

ULTRA ELITE BENCHTOP Cell Culture Shaking Incubator

ZWYC-240B

Precision Cell Culture. Redefined



TOUCH SCREEN
DISPLAY



FLASK CAPACITY



PELLIER TEMP.
CONTROL



DOUBLE LAYER
GLASS WINDOW



UV
STERILIZATION

Precise Temperature Control Stable Magnetic-Drive Shaking Superior Reproducibility



The ZWYC-240B Ultra Elite Benchtop Cell Culture Shaking Incubator is specifically designed for cell culture, microbial cultivation, and synthetic biology research. It is suitable for universities, biomedical R&D laboratories, and industrial research facilities. By integrating a high-precision Peltier temperature control system, a stable magnetic-drive shaking mechanism, an intelligent control platform, and a low-energy design philosophy, the ZWYC-240B delivers outstanding stability and consistency during long-term continuous operation.

Precise control of temperature, shaking speed, and optional humidity and CO₂ concentration creates an optimised growth environment for cells and microorganisms, significantly improving experimental reproducibility and data reliability.

With its intuitive user interface and comprehensive data management functions, the ZWYC-240B makes cultivation processes visualized, traceable, and fully manageable, meeting both exploratory research needs and standardized, regulated laboratory requirements.

High-Performance Magnetic Drive Shaking System

High-torque magnetic drive motor combined with FOC vector control technology, ensuring, smooth operation, low noise, and minimal heat generation.

Supports clockwise, counter-clockwise, and alternating rotation modes.

The classic three-axis eccentric shaking mechanism ensures stable and uniform agitation, ideal for sensitive cell and microbial cultures.



Intuitive & Intelligent User Interface

Equipped with a 7-inch high-resolution full-colour touch screen. Multi-parameter real-time display with a clear layout and intuitive operation logic allows users to monitor all key parameters at a glance.



Flexible Control Modes

- Supports both fixed value control and programmable control modes, with five (5) built-in preset programs.
- Each Program allows configuration of up to 100 segments and cycles, with a maximum duration of 999 hours 59 minutes per segment, fully meeting the requirements of complex, multi-stage, and long-term cultivation protocols.

Precision Peltier Temperature Control

Customized high-performance Peltier temperature control modules uses solid-state heating and cooling technology without compressors or refrigerants. Compared with traditional compressor systems, it is more compact, quieter, vibration-free, and requires less maintenance, while achieving energy savings of up to 70%. It provides fast thermal response, precise temperature control, and rapid switching between heating and cooling. With no mechanical moving parts, it offers higher reliability and longer service life, making it ideal for applications requiring high stability. Simple structure minimizes cleaning dead zones and simplifies maintenance.

Compact Design with High Capacity

- Benchtop design, space-saving
- Supports double-stacking
- Chamber capacity supports 2 × 5L Erlenmeyer flasks



Double-Layer Glass Viewing Window

- Double-layer insulated glass improves thermal insulation and prevents condensation.
- Inner door with single-piece glass structure enhances sealing performance and reduces contamination risk.
- Easy to clean and disinfect, suitable for high-cleanliness environments.



Illumination & UV Sterilization

- Internal LED illumination light for optimised chamber visibility.
- Built-in high-efficiency UV lamp with programmable timing.
- Interlocked with door switch for safe operation.



High-Grade Stainless-Steel Chamber with Hygienic Design

- The chamber is constructed from high-grade #304 stainless steel with fully rounded-corner design, ensuring easy cleaning and eliminating dead zones.
- A waterproof isolation structure allows stable operation in high-temperature and high-humidity environments.
- The chamber supports direct water rinsing and disinfection, with a bottom drain port to facilitate efficient cleaning.



Adjustable Fixed Shelf for Static Culture

Height-adjustable shelf enables simultaneous shaking and static cultivation within the same chamber, greatly enhancing experimental flexibility.



User Access & Security

- Three-level user access management with configurable user privileges.
- Password protection for critical system parameters and configuration settings.
- Prevention of unauthorised access and unintended parameter changes.



Electronic Records & Data Integrity

- Real time checking for operation logs, parameter curves, alarm events.
- Secure generation and storage of electronic records.
- Data is stored in a non-editable format to ensure authenticity and integrity.
- USB export of electronic records in read-only file formats.

Audit Trail & Traceability

- Automatic recording of operation logs, alarm events, and parameter changes.
- Time-stamped audit trails for full traceability of system activities.
- Long-term data storage capability of up to 10 years.

