

Stackable Incubator Shaker

ISS Series



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The LAB1ST ISS incubated and refrigerated stackable shakers are tailored for small to medium-scale projects. It is versatile enough to be used as a single unit on the floor or stacked in configurations of two or three units. It is available in three different sizes and offers both orbital and linear shaking modes (ISS165/165R), with options for 25mm or 50mm shaking throw to accommodate diverse requirements. This compact, user-friendly, and programmable incubator shaker is an invaluable tool for cultivating cells, tissues, or microorganisms in your laboratory.



Key Benefits

- Stackable up to 3 units
- Two in one: incubation as well as static cultivation (ISS165/165R)
- Large capacity with a compact footprint, with a floor area under 1.2 square meter
- Fast lead time, easy assembly and user-friendly operation
- Competitive price from source factory in China

Applications



Cell Culture

Incubator shaker provides a ideal environment for the growth of mammalian cells, hybridoma cells, insect cells and plant cells. These cells requires a high density of CO₂ and humidity control when growing up.



Microbial Culture

In the growth and development of of bacteria, fungi and other microorganisms, cultivation in incubator shaker is an essential process. It explores the best manufacturing technique for the mass production in the future.

Features

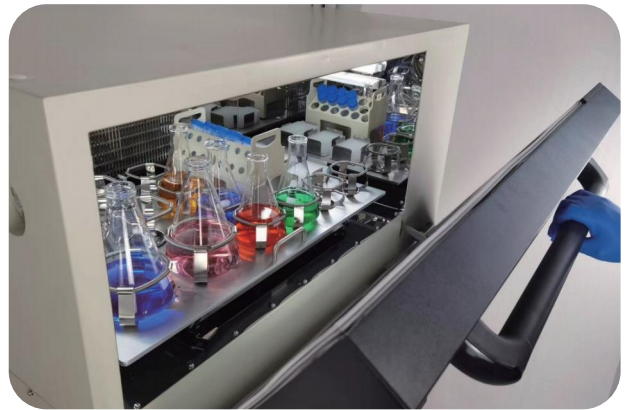
Intuitive Operation

- The 7 inch color touch LCD display enables easy setup and control of multiple parameters.
- Large viewing window and internal light provide easy observation of samples.



Safety Guarantee

- Electric leakage protection, over-speed protection, overheat protection and more.
- Operation can be resumed at set values when the power is restored in case of power outage.



Advanced Driving Technology

- The five-dimensional counter-balanced drive technology ensures longer life-span and minimized mechanical friction
- Quiet and stable even under heavy loads

