



*VIP treatment for high success rate embryos in IVF*

**MIRI<sup>®</sup>**

**Multiroom Incubator for IVF**

## Get superior stability with the MIRI® Multiroom IVF Incubator.

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



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# MIRI®

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

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.



*Hand-in-hand with the best in incubation.*

## FEATURES:

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### Heated Lid

- Prevents condensation.
- Enhances temperature regulation and recovery.
- Excellent uniformity between the lid and the bottom.
  - Temperature uniformity:  $\pm 0.1$  °C

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### 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:  $\pm 0.1$  °C

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### Six (6) Chambers

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

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### 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.

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### Mute Button

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



# Maximize embryo growth potential by providing VIP treatment



O<sub>2</sub> range: 5.0 - 20.0%  
CO<sub>2</sub> 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)

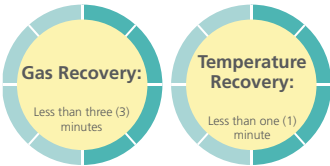
## Elevated O<sub>2</sub> concentration isn't always a good thing

While oxygen (O<sub>2</sub>) 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 opened for more than 30 sec.

## 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<sup>®</sup> for all embryologists` culture's environmental needs



## MIRI<sup>®</sup> Multiroom Incubator

### High quality airstream

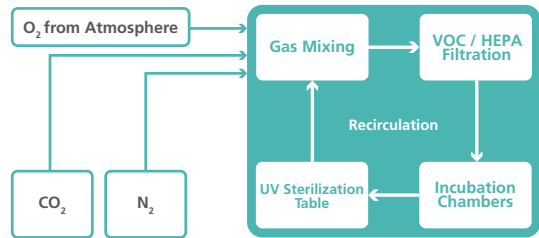
The filter module can be easily replaced once used.

The gas in the MIRI<sup>®</sup> 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.



To learn more about the MIRI<sup>®</sup> Multiroom Incubator, scan this QR code.

### Airflow Diagram



## MIRI<sup>®</sup> Humidity Multiroom Incubator

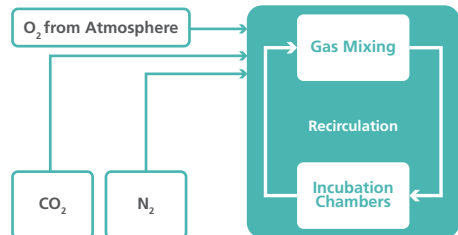
The water bottle is located on the back of the unit in a special holder for refilling and easy control of water level.

Passive humidification system



To learn more about the MIRI<sup>®</sup> Humidity, scan this QR code.

### Airflow Diagram



# 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



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

### 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.



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





**MRA-1014** - Stacking Frame for 2 units



**MRA-DRAW** - MIRI® Stacking Frame for 2 units with a drawer

## MIRI® Stacking Frame

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

# General Specifications



## MIRI® Multiroom IVF Incubator

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	
Temperature Control Range	24.9 - 40°C	
* CO <sub>2</sub> Gas Consumption	<2L/h	<4L/h
** N <sub>2</sub> Gas Consumption	<12 L/h	
CO <sub>2</sub> Control Range	2.0 - 9.9%	
O <sub>2</sub> Control Range	5.0 - 20%	
Input Gas Pressure (CO <sub>2</sub> )	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
Input Gas Pressure (N <sub>2</sub> )	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
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)	

MIRI® Stacking Frame Dimensions	
Stacking frame for 2 units (W x D x H)	717 x 700 x 634 mm (28.2 x 27.6 x 25.0")
MIRI® Stacking Frame with Drawer (W x D x H)	717 x 717 x 434 mm (28.2 x 28.2 x 17.1") On full opening of the drawer: 717 x 1225 x 434 mm (28.2 x 48.2 x 17.1")

\* Under normal condition (CO<sub>2</sub> setpoint reached at 6.0%, all lids closed)

\*\* Under normal condition (O<sub>2</sub> setpoint reached at 5.0%, all lids closed)



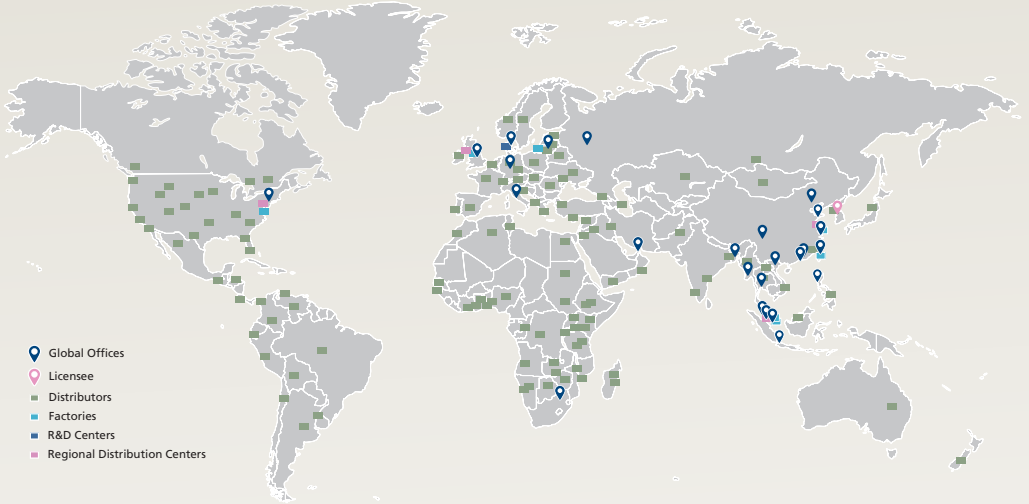
## Ordering Information

ITEM CODE	MODEL CODE	DESCRIPTION
<b>Unit</b>		
2070047	MRI-6A10-8	MIRI® Incubator, 230V, 50/60Hz
2070048	MRI-6A10-9	MIRI® Incubator, 115V, 50/60Hz
2070183	MRI-6A10-H-8	MIRI® Humidity 6 Chamber, 230V, 50/60Hz
2070184	MRI-6A10-H-9	MIRI® Humidity 6 Chamber, 115V, 50/60Hz
1320045	MRI-GA	MIRI® GA CO <sub>2</sub> / O <sub>2</sub> & Temperature Validation Unit, 115V / 230V
<b>Accessories</b>		
1320011	MRA-1007	HEPA/VOC filter (recommended to be replaced every 3 months)
1320018	MRA-1014	Stacking frame for 2 units
1320226	MRA-DRAW	Stacking Frame for 2 Units, With Drawer at the Bottom

## Accessories

ITEM CODE	MODEL CODE	DESCRIPTION
1320003	MRA-FD	Insert for Falcon® Dishes
1320004	MRA-ND	Insert for Nunc™ Dishes
1320070	MRA-VD	Insert for Vitrolife Dishes
1320099	MRA-NID	Insert for Nipro™ Dishes
1320100	MRA-LD	Insert for LifeGlobal® GPS Dishes
1320101	MRA-PD	Insert Without Footprint for Plain Dishes
1320118	MRA-OD	Insert for SparMED Oosafe®
1320507	BIRR	Insert for BIRR Dishes

# ESCO LIFESCIENCES GROUP



- 📍 Global Offices
- 📍 Licensee
- 📍 Distributors
- 📍 Factories
- 📍 R&D Centers
- 📍 Regional Distribution Centers

## Esco Medical Products

- MIRI® Multiroom Incubator
- MIRI® Humidity Multiroom Incubator
- MIRI® II-12 Multiroom Incubator
- Mini MIRI® Dry Incubator
- Mini MIRI® Humidity Incubator
- MIRI® TL6 Time-Lapse Incubator
- MIRI® TL12 Time-Lapse Incubator
- Multi-Zone ART Workstation
- Airstream® Laminar Flow Bench
- MIRI® Evidence RFID Traceability System
- CelCulture® CO<sub>2</sub> 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.*



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Designed in Denmark Made in the E.U.

**ISOCIDE™**

