

1. Summary of product

1-1 Specifications

Consumption of power	When work: maximum 320W
Air pump	Diaphragm pump
Capacity	24L/min (max)
Temperature of hot air	100~480°C
Overall dimensions	187(W)×135(H)×245(D)mm

1-2 Functions

- * Closed loop of sensor, microcomputer to display digital and control temperature, large power in starting, rapid in temperature raising, accuracy and constant in temperature, no effect caused by amount of air exhaust;
- * Design of static electricity proof: prevent from damaging PCB caused by static electricity and creepage;
- * Because of adapting the soldering method of unnecessary touching solder joint, it can avoid the elements displacement and heat shocking;
- * Can adjust amount of air and temperature greatly and can solder IC of QFP and SOP type. When solder or remove tin, different nozzles can be selected in accordance with different requirement;
- * Adapt imported heating elements and the nozzle is the same as international brand;
- * After the work of pulling solder is finished, stop the machine,

the air is still blown a little time in order to prolong the life of heating elements and handle;

- * The function of dormancy can be selected.
- * The normal setting and on - line setting for temperature two ways can be selected random.

1-3 Applications

- * It is suitable for disassembling soldering for most of parts and the surface, for example, SOIC, CHIP, QFP, PLCC, BGA and so on;
- * It is suitable for contractive flexible tube.

1-4 Accessories parts

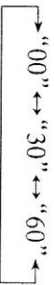
Picking up 1 piece
Picking up wire 1 piece

2 Set sleep and temperature

When set sleep, the heating elements are in the state of electric cutting off

2-1 Choose the function of sleep

Turn off the switch of power supply. The screen has no display. At the same time press the "UP" and "DOWN" knob. Then press the switch of power supply, the display screen will display "C". It indicates the temperature of centigrade. Press the knob of " * ", it display "00".

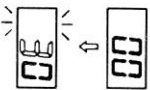


"00" indicates unsleeping.

"30" indicates to begin sleeping after work 30 minutes⁰

"60" indicates to begin sleeping after work 60 minutes

Press the knob of "*" to set and store the data of sleep. Meanwhile it indicates the normal work begins.



2-2 Set temperature normally

When set temperature normally, the heating elements are in the state of electric cutting off.

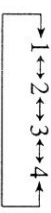
Press the knob of "*" at least 1 second.

Example: turn 400°C to 350°C



2. Press "UP" or "DOWN"

Press "*" button once.



① First, display the presetting temperature, then the digital position of 100 will flash. It indicates that it has entered into the setting mode of temperature. The digital position of 100 may be adjusted.

② Choose the needed digital to replace the digital position of 100. Use "UP" or "DOWN" knob to change the display digital. It is shown below.

When the needed digital displays, press the knob of "*" at once. The middle digital (digital position of 10) begins to flash, it indicates that the digital position of 10 may be set.



Press "UP" or "DOWN"



Press "*" button once.



Press "*" button once.



③ Choose the needed digital to replace the digital position of 10. Use "UP" or "DOWN" knob to change the display digital. It is shown below.



Press the knob of "*". The right digital position (digital position of 1) begins to flash. It indicates the digital position of 1 may be set.

④ Choose the needed digital to replace the digital position of 10. Use "UP" or "DOWN" knob to change the display digital. Use the method shown above to choose the digital position of 10. Press the knob of *.

Here, press the knob of *

- a) Input the set temperature into inner memory;
- b) Display the set temperature, and
- c) Begin to control heating elements

Notes: if power supply is cutting off when set temperature, the set temperature will not be memory.

* If the pressed time of knob has not 1 second, the present set temperature will display 2 seconds. Then display the temperature

ture at air injecting outlet. When press the knob of *, the power supply of heating elements will be cut off;

* When the temperature is over the scope, the digital position of 100 will flash again. If the condition takes place, please input correct temperature value again.

2-3 Set temperature on — line

In the work, if it is necessary to set temperature quickly and the electricity can not cut off, the way may be selected.

