



Enabling better fertility outcomes with first-in-class solutions

Fertility

Product Catalogue

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About Esco



Welcome to Esco

Esco Group is a Singapore-based life science company with a diversified portfolio and sales in over 100 countries. As a leading manufacturer of laboratory and biopharma equipment, as well as IVF medical devices, Esco offers tailored solutions that fit the needs of laboratories.

Esco contributes to meet the challenges of the 21st century by continuously innovating our products to support cutting-edge research, helping bio-pharmaceutical companies make their drugs safer and more cost effective, enabling lower cost manufacturing of vaccines, and directly through innovative medical devices and diagnostics.

Esco operates under ISO9001, ISO14001 and ISO 13485 standards to ensure that products and services are safe, reliable and of good quality. Production facility is also audited regularly by independent agencies such as UL, NSF, and others.

At Esco Medical, Life has begun

Esco Medical is one of the divisions of the Esco Group of companies, apart from Life Sciences and Healthcare. Esco Medical provides innovative technological solutions for fertility clinics and laboratories.

The slightest deviation, usually considered as insignificant, often result in non-optimal conditions for embryo growth and lowered pregnancy success. In Esco, we understand that even the smallest details affect the In Vitro Fertilization process. Thus, Esco Medical's primary focus is to provide fertility technologies and solutions to help the world's leading IVF centers to improve, standardize and automate their processes in order to achieve better clinical outcomes and patient satisfaction.

Esco Medical is the leading manufacturer and innovator of high-quality equipment such as Time-Lapse Incubator, Benchtop Multi-room Embryo Incubators, IVF Workstation, CO₂ Incubator, Anti Vibration Table, and Gas Analyser. Most of our medical products are designed in Denmark and made in the EU.

I promise...
I'll raise you like flying a kite.
Will hold you with both hands and slowly let go.
The day you fly, I'll watch you chase the sky.



Miri® TL Time-Lapse Incubator



The Time-Lapse System with Best Incubation

Miri® TL is a Time-Lapse incubator that monitors embryo development. The Esco Miri® TL, optimized for clinical and IVF procedures, is designed to support existing work and quality assurance routines. This value-added treatment provides the most unique incubation environment with the market's most secure and safest procedures. It lessens disturbance and minimizes stressful factors that may be introduced when taking the dishes out of the incubator. This incubation system also ensures predictability in the daily handling and currently offers the market's lowest cost of ownership.

Excellent Stability and Recovery.

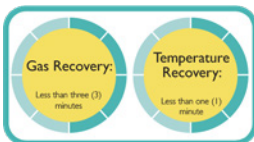
Unique Incubation Environment. Minimal Gas Consumption.

Just some of the things you'll love about the Miri® Time-Lapse, packed with features you want in an IVF incubator.



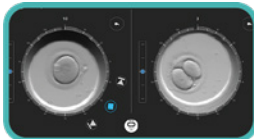
Unique Incubation Environment

- Has independent multi-chamber system
- Gas recirculation through HEPA-VOC filters and UV light.
- Built-in gas mixer. Pre-mixed gas is not required.



Miri® TL6: 6 Individual chambers
Miri® TL12: 12 Individual chambers

Gas recovery: less than three (3) minutes
Temperature recovery: less than one (1) minute



Unprecedented Faster Recovery

- Excellent recovery time for both temperature and gas parameters.
- Opening one chamber will have no impact on the rest of the system.
- Heated upper lid and bottom plate for excellent temperature regulation and uniformity.

2 Temperature Mode Options:

- **Single:** Uniform set points for all 6 (six) chambers.
- **Multi:** Individual set points for each chamber.



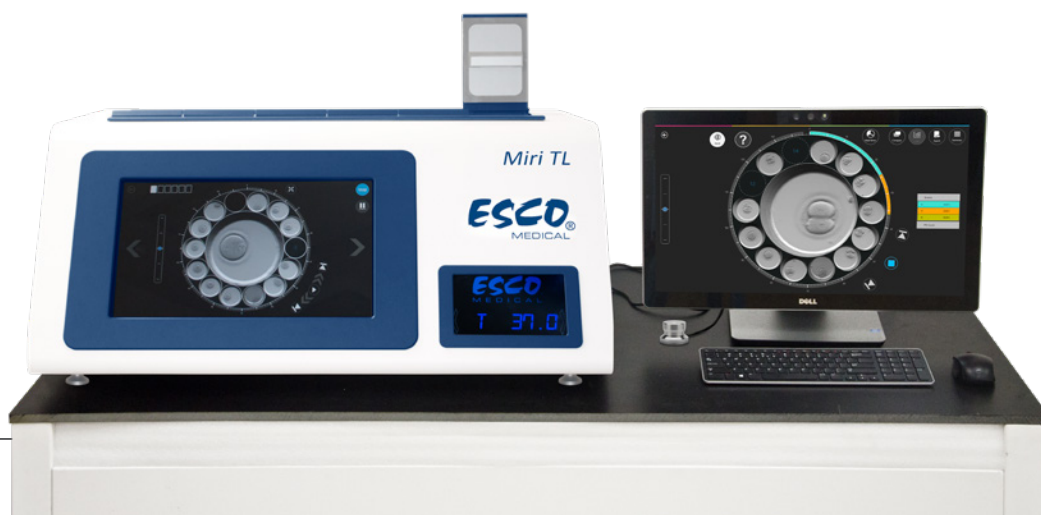
Sophisticated Annotation Tools

- Freedom to personalize instrument and parameter settings.
- Do a side-by-side comparison and compare actual timings to ideal.

Quality checking an easy breeze!

