

Laboratory Industrial OVENS



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Accredited Laboratory

JSR

[주] 제이에스리서치
JS Research Inc.

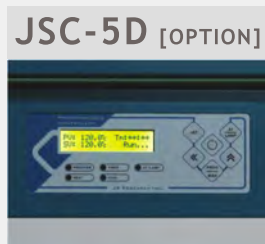
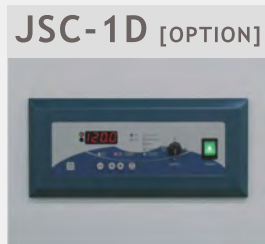
Ovens

FEATURE

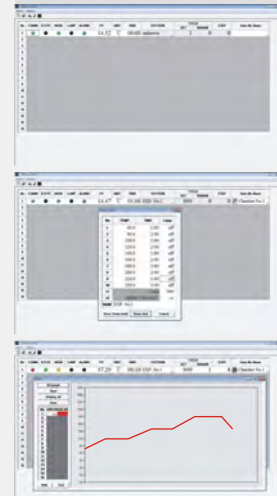
PRECISION CONTROL HIGH PERFORMANCE Standards & Options

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	
Programming	n/a	n/a	Yes	Yes
Pattern Memory			1 Pattern	5 Patterns
Max. Segment			11 Segments	80 Segments
Max. Repeats			999 or unlimited Segment Skip	999 or unlimited Segment Skip Pattern Link
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



▶ 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
- ▶ 온도 설정, 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
2014:01:07	09:00:00	120.00	00:05	03	001/999
2014:01:07	09:00:10	120.01	00:05	03	001/999
2014:01:07	09:00:20	120.01	00:05	03	001/999
2014:01:07	09:00:30	120.00	00:05	03	001/999

Performance & Convenience

Construction



- ▶ Durable epoxy powder coated metallic casing
- ▶ Ventilation damper
- ▶ 내구성이 뛰어난 에폭시 분체 도장
- ▶ 수분 및 증기 배출 배기구 장착

Chamber



- ▶ Corrosion resistant Stainless Steel 304 chamber with seamless round cornered edge allows easy cleaning and prevent leakage
- ▶ 내부식성이 뛰어난 Stainless Steel 304 재질의 챔버 코너는 이음새 없이 라운드 처리되어 있어 세척이 간편

Door Window



- ▶ Double layered glass window for easy observation of samples
- ▶ Non-contact door switch cut-off heater and blower
- ▶ 이중 강화유리 도어 투시창
- ▶ 비접촉식 도어센서 장착, 도어 개방시 히터 및 팬 동작 정지

Removable Shelf



- ▶ Removable and height adjustable Stainless Steel Wire Shelf
- ▶ 25mm 간격으로 높이 조절 가능한 스테인레스 스틸 와이어 선반

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
- ▶ DOOR SENSOR : Non-contact magnetic door switch cut-off heater and/or blower when door opened
- ▶ 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

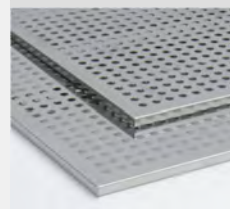
최고온도알람기능 : 작동한계 온도+1°C 초과시 히터 차단

도어스위치 : 도어를 열면 히터와 팬이 정지하여 열기로 부터 사용자를 보호하고 과열 방지

센서단락알람

누전차단기 : 전기누설 시 주전원 차단

Option



- ▶ Stainless Steel 304 Perforated Shelf
- ▶ Stainless Steel 304 타공 선반

Industrial SPECIAL OVENS

INDUSTRIAL
SCALE

Rugged Design



Heavy Duty Industrial Oven

Durable and Rugged Large Capacity Industrial Oven for industrial production line such as drying printed circuit panel, glass panel and stability test of electronic parts and components.

Horizontal air flow with adjustable damper system on each shelf level allow to maintain optimum air circulation throughout the chamber which provides excellent temperature uniformity and operational condition

Specifications

Heating	Forced Air Convection Horizontal Air Flow
Temp. Range	ambient + 10 °C ~ 250 °C
Accuracy	± 0.3 °C at 120°C (JSIO-400T)
Uniformity	± 5.0 °C at 120°C (JSIO-400T)
Control	Microprocessor PID Control Auto START / 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 Galvanized Steel Insulation : 50mm Woven Mineral Wool Floor Standing with Caster Including Stainless Steel Perforated Shelf
Electric	220 ± 10% VAC 50/60Hz 1-Phase or 380 ± 10% VAC 50/60Hz 3-Phase 4-Wire

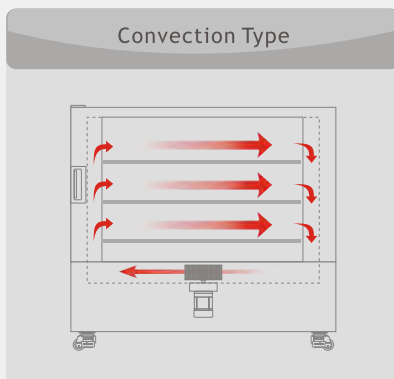
Plug config.



