

# C.I.F

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## HOT AIR REWORK STATION CIF 852-A++ (Code V700044)

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## EC DECLARATION of CONFORMITY



Us,

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We certify under our responsibility that this product conforms to European Economic Community standards :

### HOT AIR REWORK STATION CIF 852-A++ Item : V 700044

In conformance With European guidelines,

**EN 292 and to EN 60-204-1 standard**

#### (F) Déclaration du constructeur

La société C.I.F. – 92220 BAGNEUX, France, certifie que le produit répond bien aux directives de la Communauté Economique Européenne.

#### (GB) Manufacturer declaration :

C.I.F. company – 92220 BAGNEUX, France, herewith declare that this product conforms to E.E.C. regulations.

#### (D) Herstellererklärung :

Hiermit erklärt die Firma C.I.F. S.A. – 92220 BAGNEUX, France dass dieses produkt der Richtlinie EWG entspricht.

#### Conforms to the following standards

In accordance with the following European Decrees :

- Directives 73/23/EEC for low voltage machines amended by 93/68/EEC
- Directives 98/37 EC for Machines
- Directives EMC 89/336/EEC amended by 92/31/EEC and 93/68/EEC

Bagneux, February 15<sup>th</sup> 2011

Authorised signature  
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## Table of content

<b>1</b>	<b>PRESENTATION</b>	<b>5</b>
1.1	Supplied material	6
1.2	Characteristics	6
<b>2</b>	<b>TRANSPORT</b>	<b>6</b>
<b>3</b>	<b>SAFETY</b>	<b>7</b>
<b>4</b>	<b>INSTALLATION</b>	<b>8</b>
4.1	Work desk preparation	8
4.2	Needed material	8
4.3	Risks evaluation	8
4.4	Assembly of the unit	9
<b>5</b>	<b>START UP</b>	<b>11</b>
<b>6</b>	<b>PRECAUTION</b>	<b>16</b>
6.1	Advice	16
<b>7</b>	<b>STAFF PROTECTION</b>	<b>16</b>
7.1	Solder paste and solder wire	16
7.2	Filtration aims ?	16
7.3	Extraction Filtration	17
<b>8</b>	<b>MAINTENANCE</b>	<b>18</b>
8.1	Maintenance	18
8.2	Replacing heating element	18
8.3	Basic troubleshooting guide	20
<b>9</b>	<b>NOMENCLATURE &amp; SCHEME</b>	<b>22</b>
9.1	After Sales Service	22

## 1 Presentation



### Station CIF 852-A++

Micro-processor-controlled electro-static discharge (ESD) safe unit.

Easy-to-use touch type panel controls with digital display.

Environment-friendly repairing system that integrates hot air gun and vacuum pen to pick-up components.

Intelligent error-reporting mechanism. Detects and informs the personnel for problems with the sensor and heating element.

Auto-cooling functionality. Blows air to cool down the system to a safe temperature before turning OFF.

Compatibility with various types of air nozzles.

## 1.1 Supplied material

CIF852-A++ Main Station with Hot Air Gun

Air Nozzles 1130

Z003 Hot Air Gun Holder

Vacuum suction pen

G001 IC Popper

Power Cord

## 1.2 Characteristics

Power Input :	<b>220V</b>
Main Station Dimensions:	<b>188(w) x 127(h) x 244(d) mm</b>
Weight:	<b>3.8 Kg</b>

### HOT AIR

Power Consumption:	<b>550W</b>
Temperature Range:	<b>100°C - 480°C</b>
Heating Element	<b>Metal Heating Core</b>
Nozzle to Ground Resistance:	<b>Below 2 <math>\Omega</math></b>
Pump/Motor Type:	<b>Diaphragm Pump</b>
Air Capacity:	<b>23 l /min (max)</b>

Sound level slightly lower than 70 dB (A)

## 2 Transport

Carry with your two hands.

## 3 Safety

Please carefully read those instructions. They are given for your own safety and to avoid damaging the soldering station CIF852-A++. Those rules apply to all the users as well as the maintenance staff.

### Symbol

This symbol is on the machine:



Be careful to burn risk. The end of the tool carrier is very hot. This label is stuck on the unit.

### ADVICE

- Sitting position, no special installation needed.
- Only use the unit in a well-ventilated area.
- The use without precaution can cause fire.
- Do not use the unit in a explosion proof area.
- Get off all flammable materials from the work desk.
- Put the iron on its holder after use and wait it is getting cold before storing it.
- Never let the unit unattended during use.
- Never direct the iron toward a person.
- This unit is only dedicated to soldering of electronic components.