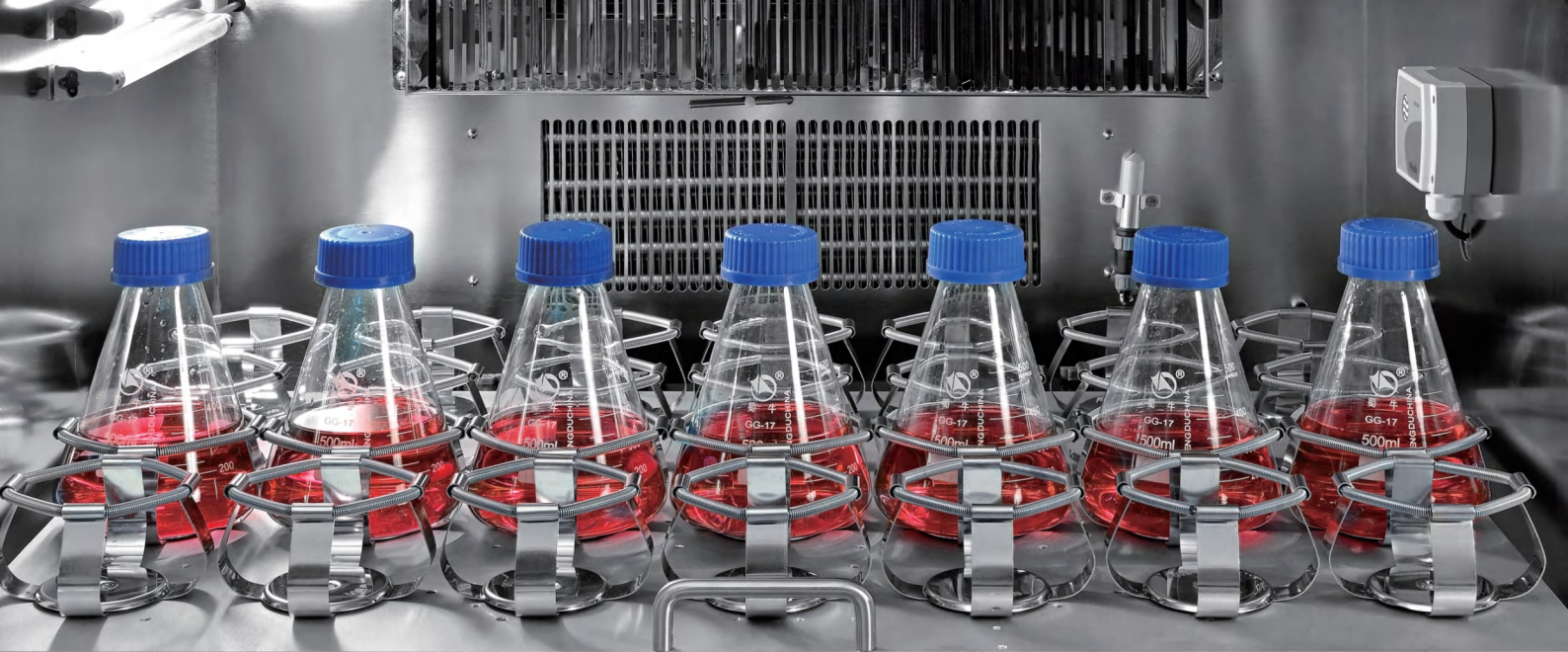
Easy Maintenance

- Features a mirror-finish stainless steel working chamber with an arch design for easy and fast cleaning.
- The incubator chamber can be cleaned with chemicals or sterilized by UV lighting

Tight Control

- Temperature uniformity: within 0.5°C; accuracy: 0.1°C, ensuring a homogeneous culturing environment.
- Optional humidity control, ranging from ambient humidity to 95%.





Large Capacity and Versatile Cultivation

Large Capacity with A Compact Footprint

- Stackable to two or three units.
- The ISS165/165R only occupies a floor area of 0.55 square meter but can hold vessels up to 5L.
- The ISS180/180R is capable of holding 2L × 36 units erlenmeyer flask, and ISS260/260R holds 2L × 45 units erlenmeyer flask.

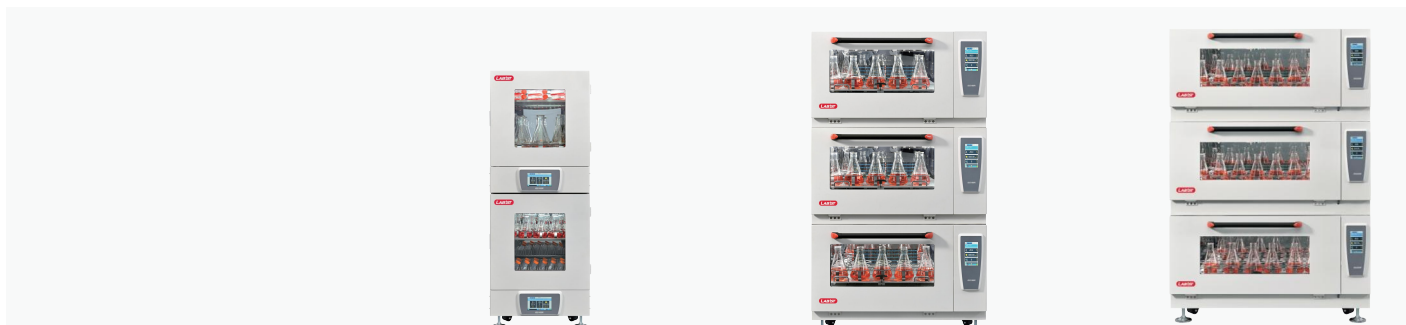


Versatile Functions

- Orbital and linear motions available; For the ISS165/165R, the shaking motions can switch freely from orbital to linear.
- 25mm or 50mm shaking diameters, and even 0-50mm stepless adjustment options.
- Two in one: designed with one height adjustable static shelf included to do static cultivation in addition to incubation



