UP2000

Reflow Solder and Curing Oven

Sikama International's versatile Ultra Profile 2000 Solder Reflow oven combines bottom-up conduction with top-down convection heat, precise temperature calibration and purity of atmosphere. The oven can be used as a stand-alone unit or as part of an automated assembly line using the SMEMA communication standard. It offers multiple load and unload configurations ensuring that it can fit even the most constrained production floors.

The Ultra Profile 2000 is an eleven-zone system with 4 heat zones and 2 cool zones. It features a liquid-cooled load and unload platform, top and bottom conduction plus convection heat zones, and cool zones utilizing liquid cooling. Each top and bottom heat zone has independent set point and gas flow controls to ensure consistent temperatures for greater profile flexibility.
The internal cooling zone ensures a process cool-down in an inert atmosphere prior to the product exiting to the offload platform.
Parts are transported through the system using sweeper bars or walking beams that operate in a "dwell" (timed delay) mode allowing adjustable cycle times. The walking beam transport system minimizes any wear on both components and machine.
The system may be operated with air, nitrogen or forming gas. The gas flow enters the chamber through small orifices in the top and bottom heated platens and exits the sides to prevent contamination of adjoining zones and minimize flux buildup. In addition to heating inert gas, the top platens contribute radiant heat to the reflow process and are easily adjustable to accommodate a broad range of component heights while maintaining accurate temperatures and atmosphere.

Capable of heating up to 752°F (400°C), the UP2000 is targeted at applications involving die soldering, BGAs, flip chips, and insulated metal core substrates. The oven may also be used for processing high-density components and substrate materials ranging from copper to ceramic to beryllium, and glass epoxy. The oven is ideally suited for lead frames and Auer Boats.

The UP2000 efficiency of operation and minimal use of electricity and gas, along with the small footprint are the results of Sikama's unique patented design for balanced heating and cooling.

SIKAMA INTERNATIONAL

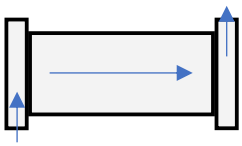
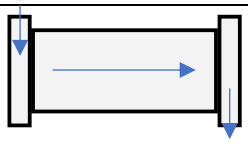
SPECIFICATIONS

FEATURES	
HEATING ZONES	4
COOLING ZONES	2
LOAD/UNLOAD BUFFERS	Standard
ZONE TEMPERATURES	752°F | 400°C ±2°C
DIRECTION OF FLOW	Multi-directional
TRANSPORT SYSTEM	Sweeper Bar | Walking Beam (WB)
AUTOMATION	SMEMA | SECS/GEM
MINIMUM O_2 LEVEL (PPM)	10

SUBSTRATE CAPACITY	
MIN/MAX DIMENSIONS – INCH (CM)	No min 12 x 3.9 (31 x 10) L x W max
MAXIMUM HEIGHT – INCH (CM)	4 (101)
MAXIMUM WEIGHT – LBS (KG)	1 (0.45) if all zones used

FACILITY REQUIREMENTS	
INPUT VOLTAGE (VAC)	220 | 380
INPUT AMPS RMS (A)	≤50 @ start-up ≤25 @ steady state
SYSTEM POWER (KW)	11 @ start-up ≤5.5 @ steady state
TOTAL COVER GAS RATE (CFM)	≤5.8
COOLING WATER FLOW (GPM)	≤2
DIMENSIONS (W x D x H)	38 x 46 x 54 inches 97 x 117 x 137 cm

LOAD/UNLOAD CONFIGURATIONS

BOTTOM HORSESHOE	
BOTTOM SERPENTINE	
TOP SERPENTINE	
TOP HORSESHOE