Comprehensive Safety Protection

- Non-volatile memory saves settings and restart after power failure
- Power interruption notification for traceability
- Door-open safety interlock with active braking for shaking
- Audible and visual alarms for high and low parameter deviations
- Sensor fault alarm
- Independent leakage protection and over-current protection
- Door lock to prevent unauthorised access



Extensive Optional Configurations

- Natural evaporation humidification tray with humidity display
- Active CO₂ control system (0–20%, ±0.2% accuracy) using imported infrared sensors
- LED photosynthetic lighting control system (0–100%, multiple spectra available)
- TCP/IP Modbus & Wi-Fi for remote monitoring
- Built-in micro printer for real-time data output



Technical Specifications

Model	ZWYC-240B
Chamber Volume	120 L
Controller	PID microprocessor
Display	7-inch full-colour LCD touch screen
Heating/Cooling	Peltier module
Air Circulation	Forced convection
Ambient Temperature	5–30°C
Timer Range	0–999 h 59 min
Control Mode	Fixed Value / Programmable
User Access Levels	3
Data Output	USB Port Options: Printer, TCP/IP, Wi-Fi
Stationary Shelf	1 pcs (Multiple level adjustable)
Access Port	Ø50mm x 1Pcs
Internal Dimension (W×D×H)	490 × 490 × 500mm
Exterior Dimension (W×D×H)	580 × 670 × 780mm
Packing Dimension (W×D×H)	690 × 730 × 935mm
Net/Gross Weight	82 kg/110 kg
Maximum Power	350W
Power Supply	220–240V / 50–60 Hz

Temperature Control	
Temperature Range	4–60°C
Resolution	0.1°C
Fluctuation	±0.1°C
Uniformity	±0.3°C @ 37 °C (No Load)

Shaking Control	
Drive Mode	Three-axis Magnetic Drive
Shaking Mode	Orbital
Shaking Direction	Clockwise, Anti-Clockwise, Alternation
Speed Range	2–300 rpm
Orbit	25mm (Default); 50mm (Optional)
Speed Accuracy	±1 rpm
Noise Level	<55 dB (1 m)
Platform Size	450 × 370mm
Maximum Load	16 kg

CO ₂ Control (Optional)	
Sensor Type	Imported Infrared Sensor
Control Range	0–20%
Display Resolution	0.1%
Control Accuracy	±0.2%

Ordering Information

Part No.	Description
ZWYC-240B	120L Ultra Elite Benchtop Shaking Incubator (Peltier), 2 - 300rpm, 4-60°C
P5067-P	Natural Evaporation Humidification Kit for ZWYC-240B
P5068	IR CO ₂ Kit for ZWYC-240B
P5069	TCP/IP Communication Protocol for ZWYC-240B
P5070	Wi-Fi Connection Kit for ZWYC-240B
P5071-RB	LED Lighting Panel & Control Kit, Red & Blue
P5071-WW	LED Lighting Panel & Control Kit, Warm White
P5072	Built-in Printer for ZWYC-240B
P6054	Tray for ZWYC-240B, 450 × 370mm, Predrilled
P6055	Tray for ZWYC-240B, 450 × 370mm, Plain
P7031	Universal Spring Pallet for ZWYC-240B, 450 × 370mm
P8010	Tube Rack S/S
P8011	Tube Rack ABS Plastic
P8017	Sticky Mat, 20 × 20cm
P8082	Sticky Mat, 20 × 8cm
P8021	O Clamp, S/S, for 50ml Flask, with Spring Retainer
P8022	O Clamp, S/S, for 100ml Flask, with Spring Retainer
P8023	O Clamp, S/S, for 250ml Flask, with Spring Retainer
P8024	O Clamp, S/S, for 500ml Flask, with Spring Retainer
P8025	O Clamp, S/S, for 750ml Flask, with Spring Retainer
P8026	O Clamp, S/S, for 1000ml Flask, with Spring Retainer
P8027	O Clamp, S/S, for 2000ml Flask, with Spring Retainer
P8028	O Clamp, S/S, for 3000ml Flask, with Spring Retainer
P8029	O Clamp, S/S, for 5000ml Flask, with Spring Retainer
P8032	O Clamp, S/S, for 96 Well Plate

Humidity (Optional)	
Humidity Display	Yes (display only)
Accuracy	±2% RH
Humidification Method	Natural evaporation
Maximum Humidity	Up to 80% RH

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