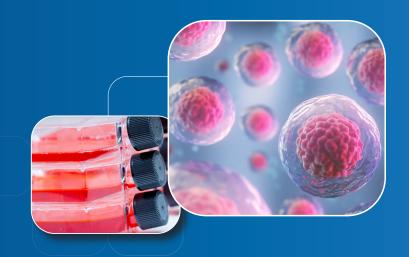


# CelCulture® Touch

**CO<sub>2</sub> Incubators with Touchscreen Controller**One Touch Closer to Cell Culture Innovation





# CelCulture® Touch

CO<sub>2</sub> Incubators with Touchscreen Controller

#### **INTRODUCTION**

Elevate your workflow efficiency with the new touchscreen user interface of Esco CelCulture® Touch CO<sub>2</sub> 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.

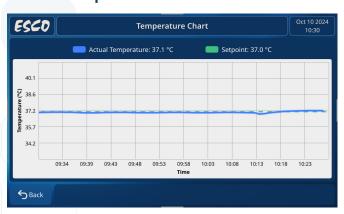
Designed with you in mind, the capacitive touchscreen controller functions seamlessly even when being used with gloves on. Maintain precision and control, enhancing your workflow efficiency.

#### **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.

# SSCD Note of STEEN NORMAL OF S

#### **Built-in Graphic and Maintenance Reminder**



The built-in graphic display provides real-time monitoring of your  ${\rm CO_2}$  incubator's performance, ensuring a streamlined workflow with easy-to-read data at a glance.

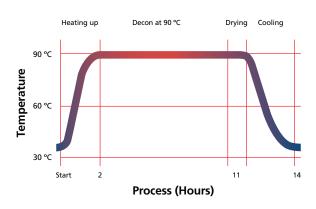
ESCD Maintenance Reminder			Jan 01 2024 12:00 PM	
	Maintenance	Period	Schedule	Reminder
Check CO <sub>2</sub> /N <sub>2</sub> g	as tank level	Daily	Jan 31 2024	
Check Water Level in the Humidity Pan		Weekly	Jan 08 2024	
Clean the Interior and Exterior of Incubator		Weekly	Jan 29 2024	
General Inspection		Yearly	Oct 24 2024	
Calibration of T	emperature, CO <sub>2</sub> , O <sub>2</sub> , and Humidity	Yearly	Oct 24 2024	
Replace ULPA Filter		Yearly	Jan 23 2025	
Replace Inlet Filter		Yearly	Oct 24 2024	
Ranlaca Outer Door Mannatic Gaskat		Sc Naodad	Dec 10 2024	
<b>⇔</b> Back				

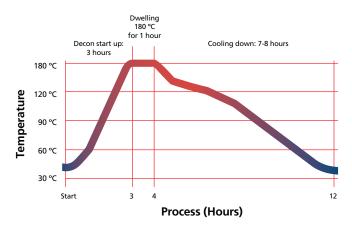
The maintenance reminder feature simplifies upkeep by alerting you when routine servicing is needed, promoting hassle-free maintenance and ensuring optimal performance without disrupting your research.

#### HASSLE-FREE HEAT DECONTAMINATION SYSTEM

#### Heat-resistant Infra-Red (IR) CO, Sensor

Experience hassle-free decontamination with the heat<sup>-</sup>resistant Infra-Red (IR) CO<sub>2</sub> sensor, designed for precision and durability. This sensor ensures accurate regulation of CO<sub>2</sub> levels, maintaining a stable environment for your cell cultures. Its heat-resistant nature means there's no need to remove it during decontamination cycles, streamlining maintenance and ensuring a continuous, clean environment.





#### 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:

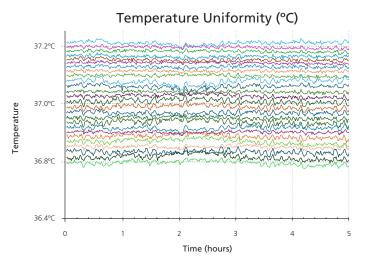
Conforms to the International Standards, 180°C High Heat Sterilization has proven to be effective in killing normally-resistant fungi, bacterial spore, and vegetative cells. Nontoxic and noncorrosive sterilization that completes within 12 hours leaving the chamber cool and dry, offering peace of mind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

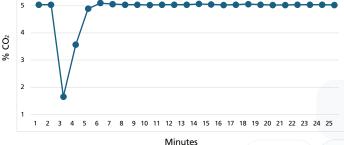
#### FAST HEATING AND BEST RECOVERY AMONG COMPETITION

## 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.





**Fast Parameter Recovery** 

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

Instant restoration of ideal temperature, CO<sub>2</sub>, and humidity levels, keeping your experiments on track

CCL-TS B Model

# 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.\*

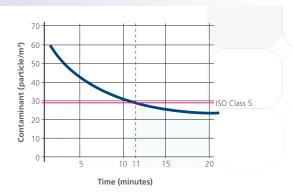
\* Units were factory-tested under controlled environmental conditions per Esco method. Esco does not guarantee identical results in the field under differing conditions. Original report available upon request. Model used in the test was CCL-170B-8-TS.

