

Lab equipment



Thermo Scientific™ Heratherm™  
CO<sub>2</sub> Chamber, Cat. No. ECS750

## Intuitive, powerful temperature control Heratherm CO<sub>2</sub> Chambers

### Applications

- Cultivation of cells, tissues and microorganisms
- Testing with control of CO<sub>2</sub>

### 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<sub>2</sub> 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<sub>2</sub> 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.

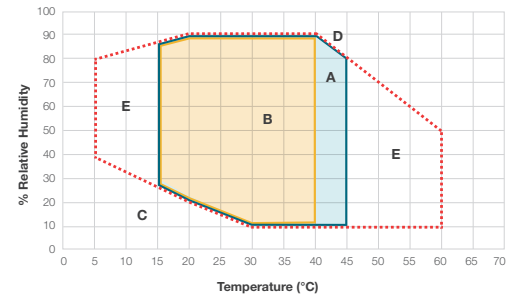
The internal chamber has rounded corners, removable shelves, and other components to help facilitate easy care maintenance.

**thermo** scientific

## Specifications for Heratherm CO<sub>2</sub> Chambers

Specification	Description
<b>Models</b>	
Solid door with inner glass door	ECS750
Exterior glass door	ECG750
<b>Overview</b>	
Chamber size	750 L / 26.5 cu. ft.
Controller	Microprocessor, PID - temperature, relative humidity (RH), control of CO <sub>2</sub> , with programmability
User interface	7-in. display with capacitive touchscreen
<b>Temperature</b>	
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	$\Delta T \geq 25 \text{ °C} / \Delta T \geq 50 \text{ °C}$
Temp. uniformity at 20°C to 37°C	$\leq \pm 0.5 \text{ °C}$
Temp. stability at 20°C to 37°C	$\leq \pm 0.1 \text{ °C}$
Heat up time to 45°C / 80% RH	$\leq 60 \text{ min}$
Cool down time to 15°C / 80% RH	$\leq 65 \text{ min}$
Recovery time at 15°C / 60%	$\leq 3 \text{ min}$
<b>Humidity</b>	
Humidity range at 37°C	10 - 90 % RH (see CO <sub>2</sub> Chamber with temperature & RH control)
Humidity increments	0.1 %
Humidity stability	$\leq \pm 2 \text{ %}$
Water consumption	$< 0.8 \text{ L per day}^*$
Water specification	DeminerIALIZED water, resistance = 0.05 - 1 M $\Omega$
Water supply	Water reservoir 5 L / optional clean water connection
<b>CO<sub>2</sub></b>	
CO <sub>2</sub> range	0 - 20 Vol-%
CO <sub>2</sub> Sensor accuracy at 37 °C and 5 % CO <sub>2</sub>	$\pm 0.2 \text{ % CO}_2$
CO <sub>2</sub> - fumigation time at climate set point 37 °C- 90 % RH and 5 % CO <sub>2</sub>	$\leq 14 \text{ min}$
CO <sub>2</sub> - recovery time at climate set point 37 °C- 90 % RH and 5 % CO <sub>2</sub>	$\leq 13 \text{ min}$
CO <sub>2</sub> increments	0.1%
<b>Electrical</b>	
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
<b>Shelving / load</b>	
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 <sup>2</sup> / 4.9 ft <sup>2</sup>
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<sub>2</sub> Chamber with temperature & RH control



### Temperature / Humidity range in CO<sub>2</sub> Chambers

CO<sub>2</sub> 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<sub>2</sub> function is disabled

**CO<sub>2</sub> Chamber temperature/humidity diagram**  
(Reference ambient condition: 22 °C; <50 % rel. humidity)

### Setable values in CO<sub>2</sub> Chambers:

Temp: 15 – 45 °C

RH: 10 – 90 %

#### Area A:

Effective temperature / CO<sub>2</sub> 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<sub>2</sub> function is enabled or when electrical sockets are installed.

## Specifications for Heratherm CO<sub>2</sub> Chambers (cont.)

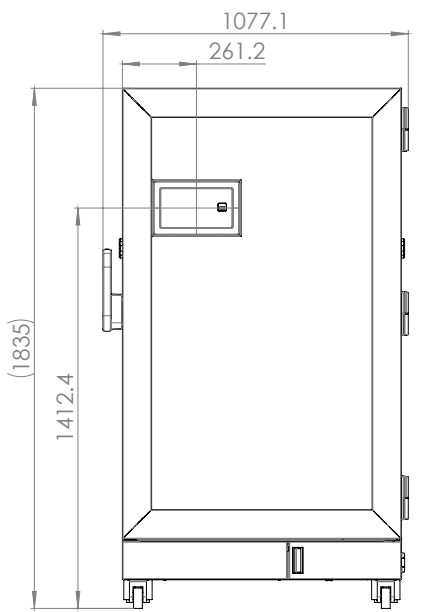
Specification	Description
<b>Dimensions</b>	
Internal dimensions (WxHxD)	840 x 1450 x 630 mm / 33.07 x 57.09 x 24.8 in.
Exterior dimensions (WxHxD)	1080 x 1835 x 895 mm / 42.52 x 72.24 x 35.24 in.
Shipping weight	ECS750: 390 kg / 859 lbs. ECG750: 396 kg / 873 lbs.
Installation space requirements	Back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

