ESCO MEDICAL

Excellent embryo hosting for high success rates

MIRI® II-12

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.

One Patient – One Chamber

MIRI® II-12 Multiroom IVF Incubator

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MIRI® II-12

MIRI® II-12 Multiroom IVF 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 by enhancing temperature recovery and uniformity within each chamber.

Heated bottom

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

Multiroom System

The MIRI® II-12 Multiroom IVF Incubator have multiple independent chambers with very stable environments, allowing embryologist to culture embryos from different patients in individual chambers.

Touchscreen PC

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

Maximize embryo growth potential by providing **VIP treatment**

O_2 range: 5-10%
CO_2 range: 3-10%
Temperature range: 25°C to 40°C

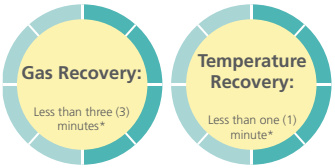
Common Stressors:
- Temperature fluctuations
- Gas concentration fluctuations
- Non-optimal pH
- Volatile Organic Compounds (VOCs)

Elevated O_2 concentration isn't always a good thing

While oxygen (O_2) 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-12 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.

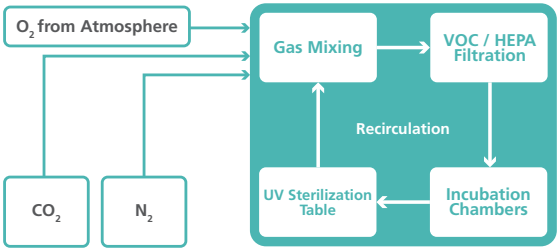
*If the lid has not been opened for more than 30 sec.

The little details count

IVF practitioners deal with precious, fragile and sensitive embryos, and often, the little details make a big difference. The MIRI® II-12 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.

There is a possibility to connect an external monitor via an HDMI connector on the back of the device to see the incubation parameters from a more significant distance.

Airflow Diagram



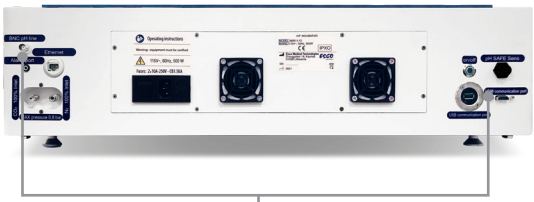
Provide total control of the gas phase environment

The built-in gas mixer and the high-performance CO_2 and O_2 sensors allow to input pure gases and accurately control the gas phase composition within the chambers.

MIRI® II-12 is built with Excellent Quality Control Features

Reliable gas mixing system

The gas mixer of the MIRI® II-12 multiroom IVF incubator gives total control over CO_2 and O_2 concentration inside the chambers while using pure gas. Moreover, the VOC/HEPA filter and UV sterilization ensure that only the highest quality of air is circulated to the cultures.



A suite of IVF-essential features

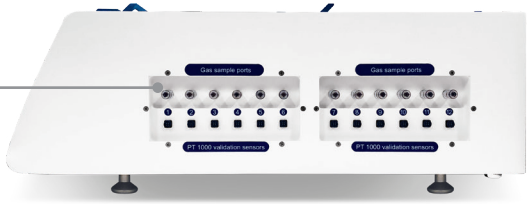
There is a BNC connection for pH measurement, USB communication port, and port for external alarm monitoring. The MIRI® II-12 can be connected to a PC to enable data logging via the supplied software included. Connections to external alarm monitoring systems and pH measurements are also possible.

High quality airstream

The filter module can be easily replaced once used. The gas in the MIRI® II-12 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.

