SOLDERTRONIC

MODEL: B3600
CONVECTION REFLOW OVEN

SUMMARY

- Affordably-priced, 6-zone "lead-free" model to suit a full range of medium- and high-volume production requirements
- High-mass heat sources and efficient flow design allow full, forced convection reflow in a footprint 20%-30% shorter than comparable systems
- Independent upper and lower PID temperature controls for each heat zone and three thermocouple inputs allow accurate "lead-free" temperature profiling
- Combination 570 mm stainless steel mesh conveyor and adjustable pin-type conveyor for PCBs up to 450 mm wide
- Nitrogen atmosphere compatible models available with enhanced heating chamber flow design and PPM O2 analyzer
- Internal, water-chilled, recirculating heat exchanger option for rapid, controlled cooling of liquidous lead-free solders
- Easy-to-use Windows-based user interface and password-protected control software with advanced temperature profiling and thermal management functions
- Timed automatic startup and shutdown modes for power management and energy conservation
- Includes industrial PC, LCD flat-screen monitor
- UPS battery backup to ensure product protection in the event of power outage (Optional)
- CE compliant
- Small footprint - only 12.5 ft. long!

Only 12.5' Long, This 6-Zone Lead-Free Convection Reflow System Handles Medium- to High-Volume Throughput

The B3600 comes standard with 6 full zones of hot-air convection heating, each with independent upper and lower temperature controls, a combination adjustable edge-pin/stainless steel mesh belt conveyor, three thermocouple inputs, and a computer controller with a user-friendly Windows-based operating system for precision temperature profiling. What's more, the B3600 can be ordered with options like full nitrogen capability and internal water cooling, making it the most advanced lead-free reflow system in its size or price range.

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distributed by:

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DETAILS

Maximum Functionality, Ease-of-Use, and Trouble-Free Maintenance are Not Sacrificed by the B3600 Compact Design

While high mass heat sources and a unique air flow design allow efficient convection reflow over shorter heated lengths, great care has been taken to ensure that the B3600 compact design does not come at the expense of easy access to system components for regular operation and system maintenance. Lockable access panels, air-cylinder-assisted hinged covers, and an automatic heating chamber hood lift, complement a well thought-out and organized system architecture within a small footprint.

Automatic Hood-Lift Mechanism Allows Easy Access to Heating Chamber and Conveyor System for Cleaning and Maintenance

This photo shows the interior of the heating chamber with the hood in the raised position and the bottom of the air diffuser panels of the upper heating zones. It also shows the combination mesh belt and adjustable pin-type conveyor rails above the belt. The rail at the center of the conveyor in this photo is the movable rail and is adjustable for board widths from 2" through 17.7" on the B3600 system. An optional centerboard support system is also offered to avert board warpage issues common to larger PCBs processed at higher lead-free temperatures.

High Precision Stainless Steel Conveyor Mechanism Includes Automatic Lubrication Function

The adjustable edge-pin type conveyor is constructed of high-quality stainless steel components and features a very stable, rugged design to maintain tight tolerances at the high temperatures associated with lead-free reflow. In conjunction with an automatic chain lubrication system (shown in this photo), smooth, quiet conveyor motion is maintained and jams or dropped PCB assemblies are prevented. Precise hand wheel width adjustment is standard on all rail conveyor systems, although programmable, automatic width adjustment is also available as an option.

The B3600 Includes a Built-In Flux Filter to Prevent Excess Residue From Entering Exhaust System

A built-in flux filtering system removes large amounts of excess flux from exhausted air or nitrogen. The filter is accessible through the hinged panels on the rear of the system and is easily removed and cleaned with an alcohol-based cleaner.

The B3600 Can Be Ordered With An Internal Water Cooling System Option

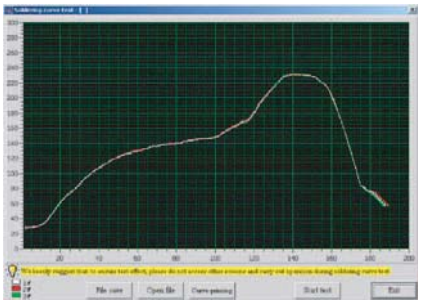
Internal, water-chilled recirculating cooling system which is available for the B3600 model. This option allows more aggressive cooling rates to meet solder paste manufacturers recommendations to a much greater degree than is possible through the exclusive use of air cooling.

