

HAKKO 816

DESOLDERING TOOL

吸錫槍 Instruction Manual 使用說明書

日本白光牌

English

Thank you for purchasing the Hakko 816. Be sure to read this manual before using the unit.
After reading it, store the manual in a convenient place for future reference.

感謝您購置 HAKKO816 吸錫槍。
使用 HAKKO816 之前，請詳閱本使用說明書。閱後請妥為收存，以備日後查閱。

CAUTION

- The Hakko 816 can not function by itself. It must be connected to the Hakko station.
Be sure to also read the instruction manual for whichever station you use.
- Check the Packing List of this manual when the Hakko 816 and station are purchased together as a set.

注意

- HAKKO816 無法單獨使用。必須連接到 HAKKO 控制臺。
此外，請務必配合各機身之使用說明書一起閱讀。
- 如果 HAKKO816 與機身成套承購的話，請以本使用說明書確認包裝清單。

中文

TABLE OF CONTENTS

PACKING LIST, APPLICABLE MODELS, SPECIFICATIONS	1
PRECAUTIONS	2
PART NAMES, INITIAL SETUP	3, 4
ANGLE ADJUSTMENT, NOZZLE REPLACEMENT, FILTER REPLACEMENT	5
HEATING ELEMENT REPLACEMENT	6
EXPLODED DRAWING AND PARTS LIST	7

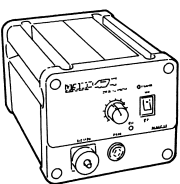

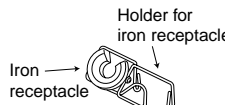

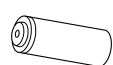
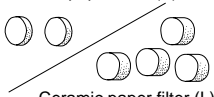
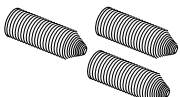


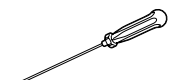

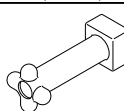

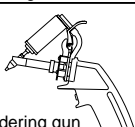
目錄

包裝清單・適用機種・規格	8
安全及使用上的注意事項	9
部件名稱・組裝	10・11
調整手柄角度・更換吸嘴・更換過濾器	12
更換發熱元件	13
分解圖・部件清單	14

PACKING LIST

Please check to make sure that all items listed below are included in the 816 package.

In case when Hakko 816 and station are purchased as a set (* indicates the case when the Hakko 816 is purchased alone)		
Desoldering gun 1 *	Iron holder base 1	Cleaning pin for $\phi 1.0\text{mm}$ (0.04 in) nozzle 1
Wrench 1 *	Iron receptacle holder 1	Cleaning pin for heating element 1
Filter pipe 1 *	Cleaning sponge 1	Cleaning pin holder 1
Anti-seizure lubricant 1 *	Ceramic paper filter (S) 2	Cleaning drill for $\phi 1.0\text{mm}$ (0.04 in) nozzle 1
Instruction manual for Hakko 816 1 *	Ceramic paper filter (L) 4	Silicone grease 1
Station 1	Spring filter 3	Instruction manual for station 1

			
Station	Iron holder base	Holder for iron receptacle Iron receptacle	Cleaning sponge
	Filter pipe		
		Ceramic paper filter (S) Ceramic paper filter (L)	Spring filter
			
Cleaning drill for $\phi 1.0\text{mm}$ (0.04 in) nozzle	Cleaning pin for $\phi 1.0\text{mm}$ (0.04 in) nozzle	Cleaning pin for heating element	Cleaning pin holder
			
Wrench	Anti-seizure lubricant	Desoldering gun	

APPLICABLE MODELS

In order to function, the Hakko 816 must be connected to one of the following Hakko stations:

Hakko 470, 471, 474, 475, 701, 702, 702B

SPECIFICATIONS FOR HAKKO 816


Name	Hakko 816
Part No.	816-02
Power consumption	24V AC 50W
Temperature range	380 – 480°C (716 – 896°F)
Standard nozzle	1.0 mm, S type, standard (Part No.: A1499)
Outer dimensions (H × L)	150 × 180 mm (5.9 × 7.0 in)
Weight (w/o cord & hose)	Approx. 120g (0.264 lb)


*Specifications and design are subject to change without notice.

PRECAUTIONS

WARNING

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

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

 **CAUTION:** Failure to comply with a CAUTION may result in injury to the operator, or damage to the items involved.

English

CAUTION

● Observe the following precautions to ensure safety.