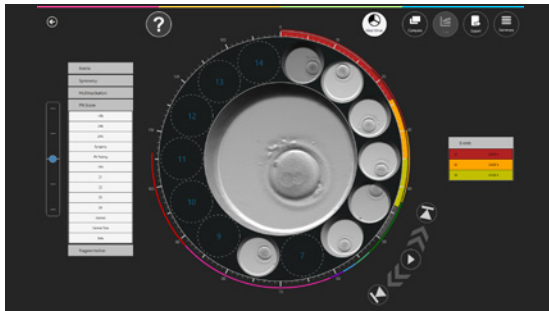
- Has 12 temperature sensors to ensure constant temperature stability.
- Independent PT1000 sensor and gas sample port for external validation.
- Built-in pH measuring system.
- Data-logging system.

Certified Medical Device



Embryo Analysis and Evaluation System

The Miri® TL Viewer Software is a simple yet sophisticated information-providing tool that can help embryologists process the data generated. You can review, annotate and compare the morphokinetic parameters of each embryo to select or deselect embryos for transfer and export data for retrospective analysis.



Navigation through the stacked timeline is easy and intuitive as the revolver shows the videos of the 14 wells of one single CultureCoin. You can play the individual videos, annotate and compare each single embryo.

Shown on the image is a magnified view of embryo #7



Assisted Annotation

The Miri® “Assist” tool automatically detects early embryo cleavage events.

Miri® Time-Lapse Incubator

Specifications	TL6	TLI2
Overall Dimensions	785 x 596 x 380 mm (30.9 x 23.5 x 15.0")	960 x 700 x 325 mm
Temperature Control Range	25 - 40 °C	25 - 40 °C
Gas Consumption (CO ₂) *	< 2 L/h	< 2 L/h
Gas Consumption (N ₂) **	< 10 L/h	< 10 L/h
CO ₂ Control Range	1.9 - 10%	1.9 - 10%
O ₂ Control Range	5 - 20%	5 - 20%
Input Gas Pressure	0.6 bar (8.7 psi)	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)	0.064s per image, using 1W single red LED (635nm)
Camera Resolution	1280 x 1024. Monochrome, 8-bit, IDS system.	1280 x 1024. Monochrome, 8-bit, IDS system.
Optics Tube Ratio	2.22 px/μm	2.22 px/μm
Imaging Focal Planes	5 min. image interval in 3 to 7 focal planes	5 min. image interval in 3 to 7 focal planes

* 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
Unit		
2070091	MRI-TL-MN-6C-8	Miri® Time-Lapse Incubator; Mini, 6 Chambers, 230V, 50/60 Hz
2070092	MRI-TL-MN-6C-9	Miri® Time-Lapse Incubator; Mini, 6 Chambers, 115V, 50/60 Hz
2070098	MRI-TL-MN-6C-SS-8	Miri® Time-Lapse Incubator; Mini, 6 chambers with SAFE Sens, 230V, 60/60 Hz
2070099	MRI-TL-MN-6C-SS-9	Miri® Time-Lapse Incubator; Mini, 6 chambers with SAFE Sens, 115V, 60/60 Hz
2070100	MRI-TL12C-8	Miri® Time-Lapse Incubator; 12 Chambers, 230V, 50/60 Hz
2070101	MRI-TL12C-9	Miri® Time-Lapse Incubator; 12 Chambers, 115V, 50/60 Hz
Accessories		
I320011	MRA-I007	HEPA + VOC filter (to be replaced every 3 months)
I320088	MRI-CC	CultureCoin for Time-Lapse of 14 embryos (25 pcs. per pack)
I320045	MRI-GA	Miri® GA CO ₂ /O ₂ & Temperature Validation Unit, 115V/ 230V
TBA	TBA	Miri® Time-Lapse Incubator; 12 chambers with SAFE Sens, 230V, 60/60 Hz
TBA	TBA	Miri® Time-Lapse Incubator; 12 chambers with SAFE Sens, 115V, 60/60 Hz

Miri® Multi-room Incubator



“The World’s Leading Benchtop Incubators”

The Miri® is a revolution, in form and functionality, of CO₂ incubators for *In Vitro* Fertilization (IVF). With 6 chambers, the Miri® is a multi-room incubator that allows users to access their cultures in one chamber without affecting the neighbouring chambers. Thus, the harmful effects of fluctuations in temperature and gas caused by frequent incubator access are avoided. Built specifically to equip IVF laboratories and clinics to provide the best standard of care, it boasts a unique set of features that cannot be found elsewhere.

Key Features

Fast Recovery

- 1 minute temperature recovery.
- 3 minutes gas recovery.



6 Completely Independent Chambers

Any disruption (e.g., temperature drop after opening the lid) has zero impact on the rest of the system.

Heated Lid

Prevents condensation. Enhances temperature regulation/recovery.

Direct Heat Transfer

Less than 1 minute temperature recovery.

Built-in pH meter

For accurate validation.

Designed in Denmark

Made in the E.U.

Other Features

Solid Validation System

- Six (6) PT1000 and Gas Sensors for validation outputs.
- SAFE Sens Integration for pH monitoring (optional).
- External Data-logging.
- Alarm relay contact
- Total capacity of up to 48 standard culture dishes.
- Separate CO₂ and O₂ regulation, expensive mixed gases not required!
- Air is continuously cleaned by HEPA/VOC filters, and UV light.

Certified Medical Device



Cleared



Tested



IEC/EN60601-1-2
3rd Edition

MDD Class II A

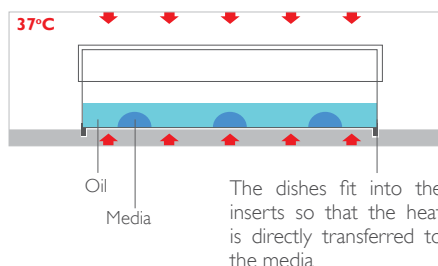


Medical Devices



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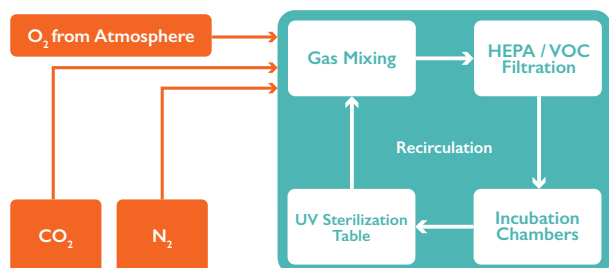
Heating Optimization Plates



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

- Has inserts to fit various dish sizes (please see page 9)
- Removable for easy cleaning

Airflow Diagram



Provides 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 composition in the chambers.

