

Advanced Vertical Thermal Processor

Building on the proven VTP 1500 platform with a state of the art control system SEMITHERM's VTP 1500X delivers a production proven solution for oxidation, diffusion and LPCVD processes, providing exceptional process performance with improved productivity and lower cost of ownership.

Features

- Configurations to match an array of applications for 200mm
- Insitu multiple film stack capable for quality interfaces
- Continuous batch processing capability using three towers/single tube
- Design eliminates boat swapping robots and elevator assemblies
- Double lift system allowing process and furnace assembly to be moved independently
- Simple intuitive control via touchscreen
- Variable load size capable
- Cassette and SMIF, standard
- Class 1 ULPA mini-environment within tool
- SECS/GEMS-II compliant



Small Footprint

Advanced temperature control

Simple, Intuitive Control

Applications

- Wet and Dry Oxidation
- Anneal
- Ultra thin Gate Dielectric
- LPCVD
- Ultra low temp LPCVD
- Ultra low temp Anneal for BEOL

SEMITOOL®
Technology That Works

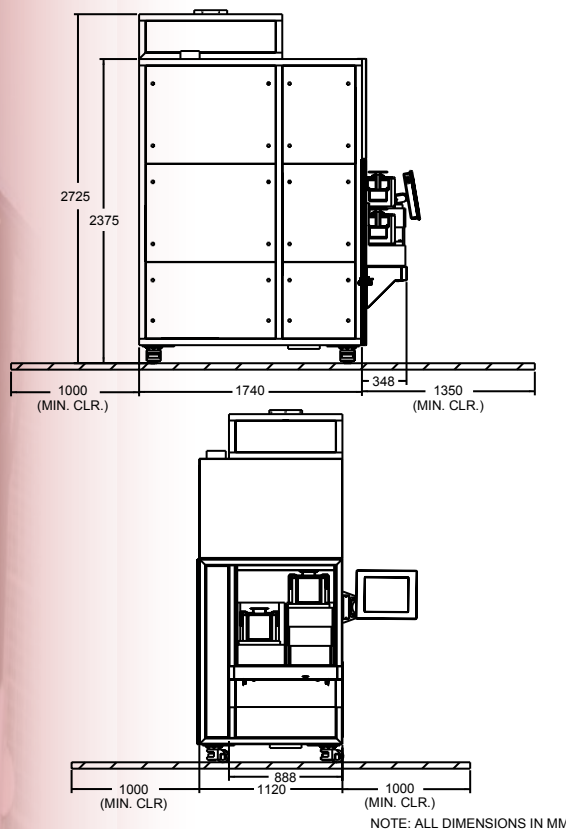
VTP 1500X

SEMITHERM's unique ability to accurately control temperature, pressure and gas distribution result in outstanding uniformity

A proprietary "double lift" system allows the process tube and furnace assembly to be controlled independently - preserving the wafer load in a totally inert environment before and after processing. This produces the highest quality film interfaces.

Wafers are loaded top down inside an ultraclean wafer staging enclosure. After the transfer, the process tube is then sealed, evacuated and the oxygen content reduced to less than 1 ppm. (<5 ppm with N2 purge).

The heated element can be lowered quickly - providing fast thermal ramp capability. Low mass, fine wire furnace elements and multiple zone ratio mix temperature controls, speed heating and cooling while minimizing temperature gradients and overshoot.



SEMITHERM's VTP 1500X costs less to own than any other competing technology.

Maximum process flexibility. The insitu processing capability handles multiple films - better, faster, more cost-effectively than dedicated tools.

Smaller footprint. With its smaller footprint the VTP 1500X will provide more throughput per m2

Higher throughput. The VTP 1500X's insitu capabilities can cut batch processing cycle time by as much as 30-40 percent.

Lower defect density. The Class 1 ULPA-filtered mini-environment enables the cleanest possible performance.

Unmatched reliability and simple maintenance. Special care has been taken to use the experience gained with the VTP 1500 product to further boost reliability and simplify maintenance tasks.

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