

Instructions manual  
US Version

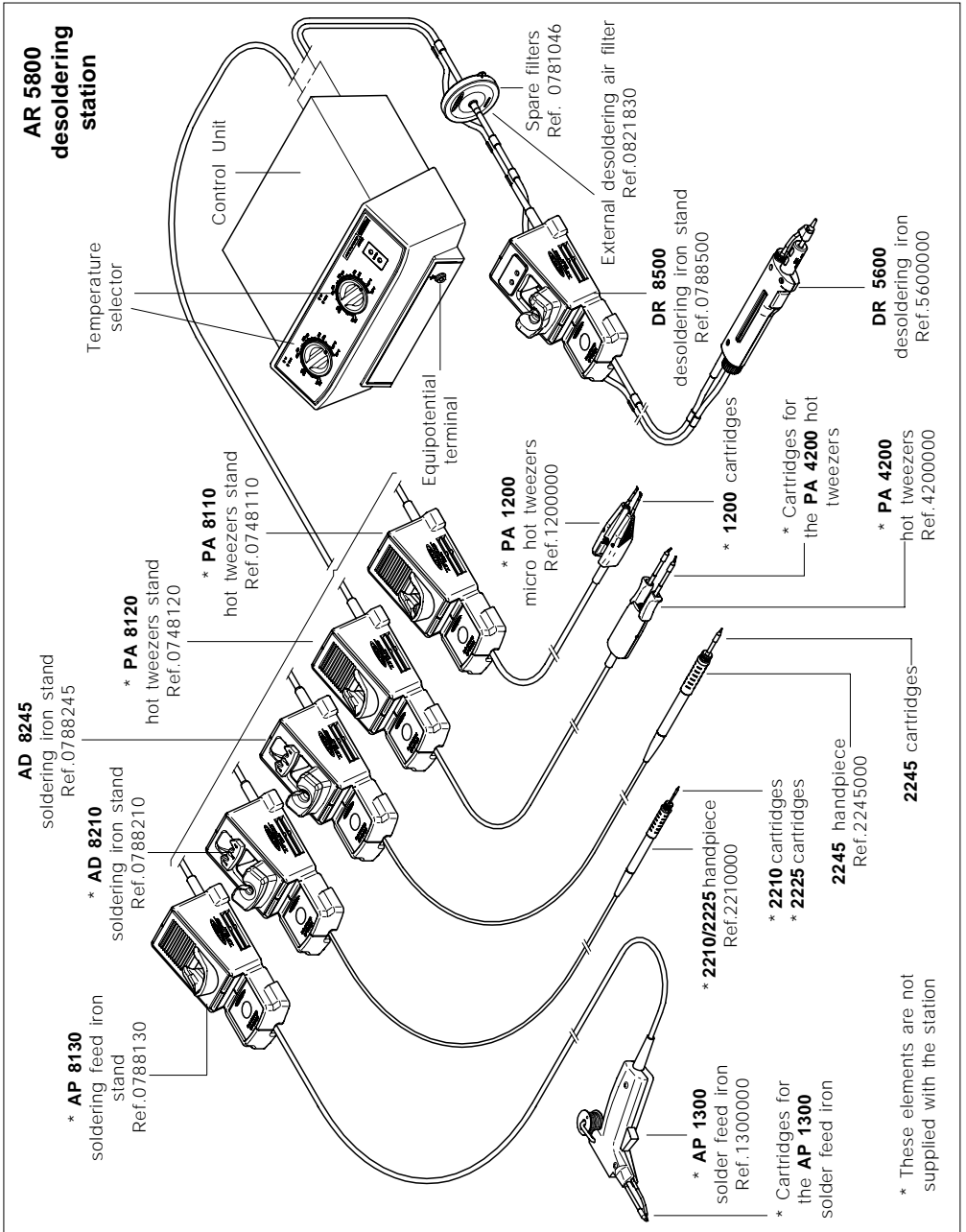
**ADVANCED**  
SERIES



DESOLDERING STATION

AR 5800

We appreciate the confidence you have placed in JBC in purchasing this station. It is manufactured to the most stringent quality standards in order to give you the best possible service. Before turning on your station, we recommend you to read these instructions carefully.



## SPECIFICATIONS

The **AR 5800** is a repair station for desoldering through-hole components by solder intake.

- **AR 5800** 120V Ref. 5800100

It is supplied with an Advanced **DR 5600** desoldering iron and Advanced **2245** soldering handpiece.

**Any of the Advanced tools for soldering-desoldering can be connected to the two modules:** the soldering handpieces, the **DR 5600** desoldering iron, the **AP 1300** solder feed iron and the tweezers.

The standardization of connections allows you to adapt your configuration in the best way to your job's needs. Do notice that you can connect only one desoldering iron.

In the station it is easy to verify which temperature control module is controlling which tool. With all tools in their stands take any one of them out of its stand while watching the green LEDs of the station. You will see that the LED of the module the tool is connected to, will stop being intermittent thus indicating the tool is ready for use.

### The station's components

- **2245** handpiece Ref. 2245000  
with the **2245-003** cartridge Ref. 2245003
- **DR 5600** desoldering iron Ref. 5600000  
with the **5600-003** tip Ref. 5600003
- **AD 8245** soldering iron stand Ref. 0788245
- **DR 8500** desoldering iron stand Ref. 0788500
- External desoldering air filter Ref. 0821830
- Spare filters Ref. 0781046
- Set of accessories Ref. 0780593
- Instruction manual Ref. 0781058

The **AR 5800** station has the following complementary products:

- **2210/2225** handpiece Ref. 2210000
- **PA 1200** micro hot tweezers Ref. 1200000
- **PA 4200** hot tweezers Ref. 4200000
- **AP 1300** solder feed iron Ref. 1300000

## Control Unit technical specifications

- Maximum power soldering iron 50W.
- Maximum power desoldering iron 75W.
- Temperature selection: 200 to 700°F (±5%).
- Station's maximum power: 175W.
- ESD protected housing.  
Typical surface resistance: 10<sup>5</sup>-10<sup>11</sup> Ohms/square
- Complies with CE standards on electrical safety, electromagnetic compatibility and antistatic protection.
- Equipotential connector is earth connected to the plug feed of the station.
- Weight of complete unit: 26.5 lbs.

## RECOMMENDATIONS FOR USE

### For soldering and desoldering

- Clean the contacts and the printed circuit to be desoldered of dust or dirt.
- Preferably select a temperature below 662°F. Excess temperature may cause the printed circuit tracks to break loose.
- The tip must be well tinned for good heat conduction. If it has been inoperative for any length of time, it should be retinned.

### Safety measures

- Incorrect use of this tool may cause fire.
- Be cautious when using the tool in places where inflammable products are stored.
- Heat can fire up inflammable products even when they are not at sight.
- Do not use when the atmosphere is explosive.
- Place the tool back on its stand in order to let it cool down before you store it.

## OPERATION

### LED lights

**Red LED -ON-** when lit, it indicates that the station is plugged in the mains.

**Green LED -READY-** when lit, it indicates that the system is ready and correctly set for working.

The green led light is on after a few seconds, is the time needed to carry on the self-checking system.

The green light is pulsing when the tool is in sleep mode.

