



*\*IVF Solutions.\**

**PROTECTING LIFE AT THE SOURCE**

*Innovative solutions for human Assisted Reproduction Techniques*



# 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 are a common sight in research laboratories, hospitals and industries worldwide, thanks to their reliability and high performance.*

*Reasons for this success are the rigorous compliance to International Standards, the elevated skills and knowledge of the whole staff and the ability to assist customers timely according to their expectations.*

***"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  
Siziano (PV)



embryos@fe1.8  
i-REF





## INTRODUCING THE NEW Embryos@fe i-REF

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

Temperature, humidity and CO<sub>2</sub> concentrations control together with an aseptic working conditions environment are key factors for a successful and reliable process.

For the most demanding applications a biohazard environment is 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, that offers Product, Operator and Environment Protection with the plus of a working environment dedicated to human Assisted Reproduction Technique.

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



## Embryos@fe i-REF SERIES

Embryos@fe i-REF Workstations, are designed according to EN 12469:2000 European Standard for Microbiological Safety Cabinets.

They are equipped with two HEPA H14 Class Filters with 99.995% overall collection efficiency on 0.1-0.2  $\mu\text{m}$  (MPPS) [EN1822-1 tested and certified] and provide partial recirculation (70% re-circulates through main HEPA H14 filter; 30% exhausts through the exhaust HEPA H14 filter) to ensure Product, Operator and Environment protection against microbiological contamination that may occur during ART protocols.

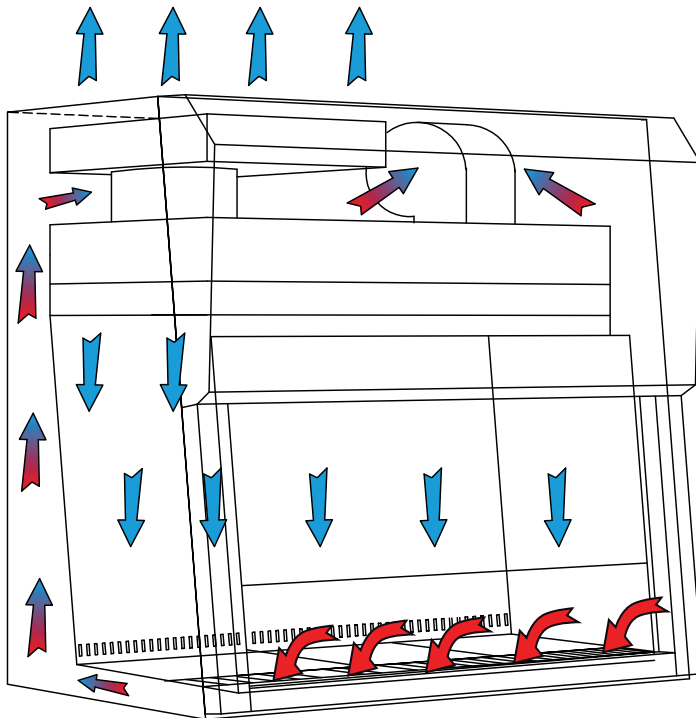
They also guarantee ISO 5 (according to ISO 14644-1 Standard) / Class 100 (according to FED Std 209 E) working environment cleanliness.

Microprocessor controlled vane anemometer continuously monitors the cabinet airflows to ensure a front barrier air speed  $> 0.5 \text{ m/s}$  (retention efficiency guaranteed according to EN 12469:2000 Standard) and an average down flow speed of  $0,4 \text{ m/s}$ .



