

FALCON 5C

REFLOW SOLDER & CURING OVEN

SIKAMA International's Falcon 5C solder reflow oven combines bottom-up conduction and top-down convection technology with precise calibration of temperature and purity of atmosphere for ultimate control of your solder reflow process. The Falcon 5C is a tabletop system intended for production runs of moderate product sizes and is manually operated.



The Falcon 5C is a seven-zone system featuring a liquid-cooled loading platform, four bottom conduction and top convection heat zones, one bottom conduction and top convection liquid-cooled zone and a liquid-cooled offload platform. Each heated zone has independent set point and gas flow controls to ensure consistent and precise temperatures for greater profile flexibility. The internal liquid-cooled zone ensures a process cool-down in an inert atmosphere prior to the product exiting onto the offload platform.

Parts are transported through the system using sweeper bars that operate in a "dwell" mode, stopping in each zone for a set period. The system may be operated with air, nitrogen, or forming gas. The inert gas flow enters the reflow chamber through small orifices in the top heated platens and exits to the sides to prevent contamination of adjoining zones and eliminate flux buildup. In addition to heating the inert gas, the top platens also contribute significant radiant heat to the reflow process and are easily adjusted to minimize the opening of the reflow chamber (to as low as 0.25 inch) thus conserving inert gas consumption while maintaining the desired oxygen level in the chamber. Capable of heating up to 400°C, the 5C is targeted at applications involving fluxless gold or tin reflow, singulated ball reflow of BGAs, fixtured double-side boards, large microwave components and a variety of substrate materials. The Falcon 5C's efficiency of operation and minimal use of electricity and gas are the result of SIKAMA's unique patented



design for balanced heating and cooling. Combined with the small size of the unit, these features are designed to minimize your capital outlay and production costs.

The Falcon 5C produces impressive results for an affordable table-top oven.

SPECIFICATIONS

External	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	External
Internal to machine						
Manual Load	Heat Top	Heat Top	Heat Top	Heat Top	Cool Top	Manual Unload
Cool Bottom	-----Sweeper Bar Transport System-----					Cool Bottom
	Heat Bottom	Heat Bottom	Heat Bottom	Heat Bottom	Cool Bottom	
Process flow direction: L to R or R to L						

FEATURES

HEATING ZONES	4
COOLING ZONES	2
LOAD/UNLOAD BUFFERS	Manual Load/Unload
ZONE TEMPERATURES	752°F 400°C ±2°C
DIRECTION OF FLOW	Bi-directional
TRANSPORT SYSTEM	Sweeper Bar
AUTOMATION	Manual
MINIMUM O ₂ LEVEL – PPM	15

SUBSTRATE CAPACITY

MIN/MAX SUBSTRATE DIMENSIONS – INCH (MM)	No min 5 x 5.75 (125 x 144) L x W max
MAXIMUM SUBSTRATE WEIGHT – LBS (KG)	1 (0.45) if all zones used

FACILITY REQUIREMENTS

INPUT VOLTAGE – VAC	110 220 380
INPUT AMPS – AMPS	24 @ start-up
SYSTEM POWER – KW	≤12 @ steady state
TOTAL COVER GAS RATE – CFM	11 @ start-up
COOLING WATER FLOW – GPM	≤5.5 @ steady state
DIMENSIONS – L x D x H – INCH (CM)	53 x 25 x 26 inches (135 x 64 x 66)

For more information contact sales@sikama.com