

Incubator



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|--|--|--|--|--|---|
| | <p>Satisfaction with the requirements of European regulations and guidelines.</p> | | <p>Real-time equipment monitoring and control system using mobile app.</p> | | <p>Registered safety patent based on Jeio Tech's proprietary technology.</p> |
| | <p>Eco-friendly product that has passed environmental impact assessment tests.</p> | | <p>Ensuring the reliability of electronic records and signatures to support GMP audit.</p> | | <p>More precise temperature control through 3-point temperature calibration.</p> |
| | <p>More precise temperature control through temperature calibration.</p> | | <p>Warning alarm in case of deviation of temperature control.</p> | | <p>Over temperature protection function.</p> |
| | <p>Possible to set end time or start time of device operation.</p> | | <p>Indicator to ascertain water level.</p> | | <p>Alarm if the water is low level.</p> |
| | <p>Control of temperature / humidity / rpm / time, etc. through dedicated program.</p> | | <p>PC communication via RS-232 / RS-485 / USB port.</p> | | <p>It memorizes the state of power failure and operates automatically when power is restored.</p> |
| | <p>2 year warranty free A/S.</p> | | | | |

General Application

Organic bacteria, organic drugs, tissue cultures in the areas of antibody testing, clinical studies, hematology, microbiology, and others.

	Description	Temp. Range (°C/°F)	Max. Temp. Fluctuation (±°C/°F)	Volume (L / cu ft)	Model	Page
Incubator	Air-jacket, Advanced (Natural Convection) <ul style="list-style-type: none"> • Ultimate temperature control • Advanced air-jacket technology 	Amb.+5 ~ 80°C / Amb.+9 ~ 176°F	±0.15 / ±0.27 at 37°C	25, 60, 114, 150 (L) / 0.88, 2.12, 4.03, 5.31 (cu ft)	IB4-AV	90
	Air-jacket, Standard (Natural Convection) <ul style="list-style-type: none"> • Simple yet effective • Film Heater incubator 	Amb.+5 ~ 80°C / Amb.+9 ~ 176°F	±0.15 / ±0.27 at 37°C	25, 60, 114, 150 (L) / 0.88, 2.12, 4.03, 5.31 (cu ft)	IB4-AS	92
	Advanced (Forced Convection) <ul style="list-style-type: none"> • Consistent temperature with forced air circulation • Prevent media drying with adjustable airflow 	Amb.+5 ~ 80°C / Amb.+9 ~ 176°F ¹⁾	±0.15 / ±0.27 at 37°C	25, 60, 111, 146 (L) / 0.88, 2.12, 3.92, 5.16 (cu ft)	IB4-V	94
	Standard (Forced Convection) <ul style="list-style-type: none"> • User-friendly interface with built-in forced circulation • Uniform temperature distribution 	Amb.+5 ~ 80°C / Amb.+9 ~ 176°F ¹⁾	±0.15 / ±0.27 at 37°C	25, 60, 111, 146 (L) / 0.88, 2.12, 3.92, 5.16 (cu ft)	IB4-S	96
	Mini (Forced Convection) <ul style="list-style-type: none"> • Space-saving design • Easy access with bottom-hinged door 	Amb. +5 to 65 / Amb. +9 to 149	0.5 at 37°C / 0.9 at 98.6°F	10 / 0.4	IM	98
	Multi (Forced Convection) <ul style="list-style-type: none"> • Independent temperature control for each chamber • 2-in-1, 4-in-1 models 	Amb. +5 to 70 / Amb. +9 to 158	0.1 at 37°C / 0.18 at 98.6°F	120 / 4.2 (60 L / 2.1 cu ft x 2 chamber) 240 / 8.5 (60 L / 2.1 cu ft x 4 chamber)	IB-02G-2C IB-02G-4C	99
Low Temperature Incubator	Air-Jacket (Natural Convection) <ul style="list-style-type: none"> • Minimization of culture medium dry-out • Air-jacket type incubator 	4 to 70 / 39.2 to 158	0.2 at 37°C / 0.36 at 98.6°F	156, 254 / 5.5, 9.0	IL3-A	100
	General (Forced Convection) <ul style="list-style-type: none"> • Optimized for BOD experiments • Forced convection method 	0 to 80 / 32 to 176	0.1 at 37°C / 0.18 at 98.6°F	150, 242 / 5.3, 8.5	IL3	100
	Personal (Forced Convection) <ul style="list-style-type: none"> • Application of peltier cooling device system • Structure minimizes noise/vibration 	5 to 40 / +41 to 104 (at 20°C / 68°F) 10 to 40 / +50 to 104 (at 25°C / 77°F) 15 to 40 / +59 to 104 (at 30°C / 86°F)	0.1 at 25°C / 0.18 at 77°F	14, 48 / 0.5, 1.7	ILP	102
	Multi (Forced Convection) <ul style="list-style-type: none"> • Independent temperature control for each chamber • 2-in-1, 4-in-1 models 	0 to 60 / 32 to 140	0.1 at 25°C / 0.18 at 77°F	300 / 10.6 (150 L / 5.3 cu ft x 2 chamber) 600 / 21.2 (150 L / 5.3 cu ft x 4 chamber)	IL-11-2C IL-11-4C	103
Plant Growth Chamber	Growth Chamber <ul style="list-style-type: none"> • 10-step program control • Temperature/Humidity auto-tuning 	5 to 50 / 41 to 122 (Lamp off) 10 to 50 / 50 to 122 (Lamp on) 20 to 50 / 68 to 122 (with humidity)	0.1 at 25°C / 0.18 at 77°F	300, 1000 / 10.6, 35.3	GC	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 model, please check the information on the corresponding page of each model.

1) IB4-V and IB4-S (forced convection type) can control down to amb +5°C (amb +9°F) when the water tray is filled with water. (Water tray: option)



An incubator series that provides optimal culture environment Application of dedicated controller for precise control

> Optimized selection model

Optimal model provided based on heat transfer method and airflow, capacity, performance and function, controller type, etc.

> Verified according to international standards

Fluctuation, variation, heating time, and recovery time are tested according to DIN 12880.

> Glass door for contamination prevention

Internal glass door allows for convenient observation of sample without temperature change and prevents inflow of external contaminants.

> Clean use and maintenance

Internal stainless steel structure allows for clean maintenance and excellent corrosion resistance.

