Lab Companion

Advanced temperature control and stability

Lab Companion Vacuum Ovens
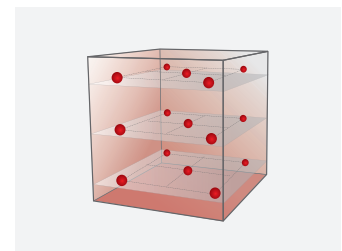
JEIO TECH

Lab Companion Vacuum Oven (Model: OV4)

OV4-30

OV4-65

Why choose Lab Companion vacuum oven?

Precise temperature control

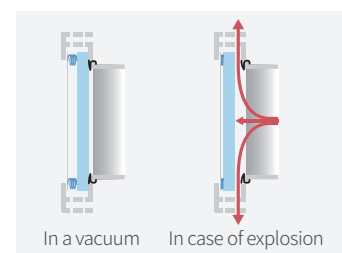· Temperature variation up to ±1.5°C at 100°C according to DIN 12880:2007 standard.
· Actual experiment area is expanded by realizing excellent temperature uniformity.
· Conforms to the conditions for loss on drying defined in the Korean Pharmacopoeia.

Variation less than ± 1.5 °C at 100°C

Structure design for user safety

· Stable vacuum formation and maintenance by applying a buffer system on the front part of the door. In case of an internal explosion, the internal pressure is discharged through the upper and lower exhaust ports.
· Apply Safety Cover to protect the user in case of broken tempered glass.
· The equipment surface is safe even at the highest temperature running to prevent burns when viewing the inspection window.

In a vacuum   In case of explosion

Door Buffer System

User-friendly controller & space efficiency

· 5-inch color touch display for intuitive operation.
· Reduced foot space is beneficial for laboratory space utilization.
· By selecting the ramp rate (°C/min), you can limit the speed of temperature rise when using.
· Convenient of data transfer by USB.
· Checking the progress intuitively through the graph.
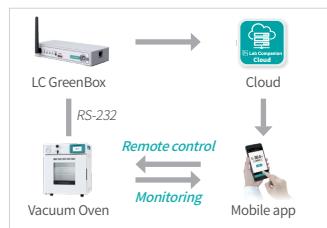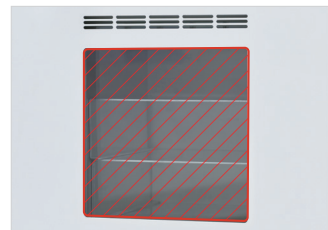

5-inch color touch controller

Main feature

- Wide temperature range that can be controlled up to 250°C.
- 3-point temperature calibration improves temperature accuracy in the entire area.
- Monitor and control via mobile app anytime, anywhere through LC Connected. (mobile monitoring system) (Option)
- Polycarbonate safety cover provided to protect a user in case of tempered glass breakage.
- Useful for feedback of the experiment result by recording the recent 36 events such as door open and error.
- Silicone gasket (basic) or viton gasket (option) for high sealing rate.
  (Viton gasket with excellent chemical resistance)

System Settings > Calibration		
Actual Temperature		17.0 °C
	Uncalibrated	Calibrated
Temp 1	60.2 °C	60.0 °C
Temp 2	100.7 °C	100.0 °C
Temp 3	151.0 °C	150.0 °C

3-point calibration for accurate data

LC GreenBox → Cloud
RS-232
Remote control
Monitoring
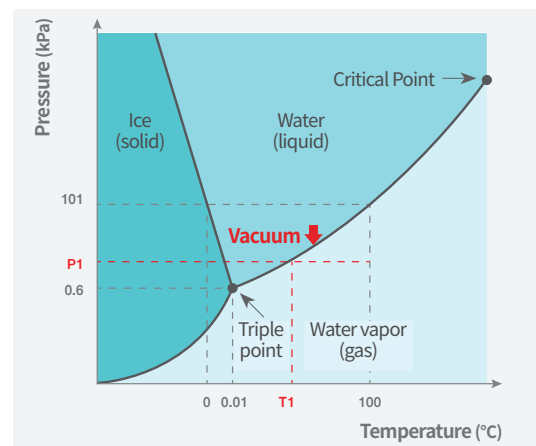Vacuum Oven — Mobile app

Mobile monitoring system

Polycarbonate safety cover

When dry in a vacuum?

Vacuum drying is used to dry samples which can be deformed when drying at high temperatures, maintaining original shape, or to dry faster than standard ovens.

When the pressure is reduced with a vacuum pump, the vaporization proceeds at a temperature lower than the boiling point of water, allowing drying at a lower temperature than normal drying conditions.

For example, if the pressure is reduced to the pressure of 'P1' in the graph on the right, the phase changes to water vapor at the temperature of 'T1', which is lower than the boiling point.

