

**ESCO**  
MEDICAL



**CelCulture®**

**CO<sub>2</sub> Incubators**

## Design Excellence - Superior Quality

Sleek, reliable, and intuitive



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# CelCulture®

CO<sub>2</sub> Incubators

## Introduction

CO<sub>2</sub> incubators are widely used in scientific research to grow and maintain cell cultures.

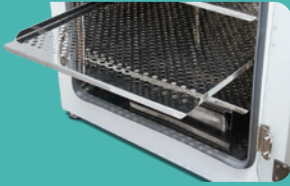
Typical fields of application include tissue engineering, in vitro fertilization, neuroscience, cancer research, in vitro fertilization for culture media preparation, and other mammalian cell research applications.

Sleek, reliable and intuitive, Esco Medical's CelCulture® CO<sub>2</sub> incubators provide complete sample protection that brings your scientific dreams one step closer to reality.



*\*Not applicable for 50 L model  
(including the top, back and bottom plenum)*

**CelCulture® — Stainless steel interior  
supported by a globally accepted technology**



### Shelving

- Perforated shelving to improve uniformity
- Anti-tip
- Stainless steel
- Built-in grip
- Dismantles without tools for easy cleaning



### Duct Work

- Directs air flow for rapid recovery and excellent uniformity
- Easily removed for cleaning



### Water Pan

- Precisely heated by base heater to provide high humidity
- Gentle airflow over water surface accelerates humidity recovery



## FEATURES:

### Smartsense™ Microcontroller Interface

Intuitive, fully-equipped control and monitoring system

### Quality Esco Construction

- Electrogalvanized steel with white oven-baked epoxy polyester antimicrobial powder-coated finish.
- External surfaces are powder coated with Esco **ISOCIDE™** to eliminate 99.9% of surface bacteria within 24 hours of exposure.
- Ensures a healthier, safer and cleaner lab environment.

### ULPA Filter\*

- 99.999% efficient, superior to conventional HEPA filters
- Filters air continuously
- Chamber returns to ISO Class 5 cleanliness in 11 minutes upon door closing to prevent contamination.

### Sample Port

Allows direct measurement of chamber atmosphere such as temperature and CO<sub>2</sub> concentration

### Blower\*

Gentle airflow in chamber improves recovery and uniformity.

### Inner Door Kit

- Divides the incubator into different chambers
- Minimizes recovery times and contamination risk



# CelCulture<sup>®</sup> CO<sub>2</sub> Incubators



## Faster Temperature and CO<sub>2</sub>/O<sub>2</sub> Recovery Time

CelCulture<sup>®</sup> CO<sub>2</sub> Incubators are equipped with a sophisticated firmware and robust hardware components to facilitate faster recovery time for temperature, CO<sub>2</sub>, and O<sub>2</sub>.

Fully redesigned sensor location to facilitate for a faster recovery of temperature inside the chamber. Infrared sensor monitors and controls CO<sub>2</sub> inside the chamber, while O<sub>2</sub> sensor maintains the suitable oxygen concentration for optimal incubation.

## Maintaining Low Levels of Oxygen for Optimal Embryo Growth

The Suppressed O<sub>2</sub> Model of the CelCulture<sup>®</sup> with its Zirconia O<sub>2</sub> sensor ensures accurate control and monitoring of hypoxic conditions inside the chamber



## Inner Door Kit Feature

A standard feature that helps to hasten the recovery of parameters and prevent cross-contamination. The 50 L chamber is divided into two sections while the 170 L has 4 sections. The 240 L model can either have 4 or 6 sections. Each section has a dedicated door panel.

