

New Product

LABWIT[®] ZWYC-290A Ultimate-Cell Shaking Incubator

*All You Want for a Shaking
Incubator.*

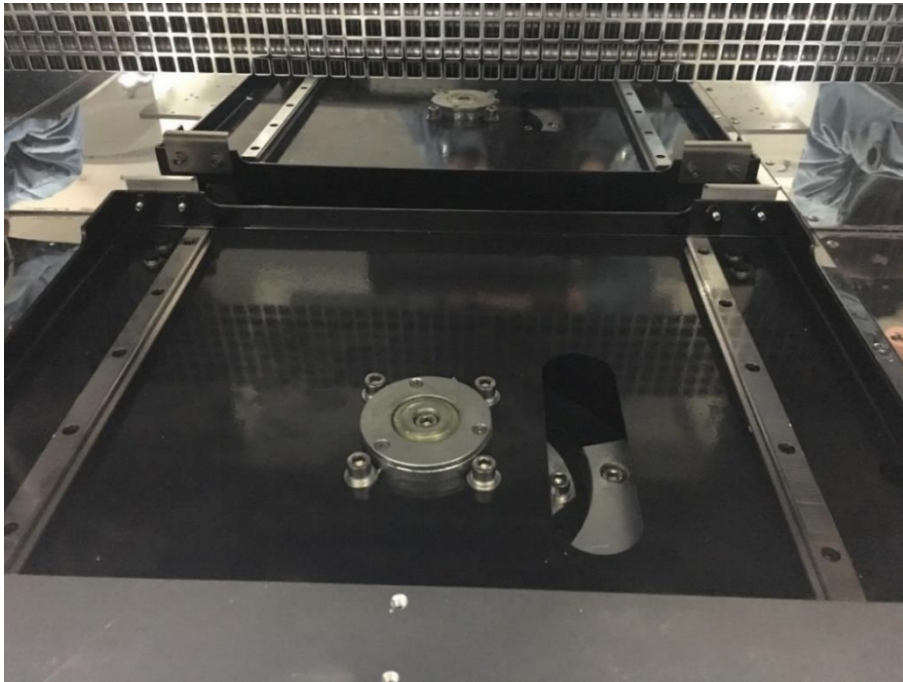
Temperature Control, Speed Setting, CO₂
Control, LED Lighting, Humidification.



The Newly released ZWYC-290A Ultimate-Cell Shaking Incubator brings leading edge technology to your cell culturing applications, it comes with plenty of latest features to meet today's demanding research requirements. In addition to its wide speed range settings, it offers a high degree of temperature precision as well as many other advanced functions such as CO₂ regulation, humidification, LED lighting, each of which can be individually customized to meet your particular research requirements.

Powerful Motor Drive System

The unit features an innovative single eccentric, counterbalance penta-drive mechanism, which is designed for lifetime durability. It ensures smooth and even shaking movement anywhere on the platform, regardless of load distribution of culturing vessels. The drive is protected from spills and the unit has a drain channel at its back for quick removal of any unwanted liquids.



The above photo shows the heavy duty, single eccentric counterbalance penta-drive mechanism which ensures smooth and even shaking movement anywhere on the platform.



(The left photo shows the drain channel at the back of the shaking incubator for quick removal of any unwanted liquids via the outlet nozzle.)

Direct heat technology

Surrounded by high density polyurethane foamed-in-place insulators from all sides, the inner chamber achieves highly efficient insulation. The unit is equipped with high performance heating elements for direct heating performance and a highly efficient hermetically sealed compressor system that allows automatic refrigeration and defrosting. A precise PID controller together with a gentle circulating fan provides homogenous temperature distribution that guarantees reproducible cultivation results.



This combination of excellent temperature control and advanced insulation benefits the culturing samples greatly. The cleverly

designed drop-down door and pull-out tray helps to make access easy to the cultivation vessels, the claw-like platform safety latches, slow soft start and exceptionally quiet operation create a friendly working environment in your lab. An access port for external sensors is included so that you can easily check the inner conditions of the cabinet. The UV light is also included as standard for sterilization purpose.

Ergonomically designed drop-down door and pull-out tray (below photo) helps to make access easy to your cultivation vessels, the claw-like platform latches guarantees safety operation.