Temperature raising:

Don't press "*" knob and press "UP" knob directly. If so, the setting temperature will raise 1°C and the display window will display the set temperature. When loose the "UP" knob, the display window will relay the set temperature about 2 seconds. If within 2 seconds of time, press the "UP" knob again, the setting temperature will raise 1°C again. If press the "UP" knob and not loose at least 1 second, the setting temperature will raise rapidly. Till the needed temperature reaches, then loose the "UP" knob.

Temperature dropping:

Don't press "*" knob and press "DOWN" knob directly. If so, the setting temperature will drop 1°C and the display window will display the set temperature. When loose the "DOWN" knob, the display window will relay the set temperature about 2 seconds. If 2 seconds later, press the "DOWN" knob again, the setting temperature will drop 1°C again. If press the "DOWN" knob and not loose at least 1 second, the setting

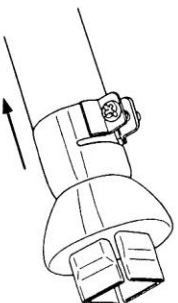
temperature will drop rapidly. Till the needed temperature reaches, then loose the "DOWN" knob.

Notes: "UP" knob equals to "↕" and "DOWN" knob equals to "↕"

3 Explanation to operation.

3-1 Preparation before operation

- * Choose the picking up wire that matches the size of IC. The FP picking up device is equipped with small wire (14 mm), but a large picking up wire (30 mm) may be necessary. Please choose the suitable picking up wire in accordance with the size of IC;
- * Choose the nozzle that will be matched with the size of IC;
- * Loose the screw on the nozzle;
- * Attach the nozzle as shown in the drawing;
- * Fasten the screw properly.



3-2 Process of detinning

- * Press the switch of power supply. The display screen displays the set temperature. After 2 seconds, begin to heat it normal. When air is injected automatically, turn on the switch of power supply at any time. When turn on, the heating raw materials begins to heat.
- * Adjust the airflow and set the knob of temperature control. After the temperature is set and the airflow is adjusted, wait for a while till the temperature is stable. We suggest that you

may adjust the temperature to 300 ~350°C. As for airflow, in case of single nozzle, the knob of airflow may be set at 1~5. For other nozzle, the knob of airflow may be set at 4~7.

* Place the picking up device under IC block.

Place the picking up device under IC block. If the width of IC block can not matched the size of picking up wire, adjust the width of the wire through pressing

* Melt the solder

Hold the iron and make the nozzle aim at the part to be melted. Let the hot air melt the solder.

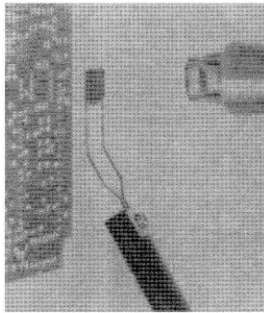
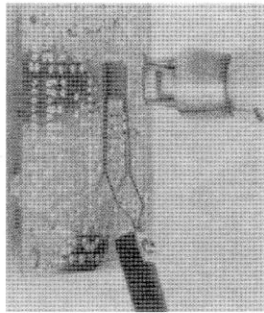
Be carefully not touch the leads of IC.

* Remove the IC block

When the solder is melting, lift the picking up device and remove the IC block.

* Turn off the switch of power supply

After the switch of power supply is turned off, the automatic air injecting function begins to work. The cool air is passed through the pipe. It makes the temperature of heating elements and handle drop. Therefore during the stage of cooling, don't pull out the plug. When the temperature of air at nozzle is be-



low 100°C, it can be turn off automatically. In case of not use the unit for a long time, pull the plug out.

* Remove any residue of solder

After remove the IC block, remove the residue of solder with a tin socking wire or detinning pump.

Notes: In case of SOP, PLCC, raise the IC block with tweezers.

3-3 Soldering

* Apply the solder paste

Apply proper solder paste and put SMD on the IC board.

* Preheat SMD.

* Soldering

Inject the hot air to lead frame uniformly.