If the green led is not lit, the reason why, will be one of the following:

1. The tool is not plugged in.
2. The maximum available power has been exceeded for too long - e.g. in a very thick soldering or desoldering at the high repetition rates.
3. The heating element has a short circuit or an open circuit.
4. When an AC 2600 console is connected to the station.
5. Any other trouble preventing the system from working properly.

If any of the above mentioned causes is corrected, the station will start working automatically, except if there is an excess in an energy supply. In this case, the station has to be switched off and restarted.

When pressing the button of the desoldering iron handle, one of the two leds in the area marked SUCTION will light up:

**Green light -SUCTION-** indicates the correct functioning of the desoldering iron.

**Red light -SUCTION-** indicates a blockade within the vacuum circuit.

This can be caused by the following:

- The tip of the desoldering iron is blocked.
- The solder tin deposit is full.
- The filter of the desoldering iron is dirty.
- The station's external desoldering air filter is dirty.

Only for users of AC 2600 console ref. 2600000.

If you lock the working temperature thanks to the console, the green LED -READY- will remain on while the dial is set at the locked temperature.

If the dial is not set at the locked temperature, the green LED -READY- will be blinking. The farther the dial will be set from the locked temperature the slower the blinking pace will be.

## SLEEP FUNCTION

### Tool in sleep mode

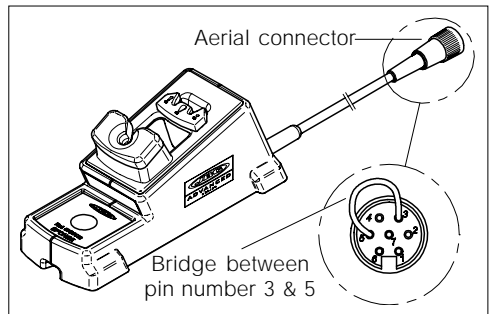
One of the Series Advanced features is that when the tool is placed in the holder, the temperature at the tip drops automatically to the sleep temperature (sleep). This function is only possible because of the quick response time which does not make the user realise the temperature rise to reach the selected temperature. In this way, the oxydation of the tinning of the tip is considerably reduced and tip life is extended 2 or even 3 times.

To indicate that the tool is in sleep-mode, the green led starts pulsing.

These parameters can be modified using the **AC 2600 console** Ref. 2600000.

**In order to take full advantage of the sleep function and as a security measure, it is necessary to place the tool in the stand when it is not being used.**

When connecting an old version solder stand, it may happen that the sleep function does not work. To resolve this problem, you should make a bridge between pins number 3 and 5 from the aerial connector of the cable of the stand, that plugs in the station.



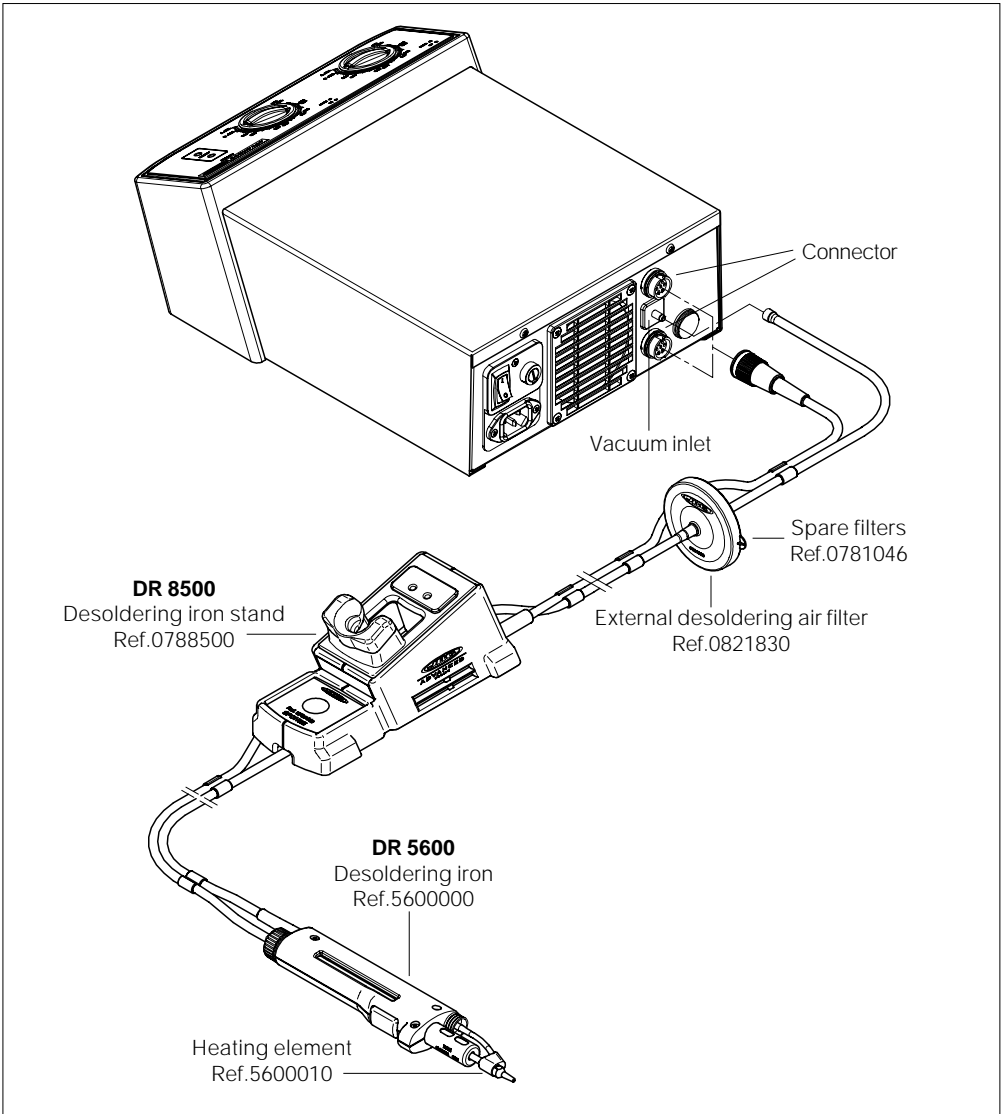
## DR 5600 DESOLDERING IRON

The **AR 5800** station includes the following:

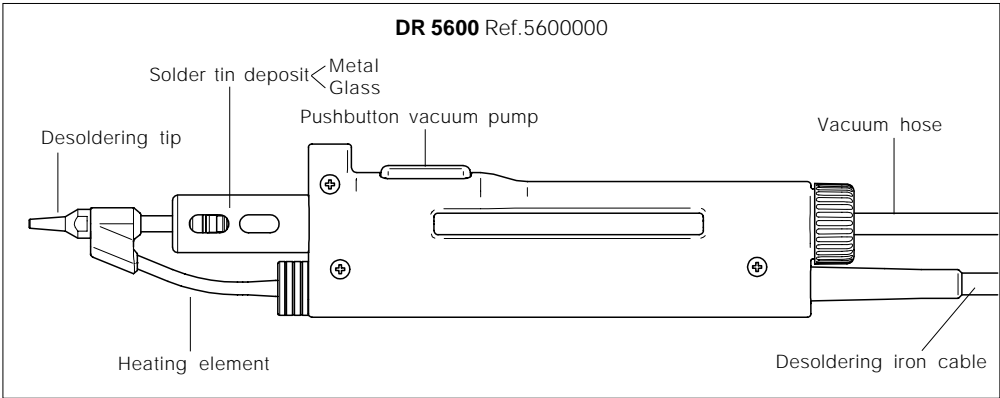
- **DR 5600** desoldering iron ref. 5600000 with the **5600-003** tip ref.5600003.  
Power desoldering iron: 75W.
- **DR 8500** desoldering iron stand ref. 0788500.
- External desoldering air filter ref. 0821830.
- Set of accessories ref. 0780593 with tips for the desoldering iron: **5600-013**, **5600-004** and **5600-005**.

