

# embryos@fe series

IVF Solutions

**EuroClone**<sup>®</sup>  
serving science through innovation



Protecting life at the source.  
Innovative solutions for human  
assisted reproduction techniques.



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# EuroClone®

serving science through innovation



## EuroClone S.p.A. has more than 40 years experience and tradition in the manufacture of scientific equipment.

EuroClone contamination control equipment is a common sight in research laboratories, hospitals and industries worldwide, thanks to unmatched performance and reliability.

Our success is down to rigorous compliance to International Standards and the extensive specialist skills and knowledge of EuroClone staff who work to ensure our customers needs are met.

**“IVF Solutions”** by EuroClone, deliver innovative workstations dedicated to ART applications designed and manufactured to the highest standards.

EuroClone, protecting life at the source!



*EuroClone® Headquarters, Pero (MI)*



*Production site, Sizzano (PV)*

# Introducing the new Embryos@fe i-REF

EuroClone Embryos@fe i-REF Series workstations are dedicated to IVF techniques.

The control of temperature, humidity and CO<sub>2</sub> concentration, together with an aseptic working environment are key factors for a successful and reliable process.

For the most demanding applications operator protection from a biohazard environment is also required.

EuroClone is proud to introduce the New Embryos@fe i-REF, a high retention efficiency recirculating cabinet engineered according to the EN12469:2000 European Standard for Microbiological Safety Cabinets. The cabinet offers product, operator and environment protection with the added advantage of a working environment dedicated to human Assisted Reproduction Techniques.

The EuroClone Embryos@fe Series is also available as a vertical laminar air flow recirculating version for ART techniques.



# Embryos@fe i-REF Series

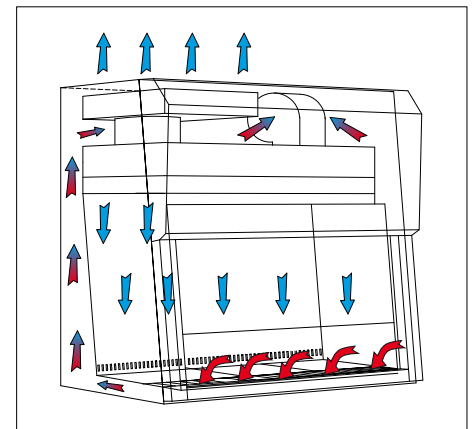
The units are equipped with two H14 grade HEPA filters with 99.995% overall efficiency of 0.1-0.2 µm particle sizes (MPPS) [EN1822-1 tested and certified]. The units partially recirculate air (70% re-circulates through the main HEPA filter and 30% exhausts through the exhaust HEPA filter) to ensure product, operator and environment protection against microbiological contamination that may occur during ART protocols.

The workstations provide an ISO Class 5 (ISO 14644-1 Standard) / Class 100 (FED Std 209 E) working environment with regards to airborne particulate cleanliness.

A microprocessor controlled vane anemometer continuously monitors the cabinet airflows to ensure the front barrier airflow is greater than 0.5 m/s (guaranteeing retention efficiency as per EN 12469:2000) and an average chamber downflow of 0.4 m/s.

## Standard features

- Choice of built in microscopes.
- Unique removable work surface for easy maintenance and microscope replacement.
- Positioning of microscopes on left or right side of the cabinet (or both in 1.8m wide unit if required).
- Internal chamber lining and work surface constructed from AISI 304 stainless steel with 2B finishing for easy cleaning and sanitising.
- 6 mm safety glass front sash and side panels provide great luminosity and cleanability.
- **ThermoHeat Technology** – heated built-in work surface(s).
- **ThermoHeat Technology** – heated built-in sample glass stage(s).
- Gassing flowmeter(s) [number and placement depends on type of workstation].
- Electrical socket(s) [number and placement depends on type of workstation].
- **HRE Technology** ensuring retention at front aperture (APF)  $\geq 10^5$  (EN12469:2000).





