



Esco ProvoCell Shaking Micro Incubator

# ProvoCell™

## 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,  $\Delta T$  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

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

Specifications, Provocell™ 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
	BLC-5	96 wells ELISA board
	BLC-6	0.5ml x 26 + 1.5ml x 24
	BLC-7	2ml x 40
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	1min 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)	



Since Esco was founded in 1978, our company has earned a reputation for innovation in the worldwide laboratory equipment industry. With years of research, R & D and manufacturing experience, Esco Micro Pte Ltd emerged as an innovative global player in the design and manufacturing of peltier-driven thermal cycler products for the life science market. Products sold in more than 100 countries include conventional thermal cyclers, real-time PCR systems and microplate shakers / incubators.

PCR Thermal Cyclers • Real-time PCR Systems • Microplate Shaker / Incubators

# ESCO

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