CelCulture®

CO_2 Incubators with High Heat Sterilization

INTRODUCTION

Introducing Esco's CelCulture® CO_2 Incubator with 180 °C High Heat Sterilization Cycle, offering efficient contamination protection and hassle-free maintenance without compromising accuracy and reliability in maintaining optimal conditions for cell growth.

The CelCulture® CO_2 Incubator has more design configurations suitable to meet the demands of every cell culture laboratory, taking your scientific dreams a step closer to reality.

S1

NEW FEATURES

S14 S5

180°C HIGH HEAT STERILIZATION

Quick and hassle-free elimination of contaminants in the chamber and its interior components.

S7 S9

HEAT-RESISTANT SENSORS

Maintenance-free sensors are to be included during sterilization.

TEMPERATURE FAIL-SAFE SYSTEM

Over-temperature protection device prevents overshooting of temperature to + 0.4°C of the set point.

WATCHDOG SYSTEM-FAILURE MODE

The auto-reset watchdog will automatically reset the system in the unlikely event of system failure, preventing the controller from freezing.

%CO_2 FAILURE MODE PROTECTION

Prevents build-up of %CO_2 over set point in cases of CO_2 sensor defect. The system will automatically stop the valve from injecting CO_2 after a certain period.

EFFICIENT ENERGY USE

Built to run optimally in ambient +5 temperature — Meaning less air-con and energy consumption, thus saving electricity bills without compromising the cell cultures.

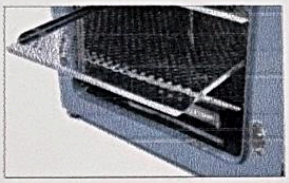
Available in 170 L (6.0 ft³) and 240 L (8.5 ft³) compact footprints

S5

ULPA FILTER

- 99.999% efficient, superior to conventional HEPA filters
- Filters air continuously
- Chamber returns to ISO Class 5 cleanliness in 8 minutes upon door closing to prevent contamination

S6



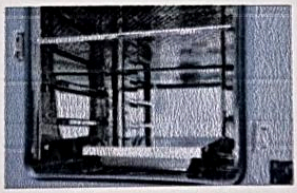
SHELVING

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

S3

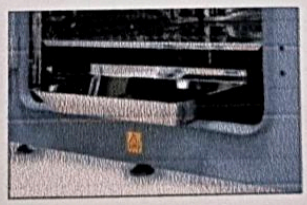
DIRECT HEAT & AIR JACKET

- Fast and uniform heating
- Rapid temperature recovery
- Air jacket improves chamber stability



DUCT WORK

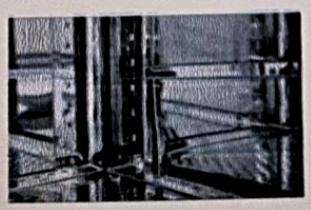
- Directs air flow for rapid recovery and excellent uniformity
- Easily removed for cleaning



WATER PAN

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

S13



ROUNDED CORNERS

- Seamless design
- Facilitates easier cleaning

APPLICATIONS: TISSUE ENGINEERING | STEM CELL RESEARCH | IN VITRO FERTILIZATION | CANCER RESEARCH | PRIMARY CE

Conform extras Brosură pag. 4

O_2 SENSOR
for suppressed O_2 model

- Highly-accurate sensor with resistance to high temperature
- Utilizes long life, non-depleting sensor technology
- Has integral heating element to prevent condensation

CO_2 SENSOR

- Heat-resistant IR sensor
- Equipped with advanced sensor technology for long-term stability
- Not affected by temperature and humidity

TOP COVER
Provides quick access to electrical panel components

DOOR SWITCH
Automatically turns off the blower, heater, UV, and gas supply when the door is opened.

SMARTSENSE™ MICROCONTROLLER INTERFACE
Intuitive controller with comprehensive userconfigurable audible and visual alarms, CelAlert™ reminder system for gas and ULPA filter replacement, and 2 MB built-in flash memory for data and event logging.

BLOWER
Gentle airflow in chamber improves recovery and uniformity

OUTER DOOR

- Reversible
- Heated to prevent condensation

SAMPLE PORT
Allows direct measurement of chamber atmosphere such as CO_2, and O_2 concentration.

