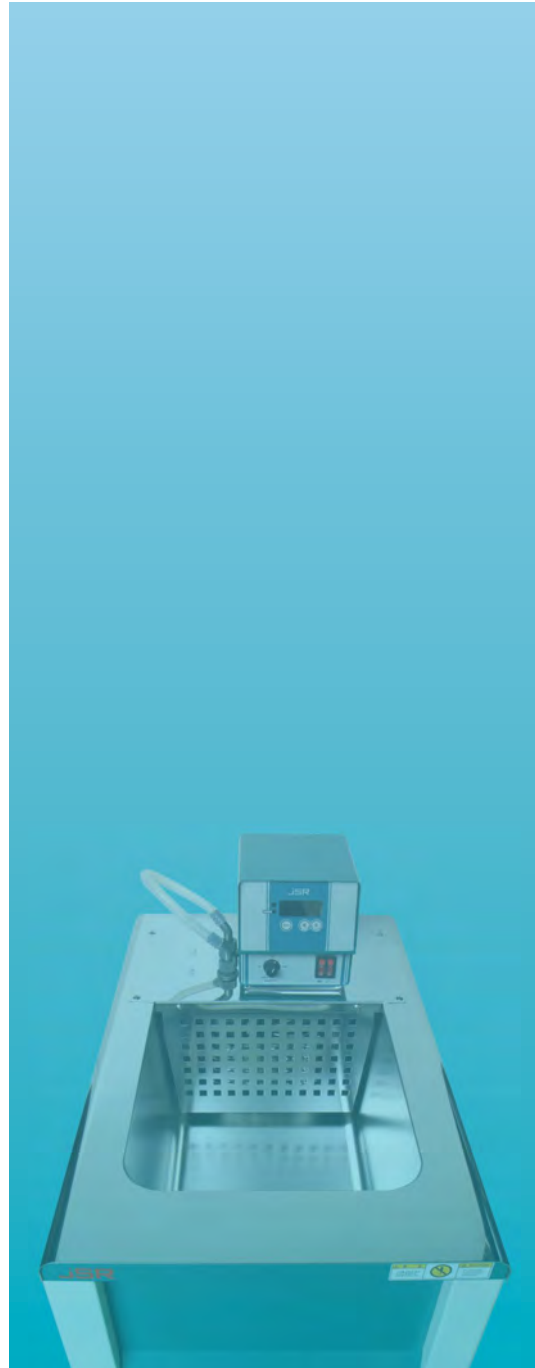


BATHS



JSR

[주] 제이에스리서치
JS Research Inc.

Laboratory

WATER BATH

JSWB-Series Heated Bath



- ▶ amb. +5 °C ~ 80 °C (99 °C)
- ▶ Constant Temperature
- ▶ Timer On / Off



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|-------------|----------|------------------------|----------|
| JSWB-06T(L) | 6 L | JSWB-TL | ± 0.1 °C |
| JSWB-11T(L) | 11 L | amb. + 5 °C ~ 80 °C | |
| JSWB-22T(L) | 22 L | JSWB-T | |
| JSWB-30T(L) | 30 L | amb. + 5 °C ~ 99 °C | |

JSOB-Series Digital Oil Bath



- ▶ amb. +10 °C ~ 250 °C
- ▶ Constant Temperature
- ▶ Timer On / Off



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|-----------|----------|--------------------------|----------|
| JSOB-100T | 11 L | amb. + 10 °C ~ 250 °C | ± 1.0 °C |
| JSOB-200T | 20 L | | |
| JSOB-300T | 33 L | | |

JSVB-Series Visco-Sight Bath



- ▶ amb. +5 °C ~ 99 °C
- ▶ Constant Temperature
- ▶ Timer On / Off
- ▶ Glass Window
- ▶ Internal Circulation



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|----------|----------|------------------------|----------|
| JSVB-30T | 31 L | amb. + 5 °C ~ 99 °C | ± 0.1 °C |

JSEB-Series Extraction Bath

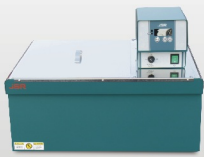


- ▶ amb. +5 °C ~ 99 °C
- ▶ Constant Temperature
- ▶ Timer On / Off
- ▶ 6 to 10 Multi-Extraction Ports



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|-----------|-------------|-----------------------|----------|
| JSEB-60T | 6 Ports | amb. +5 °C ~ 99 °C | ± 0.5 °C |
| JSEB-62T | 2 x 3 Ports | | |
| JSEB-82T | 2 x 4 Ports | | |
| JSEB-102T | 2 x 5 Ports | | |

