

CO2cell

CO₂ incubators

3-Circuit Fanless Direct Heat System



CO2cell 190 Standard



CO2cell 190 Comfort

Temperature:

Ambient + 5°C up to 60°C

Dry Heat Sterilization:

160°C (standard), 200°C (comfort) - *highest available on the market.*

CO₂ Concentration:

0.1% up to 20% controlled in 1% increments.

Relative Humidity:

Up to 90% RH ±5% @ 37°C

Chamber:

- 50L (1.8ft³) or 190L (6.7ft³) chamber volumes available.
- **Standard:** AISI 304 stainless steel.
- **Comfort:** AISI 316 stainless steel.
- 25mm (1") port.
- Inner Glass Door to minimize loss of chamber conditions.
- HEPA filter on incoming CO₂ gas tubing.
- Exterior: Anti-Microbial Paint.
- Stainless steel water tray.

Electrical:

115V 50/60Hz

Optional Equipment:

- Stainless steel exterior: AISI 304 or 316.
- Ethernet communication port.
- Stacking platform for stacking two units.
- Rolling platform cart.
- Door sensor and alarm.
- Automatic door lock.
- Automatic CO₂ tank change over kit.
- CO₂ in-line pressure regulator.
- Two stage CO₂ regulator.
- Humidity display.
- BMS contacts (24V, 1A).
- 4-20mA contacts.
- IQ/OQ protocols with 9pt. or 27pt. temperature mapping.
- Tri-gas O₂ control (comfort models only).

CO₂cell incubators produce constant and repeatable conditions for cell culturing procedures. The 6-sided 3-circuit fanless direct heat system eliminates condensation inside the chamber while delivering gentle airflow, preventing particulates from becoming airborne and reducing the risk of sample contamination.

The infrared (IR) drift free CO₂ sensor provides precise and reliable measurements while aiding in quick setpoint recovery after opening the door.

Key Benefits:

- Fanless direct heat system eliminates condensation and sample evaporation, while also reducing the risk of cross contamination.
- Standard equipped Vaisala IR CO₂ sensor provides precise and reliable measurements of CO₂ concentration.
- Zero vibration eliminates any possibility of cell edging effect.
- Stainless steel chamber construction for easier cleaning and sterilization.



Standard Controller:

- 2 x 3 LED digital display.
- Continuous indication of actual temperature and CO₂ concentration.
- Audio and visual alarm.
- Infrared drift free CO₂ sensor independent safety thermostat.
- Direct 6-sided heating system for maximum temperature uniformity of internal conditions.
- 25 mm access port in the back of the unit.



Comfort Controller:

- LCD color touch screen digital display with icon navigation.
- Continuous indication of actual temp., CO₂ concentration, time & alarm limits.
- Audio and visual alarm.
- Infrared drift-free CO₂ sensor independent safety thermostat.
- SD card system saving data in MS Excel.
- RS 232 port, BMS relay alarm contact On-board data-logging facility with graphs.
- High process security - users protected by passwords (5 users, 1 admin).
- Event log of all relevant data & events.

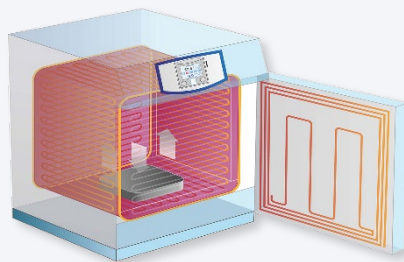
Optional Tri-Gas O₂ control (Comfort Models Only):

- 1% up to 20% N₂ concentration.
- Compartmentalized inner glass doors minimize loss of conditions:
 - CO₂cell 50 comfort: (4) compartment doors.
 - CO₂cell 190 comfort: (8) compartment doors.

CO2Cell Technical Data		Model	50	190
Interior Dimensions Chamber: AISI 304 or 316 stainless steel	Volume	ft ³	1.8	6.7
		liters	50	190
	Width	inches	15.8	24.9
		mm	402	632
	Depth	inches	11.8	17.3
		mm	300	440
	Height	inches	15.8	27
		mm	402	686
Exterior Dimensions (Including Door, Handle, Leg L, or Caster C)	Width	inches	21	30.1
		mm	534	765
	Depth	inches	18.1	28.9
		mm	460	734
	Height	inches	28.2	33.9
		mm	717	862
Shelves: Stainless Steel	Capacity: # of shelf guides in chamber side walls	Maximum #	3	8
		Standard #	3	4
Shelf Distance	Min. distance between trays	Inches	3.8	2.5
		mm	96	64
Useable Shelf Area	Width x Depth	Inches	12.8x9.8	21.9x15.8
		mm	325x249	557x401
Maximum Shelf Load	One Shelf	lbs	44.1	33.1
		kg	20	15
	Total Per Unit	lbs	132.3	132.3
		kg	60	60
# Outer Metal Doors		pc	1	1
Operation Temperature		°C	1°C above ambient up to 50°C	
Variations From Operation Temperature with Flap Closed and Door (DIN 12880 part 2)	Measurement	± °C	≤0.1	≤0.1
	Space	± °C	≤0.25	≤0.25
	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	liters	0.5	1.5
Humidity Level @ 37°C, 5% CO ²		% RH	95%	95%
Electrical Data	Max Consumption 50/60Hz	kW	0.35/0.95	0.38/1.8
		W	7.2	5.8
		V	230	230
Weight (Standard/Comfort)	Net	lbs	83.8/88.2	208.3/229.3
		kg	38/40	94.5/104
	Gross	lbs	110.2/114.6	240.3/259
		kg	50/52	109/117.5

*Approx. 50% of the tray area can be filled for uniform circulation inside the chamber.

**Voltage +/- 10%



3-circuit fan-less direct heat system

6-sided, 3 circuit (door, bottom/water pan, sides/top/back) fan-less direct heat system virtually eliminates cross contamination, condensation, and vibration.