INNER GLASS DOOR
For observing sample cells inside the chamber during operation

LEVELING FEET
Easily adjustable

DOOR LATCH
To lock / unlock the glass door

QUALITY ESCO CONSTRUCTION

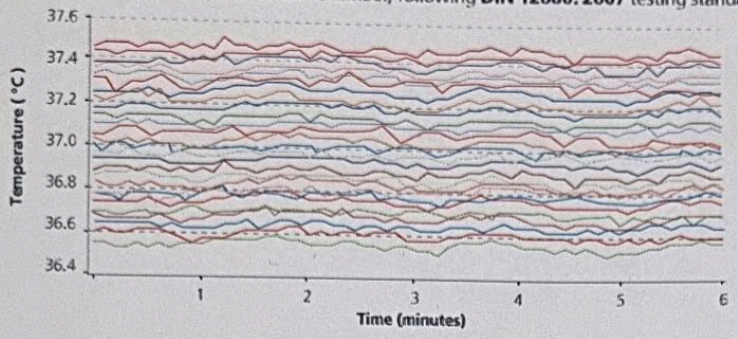
- Electrogalvanized steel with white oven-baked epoxy-polyester antimicrobial powder-coated finish.
- External surfaces are powder coated with Esco ISOCIDE™ to eliminate 99.9% of surface bacteria within 24 hours of exposure.
- Ensures a healthier, safer, and cleaner lab environment.

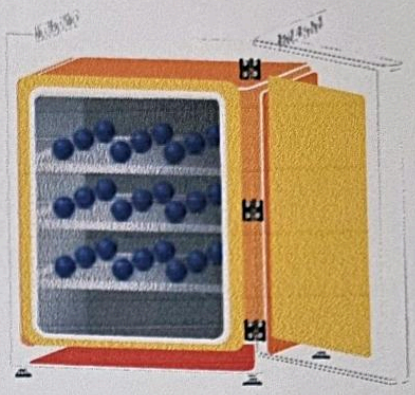
Conform extras Broşură pag. 5

VIVOCELL™ PRECISE PARAMETER CONTROL

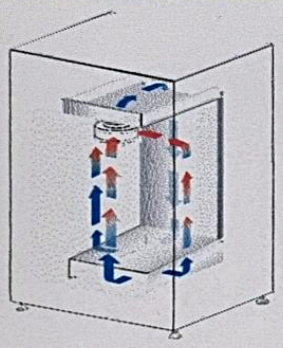
IMPROVED CULTURING ATMOSPHERE FOR BETTER CELL GROWTH

Direct heat and air jacketed design allows even distribution of heat with less than ±0.35°C* temperature variation at 27 points in the chamber, following **DIN 12880: 2007** testing standards.





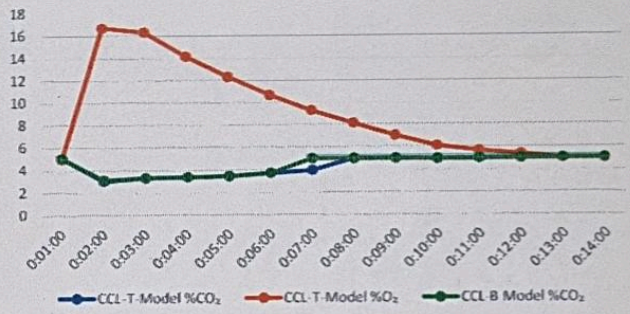
VENTIFLOW™ FORCED CONVECTION



Gentle airflow accelerates homogenization and filtration of chamber atmosphere, preventing dehydration of samples while minimizing sample stress. Blower fan automatically stops when main door is opened to minimize contamination risk.

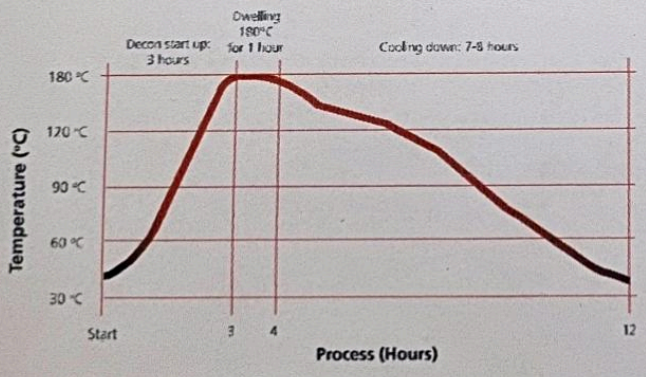
S4

FAST PARAMETER RECOVERY



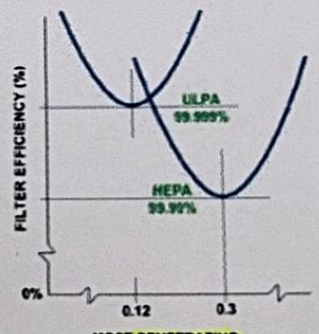
Precise and stable sensor system combined with the SmartSense™ microcontroller allows quick parameter recovery without overshooting.