## 4 Installation

### 4.1 Work desk preparation

You must have a working area with sufficient dimensions for the user to be easy. We strongly recommend dimensions of 1 metre X 1 metre.

Working area must be a tiled straw mattress, a metallic or synthetic furniture resistant to 800°C and situated in a well ventilated area.

A wash-hand basin situated near the unit is recommended, in order the user can wash his hands after handling of solder paste or solder wire.

Power supply: 230 V mono + ground / 50 Hz on normalised plug 10A with differential circuit-breaker 30mA.

A special container is needed for rejects or dirty objects due to solder paste.

### 4.2 Needed material

As a complement to the CIF 852-A++ station, we recommend you use:

\* Our SMT products kit (item code F42 028) which includes:

- 1 syringe 10 cc of no clean solder paste.
- 1 flux cleaner, 400 ml spray.
- 1 syringe of gel flux for repair.
- 1 set of 50 polyethylene needles, diameter 0.4 mm.
- 10 SMD boxes to store components.
- 1 special SMT heating tweezers.
- 1 roll of solder wire, 250 grs, diameter 0.5 mm.

\* Our ESD Mini-Kit (item code I43 202) which includes:

- 1 ESD mat 300 x 400 mm.
- 1 adjustable anallergic conductive bracelet.
- 1 extensible cord.
- 1 pressure linking cord + banana plug.

\* Our components handler « Vacuum Pen 1 » (item code article E53 018).

\* Our magnifier for inspection and control, 3 dioptries, 18 Watts « IMAGE 1 » (item code H41 023).

### 4.3 Risks evaluation

- 1- Fire: the nozzle as well as the iron body reach high temperatures, please refer to chapters 3 & 4.1. **Before storing the unit, ensure the iron gets cold.**
- 2- Burns: see chapter 3. **Once the unit stops, the nozzle as well as the metallic part of the iron are very hot ! Burns risk.**
- 3- Toxicology: see chapters 4.1 and 10.1 upon the handling of solder paste or solder wire. See chapter 10.2 upon filtration aims. Have a look on the Safety Data Sheets of those products. **Do not store any of those products along with foodstuffs.**



- 4- Waste: elimination of waste containing lead or chemical products is ruled, please refer to the law in force and ask for the companies which deal with this kind of waste. Do not mix the waste.

#### 4.4 Assembly of the unit

Unpack the unit and assemble the accessories.

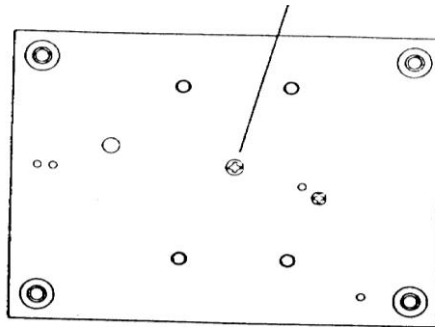
Connect the iron to the unit, screwing the connector.

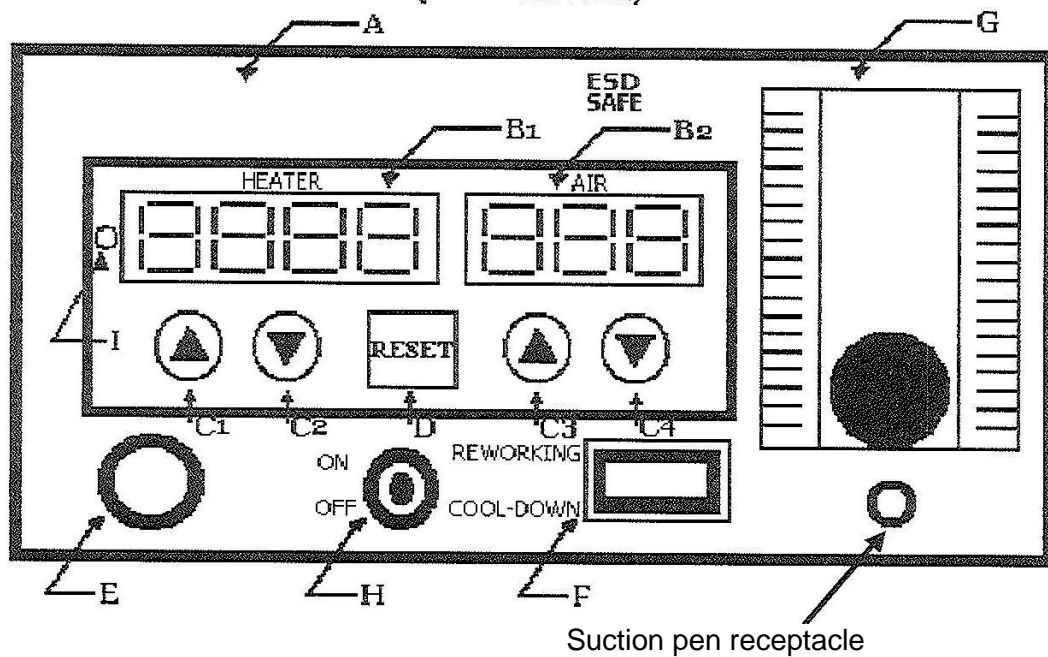
Caution! The switch must be on OFF or the unit must be unplugged.