Miri® Multi-room incubator : PRODUCT CODE: MRI-6A10-_-_-

Overall Dimensions	700 x 580 x 150 mm (27.6" x 22.9" x 6")
Power Supply	115 / 230V, 50/60 Hz
Power Consumption	280 W
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 (CO ₂)	0.6 bar (8.7 psi)
Input Gas Pressure (N ₂)	0.6 bar (8.7 psi)
Net Weight	35 kg (77.2 lbs)
Shipping Weight	40 kg (88.2 lbs)
Shipping Dimension	840 x 735 x 300 mm (33.1" X 29" x 11.9")

* 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
Unit		
2070047	MRI-6A10-8	Miri® Incubator; 230V, 50/60Hz
2070048	MRI-6A10-9	Miri® Incubator; 115V, 50/60Hz
1320045	MRI-GA	Miri® GA CO ₂ / O ₂ & Temperature Validation Unit, 115V / 230V
Accessories		
1320140	TBA	PC Holder for Miri®
1320141	TBA	Tablet PC for Data Logging of MRI-6A10
1320142	TBA	Set of Tablet PC and Holder For Data Logging of MRI-6A10
1320011	MRA-1007	HEPA+VOC filter (recommended to be replaced every 3 months)
1320018	MRA-1014	Stacking frame for 2 units
1320226	TBA	Stacking Frame for 2 Units, With Drawer at the Bottom



Miri® Stacking Frame with drawer



MRA-1014 - Stacking frame for 2 units

Mini Miri® Benchtop Incubator



Unique environment for IVF Human Embryo Culture

Built on the strong and reliable Mini® Multiroom, the Mini Miri® Benchtop Incubator is a humidified incubator that provides a stable culture environment. It has two chambers that prevent cross-contamination while HEPA-VOC filtration cleans the incoming airstream. The compact design and direct heat regulation further translate to faster temperature and gas recovery.

Key Features

 Designed in Denmark

 Made in the E.U.



Stable Parameters

- Heated upper lid and bottom plate enhance temperature regulation and uniformity across the chamber.
- Equipped with NDIR CO₂ sensor that effectively regulates gas concentration inside the chamber.

Dual Chamber System

- No crossover of heat among adjacent chambers.
- Gas composition recovery fewer than 3 minutes and temperature recovery off less than 1 minute.
- Recirculation of gas inside the chambers for minimal gas consumption.

Excellent Quality Control Features

- The pre-mixed gas is purified by built-in HEPA-VOC filter.
- Built-in PT1000 temperature sensors and gas ports for external parameter validation.
- Continuous pH monitoring with SAFE Sens® technology.

Humidified System

- Built-in humidity sensor for accurate and continuous readings.
- The water bottle is located on the side of the unit for easy control of water level and refilling.

Ergonomic Design

- Writable glass lid tops for easy patient designation.
- Save space for your lab with its compact design.
- Freedom to choose the right insert for your preferred culture dishes.
- Has large LED display that can be easily seen from a distance.

Mini Miri® Benchtop Incubator

Overall Dimensions	525 x 420 x 230 mm (20.7 x 16.5 x 9.1")
Power Supply	115-230 VAC, 50/60 Hz
Temperature Control Range	25 - 40°C
Premixed Gas Consumption	1 - 2 L/hr
Premixed Gas Pressure	0.5 - 0.6 bar (7.3 - 8.7 psi)

Ordering Information

ITEM CODE	MODEL CODE	DESCRIPTION
2070076	MRI-MINI-8	Mini Miri® 2 Chamber, 230V, 50/60Hz
2070077	MRI-MINI-9	Mini Miri® 2 Chamber, 115V, 50/60Hz

Inserts for Miri® and Mini Miri®



Extensive list of Inserts for Miri® and Mini Miri®

When ordering a Miri® or a Mini Miri®, you just have to pick the right insert/s that fit the dishes used in your laboratory. You have the freedom and flexibility to choose -- no limitations. The Miri® and Mini Miri® can easily fit-in to your existing work routine.

All inserts are optimized for the direct transfer of heat to the dishes and are totally removable for easy cleaning. This is to ensure optimal conditions for your embryos.



Falcon™



Nunc™



Vitrolife™



LifeGlobal / GPS Dishes™



Sparmed - Oosafe™



Nippon™

Ordering Information

ITEM CODE	MODEL CODE	DESCRIPTION
I320003	-	Insert for Falcon Dishes
I320004	-	Insert for NUNC Dishes
I320070	-	Insert for Vitrolife Dishes
I320099	-	Insert for Nipro Dishes
I320100	-	Insert for LifeGlobal/GPS Dishes
I320101	-	Insert Without Footprint for Plain Dishes
I320118	-	Insert for Sparmed - Oosafe™

CelCulture® CO₂ Incubators



Cradle for Optimal Embryo Incubation

The CO₂ Incubator has a vital role in providing an optimal environment in embryo development during IVF and other ART procedures. Sleek, reliable and intuitive, the Esco CelCulture® CO₂ incubator is packed with outstanding features such as rapid parameter recovery, ISO Class 5 Cleanliness, ISOCIDE™ antimicrobial coating, optional Inner Door Kit that reduces contamination risk, and other accessories for specialized applications.



CelCulture® CO₂ Incubators
available in 3 sizes, 50 L, 170 L, and 240 L.

CelCulture® CO₂ Incubators

CelCulture® is equipped with 90°C Moist Heat Decontamination System evaluated by HPA-UK. It utilizes ULPA filter to keep the chamber at ISO Class 5 cleanliness which ensures that all contaminants are filtered and clean air is recirculated.

