



The Next Generation of Time Lapse Systems.

Miri[®] TL

time lapse incubator for IVF



 Designed in Denmark

 Made in the E.U.


Medical Devices


1023

Miri® TL

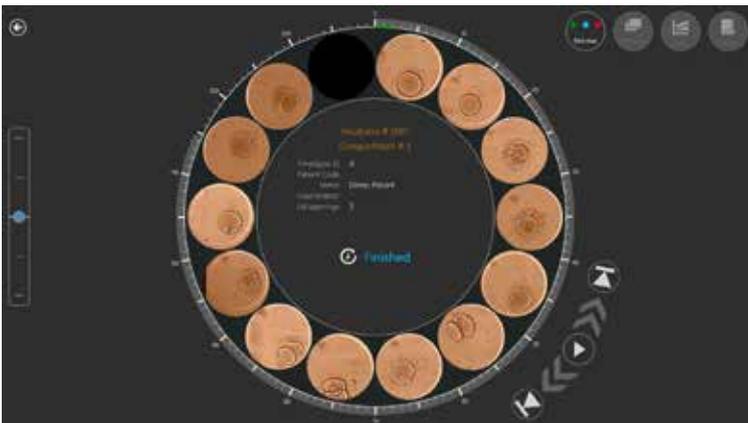
“An affordable time lapse incubation system for IVF”

The Next Generation of Time Lapse Systems. Continuously monitor embryo development without missing crucial events.

Designed to support existing work and quality assurance routines. Optimized for IVF clinical procedures, ensures predictability in the daily handling.

Time Lapse Monitoring

With Miri® TL, you can continuously monitor the development of embryos using built-in microscope and camera, specifically designed for embryo illumination. As images are digitally stored, a video can be generated to enable more objective and reliable grading criteria. This enables a detailed scoring of embryos cultured, for better prediction of future developmental and implantation potential.



Embryo Analysis and Evaluation System

The Miri® TL Viewer is equipped with embryo viability evaluation tools. These features help embryologists in improving the selection of only the best embryos to transfer. With retrospective embryo development analysis, you can maintain a complete documentation of patient details, treatment and embryo data.



A number of IVF clinics have already switched from an analogue method to a digital process. HAVE YOU?

Unique Incubation Environment

In Miri[®] TL, 6 separate chambers have been designed to prevent cross-contamination during the process. The independent temperature regulation ensures optimal embryo developmental conditions. It lessens disturbance and minimizes stressful factors that may be introduced when taking the dishes out of the incubator. This value-added treatment provides the most unique incubation environment with the market's most secure and safe handling procedures.

2 Temperature Mode Options:

- Single: Uniform set points for all 6 chambers.
- Multi: Individual set points for each chamber.



Heated Lid

- Prevents condensation.
- Enhances temperature regulation/ recovery.
- Excellent uniformity between the top and bottom.

Direct Heat Transfer

- Provides superior temperature stability.
- Less than 1 minute of temperature recovery.

Validation Ports

- Easy validation for temperature, CO₂ and O₂.



CultureCoin, a culture dish, especially designed for the Miri[®] TL



- 1 Miri[®] TL chamber contains 1 CultureCoin and has room for 14 embryos.
- With 6 chambers, total capacity is 84 embryos.

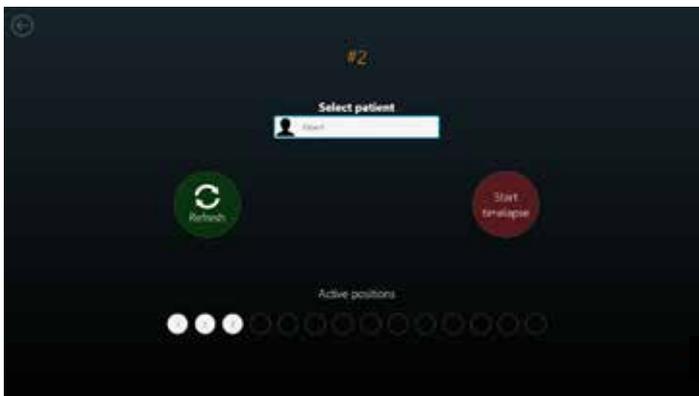
More Data For Observations, Better Selection

- In using the embryo evaluation tools, only the best embryos are selected as unviable embryos are eliminated.
- Retrospective data analysis provides complete documentation of patient details, treatment and embryo data. This can also be used for reference, knowledge sharing and training for embryologists.