Put the iron on its stand.

Power supply: 230V mono + ground / 50 Hz on normalised plug 10A with differential circuit breaker 30mA.

**ATTENTION : REMOVE THE RED SCREW UNDER THE STATION.**

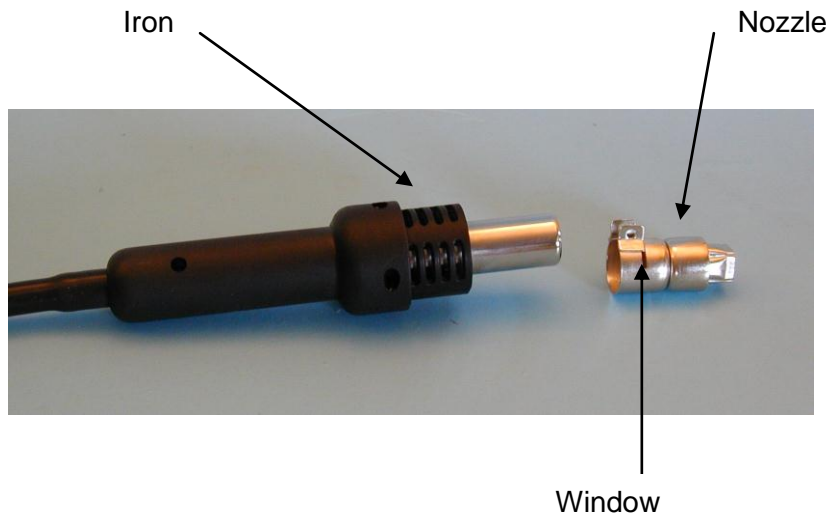




- A - Product Name**
- B1 - Temperature Meter**
- B2 - Airflow Level Meter**
- C1 - Temperature Control (Up)**
- C2 - Temperature Control (Down)**
- C3 - Airflow Control (Up)**
- C4 - Airflow Control (Down)**
- D - Reset Button**
- E - Hot Air Output**
- F - Hot Air Gun Switch**
- G - Airflow Gauge**
- H - Power Switch**
- I - Temperature Adjustment Indicator**

### Before operation

- Select the nozzle that matches the sizes of the IC.
- Screw up the nozzle, **important, always let the window open.**
- Install the nozzle as picture.
- Properly screw down the screw.



## 5 Start up

### SMD REWORKING

#### How to use the reset button?

The RESET button (button D from the control panel) can be used to reconfigure temperature and airflow level settings. Once pressed, the system will temporarily switch to stand-by mode then start the device using default temperature and airflow level values of 100°C and 51, respectively. Pressing the RESET button also removes previously configured system values.

**Do not RESET the system while temperature is still high. Allow the temperature to drop to a minimum before pressing the reset button. Failure to do so can damage the heating element as well as the handle because of excessive heat.**

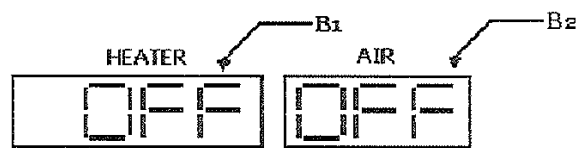
### Suction Pen Assembly and Usage

Plug the end of the suction pen to its receptacle and attach a suction tip that matches the particular IC to be used.

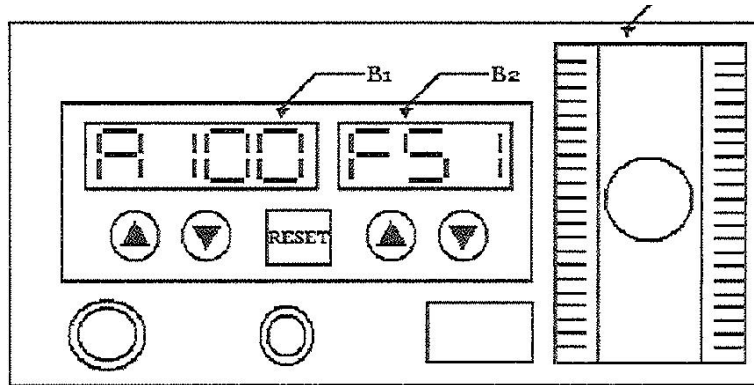
Suction strength can be increased by increasing the air pressure (button **C3** and **C4**). The higher the air pressure the more powerful the suction strength.

