

## COMMODITY DESCRIPTION

H.S. No	Item No	Description	Unit	Quantity
		Multi-Stack Shaking Incubator	set	1

A. Model : JSSI-4CML

B. Product Description : Multi Stack Shaking Incubator

C. Manufacturer / Origin : JS Research Inc. / Korea

D. Application :

JSSI-CM Series Shaking Incubator provides multiple shaking platforms in a temperature controlled chamber for big volume tissue culture applications. Ideal for any shaking application requiring controlled temperature and speed for microbiology, cell biology, cell culture, tissue culture, biochemistry, molecular biology, environmental engineering, soil testing field temperature range from + 10 °C to +70 °C and shaking speed from 20 ~ 350 rpm.

E. Photo



JSSI-4CM Multi-Stack Shaking Incubator

## **F. Feature**

### **JSC-1D Digital PID Temperature Controller**

- ✓  $\pm 0.1$  °C Digital PID Controller with LED Display
- ✓ Automatic START/STOP timer
- ✓ Adjustable timer scale 99min 59sec / 99hr 59min / 99day 23hr or continuous operation
- ✓ Temperature calibration
- ✓ Auto-tuning function
- ✓ Class A Pt-100  $\Omega$  sensor

### **JSC-TACHO Digital Shaking Controller**

- ✓ Digital feedback RPM controller with automatic STOP timer, max. 99min 59sec / 99hr 59min / continuous
- ✓ 4 digit dual digital LED displays RPM and TIME
- ✓ Inbuilt rpm calibration function
- ✓ Adjustable smooth start and stop motion

### **Construction**

- ✓ Durable epoxy powder coated metallic casing
- ✓ Corrosion resistant Stainless Steel 304 chamber
- ✓ Durable Stainless Steel 304 Sheath Heater and Copper-Aluminum fin evaporator
- ✓ Door with magnetic packing, double layer glass window
- ✓ 4 ea x caster and level foot for self balancing and anti-vibration

### **Performance**

- ✓ Four independently controlled shaking platform in a temperature controlled chamber enables large volume of culture under same condition for time saving and consistent production result.
- ✓ Each shaking platform can be operated independently under different speed and time
- ✓ Forced circulation for excellent thermal uniformity within  $\pm 0.5$  °C
- ✓ Separate heating and cooling compartment prevents contamination and maintenance free
- ✓ Cooling system with hermetically sealed compressor
- ✓ Durable shaking mechanism with powerful AC motor supports orbital or reciprocal shaking motion
- ✓ 8 ea x 36 Watt FPL Lamp with 24 hour timer for photosynthetic culture

### **Convenience**

- ✓ Door with silicone packing and compression door lock. Glass window on each platform, 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 and height adjustable level feet for easy transport, balancing and anti-vibration
- ✓ Various choice of shaking platforms

## Safety

- ✓ DUAL OVER TEMP. CUT-OFF  
Digital system cut-off heater and AUDIO VISUAL ALARM in case +2 °C above set temperature  
Analog system cut-off heater 10% above set temp.
- ✓ MAX TEMP CUT-OFF heater and AUDIO VISUAL ALARM when +1 °C above maximum limit
- ✓ OVER COOLING. CUT-OFF  
Digital system automatically cut-off compressor in case -3 °C below set temperature
- ✓ OVER SPEED CUT-OFF  
Digital system automatically cut-off motor in case +10 rpm above set rpm.
- ✓ SENSOR DISCONNECTION ALARM
- ✓ Motor failure ALARM
- ✓ Shaking motion automatically stops when door opened
- ✓ OVER CURRENT CUT-OFF : Electric Leakage Breaker

