

HAKKO 852

SMD REWORK STATION

預備加熱 Instruction Manual 使用說明書 日本白光牌

English

Thank you for purchasing the Hakko 852 SMD Rework Station.
This unit features:

- Digital control and display of time and temperature
- Display of air-flow rate
- Manual and automatic modes
- Built-in vacuum pickup

Please read this manual before operating the Hakko 852.
Keep this manual readily accessible for reference.

承蒙惠顧，謹致謝忱。
本產品之特徵為採用內部裝有真空吸取器、手動 / 自動更換、數位控制等，適用於扁平 IC 拔放臺。
請詳閱本使用說明書，正確使用。閱後請妥為收存，以備日後查閱。

TABLE OF CONTENTS

1. PACKING LIST	1
2. SPECIFICATIONS	1
3. SAFETY INSTRUCTIONS	2
4. PART NAMES.....	3
5. PREPARATION: ASSEMBLY AND ELECTRICAL CONNECTION	5
6. OPERATION	8
7. PARAMETERS / INITIAL RESETTING	14
8. MAINTENANCE / INSPECTION	15
9. ERROR MESSAGES	16
10. TROUBLESHOOTING	16
11. OPTIONAL PARTS.....	17
12. PARTS LIST / STATION.....	19
13. PARTS LIST / HANDPIECE	21
14. WIRING DIAGRAM	22

目 錄

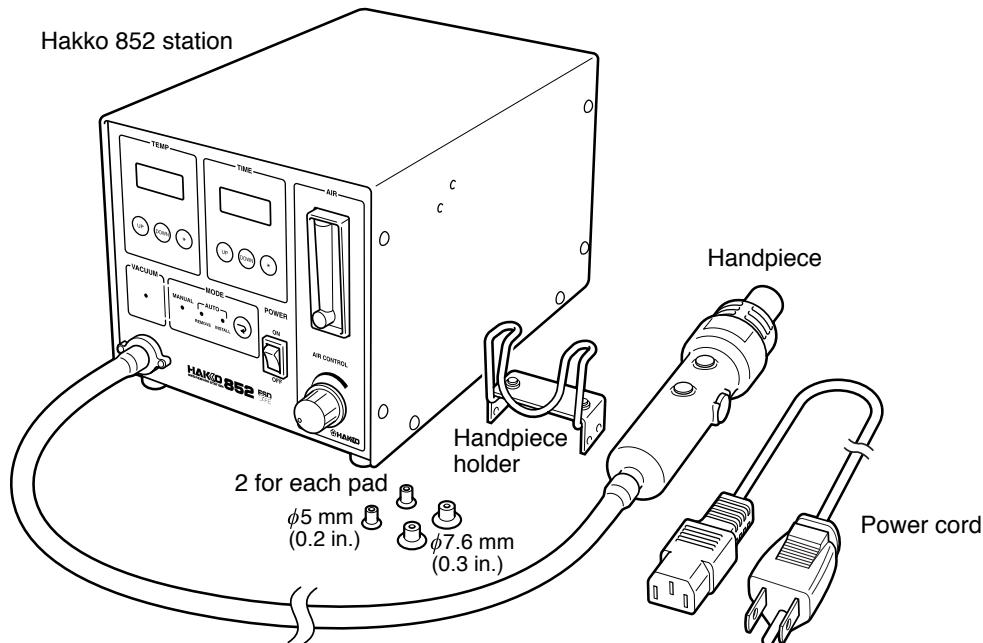
1. 包裝清單	23
2. 規格	23
3. 安全及使用上的注意事項	24
4. 各部名稱	25
5. 準備—組裝與連接	27
6. 使用方法	30
7. 參數 / 初期值設定	36
8. 保養 / 檢查方法	37
9. 錯誤顯示	38
10. 排除故障指南	38
11. 另售部件	39
12. 部件清單 (機身)	41
13. 部件清單 (焊鐵)	43
14. 電路圖	44

1. PACKING LIST

Hakko 852 station.....	1
Power cord	1
Handpiece holder	1
Pads ($\phi 5$ mm (0.2 in.), $\phi 7.6$ mm (0.3 in.)) ... 2 each	
Instruction manual	1

Check the contents of the Hakko 852 package and confirm that all the items listed below are included.

* This product does not include a nozzle. A large selection of nozzles is available for the Hakko 852. Select the nozzle or nozzles suitable for the work to be performed.



2. SPECIFICATIONS

Name	Hakko 852
Power consumption	100V-300W 110V-360W 120V-410W 220V-550W 230V-600W 240V-650W

● Station

Power consumption	30 W
Capacity	7 ℥/min to more than 20 ℥/min
Control temperature	100 ~ 450°C./212 ~ 842°F. (sensor)
Modes	Manual/Auto
Timer	15 ~ 999 seconds
External dimensions	260(l) × 180(w) × 170(h) mm. 10.2(l) × 7.1(w) × 6.7(h) in.
Weight	5 kg. (11.02 lb.)

● Handpiece

Power consumption	100V-270W 110V-330W 120V-380W 220V-520W 230V-570W 240V-620W
Total length (w/o cord)	200(l) mm / 7.9(l)in.
Weight (w/o cord)	200 g / 0.44 lb.

* This product is ESD-protected.

* Specifications and design subject to change without notice.

3. SAFETY INSTRUCTIONS

Warnings and cautions are placed at critical points in this manual to direct the operator's attention to significant items. They are defined as follows:



WARNING: Failure to comply with a WARNING may result in serious injury or death.



CAUTION : Failure to comply with a CAUTION may result in injury to the operator, or damage to the items involved. Two examples are given below.



CAUTION

When the power is ON, the temperature of the hot air and the nozzle ranges from 100 to 450°C. (212 to 842°F.). To avoid injury to personnel or damage to items in the work area, observe the following:

- Do not direct the hot air toward personnel or touch the metal parts near the nozzle.
- Do not use the product near combustible gases or flammable materials.
- Advise those in the work area that the unit can reach very high temperatures and should be considered potentially dangerous.
- Turn the power OFF when no longer using the Hakko 852 or when leaving it unattended.
- Before replacing parts or storing the unit, allow the unit to cool and then turn the power OFF.

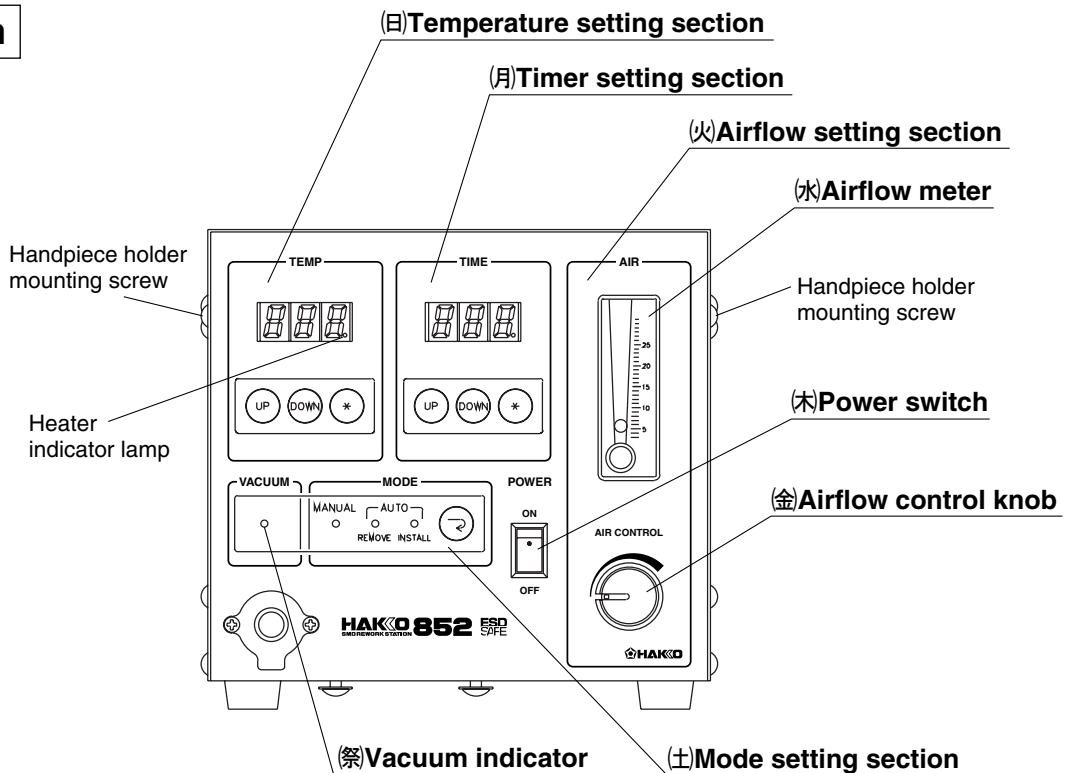
To prevent accidents and failures, be sure to take the following precautions:

- Do not strike the handpiece against hard surface or otherwise subject it to physical shock.
- Be sure the unit is grounded. Always connect power to a grounded receptacle.
- Do not disassemble the pump or the vacuum pump.
- Do not modify the unit.
- Use only genuine Hakko replacement parts.
- Do not wet the unit or use the unit with wet hands.
- Remove power cord by holding the plug – not the wires.
- Do not leave the vacuum pump on for long periods of time.
- After using, do not turn the power OFF until "P-S" is displayed on the temperature display.
- Make sure the work area is well ventilated.
- The Hakko 852 is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the Hakko 852.

4. PART NAMES

English

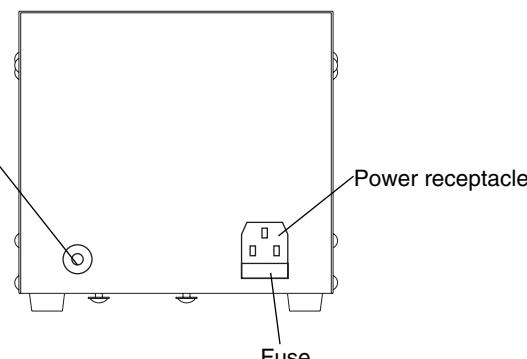
Station



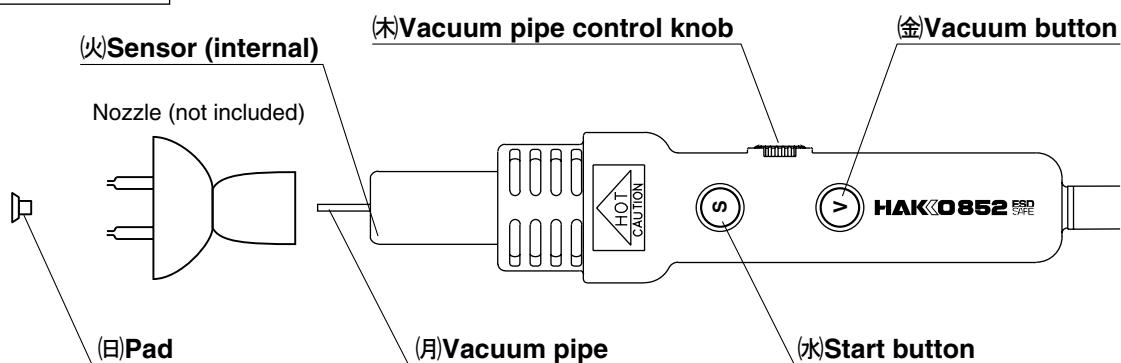
Jack for optional foot-switch

CAUTION

This jack is for the foot-switch only. Do not connect any other device.



Handpiece



Station

- ① Temperature setting section** Use this section for displaying and setting the temperature. The temperature range is 100 to 450°C. (212 to 842°F.). The temperature is factory-set to 300°C. (572°F.).
- (UP) (DOWN) Use these buttons to increase and decrease the temperature.
- (*) When this button is pressed for more than one second, the station enters temperature setting mode. This button is also used to finalize the temperature setting when setting the temperature. When this button is pressed for less than one second, the current temperature setting is displayed.
- ⚠ CAUTION:** Both the temperature displayed and the temperature setting refer to the temperature at the sensor.
- ② Timer setting section** Use this section for displaying and setting the heating time in Auto mode. The air blow time range is 15 – 999 seconds.
- (UP) (DOWN) Use these buttons to increase and decrease the blow time.
- (*) When this button is pressed for more than one second, the station enters timer setting mode. This button is also used to finalize the timer setting when setting the timer. When this button is pressed for less than one second, the current timer setting is displayed.
- ③ Airflow setting section** The airflow can be set within the range of 7 to 20l/min. Set the airflow using the airflow control knob.
- ④ Airflow meter** This meter indicates the airflow rate. (7l/min and above)
- ⑤ Power switch** This switch turns the power ON and OFF.
- ⑥ Airflow control knob** This knob controls the airflow.
- ⑦ Mode setting section** Use this section for displaying and selecting the mode. The following three modes can be selected: MANUAL, REMOVE, and INSTALL.
- Select the mode using (⑦) the mode selection button.
- ⑧ Vacuum indicator** This indicator lights when the vacuum pump is in operation.

Handpiece

- ① Pads** The pads hold parts by suction applied through the vacuum pipe.
- ② Vacuum pipe** The pads are mounted on the tip of the vacuum pipe.
- ③ Sensor (internal)** The sensor detects the temperature of the hot air.
- ④ Start button**
- Manual Mode
When the Start button is pressed, the unit begins blowing hot air.
When the start button is pressed again, the unit begins cooling and stops blowing hot air after reaching 200°C. (392°F.)
 - Auto Mode
When the Start button is pressed, the program begins. When the start button is pressed again, the unit begins cooling.
- ⑤ Vacuum pipe control knob** This knob controls the length of the vacuum pipe.
- ⑥ Vacuum button** This button turns the vacuum pump ON and OFF.

5. PREPARATION: ASSEMBLY AND ELECTRICAL CONNECTION

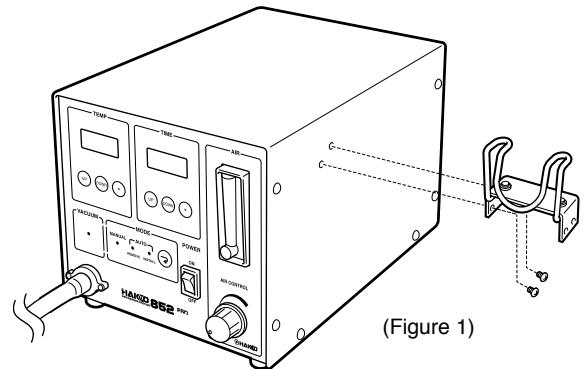
Preparation: Assembly and Electrical Connection

A. Station Assembly

● Attach the handpiece holder.

Remove the handpiece holder mounting screw from the side of the station. Attach the handpiece holder to the station. (Figure 1)

(The handpiece holder can be installed on either the left or right side.)

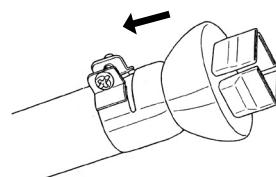
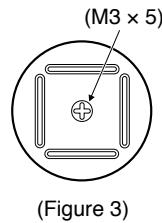
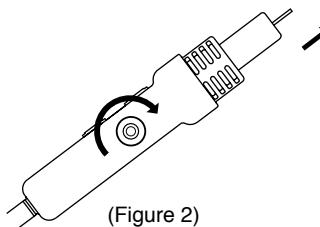


B. Handpiece Assembly

● Using vacuum function operative nozzle (see page 17.)

