



## COOLED INCUBATOR BSFLS-102

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## SHAKING INCUBATOR

From the high-end, featuring an ergonomic exterior design, an intelligent PID microcomputer control system, and a precise temperature control solution. Rooted in European and American manufacturing techniques, the use of first-class imported components ensures the recreation of a perfectly constant temperature environment, making your experiments effortless and efficient.



The shaking incubator is a versatile instrument designed for use in universities, petrochemical industries, public health and epidemic prevention, medical fields, environmental monitoring, and other research departments. It is suitable for shaking and incubating various liquid and solid compounds, including plants, microorganisms, biochemistry, cell cultures, genetics, viruses, environmental studies, and medical research. This biochemical device combines a temperature-controlled incubator and a shaker.

Equipped with a programmable intelligent PID LCD touchscreen controller, it offers high-precision temperature control, timing functions, over-temperature alarms, motor overheating protection, and automatic vibration stop when the door is opened. An RS485 interface enables computer connection for network control. Features a servo motor design that is maintenance-free and noise-free. It outputs

## SPECIFICATIONS

Model	BSFLS-102
Internal Dimensions (mm) (H*W*D)	640x810x560
External Dimensions (mm) (H*W*D)	1390x950x735
Nominal Power (KW)	0.9
Power Supply Voltage	Single-phase AC 220V/50Hz
Temperature Range (°C)	Room temperature +5°C to 65°C (without cooling)
Shaking Method	Rotary (Cyclical)
Amplitude and Shaking Speed	Ø26mm, 20-300 r/min
Accuracy (°C)	±0.1
Temperature Fluctuation (°C)	±0.5%
Number of Layers (Shelves)	2
Rack Dimensions (mm) (H*W*D)	340x730x455
Standard Bottle Holder	Upper layer with 32 bottle clips (250), lower layer with adhesive board or universal spring.
Bottle clip options (maximum quantity)	
Alt Name	Shaking Incubator

## ACCESSORIES FOR PURCHASE

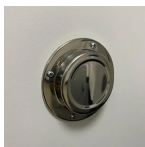
No	Name
1	Portable integrated data printer
2	Data recording storage device with USB interface
3	Built-in universal power socket interface
4	Gas interface
5	printer storage
6	US304 stainless steel perforated shelf
7	Test hole
8	programmable software
9	Door-opening power-off function



1



2



7



10

## FEATURES

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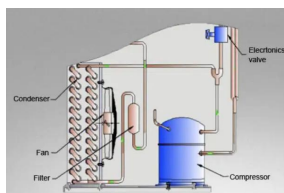
Equipped with a programmable intelligent PID LCD touchscreen controller, it offers high-precision temperature control, timing functions, over-temperature alarms, motor overheating protection, and automatic vibration stop when the door is opened. An RS485 interface enables computer connection for network control.

Features a servo motor design that is maintenance-free and noise-free. It outperforms conventional brushless DC motors at low speeds, offering smoother torque and more uniform speed.

The chamber is made of SUS304 stainless steel, offering excellent corrosion resistance and durability. A side oxygenation port ensures adequate oxygen supply during constant temperature operation, and the forced convection fan guarantees uniform temperature distribution and consistent thermal conditions.

The door is made of hollow tempered glass, and the interior is equipped with a lighting system for easy observation of samples. A UV sterilization lamp prevents cross-contamination of experimental samples. A universal spring flask holder (optional adhesive plate) is particularly suitable for cultivating a wide range of biological samples for comparative experiments.

IQ, OQ, and PQ validation documents are available in both Chinese and English, along with third-party calibration and testing services. This product has passed EU CE safety certification and comes with a 3-year quality warranty.

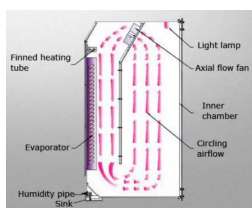


### Refrigeration Technology :

The internationally popular ALLCOLD balanced dual-mode control system integrates heating and cooling, effectively reducing temperature fluctuations. It features automatic defrosting, multi-layer safety protection, and meets the requirements for long-term operation. Equipped with internationally renowned brand compressors, it promotes environmental protection, high efficiency, and energy saving.

