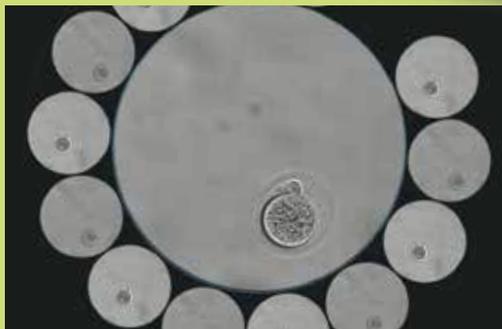
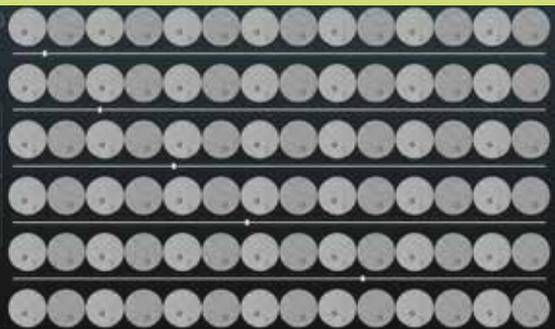


# Miri<sup>®</sup> TL

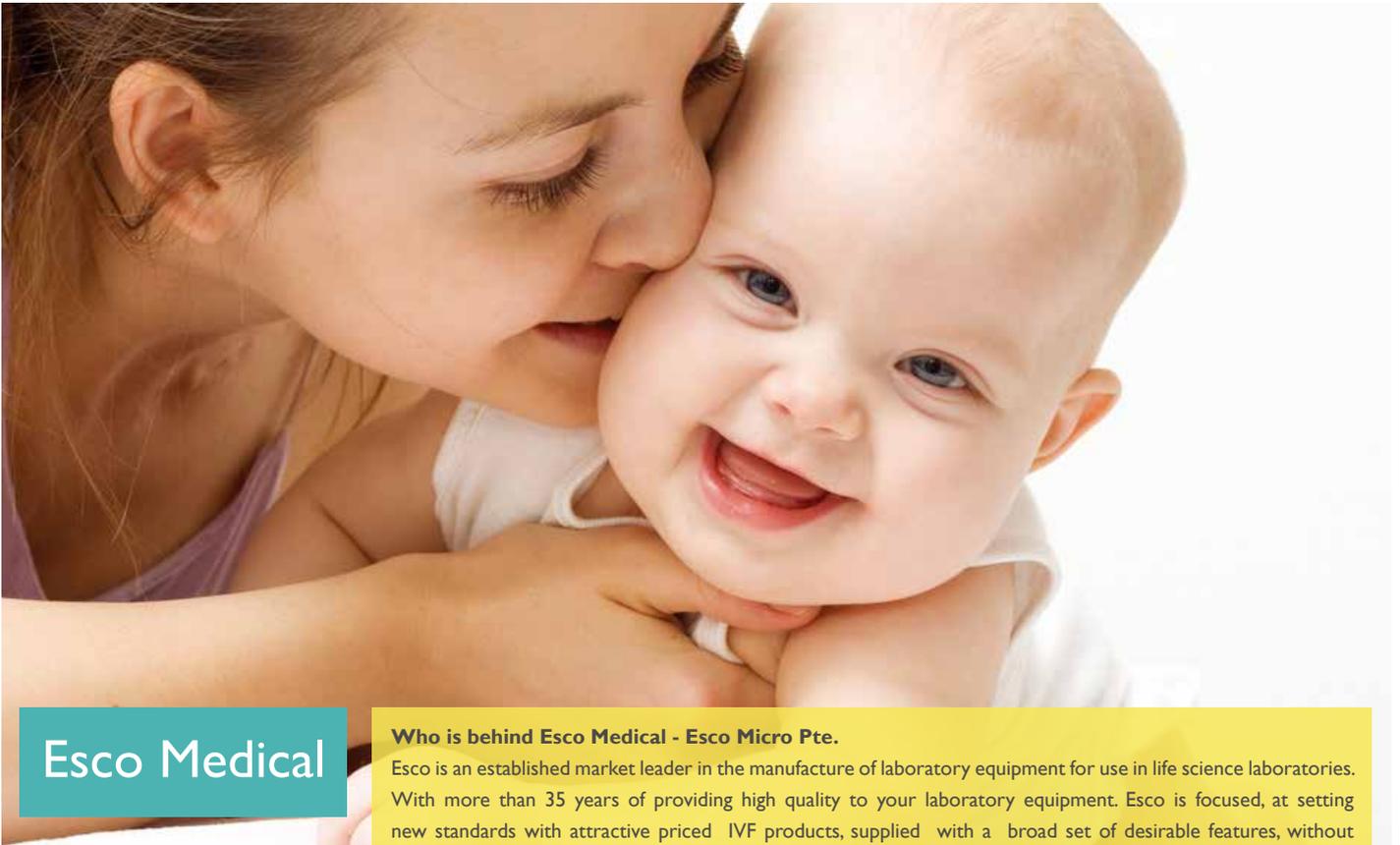
"An affordable, **time lapse** incubation system for IVF"