1. Attach the nozzle.

- Extend the vacuum pipe using the vacuum pipe control knob. (Figure 2)
- Remove the inside screw ($M3 \times 5$) of the nozzle. (Figure 3)
- Loosen the nozzle mounting screw. Pass the vacuum pipe through the nozzle hole and attach the nozzle. (Figure 4)
- Tighten the nozzle mounting screw.



2. Attach the pad.

- Attach the pad. (Figure 6)
- Adjust the pad to an appropriate position.

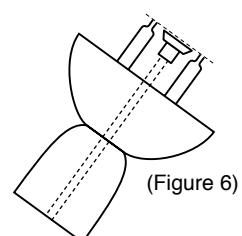
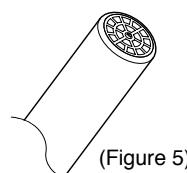
Adjust the vacuum pipe so that the pipe and pad protrude as little as possible.

⚠ CAUTION

● Vacuum Pipe

Do not use excessive force.

When not using a nozzle, retract the vacuum pipe to the shortest length. (Figure 5)



⚠ CAUTION

The nozzle and pads reach high temperatures, get very hot. Be sure they are cool before attempting to replace them.

⚠ CAUTION

● Pad

The pads do not last indefinitely. When they become deteriorated, replace them. Since exposure to high temperatures causes them to deteriorate faster, Hakko recommends they be cooled after use.

● Using vacuum function inoperative nozzle (see page 18.)

Attach the nozzle.

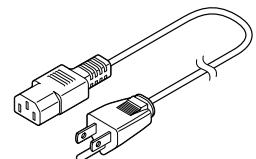
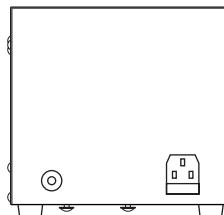
- a. Retract the vacuum pipe to the shortest length using the vacuum pipe control knob. (Figure 5)
- b. Loosen the nozzle mounting screw. Attach the nozzle. (Figure 4)
- c. Tighten the nozzle mounting screw.

⚠ CAUTION

The pad cannot be used with this type of nozzle.

C. Electrical Connection and Power ON

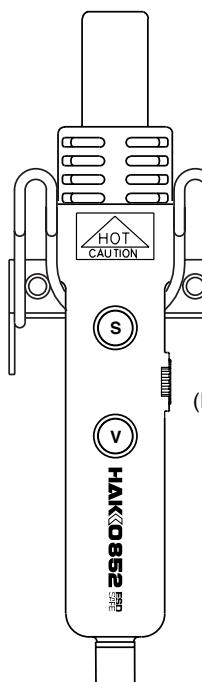
1. Connect the power cord to the power receptacle on the back panel of the station. (Figure 7)
2. Place the handpiece on the holder. (Figure 8)
3. Plug the power cord into a grounded wall socket.
4. Turn the power switch ON.



(Figure 7)

⚠ CAUTION

This product is ESD-protected. Be sure to use a grounded wall socket.



⚠ CAUTION
When not in use, place the handpiece on the holder.

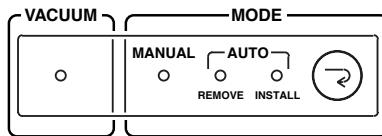
(Figure 8) Top View

5. PREPARATION: ASSEMBLY AND ELECTRICAL CONNECTION

D. Mode Selection

Select the desired mode using the mode selection button.

The Hakko 852 provides the following three modes:



(Figure 9)

● Manual Mode (See page 8.)

In this mode, air-blow start and vacuum pump operation are handled entirely by manual operation. Use this mode when setting up Auto mode conditions, performing operations for which no conditions have been established, performing maintenance, or executing a single operation.

● Remove Mode (AUTO) (See page 9.)

This mode is used when removing parts. After starting, the heating time can be set by setting the timer. The vacuum pump turns ON automatically.

● Install Mode (AUTO) (See page 10.)

This mode is used when installing parts. After starting, the heating time can be set by setting the timer. The vacuum pump turns OFF automatically.

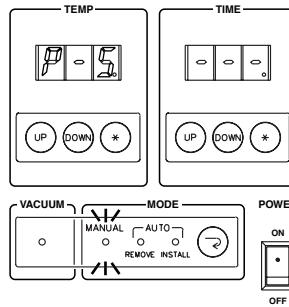
6. OPERATION

Operation in Manual Mode

●Selecting Manual Mode

Press the mode selection button and set the mode to MANUAL.

The timer does not operate.  appears on the timer display.



When checking the temperature setting

Press the  button for less than one second. To change the temperature setting, see "Setting/Changing the Temperature" on page 11.

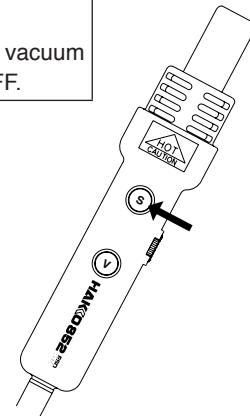
●Air Blow

1. Start

Press the Start button on the hand-piece (or the foot-switch) to start the flow of air. The hot air blows from the tip of the nozzle, and the temperature is controlled according to the temperature setting.

2. Stop

Press the Start switch again. Power to the heater is shut off and cooling begins. When the temperature falls to 200°C. (392°F.), the air stops blowing and the temperature display reads



⚠ CAUTION

Do not stop the hot air or the vacuum by turning the power switch OFF.

●Vacuum Function

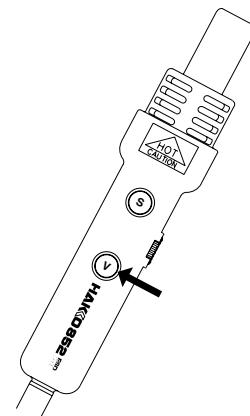
This function is used to hold the component securely to the pads.

1. Start

Press the Vacuum button on the hand-piece. The vacuum pump turns ON and the part is held by suction.

2. Stop

Press and hold the Vacuum button for **more than 0.3 second**. The vacuum pump turns OFF.



⚠ CAUTION

Parts held by the pads are very hot. Be careful when removing them from the pads.

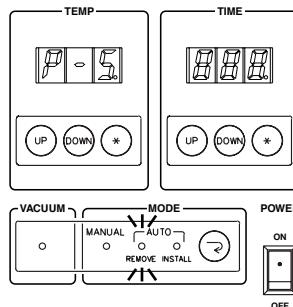
6. OPERATION

Auto/Remove Mode

●Selecting Remove Mode

Press the mode selection button and set the mode to REMOVE. This mode has the following sequence:

- ① Start/hot air blow (manual)
- ② Vacuum ON five seconds before the timer runs out (automatic)
- ③ Vacuum OFF (manual)
- ④ Cooling start and air blow stop (automatic)



To check the temperature setting, press the ***** button for less than one second. To change the temperature setting, see "Setting/Changing the Temperature" on page 11.

To change the air blow time, see "Setting/Changing the Time" on page 12.

●Removal

●Preparation

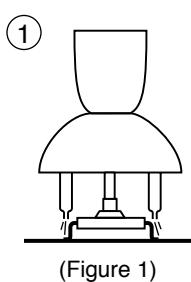
Position the nozzle and pads over the part you wish to remove.

① Start (heating)

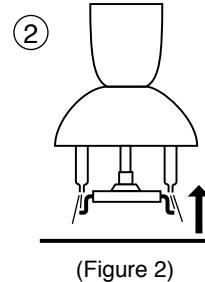
Press the start button on the handpiece (or the foot-switch). Hot air blows from the nozzle and melts the solder. The timer begins counting down. (Figure 1)

CAUTION

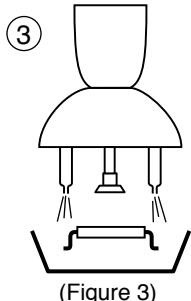
To stop the program, press the start button. Cooling begins.



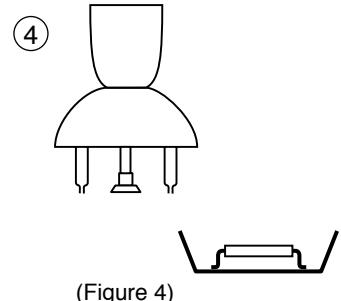
(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)

② Suction

When five seconds remain on the timer, the vacuum automatically turns ON and the part is held by suction. Lift the handpiece and remove the part from the P.W.B.. (Figure 2)

③ Releasing the Part

Release the part by pressing the vacuum button for more than 0.3 second. (Figure 3)

④ Stop

When the timer reaches 0, cooling begins and the air stops blowing as soon as the temperature reaches 200°C. (392°F.).

CAUTION

If the vacuum button is pressed before the timer runs down to five seconds, the vacuum pump turns ON and the remaining time is automatically set to five seconds.

CAUTION

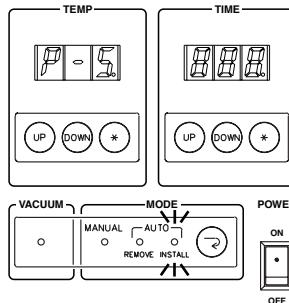
The solder that remains on the substrate will be deteriorated. Remove it with a solder remover or some solder wick.

Auto/Install Mode

●Selecting Install Mode

Press the mode selection button and set the mode to INSTALL. This mode has the following sequence:

- ① Vacuum ON (manual)
- ② Start/hot air blow (manual)
- ③ Vacuum OFF after five seconds (automatic)
- ④ Cooling start and air blow stop (automatic)



To check the temperature setting, press the \times button for less than one second. To change the temperature setting, see "Setting/Changing the Temperature" on page 11.

To change the air blow time, see "Setting/Changing the Time" on page 12.

●Installation

●Preparation

Apply an appropriate amount of solder paste to P.W.B..

① Part Suction and Positioning

Press the VACUUM button on the handpiece (or the foot-switch). The part is held to the pads by suction. Position the part over the P.W.B.. (Figure 1)

② Start

Press the START button. Hot air blows from the nozzle and soldering begins. (Figure 2)

③ Vacuum Stop

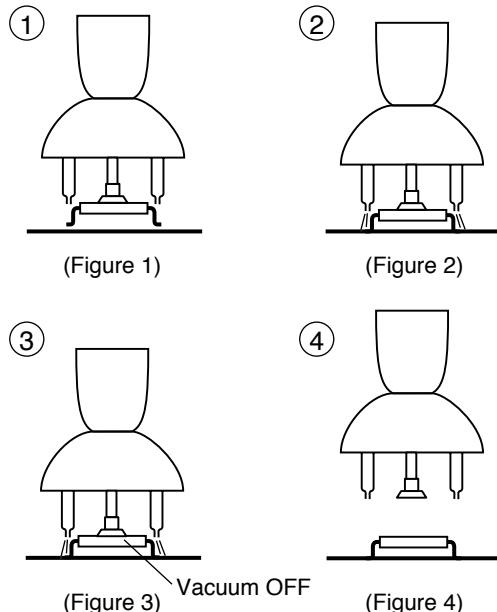
After five seconds, the vacuum turns OFF and the part is released from suction. (Figure 3)

④ Stop

When the timer reaches 0, cooling begins. Make sure the solder has hardened before lifting the handpiece. (Figure 4)

⚠ CAUTION

While there are many advantages to using hot air for soldering and desoldering, it is possible for the process to result in defects such as bridges or solder balls. Hakko recommends that all operators be made familiar with the equipment. Be sure to inspect each completed product.



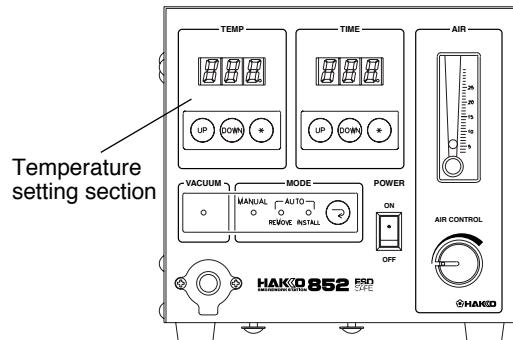
6. OPERATION

Setting/Changing the Temperature

CAUTION

The temperature setting range is 100 – 450°C.
(212 – 842°F).

- Attempt to enter a value outside the setting range will cause the display to begin flashing the HUNDREDS digit again. Reenter a correct value.
- Both the display temperature and the temperature setting are the temperature at the sensor. (Even with the same temperature setting, the temperature of the hot air differs depending on the nozzle size.)



Example: Change the temperature setting from 300 to 450°C.

1. Press the ***** on temperature setting section for more than one second.

- The station goes into temperature setting mode and the HUNDREDS digit flashes on the display, indicating that the HUNDREDS digit can be entered.

2. Enter the HUNDREDS digit.

- Use the **UP** and **DOWN** buttons to select the desired value for the HUNDREDS digit. **Only 1, 2, 3, or 4 can be selected.** (In °F mode, **2, 3, 4, 5, 6, 7, and 8 can be selected**). When the desired value is displayed, press the ***** button. The TENS digit begins to flash.

3. Enter TENS digit.

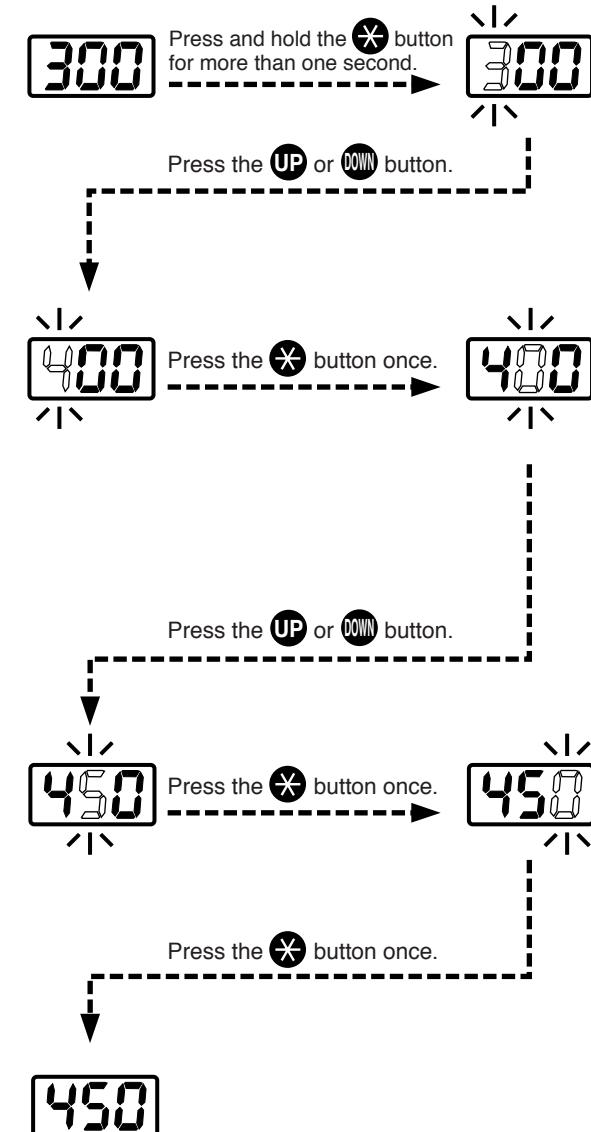
- Use the **UP** and **DOWN** buttons to select the desired value for the TENS digit. **Any value from 0 to 9 can be selected.** When the desired value is displayed, press the ***** button. The UNITS digit begins to flash.

