Fertility Combined Catalogue

ESCO MEDICAL

Enabling Better Fertility Outcomes with First-in-class Solutions

Table of Contents

About Esco Medical 04

MIRI® M Multiroom IVF Incubator.....06

MIRI® Time-Lapse Incubator 08

CultureCoin® 09

Traceability Tool 10

- MIRI® Evidence 10

Multiroom Incubator 11

- MIRI® 11
- MIRI® II-12 12

Mini MIRI® Dry and Humidity Incubators 14

Heating Optimization Plates for MIRI® Family's Multiroom Incubators.....15

CelCulture® CO_2 Incubator 16

Esco Multi-Zone ART Workstation 17

Esco Workstation with MIRI® Chambers 18

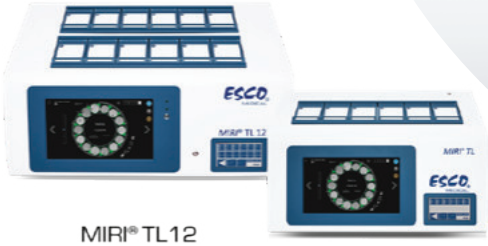
Stereomicroscope 19

MIRI® Laminar Flow Cabinet 24

MIRI® AVT 26

Versati™ Tabletop Centrifuge 27

MIRI® Evidence
RFID Witnessing & Traceability System



MIRI® TL12
Time-Lapse Incubator

MIRI® TL6
Time-Lapse Incubator

CultureCoin®

MIRI® Humidity
Multiroom Incubator

MIRI®
Multiroom Incubator

MIRI® II-12
Multiroom Incubator

Mini MIRI®
Dry Incubator

Mini MIRI®
Humidity Incubator

MIRI® M
Multiroom Incubator

MIRI® AVT
Anti-Vibration Table

Multi-Zone
ART Workstation

CelCulture®
CO_2 Incubator

Versati™
Tabletop Centrifuges

MIRI® Laminar Flow
Cabinet

Welcome to Esco

Since the establishment of Esco in 1978, we never stopped developing, providing, and delivering innovative solutions. From one, we have progressed into four business units with a worldwide presence, namely Esco Scientific, Esco Healthcare, Esco Medical, and Esco Aster—remaining true to our tagline "World-class. Worldwide."

Last 2020, we shifted from Esco Group of Companies to ***Esco Lifesciences Group***, carrying a new tagline ***"Improving lives through science"***. The transformation of the company name and brand signifies Esco's vigor in keeping up, responsive, and adaptive with the fastchanging world while keeping focused on its mission to deliver enabling technologies and provide service all over the world — and improve lives through science.

At Esco Medical, life has begun

Esco Medical is one of the divisions of the Esco Lifesciences Group, apart from Esco Scientific, Esco Healthcare and Esco Aster. 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, Multiroom Embryo Incubators, IVF Workstation, CO_2 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® M

NEW PRODUCT

The Esco Medical MIRI® M multiroom IVF incubator is a modular system consisting of a docking station and movable chambers. The incubator can have up to 18 chambers, each being movable, keeping samples safe in a stable gas and regulated temperature environment. The display depicts the patient's name being held in that chamber and allows for visual confirmation. Built-in software takes care of the digital verification.

Key Features

Ergonomic Design

- Specially designed grip points for enhanced stability.

Movable Chambers

- Stable temperature even when undocked up to 30 mins.

Built-In Digital Traceability

- Dish's movements and actions are continuously tracked anytime anywhere, docked or undocked.

Advanced Alarm System

- Informative conditions through expansive notifications and pop-ups, icons, and colors on screens and backlights.

Practical User Interface

- Integrated software for easy observation and adjustment through the incubator's touch-screen interface.

Improved Multiroom System

- Gas recovery: < 3 min for CO_2, < 5 min for O_2 after docking the chamber.
- Temperature recovery: <1 min after opening the lid for less than 10 secs.
- Temperature stability: ± 0.1°C within the setpoint | Gas stability: ± 0.2% within the setpoint.

Prolonged Undisturbed Incubation

Designed for ultimate mobility, MIRI® M Chambers allow embryos to stay in their optimal environment for extended periods – ensuring stability, minimizing disturbance and maintaining consistent incubation conditions.

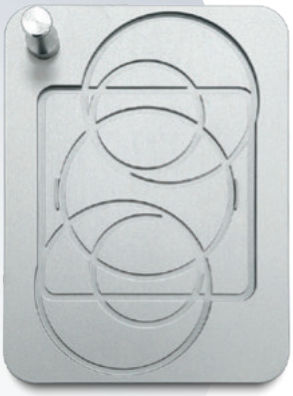
Improved Sample Transportation

Engineered with an improved, state-of-the-art transportation system, MIRI® M Chambers provide users with a larger, more ergonomic surface to hold onto, significantly enhancing grip and control during manual carrying.

Heating Optimization Plates

MIRI® M comes with specific heating optimization plates matching the type of dishes used in the laboratories.

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® M Multiroom IVF Incubator

Technical Specifications		MIRI® M Docking Station
Overall Dimensions (W x D x H)		806 × 670 × 643 mm (31.7 x 26.4 x 25.3”)
Weight		85.6 kg (188.7 lbs)
Material		Mild steel / Aluminium / PET / Stainless steel
Power Supply		115-230VAC, 50/60Hz, 1.2kW
Temperature Range		35.0 – 39.0 °C
Temperature Deviation from The Setpoint		± 0.1 °C
CO_2 Gas Consumption*	6 Chambers Docked	< 0.3 litre/hour
	18 Chambers Docked	< 0.5 litre/hour
N_2 Gas Consumption**	6 Chambers Docked	< 3.0 litres/hour
	18 Chambers Docked	< 5.0 litres/hour
CO_2 Control Range		3.0 - 12.0%
O_2 Control Range		3.0 - 10.0%
CO_2 and O_2 Concentration Deviation from the Setpoint		± 0.2%
Input Gas Pressure (CO_2)		0.7 – 1.5 bar (10.15 – 21.76 PSI)
Input Gas Pressure (N_2)		0.7 – 1.5 bar (10.15 – 21.76 PSI)
Operating Altitude		Up to 2000 meters (6560 feet or 80kPa – 106kPa)
Shipping Weight		122.3 kg (269.6 lbs) (including the pallet’s weight)
Shipping Dimension		920 x 800 x 850 mm (36.2 x 31.5 x 33.5”) (device on the pallet)

* 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).

Technical Specifications	MIRI® M Chamber
Overall Dimensions (W x D x H)	113 x 215 x 59 mm (4.5 x 8.5 x 2.3”)
Weight	1.03 kg (2.27 lbs)
Material	Aluminium / PET / Stainless steel
Power Input	24V DC, 1.58A, 38W
Battery	3.6V, 12.42 Wh, Li-Ion
Undocked Chamber Battery Time	30 minutes (without the lid opening)
Shipping Weight	1.3 kg (2.9 lbs)
Shipping Dimensions	122 x 324 x 163 mm (4.8 x 12.8 x 6.4”) (when sent separate)

Ordering Information

Item Code	Model Code	Description
2070226	MRI-M-DS18C-8/9	MIRI® M Multiroom Incubator (Docking Station + 18 Chambers)

Item Code	Model Code	Description
1320552	MRI-M-VOC	MIRI® M VOC/HEPA Filter
1320553	MRI-M-FD	MIRI® M Heating Optimization Plate for Falcon® dishes
1320554	MRI-M-ND	MIRI® M Heating Optimization Plate for Nunc™ dishes
1320555	MRI-M-BD	MIRI® M Heating Optimization Plate for BIRR dishes
1320556	MRI-M-PD	MIRI® M Heating Optimization Plate without footprint for Plain dishes

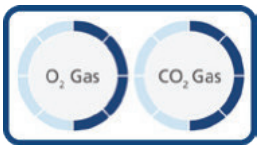
MIRI® TL

MIRI® TL is a Time-Lapse incubator that monitors embryo development. The 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.

Unique Incubation Environment

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

MIRI® TL6: 6 Individual chambers.
MIRI® TL12: 12 Individual chambers.



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 setpoints for all 6/12 (six/twelve) chambers.
- **Multi:** Individual setpoints for each chamber.

CO_2 recovery: average of three (3) minutes.*
Temperature recovery: less than one (1) minute.*

*If the lid has not been open for more than 10 seconds (based on internal testing; performance may vary depending on various factors and environmental conditions).

