



HAKKO 702B

REWORK SYSTEM

Rework System

Instruction Manual

Thank you for purchasing the Hakko 702B rework system.
This manual describes the use and maintenance of the Hakko 702B.
Please read it before using the unit. After reading the manual,
keep it in a safe place for future reference.



Remove the pump securing screw (M4 x 25 marked red)
from the bottom of the station.
Failure to do so may result in serious problems.

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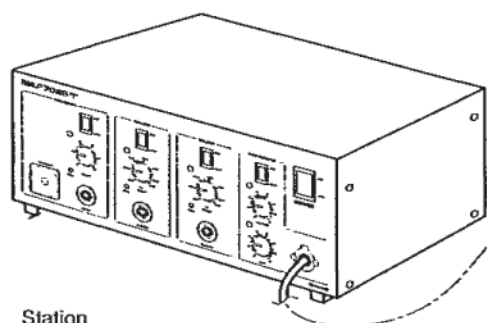
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Packing List

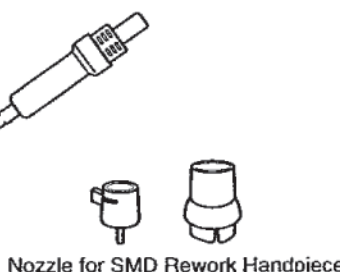
Please check to make sure that all the items listed below are included in the Hakko 702B package.

Station.....	1
Nozzle (For handpiece No.A1124B,A1128B).....	2
Soldering Iron (900S-ESD or 907-ESD).....	2
Desoldering Gun (Hakko 809).....	1
Iron Holder.....	3
Handpiece Holder.....	1
Nozzle Tray.....	1
Wrench	1

Filter Pipe [With a front holder, spring filter & ceramic paper filter (L)].....	1
Spring Filter.....	3
Ceramic Paper Filter (L).....	4
Ceramic Paper Filter (S).....	2
Cleaning Pin for $\phi 1.0$ mm (0.04 in.) nozzle..	1
Cleaning Pin for Heating Element.....	1
Cleaning Drill [for $\phi 1.0$ mm (0.04 in.) nozzle]	1
FP Pick Up (With S/L wire).....	1
Silicone Grease.....	1
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Power cord.....	1



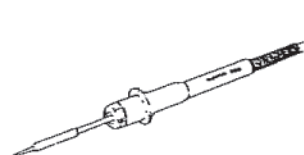
Station



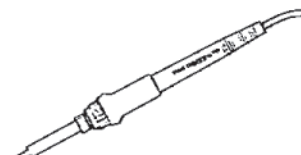
Nozzle for SMD Rework Handpiece



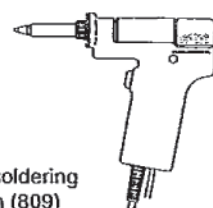
Handpiece Holder



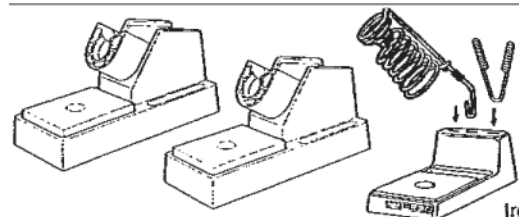
Soldering Iron (900S-ESD or 907 ESD)



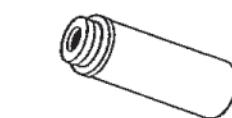
Desoldering Gun (809)



Nozzle Tray



Iron Holder

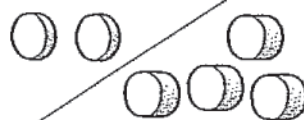


Filter Pipe

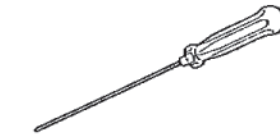
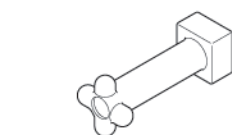


Spring Filter

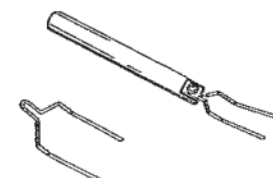
Ceramic Paper Filter (S)



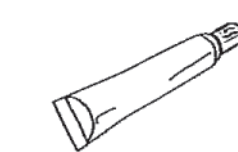
Ceramic Paper Filter (L)

Cleaning Pin for
 $\phi 1.0$ mm (0.04in.) NozzleCleaning Pin for
Heating ElementCleaning Drill for
 $\phi 1.0$ mm (0.04 in.) Nozzle

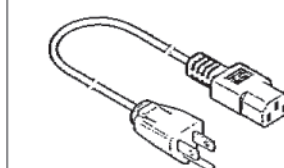
Wrench (For Desoldering Gun)



FP Pick Up (With S/L wire)



Silicone Grease



Power cord

Specifications

Name		Hakko 702B
Power Consumption		500W
Station		
Soldering	Output Voltage	24V AC
	Temperature	200 - 480°C
Desoldering	Output Voltage	24V AC
	Vacuum Generator	Vacuum pump, double cylinder type
	Vacuum Pressure	80 kPa (600 mmHg)
	Suction Flow	15 ℓ/min
	Temperature	380 - 480°C
SMD Rework	Output Voltage	Same as input voltage
	Pump	Diaphragm pump
	Capacity	20 ℓ/min (max)
	Temperature	100-420°C use A1126B
Outer Dimensions		360(W) × 266(D) × 150(H) mm
Weight		10kg (w/o cord)

Soldering Iron

Name	900S-ESD	907-ESD
Power Consumption	24V AC-50W	
Tip to Ground Resistance	under 2 Ω	
Tip to Ground Potential	Under 2 mV	
Heating Element	Ceramic	
Cord Assembly	1.2 m	
Total Length (w/o cord)	176 mm	190 mm
Weight (w/o cord)	25g	44g

Desoldering Gun

Name	Hakko 809
Power Consumption	24V AC-50W
Nozzle to Ground Resistance	under 2 Ω
Nozzle to Ground Potential	Under 2 mV
Heating Element	Ceramic
Cord Assembly	1.2 m
Outer Dimensions (w/o cord)	135(W) × 174(H) mm
Weight (w/o cord, horse)	200g

SMD Rework Handpiece

Power Consumption	250W
Total Length (w/o cord)	196 mm
Weight (w/o cord)	120g

Safety Instructions



WARNING

- If the thermal protector is tripped (the heater lamp turns off during use.), reduce the temperature setting or increase the air flow. Be sure not to operate the unit with the temperature and air flow settings that makes the thermal protector trip. This could damage the temperature control function.
- **After Using**
- After turning off the switch for SMD Rework and power switch the unit will automatically blow air through the pipe for a short periods of time. Do not disconnect the plug during this cooling process.



CAUTION

Automatic Blowing Function

Please note the unit will automatically blow air after following operations. This will stop in about 1 minute.

- Connecting the plug.
- Turning on/off the power switch.
- Turning off the switch for SMD Rework.

Before Using

Remove the pump securing screw (M4 × 25 marked red) from the bottom of the station. Failure to do so may result in serious problem.

High Temperature

The tip/nozzle temperature can reach as high as around 400°C when the power switch is on. Since mishandling may lead to burns and fire, be sure to comply with the following precautions.

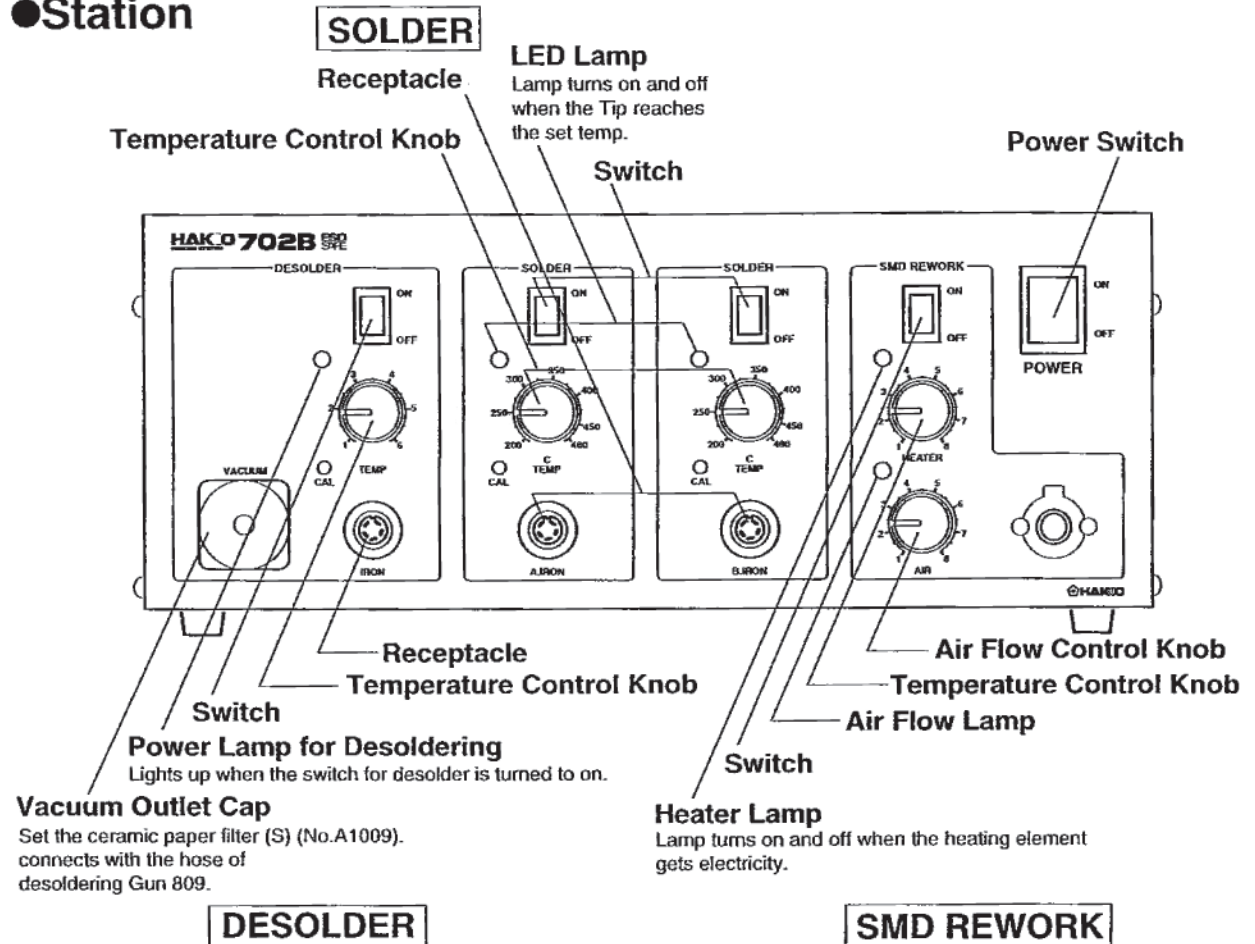
- Do not touch metal parts near the tip/nozzle.
- Do not use the product near flammable items.
- Advise other people in the work area that the unit can reach a very high temperature and should be considered potentially dangerous.
- Turn the power off while taking breaks and when you are finished using it.
- Before replacing parts or storing the unit, turn the power off and allow the unit to cool to room temperature.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

Be sure to comply with the following precautions. Failing to do so may lead to personal injury or damage to the unit.

- Do not use the unit for applications other than soldering or desoldering.
- Do not rap the iron against the work bench to shake off residual solder, or otherwise subject the iron to severe shocks.
- Make sure to use only genuine Hakko replacement parts.
- Turn the switch off before connecting or disconnecting the soldering/desoldering iron connecting cord from the cord receptacle on the station.