4. Enter the UNITS digit.

- Select the desired value for the UNITS digit in the same manner as for the TENS digit.
- Press the ***** button.
- The temperature setting is stored in memory. Heater control begins after the new temperature setting is displayed.

CAUTION

If the power is turned OFF before the temperature setting procedure is completed, the new setting value will not be stored in memory.

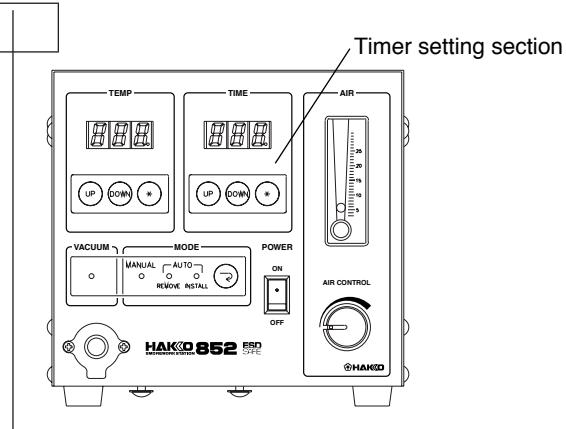


Setting/Changing the Time

CAUTION

The timer setting range is 15 – 999 seconds.

- Attempt to enter a value outside the setting range will cause the display to begin flashing the HUNDREDS digit again. Reenter a correct value.



Example: Change the temperature setting from 300 to 450°C.

1. Press the mode selection button and set the mode to REMOVE or INSTALL.

2. Press the button on timer setting section for more than one second.

- The station goes into timer setting mode and the HUNDREDS digit flashes on the display, indicating that the HUNDREDS digit can be entered.

3. Enter the HUNDREDS digit.

- Use the and buttons to display the desired value for the HUNDREDS digit.
- Press the button. The TENS digit begins to flash.

4. Enter the TENS digit.

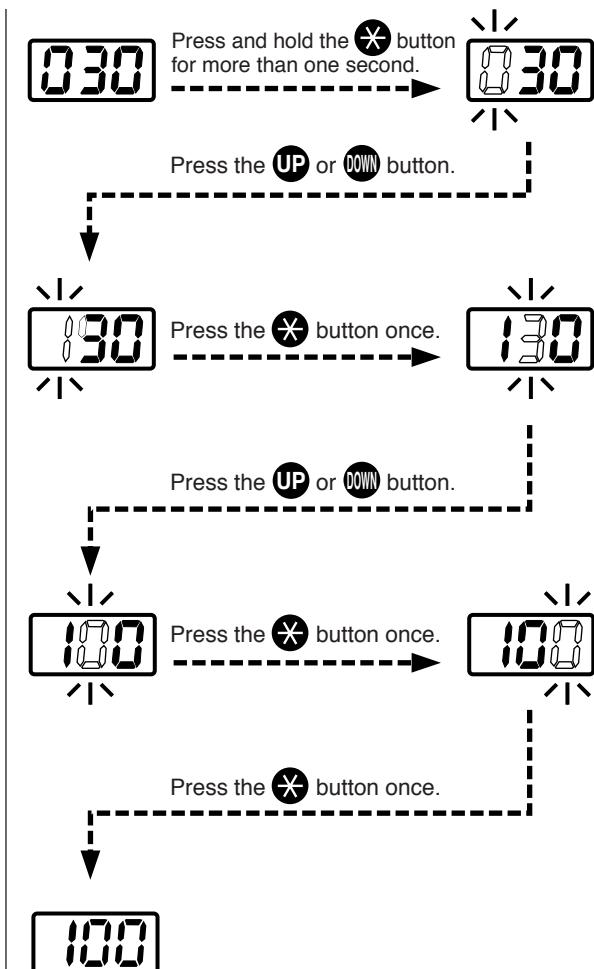
- Use the and buttons to display the desired value for the TENS digit.
- Press the button. The UNITS digit begins to flash.

5. Enter the UNITS digit.

- Select the desired value for the UNITS digit in the same manner as for the TENS digit.
- Press the button. The timer setting is stored in memory. Heater control begins after the new timer setting is displayed.

CAUTION

If the power is turned OFF before the timer setting procedure is completed, the new setting value will not be stored in memory.



6. OPERATION

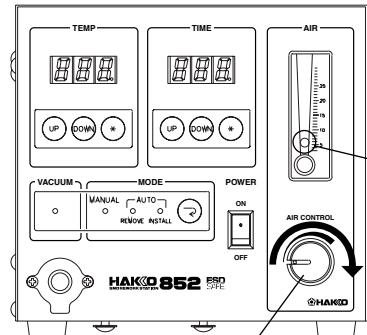
Airflow Adjustment

Adjust the flow rate of the hot air while watching the airflow meter. The adjustment range is 7ℓ/min to 20ℓ/min.

English

CAUTION

Do not apply excessive force when turning the airflow control knob.



Read from
the center
of the ball.

Turn clockwise to increase the airflow.
Turn counterclockwise to decrease the airflow.

7. PARAMETERS / INITIAL RESETTING

● Entering the Parameters

① °C (Celsius) or °F (Fahrenheit) Temperature Display

② Power Save Time

The power save function automatically turns off the hot air when it has blown continuously for a specified amount of time in manual mode. Power to the heater is turned off and then the air is stopped after the handpiece cools.

③ Sensor Temperature Display

⚠ CAUTION

If the power is turned OFF before the parameter setting procedure is completed, the new setting values will not be stored in memory.

● Initial Reset

Turn the power switch ON while simultaneously pressing the **UP**, **DOWN**, and ***** buttons on the temperature setting section. The station will be reset to the following initial values:

The Hakko 852 has the following three parameters:

- 1) °C or °F temperature display selection
- 2) Power save time (select 30 or 60 minutes)
- 3) Sensor temperature display

Once the station enters parameter mode, set the parameters in the order shown below. After all the parameters have been set, normal operation will be resumed.

1. Turn the power switch OFF .
 2. Press and hold down the **UP** and **DOWN** buttons on the temperature setting section simultaneously and then turn the power switch ON.
 3. Continue holding down both buttons until the display shows **C** (for Celsius) or **F** (for Fahrenheit). When the display shows **C** or **F**, the station is in parameter input mode.
- Pressing the **UP** and **DOWN** button will cause **C** or **F** to be displayed alternately.
 - Press the ***** button to select the scale. The power save time may now be entered.
 - When the station enters power save time setting mode, either **30** or **60** is displayed. Either 30 minutes or 60 minutes can be selected.
 - Pressing the **UP** and **DOWN** button will cause **30** or **60** to be displayed alternately.
 - Press the ***** button to enter your selection. The sensor temperature may now be displayed.
 - No data entry is required. The value displayed is the temperature currently detected by the sensor.
 - To end parameter input mode, press the ***** button. After displaying the temperature setting for two seconds, the station returns to normal mode.

°C/F selection	°C
Power save time	30 minutes
Temperature setting	300°C
Timer setting 30 seconds	30 seconds
Mode	Manual

8. MAINTENANCE / INSPECTION

English

● Broken Heater or Sensor

① Open the handpiece.

1. Retract the vacuum pipe to its shortest length.
2. Remove the three screws holding the handpiece together.
3. Move the tube downward.
4. Remove the pipe from the protruding portion of the handle.

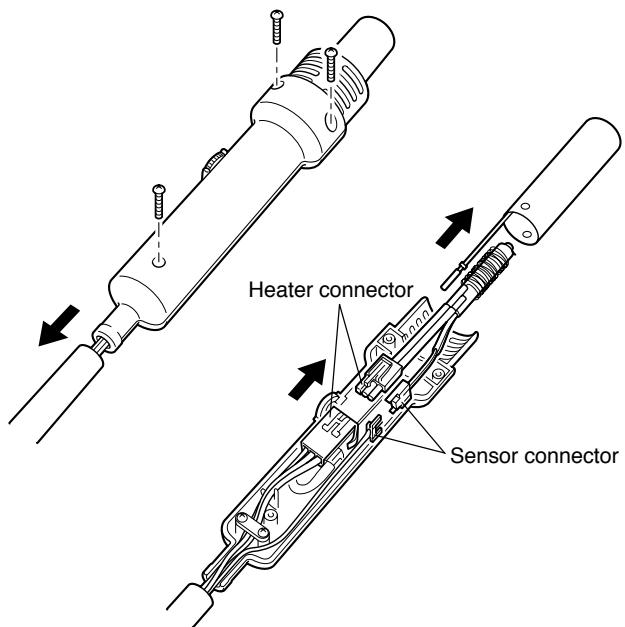
⚠ CAUTION

Quartz glass and heat insulation are inside the pipe. Be careful not to drop or lose these items.

5. Disconnect the heater sensor connector and remove the heater.

⚠ CAUTION

Do not apply excessive force to the vacuum pipe.

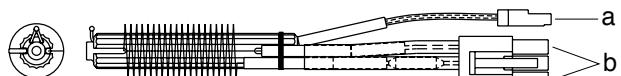


② Measure the resistance value.

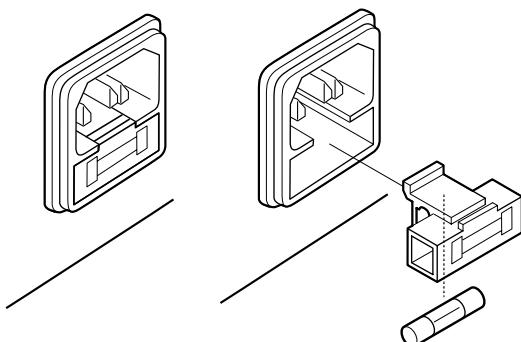
1. Measure the resistance value (a) of the sensor. The correct value is 0Ω .
2. Measure the resistance value (b) of the heater. The correct values are approximately 33Ω ($\pm 10\%$) (100-120V), 85Ω ($\pm 10\%$) (220-240V) at room temperature.

If the resistance value is incorrect, replace the part.

(Refer to the instructions included with the replacement part.)



● Replacing the Fuse

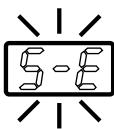


1. Unplug the power cord from the power receptacle.
2. Remove the fuse holder.
3. Replace the fuse.
4. Put the fuse holder back in place.

9. ERROR MESSAGES

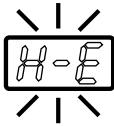
When the error detection software in the Hakko 852 detects an error, a message is displayed to alert the operator. See "Troubleshooting" for procedures to correct the error.

Sensor Error



This error occurs when there is the possibility of a sensor failure (or a failure in the sensor circuit). **S-E** flashes and the power is shut down.

Heater Error



This error occurs when the temperature of the hot air is falling even though the heater is on. The **H-E** flashes to indicate the possibility of a heater failure.

10. TROUBLESHOOTING

⚠ WARNING

- Before checking the inside of the Hakko 852 or replacing parts, be sure to disconnect the power plug. Failure to do so may result in electric shock.

- **The unit does not operate when the power switch is turned ON.**

CHECK : Is the power cord disconnected?

ACTION : Connect it.

CHECK : Is the fuse blown?

ACTION : Investigate why the fuse blew and then replace the fuse. If the cause can not be determined, replace the fuse. If the fuse blows again, send the unit in for repair.

- **S-E** flashes, indicating a sensor error.

CHECK : Is the sensor broken?

ACTION : See the procedure for checking a potentially broken sensor (p.15).

- **H-E** flashes, indicating a heater error.

CHECK : Is the heater broken?

ACTION : See the procedure for checking a potentially broken heater (p.15).

- **The timer cannot be set.**

CHECK : Is the station in Auto mode?

ACTION : Put the station into Auto mode.

CHECK : Is the value outside the setting range?

ACTION : Enter a value that is within the setting range.

- **The vacuum pump does not stop when the vacuum button is pressed.**

CHECK : Is the vacuum button being pressed for less than 0.3 second?

ACTION : Press the vacuum button for more than 0.3 second.

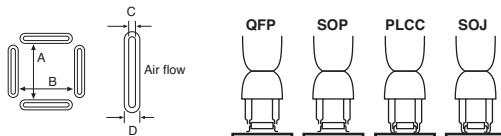
11. OPTIONAL PARTS

mm (inch)

●Nozzles

NOTE

The size in Name/ Specification indicates the size of IC package.

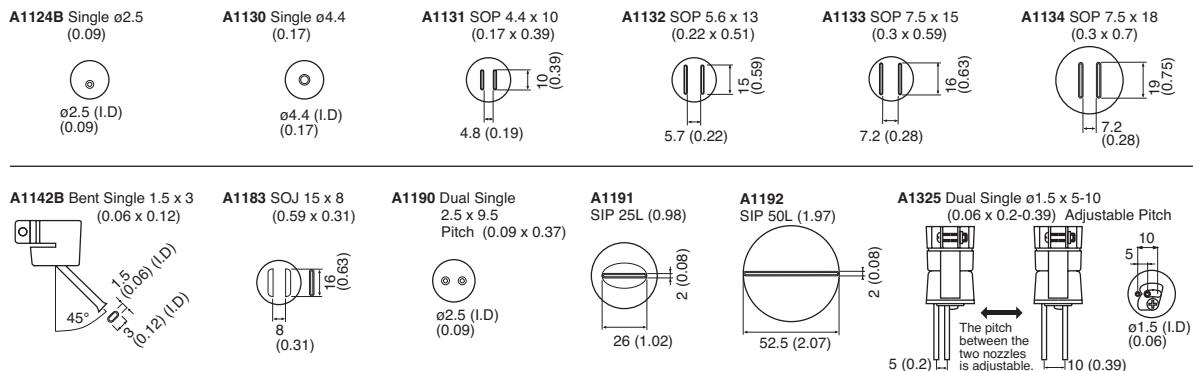


	C 0.8 (0.03) D 1.8 (0.07)	C 1.0 (0.04) D 2.0 (0.08)	C 0.8 (0.03) D 2.0 (0.08)
No.	A1125B~A1129B A1131~A1141B A1180B~A1189B A1203B~A1265B	A1191	A1192

●VACUUM FUNCTION OPERATIVE NOZZLES.

