ESCO®

Life Sciences Division

Provocell™ Shaking Micro Incubator

4 Interchangable Blocks

KEY FEATURES:

- Peltier Powered
- Digitally Controlled
- Fully Programmable
- User-Friendly Interface
- Clear Large VFD Display
- Contamination Free Metal Blocks
- Avoids Contamination When Used in Biological Safety Cabinets or Laminar Flow Cabinets

ESCO®

Life Sciences Division

Provocell™ Shaking Micro Incubator

Combining an advanced microprocessor-based control system as well as Peltier technology, Esco Provocell™ provides outstanding performance in terms of safety, reliability, accuracy and user-friendly operation.

It can be used in a biological safety or laminar flow cabinet without the contamination associated with alternative products like water or cooling bath.

It has wide application such as sample storage, storage and reaction of various enzymes, and denaturation of nucleic acids and proteins.

STABLE MIXING

- Perfect circular movement
- Excellent rotation stability
- Strong grip
- Powerful mixing
- Durable

Provocell™ uses only the world's best quality components; this include Provocell™'s powerful engine.

The motor could generate a rotation speed up to 1500rpm with a rotation axis of 3mm in diameter. Stable rotation is also one of the most important faces to create an accurate test result. With Provocell, an excellent mixing stability is ensured by an extremely constant speed of rotation created by the motor.

The block is fixed on to the main body using 4 strong screws to enhance stability. The extremely durable motor of Provocell™ surely minimized the cost of maintenance.

USER FRIENDLY

Esco is very much aware that the learning curve of an operator in face of a new equipment or technology could considerably improve by providing a user-friendly machine which not only has the best quality but also easy to be manipulated and learned.

Provocell™ uses a large Vacuum Fluorescent Display (VFD) to allow the operator to have a clear view of the temperature, speed and time of the operation in real time. The VFD provides a bright and contrast colours for easy viewing. Operational parameters are displayed in different colours so that the operator could distinctively differentiate mixing parameters without difficulty.

Provocell™ is controlled by state-of-the-art micro processor to guarantee its operation smoothness. The pre-programmed interface is design to be user-friendly and allows the operator to modify temperature, time and speed during the operation.

DESIGNED TO BE FLEXIBLE

Provocell™ is designed to suit most of your laboratory application. It is adapted to work with most of laboratory standard mixing block sizes suitable for many of different sizes of micro incubator.

Blocks :

- PVC/BLC-1: 1.5mm x 40 (Standard)
- PVC/BLC-2: 0.2ml x 96
- PVC/BLC-3: 0.5ml x 54
- PVC/BLC-4: Ø15mm x 24

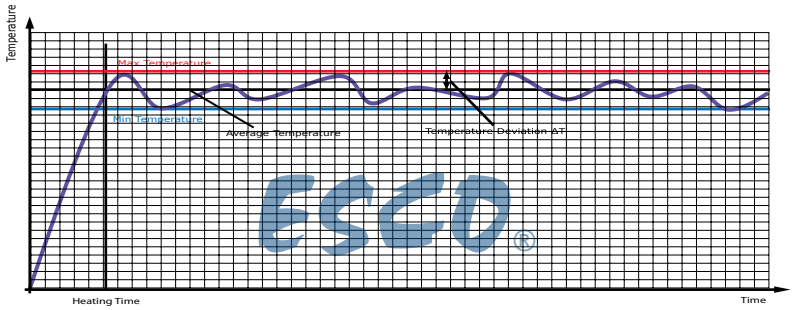
The block is hold tightly by four screws to prevent from unwanted vibration and any deviation from its original axis of rotation. This will ensure a stable mixing of laboratory samples for the best results possible.

Provocell™ Shaking Micro Incubator

ESCO®
Life Sciences Division

PELTIER MODULES FOR STABLE AND ACCURATE HEATING OR COOLING

Provocell™ Heating Plate



Provocell shaking micro incubator employs the most advanced Peltier module technology for its cooling and heating system. This provide the ability to switch from heating to cooling and vice versa in rapid pace and to create high temperature differences, excellent temperature homogeneity, low weight, and small size.