30 Amp

Control Accuracy

- ± 0.1 °C 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



- Heavy Duty Industrial Scale
- Max 250 °C
- Constant Temperature Controller
- Timer On / Off
- [OPTION] RS-232C Serial Computer Interface
- [OPTION] Program Controller with PC Control Software

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

Performance

- ▶ High capacity powerful sirocco blowers provide big volume of horizontal air flow
- ▶ Adjustable damper system on each shelf level allow maintaining optimum air circulation throughout the chamber to achieve excellent temperature uniformity and operational condition
- ▶ Separate heating compartment located on bottom plate prevents contamination and maintenance free
- ▶ 50mm thick high thermal efficiency mineral wool with woven aluminum barrier sheet save energy and less dust
- ▶ 고용량 시로코팬을 장착하여 챔버 내부에 공기 순환 원활
- ▶ 각 선반 측면에 위치한 통기구의 크기를 조절하여 공기의 흐름과 온도 분포를 운전 조건에 맞도록 조절
- ▶ 가열챔버가 바닥에 분리 되어 있어 액체 흘림으로 인한 오염과 고장이 적음
- ▶ 50mm 두께의 고효율 단열재는 알미늄 피복층이 있어 에너지 소비가 적고 분진이 없음

Convenience

- ▶ Floor standing industrial scale big volume oven provides more throughput and productivity of sample treatment
- ▶ Corrosion resistant Stainless Steel 304 Chamber
- ▶ Removable and height adjustable 3 tier shelf
- ▶ Outer door with silicone gasket and compression door lock
- ▶ Opening size adjustable ventilation damper
- ▶ Caster for easy transport

Ordering Information

	JSIO-400T	JSIO-960T	JSIO-1400T
Chamber Volume (Capacity)	410 L	960 L	1386 L
Dimensions Inner	650 x 600 x 1050	1000 x 800 x 1200	1100 x 1050 x 1200
W x D x H mm Outer	935 x 835 x 1810	1285 x 1035 x 1960	1385 x 1285 x 1960
Clearance	935 x 845 x 1820	1285 x 1045 x 1970	1385 x 1245 x 1970
Temperature Range	ambient +5 °C to 250 °C		
Accuracy at 120°C	± 0.3 °C	± 0.5 °C	± 0.5 °C
Uniformity at 120°C	± 5.0 °C	± 6.0 °C	± 8.0 °C
Heat up time to 120°C	20 min.	25 min.	25 min.
No. of Shelves / Maximum No.	3 / 8	3 / 8	3 / 8
No. of Ventilation damper	1	1	1
Electric Requirement	220 VAC 50/60Hz 1P or 380 VAC 50/60Hz 3P 4W		
Heater Capacity	4.5 kW	7.5 kW	10.5 kW
Power Rating	-	-	-
Power Plug	30 Amp	30 Amp	30 Amp

- ▶ 산업용스케일의 대용량 오븐으로 대량의 시료를 처리
- ▶ 부식에 강한 Stainless Steel 304 챔버
- ▶ 높이 조절 가능한 3단 선반
- ▶ 밀착력이 뛰어난 압착식 도어 잠금 장치
- ▶ 수분 및 증기를 배출할 수 있는 배기구 장착

Safety

- ▶ DUAL OVER TEMP. CUT-OFF
- ▶ MAX TEMP CUT-OFF
- ▶ SENSOR DISCONNECTION ALARM
- ▶ OVER CURRENT CUT-OFF : Electrical Leakage Breaker

Options

Art No.	Descriptions
OEC-001	JSC-1D Digital PID Controller /w RS-232C Interface, PC Software
OEC-003	JSC-3D Programmable Controller 1 Pattern 11 Segments /w RS-232C Interface, PC Software
OEC-005	JSC-5D Programmable Controller 5 Patterns 80 Segments

Accessories

Art No.	Descriptions
	Perforated Shelf, Stainless Steel 304
PHS-A12	for JSIO-400T W640 x D560 mm
PHS-A16	for JSIO-960T W990 x D760 mm
PHS-A18	for JSIO-1400T W1090 x D1010 mm