HAKKO

HAKKO 475 DESOLDERING TOOL

Desoldering Tool

Instruction Manual

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Thank you for purchasing the HAKKO 475 desoldering tool.
Please read this manual before operating the HAKKO 475.
Keep this manual readily accessible for reference.

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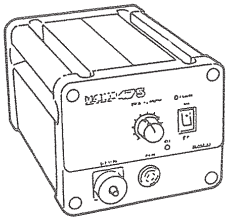
Table of Contents

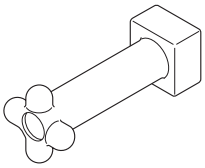
1. Packing List 1
2. Precautions 2
3. Part Names (Desoldering Gun) 3
   (Station) 4
4. Operation (Preparation-
   Assembly and Connection) ..... 5 • 6
   (Desoldering) ..... 7 • 8
   (Cleaning during Operation) 9
   (Problems during Desoldering)
   (Post-operation Maintenance) 10
   (Troubleshooting Guide) 11
5. Maintenance (Desoldering Gun) ..... 12 ~ 14
   (Station) ..... 15 • 16
6. Replacement Parts
   (Replacing Heating Element) ..... 17 • 18
7. Parts List (Station) ..... 19 • 20
   (Desoldering Gun) 21
8. Specifications 22
9. Wiring 22

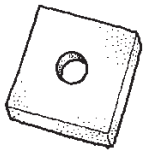
1. Packing List

Please check to make sure that all the items listed below are included in the HAKKO 475 package.

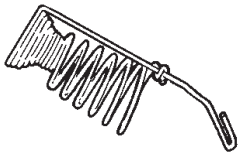
Station 1
Desoldering Gun 1
Iron Holder Base 1
Spring Iron Holder 1
Cleaning Sponge 1
Filter Pipe 1
Ceramic Paper Filter (S) 2
Ceramic Paper Filter (L) 4
Spring Filter 3
Cleaning Pin (for ø1.0mm [0.04 in] nozzle) 1
Cleaning Pin (for Heating Element) 1
Cleaning Pin Holder 1
Cleaning Drill (for ø1.0mm [0.04 in] nozzle) 1
Silicone Grease 1
Wrench 1
Instruction Manual 1

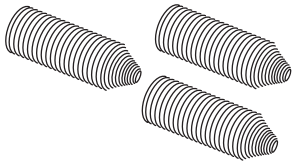

Station

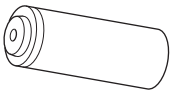

Wrench


Cleaning Sponge

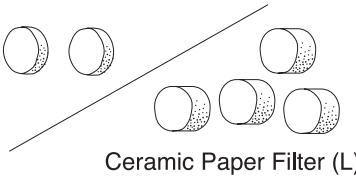
Iron Holder Base

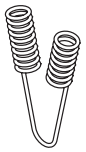

Spring Iron Holder

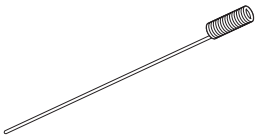

Spring Filter

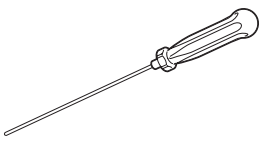

Filter Pipe

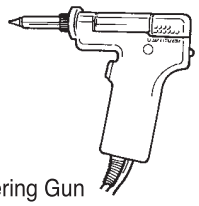
Ceramic Paper Filter (S)

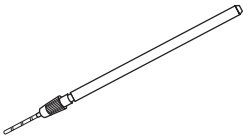

Ceramic Paper Filter (L)

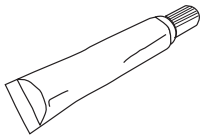

Cleaning Pin Holder


Cleaning Pin for ø1.0mm (0.04 in) Nozzle


Cleaning Pin for Heating Element


Desoldering Gun


Cleaning Drill for ø1.0mm (0.04 in) Nozzle


Silicone Grease

* This product is protected against electrostatic discharge.
* Specifications and design are subject to change without notice.

⚠CAUTION

This product includes such features as electrically conductive plastic parts and grounding of the handpiece and station as measures to protect the device to be soldered from the effects of static electricity. Be sure to observe the following instructions:

1. The handle and other plastic parts are not insulators, they are conductors. When replacing parts or repairing, take sufficient care not to expose live electrical parts or damage insulation materials.
2. Be sure to ground the unit during use.

2. Precautions

In this instruction manual, “WARNING” and “CAUTIONS” are defined as follows.

⚠ WARNING

⚠ **WARNING**: Misuse may potentially cause death of, or serious injury to the user.

⚠ **CAUTION** : Misuse may potentially cause injury to the user or physical damage to the objects involved.

For your own safety, be sure to comply with these precautions.

⚠ CAUTION

When the power is on, the nozzle temperature is between 380°C/716°F and 480°C/ 896°F.
Since mishandling may lead to burns or fire, be sure to comply with the following precautions.

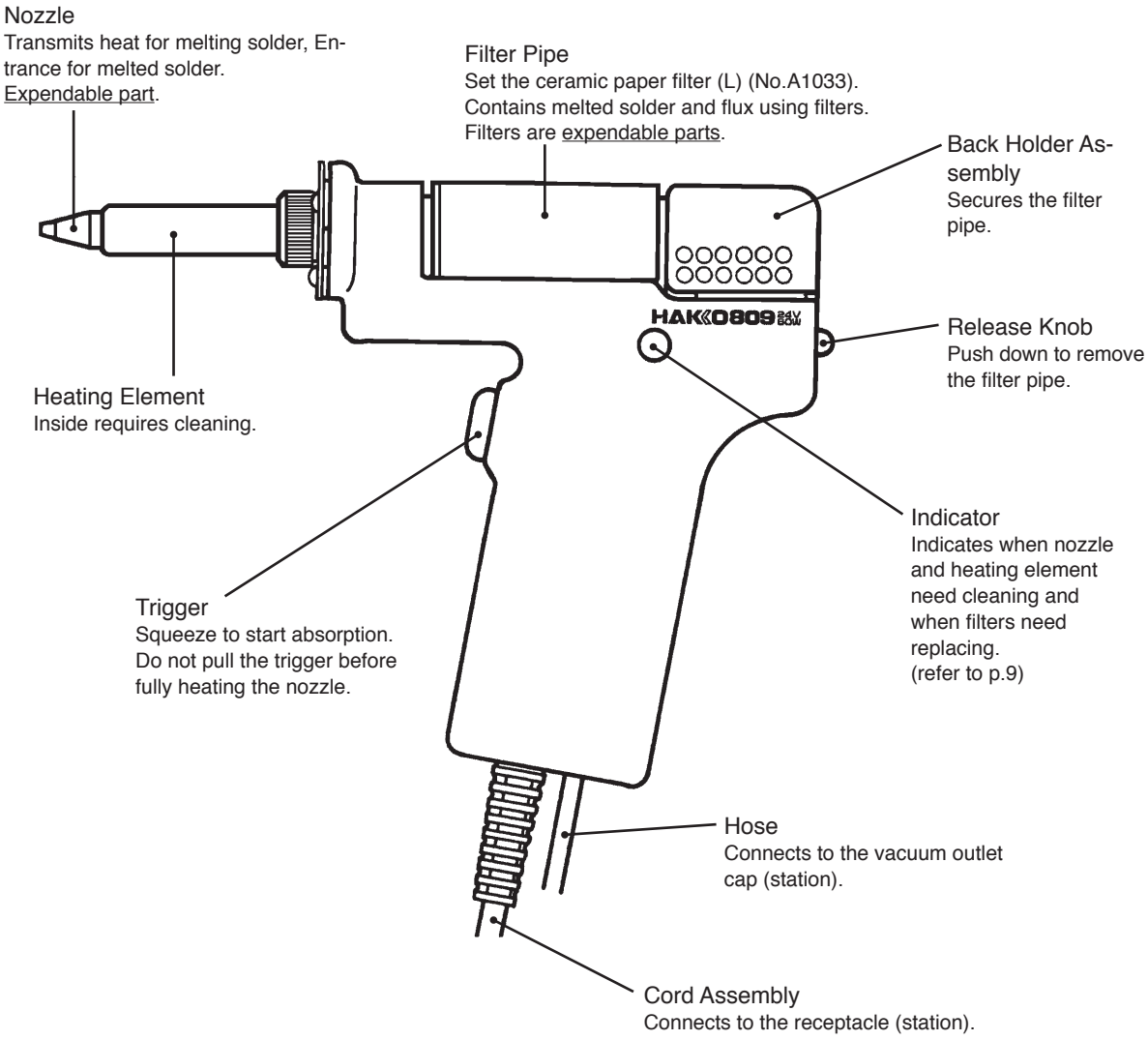
- Do not touch the metallic parts near the nozzle, nearby plastic parts and the spring iron holder.
- Do not use the product near flammable items.
- Advise other people in the work area that the unit can reach a very high temperature and should be considered potentially dangerous.
- Turn the power off while taking breaks and when finished using the unit.
- 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.

