Instruction Manual

Desoldering Station AOYUE 474A++

90474A++

Illustration similar, may vary depending on model

Please read and follow the operating instructions and safety information prior to initial operation.

Technical changes reserved!
Illustrations, functional steps, and technical data may deviate insignificantly due to continuous further developments.

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Introduction

Thank you for choosing to purchase this quality product. To minimise the risk of injury, we ask you to always take some basic safety precautions when using this product. Please read this operating manual carefully and make sure that you understand it.
Keep these operation instructions in a safe place.

ATTENTION:

- Always use an earthed power supply with the correct voltage. The corresponding voltage value is given on the nameplate. If there are doubts concerning the earthing of the power supply, contact a qualified person for checking it. Never use a damaged power cable.
- Do not open this device in a damp or wet area or with yourself being wet and protect it from direct sunlight. Install the device in a safe place so that nobody can walk on the cables, fall over them, and/or damage them. Make for sufficient cooling by ambient air and avoid any heat build-up.
- Before cleaning the device, pull out the plug and only use a damp cloth for cleaning. Avoid using cleaning agents and make sur that liquids may not enter the device.
- The inner parts of the device do not contain components requiring maintenance by the user. Leave all maintenance, control, and repair works to a qualified person. With an unqualified person intervening, the 2-years warranty will expire.
- **Read all safety precautions and instructions.** Failure to obey the safety precautions and instructions might cause an electric shock, a fire, and/or severe injuries. Keep all safety precautions and instructions for future use.

Safety instructions

General safety instructions

- The use of this device is only allowed with a fault current protection switch with a triggering nominal current up to 30 mA (according to VDE 0100 Article 702 and 738).
- The device is not intended for use by persons (including children) with impaired or limited physical, sensory, and mental abilities or lack of experience and/or real knowledge, unless they are supervised by a person responsible for their safety or follow the instructions made by this person on how to correctly use the device.
- Children should be supervised to ensure that they do not play with the device.
- During operation, the desoldering gun, hot air piston, and nozzle have temperatures between 200 °C and 480 °C. Therefore, personal injuries or material damage inside the work area might happen in case the desoldering station is not handled with care.
- Obey the following principles when working with this device:
  - After opening the parcel, check if every individual part of the device is in good condition or if you can detect visible damage caused by transport. If there are damages visible, do **not** operate the device, but **immediately** contact your vendor.
  - Switch off the device and pull out the plug before moving it.
  - Avoid exposing parts of the device to too high a mechanical stress (shocks, pushes, etc.).
- Perform a visual inspection of the device before every use. Do not use the device if the safety appliances are damaged or worn out. Never override safety regulations.
- Only use the device accordingly to the intended purpose stated in this manual.
- You are responsible for the safety of the working zone.
- If the cable or the plug is damaged due to external influences, the cable must not be repaired, but must be replaced with a new one.
- The voltage of 230 V AC indicated on the nameplate of the device must match the existent mains voltage.
- Never lift, carry, or fix the device by using the power cable.
- Make sure that the electrical plug connection is protected from flood and moisture.
- Before working on the device (maintaining, repairing, cleaning it), pull out the plug.

- Avoid exposing the device to direct jets of water.
- The user is responsible for complying with local safety and mounting regulations. If necessary, ask a qualified electrician.
- In case of device failure, repairs can only be carried out by an electrician.

Special safety instructions

For your own safety, obey the following instructions, for otherwise material damage and/or personal injuries might result:

- During operation, parts of this station can reach temperatures up to 480 °C; therefore:
  - do not use the station near flammable gases, paper, or other flammable substances;
  - avoid touching hot parts of the station, for otherwise you might seriously injure yourself;
  - do not touch metallic pieces that are near the desoldering tip.
- Overheating protection
  - The device is equipped with an automatic overheating protection that switches off the device in case one of the temperatures is too high.
  - The device re-switches itself on as soon as its condition has normalised.
- Handle the device with care.
  - Never drop it, never expose it to shock/pushes!
  - The device contains fragile components that might be destroyed when not handled with care.
- Disconnect the device from the mains before not using it for a longer period, if the power has gone off, or before opening it.
- During soldering, vapours form that might be harmful. Only perform soldering inside a well-ventilated work zone to avoid harmful accumulations.
- Do not modify the device in any way.