A1125B QFP 10 x 10 (0.39 x 0.39)	A1126B QFP 14 x 14 (0.55 x 0.55)	A1127B QFP 17.5 x 17.5 (0.68 x 0.68)	A1128B QFP 14 x 20 (0.55 x 0.78)	A1129B QFP 28 x 28 (1.1 x 1.1)	A1135B PLCC 17.5 x 17.5 (0.68 x 0.68) (44 Pins)
A:10.2 (0.4) B:10.2 (0.4) 10 (0.39)	A:15.2 (0.6) B:15.2 (0.6) 15 (0.59)	A:19.2 (0.76) B:19.2 (0.76) 19 (0.75)	A:15.2 (0.6) B:21.2 (0.83) 21 (0.83)	A:29.7 (1.17) B:29.7 (1.17) 29 (1.14)	A:18.5 (0.73) B:18.5 (0.73) 15 (0.59)
A1136B PLCC 20 x 20 (0.78 x 0.78) (52 Pins)	A1137B PLCC 25 x 25 (0.98 x 0.98) (68 Pins)	A1138B PLCC 30 x 30 (1.18 x 1.18) (84 Pins)	A1139B PLCC 12.5 x 7.3 (0.49 x 0.29) (18 Pins)	A1140B PLCC 11.5 x 11.5 (0.45 x 0.45) (28 Pins)	A1141B PLCC 11.5 x 14 (0.45 x 0.55) (32 Pins)
A:21 (0.83) B:21 (0.83) 19 (0.75)	A:26 (1.02) B:26 (1.02) 24 (0.94)	A:31 (1.22) B:31 (1.22) 29 (1.14)	A: 9 (0.35) B:14 (0.55) 6.9 (0.27)	A:13 (0.51) B:13 (0.51) 10 (0.39)	A:15 (0.59) B:13 (0.51) 10 (0.39)
A1180B BQFP 17 x 17 (0.67 x 0.67)	A1181B BQFP 19 x 19 (0.75 x 0.75)	A1182B BQFP 24 x 24 (0.94 x 0.94)	A1184B SOJ 18 x 8 (0.71 x 0.31)	A1185B TSOL 13 x 10 (0.51 x 0.39)	A1186B TSOL 18 x 10 (0.71 x 0.39)
A:18.2 (0.72) B:18.2 (0.72) 13.6 (0.54)	A:19.2 (0.76) B:19.2 (0.76) 16 (0.63)	A:24.2 (0.95) B:24.2 (0.95) 21 (0.83)	A:19 (0.75) B:10 (0.39)	A:10 (0.39) B:11.9 (0.47)	A:11.7 (0.46) B:18.2 (0.72)
A1187B TSOL 18.5 x 8 (0.73 x 0.31)	A1188B PLCC 9 x 9 (0.35 x 0.35) (20 Pins)	A1189B PLCC 34 x 34 (1.34 x 1.34) (100 Pins)	A1203B QFP 35 x 35 (1.38 x 1.38)	A1214B SOJ 10 x 26 (0.39 x 1.02)	A1215B QFP 42.5 x 42.5 (1.67 x 1.67)
A:10 (0.39) B:18.5 (0.73)	A:11 (0.43) B:11 (0.43) 10 (0.39)	A:36.5 (1.44) B:36.5 (1.44) 33.5 (1.32)	A:35.2 (1.39) B:35.2 (1.39) 35.2 (1.39)	A:31 (1.22) B:25.9 (1.02) 12 (0.47)	A:42.5 (1.67) B:42.5 (1.67) 40 (1.57)
A1257B SOP 11 x 21 (0.43 x 0.83)	A1258B SOP 7.6 x 12.7 (0.3 x 0.5)	A1259B SOP 13 x 28 (0.51 x 1.1)	A1260B SOP 8.6 x 18 (0.34 x 0.71)	A1261B QFP 20 x 20 (0.78 x 0.78)	A1262B QFP 12 x 12 (0.47 x 0.47)
A:21 (0.83) B:11.7 (0.46)	A:8.2 (0.32) B:11.7 (0.46)	A:13.5 (0.53) B:29 (1.14)	A:8.7 (0.34) B:19 (0.75)	A:21 (0.83) B:21 (0.83)	A:12.2 (0.48) B:12.2 (0.48) 12 (0.47)
A1263B QFP 28 x 40 (1.1 x 1.57)	A1264B QFP 40 x 40 (1.57 x 1.57)	A1265B QFP 32 x 32 (1.26 x 1.26)			
A:27.7 (1.09) B:39.7 (1.56) 39 (1.54)	A:40.2 (1.58) B:40.2 (1.58) 39 (1.54)	A:32.2 (1.27) B:32.2 (1.27) 31 (1.22)			

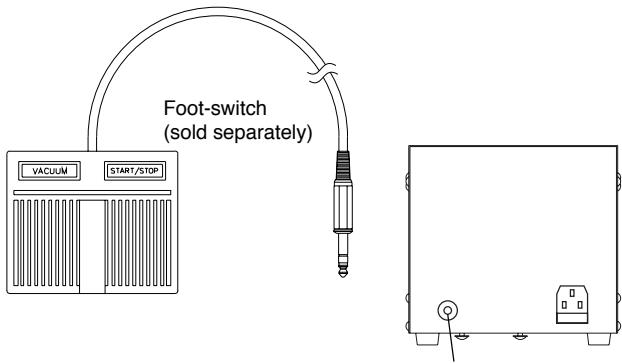
●VACUUM FUNCTION INOPERATIVE NOZZLES.



△CAUTION Be sure **not** to use No. **A1124** Single ø2.5 (0.09) and No. **A1142** Bent Single 1.5 x 3 (0.06 x 0.12) nozzle with the Hakko 852. These nozzles do not have space to blow hot air, using them with the 852 may result in danger.

●FOOT-SWITCH

The foot-switch can be used to perform the same operation as the start button and the vacuum button on the handpiece.

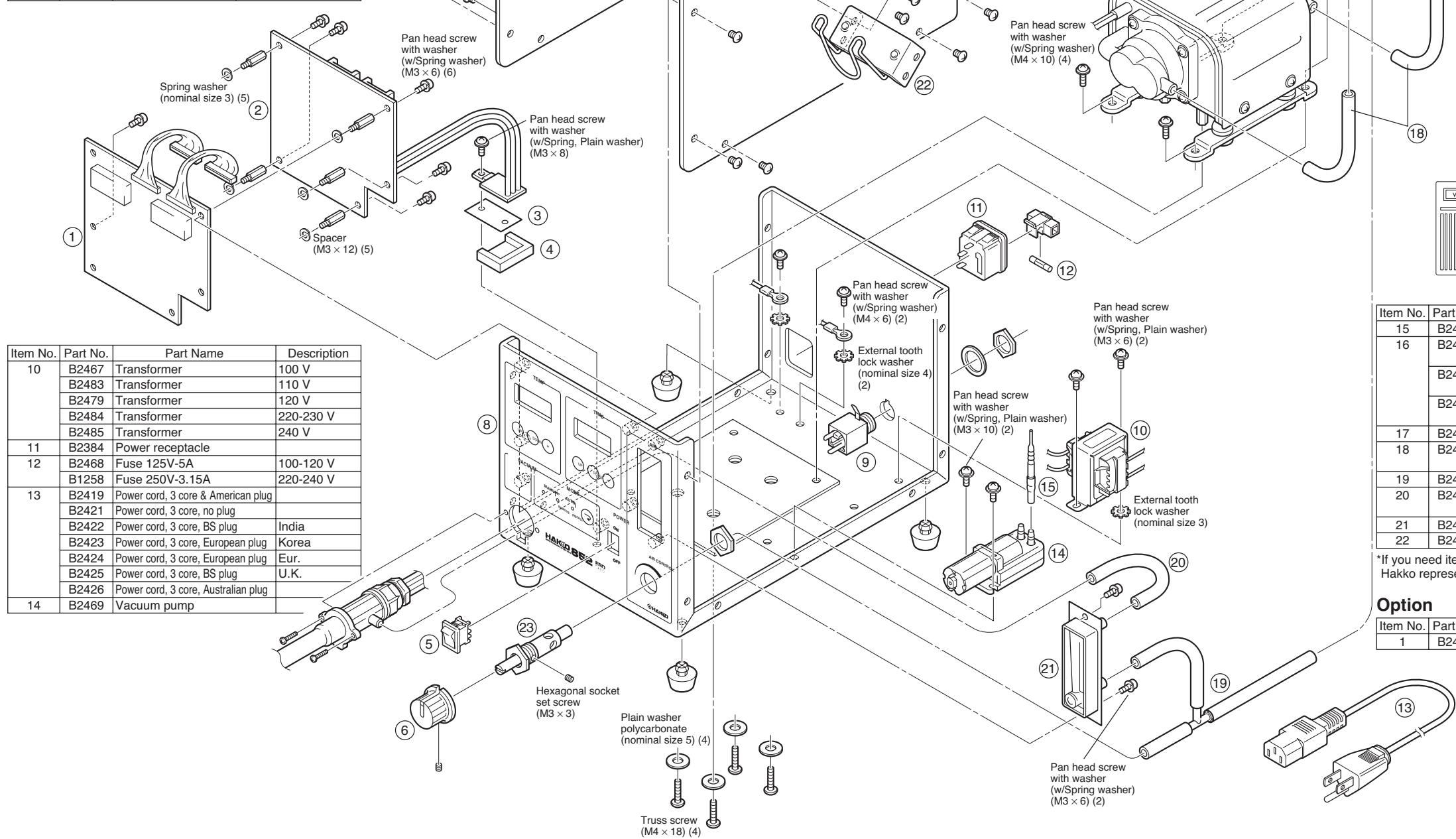


Insert the foot-switch plug into the foot-switch jack on the back of the station.

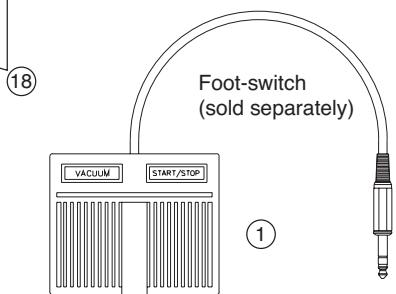
12. PARTS LIST / STATION

*Spare or repair parts do not include mounting screws, if they are not listed on the description. Screws must be ordered separately.

Item No.	Part No.	Part Name	Description
1	B2461	P.W.B./display	
2	B2462	P.W.B./heat control	100-120 V With triac
3	B2482	P.W.B./heat control	220-240 V With triac
4	B2317	Radiation sheet	
5	B1084	Insulation sheet	
6	B1028	Switch	
7	B2464	Knob	With screw
8	B2465	Cover	With display window, membrane sheet
9	B2466	Jack for footswitch	



Option



Item No.	Part No.	Part Name	Description
15	B2470	Tube joint	With silicone tube
16	B2471	Air pump	100 V, With high nut, nylon band, double-side tape
	B2480	Air pump	110-120 V, With high nut, nylon band, double-side tape
	B2481	Air pump	220-240 V, With high nut, nylon band, double-side tape
17	B2472	Sound-proof tank	
18	B2473	Silicone tube	8 × 5 × 130 ℓ mm 0.3 × 0.2 × 5.1 ℥ in.
19	B2474	Tube connector	With silicone tube
20	B2475	Silicone tube	8 × 5 × 205 ℓ mm 0.3 × 0.2 × 8.1 ℥ in.
21	B2476	Air flow meter	
22	B2477	Handpiece holder assembly	

*If you need item no. 23. Exhaust nozzle, contact your Hakko representative.

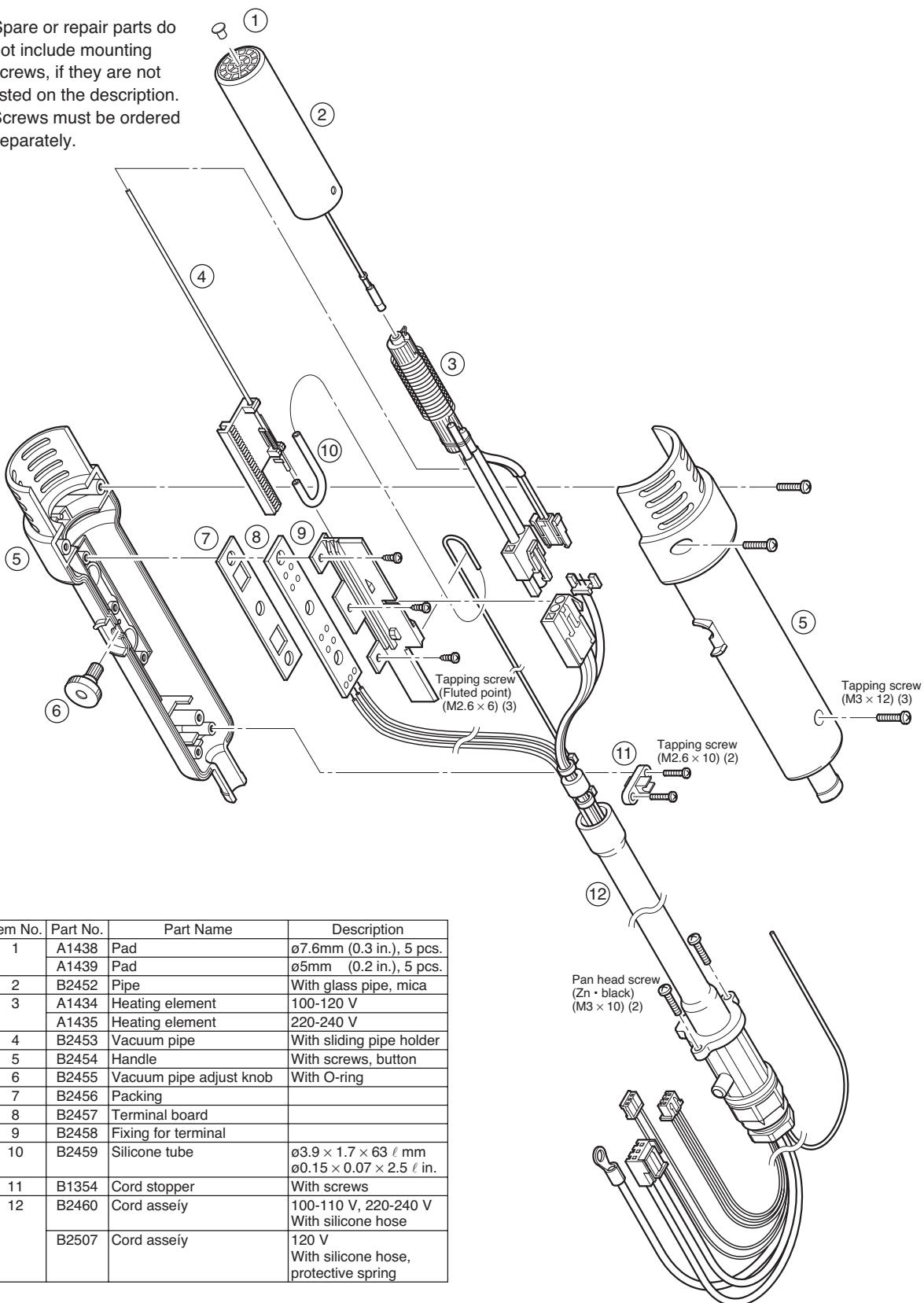
Option

Item No.	Part No.	Part Name	Description
1	B2478	Foot-switch	

13. PARTS LIST / HANDPIECE

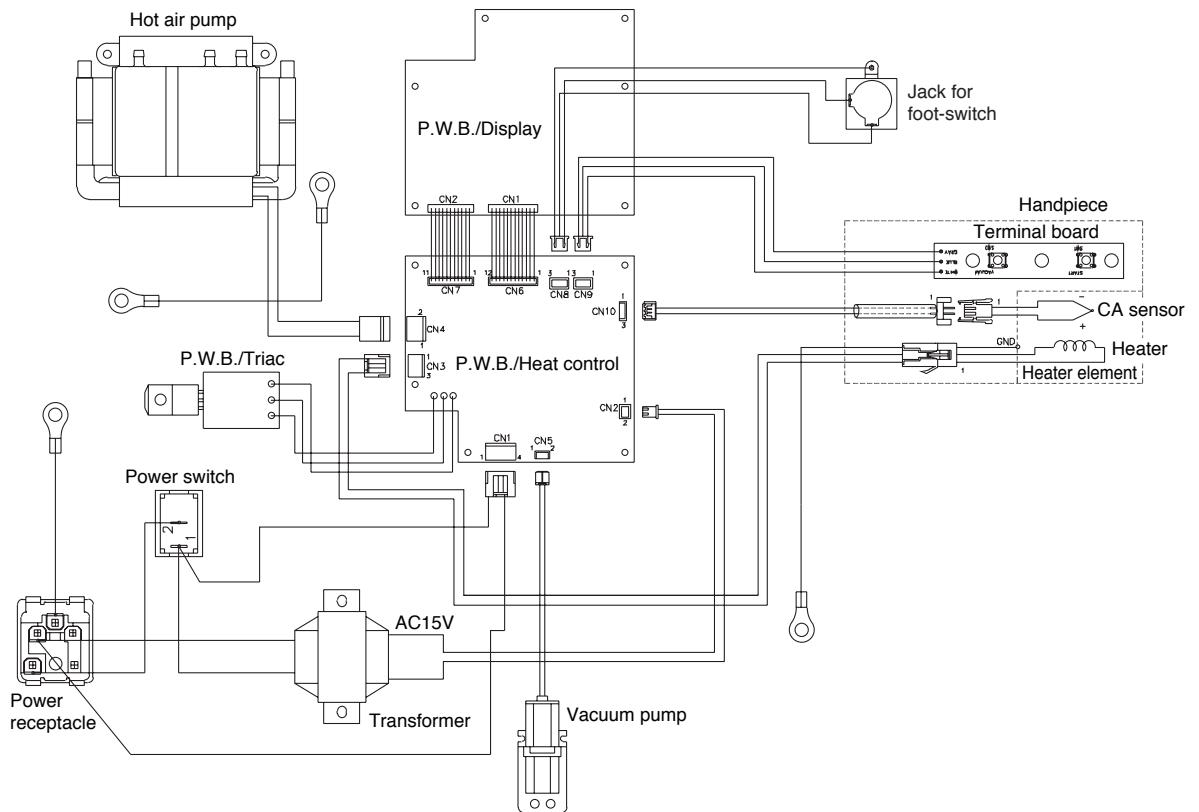
English

*Spare or repair parts do not include mounting screws, if they are not listed on the description. Screws must be ordered separately.



