



Laboratory incubators

The high technical standard of our FRIOCELL®-incubators allows exact incubation processes both for variation and deviation. The units have very short recovery times and show an excellent manner in keeping the precise regulation. A unique cooling system ensures, that the samples are not dried while cooling. A high performance system of lighting ensures outstanding homogenous parameters for tests and growth conditions. These devices are designed for use in biotechnology, botany, food processing industry, cosmetics, chemical industry etc.

Volume: 22, 55, 111, 222, 404, 707 litres
Working temperature:
 0.0°C up to 99.9°C, FC 22
Refrigerant:
 R 134a without CFC (excluded volumen 22)
 Peltiér effect – FC 22
Inner glass door
Interior: stainless steel, mat. No. 1.4301 (AISI 304)

The High-Tech Comfort Line with Multi-Functional Microprocessor Control Unit Options

- 6 adjustable programs
- chip card system for individual program storage
- RS 232 – interface for printer or PC-communication
- delayed heating start and stop function
- acoustic and visual alarm in error state
- time range 0–40 years with 1 min-intervals
- digital safety thermostat
- real time
- selectable rate of temperature increase or decrease – "RAMPS"
- programming of program time segments – "SEGMENTS"
- programme cycles
- adjustable ventilation rate 10 to 100%
- manual control of the air exhaust flap
- keyboard blocking
- door opening control



- access ports Ø 25, 50, 100 mm (Ø 50, 100 mm is not available for 22 liters volume)
- door lock
- left door versions (excluded volume 22, 404 and 707 liters)
- timer programmable water protected inner socket
- exposure lighting with digitally adjustable light 0–100%
- exposure illumination in shelves, especially for photo-stability tests (according to ICH Guideline)
- interior lighting – a wide offer of various luminary sources (excluded volumen 22 l)
- illumination measuring VIS, UV
- enlarge the cooling of -9.9°C
- BMS relay alarm contact
- special software WarmComm 4.0
- separate PT 100 sensor
- stainless steel casing of the device

... comfort line

Technical data		Models	22	55	111	222	404	707
Inner dimensions Chamber, stainless steel	volume	l	22	55	111	222	404	707
	width	mm	244	400	540	540	540	940
	depth	mm	307	370	370	520	520	520
	height	mm	296	350	530	760	1410	1410
Outer dimensions (incl. door and handle, Feet or Rollers)	width	max. mm	406	620	760	760	1010	1460
	depth	max. mm	592	640	640	790	790	790
	height	max. mm	605	820	1000	1230	1910	1910
Package dimensions (three layers carton)	width	cca mm	465	700	830	860	1080	1540
	depth	cca mm	705	730	730	830	860	860
	height	cca mm	655	1020	1280	1510	2100	2100
Volume of the steam space		l	43	89	163	299	524	876
Trays, stainless steel *)	number	max./usual	4/2	4/2	7/2	10/2	19/2	19/2
	Min. distance between trays	mm	60	70	70	70	70	70
	Storage area (w x d)	mm	185x265	380x335	520x338	520x485	520x485	920x485
Admissible weight of trays	per 1 tray	kg	10	20	20	30	30	50
	for a rack	kg	10	20	20	30	30	20
	together inside the oven	kg	23	50	50	70	100	130
Number of outer metal doors		No.	1	1	1	1	1	2
Number of inner glass doors		No.	1	1	1	1	1	2
Weight	netto	kg	33	80	101	132	230	270
	brutto	kg	38	99	131	169	270	316
Electricity data	max. power consumption mains 50/60 Hz Protective system	W V	130 100-240 IP 20	1130 230 IP 20	1130 230 IP 20	1130 230 IP 20	2250 230 IP 20	2250 230 IP 20
Temperature data								
Working temperature	at 22 °C	°C	+5 °C – +70 °C	99,9	99,9	99,9	99,9	99,9
Temperature accuracy								
in space	at 10 °C	± °C	< 0,3	< 0,5	< 0,5	< 0,5	< 1	< 1
	at 37 °C	± °C	< 0,3	< 0,5	< 0,5	< 0,5	< 1	< 1
in time		± °C	< 0,1	< 0,2	< 0,2	< 0,2	< 0,3	< 0,4
Heating/up time to 37 °C from the ambient temperature		min	< 16	23	24	25	26	27
Cooling/down time from 22 °C to 10 °C		min	< 35	< 21	< 21	< 21	< 21	< 21
Recovery time after door was opened for 1min	at 37 °C	min	1,5	4	4	4	4	4
	at 50 °C	min	4	4	4	4	4	4
Heat emission	at 37 °C	W	50	62	70	97	123	148
Noise level – complete incubator		dB	46	46	46	50	56	58

*) Approx. 50% of the tray area can be filled in a way a uniform air circulation is enabled inside the chamber.

Note: All technical data are related to 22 °C of ambient temperature and ±10% voltage swing rate ventilator 100%, defrost off, lighting off.
Changes in the design and make reserved.