ESCO
LIFESCIENCES

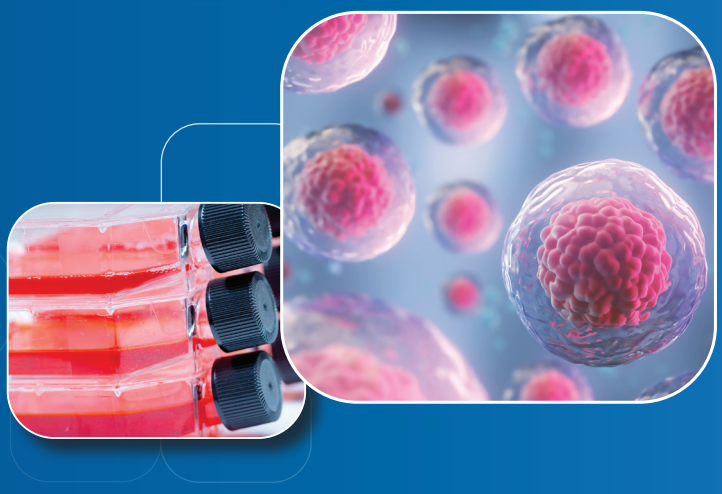
Model: CCL-170/240B-_-TS

Model: CCL-170/240B-_-HHS-TS

CelCulture® **Touch**

CO_2 Incubators with Touchscreen Controller

One Touch Closer to Cell Culture Innovation



CelCulture® **Touch**

CO_2 Incubators with Touchscreen Controller

INTRODUCTION

Elevate your workflow efficiency with the new touchscreen user interface of Esco CelCulture® Touch CO_2 Incubator. Have efficient operation, reliable results, and complete sample protection against contaminations while providing optimal conditions for cell growth.

With its intuitive operation and versatile features, CelCulture® Touch is designed to optimize research productivity, bringing you one touch closer to your cell culture innovations.

STREAMLINE YOUR CELL CULTURING EXPERIENCE WITH NEW FEATURES

Easy-to-use Touchscreen Controller

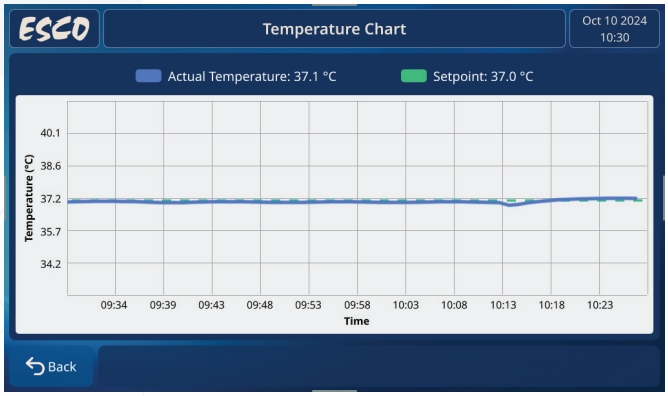
Immerse yourself in a vibrant and user-friendly experience with CelCulture® Touch color-rich touchscreen controller. The high-resolution display offers clear visibility, while the intuitive interface simplifies navigation.

Designed with you in mind, the capacitive touchscreen controller functions seamlessly even when being used with gloves on. Maintain precision and control, enhancing your workflow efficiency.

Integrated USB Port

Streamline your workflow and seamlessly extract crucial experiment data by plugging in your USB device. Embrace hassle-free software upgrades through the USB port, ensuring your incubator remains at the forefront of innovation with the latest features and capabilities.

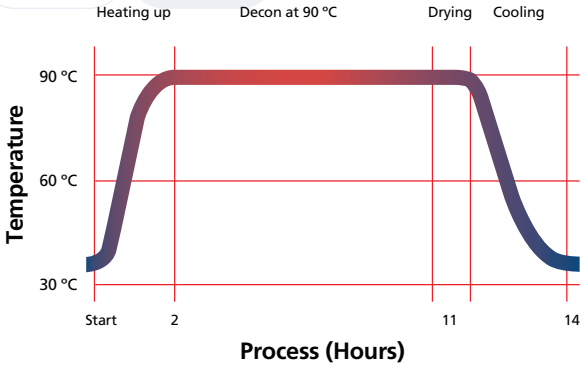
Built-in Graphic and Maintenance Reminder

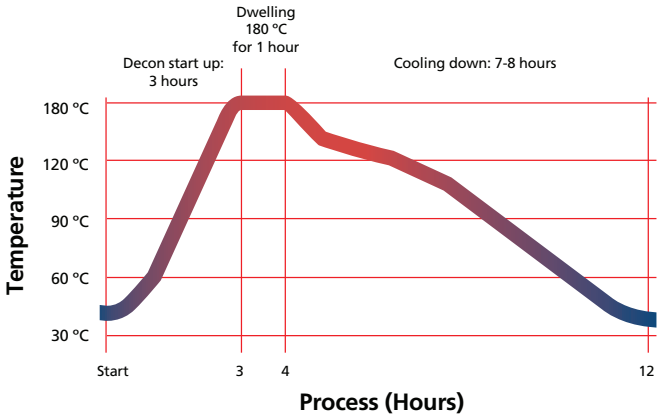


The built-in graphic display provides real-time monitoring of your CO_2 incubator's performance, stay up-to-date on your cell culture conditions with easy-to-read data at a glance.