Sophisticated Annotation Tools

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

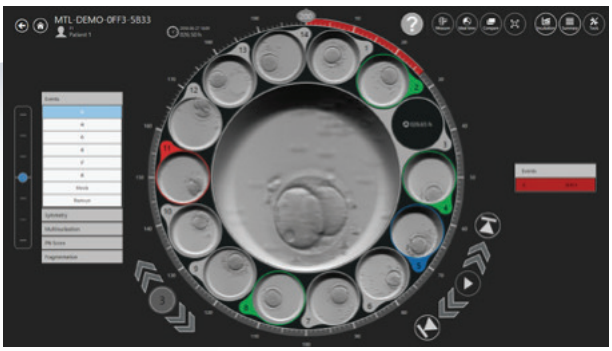
Quality checking is easy

- Has 6/12 temperature sensors to ensure constant temperature stability.
- Independent PT1000 sensor and gas sample port for external validation of each chamber.
- Built-in pH measuring system.
- Data logging system.

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

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 gnerated. 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 #3

General Specifications

Specifications	MIRI® TL6	MIRI® TL12
Overall Dimensions (W x D x H)	805 x 590 x 375 mm (31.7 x 23.2 x 14.8")	950 x 685 x 375 mm (37.4 x 27.0 x 14.8")
Chamber Dimensions	120 x 90 x 26 mm (4.7 x 3.5 x 1")	
Power Supply	115/230V, 50/60 Hz	
Power Consumption	330 W	650 W
Temperature Control Range	28.7 - 41.0 °C	
Gas Consumption (CO_2) *	< 2 L/h	
Gas Consumption (N_2) **	< 5 L/h	
CO_2 Control Range	2.9% - 9.9%	
O_2 Control Range	2.0% - 20.0%	5.0% - 20.0%
Input Gas Pressure	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
Built-in Microscope	Zeiss 20x, objective has numerical aperture of 0.35, specialized for 640 nm illumination	
Embryo Illumination	0.064s per image, using 1W single red LED (635nm)	
Camera Resolution	1920 x 1200. Monochrome, 12-bit, IDS system	
Optics Tube Ratio	3.00 px/µm	
Imaging Focal Planes	5, 10 and 20min intervals in 3, 5 and 7 focal planes	
Number of pixels in stored image	670 x 670	860 x 860
Operating altitude	Up to 2000 meters (6560 feet or 80kPa – 106kPa)	

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

Ordering Information

MIRI® TL Time-Lapse Incubator		
Item Code	Model Code	Description
Device		
2070091	MRI-TL-MN-6C-8	MIRI® Time-Lapse Incubator, Mini, 6 Chambers, 230 V, 50/60 Hz
2070092	MRI-TL-MN-6C-9	MIRI® Time-Lapse Incubator, Mini, 6 Chambers, 115 V, 50/60 Hz
2070100	MRI-TL-12C-8	MIRI® Time-Lapse Incubator, 12 Chambers, 230 V, 50/60 Hz
2070101	MRI-TL-12C-9	MIRI® Time-Lapse Incubator, 12 Chambers, 115 V, 50/60 Hz
Accessories		
1320011	MRA-1007	VOC/HEPA filter (recommended to be changed every 3 months)
1320088	MRI-CC	CultureCoin® for Time-Lapse of 14 embryos (25 pcs. per pack)
1320045	MRI-GA	MIRI® GA CO_2/O_2 & Temperature Validation Unit, 115V/ 230V

MIRI® TL Viewer and Server		
Item Code	Model Code	Description
2070042	MRI-VIEWER	MIRI® Time-Lapse Viewer
1320095	MRI-SERVER	MIRI® Time-Lapse Server

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.
- Corona plasma treated surface for the effective prevention of bubble formation.
- Packed in 1 dish pouches and delivered in boxes of 25 pcs.

General Specifications

Overall dimensions (Diameter x Height)	Ø 71 x 10 mm
CultureCoin® weight in total	13.8 grams
Material	Styrene Methyl Methacrylate (SMMA)
Incubation Temperature Range	28.7 - 40.0 °C
Incubation CO_2 Range	1.9 - 10.0%
Incubation O_2 Range	4.9 – 20.0%
Sterilization Method	Gamma Irradiation
Lifetime	2 years
Biocompatibility Tests	1. Mouse Embryo Assay (MEA) test with thawed 1-cell mouse embryos. Acceptance criteria: at least 80% of embryos developed to the blastocyst stage. 2. Limulus Amebocyte Lysate (LAL) test. Acceptance criteria: < 20 EU/device.

Ordering Information

Item Code	Model Code	Description
1320088	MRI-CC	CultureCoin® for Time-Lapse of 14 embryos (25 pcs. per pack)

MIRI® Evidence

RFID Witnessing and Traceability System

The Ultimate Traceability Tool for Fertility Clinics

MIRI® Evidence is redefining the way traceability in laboratory procedures is managed and stored in fertility clinics, eliminating errors, preventing system mix-ups, saving time, and helping clinics to comply with regulations. This IVF traceability tool provides a single, secure platform that ensures all patients are scheduled on time and documented properly - saving time and improving outcomes across the board.

The MIRI® Evidence workflow proposes tools to improve scheduling and documentation procedures, refining both clinical and administrative processes in a fertility clinic. Tasks or procedures are spontaneously arranged and scheduled as soon as the patient starts her treatment. Any changes to the treatment initiate an update of the scheduled task. The built-in validation engine warrants that all data is registered. If data is missing, a task is automatically created for the person or group of persons responsible for maintaining such information.

Benefits of Using the MIRI® Evidence

Tracking

The MIRI® Evidence system uses 2D imager scanners with no laser from a marketleading supplier, specifically designed for the healthcare industry. The reader can be used to scan wristbands, capture images, and photograph ID cards and passports.

Workflow

The MIRI® Evidence workflow offers tools to enhance scheduling and documentation procedures, improving both clinical and administrative workflows in a fertility clinic. Once a patient's workflow has been started, the system automatically allocates the tasks. The combination of events determines the type of treatment.

Compliance

MIRI® Evidence Tracking has been made to comply with the EDQM guidelines and EU regulations. The workflow and tracking system assists the fertility clinic in documenting all procedures in the laboratory and office, thus excluding double-witnessing and saving time.

Mix-up prevention

Oocytes, embryos, and semen samples are tracked and validated in and out of the containers eliminating the need for human double-witnessing. The validation guarantees that the correct sample is being processed and prevents patient samples from being mixed up.

Multiroom Incubators

MIRI® Incubation System

The Top-of-the-Line Features of the MIRI® Incubation System

- **Heated Lid**
  Prevents condensation. Enhances temperature regulation.
- **Independent Chambers**
  Any disruption (e.g., temperature drop after opening the lid) has zero impact on the rest of the system.
- **Direct Heat Transfer**
  Provides superior temperature stability.
- **A Complete Incubation Environment**
  - Has a built-in gas mixer. Premixed gas is not required.
  - Built-in pH measuring system and data logging system.

MIRI® Multiroom Incubator

The MIRI® is a revolution, in form and functionality, of benchtop incubators for In Vitro Fertilization (IVF). With 6 chambers, the MIRI® is a Multiroom 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. While the chambers operate independently, setpoints are common across all chambers rather than individual. 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 CO_2 recovery.

*If the lid has not been open for more than 10 seconds (based on internal testing; performance may vary depending on various factors and environmental conditions).

Built-in pH meter

For accurate validation.

Solid Validation System

- Six (6) PT1000 sensors and Gas ports for validation outputs
- External Data Logging.
- Alarm relay contact.

Supreme Capacity

- Total capacity of up to 48 standard culture dishes.

Excellent Gas System

- Separate CO_2 and O_2 regulation, expensive mixed gases not required!
- Air is continuously cleaned by VOC/HEPA filters, and UV light. (not applicable to MIRI® Humidity)

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

Stacking Frames

MRA-DRAW - MIRI® Stacking Frame for 2 devices with a drawer

MRA-1014 - MIRI® Stacking Frame for 2 devices

MIRI® II-12 Multiroom Incubator

The MIRI® II-12 is an incubator that provides unique features for every IVF laboratories and clinics. The chambers are specially designed to accommodate one patient ensuring personal space for each embryo. Having an excellent footprint, MIRI® II-12 is made to perfectly fit every IVF lab.

Independent Chambers

Each chamber is specially designed for one patient. Hence, there is no disturbance to other chambers even when a lid is opened/closed.

Excellent Footprint

With its compact size, it can perfectly fit in every IVF Lab.

