	154 / 70	220 / 100	287 / 130	661 / 300
Overall Dimensions							
Width	in / mm	24.4 / 620	29.9 / 760	29.9 / 760	41.7 / 1060	57.5 / 1460	95.9 / 2435
Depth	in / mm	25.6 / 650	29.5 / 750	35.2 / 895	31.1 / 790	31.1 / 790	34.3 / 870
Height ^[1]	in / mm	34.4 / 875	41.1 / 1045	50.2 / 1275	75.2 / 1910	75.2 / 1910	75.2 / 1910
Weight	lb / kg	183 / 83	234 / 106	302 / 137	494 / 224	562 / 255	1144 / 519
Internal Dimensions							
Width	in / mm	15.7 / 400	21.3 / 540	21.3 / 540	21.3 / 540	37 / 940	3x21.3 / 3x540
Depth	in / mm	14.6 / 370	14.6 / 370	20.5 / 520	20.5 / 520	20.5 / 520	20.5 / 520
Height	in / mm	13.8 / 350	20.9 / 530	29.9 / 760	55.7 / 1415	55.7 / 1415	55.7 / 1415
Electrical							
Voltage	V, Hz	115, 50/60	115, 50/60	115, 50/60	115, 50/60	115, 50/60	230, 50/60
Wattage	watts	700	700	850	1700	2000	2500
Amperage	amps	8	8	9	16	18	12
IP code		IP20	IP20	IP20	IP20	IP20	IP20

[1] 55, 111, 222 models' height dimensions measured with adjustable feet. 404, 707, 1212 models' height measured with rolling casters.



Patented Forced Air Convection

Simultaneous vertical and horizontal airflow delivers precise temperature uniformity, while bottom-to-top circulation simulates natural convection, improving temperature accuracy and stability.