

Zenith 100

Rapid Thermal Annealing Furnace
4-inch - up 2000°C



APPLICATIONS

- Silicon Carbide implantation annealing
- Graphene by high temperature SiC sublimation
- CVD of graphene

SPECIFICATIONS

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The Zenith 100 furnace can process a substrate with a maximum diameter of 4-inch diameter at temperature up to 2000°C.

The system has a stainless steel water-cooled chamber. The cold wall chamber technology provides significant advantages: low memory effect, higher cooling rates.

The high temperature tungsten heaters provide fast heating rates and enhanced temperature uniformity.

Pyrometer and thermocouple temperature measurement are standard features. Thermocouple is used for calibration and pyrometer for process temperature control with the fast digital PID temperature controller.

The design of the process chamber provides easy loading and unloading of the substrates and easy installation of the thermocouple for calibration.

An industrial PLC guarantees a reliable control of the furnace while a PC provides an easy programming and monitoring machine.

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General features

Maximum substrate size	100 mm diameter
Process chamber	Water-cooled stainless steel chamber
Heating	Tungsten heaters
Temperature control	Pyrometer temperature control Fast digital PID temperature controller
Vacuum and gas	Purge gas line with needle valve Up to 8 process gas lines with digital mass flow controllers Vacuum valve Vacuum gauge Optional vacuum dry pump Optional turbo pump Optional pressure control with throttle valve
Control	Full PC control, up to 100 steps per recipe Ethernet connection to PC for fast control and data logging Wafer traceability and process historicals
Facilities	Electricity: 3x400V+N+Gr, 50/60 Hz Power: 38 kW – 81A Water: 2 to 4 bars, pressure drop 1 bar, 12 l/mn Compressed air: 6 bars (valve actuation) Process gas fittings: VCR ¼
Dimensions and weight	Width: 800 mm, Depth: 1750 mm, Height: 2000 mm Weight: 500 kg

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