The desoldering iron is connected to the station following the below procedure:

The cable connection of the desoldering iron is connected to the plug in the DR 8500 desoldering iron stand and the vacuum hose is connected to the external desoldering air filter, which is connected to the vacuum connection of the station. The cable connection of the desoldering iron stand can be connected to any of the two connectors at the back of the station. Very important, it is essential to connect the mentioned filter to prevent from damaging the vacuum pump.



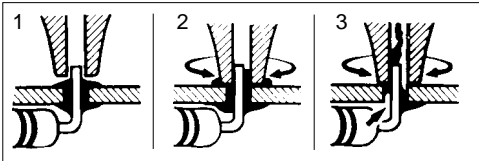
## DR 5600 Ref.5600000



### Desoldering process

Use the tip model with a larger diameter than the pad to be desoldered, so as to achieve maximum aspiration and thermal efficiency.

- 1 Apply the desoldering iron tip so that the component terminal penetrates within its orifice.
- 2 When the solder liquefies, start gently to rotate the desoldering tip so that the component's terminal can be eased away from the sides.
- 3 Press then, not before, the vacuum pump push-button just long enough to aspirate the solder.

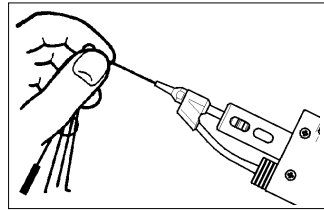


After pressing the desoldering key there is a slight delay until the self-contained vacuum pump stops, this is to make sure that the vacuum circuit is completely empty.

If any solder remains are left on any terminal after attempting to desolder it, resolder it with fresh solder and repeat the desoldering operation.

### Tip care

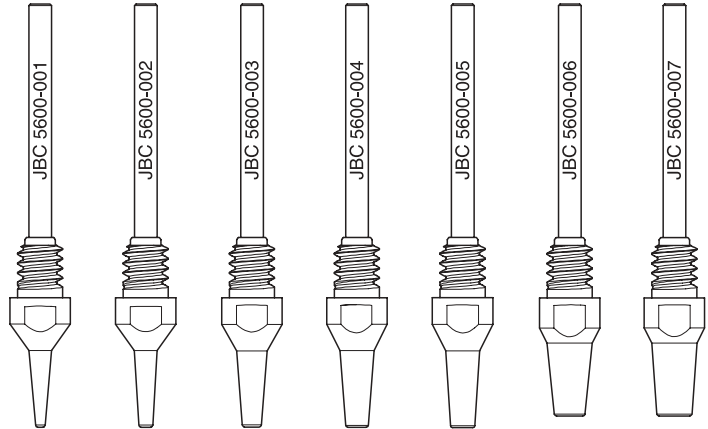
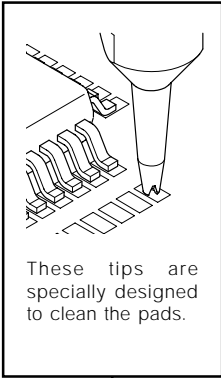
- The largest rod that fits in the tip hole should periodically be passed through in order to clean the intake tube.



- To clean the tips, use the sponge included with the stand and check it is slightly moisted. **Only deionised water (car battery water) should be used in order to wet the sponge.** If normal water was to be used, it is very likely that the tip will become dirty due to the salts dissolved within the water.
- Do not file the tips or use abrasive tools which may damage the tip's protective surface coating and avoid knocking them about.
- If the tip has been a long time without being tinned, use a metal brush to remove any dirt and oxid.

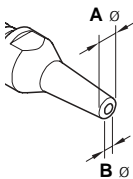
**IMPORTANT:** DO NOT press the pushbutton vacuum pump while tinning the desoldering tip, as the fumes given off by the flux would quickly soil the ducts and filter of the air circuit.

## DESOLDERING TIPS



**5600-011   5600-012   5600-013**

Ref.   **5600-001**   **5600-002**   **5600-003**   **5600-004**   **5600-005**   **5600-006**   **5600-007**

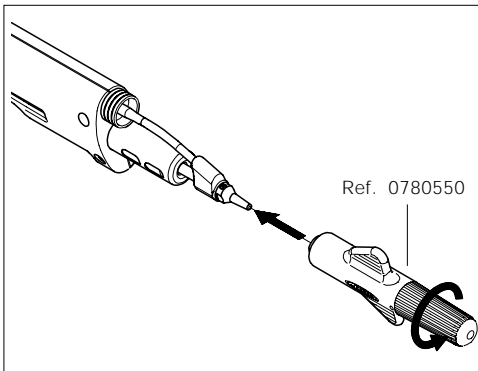


| 5600            | 001 / 011 | 002 / 012 | 003 / 013 | 004 | 005 | 006 | 007 |
|-----------------|-----------|-----------|-----------|-----|-----|-----|-----|
| <b>A</b> ø (mm) | 1.4       | 1.8       | 2.7       | 3.2 | 3.4 | 4.2 | 4.8 |
| <b>B</b> ø (mm) | 0.6       | 0.8       | 1         | 1.3 | 1.6 | 2   | 2.5 |
| max. pin ø (mm) | 0.4       | 0.6       | 0.8       | 1.1 | 1.4 | 1.7 | 2.3 |

### Change of desoldering tip

This operation should be done while the tip is hot, at a minimum temperature of 482°F, so that any tin left inside is in molten state.

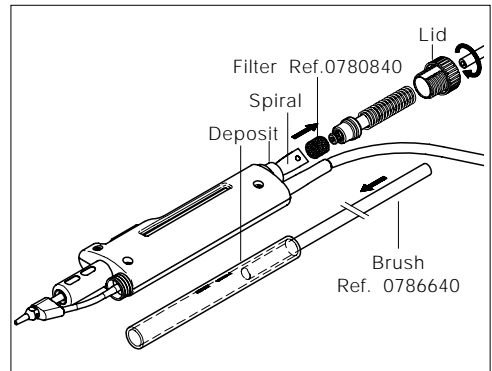
- Unscrew the tip to be replaced, with the aid of the spanner supplied.
- Fit the new tip, and tighten up with the spanner to achieve a good air tightness.



### To empty the solder tin deposit and change the filter

For this, the lid needs to be unscrewed and first the tin deposit and then its spiral must be removed to clean the inner part of the deposit with a brush.

- The condition of the filter must be checked and replaced if dirty or damaged.
- The deposit needs to be inserted with spiral put into place. Then the whole must be closed by screwing the lid shut.



