

SHAKING INCUBATORS



JSR

[주] 제이에스리서치
JS Research Inc.

Shaking INCUBATOR

SELECTION GUIDE

Complete Range



JSSI-300 Series
Floor Standing



JSSI-200 Series
Stackable



MODEL	JSSI-300T	JSSI-300C	JSSI-300CL	JSSI-200T	JSSI-200C	JSSI-200CL
SHAKING PLATFORM	W 700 x D 650 mm			W 500 x D 465 mm		
No. OF PLATFORM	1			1 Shaking & Static Shelf		
ORBITAL	yes			yes		
RECIPROCAL	yes			yes		
STATIC SHELF	no			yes		
TEMP. RANGE	heating	cooling	Cooling	heating	cooling	Cooling
LIGHTING	no	no	yes	no	no	yes
MAX. No. OF FLASKS	Universal Platform		Dedicated Platform	Universal Platform		Dedicated Platform
100 ml	41		72	32		36
200 ml	25		42	20		20
500 ml	25		25	9		12
1000 ml	16		16	9		9
2000 ml	9		-	5		-
3000 ml	9		-	4		-
5000 ml	5		-	2		-

JSSI-100 Series Compact

JSSI-CML Series Multi-Stack

JSSI-202C Series Multi-Chamber



JSSI-100T	JSSI-100C	JSSI-2CM(L)	JSSI-4CM(L)	JSSI-202C	JSSI-202CL	MODEL
W 500 x D 465 mm		W 700 x D 650 mm		W 700 x D 650 mm		SHAKING PLATFORM
1		2	4	2 Chamber x 2 Platform		No. OF PLATFORM
yes			yes	yes		ORBITAL
yes			yes	yes		RECIPROCAL
no			no	no		STATIC SHELF
heating	Cooling	Cooling		Cooling		TEMP. RANGE
no		yes (CML model only)		no	yes	LIGHTING
Universal Platform	Dedicated Platform	Universal Platform	Dedicated Platform	Universal Platform	Dedicated Platform	MAX. No. OF FLASKS
32	36	41	72	41	72	100 ml
20	20	25	42	25	42	200 ml
9	12	25	25	25	25	500 ml
9	9	16	16	16	16	1000 ml
5	-	9	-	9	-	2000 ml
4	-	9	-	9	-	3000 ml
2	-	5	-	5	-	5000 ml

Shaking INCUBATOR

SELECTION GUIDE Accessories

Platform & Accessories



DESCRIPTIONS	JSOS-300 Art. No.	JSOS-500 Art. No.	JSSI-070T(C) Art. No.
Adaptor Kit for Reciprocal Motion	-	PHF-P11	-
Stacking Bracket Kit	-	-	-
Universal Spring Rack	-	PHF-U50 PHF-U70	PHF-U40
Dimensions		W490 x D470 mm W690 x D650 mm	W430 x D380 mm
holds approx.	100 ml	20 ea 42 ea	
	250 ml	12 ea 25 ea	
	500 ml	9 ea 19 ea	
	1000 ml	5 ea 15 ea	
	2000 ml	4 ea 8 ea	
Universal Flask Platform	PHF-P30	PHF-P60 PHF-P70	PHF-P40
Dimensions	W 275 x D 345 mm	W495 x D495 mm W700 x D650 mm	W430 x D380 mm
holds maximum	50 ~ 100 ml	25 ea 41 ea	
polycarbonate	200 ~ 300 ml	16 ea 25 ea	
flask holder	500 ml	16 ea 25 ea	
	1000 ml	9 ea 16 ea	
	2L / 3L / 5L	5 ea 9 / 9 / 5 ea	
Dedicated Flask Platform incl. PC Flask Holder 50-100ml	-	PHF-P61 PHF-P71	-
		36 ea 72 ea	
Dedicated Flask Platform incl. PC Flask Holder 200-300ml	-	PHF-P62 PHF-P72	-
		25 ea 42 ea	
Dedicated Flask Platform incl. PC Flask Holder 500 - 1000 ml	-	PHF-P63 PHF-P73	-
		16 ea / 9 ea 25 ea / 16 ea	
Non-Slip Rubber Mat	PHF-M30	PHF-M60 PHF-M70	PHF-M40

▶ Universal Spring Rack

Art. No.	Dimensions	Image
PHF-U50	490 x 470 x 140 mm for JSOS-500, JSSI-100, JSSI-200	
PHF-U70	690 x 650 x 140 mm for JSSI-300, JSSI-2CML, JSSI-4CML, JSSI-202CL	

