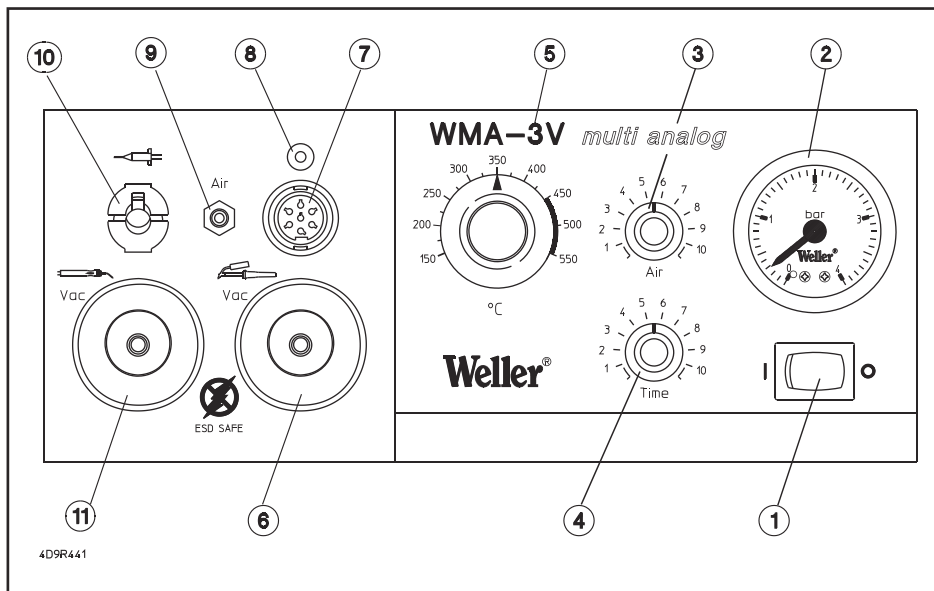
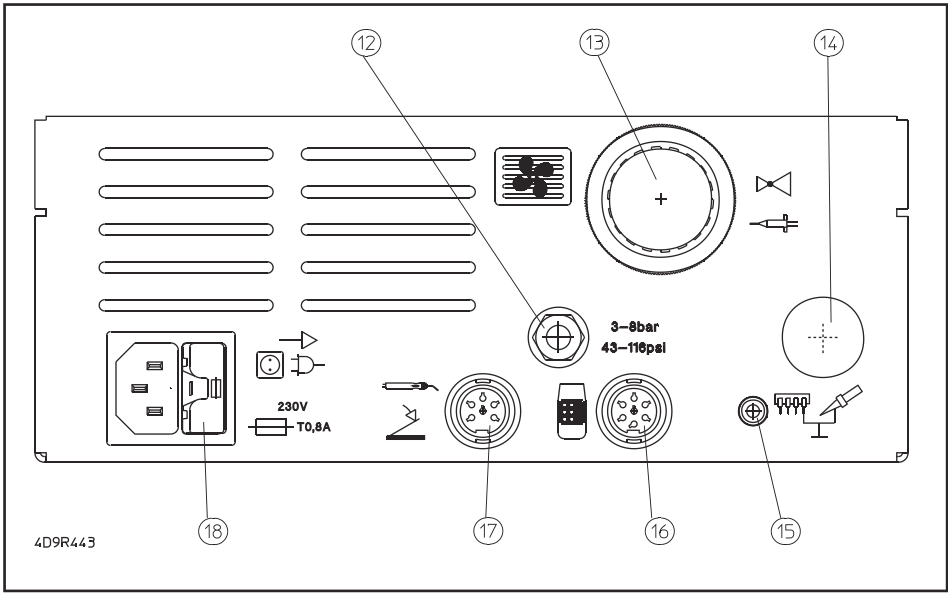

WMA3V





4D9R441





Thank you for placing your trust in our company by purchasing the Weller WMA3V. Production was based on stringent quality requirements which guarantee the perfect operation of the device.



1. Caution!

Please read these Operating Instructions and the attached Safety Information carefully prior to initial operation.

Failure to observe the safety regulations results in a risk to life and limb.

The manufacturer shall not be liable for damage resulting from misuse of the machine or unauthorised alterations.

The Weller WMA3V corresponds to the EC Declaration of Conformity in accordance with the basic safety requirements of Directives 89/336/EEC and 73/23EEC.

2. Description

The WMA 3V comprises all the necessary functions for processing of components in SM technology. The alternative connections are a hot gas pencil (100 W), a soldering bit (25 to 80 W), a de-soldering bit (50 to 80 W) and various other tools which are specified in the list of accessories. The functions for dispenser and vacuum tube are also available.