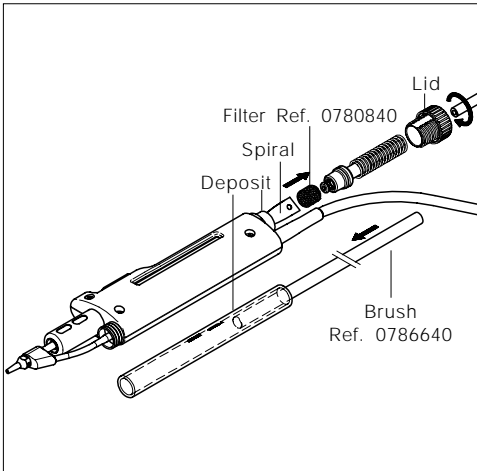
## Solder tin deposits

It can be chosen between two different deposit types:

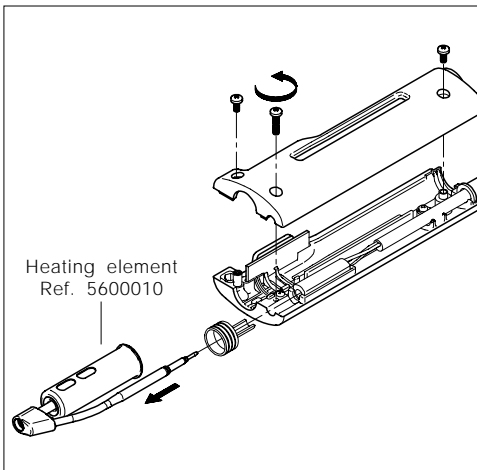
- Metal Ref. 0812630.
- Glass Ref. 0812620.

## Change of the heating element of the desoldering iron (Ref. 5600010)

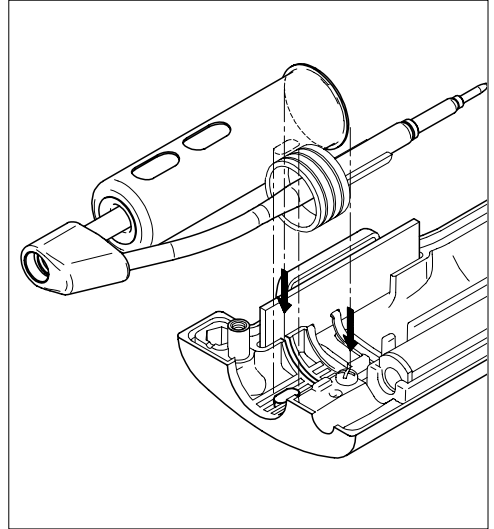
- To realize this operation, the lid needs to be unscrewed and first the tin deposit and then its spiral and filter must be removed to clean the inner part of the deposit with a brush.



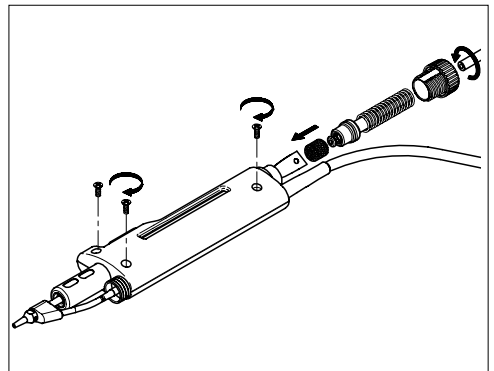
- Screw out the body of the desoldering iron. Open up the body and remove the heating element.



- Place the new heating element. Check that the right extremity of the upper part of the heating element is inserted in the slot located inside the body of the desoldering iron (see drawing hereunder).



- Screw in the body of the desoldering iron. Put the spiral and the filter back into the deposit. Place the deposit inside the body of the desoldering iron and screw in the shut lid.



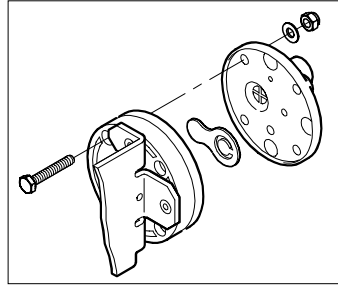
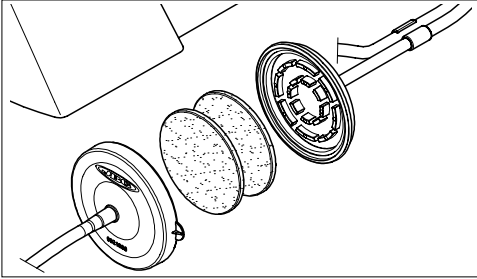
## Changing the pump inlet filter

Verify the filter at the entrance of the pump, and change it if dirty or obstructed, therefore:

Open the filter pulling the flap.

Take out the 2 cotton filters, throw away those which are soiled and replace them with new ones. Always use 2 filters.

Close the filter and check the airtightness.

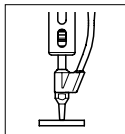


- Clean the valve with a cloth dampened in alcohol. If it is too soiled, replace it with new one. Ref. 0982970.

## Detecting air leaks in the circuit

To detect air leaks in the circuit:

- Obstruct the tip inlet orifice by pressing down on a silicone disc, or bend the tube connecting the desoldering iron to the filter.



- Press the pushbutton vacuum pump.

If the red led lights up, there is no loss of suction. Otherwise air gets into the system at some point. This can occur at the desoldering tip, or may be caused by the lid of the deposit, lids of filters or because the air pump does not function correctly due to dirty valves which occurs when the air filter has not been used correctly.

## Cleaning the vacuum pump valve

Open the control unit as follow:

- Disconnect the control unit.
- Turn it upside down, remove the fixing screws.
- Return the station to its normal position and lift up the lid.
- Undo the four screws fastening the pump cover.

## ADVANCED HANDPIECES RANGE

All the Advanced soldering handpieces range can be connected to the **AR 5800** station.

The **AR 5800** station includes the following products:

- **2245** handpiece ref. 2245000 with the **2245-003** cartridge Ref. 2245003. Power: 50W. For general soldering work.
- **AD 8245** soldering iron stand ref. 0788245.
- Set of accessories ref. 0780593 with **2245-007** cartridge Ref. 2245007. It can be chosen from a wide range of different **2245** cartridges to adapt perfectly to the needs of the job (pag. 16).

The following soldering handpiece can be connected to the **AR 5800** station:

- **2210/2225** handpiece ref. 2210000. Power: 20W. For high precision work, SMD etc. This handpiece can be used with the **2210** and **2225** cartridges. The **2225** cartridges are smaller than the **2245** cartridges and much more powerful than the **2210** cartridges. Available **2210** and **2225** cartridges: see page 18.

The **2210/2225** handpiece has to be connected to the **AD 8210** stand which has been especially designed for this handpiece.

One version of soldering iron handpiece covered with heat isolater is available:

- **2245** Confort handpiece ref. 2245110.

