

EA ULTRA PROFILE 1200

FLUXLESS REFLOW SOLDER OVEN FEATURING "ELECTRON ATTACHMENT" TECHNOLOGY

Sikama International's EA UP1200 is a continuous flow, fluxless oven capable of residue free reflow using activated hydrogen. Electron Attachment technology developed in conjunction with AirProducts, removes oxides from the wafer surface by directing hydrogen ions to the soldering surfaces. This results in a completely residue free, environmentally benign fluxless reflow process.

The EA UP1200 also uses Sikama's unique patented "thermal technology" that is based in combination with forced thermal

convection heating and radiant heating of the work items. The EA UP1200 system has eight work zones internal to the oven comprised of five heating zones and two cooling zones. Externally, there is a load and unload buffer to accommodate automated processes. The heating and cooling zones utilize the Sikama contact thermal transfer for the bottom elements and combined convection and radiant thermal transfer for the top elements. The load/unload zones can operate in local mode or can be integrated into an automated process using SMEMA or SECS/GEM connectivity to other equipment. The system is operated using nitrogen cover gas as well as a hydrogen/nitrogen blend in the EA zones. Hydrogen concentration is less than 5% to ensure safety. Each zone is independently temperature controlled permitting a complex thermal profile to be used in the reflow or curing process.

The EA UP1200 utilizes an electrically isolated ceramic roller transport mechanism to move the work item from zone-to-zone through the oven. The work item is not dragged or pushed, reducing the possibility of damage to both work item and machine due to scraping or scratching.





SPECIFICATIONS

OVEN CONFIGURATION

External	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	External
	Internal to machine								
Load buffer	Cool top	Heat top	Heat top	EA	EA	Heat top	Cool top	Cool top	Unload buffer
	-----Insulated Ceramic Rollers-----								
	Cool bottom	Heat bottom	Heat bottom	Heat bottom	Heat bottom	Heat bottom	Cool bottom	Cool bottom	
Process flow direction: Left to Right									

FEATURES

HEATING ZONES	3
ELECTRON ATTACHMENT HEAT ZONES	2
COOLING ZONES	3
LOAD/UNLOAD BUFFERS	STANDARD
ZONE TEMPERATURES	752°F 400°C ±2°C
DIRECTION OF FLOW	LEFT TO RIGHT
TRANSPORT SYSTEM	INSULATED CERAMIC ROLLERS
AUTOMATION	SMEMA SECS/GEM
COVER GAS	N ₂ /H ₂ BLEND WITH <5% H ₂
MINIMUM O ₂ LEVEL (PPM)	10
CONVEYOR HEIGHT	35 (89) MIN 39 (99) MAX

SUBSTRATE CAPACITY

MIN/MAX SUBSTRATE DIMENSIONS – INCH (MM)	3.75 (95.25) MIN 12.8 (325) L X W MAX
MAXIMUM HEIGHT – INCH (MM)	3.5 (89)
MAXIMUM SUBSTRATE WEIGHT – LBS (KG)	1 (0.45) IF ALL ZONES USED

FACILITY REQUIREMENTS

INPUT VOLTAGE	220 380
INPUT CURRENT	55 @ START-UP ≤30 @ STEADY STATE
SYSTEM POWER	27 @ START-UP ≤13.5 @ STEADY STATE
TOTAL COVER GAS RATE (CFM)	≤18.3
COOLING WATER FLOW (GPM)	≤10
DIMENSIONS INCLUDING LOAD/UNLOAD (W X D X H)	185 X 46 X 79 (470 X 117 X 201)
DIMENSIONS WITHOUT LOAD/UNLOAD (W X D X H)	116 X 46 X 79 (295 X 117 X 201)
WEIGHT	1500 (680)

For more information contact sales@sikama.com