Model JSON-050 : Natural Convection Oven

Cabinet stand with caster [option]

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.

MAIN FEATURES

PERFORMANCE

-Control Temperature Range from ambient+10 °C to 250 °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

-Corrosion resistant Stainless Steel 304 chamber

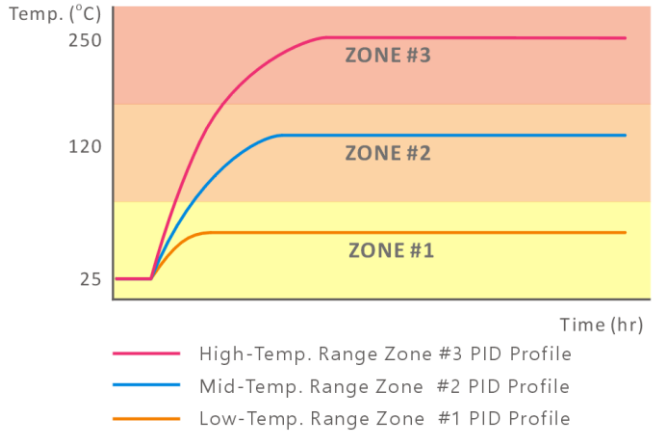
-Double layered glass window for easy observation of samples

-Ventilation damper

CONTROLLER

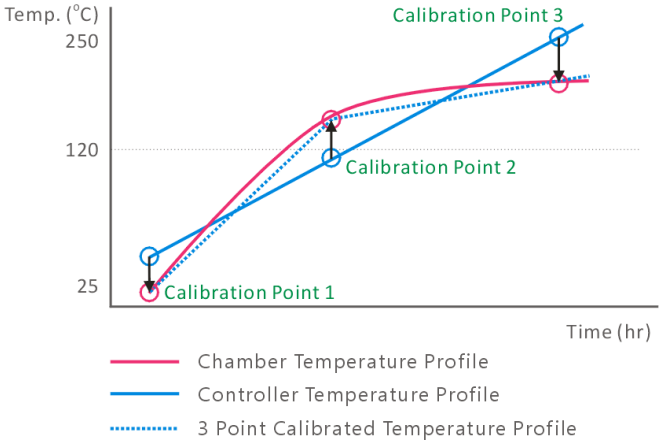
-3 ZONE PID ALGORITHM

Usable temperature range divided into three zones (LOW/MIDDLE/HIGH) and each ZONE has its individual PID parameters optimized to the range, and it provides precise and superior temperature control characteristic to whole temperature range.



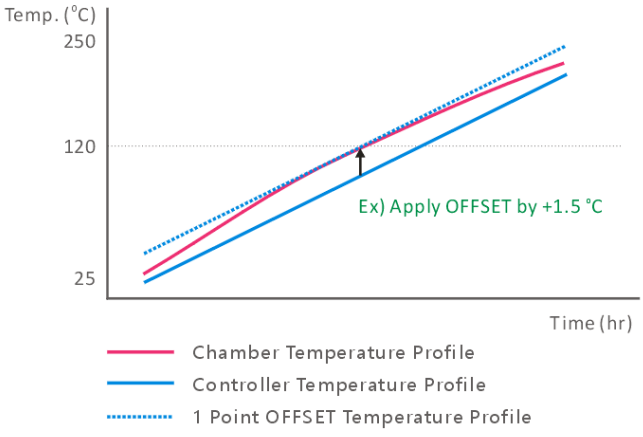
-3 POINT CALIBRATION FUNCTION

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



- 1-POINT OFFSET FUNCTION

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



Technical specifications are subject to change without prior notice

CONTROLLER

-DIGITAL MICROPROCESSOR PID TEMPERATURE CONTROLLER

Integrated Digital Microprocessor Control System

-GRAPHIC LCD DISPLAY

Back Light Graphic LCD Display provides user-friendly operating information

-UV COATED POLYCARBONATE TOUCH PANEL

Equipped with Capacitive LED Lighting Touch Button provides sensitive touching operation and durability

-ENCODER TYPE JOG DIAL

Push to Start and Stop, Rotary turn to change values provides easy and simple user interface

-0.1 °C CONTROL RESOLUTION

-Auto-Stop Timer 1 min ~ 99 hour 59 min and alarm

-Auto-Start Timer 1 min ~ 99 hour 59 min and alarm

-Temperature and Timer Memory Function in frequent use

-3 GROUP ZONE PID ALGORITHM

-3-POINT CALIBRATION

-1-POINT OFFSET CALIBRATION

-Operating temperature and remaining timer resume in case power outage and restoration