Key Features

- Wider temperature range, from (ambient+3) temperature to 60°C above ambient.
- Complete contamination control methods to protect your precious samples.
- All gas inputs are filtered via 0.2micron in-line filter and ULPA filtration system.
- 90°C moist heat decontamination cycle, validated by HPA-UK.

ISOCIDE™



Voyager Software Kit

PC-based software for remote monitoring, datalogging and programming.



Floor Stand with Adjustable Feet

Nominal range of 180 mm to 250 mm
(7.1" to 9.8")



Floor Stand with Casters

Support stand raises the incubator to a height of 700 mm (27.6") above the floor



Roller Base

With casters for mobility of your incubators.

Ordering Information

ITEM CODE	MODEL CODE	DESCRIPTION
IR Sensor Model with Stainless Steel Chamber		
2170257	CCL-050B-8-IVF	Celculture® Incubator; 50L, IR sensor; CO ₂ control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 230VAC, 50/60 Hz
2170272	CCL-170B-8-IVF	CelCulture® Incubator 170L IR Sensor; CO ₂ Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 230VAC 50/60Hz
2170258	CCL-050B-9-IVF	Celculture® Incubator; 50L, IR sensor; CO ₂ control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 115VAC, 50/60 Hz
2170273	CCL-170B-9-IVF	CelCulture® Incubator 170L IR Sensor; CO ₂ Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 115VAC 50/60Hz
Suppressed O ₂ Model with Stainless Steel Chamber		
2170260	CCL-050T-8-IVF	Celculture® Incubator; 50L, IR sensor; CO ₂ & O ₂ control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 230VAC, 50/60 Hz
2170275	CCL-170T-8-IVF	CelCulture® Incubator 170L IR Sensor; CO ₂ & O ₂ Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 230VAC 50/60Hz
2170261	CCL-050T-9-IVF	Celculture® Incubator; 50L, IR sensor; CO ₂ & O ₂ control, Moist Heat Decon, with Sealed Inner Door Kit for 50L (2 Glass Doors With Latches), Factory Installed, 115VAC, 50/60 Hz
2170276	CCL-170T-9-IVF	CelCulture® Incubator 170L IR Sensor; CO ₂ & O ₂ Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170L (4 Glass Doors With Latches), Factory Installed, 115VAC 50/60Hz

Fertilisafe™ Multi-Zone ART Workstation



The Fertilisafe™ ART Workstation is the most advanced workstation in its class. It is designed for use in applications that require a high level of control over environmental conditions. Applications can range from animal embryo culture in research to human embryo manipulation done in fertility laboratories.

Key Features



Multi-Zone Heating System

1 set point, 10 independent zones with their own heating elements and sensors allow excellent uniformity.

- Accuracy: $\pm 0.2^{\circ}\text{C}$
- Uniformity: $\pm 0.2^{\circ}\text{C}$

Low Noise, Low Vibration

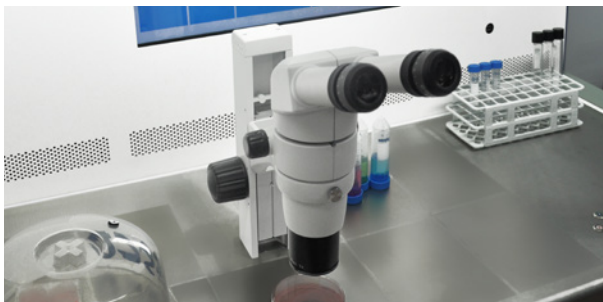
Esco Fertilisafe™ has a state-of-the-art design and features resulting in very low noise and vibration level that makes the workstation suitable for sensitive microscopic work.

Superior Air Cleanliness

Esco workstations provide ISO Class 3 air cleanliness within the workzone as per ISO 14644.1.



Designed in Denmark



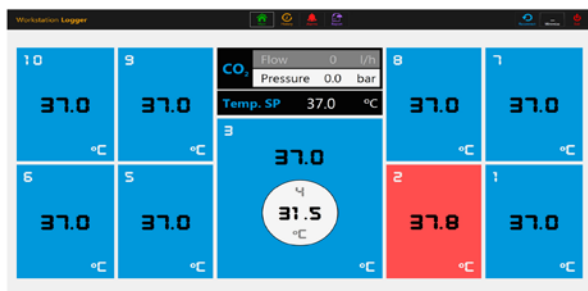
Microscope Integration Provision

Having an integrated stereomicroscope in the work chamber makes it possible to keep the culture dishes at the right temperature at all times while observation and manipulation are carried out.



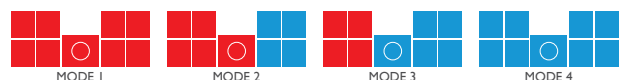
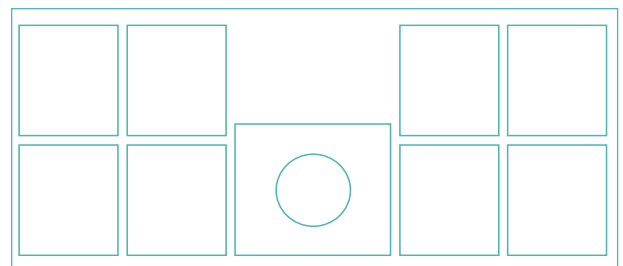
Humidification System

Gas outlet is located on the table surface. The plastic cover encloses the humidified gas effectively and creates a small incubator environment.



Surveillance System

Provides the user with real-time information of zone performance and other work area parameters such as gas pressure and flow rate.



Four Temperature Modes

Temperature Modes

- Mode 1: All zones are heated
- Mode 2: Right zones turned off
- Mode 3: Right and middle zones turned off
- Mode 4: All zones turned off

Fertilisafe™ Multi-Zone Workstation with Miri® Chambers



The Fertilisafe™ is now even better with its integrated Miri® chambers to further secure your embryos while inside the workstation. The Miri® incubator is popular for its top-notch features such as stable culture environment and faster parameter recovery.

