

# KPHIL

## In-Line PCB Pre-Heaters

“modules to pre-heat the circuit board prior to the selective soldering process”



### FEATURES:

- SMEMA compatible conveyerized in-line pre-heater.
- Accepts PCB panels up to 18" x 24"
- Up to 8 Individual zones separately controlled.
- Operates by “ramp to temperature and hold” or “time out”.
- Comes with 4 thermocouples to aid in profiling functions.
- Expanding rail widths that align with the KISS-104.
- Real time optical pyrometer control.

### DESCRIPTION:

The **KPHIL Family of pre-heaters** complement the KISS-104 in-line high speed selective soldering machine by providing the PCB at an elevated temperature. Preheating drives out volatiles from the flux and moisture from the circuit board minimizing the potential for delamination from expansion of moisture; it raises the overall temperature of the assembly preventing thermal shock to the board, allows for faster processing as the wave can pass over the component leads quicker while maintaining top side fillet formation.

Available in two models, the KPHIL-1 (bottom side heating) and KPHIL-2 (top and bottom side heating). Both units are simple to set up and use, and feature thermocouple ports to

facilitate thermal profiling.

### PROCESS OVERVIEW:

The PCB enters the KPHIL via edge conveyor or by an operator placing the PCB onto the input side of the conveyor rails. The PCB enters the KPHIL stopping when completely inside. The pre-heat cycle is initiated warming the board at a controlled rate to the set point temperature. Meanwhile, the previous board is in the KISS-104 undergoing the selective soldering process. When the soldering process is completed and the pre-heat cycle for the next board is finished, the board in the KISS-104 exits. The pre-heated board moves into location in the KISS-104 where the selective soldering process is automatically initiated. The next board enters the KPHIL completing the cycle.

### SPECIFICATIONS: (KPHIL-1 and KPHIL-2)

#### PCB Panel Size:

• PCB/Panel Size	Minimum 2" x 2"	Maximum 18" x 24"
• Conveyor Height		34" - 37"
• Clearance Above Conveyor		4" (100mm)
• Temp Ramp (typical)	2 deg C/sec.	
• Heat Source	I.R. array, 4 and 8 zones	

#### Physical:

• Footprint	36" wide x 32" deep x 48" high.	
• Weight	325 lbs./424lbs	
• Power	KPHIL-1	240VAC/1 Ph /60 Hz, 10 amps
	KPHIL-2	240VAC/1 Ph /60 Hz, 18 amps