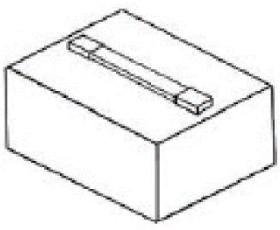
Electrical connection

The electrical connection is made to an earthed socket 230 V ~ 50 Hz. Min. fuse 10 A.

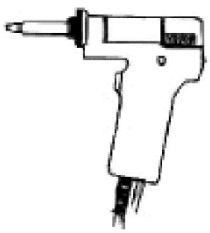
Initial operation

- Place the device on a level and solid surface the temperature of which does not exceed 40 °C. Place the device horizontally to allow the station to operate correctly.
- Connect to mains.

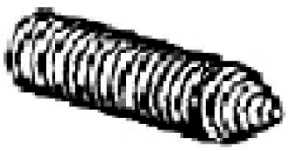
Scope of delivery



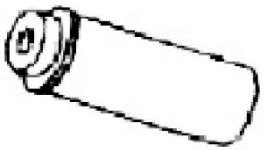
474-main station



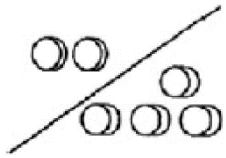
Desoldering gun



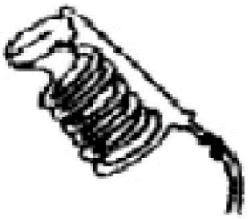
Filter/spring



Filter/spring support



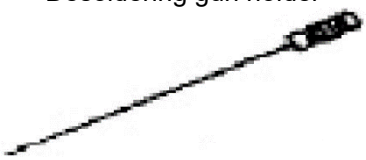
Ceramic filter paper



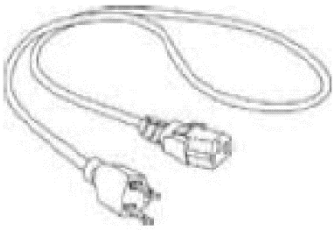
Desoldering gun holder

Cover

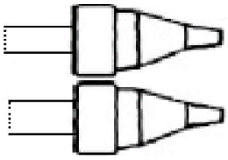
Cleaning drill



Cleaning needle



Mains plug and power cable



Desoldering tips

Technical specifications

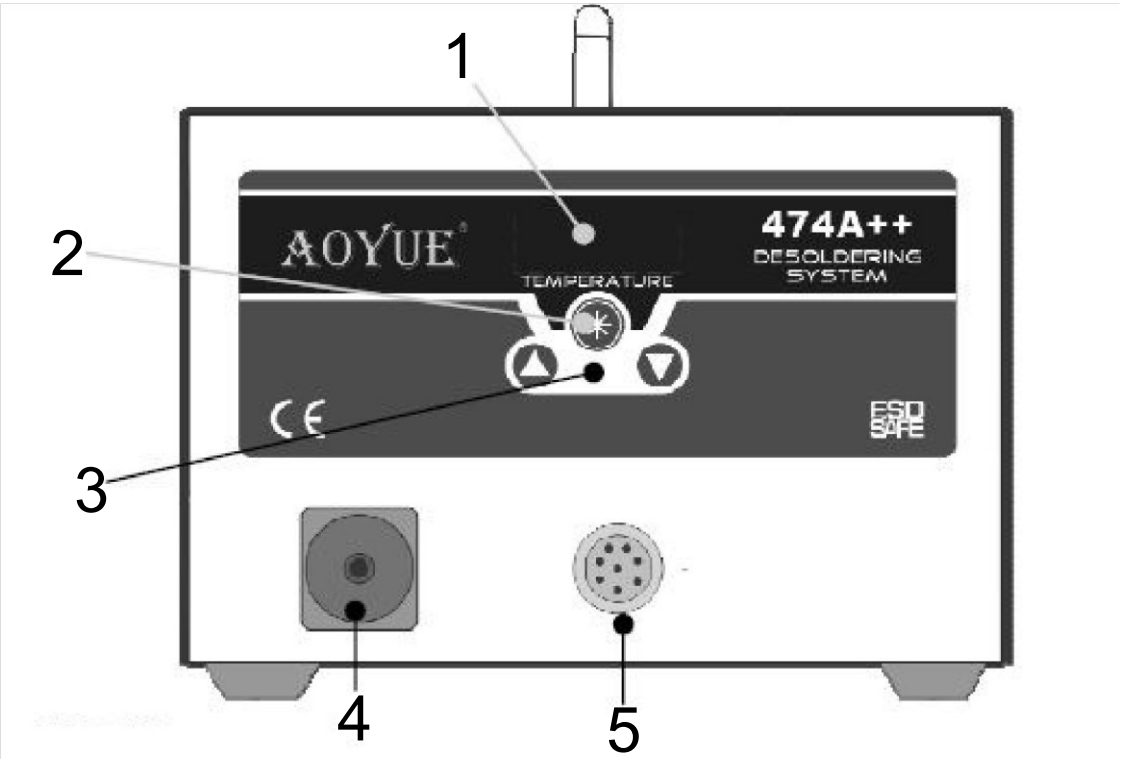
Main device	
Voltage (V)	230 ±10 %
Frequency (Hz)	50 ±2
Size (mm)	250 × 188 × 126
Length cable to handle (m)	approx. 0.9
Weight kg)	4.8
Desoldering smoke extraction (mmHg)	600 (24 inHg)
Electrical potential of earth (mV)	< 2
Resistance of earth (Ω)	< 2
Desoldering gun	
Heating element	Ceramic
Power consumption (W)	50
Temperature range (°C)	200 –480 (392 °F–896 °F)
Pumping power ($l/_{min}$)	15

Features and functions

- Large temperature adjustment range
- Extremely short heating-up times
- Antistatic design (ESD safe)
- Useful handle
- Desoldering gun holder

