

Incubated Shaker



General Application

Molecular biology, animal/plant cell culture, fermentation, genetics, new drug development, etc.

	Description	Temp. Range (°C/°F)	Motion Type	Max. Speed (rpm)	250 ml Flask Capacity	Model	Page	
Multi-type Stackable	Stackable Model <ul style="list-style-type: none"> • Double-stacked for space efficiency • Includes an electric outlet and wire shelves to use small equipment 	Amb. +5 to 80 / Amb. +9 to 176	Orbital	500	24	ISS	100	
		Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176		500	24	ISS-R	100	
	Stackable Model (Multi) <ul style="list-style-type: none"> • Maximum triple-stacked for space efficiency • Powerful DD motor for large-capacity shaking 	Amb. +10 to 80 / Amb. +18 to 176	Orbital	400	39	ISS-7100	102	
		Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176		400	39	ISS-7100R	102	
		Amb. +10 to 80 / Amb. +18 to 176		300	39	ISS-7200	102	
		Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176		300	39	ISS-7200R	102	
	Single-type	Benchtop Model <ul style="list-style-type: none"> • Convenient internal observation • Optimized for use on test bench top 	Amb. +5 to 80 / Amb. +9 to 176	Orbital	500	20	IST	104
			Amb. -15 (min. 15) to 80 / Amb. -27 (min. 27) to 176		500	20	IST-R	104
Floor Standing Model <ul style="list-style-type: none"> • Optimized for large-capacity of culture • Large capacity up to 5ea x 6 L flasks at the same time 		Amb. +5 to 80 / Amb. +9 to 176	Orbital	500	39	ISF-7100	106	
		Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176		500	39	ISF-7100R	106	
		Amb. +5 to 80 / Amb. +9 to 176		300	39	ISF-7200	106	
		Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176		300	39	ISF-7200R	106	

※ The contents of the above and the contents of this catalog may differ depending on the specific model and conditions of use. For the information about the features and specifications that applying to each models, please check the information on the corresponding page of each models.

 Satisfaction with the requirements of European regulations and guidelines.	 Certification of conformity of electricity, gas, etc. in accordance with the safety standards of Canada and USA.	 Real-time equipment monitoring and control system using mobile app.
 Registered patent based on JEIO TECH's proprietary technology.	 Compliance with Guidelines for Restriction of Hazardous Substances Use.	 Eco-friendly product that has passed environmental impact assessment tests.
 Intuitive operation with color touch display.	 Orbital motion either clockwise or counterclockwise direction can be set.	 Possible to set end time or start time of device operation.
 Warning alarm in case of deviation of temperature control.	 Electronic over temperature protection system.	 Conventional over temperature protection, a kind of backup device against electronic over temperature protection failure.
 PC communication via RS-232 / RS-485 / USB port.	 It memorizes the state of power failure and operates automatically when power is restored.	 More precise temperature control through 3-point temperature calibration.
 5 year warranty for direct drive motor	 2 year warranty free A/S.	

Incubated Shaker



Reliable precision temperature control up to 80°C Innovatory temperature control system using Lab Companion's technology

- > **Extended temperature range up to 80°C**
Broad range of applications, including culturing of thermophilic microorganisms at a temperature range up to 80°C, which is a wider range than previous models.
- > **Remote monitoring service (option)**
Monitor via mobile app anytime, anywhere with LC Connected (mobile monitoring system) connection. (when purchased LC GreenBox)
- > **More stable temperature control**
Optimized Microprocessor PID control for more accurate temperature control.
- > **Temperature calibration function**
Temperature calibration of up to 3 points allows for more reliable temperature control.
- > **Real-time monitoring of temperature deviation**
Prevents experiment errors through user notification when the actual temperature differs from the set temperature.
- > **Strong and stable shaking**
DD motor & triple cam system provide a powerful and stable shaking motion even under high loads. (ISF, ISS-7000) (registration KR 10-1678160)
Provide 5-year warranty for DD motor.
- > **Electronic over temperature protection system**
Independent precision temperature sensor and controller provides more secure and reliable over temperature protection. (ISF, ISS)
- > **Conventional over-temperature protection system**
Backup device against electronic system failure. Implementation of over-temperature protection even for electronic errors.



USB, RS-232 connection port provided.



Easy to attach and detach large-volume sample (ISF) thanks to the inclined structure. (registered design 30-2014-0060254)



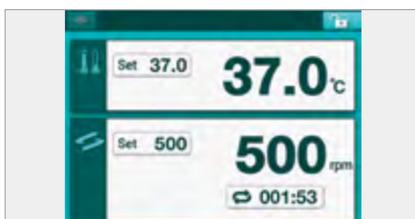
Viewing window and LED lighting for internal observation.



Optimized model based on shape and performance Easy and intuitive operation with color touch screen display

- > **Achieve intuitive and convenient operation**
Color LCD touch screen with excellent touch feeling makes researcher easy operation and it shows a status of operating.
- > **One action control provides convenience**
Convenient operation environment with easy Start/Stop button for fast and simple operation and stop.
- > **Complete model lineup according to usage environment**
Three models (tabletop, stackable, floor) provide the ability to choose the optimized model for the user environment.
- > **Maximal utilization with three operation modes**
The three modes of temperature and shaking, temperature, or shaking, provide the ability to perform various experiments with a single device.
- > **Computer interface environment provided**
USB, RS-232 connection and dedicated software provide convenient device operation and data accumulation/management function.
- > **Convenient sample observation environment provided**
Low-power consumed LED illumination provided as standard provides a convenient environment for sample observation.
- > **Lock function of controller**
Lock function for preventing change of controller settings prevents erroneous operation due to arbitrary changing.
- > **Spill drain port for internal cleanliness and easy maintenance**
Even if the sample leaks inside the equipment, it can be cleaned through the spill drain port.

※ Some of the above contents are limited to specific models.



Color LCD touch screen.



Safe use with over temperature protection function.



Spill drain port for clean internal management.

Incubated Shaker Stackable type

Double stackable for space efficiency

Structural Functional Features

- Best space-efficient model with double stacking.
- Up to 80°C, 500rpm enables setting of various experimental conditions.
- Three operating modes: Temperature & Shaking, Temperature, or Shaking.
- Includes internal power outlet.
- Shaking structure with minimized vibration.

Use Convenience Features

- Accurate rpm and temperature control through temperature auto-tuning / microprocessor PID and calibration.
- Monitor via mobile app anytime, anywhere with LC Connected. (mobile monitoring system) (when purchased LC GreenBox)
- Countdown timer (999 hours 59 minutes) of shaking operation.
- Intuitive operation with color touch display.
- High brightness / low-power LED illumination makes it easy to observe inside.
- Spill drain port for internal cleanliness and easy maintenance.

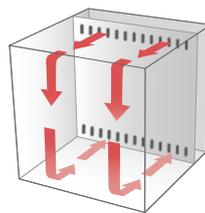
Outstanding Safety

- Electronic over temperature protection system. (advanced over temperature (A-OT) limiter)
Independent precision temperature sensor and controller provides more secure and reliable over temperature protection.
- Conventional over-temperature protection system. (B-OT, backup over temperature limiter)
A backup device against electronic system failure, mechanically preventing over temperature even when there are electronic errors.
- Soft start and stop shaking function.
- Malfunction prevented by controller lock function.
- Displays all information such as device operation and error occurrence.
- Overcurrent protection device restricts operation when objects are caught inside the system and shaking is not possible.



ISS series

with Shelf 2ea (standard)
Universal Platform, Flask Clamp (option)
Magnetic Stirrer (MS-17G)



Use the stacking kit for double stacked (option)



Color touch display



Smart Self-diagnosis

Real-time self-diagnostics to check equipment for abnormal conditions.

- Alarm is generated by monitoring difference between actual rpm/temperature and set rpm/temperature.
- Automatic rpm adjustment when device instability occurs. (high rpm, overload, weight imbalance, etc.)
- Detects abnormal conditions relating to the platform on which the sample is placed and stops the operation.
- Automatic restart as it was operated after power recovery.



Specification

Model	ISS-3075	ISS-3075R	ISS-4075	ISS-4075R
Temperature				
Range (°C / °F) ¹⁾	Amb. +5 to 80 / Amb. +9 to 176	Amb. -20 (Min. 4) to 80 / Amb. -36 (Min. 7.2) to 176	Amb. +5 to 80 / Amb. +9 to 176	Amb. -20 (Min. 4) to 80 / Amb. -36 (Min. 7.2) to 176
Fluctuation at 37°C in flask (±°C / °F)	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18
Variation at 37°C in flask (±°C / °F)	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9	0.5 / 0.9
Refrigerator (Hp)	-	1/6	-	1/6
Shaking system				
Motion type	Orbital	Orbital	Orbital	Orbital
Speed range (rpm)	20 to 500 (stackable : 20 to 250)	20 to 500 (stackable : 20 to 250)	20 to 500 (stackable : 20 to 250)	20 to 500 (stackable : 20 to 250)
Max. speed per permissible load (rpm)	500 (max. 10 kg / 22.0 lbs) 400 (max. 15 kg / 33.1 lbs) 250 (max. 15 kg / 33.1 lbs) - Stacked	500 (max. 10 kg / 22.0 lbs) 400 (max. 15 kg / 33.1 lbs) 250 (max. 15 kg / 33.1 lbs) - Stacked	500 (max. 10 kg / 22.0 lbs) 400 (max. 21 kg / 46.3 lbs) 250 (max. 21 kg / 46.3 lbs) - Stacked	500 (max. 10 kg / 22.0 lbs) 400 (max. 21 kg / 46.3 lbs) 250 (max. 21 kg / 46.3 lbs) - Stacked
Amplitude size (mm / inch, dia.)	19.1 / 0.75	19.1 / 0.75	19.1 / 0.75	19.1 / 0.75
Speed stability ²⁾ (rpm, %)	±1	±1	±1	±1
Timer (count-down)	999hr 59min	999hr 59min	999hr 59min	999hr 59min
Dimension				
Chamber volume (L / cu ft)	80 / 2.8	80 / 2.8	150 / 5.3	150 / 5.3
Platform (W x D, mm / inch)	350 x 350 / 13.8 x 13.8	350 x 350 / 13.8 x 13.8	450 x 450 / 17.7 x 17.7	450 x 450 / 17.7 x 17.7
Interior (W x D x H, mm / inch)	440 x 440 x 418 / 17.3 x 17.3 x 16.5	440 x 440 x 418 / 17.3 x 17.3 x 16.5	540 x 540 x 518 / 21.3 x 21.3 x 20.4	540 x 540 x 518 / 21.3 x 21.3 x 20.4
Exterior (W x D x H, mm / inch)	578 x 815 x 854 / 22.8 x 32.1 x 33.6	578 x 815 x 854 / 22.8 x 32.1 x 33.6	678 x 895 x 934 / 26.7 x 35.2 x 36.8	678 x 895 x 934 / 26.7 x 35.2 x 36.8
Quantity of shelves (standard / max.)	2 / 8	2 / 8	2 / 11	2 / 11
Net weight (kg / lbs)	153 / 337.3	160 / 352.7	183 / 403.4	190 / 418.9
Electrical requirements (230V, 50/60Hz, A)	6.2	7.9	6.2	7.9
Cat. No.	AAH23432K	AAH23532K	AAH23632K	AAH23732K
Electrical requirements (120V, 60Hz, A)	9.5	13	9.5	13
Cat. No.	AAH23415U	AAH23515U	AAH23615U	AAH23715U

1) The temperature control range of the ISS-3075 and ISS-4075 models are from 5°C above the ambient temperature (15°C to 40°C) to 80°C. The temperature control range of the ISS-3075R and ISS-4075R models is from 20°C lower than the ambient temperature. (18°C to 35°C) of the device to 80°C. (However, the lowest control temperature is 4°C)

2) Actual rpm allowable error for set rpm is ±1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm.

Accessories Page 108

Universal Platform, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder, Lab Sticker, Spring Wire Rack, Dedicated Platform, Rubber Mat, Universal Attachment, Rectangular Foot Caster, Stacking Kit, Wire Shelves, LC GreenBox

Incubated Shaker

Multi-stackable type

Maximal space-saving multi-stackable model

Structural Functional Features

- Large-capacity triple stackable incubated shaker.
- Up to 80°C, 400rpm enables experimental conditions for various applications.
- Three operating modes: Temperature & Shaking, Temperature, or Shaking.
- Shaking structure with minimized vibration.
- Convenient to change samples with glide-up door.
- Stable shaking of high-load samples. (registration KR 10-1678160)
- Applied a direct drive motor that has outstanding durability, a 5-year warranty for the motor.

Use Convenience Features

- Accurate rpm and temperature control through temperature auto-tuning / microprocessor PID and calibration.
- Monitor via mobile app anytime, anywhere with LC Connected. (mobile monitoring system) (when purchased LC GreenBox)
- Countdown timer (999 hours 59 minutes) of shaking operation.
- Intuitive operation with color touch display.
- High brightness / low-power LED illumination makes it easy to observe inside.
- Spill drain port for internal cleanliness and easy maintenance.

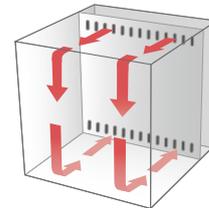
Outstanding Safety

- Electronic over temperature protection system. (A-OT, advanced over temperature limiter)
Independent precision temperature sensor and controller provides more secure and reliable over temperature protection.
- Conventional over-temperature protection system. (B-OT, backup over temperature limiter)
A backup device against electronic system failure, mechanically preventing over temperature even when there are electronic errors.
- Soft start and stop shaking function.
- Malfunction prevented by controller lock function.
- Displays all information such as device operation and error occurrence.
- Overcurrent protection device restricts operation when objects are caught inside the system and shaking is not possible.



ISS-7100R

with Universal Platform, Flask Clamp (option)



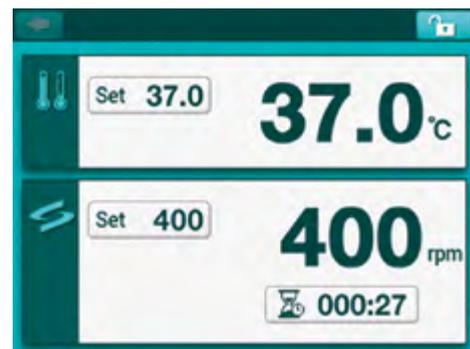
View the introduction video



Door lift-up structure for safe and convenient sample handling.



Rail-type platform allowing samples to be removed/mounted by pulling out the platform to the front.



Color touch display.



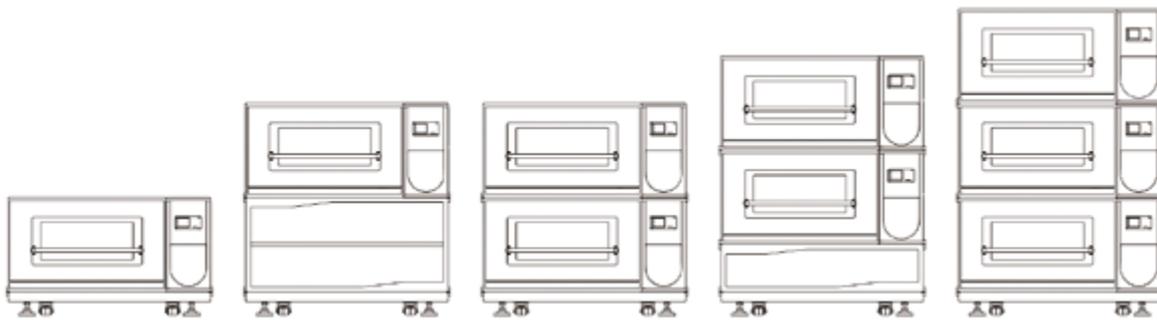
Smart Self-diagnosis

Real-time self-diagnostics to check equipment for abnormal conditions.

- Alarm is generated by monitoring difference between actual rpm/temperature and set rpm/temperature.
- Automatic rpm adjustment when device instability occurs. (high rpm, overload, weight imbalance, etc.)
- Automatic restart as it was operated after power recovery.

DD Shaking System Patented

Powerful DD motor for large-capacity shaking
The triple cam system provides stable shaking with high load samples.
(Patent registration KR 10-1678160)



Specification

Model	ISS-7100	ISS-7100R	ISS-7200	ISS-7200R
Temperature				
Range (°C / °F) ¹⁾	Amb. +10 to 80 / Amb. +18 to 176	Amb. -20 (Min. 4) to 80 / Amb. -36 (Min. 7.2) to 176	Amb. +10 to 80 / Amb. +18 to 176	Amb. -20 (Min. 4) to 80 / Amb. -36 (Min. 7.2) to 176
Fluctuation at 37°C in flask (±°C / °F)	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18
Variation at 37°C in flask (±°C / °F)	0.6 / 1.08	0.5 / 0.90	0.6 / 1.08	0.5 / 0.90
Refrigerator (Hp)	-	1/6	-	1/6
Shaking system				
Motion type	Orbital	Orbital	Orbital	Orbital
Speed range (rpm)	30 to 400 (stackable : 30 to 250)	30 to 400 (stackable : 30 to 250)	30 to 300 (stackable : 30 to 200)	30 to 300 (stackable : 30 to 200)
Max. speed per permissible load (rpm)	1 unit only 400 (max. 20 kg / 44.1 lbs)	1 unit only 400 (max. 20 kg / 44.1 lbs)	1 unit only 300 (max. 20 kg / 44.1 lbs)	1 unit only 300 (max. 20 kg / 44.1 lbs)
	Stacked units 250 (max. 15 kg / 33.1 lbs) 200 (max. 20 kg / 44.1 lbs)	Stacked units 250 (max. 15 kg / 33.1 lbs) 200 (max. 20 kg / 44.1 lbs)	Stacked units 200 (max. 15 kg / 33.1 lbs) 150 (max. 20 kg / 44.1 lbs)	Stacked units 200 (max. 15 kg / 33.1 lbs) 150 (max. 20 kg / 44.1 lbs)
	Amplitude size (mm / inch, dia.)	25.4 / 1	25.4 / 1	50.8 / 2
Speed stability ²⁾ (rpm, %)	±1	±1	±1	±1
Timer (count-down)	999 hr 59 min.	999 hr 59 min.	999 hr 59 min.	999 hr 59 min.
Dimension (1 unit)				
Chamber volume (L / cu ft)	198 / 7.0	198 / 7.0	198 / 7.0	198 / 7.0
Platform (W x D, mm / inch)	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5
Interior (W x D x H, mm / inch)	809 x 624 x 393 / 31.9 x 24.6 x 15.5	809 x 624 x 393 / 31.9 x 24.6 x 15.5	809 x 624 x 393 / 31.9 x 24.6 x 15.5	809 x 624 x 393 / 31.9 x 24.6 x 15.5
Exterior (W x D x H, mm / inch) ³⁾	1 unit ; 1307 x 996 x 755 / 51.5 x 39.2 x 29.7 1 unit+stand-I or 2 units stacked ; 1307 x 996 x 1355 / 51.5 x 39.2 x 53.3 2 units+stand-II stacked ; 1307 x 996 x 1655 / 51.5 x 39.2 x 65.2 3 units stacked ; 1307 x 996 x 1955 / 51.5 x 39.2 x 77.0			
Net weight (Kg / lbs)	300 / 661.4	320 / 705.5	300 / 661.4	320 / 705.5
Electrical requirements (230V, 50/60Hz, A)	3.7	5.6	3.7	5.6
Cat. No.	AAH238132K	AAH238232K	AAH239132K	AAH239232K
Electrical requirements (120V, 60Hz, A)	7.1	10	7.1	10
Cat. No.	AAH238115U	AAH238215U	AAH239115U	AAH239215U

1) The temperature control range of the ISS-7100 and ISS-7200 models are from 10°C above the ambient temperature of the equipment. (15°C to 40°C) to 80°C The temperature control range of the ISS-7100R and ISS-7200R models are from 20°C below the ambient temperature (18°C to 35°C) of the device to 80°C. (However, the lowest control temperature is 4°C)

2) Actual rpm allowable error for set rpm is 1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm.

3) Product height: 600mm, height of Stand I: 600mm, height of Stand II: 300mm, height of wheel attachment: 155mm.

Accessories Page 108

Universal Platform, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder, Lab Sticker, Spring Wire Rack, Dedicated Platform, Rubber Mat, Universal Attachment, Stand, Stacking Kit, LC GreenBox

Incubated Shaker Tabletop type

Provides convenient internal observation environment

Structural Functional Features

- Model optimized for use on experiment bench.
- Up to 80°C, 500rpm enables setting of various experimental conditions.
- Three operating modes: Temperature & Shaking, Temperature, or Shaking.
- Door structure allows for easy sample removal/attach at the front.
- Shaking structure with minimized vibration.
- Four models according to refrigeration system and the size of the platform.

Use Convenience Features

- Accurate rpm and temperature control through temperature auto-tuning / microprocessor PID and calibration.
- Monitor via mobile app anytime, anywhere with LC Connected. (mobile monitoring system) (when purchased LC GreenBox)
- Countdown timer (999 hours 59 minutes) of shaking operation.
- Intuitive operation with color touch display.
- High brightness / low-power LED illumination makes it easy to observe inside.
- Spill drain port for internal cleanliness and easy maintenance.

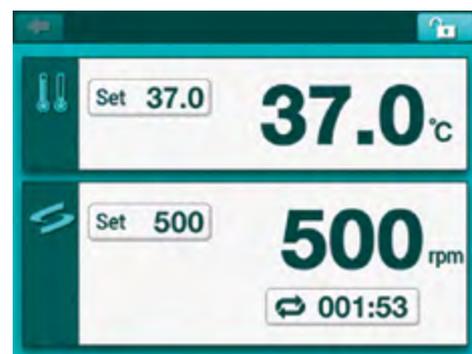
Outstanding Safety

- Over temperature limit function.
- Soft start and stop shaking function.
- Malfunction prevented by controller lock function.
- Displays all information such as device operation and error occurrence.
- Overcurrent protection device restricts operation when objects are caught inside the system and shaking is not possible.



IST series

with Universal Platform, Flask Clamp (option)



Color touch display



Smart Self-diagnosis

Real-time self-diagnostics to check equipment for abnormal conditions.

- Alarm is generated by monitoring difference between actual rpm/temperature and set rpm/temperature.
- Automatic rpm adjustment when device instability occurs. (high rpm, overload, weight imbalance, etc.)
- Detects abnormal conditions relating to the platform on which the sample is placed and stops the operation.
- Automatic restart as it was operated after power recovery.



Specification

Model	IST-3075	IST-3075R	IST-4075	IST-4075R
Temperature				
Range (°C / °F) ¹⁾	Amb. +5 to 80 / Amb. +9 to 176	Amb. -15 (Min. 15) to 80 / Amb. -27 (Min. 27) to 176	Amb. +5 to 80 / Amb. +9 to 176	Amb. -15 (Min. 15) to 80 / Amb. -27 (Min. 27) to 176
Fluctuation at 37°C in flask (±°C / °F)	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18
Variation at 37°C in flask (±°C / °F)	0.5 / 0.90	0.5 / 0.90	0.5 / 0.90	0.5 / 0.90
Refrigerator (Hp)	-	1/6	-	1/6
Shaking system				
Motion type	Orbital	Orbital	Orbital	Orbital
Speed range (rpm)	20 to 500	20 to 500	20 to 500	20 to 500
Max. speed per permissible load (rpm)	500 (max. 10 kg / 22.0 lbs) 400 (max. 15 kg / 33.1 lbs)	500 (max. 10 kg / 22.0 lbs) 400 (max. 15 kg / 33.1 lbs)	500 (max. 14 kg / 30.9 lbs) 400 (max. 21 kg / 46.3 lbs)	500 (max. 14 kg / 30.9 lbs) 400 (max. 21 kg / 46.3 lbs)
Amplitude size (mm / inch, dia.)	19.1 / 0.75	19.1 / 0.75	19.1 / 0.75	19.1 / 0.75
Speed stability ²⁾ (rpm, %)	±1	±1	±1	±1
Timer (count-down)	999 hr 59 min.			
Dimension				
Chamber volume (L / cu ft)	53 / 1.9	53 / 1.9	83 / 2.9	83 / 2.9
Platform (W x D, mm / inch)	350 x 350 / 13.8 x 13.8	350 x 350 / 13.8 x 13.8	450 x 450 / 17.7 x 17.7	450 x 450 / 17.7 x 17.7
Interior (W x D x H, mm / inch)	410 x 410 x 320 / 16.1 x 16.1 x 12.6	410 x 410 x 320 / 16.1 x 16.1 x 12.6	510 x 510 x 320 / 20.1 x 20.1 x 12.6	510 x 510 x 320 / 20.1 x 20.1 x 12.6
Exterior (W x D x H, mm / inch)	440 x 785 x 510 / 17.3 x 30.9 x 20.1	440 x 785 x 510 / 17.3 x 30.9 x 20.1	540 x 890 x 510 / 21.3 x 35 x 20.1	540 x 890 x 510 / 21.3 x 35 x 20.1
Net weight (Kg / lbs)	65 / 143.3	73 / 160.9	81 / 178.6	90 / 198.4
Electrical requirements (230V, 50/60Hz, A)				
Cat. No.	AAH23422K	AAH23522K	AAH23622K	AAH23722K
Electrical requirements (120V, 60Hz, A)				
Cat. No.	AAH23465U	AAH23565U	AAH23665U	AAH23765U

1) The temperature control range of the IST-3075 and IST-4075 models are from 5°C above the ambient temperature of the equipment. (15°C to 40°C) to 80°C. The temperature control range of the IST-3075R and IST-4075R models are from 15°C below the ambient temperature (18°C to 35°C) of the device to 80°C. (However, the lowest control temperature is 15°C)

2) Actual rpm allowable error for set rpm is ±1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm.