Part Names

●Station

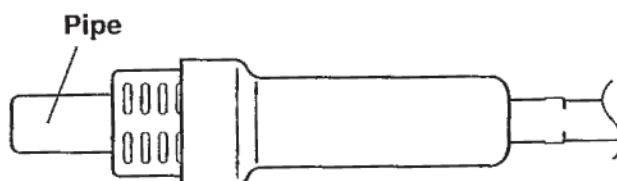


Vacuum Outlet Cap
Set the ceramic paper filter (S) (No.A1009). connects with the hose of desoldering Gun 809.

Power Cord
After connecting into the power supply, the automatic blowing function will start sending air.

● Iron

Handpiece



Desoldering Gun Hakko 809

Nozzle

Transmits heat for melting solder.
Entrance for melted solder.
Expendable part

Filter Pipe

Insert the ceramic paper filter (L) (No. A1033).
Contains filters which arrest melted solder and flux.
Filter are expendable parts.

Back Holder Assembly

Secures the filter pipe.

Heating Element

Inside requires cleaning.

Trigger

Squeeze to start extraction.
Do not pull the trigger before
fully heating the nozzle.

Release Knob

Push down to
remove the filter pipe.

Indicator

Indicates when
nozzle and heating
element need
cleaning and when
filters need replacing.

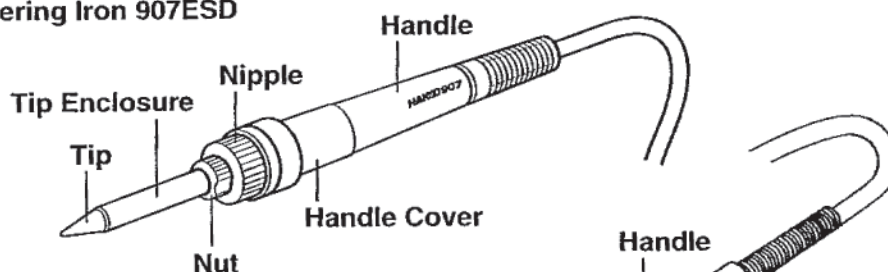
Cord Assembly

Connects to the receptacle (station).

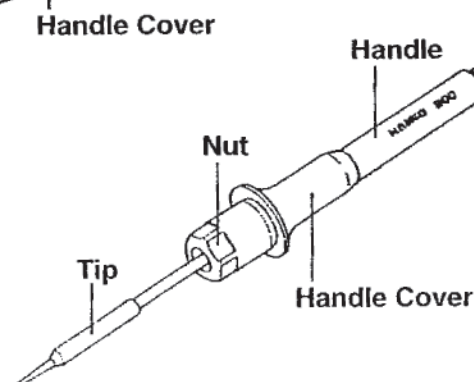
Hose

Connects to the vacuum
outlet cap (station).

Soldering Iron 907ESD



Soldering Iron 900S-ESD



Operation/Instructions For Soldering

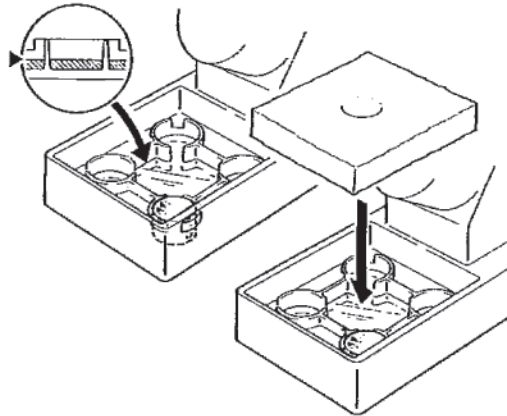
⚠ CAUTION : The sponge is compressed. It will swell when moistened with water.
Before using the unit, dampen the sponge with the water and squeeze it dry.
Failure to do so may result in damage to the soldering tip.

Preparation

A. Assemble the iron holder for soldering iron.

1. Small cleaning sponge dampen the small cleaning sponge with water and then squeeze it dry. Place it in one of the 4 openings of the iron holder base.
2. Add water to approximately the level as shown.
The small sponge will absorb water to keep the larger sponge above it wet at all times.
3. Dampen the large cleaning sponge and place it on the iron holder base.

*The large sponge may be used alone (w/o small sponge & water).



Note: The iron holder for the 900(S) and 907/908 soldering irons are different.

Be sure to put the proper soldering iron for each type.
(Marked 900S or 907/908 on the receptacle of iron holder).

B. Connections

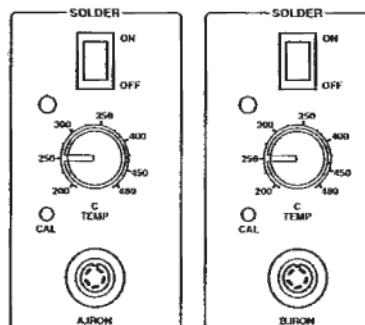
- Connect the power cord to the power receptacle on the back panel of the station.
- Connect the cord assembly to the receptacle.

⚠ CAUTION : Be sure to turn off the switch for solder before connecting or disconnecting the soldering iron.
Failing to do so may damage P.W.B.

- Each soldering iron has been tested and calibrated at the factory. Connect the A-Iron to the A-Iron receptacle and the B-Iron to the B-Iron receptacle.

Operation

1. Plug the power cord into the power supply, and turn on the power switch.



Note: Hakko 908 soldering iron featuring a large tip size and Hakko 950 also can be used with 702B station (Soldering side).


2. Temperature setting

- Set the temperature control knob to your desired temperature and turn on the switch for solder. Heater lamp turns on and off when the tip temperature reaches to the figure you set. Now you can start the soldering work.

3. Tip care and use

- **Tip temperature**
High soldering temperature can degrade the tip.
Use the lowest possible soldering temperature.
The excellent thermal recovery characteristics ensure efficient and effective soldering even at low temperature.
This also protects the soldered items from thermal damage.
- **Cleaning**
Clean the tip regularly with a cleaning sponge as oxides and carbides from the solder and flux can form impurities on the tip. These impurities can result in defective joints or reduce the tip's heat conductivity.
- **Not in use**
Never leave the soldering iron sitting at high temperature for long periods of time as the tip's solder plating will become covered with oxide, which can greatly reduce the tip's heat conductivity.
- **After use**
Wipe the tip clean and coat the tip with fresh solder.
This helps prevent tip oxidation.

Inspect and clean the tip

1. Set the temperature to 250°C.
 2. When the temperature stabilizes, clean the tip with the cleaning sponge and check the condition of the tip.
 3. If there is black oxide on the solder plated portion of the tip, apply new flux contained solder and wipe the tip on the cleaning sponge.
Repeat until the oxide is completely removed.
Coat with new solder.
-  **Never file the tip to remove oxide.**
4. If the tip is deformed or heavily eroded, replace it with a new one.

Operation/Instructions For Desoldering

Preparation

1. Remove the pump securing screw (M4 x 25 marked red) from the bottom of the station.

2. Assemble the iron holder for desoldering gun 809.
(Hakko 631; No. 631-06)

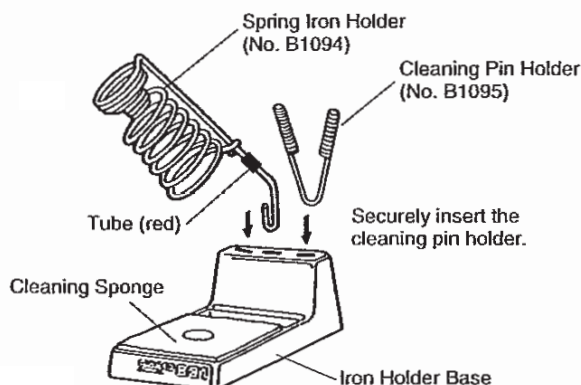
CAUTION

The sponge is compressed. It will swell when moistened with water. Be sure to dampen the sponge with water before use. Be sure to remove the round portion of the sponge.

3. Connections

CAUTION

Be sure to turn off the switch for desolder before connecting or disconnecting the desoldering gun. Failing to do so may damage P.W.B.



- Place the desoldering gun in the iron holder.
- Connect the desoldering gun to the station. Insert the connecting plug into the receptacle on the station. Lock the plug by turning the plug's outer ring clockwise. Connect the hose to the vacuum outlet cap.

Operation

1. Plug the power cord into the power supply, and turn on the power switch. Turn on the switch for desolder.

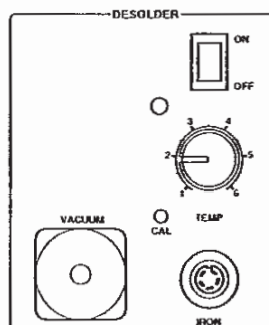
2. Set the temperature.

Note: Always set the temperature to as low as possible for the work being done.

- To more precisely set the temperature, measure the temperature at the nozzle using a soldering iron thermometer and adjust the temperature control knob accordingly.

We recommend the Hakko 191/192 thermometer for measuring the nozzle temperature.

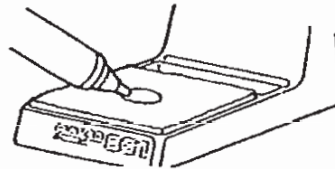
- Desoldering
After turning the switch to ON, wait 3 minutes before beginning desoldering.
- The temperature can be adjusted between 380~480°C with temperature control knob. This unit has excellent thermal recovery to operate with lower temperature than conventional desoldering tool.



3. Clean the tip of the nozzle.

- Keep the solder-plated section of the nozzle a shiny white by coating it with a small amount of solder.

If the tip of the nozzle is coated with oxide, the nozzle's heat conductivity will be lowered. Coating the tip with a small amount of fresh solder ensures maximum heat conductivity.



Wipe away any oxide or old solder from the nozzle using the hole in the center of the sponge.

4. Melt the solder.

- Apply the nozzle to the soldered part and melt the solder.

Note: Never allow the nozzle to touch the board itself.

Note: To confirm that all the solder is melted, observe the inside of the hole and the backside of the P.W.B. If this is difficult to do, try slowly moving the lead with the nozzle if the lead moves, the solder is melted.

Note: Never move the lead by force. If it doesn't move easily, the solder isn't yet fully melted.

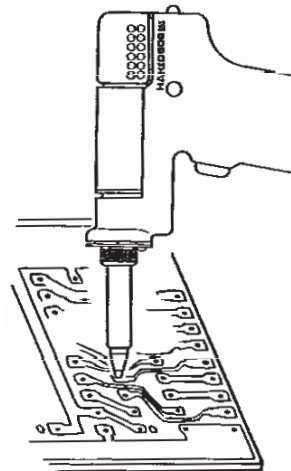
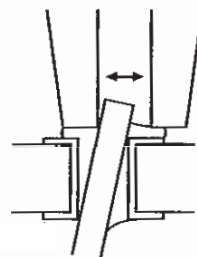
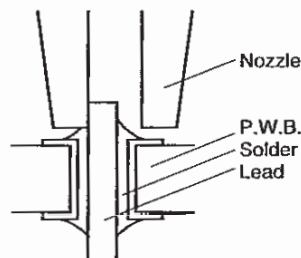
5. Extract the solder.

- After confirming that the solder is completely melted, extract the solder by squeezing the trigger on the gun.

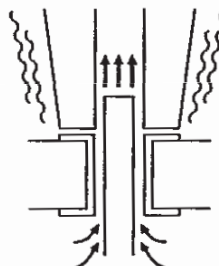
Note: Never leave any solder remaining inside the hole in the P.W.B.

6. Problems during desoldering.

- If solder remains, resolder the component and repeat the desoldering process.



Slowly move the lead with the nozzle.



Extracting the solder by slowly moving the lead back and forth with the tip of the nozzle.