## Access Ports in Key Positions

Access ports to provide an easy route for calibration and validation of the chamber parameters

- two access ports for 50 L (one at the inner glass door and one at the rear of the incubator)
- three access ports for 170 L and 240 L (one at the inner glass door and two at the rear of the incubator)

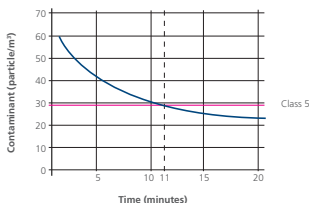


## Maximum Protection Against Contaminants

- 90°C moist heat decontamination cycle
- Gas filters
- Isocide<sup>™</sup> antimicrobial coating

## Efficient Filtration System

It makes use of ULPA filters which is 99.999% efficient, and superior to conventional HEPA filters allowing continuous air filtration. The chamber returns to ISO Class 5 cleanliness in 11 minutes upon door closing to prevent contamination.



# General Specifications



## CelCulture®

Specifications	CCL-050_-_-IVF	CCL-170_-_-IVF	CCL-240_-_-IVF
<b>Temperature</b>			
Temperature Control Method	Direct heat & air jacket using Microcontroller PI		
Temperature Range, °C	Ambient +7 to 60		
Temperature Fluctuation	± 0.2 °C		
Temperature Uniformity	<± 0.5 °C		
Temperature Accuracy	< ±0.1 °C		
Temperature Recovery (After 30 seconds door opening)	≤ 5 minutes		
<b>CO<sub>2</sub></b>			
CO <sub>2</sub> Control System	Microcontroller PI		
CO <sub>2</sub> Range, % CO <sub>2</sub>	0-19.5		
CO <sub>2</sub> Sensor	Infrared (IR) Sensor		
%CO <sub>2</sub> Recovery Time (After 30 seconds door opening)	≤ 8 minutes (at 5.0% CO <sub>2</sub> by volume)		
<b>O<sub>2</sub> SPECS (For Suppressed O<sub>2</sub> Model)</b>			
O <sub>2</sub> Control System	Microcontroller PI		
O <sub>2</sub> Range, % O <sub>2</sub>	1-18%		
O <sub>2</sub> Sensor	Zirconia O <sub>2</sub> sensor		
%O <sub>2</sub> Recovery Time (After 30 seconds door opening)	≤ 10 minutes (at 5.0% O <sub>2</sub> by volume)		
<b>Humidity</b>			
Humidification Method	Humidity Pan (Natural Humidification)		
Humidity Range, % RH	85-90		
<b>Physical Construction</b>			
Number of Shelves	50L: 2 shelves	170L: 4 shelves	240L: 4 shelves
External Dimensions (W x D x H)	500 x 500 x 655 mm (19.7" x 19.7" x 25.8")	660 x 660 x 900 mm (26.0" x 26.0" x 35.4")	750 x 770 x 900 mm (29.5" x 30.3" x 35.4")
Gross Internal Dimensions (W x D x H)	345 x 375 x 388 mm (13.6" x 14.8" x 15.3")	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")
Shipping Weight	70 kg (154.3 lbs)	120 kg (264.6 lbs)	155 kg (341.7 lbs)
Interior Volume	50 L (1.8 ft <sup>3</sup> )	170 L (6 ft <sup>3</sup> )	240 L (8.5 ft <sup>3</sup> )
<b>Contamination Control</b>			
Contamination Control Methods	1) Main body is electrogalvanized steel with Isocide™ antimicrobial coating; 2) 90°C Moist Heat Decontamination Cycle (HPA Validated); 3) 0.2 micron inlet filter for gas inputs; 4) ULPA filter*		

