FALCON SYSTEMS

FALCON 1200™

REFLOW SOLDER/CURING OVEN

Sikama International's Falcon 1200™ is a multi-purpose oven capable of temperatures up to 400°C that can be used as a reflow solder system as well as for epoxy curing applications. Incorporating Sikama's unique "thermal technology" based on conduction heating in combination with forced thermal convection, the Falcon 1200™ contains 1 load zone, 7 heat zones and 2 cooling zones and includes automatic load and unload buffers with appropriate sensors providing SMEMA interface connection to link into automated production lines. The system may be operated with air, nitrogen or forming gas.

FALCON 1200 SHOWN WITH ICS 412 COATER

Prior to entering the heat zones the temperature of the substrate is stabilized by virtue of the liquid-cooled load zone. Each heated zone has individual set point controls and gas flow controls that maintain platen temperature to within +/-2°C to ensure consistent and precise temperature for reliable, repeatable profiles. The gas is introduced into the reflow chamber through tiny perforations in the conduction heating platens and enters the chamber at the same temperature set for each zone. The internal liquid-cooled zone ensures a process cool-down in an inert atmosphere. Further cooling of the substrates is accomplished as the product exits into the liquid-cooled offload zone

Parts are transported through the furnace by sweeperbars that can operate continuously or in a "dwell" (timed delay) mode that is a unique feature offered only by Sikama and which produces superior temperature uniformity in the reflow profile. The Falcon 1200 can also be equipped with a “walking beam” transport system which picks up the product with internal rails and moves the product to the next process zone.

With optional Windows based software the Falcon 1200™ can be interfaced with a computer (customer supplied) for storing profiles, monitoring of individual heat zone temperatures, data logging, as well as speed and time controls and remote operation. A tray to accommodate a laptop computer is supplied.

The Falcon 1200™ is well suited for reflow applications involving a broad range of substrate materials including wafer bump reflow, insulated metal-core substrates, BGA, high mass components and die soldering as well as epoxy curing applications including underfill and glob-top. The Falcon 1200™ '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 that will increase your yields, improve your bottom line and safeguard your product integrity and your reputation.

SIMPLE • EFFICIENT • ECONOMICAL

All SIKAMA products designed and manufactured in Santa Barbara, California
Specification subject to change without notice.

FALCON SYSTEMS

FALCON 1200™ SERIES

TYPICAL SPECIFICATIONS...

	1200 Sweeper Bar	1200 Walking Beam
Heating Zones	7	7
Cooling Zone	2	1
Load Zones	1	N/A
Total Number of Zones	10	8
Platen Size	12.5 in W X 13.5 in L	12.5 in W X 13.5 in L
Minimum Substrate Size	N/A	3 inches
Maximum Substrate Size	12 in W X 12 in L x 0.9 in H	12 in W X 12 in L x 0.9 in H
Weight Limit	N/A	Approx 2.5 lbs
Speed Mode (Inches per Minute)	1 in to 80 in per min	N/A
Time Mode (Dwell & travel Time)	15 sec to 99 min. 59 sec (per Zone)	16 sec to 99 min. 59 sec
Temperature (Standard)	Up to 400°C	Up to 400°C
Temperature Accuracy	±2°C	±2°C
Warm-up Time to 230°C	15 minutes (approx)	15 minutes (approx)
Coolant Flow	0.5 to 2 GPM	0.5 to 2 GPM
Alarms	Over/Under Temperature, Gas Flow, Coolant Flow, Temperature, Motor Torque, SMEMA (or other) Interface	Over/Under Temperature, Gas Flow, Coolant Flow, Temperature, Motor Torque, SMEMA (or other) Interface
Parts Flow (Specify	L to R or R to L	L to R or R to L
Gas Consumption	0-800 cubic feet/hour (process dependent)	1200 cubic feet/hour (process dependent)
O2 Level	<25 PPM (process dependent)	<25 PPM (process dependent)
Voltage (Specify)	200-240 VAC, 50-60 HZ, 3 phase	200-240 VAC, 50-60 HZ, 3 phase
Start-up Power	33 KW @ 240 VAC	33 KW @ 240 VAC
Power Consumption	50% duty cycle or less (process dependent)	50% duty cycle or less (process dependent)
Basic Unit Weight	1000 lbs	1000 lbs
Basic Unit Dimensions	L 164 x W 24 X H 45 inches	L 178 x W 24 X H 45 inches L 178 with paddle adapter

SIKAMA

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