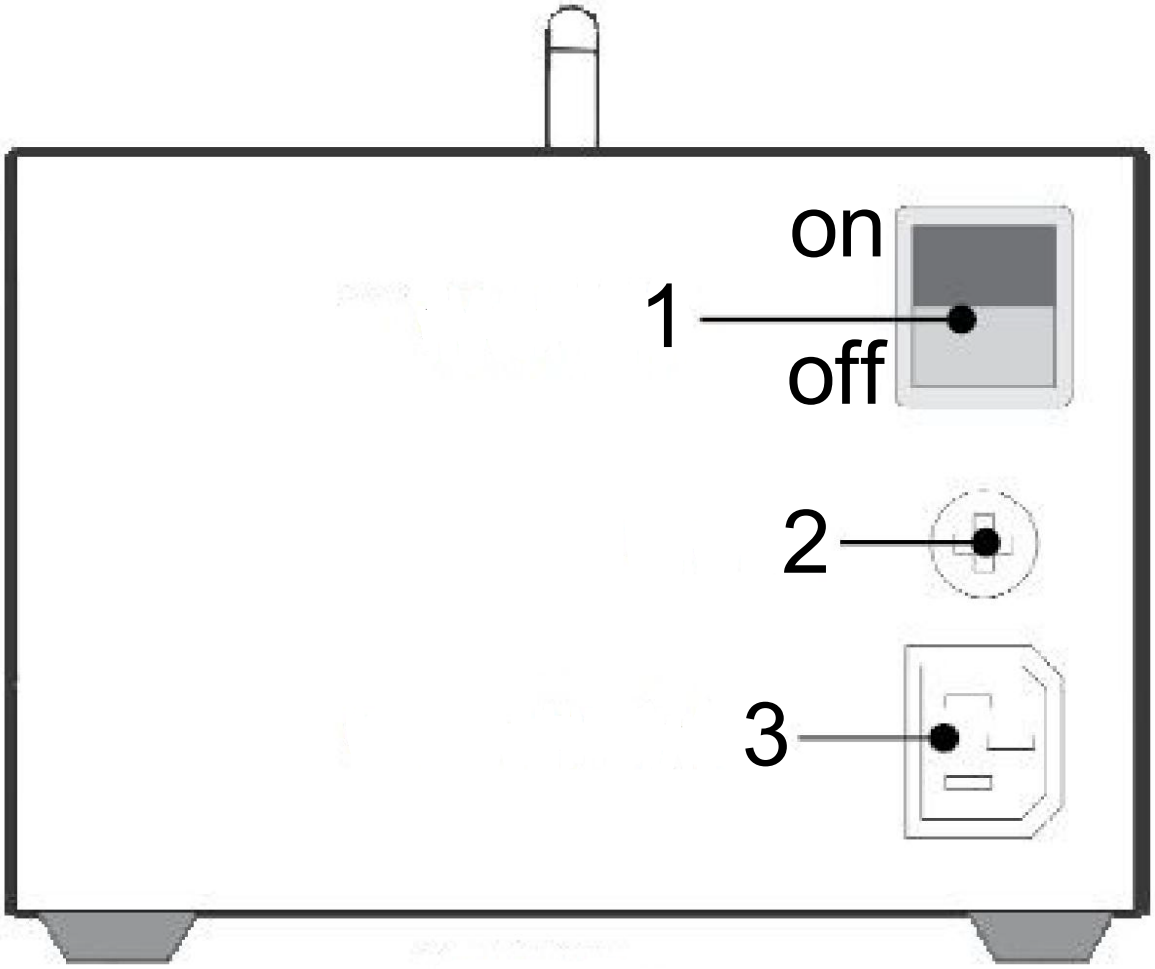
Operational components

Main device



Front part

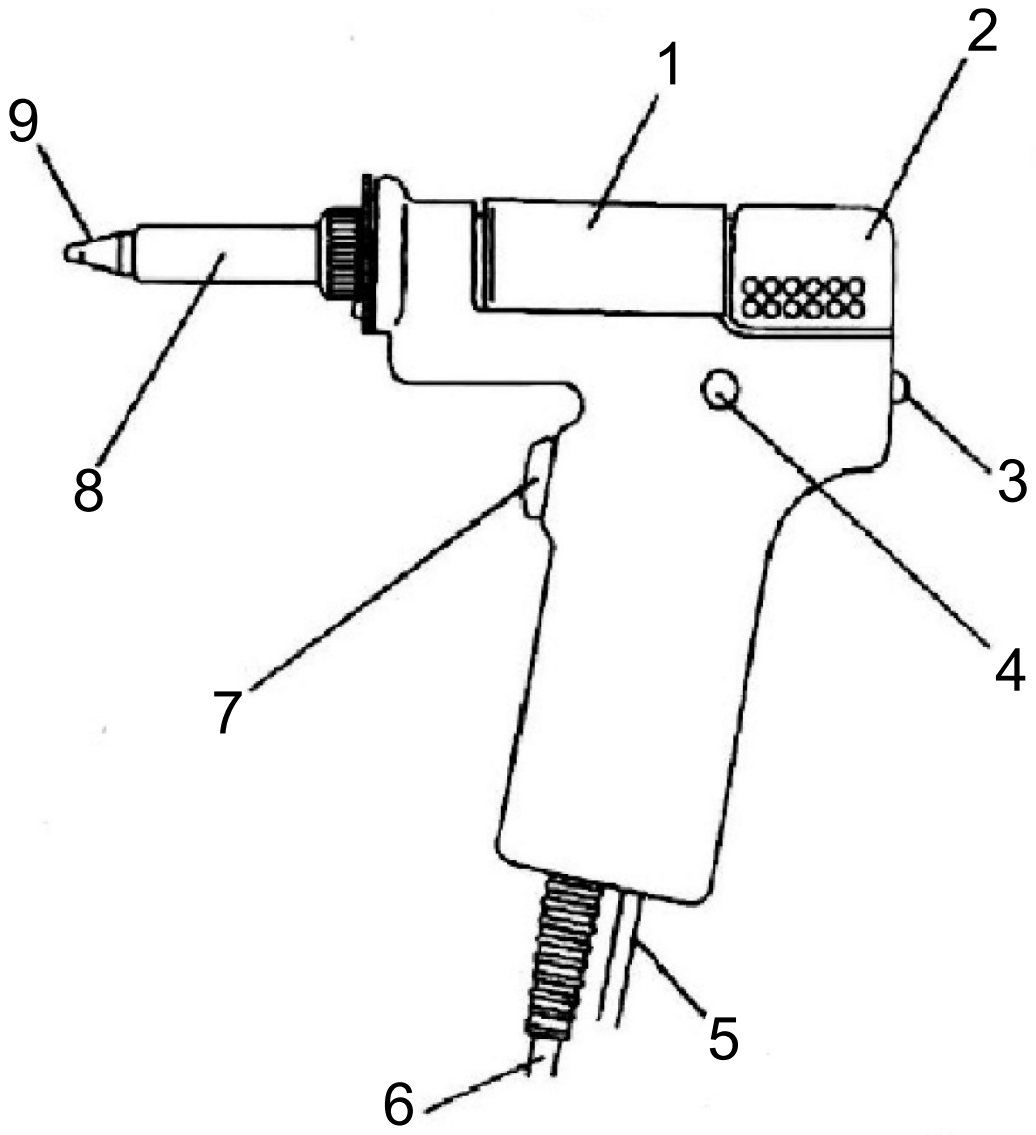