Operation (Desoldering)

Heated solder and flux can cause oxides to form and adhere to the nozzle and the inside of the heating element.

These oxides not only lower the heat conductivity, but can also clog the nozzle and heating element, resulting in a drop in suction efficiency.

Should there be a noticeable drop in suction efficiency during operation, replace the filter and clean the nozzle and heating element with the provided cleaning pin.

Cleaning during operation

1.Observing the indicator

While looking at the indicator and with the hole of the nozzle open, pull the trigger and look at the indicator.

If it is red, clean the nozzle and heating element, empty the filter pipe, and replace the filters. If the indicator is blue, cleaning is not necessary and operations can be resumed.

Caution :

The indicator will not operate accurately if the hole of the nozzle is closed or if the solder in the hole of the P.W.B. is not melted.

2.Replacing the filter



Replace the filter as shown

①~③.

During operation, the filter pipe is very hot.

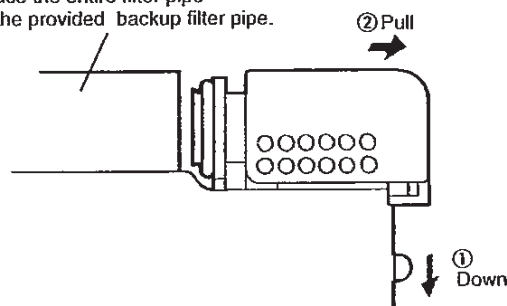
Wait until the filter pipe is cool before replacing the filter.

We recommend keeping a second filter pipe containing new filters handy, and replacing the installed filter pipe with this backup filter pipe.

Normal	Abnormal	Solution
		If the indicator is more than half red, replace the filter and clean the nozzle and the inside of the heating element. (refer to p.17 Maintenance of the desoldering gun)
Blue or slight amount of red can be seen.	More than half of the indicator is red.	

CAUTION : If there is a noticeable drop in suction efficiency, clean the nozzle and heating element with the cleaning pin.

③ Replace the entire filter pipe with the provided backup filter pipe.



Problems during Desoldering

A. The solder in the junction is not sufficiently melted.

A. The solder in the junction is not sufficiently melted.

●Temperature is not high enough.

The following parts require a greater heat capacity to desolder.

- Multi-layer P.W.B.s, power supplies, ground planes in through-hole P.W.B.s, high-capacity transistors, triacs with heat radiation fins, tuner P.W.B. ground wires, and large scale transformer terminals.

Use a preheating oven or heating gun to heat the P.W.B. to a temperature that won't damage the board or its components (Between 70°C and 80°C), then desolder.
Do not increase the temperature of the gun by recalibration as this may damage the P.W.B. board and its components.

●Nozzle is worn out.

- When the nozzle begins to wear out, the heating efficiency begins to decline. Check the nozzle. If the solder plating is damaged (p.17), or the nozzle is eroded (p.17), replace the nozzle.

B. Suction power is dropping.

B. Suction power is dropping.

- Replace the filters, and clean the nozzle and the inside of the heating element. (refer to p.17,18)

●Air is leaking from the vacuum system.

Check the air-tightness of the following parts and replace any that are worn.

- | | |
|---|-------------------------------|
| a. Contact point of the nozzle and heating element. | c. O-ring in the back holder. |
| b. Front holder near by parts. | d. Hose. |
| | e. Vacuum outlet cap. |
| | f. Packing and nearby parts. |

Post-operation maintenance

To ensure a long service life, always perform the maintenance procedures on page 17–18 immediately after using the Hakko 702B unit.

- Remove all solder from the inside of the nozzle and the heating element.

- Clean the tip of the nozzle with the cleaning sponge, then coat the tip with a fresh layer of solder to protect the solder plating.

Operation/Instructions For SMD Rework

Preparation

1.The handpiece holder.

- Remove the handpiece holder mounting screw from the side of the station.

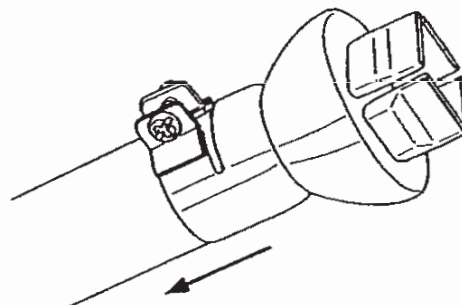
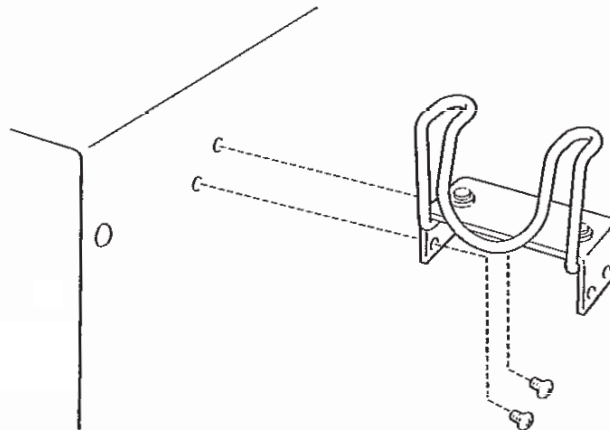
2.Select the FP pick-up wire that matches the size of the IC.

- The FP pick-up has an S wire (14mm) attached to it, but an L wire (30mm) may be necessary, depending on the size of the IC. Choose the appropriate wire for the IC.

3.Select the Nozzle that matches the size of the IC.

***Nozzle Tray is for placing the optional Nozzle.**

- Attach the nozzle when both the pipe and the nozzle are cool. Should either be warm, check to make sure that the temperature control knob is set to 1.



Operation

1.Connection

- Plug the power cord into the power supply, and turn the power switch on.

Note:

After connecting the plug into power source, the automatic blowing function will start sending air.

2. Turn on the switch for SMD rework handpiece.

Once the switch is turned to on, the heating element begins to warm up.

WARNING

Thermal protector.

For safety, power is automatically shut off to the heating element should the unit exceed a certain temperature.

Once the temperature has dropped to a safety level, power is automatically turned on.

If the thermal protector is tripped (the heater lamp turns off during use), reduce the temperature setting or increase the air flow.

Be sure not to operate the unit with the temperature and air flow settings that makes the thermal protector trip. This could damage the temperature control function.

Should the thermal protector be tripped and you do not wish to continue the operation or if you leave that place, be sure to turn the power switch off.

QFP desoldering

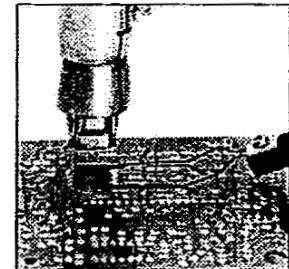
1. Adjust the air flow and temperature control knobs.

- After adjusting the air flow and temperature control knob, wait for the temperature to stabilize for a short period of time. Refer to the temperature distribution chart.

For your reference, we recommend you to adjust the temperature around 300 to 350°C.

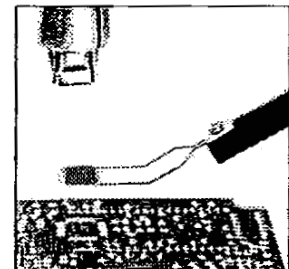
2. Place the FP pick-up under the IC lead.

- Slip the FP pick-up wire under the IC lead. If the width of the IC does not match the size of the FP pick-up, adjust the width of the wire by suppressing the wire.



3. Melt the solder.

- Hold the handpiece so that the nozzle is located directly over, but not touching the IC, and allow the hot air to melt the solder. Be careful not to touch the leads of the IC with the Nozzle.



4. Remove the IC.

- Once the solder has melted, remove the IC by lifting the FP pick-up.

5. Remove any remaining solder.

- After removing the IC, remove remaining solder with a wick or desoldering tool.

QFP soldering**1. Apply the solder paste.**

- Apply the proper quantity of solder paste and install the SMD on the P.W.B.

2. Preheat SMD.

- Refer to the photo to preheat SMD. (Fig.I)

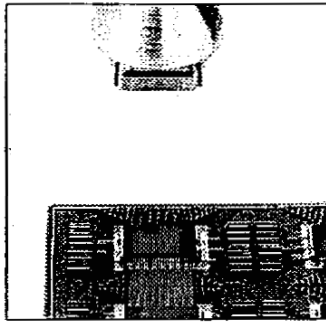


Fig. I

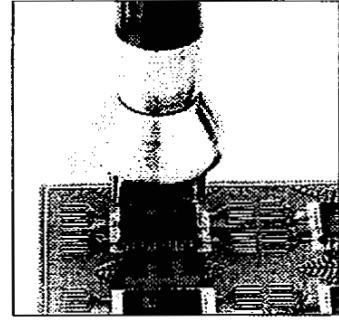


Fig. II

3. Soldering.

- Heat the lead frame evenly. (Fig.II)

4. Washing.

- When soldering is completed, wash away the flux.

Note: While there are merits by hot air, it's also possible to cause the defects such as solder balls, solder bridges. We recommend you to examine the conditions of soldering sufficiently.

5. Turn off the switch for SMD rework handpiece.

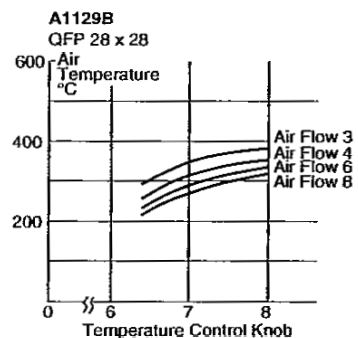
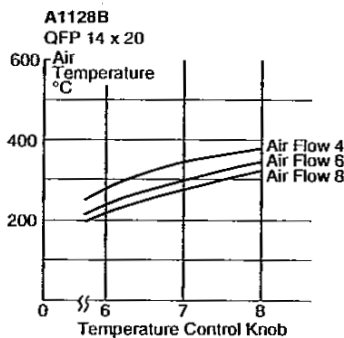
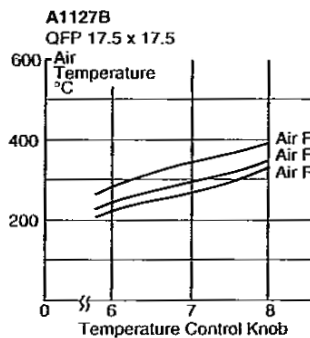
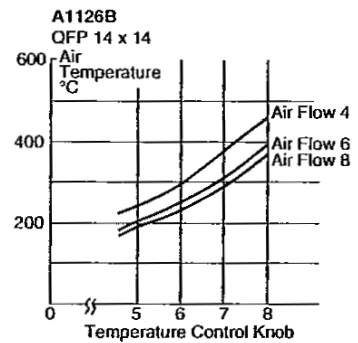
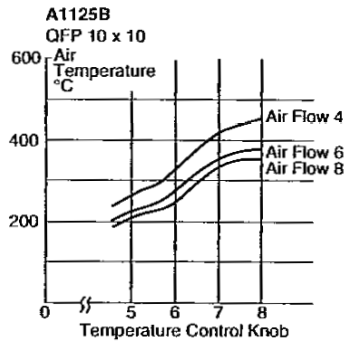
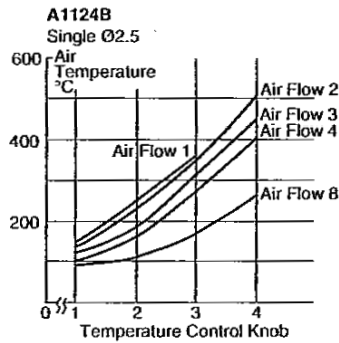
- After the switch is turned off, an automatic blowing function begins sending cool air through the pipe in order to cool both the heating element and the handle. So do not disconnect the plug during this cooling process.