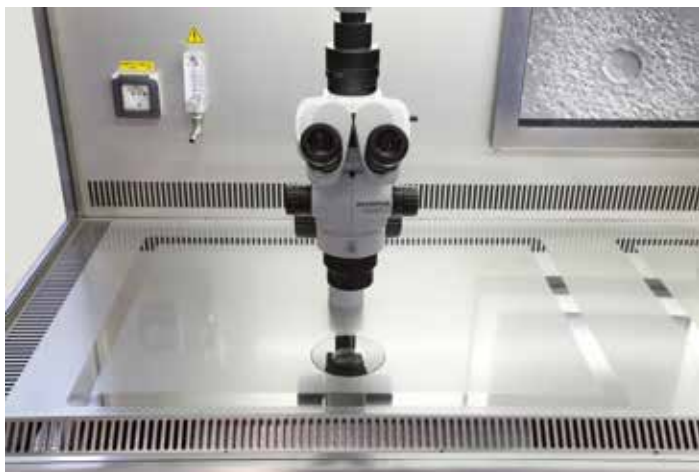
## Heated built-in work surface *ThermoHeat Technology*

- **ThermoHeat Technology** is EuroClone's exclusive heating technology based on an inert polymer heating matrix derived from aerospace applications.

It ensures uniform heating without thermal shocks and overshooting even when colder items are placed on the warm area.

A redundant system of temperature sensors, in conjunction with a specifically developed control unit based on PID (Proportional Integral Derivative) self-tuning technology, offers optimized and extremely accurate temperature controlled performance of the heated built-in surfaces at a specified set point. Temperature accuracy: overall variation  $\pm 0.4^{\circ}\text{C}$ .

- The heated area is clearly marked on the worksurface ensuring comfortable working conditions.



## Control panels

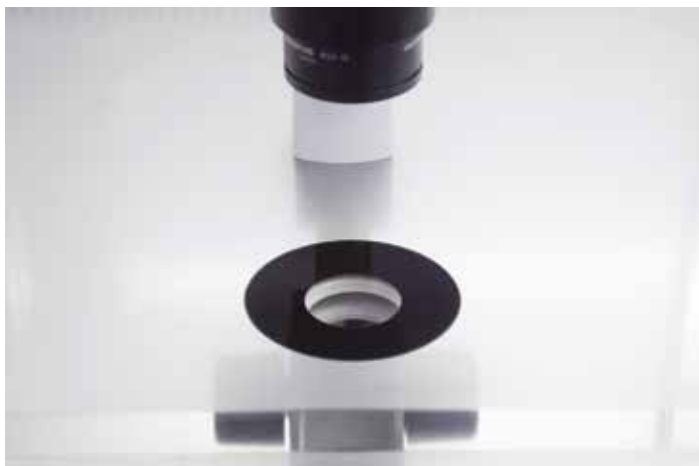
### Main Control Board

- High resolution LCD display.
- Permanent display of working conditions.
- Continuous monitoring of front barrier airflow for the highest operator safety.
- Multilevel alarms (visual and acoustic) with redundancy functions.
- Permanent monitoring of HEPA filter life span.
- Fully automatic UV-Light cycle programming and control (if UV light installed).
- Switch for warming surface(s) / glass sample stage(s).
- Fluorescent lamp switch.
- Electrical socket(s) switch.



## Heated built-in sample glass stage *ThermoHeat Technology*

- Based on **ThermoHeat Technology**, the built-in heated glass stage also offers stable temperature conditions for the embryos during microscope observations.



## Temperature & Microscope Control Boards

- Ergonomically integrated into the work surface for ease of operation.
- Large LED screen provides clearly visible current temperature.
- Remote controls for microscope(s) including: on/off switch, brightness and contrast knobs.



# Optional features

## Integrated UV-Light

- UV-Light installed on the back wall of the cabinet.
- Fully programmable operation from the main control panel.
- Interlocked with the front closing panel (included) for maximum operator safety.



## Integrated CO<sub>2</sub> Incubator

- Embryos@fe i-REF series can be provided with a dedicated housing for Micro CO<sub>2</sub> incubators that enable optimal working conditions inside the cabinet providing ready at hand samples and reducing the need to access large CO<sub>2</sub> incubators in the laboratory.



## Integrated LCD Monitor

- 19" LCD Monitor built-in on the back wall of the chamber and protected by an easily cleanable safety glare-free glass cover.
- The monitor housing is designed to avoid any airflow disturbance.
- Offers connectivity to microscope camera(s) (number of cameras depends on workstation type) and / or external PC (via USB ports).



## Optional accessories



- Warming blocks for petri dishes.
- Warming blocks for test tubes of 12 to 17 mm diameter.
- Glass hood incubators for media in culture dishes.
- Humidifier glass flask ensures the 5% CO<sub>2</sub> / gas mixture is humidified and heated before delivering it to the glass hoods.
- Cabinet support stands are available in fixed and electrically adjustable height versions.