To pick up ICs using the suction pen, increase air pressure to maximum, cover the hole at the side of the suction pen while gently tapping the tip of the suction pen on top of the IC.

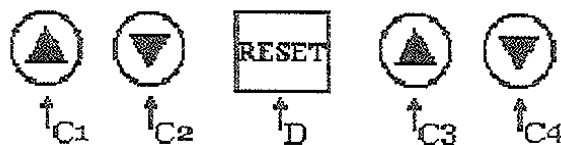
1. Turn ON the main power switch (H). The unit will display the product name.  
The temperature (heat) and air level panel will both display "OFF" afterwards.



2. Start the hot air gun by selecting "Reworking" from the Hot Air Gun switch, F.
3. The system will operate at 100°C temperature and 51 on the airflow level meter, by default. You will also notice that the metal ball inside the airflow gauge is positioned somewhere in the middle. The temperature (reading) may overshoot momentarily but will automatically adjust itself to reach the desired (actual) value.

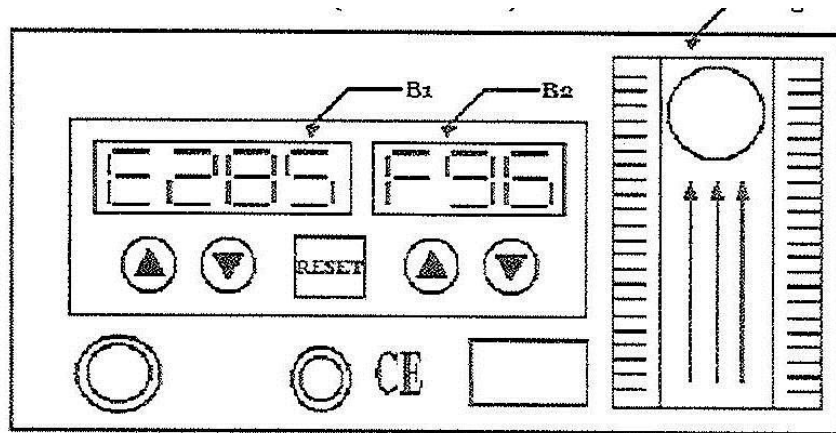


4. Set desired air pressure by pressing C3 or C4 from the panel.



5. Adjust hot air gun temperature by pressing buttons C1 or C2.
6. You may start reworking as soon the actual temperature and desired airflow level have reached values as shown from the display panel.
7. After reworking, select "cool-down" from the Hot Air Gun switch.