To prevent damage to the unit and ensure a safe working environment, be sure to comply with the following precautions.

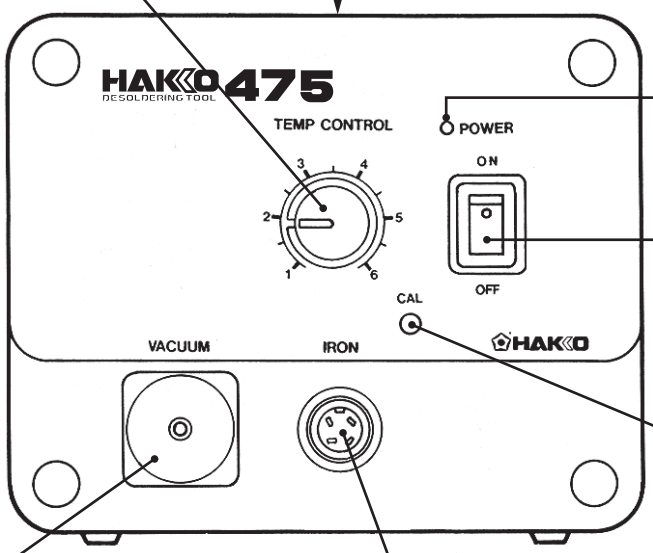
- Use clean, filtered air as the fluid. With the trigger pulled and air flowing, adjust the pressure to between 490 to 686kPa(5.0 to 7.0kgf/cm^2)
- Do not use the unit for applications other than desoldering.
- Do not rap the desoldering gun against the work bench to shake off residual solder, or otherwise subject the iron to severe shocks.
- Do not modify the unit.
- Use only genuine HAKKO replacement parts.
- Do not wet the unit or use the unit when your hands are wet.
- Set the ceramic paper filter (S) for the filter retainer (station), and the ceramic paper filter (L) for the filter pipe (gun).
- Maintain the desoldering gun and the station.
- While using the unit, don’t do anything which may cause bodily harm or physical damage.

3. Part Names (Refer to p.19, 20 & 21 for part nos.)

● Desoldering Gun



● Station



Temperature Control Knob
Provides nozzle temperature control. (refer to p.7)

Temperature Control Set Screw Clamp
Prevents the temperature control knob from being reset. (refer to p.7)

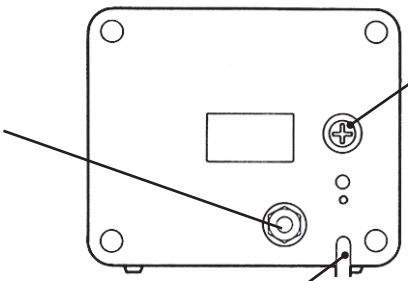
Power Lamp
Lights up when the power switch is turned to ON.

Power Switch
When turned to ON, the heating element starts to heat up.

CAL (Calibration)
Used for calibrating the temperature after replacing the heating element.

Vacuum Outlet Cap
Set the ceramic paper filter (S) (No. A1009).
Connects with the hose. Filter inside vacuum outlet cap is expendable.

Receptacle
Connector for the cord assembly.



Female Connector
Supplier inlet compresser air
Tapered screw; PT 1/8

Fuse Holder
- 100, 110V unit contain 125V-2A fuse.
- 120V unit contains 250V-2A (U) fuse.
- 220, 230V unit contain 250V-1A fuse.
- Australian 240V unit contains 250V-1A Ⓢ fuse.

Power Cord

4. Operation

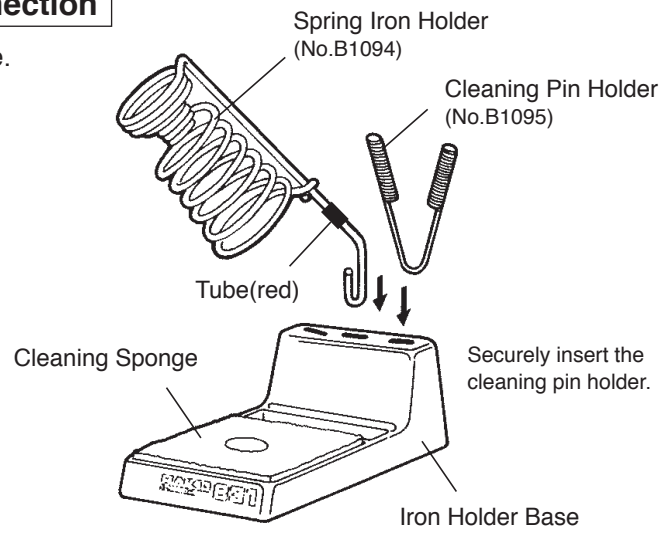
Preparation-Assembly and Connection

Assemble the HAKKO 474 on a flat surface.

1 Assemble the iron holder.

- Set the spring iron holder and cleaning pin holder in the iron holder base.
- Dampen the cleaning sponge with water and then squeeze it dry.

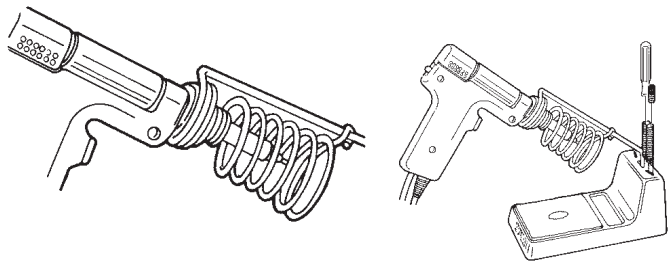
> **⚠CAUTION**
> The sponge is compressed.
> It will swell when moistened with water.
> Be sure to dampen the sponge with water before use.
> Be sure to remove the round portion of the sponge.



2 Insert the desoldering gun and cleaning pins.

- Fully insert the desoldering gun into the spring iron holder.

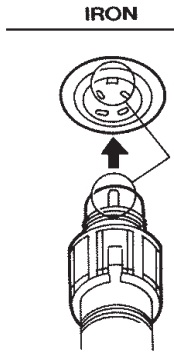
> **⚠CAUTION**
> The spring iron holder becomes extremely hot during operation of the desoldering gun. Do not touch the spring iron holder during and immediately after using the gun.



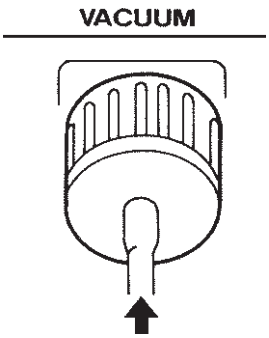
3 Connections

> **⚠CAUTION**
> Be sure to turn off the power switch before connecting or disconnecting the cord assembly and the power plug. Failure to do so may damage the P.W.B.

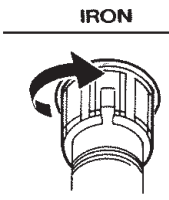
- Connect the cord assembly to the receptacle (marked “IRON”).
- Connect the hose to the vacuum outlet cap (marked “VACUUM”).



Insert the cord assembly by keying the plug to the key on the receptacle.



Fully insert the hose into the vacuum outlet cap.



Secure the plug by turning it clockwise.

4 Connect to the compresser.

- Use filtered air without any dust, oil and moisture.
- With the trigger pulled and air flowing, adjust the regulator air pressure to 490kPa(5.0kgf/cm^2).

> ⚠ **CAUTION**
> The absorption power of the unit will be reduced if adjustment is made while air is not flowing or if the tube is not measured as specified.
> Do not set the regulator to pressure of 882kPa (9kgf/cm^2) or more while the trigger is not pulled, as such pressures can damage various parts of the HAKKO 475 station.