JSIB-Series Circulation Bath



- ▶ amb. +5 °C ~ 99 °C
- ▶ Constant Temperature
- ▶ Timer On / Off
- ▶ Internal and external Circulation Pump
- ▶ Flow Rate : 8 L/min
- ▶ Pressure : 0.3 bar



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|-----------|----------|-----------------------|----------|
| JSIB-11T | 11 L | amb. +5 °C ~ 99 °C | ± 0.1 °C |
| JSIB-22T | 22 L | | |
| JSIB-50T | 48 L | | |
| JSIB-100T | 100 L | | |

JSRC-C(L) Series Refrigerated Circulation Bath



- ▶ - 20 (- 40) °C ~ 120 °C
- ▶ Constant Temperature
- ▶ Timer On / Off
- ▶ Internal and external Circulation Pump
- ▶ Flow Rate : 10 L/min
- ▶ Pressure : 0.5 bar



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|-------------|----------|-----------------|----------|
| JSRC-06C(L) | 7 L | JSRC-C | ± 0.1 °C |
| JSRC-13C(L) | 11 L | -20 °C ~ 120 °C | |
| JSRC-22C(L) | 20 L | JSRC-CL | |
| JSRC-30C(L) | 30 L | -40 °C ~ 120 °C | |

JSCT-Series JSCTC-Series Ultra-Low Cold Trap Bath

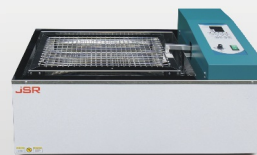


- ▶ Minimum Temperature
-25 °C ~ - 85 °C
- ▶ On/Off Temperature Control



| MODEL | CAPACITY | MINIMUM TEMPERATURE |
|------------|----------|---------------------|
| JSCT-25C | 7.2 L | - 25 °C |
| JSCT-55ULT | | - 55 °C |
| JSCT-85ULT | | - 85 °C |
| JSTC-55ULT | 2.8 L | - 55 °C |
| JSTC-85ULT | | - 85 °C |

JSSB-Series Shaking Water Bath



- ▶ amb. +5 °C ~ 99 °C
- ▶ Constant Temperature
- ▶ Timer On / Off
- ▶ Shaking Speed 20 ~ 120 rpm
- ▶ 25 mm stroke reciprocal motion



| MODEL | CAPACITY | TEMPERATURE | ACCURACY |
|----------|----------|-----------------------|----------|
| JSSB-30T | 30 L | amb. +5 °C ~ 99 °C | ± 0.2 °C |
| JSSB-50T | 50 L | | |

Laboratory

WATER BATH

Controller

▶ JSC-0D [BASIC]



- ▶ $\pm 0.1\text{ }^{\circ}\text{C}$ Digital PID Controller with automatic START/STOP timer max. 99min 59sec / 99hr 59min / 99day 23hr
- ▶ Digital LED displays operating status such as TEMP and remaining TIME
- ▶ Temperature calibration
- ▶ Auto-tuning function
- ▶ Class A Pt-100 Ω sensor
- ▶ Audio Visual Alarms
- ▶ 정밀한 PID 컨트롤러는 온도를 $\pm 0.1\text{ }^{\circ}\text{C}$ 단위로 제어
- ▶ 예약 / 정지 타이머 내장
99분59초/99시간59분/99일23시간
- ▶ 온도 보정, 오토튜닝 기능 내장
- ▶ Class A Pt-100 Ω 온도센서
- ▶ 안전한 작동을 위한 다양한 시청각적 알람

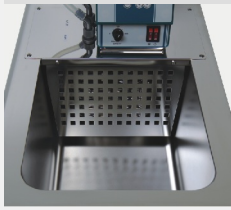
▶ JSC-7S Controller for Shaking Water Bath



- ▶ Integrated Digital PID Controller
- ▶ Temperature control with $\pm 0.1\text{ }^{\circ}\text{C}$
- ▶ Shaking speed control within $\pm 1\text{ rpm}$
- ▶ Automatic STOP timer
Max. 99min 59sec / 99hr 59min / 99day 23hr
- ▶ Dual digital LED displays
TEMP, RPM and remaining TIME
- ▶ Temperature calibration
- ▶ Shaking speed calibration
- ▶ Slow Start and Stop Control
- ▶ Auto-tuning function
- ▶ Class A Pt-100 Ω sensor
- ▶ 온도, 속도, 타이머 통합제어 PID 컨트롤러
- ▶ 온도제어 정밀도 : $\pm 0.1\text{ }^{\circ}\text{C}$
- ▶ 교반속도 제어 정밀도 : $\pm 1\text{ rpm}$
- ▶ 타이머 설정 최대 99분 59초/99시간 59분 /99일 23시간
- ▶ 현재온도, 교반속도, 잔여시간 디스플레이
- ▶ 온도 및 속도 보정 기능
- ▶ 작동 시 가속 및 감속 속도 제어
- ▶ 오토튜닝 기능 내장
- ▶ Class A Pt-100 온도센서

