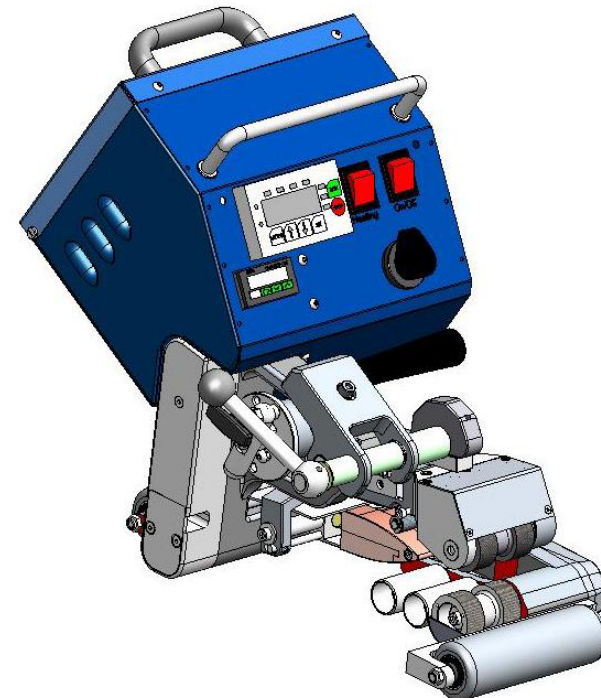


Operating Instructions

Automatic Wedge Welder Wedge It LE



MUNSCH Kunststoff-Schweißtechnik GmbH

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Registergericht/Registration Court: Amtsgericht Montabaur, HRB 3959

Geschäftsführer/Managing Director: Stefan Munsch

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Note: These operating instructions must always be available to the machine operators. Make sure to read them carefully before placing the unit in service.

Very important!

Switch off the heating wedge whenever the unit is out of service for prolonged periods.

This will prevent heating up of the machine due to radiating heat. Otherwise some machine components may develop high surface temperatures.

Additional cooling of the heating wedge is not allowed. (water, chilling agents or similar)

Technical data:

Voltage	V	230
Frequency	HZ	50
Heating capacity	W	1350
Motor rating (brushless)	W	60
Temperature	°C	Max. 450
Max. travel speed	m/min	8
Max. welding pressure	N	1200
Weight	kg	13
Dimensions LxWxH	mm	410x220x330
Materials	<i>PE-HD, PE-LD, PE-C, PP, PVC(with steel wedge)</i>	
Material thicknesses	mm	0.5-2.5

EU Conformity Declaration

MUNSCH Kunststoff – Schweißtechnik GmbH
Im Staudchen
D 56235 Ransbach - Baumbach

hereby declare on their own behalf that the industrial unit to which this declaration refers conforms to the standards, codes and regulations listed below. Any modifications made to the unit(s) without prior consultation with MUNSCH Kunststoff – Schweißtechnik GmbH will void this declaration.

Description of unit:

Automatic wedge welder Wedge-It LE

EU Directives:

98/37/EG
89/336/EWG
73/23/EWG

Harmonized standards:

DIN EN ISO 12100-1
DIN EN ISO 12100-2
EN 55014-1
EN 55014-2

The unit must not be placed into service unless all necessary safety precautions are in place and the occupational health and safety requirements are satisfied.

Ransbach-Baumbach, 01 February 2007

Dipl.-Ing. Stefan Munsch
Managing Director







Service and Repair

Repairs shall be carried out exclusively by MUNSCH Kunststoff-Schweißtechnik GmbH. Any warranties for units which are no longer in the original condition shall be expressly excluded. The units may not be modified and/or changed in any way whatsoever. Any liability for damage resulting from improper use or normal wear and tear of the units shall be excluded.

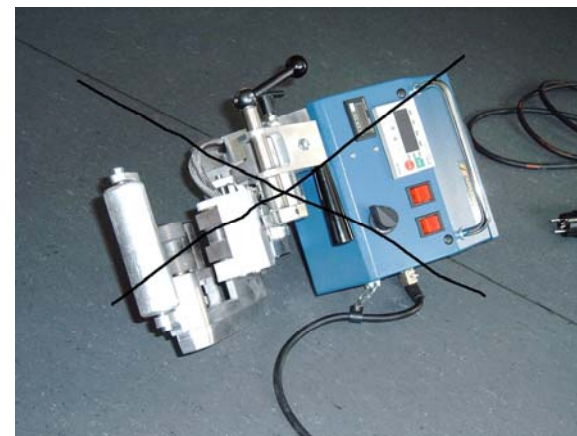
Welder type	
Serial number	

Date	Operating hours	Type of repair	Carried out by:

Safety

	<p>Danger to life when opening the unit due to exposure to live components. Disconnect the power supply (all poles) before opening the unit. A damaged connecting cable may cause fatal electrical shock. The rated voltage indicated on the unit type tag must match the mains voltage. If required, check with your electric utility.</p>
	<p>Improper use of the welding unit poses a fire and explosion hazard, especially when working in the vicinity of flammable materials and explosive gases. Not suitable for use in explosion hazard areas!!!</p>
	<p>Risk of burns!!! Do not touch the heating wedge when hot. Always allow unit to cool down.</p>
	<p>Protection Class I equipment Connect the unit only to power outlets equipped with a protective conductor. Each interruption of the protective conductor presents a hazard. Only use extension cables with the correct conductor cross-section and a protective conductor.</p>
FI	<p>FI switch required for personal protection.</p>
	<p>Unit may only be operated under observation. Heat may propagate to flammable materials outside the range of vision.</p>
	<p>Protect the unit from moisture and direct rainfall!!</p>

Important Note



Do not deposit the unit sideways (see above). Risk of damage of the power supply cable.