# 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 -

Streamline your cleaning processes with a chamber that minimizes corners and crevices, providing a smooth and accessible surface for efficient decontamination

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



#### **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.



#### **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.



#### **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



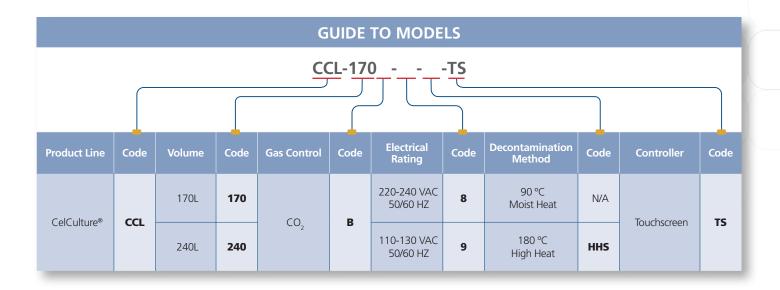
#### **Microbial Cultivation**

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



## **Drug Discovery and Development**

In pharmaceutical research, CO<sub>2</sub> 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.



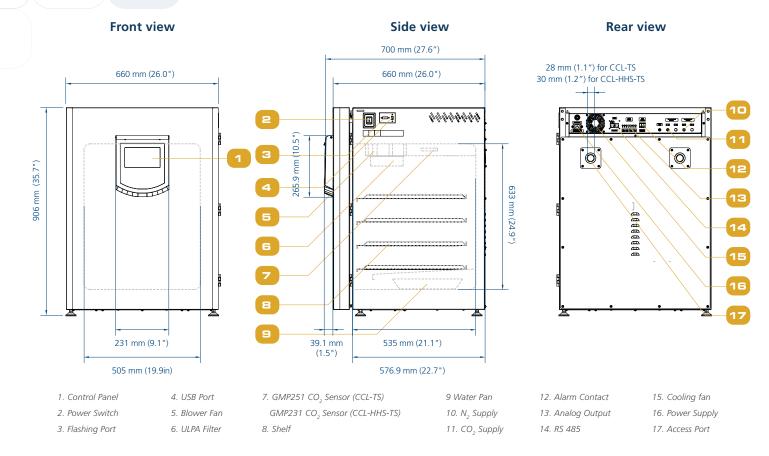
#### **ORDERING INFORMATION**

TOUCHSCREEN MODEL WITH MOIST HEAT DECONTAMINATION			
MODEL	ITEM CODE	DESCRIPTION	
CCL-170B-8-TS	2170371	CelCulture® Incubator 170 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 220-240 VAC 50/60 Hz	
CCL-240B-8-TS	2170372	CelCulture® Incubator 240 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 220-240 VAC 50/60 Hz	
CCL-170B-9-TS	2170412	CelCulture® Incubator 170 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 110-130 VAC 50/60 Hz	
CCL-240B-9-TS	2170413	CelCulture® Incubator 240 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 110-130 VAC 50/60 Hz	