In case you don't use the unit for a long time, disconnect the plug.

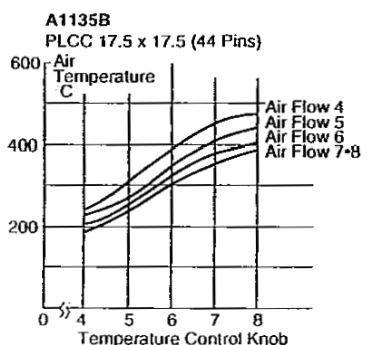
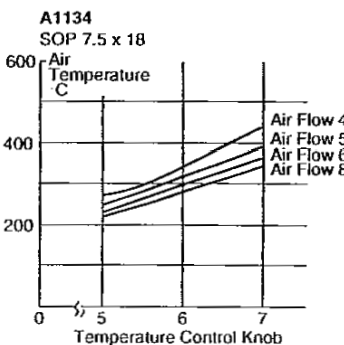
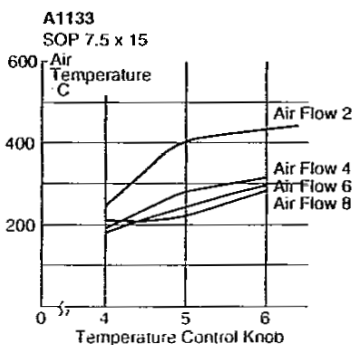
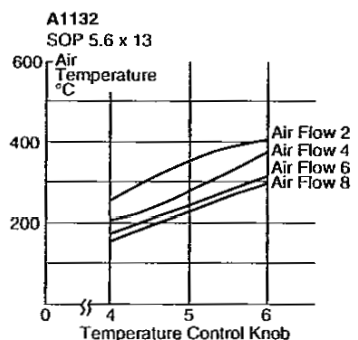
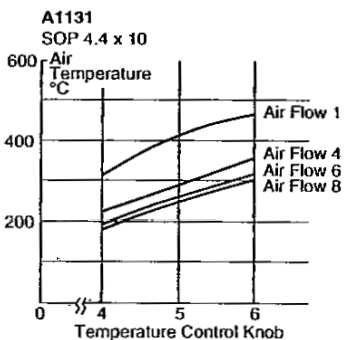
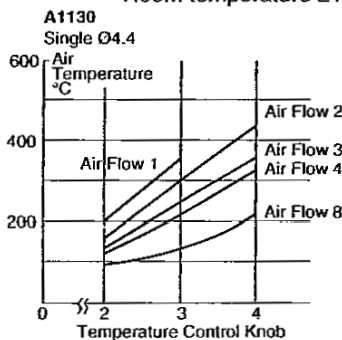
Temperature Distribution Chart

CAUTION : These charts are for reference. If the thermal protector is tripped, reduce the temperature setting or increase the air flow.

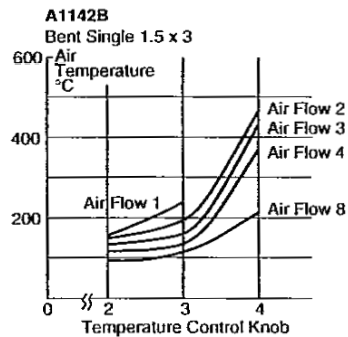
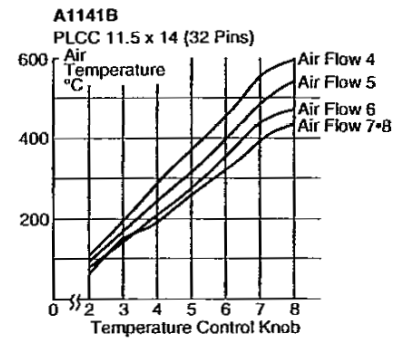
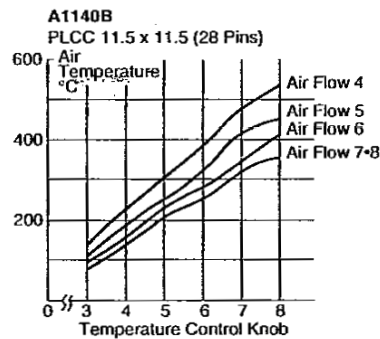
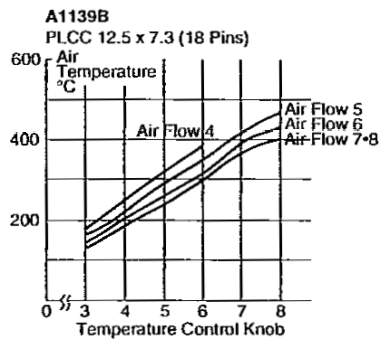
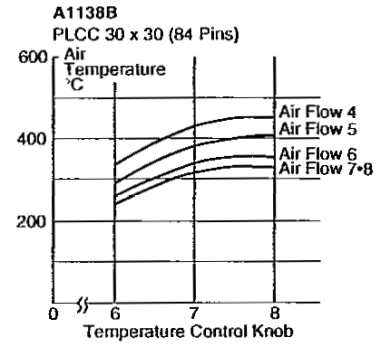
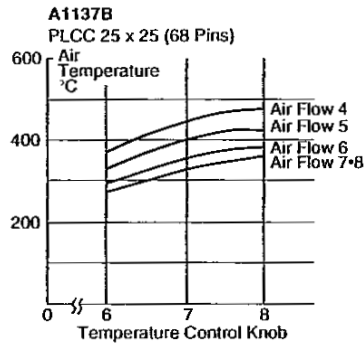
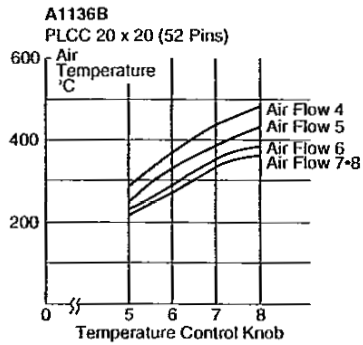
Test criteria: (A1124B ~ A1129B) Measured at the point of 3mm from the nozzle by recorder.
Room temperature 23°C.



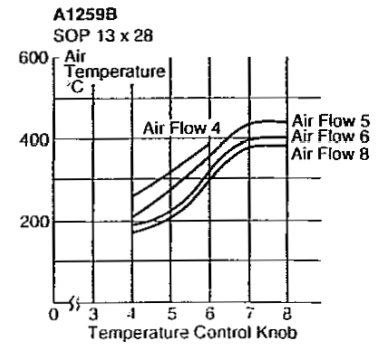
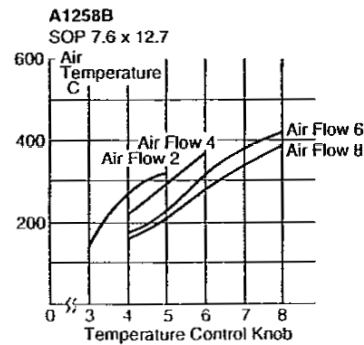
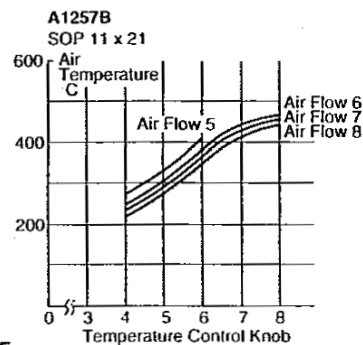
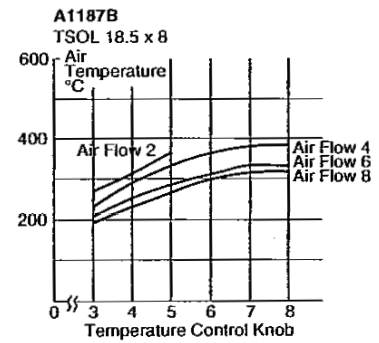
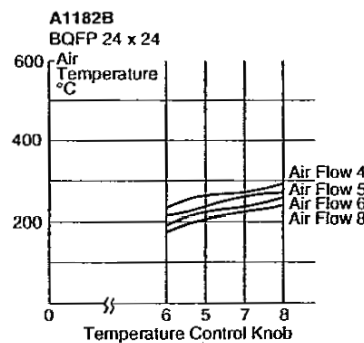
Test criteria: (A1130 ~ A1142B) Measured at the point of 3mm from the nozzle by recorder.
Room temperature 21°C.



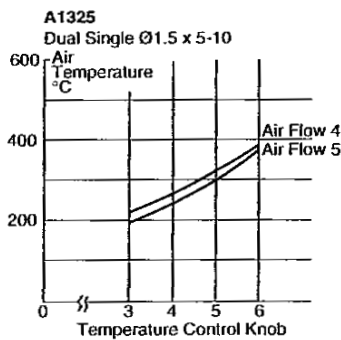
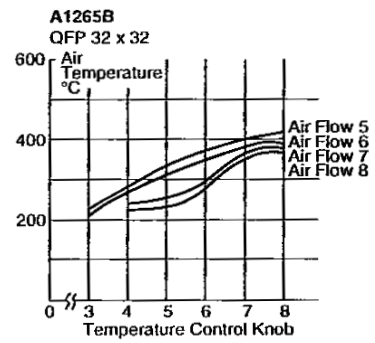
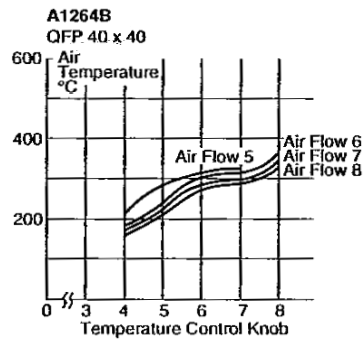
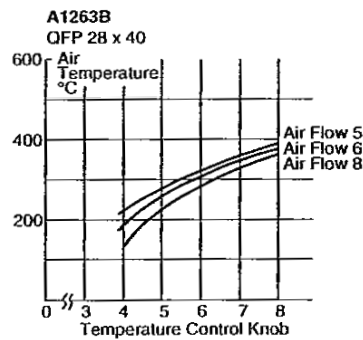
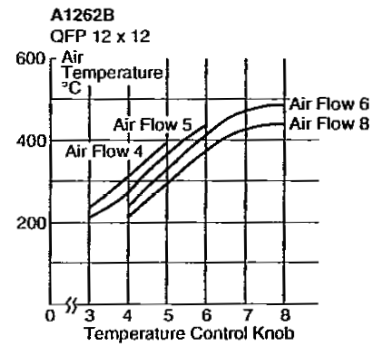
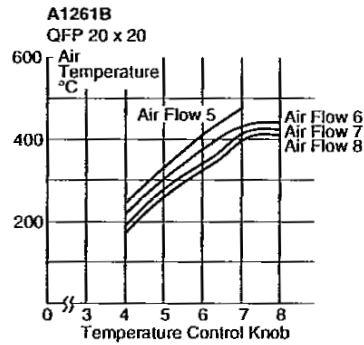
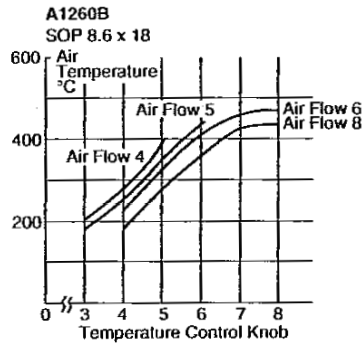
Temperature Distribution Chart



Test criteria: (A1182B, A1187B, A1258B) Measured at the point of 3mm from the nozzle by recorder.
Room temperature 24°C. (A1258B) room temperature 28°C.



Temperature Distribution Chart



Maintenance (Desoldering Gun)

Properly maintained, the Hakko 809 desoldering gun should provide years of good service. Efficient desoldering depends upon the temperature, and the quality and quantity of the solder and flux. Perform the following service procedures as dictated by the conditions of the gun's usage.

