



Tetreon Technologies Product Specification for Thermco Horizontal Furnace Systems

PRODUCT SPECIFICATION

Specification Number:

HTR 2410/2610/2810

February 2005



Model 2410, 2610 and 2810 Series, Bench Mounting Mini Furnace Systems Designed for R&D or special applications.

APPLICATION

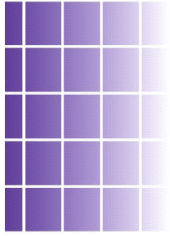
Tetreon can manufacture to your specification a single tube, bench mounted Mini-Furnace system that is ideal for research and development, MEMS, III/V, photovoltaic and other applications. The 2410 system is designed for up to 100 mm wafers, the 2610 is designed for up to 150 mm wafers and the 2810 is designed for up to 200 mm wafers. Systems can be stacked on top of each other and manual or automatic loading options are available.

PHYSICAL DESCRIPTION

The frame structure of the furnace is of unibody style construction, where heavy gauge sheet metal is welded into a modular unit with access panels for maintenance. Integrated gas systems can be provided in a separate bolt-on module with high quality 316L stainless steel used on all gas system components and surfaces.

The Models 2410 and 2610 and 2810 furnaces have the following nominal dimensions excluding the gas cabinet module, which will vary in size depending on the gas system complexity:

	Length	Width	Height
2410 series	1040 mm	750 mm	415 mm
2610 series	1250 mm	1000 mm	500 mm
2810 series	1300 mm	1000 mm	780 mm



TETREON
TECHNOLOGIES
LIMITED

Tetreon Technologies Product Specification for Thermco Horizontal Furnace Systems

2410, 2610 and 2810 Bench Mounted Furnaces

Specifications:

Three zone temperature control is provided by a master and two slaves control system with full self tuning PID parameters. Simple gas systems can be mounted in the self contained gas module which attaches to the furnace module to form an integrated bench mounted system. Manual control of valves and MFCs' can be provided with hardware interlocks for safety as necessary, or a simple step sequencer can be used to automate the gas sequence.

Temperature:

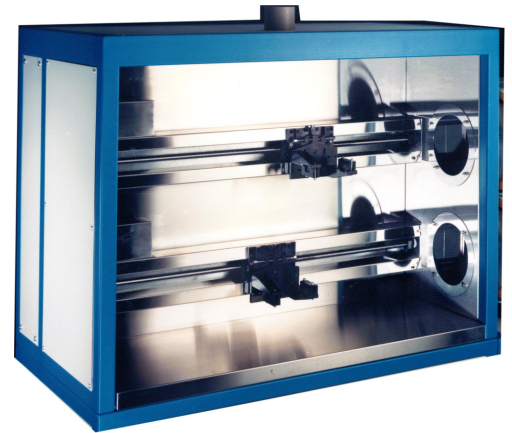
- Three independent temperature zones providing a flat temperature zone of 10"-14"
- Temperature range of 400 Deg C to 1250 Deg C with standard elements
- Set point resolution 0.1 deg C
- Offset temperature set point from Master controller to Slave of ± 50 Deg C or completely independent control per zone
- Temperature Stability ± 0.5 Deg C with self tuning PID control

Gas Control:

- MFC set point controller (0-100% full flow) 1- 4 channels typical
- Manual or sequencer controlled gas valves
- Option for Rotometer gas flow control rather than MFC

Wafer loading:

- Wafer loading can be achieved manually by means of a quartz carrier (elephant loader) with handle and push rod. Alternatively an automatic loader can be added as a cantilevered system, integrated into the furnace frame. Load station options are also available for stacked bench mounted furnaces with laminar flow and automatic loaders. For more details and process capabilities contact Tetreon.



Head Office:
Tetreon Technologies Limited
Highfield, Rock Road
Washington, Pulborough
West Sussex RH20 3BH United Kingdom

T: +44 (0)1903 892088
E: Info@tetreon.com W: www.tetreon.com

Specifications are subject to change without notice