ESCO MEDICAL

Life has begun

Ensuring unique environment for IVF Human Embryo Culture

Mini MIRI®

Humidified Benchtop Incubator

Designed in Denmark

Made in the E.U.

CERTIFIED INCUBATION

Design Excellence - Superior Quality

Mini MIRI® - a compact and
humidified bechtop incubator.

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Mini MIRI®

"A compact and humidified benchtop incubator"

Mini MIRI®— No compromises, built on the robust and reliable MIRI® design

Built on the robust and reliable MIRI® design, the Mini MIRI® Benchtop Incubator is a humidified incubator that provides a stable culture environment. It has two chambers and HEPA/VOC filtration on the incoming airstream. The compact design and direct heat regulation further translate to faster temperature and gas recovery.

FEATURES:

Heated Lid

- Prevents condensation
- Enhances temperature regulation and recovery
- Excellent uniformity between the top and the bottom
  - Accuracy: ± 0.2 °C
  - Uniformity: ± 0.2 °C

Optional SAFE Sens Integration

For continuous pH measurement.

See page 6 for more info.

Direct Heat Transfer

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

Dual Chamber System

- 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 much simpler since there is no crossover of heat from adjacent chamber.
- The small chamber volume allows for gas composition recovery in less than three (3) minutes and temperature recovery in less than one (1) minute.

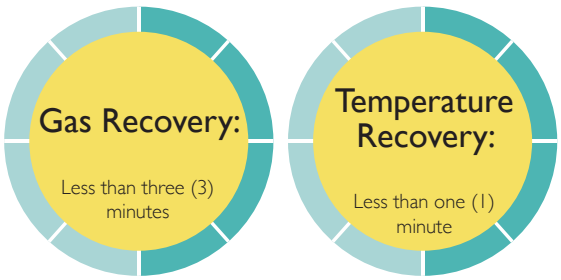
Ergonomic Rotatory Key

The Rotatory Key is used to access the menu, to toggle among settings and to set parameter values.

Superior Incubation Environment

The Mini MIRI® has two (2) chambers with temperature parameter that can be regulated independently. This is ideal because any disruption e.g., temperature drop after opening the lid of one chamber will have no impact on the other. Furthermore, calibration is so much simpler because there is no crossover of heat from adjacent chambers.

The Mini MIRI® features a total of 4 temperature controlled points. That is two (2) points for every chamber: one (1) on the bottom and another on the heated lid. The heated lid is another great feature of the Mini MIRI® as it enhances temperature uniformity.



Fast Recovery

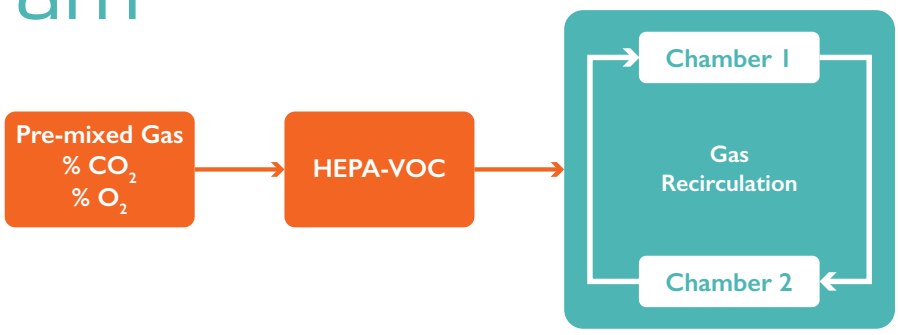
There are many advantages to using benchtop multi-room incubators. One important benefit is the speed of recovering temperature and gas parameters after opening a chamber.