## Technical Specifications

	Embryos@fe i-REF 1.2	Embryos@fe i-REF 1.8
Workplaces	1	1 or 2
Microscopes	1	1 or 2
Heated Built-in Work Surface and Glass Sample Stage (ThermoHeat Technology)	1	1 or 2
Temperature accuracy – overall variation	± 0.4°C	± 0.4°C
Retention at front aperture (Apf) (*)	≥ 10 <sup>5</sup>	≥ 10 <sup>5</sup>
Overall Dimensions (W x D x H mm)	1380 x 860 x 1450	1990 x 840 x 1450
Internal Dimensions ( W x D x H mm)	1320 x 650 x 730	1930 x 650 x 730
Noise Level d(B)A (*)	≤ 57	≤ 57
Lighting (Lux)	> 1200	> 1200
Power supply	220/230V - 50/60Hz	220/230V - 50/60Hz

(\*) Measured according to EN12469:2000 Standard

EuroClone S.p.A. reserves the right to change production specifications without prior notice

# EuroClone EMBRYOS@FE 100

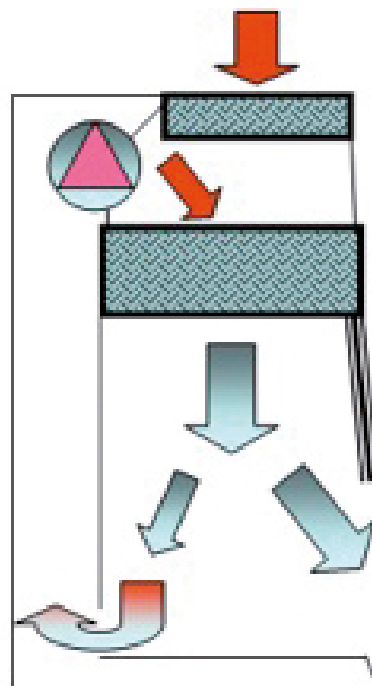


## Vertical Laminar Flow Recirculating Series for IVF Techniques

A complete and user friendly cabinet for the protection of highly sensitive IVF manipulations.

The Embryos@fe 100 Series workstation meets the most demanding expectations of IVF processes.

The ISO Class 5 aseptic working area together with the unique airflow pattern (vertical laminar airflow with partial recirculation) ensures product protection and a turbulence free environment are guaranteed.





## Standard features

- Choice of built-in microscopes.
- Unique removable work surface for easy maintenance and microscope replacement.
- Stable built-in temperature-controlled heated work surface with  $\pm 0.4^{\circ}\text{C}$  overall accuracy with PID self tuning control system for optimized temperature control and performance.
- Exclusive temperature controlled heated glass stage maximises temperature uniformity.
- Vertical laminar air flow cabinet providing an ISO Class 5 environment for IVF procedures.
- Outward airflow barrier and partial recirculation provides highest protection of the work area and a turbulence free environment.
- Microprocessor control.
- Soft touch keys.
- H14 HEPA filter with micromesh downstream equalising plenum, for the high airflow speed uniformity.
- High gravimetric efficiency pre-filter.
- Gassing flow meter(s) [number and placement depends on type of workstation].
- Electrical socket(s) [number and placement depends on type of workstation].
- 6 mm safety glass front sash and side panels offer great luminosity and cleanability

## Optional features

- Same options as available for Embryosafe i-REF.



# Technical Specifications

	Embryos@fe 100 1.2	Embryos@fe 100 1.8
Workplaces	1	1 or 2
Microscopes	1	1 or 2
Heated Built-in Work Surface and Glass Sample Stage (ThermoHeat Technology)	1	1 or 2
Temperature accuracy – overall variation	± 0.4°C	± 0.4°C
Overall Dimensions ( W x D x H mm)	1380 x 840 x 1450	1990 x 840 x 1450
Internal Dimensions ( W x D x H mm)	1300 x 600 x 700	1910 x 600 x 700
Noise Level d(B)A (*)	≤ 57	≤ 57
Lighting (Lux)	> 1200	> 1200
Power supply	220/230V - 50/60Hz	220/230V - 50/60Hz

(\*) Measured according to EN12469:2000 Standard

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