⚠ WARNING : Since the desoldering gun can reach a very high temperature, please work carefully. Except when cleaning the nozzle and heating element, always turn the power switch off and disconnect the power plug before performing any maintenance procedure.

Servicing the desoldering gun

1. Inspect and clean the nozzle.

- Plug in the power cord, turn the power switch on and let the nozzle heat up.
- Clean out the hole of the nozzle with the nozzle cleaning pin. If the nozzle cleaning pin does not pass through the nozzle, use the cleaning drill.

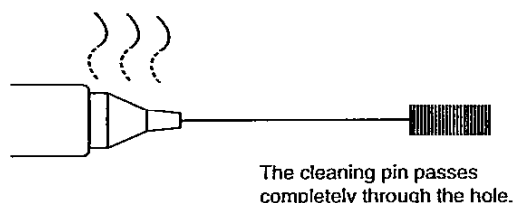
Note: The cleaning pin will not pass through the nozzle until the solder inside the nozzle is completely melted.

- Check the condition of the solder plating, surface and inside hole of the nozzle. Recoat the tip with fresh solder.
- If either is worn or eroded, or the inside diameter seems unusually wide, replace the nozzle.

Note: The inside hole and the surface of the nozzle is plated with a special alloy. Should this alloy become eroded by high temperature solder, the nozzle will not be able to maintain the proper temperature.

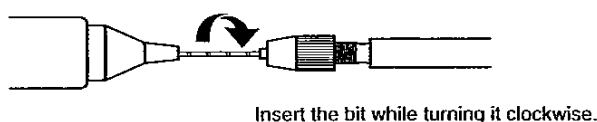
- If the cleaning pin and cleaning drill does not pass through the hole in the nozzle, replace the nozzle.

Cleaning with the nozzle cleaning pin.

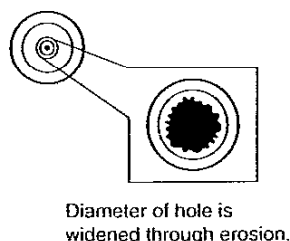
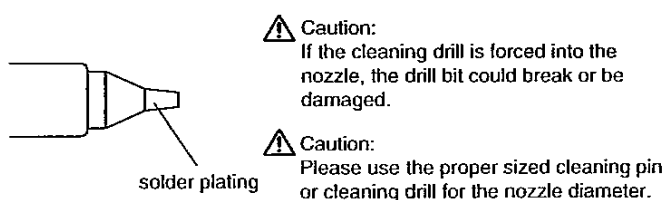
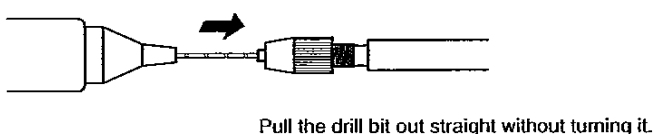


Cleaning with the cleaning drill.

• Before cleaning



• After cleaning



Note: Unfortunately, it is often difficult to observe this condition, therefore, if desoldering efficiency goes down and all other parts appear to be OK, the nozzle is probably eroded and should be replaced.

2. Disassemble the heating element.

⚠ CAUTION

The heating element is very hot during operation.

3. Clean out the hole in the heating element.

- Be sure the solder in the hole in the heating element is completely melted, then clean the hole with the provided cleaning pin.

Note: If the cleaning pin cannot pass through the hole, replace the heating element.

4. Replace the filters.

- Turn the power switch OFF.
- When the filter pipe is cool to the touch, push down the release knob at the back of the gun and remove the filter pipe.

⚠ CAUTION

The filter pipe is very hot.

- Examine the front holder.
- Examine the spring filter.
- Examine the ceramic paper filter (L). (No. A1033)

5. Secure the filters.

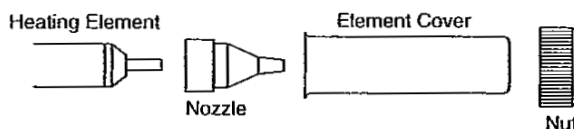
- Attach the spring filter to the front holder.
- Attach the front holder to the filter pipe.

⚠ CAUTION

Be sure the front holder is correctly aligned.

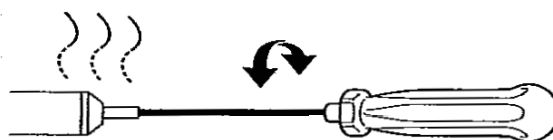
⚠ CAUTION

Use the ceramic paper filter (L) for the filter pipe (gun).
Using of the ceramic paper filter (S) in the filter pipe may cause to break or the power to drop.



Remove the nut with the attached spanner.

Scrape away all oxidation from the hole in the heating element until the cleaning pin passes cleanly through the hole.



The cleaning pin passes cleanly through the hole.

Front Holder

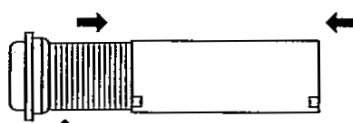
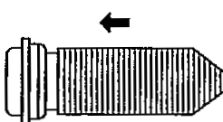


Replace
Stiff and cracked.

Replace
Solder is collected in two-thirds of the spring filter.

Replace
Ceramic paper filter is stiff with flux and solder.

Ceramic Paper
Filter (L)
(No. A1033)



Ceramic Paper
Filter (L)
(No. A1033)

Attach the front holder to the filter pipe so that it does not leak air.

Maintenance (Station)

6. Assemble the heating element.

- Attach the nozzle and tighten the nut.

⚠ CAUTION

If the nut is loose, air will leak and the temperature will drop.

Cleaning the inside of the filter case

1. Replace the ceramic paper filter.

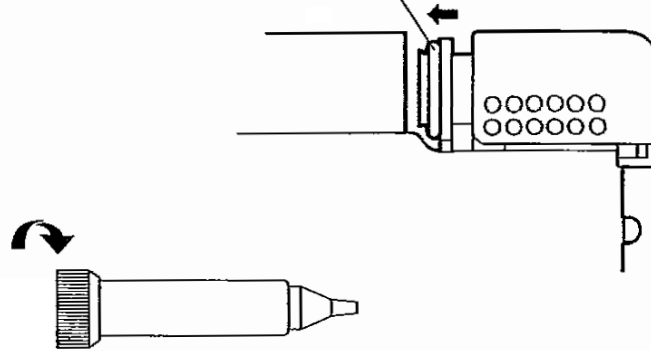
- Remove the ceramic paper filter and inspect it.
If it is stiff with flux, replace it.

2. Reassemble the filter retainer.

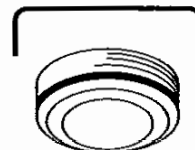
⚠ CAUTION

Set the ceramic paper filter (S) for filter case (station).
Using ceramic paper filter (L) in the filter case may cause to break or the power to drop.

Firmly press the back holder assembly into the filter pipe in order to properly seat the O-ring against the pipe.



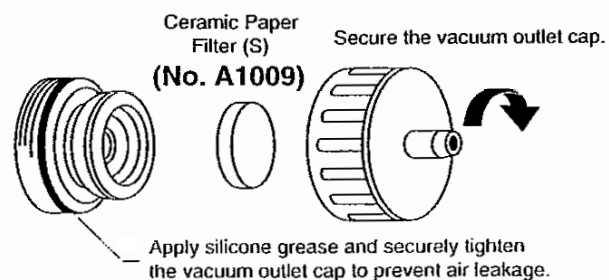
VACUUM



Filter Retainer

Ceramic Paper Filter (S)
(No. A1009)

Remove the filter retainer and push out the ceramic paper filter.



Cleaning the pump

⚠ CAUTION

Unplug the power cord before starting this procedure.

1. Disassemble the pump heads.

- Remove the cover.
- Remove the pump head from each side the pump.

2. Clean the pump head.

- Remove the valve plate and fixing plate.
- Remove any flux adhering to the plates.

⚠ CAUTION

If the fixing plate is difficult to remove, apply hot air to it to warm it up. Never use excessive force to remove the plate as it is easy to bend, and a bent plate will allow air to leak out and reduce solder vacuuming efficiency.

⚠ CAUTION

Clean the plates only with alcohol or thinner.

Replace:

If the valve plate is bent or stiff, replace it.

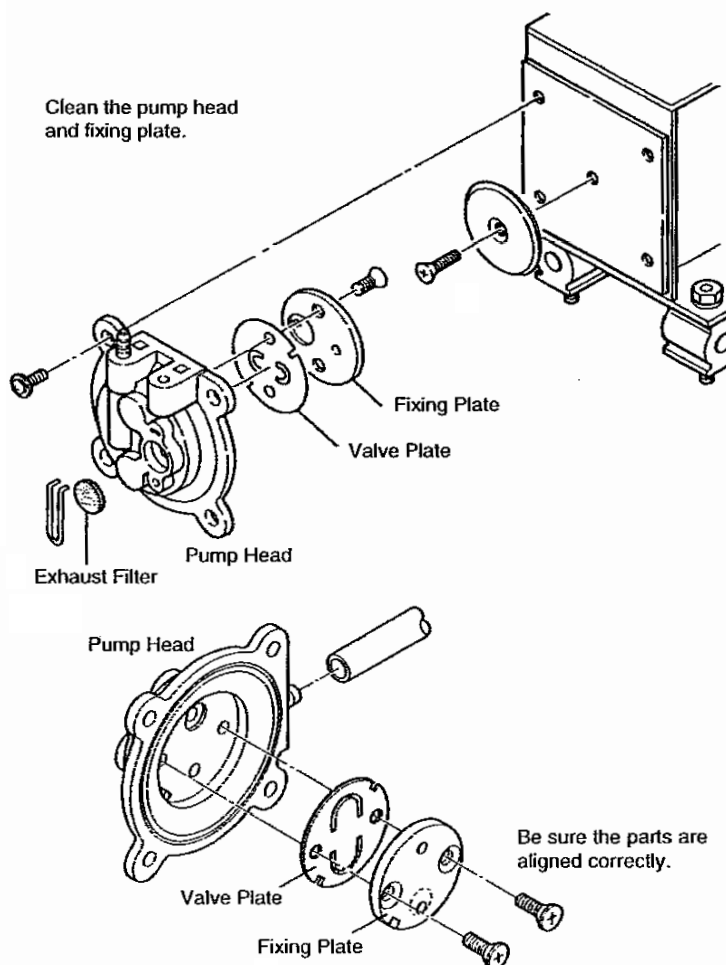
- If the exhaust filter is dirty, replace it.

3. Assemble the pump heads.

- Reassemble the valve plate and fixing plate.

⚠ CAUTION

When assembling the pump, be sure to check for air leaks.



Calibration/Option, Replacement Parts

The 702B unit should be recalibrated after changing the iron, replacing the heating element.

Calibration

1. Connect the plug of Cord assembly to the receptacle of the station.
2. Set the temperature control knob at 400°C (solder), 1 (desolder).
3. Turn the switch for solder and desolder on and wait till the temperature stabilizes.
4. When the temperature stabilizes, use a straight-edge (-) screwdriver to adjust the screw (marked CAL at the front panel of the station) until the tip thermometer indicates a temperature of 400°C (solder), 380°C(desolder).
Turn the screw clockwise to increase the temperature and counterclockwise to reduce the temperature.

*We recommend the Hakko 191/192 thermometer for measuring the tip / nozzle temperature.

Replacement tip for 900S/907

☆The tip temperature may vary depending on figure.
Refer to the chart for the correct adjustment.