8. This will start the auto cooling function by blowing air at full speed to accelerate cooling down of the hot air gun.

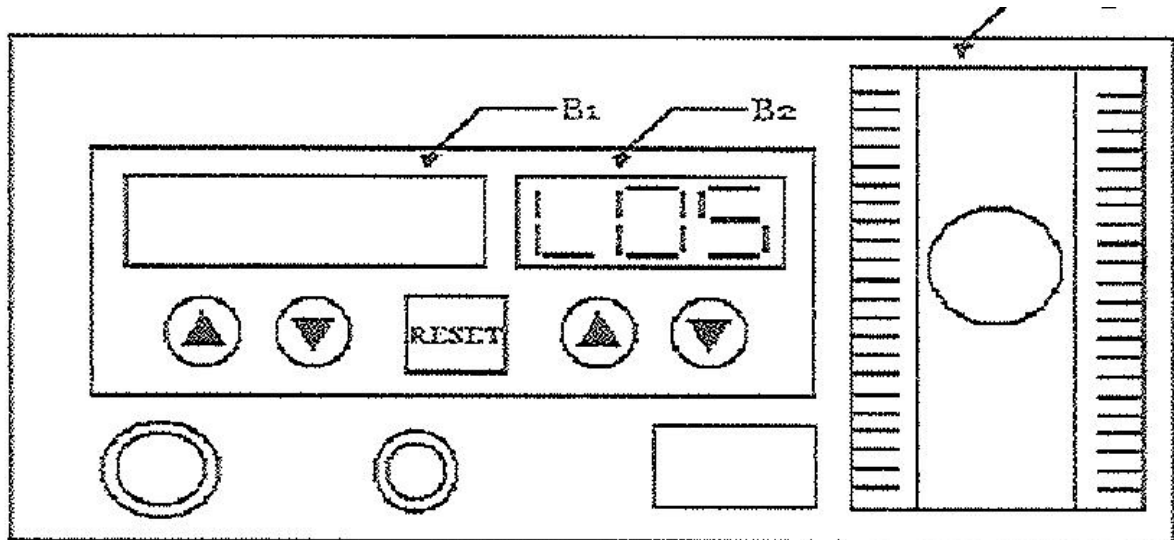


9. The cooling function will automatically stop once the temperature of the hot air gun reaches 90°C, as displayed from the panel, B1.
10. The panel will display "OFF" on both the temperature and airflow level indicating that the device can already be switch OFF.
11. Turn OFF the device by using the power switch.
12. Unplug the unit from the power source.

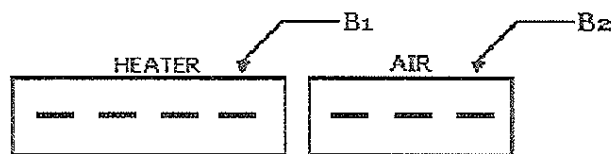
**RECOMMENDATION:** When adjusting the temperature, it is strongly advised to increase the airflow level first in order to manage the temperature. Excessive heat may damage the handle and heating element of the equipment.

### Sleep Mode Timer Set-Up

1. Switch the unit ON (or press "Reset" button, D, from the panel).
2. Press and hold C3 while the banner is scrolling.
3. Display panel, B2, will initially indicate 'L05', which means the device will switch to sleep mode after **5** minutes (default) of idle time **and** if the nozzle is docked on the handle for the duration of time.



4. Adjust the time before sleep by pressing buttons C1 or C2.
5. Press C4 to confirm.
6. The device will start counting down when the air gun is docked on the handle. Once countdown is finished and the hot air gun still docked, the device will automatically blow air (at room temperature) to bring down temperature to 90°C. The panel will then display the following after reaching the safe temperature level and to indicate that the device is now in sleep mode.



**NOTES:**

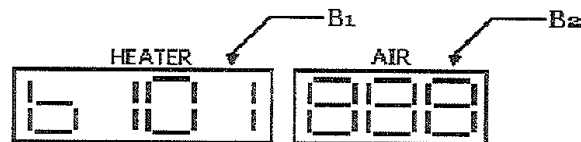
Time is configurable from 1 to 20 minutes (default 5 minutes).

The device has a switch located at the handle (cradle), which activates the countdown before the system goes to sleep.

Once the hot air gun is released from the handle during sleep mode, the unit will automatically switch back to previous working temperature and airflow level parameters.

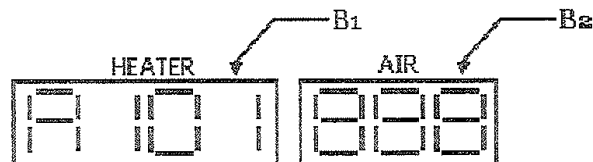
### Temperature Setting and Adjustment.

1. While the unit is ON and the Hot Air Gun switch set to "Reworking", press buttons C1 or C2 from the control panel to increase or decrease the temperature, respectively.
2. The display panel, B1, will show something like "bXXX" while the temperature is being adjusted.



You will also notice that the red light ("I" from control panel) is blinking from the panel. This is to indicate that the system is trying to reach or maintain the desired temperature level.

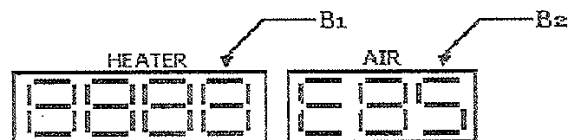
3. Wait for few seconds while the device is adjusting the actual temperature. The control panel will then display "Axxx" to indicate the actual temperature. Note that actual temperature may vary for +/- 5% of the defined value. This is normal and should not have any negative impact on reworking.



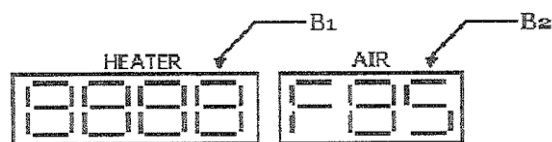
The temperature range is between 60°C and 480°C.