№	Name	№	Name
1	Display	4	Vacuum connection
2	Function key for desoldering gun	5	Connection for desoldering gun
3	Temperature adjustment		



Rear part

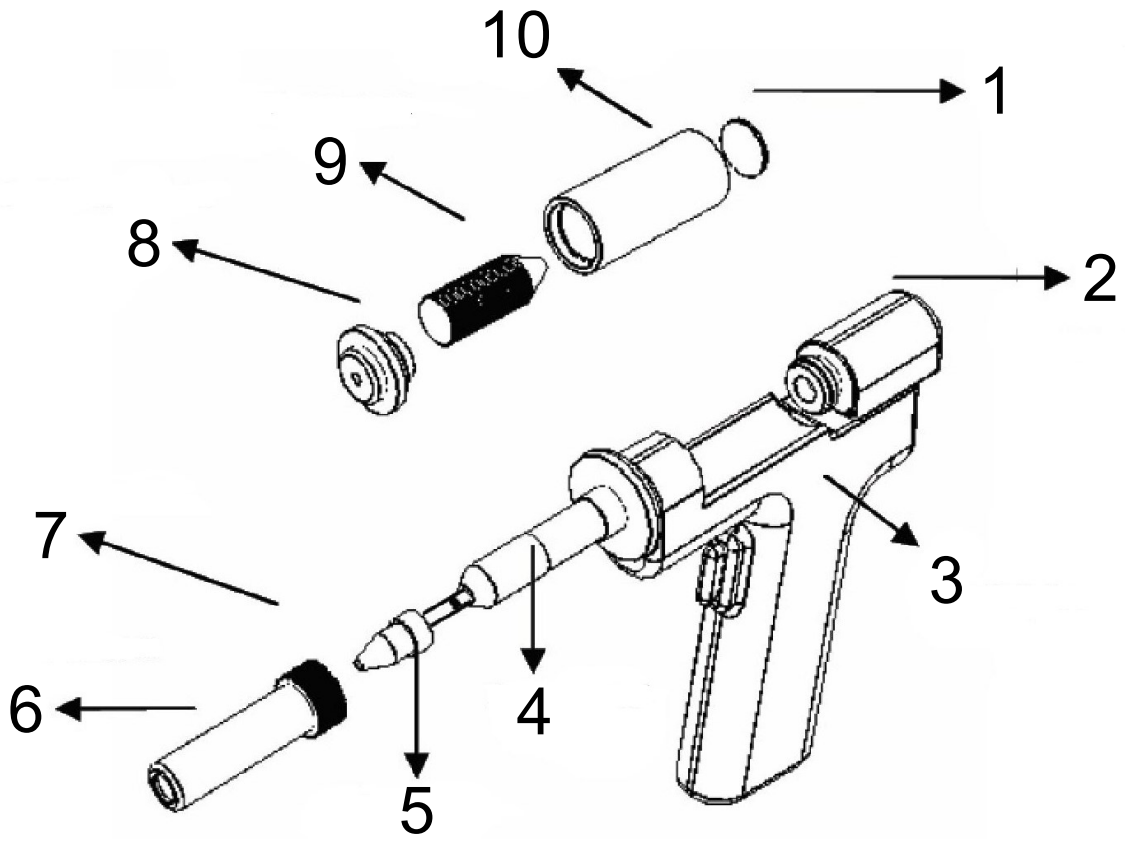
№	Name	№	Name
1	Main switch	3	Electrical connection
2	Fuse		

