



Climacell *Evo*



Patented Forced Air Convection
Large Volume CO² Incubators



Pharmaceutical drug structure testing



Virology and cancer research



Microbiological sample cultivation and cell culture growth



EVO Controller

5.7" LCD touch display

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

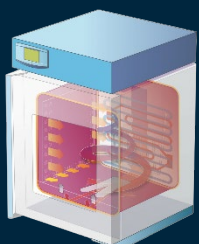
(100) programs with (100) segments each for varying loads and parameters.

Audible & visual alarms – temperature, time & humidity.

FDA CFR 21 Part 11 compliant with addition of Warmcomm 4.0F software.

USB device, RS232 & optional Ethernet port.

Integrated SD card 30-day data logger & multi-level secure user authentication.



Patented Forced Air Convection System

BMT's patented force air convection system moves air vertically and horizontally inside the chamber for precise temperature uniformity and fast heating and cooling times. The process of heating from the bottom of the chamber to the top mimics natural airflow, allowing for more precise simulation of climatic conditions.

CLIMACELL® EVO CO₂ incubators are designed to create accurate and reproducible conditions for cell growth procedures, tissue, virology, and other culturing procedures. The patented forced air convection system provides even temperature distribution throughout the chamber, while the drift-free infrared (IR) sensor provides maximum reliability and measurement precision during the entire incubation process. With the ability to control temperature, humidity, airflow, and CO₂ concentration, the CLIMACELL® EVO can accurately simulate a wide range of conditions with exact repeatability.

Temperature Range:

0°C up to 100°C (10°C up to 95°C with humidity)

Dry Heat Sterilization:

160°C

CO₂ Concentration:

0.1% up to 20% -

- Drift-free infrared (IR) CO₂ sensor

Humidity Control:

10% up to 98% - controlled in 1% increments

Chamber Volumes:

222 (8 ft³) • 404 (14.3 ft³) • 707 (25 ft³) • 1212 (43 ft³)

Chamber Construction:

- AISI 304 stainless steel chamber (AISI 316 SS option available)
- HEPA filter on incoming CO₂ gas tubing
- 50mm (2") stainless steel port

Electrical Data:

230V 50/60Hz

Drift-free Infrared (IR) CO₂ Sensor

The Vaisala drift free infrared CO₂ sensor provides accurate CO₂ measurements at all times, ensuring samples are always culturing at the correct CO₂ concentration levels. The drift free CO₂ sensor also eliminates the need for additional auto-referencing/zeroing of the sensor to prevent drifting of the CO₂ calibration.

Optional Equipment:

- Ethernet communication port
- Rolling carts for 222 models
- Optional heated inner glass door - eliminates condensation on the inner glass door(s)
- Door sensor and alarm
- Automatic lock and key door lock
- Stainless steel exterior
- 316 AISI stainless steel chamber
- 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
- 4-20mA & BMS contacts
- Water-proof socket 230V
- IQ / OQ protocols with 9pt or 27pt temperature mapping

Climacell EVO Large Volume CO2 Incubator Technical Data		Model	222	404	707	1212
Interior Dimensions Chamber: AISI 304 stainless steel (AISI 316 stainless steel option available)	Volume	ft ³	7.8	14.3	25	43
		liters	222	404	707	1212
	Width	inches	21.25	21.25	37	3 x 21.25
		mm	540	540	940	3 x 540
	Depth	inches	20.9	20.9	20.9	20.9
		mm	530	530	530	530
Height	inches	30.1	55.7	55.7	55.7	
	mm	765	1415	1415	1415	
Exterior Dimensions	Width	inches	30.7	43.1	59.2	103.5
		mm	780	1100	1500	2360
	Depth	inches	34.8	34.8	34.8	35.4
		mm	885	885	885	898
	Height (Legs L, Caster C)	inches	57.1C	74.4C	74.4C	75.6C
		mm	1450C	1890C	1890C	1921C
Shelves: Stainless Steel	Capacity: # of shelf guides in chamber side walls	Maximum #	10	19	19	3 x 19
		Standard #	2	2	2	6
Shelf Distance	Min. distance between trays	Inches	2.8	2.8	2.8	2.8
		mm	70	70	70	70
Useable Shelf Area	Width x Depth	Inches	20.5x19.1	20.5x19.1	36.3x19.1	20.5x19.1x3
		mm	520x485	520x485	920x485	520x485x3
Maximum Shelf Load	One Shelf	lbs	66.1	66.1	110.2	66.1
		kg	30	30	50	30
	Total Per Unit	lbs	154.3	220.5	286.6	661
		kg	70	100	130	300
# Outer Metal Doors			1	1	2	3
# Inner Glass Doors			1	1	2	3
Volume of Steam Space		ft ³	10.8	18.7	31	61.9
		liters	305	530	878	1753
Operation Temperature		From 0°C up to °C	100	100	100	100
Temperature Accuracy	Distribution @ 10°C	± °C	<0.5	<1	<1	<0.9
	Distribution @ 37°C	± °C	<0.5	<1	<1	<0.5
	Uniformity	± °C	<0.2	<0.3	<0.4	<0.2
Heating Time to 37°C From the Ambient Temperature		Minutes	<11	<13	<13	<30
Cooling Down Time From 22°C to 10°C		Minutes	<17	<19	<21	<21
Recovery Time After Door Opened for 30 s according to DIN 12880	@ 37°C	Minutes	<3	<3	<6	<10
	@ 50°C	Minutes	<6	<7	<6	<10
Relative Humidity (RH)	Range	%	10% - 98%	10% - 98%	10% - 98%	10% - 98%
Accuracy RH (T_{CHAMBER} ≥ 21°C)	In Time	%	<2	<2	<2	<2
Heat Emission	@ 37°C	W	63	123	148	200
CO2 Concentration		%	0.1 - 20	0.1 - 20	0.1 - 20	0.1 - 20
CO2 Required Pressure		Bar/PSI	0.3-0.7/5--10	0.3-0.7/5--10	0.3-0.7/5--10	0.3-0.7/5--10
Noise Level of Complete Device		dB	50	56	58	60
Electrical Data: EVO 0°C	Max Consumption 50/60Hz	W	2200	3150	3400	3500
		A	9.6	13.7	14.8	15.2
		V	230	230	230	230
IP Code			IP20	IP20	IP20	IP20
EVO Weight	Net	lbs	324.1	529.1	617.3	1250
		kg	147	240	280	567
	Gross	lbs	390	617	719	1898
		kg	177	280	326	861