5 Power switch

- Confirm that the power switch is set in the OFF position, then connect the power plug to the power source.

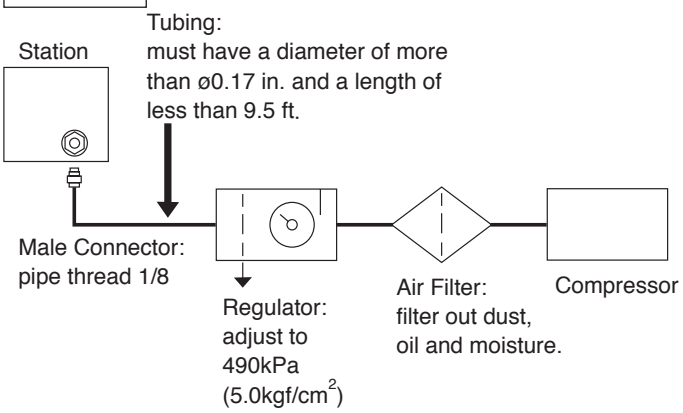
> ⚠**CAUTION**
> The entire unit is constructed of conductive materials. Always ground the unit.

- Turn the power switch to ON. The power lamp should light up.

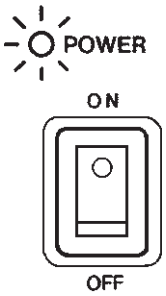
- The nozzle begins to heat up as soon as the power switch is turned to ON.

6 After turning the power switch to ON, wait 3 minutes before beginning desoldering operations.

Connections



> ⚠ CAUTION
> Use the air filter. Dust, oil and moisture can adhere to the solenoid valve in the pipe without it. This may result in damage to the unit.



The power lamp lights up.

> The power lamp doesn't light up.
> 1. Is the power cord properly connected?
> 2. Is the fuse blown?

The nozzle heats up.

> The nozzle doesn't heat up.
> 1. Is the cord assembly properly connected?
> 2. Is the heating element broken?

> ⚠**CAUTION :** The desoldering gun must be placed in the iron holder when not in use.

4. Operation

Desoldering

After turning the power switch to ON, wait 3 minutes before beginning desoldering operations.

1 Set the temperature.

⚠CAUTION
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 FG-100 thermometer or HAKKO FG-101 soldering tester for measuring the nozzle temperature.

- The temperature control knob can be secured by tightening the temperature control set screw clamp ("+" screw) at the top of the HAKKO 475 unit.

2 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.

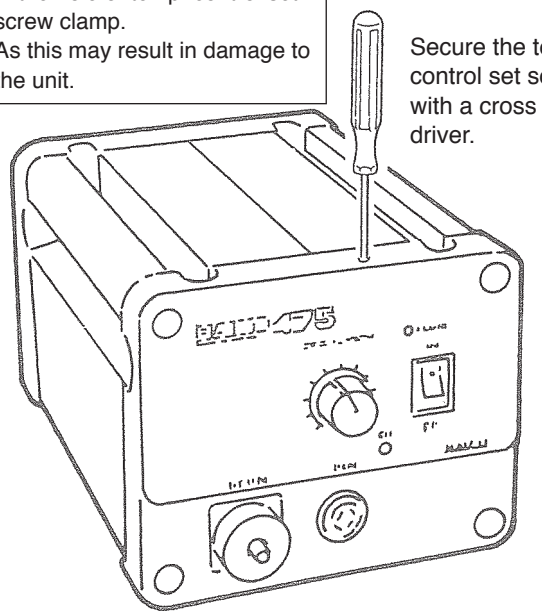
If the tip of the nozzle is coated with oxide, the nozzle's heat conductivity will be lowered.
Coating the tip with a small amount of fresh solder ensure maximum heat conductivity.

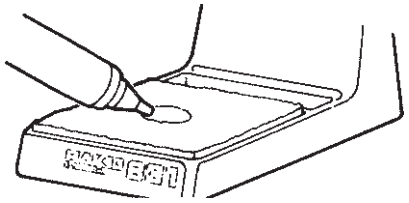
The temperature can be adjusted between 380°C (716°F) and 480°C (896°F) with temperature control knob.
Please refer to the chart below, and adjust the temperature control knob.

knob	P.W.B.
1 and 2	Single-sided P.W.B.
3 and 4	Through-hole P.W.B.
5 and 6	Multilayer P.W.B.

⚠CAUTION
Never insert the cleaning pin in the hole of temp. control set screw clamp.
As this may result in damage to the unit.

Secure the temperature control set screw clamp with a cross point screwdriver.





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

3 Melt the solder.

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

> **⚠CAUTION**
> Never allow the nozzle to touch the board itself.

- Confirm that the solder is melted.

> **⚠CAUTION**
> To confirm that all 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.

> **⚠CAUTION**
> Never move the lead by force. If it doesn't move easily, the solder isn't yet fully melted.

4 Absorb the solder.

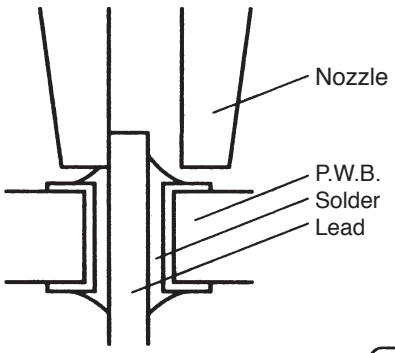
- After confirming that the solder is completely melted, absorb the solder by squeezing the trigger on the gun.

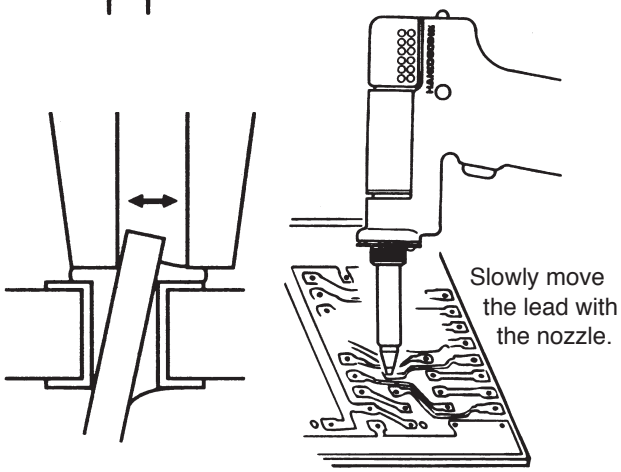
> **⚠CAUTION**
> Never leave any solder remaining inside the hole in the P.W.B.

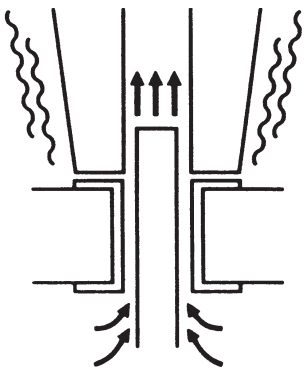
- After fully absorbing all the solder, cool the soldering junction in order to prevent it from becoming resoldered.

5 Problems during desoldering.

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







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

4. Operation

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.

⚠CAUTION
The indicator on the HAKKO 474 reads in a different way.
For instruction on the reading the HAKKO 474 indicator, please refer to the HAKKO 474 instruction manual.

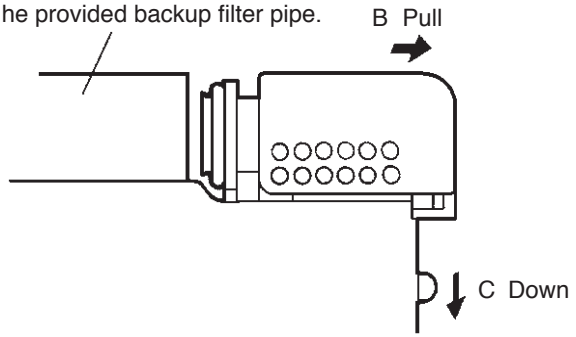
2 Replacing the filter

Replace the filter as shown A to C. 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 three-fourths or more of the indicator is red, replace the filter and clean the nozzle and the inside of the heating element. (refer to p.12 Maintenance of the Desoldering Gun)
One-half or less of rthe indicator is red.	Three-fourths 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.

A Replace the entire filter pipe with he provided backup filter pipe.



Problems during Desoldering

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

B. Suction power is dropping.

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.