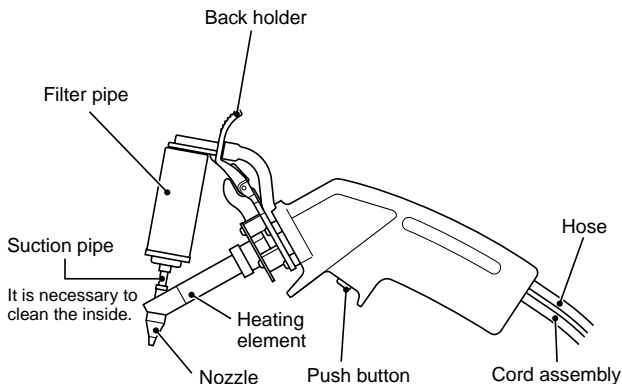
- When the power is turned on, the nozzle temperature reaches 380 to 480°C (716 to 896°F). If the unit is mishandled, **burn injury** or fire may result. Please observe the following precautions.
- Do not touch the metal portions surrounding the nozzle, the adjoining plastic portions, or the iron receptacle or iron receptacle holder of the 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 off the power while taking breaks and when finished using the unit.
- Before replacing parts or storing the unit, turn off the power and allow the unit to cool to room temperature.

● Observe the following precautions to avoid accidents and damage to the unit.

- Do not use for any purpose other than removing solder.
- Do not strike the desoldering iron against a workbench or other object in order to remove solder residue.
- Do not modify the unit.
- Use only genuine Hakko replacement parts.
- Be sure to use the included wrench, when replace the nozzle.
- Do not wet the unit or use the unit when your hands are wet.
- Install the ceramic paper filter (S) in the filter retainer of the station and install the ceramic paper filter (L) inside the filter pipe of the handpiece.
- Perform maintenance regularly.
- Do not do anything else that might be dangerous.

PART NAMES

* See the station instruction manual for instructions regarding the station.



INITIAL SETUP

① Assemble the iron holder.

- Mount the iron receptacle holder and cleaning pin holder to the iron holder base.

- Dampen the cleaning sponge with water and then squeeze it dry.

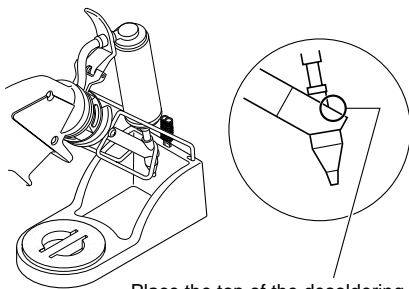
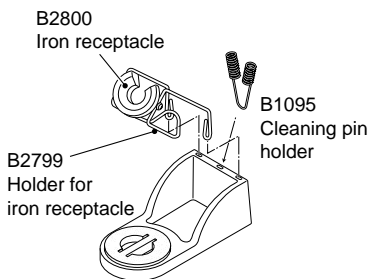
* This is optional when the Hakko 816 is purchased alone.

② Insert the desoldering gun and the cleaning pin.

⚠ CAUTION

When the unit is being used, the iron receptacle and holder for iron receptacle become very hot. Do not touch the iron receptacle or the holder for iron receptacle.

634-04 (Use for 815/816)



Place the top of the desoldering iron so that the end of the holder for iron receptacle can catch it as shown in the figure.

③ Plug the unit in.

⚠ 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 for desoldering side.
- Connect the hose to the vacuum outlet cap (marked VACUUM).

See the instruction manual for the station regarding how to connect to the compressor.

④ Turn on the power.

- Make sure the power switch is off before plugging in the power plug.

⚠ CAUTION

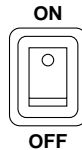
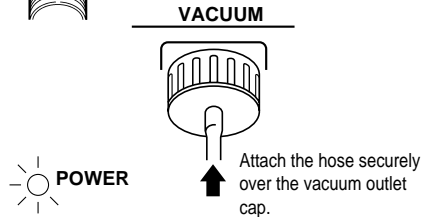
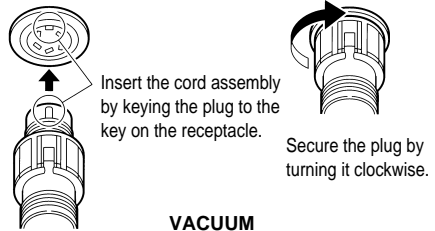
This unit is ESD-protected. Make sure this unit is grounded before using it.

- The power lamp (marked POWER) illuminates when the power switch is turned on.
- The nozzle begins heating up immediately when the switch is turned on.

⑤ Calibrate the temperature.

