



VACUUM OVENS

Cubic and Cylindrical Chamber Shapes - Max. Temperature 200 °C

Model family: OVN-VAC-200

Description.

THERMANSYS OVN-VAC-200 Vacuum Ovens family was designed to provide fast and uniform temperature control for applications requiring heating under Vacuum or inert atmosphere. Available in both **cubic chamber** shape for larger useful surface and **cylindrical chamber** shape for optimum temperature uniformity.

The inner chamber made of corrosion-free stainless steel ASTM 304, resistant to most acid, is designed to maintain Vacuum conditions up to **10⁻² torr (mmHg)**. Heated by stainless steel heating jackets all around the chamber supports homogenous temperature distribution through interior of the chamber.

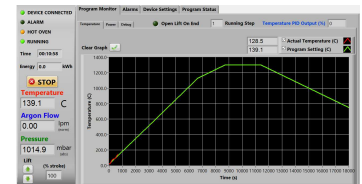
With a door having a large double wall transparent window provides full visual inspection of the treated samples. The internal window is made of safety glass that is spring mounted to act as a safety valve in case of overpressure event. The outer window is made of polycarbonate transparent material as a double safety measure. The door vacuum seal is provided by an endless high temperature Silicone gasket.

Suitable for many applications including Electronics/Semiconductors, Pharmaceuticals/Cosmetics, Plastics, Agricultural and other. Not suitable for flammable solvents drying.



Equipped with Aluminum sliding shelves enhance the fast and uniform heat transfer to the samples. Each shelf, as also the entire shelves mounting block, is fully removable for easy cleaning and disinfection.

Ergonomic design with no protruding edges, bolts or other features combines stainless steel parts with electrostatically painted finish parts for an improved esthetic result.



Equipped with a sophisticated, touch screen, temperature and pressure controller, OVN-VAC-200 Vacuum Ovens are fully electronically controlled through PYROLOGISM 2.0 software.

Temperature, Pressure and Vacuum Pump are controlled and monitored digitally. Connecting an inert gas supply the software can provide upstream pressure control.

Key features.

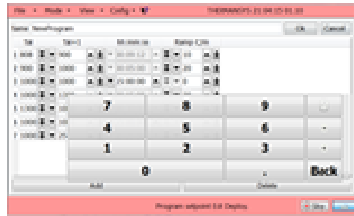
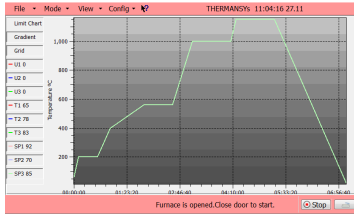
- Control strategy by Thermansys PCC (Power Consistent Control) insures silent operation and compliance with EMC standards.
- Temperature and Pressure PID control, accurate and uniform temperature profiles.
- Temperature and Pressure data digital monitoring and storage.
- Power and true RMS Current measuring circuits.
- Touch screen computer running the user friendly, PYROLOGISM 2.0 software.
- Heater failure, open control thermocouple detection alarms and interlocks.
- Stand alone over-temperature limiter (Watchdog) with manual reset in accordance with EN 60519-2 to protect the heater and load. Alarm event output (dry contact 3A/250V AC/DC).

Contact details:

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PYROLOGISM control and monitoring software.



- Digital Temperature and Pressure Indication
- Quick setting of a single ramp rate to a set point -run on timer function.
- Temperature Set-point programming with up to 15 ramp and constant temperature programming steps – graphical inspection of programming.
- Storage and reload of unlimited number of distinct programs.
- Graphical inspection of programming.
- Real time chart illustrating control temperature and running set point with dynamic zoom.
- Events and alerts messaging.
- Real time true-RMS Current (A), Voltage (V) and Power (W) measurements.
- Real time actual Power (W) and totalized Energy (kWh) chart.
- Saves all data on local memory.
- Tools for manual PID tuning and auto-tuning.
- Virtual keyboard, alarm and event message page.
- Watchdog over temperature limiter monitor/configuration.

Specifications and Ordering Information.

- Temperature control range, 5 °C above ambient to 200 °C. Monitoring resolution 0.1 °C.
- Operating Power: 208 /240VAC – 50/60Hz. Rated maximum Power 2300 W (For Heater and Pump)
- Two in depended Pt100 type embedded temperature sensors for controller and over-temperature limiter feedback.
- Temperature control setting resolution 0.1 °C. Typical control fluctuation ± 0.1 °C
- Permitted end vacuum 10^{-2} torr (mmHg). Permitted maximum pressure 780 torr (mmHg) absolute.
- Vacuum Pump connection port, Klamp Flange KF DN25, Inert gas inlet connection, ¼' Compression fitting
- Optional instrumentation port, Klamp Flange KF DN25
- Main door seal: Red Silicone gasket, continuous operation temperature 250 °C.
- Pressure transducer range 0.3-776 torr (mmHg), calibration accuracy $\pm 1\%$ full scale, response time 2msec
- **Optional** Pump supplied with the Oven: Oil Rotary Vane, double stage, $2-5 \times 10^{-2}$ torr end vacuum, free air displacement 118lpm (170 lpm for 67 heated volume model).

Compliant with **Low Voltage Directive 2006/95/EC** (harmonized referenced standard EN 61010-1: 2001 and EN 61010-2-010:2003) and **EMC Directive 2004/108/EC** (harmonized referenced standard EN 61326-1:2006).

Produced in **GREECE** following **ISO 9001:2008 quality management system** and **ISO 14001:2004 environmental management system**.

TABLE1. OVN-VAC-200 Cubic Chamber Shape Models

Model Part Number OVN-VAC...	Max. Temp. °C x Heat up time* (min)	Oven Chamber internal dim. WxHxD mm	Heated Volume (liters)	Oven external dim. WxH**xD mm	Nominal Heater Max. Power (W)	Weight (kgr)	Rack No
_V29-200	200 x 80	300x320x300	29	520x700x480	1400	55	2
_V67-200	200 x 80	400x420x400	67	620x800x580	1800	90	3

TABLE2. OVN-VAC-200 Cylindrical Chamber Shape Models

Model Part Number OVN-VAC...	Max. Temp. °C x Heat up time* min	Oven Chamber internal dim. Diameter x Depth mm	Heated Volume (liters)	Oven external dim. WxH**xD mm	Nominal Heater Max. Power (W)	Weight (kgr)	Rack No
_V22C-200	200 x 60	260x400	22	490x650x580	1400	45	2
_V34C-200	200 x 60	330x400	34	560x720x580	1600	60	2

* Oven working with no load., ** Not Including rubber feet (add about 20mm)

Ordering Example:

OVN_VAC_V67-200: This Part Number includes one OVN-VAC-200 cubic chamber shape oven having 400x420x400mm internal chamber dimensions including all standard features.

NOTE: The above described part number are valid for the OVN-VAC-200 models without a pump included.

THERMANSYS can supply a **Double Stage Rotary Vane Pump and the interconnecting hose** together with the oven. To order the Vacuum Oven equipped with the optional pump add at the end of the Part number the suffix “_Pump” e.g. **OVN_VAC_V67-200_Pump**

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