Choose the Right Model for You



Model	ISS165/165R	ISS180/180R	ISS260/260R
Capacity			
Maximum Expansion	Stackable up to 2 units	Stackable up to 3 units	Stackable up to 3 units
Max. Vessel Volume	5L	2L	2L
Tray Size	48 × 44 cm [19×17in]	78 × 50 cm [31×20in]	92 × 54 cm [36×21in]
Tray QTY [pcs]	● 1 ○ 2	1	1
Performance			
Lighting UV Lamp	● ●	● ●	● ●
White Light [0-12000 lx]	○	○	○
Red and Blue Light [0-12000 lx]	○	○	○
Humidity Control	○	○	○
Darkening Window Shade	○ Up-down Moving	○ Left-right Moving	○ Left-right Moving
Embedded Microprinter	○	○	○
Temp. Range	Incubated: 5 C above ambient to 60 C	Incubated: 5 C above ambient to 60 C	Incubated: 5 C above ambient to 60 C
[Ambient Temp. 5-35 C]	Refrigerated: 4 C to 60 C	Refrigerated: 4 C to 60 C	Refrigerated: 4 C to 60 C
Shaking Motion	Orbital & Linear [Switch freely]	Orbital Linear [Option]	Orbital Linear [Option]
Shaking Throw [Orbital]	25mm 50mm; 0-50mm [Option]	25mm 50mm; 0-50mm [Option]	25mm 50mm; 0-50mm [Option]
Shaking Throw [Linear]	25mm 50mm; 0-50mm [Option]	25mm	25mm 50mm [Option]
Shaking Frequency [25mm Shaking Throw]	2 stacked units: 20-300rpm[±1rpm]	2 stacked units: 20-300rpm[±1rpm] 3 stacked units: 20-250rpm[±1rpm]	2 stacked unit: 20-300rpm[±1rpm] 3 stacked units: 20-250rpm[±1rpm]
Shaking Frequency [50mm Shaking Throw]	2 stacked units: 20-300rpm[±1rpm]	2 stacked units: 20-300rpm[±1rpm]	2 stacked units: 20-300rpm[±1rpm]
Ergonomics, Program			
Door Opening	Opening to front	Flip up/down door	Flip up/down door
Platform Type	Fixed	Slide out	Slide out
Programming Steps Storable Programs	30 5	30 5	30 5
Parameter Control	LCD Color Touch Screen	LCD Color Touch Screen	LCD Color Touch Screen
Additional Information			
External Dimensions [single unit] [cm]	141 × 73 × 79	115 × 73 × 81	65 × 91 × 85
[W×H×D] ["]	56 × 29 × 31	45 × 29 × 32	26 × 36 × 33
Weight [Kg]	354	308	205

● = Standard ○ = Optional — = N/A

Options

LAB1ST provides multiple of options to suit your specific needs

Qualification and process validation

The IQ, OQ and PQ (installation qualification, operational qualification, and performance qualification) are important steps to prove that the devices meet requirements and regulatory standards. These documents are available in LAB1ST.

Remote control via computer

The remote control via computer can largely facilitate your operation of the whole cultivation process, and you can monitor all the parameter easily

Microprinter

The microprinter can be embedded in the incubator shaker, making it convenient to print data, curves, etc.

RS485 communication interface

The RS485 communication interface is ideal for serial data communication, achieving reliable data transmission

Lamp panel

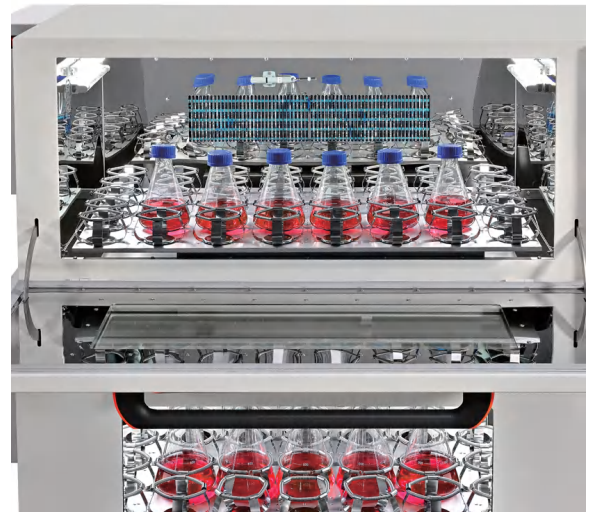
Light is an essential factor in the cultivation of phototrophic organism. The ISC incubator shaker can be installed with a lamp panel, and both white light and red and blue light are offered to meet different needs. The intensity is tunable to simulate day and night cycles.

Darkening window shade

For some light sensitive cells or microorganism, a darkening window shade is a must in the cultivation. It can prevent unwanted light or UV radiation from the chamber.

Humidity control

Humidity control and light control are also essential parts in the cultivation. Molds and yeast require a high humidity (about 85%), while the humidity for culturing cells and tissues will be higher(>90%). LAB1ST provides humidity control ranging from ambient humidity to 95%, $\pm 5\%$ at high humidity.



Humidity control

Parameter

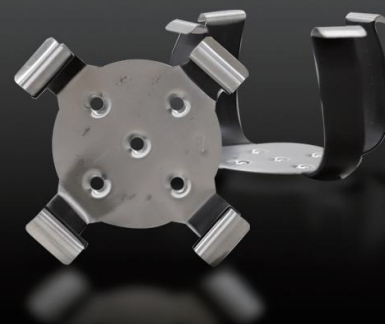
Model	ISS165/165R	ISS180/180R	ISS260/260R
Specification			
Parameter Control	P.I.D Microprocessor		
Operation Menu, MMI[Language]	CH, EN		
Display	LCD Color Touch Screen	LCD Color Touch Screen	LCD Color Touch Screen
Max. Expansion [25mm Shaking Throw]	Stackable up to 2 units	Stackable up to 3 units	Stackable up to 3 units
[50mm Shaking Throw]		Stackable up to 2 units	Stackable up to 2 units
Air Circulation	Forced air circulation		
Max. Vessel Volume	5L	2L	2L
External Dimensions[single unit] [mm]	650 × 905 × 845	1150 × 730 × 810	1410 × 730 × 785
[W×H×D] ["]	25.59 × 35.63 × 33.27	45.27 × 28.74 × 31.89	55.51 × 28.74 × 30.91
Weight [Approx.] [Kg]	205	308	354
Incubation Chamber			
Material	Mirror SUS304		
Inner Dimension [mm]	560 × 565 × 520 [165L]	850 × 565 × 395 [180L]	1020 × 430 × 595 [260L]
[W×H×D] ["]	22.05 × 22.24 × 20.47	33.46 × 22.24 × 15.55	40.16 × 16.93 × 23.43
Tray Size [mm]	480 × 440	780 × 500	920 × 540
[W×D] ["]	18.90 × 17.32	30.71 × 19.69	36.22 × 21.26
Tray QTY [pcs]	1 2 [Option]	1	1
Tray Max. Capacity [Single]	50ml×48, 100ml×39, 250ml×25, 500ml × 16, 1000ml × 9, 5000ml × 4	250ml × 40, 500ml × 28 1000ml × 15, 2000ml × 12	50ml × 135, 100ml × 91, 250ml × 60 500ml × 38, 1000ml × 27, 2000ml × 15
Tray Max. Capacity [Double]	50ml×96, 100ml×78, 250ml×50, 500ml×32	—	—
Lighting UV Lamp	8W 8W	8 W 8 W	8W 8W
Temperature			
Temp. Range [Ambient Temp. 5-35°C]	Incubated: 5°C above ambient to 60°C; Refrigerated: 18°C below ambient [min. 4°C] to 60°C		
Temp. Accuracy	0.1°C	0.1 C	0.1°C
Temp. Uniformity	≤±0.5°C [37°C]	≤±0.5°C [37°C]	≤±0.5°C [37°C]
Heating / Cooling Power	800W / 150W	1100 W / 195 W	1300W / 195W
Temp. Sensor	PT100		
Shaking Control			
Shaking Motion	Orbital & Linear [Switch freely]	Orbital Linear [Option]	Orbital Linear [Option]
Shaking Throw [Orbital]	25mm 50mm [Option] 0-50mm [Option]	25mm 50mm [Option] 0-50mm [Option]	25mm 50mm [Option] 0-50mm [Option]
Shaking Throw [Linear]	25mm 50mm [Option] 0-50mm [Option]	25mm	25mm 50mm [Option]
[No Linear for double tray]			
Shaking Frequency [Depending on load and stacking]	20-300 rpm [±1rpm]		
Stirring Power	150 W		

Parameter

Model	ISS165/165R	ISS180/180R	ISS260/260R
Ergonomics			
Door Opening	Opening to front	Flip up/down door	Flip up/down door
Platform Type	Fixed	Slide out	Slide out
Electrical, Packing and Shipping			
Total Power	940W 1296W [with cooling]	1580W 1819W [with cooling]	1580W 1819W [with cooling]
Power Source	AC200-240V, 1Phase, 50-60HZ; AC108-120V, 1Phase, 60HZ [Option]		
Packing Dimensions [One unit] [mm]	980 × 1090 × 780	1270 × 920 × 980	1540 × 920 × 980
[W×H×D] ["]	38.58 × 42.91 × 30.71	50.00 × 36.22 × 38.58	60.63 × 36.22 × 38.58
Packing Weight [Kg]	249	383	429
Standard Function			
Programming Steps Storable Programs	● [30 5]	● [30 5]	● [30 5]
Power Outage Recovery: Restore After Power On	●	●	●
Timer [0-999h/Unlimited]	●	●	●
Temperature and Speed Calibration	●	●	●
Safety Protection			
Visually Alarm Auditory Alarm	●	●	●
Overspeed Alarm	●	●	●
Sensor Fault Detection	●	●	●
Overheat Protection	●	●	●
Electric Leakage Protection	●	●	●
Compressor High Pressure Protection	●	●	●
Options			
LCD Color Touch Screen	○	●	●
Darkening Window Shade [Up-down Moving]	○	○	○
Embedded Microprinter	○	○	○
Humidity Control	○	○	○
White Light [0-12000lx] [Tunable Intensity to Simulate Day/Night-cycles]	○	○	○
Red and Blue Light [0-12000lx] [Tunable Intensity to Simulate Day/Night-cycles]	○	○	○
RS485 Communication Interface [Modbus RTU Communication Protocols]	○	○	○
IQ, OQ and PQ Documents	○	○	○
Remote Control Via Computer	○	○	○
Three Level Authority and Operation Record	●	●	●
Historical Records and Real-time Curves [USB Export]	●	●	●
Programming Steps Storable Programs [30 5]	●	●	●

● = Standard ○ = Optional — = N/A

Accessories



Stainless steel flask clamp



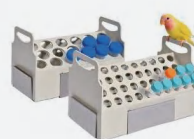
Stainless steel tray



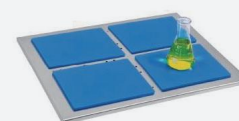
Universal tray with spring



ELISA plate rack



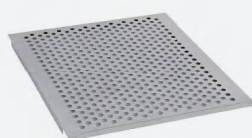
Test tube rack



Sticky board



tray with support bars



Static incubation plate



Enzyme plate clamp

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