

# JSON-Series

## NATURAL CONVECTION OVEN

amb. +10 °C ~ 250 °C



JSON-Natural Convection Oven  
with OPTIONAL Cabinet Stand

JSON-Series Natural (Gravity) Convection Ovens heat up chamber by mild gravity air convection with heating element located on the chamber bottom. Ideal for drying fine powders, general and conventional laboratory drying applications.

### # Features

#### Performance

Temperature Range : amb. +10 °C to 250 °C

Temperature Accuracy : within +/- 0.5 °C

Temperature Uniformity : within +/- 4.0 °C

Natural (Gravity) air convection for drying applications of fine powder and/or glassware.

Asymmetrically designed heating system enhances mild and uniform hot air circulation for better temperature uniformity. 50mm thick high thermal efficiency mineral wool with woven aluminum barrier sheet saves energy and less dust.

#### Construction

Durable epoxy powder coated metallic casing.

Ventilation damper.

Corrosion resistant Stainless Steel 304 chamber.

Double layered glass window for easy observation of samples.

#### Convenience

Removable and adjustable shelf by 25mm spacing.

Easy-to-open and air-tight one touch door latch.

Opening size adjustable ventilation damper.

Door switch cut-off heater to protect user from exposure to hot air.

#### Safety

DOOR SENSOR WITH DOOR OPEN AUDIO VISUAL ALARM

DUAL OVER TEMPERATURE CUT-OFF BY CONTROLLER

AND INDEPENDENT THERMOSTAT

HIGH TEMPERATURE CUT-OFF AND AUDIO VISUAL ALARM

LOW TEMPERATURE CUT-OFF AND AUDIO VISUAL ALARM

PT SENSOR SHORT OR DISCONNECTION AUDIO VISUAL ALARM

OVER CURRENT CUT-OFF : Electrical Leakage Breaker

# 3-ZONE PID Algorithm

## 3-Point Calibration

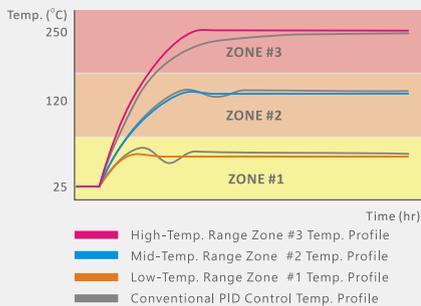
### 1-Point Offset

#### Temperature Control

- Digital Microprocessor PID Controller
- High-fidelity clear back light LCD displays complete setting and operating condition at a glance
- UV Coated Polycarbonate Touch Panel
- Easy-to-use Encoder Type Jog Dial for quick and convenient setting of temperature and timer
- 0.1 °C Control resolution
- Auto-Start and Auto-Stop Timer up to 99 hour 59 min.
- Temperature and Timer memory function in frequent use
- 3-Zone PID Algorithm
- 3-Point Calibration
- 1-Point Offset Calibration
- Power Outage and Restore Function
- Class A Pt-100 Ohm Sensor
- RS-232C PC Communication Interface [OPTION]

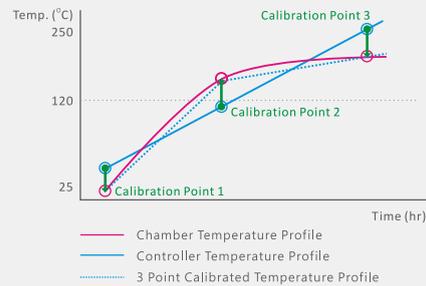


#### 3-ZONE PID Algorithm



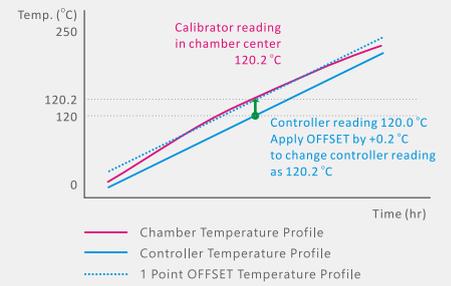
Complete temperature range is divided into three zones (LOW/MIDDLE/HIGH) and each ZONE has its individual PID algorithm to provide precise and superior temperature control characteristic of whole temperature range.

#### 3-Point Calibration



An excellent calibration tool to calibrate chamber at THREE DIFFERENT TEMPERATURE POINTS to adjust multiple temperature bias to increase temperature accuracy of WHOLE TEMPERATURE RANGE.

#### 1-Point Offset



Provides simple and easy calibration tool to calibrate chamber at ONE SPECIFIC TEMPERATURE POINT of frequent use.