Accessories Page 108

Universal Platform, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder, Lab Sticker, Spring Wire Rack, Dedicated Platform, Rubber Mat, Universal Attachment, LC GreenBox

Incubated Shaker Floor type

Optimal solution for mass culturing

Structural Functional Features

- Large-capacity incubated shaker model.
- Up to 80°C, 500rpm enables setting of various experimental conditions.
- It is convenient for attaching and detaching a large amount of sample because structure of door is lowering from the rear to the front. (registration KR 30-0837007)
- Three operating modes: Temperature & Shaking, Temperature, or Shaking.
- Easy to move/fix the product.
- Stable shaking of high-load samples. (registration KR 10-1678160)
- Applied a direct drive motor that has outstanding durability, a 5-year warranty for the motor.

Use Convenience Features

- Accurate rpm and temperature control through temperature auto-tuning / microprocessor PID and calibration.
- Monitor via mobile app anytime, anywhere with LC Connected. (mobile monitoring system) (when purchased LC GreenBox)
- Countdown timer (999 hours 59 minutes) of shaking operation.
- Spill drain port for internal cleanliness and easy maintenance.

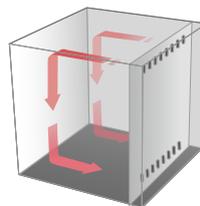
Outstanding Safety

- Electronic over temperature protection system. (A-OT, advanced over temperature limiter)
Independent precision temperature sensor and controller provides more secure and reliable over temperature protection.
- Conventional over-temperature protection system. (B-OT, backup over temperature limiter)
A backup device against electronic system failure, mechanically preventing over temperature even when there are electronic errors.
- Soft start and stop shaking function.
- Malfunction prevented by controller lock function.
- Displays all information such as device operation and error occurrence.
- Overcurrent protection device restricts operation when objects are caught inside the system and shaking is not possible.

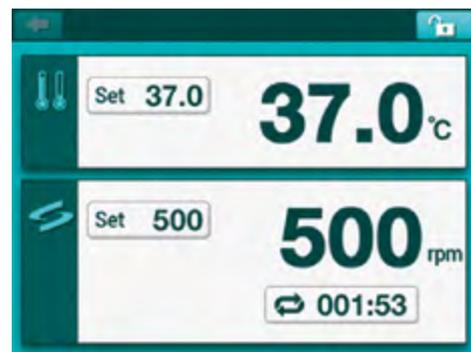


ISF series

with Optional Accessories



Easy to attach and detach large volume sample thanks to the inclined lid structure. (Registered design 30-2014-0060254)



Color touch display



Smart Self-diagnosis

Real-time self-diagnostics to check equipment for abnormal conditions.

- Alarm is generated by monitoring difference between actual rpm/temperature and set rpm/temperature.
- Automatic rpm adjustment when device instability occurs. (high rpm, overload, weight imbalance, etc.)
- Automatic restart as it was operated after power recovery.



DD Shaking System Patented

Powerful DD motor for large-capacity shaking. The triple cam system provides stable shaking with high load samples.
(Patent registration KR 10-1678160)

Specification

Model	ISF-7100	ISF-7100R	ISF-7200	ISF-7200R
Temperature				
Range (°C / °F) ¹⁾	Amb. +5 to 80 / Amb. +9 to 176	Amb. -20 (Min. 4) to 80 / Amb. -36 (Min. 7.2) to 176	Amb. +5 to 80 / Amb. +9 to 176	Amb. -20 (Min. 4) to 80 / Amb. -36 (Min. 7.2) to 176
Fluctuation at 37°C in flask (±°C / °F)	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18	0.1 / 0.18
Variation at 37°C in flask (±°C / °F)	0.5 / 0.90	0.5 / 0.90	0.5 / 0.90	0.5 / 0.90
Refrigerator (Hp)	-	1/6	-	1/6
Shaking system				
Motion type	Orbital	Orbital	Orbital	Orbital
Speed range (rpm)	30 to 500	30 to 500	30 to 300	30 to 300
Max. speed per permissible load (rpm)	500 (max. 15 kg / 33.1 lbs) 400 (max. 25 kg / 55.1 lbs) 350 (max. 35 kg / 77.2 lbs)	500 (max. 15 kg / 33.1 lbs) 400 (max. 25 kg / 55.1 lbs) 350 (max. 35 kg / 77.2 lbs)	300 (max. 20 kg / 44.1 lbs) 200 (max. 35 kg / 77.2 lbs)	300 (max. 20 kg / 44.1 lbs) 200 (max. 35 kg / 77.2 lbs)
Amplitude size (mm / inch, dia.)	25.4 / 1	25.4 / 1	50.8 / 2	50.8 / 2
Speed stability ²⁾ (rpm, %)	±1	±1	±1	±1
Timer (count-down)	999 hr 59 min.	999 hr 59 min.	999 hr 59 min.	999 hr 59 min.
Dimension				
Chamber volume (L / cu ft)	270 / 9.5	270 / 9.5	270 / 9.5	270 / 9.5
Platform (W x D, mm / inch)	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5
Interior (W x D x H, mm / inch)	894 x 634 x 480 / 35.2 x 25 x 18.9	894 x 634 x 480 / 35.2 x 25 x 18.9	894 x 634 x 480 / 35.2 x 25 x 18.9	894 x 634 x 480 / 35.2 x 25 x 18.9
Exterior (W x D x H, mm / inch)	1128 x 854 x 1035 / 44.4 x 33.6 x 40.8	1128 x 854 x 1035 / 44.4 x 33.6 x 40.8	1128 x 854 x 1035 / 44.4 x 33.6 x 40.8	1128 x 854 x 1035 / 44.4 x 33.6 x 40.8
Net weight (Kg / lbs)	277 / 610.7	287 / 632.7	277 / 610.7	287 / 632.7
Electrical requirements (230V, 50/60Hz, A)				
Cat. No.	AAH23342K	AAH23541K	AAH23442K	AAH23641K
Electrical requirements (120V, 60Hz, A)				
Cat. No.	AAH23375U	AAH23575U	AAH23475U	AAH23675U

1) The temperature control range of the ISF-7100 and ISF-7200 models are from 5°C above the ambient temperature of the equipment. (15°C to 40°C) to 80°C The temperature control range of the ISF-7100R and ISF-7200R models are from 20°C below the ambient temperature (18°C to 35°C) of the device to 80°C. (However, the lowest control temperature is 4°C)

2) Actual rpm allowable error for set rpm is ±1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm.

Accessories Page 108

Universal Platform, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder, Lab Sticker, Spring Wire Rack, Dedicated Platform, Rubber Mat, Universal Attachment, LC GreenBox

Accessories

Universal Platform



Universal Platform
Basic accessories required to use Erlenmeyer flasks, test tubes, separated funnels, etc.

Accessories for Universal Platform



Flask Clamp (STS / Plastic)
Erlenmeyer flask mounting (50ml – 6L)
High-strength spring maintains excellent clamping.



Starter Kit
Consisting of plastic clamps that are commonly used on Universal Platforms. 50ml, 100ml, 250ml, 500ml, 1L, 2L.



Funnel Clamp
Separated funnel mounting (250 ml - 2L)
Easy detachment/attachment and stable clamping.



Test Tube Rack
Test tube mounting (Φ8 mm - Φ35 mm)
Easily adjustable angle.



Microplate Holder
Various options for Microplate Single, Tower, Flat A (Large), Flat B (Small)



Lab Sticker
Excellent adhesion as size is 200x200mm, allowing for application to petri dishes, culture bottles, etc.
Temp. Range (°C): 15-60 Max. Speed (rpm): 250

LC GreenBox



LC GreenBox
Monitor the operation status of the device in real time via the mobile app with a simple internet connection.

Set Accessories



Spring Wire Rack
Fixed with 2-stage grid springs to accommodate various sample container shapes.



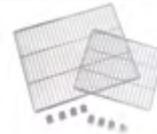
Dedicated Platform
Accessories (250 mL, 500 mL) installed on platform with maximum quantity of flask clamps.



Rubber Mat
Convenient for use with culture bottles and petri dishes with rubber mat to prevent slipping on the bottom.



Universal Attachment
Rubber mat on the bottom and adjustable clamping rod make it a convenient structure for a wide range of applications.



Wire Shelf
Shelf and its bracket enabling sample loading.
(applied to ISS-3075(R)/4075(R) series)



Retractable Foot Caster
Device that makes it easy to move/fix.
(applied to ISS-3075(R)/4075(R) series)



Stand 1 & 2
When using 1 unit of the ISS-7000 model or when using more than 2 units stackable, different height of stands provide convenient access to a platform.



Stacking Kit
Fixing tool for stacked units.
Applied to ISS series models.

Description	IST-3075 Series	IST-4075 Series	ISS-3075 Series	ISS-4075 Series	ISF-7000 Series	ISS-7000 Series
Dedicated Platform (250 ml)	AAA23611-V1	AAA23623-V1	AAA23611-V1	AAA23621-V1	AAA23634	AAA23637
Dedicated Platform (500 ml)	AAA23612-V1	AAA23622-V1	AAA23612-V1	AAA23622-V1	AAA23635	AAA23636
Rubber Mat	AAA23531	AAA23532	AAA23531-V1	AAA23532-V1	AAA23534	AAA23537
Universal Attachment	AAA23511-V1	AAA23512-V1	AAA23511-V1	AAA23512-V1	AAA23505	AAA23517
Lab Sticker	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551
Wire Shelf	-	-	00EDA0008235	00EDA0008233	-	-
Stand 1 with Stacking kit (600 mm height for stacking 1 unit)	-	-	-	-	-	AAA23571
Stand 2 with Stacking kit (300 mm height for stacking 2 unit)	-	-	-	-	-	AAA23572
Retractable Foot Caster	-	-	AAA23801	AAA23802	-	-
Stacking Kit	-	-	AAA23811	AAA23812	-	AAA23573

