Model JSBI-100CP : Programmable Tabletop Refrigerated Incubator

JSBI-100CP Programmable Tabletop Refrigerated Incubator provides 10 Steps of temperature programming or constant temperature operation range from +0℃ to +70℃ for more versatile use. It gives excellent performance for incubation of microorganisms, BOD (Biological Oxygen Demand) Test and various QA / QC Tests.

MAIN FEATURES

PERFORMANCE

-Control Temperature Range from +0℃ to +70℃

-Forced air circulation for excellent thermal accuracy and uniformity

-Aero-dynamic chamber designed with circulation blower to achieve superior thermal uniformity

-Separate heating compartment located on back wall for contamination free and maintenance free

-Air cooled refrigeration system with hermetically sealed compressor

CONSTRUCTION

-Durable epoxy powder coated metallic casing

-Corrosion resistant Stainless Steel 304 chamber with seamless round cornered edge allows easy cleaning and prevent leakage

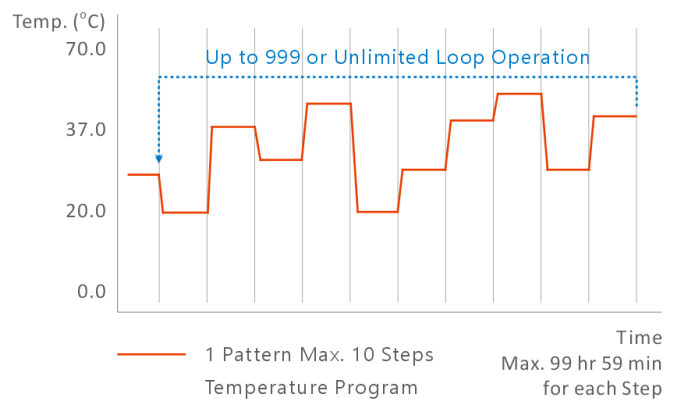-Tempered safety inner glass door for easy observation of samples

Technical specifications are subject to change without prior notice

CONTROLLER HIGHLIGHT
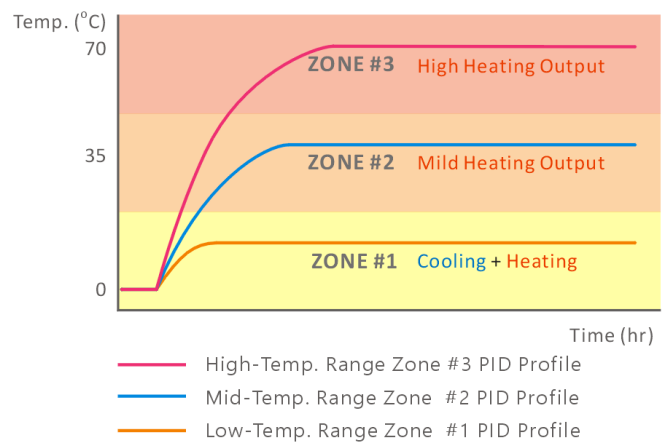

-10 STEP PROGRAMMING CAPABILITY

User can compose 10 steps of varying temperature program and can save it in a memory.

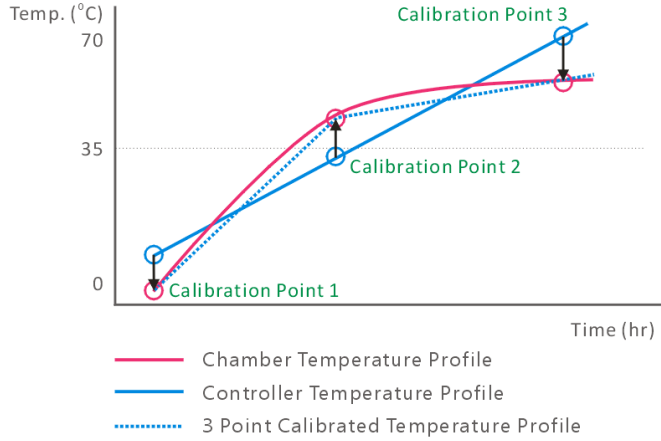Composed program can be repeated 1 ~ 999 times or unlimited number of time.

