

VIP Treatment for High Success Rate Embryos in IVF

MIRI®

Multiroom Incubator for IVF

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

ESCO
MEDICAL



Get superior stability with the MIRI® Multiroom IVF Incubator

Make the most of its integrated
tri-gas system and six independent chambers.



Table of Contents

MIRI® Multiroom IVF Incubators4

Comes in two models7

Accessories8

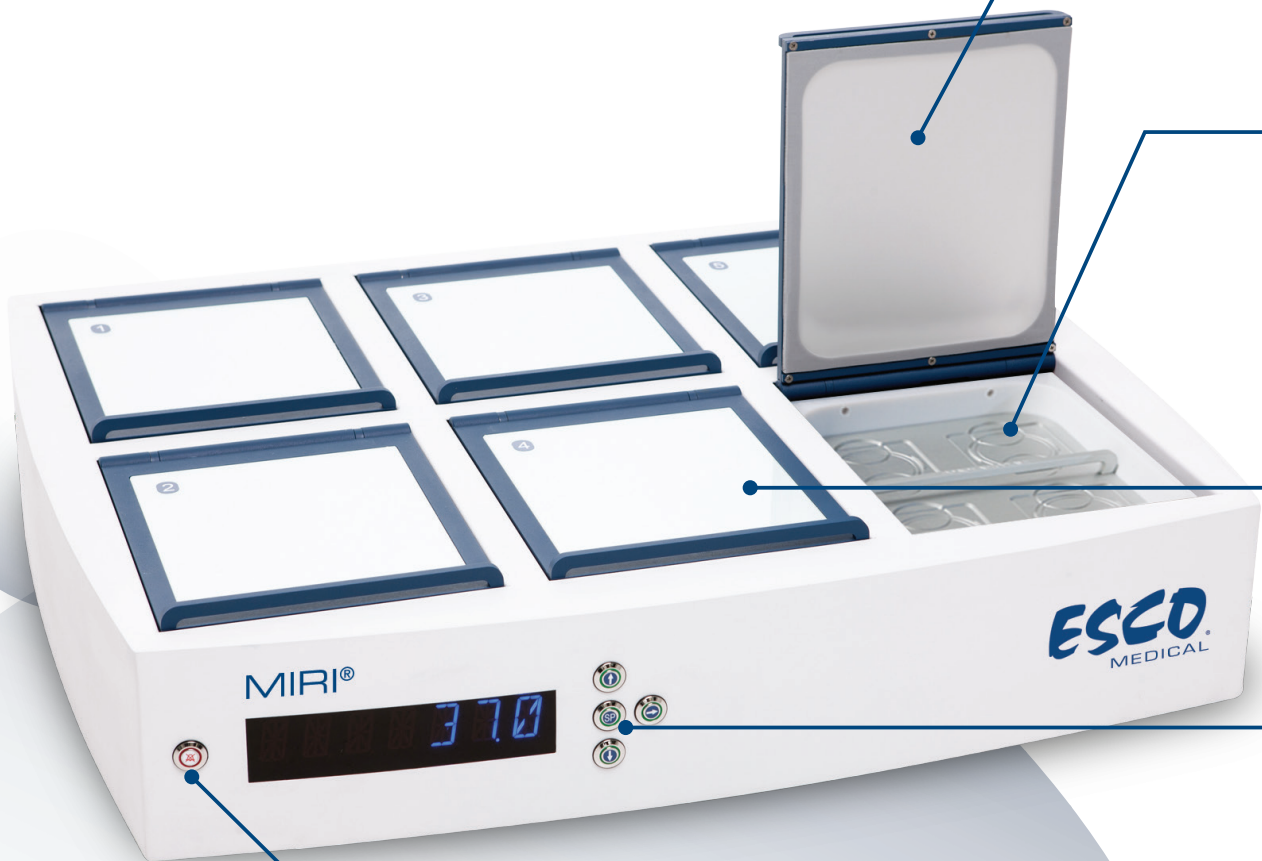
General Specifications9

Ordering Information10



MIRI®

“An advanced temperature regulation system for routine/long-term embryo incubation at your fingertips.”



Hand-in-hand with the best in incubation.

The MIRI® has six (6) chambers which are completely independent of each other. This is ideal because any disruption (e.g. temperature drop after opening the lid) has zero impact on the rest of the system. Furthermore, calibration is so much simpler because there is no crossover of heat from adjacent chambers. Temperature regulation is thus completely independent per chamber.

The MIRI® features a total of twelve (12) temperature controlled points. That is two (2) points for every chamber: one on the bottom and another on the heated lid. The heated lid is another great feature of the MIRI® as it prevents condensation and enhances temperature uniformity across cultured dishes.

