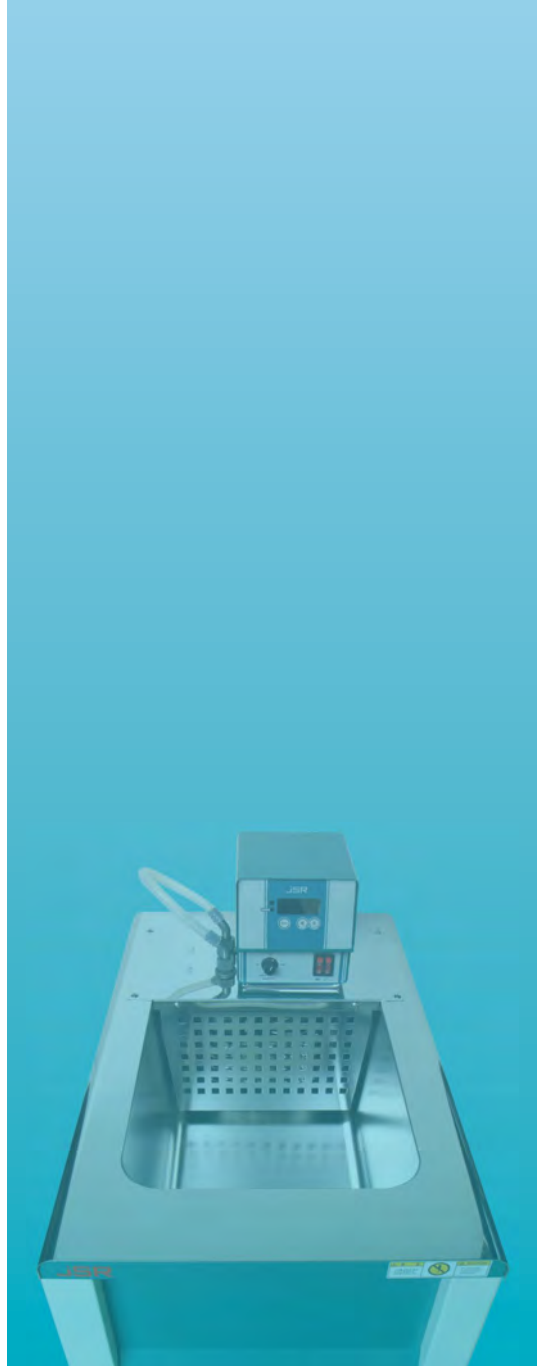


BATHS



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

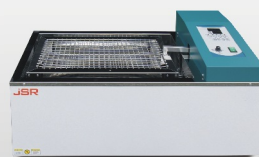


- ▶ Minimum Temperature
-25 °C ~ - 85 °C
- ▶ On/Off Temperature Control



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

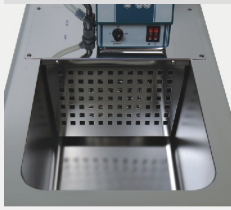
▶ JSC-7S Controller for Shaking Water Bath



- ▶ 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






Low Temp CIRCULATOR

HEATING REFRIGERATING - 40 °C Circulation Bath





Refrigerated Circulation Bath

Heated/Refrigerated circulating open bath system capable of reaching temperature as low as -40 °C and heating up to 120 °C for a wide variety of laboratory heating and cooling applications. Internal circulation of thermal fluid within the bath allows precise uniformity within $\pm 0.1^\circ\text{C}$. Circulation pump enables to circulates heated or refrigerated thermal fluid to external equipments such applications as reactor, condenser, rotary evaporator or controlling the temperature of laboratory equipment such as chromatography columns, viscometers, and densitometers. External circulation pump capacity 10 liters/min. in flow rate and 0.5 bar in pressure

-  Circulation Pump
-  Cooled - 40 °C to 120 °C
-  Timer On / Off 
-  Constant Temperature Controller



Specifications

Heating	Direct Immersion Sheath Heater with Circulation Pump
Cooling	CFC Free Air Cooled Compressor
Temp. Range	- 40 °C - 120 °C
Accuracy	$\pm 0.1^\circ\text{C}$ at -10.0°C (JSRC-13CL)
Uniformity	$\pm 0.4^\circ\text{C}$ at -10.0°C (JSRC-13CL)
Control	Microprocessor PID Control Auto START / STOP Timer
Sensor	Class A Pt-100 Ω Sensor
Safety	Over-Temperature Cut-Off Over Current Cut-Off Low Water Level Cut-Off
Material	Body : Epoxy Powder Coated Steel Bath : Seamless Electro-Polished Stainless Steel 304
Electric	220 \pm 10% VAC 50/60Hz 1-Phase
Plug config.	 or  CEE 7/7 Schuko BS 1363