▶ Stainless Steel Flask Holder

Art. No.	Capacity	Image
PHF-S01	100 ml	
PHF-S02	250 ml	
PHF-S03	500 ml	
PHF-S04	1000 ml	
PHF-S05	2000 ml	
PHF-S06	3000 ml	
PHF-S07	5000 ml	


Platform & Accessories



DESCRIPTIONS	JSSI-300	JSSI-xCML Art. No.	JSSI-202CL	JSSI-200	JSSI-100 Art. No.
Adaptor Kit for Reciprocal Motion		PHF-P11		PHF-P11	
Stacking Bracket Kit		-		PHF-P12	-
Universal Spring Rack		PHF-U70		PHF-U50	
Dimensions		W690 x D650 mm		W490 x D470mm	
holds approx.	100 ml	42 ea		20 ea	
	250 ml	25 ea		13 ea	
	500 ml	19 ea		10 ea	
	1000 ml	15 ea		6 ea	
	2000 ml	8 ea		5 ea	
Universal Flask Platform		PHF-P70		PHF-P50	
Dimensions		W700 x D650 mm		W500 x D465mm	
holds maximum	50 ~ 100 ml	41 ea		32 ea	
polycarbonate	200 ~ 300 ml	25 ea		20 ea	
flask holder	500 ml	25 ea		9 ea	
	1000 ml	16 ea		9 ea	
	2L / 3L / 5L	9 ea / 9 ea / 5 ea		5 ea / 4 ea / 2 ea	
Dedicated Flask Platform		PHF-P71		PHF-P51	
incl. PC Flask Holder 50-100ml		72 ea		36 ea	
Dedicated Flask Platform		PHF-P72		PHF-P52	
incl. PC Flask Holder 200-300ml		42 ea		20 ea	
Dedicated Flask Platform		PHF-P73		PHF-P53	
incl. PC Flask Holder 500 ~ 1000 ml		25 ea / 16 ea		12 ea / 9 ea	
Non-Slip Rubber Mat		PHF-M70		PHF-M50	


▶ Polycarbonate Flask Holder

Art. No.	Size Adjustable
PHF-P01	50 ~ 100 ml
PHF-P02	200 ~ 300 ml
PHF-P03	500 ~ 1000 ml



▶ Test Tube Holder

Art. No.	Size
PHF-T01	8 mm Dia. for 80 test tubes
PHF-T02	10 mm Dia. for 80 test tubes
PHF-T03	12 mm Dia. for 54 test tubes
PHF-T04	14 mm Dia. for 54 test tubes
PHF-T05	16 mm Dia. for 30 test tubes
PHF-T06	25 mm Dia. for 15 test tubes
PHF-T07	35 mm Dia. for 8 test tubes



Shaking INCUBATOR

PROMINENT ADVANTAGE Feature

Controller

▶ JSC-7S Controller



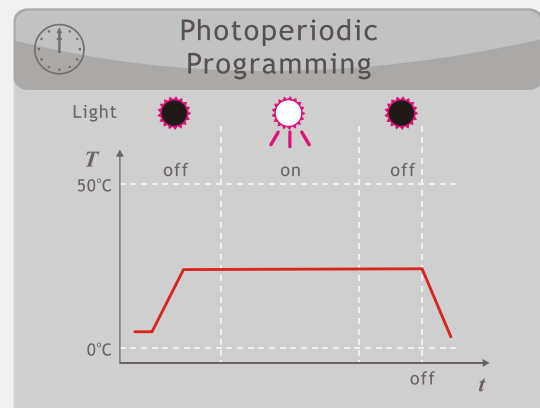
- ▶ Integrated Digital PID Controller
- ▶ Temperature control with $\pm 0.1^\circ\text{C}$
- ▶ Shaking speed control within $\pm 1\text{ rpm}$
- ▶ Automatic STOP timer
Max. 99min 59sec / 99hr 59min / 99day 23hr
- ▶ Dual digital LED displays
TEMP, RPM and remaining TIME
- ▶ Temperature calibration
- ▶ 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 : $\pm 0.1^\circ\text{C}$
- ▶ 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

▶ Chamber Light [SPECIFIC MODELS ONLY]



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



Performance & Convenience

Construction



- ▶ Self-balanced door with magnetic packing, glass window and lighting
- ▶ 자석 접착방식의 패킹, 이중 강화 유리창과 작업등

Chamber



- ▶ Corrosion resistant Stainless Steel 304 chamber
- ▶ 내부식성이 뛰어난 Stainless Steel 304 재질의 챔버