(* It is not necessary to calibrate the temperature, in case Hakko 816 and station are purchased as a set.)

1. Set the temperature control knob to "1" and heat the nozzle for three minutes.
2. Use a flathead screwdriver to adjust the potentiometer (hole marked CAL) of the station such that the nozzle temperature becomes 380°C (716°F). We recommend using the Hakko 191 (thermometer) or the Hakko 192 (soldering tester) to measure the nozzle temperature.



Lamp illuminates.

⚠ CAUTION

When not using it, place the desoldering iron on the iron holder.

⚠ CAUTION

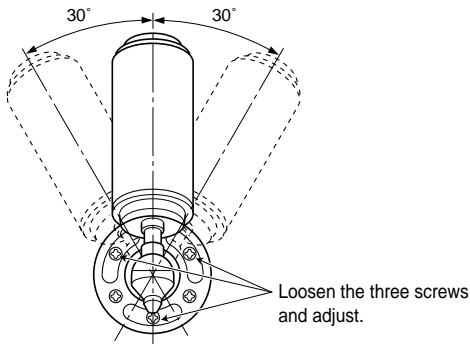
Heating the nozzle could produce smoke. This is caused by the anti-seizure lubricant burning, and is not a sign of failure.

- * Turn the potentiometer clockwise to raise the nozzle temperature and counterclockwise to lower the nozzle temperature.

Refer to the instruction manual of the station regarding how to use and maintain the station.

HANDLE ANGLE ADJUSTMENT

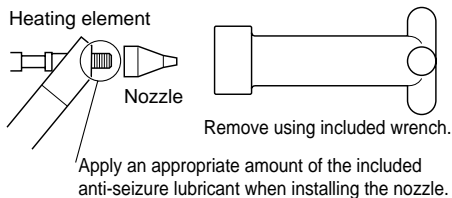
The handle angle of the Hakko 816 can be adjusted by loosening three screws as shown in the figure. The angle can be adjusted up to 30 degrees in both the left and right directions.



NOZZLE REPLACEMENT

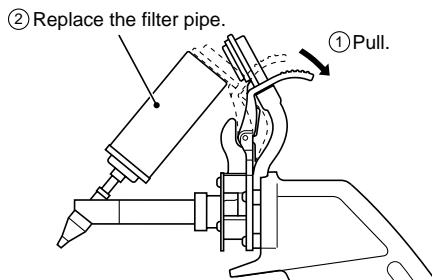
Use the included wrench to replace the nozzle of the Hakko 816 as shown in the figure.

Be sure to use the included wrench, failure to use other tools may damage the soldering gun.



FILTER REPLACEMENT

Follow steps ① and ② to replace the filter while the unit is in use. Since the filter pipe becomes hot, you must wait for it to cool. We recommend that you install a filter in a spare filter pipe in advance and replace the entire filter pipe.



CAUTION

The filter is hot during use. Take care to avoid a burn when removing the filter.

HAKKO 815 HEATING ELEMENT REPLACEMENT

⚠ WARNING

Unplug the power cord and wait until the heating element is cool enough to touch before replacing it.

A normal resistance value of a heating element is 2 to 4 Ω {at 23°C (73°F)}.

If the measured resistance value is out of abort range, replace the heating element as shown in the figure.

① Disassemble the heating section.

1. Remove the filter pipe and nozzle.
2. Remove the screws (three).

② Remove the handle.

Remove the screws (four) and open the handle.

③ Disconnect the connector and remove the heating element.

④ Install a new heating element and re-assemble.

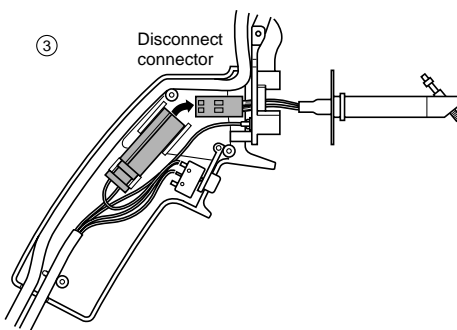
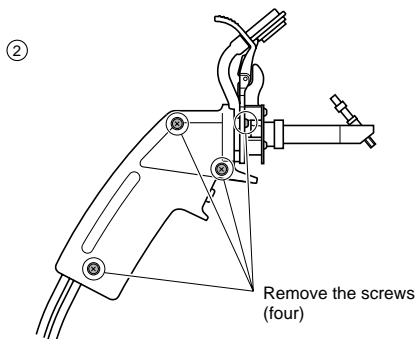
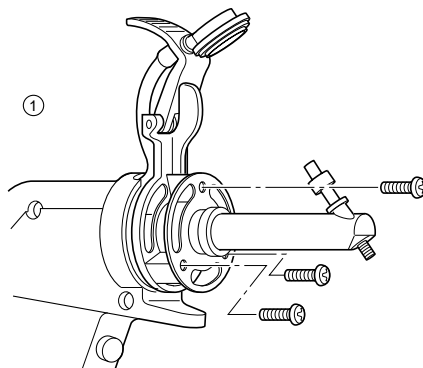
Be careful not to pinch the tube or cord, when assemble the housing.

⑤ Calibrate the temperature.

Be sure to calibrate the temperature after replacing the heating element in order to ensure accurate temperature control.

1. Set the temperature control knob to “1” and heat the nozzle for three minutes.

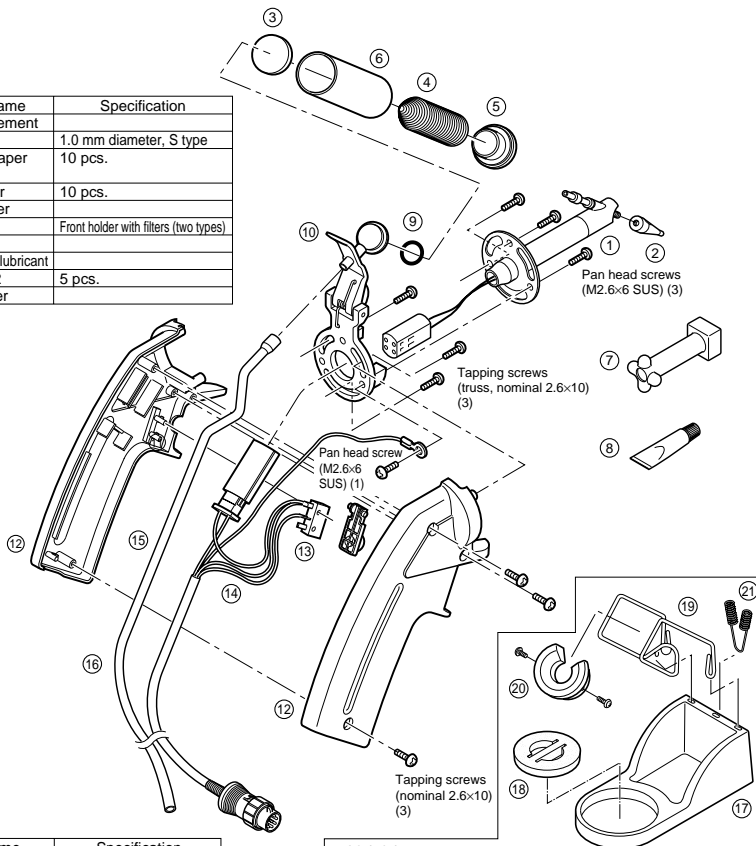
2. Use a straight-edge (-) screwdriver to adjust the potentiometer (hole marked CAL) of the station until the nozzle temperature reads 380°C (716°F). We recommend using the Hakko 191 (thermometer) or the Hakko 192 (soldering tester) to measure the nozzle temperature.



English

HAKKO 816 EXPLODED DRAWING AND PARTS LIST

Item No.	Part No.	Part name	Specification
1	A1504	Heating element	
2	A1499	Nozzle	1.0 mm diameter, S type
3	A1033	Ceramic paper filter (L)	10 pcs.
4	A1030	Spring filter	10 pcs.
5	A1314	Front holder	
6	B2073	Filter pipe	Front holder with filters (two types)
7	B2801	Wrench	
8	481-026	Anti-seizure lubricant	
9	A1012	O-ring/P12	5 pcs.
10	A1505	Back holder	



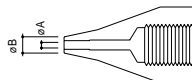
Item No.	Part No.	Part name	Specification
11		Button	
12		Handle	With screw
13		Micro switch	
14		Cord assembly	With micro switch and plug
15		Hose/conductive	
16		Cord holder	Set of 4

634-04

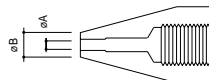
Item No.	Part No.	Part name	Specification
17	B2802	Iron holder base	With rubber foot
18	A1495	Cleaning sponge	
19	B2799	Holder for iron receptacle	
20	B2800	Iron receptacle	With screw
21	B1095	Cleaning pin holder	

* This is optional when the Hakko 816 is purchased alone.

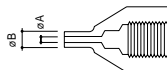
Part No.	Part name	Specification
A1496	Nozzle $\phi 0.8$	S type
A1499	Nozzle $\phi 1.0$	S type
A1498	Nozzle $\phi 0.8$	
A1500	Nozzle $\phi 1.0$	
A1501	Nozzle $\phi 1.3$	
A1502	Nozzle $\phi 1.6$	
A1503	Nozzle $\phi 2.0$	
A1497	Nozzle $\phi 0.8$	SS type



Part No.	ϕA	ϕB
A1496	0.8	1.8
A1499	1.0	2.0



Part No.	ϕA	ϕB
A1498	0.8	2.3
A1500	1.0	2.5
A1501	1.3	3.0
A1502	1.6	3.0
A1503	2.0	3.6

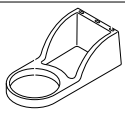
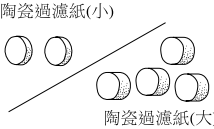
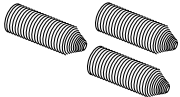




Part No.	ϕA	ϕB
A1497	0.8	2.2

包裝清單

首先請確認下列清單項目含在 816 包裝內。

HAKKO816與機身配套使用時（※係僅為HAKKO816時）		
吸錫槍 1 ※	焊鐵架底座 1	清潔針供ø1.0毫米吸嘴用 1
板手 1 ※	焊鐵插架 1	清潔針供發熱元件用 1
過濾管 1 ※	清潔海綿 1	清潔針插座 1
燒結防止劑 1 ※	陶瓷過濾紙(小) 2	清潔鑽供ø1.0毫米吸嘴用 1
HAKKO816使用說明書 1 ※	陶瓷過濾紙(大) 4	硅脂潤滑劑 1
機身 1	彈簧過濾管 3	機身使用說明書 1

 機身	 焊鐵架底座	 焊鐵插架	 清潔海綿
	 過濾管	 陶瓷過濾紙(小) 陶瓷過濾紙(大)	 彈簧過濾管
 ø1.0毫米吸嘴之清潔鑽	 ø1.0毫米吸嘴之清潔針	 發熱元件之清潔針	 清潔針插座
 扳手	 硅脂潤滑劑 燒結防止劑	 吸錫槍	

適用機種

HAKKO816 必須連接到下列 HAKKO 控制臺中之一。才能操作：

HAKKO470, 471, 474, 475, 701, 702, 702B

規格


名稱	HAKKO816
編號	816-02
耗電	AC 24V 50W
溫度範圍	380℃～480℃
吸嘴內直徑	ø1.0S型 標準（編號A1499）
外形體積（高×寬）	150 × 180 mm
重量（不包括電線及軟管）	約120g


＊規格及外觀可能改良變更，恕不先行通知。

安全及使用上的注意事項

警告

本說明書之注意事項，區分為如下之「警告」「注意」二者而加以表示。請充分理解其內容之後，再閱讀本文。

 **警告：**濫用可能導致使用者死亡或負重傷。

 **注意：**濫用可能導致使用者受傷或對涉及物體造成實質破壞。

注意

●為您本人安全着想，請務必遵守以下之注意事項。

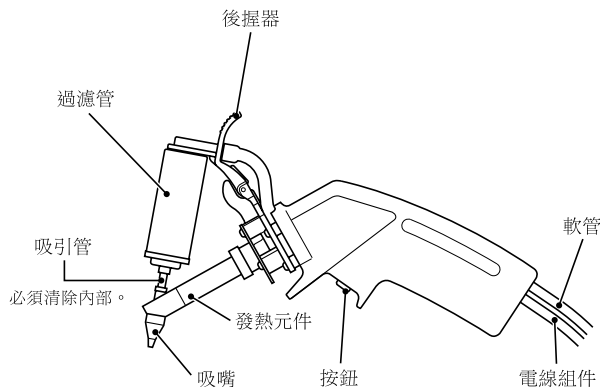
- 打開電源後，吸嘴之溫度會達到 380 ~ 480℃。
濫用可能導致燙傷、失火，請務必遵守以下之注意事項。
- 勿觸摸吸嘴周邊之金屬部份或靠近其之樹脂部份、焊鐵台之焊鐵架、焊鐵插架。
- 切勿在易燃物附近使用本機器。
- 通知周圍的人「高溫危險」。
- 使用暫停、結束或要離開時應關掉電源。
- 更換部件或收起本機器之前，應關掉電源，並待機器冷卻至室溫。