Temp. (°C)

Up to 999 or Unlimited Loop Operation

1 Pattern Max. 10 Steps
Temperature Program

Time
Max. 99 hr 59 min
for each Step

-3 ZONE PID ALGORITHM

Usable temperature range divided into three zones (LOW/MIDDLE/HIGH) and each ZONE has its individual PID parameters optimized to the range, and it provides precise and superior temperature control characteristic to whole temperature range.
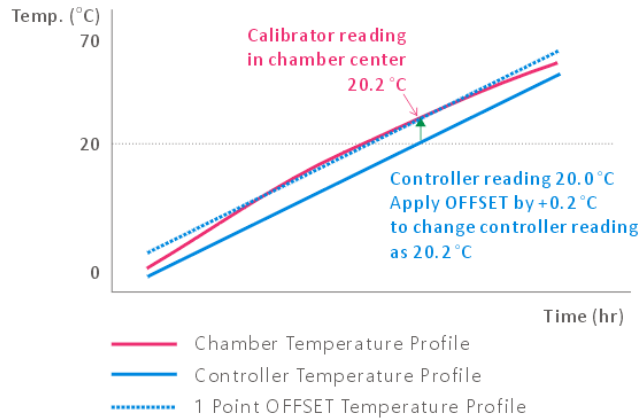

Temp. (°C)

ZONE #3   High Heating Output

ZONE #2   Mild Heating Output

ZONE #1   Cooling + Heating

Time (hr)

High-Temp. Range Zone #3 PID Profile
Mid-Temp. Range Zone #2 PID Profile
Low-Temp. Range Zone #1 PID Profile

-3 POINT CALIBRATION FUNCTION

A perfect calibration tool to calibrate chamber at THREE DIFFERENT TEMPERATURE POINTS to adjust multiple temperature bias to increase the temperature accuracy of WHOLE TEMPERATURE RANGE.

Temp. (^{o}C)

Calibration Point 3

70

35

Calibration Point 2

0

Calibration Point 1

Time (hr)

— Chamber Temperature Profile
— Controller Temperature Profile
······ 3 Point Calibrated Temperature Profile

- 1-POINT OFFSET FUNCTION

Provides simple and easy calibration tool to calibrate chamber at ONE SPECIFIC TEMPERATURE POINT in frequent use.

Temp. ($^{\circ}$C)

70

Calibrator reading
in chamber center
20.2 $^{\circ}$C

20

Controller reading 20.0 $^{\circ}$C
Apply OFFSET by +0.2 $^{\circ}$C
to change controller reading
as 20.2 $^{\circ}$C

0

Time (hr)

— Chamber Temperature Profile
— Controller Temperature Profile
······ 1 Point OFFSET Temperature Profile

CONTROLLER FEATURES

-DIGITAL MICROPROCESSOR PID TEMPERATURE CONTROLLER

  Integrated Digital Microprocessor Control System

-GRAPHIC LCD DISPLAY

  Back Light Graphic LCD Display provides user-friendly operating information

-UV COATED POLYCARBONATE TOUCH PANEL

  Equipped with Capacitive LED Lighting Touch Button provides sensitive touching operation and durability

-ENCODER TYPE JOG DIAL

  Push to Start and Stop, Rotary turn to change values provides easy and simple user interface

-0.1 °C CONTROL RESOLUTION

-10 Step Programming Capability, 1 ~ 999 times repeatable

-Auto-Stop Timer   1 min ~ 99 hour 59 min and alarm

-Auto-Start Timer   1 min ~ 99 hour 59 min and alarm

-Temperature and Timer Memory Function in frequent use

-3-ZONE PID ALGORITHM

-3-POINT CALIBRATION

-1-POINT OFFSET CALIBRATION

-POWER and TIMER RESTORE FUNCTION in case electric power outage

-CLASS A PT-100 Ω Sensor

-Delay starter to protect compressor.

