THERMCO SYSTEMS

THERMCO 2000 SERIES R&D AND MINI PRODUCTION RANGE

OVERVIEW

Thermco's 2000 series models 2400, 2600 and 2800 Diffusion Furnaces are configurable for two to four process chamber systems used for processing Semiconductor, PV , LED, Nano and MEMS substrates up to 150 mm in diameter.

The models reflect the maximum diameter substrates they can process. 2400 up to 100 mm substrates, 2600 up to 150 mm and 2800 up to 200 mm substrates. Small foot print, process flexibility and load size makes these systems ideal for R&D and smaller facilities with mini production needs.

These systems can be interfaced to a wide range of automation solutions, such as elevators and fully automatic cassette to cassette automation packages.

CHARACTERISED PROCESSES:

- Silicon Nitride
- Low Stress Silicon Nitride
- Ramped Temp Polysilicon
- Uniform grain Polysilicon
- TEOS
- LTO (Doped / Undoped)
- BPSG
- High temperature Oxide (HTO)
- High Vacuum H_2 Anneal
- Dry Oxide
- Wet Oxide
- $POCl_3$ or BBr_3
- Forming gas anneal
- High temperature drive in
- Alloy or low temp anneal
- 100% H_2 anneal
- FGA Anneal
- CNT growth
- Graphene growth

* Others available on request

Thermco Systems have thermal process tools designed with your emerging technologies in mind

CONTROL SYSTEM

The furnace is controlled by the industry leading Thermco TMX controller, recognised as one of the most flexible and reliable furnace control systems available with an installed base of thousands of units. The TMX control system and PCMUX combines the tried and trusted recipe and system control formats of earlier generation TMX products with new updated, reliable software on PC based hardware with improved graphic, control and AI functions. The system comprises one MUX computer for recipe generation and status overview and one control computer per tube.

FURNACE PERFORMANCE:

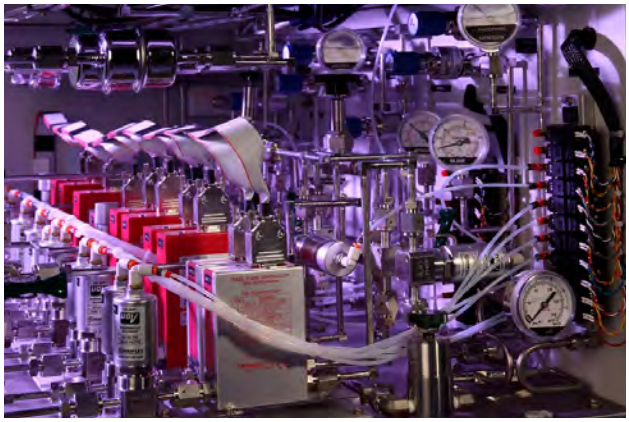
- 3 independently controlled heating zones
- Isolated secondary voltage power
- Zero Cross Over full phase SCR firing
- Balanced power loading
- Thermal safety circuits and SCR cooling fans
- Optional fast ramp (up to 25°C/min), fast cool system (up to 20°C/min)

OPERATION RANGES:

- Operating temperature range : 200°C to 1350°C
- Low to mid temperature operating range : 200°C to 900°C
- High temperature operating range : 750°C to 1350°C
- R-Type TC's for low to mid temperature range
- B-Type TC's for high temperature range
- Spike and profile temperature control thermocouples
- Cold junction compensation
- Flatzone, Up to 300 mm in length

GAS SYSTEM:

- High quality, ultra clean gas systems with POU filtration
- Regulation and filtration of incoming bulk gases
- Maximum 8 Digital or analogue MFC's
- Orbital welding and VCR fittings
- Nupro air operated valves and check-valves
- Systems tested to 10-8 ATM cc/sec
- Leak checked to 10-7 cc/sec



THERMCO SYSTEMS

Thermco Systems is a market leading manufacturer of Semiconductor Production Equipment (SPE).

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