Item No.	Part No.	Part Name	Description
1	A1438	Pad	$\varnothing 7.6\text{mm}$ (0.3 in.), 5 pcs.
	A1439	Pad	$\varnothing 5\text{mm}$ (0.2 in.), 5 pcs.
2	B2452	Pipe	With glass pipe, mica
3	A1434	Heating element	100-120 V
	A1435	Heating element	220-240 V
4	B2453	Vacuum pipe	With sliding pipe holder
5	B2454	Handle	With screws, button
6	B2455	Vacuum pipe adjust knob	With O-ring
7	B2456	Packing	
8	B2457	Terminal board	
9	B2458	Fixing for terminal	
10	B2459	Silicone tube	$\varnothing 3.9 \times 1.7 \times 63\text{ mm}$ $\varnothing 0.15 \times 0.07 \times 2.5\text{ in.}$
11	B1354	Cord stopper	With screws
12	B2460	Cord asséiy	100-110 V, 220-240 V With silicone hose
	B2507	Cord asséiy	120 V With silicone hose, protective spring

14. WIRING DIAGRAM



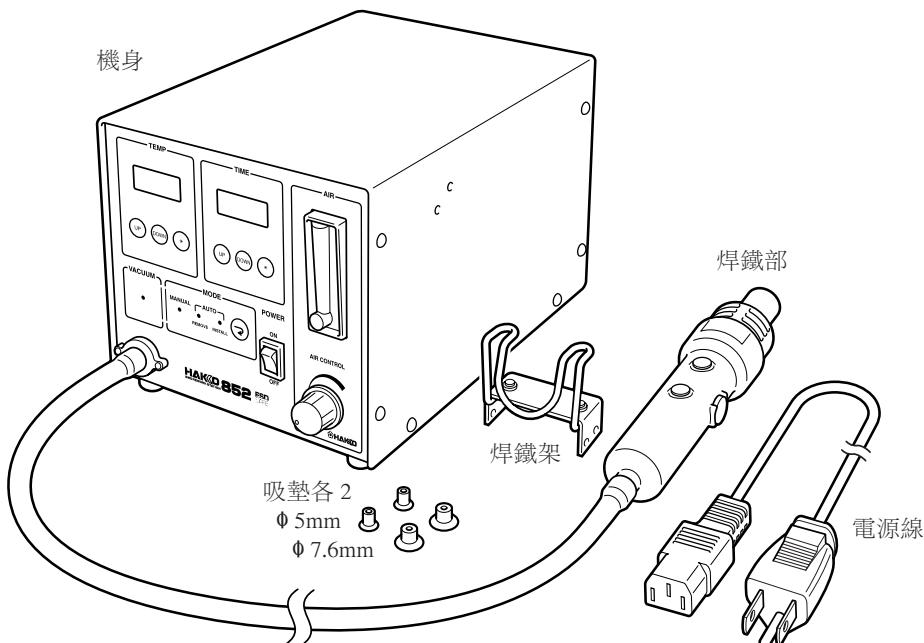
1. 包裝清單

請先確認包裝的內容。

HAKKO 852 機身	1
電源線.....	1
焊鐵架.....	1
吸墊 (Φ 5mm、Φ 7.6mm).....	各 2
使用說明書	1

※ 本商品不包含噴氣嘴。

請另購配合 IC 之噴氣嘴。



2. 規格

名稱	HAKKO 852
耗電量	100V-300W 110V-360W 120V-410W 220V-550W 230V-600W 240V-650W

● 機身

耗電量	30W
風量	7 公升 / 分 -20 公升 / 分以上
控制溫度	100~450IC/212~842IF (傳感器部)
模式	手動 / 自動
定時器	15~999 秒
外形尺寸	260 (長) × 180 (寬) × 170 (高) mm
重量	5kg

● 焊鐵部

耗電量	100V-270W 110V-330W 120V-380W 220V-520W 230V-570W 240V-620W
全長 (不含電線)	200 (L) mm
重量 (不含電線)	200g

* 本商品有防靜電處理。

* 規格及外觀，可能改良變更，恕不先行通知。

3. 安全及使用上的注意事項

本說明書之‘警告’和‘注意’的定義如下。

⚠ 警 告： 濫用可能導致使用者死亡或負重傷。

⚠ 注 意： 濫用可能導致使用者受傷或對涉及物體造成實質破壞。

●為了安全，請務必遵守以下之注意事項。

⚠ 注意

當電源接通時，熱風及噴氣嘴附近之溫度高達到攝氏100~450度的高溫。

鑑於濫用可能發生燙傷、火災，請務必嚴格遵守以下注意事項。

- 切勿碰觸熱風或噴氣嘴周圍的金屬部分。
- 切勿在引火性之氣體或材料、易燃物附近使用。
- 噴氣嘴不要朝向人或臉面。
- 通知周圍的人「高溫危險」。
- 使用暫停、結束時，或要離開現場時關閉電源。
- 更換部件或收拾本體時，應關掉電源並待冷卻至室溫。

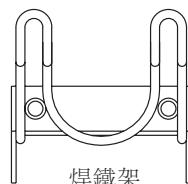
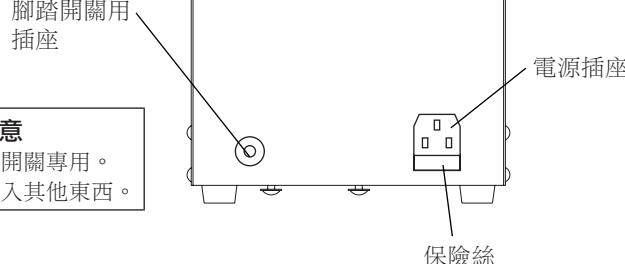
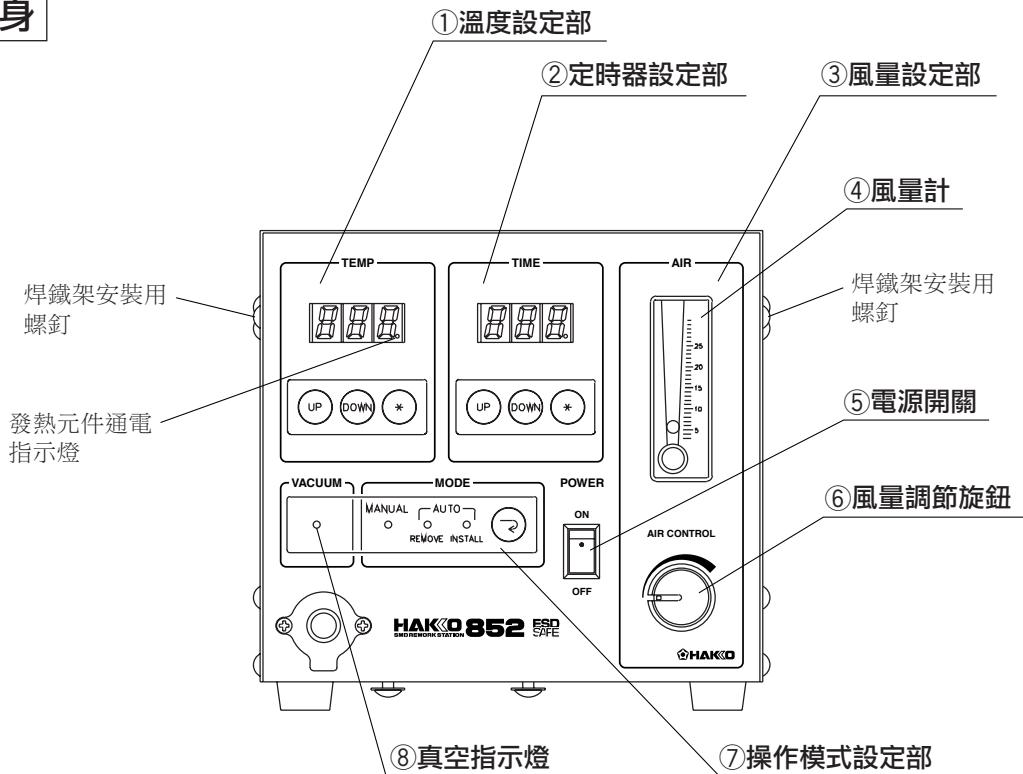
●為免損壞本產品，及保持作業環境之安全，應遵守下列事項。

- 切勿以焊鐵部敲打作業臺而給予強大衝擊。
- 務必接地之後再使用。
- 切勿分解泵或真空泵。
- 切勿改裝本產品。
- 更換部件時，應採用 HAKKO 原件。
- 切勿弄濕本體，或手濕時也不能使用。
- 拔出或插入電源線時，請抓住插頭進行。
- 切勿長時間使真空泵 ON。
- 使用後，在溫度顯示部出現“P-S”之後，才關閉電源。
- 作業時，請做好通風。
- 使用本體時，不可作任何可能傷害身體或損害物體的妄動。

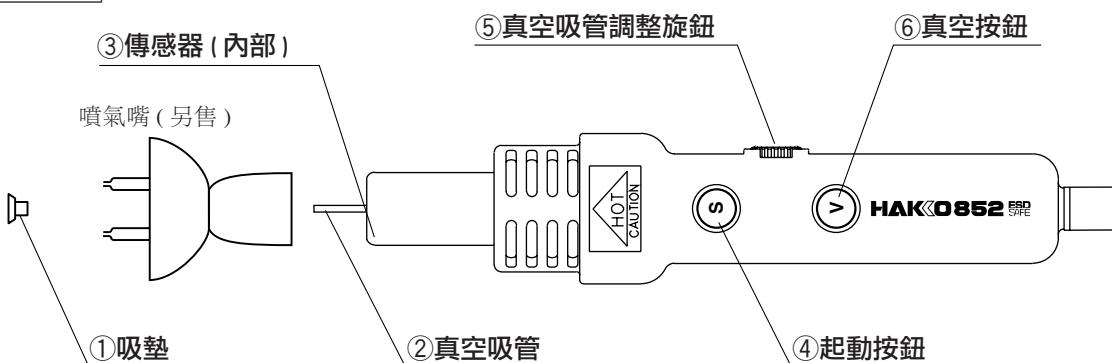


4. 各部名稱

機身



焊鐵部



機身

- ① **溫度設定部** 進行溫度顯示與設定。可在 100-450°C (212-842°F) 之範圍內設定溫度。工廠出貨時已設定為 300°C。
(溫度設定機能)
- **UP** , **DOWM** ... 為進行溫度之升高下降之按鈕。
- * 按下 1 秒鐘以上則進入溫度設定模式。
設定溫度時，決定設定的溫度。
按下不到 1 秒鐘則顯示設定溫度。
- △ 注意**
顯示及設定溫度為傳感器部的溫度。
- ② **定時器設定部** 在自動模式時，進行加熱時間的顯示與設定。可設定 15-999 秒
(定時器設定機能)
- **UP** , **DOWM** ... 為進行秒數之延長縮短之按鈕。
- * 按下 1 秒鐘以上則進入定時器設定模式。
定時器設定時，決定設定的時間。
按下不到 1 秒鐘則顯示設定時間。
- ③ **風量設定部 (風量設定機能)** 可設定 7 公升 / 分 ~20 公升 / 分之風量。以風量調節旋鈕調節之。
- ④ **風量計** 顯示風量。(7 公升 / 分以上)
- ⑤ **電源開關** 進行電源的打開、關閉。
- ⑥ **風量調節旋鈕** 進行風量調節。
- ⑦ **操作模式設定部 (模式設定機能)** 進行模式的顯示與選擇。可選擇 MANUAL、REMOVE、INSTALL 之三種模式。
以 ⑦ 模式選擇按鈕選擇之。
- ⑧ **真空指示燈** 真空泵動作時燈會亮。

焊鐵部

- ① **吸墊** 將部件吸著。
- ② **真空吸管** 在尖端裝上吸墊。
- ③ **傳感器 (內部)** 測知熱風的溫度。
- ④ **起動按鈕** ● 手動模式時
當按下起動鈕時開始吹出熱風。
再按一下開始冷卻，到 200IC 時停止。
● 自動模式時
按下起動鈕使程式起動。
再按一下停止程式，開始冷卻。
- ⑤ **真空吸管調整旋鈕** 調整真空吸管的長度。
- ⑥ **真空按鈕** 進行真空泵的打開 (ON)、關閉 (OFF)。



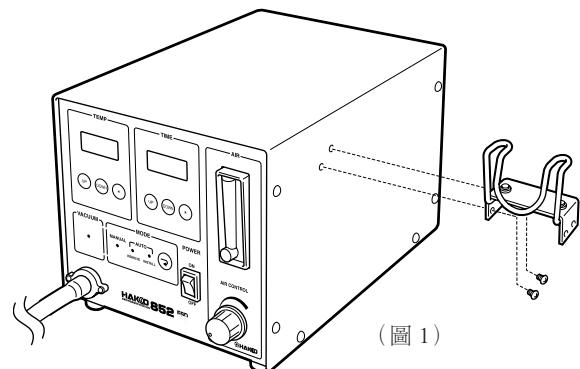
5. 準備一組裝與連接

準備一組裝與連接

A. 組裝機身

● 安裝焊鐵架

取下機身旁的焊鐵架安裝用螺釘。將焊鐵架裝到機身。(圖 1)
(左右哪一側都可安裝。)



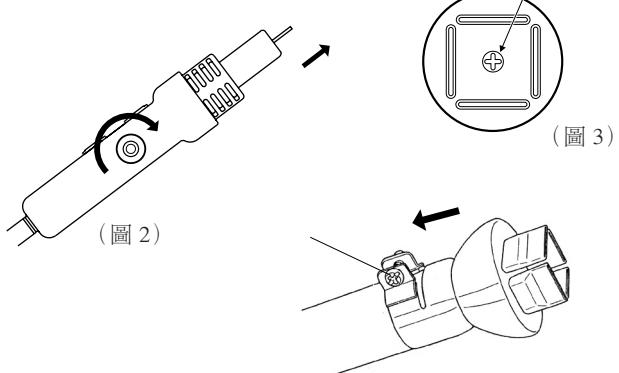
(圖 1)