Multi-Zone Heating System

The independent zones have its own heating elements and sensors.

Miri® Chambers

Your specimens are more secured than ever with the integrated Miri® chambers, known for its stable and precise temperature output.



Support Stand Options

More options to choose from to meet your requirements.



Designed in Denmark



Fit in the same Miri® inserts:



Nunc™



Falcon™



Vitrolife™



LifeGlobal /
GPS Dishes™



Nippon™



Sparmed - Oosafe™

Accessories:



Support Stand:

- With leveling feet
- With Caster Wheels
- Motorized stand with Caster Wheels



UV Light



Carbon Filter



32 mm microscope pillar

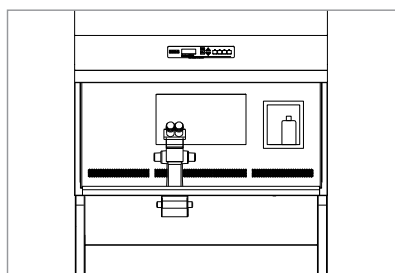
Fertilisafe™ Multi-Zone Workstation



Available in a variety of sizes and configurations to meet the needs of the laboratory

MAW-4D_

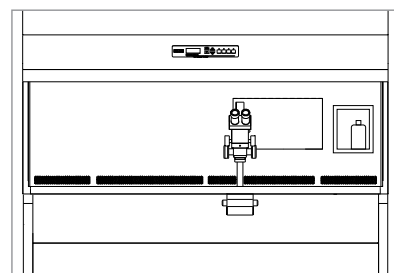
Width: 4ft
Microscope: Single
Basic Configuration
1 user
For small Laboratories



(Front View)

MAW-6D_MONO

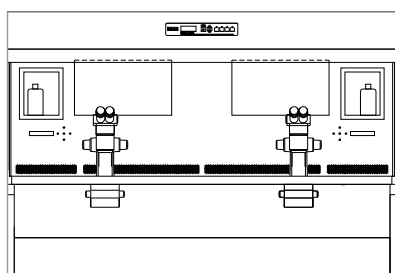
Width: 6ft
Microscope: Single
1 user
More space for other
work.



(Front View)

MAW-6D_-DUAL

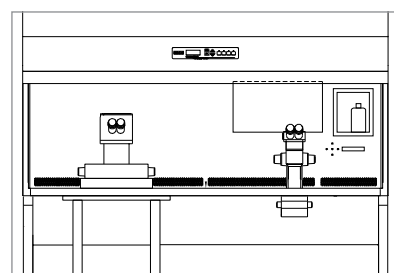
Width: 6ft
Microscope: Dual
2 users
For efficient use of space



(Front View)

MAW-6D_-MP

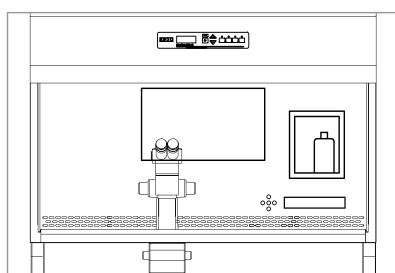
Width: 6ft
Microscope: Single
Stereomicroscope,
1 Inverted microscope
set-up



(Front View)

MAW-4D_-MC

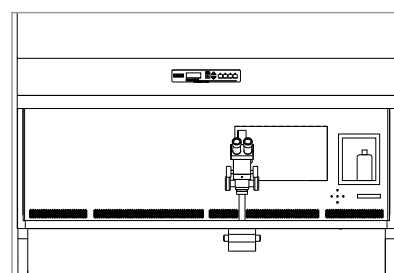
Width: 4ft
Microscope: Single
1 user
For small Laboratories



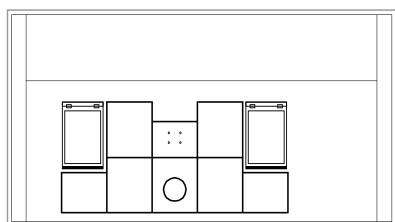
(Front View)

MAW-6D_- MONO-MC

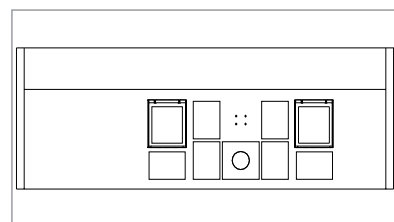
Width: 6ft
Microscope: Single
Mini® Chambers: 2



(Front View)



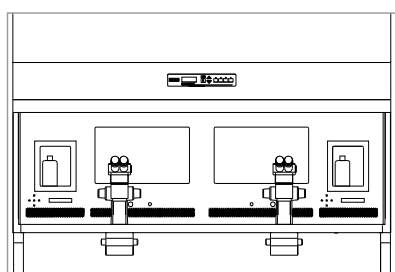
(Worktop View)



(Worktop View)

MAW-6D_-DUAL- MC

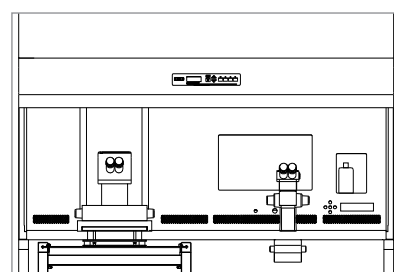
Width: 6ft
Mini® Chambers: 3
Microscope: Dual
2 users



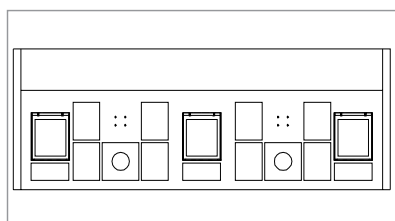
(Front View)

MAW-6D_-MP-MC

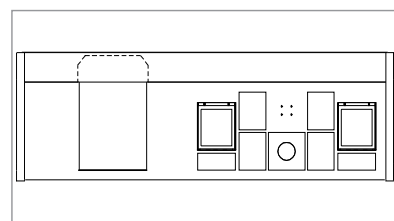
Width: 6ft
Microscope: Single
Stereomicroscope,
1 Inverted
microscope set-up
Mini Chambers: 2



