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## Fertilisafe™ Multi-Zone ART Workstation



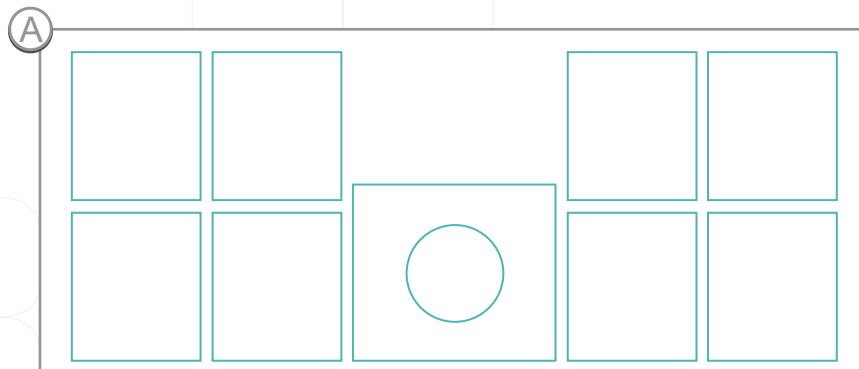
Designed in Denmark



# Fertilisafe™ Multi-zone Workstation

is at the top of its class with a complete set of advanced features:

## Next-generation Multi-Zone (9+1) temperature regulation for ART



### Multi-Zone Heating System

This is the most advanced system that helps embryologist in their daily work. 1 set point, 10 independent zones with their own heating elements and sensors allow excellent uniformity

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

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

### Smart Power Injection

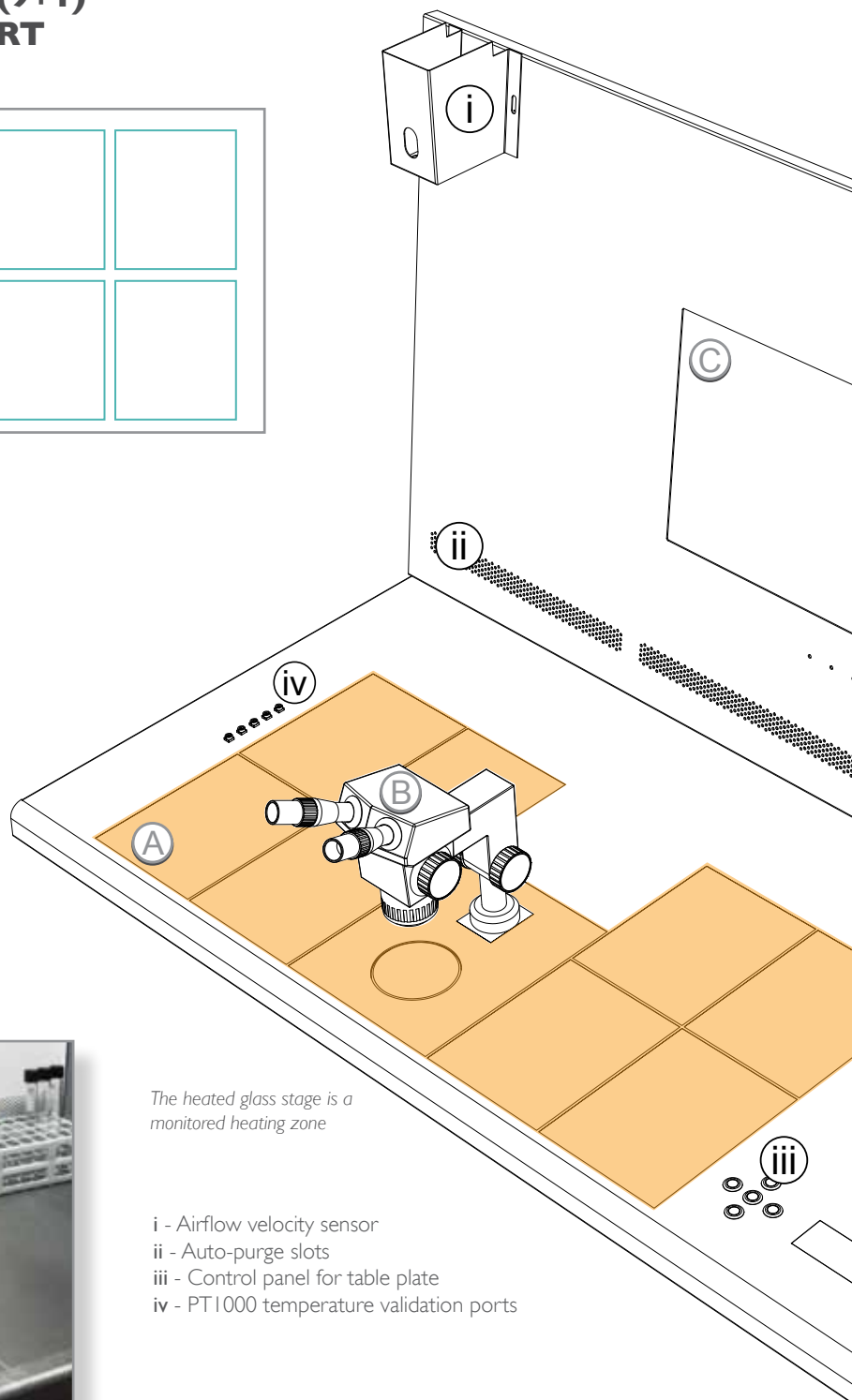
The heating system will automatically prioritize power distribution. This ensures effective temperature control with fast recovery.

Note: Zone 4 (warmed glass stage) has dedicated and uninterrupted power supply to further enhance the temperature control and recovery in this zone.



### Microscope Integration Provision

Having an integrated stereomicroscope in the work chamber make it possible to keep the culture dishes at the right temperature at all times while observation and manipulation is carried out. Fewer movement steps will also reduce risk of accidents.



The heated glass stage is a monitored heating zone

- i - Airflow velocity sensor
- ii - Auto-purge slots
- iii - Control panel for table plate
- iv - PT1000 temperature validation ports



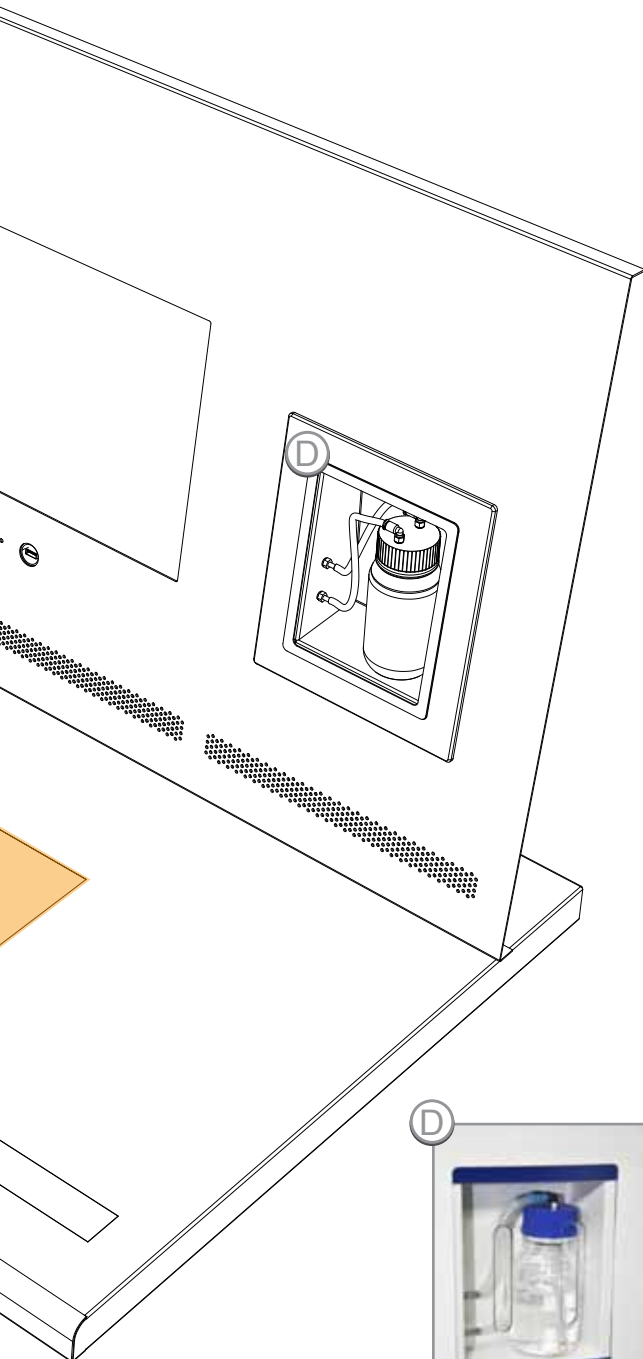
PT1000 temperature validation ports



SC-I Light Source

### C1 Surveillance System

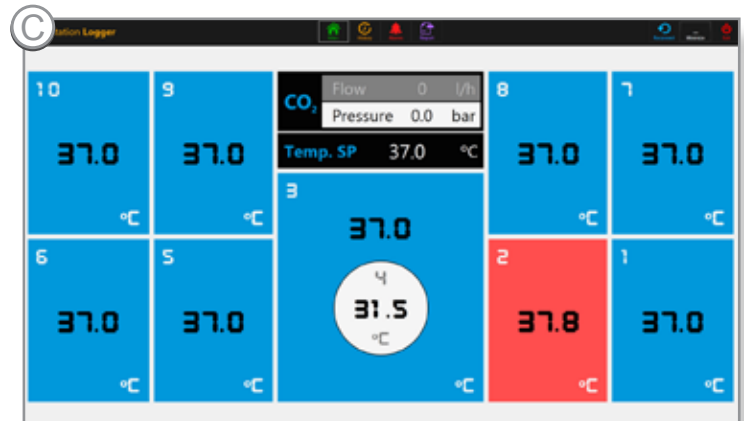
provides the user real-time information of zone performance and other work area parameters such as gas pressure and flow rate.



### C2 Touchscreen Monitor

The touchscreen monitor is a fully functional Windows PC. It has WiFi and a USB port. Thus, it has many other uses:

- Microscope camera function to record and observe culture behavior in real time.
- Teleconference calls with colleagues in other sites for real time collaborative work (note: webcam is not supplied)



### Humidification System

With digital flow control of pre-mixed gas. Enables complete environment control of samples. Gas outlet port is located on the table surface and the plastic cover will enclose the humidified gas effectively and therefore creates small "incubator".

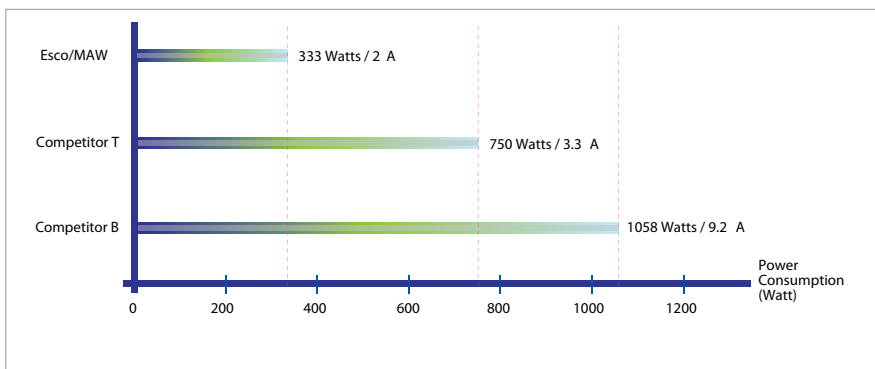
“Hand-in-hand in achieving high fertility success rates.”



Advanced workstation specifically designed for Assisted Reproductive Technology (ART) such as gamete or embryo manipulation during IVF.

High-tech components and features are designed in Denmark and made in Esco's production facilities in Europe.