Performance & Convenience

Construction



- ▶ Durable epoxy powder coated metallic casing
- ▶ High quality stainless steel 304 bath
- ▶ 내구성이 뛰어난 에폭시 분체 도장과 스테인레스 스틸 304 배스

Seamless Bath



- ▶ Easy to clean Electro-Polished seamless SUS304 Bath with perforated stainless steel bottom plate
- ▶ 부식에 강한 전해 연마 처리된 Stainless Steel (SUS304) 배스는 코너에 이음새가 없어 세척과 유지보수가 간편

Lids



- ▶ Stainless steel flat cover to help reduce heat losses and evaporation
- ▶ 온도유지와 물의 증발을 방지하기 위한 커버

Circulation Pump



- ▶ Stainless Steel or magnetic driven pump for internal and external circulation of bath fluid
- ▶ Stainless Steel 또는 Magnetic Pump는 용액을 내부 또는 외부로 순환

Safety

DUAL OVER TEMP. CUT-OFF

- 1) Digital system cut-off heater and AUDIO VISUAL ALARM in case +2°C above set temperature
- 2) Analog system cut-off heater 10% above set temp.

MAX TEMP CUT-OFF heater and AUDIO VISUAL ALARM

when if +1°C above maximum limit

SENSOR DISCONNECTION ALARM

LOW WATER LEVEL SENSOR (Specific models only)

OVER CURRENT CUT-OFF : Electrical Leakage Breaker or Fuse

이중과열방지장치

- 1) 설정온도 +2 °C 초과 시 히터 차단 및 시청각알람
- 2) 콘트롤러 오류로 지정 온도 10% 초과 시 히터차단

최고온도알람기능 : 작동 한계온도 +1°C 초과시 히터 차단

센서단락알람

저수위감지센서 (일부모델)

누전차단기 (퓨즈) : 전기누설 시 주전원 차단

Drain



- ▶ Drain for easy emptying of bath fluid [Depends model]

- ▶ 배수용 드레인 밸브 장착 [일부모델]

Maintenance



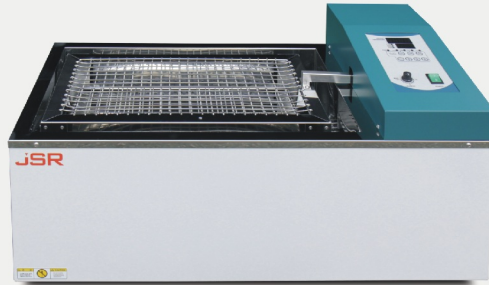
- ▶ Easy to maintain refrigeration system

- ▶ 편리한 유지보수

Shaking WATER BATH

HEATING
SHAKING

120 rpm Reciprocal



Shaking Water Bath

JSSB-Series Water Bath controls precise temperature and integral linear shaking system with universal spring wire rack which will accommodate almost any size and combination of vessels.

Ideal for chemistry, chemical engineering, cell culture, biotechnology, extraction and laboratory applications demanding constant temperature and mixing at the same time.

Specifications

| | |
|-----------------------|---|
| Temp. Range | ambient + 5 °C ~ 99 °C |
| Accuracy | ± 0.2 °C at 37.0°C (JSSB-30T) |
| Uniformity | ± 0.5 °C at 37.0°C (JSSB-30T) |
| Shaking Motion | Linear (Reciprocal) Motion |
| Speed Range | 20 - 120 rpm |
| Control | Integrated Microprocessor PID Control Auto STOP Timer |
| Sensor | Class A Pt-100 Ω Sensor |
| Safety | Over-Temperature Cut-Off Over Current Cut-Off |
| Material | Body : Epoxy Powder Coated Steel Chamber : Stainless Steel 304 Spring Wire Rack : Stainless Steel 304 with high tension spring |
| Electric | 220 ± 10% VAC 50/60Hz 1-Phase |

Plug config.



or








CEE 7/7 Schuko

BS 1363

Control Accuracy

- Integrated Digital PID Controller with ±0.1 °C temperature control resolution, shaking speed by ± 1 rpm and automatic STOP timer max. 99min 59sec / 99hr 59 min / 99day 23 hr
- Dual digital LED displays operating status of TEMP, RPM and remaining TIME
- Temperature calibration, auto-tuning function
- Class A Pt-100 Ω sensor