> More stable temperature control

Optimized Microprocessor PID control for more accurate temperature control.

> 3-point temperature calibration function (IB4, IL3)

Temperature calibration of up to 3 points provides more reliable temperature control.

> Optimized temperature control

Auto-tuning function enables optimal control even when ambient temperature or conditions are changed frequently.

> Computer interface control

Convenient remote control and data management through built-in dedicated software. (IB4, IB4-A)



Sealed glass door for contamination prevention.



Large intuitive touch display controller



Easy shelf height adjustment.



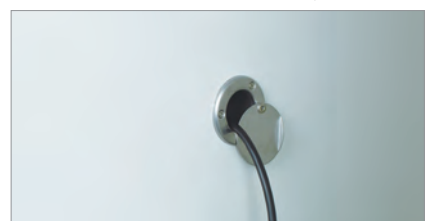
Functions convenient for actual use and Jeio Tech's patented safety system

- > **Provide convenient timer function**
Wait On/Wait Off is run after the set time elapses. (Max. 999 hours and 59 minutes)
- > **Controller lock function**
Lock function for preventing change of controller settings prevents erroneous operation due to arbitrary changing.
- > **Convenient temperature value save and operation**
Conveniently save and used frequently used temperatures value. (up to 3 presets allowed)
- > **Cable port provided as standard**
38mm diameter cable port and cover for convenient utilization of culture conditions. (IB4, IB-multi models)
- > **Top-grade overheating prevention system (Jeio Tech's patent)**
Even if a failure occurs in the device control unit, the safety device is structured so that it is preferentially operated.
- > **Over heating limit function in case of accidental over heating.**
Safety structure with shutdown function using over temperature limiter in case of overheating.
- > **Support for remote equipment monitoring services (option)**
Real-time monitoring of equipment operating status using smart phones.
- > **Prepared for unexpected power failure**
Auto-run function capable of selecting reoperation when power is restored after power failure.

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

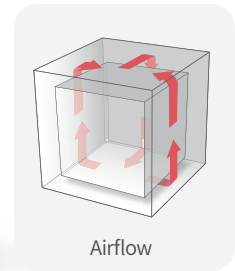


Various models for selecting the desired structure.



Cable port provided as standard on the side.

Incubator (Air-jacket) Advanced type



IB4-15AV

Intuitive Large Touch Controller

- Intuitive interface with 5-inch display
- Events and alerts in a single view with real-time graph
- Three frequent temperatures automatically suggested
- 'Wait on / Wait off' timer function



Large intuitive display



Graphs for real-time process monitoring

Unique Structural Functions

- Using Water tray delays media drying, making incubation time longer (option)
- Double stackable with stacking set (option) maximizes space utilization



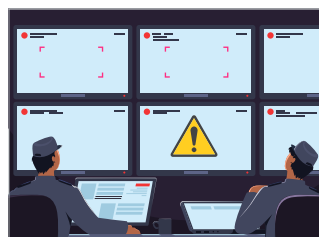
Water tray that minimizes media drying (option)



Increased space utilization by double stacking (stacking set : option)
*Double stacking example: (top) forced convection oven (bottom) forced convection incubator

Supervise Equipment with Real-time Monitoring

- Monitor the temperature on BMS (Building Management System) for quick responses to abnormalities. (option)
- Monitor via mobile app anytime, anywhere with LC Connected. (Requires LC GreenBox, option)



Timely responses via BMS-connected monitoring (BMS port: option)



Real-time monitoring via mobile devices (LC GreenBox: option)

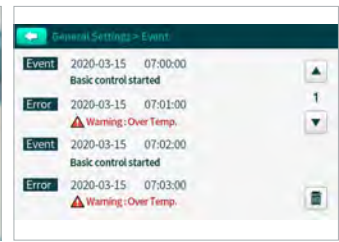


Convenient Experiment and Data Checking

- Support RS-232/USB port and software making easy operation and data management from PC
- Test data are automatically stored and easily exported via USB; easy to edit data (in CSV format)
- Logs 36 recent events, including errors, opened door, etc
- Integrated with 21 CFR Part 11 compliant LC DataKeeper, suitable for GMP audits (option)



Data storage using USB ports



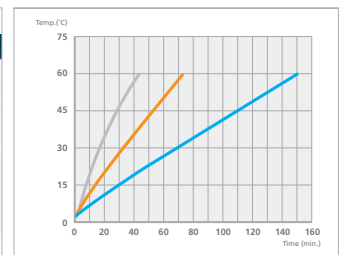
Store recent 36 events

Reliable Temperature Control Performance

- Temperature accuracy for wide range by 3-point calibration
- Ramp Control™, function that controls the rate of temperature rise by setting ramping rate(°C/min) per experiment
- Uniform temperature distribution through airflow optimized for uniform heat transfer (within ±0.55°C at 37°C)