COMPLETE CONTAMINATION CONTROL

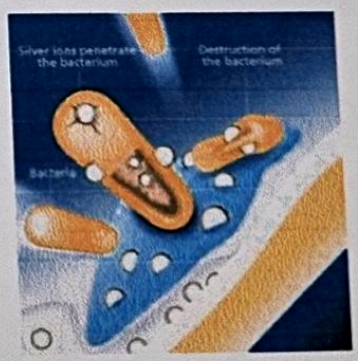


Complete Cycle lasts up to 11-12 hours.

Results are achieved when tested at 37 °C as set point in temperature ambient of 22-25°C. Results may vary if set point changes and calibration is needed.



S5



180°C HIGH HEAT STERILIZATION

S14

Conforms to the International Standards for dry heat sterilization and 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 at the end of the cycle.

ULPA FILTRATION SYSTEM

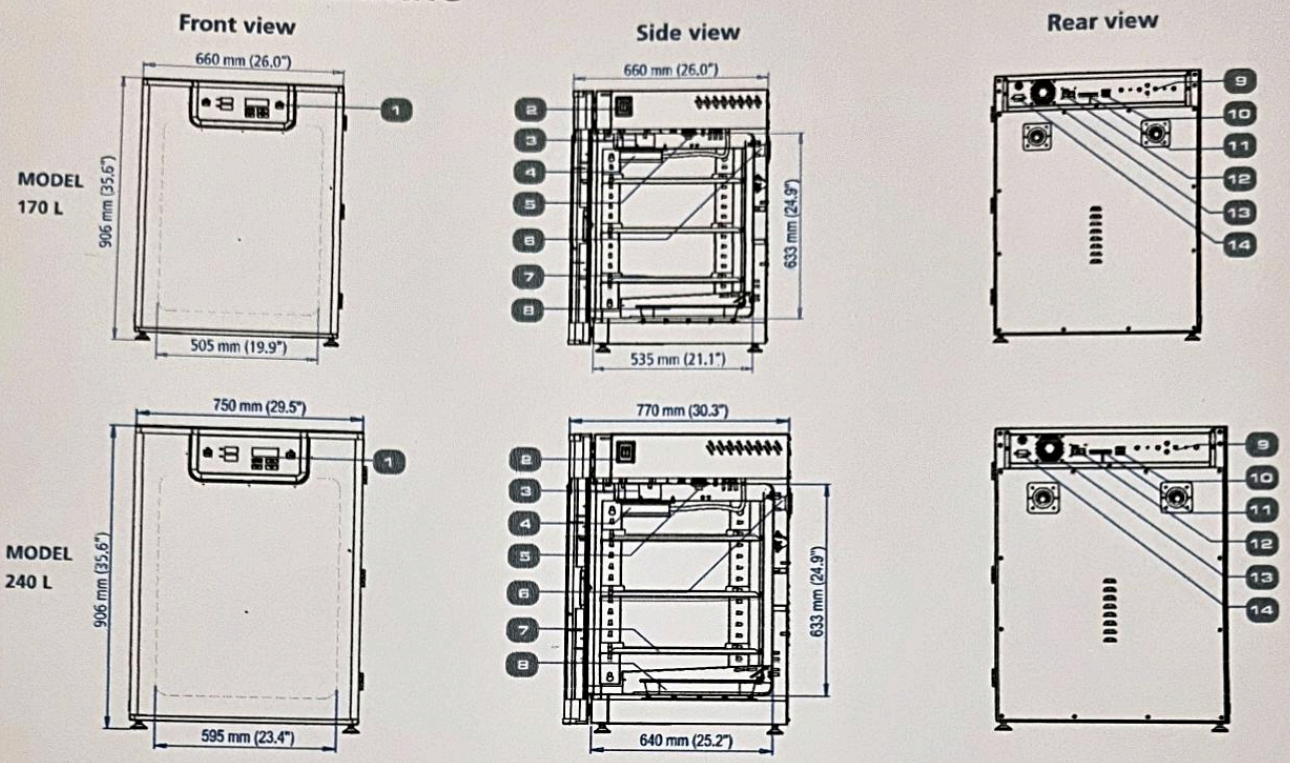
Has 10x more filtering efficiency than HEPA filter for a cleaner and safer chamber atmosphere.

