



- From Ambient +5°C to 70°C Range  
Microprocessor PID Control Digital Set and Readout
- Forced Convection Uniform Temperature Control
- Electronic Control with Safety Back-Up
- Optional Humidifier
- Optional RS-232 Communication Interface

## Feature

### Inner Tempered Glass Door

with silicone packing for easy sample view without door opening

### Digital PID Control

Provides precise temperature control, timer, alarm and auto-tuning

### Forced Convection

air flow by silent fan motor maintain uniform temperature in the chamber

### Economical and Practical

ideal for general laboratory incubation require temperature range from ambient +5°C to 70°C with precision digital PID controller

### Stainless Steel Chamber

### Safety and Convenience

over temperature and current protection capability ensure user safety and adjustable sliding rack, silent fan motor




MODEL		LIB-010M	LIB-030M	LIB-060M	LIB-080M	LIB-150M	LIB-300M
Dimensions (WxDxHmm)	Inner	210 x 210 x 210	300 x 300 x 350	400 x 350 x 400	400 x 400 x 500	500 x 500 x 600	600 x 500 x 1000
	Outer	280 x 280 x 360	460 x 520 x 672	520 x 470 x 680	550 x 587 x 827	660 x 670 x 970	745 x 715 x 1460
Capacity		9.3ℓ	32ℓ	56ℓ	80ℓ	150ℓ	300ℓ
Temperature	Range	Ambient +5 to 70°C					
	Set Accuracy	±0.1°C at 37°C					
	Uniformity	±0.5°C at 37°C					
Heater		100W	100W	150W	200W	300W	500W
Controller		Microprocessor PID Multi-Function Controller					
Display		LED 4 Digit Display					
Timer		99hr 59min / Continuous Selectable					
Material	Interior	Stainless Steel (SUS304)					
	Exterior	Powder coated Steel					
Shelves		Adjustable 2 & 4 Shelves					
Door	Inner	No Glass					
	Outer	Tempered Safety Glass Silicone Packing Double Door					
Circulation		Forced Convection Air Circulation					
Safety		Over Temp Cut-Off, Over Current Breaker					
Electric Supply		110V, 60Hz or 220V, 50/60Hz					

# Dual Chamber Incubator



MODEL		LIB-060E / without Glass Door	LIB-1002 M / Dual Chamber Incubator
Dimensions (WxDxHmm)	Inner	400 x 350 x 400	500 x 500 x 600 x 2 Chambers
	Outer	520 x 470 x 680	710 x 550 x 1750
Capacity		56ℓ	150ℓ x 2 Chambers
Temperature	Range	Ambient +5 to 70°C	Ambient +5 to 70°C
	Set Accuracy		±0.1°C at 37°C
	Uniformity		±0.5°C at 37°C
Heater		200W	600W
Controller		Digital PID Controller	Digital PID Controller x 2EA Independent Control of Each Chambers
Display		LED 4 Digit Display	LED 4 Digit Display x 2EA
Timer		99hr 59min / Continuous selectable	
Material	Interior	Stainless Steel (SUS304)	
	Exterior	Powder coated Steel	
Shelves		Adjustable 2 Shelves	Adjustable 3 Shelves
Door	Inner	Tempered Safety Glass Door with Silicone Packing	
	Outer	One touch type Lid with Magnetic Packing Door	
Safety		Over Temp Cut-Off, Over Current Breaker	
Electric Supply		110V, 60Hz or 220V, 50/60Hz	

 Custom made order is available  
 Specifications can be changed without prior notice for quality improvement.

# Low Temperature BOD Incubator



- Precise Microprocessor PID Controller
- Temperature Range from 0°C to 60°C
- Double Silicone Glass Door
- Optional RS-485 Communication Interface

## Feature

### Microprocessor PID Control

provides Precise temperature control from 0°C to 60°C, timer, alarm and auto-tuning

### Inner Tempered Glass Door

with double silicone packing easy sample view without door opening

### Silent Fan Moor

and automatic defrost function achieve excellent temperature uniformity and quiet operation