FEATURES:

Heated Lid

- Prevents condensation.
- Enhances temperature regulation/recovery.
- Excellent uniformity between the top and bottom lid.
 - Temperature uniformity ± 0.1 °C

Heated Bottom

- Provides direct heat transfer to the cultures through the heating optimization plate for stable heat regulation.
- Removable heating optimization plate with wide dish size selection.
 - Temperature uniformity ± 0.1 °C

Six (6) Chambers

Completely individual chambers for easier calibration, faster recovery, less disruption, and cross-contamination prevention.

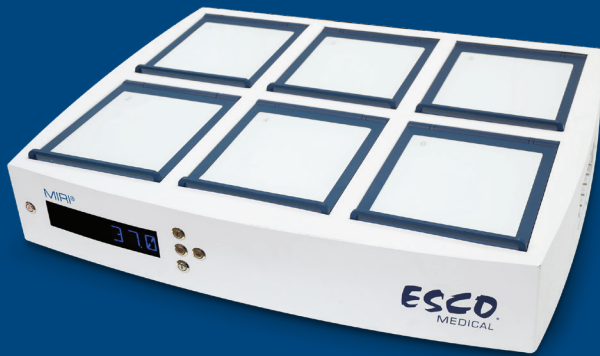
Control Panel Buttons and LED Display

A large LED display that can be easily seen from a distance. The simple 4-button control panel allows for easy and intuitive operation.

Mute Button

Temporarily mutes alarm messages and sound for five (5) minutes.

Maximize Embryo Growth Potential by Providing VIP Treatment



O₂ range: 5.0 – 20.0%
CO₂ range: 2.0 – 9.9%
Temperature range: 24.9 to 40.0 °C

Common Stressors:

- Temperature fluctuations
- Gas concentration fluctuations
- Non-optimal pH
- Volatile Organic Compounds (VOCs)

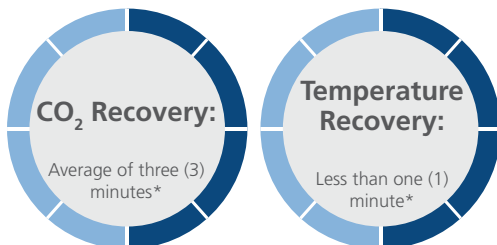
Elevated O₂ concentration isn't always a good thing

While oxygen (O₂) is necessary for normal aerobic metabolism, it is a double-edged sword as it can harm the developing embryo through oxidative damage. Recent studies highlight the benefit of having suppressed oxygen levels when incubating human embryos reflecting the natural low oxygen conditions in the womb.

Shhh... Do not disturb

The MIRI[®] has an overall design that provides cultured embryos a minimum-stress environment. The independent chamber system prevents cross-contamination while VOC/HEPA filtration cleans the airstream. The small chamber volumes and direct heat regulation further translate to faster temperature and gas recovery.

Fast Recovery



One of the benefits of our multiroom incubators is their fast recovery time after opening the lid. This is crucial in order to maintain optimal parameters for embryo incubation.

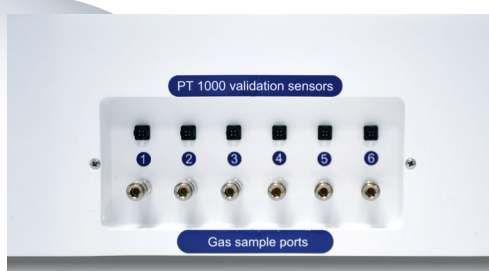
*If the lid has not been open for more than 10 seconds (based on internal testing; performance may vary depending on various factors and environmental conditions).

The Little Details Count



IVF practitioners deal with precious, fragile and sensitive embryos, and often, the little details make a big difference. The MIRI[®] has a large LED display that can be easily seen from a distance. Also, the glass lid tops, can be written on — a very useful feature for organization.

Stress-free Validation of Chamber Parameters



6 (six) built-in PT1000 temperature sensors are completely independent of the main circuitry. They allow for a continuous logging of the chamber's temperature. Likewise, gas sampling ports are available for all 6 (six) chambers



The MIRI[®] can be connected to an external device such as the MIRI[®] GA for gas and temperature validation.

