Laboratory INCUBATORS

JSR

(주) 제이에스리서치
JS Research Inc.

Laboratroy INCUBATOR

SELECTION GUIDE

JSGI-Series
General Heated Incubator

- amb. +5 ℃ ~ 70 ℃
- Constant Temperature
- Timer On / Off
- RS-232C or 485 [OPTION]
- Program Controller
  5 PTN 80 SEG [OPTION]

MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSGI-050T	48 L	amb. + 5 ℃ ~ 70 ℃	± 0.2 ℃
JSGI-100T	96 L		± 0.2 ℃
JSGI-150T	150 L		± 0.2 ℃
JSGI-250T	250 L		± 0.3 ℃
JSGI-250DT	2 x 250 L		± 0.3 ℃

JSGI-Series
Compact Incubator

- amb. +5 ℃ ~ 50 ℃
- Constant Temperature
- Timer On / Off

MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSGI-10T	9.3 L	amb. + 5 ℃ ~ 50 ℃	± 0.2 ℃
JSGI-30T	31.5 L		± 0.2 ℃

JSBI-C Series
Cooled BOD Incubator

- +0 ℃ ~ 70 ℃
- Constant Temperature
- Timer On / Off
- RS-232C or 485 [OPTION]

MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSBI-050C	50 L	+ 0 ℃ ~ 70 ℃	± 0.2 ℃
JSBI-100C	100 L		
JSBI-150C	150 L		
JSBI-250C	250 L		
JSBI-420C	420 L		
JSBI-840C	840 L		

JSBI-CP Series
Programmable Cooled Incubator

- +0 ℃ ~ 70 ℃
- Program Controller
  5 PTN 80 SEG
- RS-232C or 485 [OPTION]

MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSBI-150CP	150 L	+ 0 ℃ ~ 70 ℃	± 0.2 ℃
JSBI-250CP	250 L		
JSBI-420CP	420 L		

JSBI-DCP Series
Dual Chamber Cooled Incubator

- Dual Chamber
- +0 °C ~ 70 °C
- Constant Temperature or Program Controller 5 PTN 80 SEG
- Timer On / Off
- RS-232C or 485 [OPTION]

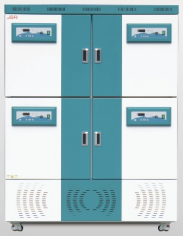
MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSBI-250DC	2 x 250 L	+ 0 °C ~ 70 °C	± 0.2 °C
JSBI-250DCP			

JSMI-02 Series
2 Chamber Incubator

- Dual Chamber
- +0 °C ~ 70 °C
- Constant Temperature or Program Controller 5 PTN 80 SEG
- Timer On / Off
- Photoperiodic Light Control
- RS-232C or 485 [OPTION]

MODEL	CAPACITY	TEMPERATURE	FEATURE
JSMI-02C	2 x 125 L	+ 0 °C ~ 70 °C	Constant
JSMI-02CP			Program
JSMI-02CPL			Light

JSMI-04 Series
Multi-Room Incubator



- Four Chamber
- +0 °C ~ 70 °C
- Constant Temperature or Program Controller 5 PTN 80 SEG
- Timer On / Off
- Photoperiodic Light Control
- RS-232C or 485 [OPTION]

MODEL	CAPACITY	TEMPERATURE	FEATURE
JSMI-04T	4 x 125 L	amb.+ 5°C~70°C	Heated
JSMI-04C		0 °C ~70 °C	Cooled
JSMI-04CP			Program
JSMI-04CPL			Light
JSMI-05C(L)	5 x 44 L	+5 °C ~70 °C	Cooled
JSMI-08CP(L)	8 x 26 L	+5 °C ~70 °C	Cooled

JSSC-Series
Cold Lab Storage Chamber

- 4 °C Refrigerator
- On/Off Control
- RS-232C or 485 [OPTION]

MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSSC-700C	686 L	+ 0 °C ~ 10 °C	± 2.0 °C
JSSC-1200C	1176 L		

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Controller Guide

	JSC-0D Basic Controller	JSC-1D Digital PID Controller	JSC-3D Programmable Controller	JSC-5D Programmable Controller
Type	Digital PID		16-bit Microprocessor	
Display	LED		2-Line Back light LCD	
Operation	Constant Temperature		Constant Temp. Mode Program Mode	
Accuracy	± 0.1 ℃		± 0.1 ℃	
Timer	Auto START/STOP		Auto STOP	
Timer Scale	Max. 99min 59sec / 99hr 59min / 99 day 23hr selectable		Max. 99min 59sec / 99hr 59min selectable	
Pattern Memory	n/a	n/a	1 Pattern	5 Patterns
Max. Segment			11 Segments	80 Segments
Max. Repeats			999 or unlimited Segment Skip	999 or unlimited Segment Skip Pattern Link
Light Control			On/Off control integrated with programming	
RS-232C or RS-485	n/a	Yes [OPTION]	Yes [OPTION]	Yes [OPTION]
PC Software	n/a	Yes [OPTION]	Yes [OPTION]	n/a
Calibration	Yes	Yes	Yes	Yes
Auto-tuning	Yes	Yes	Yes	Yes