Note: all values are measured according to DIN12880

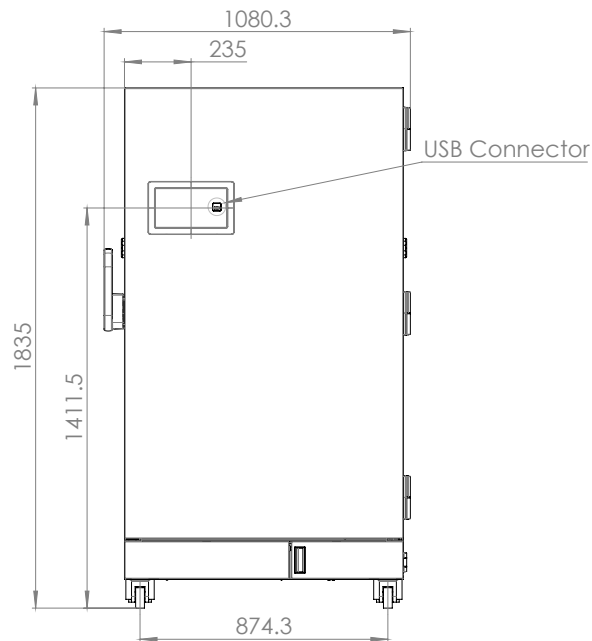
\* Value depends on settings, usage (e.g. number of door openings), and environmental conditions

\*\* Cord length of 2.5 m / 8.2 ft

### Front view

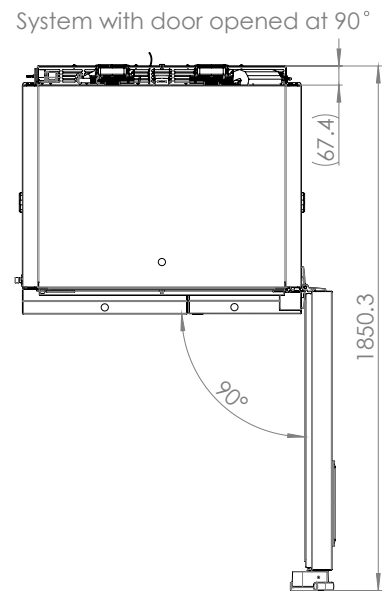


Front view with Ext. Glass Door

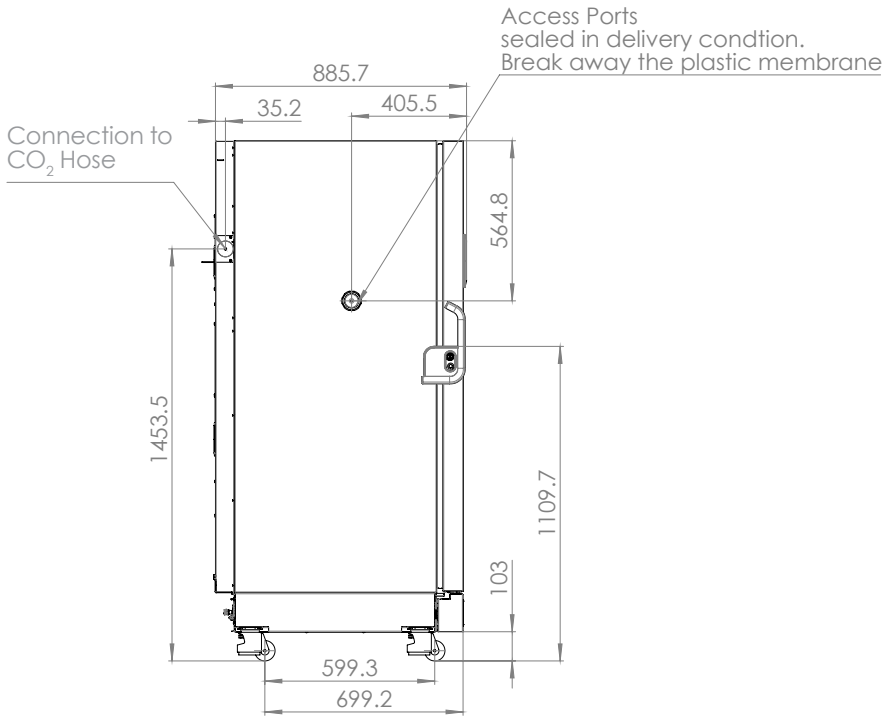


Front view with Ext. Solid Door

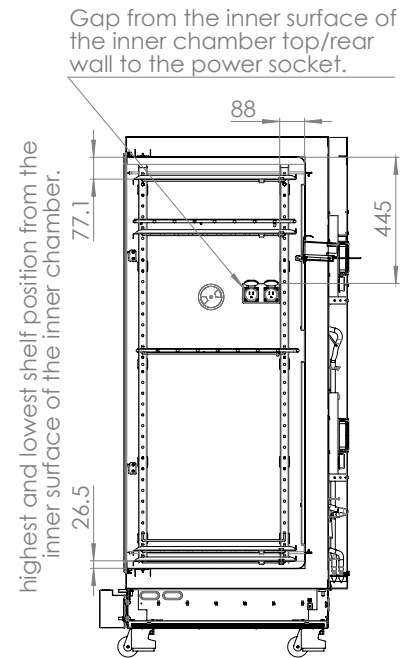
### Top view



Side view



Side view - interior



Interior power sockets can be ordered as an option.

Rear view