\* Not available for 50 L

# Ordering Information



ITEM CODE	MODEL CODE	DESCRIPTION
<b>IR Sensor Model with Stainless Steel Chamber</b>		
2170257	CCL-050B-8-IVF	Celculture® Incubator, 50L, IR sensor, CO <sub>2</sub> control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 230VAC, 50/60 Hz
2170272	CCL-170B-8-IVF	CelCulture® Incubator 170L IR Sensor, CO <sub>2</sub> Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 230VAC 50/60Hz
2170278	CCL-240B-8-IVF	CelCulture® Incubator 240L IR Sensor CO <sub>2</sub> Control, ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 240L (4/6 Glass Doors With Latches), Factory Installed, 230VAC 50/60Hz
2170258	CCL-050B-9-IVF	Celculture® Incubator, 50L, IR sensor, CO <sub>2</sub> control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 115VAC, 50/60 Hz
2170273	CCL-170B-9-IVF	CelCulture® Incubator 170L IR Sensor, CO <sub>2</sub> Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 115VAC 50/60Hz
2170279	CCL-240B-9-IVF	CelCulture® Incubator 240 L, IR Sensor, CO <sub>2</sub> Control, ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 240L (4/6 Glass Doors With Latches), 115 VAC, 50/60 Hz
<b>Supressed O<sub>2</sub> Model with Stainless Steel Chamber</b>		
2170260	CCL-050T-8-IVF	Celculture® Incubator, 50L, IR sensor, CO <sub>2</sub> & O <sub>2</sub> control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 230VAC, 50/60 Hz
2170275	CCL-170T-8-IVF	CelCulture® Incubator 170L IR Sensor, CO <sub>2</sub> & O <sub>2</sub> Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 230VAC 50/60Hz
2170281	CCL-240T-8-IVF	Celculture® Incubator, 240L, IR sensor, CO <sub>2</sub> & O <sub>2</sub> control ULPA, with Sealed Inner Door Kit for 240L (4/6 Glass Doors With Latches), Factory Installed, 230VAC 50/60Hz
2170261	CCL-050T-9-IVF	Celculture® Incubator, 50L, IR sensor, CO <sub>2</sub> & O <sub>2</sub> control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 115VAC, 50/60 Hz
2170276	CCL-170T-9-IVF	CelCulture® Incubator 170L IR Sensor, CO <sub>2</sub> & O <sub>2</sub> Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 115VAC 50/60Hz
2170282	CCL-240T-9-IVF	Celculture® Incubator, 240L, IR sensor, CO <sub>2</sub> & O <sub>2</sub> control ULPA, with Sealed Inner Door Kit for 240L (4/6 Glass Doors With Latches), Factory Installed, 115VAC 50/60Hz



# Options & Accessories



## Electronic Gas Analyzer

The electronic analyzer allows the measurement of CO<sub>2</sub> concentration, O<sub>2</sub> concentration, relative humidity and temperature (temperature probe already included).



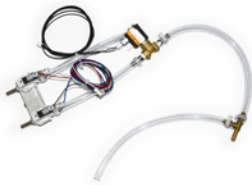
## SAFE Sens Kit

For continuous pH monitoring.



## Humidity Display

For monitoring of the Relative Humidity inside the chamber. Works from -70°C to 180°C



## CO<sub>2</sub> Back up

This option allows two tanks of CO<sub>2</sub> 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.



## N<sub>2</sub> Back up

This option allows two tanks of N<sub>2</sub> 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.



## Roller Base

With casters for mobility of your incubators.



## Floor Stand with Adjustable Feet

Nominal range of 180 mm to 250 mm (7.1" to 9.8")



## Floor Stand with Casters

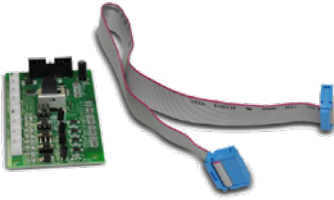
Support stand raises the incubator to a height of 700 mm (27.6") above the floor



## 2-Stage gas regulator for CO<sub>2</sub>/ N<sub>2</sub>

Used to reduce the pressure from the tank to the incubator.

# Options & Accessories



## Analog Output

Used for connecting the incubator to an output analog signals representing the temperature, CO<sub>2</sub> and O<sub>2</sub> gas concentration and relative humidity.



## Additional Stainless Steel Shelf (for SS Chamber)

Maximize your incubator space by adding more shelves. Can add 1 extra shelf for 50 L model, 3 more shelves for 170 L and 240 L models.



## Chart Recorder

Easy-to-read graph of data vs. time



## Voyager Software Kit

PC-based software for remote monitoring, datalogging and programming.

