

SIERRATHERM

PRODUCTION FURNACES INC.

1500 SERIES FAST RESPONSE FURNACES

The SierraTherm 1500 Series furnace is designed specifically for high volume Hybrid and chip component electronics production applications such as firing of noble and base metal conductors, chip Cap and chip-R terminations, resistors, chip resistors, resistor networks, and associated dielectric thick film systems. The 1500 Series can be used for glass and metal package sealing, silver-glass die attach, and most electronic packaging and curing applications with process profiles from 100° C up to the 1050° C maximum operating temperature. SierraTherm-1500 Series models are available in both air or nitrogen atmosphere configurations.

Advantages

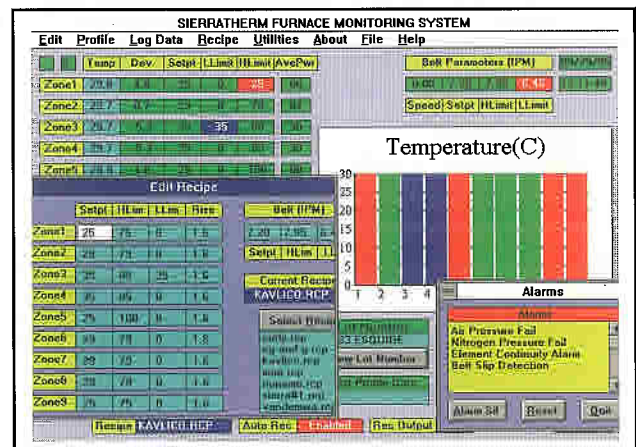
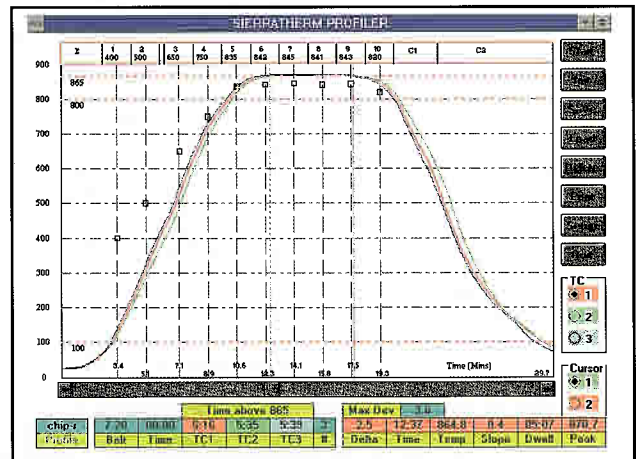
Rated to 1050° C, the 1500 Series has no muffle and features an ultra clean low-mass refractory heating chamber, free of internal metal alloy assemblies. The 1500 Series heats from ambient to 850° C in less than 20 minutes, and is designed to sustain continuous on/off heating and cooling cycles resulting from alternating periods of production and non-use. Distinctly unlike other furnaces, the SierraTherm 1500 Series is an energy efficient precision thermal processing system which provides unequaled performance by way of:

- Three tiers of graded, power saving insulation—reduces energy bills.
- Innovative atmosphere distribution and management—eliminates thermal shock
- Vigorous extraction of burn-off effluents across entire chamber width—improves yields
- Integrated burn-off condensate entrapment/collector—inhibits process contamination
- Stable, unsurpassed temperature uniformity control—ensures consistent “firing” results.

Included as standard equipment on the 1500 Series is the powerful and convenient Windows based MicroTherm PC Control, Profiling, and Monitoring System, first developed and introduced by SierraTherm in 1992.



- Fast Response
- High Value
- Energy Saving Efficiency
- Unmatched Innovation and Performance



ARISING FROM EXPERIENCE



FAST RESPONSE FURNACES

ORDERING INFORMATION AND SPECIFICATIONS

Type/Model	Heating Zones	Heated Length (In/mm)	Insulated Pre-Cooling Length (In/mm)	Cooling Section Length* (Inc. Gas Curtain) (In/mm)	Connected Load/ Operating Load (KW at 220 Volts)
6" Belt Systems +					
1K6-75C59-6A	6	75/1905	9/229	50/1270	18/4
14" Belt Systems +					
1K14-100C64-8A	8	100/2540	14/356	50/1270	45/8
1K14-125C69-10A	10	125/3175	19/483	50/1270	50/9
1K14-150C72-12A	12	150/3810	22/559	50/1270	54/10
18" Belt Systems +					
1K18-100C64-8A	8	100/2540	14/356	50/1270	64/12
1K18-125C69-10A	10	125/3175	19/483	50/1270	72/14
1K18-150-C72-12A	12	150/3810	22/559	50/1270	84/16
25" Belt System +					
1K25-125C69-10A	10	125/3175	19/483	50/1270	90/18
1K25-150C72-12A	12	150/3810	22/559	50/1270	108/20
1K25-175C79-12A	12	175/4445	29/737	50/1270	120/25
36" Belt Systems +					
1K36-125C69-10A	10	125/3175	19/483	50/1270	120/25
1K36-150C72-12A	12	150/3810	22/559	50/1270	144/24

