ThermoFisher SCIENTIFIC

Thermo Scientific™ Heratherm™ CO_2 Chamber, Cat. No. ECS750

Lab equipment

Intuitive, powerful temperature control

Heratherm CO_2 Chambers

Applications

- Cultivation of cells, tissues and microorganisms
- Testing with control of CO_2

Benefits

- Precisely control the essential parameters of your distinct cell growth conditions
- Active humidity controls the incubation environment with accuracy
- Sustainable features
- Programmable for restricted access
- Easy to program and operate – with automatic ramping / changes of temperature, humidity, CO_2 levels
- Easy to maintain and move
- Extensive alert and alarm functions
- Choice of exterior solid door with interior glass door or exterior glass door
- 24-month warranty

The Heratherm CO_2 Chamber provides uniform and elevated temperature in a large capacity chamber that offers an excellent environment for cell and tissue growth.

A broad relative humidity range covers many application needs including humidity levels above and below ambient. Peltier technology supports temperature stability while offering lower energy usage, compared to traditional compressors.

The innovative humidification system with integrated water tank has a low water consumption, with no need for a drain. Very accurate relative humidity levels provide process reliability, the heated door is minimizing potential condensate in standard applications.

Achieve data traceability and sample protection when using the restricted access functions found through the touchscreen user interface. Data logging enables 21 CFR Part 11 and IQ/OQ qualification can be implemented with service package.

The internal chamber has rounded corners, removable shelves, and other components to help facilitate easy care maintenance.

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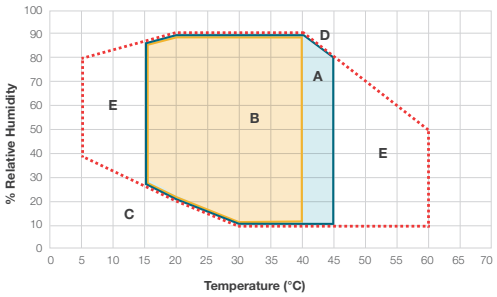
Specifications for Heratherm CO_2 Chambers

Specification	Description
Models	**Cat. No.**
Solid door with inner glass door	ECS750
Exterior glass door	ECG750
Overview	
Chamber size	750 L / 26.5 cu. ft.
Controller	Microprocessor, PID - temperature, relative humidity (RH), control of CO_2, with programmability
User interface	7-in. display with capacitive touchscreen
Temperature	
Temperature range	15 °C to 45 °C / 59 °F to 113 °F
Temperature range - with interior power socket option	15 °C to 40 °C / 59 °F to 104 °F
Temperature increments	0.1 °C
Peltier cooling / heating capacity	ΔT ≥ 25 °C / ΔT ≥ 50 °C
Temp. uniformity at 20°C to 37°C	≤±0.5 °C
Temp. stability at 20°C to 37°C	≤±0.1 °C
Heat up time to 45°C / 80% RH	≤ 60 min
Cool down time to 15°C / 80% RH	≤ 65 min
Recovery time at 15°C / 60%	≤ 3 min
Humidity	
Humidity range at 37°C	10 - 90 % RH (see CO_2 Chamber with temperature & RH control)
Humidity increments	0.1 %
Humidity stability	≤ ±2 %
Water consumption	< 0.8L per day*
Water specification	Demineralized water, resistance = 0.05 - 1 MΩ
Water supply	Water reservoir 5 L / optional clean water connection
CO_2	
CO_2 range	0 – 20 Vol-%
CO_2 Sensor accuracy at 37 °C and 5 % CO_2	± 0.2 % CO_2
CO_2- fumigation time at climate set point 37 °C- 90 % RH and 5 % CO_2	≤14 min
CO_2 - recovery time at climate set point 37 °C- 90 % RH and 5 % CO_2	≤13 min
CO_2 increments	0.1%
Electrical	
Voltage, power	100 - 240 V, 50/60 Hz, 1400 W
Energy consumption	5 - 15 kWh per day *
Power plug	Standard plug, based on country: US, EU (Schuko), UK, CN, IN, AU, CH, JP**, DK**
Power cord length	2 m power cord
Shelving / load	
Shelves (std. / positions)	3 / 36
Shelf construction	Perforated stainless steel, Type 1.4301 / AISI 304
Shelf dimensions (w x d)	795 x 575 mm / 31.3 x 22.6 in.
Shelf surface area	0.46 m^2 / 4.9 ft^2
Max. load on shelf	15.9 kg / 35 lbs. (pulled out) / 30 kg / 66.1 lbs. (stationary)
Max. load on reinforced shelf	90 kg / 198.4 lbs. (stationary)
Max. total load	210 kg / 463 lbs.