(Front View)



(Worktop View)



(Worktop View)

Fertilisafe™ Multi-zone Workstation



Fertilisafe™ Workstation Technical Specification

Model	MAW-4D_	MAW-6D_	MAW-6D_-DUAL	MAW-6D_-MP
Nominal Size	1.2 meter (4")	1.8 meter (6")	1.8 meter (6")	1.8 meter (6")
Work area dimension* (Width x Depth x Height)	1260 x 500 x 710mm (49.6" x 19.7" x 28")	1870 x 500 x 710mm (73.6" x 19.7" x 28")	1870 x 500 x 710mm (73.6" x 19.7" x 28")	1870 x 500 x 710mm (73.6" x 19.7" x 28")
Laminar air velocity	Average of 0.21m/s or 41 fpm (± 20%)			
Filter efficiency	>99.999% for particle size between 0.1 to 0.3 microns per IEST-RP-CC001.3 / H14 per EN 1822			
Noise level (per NSF 49)**	47 dBA	52 dBA	52 dBA	52 dBA
Pre-filter	Disposable and non-washable polyester fibers with 85% arrestance / EU3 rated			
Set of (9+1) heating zone	1 set	1 set	2 sets	1 set
Surveillance system	1 set	1 set	2 sets	1 set
Microscope	Position for 1 microscope	Position for 1 microscope	Position for 2 microscopes	Position for 1 microscope and 1 inverted microscope
Transmitted light source	1 set	1 set	2 sets	1 set
Humidification system***	1 set	1 set	2 sets	1 set
PT 1000 ports	5 ports	5 ports	10 ports	5 ports
Shipping weight	140 kg (308.6 lbs)	182 kg (401.2 lbs)	182 kg (401.2 lbs)	182 kg (401.2 lbs)

Fertilisafe™ Multi-Zone ART Workstation (MAW) with Miri® Chambers General Specification

Model		MAW-4D_-MC	MAW-6D_-MONO-MC	MAW6D_-DUAL-MC	MAW-6D_-MP-MC
Nominal Size		1.2 meter (4'')	1.8 meter (6'')	1.8 meter (6'')	1.8 meter (6'')
Internal Work Area, Dimensions (W x D x H)		1260 x 500 x 710 mm (49.6 x 19.7 x 28.0'')	1870 x 500 x 710 mm (73.6 x 19.7 x 28.0'')	1870 x 500 x 710 mm (83.6 x 19.7 x 28.0'')	1870 x 490 x 780 mm (73.6 x 19.3 x 30.7'')
External dimensions without support stand (width x depth x height)		1340 x 640 x 1300 mm (52.8 x 25.2 x 51.2'')	1950 x 640 x 1300 mm (76.8 x 25.2 x 51.2'')	1950 640 x 1300 mm (76.8 x 25.2 x 51.2'')	1950 x 647 x 1360 mm (76.8 x 25.4 x 53.5'')
External Dimensions with “B” type support stand (width x depth x height)		1340 x 640 x 2160 mm (52.8 x 25.2 x 85.0'')	1340 x 640 x 2160 mm (52.8 x 25.2 x 85.0'')	1950 x 640 x 2160 mm (76.8 x 25.2 x 85.0'')	1950 x 647 x 2220 mm (76.8 x 25.4 x 87.4'')
Cabinet Construction	Main Body	1.2 mm (0.05'') 18 gauge electro-galvanized steel with white oven-baked			
	Work Zone	1.2 mm (0.05'') 18 gauge stainless steel, grade 304			
	Side Walls	Tempered Laminated Glass (Optional: Polycarbonate sash for MAW with built-in UV light)			
	Sash				
Laminar air velocity		Average of 0.21 m/s or 41 fpm (± 20%)			
Pre-Filter		Disposable, non-washable polyester fibre, 85% arrestance, EU3 rated			
ULPA Filter efficiency		>99.999% for particle size between 0.1 to 0.3 microns per IEST-RP-CC001.3 / H14 per EN 1822			
Set of (7+1) heating zones		1	1	2	1
Number of Miri® Chambers		2	2	3	2
Included accessories		1 x water bottle for HS-I, including tubing 1 x sample carry tray	1 x water bottle for HS-I, including tubing 1 x sample carry tray	2 x water bottle for HS-I, including tubing 2 x sample carry tray	1 x water bottle for HS-I, including tubing 1 x sample carry tray
Microscope		Required, Not included (see microscope ordering information)			
		Position for 1 microscope	Position for 1 microscope	Position for 2 microscopes	Position for 1 microscope and 1 inverted microscope
Support stand		Required, Not included (see support stand ordering information)			

Semi Closed Environment



Designed in Denmark



Made in the E.U.

Maximum performance and Quality Control of your procedures

Semi Closed Environment (SCE) takes the controlled environment from your incubators to previous procedures in the laboratory workflow. We believe that maximum control of the environment throughout the entire ART procedure is beneficial and will lead to better outcome.

With the SCE product line, you can now perform microscopy and Intracytoplasmic Sperm Injection (ICSI) with a stable, controlled and monitored CO₂ and temperature, inside the working area.

SCE IVF - Inverted

Digital inverted microscope (Zeiss objective). 4x. Manual motorized focus/zoom.

Key Benefits of both systems:

- 3 incubator compartments with access from the front (inside the working area) and from the back (outside the working area).
- Pre-installed stereomicroscope or micromanipulator (based on your requirements).
- Heated zones on the work area.
- CO₂ controlled environment separately monitored in the working area and the 3 incubator compartments.
- VOC filtering of the air in the incubators and the large working area.
- DataLogger software with full insight of temperature and gas conditions.

