

## Model JSWB-22T : Heated Digital Water Bath



JSWB-T Series Digital Water Bath to provides constant temperature environment with heated water.

Suitable for biotechnology, chemistry, medical, environmental and general laboratory applications of temperature range from ambient +5 °C to 99 °C

### MAIN FEATURES

#### PERFORMANCE

- Maintain water temperature from ambient + 5 °C to 99 °C
- Excellent control accuracy within  $\pm 0.2$  °C and thermal uniformity within  $\pm 0.8$  °C
- Corrosion resistant Stainless Steel 304 sheath immersion heater directly heating water in the bath to reach set temperature quickly
- Perforated heater cover helps convection of heated water circulation throughout bath to maintain thermal uniformity of the bath

#### CONSTRUCTION

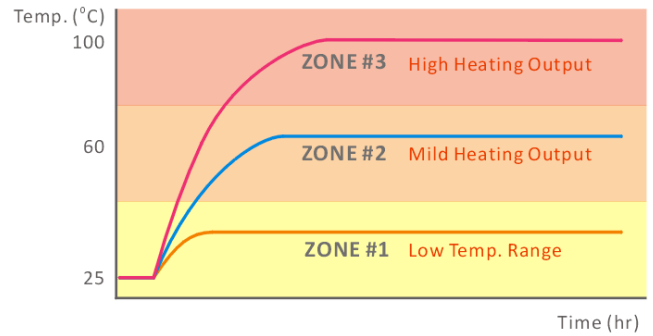
- Durable epoxy powder coated metallic casing
- Corrosion resistant Seamless Electro-Polished Stainless Steel 304 bath
- Corrosion resistant Stainless Steel 304 sheath immersion heater
- Corrosion resistant Stainless Steel 304 flat lid included
- Perforated heater cover (bottom plate) included

**CONTROLLER**



**-3 ZONE PID ALGORITHM**

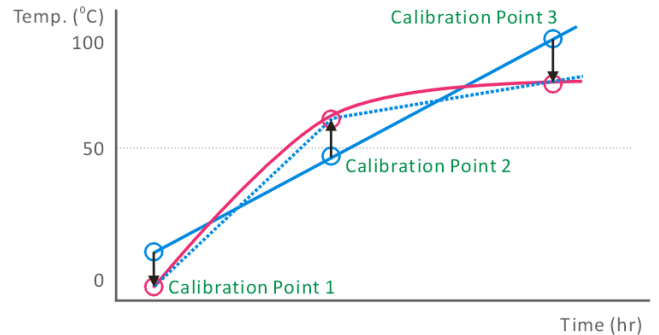
Complete temperature range is divided into three zones (LOW/MIDDLE/HIGH) and each ZONE has its individual PID Algorithm to provides precise and superior temperature control characteristic of whole temperature range.



- 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**

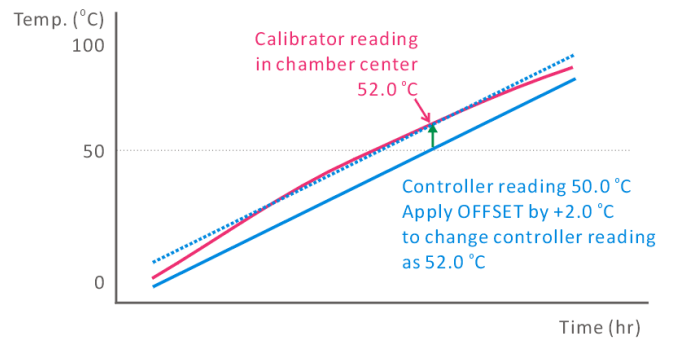
An excellent calibration tool to calibrate chamber at THREE DIFFERENT TEMPERATURE POINTS to adjust multiple TEMPERATURE BIAS to increase temperature accuracy of whole temperature range.



- 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 of frequent use.