B. 組裝焊鐵部

● 要使用可用真空機能的噴氣嘴 (參照 39 頁) 時

1. 安裝噴氣嘴

- 以真空吸管調節旋鈕使真空吸管伸出。(圖 2)
- 取下噴氣嘴內側的螺釘 (M3×5)。(圖 3)
- 鬆開噴氣嘴的安裝用螺釘。通過噴氣嘴的洞裝上真空吸管。(圖 4)
- 鎖緊噴氣嘴的安裝用螺釘。



M3×5

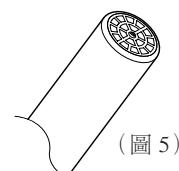
(圖 3)

△ 注意

● 真空吸管

請勿勉強用力。

未裝上噴氣嘴時請縮到最短使用之。(圖5)



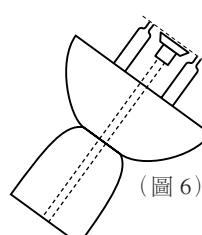
(圖 5)

2. 安裝吸墊

- 裝上吸墊。(圖 6)
- 調整適當的位置。
請使吸墊伸出盡量短一點來使用。

△ 注意

噴氣嘴與吸墊成高溫。更換時，請等到冷卻之後再進行。



(圖 6)

△ 注意

● 吸墊

吸墊為消耗品。惡化就請更換之。久置高溫之下會加速惡化，故請在作業結束後勤加冷卻。

● 要使用不能用真空機能的噴氣嘴 (參照 40 頁) 時

■ 安裝噴氣嘴

- a. 以真空吸管調節旋鈕使真空吸管縮到最短。(圖 5)
- b. 鬆開噴氣嘴的安裝用螺釘。裝上噴氣嘴。(圖 4)
- c. 鎖緊噴氣嘴的安裝用螺釘。

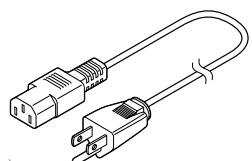
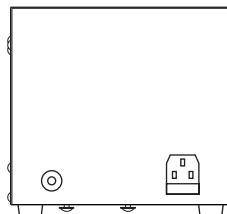


注意

不能使用吸墊。

C. 連接電源線、接通電源

1. 將電源線連接到機身後面的電源插座。
(圖 7)
2. 將焊鐵部放在焊鐵架上。(圖 8)
3. 將電源插頭插入電源插座。
4. 打開電源開關。

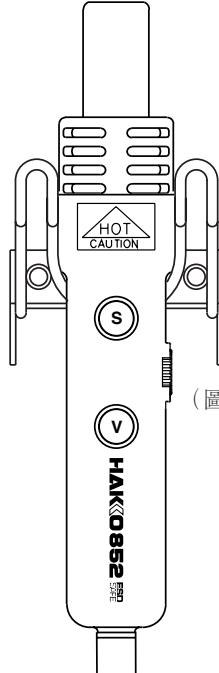


(圖 7)



注意

本產品有防靜電處理,請務必接地。



注意

不使用時,請將焊鐵部放在焊鐵架上。

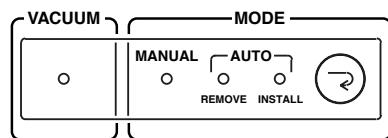
(圖 8) 從上面看到的圖

中
X

5. 準備—組裝與連接

D. 操作模式的選擇

以操作模式選擇按鈕選擇所使用的模式。HAKKO 852 按照使用方法可以選擇三種之模式。



(圖 9)

● MANUAL 模式 (參照 30 頁)

送風或真空泵的全動作以手動進行。如果未檢討或設定 AUTO 模式的條件或在進行維修及單一作業時，請使用此模式。

● REMOVE 模式 (AUTO) (參照 31 頁)

要取下部件時所使用的模式。起動後可用定時器設定加熱時間。真空泵會自動變 ON。

● INSTALL 模式 (AUTO) (參照 32 頁)

安裝部件時所使用的模式。起動後可用定時器設定加熱時間。

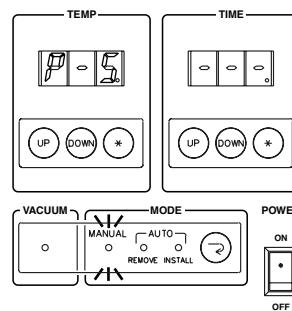
真空泵會自動變 OFF。

6. 使用方法

以 MANUAL 模式使用

● 選擇 MANUAL 模式

按下操作模式選擇按鈕以設定 MANUAL。定時器不會動作。定時器顯示部顯示



要確認設定溫度時

按下 按鈕不到一秒。如要變更設定溫度時，依照33頁的“溫度之設定/變更”而變更之。

● 送風

1. 起動

按下焊鐵部（或腳踏開關）之起動按鈕，開始送風。熱風從噴氣嘴吹出來，溫度被控制為設定溫度。

2. 停止

再次按下起動按鈕，停止對發熱元件的通電，並開始冷卻，而在 200IC 自動停止送風。停止送風後，溫度顯示部顯示 。

● 真空機能

使吸墊吸上部件。

1. 起動

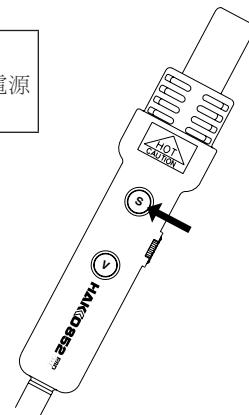
按下焊鐵部的真空按鈕，真空泵變 ON，並吸著部件。

2. 停止

要使真空泵變 OFF，請按住真空按鈕 0.3 秒以上。

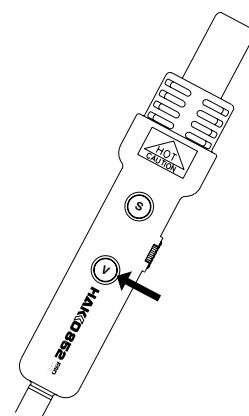
△ 注意

要停止熱風或真空時，請勿以電源開關來進行。



△ 注意

會造成故障的原因。在顯示 之後，才切斷電源開關。



△ 注意

吸著的部件成高溫狀態，取下部件時請注意。

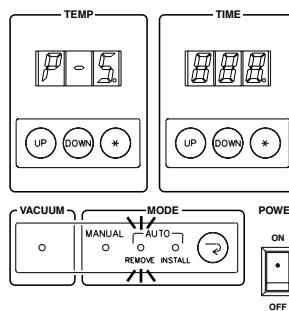
6. 使用方法

以 AUTO/REMOVE 模式使用

● 選擇 REMOVE 模式

按下操作模式選擇按鈕以設定 REMOVE。此模式的程序為

- ① 起動 / 吹出熱風（手動）
- ② 定時器剩余 5 秒真空 ON（自動）
- ③ 真空 OFF（手動）
- ④ 冷卻開始以及送風停止（自動）



要確認設定溫度時

按下 ***** 按鈕不到一秒。如要變更設定溫度時，依照33頁的“溫度之設定/變更”而變更之。

要變更送風時間，依照34頁的“定時器時間的設定/變更”而變更之。

● 取下

● 對準部件

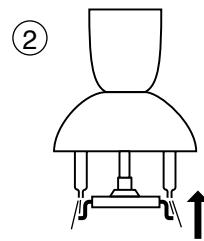
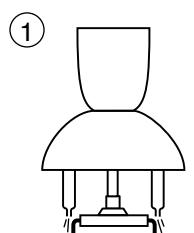
將噴氣嘴與吸墊對準要取下的部件。

① 起動（加熱）

按下焊鐵部（或腳踏開關）的起動按鈕。熱風吹出，熔化焊錫。定時器開始計時。（圖 1）

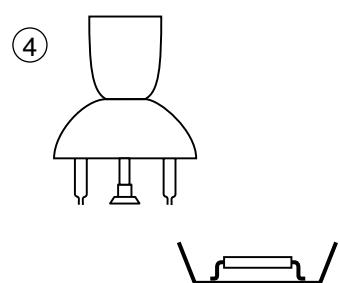
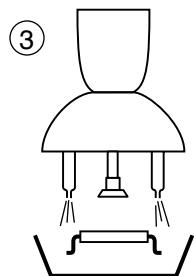
△ 注意

要中斷程序時，按下起動按鈕。開始冷卻。



② 部件的吸著

定時器剩下 5 秒時，真空自動變 ON，吸上部件。舉起焊鐵部，將部件自印刷電路板取下。（圖 2）



③ 取下被吸著的部件

按住真空按鈕 0.3 秒以上，以取下被吸著的部件。（圖 3）

④ 停止

其後定時器變為 0 時開始冷卻，在 200IC 停止送風。（圖 4）

△ 注意

定時器剩餘5秒以上時按下真空按鈕，真空泵會變ON。此時定時器剩餘時間被強迫變為5秒。

△ 注意

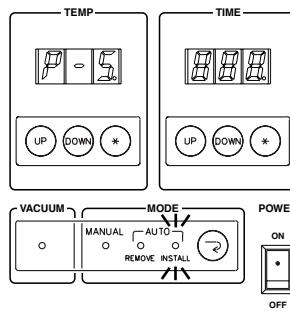
剩餘在印刷電路板上的焊錫已惡化。請用吸錫機或吸錫線去除之。

以 AUTO/REMOVE 模式使用

● 選擇 INSTALL 模式

按下操作模式選擇按鈕以設定 INSTALL。此模式的程序為

- ① 真空 ON (手動)
- ② 起動 / 吹出熱風 (手動)
- ③ 5 秒後真空 OFF (自動)
- ④ 冷卻開始以及送風停止 (自動)



要確認設定溫度時

按下 ***** 按鈕不到一秒。如要變更設定溫度時，依照33頁的“溫度之設定/變更”而變更之。

要變更送風時間，依照34頁的“定時器時間的設定/變更”而變更之。

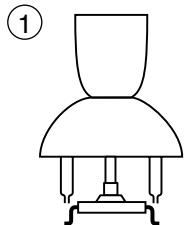
● 安裝

● 定位印刷電路板

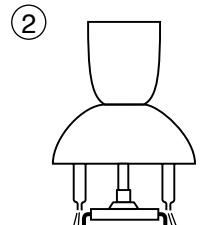
在印刷電路板上塗抹適量之錫膏等。

① 部件之吸著、定位

按下焊鐵部（或腳踏開關）的真空按鈕。使要安裝的部件吸著在吸墊上，並在印刷電路板上定位。(圖 1)



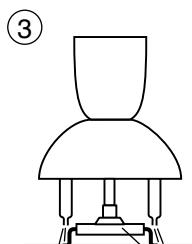
(圖 1)



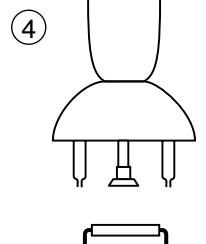
(圖 2)

② 起動

按下起動按鈕。吹出熱風，開始焊接。
(圖 2)



真空 OFF
(圖 3)



(圖 4)

③ 真空停止

5秒後真空變 OFF 鬆開吸著。(圖 3)

④ 停止

定時器變為 0 時開始冷卻。確認鋸錫凝固後舉起焊鐵。(圖 4)

⚠ 注意

使用熱風的焊接有諸多優點，但亦可能引起產生錫球或焊橋等的焊接不良。因此作業時我方建議充分考慮各種條件。



6. 使用方法

溫度之設定 / 變更

△ 注意

溫度設定範圍

100~450°C (212~842°F)

- 輸入超過設定範圍之數值，會再度回到第三位數的輸入。請重新輸入正確的數值。
- 顯示及設定溫度為傳感器部之溫度。(即使設定同一溫度，依噴氣嘴的大小而使吹出溫度產生變化。)

實例：從攝氏 300 度變更為攝氏 450 度時

1. 按下 ***** 按鈕 1 秒以上。

- 顯示部的第三位數會閃爍。此為進入溫度設定模式，表示第三位數可以輸入。

2. 第三位數的輸入

- 使用 **UP** 或 **DOWN** 按鈕決定第三位數的數值。可以輸入的數值為 1、2、3、4。
(華氏模式時為 2、3、4、5、6、7、8)。所希望的數值顯示後，按下 ***** 按鈕。閃爍移到第二位數。

3. 第二位數的輸入

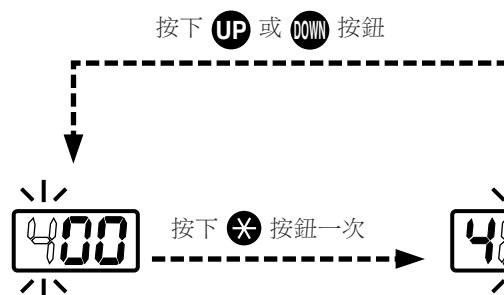
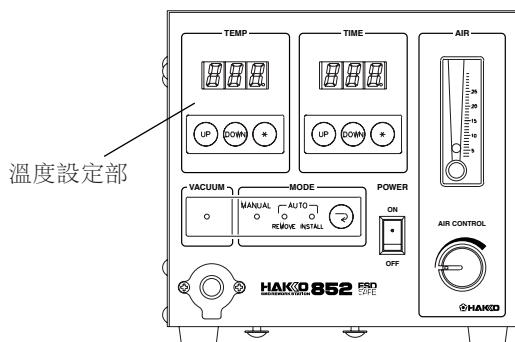
- 使用 **UP** 或 **DOWN** 按鈕決定第二位數的數值。可以輸入的數值是 1、2、3、4、5、6、7、8、9、0。所希望的數值顯示後，按下 ***** 按鈕。閃爍移到第一位數。