-RS-232C PC COMMUNICATION INTERFACE [OPTION]

CONVENIENCE

-Outer door with self-adhesive magnetic packing

-Inner glass door with high density silicone gasket and air-tight door lock

-Removable and height adjustable shelf by 25mm spacing

SAFETY

-PT SENSOR SHORT OR DISCONNECTION AUDIO VISUAL ALARM

-DUAL OVER TEMPERATURE CUT-OFF BY CONTROLLER AND INDEPENDENT THERMOSTAT

  Controller cut-off heater, compressor and AUDIO VISUAL ALARMS

  ALARM HIGH : +5 °C above set temp.

  ALARM LOW : -5 °C below set temp.

  Independent analog thermostat cut-off heater above set temperature

-DOOR OPEN AUDIO VISUAL ALARM

-OVER CURRENT CUT-OFF : Electric Circuit Breaker

SPECIFICATIONS

MODEL	JSBI-100CP
Dimension Data	
Chamber Volume	100 Liters
Inner Dims. (W x D x H mm)	450 x 450 x 500
Outer Dims. (W x D x H mm)	630 x 690 x 920
Inner Glass Door (W x H mm)	461 x 677
No. of Shelf Positions	16 ea by 25mm spacing
No. of Shelf included	2 ea
Performance Data	
Heating System	Forced Air Convection
Cooling System	Hermetically Sealed Air Cooled Compressor
Temp. Range	+0 ℃ ~ +70 ℃
Accuracy	±0.2 ℃ at +20.0 ℃
Uniformity	±0.5 ℃ at +20.0 ℃
Controller	
Processor	Digital Microprocessor PID Temperature Controller
Display	Back Light Graphic LCD Display
Panel	UV Coated Polycarbonate Solid Touch Panel
Button	Capacitive touch LED Lighting Touch Button
Interface	Push and Rotary encoder type Jog Dial
Control Logic	3 Zone PID Control
Calibration	1 Point Temperature OFFSET
	3 Point Temperature Calibration
Resolution	0.1 ℃
Programming	10 Step Temperature Program, 1 ~ 999 or unlimited times repeat
Auto-Stop Timer	1 min. ~ 99 hr 59 min
Auto-Start Time	1 min. ~ 99 hr 59 min
Sensor	CLASS A PT-100 Ω Sensor
Power Restoration	Power and Timer Restoration Function in case of power outage
PC Communication Interface	RS-232C PC COMMUNICATION INTERFACE [OPTION]

Safety Data

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Safety Device	Sensor short or disconnection AUDIO VISUAL ALARM
	Controller cut-off heater, compressor and AUDIO VISUAL ALARM
	HI-ALARM : +5 ^{o}C above set temp.
	LO-ALARM : -5 ^{o}C below set temp.
	Independent analog thermostat cut-off heater above set temperature
	Door open AUDIO VISUAL ALARM
	Over current cut-off Electric Circuit Breaker

Material Data

Body	Epoxy Powder Coated Steel
Chamber	Stainless Steel 304 (AISI304)
Inner Glass Door	Tempered Safety Glass, 5 mm thick

Electrical Data

Rated voltage	220 ± 10% VAC
Power frequency	50 / 60Hz
Heater Output	700 W
Nominal power	1.3 kW 6.0 amp
Phase	1 Phase
Plug configuration	CEE 7/7 Schuko or BS 1363

Usable Condition

Temp. & Humidity	5°C - 40°C, < 80% RH

Packaging Data

Shipping Dims. (W x D x H mm)	660 x 720 x 1040 mm
Type of packaging	Carton on a wooden palette
Net Weight	85.0 kg
Shipping Weight	95.0 kg

ORDERING INFORMATION

Art. No.	Descriptions	Voltage
JSBI-100CP	**Programmable Tabletop Refrigerated Incubator, 100 L**	220 VAC 1~ ph 50/60Hz
	including standard accessories	
	2 ea x PVC Coated Wire Shelf	
	8 ea x Shelf Support	
	1 ea x Instruction Manual	
	1 ea x Warranty Certificate	

OPTIONAL ACCESSORIES

Art. No.	Descriptions
PHS-A24	Perforated Shelf, Stainless Steel 304, W420 x D430 mm for JSBI-100CP
PHS-C10	PVC Coated Wire Shelf, W420 x D430 mm for JSBI-100CP
PHS-A99	Shelf Support, Set of 4 ea

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