CO2CELL

Laboratory Incubators with CO_2 atmosphere

MMM Group



The newest generation of CO_2 incubators aims at constant and repeatable conditions for procedures of cells and tissues growth and other cultivation processes. The system of direct heating eliminates the necessity of a fan use and consequently it also eliminates the risks of vibrations and cross contamination. The infrared sensor without any variations provides maximal reliability and precision of measuring in the course of the whole process. The installation and maintenance is very easy thanks to unique directly-heated chamber. The inner glassed door is sealed against the chamber insulation, which allows check of samples without inner environment conditions loss. The external door is also sealed by its own external sealing.

Many useful possibilities support such characteristics as decontamination at 160°C or sterilization at 200°C, while the CO_2 / O_2 sensor remains inside of the device. Internal door with several glasses minimise loss of conditions in the chamber after the door opening, the oxygen volume is controlled, etc.

Inner volume: 50, 190 litres
Operation temperature: 5°C above the ambient temperature, up to 60°C
Uncontrolled relative humidity: up to 95% RH at 37°C
Concentration of CO_2: 0,2% up to 20%
Sensor CO_2: Infrared sensor, without any variations to occur (IR)
Interior: Standard: stainless steel DIN 1.4571, (AISI 304)
Comfort: stainless steel DIN 1.4571 (AISI 316)

The Versatile Standard Line with Microprocessor Control Unit

- anti-microbiological paint
- internal glass door
- contamination risk avoided by using no fan
- LED display
- continuous indication of actual temperature and CO_2 concentration
- audio and visual alarm
- infrared drift free CO_2 sensor
- independent safety thermostat
- HEPA filter on incoming
- seamless inner chamber with rounded corners
- trial heating system for maximum homogeneity of internal conditions
- ∅ 25 mm access port in the back of the machine



Options

- 160°C decontamination (only 190 litres)
- 3-split inner glass door (only 50 litres)
- 6-split inner glass door (only 50 litres)
- 8-split inner glass door (only 190 litres)
- CO_2 Inline pressure regulator
- two stage CO_2 regulator
- automatic change over unit
- stacking kit for two machines (of same volume)
- cart-type underframe with 4 wheels
- IQ/OQ protocols
- left hinged door

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

- anti-microbiological paint
- internal glass door
- contamination risk avoided by using no fan
- large color touch screen display, simple icon navigation
- continuous indication of actual temperature, CO_2 concentration, time and alarm limits
- audio and visual alarm of error state
- infrared drift free CO_2 sensor
- independent safety thermostat
- SD card system saving the data in MS Excel format
- RS 232 port, BMS relay alarm contact
- HEPA filter on incoming CO_2 / NO_2 tubing
- seamless inner chamber with rounded corners
- direct 6-sided heating system for maximum homogeneity of internal conditions
- on board data-logging facility with graphs
- high process security – users protected by passwords (5 users, 1 admin)
- event log of all relevant data and events
- ∅ 25 mm access port in the back of the machine



Options

- 200°C sterilization
- oxygen control 1-19%
- humidity display
- 3-split inner glass door (only 50 litres)
- 6-split inner glass door (only 50 litres)
- 8-split inner glass door (only 190 litres) with shelves dividers
- two stages N_2 pressure regulator
- CO_2 Inline pressure regulator
- two stage CO_2 regulator
- automatic change over unit
- stacking kit for two machines (of same volume)
- cart-type underframe with 4 castors (two castors lockable)
- IQ/OQ protocols
- left hinged door
- Ethernet connection port
- 4-20 mA re-transmitt

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Technical data				
Inner space	volume	l	**50**	**190**
	width	mm	402	632
	depth	mm	300	440
	height	mm	402	686
External dimensions (including door, handle, legs or casters)	width	max. mm	534	765
	depth	max. mm	460	734
	height	max. mm	717	862
	ventilation neck diameter - internal / external	mm	24	24
Obal - základní obal	šířka	approx mm	800	930
	hloubka	approx mm	600	850
	výška (včetně palety)	approx mm	960	1080
Shelves	maximal number	pc	3	8
	standard equipment	pc	3	4
	minimal distance between trays/shelves	mm	96	64
	usable area	mm	325×249	557×401
Maximal allowed loading of trays *)	per 1 shelf	kg	20	15
	inside the device - in total	kg	60	60
Number of external metal door		pc	1	1
Weight	net	approx kg	38 / 40	94,5 / 104
	brut (cartoon)	approx kg	50 / 52	109 / 117,5
Electric data – mains 50/60 Hz	max. input	kW	3,5/9,5	3,8/18
	stand by input	W	7,2	5,8
	current for voltage **)	V	230**	230**
Temperature data				
Operation temperature		do °C	60	60
Temperature deviations at 37°C	measurement	±°C	≤0,1	≤0,1
	in space	±°C	≤0,25	≤0,25
	in time	±°C	≤0,1	≤0,1
Recovery rate		%/min	≤0,8	≤0,8
Required CO_2 pressure		bar / psi	0,3-0,7 / 5-10	0,3-0,7 / 5-10
Relative humidity	humidity dish volume	l	0,5	1,5
Humidity level at 37°C, 5°C CO_2		% RH	až do 95	až do 95

Note:
All the technical data apply to 22°C of ambient temperature and ± 10%.
*) The trays may be covered to approximately 50% of their surface and if possibly in such a way so as the air may evenly flow inside the chamber space.
**) Voltage ±10%
The values may differ depending on specific charge and media parameters.
Changes in the design and make reserved.



CO2CELL 50



CO2CELL 190

MMM Medcenter Einrichtungen GmbH,
Semmelweisstrasse 6, D-82152 Planegg / München
Tel.: +49 89 8992 2620, Fax.: +49 89 8992 2630,
E-mail: medcenter@mmm-medcenter.de,
www.mmm-medcenter.de