

Floor-stand Incubator Shaker

ISF Series



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For large volume laboratory cultivations, consider a floor-stand incubator shaker! The Lab1st ISF incubator shaker stands out with its ample capacity, stable shaking, precise temperature and humidity control. It is specifically crafted for medium to large-scale cultivation like microorganisms, cells and tissues cultivation. With three different sizes, three kinds of shaking throw and up to four different trays, it is versatile enough to satisfy your cultivation needs.



Key Benefits

- Large capacity at a reasonable cost
- Stable, flexible and quite shaking
- 1 year warranty, life time support
- Fast lead time and reliable shipment
- Professional sales and engineers to assist you with all the pre- and after sale problems

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

Structure

- Features a 7-inch LCD display for easy parameter setup and control.
- Built with the unique five-dimensional counter-balanced drive technology, smooth, durable and quiet.
- A mirror-finish stainless steel working chamber with an arch design for easy and fast cleaning.
- Large viewing window and internal light make observation easier.
- Two-layers tray design to accommodate larger and more vessels.
- Equipped with a UV lamp to sterilize the chamber.



Control

- Precise and accurate P.I.D Microprocessor.
- Temperature control: accuracy: $\pm 0.1^{\circ}\text{C}$, uniformity: $\pm 1^{\circ}\text{C}$ [at 37°C]; Speed accuracy: $\pm 1\text{rpm}$.
- Equipped with sequential, timed, or step-by-step execution (up to 8 steps); can store a maximum of 1 programs.
- Humidity control is optional, ranging from ambient humidity to 95%, $\pm 5\%$ at high humidity.

Performance

- Orbital shaking mode with 25mm, 35mm and 50mm shaking throw options.
- Capable of doing incubation as well as refrigeration.
- Holding vessels up to 32 units of 2000mL Erlenmeyer flask
- Operation can be resumed at set values when the power is restored in case of power outage.
- Electric leakage protection, over-speed protection, overheat protection and more



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

Three-level authority management

Three levels of authority can enhance organizational efficiency, clarity, and security by clearly defining roles and responsibilities.

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.

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.

LCD color touch screen

This options includes an intuitive and clear LCD color touch display. It makes it easy to set, control and view all the parameters

USB export interface

The USB export interface is for exporting historical records and real-time curves to help you better analyze the cultivation process.

Choose the Right Model for You



Model	ISF180/180R	ISF365/365R	ISF624/624R
Capacity			
Maximum Expansion	Non-Stackable	Non-Stackable	Non-Stackable
Max. Vessel Volume	1L	2L	2L
Tray Size [cm/in]	49 × 35 cm [19 × 14 in]	73 × 46 cm [29 × 18 in]	93 × 53cm [37 × 21 in]
Tray QTY [pcs]	2	2	2
Performance			
Lighting UV Lamp	● ●	● ●	● ●
White Light [0-12000 lx]	○	○	○
Red and Blue Light [0-12000 lx]	○	○	○
Humidity Control	○	○	○
Darkening Window Shade	—	—	—
Embedded Microprinter	○	○	○
Temp. Range [Ambient Temp. 5-35 °C]	Incubated: 5 °C above ambient to 60 °C Refrigerated: 4 °C to 60 °C	Incubated: 5 °C above ambient to 60 °C Refrigerated: 4 °C to 60 °C	Incubated: 5 °C above ambient to 60 °C Refrigerated: 4 °C to 60 °C
Shaking Motion	Orbital	Orbital	Orbital
Shaking Throw [Orbital]	25 mm	25 mm	35 mm 50 mm [Option]
Shaking Throw [Linear]	—	—	—
Shaking Frequency	25 mm orbit: 20-300 rpm	25 mm orbit: 20-300 rpm	35 mm orbit: 20-300 rpm 50 mm orbit: 20-300 rpm
Ergonomics, Program			
Door Opening	Opening to front	Opening to front	Opening to front
Platform Type	Fixed	Fixed	Fixed
Programming Steps Storable Programs	8 1; 30 5 [Upgrade to touch screen]	8 1; 30 5 [Upgrade to touch screen]	8 1; 30 5 [Upgrade to touch screen]
Parameter Control	Basic LCD-display	Basic LCD-display	Basic LCD-display
Additional Information			
External Dimensions [single unit] [cm]	70 × 134 × 58	100 × 148 × 73	124 × 150 × 84
[W×H×D] ["]	28 × 53 × 23 in	39 × 58 × 29	49 × 59 × 33
Weight [Kg]	213	342	456