Designed in Denmark



Made in the E.U.



## Esco Medical

### Who is behind Esco Medical - Esco Micro Pte.

Esco is an established market leader in the manufacture of laboratory equipment for use in life science laboratories. With more than 35 years of providing high quality to your laboratory equipment. Esco is focused, at setting new standards with attractive priced IVF products, supplied with a broad set of desirable features, without compromising existing work - & QC routines at you laboratory.

Our constant aim is to offer customers high value for their money and exceed our customers' needs and expectations.

“When controlled environment solutions are important to you,  
depend on Esco equipment for proven safety and performance”

**ESCO**  
MEDICAL

**Esco Medical** Life has  
begun 

A range of innovative products for the  
IVF laboratory available worldwide



## Miri® TL

“An affordable time lapse incubation system for IVF”

## TIME LAPSE FUNCTIONALITY BUILT ON THE Miri® PLATFORM

The Miri® Line Of Incubators Are Designed And Built Specifically for IVF Clinics with the Goal of Improving Time to Pregnancy.



### Time Lapse Monitoring

- 5 minute picture interval

### 6 Physically Separate Chambers

- Up to 6 separate patients
- Up to 84 total embryos

### Advanced Temperature Regulation

- Direct warming and heated lid

### Tri mix blend of CO<sub>2</sub>, N<sub>2</sub> and ambient O<sub>2</sub>

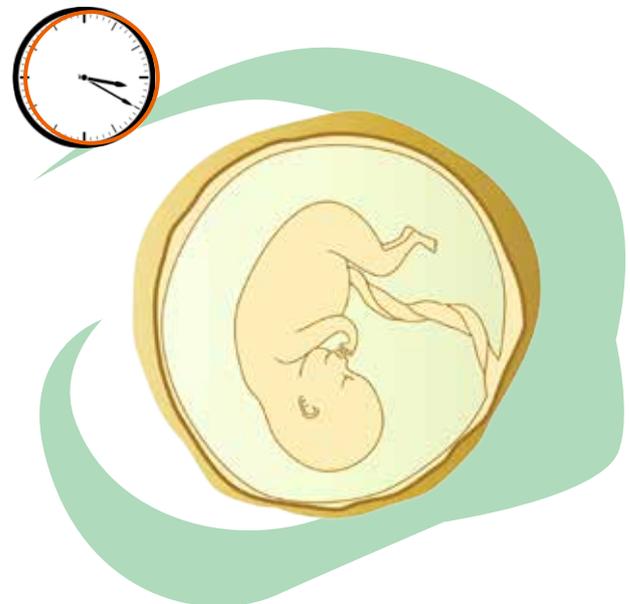
- Suppressed O<sub>2</sub>
- Pre-mixed gas is not needed
- Rapid recovery to optimal environment

## Silent Embryo Hypothesis

Parents keep a watchful eye on their children to make sure they are safe. It is no different during IVF. It is in fact very important to monitor the developing embryo in a similar way.

The Miri® TL improves on the concept of the silent embryo hypothesis by further minimizing stressful factors that may be introduced when taking the dishes out of the incubator.

The Miri® TL enables time-lapsed image monitoring of the growing embryos and thus gives the embryologist a valuable tool in the embryo decision making process and patient communication.