General Specifications

Specifications	SCE-IVF Inverted	SCE-IVF Stereo
Overall Dimensions	785 x 702 x 647 mm (30.9 x 27.6 x 25.5")	85 x 702 x 587 mm (30.9 x 27.6 x 23.1")
Power Supply	115 - 230 VAC, 50/60 Hz	115 - 230 VAC, 50/60 Hz
Power Consumption	250 Watts	250 Watts
Heating Elements	220 Watts	220 Watts
Temperature Control Range	25 – 40°C	25 – 40°C
*Gas Consumption (CO ₂)	< 2 L/h	<2 L/h (for compartments) <10 L/h (for working area)
Control Range (CO ₂)	2 – 9.9 %	2 – 9.9 %
Input Gas (CO ₂)	0.6 bar (8.7 psi)	0.6 bar (8.7 psi)
Worktop Material	Stainless Steel Tabletop	Stainless Steel Tabletop
Built-in Microscope	1x, 5x and 20x. Manual motorized focus/zoom.	MS-1 or Nikon SMZ800N (Available only these two scopes)
Net Weight	80 kg (176.4 lbs)	70 kg
Shipping Weight	90 kg (198.4 lbs)	80 kg
Shipping Dimension	850 x 1000 x 726 mm (33.5 x 39.4 x 28.6")	1 pll. 100 x 85 x 74 cm

* 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
2070083	SCE-IVF-8	Semi Closed Environment for IVF with Inverted microscope, 230V 50/60Hz
2070082	SCE-IVF-9	Semi Closed Environment for IVF with Inverted microscope, 110V 50/60Hz
TBA	TBA	Semi Closed Environment for IVF with Stereo microscope, 230V 50/60Hz
TBA	TBA	Semi Closed Environment for IVF with Stereo microscope, 110V 50/60Hz

Quality Assurance and Validation Units



Miri® GA Gas and Temperature Validation Unit

Miri® GA is a tabletop device intended to make external incubator validation easier and safer. It is capable of monitoring the temperature (PT1000 connector) & gas concentration, flow and pressure. It can validate up to 6 chambers simultaneously 24 hours a day. It also has an adjustable flow rate which gives it the ability to properly sample small volume incubation chambers. Moreover, Miri® GA comes with a full data logger software which is helpful in monitoring each parameter. The Miri® GA can connect to any brand of incubator and is a perfect accessory to Miri® TL and Miri® Multi-room Incubators.

Key Features

- Constantly validate up to 6 x CO₂ / O₂ incubators
- CO₂ / O₂ incubators controllable flow rate
- Monitor up to 6 x PT1000 sensors
- 6 ports for sequential gas samples
- Gas feedback returns sampled gas to incubator or exhaust



Designed in Denmark



Made in the E.U.

Miri® GA Technical Specifications

Overall Dimensions (W x D x H)	Weight	Material	Power Supply	Power Consumption	6 Gas Sample Ports	6 PT 1000 Sensor Input	Temperature Range
355 x 360 x 140 mm	10 kg	Mid steel and aluminum	115V, 60 Hz or 230V, 50Hz	45W	Single input or automatic switch. 30 seconds, 1 or 5 minute sample time.	Continual measurement with calibration function. Automatic sensor detection	0-60°C
PT1000 Input	CO ₂ Range	CO ₂ Sensor	O ₂ Range	O ₂ Sensor	Gas Pressure (input)	Flow rate	Sample Pump
21 bit resolution	0-19.9%	Non-dispersive infrared (NDIR) Dual Beam +/- 5% of reading or 0.1% CO ₂	0-99.9%	Chemical	0 bar	User set 0-8 l/h	Continual 0-8 l/h



Miri® GA Mini Gas Validation Unit

Miri® GA Mini is a handheld device intended to do spot measurements of CO₂ and O₂. The Miri® GA Mini can connect to any brand of incubator and is a perfect accessory for spot monitoring on Miri® TL and Miri® Multi-room Incubators.

Key Features

- Fast spot measurement of gas concentrations.
- Gas suction rate is gentle and adjustable in the range from 0-8L/h.
- For one incubator/chamber at a time.



Designed in Denmark



Made in the E.U.

Miri® GA MINI Technical Specifications

Shipping Dimensions	Weight	Power	User Interface Technology	CO ₂ Sensor Technology	O ₂ Sensor Technology	Measurement range CO ₂	Measurement range O ₂	Barometric pressure	Response Time CO ₂
200 x 200 x 150 mm	1 kg	15V DC / 1000 mA	8 x 7 segment display; Push Rotary Key; RGB indicator; Battery Indicator;	Non-dispersive infrared (NDIR)	Optical	0-10%	0-25%	500-1200 mbar	<10 sec.
Response time O ₂	Response time Pressure	Accuracy CO ₂	Accuracy O ₂	Accuracy Pressure	Operating Temperature	Operating Humidity	Input/Output Ports	Life time CO ₂	Life time O ₂
<30 sec.	<30 sec	<±0.2%	<±0.2%	±5 mbar	10-40°C	0-95% RH Non-condensing	1 pc Gas Sampling Port (input) 1 pc Gas Sampling Port (output)	> 3 years	> 2 years

Anti Vibration Table



 Designed in Denmark
 Made in the E.U.

The Anti Vibration Table (AVT) features an anti-vibration mechanism for passive dampening of the microscope. This is mainly used for *In Vitro* Fertilization (IVF) or Intra-Cytoplasmic Sperm Injection (ICSI) procedures. Exclusively designed in Denmark and made in E.U., the stainless steel table and sturdy frame add mass to the anti-vibration table. AVT-I is constructed to be easy-to-use and almost maintenance-free.