The maintenance reminder feature notifies you when it's time for routine care, whether it's simple cleaning or professional servicing, so your CO_2 incubator stays in top condition without disrupting your research.

HASSLE-FREE HEAT DECONTAMINATION SYSTEM





90°C Moist Heat Decontamination:

Minimize contamination risks and maintain a sterile environment for your cell cultures with the 90°C Moist Heat Decontamination system. This gentle yet effective process ensures a thorough decontamination within 15 hours. The chamber is left cool and dry at the end of the cycle, ensuring it is ready for use and optimal for preserving cell viability.

180°C High Heat Sterilization:

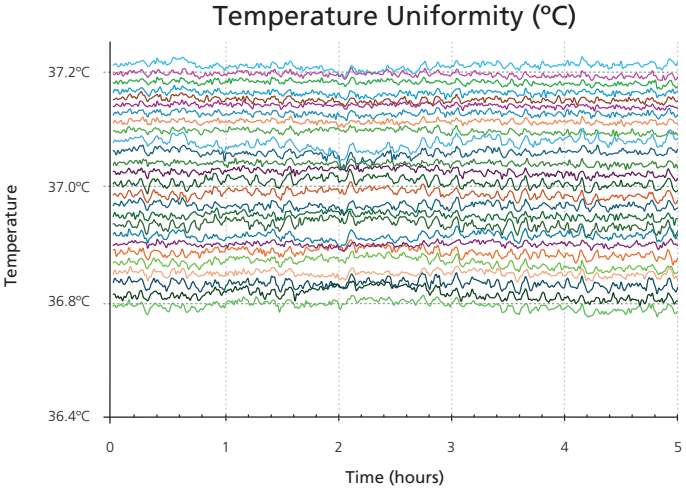
Conforms to the International Standards, 180°C High Heat Sterilization has proven to be effective in killing normally-resistant fungi, bacterial spore, and vegetative cells. Nontoxic and noncorrosive sterilization that completes within 12 hours leaving the chamber cool and dry, offering peace of mind in your research.

FAST HEATING AND RAPID RECOVERY AGAINST DOOR OPENINGS

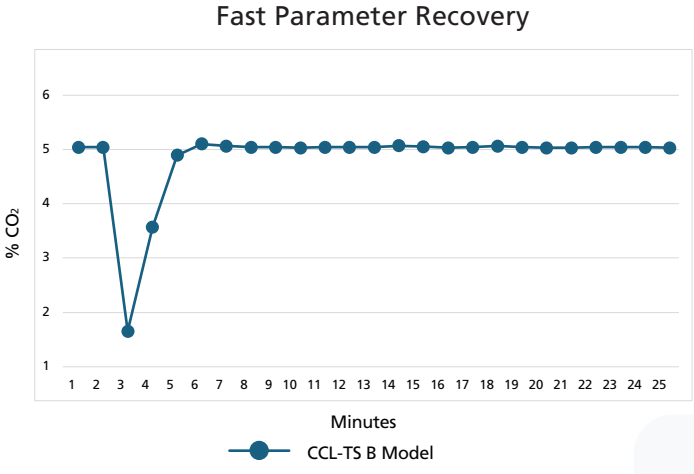
Forced Convection with Direct Heat and Air Jacket Technology

Minimize downtime between door openings and maintain uniform conditions throughout the chamber with a temperature control system that combines direct heat and air jacket technology. This design ensures precise temperature regulation and rapid recovery upon door openings, maintaining safe environment for cell cultures.

The forced convection design features a blower that expedites air recovery and promotes swift humidification for improved uniformity. The blower automatically halts upon door opening, minimizing air mixing and preserving the controlled environment.



Ensures uniform heating for consistent results across the chamber. With uniformity variance of less than ± 0.35°C, all the samples are evenly heated.



Instant restoration of ideal temperature, CO_2, and humidity levels helps minimize cellular stress and maintain optimal growth conditions.

High Accuracy Infra-Red (IR) CO_2 Sensor

Experience reliable CO_2 readings with our heat-resistant Infra-Red (IR) sensor. It stays accurate over time and works well even in the warm, humid conditions inside an incubator. No need to take it out during high-heat decontamination, keeping your workflow simple and uninterrupted.

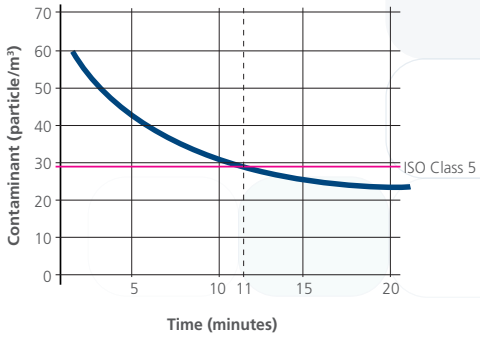
ISO CLASS 5 AIR CLEANLINESS FOR YOUR CELL CULTURE

In-Chamber ULPA Filter

Cultivate cells with confidence, knowing that the air your cultures breathe is of the utmost purity, promoting consistent and reliable results. This system ensures air cleanliness equivalent to ISO Class 5 within the chamber, reducing the risk of airborne contaminants affecting your experiments.