- Multilayer 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 (160°F) and 80°C (180°F)], then desolder. Do not increase the temperature of the gun by recalibration as this may damage the P.W.B. 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, or the nozzle is eroded, replace the nozzle. (refer to p.12)

B. Suction power is dropping.

- Replace the filters, and clean the nozzle and the inside of the heating element, (refer to p.12 to p.16, Maintenance of Desoldering Gun and Station)

- Air is leaking from the vacuum system.

Air leakage cannot be determined from the indicator. Check the air-tightness of the following parts and replace any that are worn.

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

- The air pressure is low.

Check the air pressure and connections. (refer to p.6)

Post-operation Maintenance

To ensure a long service life, always perform the following maintenance procedures immediately after using the HAKKO 475 unit.

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

Troubleshooting Guide

⚠**WARNING :** If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarity qualified person in order to avoid personal injury or damage to the unit.

● Power lamp does not light up.

- Is the power cord plugged in correctly.
  Securely insert the power cord into the power supply.
- Is the fuse blown?
  Determine why the fuse blew and eliminate the cause, then replace the fuse.
  Example Is the inside of the gun short-circuited?

● Solder is not being absorbed.

- Is the spring filter full of solder?
  Replace it with a new one. (refer to p.13)
- Is the ceramic filter hardened?
  Replace it with a new one .
- Is there a vacuum leak?
  Check the connections and replace any worn parts. (refer to p.10)
- Is the compressor providing the proper air pressure?
  Check the air pressure and the inside diameter and length of the tube. (refer to p.6)

● The nozzle does not heat up.

- Is the desoldering gun cord assembly properly connected?
  Reconnect it. (refer to p.6)
- Is the heating element damaged?
  Replace it. (refer to p.17)

NOTE : When repairs are needed, please send both the desoldering gun and the station to your sales agent.

5. Maintenance (Desoldering Gun)

Properly maintained, the HAKKO 475 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

> ⚠**CAUTION**
> The desoldering gun will be extremely hot. During maintenance, please wear gloves and work carefully.

1 Inspect and clean the nozzle.

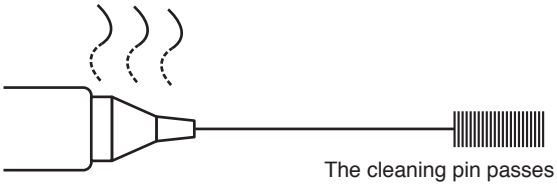
- Plug in the power cord, turn the power switch On and let the nozzle heat up.
- Clean out the hole of the nozzle with the nozzle cleaning pin.

> ⚠**CAUTION**
> The cleaning pin will not pass through the nozzle until the solder inside the nozzle is completely melted.

- If the cleaning pin does not pass through the hole in the nozzle, clean with the cleaning drill.
- Check the condition of the solder plating on the tip of the nozzle.
- If it is slightly worn, recoat the tip with fresh solder to prevent oxidation.
- Check the condition of the surface and inside hole of the nozzle.
- If either is worn or eroded, or the inside diameter seems unusually wide, replace the nozzle.

> ⚠**CAUTION**
> 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.

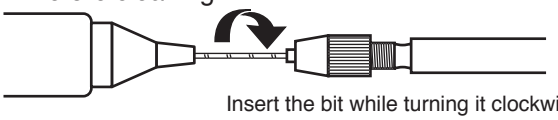
Cleaning with the nozzle cleaning pin



The cleaning pin passes completely through the hole.

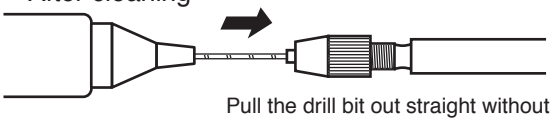
Cleaning with the cleaning drill

• Before cleaning



Insert the bit while turning it clockwise.

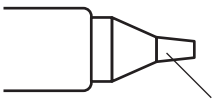
• After cleaning



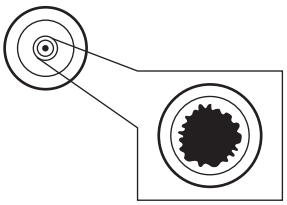
Pull the drill bit out straight without turning it.

> ⚠**CAUTION**
> If the cleaning drill is forced into the nozzle, the drill bit could break or be damaged.

> ⚠**CAUTION**
> Please use the proper size cleaning pin or cleaning drill for the nozzle diameter.



Solder plating



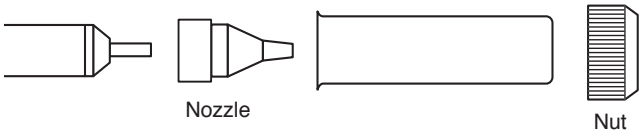
Diameter of hole is widened through erosion.

> ⚠**CAUTION**
> 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.

Heating Element Element Cover



Nozzle Nut

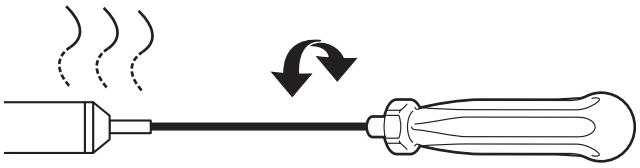
Remove the nut with the attached wrench.

3 Clean out the hole in the heating element with the provided cleaning pin.

> ⚠**CAUTION**
> Be sure the solder in the hole in the heating element is completely heated, before cleaning the hole.

- If the cleaning pin cannot pass through the hole, replace the heating element.
- Turn the power off after cleaning.

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 and completely through the hole.

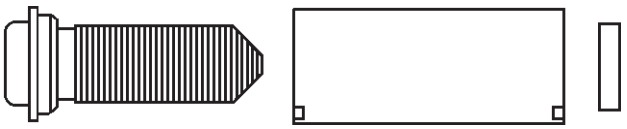
4 Replace the filters.

- 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.

Front Holder



Spring Filter Ceramic Paper Filter (L) (No.A1033)

- Examine the spring filter.

Replace
Stiff and cracked.

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

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

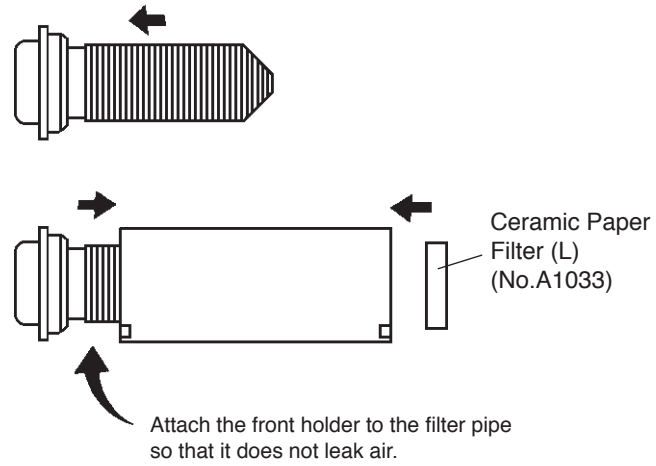
Replace
Ceramic paper filter is stiff with flux and solder.

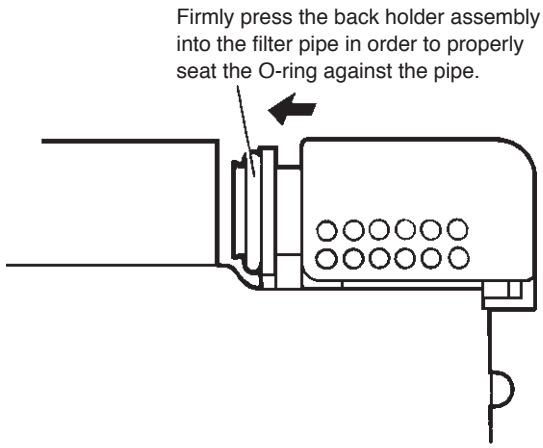
5 Secure the filters.

- 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.

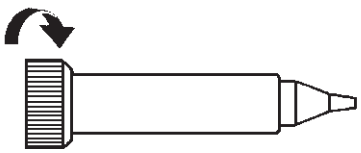




6 Assemble the heating element.

- Attach the nozzle and securely tighten the nut with the attached wrench.

> **⚠CAUTION**
> If the nut is loose, air will leak and the temperature will drop.