Low Gas Consumption

The built-in gas mixer and efficient recirculation system allows you to save on gas consumption.

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

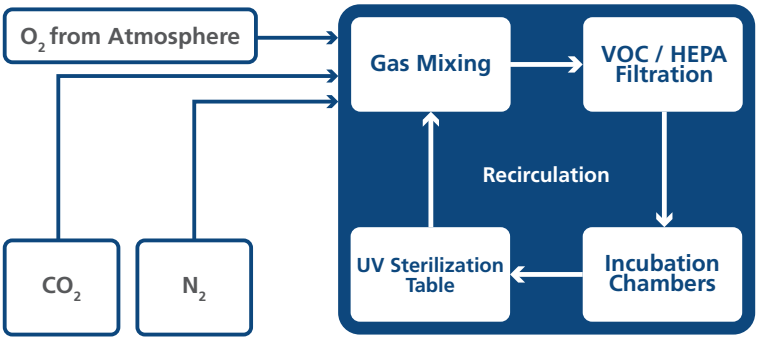
Just a fitting solution...

MIRI® II-12 comes with specific heating optimization plates matching the type of dishes used in the laboratories.

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

• There is a choice between various heating optimization plates.

Airflow Diagram



Total control of the gas phase environment is provided. The built-in gas mixer and the high-performance CO_2 and O_2 sensors allow accurate control of gas composition in the chambers.

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

General Specifications

MIRI® Multiroom IVF Incubator

Model	MIRI®	MIRI® Humidity
Overall Dimensions (W x D x H)	700 x 585 x 165 mm (27.6 x 23.0 x 6.5")	700 x 645 x 280 mm (27.6 x 25.4 x 11.0")
Chamber Dimensions	200 x 176 x 25 mm (7.9 x 6.9 x 1")	
Power Supply	115 / 230V, 50/60 Hz	
Power Consumption	300 W	
Temperature Control Range	24.9 – 40.0 °C	
*CO_2 Gas Consumption	<2 L/h	<4 L/h
**N_2 Gas Consumption	<12 L/h	
CO_2 Control Range	2.0 – 9.9%	
O_2 Control Range	5.0 – 20.0%	
Input Gas Pressure	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
Operating altitude	Up to 2000 meters (6560 feet or 80kPa – 106kPa)	
Net Weight	40 kg (88.2 lbs)	
Shipping Weight	45 kg (99.2 lbs) (Including the pallet's weight)	
Shipping Dimension	860 x 724 x 489 mm (32.4" X 28.5" x 19.3") (device on pallet)	

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")
Compartment Dimensions	120 x 90 x 26 mm (4.7 x 3.5 x 1")
Power Supply	115 / 230V, 50/60 Hz
Power Consumption	500 W
Temperature Control Range	25.0 – 40.0 °C
*CO_2 Gas Consumption	<2 L/h
**N_2 Gas Consumption	<12 L/h
CO_2 Control Range	3.0 – 10.0%
O_2 Control Range	5.0 – 10.0%
Input Gas Pressure	0.4 – 0.6 bar (5.80 – 8.70 PSI)
Operating altitude	Up to 2000 meters (6560 feet or 80kPa – 106kPa)
Net Weight	47 kg
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)

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

Stacking Frame Model	Dimensions with Devices Affixed (W x D x H)
MIRI® Stacking Frame for 2 devices	717 x 699,53 x 748 mm (28.2" x 27.5" x 29.4")
MIRI® Stacking Frame for 2 devices with a drawer	717 x 762 x 460 mm (28.2" x 29.0" x 18.1")
	On full opening of the drawer: 717 x 1328 x 460 mm (28.2" x 52.3" x 18.1")
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")

Ordering Information

Item Code	Model Code	Description
MIRI® Multiroom Incubator		
2070047	MRI-6A10-8	MIRI® Multiroom Incubator, 230V, 50/60Hz
2070048	MRI-6A10-9	MIRI® Multiroom Incubator, 115V, 50/60Hz
2070183	MRI-6A10-H-8	MIRI® Humidity Multiroom Incubator, 230V, 50/60Hz
2070184	MRI-6A10-H-9	MIRI® Humidity Multiroom Incubator, 115V, 50/60Hz
MIRI® II-12 Multiroom Incubator		
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)
1320018	MRA-1014	MIRI® Stacking frame for 2 devices
1320226	MRA-DRAW	MIRI® Stacking frame with a drawer for 2 devices
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
1320045	MRI-GA	MIRI® GA CO_2 / O_2 & Temperature Validation Unit, 115V / 230V (cannot be used with MIRI® Humidity Multiroom Incubator)

Mini MIRI® Multiroom Incubator

Built on the strong and reliable MIRI® Multiroom Incubator's platform, the Mini MIRI® is an incubator that provides a stable culture environment. It has two chambers that prevent cross-contamination while VOC/HEPA filtration cleans the incoming airstream. The compact design and direct heat regulation further translate to faster temperature and gas recovery. While the chambers operate independently, setpoints are common across all chambers rather than individual.

Comes in two models:

Mini MIRI® Humidity

- The water bottle is located on the side of the device for easy refilling and control of the water level.
- Passive humidification system

Mini MIRI® Dry

- Has a built-in gas mixer. Premixed gas is not required
- Comes with a UV module and VOC/HEPA filter.

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

General Specifications

Model	Mini MIRI® Dry	Mini MIRI® Humidity
Overall Dimensions (W x D x H)	525 x 420 x 230 mm (20.7 x 16.5 x 9.1")	
Chamber Dimensions	200 x 176 x 25 mm (7.9 x 6.9 x 1")	
Power Supply	115 / 230V, 50/60 Hz	
Power Consumption	160 W	
Temperature Control Range	24.9 – 40.0 °C	
*CO_2 Gas Consumption	<2 L/h	< 4 L/h
**N_2 Gas Consumption	<8 L/h	<12 L/h
Input Gas Pressure	0.4 – 0.6 bar (5.80 – 8.70 PSI)	
CO_2 Control Range	1.9 – 9.9%	
O_2 Control Range	3.9 – 19.9%	
Operating altitude	Up to 2000 meters (6560 feet or 80kPa – 106kPa)	
Net weight	22 kg (48.5 lbs)	
Shipping weight	30 kg (66.1 lbs) (Including the pallet's weight)	
Shipping Dimensions	630 x 525 x 500 mm (24.8 x 20.7 x 19.7") (device on the pallet)	

* *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)*

Ordering Information

Item Code	Model Code	Description
Device		
2070143	MRI-MINI-D-8	Mini MIRI® Dry Multiroom Incubator, 230V, 50/60Hz
2070144	MRI-MINI-D-9	Mini MIRI® Dry Multiroom Incubator, 115V, 50/60Hz
2070155	MRI-MINI-H-8	Mini MIRI® Humidity Multiroom Incubator 230V, 50/60Hz
2070156	MRI-MINI-H-9	Mini MIRI® Humidity Multiroom Incubator, 115V, 50/60Hz
Accessories		
1320011	MRA-1007	VOC/HEPA filter (recommended to be changed every 3 months)
1320142	MRI-DATA	Datalogger Package with an Intel® NUC Box, monitor etc.
1320045	MRI-GA	MIRI® GA CO_2 / O_2 & Temperature Validation Unit, 115V / 230V (cannot be used with Mini MIRI® Humidity Multiroom Incubator)

Heating Optimization Plates for MIRI® Family's Multiroom IVF Incubators

Extensive list of the heating optimization plates for MIRI®, MIRI® II-12, and Mini MIRI® Multiroom IVF Incubators

When placing an order for MIRI®, MIRI® II-12 or Mini MIRI®, all you have to do is select the appropriate heating optimization plate(s) that match the dishes used in your laboratory. There are no limitations to the choice you make, giving you the freedom and flexibility to choose as per your requirements. The MIRI®, MIRI® II-12 and Mini MIRI® can easily be incorporated into your existing work routine.

All heating optimization plates 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.

