

Flo-Master-Z™ SMD-5000-Z Series

Overview

The Flo-Master-Z family of products provide solutions to reworking large boards and larger BGA components. They include handling capabilities that make it easier to work with cumbersome PCBs. The SMD-5000-Z is the first system in this family, having a smaller footprint and focal preheat.

For Gentle but Powerful Low Temperature Rework

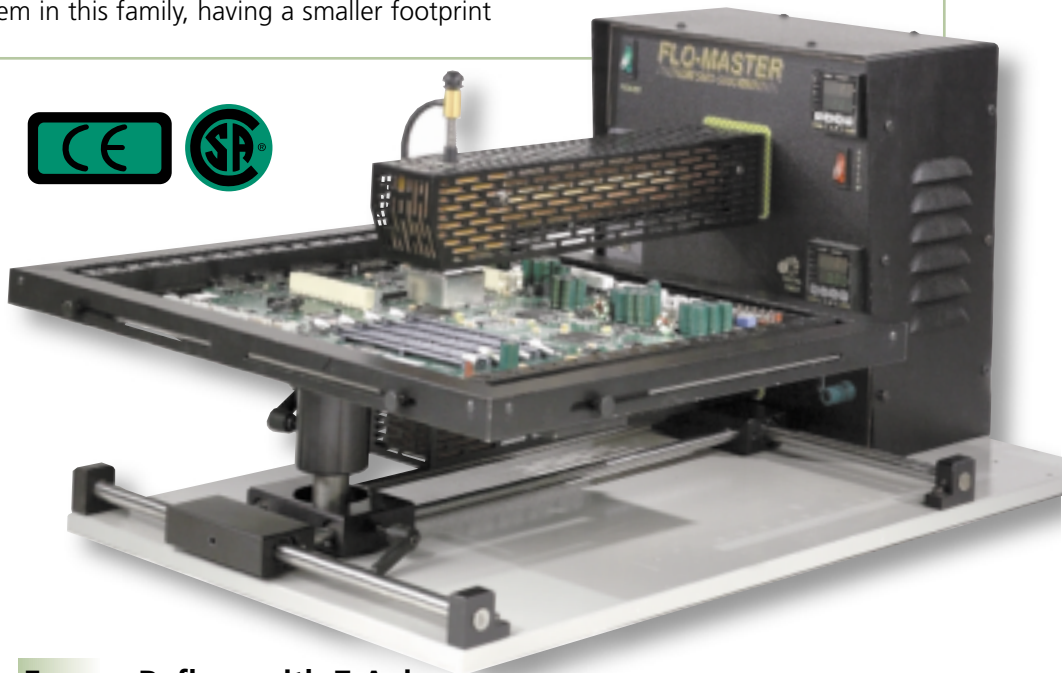
Improved Alignment

Research has verified that increasing the available energy during reflow has two significant effects:

- Increased Energy availability reduces the necessary air temperature needed to Reflow.
- A reduction in Reflow Temperature results in higher solder viscosity, producing improved alignment characteristics for BGA and SMT components.

These two important effects produce the following important advantages:

- Reduced component and board stress
- Prevent the possibility of scorching
- Assist in the prevention of bridging between contacts
- Help align BGA components more comfortably



Energy Reflow with Z-Axis

The Flo-Master-Z BGA/SMT rework and repair engine is a fully integrated dual, top and bottom heat system, including an electrically actuated Z-Axis, designed to handle ceramic BGAs, Military-type boards, and commercial applications requiring an efficient level of energy versus temperature.

Preheat

A bottom preheat and in-process heat source ensures stability of board temperature, reducing the necessary top reflow temperature, thereby following a more precise profile structure for the component undergoing rework.

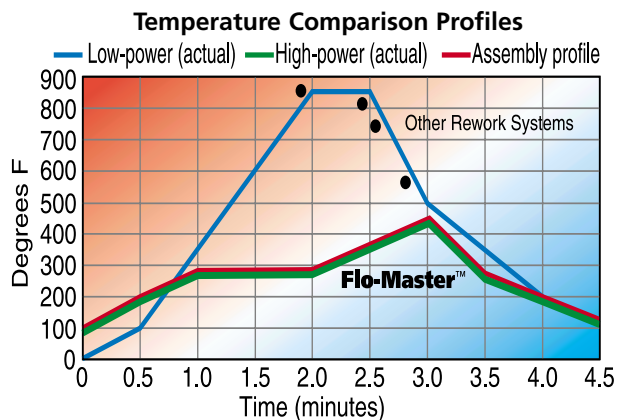
Independent Preheat Control

The preheater is an independently controlled integral system, with its own "profile" and "process time" controls. An important feature is the power available, optimizing the energy performance flowing below and into the workpiece, preventing unnecessary overheating.



Temperature Profiles

A range of temperature profiles are installed for bottom and top controllers and each thermal profile may be custom programmed, enabling different combinations of preheat and removal temperatures to be selected.



Cool Power Rework

Mechanical Control

The Flo-Master-Z has been engineered to operate on a standard workbench and includes a built-in X-Y Table for precise alignment. Each of the axes can be locked for optimum control.

Linear Air Delivery

The Heat Acceleration Chamber and delivery Nozzle Block are designed to provide maximum air spin of the air flow to the nozzle, ensuring minimal temperature differences across wide area packages—important for linear reflow of CCBGA and larger devices.