Control Accuracy

- $\pm 0.1^\circ\text{C}$ Digital PID Controller with automatic START/STOP timer max. 99min 59sec / 99hr 59min / 99day 23hr
- Temperature calibration, auto-tuning function
- Class A Pt-100 Ω sensor
- 정밀한 PID 컨트롤러는 온도를 $\pm 0.1^\circ\text{C}$ 단위로 제어
- 예약 / 정지 타이머 내장 99분59초 / 99시간59분 / 99일23시간
- 온도보정, 오토튜닝 기능 내장
- Class A Pt-100 Ω 온도 센서

Performance

- ▶ Durable epoxy powder coated metallic casing
 - ▶ High efficiency heating and cooling system allows short heat-up and cool-down times
 - ▶ Corrosion resistant stainless steel 304 sheath immersion heater and cooling coil controls bath temperature quickly and precisely
 - ▶ Stainless Steel circulation pump circulates thermal fluid to the external closed system with flow rate 10 liters/min and 0.5 bar in pressure
 - ▶ Internal circulation of bath fluid enhance thermal uniformity of the bath
 - ▶ Temperature range from -40 °C to 120 °C, accuracy $\pm 0.1^{\circ}\text{C}$
- ▶ 내구성이 뛰어난 에폭시 분체 도장 본체
 - ▶ 내구성이 뛰어난 스테인레스 스틸 (SUS304) 재질의 히터와 냉각 코일은 수조 내부의 용액을 직접 가열 또는 냉각 하여 신속히 설정 온도에 도달
 - ▶ 스테인레스 스틸 (SUS304) 재질의 순환 펌프는 외부 순환 시 10 liter/min의 유량과 0.5 bar의 압력을 제공
 - ▶ 내부 순환 시 수조의 용액이 강제 순환되어 균일한 온도 분포
 - ▶ 온도범위 - 40°C ~ 120 °C, $\pm 0.1^{\circ}\text{C}$ 의 탁월한 정밀도

Convenience

- ▶ Easy to clean Electro-polished Seamless Stainless Steel Bath
 - ▶ Drain for easy emptying of the bath fluid
 - ▶ Supplied with stainless steel flat cover to help reduce heat losses and evaporation
 - ▶ Dust accumulation in refrigeration system is easily cleaned by means of a removable venting grill
- ▶ 부식에 강한 전해 연마 처리된 Stainless Steel(SUS304) 배스는 세척과 유지보수가 간편
 - ▶ 배수용 드레인밸브장착
 - ▶ 온도유지와 물의 증발을 방지하기 위한 평판형 커버 포함
 - ▶ 냉동응축기에 발생하는 먼지를 손쉽게 제거할 수 있도록 설계

Safety

- ▶ DUAL OVER TEMP. CUT-OFF
 - ▶ MAX TEMP CUT-OFF heater and AUDIO VISUAL ALARM
 - ▶ LOW WATER LEVEL SENSOR : cut-off heater
 - ▶ SENSOR DISCONNECTION ALARM
 - ▶ OVER CURRENT CUT-OFF FUSE
- ▶ 이중과열방지장치
 - ▶ 최고온도알람기능 : 작동 한계온도+1°C 초과 시 히터 차단
 - ▶ 저수위감지센서 : 히터출력 정지
 - ▶ 센서단락알람
 - ▶ 누전차단퓨즈 : 전기 누설 시 주전원 차단

Ordering Information

	JSRC-06CL	JSRC-13CL	JSRC-22CL	JSRC-30CL
Bath Volume (Capacity)	7.0 L	11 L	20 L	30 L
Dimensions Inner	155 x 300 x 150	240 x 300 x 150	300 x 330 x 200	300 x 500 x 190
W x D x H mm Usable	155 x 120 x 150	240 x 120 x 150	300 x 150 x 200	300 x 300 x 160
Outer	290 x 470 x 700	370 x 450 x 700	430 x 480 x 720	430 x 670 x 720
Temperature Range	- 40 °C ~ 120.0 °C			
Accuracy at -10.0°C	$\pm 0.1^{\circ}\text{C}$			
Uniformity at -10.0°C	$\pm 0.3^{\circ}\text{C}$			
Heater Capacity	700 Watt	800 Watt	1.2 kW	1.6 kW
Refrigeration System	CFC Free Air Cooled Compressor			
Power Rating	6.7 Amp	8.0 Amp	9.8 Amp	11.6 Amp
Power Plug	CEE 7/7 Schuko			