MIRI[®] for all embryologists' culture's environmental needs

MIRI[®] Multiroom Incubator

High Quality Airstream

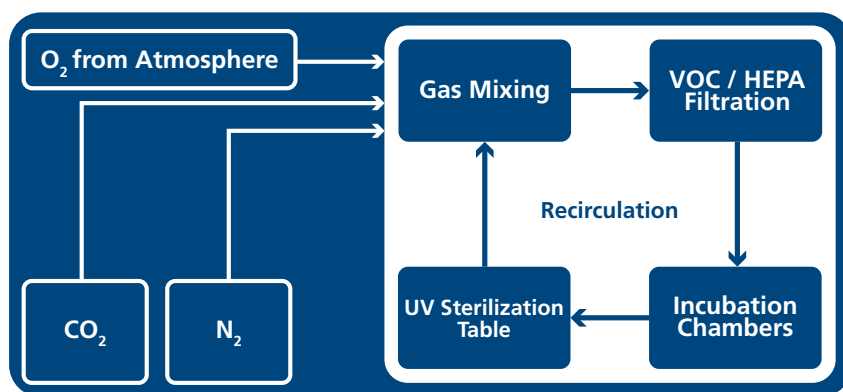
The filter module can be easily replaced once used. The gas in the MIRI[®] is continuously recirculated through a VOC/HEPA filter and a UV-C (254 nm) light that sterilizes the recirculated airstream before it passes through the filter.



Airflow Diagram



To learn more about the MIRI[®] Multiroom Incubator, scan this QR code.



MIRI[®] Humidity Multiroom Incubator

The water bottle is located on the side of the device for easy refilling and control of the water level.

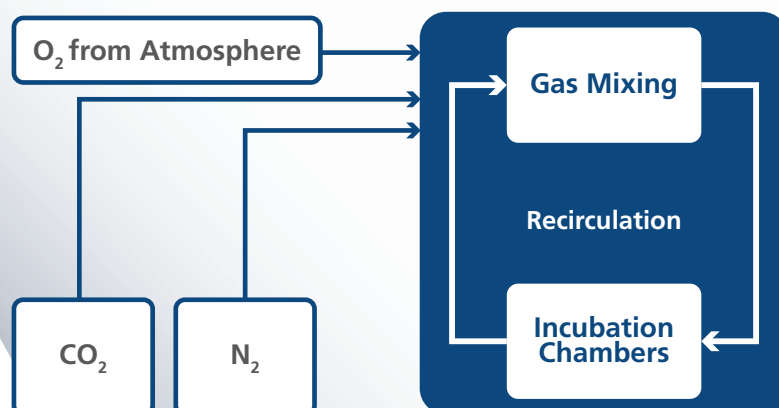
Passive humidification system.



Airflow Diagram

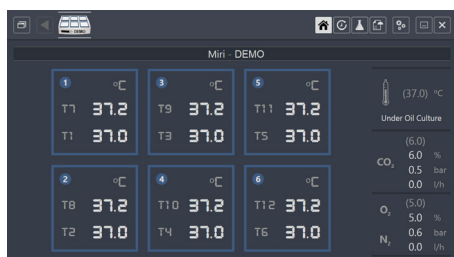


To learn more about the MIRI[®] Humidity Multiroom Incubator, scan this QR code.



Full-featured and user-friendly

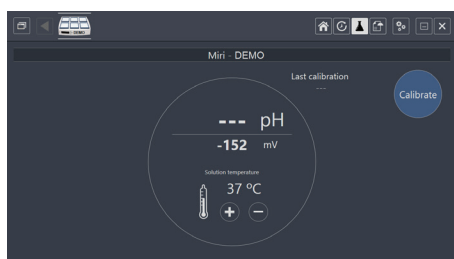
Control panel, display, and data logging software



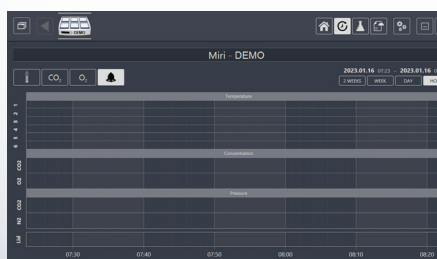
Complete parameters are displayed. Histories of any alarm events are logged.



The data logger stores continuous performance data of the machine throughout its use. These can be viewed in graphs.



The user can plug any standard BNC pH probe into the unit and measure the pH in the samples at will.



Conditions that put the MIRI® into alarm state are recorded. It is possible for the software to send email alerts as well.

The MIRI® and MIRI® Humidity can be connected to an easy-to-use, feature-packed data logging software installed on any PC and connected via USB.

Multiple machines can be connected and managed from a single computer. All real-time parameters of the machine can be conveniently viewed. These include the temperature of all monitored temperature and gas concentration points, gas input pressures, gas flow rates, current gas readings, and all setpoints.

All performance data of the machine including alarms are continuously logged and can be viewed in graphs. The data logger also automatically generate reports weekly which makes it more convenient for the user.