The workstation keeps true to Esco's world class expertise and quality in cleanroom technology.



### Energy Efficiency Chart

Esco ART workstations utilize extremely efficient EC fans, allowing exceedingly low levels of cabinet power consumption that is unparalleled in the industry.

The result is greater cost-saving for the user without compromising cabinet performance.

It also has Night Setback mode to further reduce power consumption.

Air Cleanliness Standards (ISO 14644.1, Air Cleanliness Particle Limits) (No. of Particles / m <sup>3</sup> )						
Particle Size (µm)	Cleanliness Class					
	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
0.1	10	100	1000	10000	100000	1000000
0.2	2	24	237	2370	23700	237000
0.3	1	10	102	1020	10200	102000
0.5	-	4	35	352	3520	35200
1.0	-	-	8	83	832	8320
5.0	-	-	-	3	29	293

### Superior Air Cleanliness

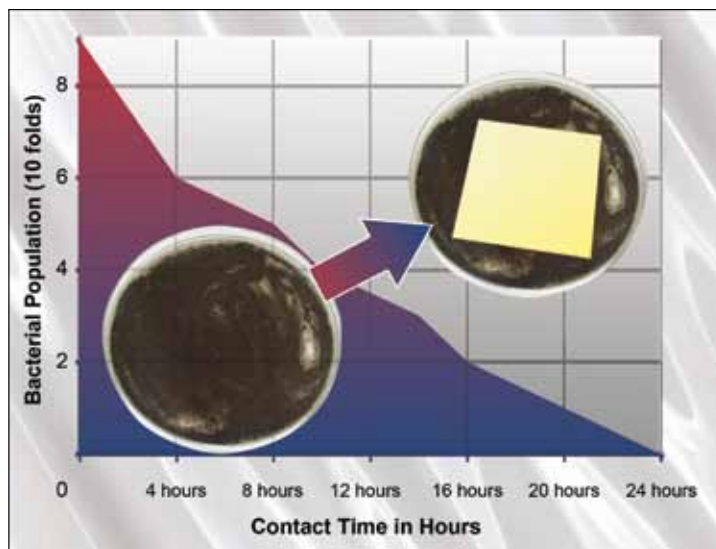
Esco cabinets provide ISO Class 3 air cleanliness within the workzone as per ISO 14644.1, significantly cleaner than the conventional Class 4 classification offered by the competition.



# Fertilisafe™

## Multi-zone ART Workstation

- Vertical laminar airflow providing sample protection
- Low noise energy-efficient EC fans
- Low vibration resulting from built-in dampers
- Provision for integration of most common microscopes
- Integrated heated glass stage
- Integrated SC-1 light source with dual-sided mirror and intensity control knob
- Selection of cabinet support stands
- Selection between 4ft. (single) and 6ft. (single, dual or MP) models



### Isocide™ Powder Coat

- Silver-ion impregnated powder coat.
- Inhibit microbial growth to improve safety



### Low Noise, Low Vibration

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

- 2x smaller high-efficiency EC fans create lower noise and vibration than 1 big blower fan.
- Passive dampers located along the connection of the tableplate to the cabinet frame effectively dampen vibrations.

# Fertilisafe ART Workstation (MAW) Technical Specifications

**MAW-4D\_**

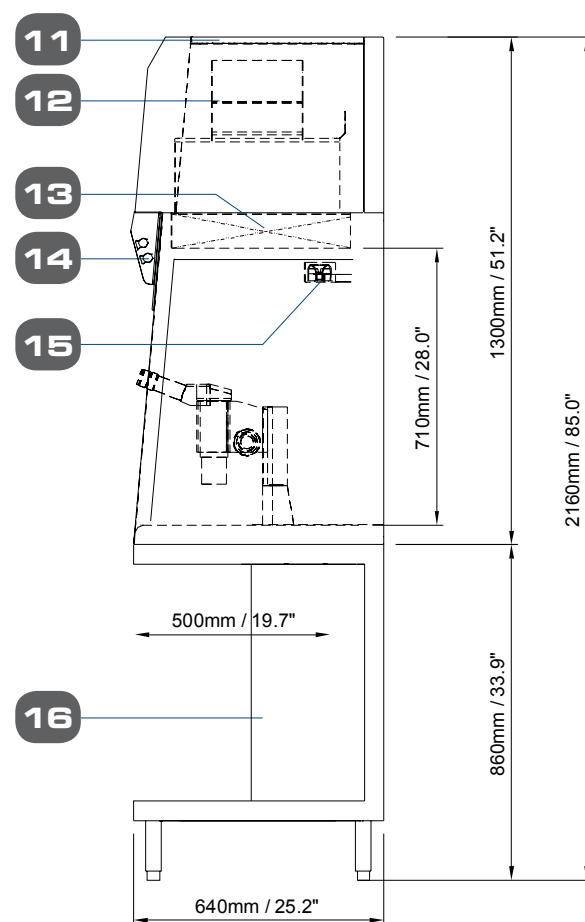
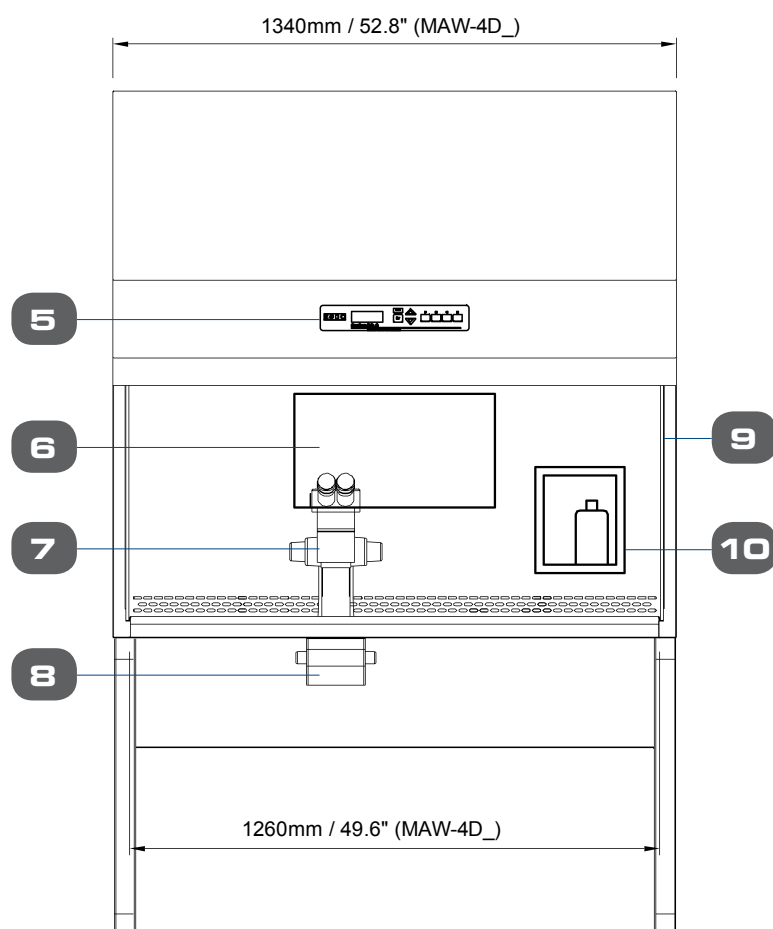
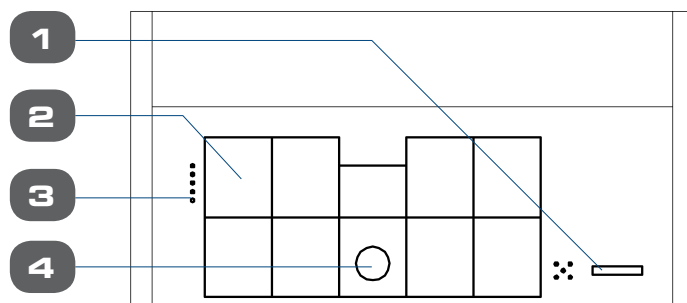
Width: 4Ft

Microscope: Single

Basic Configuration

1 user

For small Laboratories



1. Control Panel for Heated Table Top And Humidification System
2. Multi-Zone Heated Table Top (9+1 Zones)
3. PT1000 Temperature Validation Ports
4. Intergrated Heated Glass Storage
5. Esco Sentinel™ Gold Microprocessor Control System

6. Touchscreen Monitor (AIO PC)
7. Provision for Microscope
8. Integrated Light Source, SC-1
9. Side Tempered Glass
10. Humidification System with Digital Flow Control of Pre-mixed gas

11. Pre-Filter
12. Blower
13. ULPA Filter
14. Flourescent Light
15. Airflow Sensor
16. Support Stand (Model: SML-4B0)

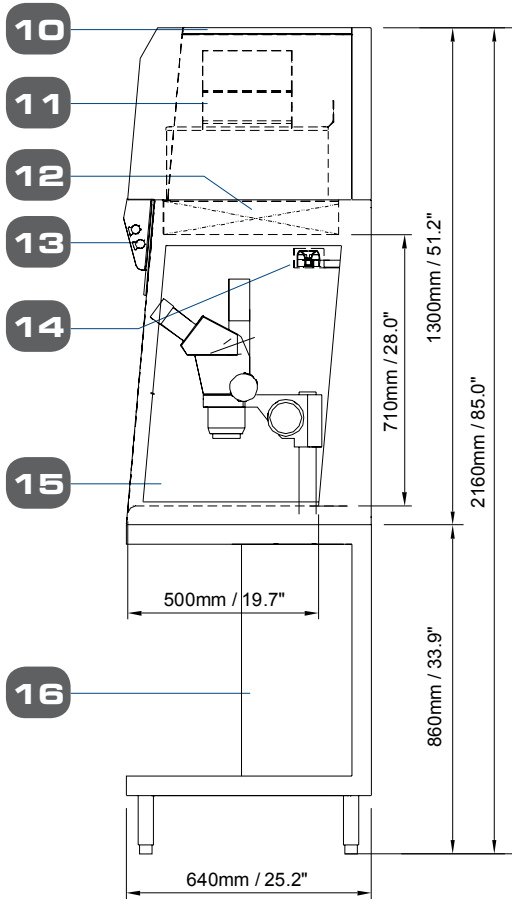
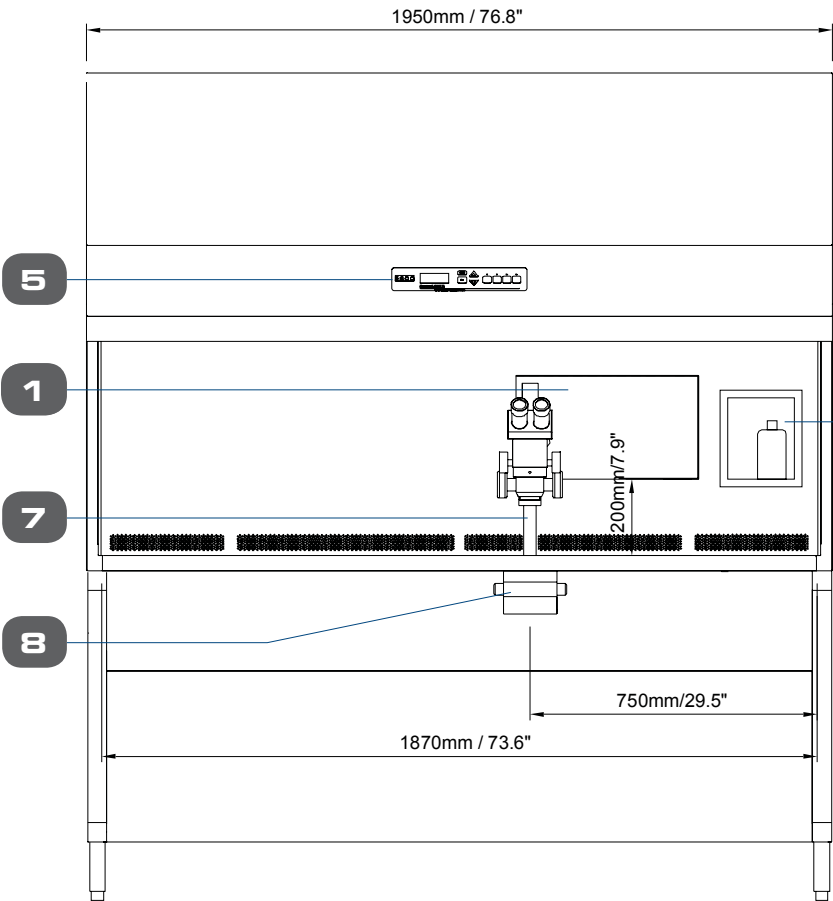
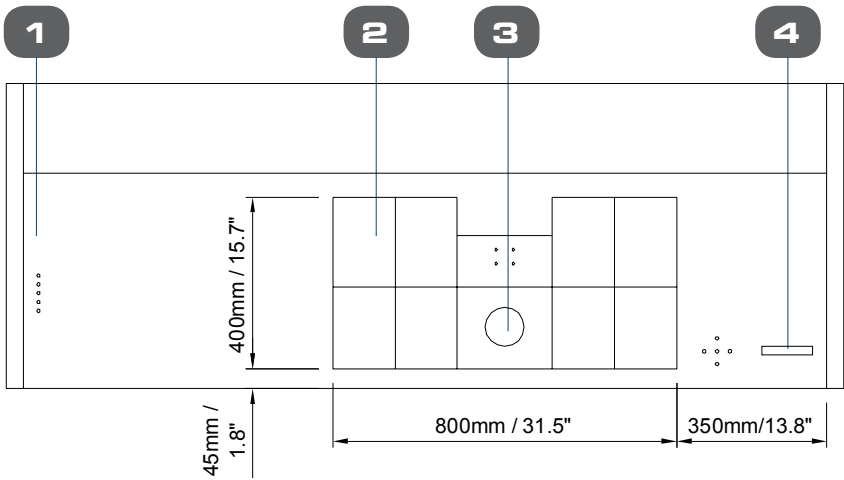
MAW-6D\_

Width: 6Ft

Microscope: Single

1 user

More space for other work



- |   |   |                                    |
|---|---|------------------------------------|
| 1. PT1000 Temperature Validation Ports                                  | 6. Touchscreen Monitor (AIO PC)                                     | 11. Blower                         |
| 2. Multi-Zone Heated Table Top (9+1 Zones)                              | 7. Provision for Microscope (Microscope not included)               | 12. ULPA Filter                    |
| 3. Integrated Heated Glass Stage  | 8. Integrated Light Source, SC-1                                    | 13. Fluorescent Light              |
| 4. Display Control Panel for Heated Table Top and Humidification System | 9. Humidification System with Digital Flow Control of Pre-mixed gas | 14. Airflow Sensor                 |
| 5. Esco Sentinel™ Gold Microprocessor Control System                    | 10. Pre-Filter  | 15. Side Tempered Glass            |
|   |   | 16. Support Stand (Model: SML-6B0) |

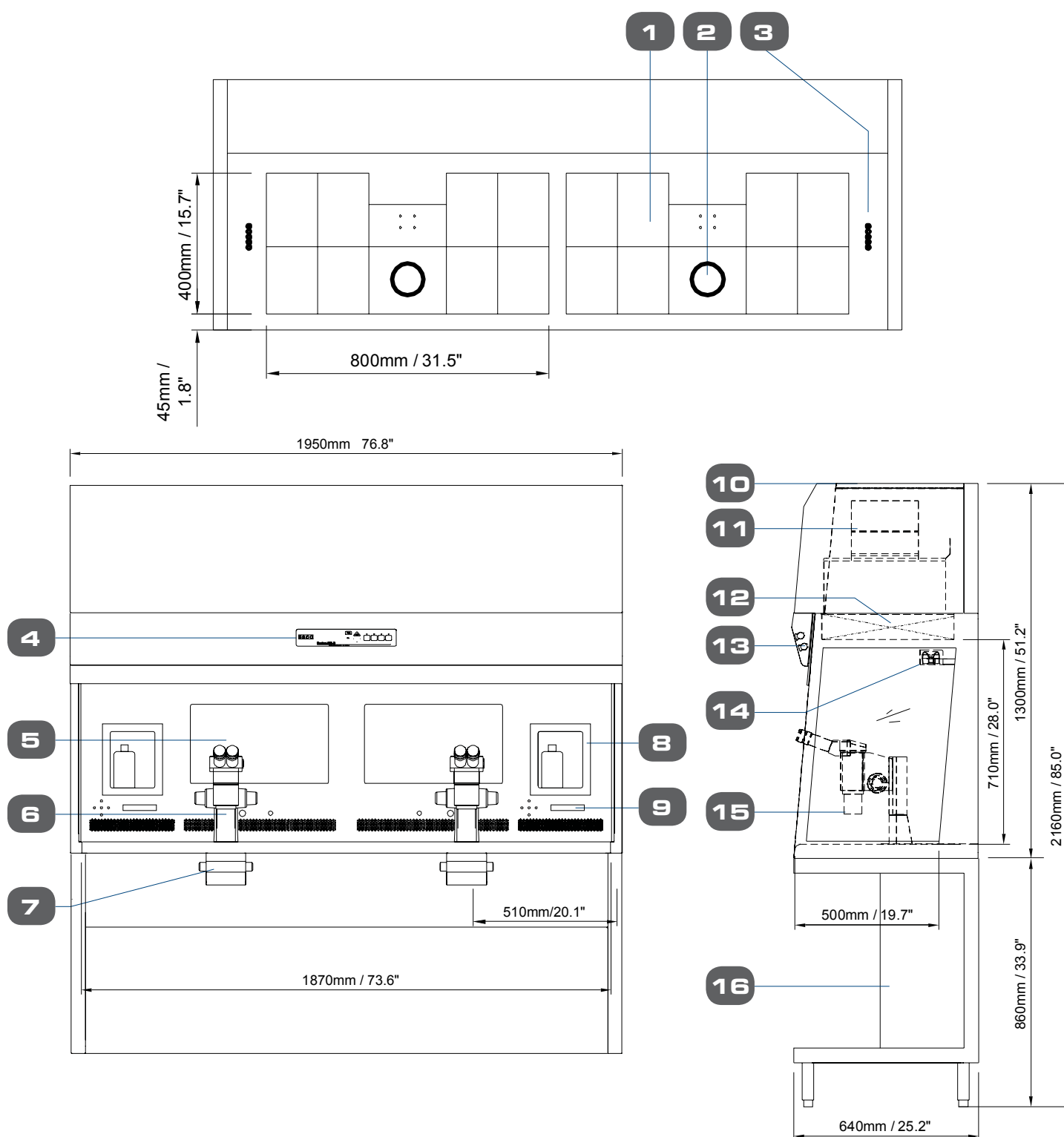
## MAW-6D\_-Dual

Width: 6Ft

Microscope: Dual

2 users

For efficient use of space



1. Multi-Zone Heated Table Top (9+1 Zones)
2. Integrated Heated Glass Stage
3. PT1000 Temperature Validation Ports
4. Esco Sentinel™ Gold Microprocessor Control System
5. Touchscreen Monitor (AIO PC)
6. Provision for Microscope (Microscope not included)

7. Integrated Light Source, SC-1
8. Humidification System with Digital Flow Control of Pre-mixed gas
9. Display Control Panel for Heated Table Top and Humidification System
10. Pre-Filter

11. Blower
12. ULPA Filter
13. Fluorescent Light
14. Airflow Sensor
15. Side Tempered Glass
16. Support Stand (Model: SML-6B0)

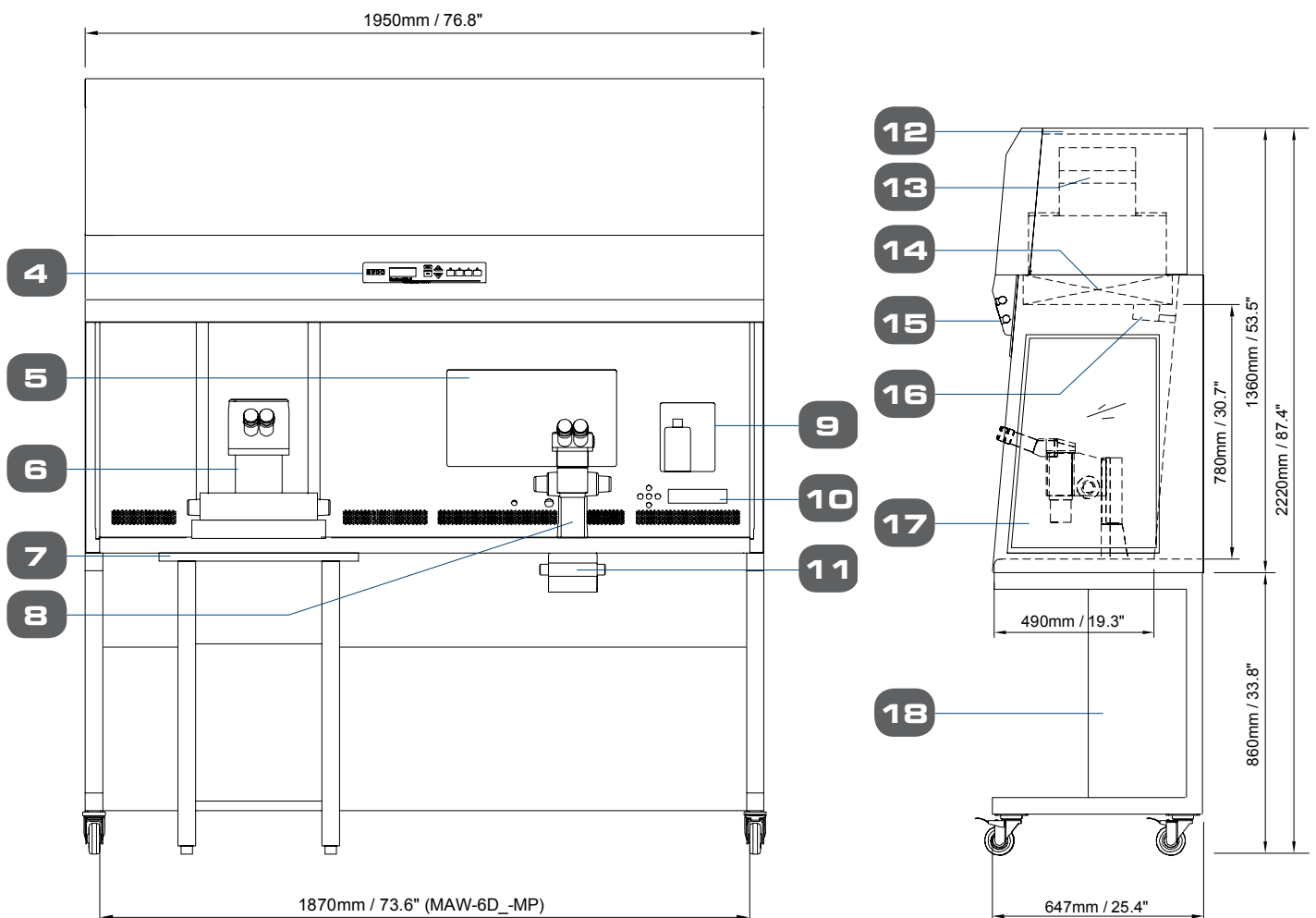
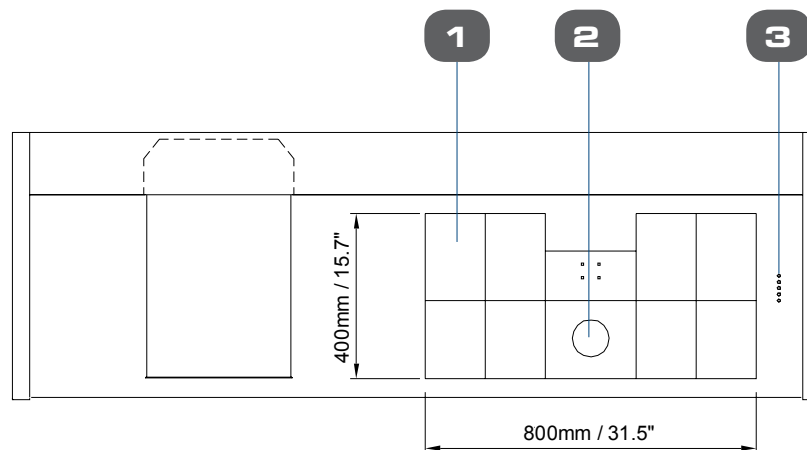