CO_2 Chamber with temperature & RH control



Temperature / Humidity range in CO_2 Chambers
CO_2 Chambers have limited temperature and relative humidity levels

Limited range factory-installed electrical socket options
When electrical sockets are installed, temperature and relative humidity levels are limited

Extended temperature levels only available if CO_2 function is disabled

CO_2 Chamber temperature/humidity diagram
(Reference ambient condition: 22 °C; <50 % rel. humidity)

Setable values in CO_2 Chambers:
Temp: 15 – 45 °C
RH: 10 – 90 %

Area A:
Effective temperature / CO_2 and humidity range. (Condensate free area)

Area B:
Limited range with factory-installed electrical sockets.

Area C:
Low temperature and humidity area. Reachable only if the ambient condition is significantly lower and the chamber samples are very dry.

Area D:
High temperature and humidity area. Immediate condensation formation area at coldest point of unit.

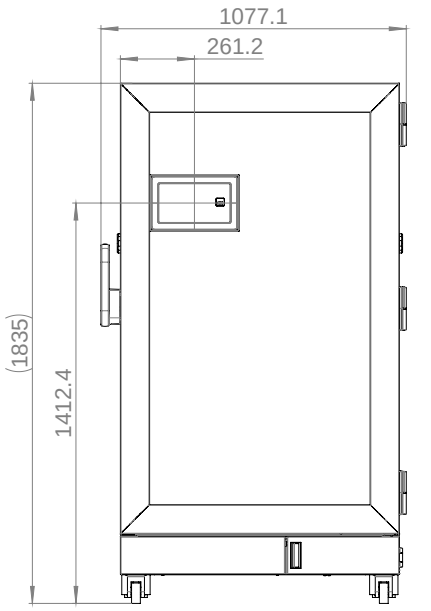
Area E:
Low and high temperature areas cannot be selected when CO_2 function is enabled or when electrical sockets are installed.

Specifications for Heratherm CO_2 Chambers (cont.)

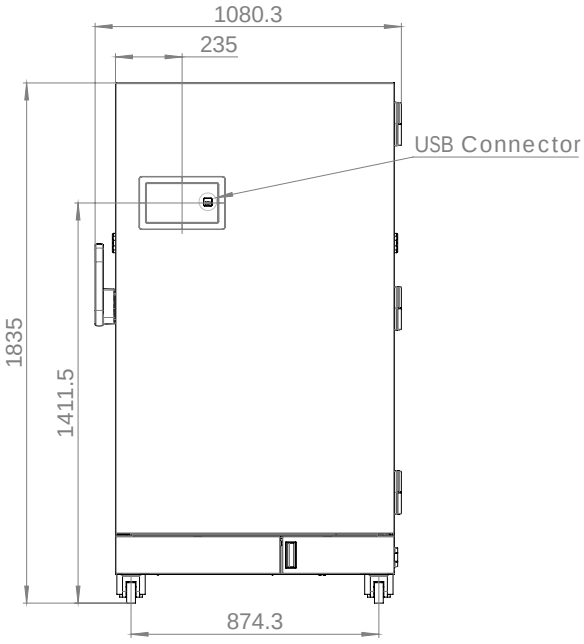
Specification	Description
Dimensions	
Internal dimensions (WxHxD)	840 x 1450 x 630 mm / 33.07 x 57.09 x 24.8 in.
Exterior dimensions (WxHxD)	1080 x 1835 x 895 mm / 42.52 x 72.24 x 35.24 in.
Shipping weight	ECS750: 390 kg / 859 lbs. ECG750: 396 kg / 873 lbs.
Installation space requirements	Back wall: 200 mm / 7.9 in. Side wall: 150 mm / 5.9 in. Ceiling: 570 mm / 22.5 in.
General information	
Connectivity	Back: USB, dry contact; Font: USB
Access port - standard	2 - right and left side
Calibration certificate included	37 °C / 90 % RH / 5.0 % CO_2
Certifications	UL, CE