Parameter

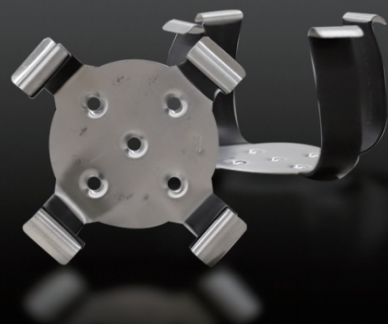
Model	ISF180/180R	ISF365/365R	ISF624/624R
Specification			
Parameter Control	P.I.D Microprocessor	P.I.D Microprocessor	P.I.D Microprocessor
Operation Menu, MMI[Language]	CH, EN	CH, EN	CH, EN
Display	Basic LCD-display	Basic LCD-display	Basic LCD-display
Max. Expansion	Non-Stackable	Non-Stackable	Non-Stackable
Air Circulation	Forced air circulation	Forced air circulation	Forced air circulation
Max. Vessel Volume	1L	1L	2L
External Dimensions[single unit] [mm]	700 × 1340 × 580	1000 × 1480 × 730	1240 × 1500 × 836
[W×H×D] ["]	27.56 × 52.76 × 22.83	39.37 × 58.27 × 28.74	48.82 × 59.06 × 32.91
Weight [Approx.] [Kg]	213	342	456
Incubation Chamber			
Material	Mirror SUS304	Mirror SUS304	Mirror SUS304
Inner Dimension [mm]	600 × 680 × 440 [180L]	860 × 760 × 520 [365L]	1100 × 805 × 705 [624L]
[W×H×D] ["]	23.62 × 26.77 × 17.32	33.86 × 29.92 × 20.47	43.31 × 31.69 × 27.76
Tray Size [mm]	485 × 348	734 × 464	928 × 530
[W×D] ["]	19.09 × 13.70	28.90 × 18.27	36.54 × 20.87
Tray QTY [pcs]	1	2	2
Tray Max. Capacity	50mL × 78, 100mL × 54, 250mL × 32 500mL × 24, 1000mL × 14	50mL × 158, 100mL × 120, 250mL × 84 500mL × 56, 1000mL × 30	50mL × 264, 100mL × 180, 250mL × 120 500mL × 80, 1000mL × 48, 2000mL × 32
Lighting UV Lamp	8W 8W	8W 8W	8W 8W
Temperature			
Temp. Range [Ambient Temp. 5-35°C]	Incubated: 5°C above ambient to 60°C Refrigerated: 4°C to 60°C	Incubated: 5°C above ambient to 60°C Refrigerated: 4°C to 60°C	Incubated: 5°C above ambient to 60°C Refrigerated: 4°C to 60°C
Temp. Accuracy	0.1°C	0.1°C	0.1°C
Temp. Uniformity	≤±1°C [37°C]	≤±1°C [37°C]	≤±1°C [37°C]
Heating / Cooling Power	600 W / 334 W	1000W / 334W	1100W / 334W
Temp. Sensor	PT100	PT100	PT100
Shaking Control			
Shaking Motion	Orbital	Orbital	Orbital
Shaking Throw [Orbital]	25mm	25mm	35mm 50mm [Option]
Shaking Throw [Linear]	—	—	—
Shaking Frequency	30-300rpm[±1rpm]	30-300rpm [±1rpm]	20-300rpm [±1rpm]
	Depending on load and stacking	Depending on load and stacking	Depending on load and stacking
Stirring Power	130W	250W	250W

Parameter

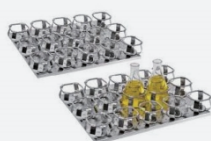
Model	ISF180/180R	ISF365/365R	ISB624/624R
Ergonomics			
Door Opening	Opening to front	Opening to front	Opening to front
Platform Type	Fixed	Fixed	Fixed
Electrical, Packing and Shipping			
Total Power	810 W 1166 W [with cooling]	1398 W 1754 W [with cooling]	1498 W 1885 W [with cooling]
Power Source	AC200-240V,1Phase,50-60HZ; AC108-120V,1Phase,60HZ [Option]		
Packing Dimensions [One unit] [mm]	820 × 1520 × 740	1120 × 1600 × 900	1360 × 1660 × 1000
[W×H×D] ["]	32.28 × 59.84 × 29.13	44.09 × 62.99 × 35.43	53.54 × 65.35 × 39.37
Packing Weight [Kg]	259	408	530
Standard Function			
Programming Steps Storable Programs	● [8 1]	● [8 1]	● [8 1]
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	○	○	○
Embedded Microprinter	○	○	○
Humidity Control	○	○	○
White Light [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	○ [upgrade to touch screen]	○ [upgrade to touch screen]	○ [upgrade to touch screen]
Third Level Authority and Operation Record	○ [upgrade to touch screen]	○ [upgrade to touch screen]	○ [upgrade to touch screen]
Historical Records and Real-time Curves [USB Export]	○ [upgrade to touch screen]	○ [upgrade to touch screen]	○ [upgrade to touch screen]
Programming Steps Storable Programs [30 5]	○ [upgrade to touch screen]	○ [upgrade to touch screen]	○ [upgrade to touch screen]

● = Standard ○ = Optional — = N/A

Accessories



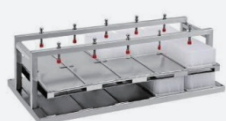
Stainless steel flask clamp



Stainless steel tray



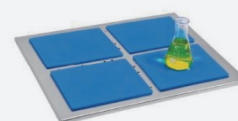
Universal tray with spring



ELISA plate rack



Test tube rack



Sticky board



tray with support bars



Enzyme plate clamp

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