## MAW-6D\_-MP

Width: 6Ft

Microscope: 1 Stereomicroscope,  
1 Inverted microscope set-up

Multi-purpose  
Embryo inspection  
& micromanipulation



1. Multi-Zone Heated Table Top (9+1 Zones)
2. Integrated Heated Glass Stage
3. PT1000 Temperature Validation Ports
4. Esco Sentinel™ Gold Microprocessor Control System
5. Touchscreen Monitor (AIO PC)
6. Inverted Microscope (Not included)
7. Anti-Vibration Table (AVT)

8. Provision for Microscope
9. Humidification System with Digital Flow Control of Pre-mixed gas
10. Display Control Panel for Heated Table Top and Humidification System
11. Integrated Light Source, SC-1
12. Pre-Filter

13. Blower
14. ULPA Filter
15. Fluorescent Light
16. Airflow Sensor
17. Side Tempered Glass
18. Support Stand (Model: SPC-6B0)

## Ordering Information

CODE	DESCRIPTION
MAW-4D8	Esco Fertilisafe Multi-Zone ART Workstation, 4ft (1.2M), 220V 50/60Hz
MAW-4D9	Esco Fertilisafe Multi-Zone ART Workstation, 4ft (1.2M), 110V 50/60Hz
MAW-6D8	Esco Fertilisafe Multi-Zone ART Workstation, 6ft (1.8M), 220V 50/60Hz
MAW-6D9	Esco Fertilisafe Multi-Zone ART Workstation, 6ft (1.8M), 110V 50/60Hz
MAW-6D8-Dual	Esco Fertilisafe Multi-Zone ART Workstation, Double Heated Zone, 6ft (1.8M), 220V 50/60Hz
MAW-6D9-Dual	Esco Fertilisafe Multi-Zone ART Workstation, Double Heated Zone, 6ft (1.8M), 110V 50/60Hz
MAW-6D8-MP	Esco Fertilisafe Multi-Zone ART Workstation, Multi-Purpose, 6ft (1.8M), 220V 50/60Hz
MAW-6D9-MP	Esco Fertilisafe Multi-Zone ART Workstation, Multi-Purpose, 6ft (1.8M), 110V 50/60Hz

### RECOMMENDED LIST OF MICROSCOPES AND THE BASE STAND TYPES

INVERTED MICROSCOPE FOR MP SERIES WORKSTATION ONLY	STEREOMICROSCOPE PROVISIONS	
	MICROSCOPE TYPES	BASE STAND
Olympus IX83P1ZF: One-Deck	Esco Stereomicroscope MS-1	Standard
Olympus IX73P1F: One-Deck (Customization on workstation needed)	Nikon SMZ series	C-PS / C-PS160 / C-DSS
Olympus IX73P2F: Two-Decks	Olympus SZX series	SZX-ST / SZX2-ST/SZ2-ST
Olympus IX53P1F: One-Deck (Customization on workstation needed)	Carl Zeiss	Stand N / V8 with T-pillar
Nikon Ti-U	Leica	S8APO
Nikon Ti-S		
Nikon Ti-E		
Zeiss Axio Vert.A1		
Zeiss Axio Vert.A1 FL		
Zeiss Axio vert.A1 FL-LED		

SUPPORT STAND CODE	DESCRIPTION
SMC-4AO	Support Stand with Caster Wheels (Height 28") for 4ft Cabinets
SMC-6AO	Support Stand with Caster Wheels (Height 28") for 6ft Cabinets
SML-4AO	Support Stand with Leveling Feet (Height 28") for 4ft Cabinets
SML-6AO	Support Stand with Leveling Feet (Height 28") for 6ft Cabinets
SMC-4BO	Support Stand with Caster Wheels (Height 34") for 4ft Cabinets
SMC-6BO	Support Stand with Caster Wheels (Height 34") for 6ft Cabinets
SML-4BO	Support Stand with Leveling Feet (Height 34") for 4ft Cabinets
SML-6BO	Support Stand with Leveling Feet (Height 34") for 6ft Cabinets

For other models, please contact Esco for more information.