Time Lapse Embryo Recording And Monitoring



The main screen shows all 6 chambers as each counter illustrates the duration of time lapse recording done. At the upper right portion, snapshots of other useful information regarding the incubator such as temperature, pH measurement, CO₂ and O₂ status, and set points are displayed.



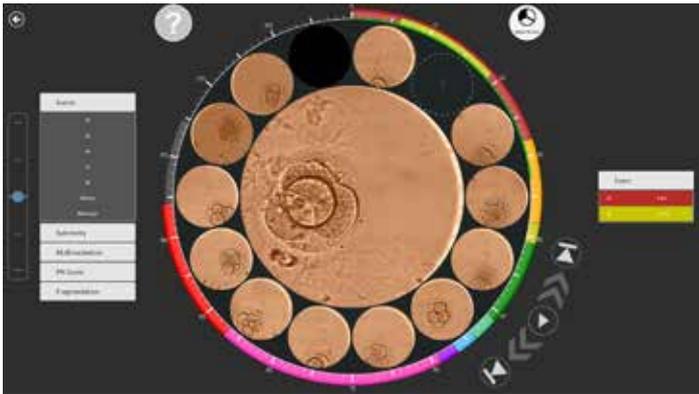
To initialize the time lapse procedure, the user will be asked to assign patient IDs. Since the Miri[®] TL chamber are physically separated, each chambers can be assigned to different patients at the same time easily.



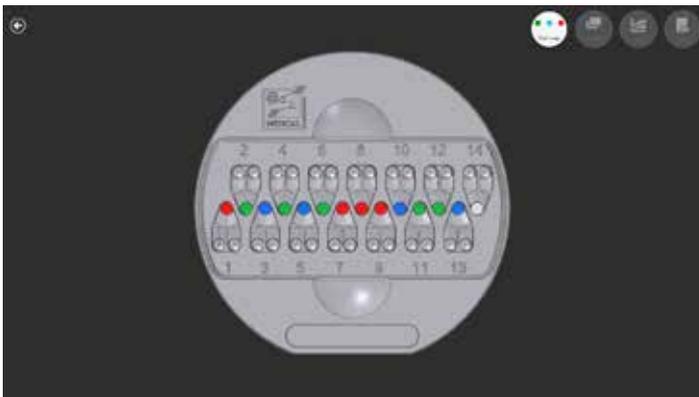
Navigation through the stacked timeline is easy and intuitive as all 14 wells of the special culture dish (CultureCoin) in a selected chamber can be monitored closely.

Shown on the image is a magnified view of embryo #2 at time point of 9 hours.

Embryo Evaluation Tools



Annotations of dish events and results are stored for reference. When an event occurs, the user simply double clicks the appropriate event from the events list. The period between the events is highlighted with a corresponding color, which is used to compare to the ideal time.

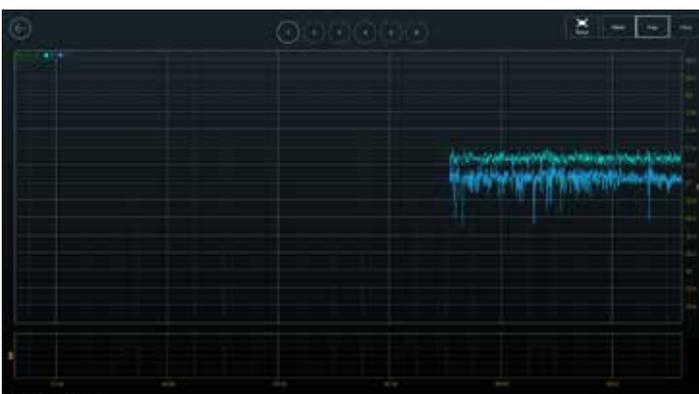


After choosing the viable embryos, a 'transfer map' will be presented which can easily identify whether the chosen embryos will undergo embryo transfer, cryopreservation, or discarding.

Data And Alarms Logging



The Miri® TL data logger documents incubation parameters such as CO₂ regulation, O₂ regulation, and temperature regulation data. Similarly, alarms are also logged.