Standard Board Holders:



Board Holder 8100-0812



Board Holder 8100-1517

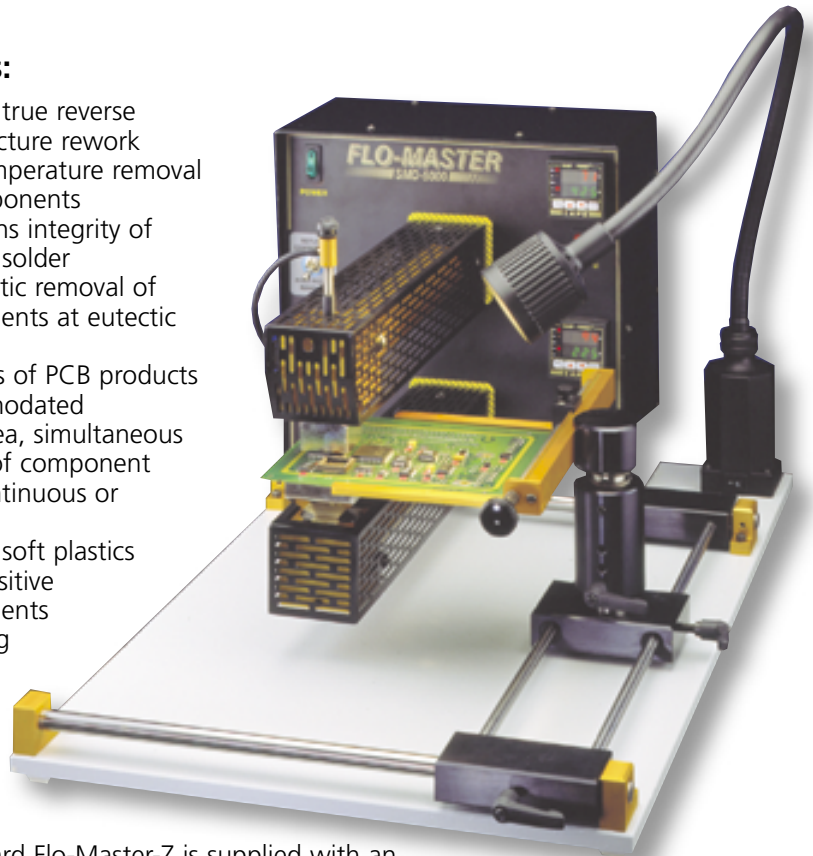


Board Holder 8100-1620

Part #	Description
5000-2000-Z	Flo-Master-Z 110V 60 Hz
5000-2002-Z	Flo-Master-Z 220V 50 Hz
8100-0812	Board Holder 8" x 12" (203 x 305 mm) (included)
8100-1517U	Board Holder Upgrade 15" x 17" (381 x 432 mm) (optional)
8100-1620U	Board Holder Upgrade 16" x 20" (406 x 508 mm) (optional)

Benefits:

- Enables true reverse manufacture rework
- Low temperature removal of components
- Maintains integrity of existing solder
- Automatic removal of components at eutectic stage
- All types of PCB products accommodated
- Total area, simultaneous reflow of component
- Run continuous or pulsed
- Rework soft plastics and sensitive components requiring short heat cycles



The standard Flo-Master-Z is supplied with an 8" x 12" (203 x 305 mm) Board Holder.

Optional sizes include:

- 8100-1517 Board Holder 15" x 17" (381 x 432 mm)
- 8100-1620 Board Holder 16" x 20" (406 x 508 mm)

Specifications:

Power	110V–1800 Watts, 220V–2400 Watts
Current	16.36 Amp @ 110V, 10.91 Amp @ 220V
Dimension	26" x 12.75" x 16" (660 x 324 x 406 mm)
Board Holder Standard	8" x 12" (203 x 305 mm)
Reflow Nozzles included:	(User may select alternatives)
8100-0000-44	0.80" x 0.80" (20.3 x 20.3 mm)
8100-1424	0.71" x 0.40" (18.0 x 10.2 mm)
8100-0132	1.20" x 1.20" (30.5 x 30.5 mm)
8100-1414	1.40" x 1.40" (35.6 x 35.6 mm)
8100-0000-20	0.50" x 0.50" (12.0 x 12.7 mm)
8100-0000-68	1.10" x 1.10" (28.0 x 28.0 mm)
Preheat Nozzles:	(Fixed Selection)
8100-2222P	2.00" x 2.00" (50.8 x 50.8 mm)
8100-0340P	1.62" x 1.62" (41.1 x 41.1 mm)
8100-0196P	1.50" x 1.50" (38.1 x 38.1 mm)
8100-1313P	1.30" x 1.30" (33.0 x 33.0 mm)
Temperature	Selectable Fahrenheit or Celsius
Air Velocity (Both Heaters)	<12.7 CFM
Vacuum	Internal (Optional Factory Air)
Air Source	Internal
Controller (Both Heaters)	Fuzzy Logic PID Profile Storage
4-Axis X-Y Table Built In	19.0" x 15.50" (482.6 x 393.7 mm)
Operation	Pulsed or Continuous
Maximum Board Size	14" x 20"
Illumination	Halogen Light 8100-0598