The chamber is restored to ISO Class 5 conditions within 11 minutes after door closing.*

** Units were factory-tested under controlled environmental conditions per Esco method. Esco does not guarantee identical results in the field under differing conditions. Original report available upon request. Model used in the test was CCL-170B-8-TS.*



Antimicrobial ISOCIDE™ Powder Coating

The external surfaces are electrogalvanized steel, coated with a white oven-baked epoxy-polyester antimicrobial powder. This advanced finish is designed to eliminate 99.9% of surface bacteria within 24 hours of exposure, ensuring a cleaner, safer environment for your critical research and laboratory work.

0.2µm Gas Inlet Filters on All Gas Injections

Guard against external contaminants with 0.2µm gas inlet filters strategically placed on all gas injections. This meticulous design ensures that gases entering the chamber are free from impurities, maintaining the purity of your cell culture environment.

IMPROVED DESIGN FOR EFFORTLESS MAINTENANCE

Perforated Stainless Steel Shelves

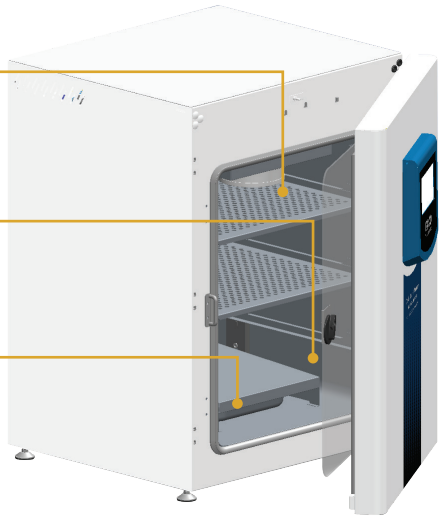
Carefully designed to improve uniformity, these shelves are not only visually appealing but also easy to remove without the need for tools.

Rounded Corner Chamber

The easy-to-clean chamber design helps reduce hidden spots where contaminants can grow, lowering the risk of contamination and keeping your cell cultures safer.

Optimized Humidity with Removable Water Pan

Precisely heated by the base heater, this system ensures uniform humidity levels, ideal for cultivating sensitive cell lines and specialized research applications. The removable pan simplifies maintenance, promoting a sterile environment, while the user-friendly design enhances the overall ease of operation.



Integrated Access Port

Designed for seamless integration of external instruments, the port allows cables, hoses, or additional sensors routed into the workspace without compromising the controlled environment. Equipped with a plug stopper, this port ensures easy and secure integration, providing researchers unparalleled flexibility and convenience.

Stackable Design for Optimal Space Utilization

To further enhance user convenience, we provide a dedicated floor stand for stacking two units. This not only facilitates easy relocation within your laboratory but also streamlines maintenance processes. The innovative design allows you to easily take out the lower unit for maintenance without the need to unstack, saving time and reducing hassle.

TAILORED FOR DIVERSE APPLICATIONS IN SCIENTIFIC DISCOVERY

Esco CelCulture® CO_2 Incubator series is not just a piece of equipment, it's a catalyst for groundbreaking research. With a design that prioritizes versatility, precision, and user-friendliness, Esco incubators are tailored for a multitude of applications, empowering researchers across various scientific disciplines.

Cancer Research

Create controlled environments for cell culture, supporting the study of cancer cell behavior and responses to various treatments with precise conditions that mimic the human body.

Tissue Engineering

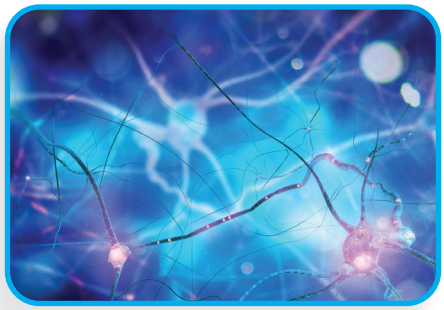
Create an environment that supports the growth and maintenance of three-dimensional cell structures, contributing to innovations in regenerative medicine and organ transplantation studies

Stem Cell Research

Create an environment conducive to the cultivation and differentiation of stem cells, supporting studies in regenerative medicine, developmental biology, and disease modeling.

Microbial Cultivation

The controlled environment is ideal for the production of microbially-derived products such as enzymes and biofuels.



Neuroscience

Facilitate precise conditions for neuronal cell culture, enabling the study of neural development, function, and responses to stimuli, crucial for advancements in neuroscience research.

Drug Discovery & Development

CO_2 Incubators are used to culture cells for testing the efficacy and toxicity of drug candidates, as well as for studying cellular mechanisms underlying diseases and potential therapeutic interventions.

OUR SERVICES

Safeguard Your Equipment with Our Service and Warranty Package!

We Provide a One-stop Solution from Installation to Decommissioning of Your Equipment!

Accreditation

Our Field Service Representatives undergo annual safety training and hold credentials such as NSF, TÜV NORD, NEBB, IFBA, and CETA-CNBT.

Fast Response

On-site response within 24 hours for priority cases/ clients. Easy to reach customer service, through email and phone call

Strong Global Network

We provide reliable services through our global network of Field Service Representatives, offering ready parts, technical support, field engineers, factory experts, and after-sales support.

Good Global Reputation

Our Service Team is dedicated to providing service of the highest standards. We provide timely, responsive service while meeting or even exceeding customer's expectations.

GUIDE TO MODELS

CCL-170 - - -TS

Product Line	Code	Volume	Code	Gas Control	Code	Electrical Rating	Code	Decontamination Method	Code	Controller	Code
CelCulture®	**CCL**	170L	**170**	CO_2	**B**	220-240 VAC 50/60 HZ	**8**	90 °C Moist Heat	N/A	Touchscreen	**TS**
		240L	**240**			110-130 VAC 50/60 HZ	**9**	180 °C High Heat	**HHS**		

ORDERING INFORMATION

TOUCHSCREEN MODEL WITH MOIST HEAT DECONTAMINATION

MODEL	ITEM CODE	DESCRIPTION
CCL-170B-8-TS	2170371	CelCulture® Incubator 170 L, IR Sensor, CO_2 Control, ULPA, 220-240 VAC 50/60 Hz
CCL-240B-8-TS	2170372	CelCulture® Incubator 240 L, IR Sensor, CO_2 Control, ULPA, 220-240 VAC 50/60 Hz
CCL-170B-9-TS	2170412	CelCulture® Incubator 170 L, IR Sensor, CO_2 Control, ULPA, 110-130 VAC 50/60 Hz
CCL-240B-9-TS	2170413	CelCulture® Incubator 240 L, IR Sensor, CO_2 Control, ULPA, 110-130 VAC 50/60 Hz

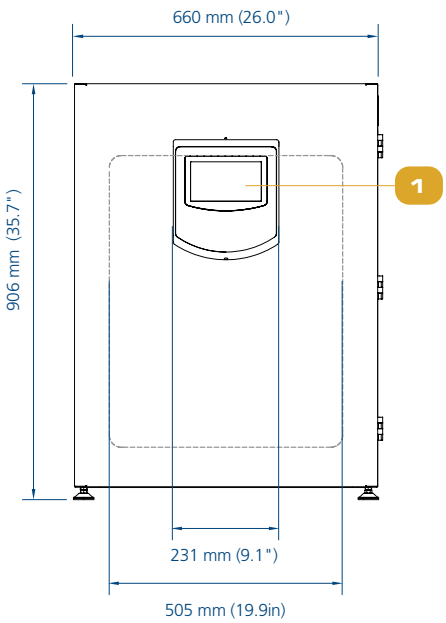
TOUCHSCREEN MODEL WITH HIGH HEAT STERILIZATION

MODEL	ITEM CODE	DESCRIPTION
CCL-170B-8-HHS-TS	2170363	CelCulture® Incubator 170 L, IR Sensor, CO_2 Control, ULPA, 220-240 VAC 50/60 Hz
CCL-240B-8-HHS-TS	2170364	CelCulture® Incubator 240 L, IR Sensor, CO_2 Control, ULPA, 220-240 VAC 50/60 Hz
CCL-170B-9-HHS-TS	2170405	CelCulture® Incubator 170 L, IR Sensor, CO_2 Control, ULPA, 110-130 VAC 50/60 Hz
CCL-240B-9-HHS-TS	2170407	CelCulture® Incubator 240 L, IR Sensor, CO_2 Control, ULPA, 110-130 VAC 50/60 Hz