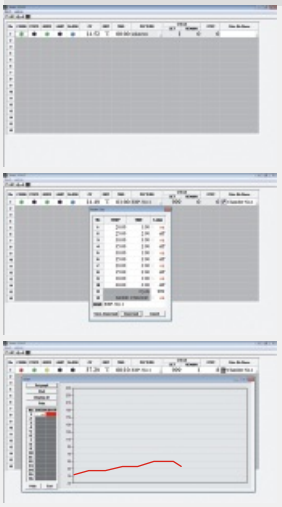
JSC-0D

JSC-1D

JSC-3D

JSC-5D

PC Software [OPTION]



- RS-232C Serial Port Communication
- Turn On and Off control
- Temperature and Timer Setting
- Pattern Programming and uploading
- Current temperature Graph Rendering
- Temperature Data Logging
- Alarm Signal
- RS-232C 시리얼 포트 통신
- 작동, 정지 제어
- 온도설정, 타이머 설정 기능
- 패턴 프로그래밍 기능
- 작동 중 온도 그래프 표시 기능
- 온도 데이터 수집 및 저장 기능
- 알람 현황 표시

ASCII Data Collection

Date	Time	Temp	Step	Seg	Cycle
2014:01:08	09:00:00	37.00	00:05	03	001/999
2014:01:08	09:00:10	37.01	00:05	03	001/999
2014:01:08	09:00:20	37.01	00:05	03	001/999
2014:01:08	09:00:30	37.00	00:05	03	001/999

Performance & Convenience

Construction

- Durable epoxy powder coated metallic casing
- 내구성이 뛰어난 에폭시 분체 도장

Chamber

- Corrosion resistant Stainless Steel 304 chamber with seamless round cornered edge allows easy cleaning and prevents leakage
- 내부식성이 뛰어난 Stainless Steel 304 재질의 챔버 코너는 이음새없이 라운드 처리 되어 있어 세척이 간편

Inner Glass Door

- High density silicone packing with air-tight door lock
- Removable and height adjustable shelf by 25mm spacing
- 내부 유리 도어와 고밀도 실리콘 패킹, 밀착식 도어락
- 25mm 간격으로 높이 조절 가능한 선반

Light Control

- Programmable Photoperiodic lighting control system
- 일광조절이 가능한 조도 ON/OFF 프로그램기능

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 +1°C above maximum limit
- **GLASS DOOR SWITCH**
- **SENSOR DISCONNECTION ALARM**
- **OVER CURRENT CUT-OFF :** Electrical Leakage Breaker

- **이중과열방지장치**
  1) 설정 온도 +2 °C 초과 시 히터 차단 및 시청각 알람
  2) 콘트롤러 오류로 지정 온도 10% 초과 시 히터차단
- **최고온도알람기능** : 작동한계 온도+1°C 초과시 히터 차단
- **도어스위치**
- **센서단락알람**
- **누전차단기** : 전기누설 시 주전원 차단

Maintenance

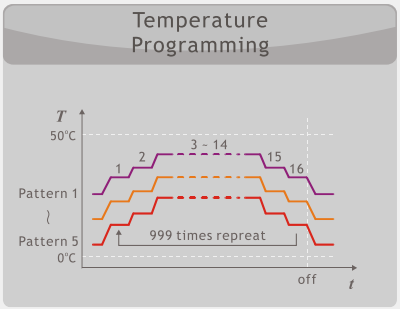
- Easy to maintain refrigeration system with dust filter
- 편리한 유지보수 먼지 필터 장착

2-Chamber COOLED INCUBATOR

INDEPENDENT TEMPERATURE CONTROL High Efficiency

Dual Chamber Refrigerated Incubator

Dual Chamber Refrigerated BOD Incubator provides large capacity volume and independent temperature control to treat large number of samples in various incubation conditions below ambient temperature for bacterial, fungal, cell and tissue culture incubation temperature range from 0℃ to 70℃ or BOD (Biological Oxygen Demand) test, QA or QC laboratory in pharmaceutical industries.