## STANDARD FEATURES

- Choice of microscopes to be built in.
- Unique removable working surface for easy maintenance and microscope replacement.
- Positioning of microscopes on left side or right side (or both in 1.8 size, if required).
- Internal Chamber and work surface completely made in AISI 304 stainless steel with 2B finishing for the easy cleaning and sanitation.
- 6 mm safety glass front sash and lateral sides offer great luminosity and cleanability.
- **ThermoHeat Technology** - based heated built-in work surface(s).
- **ThermoHeat Technology** - based 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

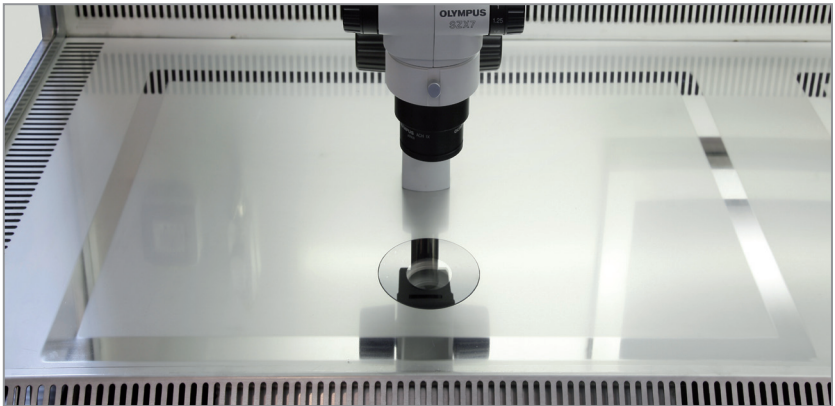
### *ThermoHeat Technology*

- *ThermoHeat Technology* is EuroClone 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 performances of the heated built-in surfaces at a specified set point (temperature accuracy - overall variation  $\pm 0.4^{\circ}\text{C}$ ).

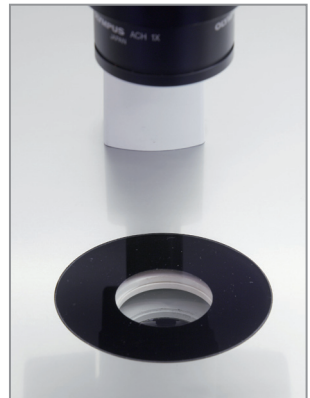
- The heated area is clearly marked to ensure the most comfortable working conditions.



## HEATED BUILT IN SAMPLE GLASS STAGE

### *ThermoHeat Technology*

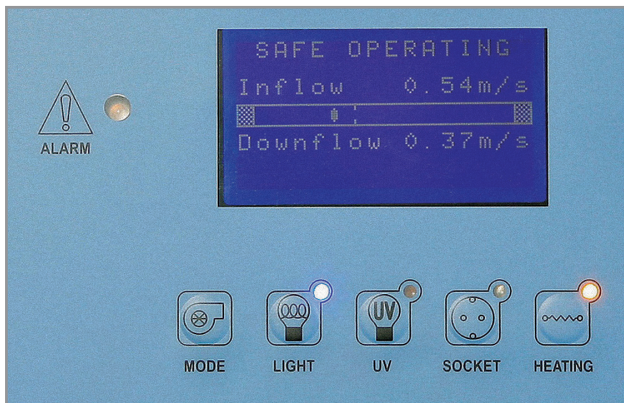
- Based on *ThermoHeat Technology* with PID control unit, the built-in heated glass stage offers stable temperature conditions for the embryos also during microscope observation.



## 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 H14 filters life span.
- Fully automatic UV-Light Cycle programming and control (if UV light installed).
- Main switch for warming surface(s) / glass sample stage(s).
- Fluorescent lamp main switch.
- Electrical socket(s) main switch.



### Temperature & Microscope Control Boards

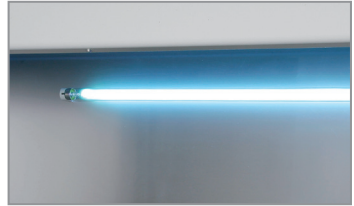
- Ergonomically integrated into the work surface for the most comfortable operations.
- Large LED screen offers prompt and clearly visible current temperature value.
- Remote controls for microscope: on/off switch, brightness and contrast knobs.



