

Mini 200

wave soldering machine

July 1999

1.- FLUXING UNIT

- foam fluxer tank for water solvable, rosin based or no-clean fluxes.
- Flux capacity : 3 liters.
- one air membrane pumps built in.
- Filter on the air circuit to preserve porous baffle.
- The foam height is adjustable by a fit for the use needle valve mounted on the inlet soldering machine.

2.- PREHEATER UNIT

- Armour plated resistor heating elements
- length of preheating stage 270 mm
- max power 0,6 KW.
- Adjustable time to stop the carriage over the preheating stage (0 up to 100 seconds) in order to get the desired temperature of the PCB.

3.- CARRIER CONVEYOR UNIT

- For PCBs of max. size 205 x 270 mm
- Adjustable speed : from 0 to 300 cm/min.
- D.C. gear motor 24 volts with control unit

4. - SOLDERING UNIT

- Solder bath capacity : 37 Kg of eutectic alloy.
- Power consumption : 2 KW
- bi directional wave with adjustable height from 0 to 10 mm.
- Heat up time : approx. 45 minutes
- Low temperature pump protection.
- regulation of bath solder temperature within the range 200-280 deg C
- J type thermocouple to control temperature

5. - CONTROL UNIT

A simple operator panel composed by 6 independent modules built in a power unit to control all the main machine functions and parameters :

- power supply module for solder pot and preheater power control
- I/O module for on/off and +5/-5 volts power supply.
- Soldering temperature control module
- Time control unit for preheating stage
- Conveyor speed control unit
- Solder alloy pump speed control unit

6.- UTILITIES REQUIRED

- Electrical power supply :
- 220V - 1 Phase – 50 Hz
- max consumption (total) : 3 Kw (12 amperes service)
- cable section needed : 6 mm each wire
- Extraction fumes duct : 1 duct of 150 mm diameter with fan built in (300 m³/h) and controlled by the main power control unit

7. - LOGIC OF OPERATION

- by pressing the I/O switch on the control unit the machine turns on the conveyor and the flux zone. The carriage passes over the flux and then over the solder pot (that in this phase is off). After that the carriage stops over the preheater for a time adjustable by the control unit.
After this time the conveyor and the main wave turn on and the carriage passes over the pot and returns to the operator.

8. - PHYSICAL CHARACTERISTICS

- System overall dimensions
- Length : 1000 mm
- Width : 560 mm
- Height : 320 mm
- Weight : 40 Kg (max weight, without solder alloy)
77 Kg (max weight with solder pot filled up)
90 Kg (max weight with alloy and packaging complete)