Vapor pressure curve

(Graph: Pressure (kPa) vs Temperature (°C); Ice (solid), Water (liquid), Water vapor (gas), Critical Point, Triple point, Vacuum, values 101, 0.6, P1, 0 0.01, T1, 100)
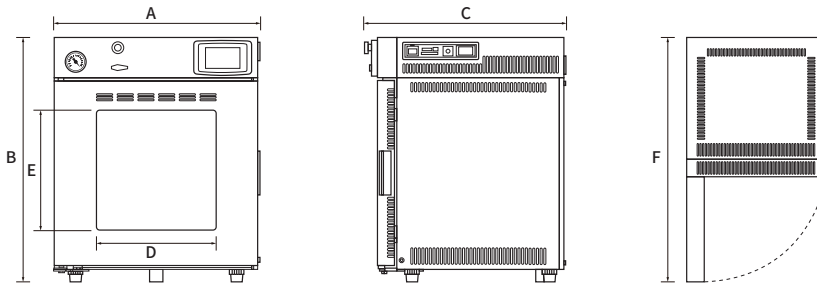
Applications

- Moisture removal from food such as dairy products.
- Moisture removal from sensitive products such as electronics.
- Drying process for the prevention of oxidation.
- Removing residual moisture to relieve capillary action.
- Defined heating protocols with temperature ramping under vacuum.

Dimensions (Unit: mm / inch)

Model	OV4-30	OV4-65
A	537 / 21.1	636 / 25.0
B	655 / 25.8	755 / 29.7
C	522 / 20.6	622 / 24.5
D	270 / 10.6	359 / 14.1
E	270 / 10.6	370 / 14.6
F	1009 / 39.7	1208 / 47.6

Specifications

Model		OV4-30	OV4-65
Chamber volume (L / cu ft)		28 / 1	65 / 2.3
Temperature	Range (°C / °F)	Amb. +15 to 250 / Amb. +27 to 482	Amb. +15 to 250 / Amb. +27 to 482
	Variation at 100°C (±°C / °F)	1.5 / 2.7	1.5 / 2.7
	Fluctuation at 100°C (±°C / °F)	0.2 / 0.36	0.2 / 0.36
	Heating up time to 100°C (min.)	70	90
Dimensions	Interior (W x D x H, mm / inch)	302 x 305 x 302 / 11.9 x 12 x 11.9	402 x 405 x 402 / 15.8 x 15.9 x 15.8
	Exterior (W x D x H, mm / inch)	537 x 522 x 655 / 21.1 x 20.6 x 25.8	636 x 622 x 755 / 25.0 x 24.5 x 29.7
	Net weight (Kg / lbs)	69 / 152.1	110 / 242.5
Shelves	Quantity of shelves (standard/max.*)	2 / 3	3 / 4
	Max. Load per shelf (kg / lbs)	20 / 44.1	20 / 44.1
Electrical requirements (230V, 50 / 60Hz, A)		5.7	6.7
Cat. No.		AAH13315K	AAH13325K
Electrical requirements (120V, 60Hz, A)		10.2	11.7
Cat. No.		AAH13316U	AAH13326U

* You can add an extra shelf that can be placed at the bottom to experiment with more samples same time, and the value of Variation and Fluctuation may increase slightly.

Accessories

Description	Silicone Gasket		Viton Gasket		LC GreenBox	
	Basic bundle accessory. Silicon gasket for sealing the door.		Viton gasket for sealing the door. High chemical resistance.		Mobile connection adapter. Available real-time monitoring and control on Lab Companion mobile app.	
Model	OV4-30	OV4-65	OV4-30	OV4-65	OV4-30	OV4-65
Cat. No.	00FAA0005146	00FAA0005147	00FAA0005187	00FAA0005188	AAHQ1011K	

Description	Shelf						Shelf Spacer	
	Extra Shelf at the lowest bottom (Optional)[1]		Lower shelf at the bottom (Basic)[2]		Upper shelf at the middle and top (Basic)[2]		Reducing the spacing between the shelf and the chamber wall for smooth thermal conductivity. (Basic)[2]	
Model	OV4-30	OV4-65	OV4-30	OV4-65	OV4-30	OV4-65	OV4-30	OV4-65
Dimension (W x D x H, mm)	292 x 285 x 30	391 x 385 x 30	292 x 285 x 100	391 x 385 x 100	299 x 285 x 100	398 x 385 x 100	285 x 2 x 93	385 x 2 x 86
Cat. No.	AAA13511	AAA13513	AAA13517	AAA13518	AAA13512	AAA13514	AAA13515	AAA13516

1) In the case of using the extra shelf, it makes put more samples at one time. However, the temperature variation and fluctuation might be increased slightly.
2) The Lower, Upper shelf, and Shelf Spacer are included as bundled accessories, and you can purchase when need to replace them.

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