### Safety and Convenience

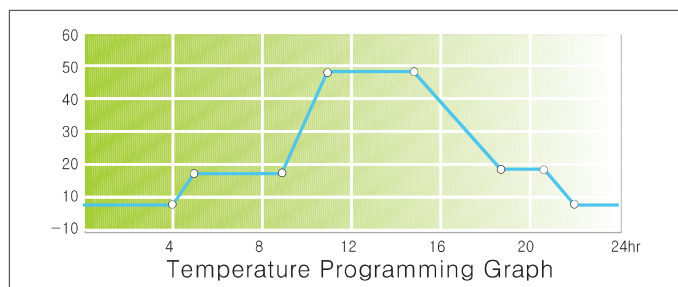
over temperature and current protection capability ensure user safety

### 10 Step Programmable


temperature control and 999 cycle (for Programmable Model)

### Back Light LCD

displays current value and set value simultaneously



Programmable PID Model		LBI-150M	LBI-250M	LBI-500M	LBI-1000M
Digital PID Model		LBI-150E	LBI-250E	LBI-500E	LBI-1000E
Dimensions (WxDxHmm)	Inner	500 x 500 x 600	500 x 500 x 1000	700 x 600 x 1000	1400 x 600 x 1000
	Outer	665 x 840 x 1360	660 x 840 x 1755	860 x 870 x 1700	1560 x 890 x 1790
Capacity		150ℓ	250ℓ	420ℓ	840ℓ
Temperature	Range	0°C to 60°C			
	Set Accuracy	±0.1°C at 20°C			
	Uniformity	±0.5°C at 20°C			
Controller		Microprocessor PID Multi-Function Controller			
Display		LED 4 Digits Display for Digital PID Model / LCD Back Light PV & SV Display for Programmable PID Model			
Timer		99hr 59 min/ Continuous			
Material	Inner	Stainless Steel			
	Outer	Powder coated Steel			
Door	Inner	Tempered Safety Glass			
	Outer	Silicone Packing Magnetic Door			
Shelves		Adjustable 3 or 5 Shelves			
Circulation Fan		14W x 2EA	14W x 3EA	14W x 4EA	14W x 8EA
Compressor		1/3 HP	1/3 HP	1/2 HP	3/4 HP
Safety		Over & Under Temp. Cut-Off			
		Over Current Breaker			
Electric Supply		110V, 60Hz or 220V, 50/60Hz			

 Custom made order is available  
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# Multi-Room Incubator



## Feature

### Independent PID Control

provides different temperature set of each chamber, precise temperature control from 0°C to 70°C, timer, alarm, auto-tuning

### 10 Step Programmable

temperature control and 999

### Back Light LCD

displays current value and set value

### Forced Convection

air flow by silent fan motor maintain uniform temperature in the chamber

### Inner Tempered Glass Door

with double silicone packing for easy sample view without door opening

- Each Chambers have Independent Controls for Operating Different Temperature
- 0°C to 70°C Range Microprocessor PID Control with 10 Step Programming
- Forced Convection Uniform Temperature Control
- Electronic Control with Safety Backup
- Optional Humidifier
- Optional RS-485 Communication Interface

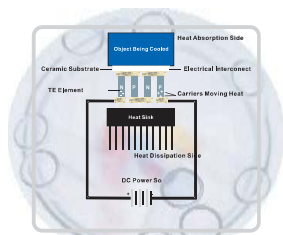
MODEL		LMI-1004A	LMI-2004R	LMI-3004PL
Dimensions (WxDxHmm)	Inner	500 x 500 x 500 x 4 Rooms		
	Outer	1700 x 770 x 1820		
Capacity		125ℓ x 4 Rooms		
Temperature	Range	Ambient +5 to 70°C	Ambient 0 to 70°C	
	Set Accuracy	±0.2°C at 37°C	±0.1°C at 25°C	
	Uniformity	±0.5°C at 37°C	±0.5°C at 25°C	
Controller		Digital PID Controller		Programmable PID Controller
Display		LED 4 Digits Display		LED 4 Digits Display
Program		None		10 Step Program
Light System		None		FL Lamp 40W
Compressor		None	1/3 HP x 4 EA	
Material	Interior	Stainless Steel		
	Exterior	Powder coated Steel		
Timer		99hr 59 min / Continuous		
Door	Inner	Tempered Glass Window with Silicone Packing		
	Outer	Silicone Packing Magnetic Double Door		
Shelves		Adjustable 2 Shelves X 4 Rooms		
Safety		Over Temp. Cut-Off / Over Current Breaker		
Electric Supply		110V, 60Hz or 220V, 50/60Hz		