Time Lapse Monitoring

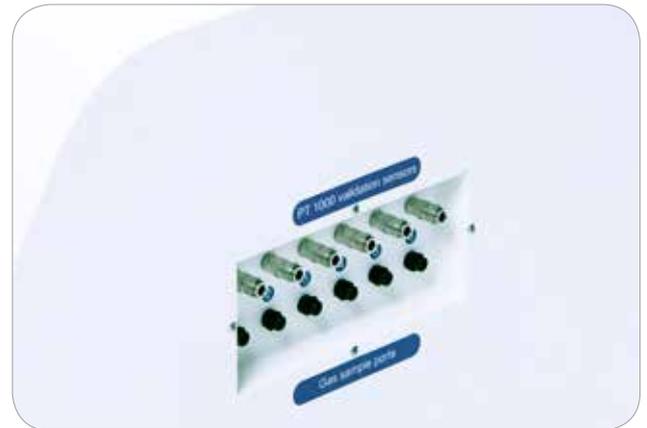
- A video can be generated as images are digitally stored in multiple focal planes.
- Retrospective data analysis can be used for reference, knowledge sharing and training for embryologists.

Embryo Analysis and Evaluation System

- Built-in HD resolution touch screen and separate powerful client touchscreen PC.
- Easy click operation system.
- Embryo evaluation tools: Event system, Transfer map and Timeline display.

Unique Incubation Environment

- 12 completely separate PID temperature controllers.
- Rapid temperature and gas recovery to ensure optimal environment stability.
- Pre-mixed gas is not required and total gas consumption is very low.



Advanced
CO₂ + O₂
Regulation

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 in the chambers.

Gas Recovery:

< 3 minutes

Gas Consumption:

CO₂: < 2 L/h

N₂: < 10 L/h

High Quality Airstream Via:

HEPA+VOC filter

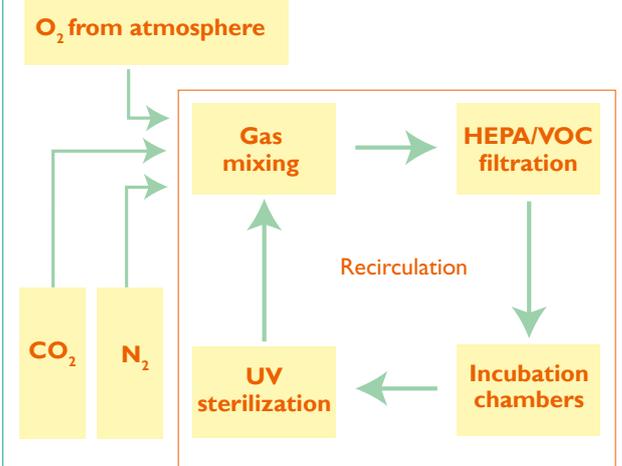
254nm UV-C with 185nm filter

High Quality
Recirculated
Airstream

Easy
Parameter
Validation



Airflow Diagram



Miri® TL Technical Specifications

Overall Dimensions	950mm x 600mm x 370mm (37.4" x 23.6" x 14.6")
Temperature Control Range	25-40 °C
Gas consumption (CO ₂) *	< 2 L/h
Gas consumption (N ₂) **	< 12 L/h
CO ₂ control range	1.9 - 10%
O ₂ control range	5 - 20%
Input gas pressure	0.6 bar (8.7 psi)
Built-in microscope	Zeiss 20x, objective has numerical aperture of 0.35, specialized for 635 nm illumination
Embryo illumination	0.064s per image, using 1W single red LED (635nm)
Camera resolution	1280x1024. Monochrome, 8-bit, IDS system.
Optics tube ratio	2.22 px/μm
Imaging Focal planes	5 min. image interval in 3 to 7 focal planes
Net Weight	90 kg (198.5 lbs)
Shipping Weight	115 kg (252.5 lbs)
Shipping Dimension	1060mm x 700mm x 400mm (41.7" x 27.6" x 15.7")

* 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).