Note: all values are measured according to DIN12880
* Value depends on settings, usage (e.g. number of door openings), and environmental conditions
** Cord length of 2.5 m / 8.2 ft

Front view

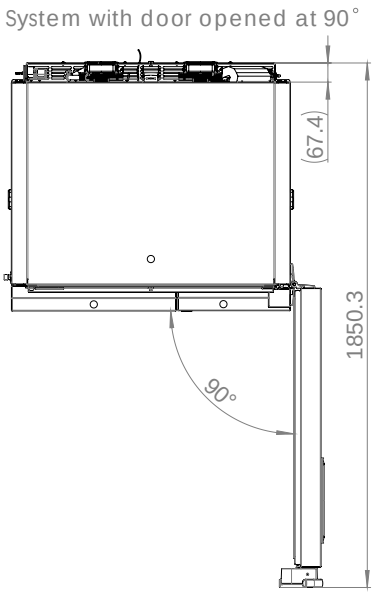


Front view with Ext. Glass Door

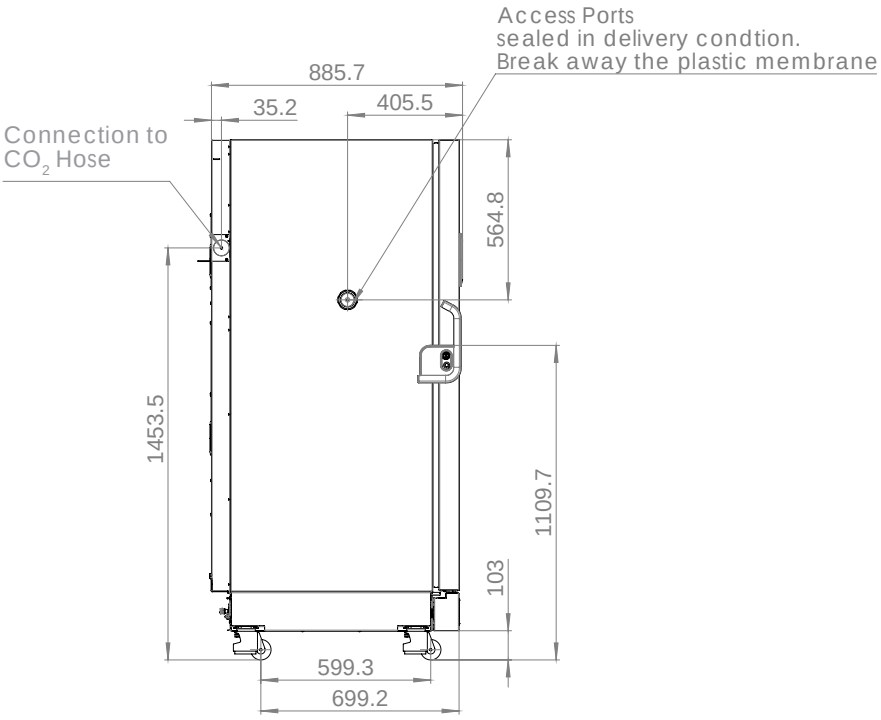


Front view with Ext. Solid Door

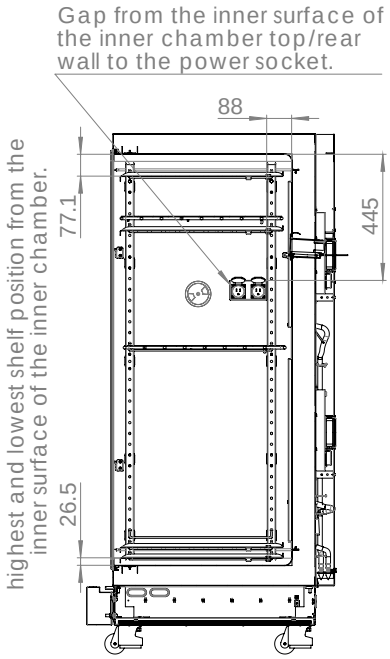
Top view



Side view



Side view - interior



Interior power sockets can be ordered as an option.

Rear view