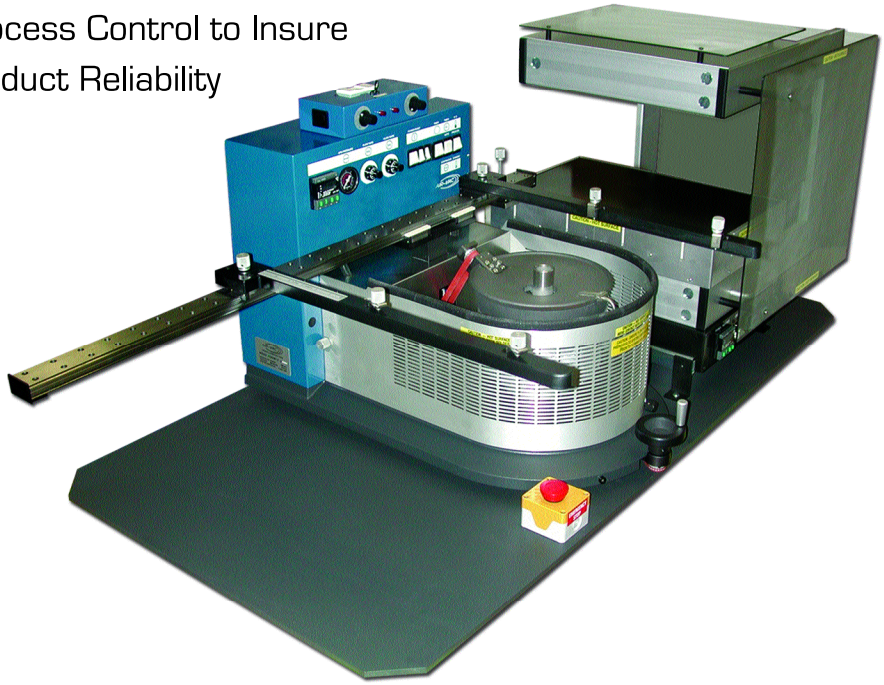
PCBRM *Modules & Systems*

Selective Soldering & Rework of Through Hole Components

Lead-Free & Thermally Challenging Assemblies
Require Process Control to Insure
Product Reliability

PCBRM15 Module includes solder pot, pumping system, precise operating controls and x, y, z alignment system.



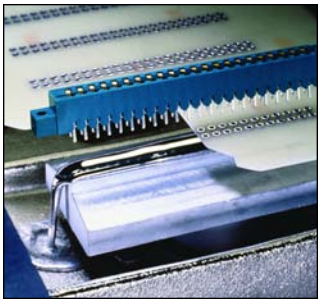
PCBRM System 5.2 includes PCBRM15 Module, two zone, 18" x 24" preheater (6500 watts) and non-contact temperature sensor.

A Simple Controlled Operation

- Components can be accurately located over a wave of molten solder whose shape matches the lead pattern.
- A volume of solder flows for only seconds against the bottom of the board, transmitting heat to the leads. When joints are molten, the component is removed.
- Holes are then cleaned with low pressure air and new component inserted and resoldered.

Systems Incorporating Preheat Provide:

- Reduced time and temperature requirements for heat absorbing assemblies or high heat alloys (lead-free).
- Minimal thermal shock, localized PCB warpage and no component overheating.
- Flux activation prior to soldering.
- Ability to rework thick board assemblies.



Reflow Solder Heating Offers Many Advantages:

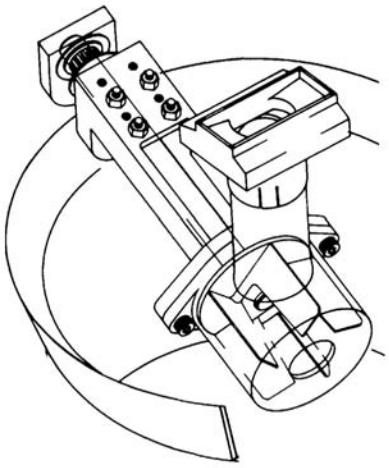
- Copper dissolution in PCB barrels, caused by excessive heat and dwell time, is minimized.
- High thermal mass equates to low operating temperatures.
- Fast, multi-lead uniform heating allows for quick removal and component soldering.
- Low operating temperatures and substantial heating power allows rework and soldering of thermal heat sinking assemblies.
- Minimal board delamination.