4. 第一位數的輸入

- 進行與輸入第二位數時同樣的操作，選擇所希望的數值後，按下 ***** 按鈕。這樣就曾存在內部記憶體內，顯示新的設定溫度後，開始控制發熱元件。

△ 注意

溫度設定未到最後而關閉電源，新的設定溫度不會被記憶。



定時器之設定 / 變更

△ 注意

定時器設定範圍

15~999秒

- 輸入超過設定範圍之數值，會再度回到第三位數的輸入。請重新輸入正確的數值。

實例：從 30 秒變更為 100 秒時

1. 按下操作模式選擇按鈕  以設定 REMOVE 或 INSTALL。

2. 按下定時器設定之  按鈕 1 秒以上。

- 顯示部的第三位數會閃爍。此為進入設定模式，表示第三位數可以輸入。

3. 第三位數的輸入

- 使用  或  按鈕決定第三位數的數值。

所希望的數值顯示後，按下  按鈕。閃爍移到第二位數。

4. 第二位數的輸入

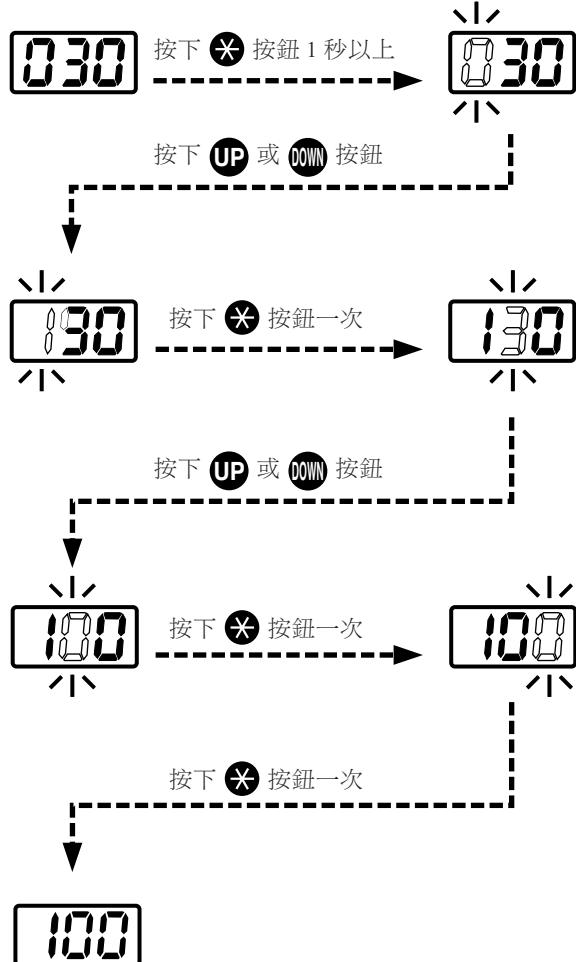
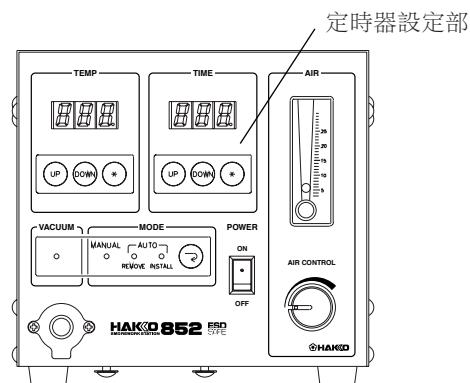
- 使用  或  按鈕決定第二位數的數值。所希望的數值顯示後，按下  按鈕。閃爍移到第一位數。

5. 第一位數的輸入

- 進行與輸入第二位數時同樣的操作，選擇所希望的數值後，按下  按鈕。這樣就曾存在內部記憶體內，顯示新的時間後，開始控制發熱元件。

△ 注意

定時器時間設定未到最後而關閉電源，新的設定定時器時間不會被記憶。



中
日

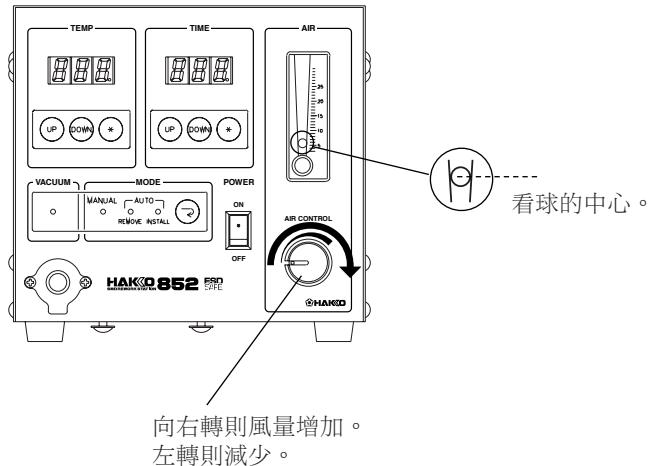
6. 使用方法

風量調節

邊看風量計邊調節熱風之風量。調節範圍為 7 公升 / 分 ~20 公升 / 分。

△ 注意

旋轉風量調節旋鈕時，請勿勉強旋轉過頭。



7. 參數 / 初期值設定

● 參數的輸入

① IC (攝氏)、IF (華氏) 之轉換

② 省電時間之轉換

所謂省電機能是在手動模式時如果熱風持續吹出，會自動切斷之機能。此時切斷對發熱元件之通電後進行冷卻，並停止送風。

③ 傳感器溫度之顯示

△ 注意

參數設定未到最後而切斷電源，新的參數不會被記憶。

● 初期值設定

按住溫度設定部之 **UP** **DOWN** ***** 按鈕並同時打開電源開關，會重新設定而變為如下之初期值。

HAKKO 852 具有以下 3 個參數。

- 1) 溫度顯示 摄氏與華氏轉換
- 2) 省電時間 (30 分、60 分轉換)
- 3) 傳感器溫度之顯示

一旦進入參數模式時，即依照以下的順序進行設定。所有的參數被設定之後，回到通常的動作。

1. 關閉電源開關。
2. 同時按住 **UP** 與 **DOWN** 按鈕，並打開電源開關。
3. 繼續按住 **UP** 與 **DOWN** 按鈕。**C** (攝氏) 或 **F** (華氏) 顯示時，表示已進入參數輸入模式。
 - 按下 **UP** 或 **DOWN** 按鈕，會作 **C** 或 **F** 的交互變換。
 - 按下 ***** 按鈕，顯示即被決定，而移到省電時間的輸入。
- 進入省電時間的設定時顯示 **30** 或 **60**。此時可選擇 30 分與 60 分。
 - 按下 **UP** 或 **DOWN** 按鈕，會作 **30** 或 **60** 的交互變換。
 - 決定後，按下 ***** 按鈕，移到下一傳感器溫度之顯示。
- 不需要輸入數值。
此處所顯示的數值是現在傳感器所測知之溫度。
 - 按下 ***** 按鈕時結束參數輸入模式，顯示設定溫度 2 秒後，回到通常的模式。

攝氏與華氏轉換	°C
省電時間	30 分
設定溫度	300°C
定時器時間	30 秒
操作模式	MANUAL



3. 保養 / 檢查方法

● 發熱元件傳感器斷

① 打開焊鐵部

1. 將真空吸管縮到最短。
2. 取下固定焊鐵部之 3 支螺釘。
3. 將保護管退到下面。
4. 將發熱元件套管從手柄之突起取下，拔出發熱元件套管。

△ 注意

發熱元件套管內部裝有石英玻璃及斷熱材料。請勿掉下或遺失。

5. 取下發熱元件傳感器之連接器，拔出發熱元件。

△ 注意

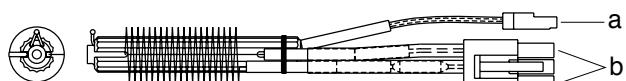
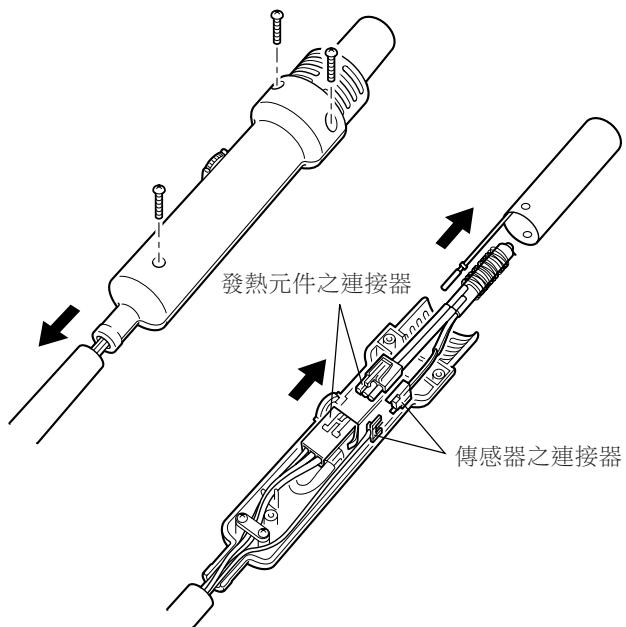
真空吸管請勿勉強使力。

② 測量電阻值

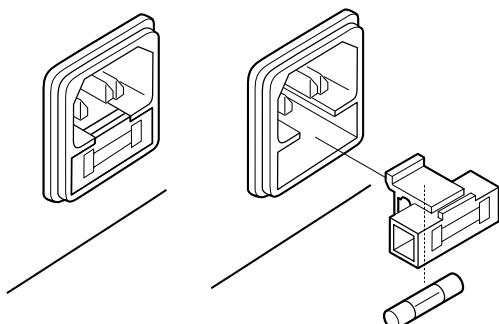
1. 測量傳感器之電阻值 a。
正常值為 0 歐姆。
2. 測量發熱元件之電阻值 b。正常值約為
33 歐姆 ($\pm 10\%$) (100-120V)，
85 歐姆 ($\pm 10\%$) (220-240V)。
(常溫時)

電阻值異常時請更換之。

(更換方法請參照更換部件附屬之說明書。)



● 保險絲更換方法



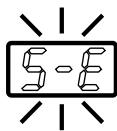
1. 將電源線自電源插座拔出。
2. 將保險絲座拔出。
3. 更換新的保險絲。
4. 組裝成原樣。

9. 錯誤顯示

HAKKO 852 若有以下失誤發生時，會有各種錯誤顯示。

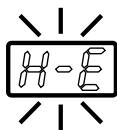
若有這樣的顯示時，請參閱「排除故障指南」。

傳感器失誤



有可能是傳感器（含傳感器電路）斷時，**S-E** 會閃爍，並停止通電。

發熱元件失誤



儘管發熱元件已經通電，但如果熱風之溫度下降，**H-E** 會閃爍，表示有可能是發熱元件斷。

10. 排除故障指南

⚠ 警 告

- 內部檢查或部件更換時，請務必拔掉電源插頭。否則會有觸電的危險。

- 雖然電源開關已經打開，卻沒有動作。

檢查：電源線是否脫落？

處理：確實連接。

檢查：保險絲是否燒斷？

處理：確認保險絲燒斷的原因後，更換之。

- 傳感器失誤 **S-E** 閃爍。

檢查：傳感器是否斷？

動作：請看傳感器斷線之檢查方法。

- 發熱元件失誤 **H-E** 閃爍。

檢查：發熱元件是否斷？

動作：請看發熱元件斷之檢查方法。

- 定時器時間無法設定。

檢查：操作模式是否變為AUTO？

處理：請使其變為AUTO模式。

檢查：輸入是否在設定範圍外？

處理：請在設定範圍內輸入。

- 按下真空按鈕，真空泵也不會停下。

檢查：真空按鈕是否按下0.3秒以上？

動作：請按下0.3秒以上。

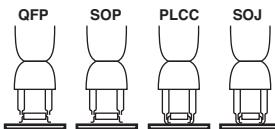
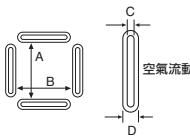


11. 另售部件

● 噴氣嘴



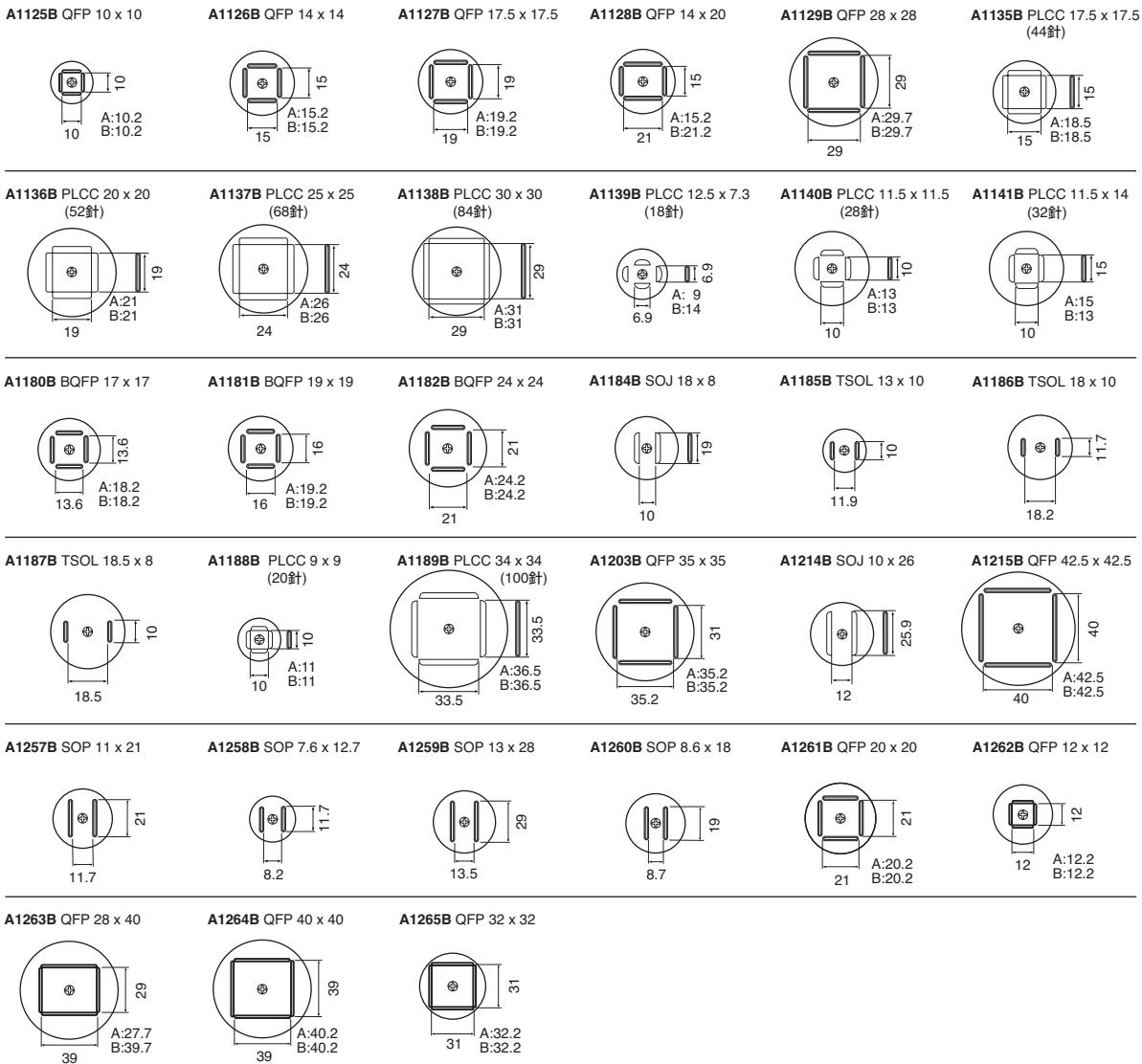
注意
噴氣嘴的規格及尺寸表示扁平IC的尺寸。



	C 0.8 D 1.8	C 1.0 D 2.0	C 0.8 D 2.0
No.	A1125B~A1129B A1131~A1141B A1180B~A1189B A1203B~A1265B	A1191	A1192

● 可以使用真空機能的噴氣嘴

單位 : mm



● 不能使用真空機能的噴氣嘴

單位 : mm (inch)

A1124B 單獨式 $\phi 2.5$



$\phi 2.5$ (內徑)

A1130 單獨式 $\phi 4.4$



$\phi 4.4$ (內徑)

A1131 SOP 4.4 x 10



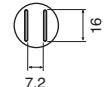
4.8

A1132 SOP 5.6 x 13



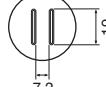
5.7

A1133 SOP 7.5 x 15



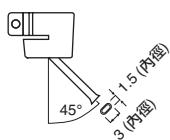
7.2

A1134 SOP 7.5 x 18



7.2

A1142B 彎曲單管 1.5 x 3



$\phi 1.5$ (內徑)
45°

A1183 SOJ 15 x 8



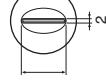
8

A1190 雙層噴嘴
2.5 x 9.5
Pitch



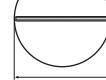
$\phi 2.5$ (內徑)