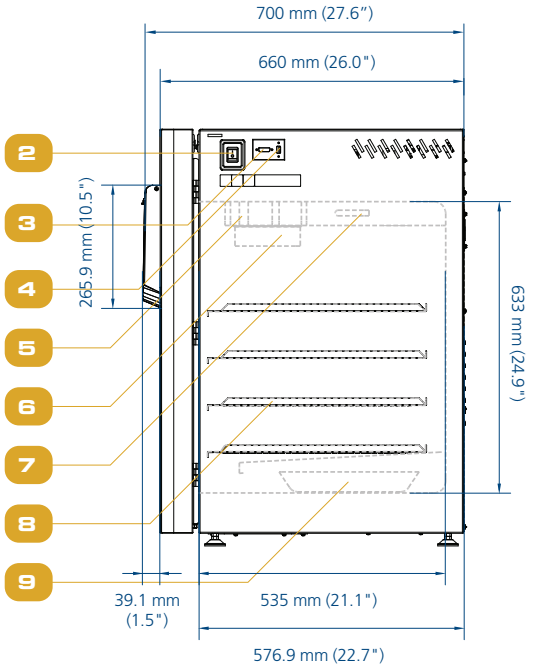
TECHNICAL SPECIFICATIONS

MODEL 170L

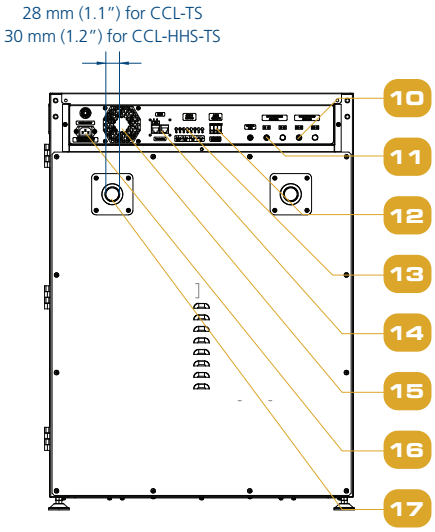
Front view



Side view



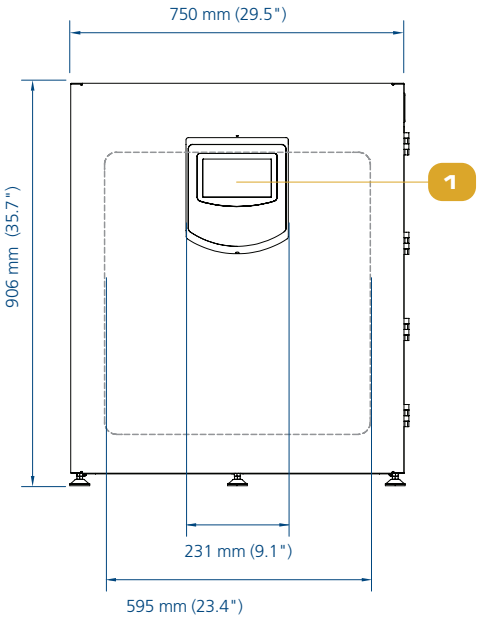
Rear view



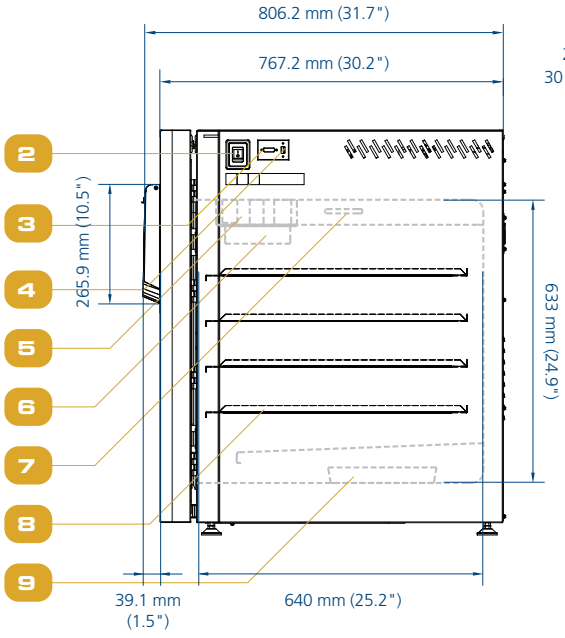
1. Control Panel
2. Power Switch
3. Flashing Port
4. USB Port
5. Blower Fan
6. ULPA Filter
7. GMP251 CO_2 Sensor (CCL-TS)
GMP231 CO_2 Sensor (CCL-HHS-TS)
8. Shelf
9 Water Pan
10. N_2 Supply
11. CO_2 Supply
12. Alarm Contact
13. Analog Output
14. RS 485
15. Cooling fan
16. Power Supply
17. Access Port

MODEL 240L

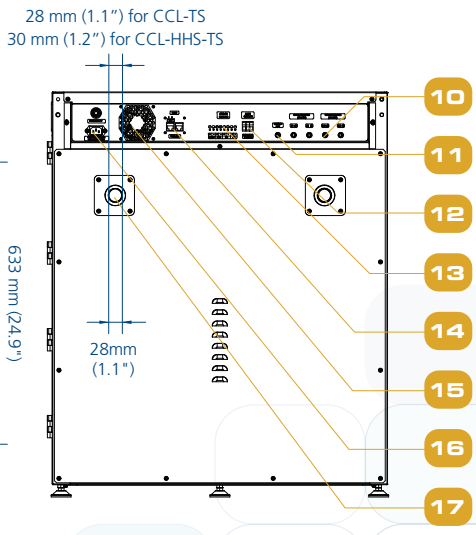
Front view



Side view



Rear view



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14. RS 485
15. Cooling fan
16. Power Supply
17. Access Port