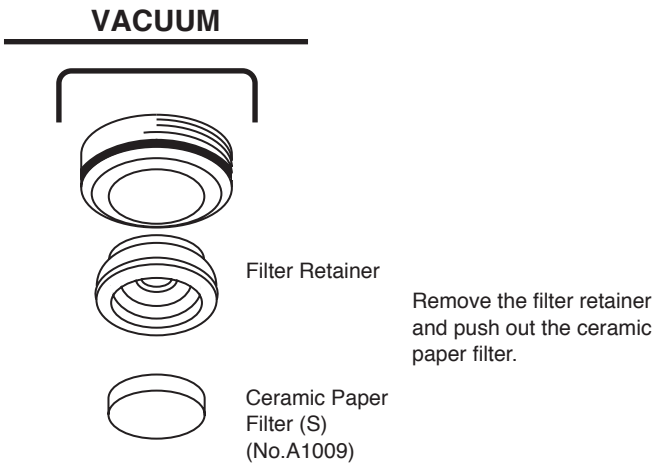


5. Maintenance (Station)

Cleaning the inside of the Filter Case

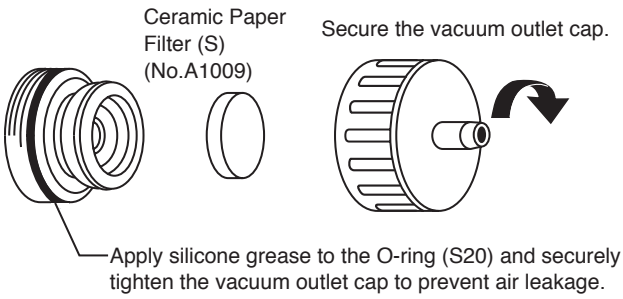
1 Replace the ceramic paper filter (No.A1009).

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



2 Reassemble the filter case.

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



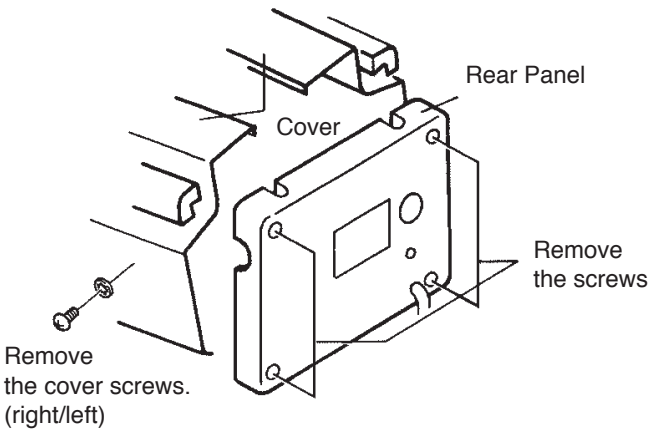
Exhaust Filter Replacement

⚠WARNING
Unplug the power cord before starting this procedure.

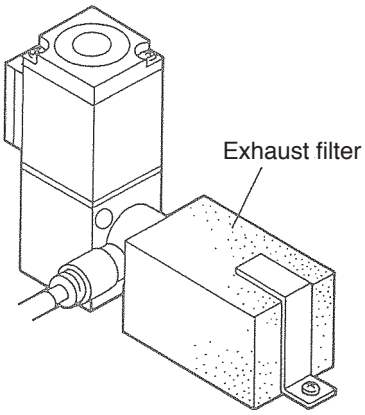
⚠CAUTION
Please make sure to remove piping of the compressed air before you start cleaning. If you clean the ejector with the pressured air pipe still connected, the compressed air may cause the nozzle and exhaust pipe to suddenly fly off when the ejector cover is removed.

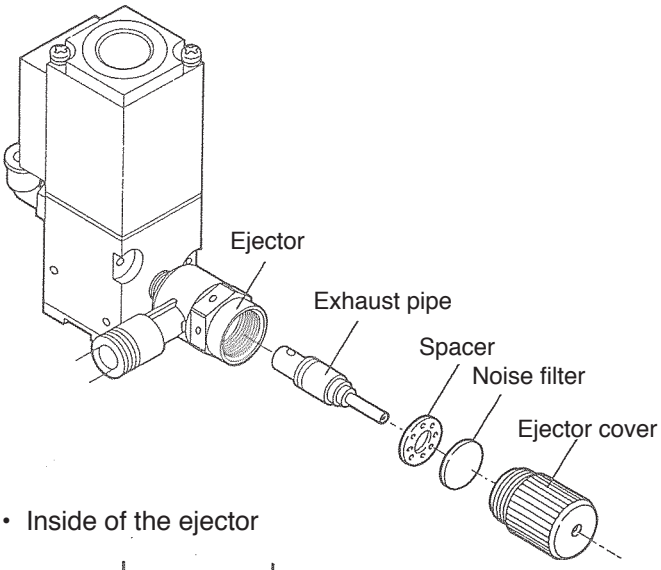
1 Disassemble the unit.

- Remove the rear panel.
- Remove the cover.



- Remove the exhaust filter which covers the ejector.
  Replace it if it is dirty.
- Remove the ejector cover.
  If the noise filter (No.B1269) inside the cover is very dirty, replace it.
- Remove the exhaust pipe and spacer from inside the ejector.
  *Pinch the tip of the exhaust pipe and pull dirmly.It can be removed together with the spacer.



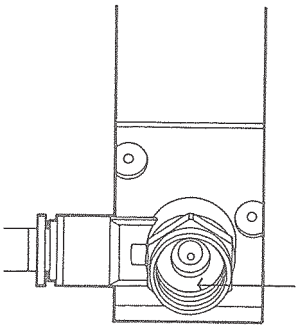


2 Clean the inside.

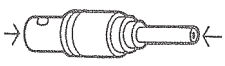
> ⚠ **CAUTION**
> Do not use thinner as a cleaning agent.

- Clean the inside of the ejector, the tip of the nozzle and the surrounding area. Remove any dirt with a cotton swab soaked in alcohol.
- Soak the exhaust pipe in alcohol and clean the inside of the pipe with a soft stick-like material.

- Inside of the ejector



- Inside of the ejector



3 Reassemble in reverse order.

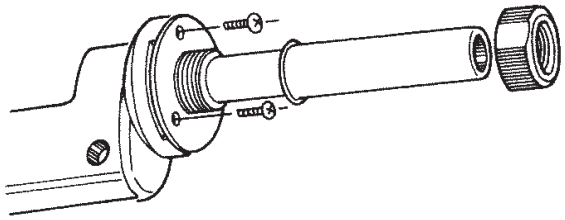
6. Replacement Parts

Replacing the Heating Element

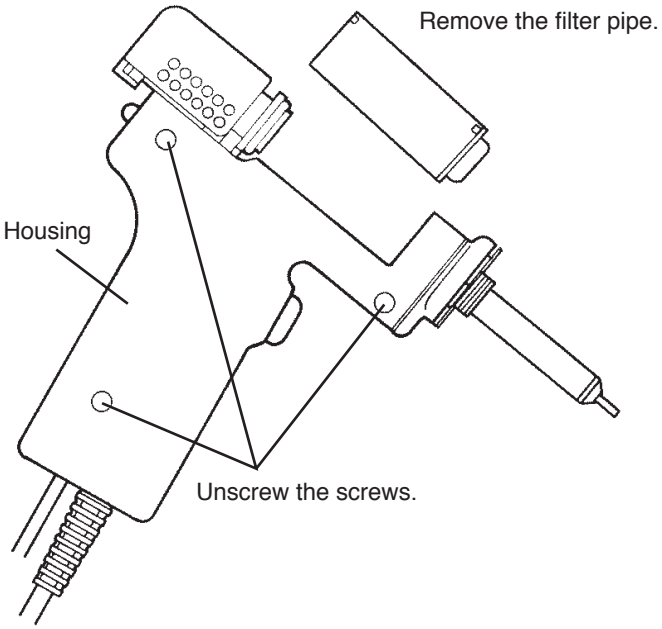
⚠WARNING
Unplug the power cord before starting this procedure.

The resistance value of a working heating element is 2-4Ω at 23°C (73° F). If the value you get is outside this range, replace the heating element.