## OPTIONAL FEATURES

### Integrated Uv-Light

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



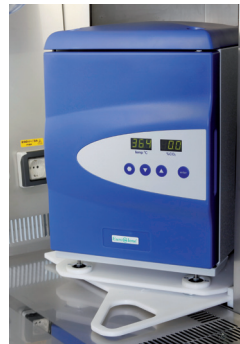
### Integrated LCD Monitor

- 19" LCD Monitor built-in on the back wall of the cabinet and protected by an easily cleanable safety glare-free glass cover.
- 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).



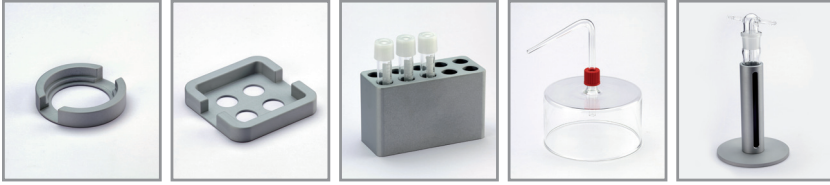
### Integrated CO<sub>2</sub> Incubator

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





## OPTIONAL ACCESORIES



- Warming blocks for Petri dishes.
- Warming blocks for test tubes from 12 to 17 mm diameters.
- 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.
- Support Stand available in fixed and electrical adjustable height versions.

## TECHNICAL SPECIFICATIONS

**Embryos@fe i-REF 1.2    Embryos@fe i-REF 1.8**

<b>Workplaces</b>	1	1 or 2
<b>Microscopes</b>	1	1 or 2
<b>Heated Built-in Work Surface and Glass Sample Stage (ThermoHeat Technology)</b>	1	1 or 2
<b>Temperature accuracy - overall variation</b>	± 0.4°C	± 0.4°C
<b>Retention at front aperture (Apf) (*)</b>	≥ 10 <sup>5</sup>	≥ 10 <sup>5</sup>
<b>Overall Dimensions (WxDxH mm)</b>	1380x860x1450	1990x840x1450
<b>Internal Dimensions (WxDxH mm)</b>	1320x650x730	1930x650x730
<b>Noise Level d(B)A (*)</b>	≤ 57	≤ 57
<b>Lighting Lux</b>	> 1200	> 1200
<b>Power supply single phase</b>	220/230V - 50/60Hz	220/230V - 50/60Hz

(\*) Measured according to EN12469:2000 Standard

## EuroClone EMBRYOS@FE 100

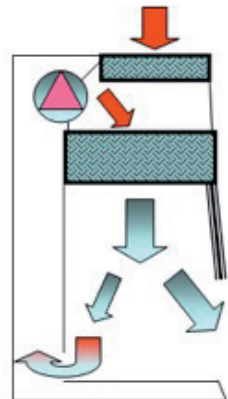
*Vertical Laminar Flow Recirculating Series for IVF Techniques*



A complete and user friendly tool for the protection of highly sensitive IVF manipulations that only experienced European design with over 40 years of know how and accurate quality manufacturing, can provide.

The Embryos@fe 100 Series workstations meet the most demanding expectations of IVF processes.

Thanks to the ISO5 aseptic working area and the unique airflow pattern (vertical laminar airflow with partial recirculation), product protection and turbulence free environment are guaranteed.



## STANDARD FEATURES

- Choice of Microscopes to be built in.
- 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 performance.
- Exclusive temperature controlled heated glass stage for maximum temperature uniformity.
- Vertical laminar air flow cabinet providing ISO 5 environment for *In-Vitro* Fertilisation procedures.
- Outward air barrier and partial recirculation for the highest protection of the work area and real turbulence free environment.
- Microprocessor Control.
- Soft touch keys.
- H14 filter with micromesh downstream equalising plenum, for the highest 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 lateral sides offer great luminosity and cleanability.