### Common Stressors:

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

## Miri® TL

“An affordable time lapse incubation system for IVF”

### Capacity:

- 14 embryos per CultureCoin
- 1 CultureCoin per Miri® TL chamber
- Total embryo capacity: 84 embryos

### CultureCoin Embryo Culture Dish For The Miri® TL

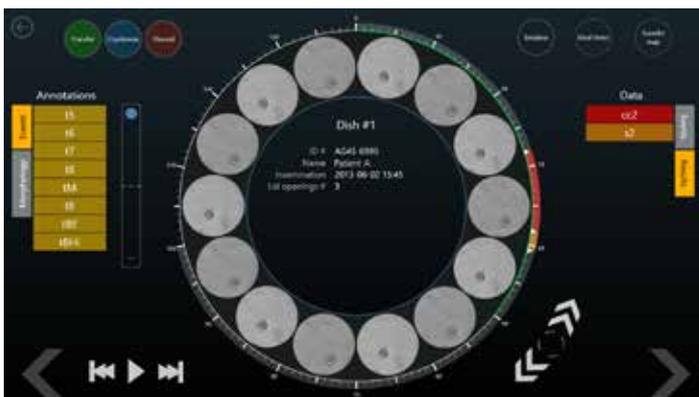


At the heart of the Miri® TL is its Time Lapse monitoring of embryo development. The Miri® TL viewer is equipped with features such as image stacking, that will be useful for embryo viability evaluation.

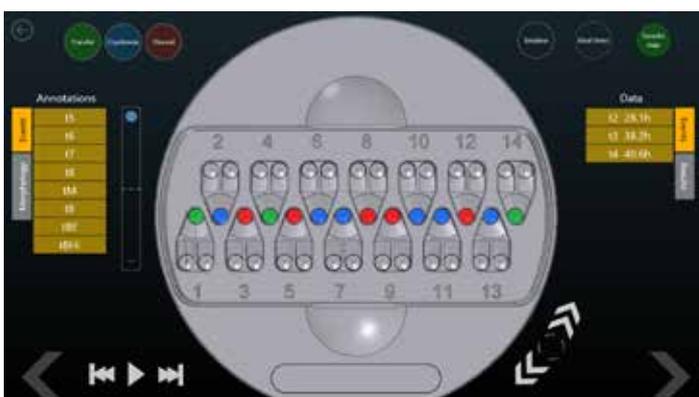
*“The 6 incubation chambers set new standards, for a safe and secure handling of your embryos”*



## Embryo Evaluation Tools



Annotations of dish events and results are stored for reference. When an event occurs, the user simply drags and drops the appropriate event from the events list. If two events relate to some result, the time period between the events is highlighted with a corresponding color fill indicating the result.



When a decision regarding the embryo's viability is to be made, the user needs only to click a button. A resulting 'transfer map' gives the user an easy method to identify embryos that have been selected for either embryo transfer, cryopreservation, or discarding.

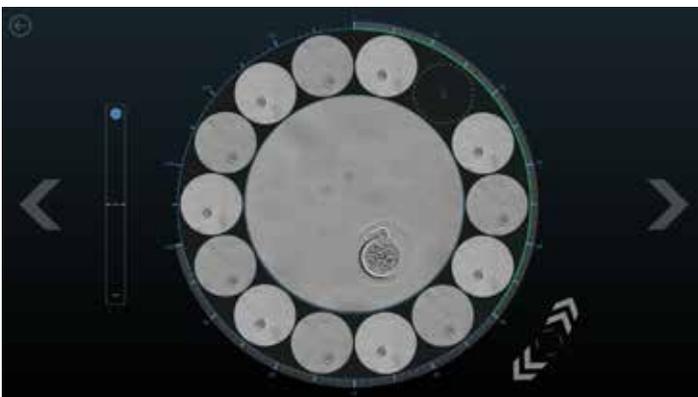
## Time Lapse Embryo Recording And Monitoring