- Chamber Temperature Profile
- Controller Temperature Profile
- ..... 1 Point OFFSET Temperature Profile

## 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
- TURN-ON TIMER up to 99 hour 59 min and alarm
- TURN-OFF DELAY TIMER up to 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  $\Omega$  Sensor

## CONVENIENCE

- Easy to clean Electro-Polished seamless Stainless Steel 304 Bath
- Perforated stainless steel bottom plate
- Drain for easy emptying the bath fluid (JSWB-22T, JSWB-30T only)
- Supplied with stainless steel Flat Lid to help reduce heat losses and evaporation

## SAFETY

- MAXIMUM TEMPERATURE LIMIT SETTING, CUT-OFF HEATER AND AUDIO VISUAL ALARM
- DUAL OVER TEMPERATURE CUT-OFF BY CONTROLLER AND INDEPENDENT THERMOSTAT
  - Controller Program cut-off heater and AUDIO VISUAL ALARM in case +10 °C above set temperature
  - Independent analog thermostat cut-off heater 10% above set temperature
- HIGH TEMPERATURE CUT-OFF AND AUDIO VISUAL ALARM
- LOW TEMPERATURE CUT-OFF AND AUDIO VISUAL ALARM
- PT SENSOR SHORT OR DISCONNECTION AUDIO VISUAL ALARM
- OVER CURRENT CUT-OFF : Fuse

## SPECIFICATIONS

DESCRIPTIONS	MODEL JSWB-22T
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### Dimension Data

Bath Volume	22 Liters
Inner Dims. (W x D x H mm)	500 x 300 x 150
Usable Dims. (W x D x H mm)	500 x 300 x 110
Outer Dims. (W x D x H mm)	545 x 345 x 270

### Performance Data

Heating System	Immersed Heating Element
Temp. Setting Range	Amb. +5 °C ~ 120.0 °C
Accuracy	±0.2 °C at 37.0 °C
Uniformity	±0.8 °C at 37.0 °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 Zone PID Control
Calibration	1 Point Temperature OFFSET 3 Point Temperature Calibration
Resolution	0.1 °C
Turn-Off Timer	Max. 99 hr 59 min
Turn-On Delay Time	Max. 99 hr 59 min
Sensor	CLASS A PT-100 Ω Sensor
Power Restoration	Power and Timer Restoration Function in case of power outage

### Safety Data

Safety Device	Max. Temp. Limit and Cut-Off audio visual alarm Dual Over Temp. Cut-Off by Controller and Thermostat High Temp. Cut-Off audio visual alarm Low Temp. Cut-Off audio visual alarm PT-Sensor Short or Open audio visual alarm Over Current Cut-Off
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**Material Data**

Body	Epoxy Powder Coated Steel
Bath	Seamless Stainless Steel 304 (AISI304)
Heating Element	Stainless Steel 304 (AISI304)

**Electrical Data**

Rated voltage	230 ± 10% VAC
Power frequency	50 / 60Hz
Heater Output	1.5 kW
Nominal power	1.5 kW 6.8 amp
Phase	1 Phase
Plug configuration	CEE 7/7 Schuko or BS 1363

**Usable Condition**

Temp. & Humidity	5°C - 40°C, < 80% RH
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**Packaging Data**

Shipping Dims. (W x D x H mm )	600 x 400 x 320
Type of packaging	Carton
Net Weight	10.0 kg
Shipping Weight	11.0 kg

**ORDERING INFORMATION**

Art. No.	Descriptions	Voltage
JSWB-22T	<b>Heated Digital Water Bath, 22 L</b> including standard accessories 1 ea x Heater Cover 1 ea x Flat Lid 1 ea x Instruction Manual 1 ea x Warranty Certificate	230 VAC 1~ ph 50/60Hz

**OPTIONAL ACCESSORIES**

Art. No.	Descriptions
PHL-WG22	Stainless Steel Gabled Lid
PHL-WR22	2 x 3 Hole Stainless Steel Concentric Ring Cover

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