Nunc™

Falcon®

Vitrolife

LifeGlobal® GPS Dishes

BIRR

SparMED Oosafe®

Ordering Information

Item Code	Model Code	Description
For MIRI® and Mini MIRI®		
1320003	MRA-FD	Heating optimization plate for Falcon® Dishes
1320004	MRA-ND	Heating optimization plate for Nunc™ Dishes
1320070	MRA-VD	Heating optimization plate for Vitrolife Dishes
1320099	MRA-NID	Heating optimization plate for Nipro™ Dishes
1320100	MRA-LD	Heating optimization plate for LifeGlobal® GPS Dishes
1320101	MRA-PD	Heating optimization plate without footprint for Plain Dishes
1320118	MRA-OD	Heating optimization plate for SparMED Oosafe®
1320507	MRA-BIRR	Heating optimization plate for BIRR Dishes
For MIRI® II-12		
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 without footprint for Plain Dish
1320505	MRA2-BIRR	Heating optimization plate for BIRR Dishes

CelCulture® CO_2 Incubator

The CO_2 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® CO_2 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® CO_2 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 +5) temperature to 60°C.
- Complete contamination control methods to protect your precious samples.
- All gas inputs are filtered via 0.2µm in-line filter and ULPA filtration system.
- 90°C moist heat decontamination cycle, validated by HPA-UK.

ISOCIDE™

CelCulture® CO_2 Incubators are available in 3 sizes, 50 L, 170 L, and 240 L.

Roller Base

With casters wheels for mobility.

Floor Stand with Casters

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

Floor Stand with Adjustable Feet

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

Voyager Software Kit

PC-based software for remote monitoring, data logging and programming.

Ordering Information

Item Code	Model Code	Description
IR Sensor Model with Stainless Steel Chamber		
2170257	CCL-050B-8-IVF	Celculture® Incubator, 50 L, IR sensor, CO_2 control, Moist Heat Decon, with Sealed Inner Door Kit for 50 L (2 Glass Doors with Latches), Factory Installed, 230 VAC, 50/60 Hz
2170272	CCL-170B-8-IVF	CelCulture® Incubator 170 L IR Sensor, CO_2 Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170 L (4 Glass Doors with Latches), Factory Installed, 230 VAC 50/60 Hz
2170278	CCL-240B-8-IVF	CelCulture® Incubator 240 L IR Sensor CO_2 Control, ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 240 L (4/6 Glass Doors with Latches), Factory Installed, 230 VAC 50/60 Hz
2170258	CCL-050B-9-IVF	Celculture® Incubator, 50 L, IR sensor, CO_2 control, Moist Heat Decon, with Sealed Inner Door Kit for 50 L (2 Glass Doors with Latches), Factory Installed, 115 VAC, 50/60 Hz
2170273	CCL-170B-9-IVF	CelCulture® Incubator 170 L IR Sensor, CO_2 Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170 L (4 Glass Doors with Latches), Factory Installed, 115 VAC 50/60 Hz
2170279	CCL-240B-9-IVF	CelCulture® Incubator 240 L, IR Sensor, CO_2 Control, ULPA, Moist Heat Decon with Sealed Inner Door Kit for 240 L (4/6 Glass Doors with Latches), Factory Installed, 115 VAC 50/60Hz
Suppressed O_2 Model with Stainless Steel Chamber		
2170260	CCL-050T-8-IVF	Celculture® Incubator, 50 L, IR sensor, CO_2 & O_2 control, Moist Heat Decon, with Sealed Inner Door Kit for 50 L (2 Glass Doors with Latches), Factory Installed, 230 VAC, 50/60 Hz
2170275	CCL-170T-8-IVF	CelCulture® Incubator 170 L IR Sensor, CO_2 & O_2 Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170 L (4 Glass Doors with Latches), Factory Installed, 230 AC 50/60 Hz
2170281	CCL-240T-8-IVF	Celculture® Incubator, 240 L, IR sensor, CO_2 & O_2 control, Moist Heat Decon, with Sealed Inner Door Kit for 240 L (4/6 Glass Doors with Latches), Factory Installed, 230 VAC 50/60 Hz
2170261	CCL-050T-9-IVF	Celculture® Incubator, 50 L, IR sensor, CO_2 & O_2 control, Moist Heat Decon, with Sealed Inner Door Kit for 50 L (2 Glass Doors with Latches), Factory Installed, 115 VAC, 50/60 Hz
2170276	CCL-170T-9-IVF	CelCulture® Incubator 170 L IR Sensor, CO_2 & O_2 Control ULPA, Moist Heat Decon, with Sealed Inner Door Kit for 170 L (4 Glass Doors with Latches), Factory Installed, 115 VAC 50/60 Hz
2170282	CCL-240T-9-IVF	Celculture® Incubator, 240 L, IR sensor, CO_2 & O_2 control, Moist Heat Decon, with Sealed Inner Door Kit for 240 L (4/6 Glass Doors with Latches), Factory Installed, 115 VAC 50/60 Hz

Multi-Zone ART Workstation

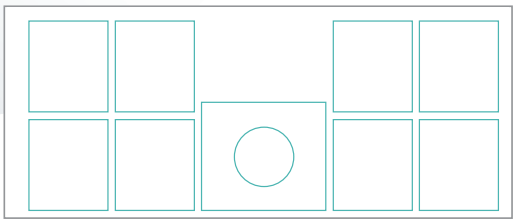
The Multi-Zone ART Workstation is the most advanced workstation in its class. It is designed for use in applications that require a high level of control over environmental conditions. Applications can range from animal embryo culture in research to human embryo manipulation done in fertility laboratories.

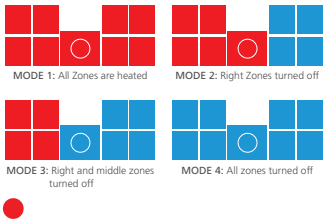
Key Features

Multi-Zone Heating System

1 setpoint, up to 12 independent zones per working area with their own heating elements and sensors allow excellent uniformity. The heating system will automatically prioritize power distribution to ensure effective temperature control with fast recovery. In models that feature MIRI® chambers, temperature regulation of the chambers will always be on regardless of mode.

- Accuracy: ± 0.2 °C
- Uniformity: ± 0.2 °C





**The provided example of heating zone overlay is applicable for MAW-4D_ model. For different heating zone layouts, please read pages 18 and 19. The heating modes are the same for all the models.*

Humidification System

The Multi-zone ART Workstation design does not allow active control of humidity levels in circulated gas. The humidification method used in the Multi-zone ART Workstation increases circulating gas' humidity, which will decrease evaporation risks in media of Petri dishes placed in the chambers. On models without MIRI® chambers semi-closed environment can be created with a plastic cover.

Heated Glass Stage

The heated glass stage has its own independent heating zone further to enhance the temperature control and recovery in this zone.

Stainless-Steel Table-top

The main material used in the tabletop surface is stainless steel. which ensures its strength and rigidity.

Microscope Integration Provision

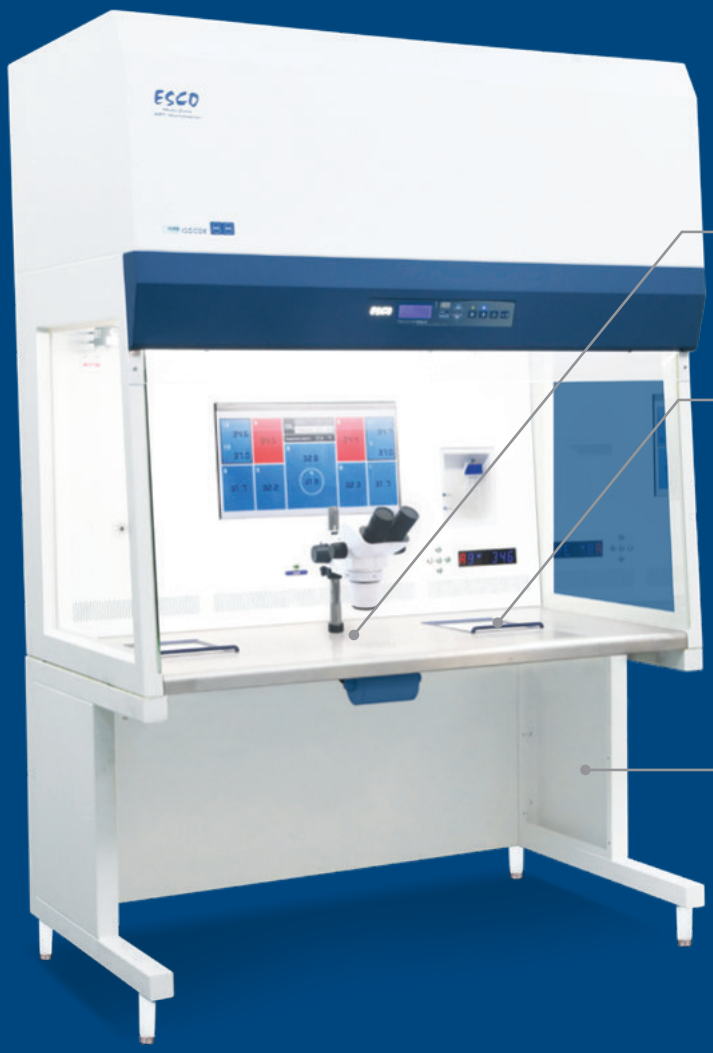
The integrated stereoscope in the work chamber allows users to maintain culture dishes at steady temperature during observation and manipulation. Fewer movements will also reduce risk of accidents.