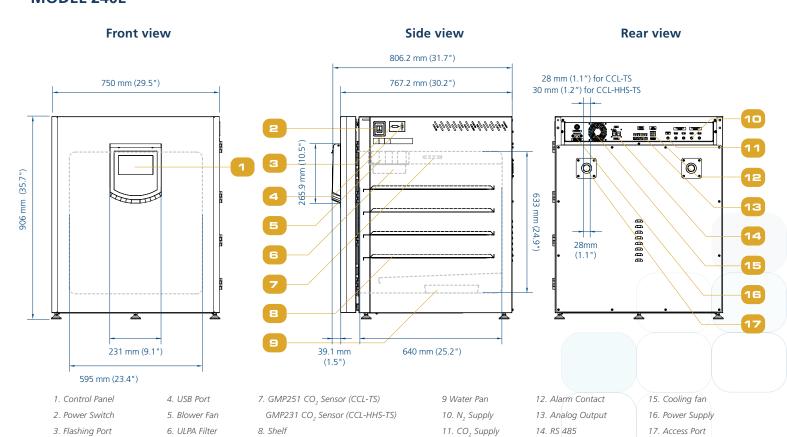
TOUCHSCREEN MODEL WITH HIGH HEAT STERILIZATION			
MODEL	ITEM CODE	DESCRIPTION	
CCL-170B-8-HHS-TS	2170363	CelCulture® Incubator 170 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 220-240 VAC 50/60 Hz	
CCL-240B-8-HHS-TS	2170364	CelCulture® Incubator 240 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 220-240 VAC 50/60 Hz	
CCL-170B-9-HHS-TS	2170405	CelCulture® Incubator 170 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 110-130 VAC 50/60 Hz	
CCL-240B-9-HHS-TS	2170407	CelCulture® Incubator 240 L, IR Sensor, CO <sub>2</sub> Control, ULPA, 110-130 VAC 50/60 Hz	

#### **TECHNICAL SPECIFICATIONS**

#### **MODEL 170L**



#### **MODEL 240L**



GENERAL :	SPECIFICATIONS	CCL-170BTS	CCL-240BTS	
		CONTROLLER		
Туре		Touchsc	reen	
		 TEMPERATURE		
Temperature Control Method		Direct Heat and Air Jacket using Microcontroller PI		
' Ambient Tempera	iture Range	18 to 32°C (64.		
Temperature Con	trol Range, °C	Ambient +	5 to 60	
 Temperature Unif		< ± 0.35	< ± 0.5	
Temperature Fluc	tuation, °C *	± 0.2	2	
Temperature Accı	ıracy, °C *	± 0.1		
Temp. Recovery T	me**	≤5 minutes	≤6 minutes	
(after 30 seconds	door opening, 98% from initial value)	23 millutes	≤0 IIIIIIdte3	
		CO <sub>2</sub>		
CO <sub>2</sub> Control Syste	m	Microcontr	roller PI	
CO <sub>2</sub> Control Rang	e, % CO <sub>2</sub>	0 to 19	9.5	
CO <sub>2</sub> Accuracy, % (	O <sub>2</sub> ***	± 0.	1	
CO <sub>2</sub> Sensor		Infrared (IR) C	O <sub>2</sub> Sensor	
CO <sub>2</sub> Recovery Time	e****	≤5 minu	utes	
	door opening, 98% from initial value)			
		HUMID	DITY	
Humidification M		Water p		
Humidity Range, % RH*****		85% to 90%		
		PHYSICAL CON	STRUCTION	
Interior Volume		170 L (6.0 ft³)	240 L (8.5 ft³)	
External Dimensio	ons (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")	
nternal Dimensio	ns (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.)	
	Main Body	Electrogalvanized steel with Isocide™ antimicrobial coating		
	Interior Material	Stainless steel, type 304		
Cl	Number of Shelves	4		
Chamber Construction	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	Nominal Power at 37°C	90 W	95 W	
Configuration (110-130 VAC,	Maximum Power Consumption	1550 W	1650 W	
(110-130 VAC, 50/60 Hz)	Full Load Amps	12.7 A	13.7 A	
Electrical	Nominal Power at 37°C	45 W	50 W	
Configuration (220-240 VAC,	Maximum Power Consumption	1500	W	
50/60 Hz)	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")	
		CONTAMINATIO	ON CONTROL	
Contamination Control Methods		<ol> <li>Main body is electro-galvanized steel with lsc</li> <li>90°C moist heat decontamination;</li> <li>ULPA filter;</li> <li>0.2-micron inlet filter for gas inputs;</li> <li>1-micron air circulation filter.</li> </ol>	ocide™ antimicrobial-coating;	

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.

<sup>\*\*</sup>For temperature not exceeding 37.2°C.

<sup>\*\*\*</sup>Results are achieved when tested at 5%  ${\rm CO_2}$  as set point. Results may vary if set point changes and calibration is needed.

<sup>\*\*\*\*</sup>For  $CO_2$  level not exceeding 5.2%.

<sup>\*\*\*\*\*</sup> Esco does not guarantee condensation-free chamber at humidity level higher than 90%.