The claw-like platform safety latches

Flexible Capacity

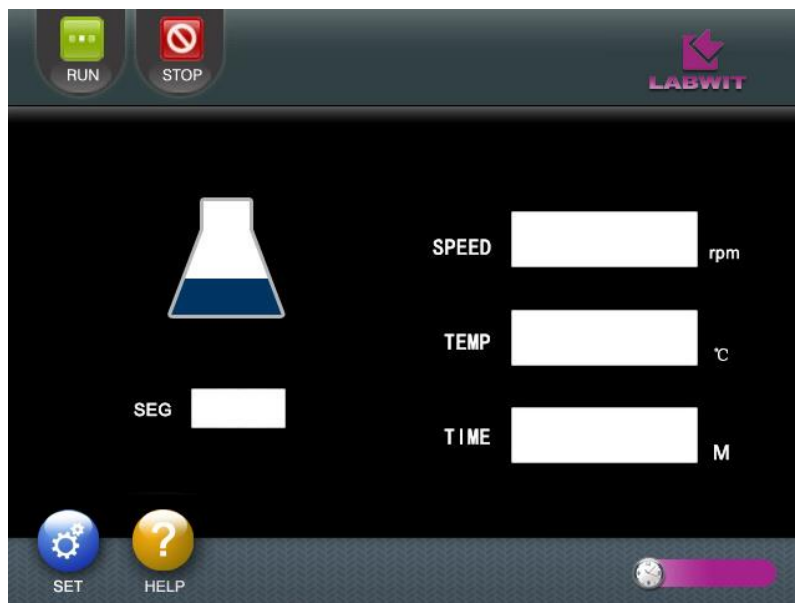
The unit offers more capacity, a maximum of 6x5L flasks is possible to be loaded sufficiently in the cabinet by using the green sticky mat. Up to three cabinets can be stacked together for greater shaking capacity, stacking is simple and easy, without the need for special tools or stacking kits. Each cabinet can be operated independently and can be individually configured to meet your particular experimentation requirements.



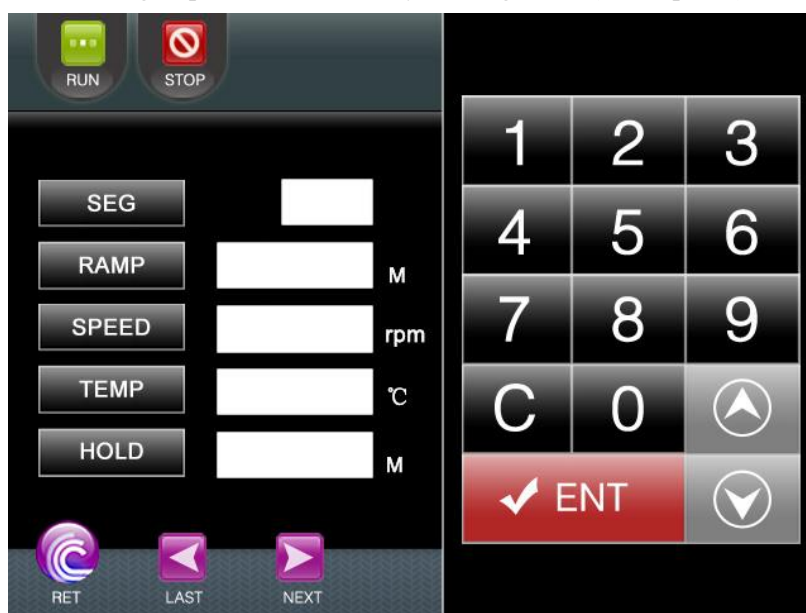
The above photo shows the using of green sticky mat on the platform with various accessories. The sticky mat can be ordered separately upon order, its size is 20x20cm. The shaking platform can have a total number of 8 pieces of sticky mat. A full selection of accessories can be arranged on the platform to suit your various application needs.

Running Mode Options

The shaking incubator offers the choice of steady running mode and programmable running mode to suit diversified user experimentation requirements. A maximum of 18-step, 9 programs can be stored for convenient retrieval, each program can be repeated up to 99 cycle times.



Setting of parameters in steady running mode (above photo).



Setting of parameters in programmable running mode.

Built for Safety

The new shaking incubator has been designed to include many safety features including:

- Independent overtemperature thermostat protects culturing samples from being exposed to excess heat.
- Independent safety protection of relay cut-offs against electrical over-current and leakage.
- Sensor failure alarm, overtemperature alarm, over-speed alarm, door-left-open alarm.
- Auto-recovery after power failure.
- Integrated password or fingerprint system protects against unauthorized access.

Optional Features

The new shaking incubator offers a wide variety of configuration options such as humidification, CO₂ control, LED lighting in order to ensure the best conditions for screening and optimizing photosynthesis processes.

Active Humidity Control

To simplify maintenance the shaking incubator is equipped with an external humidity water reservoir and a peristaltic pump for easy replenishment of water. Compared to a traditional removable humidity water pan, this convenient water reservoir greatly eases the culturing activity and avoid the possibility of any contamination. The exterior water reservoir stands beside the shaking incubator and is connected to it by a flexible tube for water supply. Precise PID control with a microprocessor ensures exact regulation of the humidity, the humidity setting is controlled directly from the incubator's intuitive touch screen, the achieved relative humidity (RH) is clearly shown on the screen display. The humidification is achieved by the high temperature direct steam up to 140 degree.C through electrical heating before it is injected to the internal chamber, and thus is effectively sterilized once more. A highly responsive humidity probe continuously measures the humidity level with automatic water refill. This innovative humidity system can effectively reduce evaporations during cultivation and prevent the samples from desiccation. It provides fast recovery rate and is ideal

for applications require flexibility and precise monitoring of the humidity levels.



A highly responsive humidity probe continuously measures the humidity level in the chamber.

