



Excellent embryo hosting for high success rates

MIRI® II

Multiroom Incubator for IVF

One Patient – One Chamber

MIRI® II Multiroom Incubator



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MIRI[®] II



This equipment is a CE-marked device and is in conformity with the essential requirements of the Medical Devices Directive 93/42/EEC as amended by Directive 2007/47/EC.

MIRI® II Multiroom Incubator dedicates one chamber for one patient to ultimately secure a minimum-stress environment for embryos. The chambers are completely independent of each other. Any disruption on one chamber (e.g. temperature drop after opening the lid) has zero impact on the rest of the system.

FEATURES:

Heated Lid

Prevents condensation and improves temperature regulation and recovery enhancing uniformity within each chamber.



Heated bottom

Provides direct heat transfer to the culture dishes for stable heat regulation.

Multiroom System

The MIRI® II Multiroom Incubator have multiple independent chambers with very stable environments, allowing embryologist to culture embryos from individual patients in individual chambers.

Touchscreen PC

Allows user to control and monitor important parameters (temperature, gas concentration) simultaneously and gives visual and audible alarm to signal critical conditions. It has large display that can be easily seen from a distance.



Maximize embryo growth potential by providing VIP treatment



Oxygen range: 5-20%
Carbon dioxide range: 1.9-10%
Temperature range: 25°C to 40°C
Gas recovery: less than 3 minutes
Temperature recovery: less than 1 minute

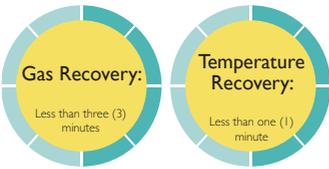
Common Stressors:
- Temperature fluctuations
- Gas concentration fluctuations
- Non-optimal pH
- Volatile Organic Compounds (VOCs)

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



Fast Recovery

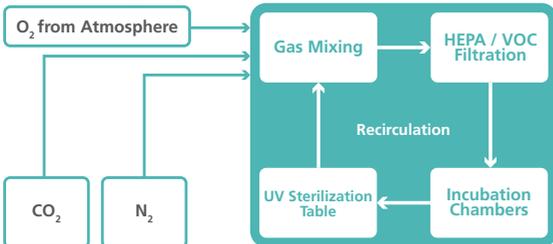
There are many advantages to using multiroom incubators. One important benefit is the speed of recovering temperature and gas parameters after opening a chamber.



The little details count

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

Airflow Diagram



Provide total control of the gas phase environment

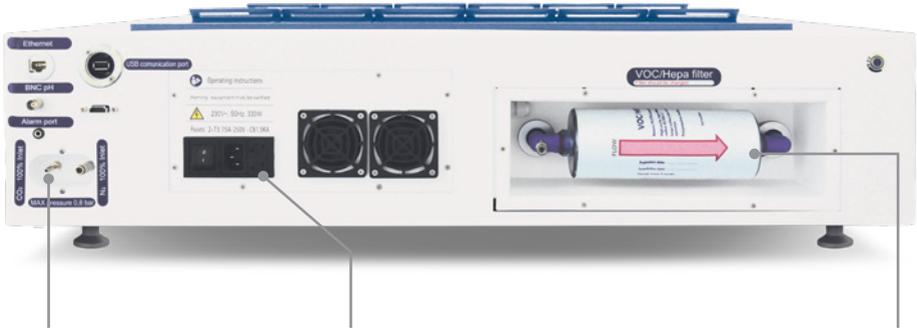
The built-in gas mixer and the high-performance CO₂ and O₂ sensors allow accurate control of gas phase composition within the chambers.

MIRI® II is built with Excellent Quality Control Features



The MIRI® II has reliable gas mixing system that allows gas phase flexibility.

The gas mixer of MIRI® II gives total control over CO₂ and O₂ concentration levels while also giving flexibility over what gas input is desired.* Moreover, the HEPA/VOC filter and UV sterilization ensure that only the highest quality of air is circulated to the cultures.



Premixed gas is NOT required

MIRI® II can accept pure gas (and even premixed gas if desired). The use of 100% CO₂ and 100% N₂ allows the incubator to achieve steady-state gas condition faster than premixed gases. This is important as this will stabilize the pH during embryo development.

A suite of IVF-essential features

There is a BNC connection for pH measurement, USB communication port, and port for external alarm monitoring. The MIRI® II can be connected to a PC to avail of data logging via the supplied software included. Connections to external alarm monitoring systems and pH measurements are also possible.

High quality airstream via HEPA/VOC filter + UV

The filter module can be easily replaced once used. The gas in the MIRI® II is continuously recirculated through a HEPA/VOC filter. A UV-C light (254 nm) sterilizes the airstream before passing through the filter.