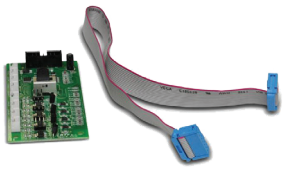
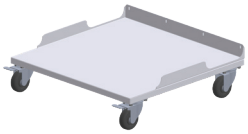
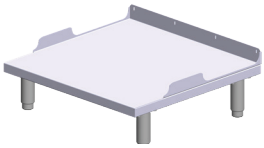
GENERAL SPECIFICATIONS		CCL-170B-_-TS	CCL-240B-_-TS
CONTROLLER			
Type		Touchscreen	
TEMPERATURE			
Temperature Control Method		Direct Heat and Air Jacket using Microcontroller PI	
Ambient Temperature Range		18 to 32°C (64.4 to 89.6°F)	
Temperature Control Range, °C		Ambient +5 to 60	
Temperature Uniformity, °C *		< ± 0.35	< ± 0.5
Temperature Fluctuation, °C *		± 0.2	
Temperature Accuracy, °C *		± 0.1	
Temp. Recovery Time** (after 30 seconds door opening, 98% from initial value)		≤5 minutes	≤6 minutes
CO_2			
CO_2 Control System		Microcontroller PI	
CO_2 Control Range, % CO_2		0 to 19.5	
CO_2 Accuracy, % CO_2***		± 0.1	
CO_2 Sensor		Infrared (IR) CO_2 Sensor	
CO_2 Recovery Time**** (after 30 seconds door opening, 98% from initial value)		≤5 minutes	
HUMIDITY			
Humidification Method		Water pan	
Humidity Range, % RH*****		85% to 90%	
PHYSICAL CONSTRUCTION			
Interior Volume		170 L (6.0 ft³)	240 L (8.5 ft³)
External Dimensions (W x D x H)		660 x 700 x 906 mm (26" x 27.6" x 35.7")	750 x 806 x 906 mm (29.5" x 31.7" x 35.7")
Internal Dimensions (W x D x H)		505 x 535 x 633 mm (19.9" x 21.1" x 24.9")	595 x 640 x 633 mm (23.4" x 25.2" x 24.9")
Net Weight		109 kg (240.3 lbs.)	131.5kg (289.9 lbs.)
Chamber Construction	Main Body	Electrogalvanized steel with Isocide™ antimicrobial coating	
	Interior Material	Stainless steel, type 304	
	Number of Shelves	4	
	Maximum Number of Shelves	7	
	Shelves Dimensions (W x D x H)	470 x 476 x 16 mm (18.5" x 18.75" x 0.63")	560 x 585 x 16 mm (22.0" x 23.9" x 0.63")
	Maximum Load per Shelf	11 kg/shelf (24.3 lbs/shelf)	15 kg/shelf (33.1 lbs/shelf)
Electrical Configuration (110-130 VAC, 50/60 Hz)	Nominal Power at 37°C	90 W	95 W
	Maximum Power Consumption	1550 W	1650 W
	Full Load Amps	12.7 A	13.7 A
Electrical Configuration (220-240 VAC, 50/60 Hz)	Nominal Power at 37°C	45 W	50 W
	Maximum Power Consumption	1500 W	
	Full Load Amps	7 A	
Shipping Weight		128.5 kg (283.3 lbs.)	151.5 kg (334.0 lbs.)
Shipping Dimensions (W x D x H)		830 x 710 x 950 mm (32.7" x 28.3" x 37.4")	880 x 850 x 1110 mm (34.6" x 33.5" x 43.7")
CONTAMINATION CONTROL			
Contamination Control Methods		1) Main body is electro-galvanized steel with Isocide™ antimicrobial-coating; 2) 90˚C moist heat decontamination; 3) ULPA filter; 4) 0.2-micron inlet filter for gas inputs; 5) 1-micron air circulation filter.	

All data recorded is specified for standard models with unloaded chambers and tested under optimum factory setting conditions of 23°C and 60% ambient humidity.
**Results are achieved when tested at 37°C as set point. Results may vary if set point changes and calibration is needed.*
***For temperature not exceeding 37.2°C.*
****Results are achieved when tested at 5% CO_2 as set point. Results may vary if set point changes and calibration is needed.*
*****For CO_2 level not exceeding 5.2%.*
****** Esco does not guarantee condensation-free chamber at humidity level higher than 90%.*

GENERAL SPECIFICATIONS		CCL-170B-_-HHS-TS	CCL-240B-_-HHS-TS
CONTROLLER			
Type		Touchscreen	
TEMPERATURE			
Temperature Control Method		Direct Heat and Air Jacket using Microcontroller PI	
Ambient Temperature Range		18 to 32°C (64.4 to 89.6°F)	
Temperature Control Range, °C		Ambient +5 to 60	
Temperature Uniformity, °C *		<± 0.35	
Temperature Fluctuation, °C *		± 0.2	
Temperature Accuracy, °C *		± 0.1	
Temp. Recovery Time** (after 30 seconds door opening, 98% from initial value)		≤5 minutes	≤6 minutes
CO_2			
CO_2 Control System		Microcontroller PI	
CO_2 Control Range, % CO_2		0-19.5	
CO_2 Accuracy, % CO_2***		± 0.1	
CO_2 Sensor		Infrared (IR) CO_2 Sensor	
CO_2 Recovery Time**** (after 30 seconds door opening, 98% from initial value)		≤5 minutes	
HUMIDITY			
Humidification Method		Water pan	
Humidity Range, % RH*****		85% to 90%	
PHYSICAL CONSTRUCTION			
Interior Volume		170 L (6.0 ft³)	240 L (8.5 ft³)
External Dimensions (W x D x H)		660 x 700 x 906 mm (26.0" x 27.6" x 35.7")	750 x 806 x 906 mm (29.5" x 31.7" x 35.7")
Internal Dimensions (W x D x H)		505 x 535 x 633 mm (19.9" x 21.1" x 24.9")	595 x 640 x 633 mm (23.4" x 25.2" x 24.9")
Net Weight		110.5 kg (243.6 lbs.)	133 kg (293.2 lbs.)
Chamber Construction	Main Body	Electrogalvanized steel with Isocide™ antimicrobial coating	
	Interior Material	Stainless steel, type 304	
	Number of Shelves	4	
	Maximum Number of Shelves	7	
	Shelves Dimensions (W x D x H)	470 x 476 x 16 mm (18.5" x 18.75" x 0.63")	560 x 585 x 16 mm (22.0" x 23.9" x 0.63")
	Maximum Load per Shelf	11 kg/shelf (24.3 lbs/shelf)	15 kg/shelf (33.1 lbs/shelf)
Electrical Configuration (110-130 VAC, 50/60 Hz)	Nominal Power at 37°C	90 W	
	Maximum Power Consumption	1600 W	1700 W
	Full Load Amps	13 A	14 A
Electrical Configuration (220-240 VAC, 50/60 Hz)	Nominal Power at 37°C	50 W	
	Maximum Power Consumption	1500 W	
	Full Load Amps	7 A	
Shipping Weight		130 kg (286.6 lbs.)	153 kg (337.3 lbs.)
Shipping Dimensions (W x D x H)		830 x 710 x 950 mm (32.7" x 28.3" x 37.4")	880 x 850 x 1110 mm (34.6" x 33.5" x 43.7")
CONTAMINATION CONTROL			
Contamination Control Methods		1) Main body is electro-galvanized steel with Isocide™ antimicrobial-coating; 2) 180°C dry heat sterilization; 3) ULPA filter; 4) 0.2-micron inlet filter for gas inputs; 5) 1-micron air circulation filter.	