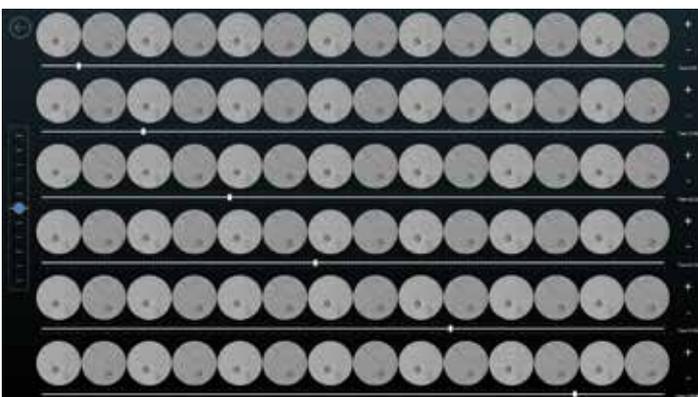
The main screen shows all 6 chambers and each has a counter showing the duration of time lapse recording done. At the upper right portion is a snapshot of other useful information regarding the incubator such as temperature, CO<sub>2</sub>, and O<sub>2</sub> statuses and set points.



When accessing a chamber to start a time lapse, The Miri® TL allows the user to assign patient IDs. Since the Miri® TL's chambers are physically separate, being able to identify which patient is assigned to which incubation chamber is a very useful and sensible feature.



Time lapse monitoring of all 14 wells of a selected chamber containing a culture dish (CultureCoin) is possible. Shown here is the zoomed view of embryo #2 at time point of 50 hours. Navigation through the stacked timeline is easy and intuitive.



A timeline view displays a matrix of 14 embryos (rows) with a snapshot of time stages of development (columns). This feature provides a powerful tool to make side-by-side comparisons between embryos.

## Data And Alarms Logging



The Miri® TL data logger logs incubator parameters such as CO<sub>2</sub> regulation data , O<sub>2</sub> regulation data, and temperature regulation data. Similarly, alarms are also logged.



The Miri® TL has a built-in standard pH meter (BNC-type connection pH probes) and is accessed from the pH meter screen.

### Miri® TL

Time Lapse Incubator  
for IVF

Advanced  
Temperature  
Regulation

The Miri® TL boasts advanced temperature regulation. Firstly, all of the 6 chambers are separate from each other---no crossover heat. Secondly, each chamber is regulated by two sensors that monitor a heated base and a heated lid respectively.

#### Heated Lid

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

#### Direct Heat Transfer

< 1 minute temperature recovery



Easy temperature, CO<sub>2</sub>, and O<sub>2</sub> validation via the easy access PT1000 connectors and gas sampling ports.



Time Lapse Viewer

Incubation Control Panel and Display

Advanced  
CO<sub>2</sub> + O<sub>2</sub>  
Regulation

High Quality  
Recirculated  
Airstream

Easy  
Parameter  
Validation

The Miri® TL features a gas mixer and CO<sub>2</sub> & O<sub>2</sub> sensors. The ability to mix gas enables the user to modify gas concentrations anytime.