ISOCIDE™ ANTIMICROBIAL SURFACE COATING

Enhances sample protection by inhibiting microbial growth on the external surfaces.

Conform extras Broşură pag. 6

ENGINEERING DRAWING



1. Control panel
2. On / off switch
3. Blower fan
4. ULPA filter
5. Sensors
6. Access port
7. Adjustable shelves
8. Humidity pan
9. CO_2 gas supply
10. Alarm contact
11. Analog output
12. RS485
13. Cooling fan
14. Power Supply Inlet

ORDERING INFORMATION

S18

	MODEL	ITEM CODE	DESCRIPTION
IR SENSOR MODEL WITH STAINLESS STEEL CHAMBER	CCL-170B-8-HHS	2170295	CelCulture® Incubator 170 L IR Sensor, CO_2 Control, ULPA, 180°C HHS, 230 VAC 50/60 Hz
	CCL-240B-8-HHS	2170270	CelCulture® Incubator 240 L IR Sensor, CO_2 Control, ULPA, 180°C HHS, 230 VAC 50/60 Hz
	CCL-170B-9-HHS	2170303	CelCulture® Incubator 170 L IR Sensor, CO_2 Control, ULPA, 180°C HHS, 115 VAC 50/60 Hz
	CCL-240B-9-HHS	2170304	CelCulture® Incubator 240 L IR Sensor, CO_2 Control, ULPA, 180°C HHS, 115 VAC 50/60 Hz
SUPPRESSED O_2 MODEL WITH STAINLESS STEEL CHAMBER	CCL-170T-8-HHS	2170297	CelCulture® Incubator 170L IR Sensor, CO_2/O_2 Control, ULPA, 180°C HHS, 230 VAC 50/60 Hz
	CCL-240T-8-HHS	2170300	CelCulture® Incubator 240L IR Sensor, CO_2/O_2 Control, ULPA, 180°C HHS, 230 VAC 50/60 Hz
	CCL-170T-9-HHS	2170307	CelCulture® Incubator 170L IR Sensor, CO_2/O_2 Control, ULPA, 180°C HHS, 115 VAC 50/60 Hz
	CCL-240T-9-HHS	2170308	CelCulture® Incubator 240L IR Sensor, CO_2/O_2 Control, ULPA, 180°C HHS, 115 VAC 50/60 Hz
IR SENSOR MODEL WITH STAINLESS STEEL CHAMBER (NO ULPA FILTER)	CCL-170B-8-NF-HHS	2170298	CelCulture® Incubator 170 L IR Sensor, CO_2 Control, 180°C HHS, 230 VAC 50/60 Hz, No ULPA Filter
	CCL-240B-8-NF-HHS	2170299	CelCulture® Incubator 240 L IR Sensor, CO_2 Control, 180°C HHS, 230 VAC 50/60 Hz, No ULPA Filter
	CCL-170B-9-NF-HHS	2170305	CelCulture® Incubator 170 L IR Sensor, CO_2 Control, 180°C HHS, 115 VAC 50/60 Hz, No ULPA Filter
	CCL-240B-9-NF-HHS	2170306	CelCulture® Incubator 240 L IR Sensor, CO_2 Control, 180°C HHS, 115 VAC 50/60 Hz, No ULPA Filter
SUPPRESSED O_2 MODEL WITH STAINLESS STEEL CHAMBER (NO ULPA FILTER)	CCL-170T-8-NF-HHS	2170301	CelCulture® Incubator 170 L IR Sensor, CO_2/O_2 Control, 180°C HHS, 230 VAC 50/60 Hz, No ULPA Filter
	CCL-240T-8-NF-HHS	2170302	CelCulture® Incubator 240 L IR Sensor, CO_2/O_2 Control, 180°C HHS, 230 VAC 50/60 Hz, No ULPA Filter
	CCL-170T-9-NF-HHS	2170309	CelCulture® Incubator 170 L IR Sensor, CO_2/O_2 Control, 180°C HHS, 115 VAC 50/60 Hz, No ULPA Filter
	CCL-240T-9-NF-HHS	2170310	CelCulture® Incubator 240 L IR Sensor, CO_2/O_2 Control, 180°C HHS, 115 VAC 50/60 Hz, No ULPA Filter

Confirm extras Brochure pag. 8