Custom made order is available  
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# Peltier Cooled Incubator / Blood Bank Warmer

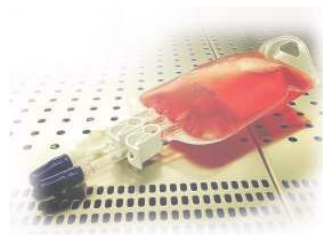


### Thermoelectric Heat & Cool Technology



High precision temperature accuracy  $\pm 0.1^{\circ}\text{C}$   
and stable uniformity  $\pm 0.5^{\circ}\text{C}$

### Blood Bank Warmer / Incubator



To warm blood with programmed  
temperature and time

### Compact Thermal Printer



The IQ, OQ, PQ validation and documentation  
complied GMP and FDA requirement

Dedicated Models for **Blood Bank Warmer / Incubator LCI-012ELB, LCI-032ELB, LCI-052ELB**

Please Specify model numbers for the Application of Medical and Blood Bank research.

Printer is required to order by option

MODEL		LCI-011E	LCI-031E	LCI-051E
Controller		Digital PID Program Controller with RS-232/485 Interface & PC Software		
MODEL		LCI-010EL	LCI-030EL	LCI-050EL
Controller		Microprocessor PID Controller with Timer Function		
Dimensions (W x D x H mm)	Inner	200 x 200 x 250	300 x 300 x 350	350 x 360 x 400
	Outer	330 x 440 x 530	430 x 540 x 630	480 x 600 x 680
Capacity		10ℓ	30ℓ	50ℓ
Power Consumption	Max.	300W	500W	700W
Temperature	Range	0°C to 60°C		
	Stability	Set Accuracy : $\pm 0.1^{\circ}\text{C}$ / Uniformity $\pm 0.5^{\circ}\text{C}$		
Program		10 steps, 999 cycles Programmed Operation		
Display		LCD Display with PV & SV, Back Light / 5 Digits LED Indication Lamp		
Material	Interior	Stainless Steel 304		
	Exterior	Epoxy Powder Coated EGI steel		
Door	Inner	Tempered Safety Glass Door		
	Outer	Silicon Packing Magnetic Door		
Shelves		Adjustable 2 Shelves		
Safety Device		Over & Low Temperature protector / Electric Leakage, Current Breaker / H-Low Alarm		
Electric Supply		110V / 220 VAC, 50 / 60Hz		

Custom made order is available  
Specifications can be changed without prior notice for quality improvement.

# Air Jacket CO<sub>2</sub> Incubator

## Feature

### Infra-Red CO<sub>2</sub> Sensor

by digital signal processing with automatic temperature compensation and auto zero calibration

### Microprocessor PID Control

Provides Precise temperature control up to 60°C, timer, alarm, auto-tuning (Option : automatic on/off function)

### Safety and Convenience

over temperature and current protection capability ensure user safety

### Seamless Rounded One-piece Chamber

### Detachable Shelf Frame

### Inner Tempered Glass Door

with double silicone packing easy sample view without door opening

### Stainless Steel Chamber

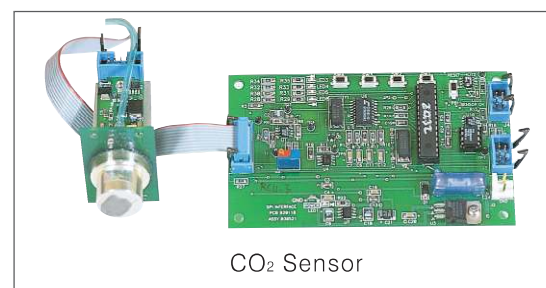
Durable stainless steel chamber

### 10 Step Programmable


Temperature control and 999 cycle



- Infra-Red CO<sub>2</sub> Sensor by Digital Signal Processing
- Auto Zero Calibration
- Precise Digital PID Controller
- Reliable and Accurate Temperature Control
- Humidifier Tray
- Optional RS-485 Communication Interface
- Optional Mobile Alert & Control System



MODEL		LCO-066 AIP	LCO-166 AIP	LCO-266 AIP	LCO-366 AIP
Controller		Programmable controller with RS-485 interface, Software pack			
MODEL		LCO-065 AI	LCO-165 AI	LCO-265 AI	LCO-365 AI
Controller		Digital PID Controller with Multi-Function			
Dimensions (WxDxHmm)	Inner	350 x 360 x 405	450 x 450 x 500	495 x 515 x 600	600 x 600 x 900
	Outer	500 x 495 x 785	600 x 600 x 600	660 x 645 x 1010	750 x 745 x 1250
Capacity		49ℓ	101ℓ	150ℓ	324ℓ
CO <sub>2</sub> Sensor		Digital signal Processing NDIR Sensor			
Temp. Range / Set Accuracy		Ambient +5°C to 60°C / ±0.1°C at 37°C			
CO <sub>2</sub> Range / Set Accuracy		0°C to 20% / ±0.1% at 5%			
Material	Interior	Stainless Steel			
	Exterior	Powder Coated Steel			
Door	Inner	Tempered Safety Glass Door			
	Outer	Packing Magnetic Door			
Circulation		Circulation Fan			
Safety Device		Over Temp Protector, Alarm Device, Leakage Breaker			
Electric Supply		110V, 60Hz or 220V, 50/60Hz			
Optional Accessory					
LCO-270RG		2 Stage Regulator with Flow Meter for CO <sub>2</sub>			
LCO-271CA		CO <sub>2</sub> Analyzer			
		UV Sterilization (Option)			

 Custom made order is available  
Specifications can be changed without prior notice for quality improvement.



Small Shaking Incubator



Large Shaking Incubator

## Feature

### Digital PID Control

Provides precise temperature control from 10°C to 60°C, speed control 0 to 300 rpm touch-sensitive membrane type keypad with timer

### Safety and Convenience

over temperature and current protection, leakage breaker ensure user safety

### Universal Spring Rack (Option)

which can accommodate various sized flasks and tube racks easy to attach and remove from the shaking plate

### Shaking Mechanism

electronically controlled shaking mechanism provides quiet orbital motion precise speed control and digital display

Shaking Motion can stop automatically when door is opened



Illumination Lamp



LSI-3016R with Universal Spring Rack

- Orbital Rate from 0 to 300 rpm
- Precise Temperature Control 10°C to 60°C
- Universal Rack for Various Flasks
- Stabilized Orbital Motion

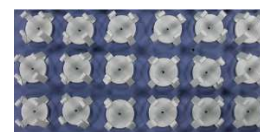
MODEL	LSI-3016A	LSI-3016R	LSI-1005R	LSI-2005RL(W/Lamp)
Dimensions Bath	545 x 550 x 360		750 x 715 x 470	
(WxDxHmm) Overall	585 x 850 x 800		1050 x 890 x 1000	
Temperature Range	Ambient +5°C to 60°C		10°C to 60°C	
Set Accuracy	±0.1°C at 25°C		±0.1°C at 25°C	
Uniformity	±0.5°C at 25°C		±0.5°C at 25°C	
Shaking Speed	0 to 300 rpm			
Stroke	20mm Orbital Motion			
Controller	Digital PID Controller			
Display	LED 4 Digit Display			
Timer	99hr 59min / continuous			
Compressor	None	1/8 HP	1/8 HP	1/8 HP
Material Interior	Stainless Steel			
Exterior	Powder coated Steel			
Safety	Over Temp Cut-Off, Over Current Breaker			
Electric Supply	110V, 60Hz or 220V, 50/60Hz			

For LSI-3016A/R		For LSI-1005R	
FH-0103	100ml 32EA	FH-0100	100ml 70EA
FH-0203	250ml 23EA	FH-0250	250ml 36EA
FH-0503	500ml 16EA	FH-0500	500ml 23EA
FH-1003	1000ml 9EA	FH-1000	1000ml 18EA
SR-1450	Spring Rack	FH-2000	2000ml 9EA
		SR-2450	Spring Rack