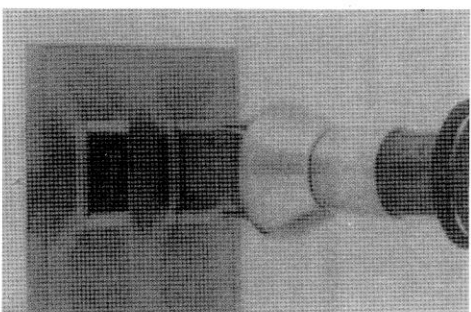


Fig I

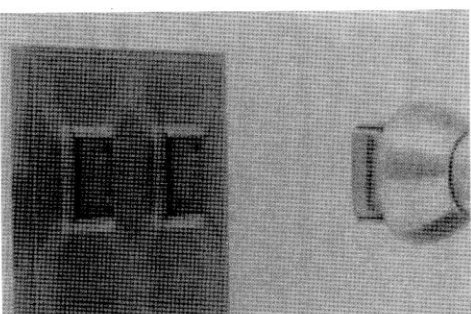


Fig II

*** Washing**

After finished, clean the residue of molten materials.

Notes: it is effective to solder it with hot air. But it is possible to cause the defects such as solder balls, solder bridges and so on. We suggest that you should check the condition of solder carefully.

4 Precautions

* When attach the nozzle, don't exert too much force on it or pull the edge of nozzle by pliers. Also don't exert too much force to fasten the screw.

* When attach the nozzle, it is necessary to attach it only when the heating pipe and nozzle have been cooled.

* Caution – operation at high temperature

Don't use the disassembling station near easy inflammable gases, paper or other easy inflammable materials. The nozzle and hot air are very hot. It can burn human body. Never touch the heater or allow the hot air to blow against your skin. Initial, the iron may emit white smoke, but this will disappear soon.

* After use, be sure to cool the unit

After turn off the switch of power supply, the unit will blow cool air for a short time automatically. During the period of cooling, don't pull the plug of power supply out. When the temperature of blowing air is below 100°C, the unit can stop automatically.

* Don't drop it and shock it heavy

The heating pipe contains quartz glass. If it is dropped or

shocked heavy, the quartz glass will be broken.

* Don't disassemble the pump.

* If the unit does not use for a long time, the switch of power supply should be turned off.

* Use the function of sleeping

If choose the function of sleeping, when the function of sleeping is action, the heating elements will cut off the power supply and the heating will be stopped. At the time, the cooling air can blow still. When press the knob of " * ", the work of heating begins again.

The time of sleeping function should be calculated from the time when press the knob of " * " last time.

* **The last decimal on the screen of display means the marks to heat.**

* **Don't turn off power supply when set the temperature.**

* **When the screen of display appears "S - E" and flashes in a long time, it indicates that the sensor has troubles.**

It is necessary to repair or exchange

* **When the temperature of screen flashes, it indicates that the temperature can not be raised. The heating elements could be damaged.**

* **When the temperature is over 350°C, when start it, the knob of airflow control should be at 3~8 position.**

* **When the working temperature is over 450°C, the knob of airflow control must be over 4 position.**

5. Replace the heating elements

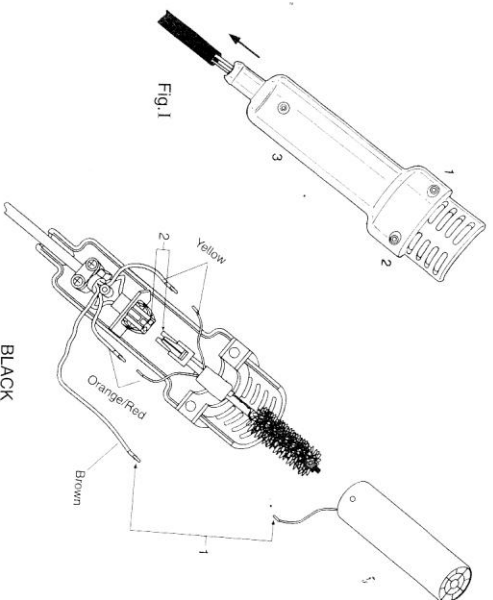
5-1 Replacing parts

No.	Name/specifications
47007	Heating element 100V(A1143B)
47008	Heating element 110V(A1144B)
47009	Heating element 120V(A1145B)
47010	Heating element 220V - 240V(A1146B)
47183	Picking up device including small and big wire
44025	Picking up wire (small)
44025	Picking up wire (big)