## G. Specifications

Chamber Volume (Capacity)	1180 Liters
No. of Shaking Platform	4 Shaking Platforms
Inner Dims. (W x D x H)	850 x 720 x 1925 mm
Outer Dims. (W x D x H)	1590 x 910 x 2255 mm
Platform Dims. (W x D)	700 x 650 mm
Heating	Forced Air Convection
Cooling	CFC Free Air Cooled Compressor
Temp. Range	+10°C ~ +70°C
Accuracy	±0.5°C at +25°C
Uniformity	±3.0°C at +25°C
Shaking Mode	Orbital Reciprocal with optional adaptor
Shaking speed range	20 ~ 350 rpm
Shaking Stroke	20 mm
Shaking speed accuracy	±1 rpm
Control	Digital PID microprocessor temperature control Digital Feedback Shaking Control Timer : 99min 59sec / 99hr 59min / 99day 23hr / continuous
Sensor	Class A PT-100 Ω Sensor
Illumination	8 ea x 36 Watt FPL Fluorescent Lamp

Safety	Over-Temperature Cut-Off Over-Speed Cut-Off Over Current Cut-Off
Material	Body : Epoxy Powder Coated Steel, 1.0 mm thickness Chamber : Stainless Steel 304, 0.8 mm thickness Glass Window : Double Layer Tempered Safety, 5 mm thickness
Electrical Requirement	220 ± 10% VAC, 50/60Hz, 1-Phase
Heater Capacity	1.5 kW
Power Rating	10.0 amps
Plug Configuration	CEE 7/7 Schuko or BS 1363
Net Weight	420 kg
Shipping Weight	520 kg
Shipping Dims. (W x D x H)	1720 x 1030 x 2390 mm, wooden crating

#### H. Standard Accessories

Instruction Manual : 1 EA  
Warranty Card : 1 EA

#### I. Options & 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 Flask loading capacity (approx. 42 x 100ml, 25 x 250ml, 19 x 500ml, 15 x 1000ml, 8 x 2000ml)
PHF-P70	Universal Flask Holder Platform W700 x D650 mm Flask loading capacity (approx. 41 x 100ml, 25 x 250ml, 25 x 500ml, 16 x 1000ml, 9 x 2000ml, 9 x 3000ml, 5 x 5000ml)
PHF-P71	Dedicated Flask Holder Platform W700 x D650 mm including 72 ea x 50 ~ 100 ml polycarbonate flasks holder
PHF-P72	Dedicated Flask Holder Platform W700 x D650 mm including 42 ea x 200 ~ 300 ml polycarbonate flasks holder

**PHF-P73** Dedicated Flask Holder Platform W700 x D650 mm  
including 25 ea x 500 - 1000 ml polycarbonate flasks holder

**PHF-M70** Non-Slip Rubber Mat W700 x D650 mm

**PHF-P01** Polycarbonate Flask Holder 50 - 100 ml Size Adjustable

**PHF-P02** Polycarbonate Flask Holder 200 - 300 ml Size Adjustable

**PHF-P03** Polycarbonate Flask Holder 500 - 1000 ml Size Adjustable

**PHF-S01** Stainless Steel Flask Holder 100 ml

**PHF-S02** Stainless Steel Flask Holder 250 ml

**PHF-S03** Stainless Steel Flask Holder 500 ml

**PHF-S04** Stainless Steel Flask Holder 1000 ml

**PHF-S05** Stainless Steel Flask Holder 2000 ml

**PHF-S06** Stainless Steel Flask Holder 3000 ml

**PHF-S07** Stainless Steel Flask Holder 5000 ml

**PHF-T01** Test Tube Holder 8 mm Dia. for 80 test tubes

**PHF-T01** Test Tube Holder 10 mm Dia. for 80 test tubes

**PHF-T01** Test Tube Holder 12 mm Dia. for 54 test tubes

**PHF-T01** Test Tube Holder 14 mm Dia. for 54 test tubes

**PHF-T01** Test Tube Holder 16 mm Dia. for 30 test tubes

**PHF-T01** Test Tube Holder 25 mm Dia. for 15 test tubes

**PHF-T01** Test Tube Holder 35 mm Dia. for 8 test tubes

## **J. Warranty**

1 Year full coverage warranty