

**FALCON SYSTEMS**

# FALCON 8000™ SERIES

**S**ikama International has developed a new line of reflow solder systems known as the Falcon 8000 Series. Incorporating Sikama's unique "thermal technology" based on conduction heating in combination with forced thermal convection, the 8000 Series consists of the 8100 (10 heat zones) and the 8500 (5 heat zones). Each system includes automatic load and unload buffers with appropriate sensors providing SMEMA interface connection to link into automated production lines.

Prior to entering the heated zones, the temperature of the substrates is stabilized by virtue of the liquid-cooled load zone(s). 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 temperatures for reliable, repeatable profiles. The gas is introduced through tiny perforations in the conduction heating platens and enters the reflow chamber at the same temperature as the platens. The internal liquid-cooled zone(s) ensure 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. Both systems can be supplied to operate left to right or right to left (specify at time of ordering). The



*Falcon 8100*

Falcon 8000 Series reflow systems feature a unique optional robotic unload capability to complete reflow of parts in process in the event of a downstream equipment failure and off-load the saved substrates onto a tray. These parts can then be manually placed back into the production cycle when the automated line resumes.

The system can be interfaced with a computer (customer supplied) for storing of profiles, monitoring of individual heat zone temperatures as well as speed and time controls and remote operation. A tray to accommodate a laptop computer is supplied. Sikama offers an optional Windows® based software package for use with the Falcon systems. KIC Prophet™ thermocouple installation is available as optional equipment (does not include the KIC Prophet system itself).

The Falcon 8100 is ideal for applications involving large ceramic substrates requiring progressive ramp up and ramp down reflow profiles and enables a variety of custom reflow profiles due to the versatility resulting from having ten individually controlled heating zones.

The Falcon 8500 is well suited for wafer bumping applications (3-8 inch diameter wafers) as well as accommodating a broad range of substrate materials, high mass components and fixtures. In addition, the Falcon 8000 reflow systems, also excellent for curing epoxies, are powerful, highly efficient, cost effective systems with high production capabilities and are designed to minimize your initial capital outlay and production costs, increase yields, safeguard your product integrity and improve your bottom line.

**SIKAMA**



**SIMPLE • EFFICIENT • ECONOMICAL**

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**FALCON 8000™ SERIES****TYPICAL SPECIFICATIONS**

	<u>FALCON 8500</u>	<u>FALCON 8100</u>
Heating Zones	5	10
Cooling Zones	2	4
Load Zones	1	2
Total Number of Zones	8	16
Platen Size	8 in. W x 12 in. L	8 in. W x 6 in. L
Maximum Substrate Size	8 in. W x 11 in. L	8 in. W x 5 in. L
Time Mode (Dwell & Travel Time)	15 sec. to 99 min. 59 sec.(per zone)	12 sec. to 99 min. 59 sec.(per zone)
Temperature (Standard)	Up to 420°C	Up to 420°C
Temperature Accuracy	± 2°C	± 2°C
Warm-up Time to 230°C	15 minutes	15 minutes
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)	In-line: L to R or R to L	In-line: L to R or R to L
Gas Consumption	0-600 cubic feet/hour (process dependent)	0-600 cubic feet/hour (process dependent)
O <sub>2</sub> Level	<25 PPM (process dependent)	<25 PPM (process dependent)
Voltage (Specify)	200-240 VAC, 50-60 Hz, 1 or 3 phase	200-240 VAC, 50-60 Hz, 1 or 3 phase
Start-up Power	10 kW @ 240 VAC	10 kW @ 240 VAC
Power Consumption	50% duty cycle or less	50% duty cycle or less
Basic Unit Weight	750 lbs.	750 lbs.
Basic Unit Dimensions	L 126 x W 28 x H 45 inches	L 114 x W 28 x H 45 inches

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