Stress-free validation of chamber parameters

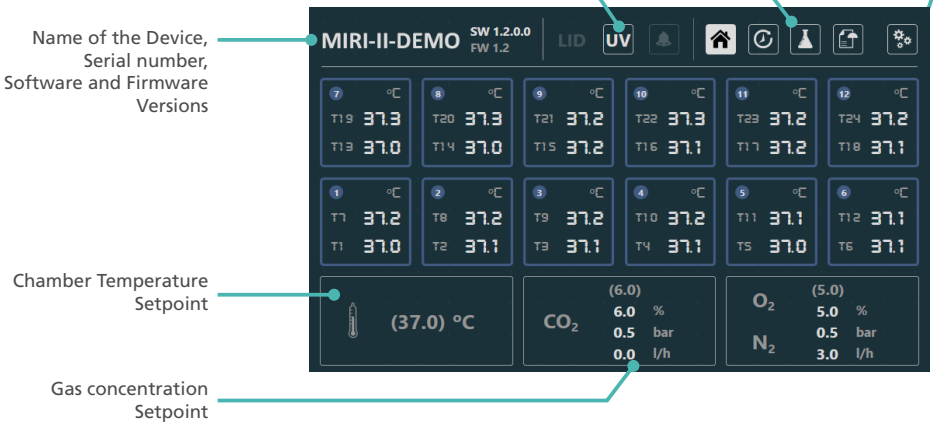
Built-in PT1000 Temperature Sensors and gas sampling ports are completely independent from the main circuitry. Therefore they are available for all 12 chambers.



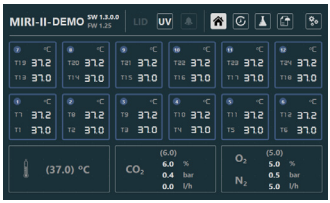
The MIRI® II-12 can be connected to an external device such as the MIRI® GA for gas and temperature validation.

Intuitive and User-Friendly Touchscreen PC

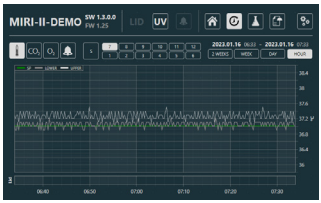
Used to control and monitor important parameters (temperature, gas concentration) simultaneously and give visual and audible alarm to signal critical conditions. It has large display that can be easily seen from a distance and since it is a PC, it is equipped with a great deal of features to help make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



Full-featured data logging software



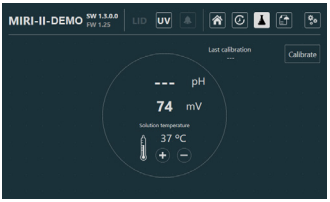
Complete parameters are displayed. Histories of any alarm events are logged.



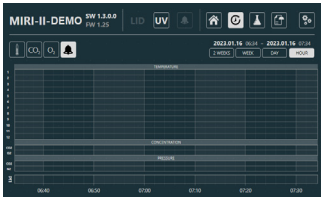
The data logger stores continuous performance data of the machine throughout its use. These can be viewed in graphs.

All real-time parameters of the machine can be conveniently observed. 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.



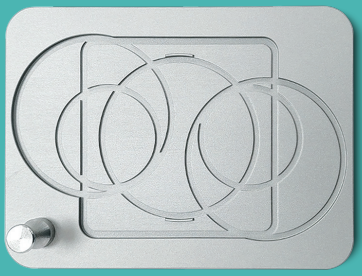
The user can plug any standard BNC pH probe into the unit and measure the pH in the samples at will



Conditions that put the MIRI® II-12 into alarm state are recorded.
It is possible for the software to send email alerts as well.

Just a fitting solution…

MIRI® II-12 comes with specific heating optimization plates 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.

- A selection of heating optimization plates is available for various dish sizes.

General Specifications

MIRI® II-12 Multiroom IVF Incubator

Overall Dimensions (W x D x H)	740 x 575 x 215 mm (29.1 x 22.6 x 8.5")
Chamber Dimensions	120 x 90 x 26 mm (4.7 x 3.5 x 1")
Net Weight	47 kg
Material	Mild steel / Aluminum / PET / Stainless steel
Power Supply	115 / 230V 50/60 Hz or 230V 50/60 Hz
Power Consumption	500 W
Temperature Control Range	25 – 40 °C
*CO_2 Gas Consumption	<2 L/h
**N_2 Gas Consumption	<12 L/h
CO_2 Control Range	3 – 10%
O_2 Control Range	5 – 10%
CO_2 Input Gas Pressure	0.4 – 0.6 bar (5.80 – 8.70 PSI)
N_2 Input Gas Pressure	0.4 – 0.6 bar (5.80 – 8.70 PSI)
Shipping weight	57 kg (121.3 lbs) (Including the pallet's weight)
Shipping dimension	890 x 710 x 480 mm (35 x 28 x 18.9") (device on the pallet)

Stacking Frame Model	Dimensions with Devices Affixed (W x D x H)
MIRI® II-12 Stacking Frame for 2 devices	785 x 599.5 x 798 mm (30.9" x 23.6" x 31.4")
MIRI® II-12 Stacking Frame for 2 devices with a drawer	762 x 784 x 580 mm (30.0" x 30.9" x 22.8")
	On full opening of the drawer: 762 x 1235 x 580 mm (30.0" x 48.6" x 22.8")

** Under normal condition (CO_2 setpoint reached at 6.0%, all lids closed)*
*** Under normal condition (O_2 setpoint reached at 5.0%, all lids closed)*

These limited-edition MIRI® II-12 units are available in line with Esco Medical's 10th year anniversary.