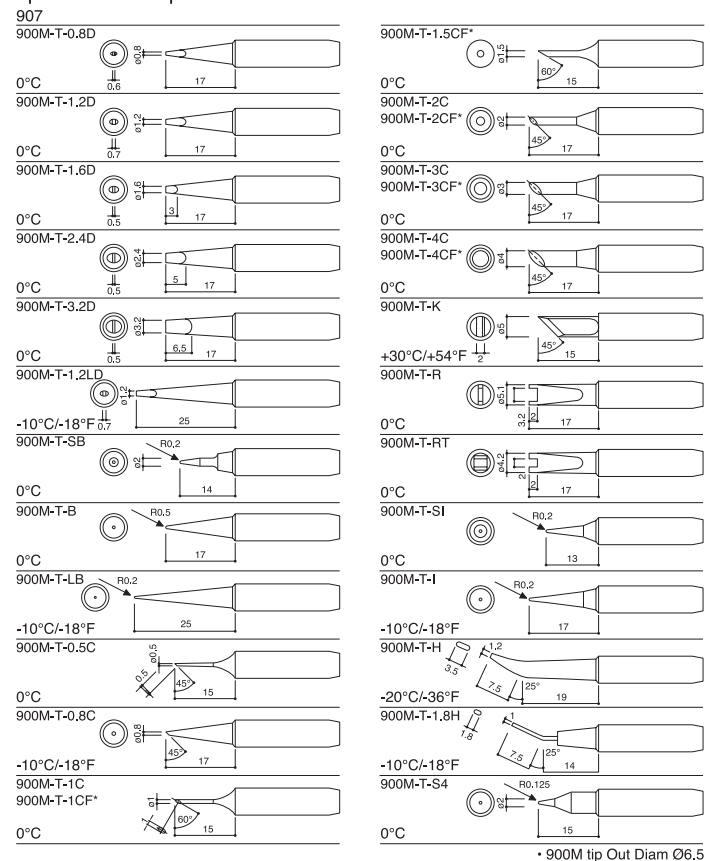
Example

When using 900M-T-H at 400°C.

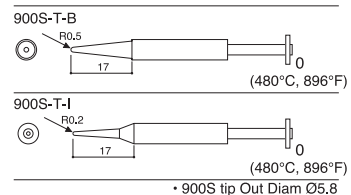
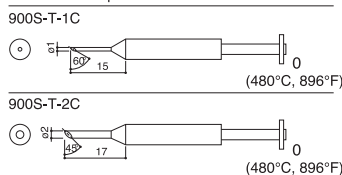
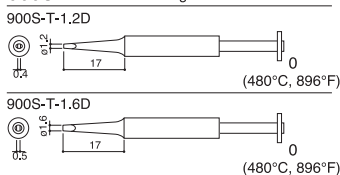
The gap between standard tip is -20°C.

Adjust the temperature control knob at 420°C.

*These tips are tinned flat only.



900S For micro soldering Hakkorecommends the 900S iron with fine tips.



Replacement/Optional Parts

Replacement and optional parts for 809

Iron holder, FP pick up,
Nozzle tray, Spanner,
Silicone grease,
Cleaning pin holder

• Nozzle

Part No.	Part Name/Description
A1002	Nozzle S ϕ 0.8mm / small
A1003	Nozzle S ϕ 1.0mm / small
A1004	Nozzle ϕ 0.8mm
A1005	Nozzle ϕ 1.0mm
A1006	Nozzle ϕ 1.3mm
A1007	Nozzle ϕ 1.6mm

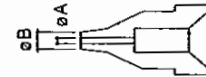
• Cleaning pin/drill

Part No.	Part Name/Description
B1215	Cleaning pin for heating element
B1086	Cleaning pin for ϕ 0.8mm nozzle
B1087	Cleaning pin for ϕ 1.0mm nozzle
B1088	Cleaning pin for ϕ 1.3mm nozzle
B1089	Cleaning pin for ϕ 1.6mm nozzle

B1302	Cleaning drill for ϕ 0.8mm nozzle
B1303	Cleaning drill for ϕ 1.0mm nozzle
B1304	Cleaning drill for ϕ 1.3mm nozzle
B1305	Cleaning drill for ϕ 1.6mm nozzle

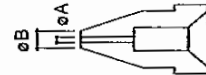
Part No.	Part Name/Description
B2477	Handpiece Holder
B1094	Spring holder for 809
C1141	Iron holder for 900S
C1142	Iron holder for 907 908
B2020	Iron receptacle for 900S
B2021	Iron receptacle for 907 908
A1042	Cleaning sponge *Old part no. 609-029
B2019	Iron holder base (for soldering iron)

No. A1002, A1003



Part No.	øA	øB
A1002	0.8mm	1.8mm
A1003	1.0mm	2.0mm

No. A1004 ~ A1007



Part No.	øA	øB
A1004	0.8mm	2.3mm
A1005	1.0mm	2.5mm
A1006	1.3mm	3.0mm
A1007	1.6mm	3.0mm

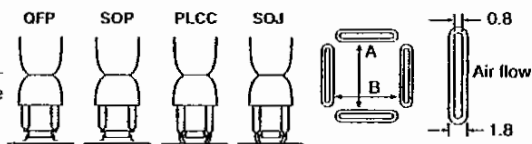
Part No.	Part Name/Description
B1438	FP pick up
B1439	FP pick up wire (S)
B1440	FP pick up wire (L)
B1914	Nozzle tray
B2100	Spanner (for desoldering iron)
A1028	Silicone grease
B2312	Cleaning pin holder

Additions of Optional Parts

•Nozzles

Note

The size in name/specification indicates the size of IC package.



mm

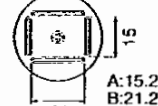
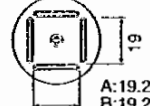
A1124B Single Q2.5

A1125B QFP 10 x 10

A1126B QFP 14 x 14

A1127B QFP 17.5 x 17.5

A1128B QFP 14 x 20



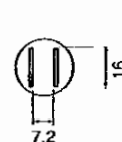
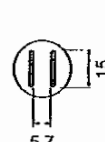
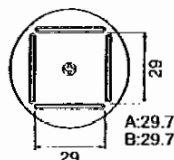
A1129B QFP 28 x 28

A1130 Single Q4.4

A1131 SOP 4.4 x 10

A1132 SOP 5.6 x 13

A1133 SOP 7.5 x 15



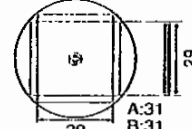
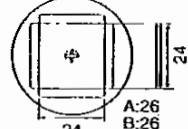
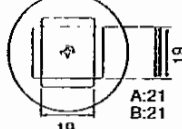
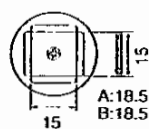
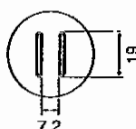
A1134 SOP 7.5 x 18

A1135B PLCC 17.5 x 17.5 (44 Pins)

A1136B PLCC 20 x 20 (52 Pins)

A1137B PLCC 25 x 25 (68 Pins)

A1138B PLCC 30 x 30 (84 Pins)



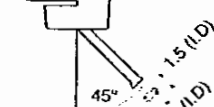
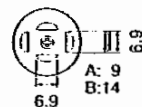
A1139B PLCC 12.5 x 7.3 (18 Pins)

A1140B PLCC 11.5 x 11.5 (28 Pins)

A1141B PLCC 11.5 x 14 (32 Pins)

A1142B Bent Single 1.5 x 3

A1182B BOFP 24 x 24



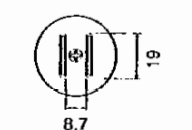
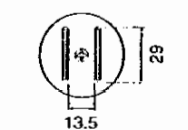
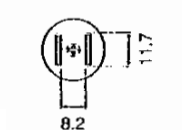
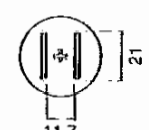
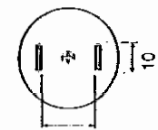
A1187B TSOL 18.5 x 8

A1257B SOP 11 x 21

A1258B SOP 7.6 x 12.7

A1259B SOP 13 x 28

A1260B SOP 8.6 x 18



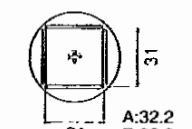
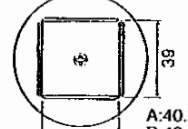
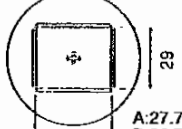
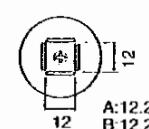
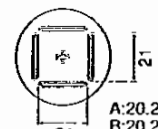
A1261B QFP 20 x 20