## # Specifications

Model	JSON-050	JSON-100	JSON-150	JSON-250
<b>Dimension Data</b>				
Chamber Volume	50 Liters	100 Liters	150 Liters	250 Liters
Inner Dims. (WxDxH) mm	400 x 300 x 400	500 x 400 x 500	560 x 450 x 600	600 x 600 x 700
Outer Dims. (WxDxH) mm	560 x 525 x 710	660 x 625 x 810	720 x 675 x 910	760 x 825 x 1010
Window Dims. (WxH) mm	150 x 290	150 x 360	150 x 410	150 x 460
No. of Shelf Positions	12 ea	16 ea	20 ea	24 ea
No. of Shelf Included	2 ea	2 ea	2 ea	3 ea
No. of Ventilation Damper	2 ea	2 ea	2 ea	2 ea
<b>Performance Data</b>				
Heating System	Forced Convection			
Temperature Range	ambient +10 °C to 250 °C, 0.1 °C resolution			
Temperature Accuracy at 120 °C	+/- 0.3 °C	+/- 0.3 °C	+/- 0.5 °C	+/- 0.5 °C
Temperature Uniformity at 120 °C	+/- 2.0 °C	+/- 3.0 °C	+/- 3.0 °C	+/- 4.0 °C
Heat-up Time to 120 °C	10 min.	10 min.	15 min.	20 min.
<b>Controller</b>				
Type	Digital Microprocessor PID Temp. Controller with Capacitive Touch Button and Jog Dial			
Display	Full Size Digital Back Light Graphic LCD Display			
Control Logic	3 Zone PID Control			
Calibration	1 Point Temperature Offset 3 Point Temperature Calibration			
Auto-Start	Max. 99 hr 59 min by 1 min resolution			
Auto-Stop	Max. 99 hr 59 min by 1 min resolution			
Sensor	Class A Pt-100 Ohm Sensor			
Power Restoration	Power and Timer Restoration Function in case of power outage			
Communication Interface	RS-232C Communication Interface [OPTION]			
<b>Material Data</b>				
Body	Epoxy Powder Coated Steel			
Chamber	Stainless Steel 304 (AISI304)			
Insulation	50 mm Woven Mineral Wool with Aluminum Barrier			
<b>Safety Data</b>				
Safety Device	Door Open / Over Temperature / Over Current Protection Audio Visual Alarm			
<b>Electrical Data</b>				
Power Requirement	220 +/- 10% VAC   50/60 Hz   1 Phase			
Power Consumption	1.3 kW 5.5 amp	1.6 kW 6.8 amp	1.8 kW 7.7 amp	2.6 kW 11.3 amp
Plug Configuration	CEE 7/7 Schuko or BS 1363			
<b>Usable Condition</b>				
Temp. & Humidity	5 °C - 40 °C, 80% RH Max.			

# JSR

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## # Ordering Information

### Art. Number

### Descriptions

JSON-050	Natural Convection Oven 50 Liter	22 VAC 1 ph 50/60Hz
JSON-100	Natural Convection Oven 100 Liter	220 VAC 1 ph 50/60Hz
JSON-150	Natural Convection Oven 150 Liter	220 VAC 1 ph 50/60Hz
JSON-250	Natural Convection Oven 250 Liter	220 VAC 1 ph 50/60Hz

### Accessories

### Shelves

PHS-A03	Perforated Shelf, Stainless Steel 304 for JSON-050	W370 x D280 mm
PHS-A05	Perforated Shelf, Stainless Steel 304 for JSON-100	W470 x D380 mm
PHS-A07	Perforated Shelf, Stainless Steel 304 for JSON-150	W530 x D430 mm
PHS-A09	Perforated Shelf, Stainless Steel 304 for JSON-250	W570 x D580 mm
PHS-B03	Wire Shelf, Stainless Steel 304 for JSON-050	W370 x D280 mm
PHS-B05	Wire Shelf, Stainless Steel 304 for JSON-100	W470 x D380 mm
PHS-B07	Wire Shelf, Stainless Steel 304 for JSON-150	W530 x D430 mm
PHS-B09	Wire Shelf, Stainless Steel 304 for JSON-250	W570 x D580 mm
PHS-A99	Shelf Support, Set of 4 ea	

### Accessories

### Cabinet Stands

PHC-050	Cabinet Stand with Caster for JSON-050
PHC-100	Cabinet Stand with Caster for JSON-100
PHC-150	Cabinet Stand with Caster for JSON-150
PHC-250	Cabinet Stand with Caster for JSON-250



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DISTRIBUTOR

# JSR

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