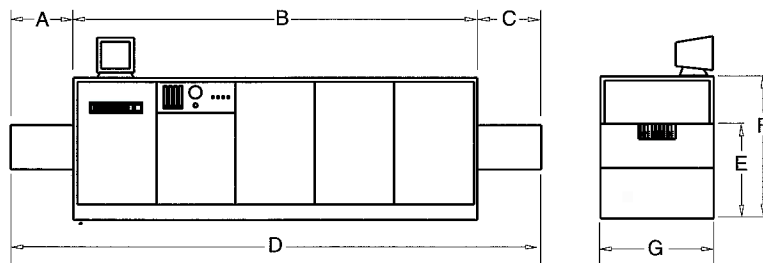
* Cooling sections can utilize a graduated water cooling module or a forced air cooling module as standard equipment.

+ Models can be configured with a gas tight nitrogen atmosphere as an option.

Notes: 1. SierraTherm also manufactures custom designed furnaces to meet specific customer requirements.

2. Specifications are subject to change without notice.

DIMENSIONS



Type/Model	A	B	C	D	E	F	G
6" Belt Systems +							
1K6-75C59-6A	24/610	154/3912	24/610	202/5131	36/914	50/1422	36/914
14" Belt Systems +							
1K14-100C64-8A	24/610	184/4674	24/610	202/5131	36/914	50/1422	43/1092
1K14-125C69-10A	24/610	214/5436	24/610	262/6655	36/914	50/1422	43/1092
1K14-150C72-12A	24/610	244/6298	24/610	292/7417	36/914	50/1422	43/1092
18" Belt Systems +							
1K18-100C64-8A	24/610	184/4674	24/610	202/5131	36/914	50/1422	48/1219
1K18-125C69-10A	24/610	214/5436	24/610	262/6655	36/914	50/1422	48/1219
1K18-150-C72-12A	24/610	244/6198	24/610	292/7417	36/914	50/1422	48/1219
25" Belt System +							
1K25-125C69-10A	24/610	214/5436	24/610	262/6655	36/914	50/1422	55/1397
1K25-150C72-12A	24/610	244/6198	24/610	292/7417	36/914	50/1422	55/1397
1K25-175C79-12A	24/610	274/6960	24/610	322/8179	36/914	50/1422	55/1397
36" Belt Systems +							
1K36-125C69-10A	24/610	214/5436	24/610	262/6655	36/914	50/1422	67/1702
1K36-150C72-12A	24/610	244/6198	24/610	292/7417	36/914	50/1422	67/1702

OPTIONS: Air Purifier System, 440/480 Transformers, In-Line and Stand Alone Solvent Dryers, Profiling Thermocouples, Belt Stop Alarm Systems, Individual Element Monitoring System, Brush Belt Cleaners, Ultrasonic Belt Cleaning Systems, Printers and Plotters, UPS for belt drive system, Light Tower, Part Sensor Alarms.

PERFORMANCE SPECIFICATIONS

Maximum Temperature Rating: 1050°C

Normal Operating Temperature: 200-1000°C

Cross-Belt Temperature Uniformity: +/- 1.5°C

Energy Consumption:

for models operating at typical 850°C profiles
(Typically 10-20% 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:

Four independently adjustable gas inlets

Uniform flow distribution across entire chamber width

Directional gas flow control

Power Supply: 200/240 Volts, 3 Phase, 50-60 HZ

Clearance Above Conveyor Belt: 2/51 (In/mm)

Belt Speed Range: 0.1-30 ipm

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 14" Color Monitor

3 Port Time Temperature Part Profiler

SPC Data Logging and Historical Display

On-Line Help Manual

Exhaust System:

2" Diameter, Air Powered Venturi Exhauster

Full Chamber Width Exhausting

Removable Condensate Collection Trap

Exhaust Gas Flow Monitor and Control

Heater Warranty: 2 years

SierraTherm Production Furnaces, Inc.

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