5-2 Replace the heating materials

- * Loose the screw and take out the wire tube.
Loose three screws of handle and take out the wire tube
- * Loose the handle
Loose the protect sheath of grounding wire and take out the tube. It contains quartz glasses and heat insulator in it.
Don't drop or loss them.
- * Take the heating materials out
Loose the terminal and take the heating materials out
- * Insert new heating material
Treat it carefully. Don't rub the electric line of heating materi-

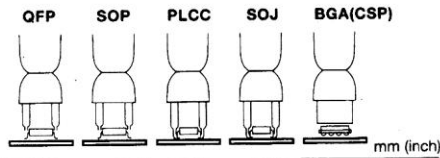
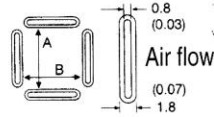
als. Insert new heating material and connect their terminals. The sensor has polar. It is necessary to distinguish its color. Connect it with same color.
According to the reverse procedures of disassemble to install the handle. Make the protruding part of handle telescope the hole of pipe part.



Option Parts

Nozzles

The size in name/specification indicates the size of IC Package



Part No.	IC Package	Dimensions (mm)	Dimensions (inch)
A1125	QFP 10 x 10	10 x 10	0.39 x 0.39
A1126	QFP 14 x 14	15 x 15	0.59 x 0.59
A1127	QFP 17.5 x 17.5	19 x 19	0.75 x 0.75
A1128	QFP 14 x 20	21 x 15	0.83 x 0.59
A1129	QFP 28 x 28	29 x 29	1.14 x 1.14
A1135	PLCC 17.5 x 17.5 (44 pins)	15 x 15	0.59 x 0.59
A1136	PLCC 20 x 20 (52 pins)	19 x 19	0.75 x 0.75
A1137	PLCC 25 x 25 (68 pins)	24 x 24	0.94 x 0.94
A1138	PLCC 30 x 30 (84 pins)	29 x 29	1.14 x 1.14
A1139	PLCC 12.5 x 7.3 (18 pins)	6.9 x 6.9	0.27 x 0.27
A1140	PLCC 11.5 x 11.5 (28 pins)	10 x 10	0.39 x 0.39
A1141	PLCC 11.5 x 14 (32 pins)	10 x 15	0.39 x 0.59
A1182	BQFP 24 x 24	21 x 21	0.83 x 0.83
A1187	TSOL 18.5 x 8	18.5 x 10	0.73 x 0.39
A1257	SOP 11 x 21	11.7 x 21	0.46 x 0.83

A1258	SOP 7.6 x 12.7	8.2 x 11.7	0.32 x 0.48
A1259	SOP 13 x 28	13.5 x 29	0.53 x 1.14
A1260	SOP 8.6 x 18	8.7 x 19	0.34 x 0.75
A1261	QFP 20 x 20	21 x 21	0.83 x 0.83
A1262	QFP 12 x 12	12 x 12	0.47 x 0.47
A1263	QFP 28 x 40	39 x 29	1.54 x 1.14
A1264	QFP 40 x 40	39 x 39	1.54 x 1.54
A1265	QFP 32 x 32	31 x 31	1.22 x 1.22
A1124	Single Ø2.5	Ø2.5 (I.D.)	0.09
A1130	Single Ø4.4	Ø4.4 (I.D.)	0.17
A1131	SOP 4.4 x 10	4.8 x 10	0.19 x 0.39
A1132	SOP 5.6 x 13	5.7 x 15	0.22 x 0.59
A1133	SOP 7.5 x 15	7.2 x 16	0.29 x 0.63
A1134	SOP 7.5 x 18	7.2 x 19	0.28 x 0.75
A1142	Bent Single 1.5 x 3	1.5 x 3 (I.D.)	0.12 x 0.12
A1325	Dual Single Ø1.5 x 5.10	5 x 10	0.06 x 0.2-0.39

Adjustable Pitch

The Pitch between the two nozzles is adjustable

Nozzle face

Ø1.5 (I.D.) (0.06)

5 (0.2) 5-10mm 10 (0.39)