Desoldering gun



№	Explanation	№	Explanation
1	Ceramic paper filter collecting soldering material and flux	6	Connection cable, to connect to the station
2	Filter holder, keeps the filter in place	7	Trigger, begins suction on press; do not press if nozzle has not heated up completely
3	Ejection knob, ejects filter on press	8	Heating element, clean regularly
4	Pressure display, displays need of the nozzle or heating element to be cleaned or the filter to be replaced	9	Hot nozzle to melt solder, intake for molten solder
5	Vacuum cable, to connect to the station		

Main components



№	Name	№	Name
1	Filter pad	6	Heating element casing
2	Filter holder	7	Safety cap
3	Main part of desoldering gun	8	Filter tube cap
4	Heating element	9	Filter spring
5	Nozzle	10	Filter tube

Preparations

Main device

Remove the red safety screw on the underside of the station before operating the station.

Desoldering station

1. Plug the plug of the desoldering gun into the appropriate socket of the desoldering station.
2. Connect the vacuum hose to the vacuum socket.
3. Place the desoldering gun in its holder.

Plug the plug into the station, making sure that the marks match.

Fasten the plug by turning it clockwise.

Basics

- Humidify the filter pads before use to allow them to be very efficient. It is recommended to regularly re-humidify the pads.
- Clean the filter spring and exchange the filters when they are dirty.
- The solder channel inside the gun can be cleaned with the help of the cleaning needle if necessary.

Initial operation

1. Plug the power cable into the station and in an appropriate wall socket.
2. Press the main switch on the rear part of the station to switch it on.
3. The display shows “OFF.” The display changes only with a function being activated by the user.
4. Plug the plug of the desoldering gun into the appropriate socket of the desoldering station.
5. Connect the vacuum hose to the vacuum socket.
6. To activate the desoldering function, press and hold the function key 2. The temperature display shortly displays the pre-set temperature, then changes to show the actual temperature.
7. To change the temperature, use the function key 3.
8. Wait until the desoldering gun has heated up completely. The desoldering tip reaches its service temperature after approximately 5–6 min. The optimal service temperature is reached after about 5–9 min. If after switching-on for the first use solder collects inside the gun, clean the gun and wait another moment until the gun has reached an ideal service temperature.
9. If necessary, check the temperature with an external thermal sensor and adapt it.
10. The solder must have melted completely before you can use the desoldering gun. Solder partially melted obstructs the desoldering gun.
11. When activating the desoldering gun, wait another 1 or 2 s to make sure that the entire solder reaches the filter instead of obstructing the gun.
12. Regular cleaning of the filter and gun avoids a loss of suction power.
13. To turn off the desoldering function, press the function key 2 for 3–5 s. Note that the temperature shortly decreases when the desoldering gun is pressed. This is caused by the air flow sucking in the solder. The system automatically heats up to the pre-set temperature.