Surveillance System**

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

***When any of the heating zones are OFF, the monitor shall not display real-time temperature as there are no controlled heating to give uniformity across the OFF zone.*

Multi-Zone Workstation with MIRI® Chambers



The workstation 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

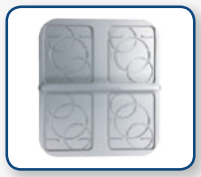
Your specimens are more secured than ever with the integrated MIRI® chambers, known for its stable and precise temperature output.

Support Stand Options

More options to choose from to meet your requirements.

Fit in the same MIRI® heating optimization plates

Nunc™



Falcon®

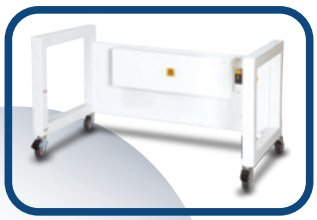
Vitrolife

LifeGlobal® GPS Dishes

BIRR

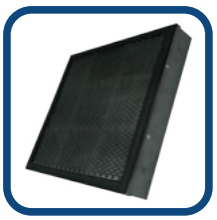
SparMED Oosafe®

Accessories



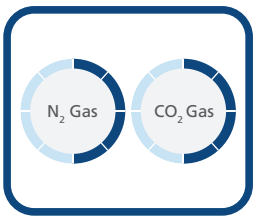
Support Stand:
- *With leveling feet*
- *With Caster Wheels*
- *Telescopic stand with Caster Wheels*

UV Kit*



Pre-Filter

32mm Microscope pillar



Gas Mixer for MAW

**Esco reserves the right to make periodic minor design changes without obligation to notify any person or entity of such change.*

Stereomicroscope MS-1

A Stereomicroscope is a type of optical microscope that allows the user to see a three-dimensional view of a specimen. This Stereomicroscope is very useful in assessing oocyte and embryo morphology and viability. It has a built-in camera mount where you can place your camera set for a better viewing and documentation of images. Moreover, additional objective lenses (0,5x, 1,5x, 2x) can be screwed on the microscope head for additional magnification.

Key Features

PK-Mount and Camera Set

Allows to mount a digital camera which helps the user to take a better look at their specimen.

Adjustable Interpupillary Distance

Enables the user to adjust the space between the eyepieces for a more pleasurable observation.

Black and White Work Board

Enhances the specimen/sample viewing experience.

Vertical Light Source

Adapted for the stereomicroscope, this type of light source enhances everyday embryo and gamete inspections is useful in an IVF laboratory as it is designed for inspection of gametes and embryos.

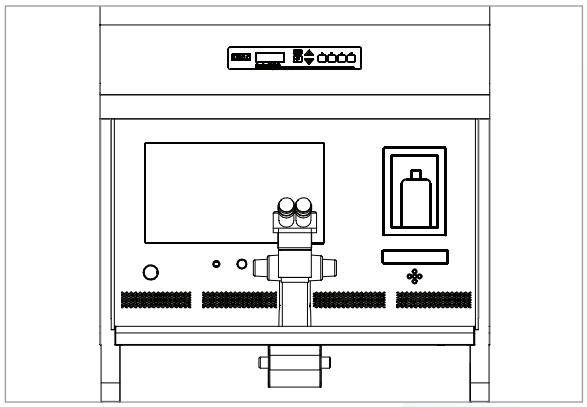
The MS-1 Stereomicroscope and IVF Workstations

The Multi-Zone ART Workstations (MAW) are IVF workstations with controlled temperature and humidity working environment. These workstations are intended for working with gametes and / or embryos at / or near body temperature in a multi-zone heated set-up during in vitro fertilization (IVF) / assisted reproductive technology (ART) treatments.

The Multi-Zone ART Workstations are even better with its integrated MIRI® chambers to further secure the embryos while inside the workstation. The MIRI® incubator is popular for its top-notch features such as stable culture environment and faster parameter recovery. Also, these workstations have a provision for one's microscope of choice like the MS-1 Stereomicroscope.

Multi-Zone ART Workstations

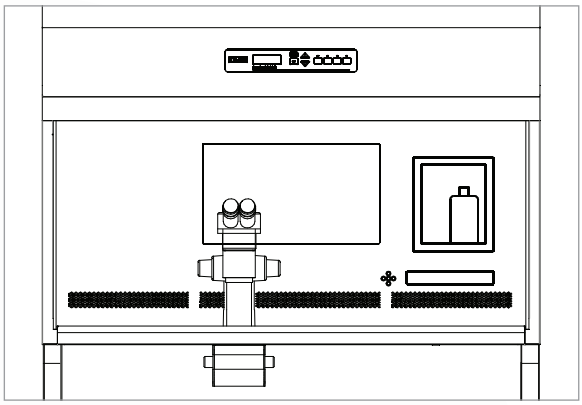
MAW-3D8



- Width: 3 Feet
- Microscope: Single
- Basic Configuration
- Accomodates 1 user
- Ideal for small laboratories

MAW-4D_

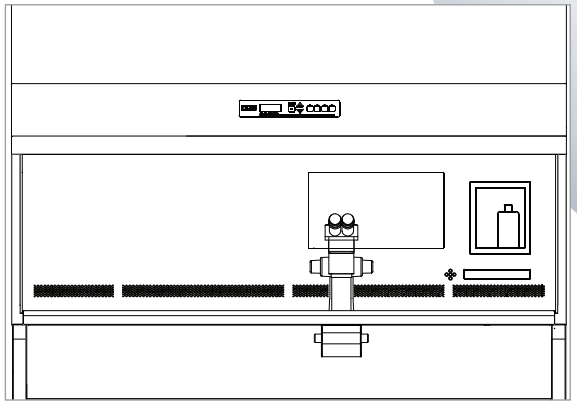
(Front View)



- Width: 4ft
- Microscope: Single
- Basic Configuration
- Accomodates 1 user
- Ideal for small Laboratories

MAW-6D_MONO

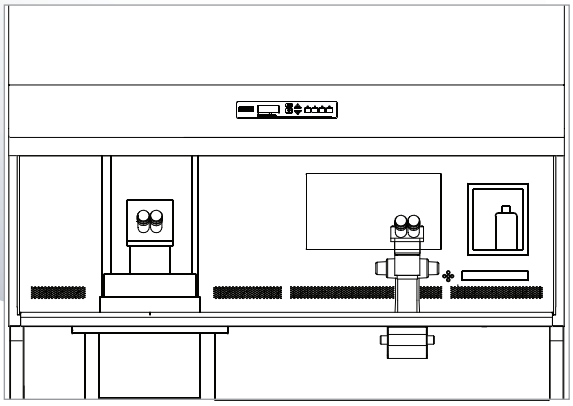
(Front View)



- Width: 6ft
- Microscope: Single
- Accomodates 1 user
- For users that require additional workspace

MAW-6D_-MP

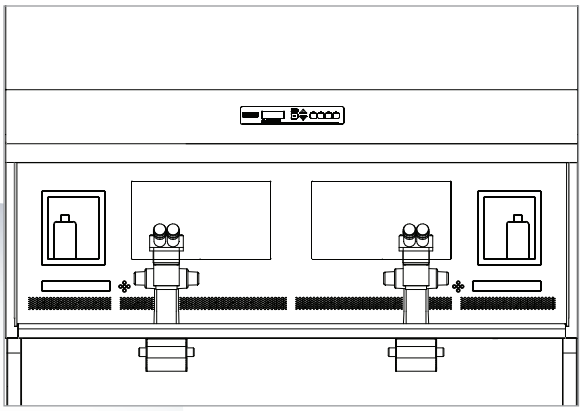
(Front View)



- Width: 6ft
- Microscope: Single 1 Stereomicroscope, with the ability to integrate 1 inverted microscope.
- Multi-purpose - ideal for embryo inspection and micromanipulation.
- Accomodates 2 users

MAW-6D_-DUAL

(Front View)

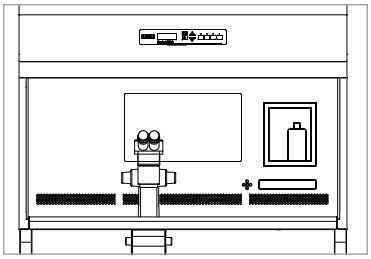


- Width: 6ft
- Microscope: Dual
- Accomodates 2 users
- For those who want to use all available area of the workspace

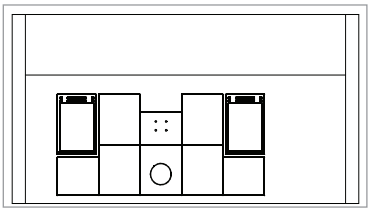
Available in a variety of sizes and configurations to meet the needs of the laboratory

MAW-4D_-MC

(Front View)



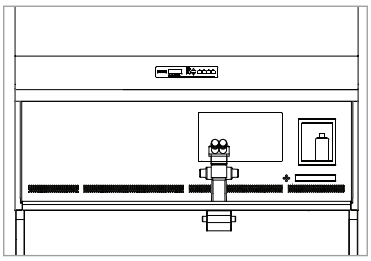
(Worktop View)



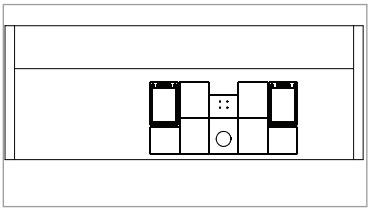
- Width: 4ft
- Microscope: Single
- Accomodates 1 user
- Ideal for small Laboratories
- Basic Configuration with 2 MIRI® Chambers

MAW-6D_-MONO-MC

(Front View)



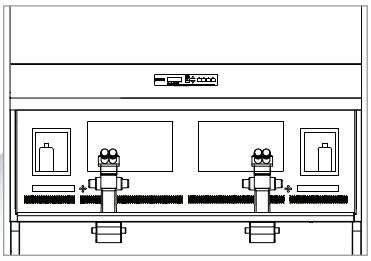
(Worktop View)



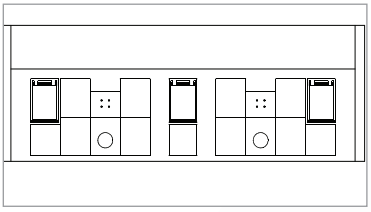
- Width: 6ft
- Microscope: Single
- Accomodates 1 user
- For users that require additional workspace
- Basic Configuration with 2 MIRI® Chambers

MAW-6D_-DUAL-MC

(Front View)



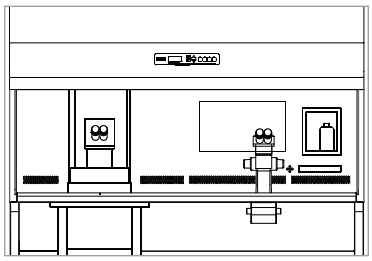
(Worktop View)



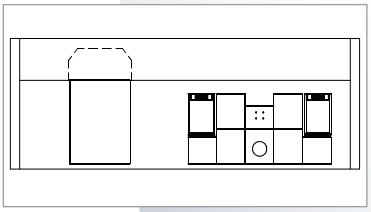
- Width: 6ft
- Microscope: Dual
- Accomodates 2 users
- Basic Configuration with 3 MIRI® Chambers
- For those who want to use all available area of the workspace

MAW-6D_-MP-MC

(Front View)



(Worktop View)



- Width: 6ft
- Microscope: Single
- Stereomicroscope, 1 Inverted microscope set-up
- Accomodates 2 users
- Multi-purpose-ideal for embryo inspection and micromanipulation
- Basic Configuration with 2 MIRI® Chambers

General Specifications

Multi-Zone ART Workstations

Model	MAW-3D8	MAW-4D_	MAW-6D_-MONO	MAW-6D_-DUAL	MAW-6D_-MP
Nominal Size	0.9 meter (3')	1.2 meter (4")	1.8 meter (6")		
Internal Work area dimensions (W x D x H)*	950 x 500 x 710 mm (37.4" x 19.7" x 28.0")	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 490 x 780 mm (73.6" x 19.3" x 30.7")
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				
Pre-filter	Disposable and non-washable polyester fibers with 85% arrestance / EU3 rated				
Noise level (per NSF 49)**	47 dBa	47 dBa	52 dBa		
Set of (9+1) Heating Zones	(7+1) Heating Zone	1 set	1 set	2 sets	1 set
Surveillance System with data logger	1 set	1 set	1 set	2 sets	1 set
Humidification System***	1 set	1 set	1 set	2 sets	1 set
PT 1000 ports	5 ports	5 ports	5 ports	10 ports	5 ports
Microscope	Required, Not included (see microscope ordering information)				
	Position for 1 stereo microscope			Position for 2 stereo microscopes	Position for 1 stereo microscope and 1 inverted microscope
Transmitted Light Source	1 set	1 set	1 set	2 sets	1 set
Operating altitude	Up to 2000 meters (6560 feet or 89kPa – 106kPa)				
Shipping weight	195 kg	250 kg	350 kg		

** The actual MAW-6D_-MP's work area dimension will be customized to fit the inverted microscope.*
*** Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3-4 dBA above these values.*
****1 set of humidification system includes one (1) water bottle with tubing, one (1) sample carry tray and one (1) plastic cover.*

Multi-Zone ART Workstations with MIRI® Chambers

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 (73.6" x 19.7" x 28.0")	1870 x 490 x 780 mm (73.6" x 19.3" x 30.7")
External dimensions w/o support stand (W x D x H)		1340 x 640 x 1400 mm (52.8" x 25.2" x 55.1")	1950 x 640 x 1400 mm (76.8" x 25.2" x 55.1")	1950 x 640 x 1400 mm (76.8" x 25.2" x 55.1"	1950 x 647 x 1460 mm (76.8" x 25.4" x 57.5")
External Dimensions w/ "B" type support stand (W x D x H)		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 epoxy-polyester powder-coated finish.			
	Work Zone	1.2 mm (0.05") 18 gauge stainless steel, grade 304			
	Side Walls	Tempered Glass (Optional: Polycarbonate sash for MAW with built-in UV light)			
	Sash				
Laminar Air Velocity		Average of 0.21m/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			
Noise Level (as per IEST)		47 dBA	52 dBA		
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-1, including tubing 2 x heating optimization plate	1 x water bottle for HS-1, including tubing 2 x heating optimization plate	2 x water bottle for HS-1, including tubing 3 x heating optimization plate	1 x water bottle for HS-1, including tubing 2 x heating optimization plate
Microscope		Required, Not included (see microscope ordering information)			
		Position for 1 stereo microscope	Position for 1 stereo microscope	Position for 2 stereo microscopes	Position for 1 microscope and 1 inverted microscope
Support stand		Required, Not included (see support stand ordering information)			
Gas sample ports		1 IN / 1 OUT			
Operating altitude		Up to 2000 meters (6560 feet or 89kPa – 106kPa)			

Stereomicroscope MS-1

Overall Dimensions (W x D x H)	250 x 250 x 240 mm (9.8" x 9.8" x 9.4")
Net Weight	4.5kg
Type of Light Source	Makes use of a light source integrated into a laminar table Note that an external LED ring could be used, mounted on a microscope (voltage is 110 – 220 V)
Camera Compatibility	Microscope can come with or without camera. Most important camera needs to be C-mounted. The recommended camera is IDS model UI-3880LE-C-HQ.

Ordering Information

Item Code	Model Code	Description
Esco Multi-Zone ART Workstation Basic Configuration and Multi-Purpose		
2070177	MAW-3D8	Esco Multi-Zone ART Workstation, 3ft 3ft (0.91m), 230V 50/60Hz
2070017	MAW-4D8	Esco Multi-Zone ART Workstation, 4ft (1.2m), 230V 50/60Hz
2070025	MAW-4D9	Esco Multi-Zone ART Workstation, 4ft (1.2m), 115V 50/60Hz
2070018	MAW-6D8-MONO	Esco Multi-Zone ART Workstation, 6ft (1.8m), 230V 50/60Hz
2070026	MAW-6D9-MONO	Esco Multi-Zone ART Workstation, 6ft (1.8m), 115V 50/60Hz
2070050	MAW-6D8-DUAL	Esco Multi-Zone ART Workstation, Double Heated Zone, 6ft (1.8m), 230V 50/60Hz
2070039	MAW-6D9-DUAL	Esco Multi-Zone ART Workstation, Double Heated Zone, 6ft (1.8m), 115V 50/60Hz
2070036	MAW-6D8-MP	Esco Multi-Zone ART Workstation, Multi-Purpose, 6ft (1.8m), 230V 50/60Hz
2070038	MAW-6D9-MP	Esco Multi-Zone ART Workstation, Multi-Purpose, 6ft (1.8m), 115V 50/60Hz
Esco ART Workstation with MIRI® Chambers		
2070068	MAW-4D8-MC	Esco Multi-Zone ART Workstation, MIRI® Chambers, 4ft (1.2m), 230V 50/60Hz
2070070	MAW-4D9-MC	Esco Multi-Zone ART Workstation, MIRI® Chambers, 4ft (1.2m), 115V 50/60Hz
2070069	MAW-6D8-MONO-MC	Esco Multi-Zone ART Workstation, MIRI® Chambers, 6ft (1.8m), 230V 50/60Hz
2070071	MAW-6D9-MONO-MC	Esco Multi-Zone ART Workstation, MIRI® Chambers, 6ft (1.8m), 115V 50/60Hz
2070075	MAW-6D8-DUAL-MC	Esco Multi-Zone ART Workstation, Double Heated Zone, MIRI® Chambers, 6ft (1.8m), 230V 50/60Hz
2070074	MAW-6D9-DUAL-MC	Esco Multi-Zone ART Workstation, Double Heated Zone, MIRI® Chambers, 6ft (1.8m), 115V 50/60Hz
2070072	MAW-6D8-MP-MC	Esco Multi-Zone ART Workstation, Multi-Purpose, MIRI® Chambers, 6ft (1.8m), 230V 50/60Hz
2070073	MAW-6D9-MP-MC	Esco Multi-Zone ART Workstation, Multi-Purpose, MIRI® Chambers, 6ft (1.8m), 115V 50/60Hz
ART Workstation with MIRI® Chambers and Trigas Mixer		
2070187	MAW-4D8-MC-G	Esco Multi-Zone ART Workstation, MIRI® Chambers, Gas Mixer, 4ft (1.2m), 230V 50/60Hz
2070188	MAW-4D9-MC-G	Esco Multi-Zone ART Workstation, MIRI® Chambers, Gas Mixer, 4ft (1.2m), 115V 50/60Hz
2070189	MAW-6D8-MONO-MC-G	Esco Multi-Zone ART Workstation, MIRI® Chambers, Gas Mixer, 6ft (1.8m), 230V 50/60Hz
2070190	MAW-6D9-MONO-MC-G	Esco Multi-Zone ART Workstation, MIRI® Chambers, Gas Mixer, 6ft (1.8m), 115V 50/60Hz
2070191	MAW-6D8-DUAL-MC-G	Esco Multi-Zone ART Workstation, Double Heated Zone, MIRI® Chambers, Gas Mixer, 6ft (1.8m), 230V 50/60Hz
2070192	MAW-6D9-DUAL-MC-G	Esco Multi-Zone ART Workstation, Double Heated Zone, MIRI® Chambers, Gas Mixer, 6ft (1.8m), 115V 50/60Hz
2070193	MAW-6D8-MP-MC-G	Esco Multi-Zone ART Workstation, Multi-Purpose, MIRI® Chambers, Gas Mixer, 6ft (1.8m), 230V 50/60Hz
2070194	MAW-6D9-MP-MC-G	Esco Multi-Zone ART Workstation, Multi-Purpose, MIRI® Chambers, Gas Mixer, 6ft (1.8m), 115V 50/60Hz
Stereomicroscope		
1320375	MS – I	Stereomicroscope

MIRI® Laminar Flow Cabinet

The MIRI® Laminar Flow Cabinet has been designed with the capability to maintain a controlled work surface for laboratory applications requiring a clean and sterile workspace, which is achieved through the use of vertical laminar airflow pattern. Clean filtered air travels from the top of the cabinet downwards onto the working surface.

Laminar flow cabinets are ideal to be used for our customers who requires a clean and sterile workspace to provide good protection towards the sample.

Key Features

- ULPA Filter (ISO Class 3 Work Zone)
- ISOCIDE™ Antimicrobial Powder Coating
- Built-in Monitor (optional)
- Integrated Microscope Pole (optional)
- Outstanding Sample Protection
- Energy Efficient
- Available Sizes: 3, 4, 5 and 6 ft

ULPA filter

ISOCIDE™

General Specifications

Model		MLF-3D_	MLF-4D_	MLF-5D_	MLF-6D_
Work Area Dimension (W x D x H)		965 x 635 x 710 mm (39.0" x 25.0" x 28.0")	1250 x 635 x 710 mm (49.2" x 25.0" x 28.0")	1570 x 635 x 710 mm (61.8" x 25.0" x 28.0")	1875 x 635 x 710 mm (73.8" x 25.0" x 28.0")
External Dimensions without Support Stand (W x D x H)		1035 x 760 x 1270 mm (40.7" x 29.9" x 50.0")	1340 x 760 x 1270 mm (52.8" x 29.9" x 50.0")	1640 x 760 x 1270 mm (64.6" x 29.9" x 50.0")	1965 x 760 x 1270 mm (77.4" x 29.9" x 50.0")
External Dimension with "STL" Type Support Stand (W x D x H)		1035 x 760 x 1980 mm (40.7" x 29.9" x 78.0")	1340 x 760 x 1980 mm (52.8" x 29.9" x 78.0")	1640 x 760 x 1980 mm (64.6" x 29.9" x 78.0")	1965 x 760 x 1980 mm (77.4" x 29.9" x 78.0")
Cabinet Construction	Main Body	1.2 mm (0.05") 18-gauge electro-galvanized steel with white oven baked epoxy-polyester powder coated finish			
	Work Zone	1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish			
	Side Walls	UV-absorbing tempered glass 5mm (0.2"), colourless and transparent			
	Sash				
Power Supply	MLF-_D8	220-240V, 50/60Hz			
	MLF-_D9	110-130V, 50/60Hz			
Motor Type		ECM Motor			
Pre-Filter		Disposable and non-washable 100% polyester fiber with 85% arrestance, EU-3 rated			
Filter Efficiency		HEPA/ULPA filtration with 99.9995% efficiency			
ISO Classification		ISO Class 3			
Noise Level Reading*		≤48 dB(A)*			
Control System		Esco Sentinel™ Gold Microprocessor Controller			
Microscope Pole Provision		Position for 1 microscope			
Transmitted Light Source		1 set			
Advanced Option		Touchscreen Monitor**			

*Noise reading in open field condition/ anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3-4 dBA above these values.
** Monitoring screen system comes as accessory, you are required to specify in your quotation

Ordering Information

Item Code	Model Code	Description
Cabinet with Lightsource		
2070217	MLF-3D8 w/LS	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 220-240V, 50/60Hz
2070220	MLF-3D9 w/LS	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 110-130V, 50-60Hz
2070218	MLF-4D8 w/LS	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 220-240V, 50/60Hz
2070221	MLF-4D9 w/LS	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 110-130V, 50-60Hz
2070182	MLF-5D8 w/LS	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 220-240V, 50/60Hz
2070222	MLF-5D9 w/LS	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 110-130V, 50-60Hz
2070219	MLF-6D8 w/LS	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 220-240V, 50/60Hz
2070236	MLF-6D9 w/LS	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 110-130V, 50-60Hz
2070238	MLF-3D8-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 220-240V, 50/60Hz with screen monitor integration
2070242	MLF-3D9-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 110-130V, 50-60Hz with screen monitor integration
2070239	MLF-4D8-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 220-240V, 50/60Hz with screen monitor integration
2070243	MLF-4D9-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 110-130V, 50-60Hz with screen monitor integration
2070240	MLF-5D8-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 220-240V, 50/60Hz with screen monitor integration
2070244	MLF-5D9-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 110-130V, 50-60Hz with screen monitor integration
2070241	MLF-6D8-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 220-240V, 50/60Hz with screen monitor integration
2070245	MLF-6D9-MON w/LS	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 110-130V, 50-60Hz with screen monitor integration
Cabinet without Lightsource		
2070255	MLF-3D8	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 220-240V, 50/60Hz
2070259	MLF-3D9	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 110-130V, 50-60Hz
2070256	MLF-4D8	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 220-240V, 50/60Hz
2070260	MLF-4D9	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 110-130V, 50-60Hz
2070257	MLF-5D8	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 220-240V, 50/60Hz
2070261	MLF-5D9	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 110-130V, 50-60Hz
2070258	MLF-6D8	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 220-240V, 50/60Hz
2070262	MLF-6D9	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 110-130V, 50-60Hz
2070247	MLF-3D8-MON	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 220-240V, 50/60Hz with screen monitor integration
2070251	MLF-3D9-MON	Esco MIRI® Laminar Flow Cabinet, 3ft (0.9 meter), 110-130V, 50-60Hz with screen monitor integration
2070248	MLF-4D8-MON	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 220-240V, 50/60Hz with screen monitor integration
2070252	MLF-4D9-MON	Esco MIRI® Laminar Flow Cabinet, 4ft (1.2 meter), 110-130V, 50-60Hz with screen monitor integration
2070249	MLF-5D8-MON	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 220-240V, 50/60Hz with screen monitor integration
2070253	MLF-5D9-MON	Esco MIRI® Laminar Flow Cabinet, 5ft (1.5 meter), 110-130V, 50-60Hz with screen monitor integration
2070250	MLF-6D8-MON	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 220-240V, 50/60Hz with screen monitor integration
2070254	MLF-6D9-MON	Esco MIRI® Laminar Flow Cabinet, 6ft (1.8 meter), 110-130V, 50-60Hz with screen monitor integration

MIRI® Anti-Vibration Table

The MIRI® AVT (Anti-Vibration Table) features an anti-vibration mechanism for passive dampening of the microscope. This is mainly used for micromanipulation procedures like 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. MIRI® AVT is constructed to be easy-to-use and almost maintenance-free.

Key Features

- Anti-vibration mechanism for passive dampening.
- Sturdy frame.
- Stainless-steel table-top.
- MIRI® AVT is able to eliminate vibrations in the range of 1-100 Hz.

General Specifications

Technical Specifications	MIRI® AVT
Overall Dimensions (W x D x H)	1200 x 800 x 785 mm (47.2 x 31.5 x 31”)
Net weight	117 kg (258 lbs)
Material	Powder-painted mild steel/Stainless steel
Float Size (W x D)	540 x 340 mm (21.3 x 13.4”)
Recommended load weight	15 – 75 kg
Damping coefficient (6 Hz)	~ 0.1
Amplitude (6 Hz)	< 1 µm
Vibration Criteria	VC-C*
Frequency Range of Isolation	1 Hz – 100 Hz
Vertical Natural Frequency	1.5 Hz – 3 Hz
Horizontal Natural Frequency	1 Hz – 2 Hz
Damping Ratio	0.1 – 0.3

*VC-C: More sensitive equipment (12.5 µm/s). A good standard for lithography and inspection equipment down to 1 micron detail size.

Ordering Information

Item Code	Model Code	Description
1320484	MIRI® AVT	Anti-Vibration Table MIRI® AVT

Versati™ Tabletop Centrifuge

Overview

Versati™ Tabletop centrifuge stands out among the same-level products with its versatility, running features, and easy handling. It can be used with high-capacity and low-to-high-speed general-purpose centrifuge applications. It is suitable for sperm preparation for human and animal IVF.

Key Features

- Compact Design.
- Incredible Flexibility.
- Overspeed Protection.

Model: TCV-1500

- Maintenance-free brushless motor.
- Superior safety (Automatic rotor recognition).
- Audible and visible alarms.
- Capacity of up to 1500 ml.

Accessories

Fixed-angle Rotor

- Mainly for hospital use in centrifugation of urine and blood.
- Rotor and adapters are autoclavable (maximum of 121°C, 20 minutes).
- Can be used for Sperm Preparation for Human and Animal IVF.

Ordering Information

Item Code	Model Code	Description
2220005	TCV-1500-8	Tabletop Centrifuge Ventilated 230 VAC, 50/60 Hz
2220006	TCV-1500-9	Tabletop Centrifuge Ventilated 120 VAC, 50/60 Hz

Guide to Models

TCV - 1500 - 8

Model	Code	Centrifuge Capacity	Code	Electrical Supply	Code
Tabletop Centrifuge Ventilated	TCV	Maximum Sample Capacity (ml)	1500	230 VAC 50/60 Hz	8
				120 VAC 50/60 Hz	9
Tabletop Centrifuge Refrigerated	TCR			230 VAC 50/60 Hz	8
				120 VAC 50/60 Hz	9

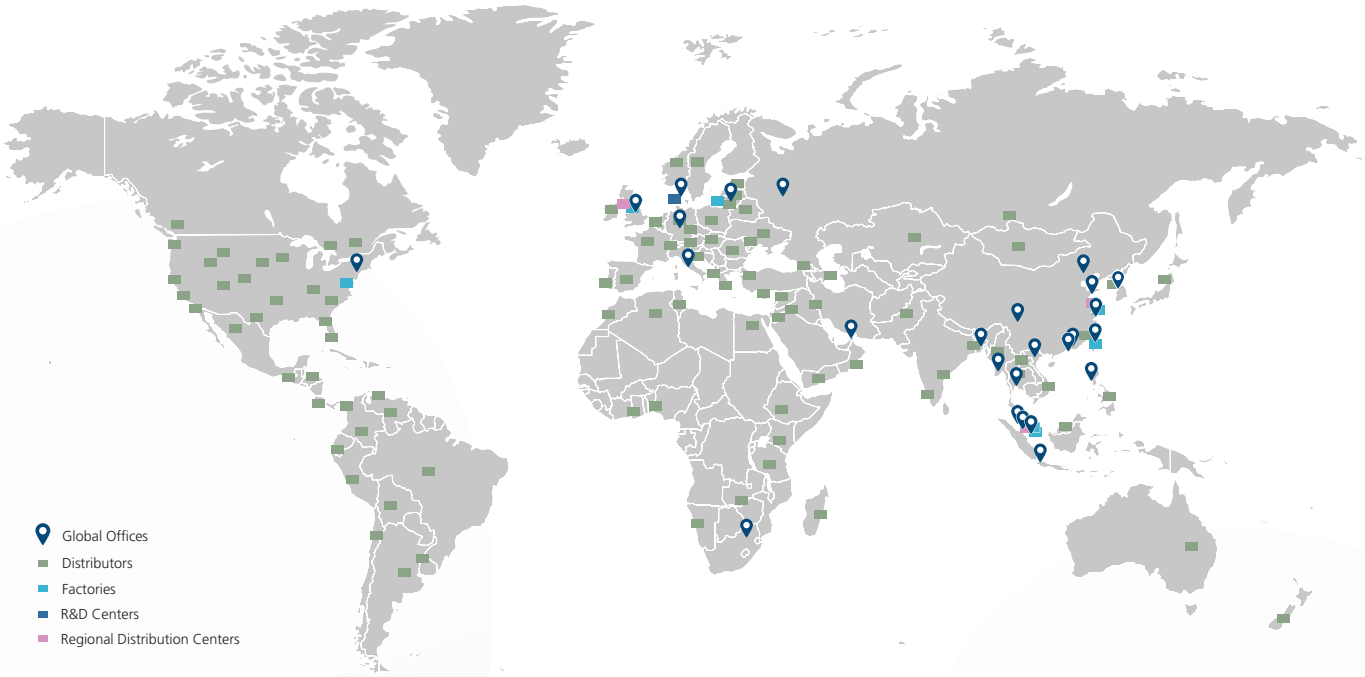
TCV / TCR High Speed Tabletop Centrifuge for up to 16,000 rpm

Ideal for multi-purpose centrifugation at high-speed.

Model Code	Item Code	Description
TCV-1500-8	2220005	Tabletop Centrifuge Ventilated 230 VAC, 50/60 Hz
TCV-1500-9	2220006	Tabletop Centrifuge Ventilated 120 VAC, 50/60 Hz

Contact Esco or your local Sales Representative for ordering information

ESCO LIFESCIENCES GROUP



Esco Medical Products:

MIRI® Multiroom Incubator
MIRI® Humidity Multiroom Incubator
MIRI® II-12 Multiroom Incubator
Mini MIRI® Dry Multiroom Incubator
Mini MIRI® Humidity Multiroom Incubator
MIRI® TL6 Time-Lapse Incubator
MIRI® TL12 Time-Lapse Incubator
Multi-Zone ART Workstation
MIRI® Laminar Flow Cabinet
MIRI® Evidence RFID Witnessing & 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.

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