## OPTIONAL FEATURES

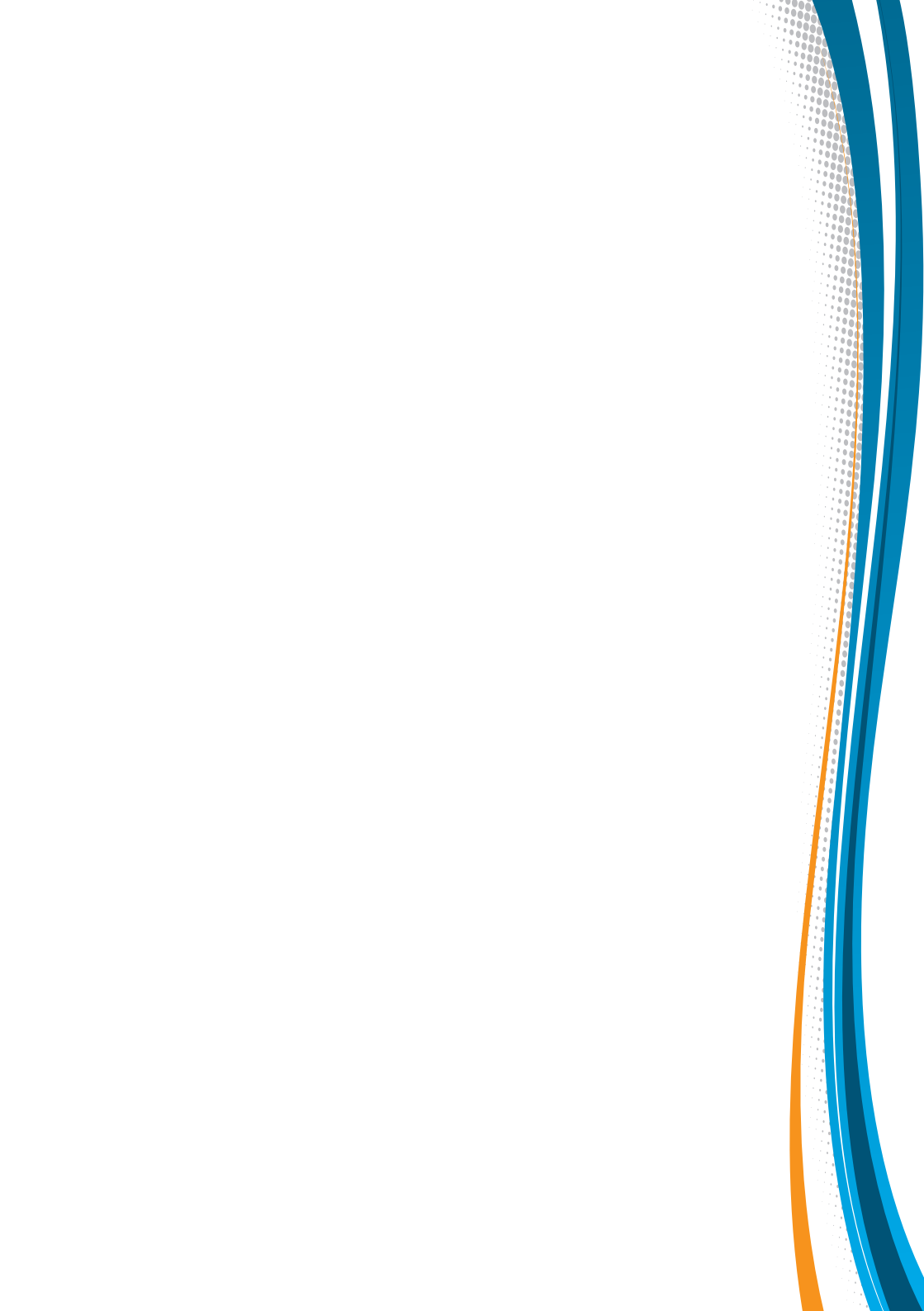
- Same options as available for Embryos@fe i-REF.



# 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 (WxDxH mm)	1380 x 840 x 1450	1990 x 840 x 1450
Internal Dimensions (WxDxH mm)	1300 x 600 x 700	1910 x 600 x 700
Noise Level d(B)A (*)	≤ 57	≤ 57
Lighting Lux	> 1200	> 1200
Power supply single phase	220/230V - 50/60Hz	220/230V - 50/60Hz

(\*) Measured according to EN12469:2000 Standard





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