-  Reciprocal Shaking
-  Heated amb. +5 °C ~ 99 °C
-  Timer Off 
-  Constant Temperature Controller

- ▶ 통합형 PID 컨트롤러는 배스의 온도를 $\pm 0.1^{\circ}\text{C}$ 교반속도를 ± 1 rpm 단위로 제어하고 타이머 설정 최대 99분 59초 / 99시간 59분 / 99일 23시간
- ▶ 두 개의 디스플레이는 현재온도, 현재교반속도, 잔여시간등 작동상태를 표시
- ▶ 온도 및 속도 보정, 오토튜닝 기능 내장
- ▶ Class A Pt-100 온도센서

Performance

- ▶ Durable epoxy powder coated metallic casing
- ▶ Corrosion resistant Stainless Steel 304 bath
- ▶ Corrosion resistant stainless steel sheath immersion heater directly heating and boiling water in the bath to reach set temperature quickly
- ▶ Stainless Steel shaking rack and mechanism with powerful AC motor supports linear shaking motion up to 120 rpm
- ▶ Maximum temperature up to 99°C , accuracy $\pm 0.2^{\circ}\text{C}$
- ▶ 내구성이 뛰어난 예폭시 분체 도장 본체
- ▶ 내부식성이 뛰어난 Stainless Steel 304 재질의 배스
- ▶ 내부식성이 뛰어난 스테인레스 스틸 (SUS304) 재질의 히터가 수조 내부의 물을 직접 가열하여 신속히 설정 온도에 도달
- ▶ 스테인레스 스틸 (SUS304) 재질의 스프링랙은 강력한 AC Motor로 최대 120 rpm 속도로 교반
- ▶ 최고 가열 온도 99°C , $\pm 0.2^{\circ}\text{C}$ 의 탁월한 정밀도

Convenience

- ▶ Easy to clean polished Stainless Steel 304 Bath
- ▶ Stainless steel 304 universal spring rack with high tension spring wire to accommodate almost any size and combination of vessels
- ▶ Drain for easy emptying of the bath fluid
- ▶ Supplied with stainless steel gabled cover to help reduce heat losses and evaporation
- ▶ 부식에 강한 연마 처리된 Stainless Steel(SUS304) 배스는 세척과 유지보수가 간편
- ▶ Stainless Steel 304 재질의 스프링 랙은 다양한 용량과 형태의 용기를 손쉽게 사용할 수 있음
- ▶ 배수용 드레인밸브장착
- ▶ 온도유지와 물의 증발을 방지하기 위한 커버 포함

Safety

- ▶ DUAL OVER TEMP. CUT-OFF
- ▶ MAX TEMP CUT-OFF heater and AUDIO VISUAL ALARM
- ▶ MAX RPM CUT-OFF motor and AUDIO VISUAL ALARM
- ▶ MOTOR FAILURE ALARM
- ▶ SENSOR DISCONNECTION ALARM
- ▶ OVER CURRENT CUT-OFF FUSE
- ▶ 이중과열방지장치
- ▶ 최고온도알람기능 : 작동 한계온도+1°C 초과 시 히터 차단
- ▶ 최고속도알람기능 : 작동 한계속도+10 rpm 초과시 모터 차단
- ▶ 속도이상알람기능 : 교반이상시 알람
- ▶ 속도이상알람기능 : 교반이상시 알람
- ▶ 센서단락알람
- ▶ 누전차단퓨즈 : 전기 누설 시 주전원 차단

Ordering Information

| | JSSB-30T | JSSB-50T |
|------------------------|----------------------------|-----------------|
| Bath Volume (Capacity) | 30 L | 50 L |
| Dimensions Inner | 500 x 300 x 190 | 600 x 380 x 220 |
| W x D x H mm Outer | 760 x 370 x 400 | 870 x 450 x 430 |
| Spring Rack | 405 x 250 x 140 | 535 x 315 x 160 |
| Temperature Range | ambient +5°C ~ 99°C | |
| Accuracy at 37.0°C | $\pm 0.2^{\circ}\text{C}$ | |
| Uniformity at 37.0°C | $\pm 0.5^{\circ}\text{C}$ | |
| Shaking Speed Range | 20 ~ 120 rpm / 25mm stroke | |
| Accuracy | ± 1 rpm | |
| Heater Capacity | 2.0 kW | 3.0 kW |
| Power Rating | 9.2 Amp | 13.8 Amp |
| Power Plug | CEE 7/7 Schuko | |