A1262B QFP 12 x 12

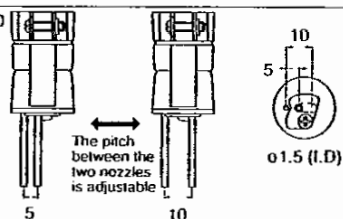
A1263B QFP 28 x 40

A1264B QFP 40 x 40

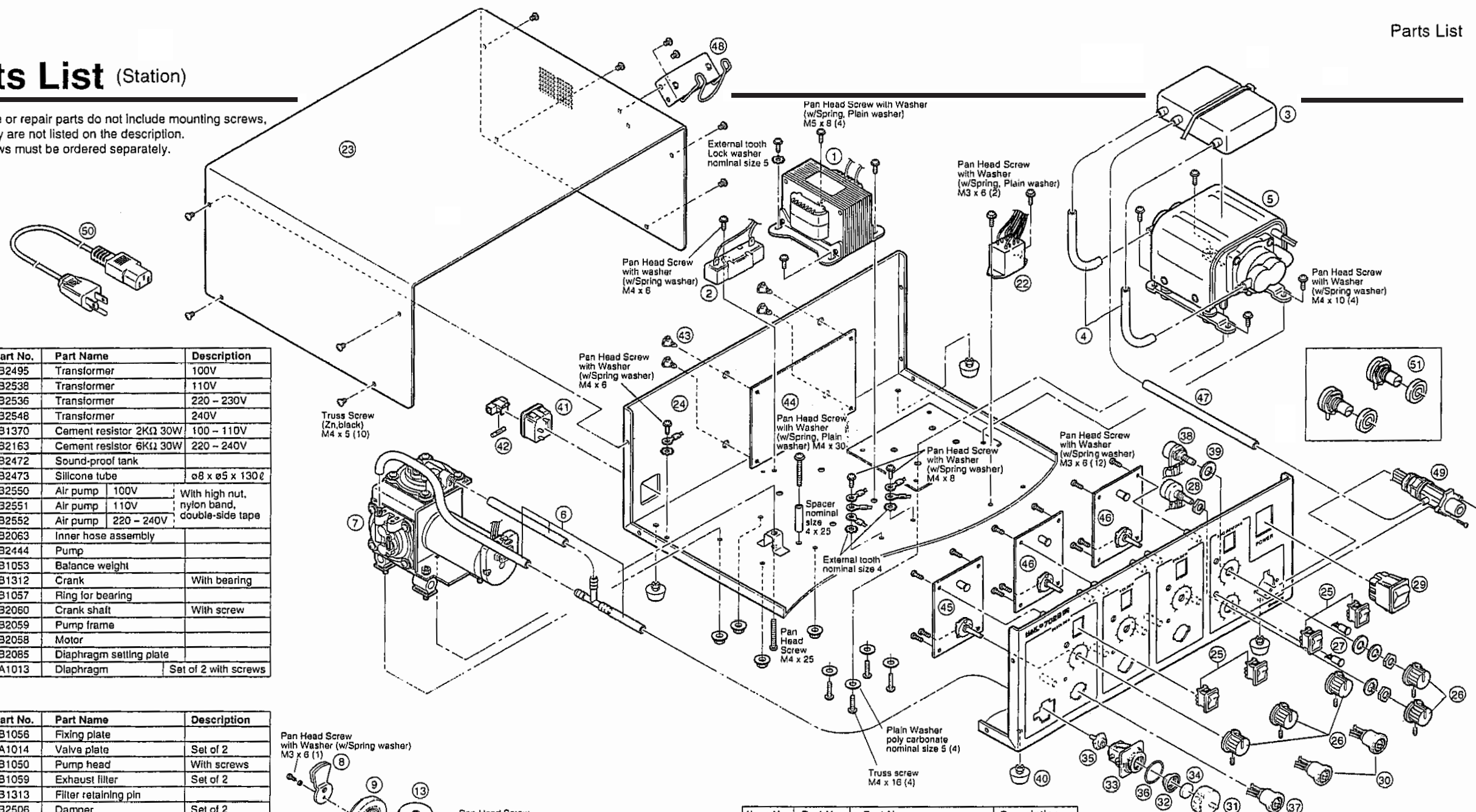
A1265B QFP 32 x 32



A1325 Dual Single $\phi 1.5 \times 5-10$
Adjustable Pitch



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

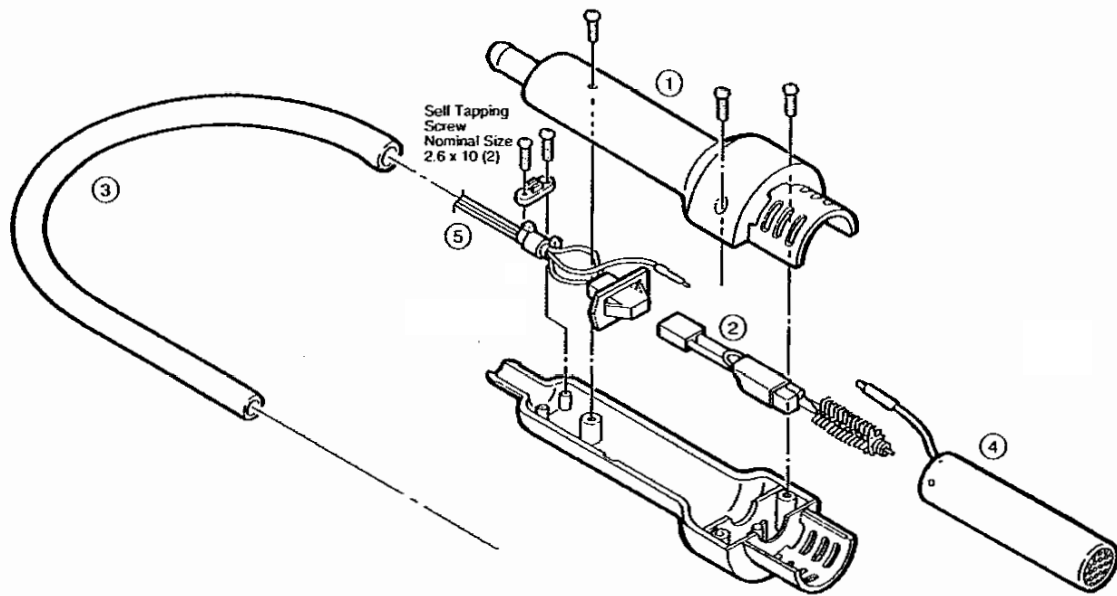


Item No.	Part No.	Part Name	Description
16	B1056	Fixing plate	
17	A1014	Valve plate	Set of 2
18	B1050	Pump head	With screws
19	B1059	Exhaust filler	Set of 2
20	B1313	Filter retaining pin	
21	B2506	Damper	Set of 2
22	B2534	Relay	100, 110V
	B2535	Relay	220 – 240V
23	B2532	Cover	
24	B2533	Chassis	
25	B1084	Switch	
26	B1486	Knob	
27	B1934	LED lamp	
28	B1940	Potentiometer 300K Ω (SMD air side)	100 – 110V
	B2164	Potentiometer 500K Ω (SMD air side)	220 – 240V
29	B1443	Power switch	
30	926-209	Receptacle	Solder side

Item No.	Part No.	Part Name	Description
44	B1446	P.W.B	240V (SMD rework)
	B2044	P.W.B	230V CE
45	B2529	P.W.B (Desolder)	With potentiometer
46	B2528	P.W.B (Solder)	With potentiometer
	B2355	P.W.B (Solder)	CE With potentiometer
47	B2509	Silicone tube	ø8 x ø5 x 260 ℓ
48	B2477	Handpiece holder	Assembly
49	B2537	Air nozzle	With cord stopper
50	B2419	Power cord, 3 core	American plug
	B2421	Power cord, 3 core	no plug
	B2422	Power cord, 3 core	BS plug/India
	B2423	Power cord, 3 core	European plug/Korea
	B2424	Power cord, 3 core	European plug/Eur
	B2425	Power cord, 3 core	BS plug/U.K.
	B2426	Power cord, 3 core	Australian plug
	B2436	Power cord, 3 core	Chinese plug
51	B2347	Spacer	Mounting on potentiometer CB

Parts List (Handpiece)

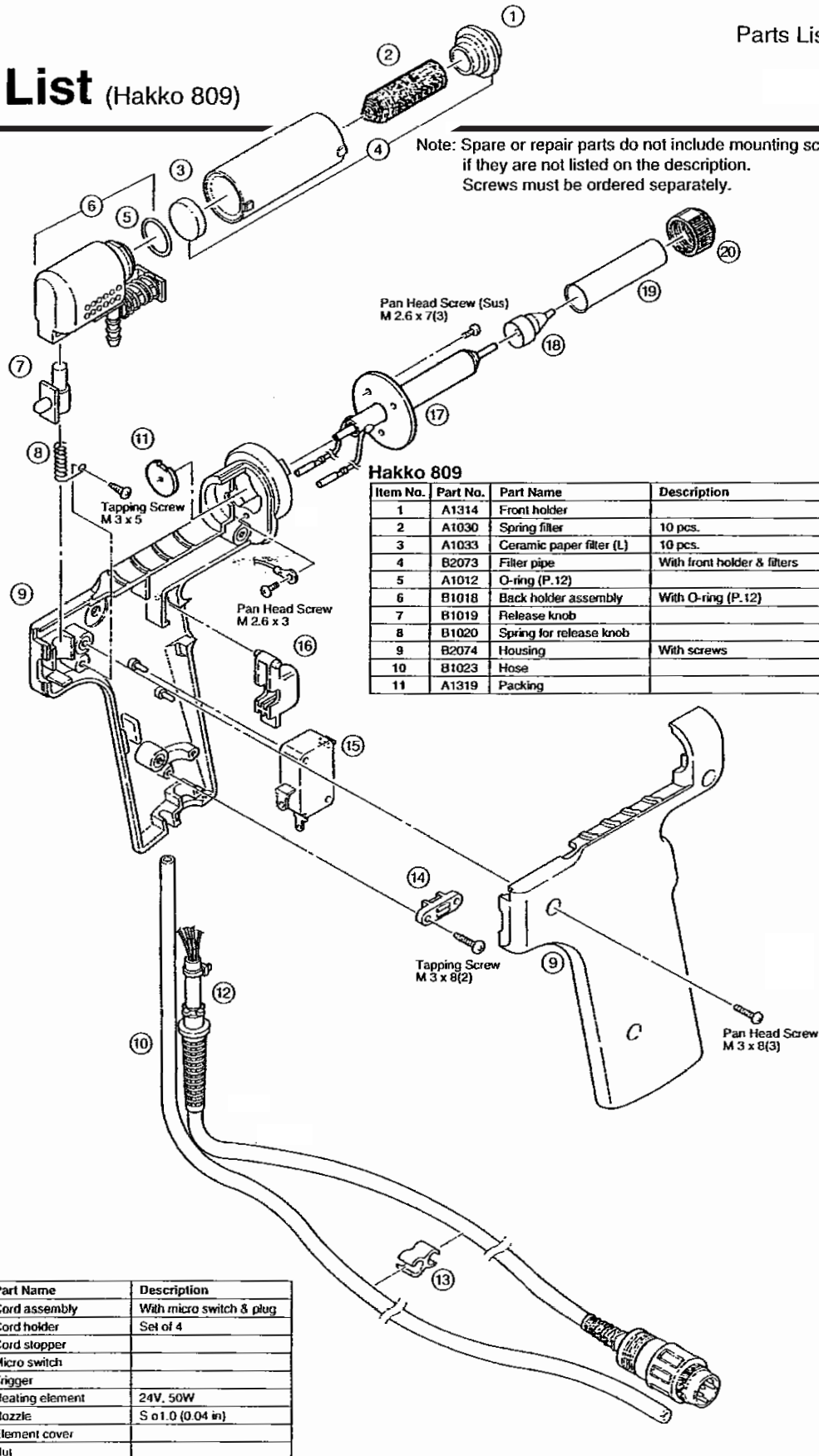
Note: Spare or repair parts do not include mounting screws, if they are not listed on the description.
Screws must be ordered separately.



Item No.	Part No.	Part Name	Description
1	B1923	Handle	With screws
2	A1143	Heating element	100V/250W
	A1144	Heating element	110V/250W
	A1145	Heating element	120V/260W
	A1146	Heating element	220V-240/250W
3	B1188	Silicone hose	
4	B1441	Pipe assembly	
5	B1360	Cord assembly	

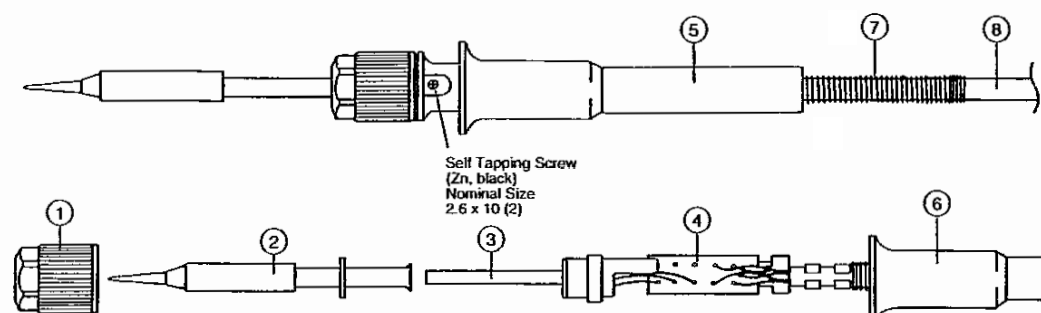
Parts List (Hakko 809)

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



Parts List (Hakko 900S)

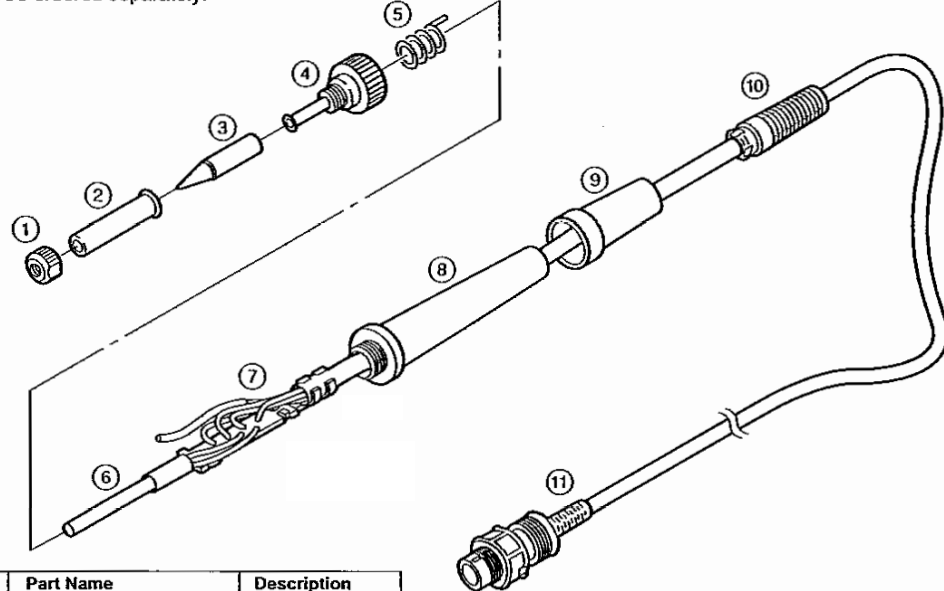
Note: Spare or repair parts do not include mounting screws, if they are not listed on the description.
Screws must be ordered separately.



