## 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**<br>• Double-stacked for space efficiency<br>• Also, easy to use as a general incubator | Amb. +5 to 80 / Amb. +9 to 176 | Orbital | 500 | 24 | ISS | 98 |
| | | Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176 | | 500 | 24 | ISS-R | 98 |
| | **Stackable Model (Multi)**<br>• Maximum triple-stacked for space efficiency<br>• Powerful DD motor for large-capacity shaking | Amb. +10 to 80 / Amb. +18 to 176 | Orbital | 400 | 35 | ISS-7100 | 100 |
| | | Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176 | | 400 | 35 | ISS-7100R | 100 |
| | | Amb. +10 to 80 / Amb. +18 to 176 | | 300 | 35 | ISS-7200 | 100 |
| | | Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176 | | 300 | 35 | ISS-7200R | 100 |
| **Single-type** | **Benchtop Model**<br>• Convenient internal observation<br>• Optimized for use on test bench top | Amb. +5 to 80 / Amb. +9 to 176 | Orbital | 500 | 20 | IST | 102 |
| | | Amb. -15 (min. 15) to 80 / Amb. -27 (min. 27) to 176 | | 500 | 20 | IST-R | 102 |
| | **Floor Standing Model**<br>• Optimized for large-capacity of culture<br>• 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 | 104 |
| | | Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176 | | 500 | 39 | ISF-7100R | 104 |
| | | Amb. +5 to 80 / Amb. +9 to 176 | | 300 | 39 | ISF-7200 | 104 |
| | | Amb. -20 (min. 4) to 80 / Amb. -36 (min. 7.2) to 176 | | 300 | 39 | ISF-7200R | 104 |

※ 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.

**CE** Satisfaction with the requirements of European regulations and guidelines.

**CSA c US** Certification of conformity of electricity, gas, etc. in accordance with the safety standards of Canada and USA.

**LC Connected** Real-time equipment monitoring and control system using mobile app.

**Patented** Registered patent based on JEIO TECH's proprietary technology.

**RoHS Compliant** Compliance with Guidelines for Restriction of Hazardous Substances Use.

**Green CFC-Free** Eco-friendly product that has passed environmental impact assessment tests.

**Touch Display** Intuitive operation with Color Touch display.

**Orbital** Orbital motion either clockwise or counterclockwise direction can be set.

**Timer** Possible to set end time or start time of device operation.

**Deviation Warning** Warning alarm in case of deviation of temperature control.

**Advanced Over Temp.** Electronic over temperature protection system.

**Backup Over Temp.** Conventional over temperature protection, a kind of backup device against electronic over temperature protection failure.

**Computer Interface** PC communication via RS-232 / RS-485 / USB port.

**Auto Run** It memorizes the state of power failure and operates automatically when power is restored.

**2 year Warranty** 2 year warranty Free A/S.

# 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.
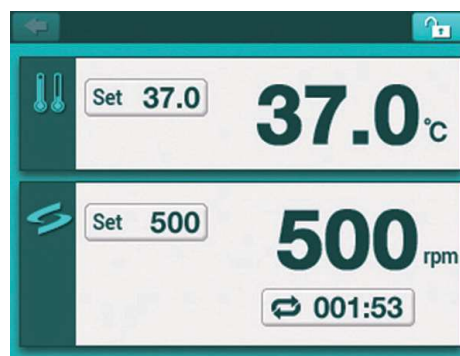- Spill drain port for internal cleanliness and easy maintenance.