All data recorded is specified for standard models with unloaded chambers and tested under optimum factory setting conditions of 23°C and 60% ambient humidity.
**Results are achieved when tested at 37°C as set point. Results may vary if set point changes and calibration is needed.*
***For temperature not exceeding 37.2°C.*
****Results are achieved when tested at 5% CO_2 as set point. Results may vary if set point changes and calibration is needed.*
*****For CO_2 level not exceeding 5.2%.*
****** Esco does not guarantee condensation-free chamber at humidity level higher than 90%.*

OPTIONS AND ACCESSORIES

	DESCRIPTION	MODEL CODE	ITEM CODE
	**HUMIDITY DISPLAY** This option allows the incubator to monitor the relative humidity inside the chamber. The sensor is easy to install and has excellent accuracy. The airflow in the chamber does not affect the measurement. The sensor is maintenance-free and does not need to be removed prior to sterilization.	COA-1001 (factory-installed)	5170470
		COA-1001-F (field-installed)	5170471
	**CO_2 BACKUP** This option allows two tanks of CO_2 to be connected to the incubator. It will automatically switch from the primary tank to the secondary tank when low gas pressure is detected on the primary tank.	COA-1009 (factory-installed)	5171427
		COA-1009-F (field-installed)	5171428
	**ANALOG OUTPUT** A set of relay contacts is provided at the rear of the incubator that allows the incubator to output analog signals representing the temperature, $\%CO_2$, $\%O_2$ and relative humidity, depending on the options available in the incubator. This allows the chamber to be connected to an in-house data acquisition or alarm system. This option can also be field-installed. The analog signal outputs can be set to operate in either voltage DC (0-5 VDC) or current (4-20 mA) mode. The factory default setting is voltage. Switch on the board to toggle between the modes.	COA-1005 (factory-installed)	5170475
		COA-1005-F (field-installed)	5170476
	**2-STAGE GAS REGULATOR FOR CO_2** CO_2 gas input regulators reduce pressure from the tank to the incubator. It has dual pressure gauges, barbed line connection and shutoff valve. It prevents over-pressurization of the gas supply into the incubator which could cause the tubing to burst.	COA-2005-F	5170481
	**EXTRA STAINLESS STEEL SHELF WITH SUPPORT RAILS** Each CO_2 incubator comes standard with 4 shelves and it can accommodate up to a maximum of 7 shelves.	COA-2007-F (for 170 L models)	5170327
		COA-2025-F (for 240 L models)	5170426
	**ROLLER BASE** Roller base is available with casters for mobility of your incubators and to provide protection against floor contamination.	COA-2001-F (for 170 L models)	5170478
		COA-2019-F (for 240 L models)	5170420
	**FLOOR STAND 200 MM (8.0”) WITH ADJUSTABLE FEET** Floor stands are available with adjustable feet, with a nominal range of 180 mm to 250 mm (7.1” to 9.8”) for comfortable access to the incubator and to avoid floor contamination.	COA-2002-F (for 170 L models)	5170479
		COA-2021-F (for 240 L models)	5170422

