

# BioGrowth Small Capacity Stackable Incubator Shaker

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## *Introduction*

Revolutionize your lab work with our versatile equipment. Optimize your workspace with one, two, or three-floor configurations, each offering independent temperature and speed controls. The hollow tempered glass door allows 360° observations without disruption. Enjoy smooth and reliable operation thanks to the three-dimensional three-wheel drive system. Safety and data protection are paramount, with over-temperature alarms and automatic power-off features. The sleek, hygienic design ensures durability and easy maintenance. The user-friendly interface with encryption lock, timing features, and a side debugging hole for oxygen access makes your work hassle-free. Plus, efficient lighting and UV sterilization functions are at your fingertips.

## *Product Features*

- 1. Flexible Space Optimization:** Choose between one, two, or three-floor configurations to maximize your workspace while minimizing the equipment's footprint. Each layer is equipped with independent temperature and speed controls, allowing users to set and adjust different parameters as needed.
- 2. 360° Observation Convenience:** The unit's hollow tempered glass door offers unobstructed views from all angles, eliminating the need to open the door for observations.
- 3. Smooth and Reliable Operation:** Experience reliable and hassle-free operation with the three-dimensional integrated partial three-wheel drive system. It ensures stability, durability, and consistent performance.
- 4. Safety and Data Protection:** The equipment comes with an over-temperature alarm function and an automatic power-off feature in case of abnormal conditions. Additionally, it boasts a power-off recovery function, safeguarding against data loss due to power outages or crashes.

## ***Product Features - Continued***

- 5. Sleek and Hygienic Design:** With its streamlined exterior, the equipment not only looks modern but is also easy to maintain. The interior is crafted from 304 brushed anti-corrosion stainless steel, featuring an arc corner design that prevents bacterial growth. The outer shell, made of electrostatic spray plastic, adds to its durability.
- 6. Intuitive Interface with Enhanced Security:** The user-friendly interface incorporates an encryption lock function to prevent unintended operations and human errors. It also includes a timing feature, allowing for customizable culture times ranging from 0 to 999.9 hours.
- 7. Oxygen Access Without Door Opening:** A strategically placed debugging hole on the side of the unit caters to the oxygen requirements of your samples without the need to open the main door. This feature enhances convenience for subsequent technical certifications.
- 8. Efficient Illumination and Sterilization:** The equipment is equipped with lighting and UV sterilization functions, providing well-lit conditions and enhanced sterilization capabilities as needed.

## ***Unique Advantages***

- 1. Effortless Touchscreen Control:** The LCD touch screen streamlines your interaction with the equipment. It conveniently displays temperature, speed, time, actual temperature, speed, and remaining time all on one interface. No need to toggle between screens, enhancing the intuitive user experience. You have the freedom to adjust the rocking plate's rotation direction and set the forced convection fan to operate continuously, automatically, or as needed.
- 2. Intelligent Data Management:** Benefit from the built-in data memory function, which records temperature and rotational speed data per minute in real-time. This data is then used to generate historical records and real-time curve graphs, simplifying the analysis of temperature and rotational speed impacts during experiments. With a data retention period of up to 12 months and the convenience of a USB interface, importing and exporting information is a breeze.
- 3. Adaptive PLC Control:** The equipment employs PLC microcomputer intelligent control, allowing you to add custom programs at any time. This adaptive feature enhances user-friendliness and ensures your programming needs are met efficiently.
- 4. Uniform Temperature Distribution:** Its patented three-channel hot and cold gas mixing circulation air duct design ensures consistent temperature distribution throughout the chamber.

## Unique Advantages - Continued

- Enhanced Stability:** Featuring a patented self-balancing system, this design enhances the machine's stability, especially at higher speeds, effectively extending its operational lifespan.
- Effortless Cleaning:** The equipment comes equipped with a patented diversion waterproof system. This design allows thorough internal cavity waterproofing and flushing without leaving any inaccessible areas, simplifying cleaning tasks without requiring specialized tools.
- Precise and Stable Performance:** Equipped with a high-quality servo motor, the equipment delivers precise speed control and unwavering stability. A built-in filter magnetic ring effectively shields external interference, further enhancing machine stability.
- Efficient Cooling and Low Noise:** Imported high-quality compressors and nitrogen-free, eco-friendly refrigerants ensure efficient cooling with minimal noise. This setup guarantees stable, frost-free, and ice-free operation even at low temperatures over extended periods.
- Enhanced Safety and Stability:** A user-friendly feature includes instant-stop or slow-stop functionality when the lid is opened. This not only enhances safety but also reduces shear forces on sensitive cell samples, ensuring greater stability during experimentation.
- Humidity Control for Optimal Conditions:** The optional built-in active humidity control module occupies minimal space. Additionally, an external water replenishing bucket facilitates automatic water replenishment. This system, paired with a high-precision humidity probe, maintains humidity levels of up to 95% under standard conditions at 37°C. Real-time humidity display ensures sample integrity by minimizing volatilization.



UMSI-149-2T



UMSI-149-3T

## Technical Specifications

Model	UMSI-149-1T	UMSI-149-2T	UMSI-149-3T
Number of overlays	1 layer	2 layers	3 layers
Type	Stacked		
Display	LCD touchscreen		
Rotation speed	10-350rpm		
Speed control accuracy	1rpm		
Shaking throw	26mm		
Maximum load	50kg		
Volumn	149L		
Temperature control mode	PLC control mode		
Temperature control range	4-60℃		
Temperature display resolution	0.1℃		
Temperature fluctuation	±0.1℃		
Temperature field uniformity	±0.5℃@37℃		
Ambient temperature	5-35℃		
Sterilization method	UV sterilization		
Tray size	524×412mm		
Tray capacity of shake flask	250ml×30 2000ml×6	500ml×20 3000ml×5	1000ml×12
Illumination	FI tube, 30W		
Heating power	400W		
Cooling power	132W		
Power supply	AC220V±10%, 50-60Hz		
Timing function	0-999.9hours		
Net weight	128kg/layer		
Dimension(W×D×H)	899×712×657mm		
Package size(W×D×H)	1030×860×760mm		
Gross weight	157kg/layer		
Optional	Shading device, 90℃ high temperature module, embedded printer		