Key Features

- Anti-vibration mechanism for passive dampening
- Sturdy frame
- Stainless steel table with elegant glass design
- Range (HZ) vibration could be eliminated while using this AVT: 5.5-50Hz

Technical Specifications	AVT-I
Overall Dimensions (W x D x H)	1200mm x 800mm x 800mm (47.2" x 31.5" x 31.5")
Net weight	114 kg (251.3 lbs)
Material	Powder-painted mild steel, Stainless steel and glass
Float Dimension (W x D)	540mm x 340mm (21.3" x 13.4")
Ordering information	
AVT-I	Anti Vibration Table
Shipping Weight	166 Kg (366.0 lbs)
Resonance Frequency	5.5 - 50 Hz
Recommended Load Weight (table with 2 springs)	26 - 32 Kg (57.3 - 70.5 lbs)
Recommended load weight (table with 3 springs)	32 - 50 Kg (70.5 - 110.2 lbs)

SAFE Sens



Continuous pH Monitoring

Worry-free pH monitoring of your Esco incubators

SAFE Sens (Sterile, Automated Fluoroscopic Evaluation) offers 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.

Order SAFE Sens with your new Miri® and Mini Miri®*

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.



*Factory-installed. No option yet to install on-site for previously ordered Miri®.

**SAFE Sens is a trademark brand of Blood Cell Storage, Inc. (BCSI)

Ordering Guide for SAFE Sens



Step 1: Choose the correct electrical rating for each equipment.

Model Code	Item Code	Description
Miri® TL6		
MRI-TL-MN-6C-SS-8	2070098	Miri® Time-Lapse Incubator; Mini, 6 chambers with SAFE Sens, 230 V, 60/60 Hz
MRI-TL-MN-6C-SS-9	2070099	Miri® Time-Lapse Incubator; Mini, 6 chambers with SAFE Sens, 115 V, 60/60 Hz
Miri® TL12		
MRI-TL12C-8	2070100	Miri® Time-Lapse Incubator; 12 Chambers, 230 V, 50/60 Hz
MRI-TL12C-9	2070101	Miri® Time-Lapse Incubator; 12 Chambers, 115 V, 50/60 Hz
Miri®		
MRI-6A10-SS-8	2070086	Miri® Incubator; with SAFE Sens for pH measurement, 230V, 50/60Hz
MRI-6A10-SS-9	2070087	Miri® Incubator; with SAFE Sens for pH measurement, 115V, 50/60Hz
Mini Miri®		
MRI-MINI-SS-8	2070078	Mini Miri® Incubator; with SAFE Sens for pH measurement, 230V, 50/60Hz
MRI-MINI-SS-9	2070079	Mini Miri® Incubator; with SAFE Sens for pH measurement, 115V, 50/60Hz

Step 2: Order the SAFE Sens Accessories.*

Model Code	Item Code	Description
TBA	1081277	SAFE Sens SV2 Sensor; Pack of 10 pieces (shelf-life 12 months)
TBA	1081278	SAFE Sens QC2 Alignment Tool
TBA	1320191	SAFE Sens TrakStation, a tablet with SAFE Sens Software, for pH monitoring.

- *Notes: (1) One QC2 alignment tool can be used on all incubators. If incubators are located in separate rooms, you may have to order more than one QC2 tool.
 (2) QC2 Alignment tool and SV2 sensors have an expiration date of one (1) year.
 (3) The Miri® with SAFE Sens automatically comes with free one (1) pack of SV2 sensors, which is to be used for Site Standardization. Please determine how many additional packs you need for routine pH testing. Put into consideration that the sv2 sensor has one year expiration date. See page 5 for stock-keeping matrix
 (4) One TrakStation can connect up to eight (8) incubators by using a USB 3.0 Hub. Determine how many PC tablets you need.
 (5) The Esco datalogger should be installed separately on another Windows PC/ tablet. Please see page 5 for the minimum requirements.

Step 3: Choose Heat Optimization Plate. Only one chamber has the SAFE Sens installed so order only one (1) plate that has a hole for the SAFE Sens. See guide below.

No Heat Optimization Plate needed for Miri® TL



Note: Heat plates should only be ordered for Miri® and Mini Miri®.

Item Code	Model Code	DESCRIPTION
Heating Plates with No Hole		
I320003	TBA	Insert for Falcon® Dishes
I320004	TBA	Insert for NUNC® Dishes
I320070	TBA	Insert for Vitrolife® Dishes
I320099	TBA	Insert for Nipro Dishes
I320100	TBA	Insert for LifeGlobal/ GPS Dishes™
I320101	TBA	Insert Without Footprint for Plain Dishes
I320118	TBA	Insert for Sparmed - Oosafe™

Item Code	Model Code	DESCRIPTION
Heating Plates with Hole for SAFE Sens		
I320220	TBA	Insert for NUNC® Dishes, with hole for SAFE Sens
I320221	TBA	Insert for Vitrolife® Dishes, with hole for SAFE Sens
I320222	TBA	Insert for Nipro Dishes, with hole for SAFE Sens
I320223	TBA	Insert for LifeGlobal/ GPS Dishes™, with hole for SAFE Sens
I320224	TBA	Insert Without Footprint for Plain Dishes, with hole for SAFE Sens
I320225	TBA	Insert for Sparmed - Oosafe™, with hole for SAFE Sens
I320219	TBA	Insert for Falcon® Dishes, with hole for SAFE Sens



CultureCoin for Miri® TL

- Holds up to 14 embryos with individual numbered wells (1-14).
- For single and separated culture where each embryo are cultured in its own environment.
- Ergonomic design for easy handling and location of embryos.
- Separate well for pH measurements.
- Oxygen plasma treated for high wet-ability (hydroscopic).
- Packed in 1 dish pouches and delivered in boxes of 25 pcs.

Ordering Information

Item code: I320088

Model Code: MRI-CC

Description: CultureCoin for Time-Lapse of 14 embryos (25 pcs, per pack)

GLOBAL NETWORK

-  Global Offices
-  Joint Ventures
-  Licensee
-  Distributors
-  Factories
-  R&D Centers
-  Regional Distribution Centers



Esco Medical Products:

Anti-Vibration Table (AVT)
CO₂ Incubators
Culture and Fertilization Dishes
Fertilisafe® IVF Workstation
Miri® Benchtop Multi-room Incubators
Mini Miri® Humidified Benchtop Incubator
Miri® TL6 Time Lapse Embryo Incubators
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.



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