Interchangeable Platforms



- ▶ Various interchangeable shaking platforms
- ▶ 용도에 따라 교환할 수 있는 다양한 교반 플랫폼

Maintenance



- ▶ Easy to maintain refrigeration system
- ▶ 편리한 유지보수

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

MAX RPM CUT-OFF motor and AUDIO VISUAL ALARM

- when +10 rpm above maximum limit

MOTOR FAILURE ALARM in case of shaking start failure

DOOR SENSOR : Cut-off motor when door opened

SENSOR DISCONNECTION ALARM

OVER CURRENT CUT-OFF : Electrical Leakage Breaker

이중과열방지장치

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

최고온도알람기능 : 작동 한계온도 +1°C 초과시 히터 차단

최고속도알람기능 : 작동 한계속도 +10 rpm 초과시 모터 차단

속도이상알람기능 : 교반이상시 알람

도어스위치 : 도어를 열면 모터가 정지하여 사용자를 보호

센서단락알람

누전차단기 : 전기누설 시 주전원 차단









Shaking INCUBATOR

JSSI-202C Series TWO-CHAMBER 2-Chamber 2-Shaker



Multi-Chamber Shaking Incubator

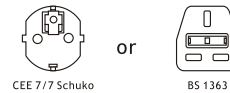
JSSI-202 Series Shaking Incubator has two independent temperature controlled chambers with shaker for big volume tissue culture applications at different temperature and shaking speed.

-  Dual Chamber Independent Control
-  Cooled +10 °C to 70 °C
-  Timer Off 
-  20 ~ 350 rpm
Orbital or Reciprocal
-  Photoperiodic Control 
-  Max. Load 35 kgs

Specifications

Heating	Forced Air Convection
Temp. Range	+10 °C ~ 70 °C
Accuracy	± 0.5 °C at 25.0°C
Uniformity	± 2.0 °C at 25.0°C
Shaking Motion	Orbital or Reciprocal
Speed Range	20 ~ 350 rpm (orbital)
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 Window Glass : Tempered Safety
Electric	220 ± 10% VAC 50/60Hz 1-Phase

Plug config.



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 59min / 99 day 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

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

Performance

- ▶ Two independent temperature controlled chamber with shaking platform allows conducting two different culture condition at the same time.
- ▶ Separate heating and cooling compartment prevent contamination and maintenance free
- ▶ Cooling system with hermetically sealed compressor
- ▶ Durable shaking mechanism with powerful AC motor supports orbital or reciprocal shaking motion
- ▶ Programmable Lighting System above each platform with 24 hour timer for photosynthetic culture [OPTION]

Convenience

- ▶ Door with air tight silicone packing and glass window on each chamber, lighting in chamber for easy observation during cultivation
- ▶ Door switch to cut-off shaking motion when put in and out sample
- ▶ Auto-defrost system, user settable interval and time
- ▶ Caster with height adjustable level feet for balancing, anti-vibration and easy transport
- ▶ Various choice of shaking platforms

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
- ▶ DOOR SWITCH
- ▶ SENSOR DISCONNECTION ALARM
- ▶ OVER CURRENT CUT-OFF

Accessories

Art No.	Descriptions	
PHF-P11	Adaptor Kit for Reciprocal Motion	
OHC-106	24 Hour Timer Photoperiodic Light Control	
PHF-U70	Universal Spring Rack	W690 x D650 mm
PHF-P70	Flask Holder Platform	W700 x D650 mm
PHF-M70	Non-Slip Rubber Mat	W700 x D 650 mm
PHF-Pxx	Polycarbonate Flask Holder	50 ~ 1000 ml
PHF-Sxx	Stainless Steel Flask Holder	100 ~ 5000 ml
PHF-Txx	Test Tube Rack	Dia. 8 ~ 35 mm

*Shaking Incubator supplied without shaking platform and accessories
Refer Ordering Information page 56*

Ordering Information

	JSSI-202C	JSSI-202CL
Chamber Volume (Capacity)	2 x 324 L	
No. of Shaking Platform	2	
Dimensions Inner	750 x 720 x 600	
W x D x H mm Outer	1295 x 845 x 1750	
Platform	W700 x D650 mm	
Temperature Range	+10 °C ~ 70 °C	
Accuracy	$\pm 0.5\text{ }^{\circ}\text{C}$ at 25 °C	
Uniformity	$\pm 2.0\text{ }^{\circ}\text{C}$ at 25 °C	
Shaking Motion	Orbital or Reciprocal	
Speed /Stroke	20 ~ 350 rpm / 20mm	
Illumination Working Lamp	none 25 Watt Bulb	36 Watt FPL x 4 ea none
Heater Capacity	2 x 1.2 kW	
Refrigeration System	CFC Free Air Cooled Compressor	
Power Rating	20.0 Amp	
Power Plug	CEE 7/7 Schuko	