Automatic Startup and Shutdown Functions Provide Maximum Flexibility and Energy Saving Potential

Timed automatic startup and shutdown functions can be used to coordinate oven warm-up and cooldown times with breaks in production and transitions between up to three separate work shifts in each 24 hour period. These convenient scheduling tools will pay dividends through both energy conservation and production preparedness.

Zone Temperatures and Conveyor Speed are Easily Set Through a Password-Protected Parameters Window

Process control parameters that produce a specific temperature profile can be saved to and loaded from memory for specific production runs. Once loaded, specific zone temperature settings, upper and lower limits, alarm settings and conveyor speeds can be adjusted as necessary. Password protection separates basic operator functions from critical parameter settings that should only be changed by supervisors or production managers.



Full-Screen Temperature Profile Recording

The control software allows easy charting of real-time thermal data from up to three separate thermocouple inputs for precise profiling that matches solder paste manufacturers' critical lead-free reflow parameters. This allows users to set zone temperatures and conveyor speeds to the optimum settings that will produce the desired profile at the desired throughput. The thermocouples also allow monitoring of temperature sensitive components at specific locations on the PCB.

SPECIFICATION

B3600

General:

- Lead Free Compatible
- Tin Lead (SnPb) Compatible
- Nitrogen Atmosphere Compatible (Optional)
- Double-Sided Board Processing
- CE Compliance
- SMEMA Compatible (Optional)

Board Handling:

- Heated Board Width: 570mm
- Mesh Belt Conveyor (Standard)
- Mesh Belt Width: 570mm
- Chain-Driven Pin Conveyor (Standard)
- Pin Conveyor Max. Width: 450mm
- Pin Conveyor Min. Width: 50mm
- Auto Adjust Pin Conveyor (Optional)
- Powered Center Support (Optional)
- Automatic Chain Lubrication
- Conveyor Speed: 400-1800mm/min
- Conveyor Height: 900mm ±20mm
- Conveyor Direction: Left to Right
- Component Max. Height: 30mm upper, 25mm lower

Heating:

- Forced Hot Air Convection
- Number of Independently Controlled: 12 total
- Heating Zones: 6 upper, 6 lower
- Total Heated Length: 2200 mm
- Number of Oven Convection Motors: 12 / Power: 120W x 12
- Delta T: ±2° C

Temperature Controls:

- PID (Proportional-Integral-Differential)
- Temperature Control Accuracy: ±1° C
- PCB Temperature Tolerance: ±2° C
- Temperature Range: Ambient -300° C
- Ramping Time (from cold start): < 15 min
- Profiling / Thermocouple Channels: 3

Cooling:

- Standard Cooling Method: Air
- Internal Chilled Water Cooling (Optional)
- Number of Cooling Zones: 1 (2 with water cooling)
- Cooling Tunnel Length: 620 mm
- Exit Temperature: 40°C
- Number of Cooling Fans: Three 45W or 370W

Operating System and User Interface:

- Windows Compatible PC
- On-Screen Thermal Profiling and Parameter Setting
- Print Capability
- Data Logging & Event Recording
- Alarms: Audible, Visual (Light Tower) and On-Screen Display

Dimensions and Physical Characteristics:

- Size: L3800 X W1510 X H1550 mm
- Net Weight: 1510 kg

Utilities:

- Power Supply: 220 VAC 3-Phase
- Frequency: 60Hz
- Operating Power Consumption: 8-14 KW
- Start-Up Power(Sequential Start-Up Mode*): 25 KW
- Current(Sequential Start-Up Mode*): 83A
- Total Power (Maximum): 46 KW
- N2 Consumption: 20-30 m3/h
- Oxygen Density: 300-1000 ppm (with N2 only)
- Number of Exhaust Vents: 2 or 3
- Exhaust Opening Size: 8"x1", 8"x1", 8"x2"
- Exhaust Venting Volume: 340 CFM per vent

*Sequential Start-Up Mode is the default start-up mode and limits current draw during start-up

Miscellaneous:

- Hood Opening Mechanism :Automatic Raise and Lower

We reserve the right to make changes without notice.