Automatic sleep function

This function can be used to automatically switch off the desoldering station after a pre-set time. The station being in sleep mode, the display shows three dashes: “---.” Simply activate a function key to wake the station up. This function is turned off at the factory. If you wish to use it, follow the next steps:

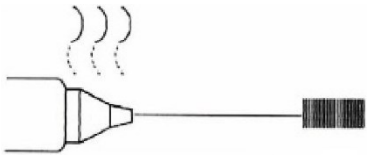
1. With the station being switched off, press the function keys 2 and 3 at the same time for 5 s.
2. The display now shows “t00.” The function can be adjusted.
3. Use the function key 3 to set the desired time. You can set a time between 1 and 60 min. The time value “0” means that the function has been turned off.
4. Confirm the changes by pressing and holding down the function key 2.

Maintaining the desoldering gun

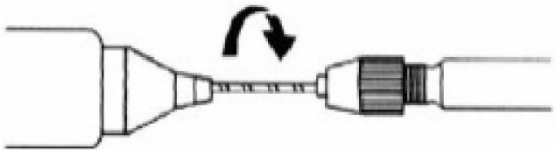
1. Checking and cleaning the desoldering gun in case of an obstruction

   a) Plug in the power plug of the station, turn on the desoldering function of the station, and wait for the nozzle to heat up.
   b) Wait until the nozzle has heated up completely before beginning cleaning.
   c) Clean the nozzle opening with the help of the cleaning needle.
   d) In case the cleaning needle does not penetrate the opening, instead use the cleaning drill.

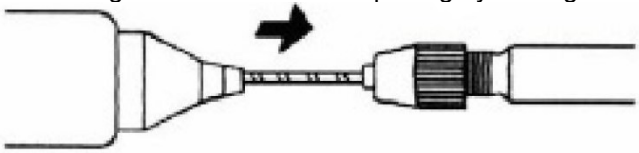
ATTENTION: During cleaning, the desoldering gun is **hot.** Apply appropriate material to avoid injuries! Only perform maintenance jobs with the device being **switched off** and the power plug being **unplugged!**



The cleaning needle is completely pushed in to the nozzle opening.



Push the cleaning drill into the nozzle opening by turning it clockwise.



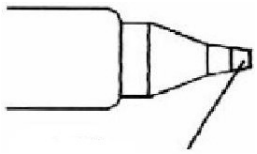
Pull out the cleaning drill straight without turning it.

Attention!

If the cleaning drill gets stuck into the nozzle, there is a risk of it breaking or being damaged otherwise.

2. Check the nozzle for signs of wear and tear.

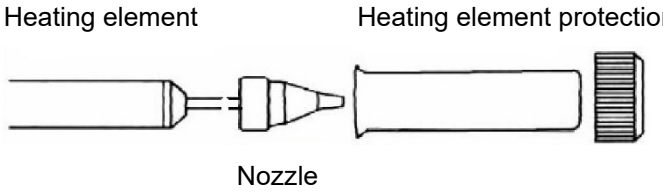
   a) Check the condition of the nozzle tip coating.
   b) The inner part of the nozzle and its surface are coated with a special alloy. If this alloy is damaged by high temperatures, the nozzle is not able any longer to heat up correctly and regularly.



