ESCO
WORLD CLASS. WORLDWIDE.

CelCulture® CO_2 Incubator
Model CCL-170_-_

CelCulture®

CO_2 Incubator with Integrated Cooling System

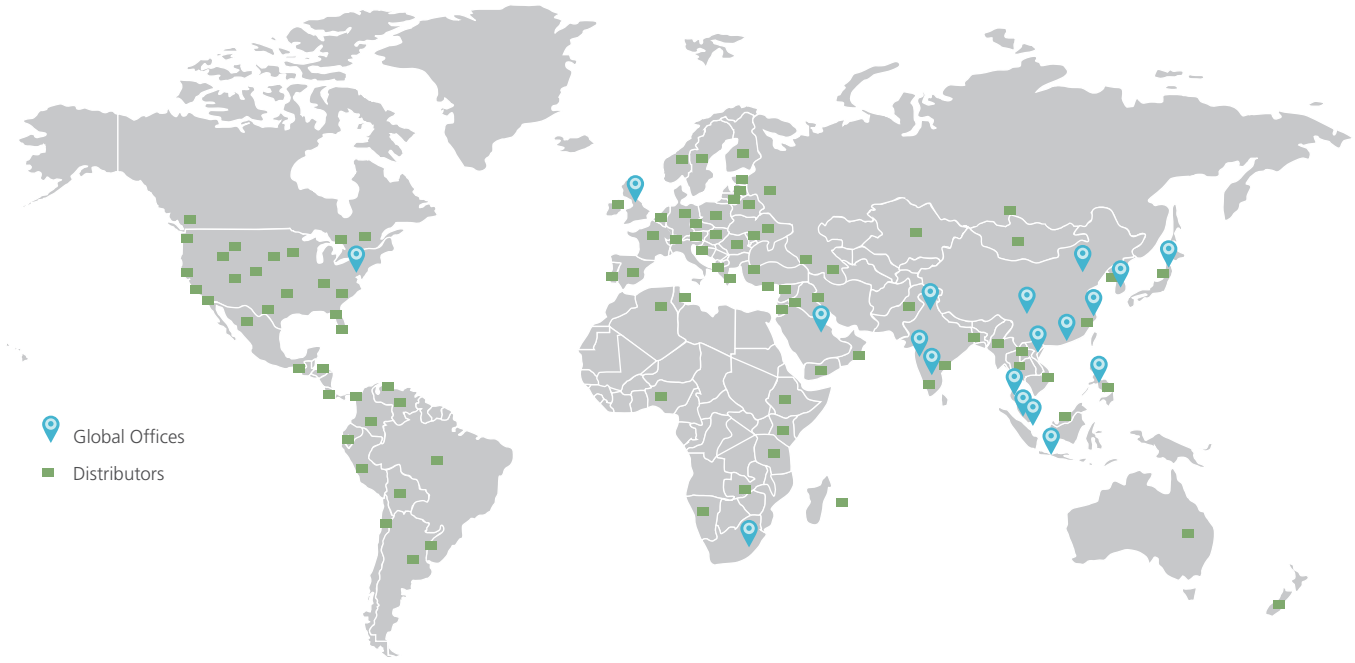
Solution for Highly Specialized Applications

WELCOME TO ESCO

Esco's Vision is to provide enabling technologies for scientific discoveries to make human lives healthier and safer.

- A leader in the development of controlled environment, laboratory and pharmaceutical equipment solutions.
- A world leader in biological safety cabinets.
- Esco has established offices in 13 countries such as Bahrain, China, India, Japan, Korea, Malaysia, Philippines, Singapore, UK, US, Vietnam, South Africa and Indonesia and is continually expanding.
- North American facilities in Pennsylvania; sales, service, logistics for US & Canada.
- Group total of more than 600 employees.
- Distributors in more than 100 countries.
- Products independently tested to international standards.
- Large R&D investments, world leading technologies.
- State-of-the-art production; vertically integrated manufacturing floor space.
- Worldwide service played out over a geographic expanse so broad that the sun never sets on what we do.

GLOBAL NETWORK



PRODUCTS AND APPLICATION

Esco Life Science Tools

Laboratory Equipment

Biosafety and Laminar Flow

- Class II Type A2 Biological Safety Cabinets
- Class II Type B2 Biological Safety Cabinets
- Class III Biological Safety Cabinets
- Horizontal Laminar Flow Clean Benches
- Vertical Laminar Flow Clean Benches
- Laboratory Animal Research Workstations
- PCR Cabinets

Fume Hoods

- Laboratory Fume Hoods
- Ductless Fume Hoods
- Fume Scrubbers
- Exhaust Blowers
- Fume Hood Airflow Monitors