Accurate temperature control with 3-point calibration



Ramp Control™ per experiment condition

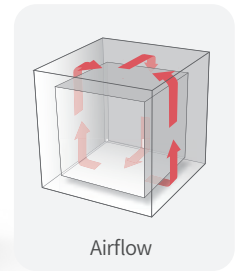
Specification

Model		IB4-03AV	IB4-05AV	IB4-10AV	IB4-15AV
Chamber volume (L / cu ft)		25 / 0.88	60 / 2.19	114 / 4.03	150 / 5.3
Temperature	Range (°C / °F)	Amb.+5 ~ 80°C / Amb.+9 ~ 176°F			
	Fluctuation at 37°C (°C / °F)	±0.1 / ±0.18	±0.1 / ±0.18	±0.15 / ±0.27	±0.1 / ±0.18
	Variation at 37°C (°C / °F)	±0.31 / ±0.56	±0.48 / ±0.86	±0.46 / ±0.83	±0.55 / ±0.99
	Heating time to 37°C (min.)	44	40	46	49
	Recovery time at 37°C (min.)	5	9	9	9
Control panel		5 inch TFT Color LCD			
Communication interface		USB-B, RS-232			
Function	Recently event record	36 ea			
	Recommended temperature	Suggest three frequently used temperature			
	Graph	Available viewing stored and real-time graphs			
	Data storage	Save your experiment data (in CSV format)			
	Temp. ramping rate (°C/min. °F/min)	0 ~ 2 0 ~ 3.6			
Dimensions	Interior (W x D x H, mm / inch)	300 x 210 x 400 / 11.81 x 8.27 x 15.75	380 x 330 x 480 / 14.96 x 12.99 x 18.9	485 x 350 x 655 / 19.1 x 13.78 x 25.79	550 x 376 x 710 / 21.62 x 14.8 x 27.95
	Exterior (W x D x H, mm / inch)	478 x 527 x 604 / 18.8 x 20.75 x 23.78	558 x 648 x 684 / 21.97 x 25.5 x 26.93	663 x 677 x 859 / 26.1 x 26.65 x 33.82	728 x 704 x 914 / 28.66 x 27.7 x 36.0
	Net weight (kg / lbs)	31 / 68.34	40 / 88.18	55 / 121.25	60 / 132.28
Shelves	Quantity of shelves (standard/max.)	2 / 4	2 / 5	2 / 8	2 / 9
	Max. Load per shelf (kg / lbs)	20 / 44.09			
Electrical requirements (230V, 50/60Hz, A)		2.5	3.5	3.5	3.5
Cat. No.		AAH21755K	AAH21765K	AAH21775K	AAH21785K
Electrical requirements (120V, 60Hz, A)		4.8	6.7	6.7	6.7
Cat. No.		AAH21753U	AAH21763U	AAH21773U	AAH21783U

※ Technical data according to DIN 12880

Accessories Page 107 Wire Shelf, Perforated Shelf, Stacking set, BMS Port, LC GreenBox, LC DataKeeper

Incubator (Air-jacket) Standard type



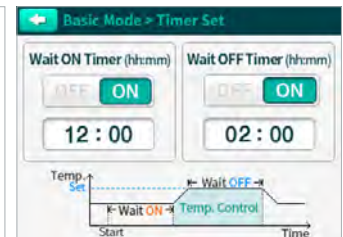
IB4-15AS

Intuitive Touch Controller

- Intuitive interface with 3.5-inch display
- 'Wait on / Wait off' timer function



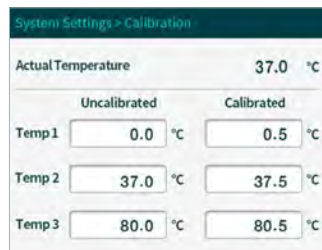
3.5-inch touch display



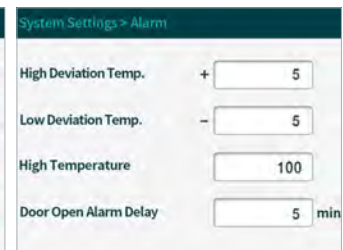
Wait on & Wait off timer

Reliable Temperature Control Performance

- Temperature accuracy for wide range by 3-point calibration
- The upper and lower temperature limits can be set, enabling alerts for deviations to trigger quick actions
- Uniform temperature distribution through airflow optimized for uniform heat transfer (within $\pm 0.55^{\circ}\text{C}$ at 37°C)



Accurate temperature control with 3-point calibration



Settings for temperature deviation

Convenient Experiment and Data Checking

- Support RS-232/USB port and software making easy operation and data management from PC (option)
- Monitor via mobile app anytime, anywhere with LC Connected. (Requires LC GreenBox, option)
- Monitor the temperature on BMS (Building Management System) for quick responses to abnormalities. (option)
- Integrated with 21 CFR Part 11 compliant LC DataKeeper, suitable for GMP audits (option)



Manipulation via PC (option)



Real-time monitoring via mobile devices (LC GreenBox: option)



Enhanced Safety and Convenience

- Implemented with the highest-level overheating prevention system (Patented in Korea)
- Over Temperature Limiter
- Complaint to IEC Class II protection standards and temperature protection in line with DIN 12880 Class 3.1
- Logs the last 12 events, including run times, stops, and errors
- Double stackable with stacking set (option) maximizes space utilization



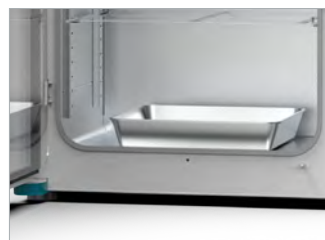
Logs the recent 12 events



Increased space utilization by double stacking (stacking set : option)
*Double stacking example: (top) forced convection oven (bottom) forced convection incubator

Multiple Features to Minimize Incubation Failure

- Using Water tray delays media drying, making incubation time longer (option)
- Automatically resume the control of previous operations when restored within 30 seconds from blackouts
- Controller can be locked with the button on the top, preventing any actions from unintended pressing
- Abnormalities are notified with audiovisual alerts to trigger quick actions



Water tray that minimizes media drying (option)



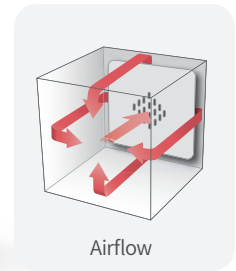
Audiovisual alerts to notify abnormalities

Specification

Model		IB4-03AS	IB4-05AS	IB4-10AS	IB4-15AS
Chamber volume (L / cu ft)		25 / 0.88	60 / 2.19	114 / 4.03	150 / 5.3
Temperature	Range (°C / °F)	Amb.+5 ~ 80°C / Amb.+9 ~ 176°F			
	Fluctuation at 37°C (°C / °F)	±0.1 / ±0.18	±0.1 / ±0.18	±0.15 / ±0.27	±0.1 / ±0.18
	Variation at 37°C (°C / °F)	±0.31 / ±0.56	±0.48 / ±0.86	±0.46 / ±0.83	±0.55 / ±0.99
	Heating time to 37°C (min.)	44	40	46	49
	Recovery time at 37°C (min.)	5	9	9	9
Control panel		3.5 inch TFT Color LCD			
Communication interface		USB-B, RS-232 (option)			
Function	Recently event record	12 ea			
Dimensions	Interior (W x D x H, mm / inch)	300 x 210 x 400 / 11.81 x 8.27 x 15.75	380 x 330 x 480 / 14.96 x 12.99 x 18.9	485 x 350 x 655 / 19.1 x 13.78 x 25.79	550 x 376 x 710 / 21.62 x 14.8 x 27.95
	Exterior (W x D x H, mm / inch)	478 x 527 x 604 / 18.8 x 20.75 x 23.78	558 x 648 x 684 / 21.97 x 25.5 x 26.93	663 x 677 x 859 / 26.1 x 26.65 x 33.82	728 x 704 x 914 / 28.66 x 27.7 x 36.0
	Net weight (kg / lbs)	31 / 68.34	40 / 88.18	55 / 121.25	60 / 132.28
Shelves	Quantity of shelves (standard/max.)	2 / 4	2 / 5	2 / 8	2 / 9
	Max. Load per shelf (kg / lbs)	20 / 44.09			
Electrical requirements (230V, 50/60Hz, A)		2.5	3.5	3.5	3.5
Cat. No.		AAH21555K	AAH21565K	AAH21575K	AAH21585K
Electrical requirements (120V, 60Hz, A)		4.8	6.7	6.7	6.7
Cat. No.		AAH21553U	AAH21563U	AAH21573U	AAH21583U

※ Technical data according to DIN 12880

Incubator (Forced Convection), Advanced type



IB4-15V

Intuitive Large Touch Controller

- Intuitive interface with 5-inch display
- Events and alerts in a single view with real-time graph
- Three frequent temperatures automatically suggested
- 'Wait on / Wait off' timer function



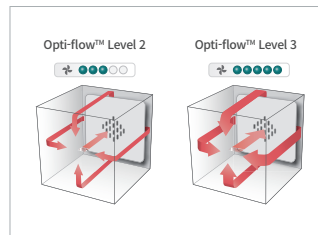
Large intuitive display



Graphs for real-time process monitoring

Unique Structural Functions

- Opti-flow™, the fan speed control function based on sample and testing conditions
- Double stackable with stacking set (option) maximizes space utilization



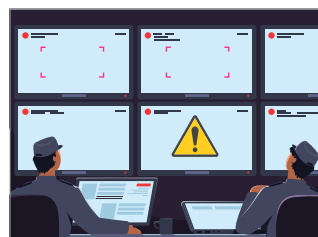
Minimize media drying with Opti-flow™



Increased space utilization by double stacking (stacking set : option)
*Double stacking example: (top) forced convection oven (bottom) forced convection incubator

Supervise Equipment with Real-time Monitoring

- Monitor the temperature on BMS (Building Management System) for quick responses to abnormalities (option)
- Monitor via mobile app anytime, anywhere with LC Connected. (Requires LC GreenBox, option)



Timely responses via BMS-connected monitoring (BMS port: option)



Real-time monitoring via mobile devices (LC GreenBox: option)

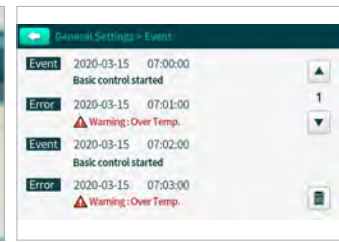


Convenient Experiment and Data Checking

- Support RS-232/USB port and software making easy operation and data management from PC
- Test data are automatically stored and easily exported via USB; easy to edit data (in CSV format)
- Logs 36 recent events, including errors, opened door, etc
- Integrated with 21 CFR Part 11 compliant LC DataKeeper, suitable for GMP audits (option)



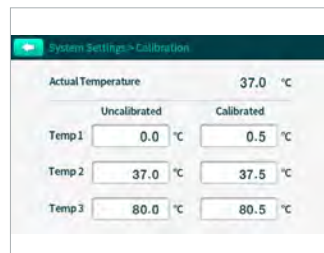
Data storage using USB ports



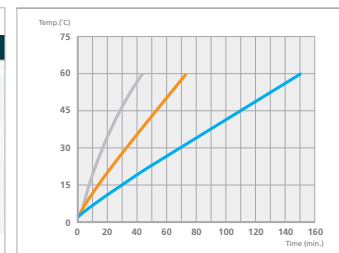
Store recent 36 events

Reliable Temperature Control Performance

- Temperature accuracy for wide range by 3-point calibration
- Ramp Control™, function that controls the rate of temperature rise by setting ramping rate(°C/min) per experiment
- Uniform temperature distribution through airflow optimized for uniform heat transfer (within ±0.41°C at 37°C)



Accurate temperature control with 3-point calibration



Ramp Control™ per experiment condition

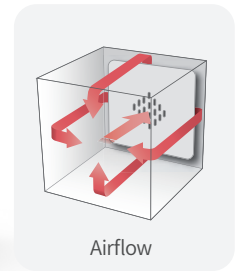
Specification

Model		IB4-03V	IB4-05V	IB4-10V	IB4-15V
Chamber volume (L / cu ft)		25 / 0.88	60 / 2.12	111 / 3.92	146 / 5.16
Temperature	Range (°C / °F)	Amb.+5 ¹⁾ ~ 80°C / Amb.+9 ~ 176°F			
	Fluctuation at 37°C (°C / °F)	±0.1 / ±0.18	±0.15 / ±0.27	±0.1 / ±0.18	±0.1 / ±0.18
	Variation at 37°C (°C / °F)	±0.23 / ±0.41	±0.41 / ±0.74	±0.39 / ±0.70	±0.35 / ±0.63
	Heating time to 37°C (min.)	5	4	8	7
	Recovery time at 37°C (min.)	5	4	4	3
Control panel		5 inch TFT Color LCD			
Communication interface		USB-B, RS-232			
Function	Recently event record	36 ea			
	Recommended temperature	Suggest three frequently used temperature			
	Graph	Available viewing stored and real-time graphs			
	Data storage	Save your experiment data (in CSV format)			
	Temp. ramping rate (°C/min. °F/min)	0 ~ 8 0 ~ 14.4	0 ~ 6 0 ~ 10.8	0 ~ 5 0 ~ 9	0 ~ 4 0 ~ 7.2
Dimensions	Interior (W x D x H, mm / inch)	300 x 210 x 400 / 11.81 x 8.27 x 15.75	380 x 330 x 480 / 14.96 x 12.99 x 18.9	485 x 350 x 655 / 19.1 x 13.78 x 25.79	550 x 376 x 710 / 21.62 x 14.8 x 27.95
	Exterior (W x D x H, mm / inch)	478 x 527 x 604 / 18.8 x 20.75 x 23.78	558 x 648 x 684 / 21.97 x 25.5 x 26.93	663 x 677 x 859 / 26.1 x 26.65 x 33.82	728 x 704 x 914 / 28.66 x 27.7 x 36.0
	Net weight (kg / lbs)	32 / 70.55	41 / 90.39	56 / 123.46	62 / 136.69
Shelves	Quantity of shelves (standard / max.)	2 / 4	2 / 5	2 / 8	2 / 9
	Max. Load per shelf (kg / lbs)	20 / 44.09			
Electrical requirements (230V, 50/60Hz, A)		3			
Cat. No.		AAH21655K	AAH21665K	AAH21675K	AAH21685K
Electrical requirements (120V, 60Hz, A)		5.8			
Cat. No.		AAH21653U	AAH21663U	AAH21673U	AAH21683U

1) Able to control down to amb +5°C(amb +9°F) when the water tray is filled with water. (Water tray: option)

※ Technical data according to DIN 12880

Incubator (Forced Convection), Standard type



IB4-15S

Intuitive Touch Controller

- Intuitive interface with 3.5-inch display
- 'Wait on / Wait off' timer function



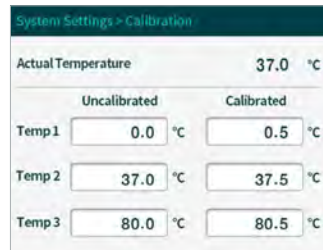
3.5-inch touch display



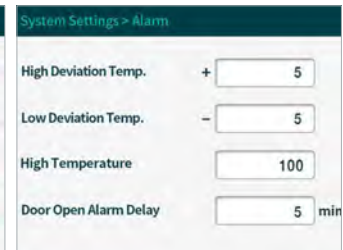
Wait on & Wait off timer

Reliable Temperature Control Performance

- Temperature accuracy for wide range by 3-point calibration
- The upper and lower temperature limits can be set, enabling alerts for deviations to trigger quick actions
- Uniform temperature distribution through airflow optimized for uniform heat transfer (within $\pm 0.41^{\circ}\text{C}$ at 37°C)



Accurate temperature control with 3-point calibration



Settings for temperature deviation

Convenient Experiment and Data Checking

- Support RS-232/USB port and software making easy operation and data management from PC (option)
- Monitor via mobile app anytime, anywhere with LC Connected. (Requires LC GreenBox, option)
- Monitor the temperature on BMS (Building Management System) for quick responses to abnormalities. (option)
- Integrated with 21 CFR Part 11 compliant LC DataKeeper, suitable for GMP audits (option)



Manipulation via PC (option)



Real-time monitoring via mobile devices (LC GreenBox: option)



Enhanced Safety and Convenience

- Implemented with the highest-level overheating prevention system (Patented in Korea)
- Over Temperature Limiter
- Complaint to IEC Class II protection standards and temperature protection in line with DIN 12880 Class 3.1
- Logs the last 12 events, including run times, stops, and errors
- Double stackable with stacking set (option) maximizes space utilization



Logs the recent 12 events



Increased space utilization by double stacking (stacking set : option)
*Double stacking example: (top) forced convection oven (bottom) forced convection incubator

Multiple Features to Minimize Incubation Failure

- Using Water tray delays media drying, making incubation time longer (option)
- Alarm is activated when door remains open longer than the set time to maintain internal temperature
- Automatically resume the control of previous operations when restored within 30 seconds from blackouts
- Controller can be locked with the button on the top, preventing any actions from unintended pressing



Water tray that minimizes media drying (option)



Audiovisual alerts to notify abnormalities

Specification

Model		IB4-03S	IB4-05S	IB4-10S	IB4-15S
Chamber volume (L / cu ft)		25 / 0.88	60 / 2.19	111 / 3.92	146 / 5.16
Temperature	Range (°C)	Amb.+5 ¹⁾ ~ 80°C / Amb.+9 ~ 176°F			
	Fluctuation at 37°C (°C / °F)	±0.1 / ±0.18	±0.15 / ±0.27	±0.1 / ±0.18	±0.1 / ±0.18
	Variation at 37°C (°C / °F)	±0.23 / ±0.41	±0.41 / ±0.74	±0.39 / ±0.70	±0.35 / ±0.63
	Heating time to 37°C (min.)	5	4	8	7
	Recovery time at 37°C (min.)	5	4	4	3
Control panel		3.5 inch TFT Color LCD			
Communication interface		USB-B, RS-232 (option)			
Function	Recently event record	12 ea			
Dimensions	Interior (W x D x H, mm / inch)	300 x 210 x 400 / 11.81 x 8.27 x 15.75	380 x 330 x 480 / 14.96 x 12.99 x 18.9	485 x 350 x 655 / 19.1 x 13.78 x 25.79	550 x 376 x 710 / 21.62 x 14.8 x 27.95
	Exterior (W x D x H, mm / inch)	478 x 527 x 604 / 18.8 x 20.75 x 23.78	558 x 648 x 684 / 21.97 x 25.5 x 26.93	663 x 677 x 859 / 26.1 x 26.65 x 33.82	728 x 704 x 914 / 28.66 x 27.7 x 36.0
	Net weight (kg / lbs)	32 / 70.55	41 / 90.39	56 / 123.46	62 / 136.69
Shelves	Quantity of shelves (standard/max.)	2 / 4	2 / 5	2 / 8	2 / 9
	Max. Load per shelf (kg / lbs)	20 / 44.09			
Electrical requirements (230V, 50/60Hz, A)		3			
Cat. No.		AAH21455K	AAH21465K	AAH21475K	AAH21485K
Electrical requirements (120V, 60Hz, A)		5.8			
Cat. No.		AAH21453U	AAH21463U	AAH21473U	AAH21483U

1) Able to control down to amb +5°C(amb +9°F) when the water tray is filled with water. (Water tray: option)

※ Technical data according to DIN 12880

Incubator (Forced Convection)

Mini type



Small-sized incubator with compact design for ambient temperature use

Structural Functional Features

- Small incubator with compact design.
- Structure that circulates internal air for temperature control.
- Design with door that opens downward, minimizing the required space on the side of the device.
- Convenient internal observation door with a sight window.
- Stainless steel interior and shelves are excellent in terms of corrosion resistance and clean maintenance.

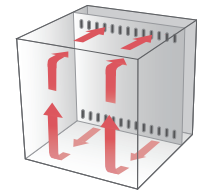


Use Convenience Features

- Accurate temperature control through temperature calibration and microprocessor PID.
- Clear VFD panel for convenient operation status checking.
- Easy operation with touch button and jog dial.
- Over-temperature and over-current limiter function.
- Provides notification/alarms when the door is open for an extended period of time.
- Alarm function when temperature sensor is disconnected.

IM-10

with Wire Shelves 2ea (standard)



※ When the chamber is operating with forced convection type, the amount of moisture evaporation of the medium is relatively high.

Specification

Model		IM-10
Chamber volume (L / cu ft)		10 / 0.4
Temperature	Range (°C / °F)	Amb. +5 to 65 / Amb. +9 to 149
	Fluctuation at 37°C (±°C / °F)	0.5 / 0.9
	Variation at 37°C (±°C / °F)	0.5 / 0.9
	Heating time to 37°C (min.)	5
	Recovery time at 37°C (min.)	2
Dimensions	Interior (W x D x H, mm / inch)	278 x 262 x 160 / 11 x 10.4 x 6.3
	Exterior (W x D x H, mm / inch)	400 x 410 x 264 / 15.7 x 16.1 x 10.4
	Net weight (Kg / lbs)	13.0 / 28.7
Shelves	Quantity of shelves (standard/max.)	2 / 4
Electrical requirements (230V, 50/60Hz, A)		1
Cat. No.		AAH24315K
Electrical requirements (120V, 60Hz, A)		2.1
Cat. No.		AAH24316U

※ The lowest controllable temperature depends on variations in room and sample temperatures. Please contact technical support for consultation before purchasing.

※ Technical data (according to DIN 12880 before 2013)

Accessories Page107 Wire Shelves, Perforated Shelves

Low Temperature Incubator (Forced Convection/Air-jacket) General type

Provides stable, low-temperature culture environment



IL3-15A

with Wire Shelves 2ea (standard)



IL3-25

with Wire Shelves 3ea (standard)

Structural Functional Features

- Compact structure design.
- Clear VFD panel for clear information display.
- The inner toughened-glass door is completely enclosed with silicone packing, making it easy to observe the sample without changing the temperature.
- External door can be opened and closed smoothly with magnetic packing to minimize sample impact.
- The sample space is independently kept clean and the structure protects against sources of contamination.
- Internal power outlet included as standard for easy operation of small products.
- Easily removable condenser grill structure.
- Stainless steel interior and shelves are excellent in terms of corrosion resistance and clean maintenance.
- Easy to clean as inner edges are curved.

Use Convenience Features

- Accurately controlling temperature based on temperature calibration /auto-tuning / microprocessor PID.
- Save and use 3 frequently used temperatures.
- Wait On/Off timer. (up to 999 hours 59 minutes)
- USB/RS-232 connection and software provide convenient computer operation and data managing.
- Operation and data management with computer connection.
- Alarm function when temperature sensor is disconnected.
- Monitor via mobile app anytime, anywhere with LC Connected. (Requires LC GreenBox, option)

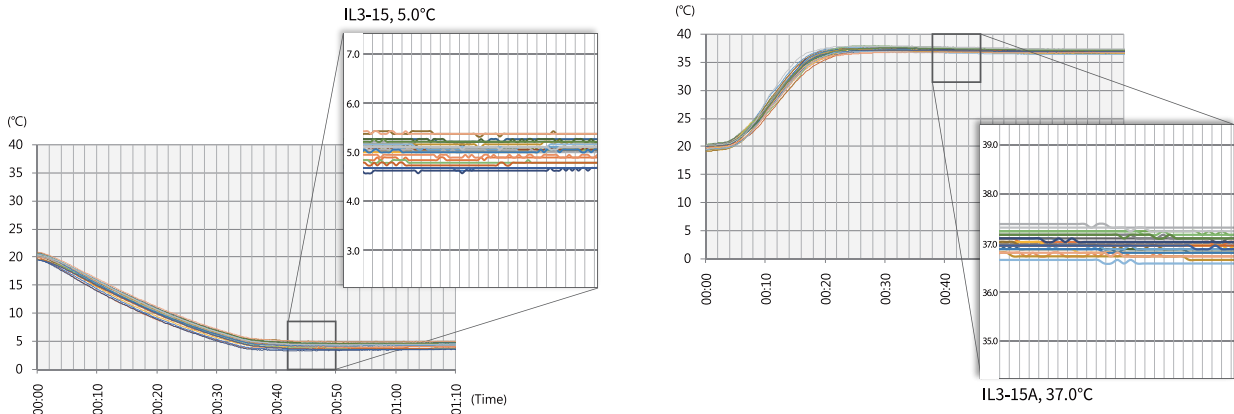
Outstanding Safety

- Top-rated overheating protection system. (registration KR 10-0397583)
- Mechanical/ electronic overheat protection.
- Set the temperature deviation notification.
- Mal-operation prevented by controller lock function.



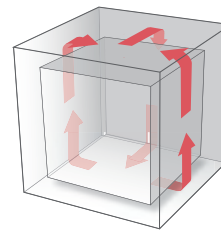
Temperature Variation

- Superior temperature uniformity with excellent temperature control capability.

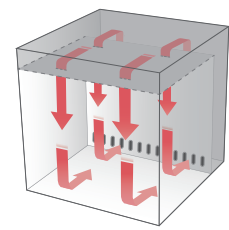


Two Series Of Models According To Heat Transfer Method

- Forced Convection**
The structure allows for the inside air to be circulated and the temperature to be controlled, producing stable temperature control and good distribution. However, the amount of moisture evaporation of the culture is relatively high.
- Natural Convection (Air-jacket)**
The air-jacket structure heats the outside air in the space where the sample is placed and transfers the heat to the inside, and the moisture evaporation amount of the culture is relatively low.



Natural Convection (Air-jacket)



Forced Convection

Specification

Model		Forced Convection		Natural Convection (Air-jacket)	
		IL3-15	IL3-25	IL3-15A	IL3-25A
Chamber volume (L / cu ft)		150 / 5.3	242 / 8.5	156 / 5.5	254 / 8.97
Refrigerator (Hp)		1 / 6	1 / 6	1 / 6	1 / 6
Temperature	Range (°C / °F)	0 to 80 / 32 to 176	0 to 80 / 32 to 176	4 to 70 / 39.2 to 158	4 to 70 / 39.2 to 158
	Fluctuation at 37°C (±°C / °F)	0.1 / 0.18	0.1 / 0.18	0.2 / 0.36	0.2 / 0.36
	Variation at 37°C (±°C / °F)	0.8 / 1.4	1.0 / 1.8	0.7 / 1.3	1.0 / 1.8
	Heating time 20 to 37°C (min.)	43	45	45	50
	Cooling time 20 to 5°C (min.)	45	50	53	58
Recovery time at 37°C (min.)		4	4	5	5
Dimension	Interior (W x D x H, mm / inch)	600 x 500 x 500 / 24 x 20 x 20	500 x 520 x 930 / 20 x 20.5 x 36.6	600 x 520 x 500 / 24 x 20.5 x 20	500 x 540 x 940 / 20 x 21.3 x 37
	Exterior (W x D x H, mm / inch)	720 x 760 x 1070 / 28.3 x 29.9 x 42.1	620 x 770 x 1618 / 24.4 x 30.3 x 63.7	770 x 790 x 1115 / 30.3 x 31.1 x 43.9	670 x 805 x 1668 / 26.4 x 31.7 x 65.7
	Net weight (Kg / lbs)	100 / 220	135 / 297	108 / 238.1	145 / 319.7
Shelves	Quantity of shelves (standard / max.)	2 / 6	3 / 13	2 / 6	3 / 13
	Max. Load per shelf (Kg / lbs)	26 / 57.3	30 / 66	26 / 57.3	30 / 66
Electrical requirements (230V, 50/60Hz, A)		4.5	6.4	6.6	8
Cat. No.	AAH220412K	AAH220512K	AAH220612K	AAH220712K	
Electrical requirements (120V, 60Hz, A)		8.3	10.6	10.2	12.3
Cat. No.	AAH220462U	AAH220562U	AAH220632U	AAH220732U	

※ Technical data (according to DIN 12880 before 2013)

Accessories Page 107 Wire Shelves, Perforated Shelves, LC GreenBox

Low Temperature Incubator Personal type



Low temperature personal incubator

Structural Functional Features

- Small incubator with compact design.
- Minimizes vibration and power consumption by using electronic cooling element. (peltier module)
- Structure that circulates internal air for temperature control.
- The inner glass door is completely enclosed with silicone packing, making it easy to observe the sample without changing the temperature.
- External door can be opened and closed smoothly with magnetic packing to minimize sample impact.
- Stainless steel interior and shelves are excellent in terms of corrosion resistance and clean maintenance.



ILP-02 (stackable unit)

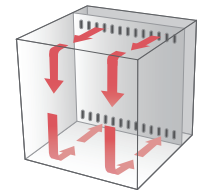
with Wire Shelf 1ea (standard)

ILP-12

with Wire Shelf 2ea (standard)

Use Convenience Features

- Accurately controlling temperature based on temperature calibration / auto-tuning / microprocessor PID.
- Save and use 3 frequently used temperatures.
- Wait On/Off timer. (up to 99 hours 59 minutes)
- Operation and data management with computer connection.
- Alarm function when temperature sensor is disconnected.
- Internal air circulation speed and defrost cycle control.
- Monitor via mobile app anytime, anywhere with LC Connected. (Requires LC GreenBox, option)



Outstanding Safety

- Top-rated overheating protection system. (registration KR 10-0397583)
- Over temperature limit function.
- Mal-operation prevented by controller lock function.

Convenient Program Control

- Various culture and incubating experiments with the 9 step program.
- Temperature/time settings for each step.
- Up to 99 hours and 59 minutes.
- Repeat operation up to 200 times.

Specification

Model		ILP-02	ILP-12
Chamber volume (L / cu ft)		14 / 0.5	48 / 1.7
Temperature	Range (°C / °F)	5 to 40 / +41 to 104 (at 20°C / 68°F) 10 to 40 / +50 to 104 (at 25°C / 77°F) 15 to 40 / +59 to 104 (at 30°C / 86°F)	5 to 40 / +41 to 104 (at 20°C / 68°F) 10 to 40 / +50 to 104 (at 25°C / 77°F) 15 to 40 / +59 to 104 (at 30°C / 86°F)
	Fluctuation at 25°C (±°C / °F)	0.1 / 0.18	0.1 / 0.18
	Variation at 25°C (±°C / °F)	0.5 / 0.9	0.4 / 0.72
	Heating time to 40°C (min.)	17	9
	Cooling time 40 to 5°C (min.)	60	60
Dimension	Recovery time at 25°C (min.)	1.5	1.5
	Interior (W x D x H, mm / inch)	315 x 200 x 230 / 12.4 x 7.9 x 9.1	334 x 334 x 430 / 13.1 x 13.1 x 17
	Exterior (W x D x H, mm / inch)	430 x 495 x 400 / 17 x 19.4 x 15.7	430 x 665 x 620 / 17 x 26.2 x 24.4
Shelves	Net weight (Kg / lbs)	27.5 / 60.6	49 / 108
	Quantity of shelves (standard / max.)	1 / 6	2 / 13
Electrical requirements (230V, 50/60Hz, A)	Max. Load per shelf (Kg / lbs)	15 / 33.0	20 / 44.1
Cat. No.	Electrical requirements (120V, 60Hz, A)	1.8	3.5
	Cat. No.	AAH24032K	AAH24042K
	Cat. No.	AAH24033U	AAH24043U

※ Technical data (according to DIN 12880 before 2013)

Accessories **Page 107** Wire Shelves, Perforated Shelves, LC GreenBox

Low Temperature Incubator Multi type (Forced Convection)



Independent control and efficient space utilization for each chamber

Structural Functional Features

- Each chamber can be controlled independently and easy to use with maximally space-efficient structure.
- Structure that circulates internal air for temperature control.
- The inner glass door is completely enclosed with silicone packing, making it easy to observe the sample without changing the temperature.
- External door can be opened and closed smoothly with magnetic packing to minimize sample impact.
- Stainless steel interior and shelves are excellent in terms of corrosion resistance and clean maintenance.
- Easy to clean as inner edges are curved.



IL-11-2C



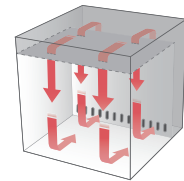
IL-11-4C

Incubator

Use Convenience Features

- Accurately controlling temperature based on temperature calibration / auto-tuning / microprocessor PID.
- Save and use 3 frequently used temperatures.
- Wait On/Off timer. (up to 99 hours 59 minutes)
- Alarm function when temperature sensor is disconnected.
- Internal air circulation speed and defrost cycle control

※ When the chamber is operating with forced convection type, the amount of moisture evaporation of the medium is relatively high.



Outstanding Safety

- Top-rated overheating protection system. (registration KR 10-0397583)
- Over temperature limit function.
- Mal-operation prevented by controller lock function.

Convenient Program Control

- Various culture and incubating experiments with the 9 step program.
- Temperature/time settings for each step.
- Up to 99 hours and 59 minutes.
- Repeat operation up to 200 times.

Specification

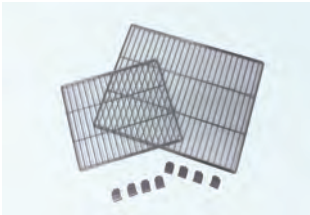
Model		IL-11-2C		IL-11-4C	
Chamber volume (L / cu ft)		300 / 10.6 (150 / 5.3 x 2 chambers)		600 / 21.2 (150 / 5.3 x 4 chambers)	
Refrigerator (Hp)		1/8 x 2ea		1/8 x 4ea	
Temperature	Range (°C / °F)	0 to 60 / 32 to 140		0 to 60 / 32 to 140	
	Fluctuation at 25°C (±°C / °F)	0.1 / 0.18		0.1 / 0.18	
	Variation at 25°C (±°C / °F)	0.5 / 0.9		0.5 / 0.9	
	Heating time to 40°C (min.)	16		16	
	Cooling time 40 to 5°C (min.)	53		53	
Dimension	Recovery time at 40°C (min.)	2		2	
	Interior (W x D x H, mm / inch)	600 x 500 x 500 / 23.6 x 19.7 x 19.7 (each chamber)		600 x 500 x 500 / 23.6 x 19.7 x 19.7 (each chamber)	
	Exterior (W x D x H, mm / inch)	760 x 760 x 1690 / 29.9 x 29.9 x 66.1		1500 x 760 x 1690 / 59.1 x 29.9 x 66.1	
Shelves	Net weight (Kg / lbs)	180 / 397		350 / 772	
	Quantity of shelves (standard / max.)	2 / 12 (each chamber)		2 / 12 (each chamber)	
Electrical requirements (230V, A)	Max. Load per shelf (Kg / lbs)	26 / 57.3		26 / 57.3	
	Cat No	50Hz, 9	60Hz, 9	50Hz, 9 x 2ea	60Hz, 9 x 2ea
Electrical requirements (120V, 60Hz, A)	Cat No	AAH28112K	AAH28111K	AAH28012K	AAH28011K
Cat No		AAH28113U		AAH28013U	

※ Technical data (according to DIN 12880 before 2013)

※ This product is forced convection type. If the sample dries easily or is sensitive, we recommend using the natural convection type.

Accessories Page 107 Wire Shelves, Perforated Shelves

Accessories for Incubator



Wire Shelf
(2 shelves included as standard)
· Stainless Steel
· Uniform temperature distribution based on high air permeability



Perforated Shelf
· Stainless Steel
· Robust structure is ideal for heavy load samples



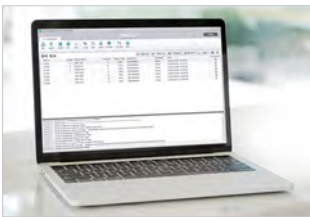
Recorder (Dot)
· 6-channel graph-type temperature recorder.
· Adjustable recording range, speed, etc.



CO₂ Control System
· CO₂ control system for optimal photosynthetic conditions (Sensor, PCB, Valve, etc)

Model	Wire Shelves		Perforated Shelves		Recorder	CO ₂ Control System
	Cat. No.	Quantity of shelves (standard/max.)	Cat. No.	Quantity of shelves (max.)	Cat. No.	Cat. No.
IB4-03	00FDA0009739	2 / 4	AAA125341	4	-	-
IB4-05	00FDA0009738	2 / 5	AAA125342	5	-	-
IB4-10	00FDA0009737	2 / 8	AAA125343	8	-	-
IB4-15	00FDA0009736	2 / 9	AAA125344	9	-	-
IM-10	00EDA0008244	2 / 4	AAA24511	4	-	-
IB-02G-2C/4C ¹⁾	00EDA0008136	2 / 4	AAA12531	4	-	-
ILP-02	00EDA0008223	1 / 6	AAA24501	6	-	-
ILP-12	00EDA0008221	2 / 13	AAA24502	13	-	-
IL3-15/15A	00EDA0008219	2 / 6	AAA22521	6	-	-
IL3-25/25A	00EDA0008220	3 / 13	AAA22522	13	-	-
IL-11-2C/4C ¹⁾	00EDA0008219	2 / 12	AAA12532	12	-	-
GC-300TL	00EDA0008220	3 / 14	AAA22522	14	AAAA1501	AAAA1521
GC-300TLH	00EDA0008220	3 / 14	AAA22522	14	AAAA1501	AAAA1521
GC-1000TLH	00EDA0008222	6 / 29	AAAA1512	29	AAAA1502	AAAA1521

1) Standard for each chamber



LC DataKeeper
· High-integrity software compliant with FDA 21 CFR Part 11
· Integrated with Jeio Tech equipment to undergo GMP audits



LC GreenBox
· Real-time monitoring and control via mobile app
· Connect up to 4 devices to one
· Communication port connectivity via a RS-232 port



BMS Port
· Real-time equipment monitoring from a central monitoring facility
· Useful for safety management at laboratories that operate multiple devices



Stacking Set (-05 / -15 models only)
· Double stackable
· Firm stacking allows efficient utilization of space
(※ When double stacking, the minimum control temperature of the upper chamber may be limited due to the heat generated by the lower chamber)

Model	IB4-03	IB4-05	IB4-10	IB4-15
LC DataKeeper-Basic ¹⁾			SSA11001	
LC DataKeeper-Pro ¹⁾			SSA11002	
LC GreenBox			AAHQ1011K	
BMS Port			AAA125534	
Stacking Set	-	AAA125547	-	AAA125549
Water Tray	AAA125443	AAA125444	AAA125445	AAA124554
Communication Port ²⁾			AAA125533	

1) Trial version is available for 30 days, offering the same features as the Basic version, and can be requested through the website.

2) Communication port is provided as a standard in advanced (-V) model and is an optional add-on for the basic (-S) model for connecting LC DataKeeper, LC GreenBox, BMS, and PC.