### Airflow Level Setting and Adjustment

1. While the unit is ON and the Hot Air Gun switch set to "Reworking", press buttons C3 or C4 from the control panel to increase or decrease the airflow level, respectively.
2. The display panel, B2, will show something like "Eyyy" while air pressure is being adjusted.



3. Wait for a few seconds until the panel displays "Fyyy" indicating that actual airflow level has been reach.



The air flow level range is between 6 and 99.

## 6 Precaution

The CIF 852-A++ station must not be used near flammable gases, paper or other flammable products. The nozzle and hot air can cause severe burns. Never touch the heating body and never direct the nozzle to the skin.

- **DO NOT LET THE TOLL HOLDER GETTING DOWN**
- **DO NOT DISMANTLE THE STATION**
- **UNPLUG THE STATION WHEN NOT USED**
- **WAIT THE NOZZLE GETS COLD BEFORE STORING THE UNIT.**

### 6.1 Advice

- 1- Use an ESD bracelet before using this station.
- 2- If it is difficult using this unit, please read again this instruction manual.
- 3- Do not dismantle the unit, risk of electric hazard.
- 4- If you meet any problem or default, please contact your reseller.

## 7 Staff protection

### 7.1 Solder paste and solder wire

Solder paste as well as solder wire contain lead, do not forget cleaning your hands after each handling.

Put the rejects or dust remains in a container especially dedicated for that use.

### 7.2 Filtration aims ?

Gases and fumes produced during the different manufacturing phases are often toxic. You must take care of this danger. This protection is above all needed when the worker faces these gases and fumes all the day long.

During gluing and soldering, the air gets polluted with solvents and isocyanides which are famous for their carcinogenic effects. Solvent gases and soldering flux can cause asthma, bronchitis, reduction of pulmonary functions, eyes, skin and respiratory system irritation and eczema.

Industrial rejects in the atmosphere are more and more regulated.

Many other fields are concerned: laboratories, chemical, mechanical, pharmaceutical,... industries.

Extract and filter polluted air is a protection for:

- the worker and staff around
- the environment.

Extract and filter polluted air is a profitable investment:

- As less staff absence due to professional illnesses gives higher production rates.



### 7.3 Extraction Filtration

The units Dedicated for treatment from 70 to 250 m<sup>3</sup>/h, mobiles, complete they are connected to a wide range of suction arms for many applications.

Ex: Filter unit FILTRATEC-F

item code:I51 025



Suction arms:

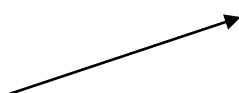
Conceived to be connected to the Filtratec units, they are all ESD safe. Different types of hoods and nozzles can adapt.

Each arm is delivered with a fixing system for table or wall.

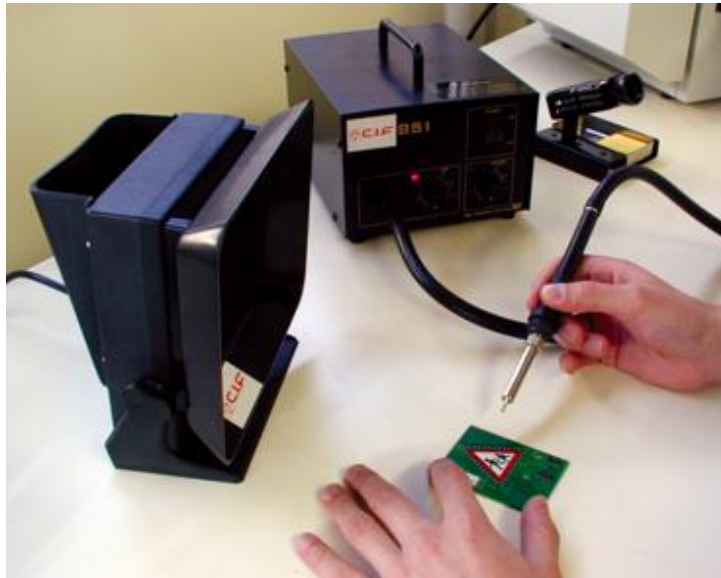
Ex: Suction arm 4401

item code:I55049

Suction arm 4401



For multipurpose stations, please contact us.



