



Stability, Photostability, Growth, Incubation, Environmental Chamber



BETATEK INC.
Instrumentation Superbly Supported
L'instrumentation à son meilleur

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Pharmaceutical & Bio Tech

ICH Stability & Photostability



Insect Research

Simulating conditions for organisms, aquaculture and a wide variety of insects including drosophila, algae, bacteria and fungus.



Biology & Microbiology

Testing and growth of bacteria cultures and microorganisms



Plant Growth

Simulating environmental conditions for agricultural applications; germination, green plant growth, plant tissue culture, crops and fruits



Food & Beverage Science

Stability testing testing of food, beverages and packaging including shelf life studies



Cosmetics

ICH Stability, Photostability & durability testing



Aerospace, Auto, Industrial

Testing of materials quality and durability; adhesives, textiles, seals, composites, components & electronics



Climacell 404 (14.3 ft3)



Climacell 222 (8 ft3)

The **CLIMACELL** series was developed to created exact and reproduce simulation of a wide range of environmental conditions for the testing of pharmaceutical products, plant growth, insect rearing, shelf life testing of food, materials and components. This includes ICH Q1A & Q1B stability, photostability. Secure data storage Warmcomm Software conforming to **FDA 21 CFR part 11**.

The Climacells' stainless steel pharmaceutical graded (AISI 304) double-wall chamber design (main & inner chamber) allows for long life expectancy and facilitates the easy cleaning and sterilization of the chamber.

Combine these features with controllable lighting and BMT's patented air-flow system, humidification and dehumidification creates precise conditions.

Forced Air Convection: Patented Air flow system: vertical & horizontal

Chamber Sizes: 111 (3.9), 222 (7.8), 404 (14.3), 707 (25) ft3 /liters

Working Temperature Range: 0 °C up to 99.9 °C with humidity 10 °C up to 95°C

Humidity Range: 10-95%, controlled in 1% increments

Lighting:

VIS & UV shelf & door lighting: fluorescent tube

Fully programmable light intensity, microprocessor diming 0 – 100%

111 & 222: up to 2 shelf lights

404 & 707: up to 3 shelf lights

Power: 230V 50 / 60Hz

Features

- removable inner chamber for cleaning & sterilization
- AISI 304 seamless stainless steel chamber & shelves with rounded corners
- data encryption corresponding to FDA 21 Part 11
- multi-level user administration
- continuous indication of temperature, humidity, time & alarm
- audio and visual alarm
- independent safety thermostat
- RS 232 communication port with Ethernet option
- 5 layers of insulation for precise chamber uniformity
- digital safety thermostat
- patented air flow and adjustable forced air fan rate 10% to 100 %
- automatic water supply from water supply
- pure water tank with automatic pump

LED Comfort Controller



- fuzzy logic digital microprocessor controller
- humidification and de-humidification
- 6 programs – 40 segments – for varying loads and parameters
- chip card storage system for individual user programs & admin security
- Time range 1 minute to 16 years in 1 min. intervals
- graphic display of cycle parameters
- high process security – users protected by passwords (5 users, 1 admin)
- program temperature ramps, real time, heating sequences and cycling
- delayed heating start and stop

Lighting: LED & Tube

- VIS & UV fluorescent lighting
- Combination UV & VIS for ICH Q1B photostability
- digitally programmable intensity 0 – 100%

Options

- Communication module: WiFi, Ethernet, USB
- 10 °C with automatic defrost
- VIS & UV light measurement w/data output: -10 to 70°C
- access ports 25mm (1"), 50 (2"), 100 (4")
- automatic door lock or standard key lock
- programmable water proof inner outlet
- BMS remote alarm monitoring contacts
- PT 100 flexible sensor
- WarmComm software: FDA 21 CFR part 11 and Bi directional communication
- Stainless steel exterior
- AISI 316 stainless steel chamber
- Stainless steel exterior

Climacell Technical Data		Model	111	222	404	707
Interior dimensions Chamber: stainless steel	volume	ft3	3.9	7.8	14.3	25
		liters	111	222	404	707
	width	inches	21.25	21.25	21.25	37
		mm	540	540	540	940
	depth	inches	14.6	20.5	20.5	20.5
		mm	370	520	520	520
	height	inches	20.9	29.9	55.6	55.6
		mm	530	760	1410	1410
Volume of the steam space		ft3	5.8	10.6	18.5	31
		liters	163	299	524	876
Shelves: stainless steel	# of shelf guides in chamber side walls	max. number	7	10	19	19
		standard #	2	2	2	2
Shelf distance	min. distance	inches	2.8	2.8	2.8	2.8
	between trays	mm	70	70	70	70
Useable shelf area	width x depth	inches	20.5x13.3	20.5x19.1	20.5x19.1	36.3x19.1
		mm	520x338	520x485	520x485	920x485
Outer metal doors		No.	1	1	1	2
Inner glass doors		No.	1	1	1	2
Maximum shelf load	one shelf	lbs	44	66.1	66.1	110.2
		kg	20	30	30	50
	total per unit	lbs	110.2	154.3	220.5	286.6
		kg	50	70	100	130
Electric parameters	max consumption	W	50	70	100	130
	Protective system	V	230	230	230	230
		IP 20	IP 20	IP 20	IP 20	IP 20
Working temperature	range °C		0 -- 99.9	0 -- 99.9	0 -- 99.9	0 -- 99.9
Temperature accuracy in the chamber Distribution	at 10°C	± °C	<0.5	<0.5	<1	<1
	at 37°C	± °C	<0.5	<0.5	<1	<1
Uniformity		± °C	<0.2	<0.2	<0.3	<0.4
Heating up time from ambient temp., Cooling down time	to 37°C	min.	24	25	26	27
	from 22°C - 10°C	min.	<21	<21	<21	<21
Recovery time after 1 min. door open	at 37°C	min.	4	4	4	4
	at 50°C	min	4	4	4	4
Relative Humidity	range	%	10%-95%	10%-95%	10%-95%	10%-95%
Heat Emission	at 37°C	W	70	97	123	148
External dimensions (including door/Handle, feet / rollers)	width	inches	30	30	39.8	57.5
		mm	760	760	1010	1460
	depth	inches	25.2	31.1	31/1	31/1
		mm	640	790	790	790
	height	inches	43.3	52.4	75.3	75.3
		mm	1100	1330	1910	1910
Weight	net	lbs	222.7	291	507	595.2
Climacell Technical Data		kg	101	132	230	270
	gross	lbs	288.8	372.6	696.2	696.7
		kg	131	169	270	316