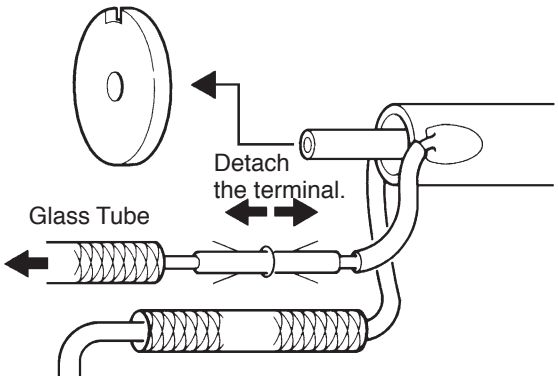
1 Disassemble the heating parts.



2 Separate the housing.



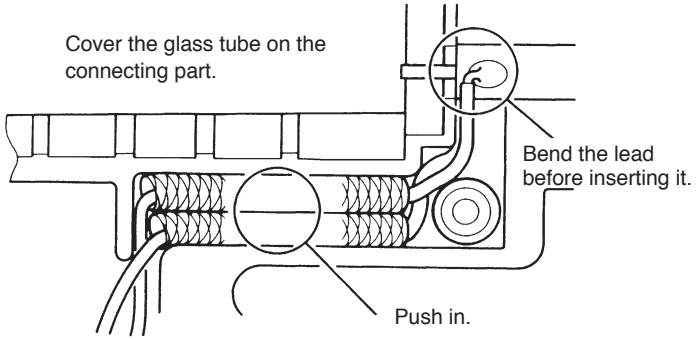
3 Detach the terminal and remove the heating element.



4 Insert a new heating element and reassemble.

(Heating element 24V-50W)

> **⚠CAUTION**
> Before reassembling enclosure, make sure connectors are completely covered by the glass tube.

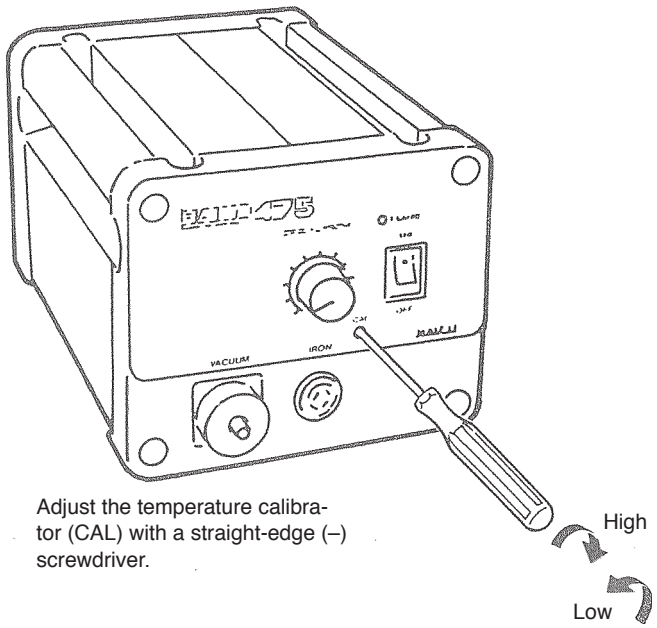


Position the leads in groove and press them into place.
Be careful that the leads do not get caught in the housing.

5 Recalibrate the temperature.

The resistance of new heating element varies, resulting in variations in operating temperatures. It is necessary to recalibrate the temperature every time the heating element is replaced.

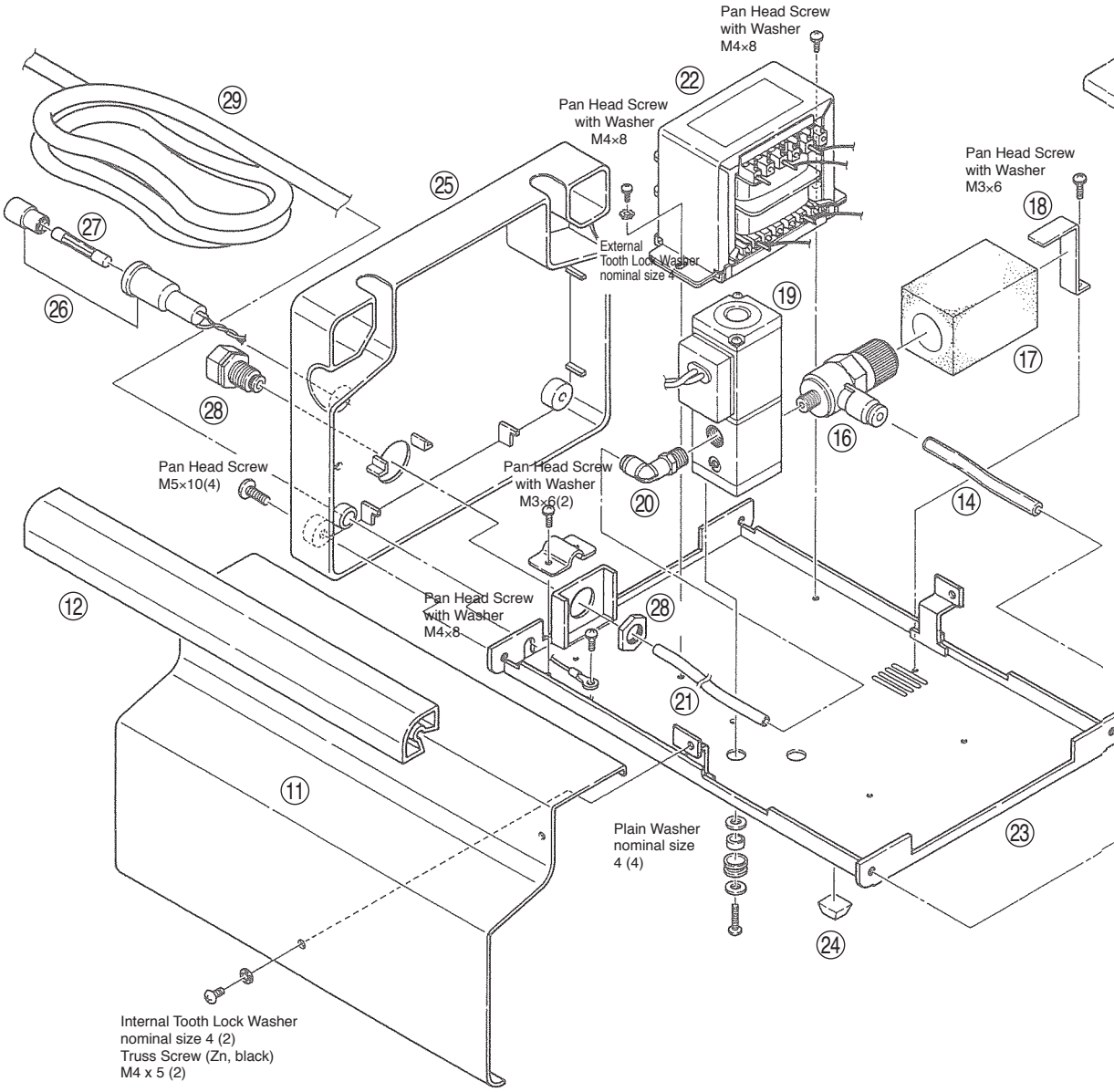
- Set the temperature control knob to 1 and allow the gun to warm up for 3 minutes.
- Using a tip thermometer, adjust the temperature calibrator (marked “CAL”) until the nozzle temperature reads at 380°C (716° F).



Adjust the temperature calibrator (CAL) with a straight-edge (–) screwdriver.