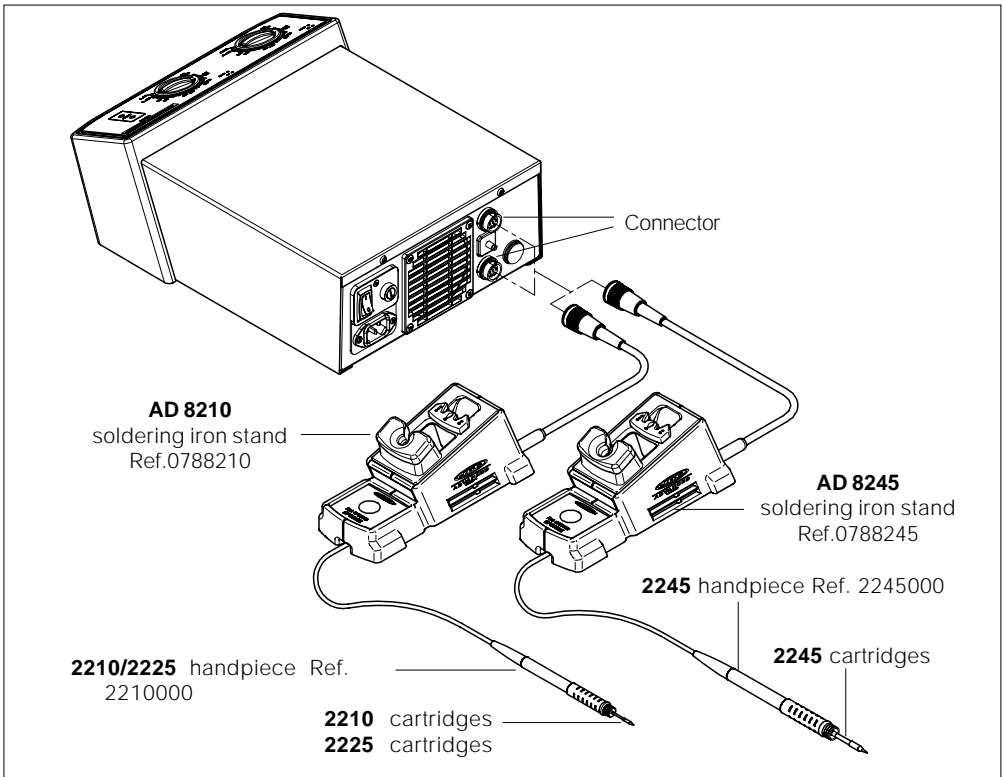
These articles are not delivered with the station.

The **2210**, **2225** and **2245** handpieces and cartridges comply with the MIL-SPEC-2000 referring to the potential difference between the soldering tip and ground connection, must be less than 2 mV.

For a soldering handpiece to work properly, the following components are required: a control unit, a handpiece and the corresponding stand and cartridge.

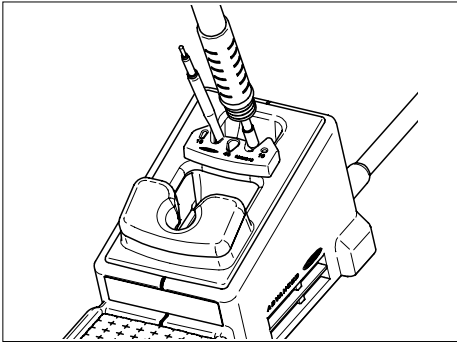
The soldering iron is connected to the station in the following way:

The cable connection of the soldering iron is connected to the plug in the soldering iron stand and the cable connection of the soldering iron stand can be connected to any of the two connectors at the back of the station. Please find the connection plan on figure.

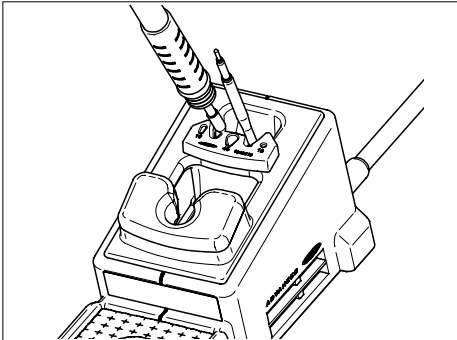


## Changing the handpiece's cartridge

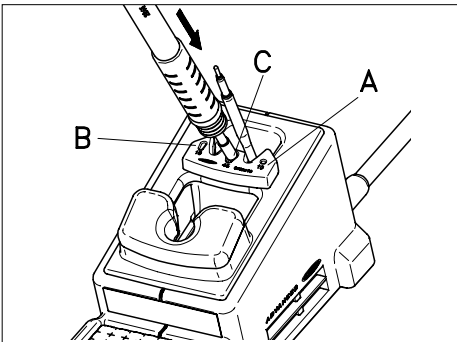
With the Advanced system, the cartridge can be changed quickly, without turning off the station, so you have two soldering irons in one. Here is what to do to change the cartridge:



1 - Place the handpiece and remove the cartridge.

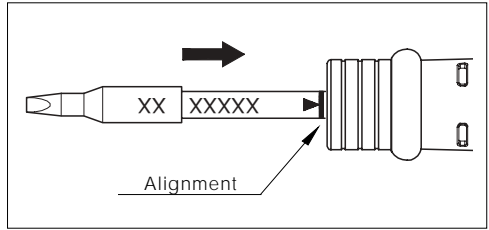


2 - Place the handpiece on top of the new cartridge, press it slightly down and remove the handpiece.




3 - Press the cartridge into the opening A, B or C:

- A. For straight 2210 and 2225 cartridges.
- B. For curved 2210 and 2225 cartridges.
- C. For 2245 cartridges.



### Important.

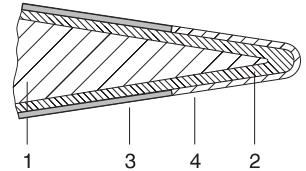
- It is essential to insert the cartridge till the end for a good connection. Take the mark  as a reference.

### Advanced series cartridge

The cartridge is made of the heating element which has the heating system, a temperature sensor and a long life tip.

The long-life tip is basically made of:

- 1 Copper
- 2 Iron
- 3 Chromium
- 4 Tin plate



### Long-life tip care

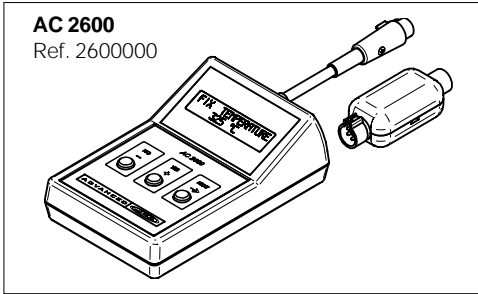
Except for the copper core, the rest of metals are placed galvanically on relatively thin layers, therefore it is necessary to avoid anything which could cause their destruction.

To clean the tips, use the sponge included with the stand and check that it is slightly moisted.

**Only deionised water (car battery water) should be used in order to wet the sponge.** If normal water was to be used, it is very likely that the tip will become dirty due to the salts dissolved within the water.

To re-tin the soldering tips, we recommend using the TT 9400 tip tinner/cleaner ref. 9400000.

## AC 2600 console



**AC 2600**  
Ref. 2600000

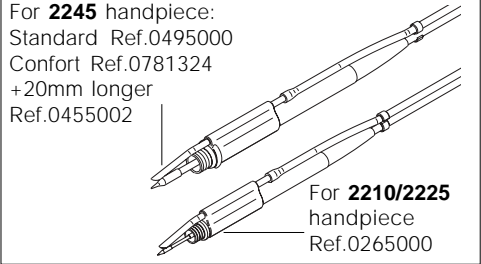
The **AC 2600** console is designed for modifying the original regulation program parameters of the following Advanced control units:

- **AD 2000** soldering station.
  - **AD 2200** soldering station.
  - **DI 3000** digital soldering station (\*\*).
  - **AD 4200** and **AD 4300** dual soldering stations.
  - **AR 5500**, **AR 5800 (\*)** and **DS 5300 (\*)** desoldering stations.
  - **AM 6000** and **AM 6500 (\*)** rework stations.
- (\*) These stations need a console whose program version is 4.0 or higher.  
(\*\*) These stations need a console whose program version is 5.01 or higher.

