

SIERRATHERM

PRODUCTION FURNACES INC.

3500 SERIES SOLDER REFLOW CONVEYOR FURNACES

The SierraTherm 3500 Series furnace is designed specifically for high volume production solder reflow applications. These state-of-the-art furnaces are available in air, nitrogen, and hydrogen atmosphere configurations. The precision controlled 3500 Series can be used for process profiles ranging in temperature from 100°C to 600°C. Incorporating the latest in furnace technology, SierraTherm solder Reflow Conveyor Furnaces provide the efficient reliable performance required in today's competitive manufacturing environment.

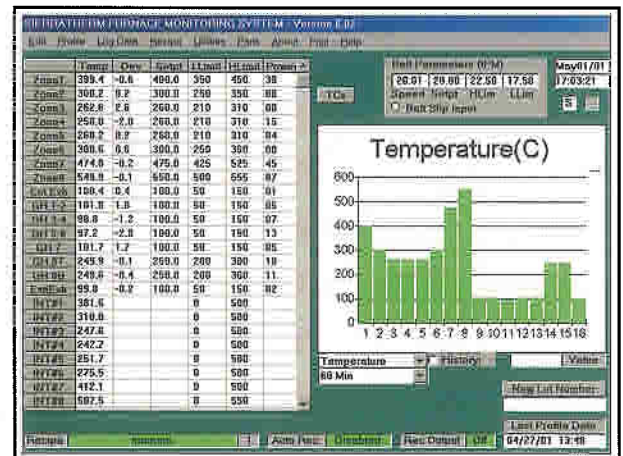
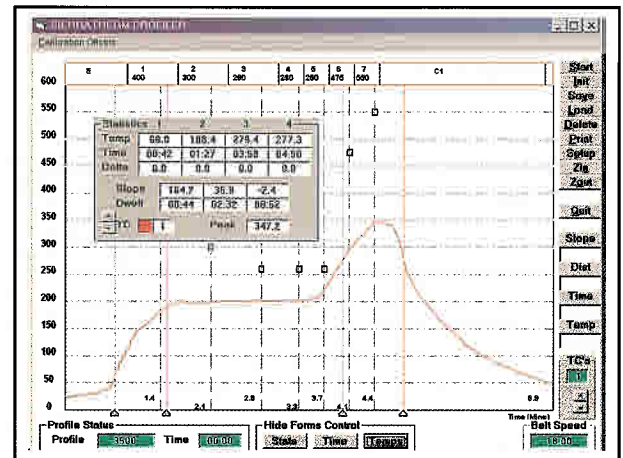


- Handling System Available
- Unmatched Atmospheric Purity
- Extraordinary Thermal Profile Control

ADVANTAGES

Rated to 600°C, the 3500 Series includes a durable stainless steel muffle and features an ultra-clean low-mass refractory heating chamber. Air, nitrogen, hydrogen, or a mixture of these atmospheres are available and maintained at extreme levels of purity in a muffle-contained environment. Distinctly unlike other furnaces, the SierraTherm 3500 Series is an energy efficient precision thermal processing system which provides unequalled performance by way of:

- Zone isolation and rapid quenching technologies allow precision definition of reflow phase peaks.
- 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
- Vigorous extraction of effluents across entire chamber width improves yields
- Integrated condensate entrapment / collection inhibits process contamination
- Computer controlled hydrogen system and redundant overtemperature protection ensure workplace safety



ARISING FROM EXPERIENCE





Solder Reflow Controlled Atmosphere Furnaces

ORDERING INFORMATION AND SPECIFICATIONS

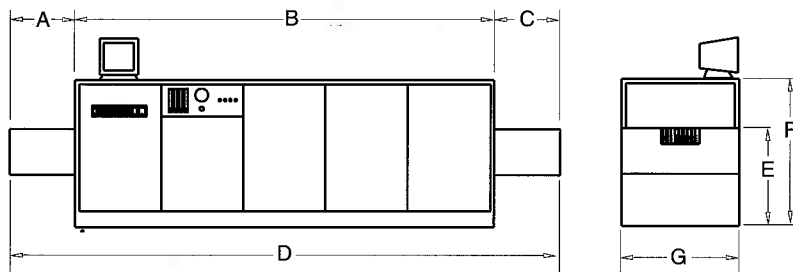
Type	Model	Heating Zones	Heated Length (in/mm)	Graduated Cooling Length (In/mm)	Connected Load/ Operating Load (KW)
6" Belt Systems	3K6-65C42-7AN	7	65/1651	42/1067	22
	3K6-84C84-7AN	7	84/2134	84/2134	37
	3K6-112C103-8AN	8	112/2845	103/2616	42
12" Belt Systems	3K12-65C42-7AN	7	65/1651	42/1067	35
	3K12-84C84-7AN	7	84/2134	84/2134	55
	3K12-112C103-8AN	8	112/2845	103/2616	64
18" Belt Systems	3K18-65C42-7AN	7	65/1651	42/1067	56
	3K18-84C84-7AN	7	84/2134	84/2134	70
	3K18-112C103-8AN	8	112/2845	103/2616	78

Notes: 1. SierraTherm also manufactures custom designed furnaces to meet specific customer requirements.
 2. Specifications are subject to change without notice.
 3. Furnace models are subject to change without notice.

APPLICATIONS

The 3500 Series controlled atmosphere furnaces are ideal for most solder reflow applications including BGA reflow, chip interconnect, C4 wafer bumping, assembly, and package sealing.

DIMENSIONS



Type/Model	A	B	C	D	E	F	G
6" Belt Systems							
3K6-65C42-7AN	16/406	124/3150	16/406	156/3962	36/914	68/1727	36/914
3K6-84C84-7AN	24/610	184/4674	24/610	232/5893	36/914	68/1727	36/914
3K6-112C103-8AN	24/610	244/6198	24/610	292/7417	36/914	68/1727	36/914
12" Belt Systems							
3K12-65C42-7AN	16/406	124/3150	16/406	156/3962	36/914	68/1727	44/1118
3K12-84C84-7AN	24/610	184/4674	24/610	232/5893	36/914	68/1727	44/1118
3K12-112C103-8AN	24/610	226/5740	24/610	274/6960	36/914	68/1727	44/1118
18" Belt Systems							
3K18-65C42-7AN	16/406	124/3150	16/406	156/3962	36/914	68/1727	48/1219
3K18-84C84-7AN	24/610	184/4674	24/610	232/5893	36/914	68/1727	48/1219
3K18-112C103-8AN	24/610	226/5740	24/610	274/6960	36/914	68/1727	48/1219

OPTIONS

- Automated Handling Systems
- Air Purifier System
- 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: 600°C
 Normal Operating Temperature: 100°C–600°C
 Energy Consumption:
 Typically 25-30% of connected load
 (for models operating at typical 300°C profiles)

Overtemperature Protection:
 Redundant Overtemperature Protection in all zones

Cooling Modules:
 Free and forced convection/conduction
 Both air and water available as standard equipment
 Forced gas quench system also standard

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, 50-60Hz standard

Clearance Above Conveyor Belt:
 2 in. (51mm) standard

Belt Speed Range:
 Application dependent

Drive System: Mechanical Belt Slip Clutch

Control System: MicroTherm Windows Based Control System standard

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.

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