PCR

- PCR Thermal Cyclers
- *Not Available in North America*

Incubators and Ovens

- Forced Convection Laboratory Ovens
- Forced Convection Laboratory Incubators
- Refrigerated Incubators
- CO_2 Incubators
- Remote Monitoring, Data Logging, and Programming Software

Cold Storage

- Laboratory Refrigerators
- Laboratory Freezers
- Laboratory Combination Freezers
- Ultra-low Temperature Freezers

Medical Equipment

Assisted Reproductive Technology

- ART Workstations
- CO_2 Incubators with Suppressed O_2
- Multi-room Incubators

Pharmaceutical Equipment

Containment / Compounding Pharmacy

- Downflow Booths
- Powder Weighing Balance Enclosures
- Pharmacy Isolators
- Cytotoxic Safety Cabinets
- Soft Capsule
- Air Showers
- Straddle Units
- Garment Storage Cabinets
- Pass Boxes
- Transfer Hatches

CelCulture®

CO_2 Incubator with Integrated Cooling System

INTRODUCTION

Esco CelCulture CO_2 Incubator with Integrated Cooling System provides solution for highly specialized application.

The integrated cooling system allows studies of samples that requires temperature at/or below ambient temperature.

KEY FEATURES

WIDER TEMPERATURE RANGE

Temperature range of 12°C below ambient to 60°C above ambient means wider range of applications.

HIGHLY EFFICIENT, ENVIRONMENTALLY FRIENDLY PELTIER COOLING SYSTEM

This provides precise heating and cooling inside the chamber making sure that your samples are safe from temperature changes.

COMPLETE CONTAMINATION CONTROL METHODS

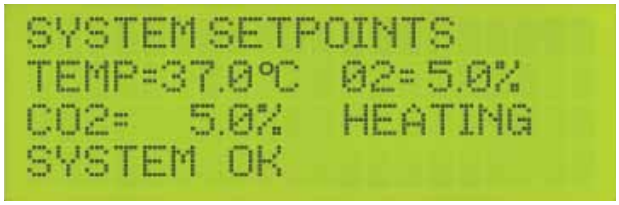
- *90 °C validated moist heat decontamination cycle*
- *ULPA filter*
- *ISOCIDE® anti-microbial coating*
- *0.2 micron in-line filter*

APPLICATIONS

- *Stem Cell Research*
- *Mammalian Research*
- *Tissues Re-generation*
- *Food Research*
- *Regenerative Medicine*
- *Marine Biology*
- *Fish Cell Research*
- *Amphibian cell Research*
- *Insect Cell Research*

HEATING AND COOLING FUNCTION

Users can use it as a conventional CO_2 incubator using heating mode or switch to cooling mode.



OPTIONS AND ACCESSORIES

All options and accessories for standard CelCulture CO_2 incubators are also appropriate to use on CelCulture CO_2 Incubator with Integrated Cooling Option.

ORDERING INFORMATION

IR SENSOR MODEL WITH INTEGRATED COOLING SYSTEM

Models	Description
CCL-170-B-8-P	CelCulture Incubator, 170L, IR sensor, CO_2 control, Moist Heat Decon, Peltier System, 230VAC, 50/60 Hz
CCL-170-B-9-P	CelCulture Incubator, 170L, IR sensor, CO_2 control, Moist Heat Decon, Peltier System, 115VAC, 50/60 Hz

SUPPRESSED O_2 MODEL WITH INTEGRATED COOLING SYSTEM

Models	Description
CCL-170-T-8-P	CelCulture Incubator, 170L, IR sensor, CO_2 control, O_2 control, Moist Heat Decon, Peltier System, 230VAC, 50/60 Hz
CCL-170-T-9-P	CelCulture Incubator, 170L, IR sensor, CO_2 control, O_2 control, Moist Heat Decon, Peltier System, 115VAC, 50/60 Hz

