

# 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 1500 rpm
- 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.

### Application

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

### 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 aluminum covering and powerful fan dissipates heat efficiently and quickly.
- The unique module design reduces heat loss.
- The ergonomic design is easy to use.

### General Specifications, Provocell™ Shaking Micro Incubator

Available Blocks*	Order Number	Capacity/Size
	BLC-1	1.5 ml x 40 (Standard)
	BLC-2	0.2 ml x 96
	BLC-3	0.5 ml x 54
	BLC-4	Ø15 mm x 24
	BLC-5	96 wells ELISA board
	BLC-6	0.5 ml x 26 + 1.5 ml x 24
	BLC-7	2 ml x 40
Temperature Setting Range	0-105°C	
Temperature Control Range	Ambient -14°C to 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 99 h 59 min	
Speed	300-1500 rpm	
Amplitude	3 mm (0.11")	
Power supply, Consumption	Model	Voltage
	ESC-PVC-2	110 VAC±11V, 50/60 Hz, 150 W
	ESC-PVC-1	220 VAC±22V, 50/60 Hz, 150 W
Dimension (W x D x H)	295 x 265 x 170 mm (11.6" x 10.4" x 6.7")	
Warranty	3 years for mainbody, 2 years for blocks	
Net Weight	9.5 Kg (20.9 lbs)	
Shipping Weight	10.5 Kg (23.1 lbs)	
Shipping Dimensions (W x D x H)	320 x 420 x 330 mm (12.6" x 16.5" x 13.0")	

\* Note to customer: Specify block when ordering.

## ORDERING INFORMATION

### Order Information, Provocell™ Shaking Micro Incubator

Model Code	Item Code	Description
ESC/PV-PVC-2	2210029	Provocell™ Micro Incubator 110 VAC
ESC/PV-PVC-1	2210030	Provocell™ Micro Incubator 220 VAC
ESC/PV-BLC-1	2210022	Provocell™ Incubator Block 1 (1.5 ml x 40)
ESC/PV-BLC-2	2210023	Provocell™ Incubator Block 2 (0.2 ml x 96)
ESC/PV-BLC-3	2210024	Provocell™ Incubator Block 3 (0.5 ml x 54)
ESC/PV-BLC-4	2210025	Provocell™ Incubator Block 4 (15 mm x 24)
ESC/PV-BLC-5	2210027	Provocell™ Micro Incubator Block 5 96 Well ELISA Board
ESC/PV-BLC-6	2210028	Provocell™ Micro Incubator Block 6 26 x 0.5 ml + 24 x 1.5 ml
ESC/PV-BLC-7	2210026	Provocell™ Incubator Block 7 2 ml x 40



ART Equipment  
 Biological Safety Cabinets  
 CO<sub>2</sub> Incubators  
 Compounding Pharmacy Equipment  
 Containment / Pharma Products  
 Ductless Fume Hoods  
 Freeze Dryer  
 Lab Animal Research Products  
 Laboratory Fume Hoods  
 Laboratory Ovens and Incubators  
 Laminar Flow Clean Benches  
 PCR Cabinets  
 PCR Thermal Cyclers  
 Powder Weighing Balance Enclosures  
 Ultra-low Freezers

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