The above photo shows the exterior humidity water reservoir with easy visual monitoring of the water level.

LED Lighting

For the culture of photosynthetic organisms such as algae, plant cells and photosynthetic bacteria, The unit can be upgraded with dual colour LED lighting control kit, each colour of lighting can be independently controlled and programmed to simulate day/night cycles.



The combinations of Red, Blue, Orange and White LED lights have been formulated to provide a beneficially synchronized effect on the plant. The Blue LED lights (430~450nm) provide peak chlorophyll absorption in the plant, promoting vegetative growth. The Red and Orange LED lights (640~660nm) cause large absorption of nutrients by chlorophyll, most critically influencing the photosynthesis process, which in turn promotes budding and flowering. White LED lights are useful for your plants to absorb other lighting spectrums as supplementary like natural sunlight.



Advanced CO₂ Control

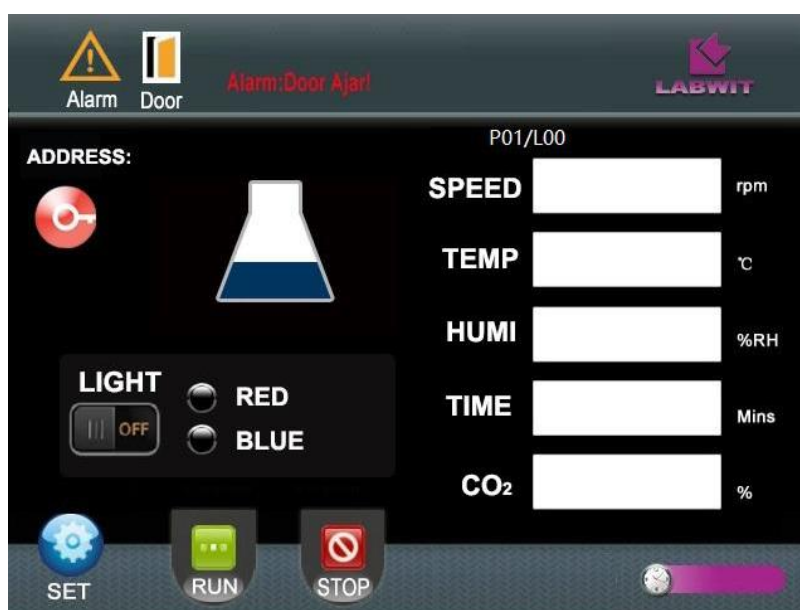
The new shaking incubator features an advanced, NDIR type, single-beam, dual-wavelength CO₂ sensor for precise CO₂ dosing in the range of 0~20%.



The left photo shows the NDIR type, single-beam, dual-wavelength CO₂ sensor for precise CO₂ dosing in the range of 0~20%.



Precise PID control incorporating a microprocessor guarantees superior performance and accuracy to the situations where temperature and humidity fluctuates, this is essential for keeping the pH value of the culturing medium at the healthy level.



The left photo shows the user-friendly touch screen interface for CO₂, Humidity, LED Light, Temperature, Speed Settings.

Specifications

Model	ZWYC-290A
Drive	Single eccentric, Penta-drive system.
Controller	P.I.D microprocessor
Performance	Heated and Refrigerated
Temperature Range	ambient-20°C to 60°C (or 4~60°C at RT 25 degree.C)
Setting	Digital
Display	4.3 inch, 65K color, Touch Screen
Temperature Set Resolution	±0.1°C
Temperature Uniformity	±1°C@37°C
Airflow type	Forced-air circulation
Refrigeration	Automatic, compressor-cooled.
Defrosting	Automatic. Manual defrosting is available.
Shaking Mode	Orbital
Orbital Diameter (shaking throw) mm	Φ0~50
Shaking Speed	30-300 rpm (±1rpm)
Programs	9 programs, 18 steps.
Chamber Numbers	1 Unit
Capacity	Support standard Erlenmeyer flasks of 100mlx50 or 250mlx37 or 500mlx30 or 1000mlx18 or 2000mlx8
Timer (minutes)	0~9999
Platform Size	850x450mm
Platform numbers	1, included
Standard features	Built-in printer, UV light, illumination light, access port for external sensors.
Volumn	225L
Internal Dimension	940x570x420mm
Electricity	220~230V 50/60Hz
Motor Power	1150W
Net/Gross Weight	250/290Kg
External Dimension	1320x938x586mm
Accessory, support stand	Must be ordered separately.
Sticky mat	Must be ordered separately.
Humidity Control	Optional
Humidity Range	40~80%RH
Humidity Set Resolution	±1%RH
Humidity Uniformity	±3%RH
Humidity Sensor Type	Capacitive
Humidification Method	Direct Steam Injection

CO2 Control	Optional
CO2 sensor type	NDIR, Infrared
CO2 Range	0~20%
CO2 Set Resolution	±0.2%
LED Light	Optional
Light Type	50% Red, 50% Blue.
Spectrum Wavelength	Red: 640~660nm, Blue: 430~450nm.
Light Intensity	13000 Lux (Red 6500 Lux, Blue 6500 Lux)