# **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.
- Utilized as an incubator using the shelves.
- 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.

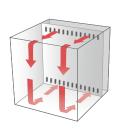
# Outstanding Safety

- 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)





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)                               | Amb. +5 to 80<br>/ Amb. +9 to 176  |           | Amb20 (Min. 4) to 80<br>/ Amb36 (Min. 7.2) to 176  |           | Amb. +5 to 80<br>/ Amb. +9 to 176  |           | Amb20 (Min. 4) to 80<br>/ Amb36 (Min. 7.2) to 176  |           |
| Fluctuation at 37°C in flask ( $\pm$ °C / °F) | 0.1 / 0.18   |           | 0.1 / 0.18   |           | 0.1 / 0.18   |           | 0.1 / 0.18   |           |
| Variation at 37°C in flask ( $\pm$ °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<br>(stackable : 20 to 250)   |           | 20 to 500<br>(stackable : 20 to 250)   |           | 20 to 500<br>(stackable : 20 to 250)   |           | 20 to 500<br>(stackable : 20 to 250)   |           |
| Max. speed per permissible load<br>(rpm)      | 500 (max. 10 kg / 22.0 lbs)<br>400 (max. 15 kg / 33.1 lbs)<br>250 (max. 15 kg / 33.1 lbs) -<br>Stacked |           | 500 (max. 10 kg / 22.0 lbs)<br>400 (max. 15 kg / 33.1 lbs)<br>250 (max. 15 kg / 33.1 lbs) -<br>Stacked |           | 500 (max. 10 kg / 22.0 lbs)<br>400 (max. 21 kg / 46.3 lbs)<br>250 (max. 21 kg / 46.3 lbs) -<br>Stacked |           | 500 (max. 10 kg / 22.0 lbs)<br>400 (max. 21 kg / 46.3 lbs)<br>250 (max. 21 kg / 46.3 lbs) -<br>Stacked |           |
| Amplitude size (mm / inch, dia.)              | 19.1 / 0.75  |           | 19.1 / 0.75  |           | 19.1 / 0.75  |           | 19.1 / 0.75  |           |
| Speed stability <sup>2)</sup> (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<br>/ 17.3 x 17.3 × 16.5  |           | 440 x 440 x 418<br>/ 17.3 x 17.3 x 16.5  |           | 540 x 540 x 518<br>/ 21.3 x 21.3 x 20.4  |           | 540 x 540 x 518<br>/ 21.3 x 21.3 x 20.4  |           |
| Exterior (W x D x H, mm / inch)               | 578 x 815 x 854<br>/ 22.8 x 32.1 x 33.6  |           | 578 x 815 x 854<br>/ 22.8 x 32.1 x 33.6  |           | 678 x 895 x 934<br>/ 26.7 x 35.2 x 36.8  |           | 678 x 895 x 934<br>/ 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, A)             | 60Hz, 6.2  | 50Hz, 6.2 | 60Hz, 7.9  | 50Hz, 7.9 | 60Hz, 6.2  | 50Hz, 6.2 | 60Hz, 7.9  | 50Hz, 7.9 |
| Cat. No.                                      | AAH23431K  | AAH23432K | AAH23531K  | AAH23532K | AAH23631K  | AAH23632K | AAH23731K  | AAH23732K |
| Electrical requirements (120V, A)             | 60Hz, 9.5  |           | 60Hz, 13   |           | 60Hz, 9.5  |           | 60Hz, 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  $\pm$ 1rpm if setting is less than 100rpm,  $\pm$ 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, Rectangular Foot Caster, Stacking Kit, Wire Shelves, LC GreenBox