GENERAL S	SPECIFICATIONS	CCL-170BHHS-TS	CCL-240BHHS-TS	
		CONTROLLER		
Гуре		Touchscreen		
		TEMPERATURE		
Temperature Cont	rol Method	Direct Heat and Air Jacket	using Microcontroller PI	
Ambient Tempera	ture Range	18 to 32°C (64.		
Temperature Cont		Ambient +5 to 60		
Temperature Unif	ormity, °C *	<± 0.35		
Temperature Fluct	tuation, °C *	± 0.2		
Temperature Accu	racy, °C *	± 0.1		
Temp. Recovery Ti (after 30 seconds :	me** door opening, 98% from initial value)	≤5 minutes	≤6 minutes	
		CO <sub>2</sub>		
CO₂ Control Syste	m	Microcontr	roller PI	
CO₂ Control Rang	e, % CO <sub>2</sub>	0-19.	5	
CO <sub>2</sub> Accuracy, % C	O <sub>2</sub> ***	± 0.	1	
CO <sub>2</sub> Sensor		Infrared (IR) C	CO <sub>2</sub> Sensor	
CO <sub>2</sub> Recovery Time (after 30 seconds)	e**** door opening, 98% from initial value)	≤5 minutes		
		HUMIDITY		
Humidification M	ethod	Water	pan	
Humidity Range, '	% RH****	85% to	90%	
		PHYSICAL CON	STRUCTION	
nterior Volume		170 L (6.0 ft³)	240 L (8.5 ft³)	
External Dimensio	ns (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")	
nternal Dimensio	ns (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.)	
	Main Body	Electrogalvanized steel with Iso	cide™ antimicrobial coating	
	Interior Material	Stainless steel	, type 304	
	Number of Shelves	4		
Chamber Construction	Maximum Number of Shelves	7		
- Action	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	Nominal Power at 37°C	90 V	V	
Configuration (110-130 VAC,	Maximum Power Consumption	1600 W	1700 W	
50/60 Hz)	Full Load Amps	13 A	14 A	
Electrical	Nominal Power at 37°C	50 V	V	
Configuration (220-240 VAC,	Maximum Power Consumption	1500 W 7 A		
50/60 Hz)	Full Load Amps			
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")	
		CONTAMINATIO	ON CONTROL	
Contamination Control Methods		<ol> <li>Main body is electro-galvanized steel with Isr</li> <li>180°C dry heat sterilization;</li> <li>ULPA filter;</li> <li>0.2-micron inlet filter for gas inputs;</li> <li>1-micron air circulation filter.</li> </ol>	ocide™ antimicrobial-coating;	

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.

<sup>\*\*</sup>For temperature not exceeding 37.2°C.

<sup>\*\*\*</sup>Results are achieved when tested at 5%  ${\rm CO_2}$  as set point. Results may vary if set point changes and calibration is needed.

<sup>\*\*\*\*</sup>For CO<sub>2</sub> level not exceeding 5.2%.

<sup>\*\*\*\*\*</sup> Esco does not guarantee condensation-free chamber at humidity level higher than 90%.

#### **OPTIONS AND ACCESSORIES**

	DESCRIPTION	MODEL CODE	ITEM CODE
This option the chamb airflow in t	HUMIDITY DISPLAY This option allows the incubator to monitor the relative humidity inside	COA-1001 (factory-installed)	5170470
	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-F (field-installed)	5170471
	CO <sub>2</sub> 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-1002 (factory-installed)	5170472
		COA-1002-F (field-installed)	5170473
	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 <sub>2</sub> , %O <sub>2</sub> and relative humidity, depending on the options available in the incubator. This allows the chamber to be connected to an in-house data	COA-1005 (factory-installed)	5170475
	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-F (field-installed)	5170476
	<b>2-STAGE GAS REGULATOR FOR CO</b> <sub>2</sub> $CO_2$ 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
1	<b>EXTRA STAINLESS STEEL SHELF WITH SUPPORT RAILS</b> 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	COA-2003-F (for 170 L models)	5170480
	the floor for comfortable access. It comes with casters for mobility of your incubators.	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		5170489
	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-2042-F (for 240 L models)	5170999
	ELECTRONIC CO <sub>2</sub> ANALYZER, FOR CO <sub>2</sub> / TEMP MEASUREMENT (WITH TEMPERATURE PROBE)	COA-2010-F	5170329
	<b>REVERSED DOOR SWING</b> The incubator has a door opening on the left side by default. This option allows the doors to be factory-installed as opening from the right side.	COA-1004 (factory-installed)	5170474
100	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
ESCO	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 <sub>2</sub> incubators, and ultra-low temperature freezers.	Voyager	5250001

#### **ESCO LIFESCIENCES GROUP**

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