Solder

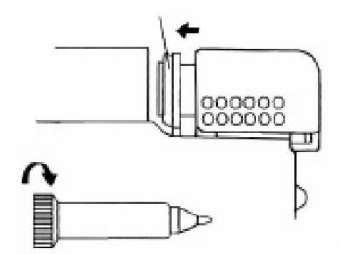
3. Replacing the heating element

a) Release the holder and remove the cover and tip.
b) Remove the old heating element, place a new one.
c) Replace the nozzle and cover on their correct places. Re-tighten the locking screw to prevent any air leak. In case the locking screw is not correctly tightened, the desoldering cannot heat up correctly any longer.



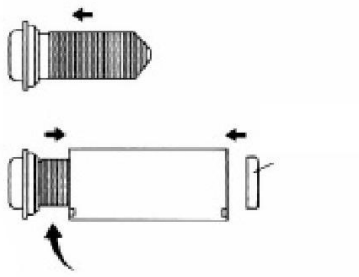
4. Checking the filters

a) The filters must be checked regularly.
b) If the filter cover has cooled down to the point that one may touch it, press the ejection knob on the rear part of the gun and remove the cover.
c) Remove the front holder and filter spring to avoid damages and obstructions.
d) Remove the filter.
e) Exchange the filter if you remark one of the following changes:
   - The filter is rigid and brittle;
   - solder has filled up two thirds of the filter spring;
   - the filter spring is rigid and obstructed with flux and solder.



5. Re-installing the filter

a) Attach the filter spring to the front holder.
b) Attach the front holder to the filter cover, making sure that it is correctly oriented.



Use – desoldering

1. Switch the desoldering switch to “on.”
2. Adjust the temperature.
   a) Always adjust a temperature as low as possible.
   b) To be able to precisely set the temperature, measure the nozzle temperature with a thermometer and adjust the temperature regulation.
   c) The temperature may be between 380 °C and 480 °C.
3. Wipe off old solder on the nozzle in the central hole of the sponge. If the nozzle tip is stuck with old solder, the tip cannot correctly heat up any longer. Coat the nozzle with a thin layer of new solder to ensure optimal heating power.
4. Allow the tip to touch the soldered spot to melt the solder.
   a) Never allow the hot nozzle to touch the board itself.
   b) Ensure that the solder has melted properly. Partially molten solder obstructs the desoldering gun.
   c) Never try to move the solder by force. It moves very easily when molten. If it does not move easily, this is a sign for the solder not having melted correctly.
5. After ensuring that all the solder has melted, suck it in by pressing the gun trigger.
   a) Hold the trigger for another 1–2 s to be sure that no solder rests stay in the channel and that all solder gets into the filter.
   b) Do not leave any solder rests in the hole on the board.
   c) After removing all solder, wait for the board to cool down to avoid any accidental desoldering.
6. Clean the filter and regularly humidify the sponge during and after use to ensure constant efficiency.
7. After work, switch off the desoldering unit.
8. Before storing the device, wait for the desoldering gun to cool down.

Note: With the suction power obviously decreasing, clean the nozzle and heating element with the help of the cleaning needle.

Regulations for waste disposal

The Waste Electrical and Electronic Equipment Directive (WEEE Directive, 2012/19/EU) of the EU was implemented in the German law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE directive are labelled with the symbol of a crossed-out wheeled rubbish bin. This symbol indicates that this electric device must not be disposed of with the domestic waste.

WilTec Technik GmbH is registered with the German registration authority EAR (Stiftung Elektro-Altgeräte Register) under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic devices (intended for use in the countries of the European Union and other European countries with a separate waste collection system for these devices).
The symbol on the packaging or the product itself indicates that this product must not be treated as normal domestic waste but must be disposed of at a recycling collection station for electrical and electronic waste.
By disposing of this product correctly, you contribute to the protection of the environment and the health of your fellow people. Inappropriate disposal threatens the environment and health.

Material recycling helps to reduce the consumption of raw materials.

Additional information about the recycling of this product can be provided by your local commune, the municipal waste disposal facilities, or the store where you purchased the product.

Address:
WilTec Wildanger Technik GmbH
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52249 Eschweiler Germany

Important Note: