

# 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. (Requires LC GreenBox, option)
- Countdown timer (999 hours 59 minutes) of shaking operation.
- Spill drain port for internal cleanliness and easy maintenance.

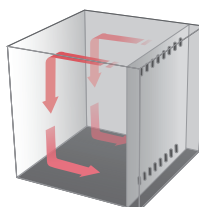
### Outstanding Safety

- 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.

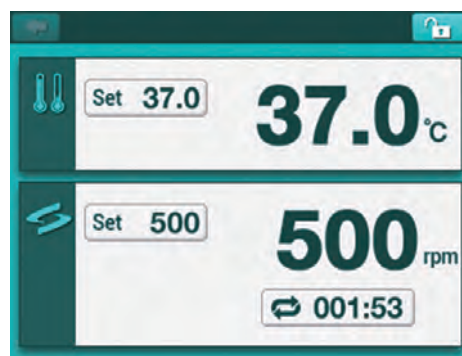


ISF series

with Optional Accessories



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



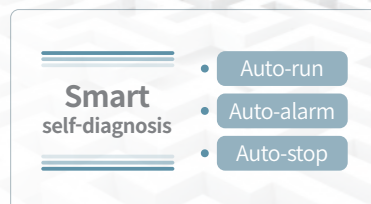
Color touch display



## 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 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.

(Patented in Korea)

## Specification

| Model                                             | ISF-7100                                                                                  | ISF-7100R                                                                                 | ISF-7200                                                   | ISF-7200R                                                  |
|---------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| <b>Temperature</b>                                |                                                                                           |                                                                                           |                                                            |                                                            |
| Range (°C / °F) <sup>1)</sup>                     | 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                                                        |
| <b>Shaking system</b>                             |                                                                                           |                                                                                           |                                                            |                                                            |
| 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)<br>400 (max. 25 kg / 55.1 lbs)<br>350 (max. 35 kg / 77.2 lbs) | 500 (max. 15 kg / 33.1 lbs)<br>400 (max. 25 kg / 55.1 lbs)<br>350 (max. 35 kg / 77.2 lbs) | 300 (max. 20 kg / 44.1 lbs)<br>200 (max. 35 kg / 77.2 lbs) | 300 (max. 20 kg / 44.1 lbs)<br>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 <sup>2)</sup> (rpm, %)            | ±1                                                                                        | ±1                                                                                        | ±1                                                         | ±1                                                         |
| Timer (count-down)                                | 999 hr 59 min.                                                                            | 999 hr 59 min.                                                                            | 999 hr 59 min.                                             | 999 hr 59 min.                                             |
| <b>Dimension</b>                                  |                                                                                           |                                                                                           |                                                            |                                                            |
| 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                                                |
| <b>Electrical requirements (230V, 50/60Hz, A)</b> |                                                                                           |                                                                                           |                                                            |                                                            |
| Cat. No.                                          | AAH23342K                                                                                 | AAH23541K                                                                                 | AAH23442K                                                  | AAH23641K                                                  |
| <b>Electrical requirements (120V, 60Hz, A)</b>    |                                                                                           |                                                                                           |                                                            |                                                            |
| 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)

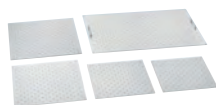
2) Actual rpm allowable error for set rpm is ±1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm.

## Accessories Page 120

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

# Accessories

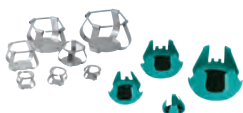
## Universal Platform



### Universal Platform

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

## Accessories for Universal Platform



### Flask Clamp (SUS / 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.



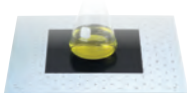
### Test Tube Rack

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 to 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



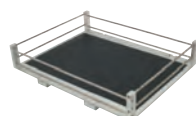
### Spring Wire Rack

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.



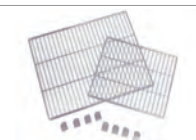
### Rubber Mat

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-V1     |
| Universal Attachment                                             | AAA23511-V1     | AAA23512-V1     | AAA23511-V1     | AAA23512-V1     | AAA23505        | AAA23517-V1     |
| Lab Sticker                                                      | AAA30551        | AAA30551        | AAA30551        | AAA30551        | AAA30551        | AAA30551        |
| Wire Shelf                                                       | -               | -               | 00EDA0008235    | 00EDA0008233    | -               | -               |
| Stand 1 with Stacking kit<br>(600 mm height for stacking 1 unit) | -               | -               | -               | -               | -               | AAA23571        |
| Stand 2 with Stacking kit<br>(300 mm height for stacking 2 unit) | -               | -               | -               | -               | -               | AAA23572        |
| Retractable Foot Caster                                          | -               | -               | AAA23801        | AAA23802        | -               | -               |
| Stacking Kit                                                     | -               | -               | AAA23811        | AAA23812        | -               | AAA23573        |

## LC GreenBox

| Description | Dimension<br>(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       |                 |                 |                 |                 |                 |

| 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-V1             |
| 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) <sup>1)</sup> | 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 <sup>2)</sup> | AAA30575                | 9                       | 12                      | 9                       | 12                      | 24                      | 21                      |
|                                                          | 1 L <sup>2)</sup>    | AAA30576                | 4                       | 9                       | 5                       | 9                       | 12                      | 11                      |
|                                                          | 2 L <sup>2)</sup>    | 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 <sup>3)</sup>                             | 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                       |
|                                                          | Ø30 mm (10ea)        | AAA23587                | 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-V1     |
| 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               |

## 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 |