

Forced Convection Reflow Soldering Systems



SMT 200 C

SMT 400 C

More than just Soldering

SMT

maschinen und vertriebs gmbh & co kg
REFLOW-LÖTSYSTEME

SMT 200 C

SMT 400 C

Low investment cost – High performance and productivity

The forced convection reflow soldering systems SMT 200 C and SMT 400 C have been designed for small and medium serial production of SMD - printed circuits boards and ceramic

"substrates" and are available in various designs and with several options. The machines can also be used for curing. The technology of the SMT 200 C and SMT 400 C is similar

to systems designed for serial high speed production and combines the advantages of forced convection systems with the request for low investment cost.



Precisely tuned to the profile and thermal strain: The heat transmission

The SMT 200 C and SMT 400 C are working with an optimum of convection. In separate chambers the process gas is precisely heated up and led to the process zone via air leading inserts. A turbulent air flow is created which makes sure that even smallest components will not be dislocated.

The process area is separated into four individual programmable and controllable

heating zones. In the preheating zones, the heating elements are located above the conveying system whereas in the peakzone top and bottom heating elements are installed. Due to the exclusive use of convection for energy transfer, an even and rapid heating-up of all components assembled is guaranteed. The high air flow prevents from formation of temperature

shadows, thus enabling the processing of a large variety of printed circuit boards with one soldering profile only.

The small temperature difference (ΔT) between large and small components is the major advantage of the SMT 200 C and SMT 400 C.

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The menu-guided user interface allows an easy and efficient operation of the system.

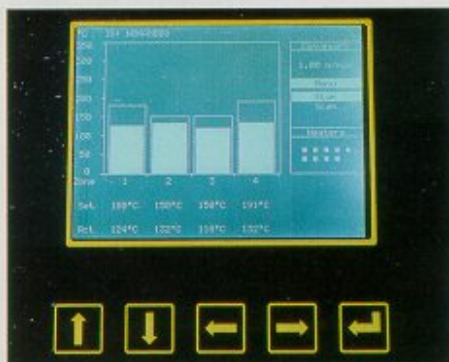
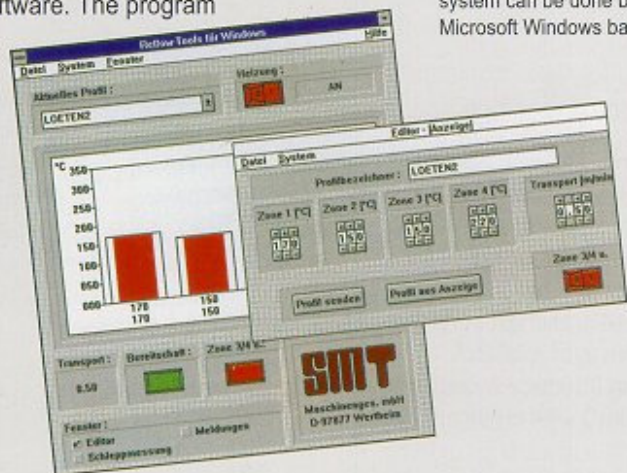
Easy and comfortable: the operation

The nominal temperatures in the individual heating zones as well as the conveyor speed can be programmed and are shown together with actual data on the LCD display both, graphically and numerically. The precise parameter identification and thus the stabilisation of the entire process requires a direct temperature measuring at solder joints or components. The thermal strain of the components can be determined by means of drag measurement and is displayed graphically.

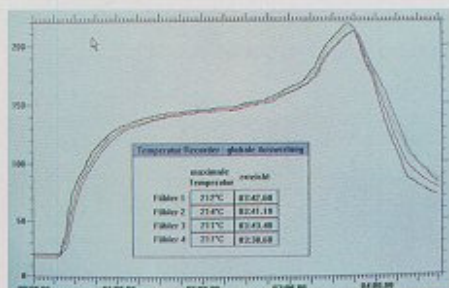
Via the serial RS 232 interface a connection and data transfer to an external PC is possible.

The programming and operation of the system can be done by means of the Microsoft Windows® based software. The program enables the logging and evaluation of process parameters as well as the temperature profile curves measured. A remarkable advantage with respect to DIN / ISO 9000 ff.

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User interface 400 C



Temperature curves of a PCB

Controlled in seconds: The temperatures in the heating zones

For a defined and reproducible temperature stability of a reflow soldering system the method of measuring and controlling the temperatures is of decisive significance.

In case of the SMT 200 C and SMT 400 C highly sensitive temperature sensors measure the actual temperatures in each heating zone at conveyor level and transmit this data to the control unit, one signal per second. Here the nominal and actual values are compared and optimized. The advantage of this spherical measurement is the constant temperature in the process zone, irrespective of the number and size of boards to be treated.

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Always exact: The conveyor system



Belt conveyor

The forced convection reflow soldering systems SMT 200 C and SMT 400 C in standard version are equipped with a seamless, high flexible stainless steel mesh belt conveyor, which allows handling of board sizes up to 200 mm respectively 400 mm.

The boards are conveyed from left to right side with a variable speed of 0,2 m/min to 1,8 m/min.

The highlights of the SMT 200 C and SMT 400 C

- Pass through soldering system in forced convection technology
- Soldering of complex and difficult boards, BGA handling possible
- Compact design
- Mesh belt and chain conveyor as well as dual conveyor available
- Handling interface available (only at SMT 400 C with chain conveyor)
- Including software for external PC
- Easy in operation
- Low investment and operation cost

For handling of double sided boards the SMT 400 C is also available with a chain conveyor system and center support. A handling interface is available for inline installation into a complete production line.



Double chain conveyor

More than just Soldering

For further details of the SMT 200 C and SMT 400 C please contact us at the address below or via our representative in your area. SMT prides itself in offering special solutions to production needs and joint development programmes are welcome.

A wide range of convection reflow systems in addition to the SMT 200 C and SMT 400 C is available as well as stencil printers.

Production consulting programmes and training programmes are structured to your needs and draw on the years of experience held within SMT.

We look forward to working with you and helping you overcome your challenges.