Automatic defrost function: The balanced refrigeration system is based on innovative rapid heat pump defrost technology, allowing continuous, uninterrupted operation. This effectively resolves frosting issues caused by prolonged evaporator operation.

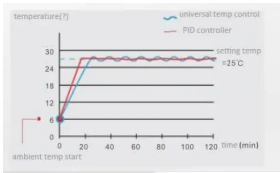
Eco-friendly refrigerants: Ensuring a cleaner world while providing an excellent user experience. This technology also reduces energy consumption and operating costs.



### Airflow Circulation System:

The forced convection airflow circulation system ensures that a larger number of samples can be stored in the chamber without compromising temperature uniformity. It enables rapid temperature recovery after the door is opened. Paired with a maintenance-free, branded axial fan, it enhances operational convenience.

The system guarantees continuous temperature stability within the working chamber. Combined with the airflow channel design, it provides an optimal environment for sample cultivation once the desired temperature is reached.



**Microcomputer PID Control Technology:**

Equipped with a programmable segmented control LCD touchscreen, all parameters are clearly displayed at a glance. It provides comprehensive status information required by users, including measured temperature, set temperature, alarms, cooling (if equipped), heating, lighting, and timer operation.

Features adaptive PID program control, ensuring precise temperature regulation, preventing temperature overshoot, and maintaining uniform and consistent chamber temperature.

Built-in multifunctional memory menu, with a standard RS485 interface for computer connection, enabling real-time monitoring.

Meets diverse user needs with a wide time setting range: 0-999 hours, 0-9999 minutes.



Programmable Segmented Touchscreen



**PT100 Temperature sensor**

Temperature Sensing Components:

PT100 Temperature Sensor:

Ensures fast response to step changes in temperature with minimal self-heating effects, delivering accurate and reliable temperature readings.

**Efficient Insulation Design:**

Double-layer insulated thermal design:

Fully supports eco-friendly concepts by conserving energy.

Internal isolation door:

Allows users to observe chamber samples while maintaining consistent internal temperature, ensuring reliable experimental conditions.

**Ergonomic Design:**

Modern lab aesthetics:

Incorporates internationally popular arc-shaped designs and color schemes, enhancing operational comfort.

Integrated handle and LCD display:

Designed for ease of use, offering a comfortable viewing angle and seamless operation for door opening and interface adjustments.

Adjustable mesh shelves:

Shelves can be repositioned at various intervals to accommodate diverse cultivation needs.





#### Advanced Manufacturing Technology:

##### High-precision construction:

All sheet metal components are processed using laser cutting and CNC bending. Cold-rolled steel undergoes a three-step acid treatment for rust prevention, and a surface electrostatic spray coating enhances durability and aesthetics.

##### Ease of Cleaning:

The clean and easy-to-maintain chamber design minimizes seams, simplifying cleaning and upkeep.

Removable, multi-layer shelves allow for easy adjustment and reduce metal components inside the chamber, making cleaning more straightforward.

A water collection tray is integrated into the bottom of the chamber, with a drain valve that can be periodically opened to remove accumulated water, preventing bacterial growth.

##### Convenient Maintenance

The LCD microcomputer controller features diagnostic functions, displaying various operating states, including historical operation records and temperature data for each segment.

Electrical control components are separated from the chamber workspace, with the refrigeration unit and electrical output control parts installed at the bottom of the cabinet, ensuring easy access for maintenance and servicing.



#### Safe and Efficient Protection Concept:

Multiple over-temperature protection functions: Includes audible and visual alarms to promptly alert users.

Certified electrical components: Key electrical components comply with UL certification standards.

Temperature protection design: Adheres to German DIN 12880 Class 3.1 standards, while electrical safety conforms to international IEC 61010-1, UL 61010-1 (USA), and EN 61010-1 (EU) standards.



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