

## Model JSBI-420C Refrigerated BOD Incubator



JSBI-xxxC series Refrigerated BOD Incubator gives excellent incubation conditions for bacterial, fungal, cell and tissue culture incubation, BOD (Biological Oxygen Demand) Test, QA / QC in pharmaceutical laboratory.

### MAIN FEATURES

#### PERFORMANCE

- Control Temperature Range from +0°C to +70°C
- 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

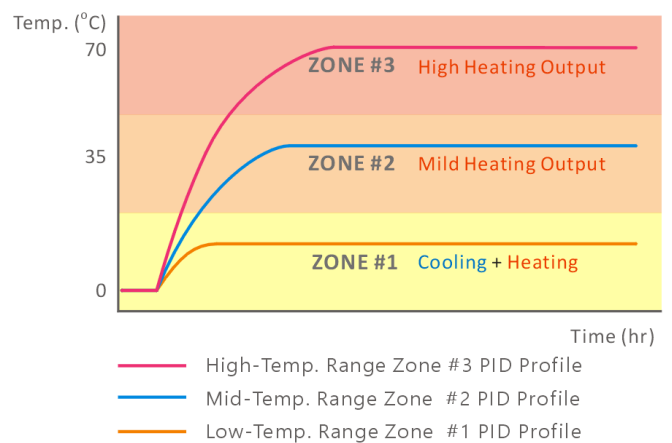
- Durable epoxy powder coated metallic casing
- Corrosion resistant Stainless Steel 304 chamber with seamless round cornered edge allows easy cleaning and prevent leakage
- Tempered safety inner glass door for easy observation of samples

**CONTROLLER**



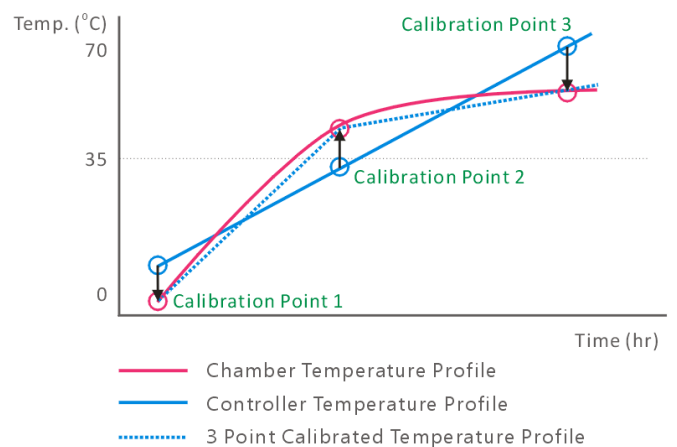
**-3 ZONE PID ALGORITHM**

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.



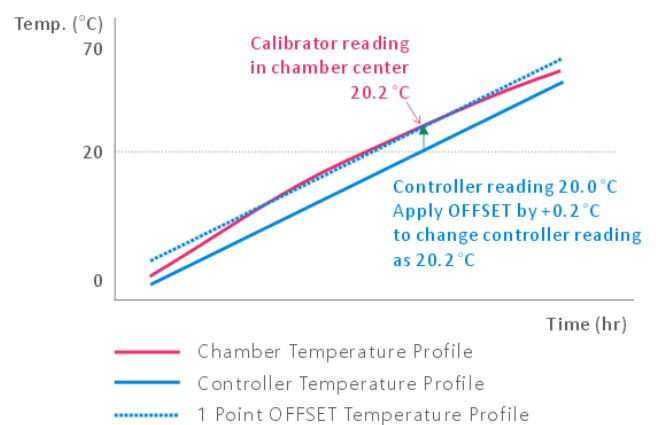
**-3 POINT CALIBRATION FUNCTION**

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.



**- 1-POINT OFFSET FUNCTION**

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



## CONTROLLER

### -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

-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 GROUP ZONE PID CONTROL ALGORITHM

### -3 POINT CALIBRATION

### -1 POINT OFFSET CALIBRATION

-POWER and TIMER RESTORE FUNCTION in case electric power outage

-CLASS A PT-100  $\Omega$  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

### JSBI-420C

#### Dimension Data

Chamber Volume	420 Liters
Inner Dims. (W x D x H mm)	700 x 600 x 1000
Outer Dims. (W x D x H mm)	880 x 925 x 1770
Inner Glass Door (W x H mm)	761 x 1077
No. of Shelf Positions	36 ea
No. of Shelf included	3 ea

#### Performance Data

Heating System	Forced Air Convection
Cooling System	Hermetically Sealed Air Cooled Compressor
Temp. Range	+0 °C ~ +70 °C
Accuracy	±0.2 °C at +20.0 °C
Uniformity	±0.5 °C at +20.0 °C

#### 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 Group Zone PID Control
Calibration	1 Point Temperature OFFSET 3 Point Temperature Calibration
Resolution	0.1 °C
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**

Safety Device                      Sensor short or disconnection AUDIO VISUAL ALARM  
 Controller cut-off heater, compressor and AUDIO VISUAL ALARM  
     HI-ALARM : +5 °C above set temp.  
     LO-ALARM : -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

**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                        1.5 kW  
 Nominal power                      2.4 kW    10.3 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**

Type of packaging                    Carton on a wooden palette  
 Shipping Dims. (WxDxH mm )    1030x1070x1930mm  
 Net Weight                            175.0 kg  
 Shipping Weight                      220.0 kg

**ORDERING INFORMATION**

Art. No.	Descriptions	Voltage
JSBI-420C	Refrigerated BOD Incubator, 420 L	220 VAC 1~ ph 50/60Hz

**OPTIONAL ACCESSORIES**

Art. No.	Descriptions
PHS-A13	Perforated Shelf, Stainless Steel 304, W670 x D580 mm for JSBI-420C
PHS-C06	PVC Coated Wire Shelf, W670 x D580 mm for JSBI-420C
PHS-A99	Shelf Support, Set of 4 ea

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