# Esco Incubators



MIRI<sup>®</sup> TL Time-Lapse Incubators

MIRI<sup>®</sup> Multiroom Incubator

MIRI<sup>®</sup> II-12 Multiroom Incubator

Mini MIRI<sup>®</sup> Dry and Humidity Incubator

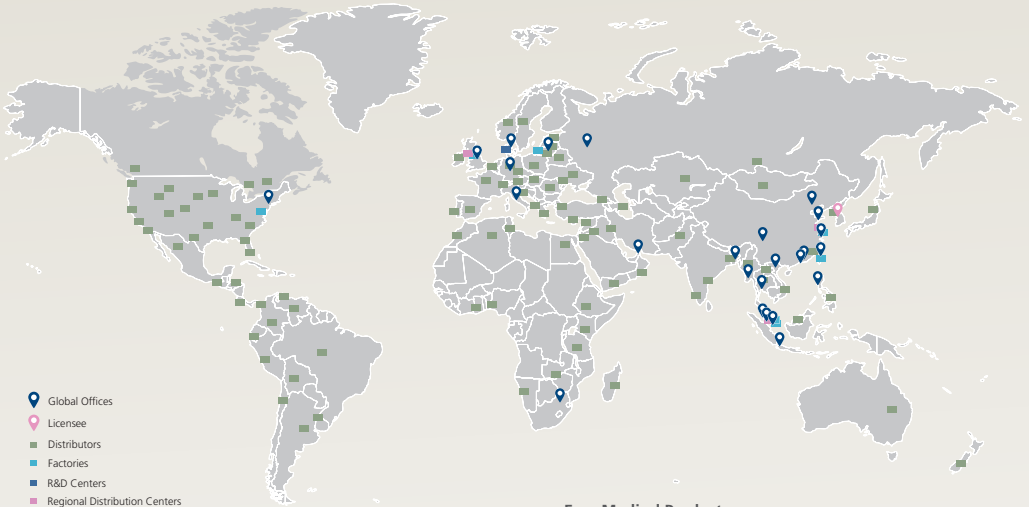
# Accessories & Ordering Information



ITEM CODE	MODEL CODE	DESCRIPTION
5170470	COA-1001	Humidity Display, Factory-installed
5170471	COA-1001-F	Humidity Display, Field-installed Kit
5170472	COA-1002	CO <sub>2</sub> Backup (Tank Switcher), Factory-installed
5170473	COA-1002-F	CO <sub>2</sub> Backup (Tank Switcher), Field-installed
5170474	COA-1004	Reversed Door Swing, Factory-installed
5170475	COA-1005	Analog Outputs, Factory-installed
5170476	COA-1005-F	Analog Outputs, Field-installed
5170490	COA-1007	N <sub>2</sub> Back-up (Tank Switcher), Factory-installed
5170491	COA-1007-F	N <sub>2</sub> Back-up (Tank Switcher), Field-installed
5170419	COA-2018-F	Roller Base (50 L)
5170478	COA-2001-F	Roller Base (170 L)
5170420	COA-2019-F	Roller Base (240 L)
5170421	COA-2020-F	Floor Stand 200 mm (8.0") with Adjustable Feet (50 L)
5170479	COA-2002-F	Floor Stand 200 mm (8.0") with Adjustable Feet (170 L)
5170422	COA-2021-F	Floor Stand 200 mm (8.0") with Adjustable Feet (240 L)
5170423	COA-2022-F	Floor Stand 700 mm (27.6") with Casters (50 L)
5170480	COA-2003-F	Floor Stand 700 mm (27.6") with Casters (170 L)
5170424	COA-2023-F	Floor Stand 700 mm (27.6") with Casters (240 L)
5170489	COA-2004-F	2-units Floor Stand Stacking Kit (For 170L)
5170999	COA-2042-F	2-units Floor Stand Stacking Kit (for 240L)
5170481	COA-2005-F	2-Stage Gas Regulator for CO <sub>2</sub> / N <sub>2</sub> Choose one of the connectors below: 1080588 - CGA 320 Connector (US standard) 1080589 - BP-B534-#8-NT4 Connector (British standard) 1080590 - G5/8-RH Connector (China standard)

ITEM CODE	MODEL CODE	DESCRIPTION
5170425	COA-2024-F	Extra Shelf (50 L, stainless steel)
5170327	COA-2007-F	Extra Shelf (170 L, stainless steel)
5170426	COA-2025-F	Extra Shelf (240 L, stainless steel)
5170483	COA-2008-F	Stacking Kit (one set included with every unit purchased)
5170329	COA-2010-F	Electronic CO <sub>2</sub> Analyzer, For CO <sub>2</sub> / Temp Measurement (with Temperature Probe)
5170397	COA-2016-F	Electronic CO <sub>2</sub> + O <sub>2</sub> Analyzer, For CO <sub>2</sub> / O <sub>2</sub> / Temperature Measurement
5170398	COA-2017-F	Electronic CO <sub>2</sub> + O <sub>2</sub> + RH Analyzer, For CO <sub>2</sub> / O <sub>2</sub> / RH / Temperature Measurement
2170020	COA-2011-F	IQ / OQ Documentation
2170021	COA-2012-F	6" Chart Recorder, Temp, 115/230 VAC, 50/60 Hz
2170022	COA-2013-F	8" Chart Recorder, Temp / Temp, 115/230 VAC, 50/60 Hz
2170023	COA-2014-F	6" Chart Recorder, Temp/RH, 115/230 VAC, 50/60 Hz
5170487	COA-2015-F	Inner Door Shelving Kit for 170 L (4 sets with total 12 mini-shelves for one incubator)
5250001	Voyager®	Voyager® Software Kit
1320045	MRI-GA	MRI® GA CO <sub>2</sub> / O <sub>2</sub> / Temp Validation Unit, 115 -230 VAC, 50/60 Hz
1250109	MRA-SS-TS	SAFE Sens TrackStation for CO <sub>2</sub> Incubator (to be sold with 1250110). Can connect up to 8 incubators.
1250110	MRA-SS-TP	SAFE Sens TrackPod for CO <sub>2</sub> Incubator (to be sold with 1250109)
1081277	MRA-SS-SV2	SAFE Sens SV2 Sensor, Pack of 10 pieces (shelf-life 12 months)
1081278	MRA-SS-QC2	SAFE Sens QC2 Alignment Tool

# ESCO LIFESCIENCES GROUP



- Global Offices
- Licensee
- Distributors
- Factories
- R&D Centers
- Regional Distribution Centers



## Esco Medical Products:

- MIRI® TL6 Time-Lapse Incubator
- MIRI® TL12 Time-Lapse Incubator
- MIRI® Multiroom Incubator
- MIRI® II-12 Multiroom Incubator
- Mini MIRI® Dry Incubator
- Mini MIRI® Humidity Incubator
- Esco Multi-Zone ART Workstation
- CelCulture® CO<sub>2</sub> Incubator
- MIRI® GA (Gas and Temperature Validation Unit)
- MIRI® AVT
- Versati™ Tabletop Centrifuge
- CultureCoin®

*Infertility is a problem that has a significant social, psychological, and economic impact on afflicted individuals and couples. It is a global concern that knows no race or creed. It has been estimated that 1 in 6 couples struggle with infertility at least once in their lifetime.*

*Esco Medical is one of the divisions of the Esco Lifesciences Group. We provide innovative technological solutions for fertility clinics and laboratories. We aim to become the leading manufacturer of high-quality equipment such as long-term embryo incubators, ART workstations, anti-vibration tables, and time-lapse incubators.*

*Our products are designed with the Silent Embryo Hypothesis as a guiding principle. The Silent Embryo Hypothesis states that the less disturbed an embryo can remain, the better its developmental potential will be. Most of our products are designed in Denmark and made in the EU. Our primary focus is to increase pregnancy success rates and patient satisfaction.*



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Designed in Denmark



Made in the E.U.