OPTIONS AND ACCESSORIES

	DESCRIPTION	MODEL CODE	ITEM CODE
	**FLOOR STAND 700 MM (27.6") WITH CASTERS** This support stand raises the incubator to a height of 700 mm (27.6") above the floor for comfortable access. It comes with casters for mobility of your incubators.	COA-2003-F (for 170 L models)	5170480
		COA-2023-F (for 240 L models)	5170424
	**2-UNITS FLOOR STAND STACKING KIT** This floor stand allows two incubator units to be stacked without being physically in contact with each other. For the lower unit, it uses roller base for mobility and for easy pull out of the lower unit in case of troubleshooting. Floor stand for upper unit also has casters for easy relocation.	COA-2004-F (for 170 L models)	5170489
		COA-2042-F (for 240 L models)	5170999
	**ELECTRONIC CO_2 ANALYZER, FOR CO_2 / TEMP MEASUREMENT (WITH TEMPERATURE PROBE)**	COA-2010-F	5170329
	**IQ / OQ DOCUMENTATION** The execution of the IQ / OQ verifies that the incubator is installed and is operating pursuant to the validated Standard Operating Procedures (SOPs).	COA-2011-F	9010179
	**PROtect GEN 2** Esco PROtect Generation 2 monitoring automatically send data to a central server to monitor temperature and other parameters and send real-time alerts to users. It complies with ISO 17025, GMP, and GLP requirements.	PROtect Gen 2	*(See PROtect Gen 2 brochure)*
	**Esco Voyager®** Esco Voyager® is a PC-based software package developed for the remote monitoring, datalogging and programming / device configuration of Esco controlled environment laboratory equipment. Compatible equipment includes laboratory ovens and incubators, low temperature incubators, CO_2 incubators, and ultra-low temperature freezers.	Voyager	5250001

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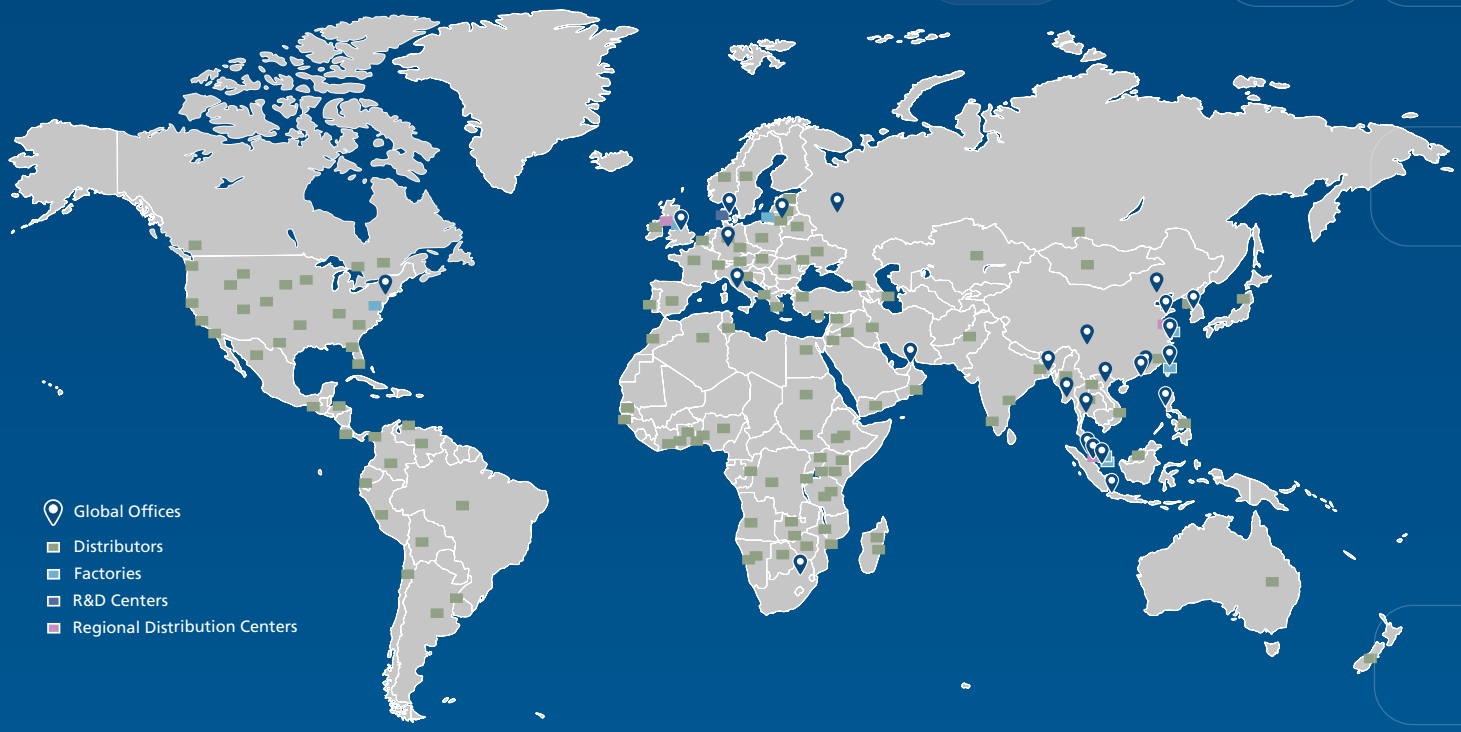

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ESCO® LIFESCIENCES GROUP

Esco Micro Pte. Ltd. • 19 Changi South Street 1 • Singapore 486779
Tel +65 6542 0833 • Fax +65 6542 6920 • mail@escolifesciences.com
www.escolifesciences.com

Esco Technologies, Inc. • 903 Sheehy Drive, Suite F, Horsham, PA 19044, USA
Tel: +1 215-441-9661 • Fax 484-698-7757
eti.admin@escolifesciences.com

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