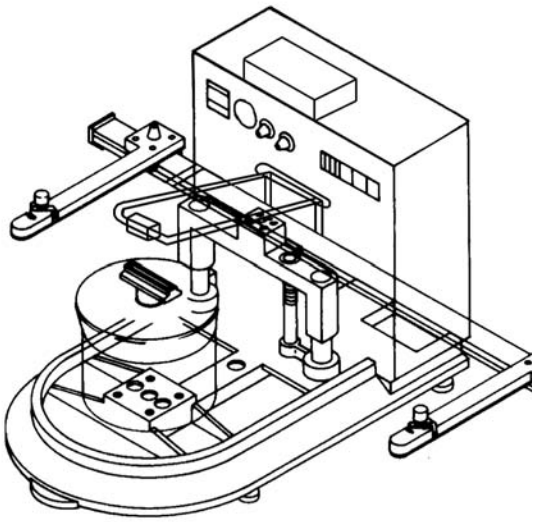
The PCBRM15 & System 5.2 are designed for Lead-Free applications, however, they also meet all requirements for tin/lead solder.

Key Design Features

Pumping System & Solder Pot

- Cast iron solder pot and titanium/cast iron impeller pump designed to withstand aggressive lead-free solder.
- Simple design - trouble-free operation
- Impeller pump/baffle are mounted below surface of solder, minimizing dross accumulation and ensuring level wave.





Precise Operating Control

Solder Wave Contact

- Cycle Duration automatically sets time solder contacts board.

Solder Wave Flow Rate

- Allows level wave for any flow well shape or size.
- 3 stage settings for enhanced process control
  - Ramp Up Rate for uniform wave shape
  - Process Rate limits time against board
  - Ramp Down Rate affects solder peeling

Temperature

- Microprocessor provides closed-loop control of set temperature. System can be set up to 615˚F (325˚C).

Alignment System

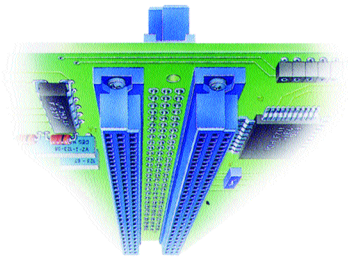
X, Y, Z Board Carrier

- Cantilever rails hold boards up to 22W" x 20D".
- Linear bearings for precision rail movement
- Rigid cast framework for continuous usage.

Component Location & PCB Hole Cleaning System

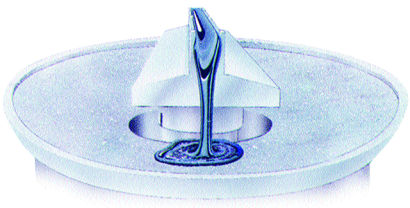
- Aligns component over solder wave
- Positions cleaning hood to clean PCB barrels

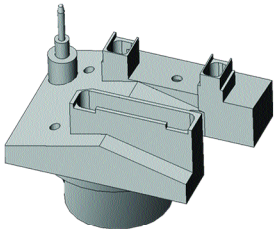
Application Specific Tooling

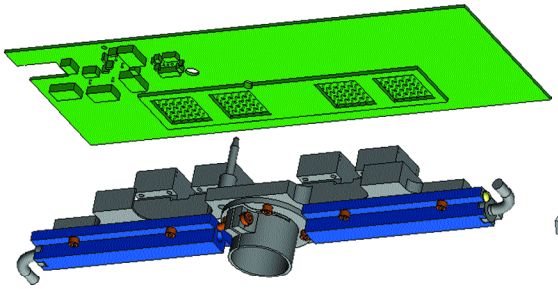


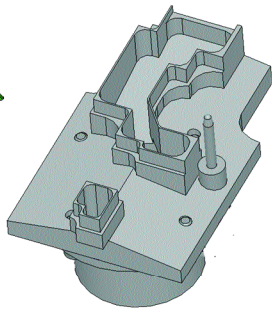
Titanium Flow Wells Determine the Size, Shape & Direction of Solder Flow.

- Solder flow can be accurately directed away from adjacent components to limit heat exposure to sensitive areas.
- High pin count component leads are heated simultaneously for quick and safe process.
- Locating Pins accurately position the lead pattern over the solder wave.
- External Heaters maintain uniform heat on large flow wells
- Fixtures preheat and solder multiple boards, plus hold irregularly shaped boards.









PCBRM15 Technical Data

- **Physical Dimensions:** 32"W x 32"D x 26"H
- **Solder Capacity:** 35 lbs. **Weight with Solder:** 125 lbs.
- **Compressed Air:** 40-80 psi, clean moisture free
- **Electrical:** 208/220V, 15 amps @ 220V, 50/60Hz single phase, 2500 watts.

PCBRM System 5.2 Technical Data

- **Physical Dimensions:** 76"W x 33"D x 28"H
- **Board Carrier Size:** 24"W x 20"D
- **Solder Capacity:** 35 lbs. **Weight with Solder:** 230 lbs.
- **Compressed Air:** 40-80 psi, clean moisture free
- **Electrical:** 45 amps @ 220V, 50/60Hz, 10000 watts.

TECHNICAL DATA SUBJECT TO CHANGE.

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