GENERAL SPECIFICATION

Models	CCL-170B-8-P CCL-170B-9-P
TEMPERATURE (Heating Mode)	
Ambient Temp Range	18 to 34°C (64 to 93 °F)z
Temperature Control Method	Direct Heat and Air Jacketed with Peltier Cooling System using PID microprocessor
Temperature Range, °C	12°C below ambient to 60°C above ambient
Temperature Uniformity, °C	± 0.2*
Temperature Fluctuation, °C	± 0.1
Temperature Recovery time** (after 1 min. door opening, 98% from initial value), minutes	6
TEMPERATURE (Cooling Mode)	
Pull Down Time to 8°C below Ambient (at 25°C Ambient Temperature),minutes	42
Pull Down Time to 12°C below Ambient (at 25°C Ambient Temperature), minutes	90
Temperature Uniformity at 8°C below Ambient, °C	± 0.4
Temperature Recovery Time** (after 1 min. door opening, 98% from initial value), minutes	32
Power Off Temperature Increase Rate 1 hour, °C 10 hours, °C	 1.9 10
CO_2 (Heating Mode)	
CO_2 Control System	Microprocessor PID
CO_2 Range, % CO_2	0-20
CO_2 Accuracy, % CO_2	± 0.1
CO_2 Sensor	Infrared (IR) Sensor**
CO_2 Recovery Time*** (after 1 min. door opening, 98% from initial value) (Heating Mode)	Standard Unit: 4 minutes Suppressed O_2 model: 5 minutes
CO_2 (Cooling Mode)	
Start-up Time at 5% CO_2, minutes	14
Recovery Time at 5% CO_2, minutes	9
CO_2 Fluctuation, %CO_2	± 0.3
FOR SUPPRESSED O_2 MODEL (Heating Mode)	
O_2 Control System	Microprocessor PID
O_2 Range, % O_2	1-20.7
O_2 Accuracy, % O_2	± 0.1
O_2 Sensor	Galvanic Cell Type
O_2 Recovery Time**** (after 1 min. door opening, 98% from initial value), minutes	At 1.0% O_2 volume: 20 At 5.0% O_2 volume: 10

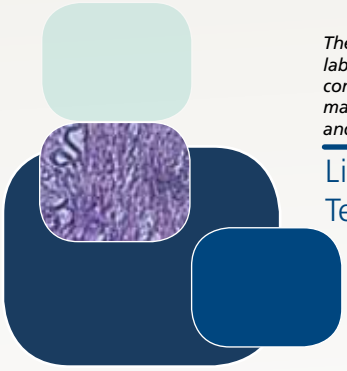
FOR SUPPRESSED O_2 MODEL (Cooling Mode)	
Start-up Time at 5% O_2, minutes	14
O_2 Recovery Time at 5% O_2**** (after 1 min. door opening, 98% from initial value), minutes	12
O_2 Fluctuation, %O_2	± 0.2
Humidity (Heating Mode)	
Humidification Method	Humidity pan
Humidity range	85% - 93%
Humidity range (Suppressed O_2 control)	85% - 91%
Physical Parameters	
Interior Volume	170l (5.7 cu. Ft.)
Internal Dimensions (W x D x H)	505 mm x 530 mm x 635 mm (19.9" x 20.9" x 25.0")
External Dimension (W x D x H)	660 mm x 672 mmx 900 mm (26.0" x 26.46" x 35.4")
Net Weight	105 kg (231 lbs)
Shipping Weight	131.5 kg (289 lbs)
Shipping Dimension (W x D x H)	820 mm x 850 mm x 930 mm 32.28" x 33.47" x 36.62"
Number of Shelves	4
Maximum No. of Shelves	7
Shelves Area (W x D)	470 mm x 470 mm (18.5" x 18.5")
Max. Load per Shelf	11 kg/shelf (24.3 lbs/shelf)
Available Electrical Configuration	220 - 240 VAC, 50 / 60 Hz, 1Φ, 3.4 A 110 - 130 VAC, 50 / 60 Hz, 1Φ, 7.0 A
Airflow	6-8 cfm
Interior Material	Stainless steel, type 304
Maximum Power Consumption	800 Watts
Power Consumption 37˚C	80 W
CONTAMINATION CONTROL	
Contamination Control Methods	1) Main body is electrogalvanized steel with ISOCIDE® antimicrobial coating; 2) Moist 90˚C OVERNIGHT decon. cycle (HPA validated); 3) 0.2 micron in-line filter for gas inputs; 4) ULPA filter

* Data recorded under optimum factory setting conditions
** For temperature not exceeding 37°C
*** For CO_2 not exceeding 5.2%.
**** For O_2 not exceeding 5.2%

ESCO GLOBAL NETWORK

ART Equipment
Biological Safety Cabinets
CO_2 Incubators
Compounding Pharmacy Equipment
Containment / Pharma Products
Ductless Fume Hoods
Freeze Dryer
Lab Animal Research Products
Laboratory Fume Hoods
Laboratory Ovens and Incubators
Laminar Flow Clean Benches
PCR Cabinets
PCR Thermal Cyclers
Powder Weighing Balance Enclosures
Ultra-low Freezers

The Esco Group of Companies is a global life sciences tools provider with sales in over 100 countries. The group is active in lab equipment, pharma equipment and medical devices. Manufacturing facilities are located in Asia and Europe. R&D is conducted worldwide spanning the US, Europe and Asia. Sales, service and marketing subsidiaries are located in 12 major markets including the US, UK, Singapore, Japan, China and India. Regional distribution centers are located in the US, UK, and Singapore.



Life Science • Chemical Research • Assisted Reproductive Technology (ART) • Pharmaceutical Equipment • General Equipment

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