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FRIOCELL ECO

BOD Incubators



Water Treatment / BOD

Biological Oxygen Demand, study of microorganisms, aerobic bacteria & oxidization of organic matter.



Research & Laboratory

Testing and growth of bacteria cultures and microorganisms



Biology & Microbiology

Testing and growth of bacteria cultures and microorganisms



222 on optional cart

Back (L - R) 404, 707, 1212
Front (L - R) 55, 111, 222

The **Fricell** allows exact incubation while **maintaining precise temperature control**. The unique cooling & heating system ensures that samples do not over dry.

The patented forced air convection ensures even temperature distribution throughout the entire chamber. Ideal for use in water testing laboratories.

The Fricells unique double chamber design & removable inner chamber elevate sterilization standards.



Patented Air Movement - Mechanical Convection

Chamber Volumes 22, (.8 ft3), 55 (2 ft3), 111 (4 ft3), 222 (8 ft3), 404 (14.3 ft3), 707 (25 ft3), 1212 (43 ft3)

Temperature 0°C up to 100°C / 70°C (22)

Patented Forced-Air convection system

Access ports 25 mm (1"), 50 mm (2"), 100 mm (4") optional

Double Wall Removable inner chamber for cleaning

Chamber AISI seamless stainless steel w/ rounded corners

Fuzzy Logic ensures accurate temperatures w/out

Smart Handle with four-point locking sealing door to chamber

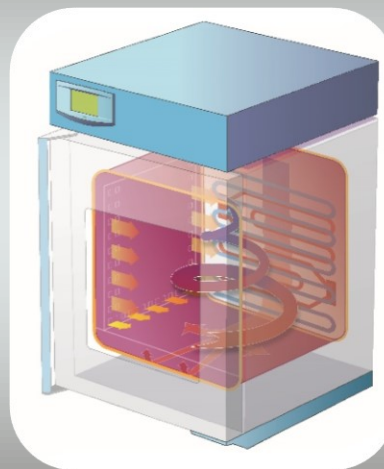
ECO LCD Control Panel



- 3" LCD COG display
- 9 programs with 2 segments for varying loads and parameters. Optional 8 segments
- constant monitoring of chamber conditions
- fuzzy logic enabled microprocessor
- USB & RS232 device ports
- delayed heating start & stop function
- digital safety thermostat
- acoustic and visual alarms
- keyboard security against unauthorized use
- inner glass door to view into chamber

Patented Air - Flow

Vertical and Horizontal Air movement system for precise temperature distribution



Options

- USB Flash port & 30day data logging
- ECP + add 6 segments for a total of 8
- -10°C and automatic defrost
- access ports 25, 50, 100 mm
- Ethernet communication port
- rolling carts for 22, 55, 111, 222
- Door sensor and alarm
- automatic and key door lock
- WarmComm Software...
- ✓ 4.0B – Receive data
- ✓ 4.0P – Receive data and control the unit
- ✓ 4.0F – FDA 21 CFR part 111 compliant
- BMS – Building monitoring alarm contact
- Flexible PT 100 sensor
- stainless steel exterior
- interior light
- chamber outlet 115V
- IQ / OQ protocols with 9pt temperature mapping

FRIOCELL ECO	Technical Data	Model	22	55	111	222	404	707	1212	
Interior dimensions Chamber: stainless steel	volume	ft3	0.8	1.9	3.9	7.8	14.3	25	43	
		liters	22	55	111	222	404	707	1212	
	width	inches	9.5	15.7	21.3	21.3	21.3	37	21.3 x 3	
		mm	244	400	540	540	540	940	540 x 3	
	depth	inches	11.6	14.6	14.6	20.5	20.5	20.5	20.5	
		mm	306	370	370	520	520	520	520	
	height	inches	13.3	13.8	20.8	29.9	55.7	55.7	55.7	
		mm	296	350	530	760	1415	1415	1415	
Volume of the steam space		ft3	1.5	3.1	5.8	10.6	18.5	31	55.5	
		liters	43	89	163	299	524	876	1,753	
Shelves: stainless steel	number of shelf guides in chamber side walls	max. number standard #	4	4	7	10	19	19	19 x 3	
			2	2	2	2	2	2	2 x 3	
Shelf distance	min. distance between trays	inches	2.4	2.8	2.8	2.8	2.8	2.8	2.8	
		mm	60	70	70	70	70	70	70	
Useable shelf area 20.5x19.1	width x depth	inches	7.3x10.4	15x13.2	20.5x13.3	20.5x19.1	20.5x19.1	36.3x19.1	36.3x19.1 x3	
		mm	185x265	380x335	520x338	520x485	520x485	920x485	920x485x3	
520x485 Inner glass doors		No.	1	1	1	1	1	2	3	
		No.	1	1	1	1	1	2	3	
Maximum shelf load 66.1 30 220.5	one shelf	lbs	22	44	44	66.1	66.1	110.2	66.1	
		kg	10	20	20	30	30	50	30	
	total per unit	lbs	55.1	110.2	110.2	154.3	220.5	286.6	220.5	
		kg	25	50	50	70	100	130	100	
100 230V option available Protective system	max consumption 50/60 Hz	W	150	840	863	1012	1829	2070	2500	
		V	115	115	115	115	115	115	230	
			IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	
Temperature Data Working temperature	range °C		5°C to 70°C	-10 to 100	-10 to 100	-10 to 99.9	-10 to 100	-10 to 100	-10 to 70	
	Temperature Distribution	at 10°C	± °C	<0.3	<0.5	<0.5	<0.5	<1	<1	<0.6
		at 37°C	± °C	<0.3	<0.5	<0.5	<0.5	<1	<1	<1
	Temp. Uniformity		± °C	<0.1	<0.2	<0.2	<0.2	<0.3	<0.4	<0.3
		Heating up time from ambient temp.	to 37°C	min.	<10	23	24	25	26	27
	Cooling down time	from 22°C to 10°C	min.	<31	<14	<21	<21	<21	<21	<21
			Recovery time after 1 min. door open	at 37°C at 50°C	min. min	5 6	5 6	5 6	2 3	2 4
Heat Emission	at 37°C	W	50	62	70	97	123	148	200	
External dimensions (door/handle/feet/ casters)	width	inches	15.9	24.4	29.9	29.9	41.7	57.5	95.9"	
		mm	406	620	760	760	1060	1460	2435	
	depth	inches	22	25.6	25.6	31.1	31.1	31.1	34.3	
		mm	592	640	640	790	790	790	870	
	height	inches	23.7	34.5	39.4	50.2	75	75	75	
mm		605	875	1000	1275	1905	1905	1905		
Weight	net	lbs	72.8	176.4	222.7	291	507	595.2	1202	
		kg	33	80	101	132	230	270	545	
	gross	lbs	83.8	218.3	288.8	372.6	696.2	696.7	1907	
		kg	38	99	131	169	270	316	865	

Note: All technical data is related to 22 °C ambient temperature and +/- 10% voltage swing (if specified). For other parameters see section: Electrical connections. Temperature and humidity variation occurs in the case of consistent air-flow during operation.

- No more than 50% of the tray should be filled in order to facilitate uniform air circulation inside the chamber

BMT USA

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Bench Top Models

- 22 (.8 ft3), 55 (2 ft3)
- 111 (4 Ft3)
- 222 (2 ft3)
- Optional Leveling casters
- Optional Rolling carts