**Other Advantages Include:**

Lower operational costs  
Monitor actual gas concentrations in real time

**High Quality Airstream Via:**

HEPA+VOC filter  
254nm UV-C with 185nm filter

**Gas Recovery:**

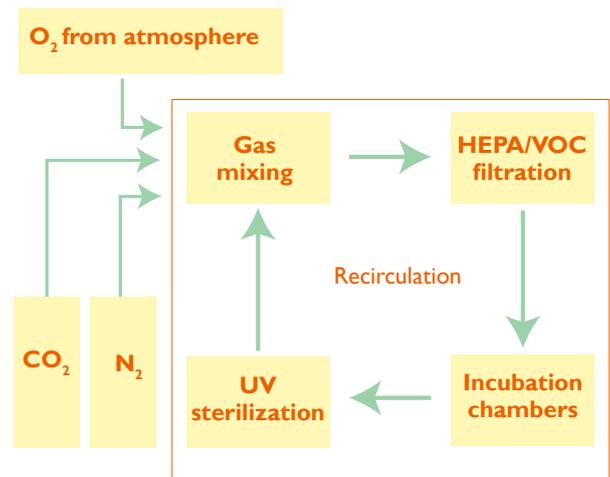
< 3 minutes

**Gas Consumption:**

CO<sub>2</sub>: 2 L/h

N<sub>2</sub>: 10 L/h

## The Miri® TI Gas Mixer Diagram



## General Specifications

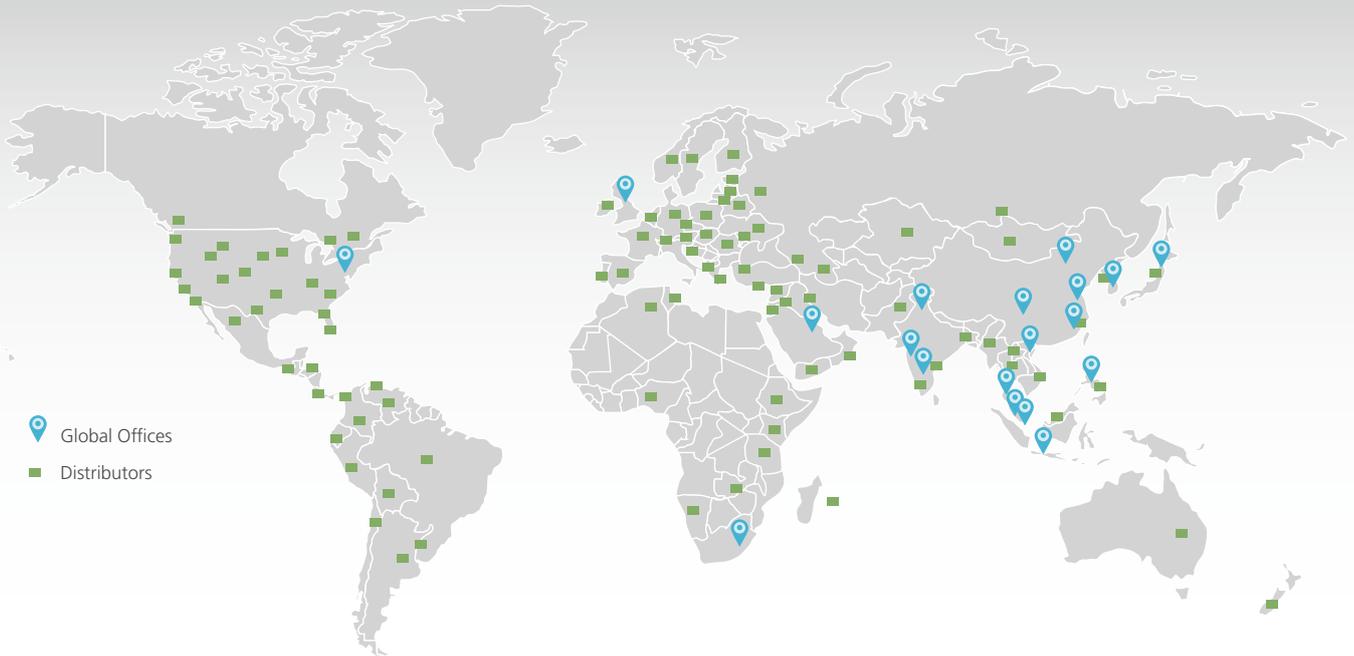
Model Code	MRI-TL8 (Miri® TL, 230V) MRI-TL9 (Miri® TL, 115V)
Overall Dimensions	950mm x 600mm x 370mm
Power Frequency	50/60 Hz
Temperature Range	25-40 C
Gas Consumption	CO <sub>2</sub> : 2L/H N <sub>2</sub> : 10L/H
Gas Control Range	CO <sub>2</sub> : 1.9-10% O <sub>2</sub> : 20-5%
Gas Input Pressure	0.6 bar (8.7 psi)

## OTHER USEFUL FEATURES:

- Writable Glass Lids
- Large Easy-To-See Displays
- pH Measurement (BNC)
- Alarms With External Alarm Port



# GLOBAL NETWORK



 Global Offices  
 Distributors



**Esco Medical Product:**  
 ART Workstations  
 Upright CO<sub>2</sub> Incubators  
 Bench Top Incubators  
 Time Lapse Incubators

*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 nor creed. It has been estimated that 1 in 6 couples would struggle with infertility at least once in their lifetime.*

*The vision of Esco Medical is to support Assisted Reproductive Technologies (ART), such as IVF, by developing practical and state-of-the-art technological solutions for improving clinical success rates and patient satisfaction. All Esco Medical products are designed with the IVF clinic in mind and developed 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.*

*It is on these foundations that Esco Medical remains committed to providing world class ART, worldwide. At Esco Medical, life has begun.*



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