shaker incubator that can be stacked to hold three units

This is a stackable shaker incubator designed for multifunctional needs of the laboratory, adopting modular structure design, which can support three-layer stacking placement, significantly saving space.

Shaker Incubator

The basic function supports dynamic oscillation and static culture, and can be equipped with optional humidity control and light module, expanding into environment simulation type culture equipment.

The Main Features of the Shaker Incubator

- 1, 7-inch TFT color touch display, intuitive operation, clear interface.
- 2, Intelligent PID regulation system, to achieve precise control of temperature and speed.
- 3, The inner cavity is made of 304 stainless steel material, corrosion resistance, easy to clean, rounded corners design to prevent bacteria accumulation.
- 4, High precision DC brushless motor, output constant torque, stable operation.

- 5, Multiple safety and intelligent functions: power failure automatic recovery, operation timing, clock display, data memory, parameter encryption protection, temperature calibration.
- 6, open the door to stop the protection mechanism, to avoid the experimental risk of misoperation.
- 7, pull-out tray design, enhance the convenience of bottling and cleaning.
- 8, modular stacking structure, can be placed vertically three, saving experimental space.
- 9, amplitude adjustable orbital rotary oscillation mode, to adapt to the needs of different types of samples.
- 10, optional humidity adjustment, controllable light system, adapt to complex environmental conditions.
- 11, Support upgrading to light oscillation incubator, wider application.

Advantage

- 1, high space utilization: stacked design saves laboratory operating space.
- 2, one machine multi-purpose: can be used for conventional temperature-controlled oscillation, can also be upgraded to multi-parameter control system, humidity, light.
- 3, high reliability and low noise: high-precision drive system to ensure stable operation of the equipment, noise control is better than the industry average.
- 4, flexible adaptation: adapted to different specifications of the bottle, to support a variety of rapid switching of the experimental program.

- 5, humanized design: touch screen interface and convenient operation structure, reduce the labor intensity of experimental personnel.

Working Principle

The shaker incubator is based on the principle of orbital cyclotron oscillation: the platform moves along the circular trajectory, and by adjusting the amplitude and frequency, it can realize uniform mixing of the samples, which is conducive to the exchange of oxygen in the culture solution and the uniform distribution of nutrients. The internal temperature control system uses a PID algorithm to adjust the heating element with real-time feedback to realize precise temperature control. The humidity and light modules are controlled by closed-loop sensors to simulate growth conditions in different natural or industrial environments, providing a more accurate and repeatable external stimulus environment for experiments.

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Model	**SZ192**
Display screen	TFT Touch Screen
Control method	PID
Air circulation method	forced convection
Oscillation mode	orbital

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Model	**SZ192**
Environmental temperature	5°C to 35°C
Number of stackable placements	3
Curve Programming Settings	Repeat, Step, Temperature Step, Curve Programming Settings: 10, 20 segments per step, 9999 minutes per time period
Timer	0 to 9999 minutes
Temperature control range	+4°C to +60°C
Temperature resolution	0.1°C
Temperature accuracy	±0.1°C
Temperature uniformity	±0.5°C at 37°C
Shaking speed	30 to 300rpm
Speed increments	1rpm

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Model	**SZ192**
Shaking orbit	0 to 50mm, adjustable
Safety function	Alarms for exceeding upper and lower temperature limits, speed and humidity alarms, sensor fault alarms, leakage, overcurrent trip protection, chiller overload protection, door opening protection.
Other Functions	Lighting system, automatic shutdown, automatic startup, temperature and humidity correction, monitoring timer, clock display, power failure recovery, parameter storage, parameter encryption and expandable RS485 interface
Print function	internally installed
Cooling function	air-cooled, R134a
Number of oscillating platform	1
Platform dimensions	810x430mm
Platform numbers	1

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Model	**SZ192**
Number of triangular flasks	65x100ml or 38x250ml or 30x500ml or 18x1L or 11x2L
Volume	192L
Internal dimensions	920x532x393mm
External dimensions	one unit 1300x926x732mm, two unit 1300x926x1312mm, three unit 1300x926x1926mm
Power	1200w
Power supply	220Vac, 50/60Hz
Weight	250kg
The following features are optional	
Humidity control range	40%RH to 80%RH(more than 15°C)
Humidity control accuracy	0.1%RH

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Model	**SZ192**
Humidity uniformity	⩽ 3%RH
Light source	Led light, red 50%, blue 50%
Wavelength of light	Red light: 640nm to 660nm, Blue light: 430nm to 450nm
Light intensity, fluorescent	10000Lux, measured at a distance of 10 cm
Light intensity, grow lights	Red:6500Lux, Blue:6500Lux, measured at a distance of 10 cm
Light ratio and intensity control	Red light, blue light independently controlled, intensity adjustable from 0 to 100% in 1% steps