### ▰ 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.
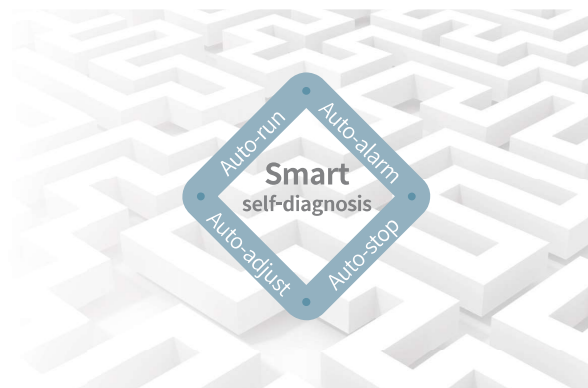
**IST series**
with Universal Platform, Flask Clamp (option)

Color touch display

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CE | C CSA US | LC Connected | RoHS Compliant | Green CFC-Free | Touch Display | Orbital | Timer | Deviation Warning | Over Temp. | Computer Interface | Auto Run | 2 year Warranty

## 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.

Smart self-diagnosis
Auto-run · Auto-alarm · Auto-adjust · Auto-stop

## Specification

| Model | IST-3075 | | IST-3075R | | IST-4075 | | IST-4075R | |
|---|---|---|---|---|---|---|---|---|
| **Temperature** | | | | | | | | |
| Range (°C / °F) | 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. | | 999 hr 59 min. | | 999 hr 59 min. | | 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, A)** | 60Hz, 4 | 50Hz, 4 | 60Hz, 5.5 | 50Hz, 5.5 | 60Hz, 4 | 50Hz, 4 | 60Hz, 5.5 | 50Hz, 5.5 |
| **Cat. No.** | AAH23411K | AAH23422K | AAH23511K | AAH23522K | AAH23611K | AAH23622K | AAH23711K | AAH23722K |
| **Electrical requirements (120V, A)** | 60Hz, 7.5 | | 60Hz, 10.1 | | 60Hz, 7.5 | | 60Hz, 10.1 | |
| **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)
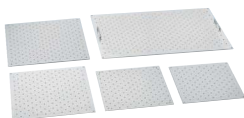2) Actual rpm allowable error for set rpm is ±1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm.

## Accessories [Page 106]

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 (Stainless Steel)
Erlenmeyer flask mounting (50 ml – 6 L) High-strength spring maintains excellent clamping.

### Flask Clamp (Plastic)
Erlenmeyer flask mounting (50 ml – 2 L) Reduced noise with plastic body and rubber on the bottom. (Using under 40℃, and under 300rpm)
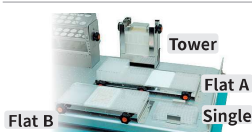
### Funnel Clamp
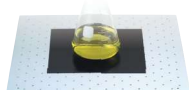Separated funnel mounting (250 ml – 2L) Easy detachment/attachment and stable clamping.

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

### Microplate Holder
Tower

Flat A

Flat B

Single

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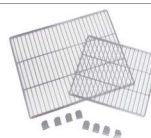
### Rubber Mat
Convenient for use with culture bottles and petri dishes with rubber mat to prevent slipping on the bottom.

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

### Wire Shelve
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 Shelve | - | | 00EDA0008235 | 00EDA0008233 | - | - |
| Stand 1 with Stacking kits (600 mm height for stacking 1 unit) | - | - | - | - | - | AAA23571 |
| Stand 2 with Stacking kits (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 | AAAQ1011 | AAAQ1011 | AAAQ1011 | AAAQ1011 | AAAQ1011 | AAAQ1011 |

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| 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 Rack[3] | 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 | 45 |
| | 100 mℓ | 9 | 16 | 9 | 16 | 28 | 28 |
| | 250 mℓ | 4 | 9 | 4 | 9 | 18 | 18 |
| | 300 mℓ | 4 | 9 | 4 | 9 | 18 | 18 |
| | 500 mℓ | 4 | 5 | 4 | 5 | 15 | 15 |
| | 1 L | 2 | 4 | 2 | 4 | 10 | 10 |
| | 2 L | 1 | 2 | 1 | 2 | 6 | 6 |
| | 2.8 L | 1 | 2 | 1 | 2 | 4 | 4 |