Item No.	Part No.	Part Name	Description
1	900S-006S	Nut	
2		Soldering tip	See p.21
3	A1322	Heating element	Old part no : 900S-H
4	900S-101	Terminal board	With cord stopper
5	900S-001S	Handle	Handle cover included, ESD
6	900S-034S	Handle cover	
7	900S-010	Cord bushing	
8	900S-039S	Cord assembly	E.S.D.

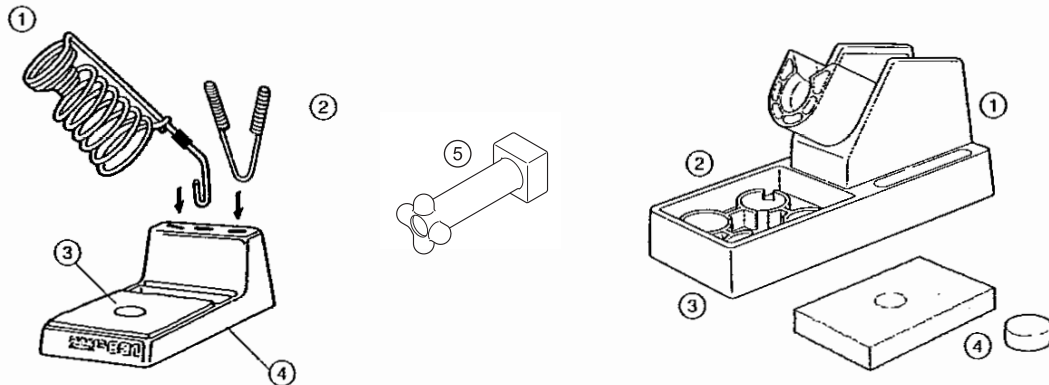
Parts List (Hakko 907 908 /Iron holder)

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



907 908

Item No.	Part No.	Part Name	Description
1	B1784	Nut	
2	B1786	Tip enclosure	
3		Soldering tip	See p.21
4	B2022	Nipple	
5	B2032	Grounding spring	
6	A1321	Heating element	
7	B2028	Terminal board	With cord stopper
8	B2024	Handle	With handle cover, E.S.D.
9	B2027	Handle cover	
10	B2031	Cord bushing	
11	B2030	Cord assembly	E.S.D.



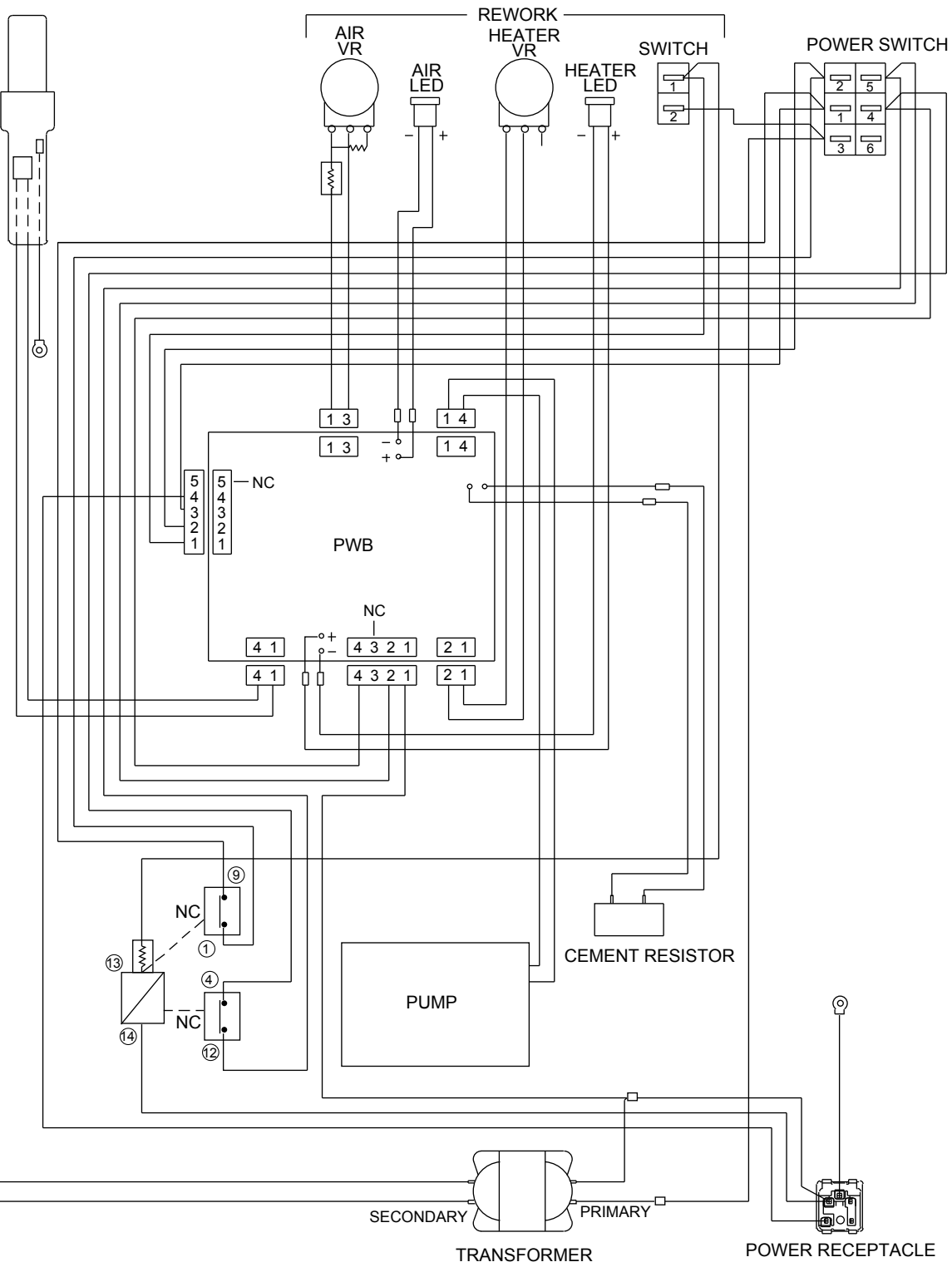
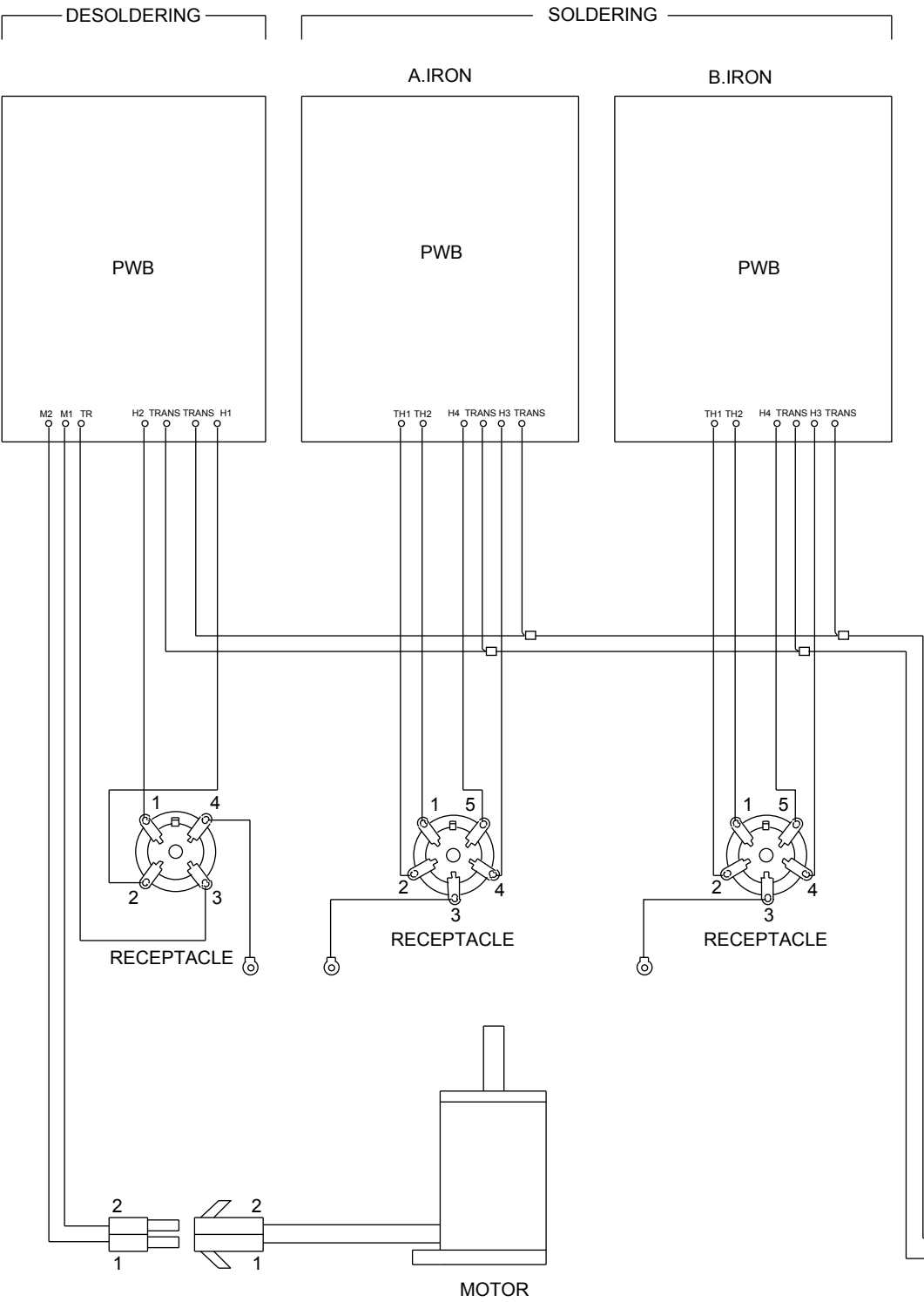
Iron Holder

Item No.	Part No.	Part Name	Description
1	B1094	Spring iron holder	802, 809
2	B1095	Cleaning pin holder	
3	A1042	Cleaning sponge	
4	B1470	Iron holder base	
5	B3048	Wrench	

Iron Holder

Item No.	Part No.	Part Name	Description
1	C1141	Iron holder	907, 908
	C1142	Iron holder	900S
2	B2020	Iron receptacle	900S
	B2021	Iron receptacle	907, 908
3	B2019	Iron Holder base	
4	A1042	Cleaning sponge	

Wiring



中國RoHS: 產品中有毒有害物質或元素的名稱及含量

部件名稱	有毒有害物質或元素					
	鉛(Pb)	汞(Hg)	鎘(Cd)	六價鉻 (Cr(VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
泵組件	×	○	○	○	○	○
過濾管接合套	×	○	○	○	○	○
吸錫槍部 (焊鐵部)	×	○	○	○	○	○
電路板	×	○	○	○	○	○
清潔鑽	×	○	○	○	○	○
插頭	×	○	○	○	○	○
<p>○：表示該有毒有害物質在該部件所有均質材料中的含量均在SJ/T 11363-2006 標準規定的限量要求以下。</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> <p>×</p> 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