Accessories



Heating Optimization Plates

Each chamber contains a heating optimization plate to facilitate heat transfer directly to the culture dishes:

- It is removable for easier cleaning.
- A selection of heating optimization plates is available for various dish sizes.

The dishes fit into the heating optimization plates so that the heat is directly transferred to the media.



Nunc™



Falcon®



Vitrolife



LifeGlobal®
GPS Dishes



SparMED - Oosafe®



BIRR

Total Capacity

Heating plates customized for several types of dishes:

- 4 x Falcon® Ø 50/60 mm
- 8 x Falcon® Ø 35 mm
- 4 x Nunc™ Ø 54/60mm
- 8 x Nunc™ Ø 35 mm
- 4 x Vitrolife Dishes
- 4 x LifeGlobal® GPS Dishes
- 4 x SparMED Oosafe® 4-well dishes
- 4 x SparMED Oosafe® Ø 55/60 mm
- 8 x SparMED Oosafe® Ø 35 mm
- 6 x BIRR Ø 35 mm
- 6 x BIRR Ø 60 mm



MIRA-1014 - MIRI® Stacking Frame for 2 devices



MIRA-DRAW - MIRI® Stacking Frame for 2 devices with a drawer

MIRI® Stacking Frame

MIRI® has a stacking system to maximize space in your IVF laboratory.

General Specifications

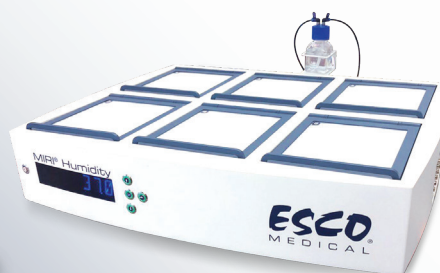
MIRI® Multiroom IVF Incubators

Model	MIRI®	MIRI® Humidity
Overall Dimensions (W x D x H)	700 x 585 x 165 mm (27.6 x 23.0 x 6.5")	700 x 645 x 280 mm (27.6 x 25.4 x 11.0")
Chamber Dimensions	200 x 176 x 25 mm (7.9 x 6.9 x 1")	
Power Supply	115/230V, 50/60 Hz	
Power Consumption	300 W	
* CO ₂ Gas Consumption	<2L/h	<4L/h
**N ₂ Gas Consumption	< 12 L/h	
CO ₂ Control Range	2.0 - 9.9%	
O ₂ Control Range	5.0 - 20%	
Input Gas Pressure (CO ₂)	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
Input Gas Pressure (N ₂)	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
Operating Altitude	Up to 2000 meters (6560 feet or 89kPa – 106kPa)	
Net Weight	40 kg (88.2 lbs)	
Shipping Weight	45 kg (99.2 lbs) (Including the pallet's weight)	
Shipping Dimension	824 x 724 x 489 mm (32.4 x 28.5 x 19.3") (device on the pallet)	

* Under normal condition (CO₂ setpoint reached at 6.0%, all lids closed).

** Under normal condition (O₂ setpoint reached at 5.0%, all lids closed).

Stacking Frame Model	Dimensions with Devices Affixed (W x D x H)
MIRI® Stacking Frame for 2 Devices	717 x 699,53 x 748 mm (28.2" x 27.5" x 29.4")
MIRI® Stacking Frame for 2 Devices with a drawer	717 x 762 x 460 mm (28.2" x 29.0" x 18.1")
	On full opening of the drawer: 717 x 1328 x 460 mm (28.2" x 52.3" x 18.1")