Changes available to perform:

- Fixing the the working temperature.
- Selection of temperature units in Celsius grades -°C- or Fahrenheit -°F-.
- Modification of sleep temperatures and standby times.
- Adjustment of temperature.
- Set the parameters back to the original parameters.
- Read-out data:
  - Working hours.
  - Sleep cycles and sleep hours.
  - Cartridge and iron changes.
  - Program version.

## Fume extractor accessories



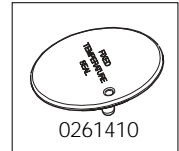
For **2245** handpiece:  
Standard Ref.0495000  
Confort Ref.0781324  
+20mm longer  
Ref.0455002

For **2210/2225**  
handpiece  
Ref.0265000

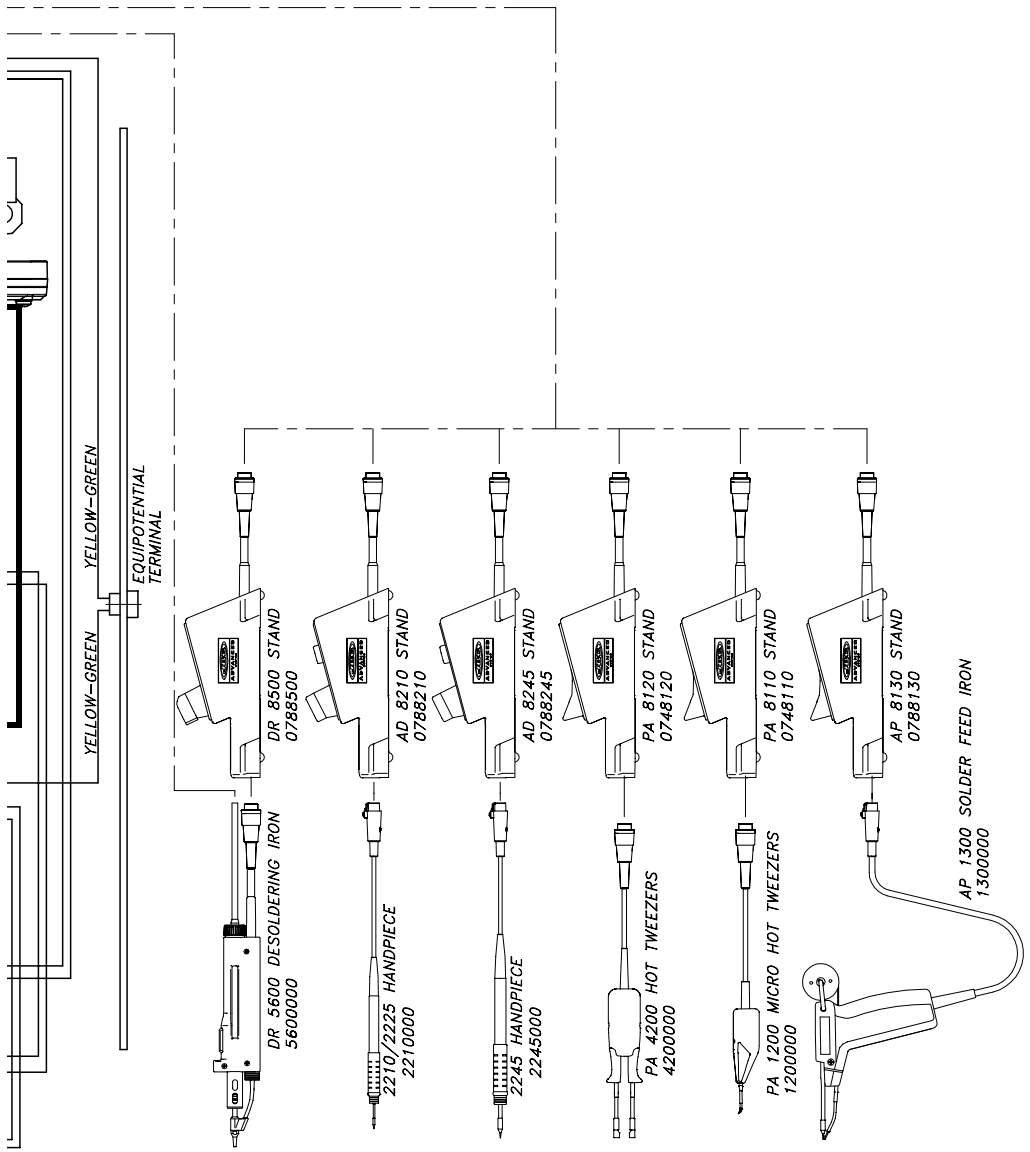
Specially designed for the Advanced Series 2210/2225 and 2245 handpieces. Easily clips onto the handpiece and can be quickly removed for easy maintenance.

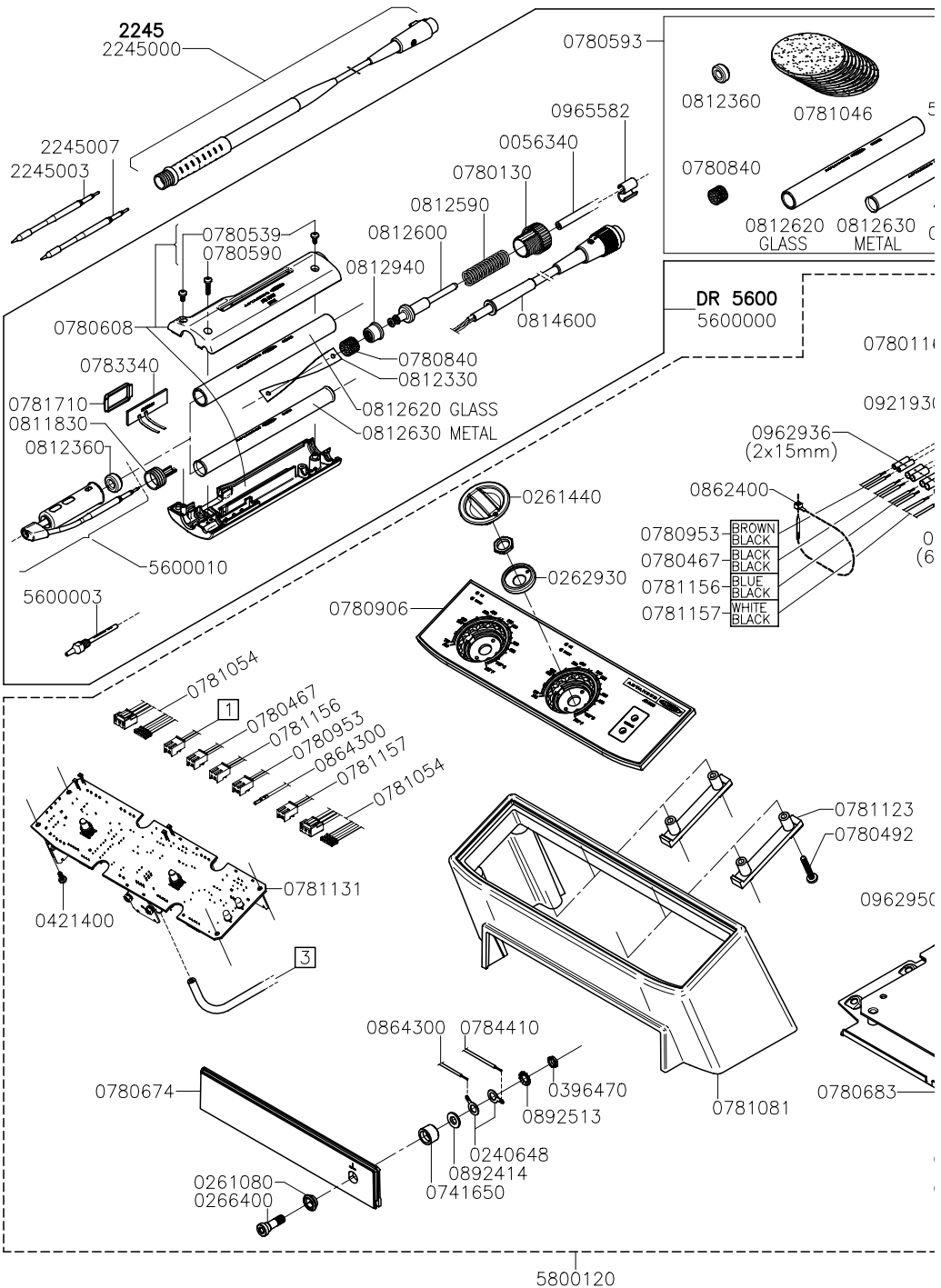
## Temperature sealing-cover

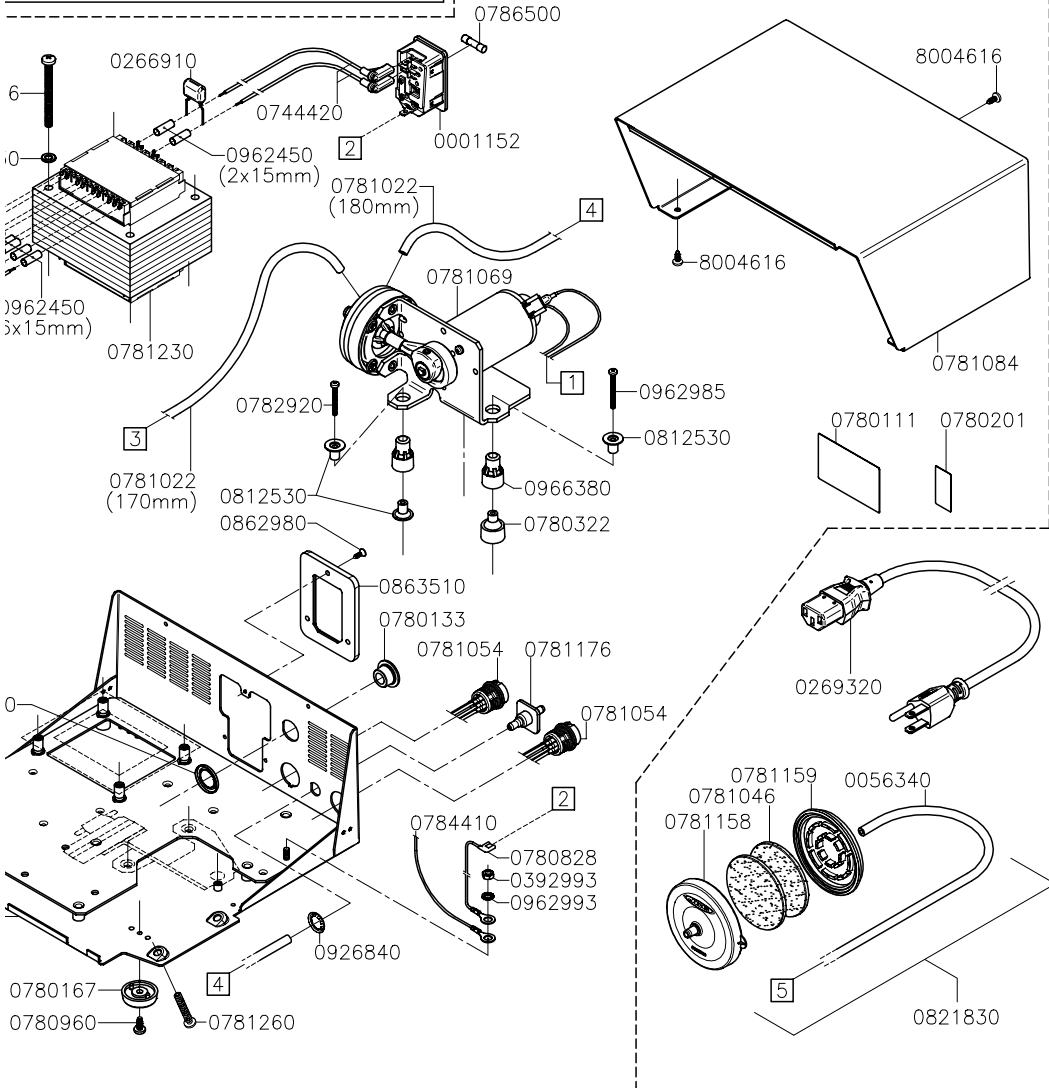
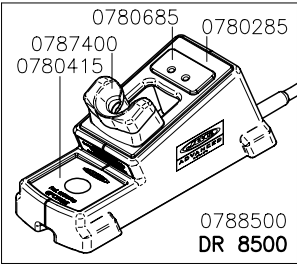
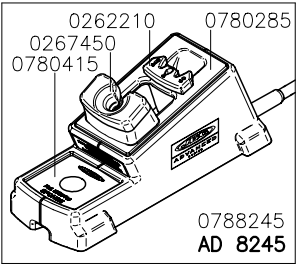
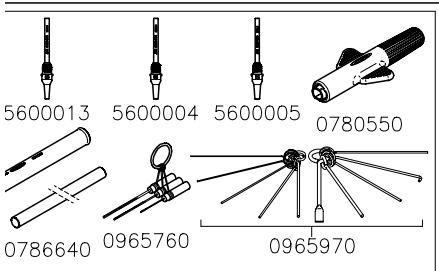
Accessory which replaces the selection temperature button and it is use to prevent operators from changing the temperature that has been pre-selected. Indicates the selected temperature.







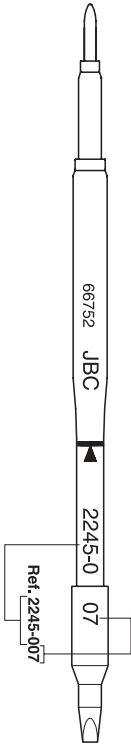




VALID FROM SERIAL N. 92000

# CARTRIDGE RANGE

## 2245



2245-030



2245-037



2245-032



2245-036



2245-001  
2245-201\*



2245-003



2245-043



2245-033



2245-029



2245-034  
2245-234\*



2245-035



2245-004  
2245-204\*



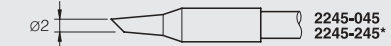
2245-046  
2245-246\*

\* These cartridges have a total length of 20mm longer than the normal cartridges, allowing them to reach places with difficult access and cartridges 2245-XXX are compatible with the AP 1300 solder feed iron.

All the cartridges shown are actual size.



2245-005



2245-045  
2245-245\*



2245-012



2245-051



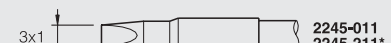
2245-006  
2245-206\*



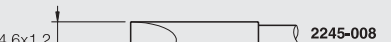
2245-044



2245-007



2245-011  
2245-211\*

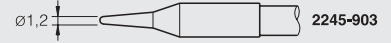


2245-008  
2245-208\*

### LEAD-FREE CARTRIDGES



2245-930



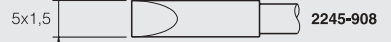
2245-903



2245-906



2245-907

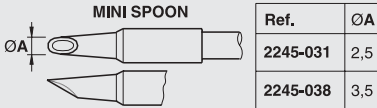
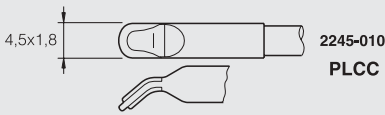
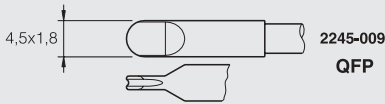


2245-908

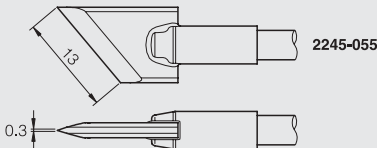
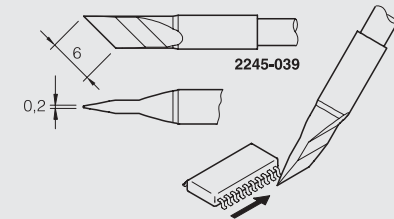
These cartridges are made to last longer in lead-free processes because of their extra tough plating.

PATENT PENDING

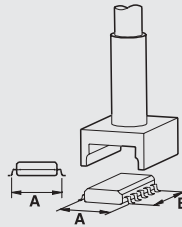
**TO SOLDER SMT IC**



**BEVEL EDGE TIP**

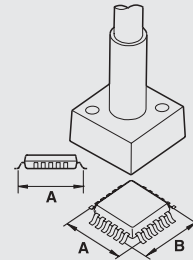


**TUNNEL TYPE FOR DUAL IN LINE IC**



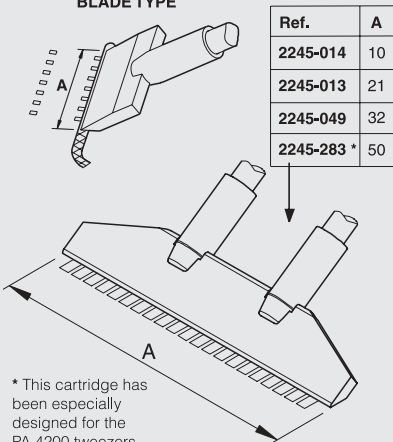
| Ref.     | A    | B    |
|----------|------|------|
| 2245-220 | 5,9  | 6,0  |
| 2245-250 | 5,9  | 8,0  |
| 2245-221 | 5,9  | 10,0 |
| 2245-222 | 7,5  | 12,0 |
| 2245-215 | 9,6  | 18,0 |
| 2245-226 | 14,6 | 28,4 |

**FOR IC'S: QFP AND PLCC**



| Ref.     | A x B       |
|----------|-------------|
| 2245-223 | 8,5 x 8,5   |
| 2245-224 | 12,0 x 12,0 |
| 2245-228 | 12,4 x 15,0 |
| 2245-227 | 17,5 x 17,5 |

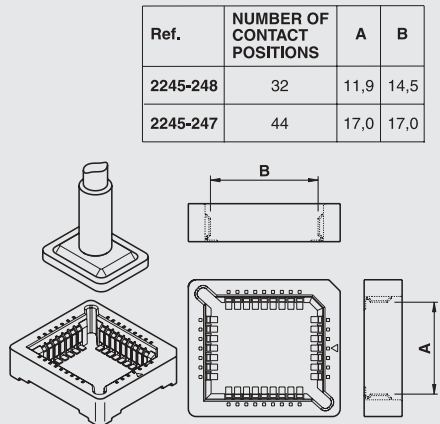
**BLADE TYPE**



| Ref.       | A  |
|------------|----|
| 2245-014   | 10 |
| 2245-013   | 21 |
| 2245-049   | 32 |
| 2245-283 * | 50 |

\* This cartridge has been especially designed for the PA 4200 tweezers.

**FOR PLCC SOCKETS**

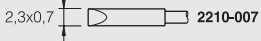
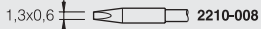
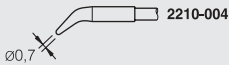
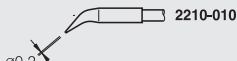
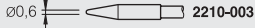


| Ref.     | NUMBER OF CONTACT POSITIONS | A    | B    |
|----------|-----------------------------|------|------|
| 2245-248 | 32                          | 11,9 | 14,5 |
| 2245-247 | 44                          | 17,0 | 17,0 |

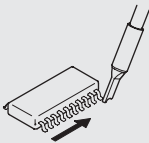
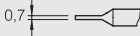
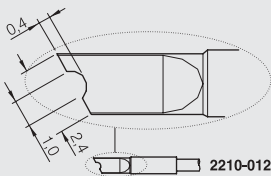
# CARTRIDGE RANGE

## 2210

Ref. 2210-001



### FINE PITCH

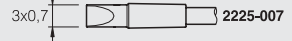
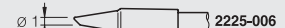
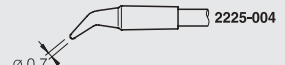
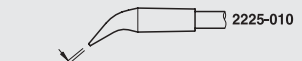
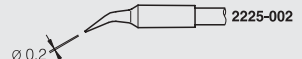
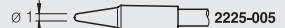


All the cartridges shown are actual size.

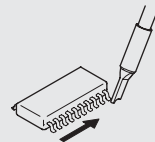
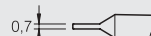
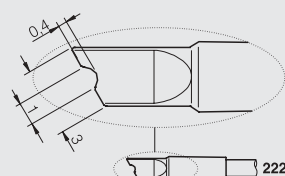
2225 cartridges are used in 2210/2225 handpieces and any of our Advanced station, except AD 2000 station.

## 2225

Ref. 2225-003



### FINE PITCH



All the cartridges shown are actual size.

# ADVANCED SERIES

## JBC®



### AD 2200

Soldering stations for specialized use with SMD components assemblies.



### AM 6500

Station for rework and repair of through-hole and SMT boards.



### JT 7000

Hot-air flow repair station for desoldering all types of SMD's particularly QFPs and PLCCs of any size.



### TE 5000

Hot-air flow repair station designed for soldering and desoldering small and medium-sized SMDs.



## WARRANTY

**ENGLISH**

The JBC 2 years warranty, guarantees this equipment against all manufacturing defects, covering the replacement of defective parts and all necessary labour.

Warranty does not cover product wear due to use or mis-use.

In order for the warranty to be valid, equipment must be returned, postage paid, to the dealer where it was purchased enclosing this, fully filled in, sheet.

|                  |
|------------------|
| SERIAL N°        |
| STAMP OF DEALER  |
| DATE OF PURCHASE |



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