The various functions are controlled via the manual control panel, footswitches or finger-operated switches. Temperature is regulated on an analog basis, and the desired temperature is set by means of the continuous-adjustment facility of a rotary knob potentiometer.

this indicates that the system is heating up. The hose of the hot gas pencil is connected to the 'Air' nipple, and the vacuum hose of the de-soldering bit is connected to the correspondingly marked 'Vac' nipple. The air flowrate for the hot gas pencil has a continuous range of adjustment of up to 10 litres per minute by means of the 'Air' precision choke valve.

Warning: in order to prevent injury, always refrain from connecting the vacuum hose to the 'Air' nipple.

The hot gas pencil is equipped with a return valve which protects the hot gas pencil from damage in the event of its being inadvertently connected to the 'Vac' nipple.

A wide range of products is available for carrying out various soldering functions, comprising hot-air nozzles, suction nozzles and solder bits for the corresponding solder tools.

The vacuum for the vacuum tube is generated by a pressure transducer which is operated either by footswitch or

by means of the manual operation control panel. The vacuum tube is equipped with a suction connection and a guide rail. The functions of suction and of deposition of SM components can be performed by the operator's thumb or index finger. Precise handling of the smallest SM components is greatly simplified by the ergonomic form of the tube and by a wide range of fittings (for example, the rotatable suction attachment with 360°C angle of rotation).

The dispenser pressure pulse for solder paste or adhesive metering is generated from the manual control panel either with a timer control in the approximate range of 0.05 to 1.5 seconds or without using a timer control. The duration of the pressure pulse in the case of using the timer control is set by means of the 'Time' potentiometer.

The required dispenser pressure is set by means of a pressure regulating valve on

Technical data

Dimensions:	240 x 270 x 105 mm (W x D x H)
Mains voltage:	230 V AC, 50 Hz
Power draw:	130 W
Protection category:	1
Fuse:	Glass tube fuse (5 x 20) T800mA in the cooler connector
Temperature setting:	Soldering/De-soldering bit, continuous adjustment from 150 to 450°C
Setting tolerance:	Hot air pencil 150-550°C Soldering/de-soldering pencil ±2% of limit value Hot air pencil ±30°C
Equipotential bonding:	Via 3.5 mm pawl socket on the back panel of the unit

The metal casing is coated with anti-static paint. The desired equipotential bonding can be achieved by means of a pawl socket on the back of the unit. Accordingly, the

WMA3V hot gas station fulfils all EGB safety requirements.

3. Commissioning

Lay the soldering tools used in the safety rest provided for the purpose. Connect the corresponding connecting lines to the control unit:

- Dispenser to rapid connection (10)
- Vacuum tube to 'Vac' nipple (11)
- Air hose of hot gas pencil to 'Air' nipple (9)
- Vacuum hose of de-soldering bit to 'Vac' nipple (6)
- Insert the electrical connection line of the soldering tool into the 7-pin connecting socket and lock.

Check whether the mains voltage is consistent with the information on the model label. If the control unit's mains voltage is correct, connect it to the mains. Connect the compressed air supply at an operating pressure of 3 to 8 bars to the compressed air connection (12) by means of a 6 mm external diameter compressed air hose.

Caution: Inert gas or purified, dry compressed air is required for operating the unit.

By means of pressure setting valve (13), set dispenser pressure display (2) to approx 2 bars. Switch on the unit by means of mains switch (1). Set desired temperature (5), hot air flowrate (3) and dispenser time (4).

Maintenance

Air flowrate is influenced by dirty filters.

Consequently the main filters for 'Vacuum' should be regularly inspected and replaced as required.

4. Equipotential bonding

The various circuit elements of the 3,5 mm jack bush make 4 variations possible:

Hard-grounded: No plug (delivery form)

Equipotential bonding: With plug, equalizer at center contact (impedance 0 ohms)

Potential free: With plug

Soft-grounded: With plug and soldered resistance. Grounding with set resistance value.

5. Operating guideline

Nozzles are screwed into the hot gas pencil. To change nozzles over, use the SW8 internal hexagon key and lock with a 'C' spanner.

Caution: Max thread depth is 5 mm. A longer thread will cause damage to the heating element.

The option exists of supplying the hot gas pencil with nitrogen (N₂) separately. For this purpose the control unit can be converted by means of a retrofit kit. Inert gas reduces oxidation, and the flux remains active for longer. We recommend nitrogen (N₂) which can be obtained commercially in steel bottles. The bottle must be equipped with a pressure reducer of 0 to 10 bars. Furthermore a compressed air connection with an external diameter of 6 mm is required.

Soldering with hot gas (e.g. Melf 0204)

- Use the vacuum tube to place the component in the fresh paste.
- Set hot gas temperature to approx 450°C and set throughflow rate to position 4.
- Keep the hot gas pencil at a distance of approx 10 mm from the soldering tip.
- Use the finger-operated switch or the control on the manual control panel to start air flowing through the hot gas pencil.
- The solder paste will start to dry immediately.
- Once the solder paste is dry, bring the hot gas pencil closer to the solder tip until the paste melts.

Please note that solder paste only has a limited shelf life. Consequently it is important to use only fresh solder paste. Solder paste cartridges should be stored in a cool place when not in use. The dispenser connection is provided with a quick-fitting connection in order to enable trapped

A footswitch can also be used instead of the manual control panel. With the footswitch connected, the finger-operated switch function of the inserted soldering tool (vacuum or hot gas) is activated automatically. Soldering tools are set for a medium solder tip and a medium nozzle. Deviations may arise on replacing the tips or when different tip forms are used.

6. List of accessories

005 33 110 99	MPR 30 Solder bit set
005 33 111 99	MLR 21 Solder bit set
005 33 112 99	LR 21 Antistatic solder bit set
005 33 113 99	LR 82 Solder bit set
005 33 115 99	DS 80 Desoldering set
005 33 118 99	DS V Desoldering set
005 33 119 99	DS VT De-soldering set
005 33 120 99	WT 50 De-soldering set
005 13 050 99	EXIN 5 Reflow soldering set
005 25 030 99	WST 20 Thermal insulator unit
005 87 397 48	Conversion kit for nitrogen connection

7. Scope of supply

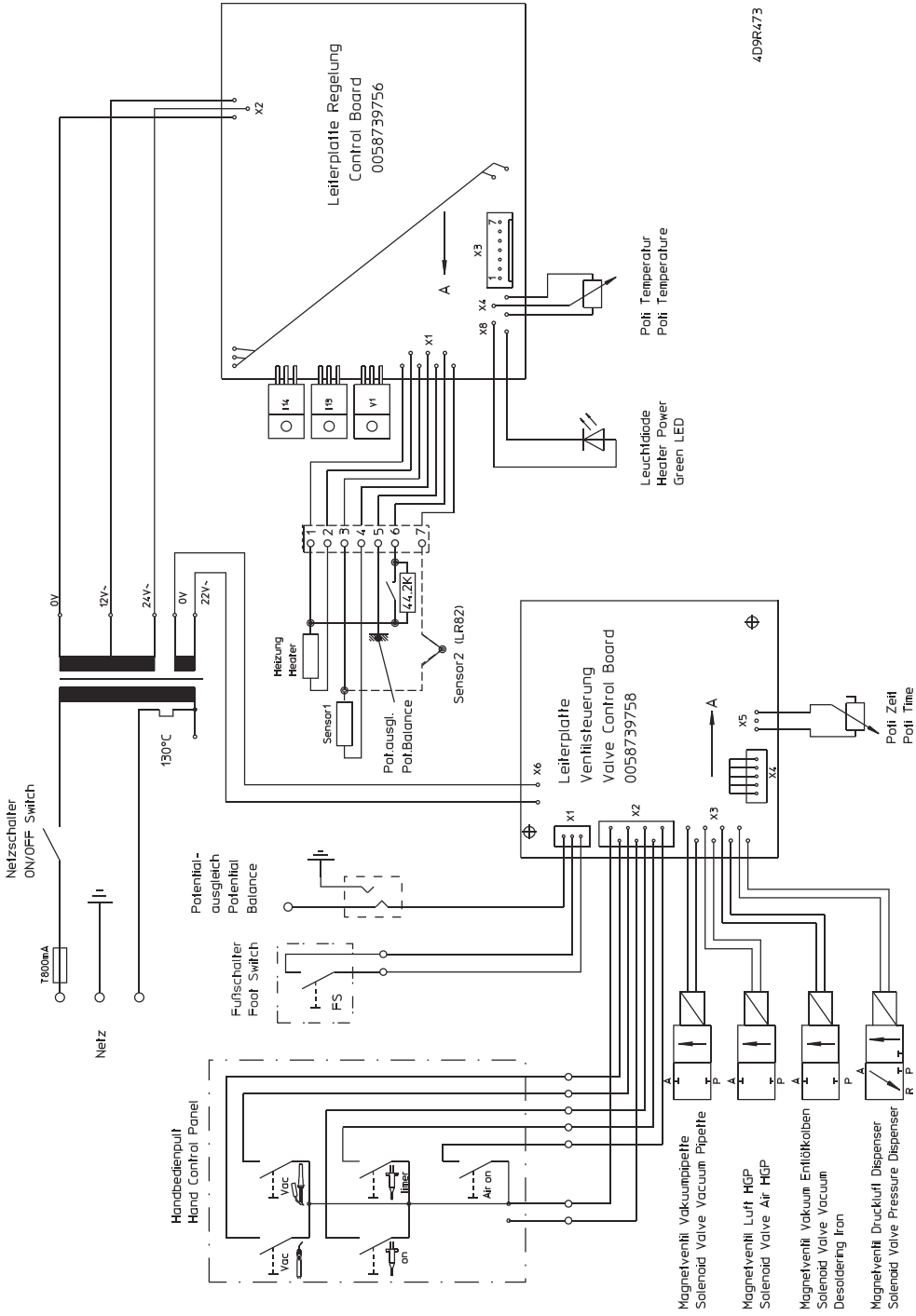
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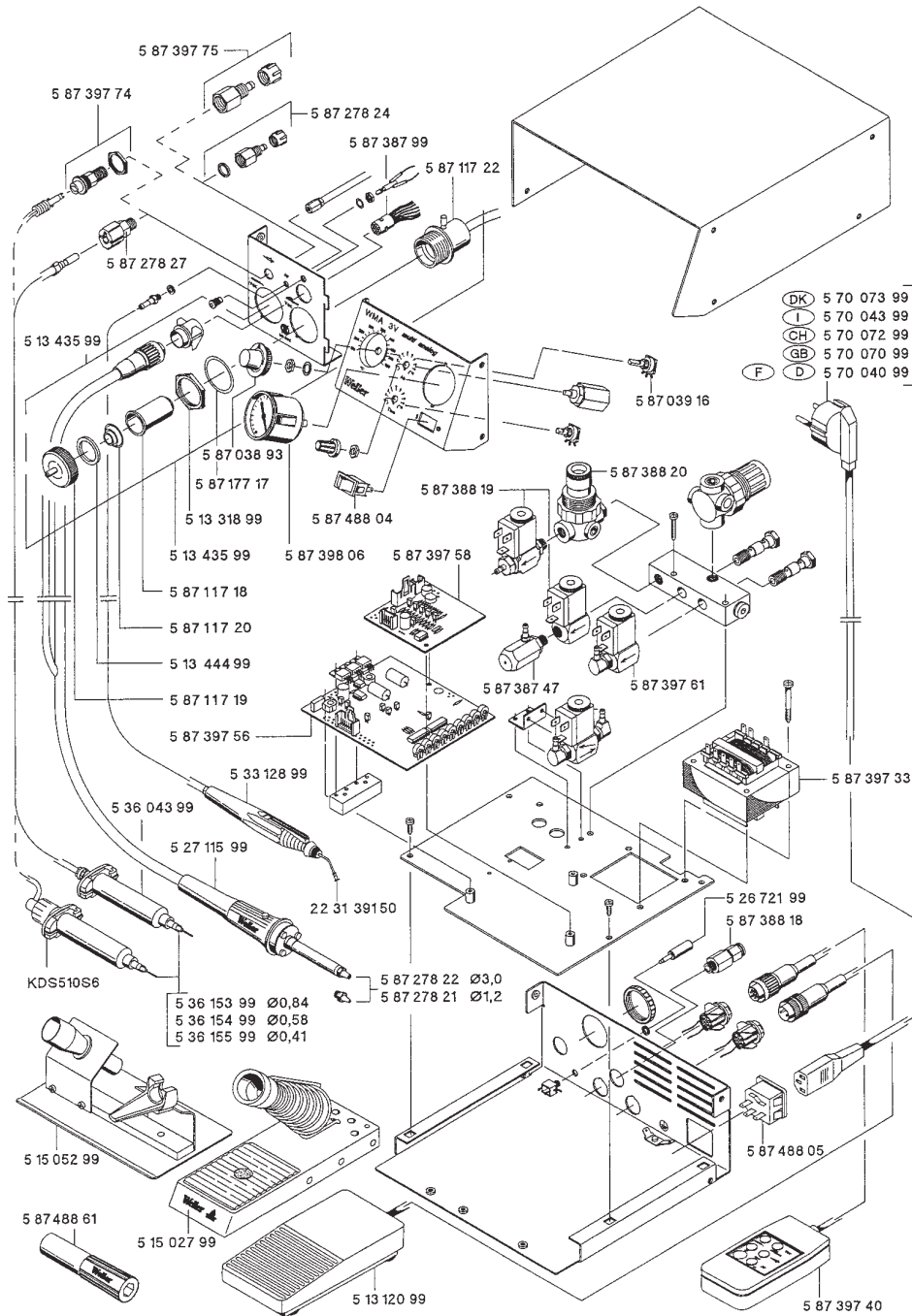
Mains cable
 Hot gas pencil
 SW6 internal key
 SW8 'C' spanner
 Hot gas nozzle 1,2
 Vacuum tube
 Dispenser
 1 rest unit for hot gas pencil
 1 double rest unit for dispenser and vacuum tube
 Manual control panel
 Footswitch
 Operating instructions
 Safety Information

Circuit diagramm, see page 61

Exploded view, see page 62

Subject to technical alterations and amendments!





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