Stress-free validation of chamber parameters



PT1000 temperature sensors are built-in, which are completely independent from the main circuitry. Gas sampling ports are likewise available for all 6 or 12 chambers.

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

* Input of pure gases is recommended



Intuitive and User-Friendly Touchscreen PC

Used to control and monitor important parameters (temperature, gas concentration) simultaneously and give visual and audible alarm to signal critical conditions. It has large display that can be easily seen from a distance and since it is a PC, it is equipped with a great deal of features to help make life in the laboratory easier.



Menu

Gas Concentration

Name of Equipment

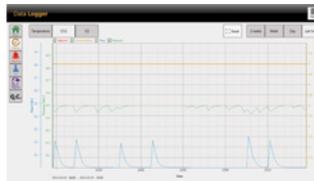
Chamber Temperature

Mode

Full-featured 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.



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

The MIRI® II 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 set points.

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.

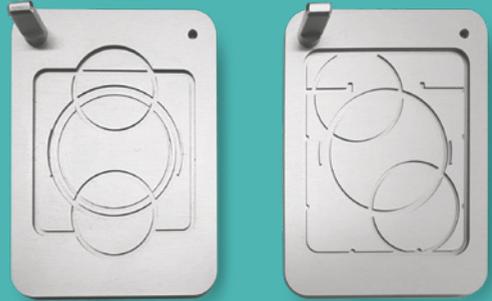
Just a fitting solution...

MIRI® II comes with specific inserts matching the type of dishes used in the laboratories.

Heating optimization plates

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

- Has inserts to fit various dish sizes



The dishes fit into the inserts so that the heat is directly transferred to the media.

General Specifications

MIRI® II Multiroom Incubator

Model	MIRI® II Incubator, 6 Chambers	MIRI® II Incubator, 12 Chambers
Overall Dimensions (W x D x H)	413 x 560 x 194 mm (16.3 x 22 x 7.6")	739 x 560 x 194 mm (29.1 x 22 x 7.6")
Net Weight	25 kg	45 kg
Material	Mild steel / Aluminum / POM / Stainless steel	
Power Supply	115V 50/60 Hz or 230V 50/60 Hz	
Power Consumption	280 W	530 W
Temperature Control Range	25 - 40° C	
CO ₂ Gas Consumption	<2 L/h	
N ₂ Gas Consumption	<6 L/h	
CO ₂ Control Range	1.9 - 10 %	
O ₂ Control Range	5 - 20%	
CO ₂ Input Gas Pressure	0.6 bar (8.70 psi)	
N ₂ Input Gas Pressure	0.6 bar (8.70 psi)	
Shipping weight	35 kg	60 kg
Shipping dimension	700 x 555 x 330 mm	880 x 700 x 355 mm

* Under normal condition (CO₂ set point reached at 5.0%, all lids closed)

** Under normal condition (O₂ set point reached at 5.0%, all lids closed)

Ordering Information



ITEM CODE	MODEL CODE	DESCRIPTION
2070160	MRI2-6C-8	MIRI® II Incubator with 6 chambers, 230V, 50/60Hz
2070161	MRI2-6C-9	MIRI® II Incubator with 6 chambers, 115V, 50/60Hz
2070162	MRI2-6C-SS-8	MIRI® II Incubator with 6 chambers, with SAFE Sens, 230V, 50/60Hz
2070163	MRI2-6C-SS-9	MIRI® II Incubator with 6 chambers, with SAFE Sens, 115V, 50/60Hz
2070164	MRI2-12C-8	MIRI® II Incubator with 12 chambers, 230V, 50/60Hz
2070165	MRI2-12C-9	MIRI® II Incubator with 12 chambers, 115V, 50/60Hz
2070166	MRI2-12C-SS-8	MIRI® II Incubator with 12 chambers, with SAFE Sens, 230V, 50/60Hz
2070167	MRI2-12C-SS-9	MIRI® II Incubator with 12 chambers, with SAFE Sens, 115V, 50/60Hz

Want to add MIRI® II Multiroom Incubator to your IVF Laboratory? Contact Us.





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Esco Medical Products:

- MIRI® TL6 Time-Lapse Incubator
- MIRI® TL12 Time-Lapse Incubator
- MIRI® Multiroom Incubator
- MIRI® II Multiroom Incubator
- Mini MIRI® Incubator
- Esco Multi-Zone ART Workstation
- Esco Multi-Zone ART Workstation Class II
- Semi-Closed Environment IVF
- CelCulture® CO₂ Incubator
- MIRI® GA (Gas and Temperature Validation Unit)
- Anti-Vibration Table (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 Group of Companies. 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



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