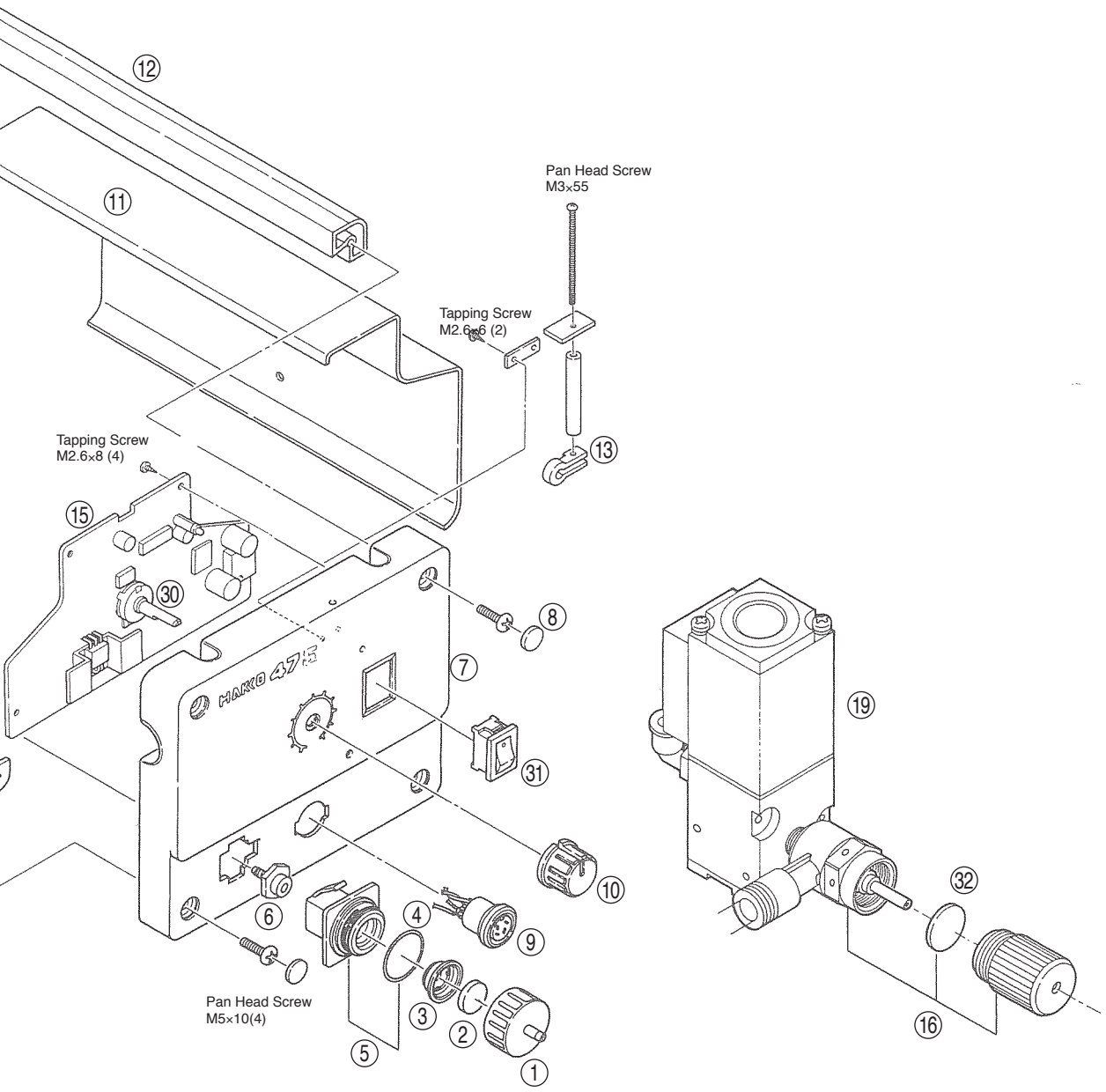
7. Parts List (Station)

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



Item No.	Part No.	Part Name	Specifications
1	B1029	Vacuum outlet cap	
2	A1009	Ceramic paper filter (S)	10 pcs.
3	B1063	Filter retainer	
4	B1034	O-ring (S20)	
5	B1031	Vacuum outlet retainer	With o-ring (S20)
6	B1064	Filter case joint	
7	B2069	Front panel	
8	B1038	Cover for securing screw	Set of 4
9	B1036	Receptacle	
10	B1028	Knob	
11	B1093	Cover	One side
12	B1061	Handle	One side
13	B1044	Temp. control set screw clamp	

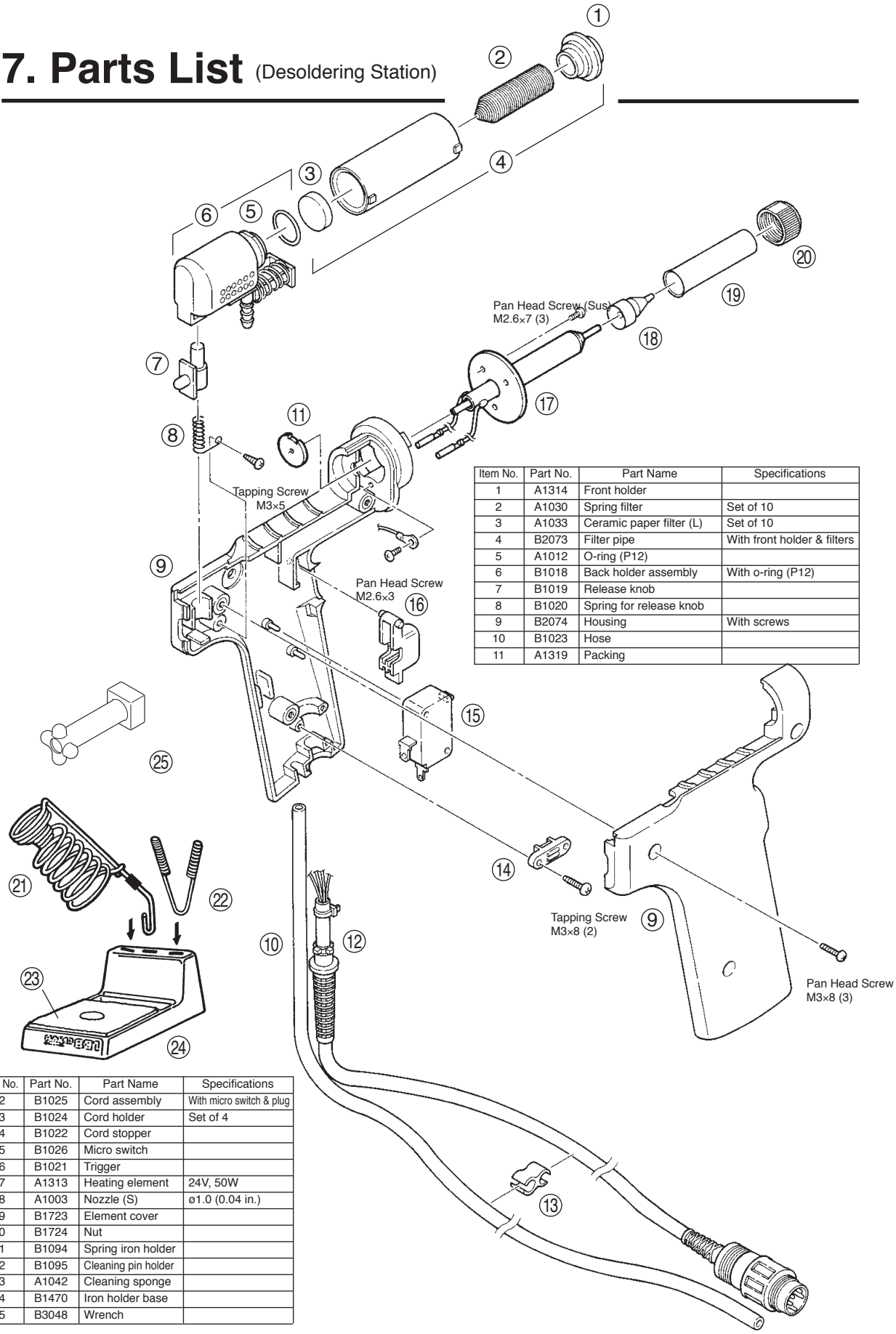
Item No.	Part No.	Part Name	Specifications
14	B1073	Joint hose	
15	B2071	P.W.B.	With potentiometer
16	B1069	Ejector	
17	B1070	Exhaust filter	
18	B1071	Exhaust filter retaining clip	
19	B1074	Solenoid valve	
20	B1075	Elbow joint	
21	B1076	Pressure hose	
22	B1072	Transformer	100-24V
	B1103	Transformer	120-24V
	B1136	Transformer	110-24V
	B1137	Transformer	220-24,230-24,240-24V
	B2330	Transformer	230-24V (CE)
23	B1067	Chassis	



Item No.	Part No.	Part Name	Specifications
24	B1037	Rubber stopper	Set of 4
25	B2070	Rear panel	With rating seal
26	B1041	Fuse holder	w/o Fuse
	B1134	Fuse holder(s)	w/o Fuse Australian 240V
27	B1042	Fuse	125V-2A/100,110V
	B1138	Fuse	250V-1A/220,230V
	B1139	Fuse	250V-1A Ⓢ/Australian 240V
	B1275	Fuse	250V-2A(U)/120V
	B2318	Fuse	0.63A (CE)
28	B1065	Female connector	
	B1127	Female connector	120V