The little details count

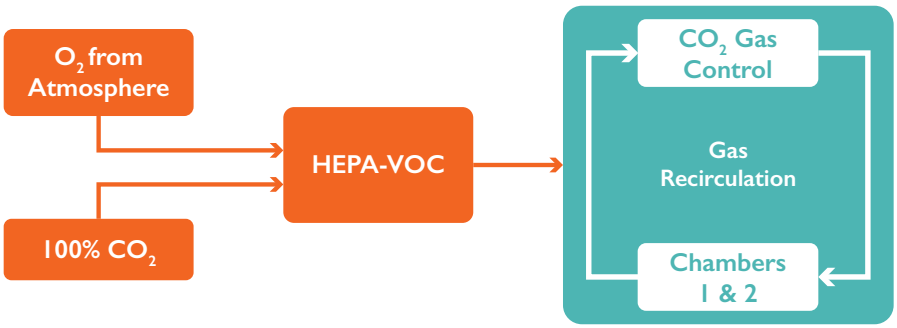
IVF practitioners deal with precious and sensitive embryos, and often, the little details make a big difference. The Mini MIRI® has a large LED display that can be easily seen from a distance. Also, the glass lid tops, while acting as chamber insulators, can be written on — a very useful feature for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

Airflow Diagram

You can run the Mini MIRI® with pre-set concentration for both CO_2 and O_2 gases. It will pass through the HEPA-VOC filter before it goes thru the chambers. Gas is recirculated within the two (2) chambers.



When running 100% CO_2, the built-in NDIR CO_2 sensor will regulate the concentration of the incoming CO_2 gas to your desired level.



The Mini MIRI® is built with Excellent Quality Control Features

High quality airstream via HEPA-VOC filter

The gas in the Mini MIRI® is purified by a built-in HEPA-VOC filter which effectively removes VOCs and particulates larger than 0.3 µm.

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 the two (2) chambers.

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

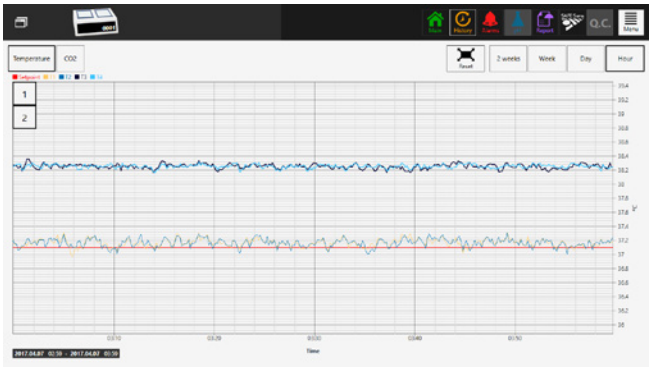
Use either pre-mixed gas or pure CO_2 Gas

You can either use pre-mixed gas or you can use 100% CO_2 as your input gas. The Mini MIRI® is equipped with NDIR CO_2 sensor that effectively regulates CO_2 gas inside the chamber.

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.

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

The Mini MIRI® can be connected to an easy to-use, feature-packed data logging software installed on any ordinary 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 datalogger also automatically generate reports weekly which makes it more convenient for the user.

Accessories

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
- Removable for easy cleaning

For Mini MIRI® with integrated SAFE Sens (optional), order a different plate with hole to accomodate the SAFE Sens sensor *(see ordering information on page 7)*.

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

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 Nippon™
- 4 x Sparmed - Oosafe™

Nunc™

Falcon™

Vitrolife™

LifeGlobal / GPS Dishes™

Nippon™

Sparmed - Oosafe™

SAFE Sens* Continuous pH Monitoring (Optional)

The Mini MIRI® can be installed with an integrated SAFE Sens technology for fast, effective, and non-invasive continuous pH monitoring product for *in vitro* fertilization (IVF) procedures.

The SAFE Sens technology employs an optical fluorescent measurement technology, used in combination with disposable sensors, which accurately and reliably monitors the pH of small volumes of fluids such as the media used in IVF.

Key Features

Continuous pH measurement

- Reading and recording every 30 minutes (default setting - adjustable).
- Single use sensor probe for up to seven (7) days of pH readings.

Easy to implement

- Easy to align (no buffers, no hassles).
- Easy to use and maintain.

Data-Logging System**

- Data Logging and user alarms.
- Each TrakStation® can be connected to multiple incubators.

