

Laboratory INCUBATORS



JSR

[주] 제이에스리서치
JS Research Inc.

Laboratroy

INCUBATOR

SELECTION GUIDE

JSGI-Series General Heated Incubator



- ▶ amb. +5 °C ~ 70 °C
- ▶ 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 °C ~ 70 °C	± 0.2 °C
JSGI-100T	96 L		± 0.2 °C
JSGI-150T	150 L		± 0.2 °C
JSGI-250T	250 L		± 0.3 °C
JSGI-250DT	2 x 250 L		± 0.3 °C

JSGI-Series Compact Incubator



- ▶ amb. +5 °C ~ 50 °C
- ▶ Constant Temperature
- ▶ Timer On / Off



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

JSBI-C Series Cooled BOD Incubator



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



MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSBI-050C	50 L	+ 0 °C ~ 70 °C	± 0.2 °C
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 °C ~ 70 °C
- ▶ Program Controller
- ▶ 5 PTN 80 SEG
- ▶ RS-232C or 485 [OPTION]



MODEL	CAPACITY	TEMPERATURE	ACCURACY
JSBI-150CP	150 L	+ 0 °C ~ 70 °C	± 0.2 °C
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	0 °C ~ 70 °C	Heated
JSMI-04C			Cooled
JSMI-04CP			Program
JSMI-04CPL			Light
JSMI-05CP(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		

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 °C		± 0.1 °C	
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



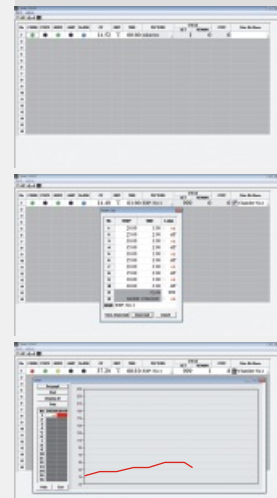
JSC-3D



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

Cold Lab CHAMBER

REFRIGERATION STORAGE CHAMBER

Sample & Reagent Store





Cold Lab Chamber

Cold Lab Chamber provide the reliability and security essential for the protection of temperature sensitive samples to be stored in +4 °C range. Ideal for the demanding requirements of daily laboratory applications such as storage of chemicals, reagents and samples.







Complete with adjustable shelves for storage, digital control for temperature setting with high and low temperature cut-off.

Specifications

Cooling	CFC-Free air cooled compressor
Temp. Range	+ 0 °C - 10 °C (General Operation at +4 °C)
Control	Digital ON/OFF Control
Sensor	Class A Pt-100 Ω Sensor
Safety	Over-Temperature Cut-Off Low-Temperature Cut-Off Over Current Cut-Off
Material	Body : Epoxy Powder Coated Steel Chamber : Stainless Steel 304 Inner Glass Door : Tempered Safety Glass Outer Door Window : Double Layer Tempered Safety Glass Including PVC Coated Wire Shelf
Electric	Built-in Caster for easy transport 220 ± 10% VAC 50/60Hz 1-Phase
Plug config.	 or  <small>CEE 7/7 Schuko BS 1363</small>

Control Accuracy

- ±2.0 °C Digital ON/OFF Control
- Temperature calibration
- Class A Pt-100 Ω sensor
- RS-232C Communication Interface and Software [OPTION]
- 디지털 컨트롤러는 ±2.0 °C 범위에서 냉동기를 ON/OFF 제어
- 온도보정 기능 내장
- Class A Pt-100 Ω 온도 센서
- 통신용 RS-232C 시리얼 포트, 데이터 저장 및 컨트롤 소프트웨어 포함 [옵션]

-  Cooled +0 °C to 10 °C
-  Constant Temperature Controller
-  Timer On / Off 
-  [OPTION] RS-232C Serial Computer Interface
-  [OPTION] Chart Recorder

Performance

- ▶ Durable epoxy powder coated metallic casing
- ▶ Corrosion resistant Stainless Steel 304 chamber
- ▶ Durable copper-aluminum finned evaporator
- ▶ Forced circulation for excellent thermal uniformity
- ▶ Cooling system with CFC-Free compressor

- ▶ 내구성이 뛰어난 에폭시 분체 도장 본체
- ▶ 내부식성이 뛰어난 Stainless Steel 304 재질의 챔버
- ▶ 공기 순환식 설계로 균일한 온도 분포
- ▶ 내구성이 강한 냉각 시스템

Convenience

- ▶ Outer door with self adhesive magnetic packing with double layer glass window
- ▶ Inner glass door with high density silicone packing and air-tight door lock
- ▶ Stainless Steel 304 Chamber
- ▶ Removable and height adjustable shelf by 25mm spacing
- ▶ Auto-defrost system, user settable interval and time
- ▶ Built-in casters for easy transport
- ▶ 자석 접착방식의 외부 도어 패킹과 이중 강화유리 도어 투시창
- ▶ 내부 유리 도어와 고밀도 실리콘 패킹, 밀착식 도어락은 챔버의 기밀성이 뛰어남
- ▶ Stainless Steel 304 챔버
- ▶ 25mm 간격으로 높이 조절 가능한 선반
- ▶ 제상 간격 및 시간을 조절할 수 있는 자동 제상 시스템
- ▶ 바퀴를 장착하여 설치 및 이동이 편리함

Safety

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

Options

Art No.	Descriptions
OEC-001	JSC-1D Constant Temperature Controller /w RS-232C 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
OER-010	6-Channel Chart Recorder
OHC-104	50 mm Access Port
	PVC Coated Wire Shelf
PHS-C16	for JSSC-700C W670 x D680 mm
PHS-C17	for JSSC-1200C W585 x D630 mm
PHS-A99	Shelf Support, Set of 4

Chart Recorder



Access Port



Ordering Information

	JSSC-700C	JSSC-1200C
Chamber Volume (Capacity)	686 L	1176 L
Dimensions Inner	700 x 700 x 1400	1200 x 700 x 1400
W x D x H mm Outer	900 x 900 x 1980	1410 x 900 x 1980
Temperature Range	+0 °C ~ 10 °C (General Operation at 4 °C)	
Accuracy	± 2.0 °C ON/OFF Control	
Uniformity	± 1.6 °C at 4 °C	± 2.0 °C at 4 °C
Number of shelves / Maximum No.	4 / 25	8 / 50
Heater Capacity	-	
Refrigeration System	CFC-Free Air Cooled Compressor	
Power Rating	3.0 Amp	4.0 Amp
Power Plug	CEE 7/7 Schuko Plug	