Item No.	Part No.	Part Name	Specifications
29	B2068	Power cord, 3 wired cord & American plug	U.S.A.
	B2079	Power cord, 3 wired cord but no plug	
	B2081	Power cord, 3 wired cord & Australian plug	
	B2082	Power cord, 3 wired cord & BS plug	
	B2320	Power cord, 3 wired cord & European plug	CE
	B2321	Power cord, 3 wired cord & BS plug	CE
	B2490	Power cord, 3 wired cord & Chinese plug	
	B3505	Power cord, 3 wired cord & American plug	
30	B1078	Potentiometer	
31	B1084	Switch	
32	B1269	Noise filter	

7. Parts List (Desoldering Station)



Item No.	Part No.	Part Name	Specifications
1	A1314	Front holder	
2	A1030	Spring filter	Set of 10
3	A1033	Ceramic paper filter (L)	Set of 10
4	B2073	Filter pipe	With front holder & filters
5	A1012	O-ring (P12)	
6	B1018	Back holder assembly	With o-ring (P12)
7	B1019	Release knob	
8	B1020	Spring for release knob	
9	B2074	Housing	With screws
10	B1023	Hose	
11	A1319	Packing	

Item No.	Part No.	Part Name	Specifications
12	B1025	Cord assembly	With micro switch & plug
13	B1024	Cord holder	Set of 4
14	B1022	Cord stopper	
15	B1026	Micro switch	
16	B1021	Trigger	
17	A1313	Heating element	24V, 50W
18	A1003	Nozzle (S)	ø1.0 (0.04 in.)
19	B1723	Element cover	
20	B1724	Nut	
21	B1094	Spring iron holder	
22	B1095	Cleaning pin holder	
23	A1042	Cleaning sponge	
24	B1470	Iron holder base	
25	B3048	Wrench	

8. Specifications

Model No.	HAKKO 475
Power Consumption	70W

Part Name	
Output Voltage	AC 24V
Vacuum Generator	Ejector type
Vacuum Pressure (max.)	93kPa (700 mm Hg) (28 in. Hg)
Suction Flow	20 ℓ/min.*
Nozzle to Ground Potential	< 2mV
Nozzle to Ground Resistance	< 2Ω
Applied Air Pressure	490kPa (5.0kgf/cm^2)
Compressed Air Consumption	1.62 c.f.m. (46ℓ/min.)
Dimensions	165(W) × 135(H) × 260(D)mm (6.50 × 5.31 × 10.24 in.)
Weight (w/o cord)	3.0kg (6.6lb.)

*This suction flow is measured at the filter case suction port of Station.

●Desoldering Gun

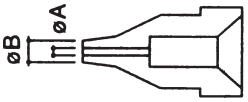
Model No.	HAKKO 809
Part No.	C1183
Power Consumption	AC 24V / 50W
Temperature Range	380 to 480°C (716 to 896°F)
Insulation Resistance	> 300MΩ at 420°C (790°F)
Nozzle Inside Diameter	ø1.0mm (0.04 in.) (nozzle S standard)
Dimensions	135(W) × 174(H)mm (5.31 × 6.85 in.)
Weight (w/o cord)	200g (0.44lb.)

Condition of measurement

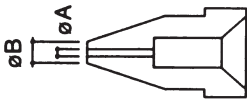
- Insulation resistance
  The insulation resistance was measured between the nozzle and the lead of the heating element using a 500 V DC insulation resistance meter.
  Caution: The insulation resistance cannot be measured between the nozzle and the power plug as the transformer between the secondary part (heating element) and the primary part acts as an insulator.
- Voltage leakage
  The voltage leakage was measured between the nozzle and the grounding plug at a temperature of 480°C (896°F) using an AC mV meter.
  Caution: Be sure to ground the unit before measuring the voltage leakage.
- Specifications and design are subject to change without notice.

●Replacement Parts

Part No.	Part Name	Specifications
A1002	Nozzle S ø0.8mm (0.03 in.)	
A1003	Nozzle S ø1.0mm (0.04 in.)	
A1004	Nozzle ø0.8mm (0.03 in.)	
A1005	Nozzle ø1.0mm (0.04 in.)	
A1006	Nozzle ø1.3mm (0.05 in.)	
A1007	Nozzle ø1.6mm (0.06 in.)	



Part No.	øA	øB
A1002	0.8mm (0.03 in.)	1.8mm (0.07 in.)
A1003	1.0mm (0.04 in.)	2.0mm (0.08 in.)

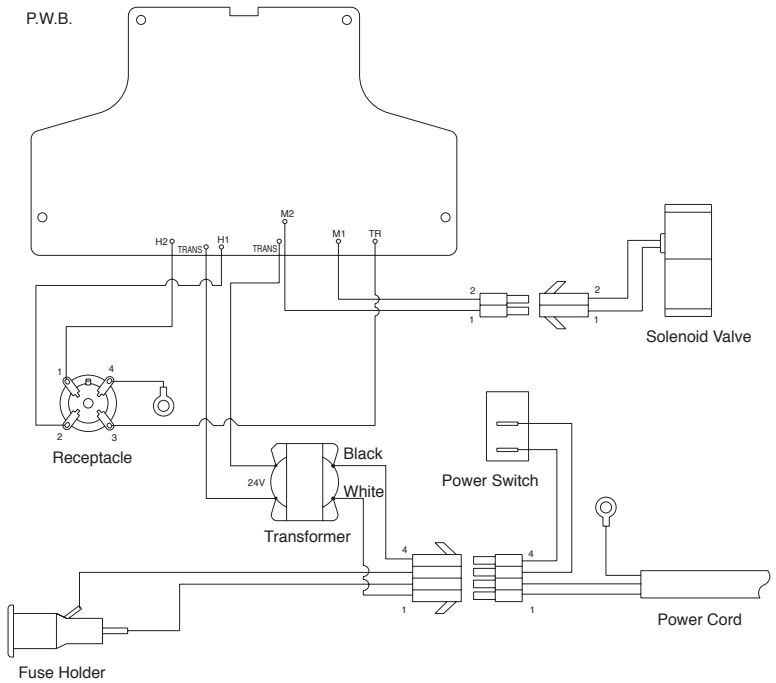


Part No.	øA	øB
A1004	0.8mm (0.03 in.)	2.3mm (0.09 in.)
A1005	1.0mm (0.04 in.)	2.5mm (0.1 in.)
A1006	1.3mm (0.05 in.)	3.0mm (0.12 in.)
A1007	1.6mm (0.06in.)	3.0mm (0.12 in.)

Part No.	Part Name	Specifications
B1215	Cleaning pin	for heating element
B1086	Cleaning pin	for ø0.8mm (0.03 in.) nozzle
B1087	Cleaning pin	for ø1.0mm (0.04 in.) nozzle
B1088	Cleaning pin	for ø1.3mm (0.05 in.) nozzle
B1089	Cleaning pin	for ø1.6mm (0.06 in.) nozzle
B1302	Cleaning drill	for ø0.8mm (0.03 in.) nozzle
B1303	Cleaning drill	for ø1.0mm (0.04 in.) nozzle
B1304	Cleaning drill	for ø1.3mm (0.05 in.) nozzle
B1305	Cleaning drill	for ø1.6mm (0.06 in.) nozzle

Part No.	Part Name	Specifications
B2073	Filter pipe	w/front holder & filters
A1009	Ceramic paper filter (S)	for filter case 10pcs.
A1033	Ceramic paper filter (L)	for filter pipe 10pcs
A1030	Spring filter	10pcs.
A1313	Heating element	24V, 50W
A1028	Silicone grease	
A1042	Cleaning sponge	

9. 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)
過濾管接合套	×	○	○	○	○	○
吸錫槍部	×	○	○	○	○	○
電路板	×	○	○	○	○	○
保險絲套	×	○	○	○	○	○
清潔鑽	×	○	○	○	○	○
插頭	×	○	○	○	○	○

○： 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。

×： 表示該有毒有害物質至少在該部件的某一均質材料中的含量超出SJ/T 11363-2006 標準規定的限量要求。

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