Peltier module does not require any moving parts in its process, thus it generates no noise and no vibration. This system is environmentally friendly since no cooling medium such as CFC's is used. Because no cooling medium is needed, there is no gas leakage, meaning that safety is ensured and maintenance is easy.

Our Peltier module uses the best semiconductor materials and technology to reach a remarkable performance in cooling and heating properties. Special ceramic materials combined with stress release technology of our Peltier modules prevents any damages from rapid changes of high temperature and thus ensures a long lifespan.

Peltier modules are distributed uniformly under the metal blocks to guarantee a homogeneity in temperature. Furthermore, special aluminium block and a unique structure design of Peltier modules combined with a powerful fan dissipates the heat effectively and improves cooling and heating process considerably.

- Fast cooling and heating (up to 6°C/min)
- Excellent temperature homogeneity
- Special ceramic semiconductor materials
- Small size and light weight
- Easy maintenance
- Stable and accurate temperature level (ΔT less than 0.5 °C)
- Powerful fan for quick heat dissipation
- A unique design to reduce heat loss
- Special aluminium covering for effective heat dissipation
- No moving parts
- No noise and vibration
- Environmentally friendly

SPECIFICATION PVC-X

Block Available (PVC/BLC-X)*	PVC/BLC-1: 1.5ml x 40 (Standard) PVC/BLC-2: 0.2ml x 96 PVC/BLC-3: 0.5ml x 54 PVC/BLC-4: Ø15mm x 24
Temp Setting Range	0 ~ 105 °C
Timer Range	1min ~ 99h59min
Temp Control Range	Room Temp. -14°C ~ 100 °C
Mixing Speed	300rpm - 1500rpm
Mixing Amplitude	3mm
Temp Control Accuracy	< ±0.5 °C
Display Accuracy	< ±0.5 °C
Temp Uniformity	< ±0.5 °C (0 - 60 °C) < ±1.0 °C (60 - 100 °C)
Heating Time (from 20°C to 100°C)	~6°C/min
Cooling Time	~12min (from Room Temp. to Room Temp. -10°C) ~15min (from 100°C to Room Temp. +10°C)
Dimension (L x W x H)	295mm x 265mm x 170mm
Net Weight	8.5 kg
Power Supply	PVC-1: AC220V±22V 50/60Hz1Hz 125W PVC-2: AC110V±11V 50/60Hz1Hz 125W

* PVC-1 and PVC-2 terms are only for the main bodies. Specify one type of block (PVC/BLC-X) when ordering.

Provocell™ Shaking Micro Incubator

ESCO®
Life Sciences Division

Esco is one of the leading manufacturers in the field of clean air and containment technology in Asia. Our main products include cleanroom equipment, laboratory clean air/containment devices, and cleanroom apparel.

Esco is a company focused on clean-air and containment technology with a history of quality products since 1978. We are highly oriented towards the international market place with sales in more than 60 countries. Headquartered in Singapore with over 300 employees globally, the company is structured into 5 distinct business divisions.

At Esco, quality and customer satisfaction are our top priorities, which is why the company operates under an ISO 9001 certified quality management system and ISO 14001 certified Environmental Management System. Extensive quality control and testing is carried out at all steps of the design and production process.

All products are manufactured under
a quality system registered to:
ISO 9001 TOTAL QUALITY MANAGEMENT
ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM

ISO 9001 REGISTERED FIRM
Esco Micro Pte Ltd
PT Esco Bintan

ISO 14001 REGISTERED FIRM
PT Esco Bintan

ESCO®

Worldwide Headquarters
21 Changi South Street 1 ~ Singapore 486 777
Tel: +65 6542 0833 ~ Fax: +65 6542 6920
Email: lifesciences@escoglobal.com
Website: http://lifesciences.escoglobal.com

Your Local Distributor: