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WR 3M

Operating Instructions

WR 3M
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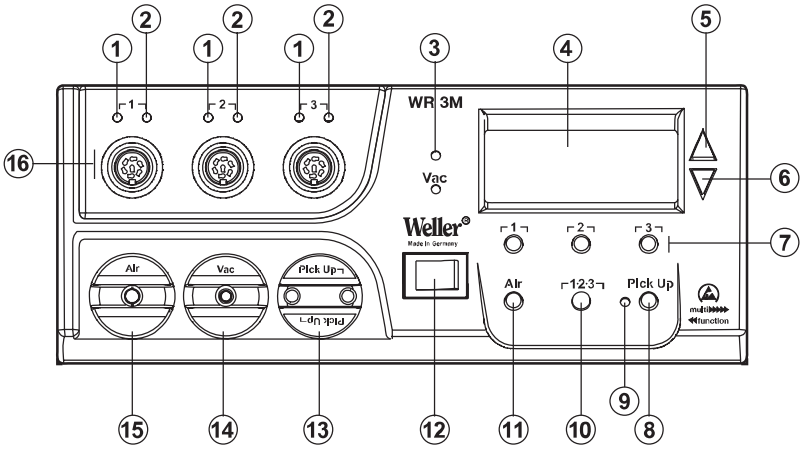

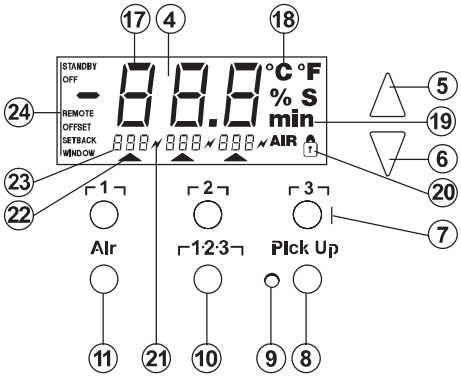

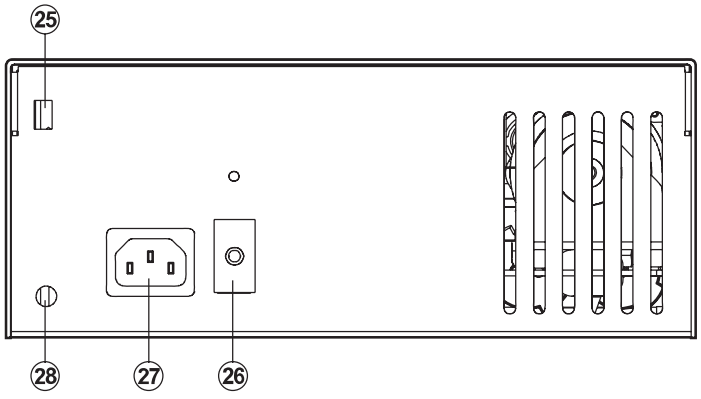

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Contents

1 About these instructions

Thank you for the confidence you have shown in buying the Weller WR 3M. Production was based on stringent quality requirements which guarantee the perfect operation of the device. These instructions contain important information which will help you to start up, operate and service the WR 3M repair station safely and correctly as well as to eliminate simple faults/malfunctions yourselves.

▷ Read these instructions and the accompanying safety information carefully before starting up the device and starting work with the WR 3M repair station.

▷ Ensure that these instructions are accessible to all users.

1.1 Directives taken into consideration

The Weller microprocessor-controlled repair station WR 3M complies with the specifications of the EC Declaration of Conformity based on Directives 2004/108/EC and 2006/95/EC.

1.2 Documents also applicable

– Operating Instructions for the repair station WR 3M
– Safety information booklet accompanying these instructions

2 For your safety

The WR 3M repair station has been manufactured in accordance with state-of-the-art technology and recognised safety rules and regulations. There is nevertheless the risk of personal injury and damage to property if you fail to observe the safety information set out in the accompanying booklet and the warnings given in these instructions. If the repair station WR 3M is passed on to third parties, always hand over the Operating Instructions as well.

2.1 Specified use

Always use the repair station WR 3M exclusively for the purpose specified in the Operating Instructions, namely soldering under the conditions specified here. Intended use of the WR 3M repair station also includes the requirement that

– observing these operating instructions,
– observing all other accompanying documentation,
– observance of the locally applicable accident prevention regulations.

The manufacturer shall not be liable for damage resulting from unauthorised alterations to the machine.

3 Scope of delivery

– WR 3M repair station
– Power cable
– Air-hose adapter for hot-air pencil 1 (HAP 1)
– Operating Instructions for the WR 3M
– Safety information booklet
– CD with USB software (“Firmware Updater” and “Monitor Software”)
– USB cable
– Equipotential-bonding connector
– Packing with coloured tool markings

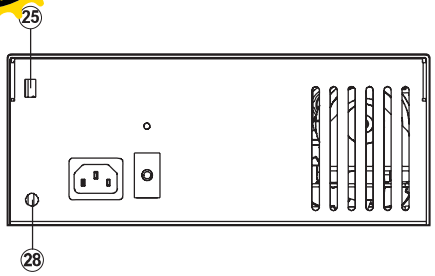
4 Device description

The Weller WR 3M is a versatile repair station for making professional repairs to latest-technology electronic subassemblies in industrial production engineering and in the repair and laboratory fields. The WR 3M has 3 independent channels for simultaneously operating 3 soldering tools.
Precise temperature control performance at the soldering tip is guaranteed by the digital control electrotechnology together with superior-quality sensor and heat-transfer technology. High-speed measured-value acquisition provides for maximum temperature precision and optimum dynamic temperature performance in load situations. The temperature can be set to any value within the range from 50 °C to 550 °C (150 °F – 999 °F) depending on which tool is connected. Setpoint and actual values are displayed in digital form. Three temperature buttons are used to select fixed temperatures directly. The optical control indicator flashes ("⟋" symbol in the display and additional green LED) to indicate when the preselected temperature has been reached.
The Weller WR 3M repair station offers the following additional functions:

- Automatic tool detection and activation of corresponding control parameters
- All Weller tools incl. HAP 200 can be connected (WX tools excluded)
- Digital temperature control
- Option of inputting offset values
- Programmable temperature reduction (setback)
- Standby and lock functions
- Installed heavy-duty pump
- Antistatic device design in accordance with ESD safety
- Different equipotential-bonding possibilities on the device (standard configuration)
- Customer-specific calibration function
- USB port for control, evaluation and documentation via PC
- Additional vacuum channel for component handling

4.1 Technical data WR 3M

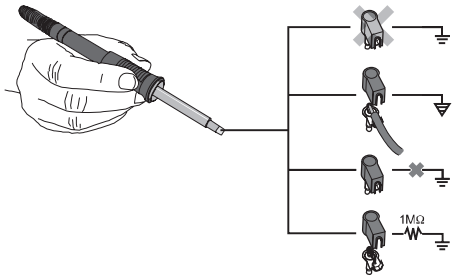
Dimensions	L x W x H (mm): 273 x 235 x 102 L x W x H (inches): 10.75 x 9.25 x 4.02
Weight	approx. 6.7 kg
Mains supply voltage	230 V, 50 Hz (120 V, 60 Hz)
Power consumption	400 W
Safety class	I and III, housing antistatic
Fuse	Overcurrent release 230 V 2.0 A 120 V 4.0 A
Temperature control of channels	Soldering and desoldering iron stepless 50 °C – 550 °C (150 °F – 999 °F) Controllable temperature range depends on the tool. WP 80 / WP 120 50 °C-450 °C (150 °F-850 °F) WSP 150 50 °C-550 °C (150 °F-950 °F) WP 200 50 °C-550 °C (150 °F-950 °F) WMRT / WMRP 100 °C-450 °C (200 °F-850 °F) DSX 80 / DXV 80 50 °C-450 °C (150 °F-850 °F) DSX 120 50 °C-450 °C (150 °F-850 °F) HAP 200 / HAP 1 50 °C-550 °C (150 °F-999 °F)
Temperature accuracy	± 9 °C (± 17 °F)
Temperature stability	± 2 °C (± 4 °F)
Soldering tip leakage resistance (tip to ground)	Corresponds to IPC-J-001
Soldering tip leakage current (tip to ground)	Corresponds to IPC-J-001
Pump (periodic duty (30/30) s)	Max. vacuum 0.7 bar Max. delivery rate 18 l/min Hot air max. 15 l/min
Additional vacuum pump	Max. vacuum 0.5 bar Max. conveying capacity 1.7 l/min
Potential balance	Via 3.5 mm pawl socket on back of device



USB port

The control unit is equipped with a mini USB port (25). For the purpose of using the USB port, Weller software is available on a CD with which you

– can carry out a software update ("Firmware Updater“) on your control unit and
– can remote-control the control unit and graphically display, store and print temperature curves ("Monitor Software“).



Equipotential bonding

4 variants are possible through connecting the 3.5 mm pawl socket (28) differently:

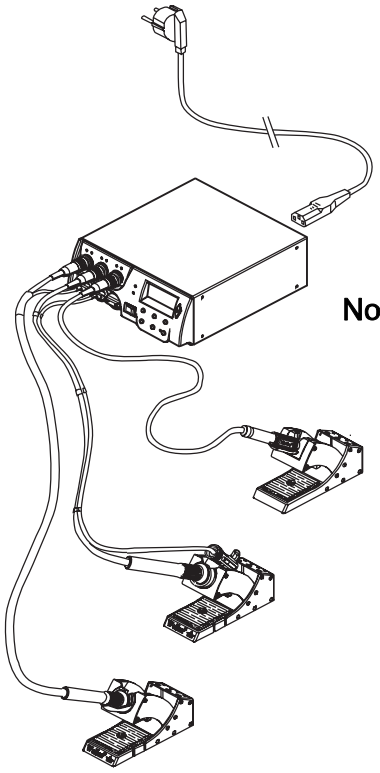
– Hard earthed/grounded: without connector (delivery status)
– Equipotential bonding: with connector, bonding lineat central contact
– Floating: with connector
– Soft earthed/grounded: with connector and soldered resistor. Earthing/grounding via the selected resistor

5 Starting up the device

WARNING! **Risk of injury due to incorrectly connected vacuum hose.**

If the vacuum hose is incorrectly connected, hot air and liquid solder can escape when the unsoldering bit is actuated and cause injuries.

▷ Never connect the vacuum hose to the "Air“ nipple!



1. Carefully unpack the device.
2. Connect the soldering tools as follows:
   - Connect the hot-air pencil (HAP) with air hose to "Air“ nipple (15) and insert with the attachment plug in connection socket ⌜1⌝, ⌜2⌝ or ⌜3⌝ (16) of the repair station and lock by turning clockwise slightly. The HAP 1 hot-air pencil can only be connected with the air-hose adapter.

Note If you are using an HAP 200, this can only be connected to channel 1! The maximum output power is limited to 360 watts.

   - Connect the unsoldering tool with vacuum hose to "Vac“ nipple (14) and insert with the attachment plug in connection socket ⌜1⌝, ⌜2⌝ or ⌜3⌝ (16) of the repair station and lock by turning clockwise slightly.
   - Insert the soldering tool with attachment plug in connection socket ⌜1⌝, ⌜2⌝ or ⌜3⌝ (16) of the repair station and lock by turning clockwise slightly.
   - Two pick-up tools (WRK, WVP) can be connected with the vacuum hose to the two pick-up nipples (13), where only the right nipple is active. You can switch to the other nipple by rotating 180°.
3. Place the soldering tools in the safety holder.

4. Check whether the mains supply voltage matches that indicated on the rating plate and whether mains power switch (12) is off.
5. Connect the control unit to the mains supply (27).
6. Switch on the device at mains power switch (12).

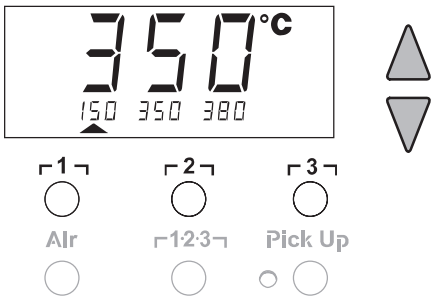
After the device has been switched on, the microprocessor carries out a self-test in which all the segments are briefly in operation. Then the electronics switches automatically to the basic temperature setting of 350 °C for all channels and 50 % for the "Air" setting. Green LED (2) lights up when activated channels are being used:

– LED lit green constantly indicates that the connected tool is being heated up.
– LED flashing green indicates that the preselected tool temperature has been reached.

Active channels are indicated in the display with a triangle (22) and a lightning symbol (21).

6 Operating the device

6.1 Selecting a channel, switching on or off



1. Press one of the buttons ┌1┐, ┌2┐ or ┌3┐ to select one of the three channels.
   The display shows the setpoint temperature of the selected channel and - in smaller script - the permanently programmed temperatures.
   - Or -
   Tap on the ┌1·2·3┐ button until the desired channel is displayed. The current tool temperature then appears in the display. The status with the corresponding setpoint temperature is also displayed in the lower area.
   The selected channel is indicated by a triangle (21) in the display and by a red-lit LED (1) on the device.
2. Press the **UP** and **DOWN** buttons simultaneously until three dashes "**- - -**“ appear in the display.
3. Release the buttons.
   If the channel is now deactivated, "OFF“ appears in the display.
   If the channel is activated, the current actual temperature appears in the display.

Stored data are not lost when a channel is switched off.

Note The display switches automatically to the channel to which a tool has been newly connected, the finger switch has been pressed or the tool has been removed from the switching holder.
This function can be deactivated in the special functions menu 2 (see "Deactivate / activate automatic channel change" on page 18).

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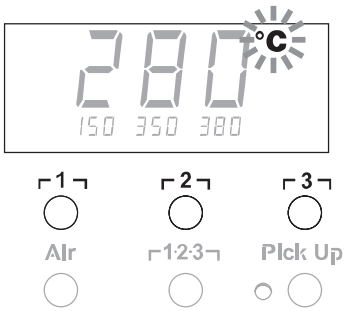
6.2 Setting the temperature

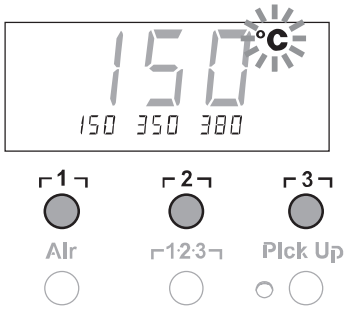
Setting the temperature individually



1. Select the desired channel by pressing one of the buttons ┌1┐, ┌2┐ or ┌3┐.
   The display shows the actual temperature values of the selected channel.
2. Press the **UP** or **DOWN** button.
   The display switches to the set setpoint value. The temperature symbol (18) flashes.
3. Press the **UP** or **DOWN** button to set the desired setpoint temperature:
   - Brief touching alters the setpoint value by one degree.
   - Permanent pressing alters the setpoint value in rapid pass mode.

   The actual value of the selected channel appears in the display again approx. 2 seconds after the setting buttons are released.

Setting temperature with temperature buttons ┌1┐, ┌2┐ and ┌3┐

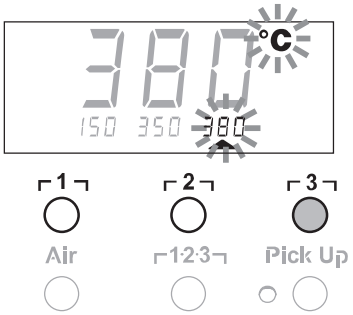


The setpoint temperature value can be set for each channel separately by selecting three preset temperature values (fixed temperatures).

Factory settings:

┌1┐ = 150 °C (300 °F), ┌2┐ = 350 °C (662 °F), ┌3┐ = 380 °C (716 °F)

1. Select a channel.
   3 fixed temperatures are shown in the display for approx. 2 s. The temperature value can now be input as long as the temperature symbol is flashing.



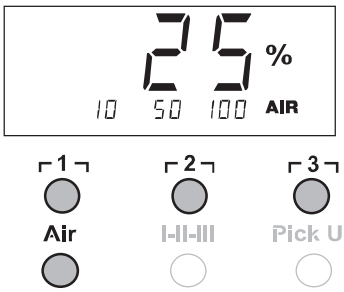
2. Set the setpoint temperature value with the **UP** or **DOWN** button.
3. Keep the desired temperature button ┌1┐, ┌2┐ or ┌3┐ pressed for 3 seconds.
   The temperature display for the corresponding temperature value flashes during this period. The set value is stored after 3 seconds.
4. Release the temperature button again.

Note Assigning a low "Setback" temperature to a temperature button offers the possibility of manual temperature reduction when the soldering bit is not in use.

Selecting temperature with temperature buttons ┌1┐, ┌2┐ and ┌3┐

1. Select a channel.
2. Three fixed temperatures shown in the display for approx. 2 s. As long as the temperature symbol is flashing, the desired temperature can be selected by pressing ┌1┐, ┌2┐ or ┌3┐.

6.3 Setting air flow



The air flow can, starting from a maximum flow value of 15 l/s (HAP 200) or 10 l/s (HAP 1), be set in a range of 10 % to 100 %.

1. Press the AIR button.

   The current air flow in per cent is shown in the display for approx. 2 s.
2. Set the desired flow by pressing the **UP** or **DOWN** button.

   The set value is adopted. The actual temperature of the selected channel is displayed again after 3 s.

Note Just as with the 3 fixed temperatures, 3 fixed air volumes can be set and selected.
Factory settings:

1 = 10 %, **2** = 50 %, **3** = 100 %

6.4 Switching the vacuum pick-up pump on/off

▷ Press the pick-up button.

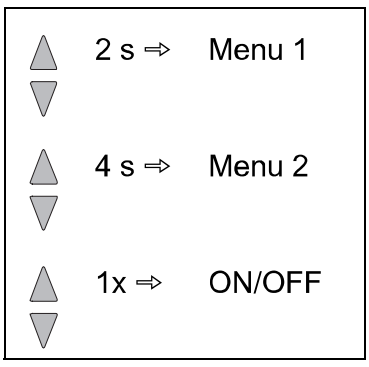
The pump is switched on or off, depending on the initial state. In switched-on mode, the LED (8) next to the pick-up button lights up green.

Note The vacuum pump is not designed for continuous operation. To protect itself, the pump switches off automatically after 10 minutes of continuous operation.

6.5 Soldering and unsoldering

▷ Carry out the soldering work in accordance with the operating instructions of your connected soldering tool.

7 Special functions



The special functions are divided into 2 menu levels:

– Menu 1 with setting options for
standby temperature, temperature deactivation (setback), automatic switch-off time (Auto-OFF), temperature offset, window function, temperature units, switch-on time (On Time) for hot-air pencil, vacuum OFF delay (VAC OFF), vacuum ON delay (VAC ON) and lock function.

– Menu 2 with setting options for
pressure gauge level, ID code, calibration function (FCC), pick-up capacity, autom. channel change ON / OFF, button lock ON/OFF and control characteristic HI / LO.

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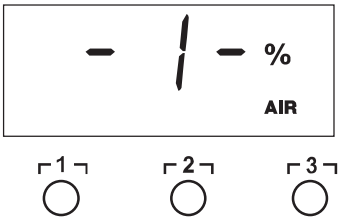
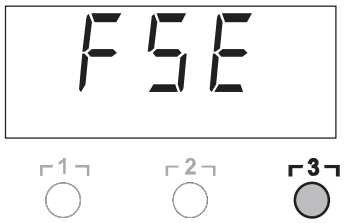
7.1 Selecting Menu 1 special functions

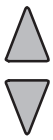
Special functions	Navigation	
STANDBY		
SETBACK		
AUTO OFF		
OFFSET	↓	⌜1⌝
WINDOW		
°C/°F	↑	⌜2⌝
ON TIME		
VAC OFF	EXIT	⌜3⌝
VAC ON		
🔒		



1. Select the desired channel ⌜1⌝, ⌜2⌝ or ⌜3⌝ for entering the special functions.
2. Press and hold down the **UP** and **DOWN** buttons simultaneously.
   "– 1 –" appears in the display after 2 s.
3. Release the buttons.
   Selection of the special functions of Menu 1 is activated.
   The settings can now be made.
   - Select menu items with buttons ⌜1⌝, ⌜2⌝.
   - Exit the menu again with button ⌜3⌝ (EXIT).

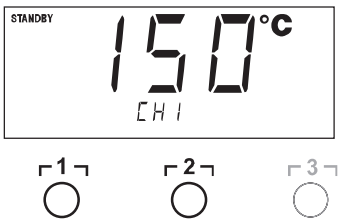
Resetting the special functions to the factory settings





1. Press and hold down button ⌜3⌝.
2. Then press the **UP** and **DOWN** buttons simultaneously.
   "FSE" appears in the display.
   The repair station is now reset to the factory settings.

Setting the standby temperature



The standby temperature is automatically set after a temperature deactivation. The actual temperature flashes in the display.
"STANDBY" appears in the display.

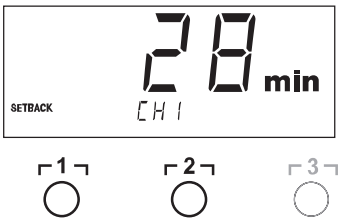
1. Select the menu item STANDBY in Menu 1.
2. Set the setpoint value for the standby temperature with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ⌜1⌝ (back) or ⌜2⌝ (forward).

Setting temperature deactivation (SETBACK)

When the soldering tool is not in use, the temperature is reduced to the standby temperature after the set setback time has elapsed. The setback state is indicated by a flashing actual value and "STANDBY“ appears in the display. Pressing the **UP** or **DOWN** button terminates this setback state. Depending on the tool, the finger switch or the switching holder deactivates the setback state.

The following setback settings are possible:

– "0 min“: setback OFF (factory setting)
– "ON“: setback ON (the system is controlled down to standby temperature with the switching holder after the soldering bit is stowed)
– "1-99 min“: setback ON (individually settable setback time)

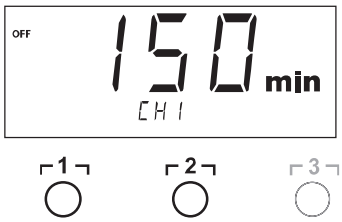


1. Select the menu item SETBACK in Menu 1.
2. Set the setback value with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ⌜1⌝ (back) or ⌜2⌝ (forward).

Setting the automatic switch-off time (AUTO-OFF)

When the soldering tool is not in use, heating of the soldering tool is switched off after the AUTO-OFF time has elapsed.

Temperature deactivation is performed independently of the set setback function. The actual temperature flashes in the display and serves as residual-heat indicator. "OFF“ appears in the display. Below 50 °C (122 °F), a flashing dash appears in the display.



The following AUTO-OFF time settings are possible:

– "0 min“: AUTO-OFF function is switched off
– "1-999 min": AUTO-OFF time, individually settable

1. Select the menu item OFF in Menu 1.
2. Set the AUTO-OFF setpoint time value with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ⌜1⌝ (back) or ⌜2⌝ (forward).

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Temperature performance with different settings of the SETBACK and AUTO OFF functions

Settings		Temperature performance without switching holder
SETBACK time [1-99 mins]	OFF time [1-999 mins]	
0	0	Soldering tool remains at the set soldering temperature.
ON		
0	Time	Soldering tool is switched off when not in use[1] after the OFF time has elapsed.
ON		
Time	0	Soldering tool is controlled down when not in use[1] to the STANDBY temperature[2] after the SETBACK time has elapsed.
Time	Time	Soldering tool is controlled down when not in use[1] to the STANDBY temperature[2] after the SETBACK time has elapsed and is switched off after the OFF time has elapsed.
		Temperature performance with switching holder
0	0	Soldering is switched off in the holder[3].
ON	0	Soldering tool is controlled down in the holder[3] to the STANDBY temperature[2].
0	Time	Soldering tool is switched off in the holder[3] after the OFF time has elapsed.
ON	Time	Soldering tool is controlled down in the holder[3] to the STANDBY temperature[2] and is switched off after the OFF time has elapsed.
Time	0	Soldering tool is controlled down in the holder[3] to the STANDBY temperature[2] after the SETBACK time has elapsed.
Time	Time	Soldering tool is controlled down in the holder[3] to the STANDBY temperature[2] after the SETBACK time has elapsed and is switched off after the OFF time has elapsed.

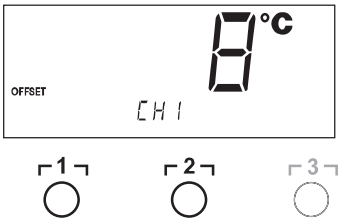
[1] Not in use = UP/DOWN buttons not pressed and no temperature drop > 5 °C.

[2] STANDBY temperature must be below the set setpoint temperature, otherwise the SETBACK function is inactive.

[3] When a switching holder is connected, the soldering tool always remains at the set setpoint temperature outside the holder.
The holder function is activated when the soldering tool is stowed for the first time.

Note Reset of STANDBY and OFF modes:
- without switching holder by pressing the **UP** or **DOWN** button.
- with switching holder by removing the soldering tool from the holder.

Setting the temperature offset



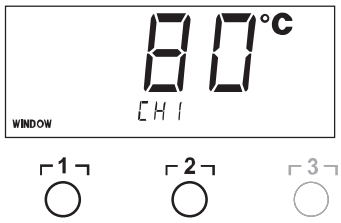
The real soldering-tip temperature can be adapted by entering a temperature offset around ± 40 °C (± 72 °F).

1. Select the menu item OFFSET in Menu 1.
2. Set the OFFSET temperature value with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌ 1 ┐ (back) or ┌ 2 ┐ (forward).

Setting the window function

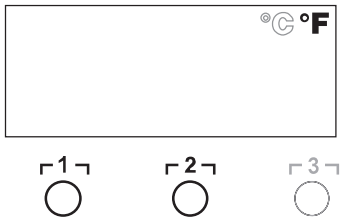
It is possible, starting from a set, locked temperature, to set a temperature window of ± 99 °C (± 180 °F) with the aid of the WINDOW function.

Note To be able to use the WINDOW function, ensure that the repair station is in the locked state (see "Switching the lock function on/off“ Page 15).



1. Select the menu item WINDOW in Menu 1.
2. Set the WINDOW temperature value with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌ 1 ┐ (back) or ┌ 2 ┐ (forward).

Switching the temperature unit

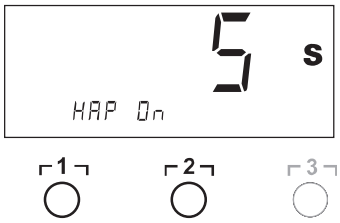


Switching the temperature unit from °C to °F or vice versa.

1. Select the menu item °C / °F in Menu 1.
2. Set the temperature unit with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌ 1 ┐ (back) or ┌ 2 ┐ (forward).

Limiting the switch-on time (ON TIME) for hot-air pencil (HAP)

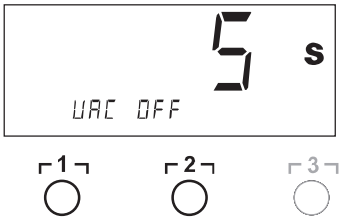
The switch-on time for the HAP hot-air flow can be limited in increments of 1 from 0 to 60 s. The set time is then identical for all 3 channels. Factory setting is 0 s ("OFF“), i.e. the air flow is activated as long as the button on the hot-air pencil or the optional foot switch is pressed.



1. Select the menu item HAP-TIME in Menu 1.
2. Set the time value with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌ 1 ┐ (back) or ┌ 2 ┐ (forward).

Setting the vacuum OFF delay (VAC OFF)

To prevent the unsoldering bit from becoming clogged, it is possible to set a vacuum OFF delay of 0 to 5 s (factory setting 2 s).



1. Select the menu item VAC OFF in Menu 1.
2. Set the time value (VAC OFF) with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌ 1 ┐ (back) or ┌ 2 ┐ (forward).

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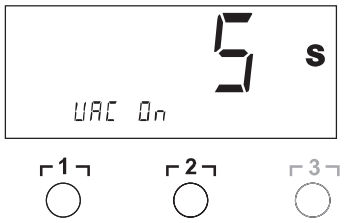
Setting the vacuum ON delay (VAC ON)



In order to prevent the pump from starting prematurely or to ensure a defined soldering-joint preheating time, it is possible to set an ON delay of 0 to 9 s (factory setting 0 s: Off).

1. Select the menu item VAC ON in Menu 1.
2. Set the time value (VAC ON) with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌1┐ (back) or ┌2┐ (forward).

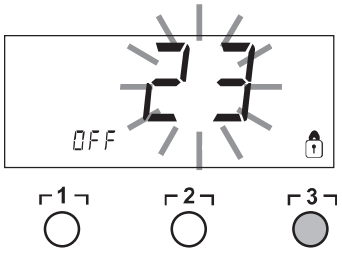
Switching the lock function on/off

After the lock is switched on, only the temperature buttons ┌1┐, ┌2┐ and ┌3┐, **Pick-Up** and ┌1·2·3┐ can still be operated on the repair station. All other settings are disabled until the repair station is unlocked again.

To lock the repair station:

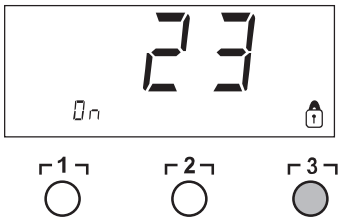
1. Select the menu item LOCK in Menu 1.
   "OFF“ appears in the display. The padlock symbol flashes.

Note Pressing the buttons ┌1┐ or ┌2┐ while "OFF“ is displayed results in the menu item being exited without a stored lock code.



2. Set a 3-digit lock code with the **UP** or **DOWN** button.
3. Press button ┌3┐ for 5 seconds.
   The code is stored. The padlock symbol is displayed. The station is now locked. The display switches to the main menu.

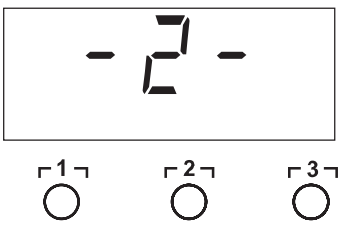
To unlock the repair station:



1. Select the menu item LOCK in Menu 1.
   "ON“ appears in the display. The padlock symbol is displayed.
2. Enter the 3-digit lock code with the **UP** or **DOWN** button.
3. Press button ┌3┐.
   The station is now unlocked. The display switches to the main menu.

7.2 Selection special functions menu 2

Special functions	Navigation	
LEVEL		
ID		
FCC	↓	┌1┐
PICK-UP	↑	┌2┐
HAP LOCK	EXIT	┌3┐
HI / LO CONTROL		
AUTO CHANNEL		



4 s

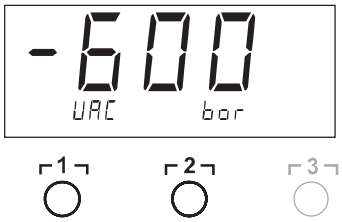
1. Select the desired channel ┌1┐, ┌2┐ or ┌3┐ for entering the special functions.
2. Press and hold down the **UP** and **DOWN** buttons simultaneously.
   "– 2 –“ appears in the display after 4 s.
3. Release the buttons.
   Selection of the special functions of Menu 2 is activated.
   The settings can now be made.

Select menu items with buttons ┌1┐ and ┌2┐.
Exit the menu again with button ┌3┐ (EXIT).

Defining the pressure-gauge threshold

– This function can be used to define the maintenance interval of the unsoldering tool. Here the value in mbar at which the electric pressure gauge issues a warning signal when the intake system is contaminated (LED (3) of the vacuum pump switches from green to red) is defined. The set value is dependent on the suction nozzles used.

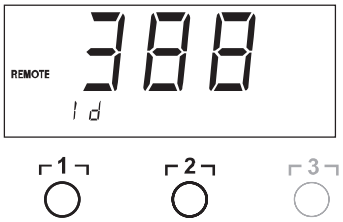
– Factory setting: -600 mbar
Settable: -400 mbar to -800 mbar



1. System (tips and filter) must be free
2. Select the menu item LEVEL in Menu 2.
3. Set the LEVEL pressure value with the **UP** or **DOWN** button. The LED control check switches back and forth between red and green. Use the **UP** button to increase vacuum by 50 to 80 mbar, pinch the vacuum tube and check whether the control lamp switches from green to red.
4. Proceed to the next menu item with the button ⌜1⌝ (back) or ⌜2⌝ (forward).

Setting the station identification (ID code)

When the optional USB port is used, several WR 3M repair stations can be activated and remote-controlled to their full operational extent. To this end, each station requires a station identification (ID code) so that it can clearly identified.



1. Select the menu item REMOTE ID in Menu 2.
2. Enter an ID with the **UP** or **DOWN** button (possible values 0 – 999).
3. Proceed to the next menu item with the button ⌜1⌝ (back) or ⌜2⌝ (forward).

Note Press button ⌜3⌝ to exit the menu item without changes (EXIT).

Executing the calibration function (Factory Calibration Check)

With the FCC function you can check the temperature precision of the repair station and even out possible deviations. For this purpose, the soldering-tip temperature must be measured with an external temperature meter and a temperature measuring tip assigned to the soldering tool. The corresponding channel must be selected prior to calibration.

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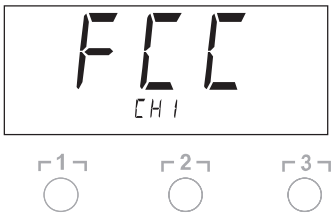
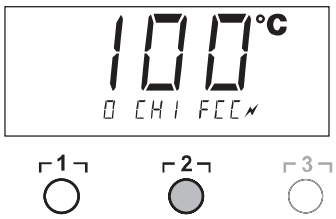
Changing calibration at 100 °C / 212 °F



1. Insert the temperature sensor (0.5 mm) of the external temperature meter into the temperature measuring tip.
2. Select the menu item FCC in Menu 2.
3. Press the **DOWN** button.
   Calibration point 100 °C / 212 °F is selected.
   The soldering tip is now heated to 100 °C / 212 °F.
   The control indicator flashes as soon as the temperature is constant.
4. Compare the temperatures indicated by the meter with the indications in the display.

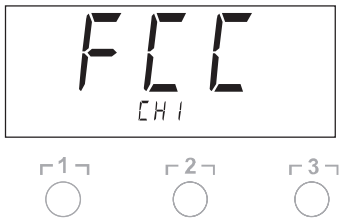


5. Use the **UP** or **DOWN** button to set the difference between the value indicated on the external meter and the value indicated on the repair station.
   Maximum possible temperature adjustment ± 40 °C (± 72 °F).
   Example:
   Display 100 °C, external measuring instrument 98 °C:
   setting ▲ 2
   Display 100 °C, external measuring instrument 102 °C:
   setting ▼ 2

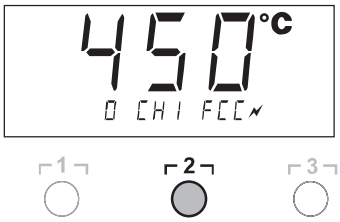
Note Press button ┌ 3 ┐ to exit the menu item without changes (EXIT).

6. Press button ┌ 2 ┐ (Set) to confirm the value.
   The temperature deviation is now reset to 0. Calibration at 100 °C / 212 °F is now concluded.
7. Exit menu 2 with button ┌ 3 ┐.

Changing calibration at 450 °C / 842 °F



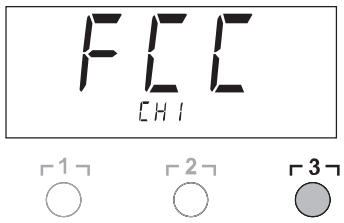
1. Insert the temperature sensor (0.5 mm) of the external temperature meter into the temperature measuring tip.
2. Select the menu item FCC in Menu 2.
3. Press the **UP** button.
   Calibration point 450 °C / 842 °F is selected.
   The soldering tip is now heated to 450 °C / 842 °F.
   The control indicator flashes as soon as the temperature is constant.
4. Compare the temperatures indicated by the meter with the indications in the display.



5. Use the **UP** or **DOWN** button to set the difference between the value indicated on the external meter and the value indicated on the repair station.
   Maximum possible temperature adjustment ± 40 °C (± 72 °F).
   Example:
   Display 450 °C, external measuring instrument 448 °C:
   setting ▲ 2
   Display 450 °C, external measuring instrument 452 °C:
   setting ▼ 2

Note Press button ┌ 3 ┐ to exit the menu item without changes (EXIT).

6. Press button ┌ 2 ┐ (Set) to confirm the value.
   The temperature deviation is now reset to 0. Calibration at 450 °C / 842 °F is now concluded.
7. Exit Menu 2 with button ┌ 3 ┐.



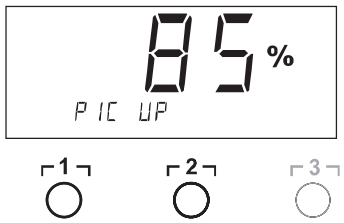
Resetting calibration to factory settings

1. Select the menu item FCC in Menu 2.
2. Press and hold down button ┌3┐.
3. Then press the **UP** and **DOWN** buttons simultaneously.
   "FSE" (Factory Setting Enabled) appears in the display.
   The repair station is now reset to the factory calibration.
4. Proceed to the next menu item with the button ┌1┐ (back) or ┌2┐ (forward).

Setting the pick-up capacity

This function can be used to set the capacity of the additional vacuum pump for pick-up operation:

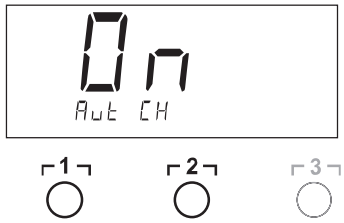
– Factory setting: 85 %
– Settable: 50 % – 100 %



1. Select the menu item LEVEL in Menu 2.
2. Set the LEVEL pressure value with the **UP** or **DOWN** button.
3. Proceed to the next menu item with the button ┌1┐ (back) or ┌2┐ (forward).

Deactivating / activating automatic channel change

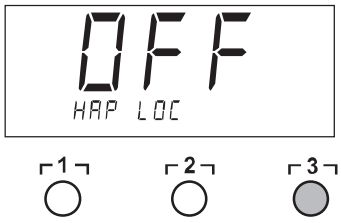
This function can be used to deactivate the automatic channel change, which was activated in the factory:



1. Select the menu item AUTO CHANNEL in menu 2.
2. Set the temperature unit with the **UP** or **DOWN** button.
   (ON = activate / OFF = deactivate)
3. Proceed to the next menu item with the button ┌1┐ (back) or ┌2┐ (forward).

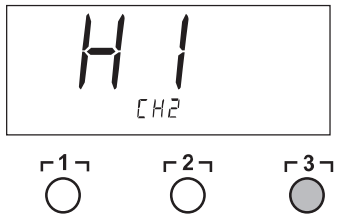
Activating / deactivating button lock HAP

This function can be used to change the button behaviour of the HAP iron set in the factory. If the lock is activated, the HAP is switched on the first time the button is pressed and switched off with a further actuation.



1. Select the menu item HAP LOCK in Menu 2.
2. Set the temperature unit with the **UP** or **DOWN** button.
   (ON = activate / OFF = deactivate)
3. Proceed to the next menu item with the button ┌1┐ (back) or ┌2┐ (forward).

Note To protect itself, the pump switches off automatically after 20 minutes of continuous operation.



Setting the control characteristics for the WP 120

The HI / LO CONTROL function can be used to set the control characteristic of the WP 120, which was set to HI in the factory:

1. Select the menu item HI / LO in Menu 2.
2. Set the status by pressing the **UP** (HI) or **DOWN** (LO) button.

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8 Resetting to factory settings

Resetting the special functions

This function is described under "7.1 Selection special functions menu 1", "Resetting the special functions to the factory settings“ on page 11.

Resetting calibration to factory settings

This function is described under "7.2 Selecting special functions menu 2", "Resetting calibration to factory settings" on page 15.

9 Care and maintenance of the WR 3M

9.1 Servicing the filter

Regularly check the main filter for “VACUUM” and “AIR” and replace if necessary.

WARNING!

Vacuum pump will be destroyed if operated without the filter.

▷ Check before starting soldering whether a main filter is inserted.

Replacing the filter

1. Turn the cover cap for "Vac“ (14) or "Air“ (15) 45° counterclockwise and remove.
2. Pull out the contaminated filter and dispose of properly.
3. Insert an original WELLER filter cartridge.

   Make sure that the cover seal is correctly seated.
4. Insert pressure spring.
5. Refit the cover cap under slight pressure and turn 45° clockwise.

10 Fault messages and fault elimination

Message/Symptom	Possible cause	Corrective measures
Display: "- - -“	– Tool has not been detected – Tool defective	– Check connection of tool to device – Check connected tool
HAP 200 is not working	HAP 200 not connected to channel 1	Connect HAP 200 to channel 1
Display: "tip"	Soldering tip of microtool not correctly inserted or defective	– Insert soldering tip again – Replacing defective soldering tip
Pick-up does not stop	– Vacuum is not fully built up – Hose defective or kinked – Spring bias too great	– Check vacuum at pick-up connection – Replace hose – Reduce spring bias
No air at HAP	Air hose not or incorrectly connected	Connect air hose to AIR nipple
No vacuum at unsoldering tool	– Vacuum hose not or incorrectly connected – Unsoldering nozzle clogged	– Connect vacuum hose to Vac nipple – Maintain unsoldering nozzle with cleaning tool
Status indication of VAC LEDs incorrect	Pressure-gauge level not correctly set	Set pressure-gauge level in special menu 2
No display function (display off)	No mains supply voltage	– Turn on mains power switch – Check mains supply voltage – Check device fuse
VAC LED red	Vacuum system clogged	– Clean suction nozzle – Check filter (13); replace if yellow – Clean unsoldering tool – replace filter – Check vacuum hose

EN

11 Accessories

T005 29 216 99 WP 65 Soldering set with holder WDH 10, 65 W
T005 29 181 99 WP 80 Soldering iron set, 80 W
T005 29 161 99 WSP 80 Soldering iron set, 80 W
T005 29 194 99 WP 120 Soldering set with holder WDH 10T, 120 W
T005 29 200 99 WP 200 Soldering set with holder WDH 31, 200 W
T005 29 189 99 WSP 150 Soldering iron set, 150 W
T005 29 190 99 WMRP Micro soldering iron set, 40 W
T005 13 173 99 WMRT Micro unsoldering-tweezer set, 80 W
T005 29 163 99 MPR 80 Soldering iron, 80 W
T005 33 155 99 WMP Soldering iron set, 65 W
T005 29 187 99 LR 21 Soldering iron set, 50 W
T005 29 188 99 LR 82 Soldering iron set, 80 W
T005 33 133 99 WTA 50 Unsoldering-tweezer set, 50 W
T005 25 032 99 WST 82 KIT1 Thermal stripping set, 80 W
T005 25 031 99 WST 82 KIT2 Thermal stripping set, 80 W
T005 27 040 99 WSB 80 Soldering bath, 80 W
T005 27 042 99 WSB 150 Soldering bath, 150 W
T005 27 028 99 WHP 80 Preheating plate, 80 W
T005 13 182 99 DXV 80 Desoldering iron set, 80 W
T005 13 183 99 DSX 80 Desoldering iron set, 80 W
T005 13 198 99 DSX 120 Desoldering iron, 120 W
T005 27 118 99 HAP 1 Hot-air pencil set, 100 W
T005 15 154 99 WRK Holder set
T005 15 155 99 WRK Desoldering set
T005 29 184 99 WVP Vacuum pipette
T005 27 116 99 HAP 200 Hot-air pencil
T005 27 117 99 HAP 200 Hot-air set
T005 15 152 99 WDH 30 Holder for HAP 200/DSX 80/DSX 120
T005 15 153 99 WDH 40 Holder for DXV 80
T005 15 158 99 WDH 31 Holder for WP 200
T005 15 161 99 WDH 10T Switching holder WSP 80/WP 80
T005 15 162 99 WDH 20T Switching holder for WMP
T005 87 617 30 Desoldering set 33x33/24x24 with pick-up
T005 87 617 31 Desoldering set 27x27/20x20 with pick-up
T005 87 617 32 Desoldering set 18/15.5/12.5/10 with pick-up
T005 13 120 99 Foot switch
T005 87 388 50 Adapter for foot switch
T005 15 125 99 WDC 2 Dry cleaning insert
T005 13 840 99 Wool balls for WDC
T005 87 597 28 Reset connector °C
T005 87 597 27 Reset connector °F

Please refer to the Operating Instructions accompanying the individual soldering-iron sets for more information on accessories.

12 Disposal

Dispose of replaced equipment parts, filters or old devices in accordance with the rules and regulations applicable in your country.

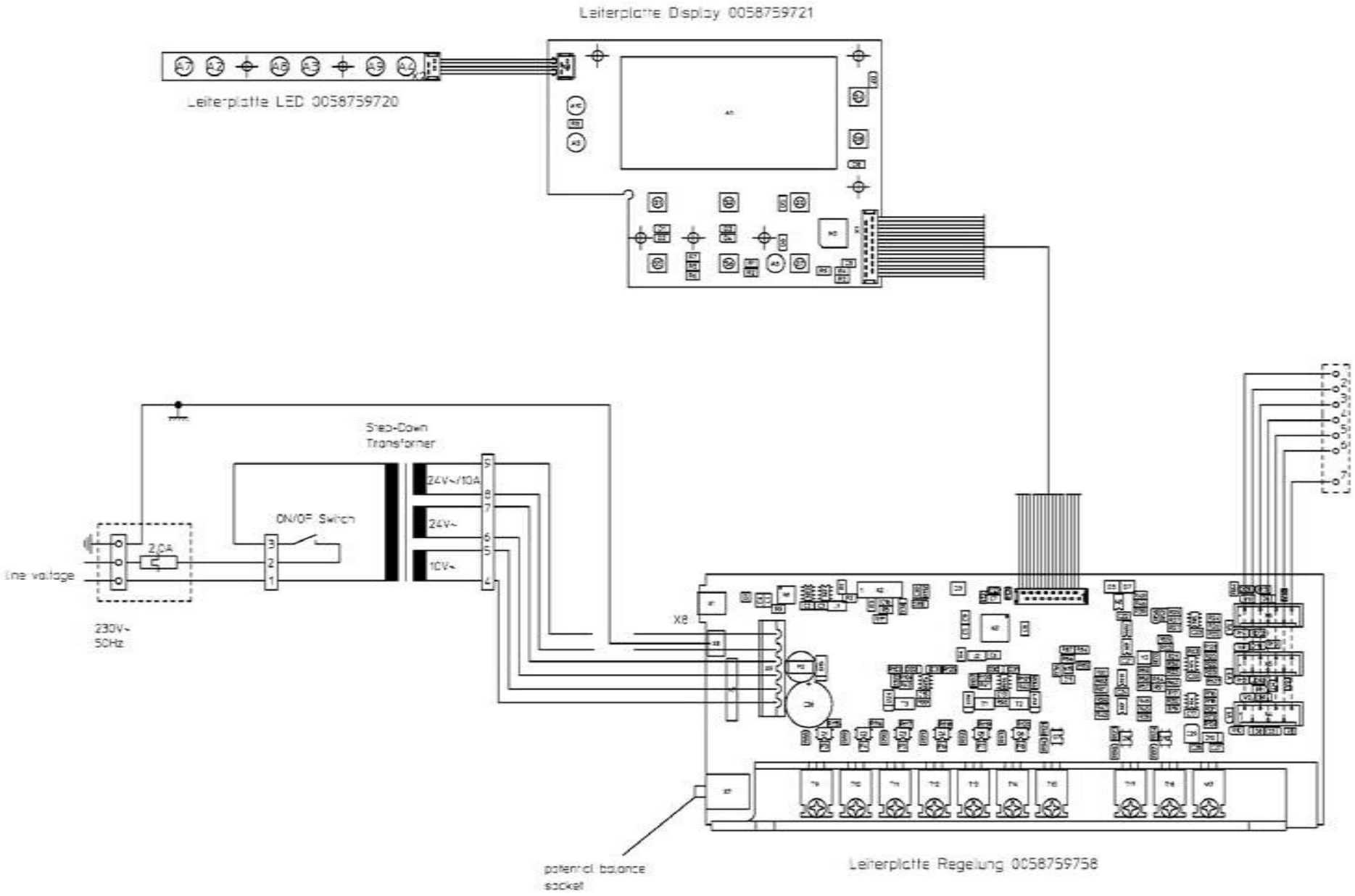
13 Warranty

Claims based on defects will fall under the statute of limitations 12 months after delivery to the purchaser of the goods. This does not apply to claims by the buyer for indemnification in accordance with §§ 478, 479 BGB (German Federal Law Gazette).

We shall only be liable in the case of a warranty we have issued if the quality or service life guarantee has been issued by us in writing with reference to the term "warranty".

Subject to technical alterations and amendments!

See the updated operating instructions at www.weller-tools.com.



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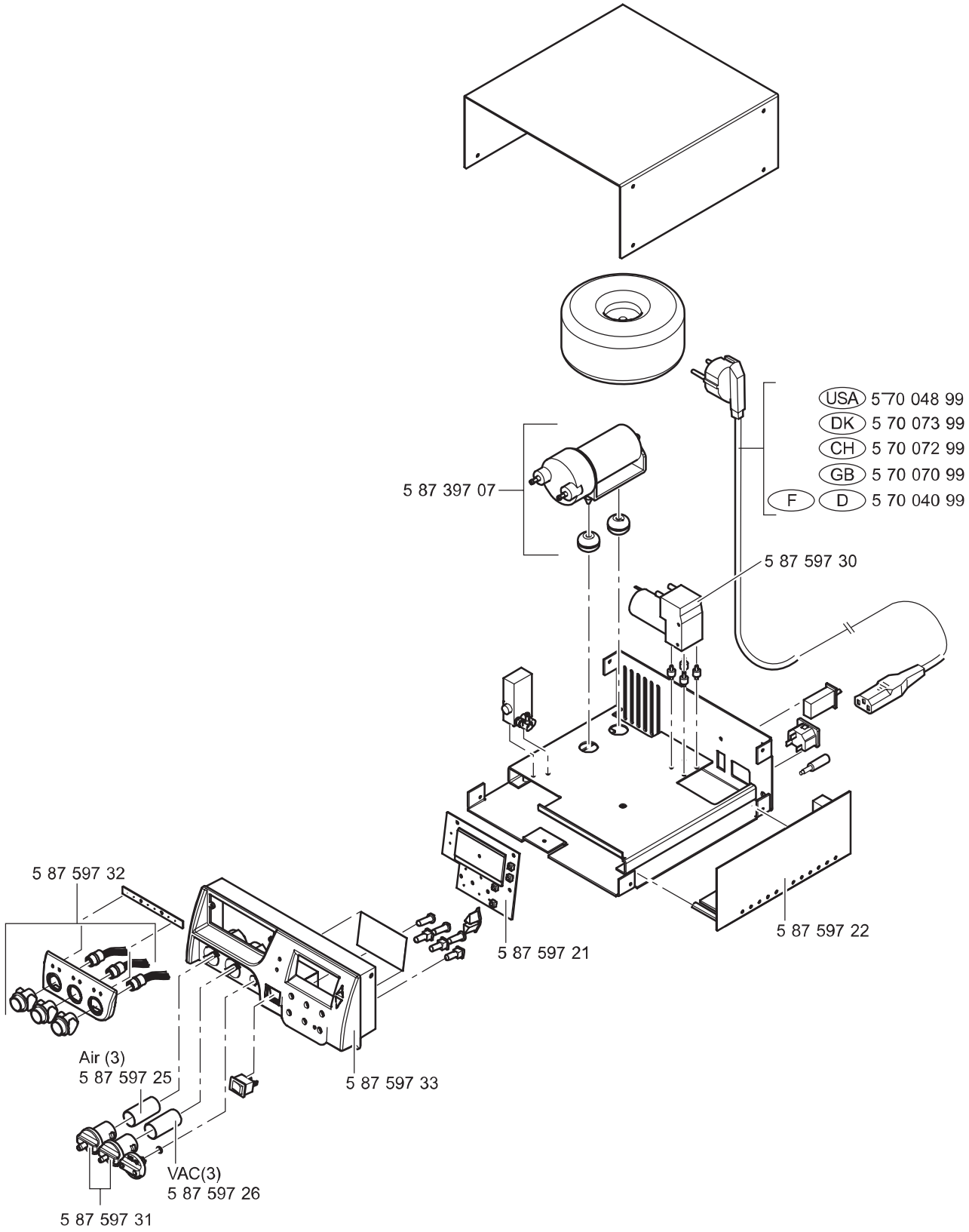

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