●請務必遵守以下之注意事項，否則可能發生個人受傷或機器受損。

- 切勿使用於去除鉛錫以外之用途。
- 不要為了取下鉛錫屑而將焊鐵在工作台上敲打等，給予強力衝擊。
- 切勿改裝本產品。
- 更換部件時，必僅使用 Hakko 正廠部件。
- 更換吸嘴時，必定要使用附屬的扳手。
- 切勿弄濕本產品或以濕手使用。
- 陶瓷過濾紙（小）配置於機身之過濾管護圈，陶瓷過濾紙（大）配置於吸錫筆部之過濾管內。
- 應定期實施保養。
- 請勿進行其他認為危險之行為。

部件名稱

* 關於機身，請參照機身使用說明書。



組裝

①組裝焊鐵台

- 將焊鐵插架與清潔針插座安裝在焊鐵架底座上。
- 將清潔海綿濕水後擰乾。

※僅為 HAKKO816 時，即為選購品。

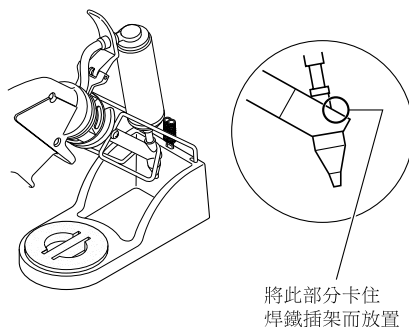
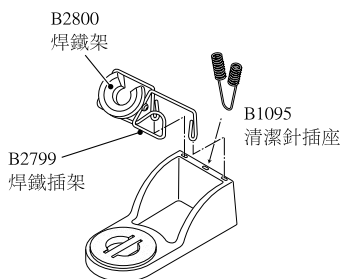
②插入吸錫槍及清潔針

如圖所示放置吸錫槍。

△注意

作業中，焊鐵架、焊鐵插架部份呈高溫，故請勿觸及焊鐵架、焊鐵插架部份。

634-04用於815/816



③連接

⚠注意

進行電線組件與插座之插入及拔出之前，請必將電源開關關掉，否則可能損壞電路板。

- 將電線組件連接至插座。
- 將軟管連接至真空出口蓋（標示有 VACUUM）。

關於連接至空氣壓縮機的方法，請參照機身使用說明書。

④打開電源。

- 確認電源開關為 OFF 後才將電源插頭插入。

⚠注意

本機施以防靜電功能，請接地使用。

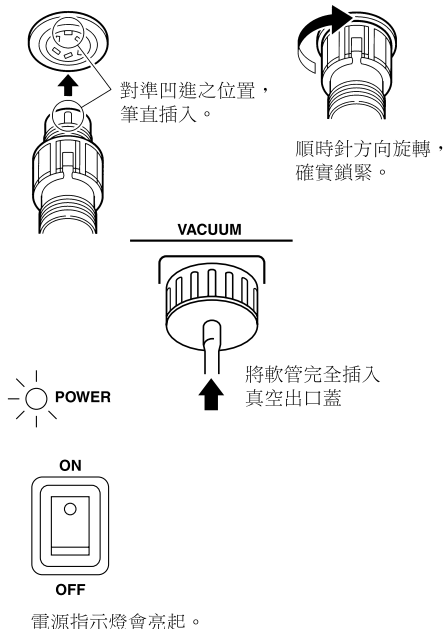
- 電源開關打開為 ON 時電源燈（標示有 POWER）會亮起。
- 開關打開之同時，吸嘴即被加熱。

⑤校準溫度

（※當HAKKO816 與機身成套承購時，不必要校準）

1. 將溫度調整旋鈕設定於「1」，使吸嘴加熱 3 分鐘。
 2. 以螺絲起子（-）調整機身上之電位計（標示有 CAL 之孔），使吸嘴之溫度達到 380℃。吸嘴溫度之測定，我廠建議您採用 HAKKO191（溫度計）或 HAKKO192（焊鐵測試儀）。
- ※ 吸嘴溫度在電位計部分順時針方向旋轉是昇溫，反時針方向是降溫。

關於使用方法及保養方法，請參照機身使用說明書。



⚠注意

不使用時，請將焊鐵部置於焊鐵座。

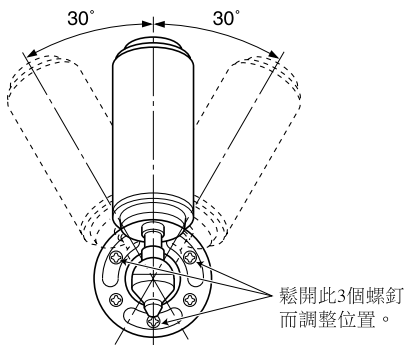
⚠注意

吸嘴被加熱時，可能發出白煙，這是燒結防止劑之煙，並非故障。

調整手柄角度

HAKKO816之手柄角度，如圖所示，可鬆開3個螺釘而調整。

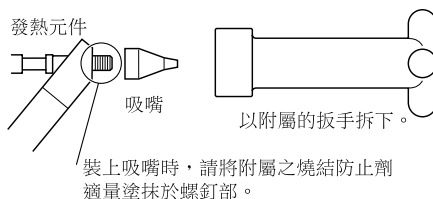
左右可各別調整至30°。



更換吸嘴

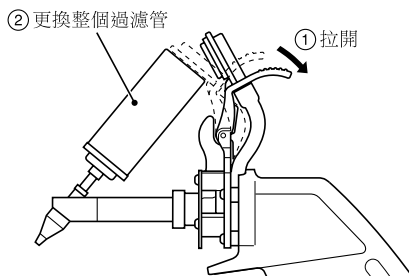
當更換HAKKO816之吸嘴時，如圖所示，請使用附屬的扳手。

如果用其他工具會損壞吸錫槍，請必定使用附屬的扳手。



更換過濾器

更換作業中之過濾器時，依①~②之順序進行。由於過濾管呈高溫，必須等待其冷卻。因此，我廠建議您事先將預備的過濾管配置好過濾器後可將整個，過濾管更換。



△注意

作業中之過濾器呈高溫。拆下時，請充分注意來作業。

更換發熱元件

△警告

更換前請拔掉電源線待充分冷卻後才進行更換。
正常之發熱元件的電阻值為 $2 \sim 4$ 歐姆（ 23°C 時）。
電阻值測定之結果，如果超出上述範圍時，請依照圖示更換發熱元件。

① 分解發熱部。

1. 拆下過濾管及吸嘴。
2. 拆下 3 個螺釘。

② 拆下手柄。

- 拆下 4 個螺釘然後，打開手柄。

③ 拔掉連接器後，拆下發熱元件。

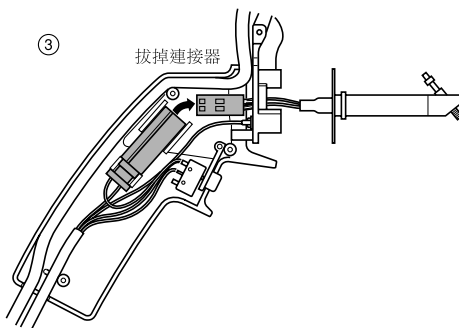
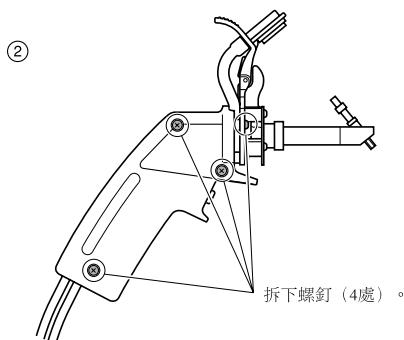
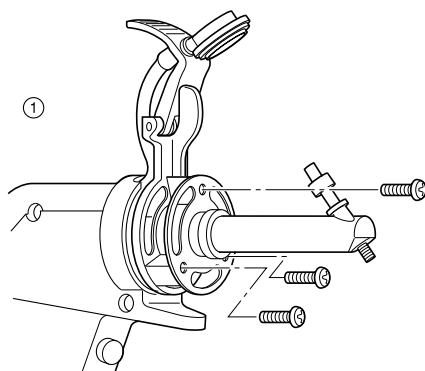
④ 裝上新的發熱元件，加以組裝。

安裝手柄時請注意切勿讓軟管及電線夾住。

⑤ 進行溫度校準。

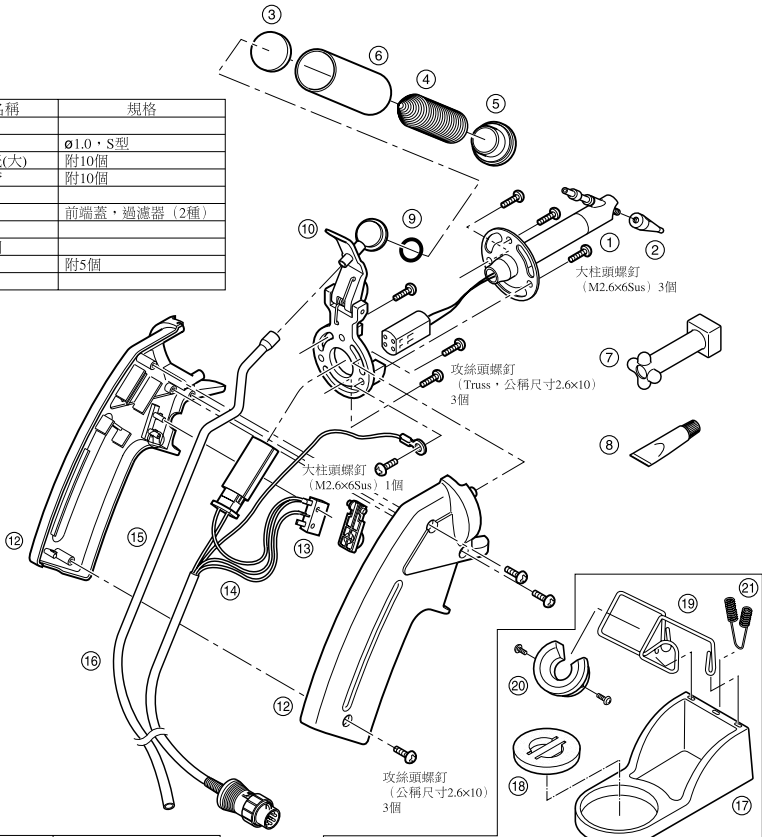
發熱元件更換後，為了正確的管理溫度，請務必進行校準溫度。

1. 將溫度調整旋鈕設定於「1」，使吸嘴加熱 3 分鐘。
2. 以螺絲起子（-）調整機身上之電位計（標示有 CAL 之孔），使吸嘴之溫度達到 380°C 。吸嘴溫度之測定，我廠建議您採用 HAKKO191（溫度計）或 HAKKO192（焊鐵測試儀）。



分解圖、部件清單

圖號	部件編號	部件名稱	規格
1	A1504	發熱元件	
2	A1499	吸嘴	ø1.0・S型
3	A1033	陶瓷過濾紙(大)	附10個
4	A1030	彈簧過濾管	附10個
5	A1314	前端蓋	
6	B2073	過濾管	前端蓋・過濾器 (2種)
7	B2801	扳手	
8	481-026	燒結防止劑	
9	A1012	圓環 / P12	附5個
10	A1505	後握器	



圖號	部件編號	部件名稱	規格
11		按鈕	
12		手柄	附螺釘
13		微型開關	
14		電線組件	附微開關、插頭
15		軟管 / 導電性	
16		電線支架	4件組

部件編號	部件名稱	規格
A1496	吸嘴ø0.8	S型
A1499	吸嘴ø1.0	S型
A1498	吸嘴ø0.8	
A1500	吸嘴ø1.0	
A1501	吸嘴ø1.3	
A1502	吸嘴ø1.6	
A1503	吸嘴ø2.0	
A1497	吸嘴ø0.8	SS型

圖號	部件編號	部件名稱	規格
17	B2802	焊鐵架底座	附橡膠塞
18	A1495	清潔海綿	
19	B2799	焊鐵插架	
20	B2800	焊鐵架	附螺釘
21	B1095	清潔針插座	

※僅為HAKKO816時，焊鐵台即為選購品。

圖號	部件編號	部件名稱	規格
17	B2802	焊鐵架底座	附橡膠塞
18	A1495	清潔海綿	
19	B2799	焊鐵插架	
20	B2800	焊鐵架	附螺釘
21	B1095	清潔針插座	

※僅為HAKKO816時，焊鐵台即為選購品。

編號	øA	øB
A1496	0.8	1.8
A1499	1.0	2.0

編號	øA	øB
A1498	0.8	2.3
A1500	1.0	2.5
A1501	1.3	3.0
A1502	1.6	3.0
A1503	2.0	3.6

編號	øA	øB
A1497	0.8	2.2



HAKKO CORPORATION

HEAD OFFICE

TEL: +81-6-6561-3225 FAX: +81-6-6561-8466

<http://www.hakko.com> E-mail: sales@hakko.com

OVERSEAS AFFILIATES

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

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

Toll Free (800)88-HAKKO

<http://www.hakkousa.com>

HONG KONG: HAKKO DEVELOPMENT CO., LTD.

TEL: 2811-5588 FAX: 2590-0217

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

E-mail: info@hakko.com.hk

SINGAPORE: HAKKO PRODUCTS PTE., LTD.

TEL: 6748-2277 FAX: 6744-0033

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

E-mail: sales@hakko.com.sg

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