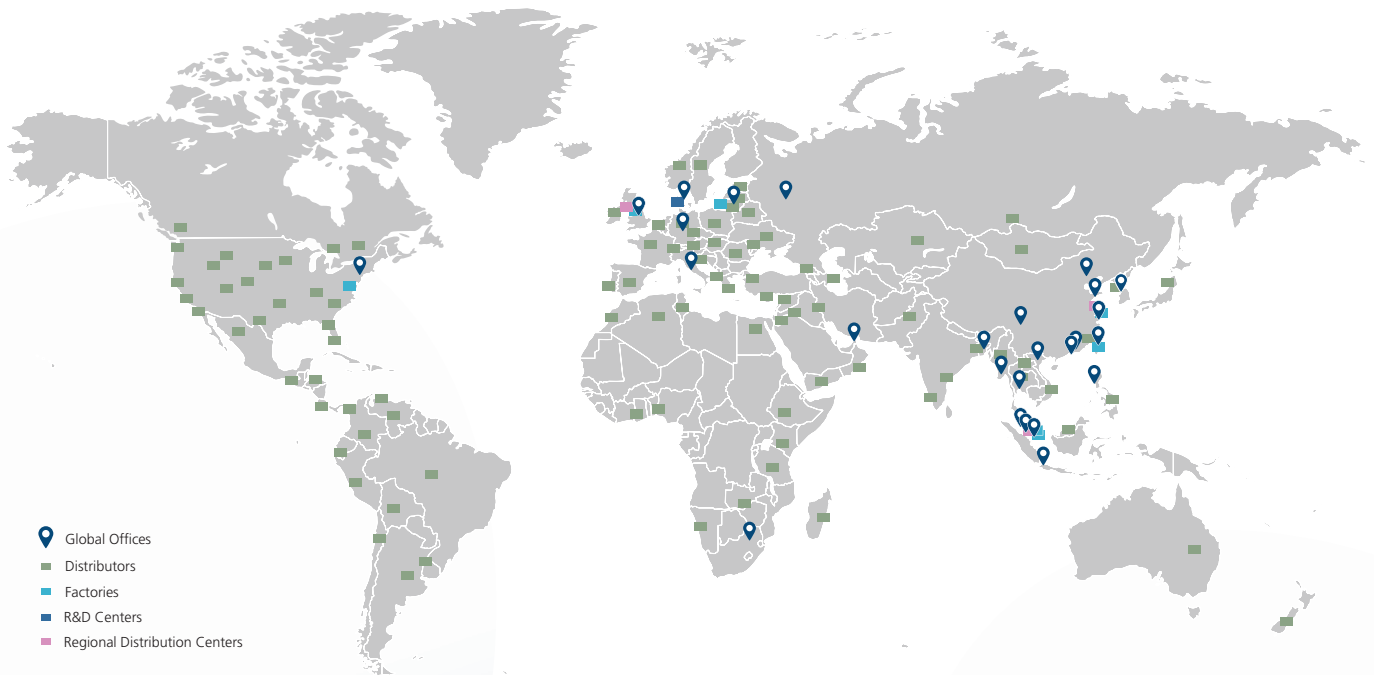
Ordering Information

MIRI® Multiroom Incubator		
Item Code	Model Code	Description
Device		
2070047	MRI-6A10-8	MIRI® Multiroom Incubator, 230V, 50/60Hz
2070048	MRI-6A10-9	MIRI® Multiroom Incubator, 115V, 50/60Hz
2070183	MRI-6A10-H-8	MIRI® Humidity Multiroom Incubator, 230V, 50/60Hz
2070184	MRI-6A10-H-9	MIRI® Humidity Multiroom Incubator, 115V, 50/60Hz
Accessories		
1320011	MRA-1007	HEPA/VOC filter (recommended to be replaced every 3 months)
1320142	MRI-DATA	Datalogger Package with an Intel® NUC Box, monitor etc.
1320018	MRA-1014	MIRI® Stacking Frame for 2 devices
1320226	MRA-DRAW	MIRI® Stacking Frame with a drawer for 2 devices
1320045	MRI-GA	MIRI® GA CO ₂ /O ₂ & Temperature Validation Unit, 115V / 230V (only for MIRI® Multiroom Incubator)

Heating Optimization Plates		
Item Code	Model Code	Description
1320003	MRA-FD	Heating optimization plate for Falcon® Dishes
1320004	MRA-ND	Heating optimization plate for Nunc™ Dishes
1320070	MRA-VD	Heating optimization plate for Vitrolife Dishes
1320099	MRA-NID	Heating optimization plate for Nipro™ Dishes
1320100	MRA-LD	Heating optimization plate for LifeGlobal® GPS Dishes
1320101	MRA-PD	Heating optimization plate without footprint for Plain Dishes
1320118	MRA-OD	Heating optimization plate for SparMED Oosafe®
1320507	MRA-BIRR	Heating optimization plate for BIRR Dishes



ESCO LIFESCIENCES GROUP



Esco Medical Products:

MIRI® Multiroom Incubator
MIRI® Humidity Multiroom Incubator
MIRI® II-12 Multiroom Incubator
Mini MIRI® Dry Multiroom Incubator
Mini MIRI® Humidity Multiroom Incubator

MIRI® TL6 Time-Lapse Incubator
MIRI® TL12 Time-Lapse Incubator
Multi-Zone ART Workstation
MIRI® Laminar Flow Cabinet
MIRI® Evidence RFID Witnessing & Traceability System

CelCulture® CO₂ Incubator
MIRI® GA (Gas and Temperature Validation Unit)
MIRI® AVT
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.

ESCO
MEDICAL



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