Station **FILTRIX 628** item code I51 024

## 8 Maintenance

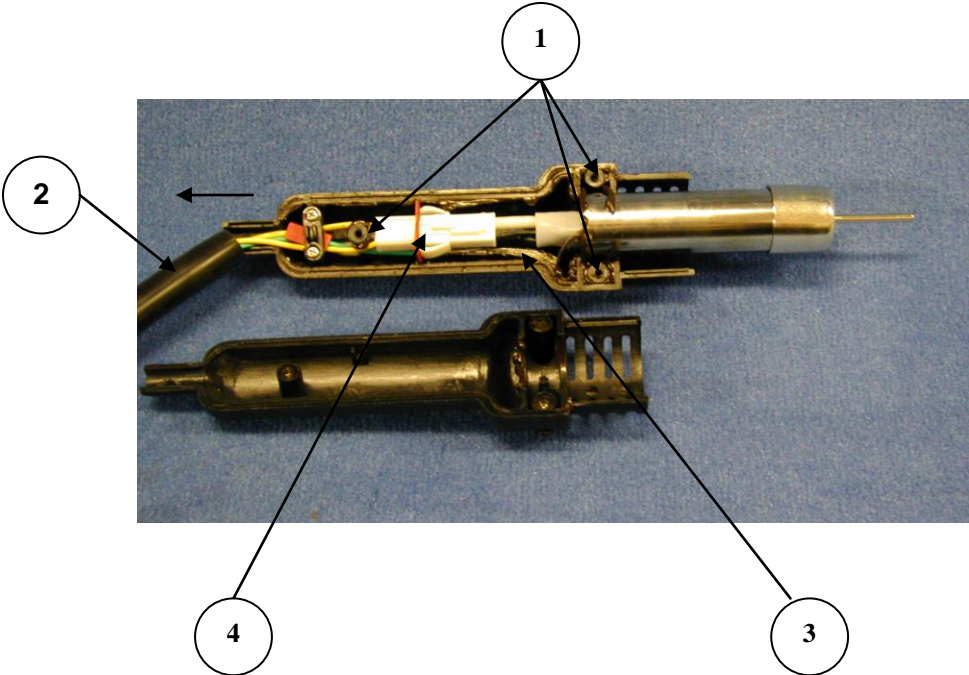
### 8.1 Maintenance

Clean the hot air iron once a week thanks to a soft dust.  
**KEEP IN MIND A CLEAN MACHINE WORKS PROPERLY.**

### 8.2 Replacing heating element

1. Loosen the 3 screws that secure the hot air gun handle. The heating element is located in the middle part of the hot air gun.
2. Slide off the plastic tube.
3. Disconnect the ground wire sleeve.
4. The Quartz glass and heat insulation are installed inside the pipe. Loosen the cable and remove the heating element.
5. Insert the new heating element and reconnect the terminal. Be careful not to rub or touch together the heating element wire.
6. Reconnect the ground wire after replacing the heating element.
7. Re-assemble the handle.

**NOTE:** The life expectancy of a heating element is 1 year under normal operating conditions.



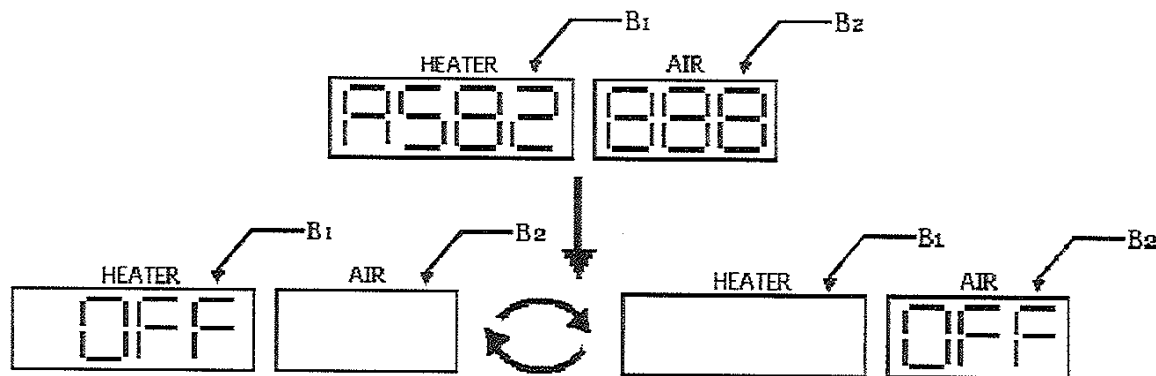
## 8.3 Basic troubleshooting guide

### **PROBLEM 1: THE UNIT HAS NO POWER**

1. Check if the unit is switched ON.
2. Check the fuse. Replace with the same type if fuse is blown.
3. Check the power cord and make sure there are no disconnections.
4. Verify that the unit is properly connected to the power source.

### **PROBLEM 2: TEMPERATURE DISPLAY IS ALWAYS ABOVE 500°C**

**Description:** Constant display of above 500°C temperature from the panel then displays a blinking "OFF" on both sides of the panel after a few minutes



#### **SOLUTION:**

The thermal sensor may be broken and needs to be replaced.

