

# SIERRATHERM

PRODUCTION FURNACES INC.

## 2500 SERIES CONTROLLED ATMOSPHERE CONVEYOR FURNACES

The SierraTherm 2500 Series furnace is designed specifically for high volume production applications such as thick film firing of noble metals and copper, and firing silver conductor. The 2500 Series can be used for chip joining, LTCC, brazing, reducing, sealing glass-to-metal, and curing polymer thick films with process profiles from 100°C up to the 1050°C maximum operating temperature. SierraTherm 2500 Series models are available in air, nitrogen, or hydrogen atmosphere configurations.



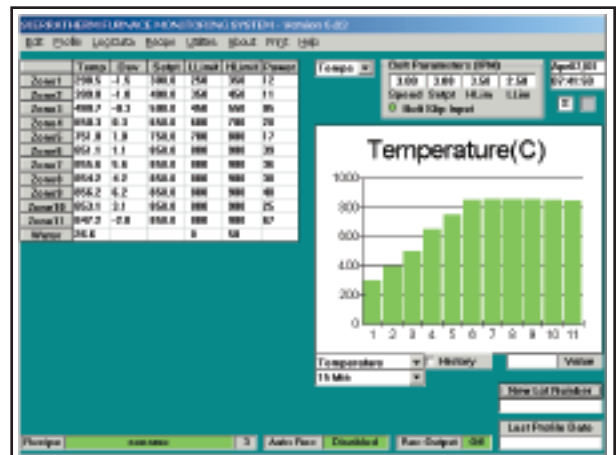
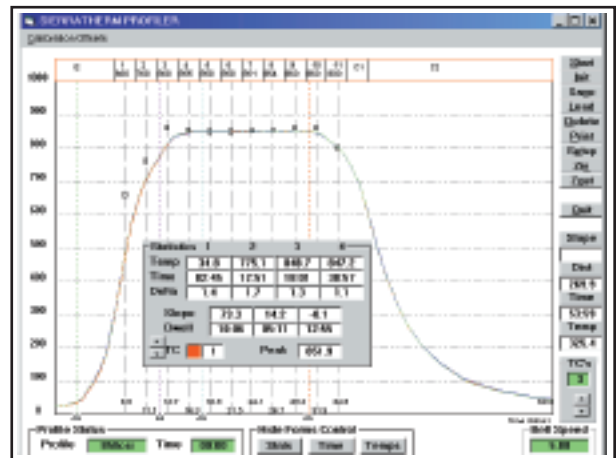
- Energy Saving Efficiency
- Unmatched Atmospheric Control
- Leader in MLCC Copper Firing
- Unmatched Innovation and Performance Benchmark

## ADVANTAGES

Rated to 1050°C, the 2500 Series includes a gas-tight alloy muffle and features an ultra-clean low-mass refractory heating chamber. Air, nitrogen, hydrogen, and combinations of these gases are available and maintained at extreme levels of purity in the muffle-contained environment. SierraTherm muffles are designed for maximum rigidity and durability under extreme operating conditions. Distinctly unlike other furnaces, the SierraTherm 2500 Series is an energy efficient precision thermal processing system which provides unequalled performance by way of:

- Three tiers of graded, power saving insulation reduces energy bills
- Innovative atmosphere distribution and management eliminates thermal shock
- Stable, unsurpassed temperature uniformity control ensures consistent process results
- Atmosphere changes can be accomplished in minutes reducing gas consumption
- Controlled atmosphere capability of 1-3 ppm above source gas purity

Included as standard equipment on the 2500 Series is the powerful and convenient Windows based MicroTherm PC Control Profiling, and Monitoring System, first developed and introduced by SierraTherm.