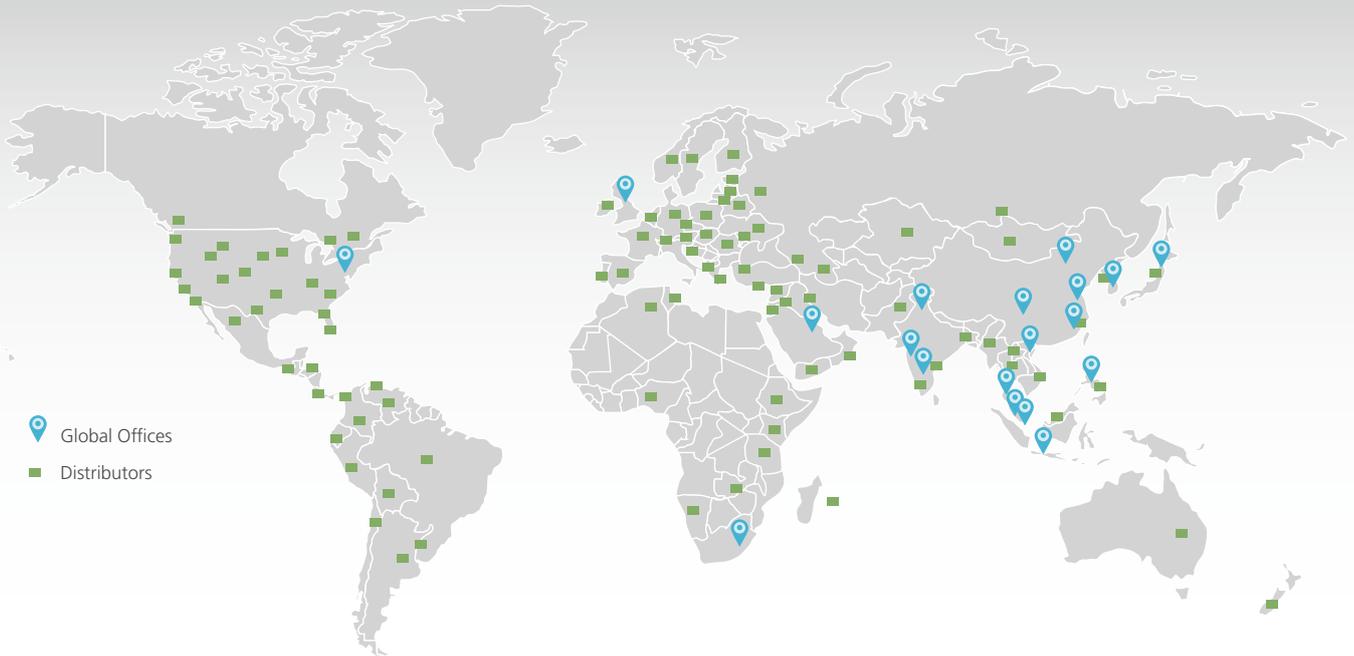
Ordering Information

MRI-TL8	Miri® Time Lapse Incubator System, 230 V, 50/60 Hz
MRI-TL9	Miri® Time Lapse Incubator System, 115 V, 50/60 Hz
Accessories	
MRA-1007	HEPA + VOC filter (to be replaced every 3 months)
MRI-CC	CultureCoin for Time Lapse of 14 embryos (25 pcs. per pack)

The Time-Lapse incubator keeps true to Esco's world class expertise and quality in IVF technology.



GLOBAL NETWORK



 Global Offices
 Distributors



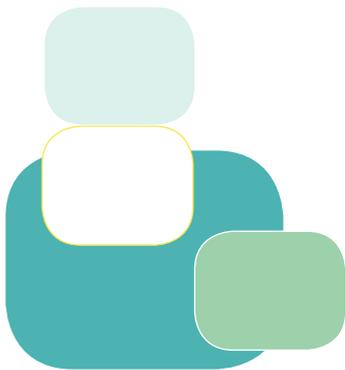
Esco Medical Products:

- ART Workstations
- CO₂ Incubators
- Miri® Multi-room Incubators
- Miri® TL (Time Lapse) Bench Top Incubators
- Miri® GA (Gas Analyser)
- Anti-Vibration Table (AVT)

Infertility is viewed as a problem that has social, psychological, and economic impacts to the afflicted individuals and couples. It is a global concern that knows no race or creed. It has been estimated that 1 in 6 couples would struggle with infertility at least once in their lifetime.

Esco Medical is one of the divisions of the Esco Group of Companies, the other two being the laboratory and pharmaceutical equipment divisions. Esco is now targeting innovative technological solutions for fertility clinics and laboratories. Esco Medical is positioned to become a leading manufacturer and innovator of high-quality equipment such as long-term embryo incubators, ART workstations, anti vibration table, time-lapse incubator and etc.

Esco Medical products are designed to develop 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. The primary focus of this division is to increase pregnancy success rates and patient satisfaction.



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