### **PROBLEM 3: ACTUAL AIR TEMPERATURE IS NOT INCREASING**

**Description:** Actual temperature reading is not increasing or decreasing based on desired level (set temperature). The panel will then display a blinking "OFF" on both sides afterwards. **SOLUTION:**

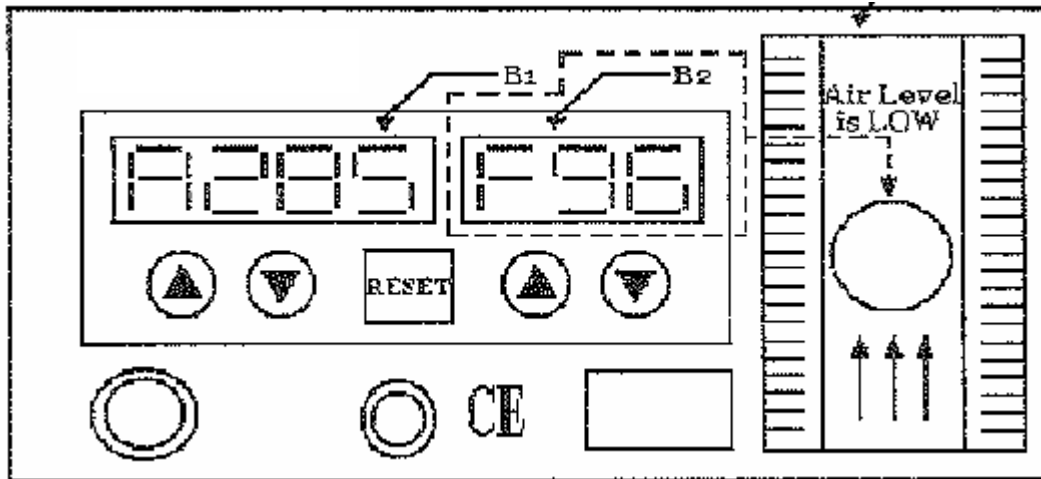
The heating element may be broken and needs to be replaced.

### **PROBLEM 4: BANNER OR PRODUCT NAME IS ALWAYS SCROLLING -THE UNIT IS NOT USABLE**

**Description:** The product name is just always scrolling from the digital panel, rendering the device unusable.

**SOLUTION:** Try to press "Reset" from the panel. Note that resetting the device will also reset all previously defined configurations. If the problem persists, contact the vendor.

**PROBLEM 5: AIR PRESSURE LEVEL IS SIGNIFICANTLY LOW NO MATTER HOW HIGH THE AIRFLOW LEVEL IS CALIBRATED**



**Case 1:** Check the mains voltage (AC power source). If the voltage level falls significantly low, about 15-20% lower than the standard, there will also be a noticeable drop in the air pressure level.

**SOLUTION:** Please refer to your local power service provider.

**Case 2:** The microcontroller might have detected the operating frequency incorrectly. The airflow level is noticeably weaker.

**SOLUTION:** Try to press the "Reset" button on the panel and let the device re-detect the proper operating frequency. Note that resetting the device will also reset all previously defined configurations.

**PROBLEM 6: THE UNIT IS VIBRATING TOO MUCH**

Check if the 4 screws that hold the pump in place are properly and tightly connected. Unplug the system from the main power source before opening the case to check the internal settings.

**PROBLEM 9: AIR PRESSURE DROPS WHEN USING THE SUCTION PEN**

**DESCRIPTION:** The air level pressure drops when using the suction pen and does not recover to its previous height in the air gauge.

**SOLUTION:** Decrease the air pressure level, set air pressure level at about 80.

**NOTE:** Air level may drop a little when the suction pen is picking up ICs. The air pressure level gauge should revert back to its previous state when the IC is release.

Blockages in suction pen's tube and nozzle may cause the air pressure to drop. Clean the air passage for maximum air pressure capacity regularly.

**PROBLEM 8: DISPLAY & OTHER DEVICE OPERATION ISSUES**

**SOLUTION:** Try to press the "Reset" button on the device. Note that resetting the device will also reset all previously defined configurations.

**OTHER PROBLEMS NOT MENTIONED:**

Contact the vendor.

**9 Nomenclature & scheme**

Reference	Description
V50007	Hot air gun heating element

**9.1 After Sales Service**

Contact CIF distributor

Email : [cif@cif.fr](mailto:cif@cif.fr)

Fax : 33 (0)1 4547 1614





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