- Dual Chamber Independent Temperature
- Cooled +0 ℃ to 70 ℃
- Constant Temperature Controller
- Program Controller 5 Patterns 80 Segments
- [OPTION] RS-485 Multi-Drop Computer Interface

Specifications

Heating	Forced Air Convection
Cooling	CFC-Free air cooled compressor
Temp. Range	+ 0 ℃ ~ 70 ℃
Accuracy	± 0.2 ℃ at 20.0℃
Uniformity	± 0.5 ℃ at 20.0℃
Control	Microprocessor PID Control (JSBI-250DC)
	Programmable PID Control (JSBI-250DCP)
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
	Inner Glass Door : Tempered Safety
	Including PVC Coated Wire Shelf
	Built-in Caster for easy transport
Electric	220 ± 10% VAC 50/60Hz 1-Phase
Plug config.	 or 

CEE 7/7 Schuko BS 1363

JSBI-250DC Controller

- ±0.1 ℃ Digital PID Controller with automatic START/STOP timer max. 99min 59sec / 99hr 59min / 99 day 23hr
- Temperature calibration, auto-tuning function
- Class A Pt-100 Ω sensor

- 정밀한 PID 콘트롤러는 온도를 ±0.1 ℃ 단위로 제어
- 예약 / 정지 타이머 내장 99분59초 / 99시간59분 / 99일23시간
- 온도보정, 오토튜닝 기능 내장
- Class A Pt-100 Ω 온도 센서

JSBI-250DCP Controller

- Programmable 16-bit Microprocessor Digital PID control with ±0.1℃ resolution
- 5 Patterns memory 80 Segments 999 times repeatable
- Constant Temp. Mode / Program Mode
- Pattern link and Segment skip function
- Automatic STOP timer Max. 99min 59sec / 99hr 59min
- Temperature calibration and auto-tuning function
- Class A Pt-100 Ω sensor

- 해상도 ±0.1 ℃ 정밀한 16-bit 프로그램 PID 콘트롤러
- 5패턴 저장 메모리 80세그먼트, 999회 또는무한 반복운전
- 정치운전 또는 프로그램운전 기능
- 작동 중인 패턴 종료 후 다른 패턴으로 링크하여 연속작동
- 현재 작동 중인 세그먼트 건너 뛰기 기능
- 타이머 내장 99분59초 / 99시간59분
- 온도보정, 오토튜닝 기능 내장
- Class A Pt-100 Ω 온도 센서

Performance

- Durable epoxy powder coated metallic casing
- Corrosion resistant Stainless Steel 304 chamber
- Durable Stainless Steel 304 Sheath Heater and copper-aluminum finned evaporator
- Forced circulation for excellent thermal uniformity
- Separate heating and cooling compartment prevents contamination and maintenance free
- Cooling system with hermetically sealed compressor

- 내구성이 뛰어난 에폭시 분체 도장 본체
- 내부식성이 뛰어난 Stainless Steel 304 재질의 챔버
- 내구성과 내부식성이 뛰어난 Stainless Steel 304 재질의 히터와 냉각 효율이 뛰어난 냉각기
- 부드러운 공기 순환식 설계로 균일한 온도 분포
- 가열챔버가 후면에 위치하여 액체 흘림으로인한 고장이적음
- 내구성이 강한 냉각 시스템

Convenience

- Outer door with self adhesive magnetic packing
- Inner glass door with high density silicone packing and air-tight door lock
- Stainless Steel 304 Chamber with seamless round cornered edge allows easy cleaning and prevent contamination
- Removable and height adjustable shelf by 25mm spacing
- Auto-defrost system, user settable interval and time
- Built-in casters for easy transport

Safety

- DUAL OVER TEMP. CUT-OFF
- MAX TEMP CUT-OFF
- AUDIBLE VISUAL ALARMS
- SENSOR DISCONNECTION ALARM
- OVER CURRENT CUT-OFF : Electric Leakage Breaker

Options

Art No.	Descriptions
OEC-002	JSC-1D Constant Temperature Controller /w RS-485C Multi-Drop Interface, PC Software
OEC-004	JSC-3D Programmable Controller 1 Pattern 11 Segments /w RS-485 Multi-Drop Interface, PC Software
OEA-001	Power Outlet Consent in Chamber for CEE 7/7 Schuko Plug
OEA-002	Power Outlet Consent in Chamber for BS 1363 Plug

Accessories

Art No.	Descriptions
PHS-A06	**Perforated Shelf, Stainless Steel 304** for JSBI-250DC(P) W470 x D480 mm
PHS-C05	**PVC Coated Wire Shelf** for JSBI-250DC(P) W470 x D480 mm
PHS-A99	Shelf Support, Set of 4

Ordering Information

		JSBI-250DC	JSBI-250DCP
Chamber Volume (Capacity)		250 L x 2 Chamber 2 Door	
Dimensions W x D x H mm	Inner	500 x 500 x 1000	
	Outer	1365 x 825 x 1760	1365 x 810 x 1830
Temperature	Controller	JSC-1D Digital PID Control	JSC-5D Programmable Controller
	Range	+0 ℃ to 70 ℃	
	Accuracy at 20.0℃	± 0.2 ℃	
	Uniformity at 20.0℃	± 0.5 ℃	
Number of shelves / Maximum No.		3 / 20 per chamber	
Heater Capacity		1.0 kW x 2 ea	
Refrigeration System		CFC-Free Air Cooled Compressor	
Power Rating		15.0 Amp	
Power Plug		CEE 7/7 Schuko	

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