## General Specifications

SPECIFICATION	MAW-4D_	MAW-6D_	MAW-6D_-DUAL	MAW-6D_-MP
Work area dimensions (width x depth x height)	1260mm x 500mm x 710mm (49.6" x 19.7" x 28.0")	1870mm x 500mm x 710mm (76.8" x 19.7" x 28.0")		1870mm x 490mm x 780mm (76.8" x 19.3" x 30.7")
External dimensions without support stand (width x depth x height)	1340mm x 640mm x 1300mm (52.8" x 25.2" x 51.2")	1950mm 640mm x 1300mm (76.8" x 25.2" x 51.2")		1950mm 647mm x 1360mm (76.8" x 25.4" x 53.5")
External Dimensions with "B" type support stand (width x depth x height)	1340mm x 640mm x 2160mm (52.8" x 25.2" x 85.0")	1950mm 640mm x 2160mm (76.8" x 25.2" x 85.0")		1950mm 647mm x 2220mm (76.8" x 25.4" x 87.4")
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		
Pre-filter	Disposable and non-washable polyester fibers with 85% arrestance / EU3 rated			
Heating system	Smart power injection electrical heating, 9+1 zones		Smart power injection electrical heating 2 x (9 +1) zones	Smart power injection electrical heating, 9+1 zones
Included advanced features	Integrated humidification system HS-1 Surveillance system with data logger AIO PC Transmitted light source SC-1 (with bulb) 5 x PT1000 validation ports		2x Integrated humidification system HS-1 Surveillance system with data logger AIO PC 2 x Transmitted light source SC-1 (with bulb) 10 x PT1000 validation ports	Integrated humidification system HS-1 Surveillance system with data logger AIO PC Transmitted light source SC-1 (with bulb) 5 x PT1000 validation ports
Included accessories	1 x water bottle for HS-1, including tubing 1 x sample carry tray 1 x humidified gas plastic cover		2 x water bottle for HS-1, including tubing 2 x sample carry tray 2 x humidified gas plastic cover	1 x water bottle for HS-1, includ- ing tubing 1 x sample carry tray 1 x humidified gas plastic cover
Microscope	Required Not included (see microscope ordering information)			
	Position for 1 microscope		Position for 2 microscope	Position for 1 microscope and 1 inverted microscope
Support stand	Required, Not included (see support stand ordering information)			
Shipping dimensions (width x depth x height)	1420 x 720 x 1760 mm (55.9" x 28.3" x 69.3")	2100 x 820 x 1760 mm (82.7" x 32.3" x 69.3")		
Shipping weight	243 kg	340 kg		

\* 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.

### Indication for Use Statement:

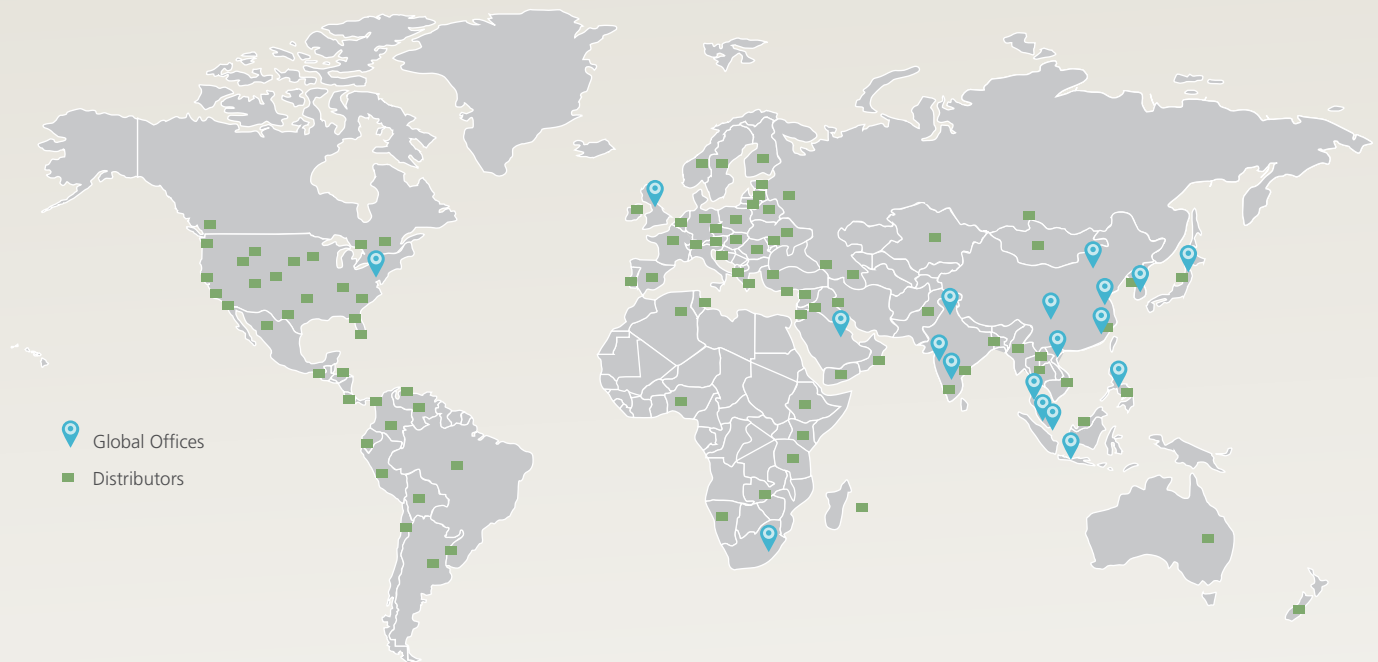
The Fertilisafe™ ART Workstation is a laminar flow workstation with controlled temperature and humidity working environment. The workstation is intended for work with gametes and / or embryos at or near body temperature in a multi-zone heated setup during in vitro fertilization (IVF) / assisted production technology (ART) treatments.





#### Caution:

- Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.
- Only to be used by a trained and qualified professional. The device is sold under exemption specified in 21 CFR 801 Subpart D.

# ESCO GLOBAL NETWORK



 Global Offices  
 Distributors



**Esco Medical Products:**  
 ART Workstations  
 Upright CO<sub>2</sub> Incubators  
 Miri® Multi-room Incubators  
 Miri® TL (Time Lapse) Bench Top Incubators  
 Miri® GA (Gas Analyser)  
 Anti-Vibration Table (AVT)

*Infertility is viewed as a problem that has social, psychological, and economic impacts to the afflicted individuals and couples. It is a global concern that knows no race nor creed. It has been estimated that 1 in 6 couples would struggle with infertility at least once in their lifetime.*

*The vision of Esco Medical is to support Assisted Reproductive Technologies (ART), such as IVF, by developing practical and state-of-the-art technological solutions for improving clinical success rates and patient satisfaction. All Esco Medical products are designed with the IVF clinic in mind and developed with the Silent Embryo Hypothesis as a guiding principle. The Silent Embryo Hypothesis states that the less disturbed an embryo can remain, the better its developmental potential will be.*

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

**ESCO**  
 MEDICAL

**dijkstra**  
 verenigde

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 LIVE SUPPORT

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