

ESCO
MEDICAL



CelCulture[®] for IVF

Cradle for Optimal Embryo Incubation



Design Excellence - Superior Quality

Sleek, reliable and intuitive



table of contents

CelCulture® Parts and Features4

Celculture® CO₂ Incubators for IVF6

General Specifications7

Ordering Information8

Options & Accessories9

Other Esco Embryo Incubators10

Accessories & Ordering Information11



CelCulture®

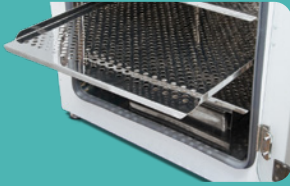
CO₂ Incubators

The CO₂ Incubator has a vital role in providing an optimal environment in embryo development during IVF and other ART procedures.

Sleek, reliable and intuitive, Esco CelCulture® CO₂ incubators are packed with outstanding features such as rapid parameter recovery, ISO Class 5 Cleanliness, ISOCIDE™ antimicrobial coating, standard Inner Door Kit that reduces contamination risk, and other accessories for specialized applications.



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 CO₂ 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[®] CO₂ Incubators for IVF



Achieve optimal embryo growth

CelCulture[®] CO₂ Incubators now has a specific line of incubators for applications in IVF. These are packed with outstanding features to ensure stable environment for optimal embryo growth and faster parameter recovery every time the door is opened.

Faster Temperature and CO₂/O₂ Recovery Time

CelCulture[®] CO₂ Incubators for IVF are equipped with a sophisticated firmware and robust hardware components to facilitate faster recovery time for temperature, CO₂, and O₂. Faster recovery times render less stress to culture to ensure the integrity and full development of the embryos.

Fully redesigned sensor location to facilitate for a faster recovery of temperature inside the chamber. Infrared sensor monitors and controls CO₂ inside the chamber, while O₂ sensor maintains the suitable oxygen concentration for optimal incubation and growth of embryos.

Maintaining Low Levels of Oxygen for Optimal Embryo Growth

The Suppressed O₂ Model of the CelCulture[®] is built to mimic the natural environment of developing embryos by maintaining the low levels of oxygen. The Zirconia O₂ 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[™] antimicrobial coating

M
E
A
Assay

Tested

For IVF applications, Esco CelCulture[®] CO₂ incubators are certified embryo-safe.

Rigorously tested with the Mouse Embryo Assay (MEA), the CelCulture[®] remarkably has 100% embryo survival. The Mouse Embryo Assay (MEA) is the de facto standard test done to demonstrate that a procedure or an article of equipment is safe to use for manipulating human embryos (e.g., in vitro fertilization or IVF).



General Specifications



CelCulture®

Specifications	CCL-050_-_IVF	CCL-170_-_IVF	CCL-240_-_IVF
Temperature			
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		
CO₂			
CO ₂ Control System	Microcontroller PI		
CO ₂ Range, % CO ₂	0 - 20		
CO ₂ Sensor	Infrared (IR) Sensor		
O₂ SPECS (For Suppressed O₂ Model)			
O ₂ Control System	Microcontroller PI		
O ₂ Range, % O ₂	1 - 20.7		
O ₂ Sensor	Zirconia O ₂ sensor		
Humidity			
Humidification Method	Humidity Pan (Natural Humidification)		
Humidity Range, % RH	Standard Unit: Up to 95% Suppressed O ₂ model: Up to 91%		
Physical Construction			
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 ft³)	170 L (6 ft³)	240 L (8.5 ft³)
Contamination Control			
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
IR Sensor Model with Stainless Steel Chamber		
2170257	CCL-050B-8-IVF	Celculture® Incubator, 50L, IR sensor, CO2 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, CO2 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 CO2 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, CO2 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, CO2 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 ₂ Control, ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 240L (4/6 Glass Doors With Latches), 115 VAC, 50/60 Hz
Supressed O₂ Model with Stainless Steel Chamber		
2170260	CCL-050T-8-IVF	Celculture® Incubator, 50L, IR sensor, CO2 & O2 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, CO2 & O2 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, CO2 & O2 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, CO2 & O2 control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Door With Latches), Factory Installed, 115VAC, 50/60 Hz
2170276	CCL-170T-9-IVF	CelCulture® Incubator 170L IR Sensor, CO2 & O2 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, CO2 & o2 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 CO₂ concentration, O₂ concentration, relative humidity and temperature (temperature probe already included).



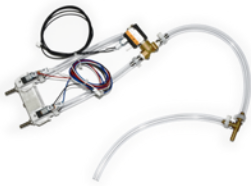
SAFE Sens Kit

For continuous pH monitoring.



Humidity Display

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



CO₂ Back up

This option allows two tanks of CO₂ 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.



N₂ Back up

This option allows two tanks of N₂ 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

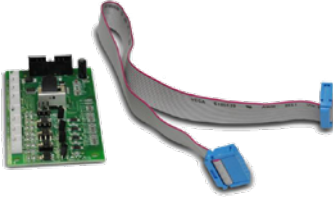
Support stand raises the incubator to a height of 700 mm (27.6") above the floor



2-Stage gas regulator for CO₂/N₂

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, CO₂ and O₂ 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

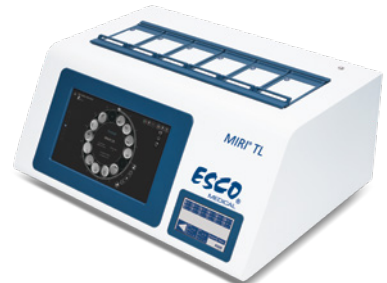
PC-based software for remote monitoring, datalogging and programming.

Other Esco Embryo Incubators



MIRI® Multiroom Incubator

The overall design provides embryo culture in a minimum-stress environment. The 6-chamber format prevents cross-contamination while HEPA+VOC filtration and UV light clean the airflow of the incubator. The chambers are also independent of each other; hence, any disruption such as temperature drop when opening the lid will have no impact on the rest of the system.



MIRI® TL Incubator

Time-Lapse Imaging has given birth to a new concept in the IVF laboratory, termed morphokinetics. It allows embryologists to see significant morphological events that might not be seen through conventional scoring. With MIRI® TL, you can watch the embryos grow and develop throughout the entire culture process. There's no need to take your dishes out for scoring.

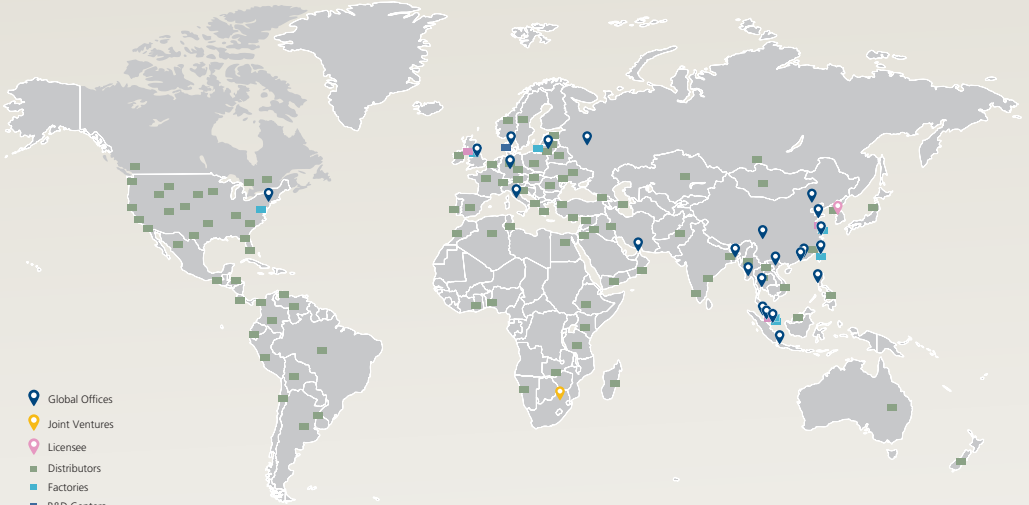
Accessories & Ordering Information



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 ₂ Backup (Tank Switcher), Factory-installed
5170473	COA-1002-F	CO ₂ 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 ₂ Back-up (Tank Switcher), Factory-installed
5170491	COA-1007-F	N ₂ 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)
5170481	COA-2005-F	2-Stage Gas Regulator for CO ₂ / N ₂ 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 ₂ Analyzer, For CO ₂ / Temp Measurement (with Temperature Probe)
5170397	COA-2016-F	Electronic CO ₂ + O ₂ Analyzer, For CO ₂ / O ₂ / Temperature Measurement
5170398	COA-2017-F	Electronic CO ₂ + O ₂ + RH Analyzer, For CO ₂ / O ₂ / 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	MIRI® GA CO ₂ / O ₂ / Temp Validation Unit, 115 -230 VAC, 50/60 Hz
1250109	TBA	Safesens TrackStation for CO ₂ incubator (to be sold with 1250110). Can connect up to 8 incubators.
1250110	TBA	Safesens TrackPod for CO ₂ incubator (to be sold with 1250109)
1081277	TBA	SafeSens SV2 Sensor, Pack of 10 pieces (shelf-life 12 months)
1081278	TBA	SafeSens QC2 Alignment Tool

ESCO GLOBAL NETWORK



- 📍 Global Offices
- 📍 Joint Ventures
- 📍 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 Multiroom Incubator
- Mini MIRI® Incubator
- Esco Multi-Zone ART Workstation
- Esco Multi-Zone ART Workstation Class II
- CelCulture® CO₂ Incubator
- MIRI® GA (Gas and Temperature Validation Unit)
- Anti-Vibration Table (AVT)
- Versati™ Tabletop Refrigerated 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.



21 Changi South Street 1 • Singapore 486 777
 Tel +65 6542 0833 • Fax +65 6542 6920
 medical@escoglobal.com • www.esco-medical.com



Esco Global Offices: Bangladesh | China | Denmark | Germany | Hong Kong | Indonesia | Italy | Lithuania | Malaysia | Myanmar | Philippines | Russia | Singapore | South Africa | South Korea | Taiwan | Thailand | UAE | UK | USA | Vietnam



Designed in Denmark



Made in the E.U.