Compact and Efficient

- No more unnecessary openings of your incubator for spot pH measurement.
- Only requires 100 µL of media + 50 µL of oil.

** SAFE Sens is a trademark brand of Blood Cell Storage, Inc. (BCSI). SAFE Sens integration is currently offered as a factory-installed option.*

*****Minimum system requirements for datalogger PC/Tablet:***

• Intel Core 2 Duo or AMD Athlon X2 at 2.4 GHz processor • 4Gb RAM • 15Gb Hard Disk space • Integrated Video Card • Monitor with resolution 1024 x 768 • Windows 7 pro/ 8 Pro/ 10 OS with 64 Bit architecture • USB 3.0 port for each connected device

General Specifications

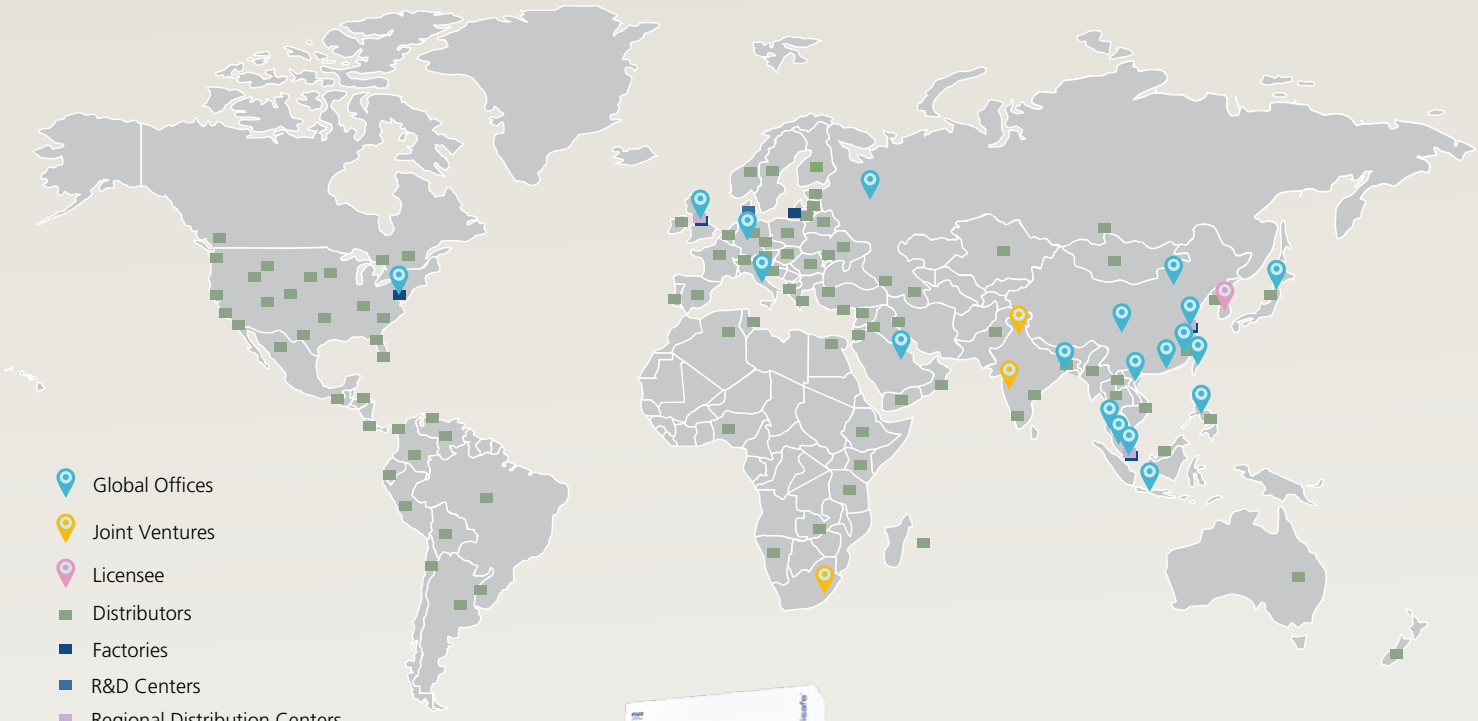
Mini MIRI® Humidified Benchtop Incubator

Overall Dimensions (W x D x H)	525 x 420 x 230 mm (20.7 x 16.5 x 9.1")
Weight	22 Kg (48.5 lbs)
Power Supply	115 - 230 VAC, 50/60 Hz
Power Consumption	160 W
Heating Elements	70 W
Temperature Control Range	25 - 40° C
CO_2 Gas Consumption	Less than 2 L/hr
Premixed Gas Consumption	In purge < 50 L/hr In Normal run < 1 L/hr
Gas Flow Range	0 - 60 L/hr (0 - 1 L/min)
Gas Flow Accuracy Reading	± 2
CO_2 Gas Pressure (input)	0.6 bar (8.70 PSI)
Premixed Gas Pressure	0.5 - 0.6 bar (7.3 - 8.7 psi)
CO_2 Range	1.9 - 10%

Ordering Information

ITEM CODE	MODEL CODE	DESCRIPTION
Unit		
2070076	MRI-MINI-8	Mini MIRI® 2 Chambers, 230V, 50/60Hz
2070077	MRI-MINI-9	Mini MIRI® 2 Chambers, 115V, 50/60Hz
2070078	MRI-MINI-SS-8	Mini MIRI®, 2 chambers, with SAFE Sens for pH measurement, 230V, 50/60 Hz
2070079	MRI-MINI-SS-9	Mini MIRI®, 2 chambers, with SAFE Sens for pH measurement, 115V, 50/60 Hz
Accessories		
1081277	TBA	SAFE Sens SV2 Sensor, Pack of 10 pieces (shelf-life 12 months)
1081278	TBA	SAFE Sens QC2 Alignment Tool
1320191	TBA	SAFE Sens TrakStation, a tablet with SAFE Sens Software, for pH monitoring.
1320003	TBA	Insert for Falcon® Dishes
1320004	TBA	Insert for NUNC® Dishes
1320070	TBA	Insert for Vitrolife® Dishes
1320099	TBA	Insert for Nipro Dishes
1320100	TBA	Insert for LifeGlobal/ GPS Dishes™
1320101	TBA	Insert Without Footprint for Plain Dishes
1320118	TBA	Insert for Sparmed - Oosafe™
1320219	TBA	Insert for Falcon® Dishes, with hole for SAFE Sens
1320220	TBA	Insert for NUNC® Dishes, with hole for SAFE Sens
1320221	TBA	Insert for Vitrolife® Dishes, with hole for SAFE Sens
1320222	TBA	Insert for Nipro Dishes, with hole for SAFE Sens
1320223	TBA	Insert for LifeGlobal/ GPS Dishes™, with hole for SAFE Sens
1320224	TBA	Insert Without Footprint for Plain Dishes, with hole for SAFE Sens
1320225	TBA	Insert for Sparmed - Oosafe™, with hole for SAFE Sens

GLOBAL NETWORK



Esco Medical Products:
Anti-Vibration Table (AVT)
CelCulture CO_2 Incubator
Culture and Fertilization Dishes
Fertilisafe® IVF Workstation
MIRI® Benchtop Multi-room Incubators
Mini MIRI® Humidified Benchtop Incubator
MIRI® TL6 Time Lapse Embryo Incubator
MIRI® TL12 Time Lapse Embryo Incubator
MIRI® GA (Gas and Temperature Validation Unit)
MIRI® GA Mini (Gas Analyzer)
Semi Closed Environment (IVF/ICSI)

Infertility is viewed as a problem that has social, psychological, and economic impact on 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 struggle with infertility at least once in their lifetime.

Esco Medical is one of the divisions of the Esco Group of Companies, apart from Life Sciences and Healthcare. Esco is now providing 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 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.

ESCO MEDICAL Life has begun

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escoglobal.com LIVE SUPPORT

Esco Micro Pte Ltd Certificate No: 651076
PT. Esco Bintan Indonesia Certificate No: 651333/E
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