ARISING FROM EXPERIENCE





# Controlled Atmosphere Conveyor Furnaces

## ORDERING INFORMATION AND SPECIFICATIONS

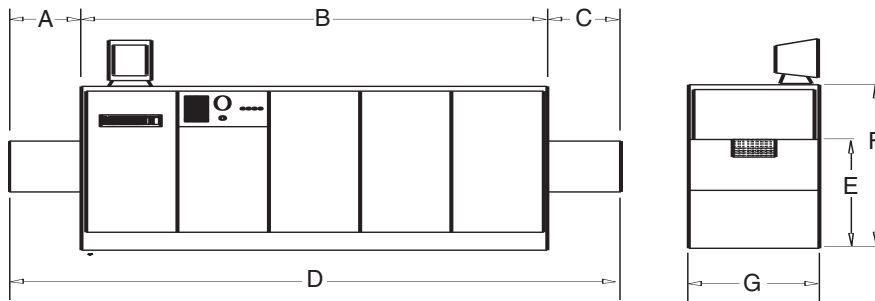
Type	Model	Heating Zones	Heated Length (in/mm)	Graduated Cooling Length (In/mm)	Connected Load/ Operating Load (KW)
<b>6" Belt Systems</b>	2K6-78C52-6AN	6	78/1981	52/1321	22
<b>14" Belt Systems</b>	2K14-117C73-9AN	9	117/2972	73/1854	56
	2K14-143C77-11AN	11	143/3632	77/1956	67
<b>18" Belt Systems</b>	2K18-143C77-11AN	11	143/3632	77/1956	70
<b>25" Belt Systems</b>	2K25-117C73-9AN	9	117/2972	73/1854	110
	2K25-143C77-11AN	11	143/3632	77/1956	104
<b>36" Belt Systems</b>	2K36-143C77-11AN	11	143/3632	77/1956	125
	2K36-182C98-14AN	14	182/4623	98/2489	154

Custom sized systems are available upon request, please consult factory.

### APPLICATIONS

The 2500 Series controlled atmosphere furnaces are ideal for most electronic assembly applications including: Copper thick film firing, Curing polymer thick film, MCM/Chip Joining, Sealing glass-to-metal, Firing silver conductor, LTCC/Green tape, Thick film firing noble metals, Reducing, Brazing, Custom Process Applications

### DIMENSIONS



Type/Model	A	B	C	D	E	F	G
<b>6" Belt Systems</b>							
2K6-78C52-6AN	18/457	154/3912	18/457	190/4826	36/914	50/1422	36/914
<b>14" Belt Systems</b>							
	2K14-117C73-9AN	24/610	214/5436	24/610	262/6655	36/914	50/1422
2K14-143C77-11AN	24/610	244/6198	24/610	292/7417	36/914	50/1422	43/1092
<b>18" Belt Systems</b>							
2K18-143C77-11AN	24/610	244/6198	24/610	292/7417	36/914	50/1422	48/1219
<b>25" Belt Systems</b>							
	2K25-117C73-9AN	24/610	214/5436	24/610	262/6655	36/914	50/1422
2K25-143C77-11AN	24/610	244/6198	24/610	292/7417	36/914	50/1422	55/1397
<b>36" Belt Systems</b>							
	2K36-143C77-11AN	24/610	244/6198	24/610	292/7417	36/914	50/1422
2K36-182C98-14AN	24/610	304/7722	24/610	352/8941	36/914	50/1422	68/1727

### OPTIONS

- Air Purifier Systems
- 440/480 Transformers
- Profiling Thermocouples
- Belt Stop Alarm System
- Individual Element Monitoring System
- Brush Belt Cleaners
- Ultrasonic Belt Cleaning Systems
- Printers and Plotters
- UPS for Belt Drive System
- Light Tower
- Part Sensor Alarms
- Air Filtration System
- Oxygen Analyzer
- Hydrogen Safety System
- Combustible Gas Monitor

### PERFORMANCE SPECIFICATIONS

- Maximum Temperature Rating: 1050°C
- Normal Operating Temperature: 200°C–1050°C
- Energy Consumption: for models operating at typical 850°C profiles (typically 25-30% of connected load)
- Overtemperature Protection: Redundant Overtemperature Protection in all zones (maximum 16 zones)
- Cooling Modules: Free and forced Convection/Conduction Both air and water available as standard equipment
- Atmosphere System: Air/Nitrogen/Hydrogen atmospheres available Uniform flow distribution across entire chamber width Directional gas flow control
- Power Supply: 200/240 Volts, 3 Phase, 50-60 Hz standard
- Clearance Above Conveyor Belt: 2 in. (51 mm) standard
- Belt Speed Range: 1-15 ipm standard
- Drive System: Microprocessor controlled, closed loop, digital feedback, ±0.1% accuracy Mechanical Belt Slip Clutch
- Control System: MicroTherm Windows Based PC Control System Pentium PC Super VGA 15" color monitor 3 Port time/temperature part profiler SPC data logging and historical display On-line help manual Available - Multiport removable copper firing extractor
- Exhaust System: 2" diameter, air powered venturi exhauster Full chamber width exhausting Removable condensate collection trap Exhaust gas flow monitor and control

Performance specifications are based on nominal operating conditions. Actual performance characteristics are dependent on specific processing applications.

## SierraTherm Production Furnaces, Inc.

200 Westridge Drive • Watsonville, CA 95076 • (831) 763-0113 • Fax (831) 763-1509