-CLASS A PT-100 Ω Sensor

-RS-232C PC COMMUNICATION INTERFACE [OPTION]

CONVENIENCE

-Double layered tempered safety glass window for easy observation of samples

-Removable and height 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

-PT SENSOR SHORT OR DISCONNECTION AUDIO VISUAL ALARM

-DUAL OVER TEMPERATURE CUT-OFF BY CONTROLLER AND INDEPENDENT THERMOSTAT

Controller cut-off heater and AUDIO VISUAL ALARMS

ALARM HIGH : +10 °C above set temp.

ALARM LOW : -10 °C below set temp.

-Independent analog thermostat cut-off heater above set temperature

-DOOR OPEN AUDIO VISUAL ALARM

-OVER CURRENT CUT-OFF : Electric Circuit Breaker

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SPECIFICATIONS

Art. No.	JSON-050
Dimension Data	
Chamber Volume	48 Liters
Inner Dims. (W x D x H mm)	400 x 300 x 400
Outer Dims. (W x D x H mm)	560 x 525 x 710
Window Dims. (W x H mm)	150 x 290
No. of Shelf Positions	12 ea
No. of Shelf included	2 ea
No. of Ventilation Damper	1 ea
Performance Data	
Heating System	Natural (Gravity) Air Convection
Temp. Range	Amb. +10 °C ~ +250 °C
Accuracy at 120 °C	±0.3 °C
Uniformity at 120 °C	±2.0 °C
Heat up time to 120 °C	10 min.
Controller	
Processor	Digital Microprocessor PID Temperature Controller
Display	Back Light Graphic LCD Display
Panel	UV Coated Polycarbonate Solid Touch Panel
Button	Capacitive touch LED Lighting Touch Button
Interface	Push and Rotary encoder type Jog Dial
Control Logic	3 Zone PID Control
Calibration	1 Point Temperature OFFSET
	3 Point Temperature Calibration
Resolution	0.1 °C
Auto-Stop Timer	1 min. ~ 99 hr 59 min
Auto-Start Time	1 min. ~ 99 hr 59 min
Sensor	CLASS A PT-100 Ω Sensor
Power Restoration	Power and Timer Restoration Function in case of power outage
PC Communication Interface	RS-232C PC COMMUNICATION INTERFACE [OPTION]

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Safety Data	
Safety Device	Sensor short or disconnection AUDIO VISUAL ALARM Controller cut-off heater and AUDIO VISUAL ALARM in case HI-ALARM : +10 °C above set temp. LO-ALARM : -10 °C below set temp. Independent analog thermostat cut-off heater above set temperature Door sensor Cut-Off heater AUDIO VISUAL ALARM Over Current Cut-Off

Material Data	
Body	Epoxy Powder Coated Steel
Chamber	Stainless Steel 304 (AISI304)
Insulation	50 mm Woven Mineral Wool

Electrical Data	
Rated voltage	220 ± 10% VAC
Power frequency	50 / 60Hz
Heater Output	1.2 kW
Nominal power	1.3 kW 5.5 amp
Phase	1 Phase
Plug configuration	CEE 7/7 Schuko or BS 1363

Usable Condition	
Temp. & Humidity	5°C - 40 °C, < 80% RH

Packaging Data	
Type of packaging	Carton on a wooden palette
Shipping Dims. (W x D x H mm)	560 x 600 x 860
Net Weight	46.0 kg
Shipping Weight	50.0 kg

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ORDERING INFORMATION

Art. No.	Descriptions	Voltage
JSON-050	**Natural Convection Oven, 48 L**	220 VAC 1~ ph 50/60Hz
	including standard accessories	
	2 ea x Wire Shelf, Stainless Steel 304	
	8 ea x Shelf Support	
	1 ea x Instruction Manual	
	1 ea x Warranty Certificate	

OPTIONAL ACCESSORIES

Art. No.	for	Descriptions
Shelf		
PHS-A03	JSON-050	Perforated Shelf, Stainless Steel 304, W370 x D280 mm
PHS-B03	JSON-050	Wire Shelf, Stainless Steel 304, W370 x D280 mm
Shelf Support		
PHS-A99		Shelf Support, Set of 4 ea
Cabinet Stand with Caster		
PHC-050	JSON-050	Cabinet Stand with Caster

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