A1191 SIP 25L



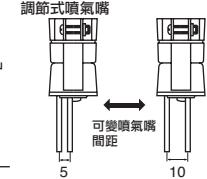
26

A1192 SIP 50L



52.5

A1325 雙層噴嘴 $\phi 1.5 \times 5-10$
調節式噴氣嘴



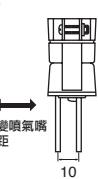
5

10

10

噴氣嘴正面

可變噴氣嘴
間距



5

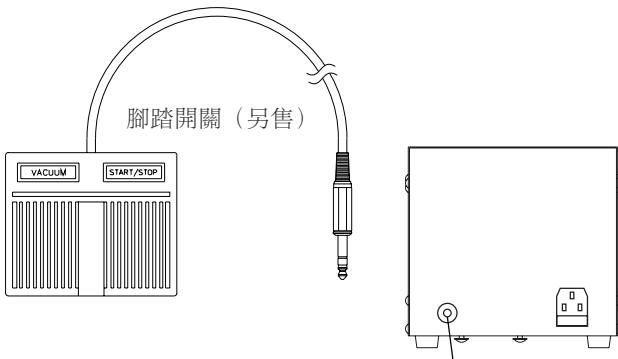
10

△ 注意

切勿使用舊編號A1124單獨式 $\phi 2.5\text{mm}$ 噴氣嘴，舊編號A1142彎曲單管 1.5×3 在852。如在852使用，吹風口被塞住會引起危險。

● 腳踏開關

以腳踏開關可以操作手柄部分的起動按鈕和真空按鈕。



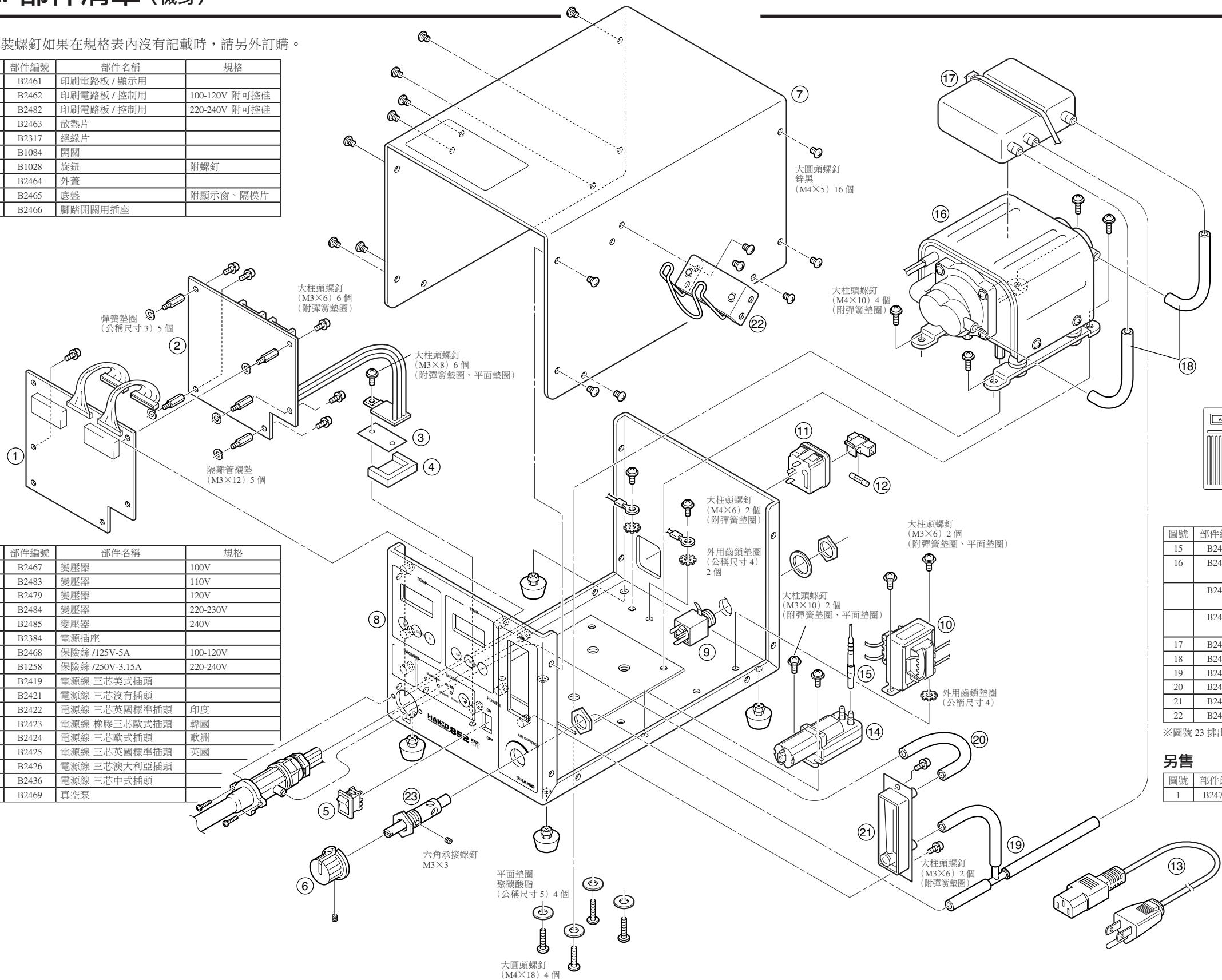
將腳踏開關之插座插入機身後面之
腳踏開關用插座。



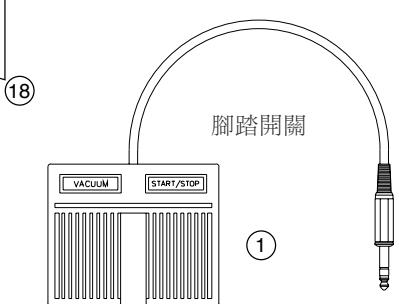
12. 部件清單 (機身)

※安裝螺釘如果在規格表內沒有記載時，請另外訂購。

圖號	部件編號	部件名稱	規格
1	B2461	印刷電路板 / 顯示用	
2	B2462	印刷電路板 / 控制用	100-120V 附可控硅
3	B2482	印刷電路板 / 控制用	220-240V 附可控硅
4	B2317	絕緣片	
5	B1084	開關	
6	B1028	旋鈕	附螺釘
7	B2464	外蓋	
8	B2465	底盤	附顯示窗、隔模片
9	B2466	腳踏開關用插座	



另售



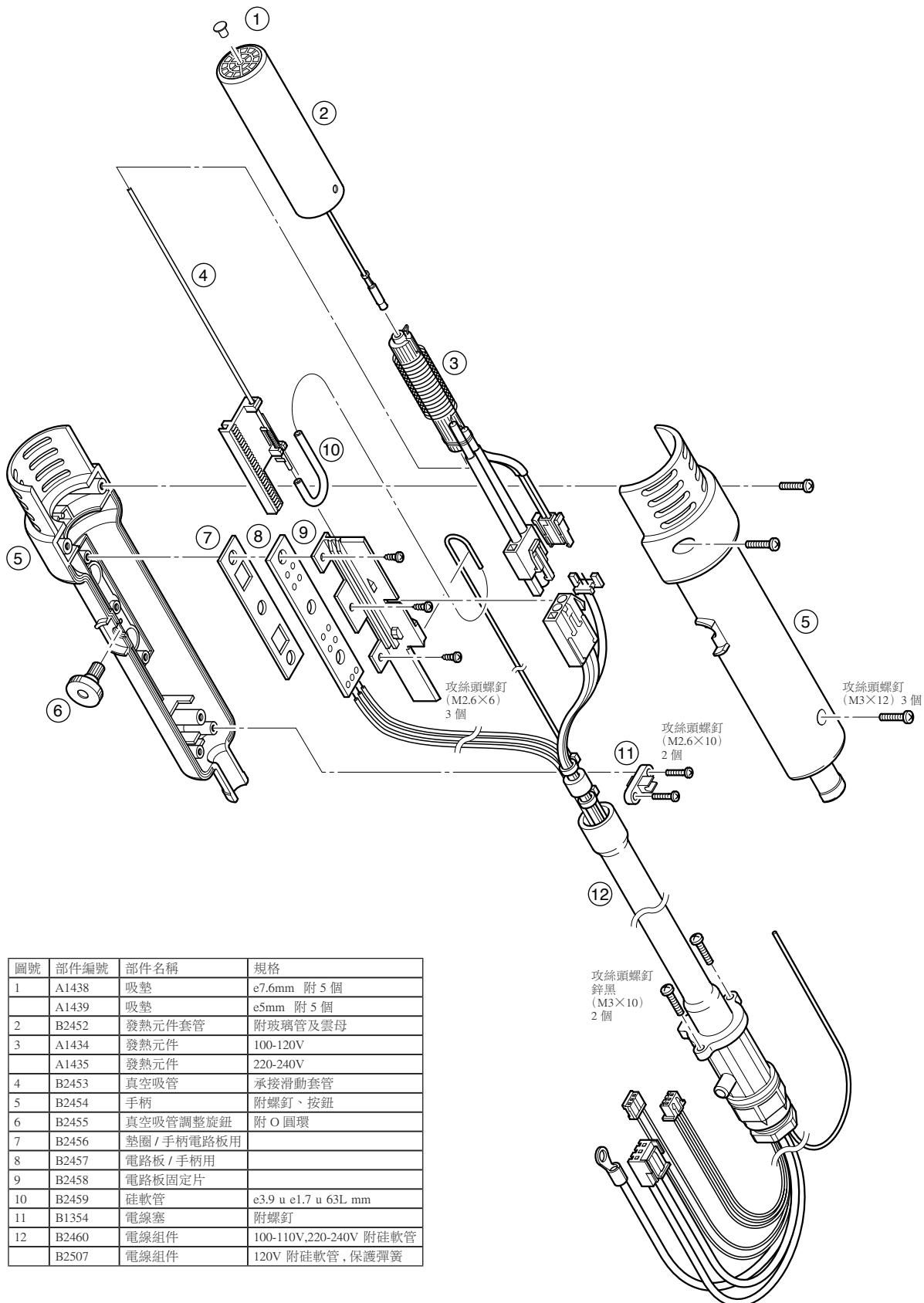
圖號	部件編號	部件名稱	規格
15	B2470	接合器 / 真空泵用	硅軟管
16	B2471	空氣泵	100V, 附高螺母、尼龍扣帶、兩面膠帶
	B2480	空氣泵	110-120V, 附高螺母、尼龍扣帶、兩面膠帶
	B2481	空氣泵	220-240V, 附高螺母、尼龍扣帶、兩面膠帶
17	B2472	消音箱	附尼龍扣帶、兩面膠帶
18	B2473	硅軟管	e8 × e5 × 130L mm
19	B2474	T字形接合器	附硅軟管
20	B2475	硅軟管	e8 × e5 × 205L mm
21	B2476	風量計	附安裝板
22	B2477	焊鐵架	組裝品

※圖號 23 排出噴嘴，有需要者請詢問代理店或銷售店。

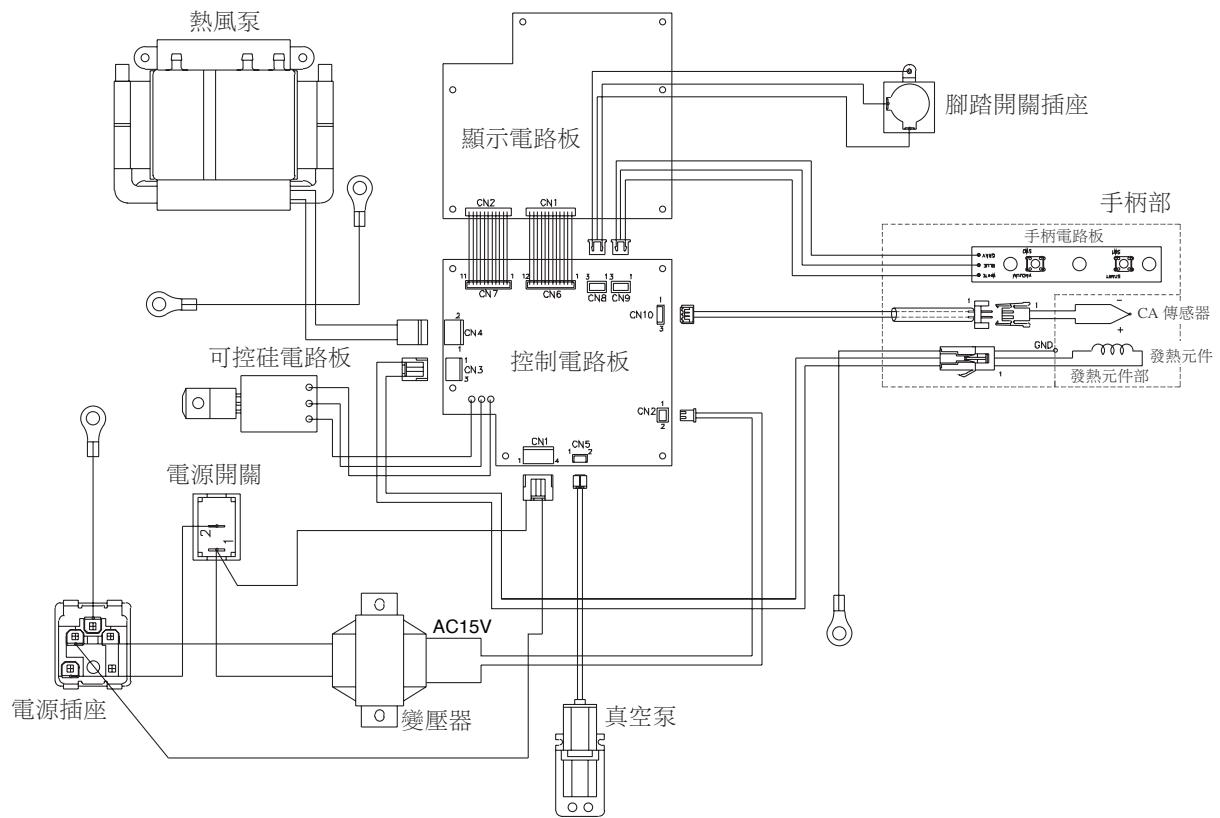
另售

圖號	部件編號	部件名稱	規格
1	B2478	腳踏開關	

13. 部件清單 (焊鐵)



14. 電路圖



MEMO

文
中

中

X

闫
中



HAKKO CORPORATION

HEAD OFFICE

TEL:+81-6-6561-3225 FAX:+81-6-6561-8466
<http://www.hakko.com> E-mail:sales@hakko.com

OVERSEAS AFFILIATES

U.S.A.: AMERICAN HAKKO PRODUCTS, INC.

TEL: (661) 294-0090 FAX: (661) 294-0096

Toll Free: (800)88-HAKKO

<http://www.hakkousa.com>

HONG KONG: HAKKO DEVELOPMENT CO., LTD.

TEL: 2811-5588 FAX: 2590-0217

<http://www.hakko.com.hk>

E-mail:info@hakko.com.hk

SINGAPORE: HAKKO PRODUCTS PTE., LTD.

TEL: 6748-2277 FAX: 6744-0033

<http://www.hakko.com.sg>

E-mail:sales@hakko.com.sg

Please access to the following address for the other Sales affiliates.

<http://www.hakko.com/address>