## Accessories



SR-1450 Spring Rack



FH-0503 Flask Holder 500ml Optional

# Multi-Stack Shaking Incubator



- ❑ Space Saving Multi-Stackable Shaking Incubator
- ❑ Microprocessor PID Control from for 0.1°C Precision
- ❑ Temperature Control from 10°C to 60°C
- ❑ Precision Speed Control from 0 to 300 RPM Max.
- ❑ Front Mount Glass Window for Operation View
- ❑ Timer, Alarm, Auto-Tuning Function
- ❑ Built-in Safety and Convenience

## Feature

### Digital PID Control

Provides precise temperature control from 10°C to 60°C, speed control 0 to 300 rpm touch-sensitive membrane type keypad with timer

### Safety and Convenience

over temperature and current protection, leakage breaker ensure user safety

### Ideal for Large Shaking Incubator

Space saving design for large quantity shaking incubation with 4 independent controllable shaking platform

### Universal Spring Rack (Option)

which can accommodate various sized flasks and tube racks easy to attach and remove from the shaking plate

### Shaking Mechanism

electronically controlled shaking mechanism provides quiet orbital motion precise speed control and digital display


Shaking Motion can stop automatically when door is opened

### Various Flask Holders

See page 53 for ordering information

MODEL		LSI-5002M	LSI-5004M
Stack		2 Stacks	4 Stacks
Dimensions (WxDxHmm)	Bath	850 x 700 x 900	850 x 700 x 1800
	Overall	1570 x 840 x 1640	1350 x 850 x 2000
Refrigerator		1/2 HP	3/4 HP
Temperature	Range	10°C to 60°C	
	Set Accuracy	±0.1°C at 37°C	
	Uniformity	±0.5°C at 37°C	
Speed	Range	0 to 300 rpm	
	Stroke	20mm Orbital Motion	
Controller		Digital PID Multi-Function Controller	
Plate Size		700(W) x 450(D) mm	
Door	Outer	Magnetic Packing Door with Pair Glass	
Material	Interior	Stainless Steel	
	Exterior	Powder coated Steel	
Safety Device		Pause Stop Switch, Over Temp. Protector Over Current & Leakage Breaker	
Electric Supply		110V, 60Hz or 220V, 50/60Hz	
Model	Descriptions		
LSI-5002ML	Built-in Fluorescent Lamp 20W x 4EA		
LSI-5004ML	Built-in Fluorescent Lamp 20W x 8EA		



 Custom made order is available  
Specifications can be changed without prior notice for quality improvement.





Multi-Stack Shaker

## Feature

- Powerful Electromagnetic Drive System provides high precision speed control
- No drive motor, No V-belt means No trouble!
- High precision Rotation Control by Auto tuning, Auto-alarm and Timer Function.
- High precision Rotation Control by Auto tuning, Auto-alarm and Timer Function.
- Molded plastic case and metal fly wheel offers durable and stable operation

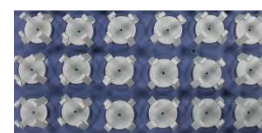


Shaker

## Accessories



SR-1450 Spring Rack




FH-0503 Flask Holder 500ml  
Optional

MODEL	LSI-1	LSI-2	LSI-1MR4	LSI-2MR4
Dimensions (W x D x H mm)	480 x 610 x 90	800 x 610 x 90	680 x 640 x 1950	1000 x 640 x 1950
Platform (W x D mm)	460 x 465	770 x 465	460 x 465	700 x 465
Installed Plate	250ml x 23EA	250ml x 26EA	4 Shakers	4 Shakers
Controller	Time & Speed controller			
Speed range	15 to 300 rpm			
Material	Al molded & plastic mold cover			
Shaking stroke	Adjustable 25, 30, 35 mm orbit			
Electrical supply	220 Voltage, 50 / 60 Hz, 1Phase			

\*LSI-1MR2, LSI-2MR2 Model is 2 Shakers with Multi-Rack

MODEL	Descriptions	MODEL	Descriptions
FH0100-1	100ml x 36 Holders	FH0500-1	500ml x 16 Holders
FH0100-2	100ml x 72 Holders	FH0500-2	500ml x 32 Holders
FH0250-1	250ml x 20 Holders	FH1000-1	1000ml x 9 Holders
FH0250-2	250ml x 26 Holders	FH1000-2	1000ml x 16 Holders

 Custom made order is available  
Specifications can be changed without prior notice for quality improvement.