

ProvoCell™



Esco ProvoCell Shaking Micro Incubator

Shaking Micro Incubator

The Esco ProvoCell Shaking Micro Incubator is designed for a wide variety of mixing applications for accurate incubation of reactions and denaturation of nucleic acids and proteins. ProvoCell combines an advanced microprocessor-based controller with Peltier heating and cooling to deliver outstanding reliability, safety and overall performance.

- ProvoCell can be used on the benchtop or in a biological safety or laminar flow cabinet without the contamination risk associated with conventional water- or liquid-cooling baths.
- Peltier technology permits rapid switching between heating and cooling with accurate temperature control and block uniformity.
- Special, stress-release ceramics prevent block damage resulting from rapid temperature changes, prolonging block lifespan.
- The ProvoCell system is environmentally friendly, maintenance free and uses no refrigerants or coolants.

General Features

- Smooth orbital rotation
- Digitally controlled Peltier heating and cooling
- Fully programmable with speed setting up to 1500rpm
- User-friendly interface
- Large, easy to read display
- Easy to clean interchangeable metal blocks
- Small footprint
- Compatible for use inside biological safety cabinet
- Manufactured with top quality, laboratory-grade components

Uniform Mixing

The ProvoCell Shaking Micro Incubator delivers stable, even orbital rotation creating steady, even vortexing that is required to ensure even and accurate mixing conditions.

- Rotation speed can be adjusted up to 1500 rpm within a 3 mm diameter (0.11") rotation axis.
- The sample block is mounted to the main body using 4 bolts to enhance stability.
- The long motor life minimizes maintenance costs.

User Friendly Operation

The large Vacuum Fluorescent Display (VFD) gives the user a clear view of the current temperature, speed and time.

- Operational parameters are color coded for easy visual differentiation of the parameters.
- A state-of-the-art microprocessor with pre-programmed interface is easy to use and allows the operator to modify temperature, time and speed during operation.

High Performance Peltier Modules

Peltier modules are designed for rapid temperature heating or cooling response and overall temperature accuracy.

- Excellent temperature uniformity.
- Temperature control accuracy, ΔT is less than 0.1°C.
- Ceramic semiconductors eliminate moving parts and noise, reducing vibration, minimizing maintenance.
- Lightweight modules occupy a small footprint.
- An aluminium covering and powerful fan dissipates heat efficiently and quickly.
- The unique module design reduces heat loss.
- The ergonomic design is easy to use.



Esco ProvoCell™ Control Panel



Application

Provozell is designed to meet a variety of laboratory applications. Choose from a selection of accessory mixing blocks available for different tube sizes.

Specifications, Provozell™ Shaking Micro Incubator		
* Note to customer: Specify block when ordering.		
Available Blocks*	Order Number	Capacity/Size
	BLC-1	1.5ml x 40 (Standard)
	BLC-2	0.2ml x 96
	BLC-3	0.5ml x 54
	BLC-4	Ø15mm x 24
Temperature Setting Range	0°C ~ 105°C	
Temperature Control Range	Ambient to -14°C ~ 100°C	
Block Temperature Uniformity	±0.5°C	
Temperature Accuracy	±0.5°C	
Temperature Uniformity	±0.5°C	
Heating Rate	6°C / min (from 20°C to 100°C)	
Heating Time, Nominal	≤12 mins from 20°C to 100°C	
Cooling Time, Nominal	≤8 mins for 10°C decrease from ambient temperature ≤15 mins from 100°C to 10°C above ambient temperature	
Timer Range	1 min to 99h 59min	
Speed	300 to 1500 rpm	
Amplitude	3mm (0.11")	
Electrical	Model	Voltage
	ESC-PVC-2	110V±11V 50/60Hz 150W
	ESC-PVC-1	220V±22V 50/60Hz 150W
Dimension (L x W x H)	295 x 265 x 170 mm (11.7" x 10.4" x 6.7")	
Net Weight	8.5 kg (18.7 lbs)	



Esco Containment, Clean Air and Laboratory Equipment Products

- Biological Safety Cabinets, Class II, III
- Fume Hoods, Conventional, High Performance, Ductless Carbon Filtered
- Laminar Flow Cabinets, Horizontal, Vertical, PCR
- Animal Containment Workstations
- Hospital Pharmacy Isolators, Cytotoxic Safety Cabinets
- Specialty Workstations: *In-Vitro* Fertilization, Powder Weighing
- PCR Thermal Cyclers, Conventional, Real-Time
- Cleanroom Fan Filter Units, Modular Rooms, Air Showers, Pass Thrus

Since 1978, Esco has emerged as a leader in the development of controlled environment, laboratory and cleanroom equipment solutions. Products sold in more than 100 countries include biological safety cabinets, fume hoods, ductless fume hoods, laminar flow clean benches, animal containment workstations, cytotoxic cabinets, hospital pharmacy isolators, and PCR cabinets and instrumentation. With the most extensive product line in the industry, Esco has passed more tests, in more languages, for more certifications, throughout more countries than any biosafety cabinet manufacturer in the world. Esco remains dedicated to delivering innovative solutions for the clinical, life science, research and industrial laboratory community. www.escoglobal.com.

NSF / ANSI 49 Biological Safety Cabinets • Animal Containment Workstations • Fume Hoods • Clean Benches



WORLD CLASS. WORLDWIDE.

Esco Technologies, Inc. • 2940 Turnpike Drive, Units 15-16 • Hatboro, PA 19040, USA
Toll-Free USA and Canada 888-375-ESCO • Tel 215-441-9661 • Fax 215-441-9660
us.escoglobal.com • usa@escoglobal.com

Esco Micro Pte. Ltd. • 21 Changi South Street 1 • Singapore 486 777
Tel +65 6542 0833 • Fax +65 6542 6920 • mail@escoglobal.com
www.escoglobal.com

Esco Global Offices | Singapore | Philadelphia, USA | Leiden, The Netherlands | Salisbury, UK
Kuala Lumpur, Malaysia | Beijing, Shanghai & Guangzhou, China | Mumbai, India | Manama, Bahrain