Ordering Information

Stacking Frames

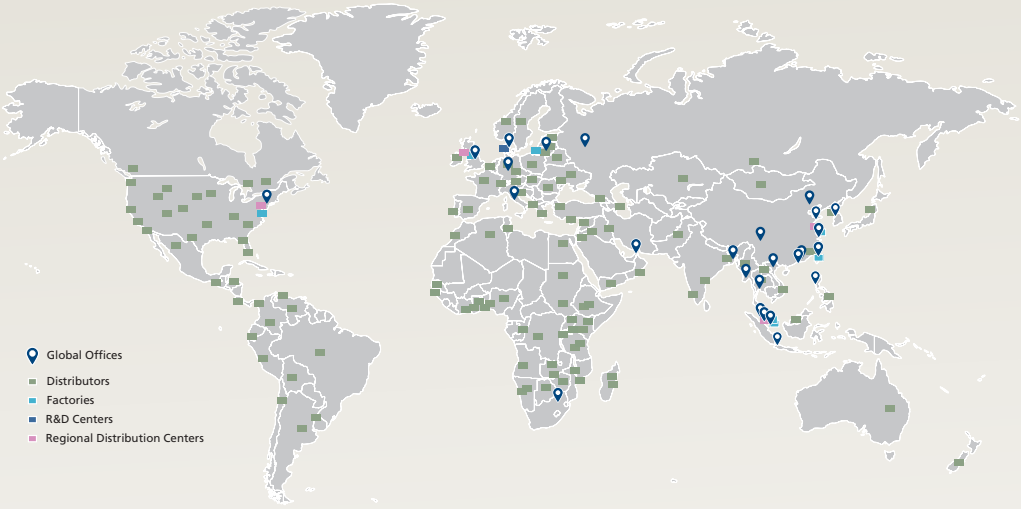
MRA2-DRAW - MIRI® II-12 Stacking Frame for 2 devices with a drawer

MRA2-1014 - MIRI® II-12 Stacking Frame for 2 devices

MIRI® II-12 Multiroom Incubator		
Item Code	**Model Code**	**Description**
Device		
2070164	MRI2-12C-8	MIRI® II-12 Multiroom Incubator, 230V, 50/60Hz
2070165	MRI2-12C-9	MIRI® II-12 Multiroom Incubator, 115V, 50/60Hz
Accessories		
1320011	MRA-1007	VOC/HEPA filter (recommended to be changed every 3 months)
1320498	MRA2-1014	MIRI® II-12 Stacking frame for 2 devices
1320499	MRA2-DRAW	MIRI® II-12 Stacking frame with a drawer for 2 devices
1320499	MRI-GA	MIRI® GA CO_2 / O_2 & Temperature Validation Unit, 115V / 230V

Heating Optimization Plates		
Item Code	**Model Code**	**Description**
1320429	MRA2-FD	Heating optimization plate for Falcon® Dishes
1320430	MRA2-ND	Heating optimization plate for Nunc™ Dishes
1320431	MRA2-VD	Heating optimization plate for Vitrolife Dishes
1320433	MRA2-LD	Heating optimization plate for LifeGlobal® GPS Dishes
1320436	MRA2-OD	Heating optimization plate for SparMED Oosafe®
1320434	MRA2-PD	Heating optimization plate for Plain Dish
1320505	MRA2-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 Incubator
- Mini MIRI® Humidity Incubator
- MIRI® TL6 Time-Lapse Incubator
- MIRI® TL12 Time-Lapse Incubator
- Multi-Zone ART Workstation
- MIRI® Laminar Flow Cabinet
- MIRI® Evidence RFID Traceability System
- CelCulture® CO_2 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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Designed in Denmark Made in the E.U.

ISOCIDE™

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