LC GreenBox

Description	Dimension (W x D x H, mm/inch)	IST-3075 Series	IST-4075 Series	ISS-3075 Series	ISS-4075 Series	ISF-7000 Series	ISS-7000 Series
LC GreenBox	156 x 94 x 34 / 6.1 x 3.7 x 1.3	AAHQ1011K	AAHQ1011K	AAHQ1011K	AAHQ1011K	AAHQ1011K	AAHQ1011K

Description		Model	IST-3075 Series	IST-4075 Series	ISS-3075 Series	ISS-4075 Series	ISF-7000 Series	ISS-7000 Series
		Platform Size (mm/inch)	350 x 350 / 13.8 x 13.8	450 x 450 / 17.7 x 17.7	350 x 350 / 13.8 x 13.8	450 x 450 / 17.7 x 17.7	755 x 520 / 29.7 x 20.5	755 x 520 / 29.7 x 20.5
Universal Platform		Cat. No.	AAA23501-V3	AAA23502-V3	AAA23501-V3	AAA23502-V3	AAA23503-V3	AAA23507
Flask Clamp for Erlenmeyer Flask (Stainless Steel)	50 ml	AAA23550	36	49	36	49	88	88
	100 ml	AAA23551	24	39	24	39	68	68
	250 ml	AAA23552	14	20	14	24	39	39
	300 ml	AAA23556	14	20	14	24	39	39
	500 ml	AAA23553	9	16	9	16	28	28
	1 L	AAA23554	6	9	6	9	18	18
	2 L	AAA23555	4	5	4	6	11	11
	2.8 L	AAA23557	2	4	2	5	8	8
	4 L	AAA23558	-	-	-	4	6	6
	6 L	AAA23559	-	-	-	2	5	-
Flask Clamp for Erlenmeyer Flask (Plastic)¹⁾	50 ml	AAA30570	36	49	36	49	88	88
	100~125 ml	AAA30571	19	29	19	29	48	48
	200 ml	AAA30572	13	21	13	21	35	35
	250 ml	AAA30573	13	19	13	19	35	34
	300 ml	AAA30574	12	19	12	19	35	34
	500 ml ²⁾	AAA30575	9	12	9	12	24	21
	1 L ²⁾	AAA30576	4	9	5	9	12	11
	2 L ²⁾	AAA30577	2	4	4	5	8	6
Funnel Clamp	250 ml	AAA23562	4	6	4	6	15	15
	500 ml	AAA23563	2	4	3	4	10	10
	1 L	AAA23564	-	3	-	3	7	7
	2 L	AAA23565	-	-	-	-	5	5
Test Tube Rack³⁾	Ø8 mm (86ea)	AAA23581	2	4	2	4	7	7
	Ø10 mm (86ea)	AAA23582	2	4	2	4	7	7
	Ø12 mm (58ea)	AAA23583	2	4	2	4	7	7
	Ø14 mm (58ea)	AAA23584	2	4	2	4	7	7
	Ø17 mm (32ea)	AAA23585	2	4	2	4	7	7
	Ø25 mm (19ea)	AAA23586	2	4	2	4	7	7
	Ø35 mm (10ea)	AAA23594	2	4	2	4	7	7
Microplate Holder	Single	AAA23654	8	15	8	15	25	25
	Tower	AAA23651	5	8	6	10	21	21
	Flat A (Large)	AAA23652	-	2	-	2	4	4
	Flat B (Small)	AAA23653	2	2	2	3	6	6

1) In the case of plastic flask clamps mounting, deformation may occur at temperatures over 40°C. Stainless steel flask clamps are recommended when using over 40°C and high temperature environment.

2) Possible to use under 300rpm

3) Maximum quantity on each platform. (no angle condition for test tube rack), it is the maximum quantity that does not cause the rack to tilt.

Description	IST-3075 Series	IST-4075 Series	ISS-3075 Series	ISS-4075 Series	ISF-7000 Series	ISS-7000 Series
Spring Wire Rack (Cat. No.)	AAA23521-V1	AAA23522-V2	AAA31521-V1	AAA31522-V1	AAA23514	AAA23527
Quantity of Erlenmeyer Flask	50 ml	16	25	16	25	45
	100 ml	9	16	9	16	28
	250 ml	4	9	4	9	18
	300 ml	4	9	4	9	18
	500 ml	4	5	4	5	15
	1 L	2	4	2	4	10
	2 L	1	2	1	2	6
2.8 L	1	2	1	2	4	

Starter Kit

Description	Composition of Clamp	Cat. No.
Starter Kit I	50 ml (2), 100 ml (2), 250 ml (4), 500 ml (4), 1L (2), 2L (2)	AAA30581
Starter Kit II	50 ml (3), 100 ml (3), 250 ml (6), 500 ml (6)	AAA30582