When the unit is out of operation (between two welding operations, during breaks or on the shelf), tilt it towards the front to prevent it from rolling away and avoid damage caused by the hot wedge.

Now, the welding process has been started.

Once the unit reaches the last few centimetres of the weld seam, disengage the nip pressure lever (1) and move the heating wedge (4) to its starting position.

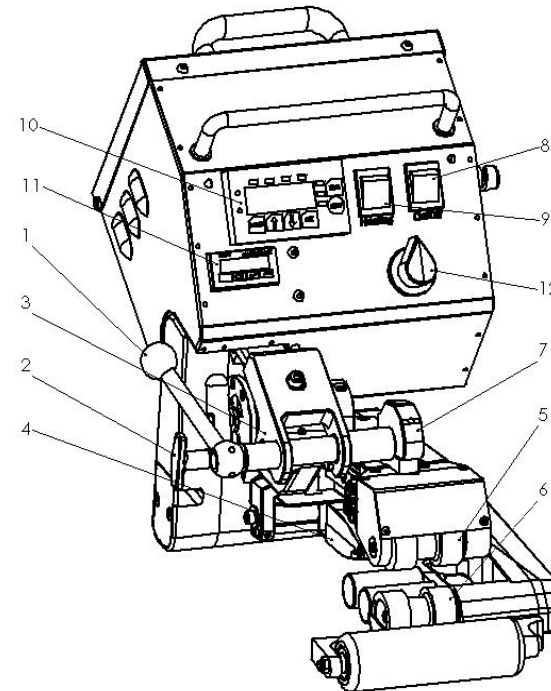
Press the "Motor Stop" button to turn off the motor (page 4) When restarting the machine, it will continue with the same travel speed unless the potentiometer has been readjusted.

Test the weld seam (tensile test, proper fusion). Correct the travel speed and/or temperature, if necessary.

Attention!!

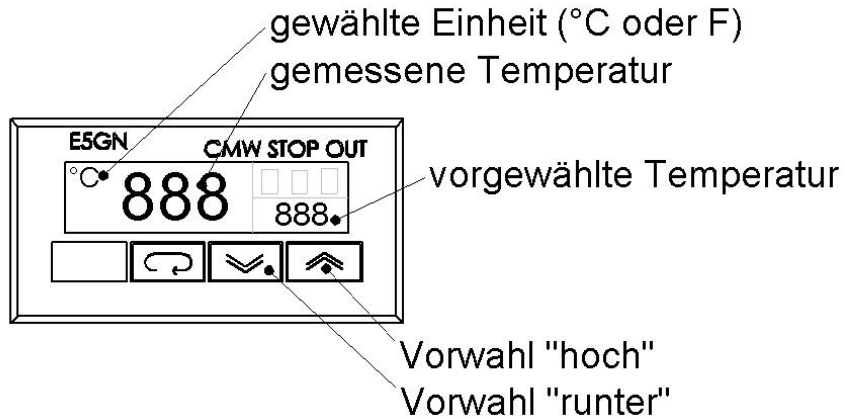
Never allow the machine to run with the nip rollers locked in place and no material in the machine. This will destroy the nip rollers and the wedge assembly.

Product Description



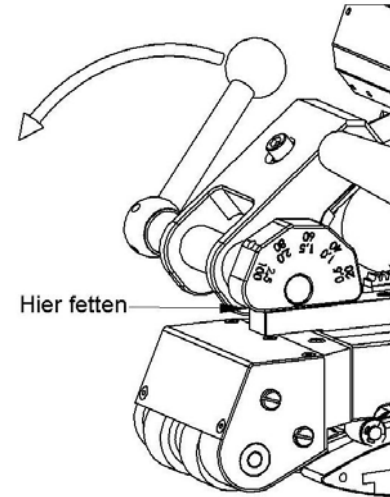
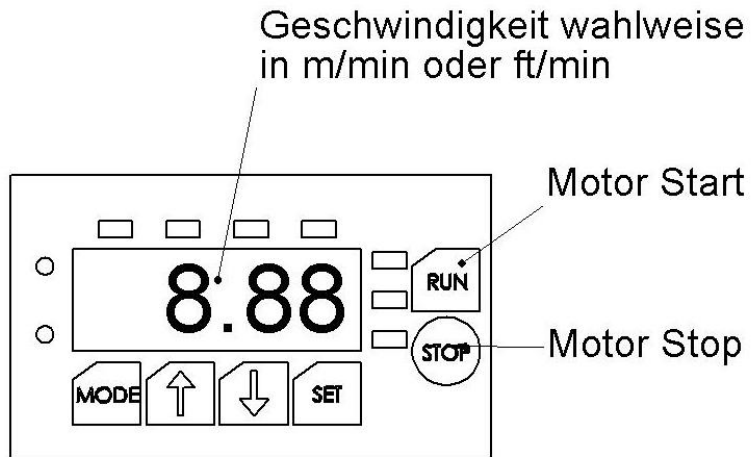
- 1 - Nip pressure lever
- 2 - Wedge adjustment disk (adjustable and engaging)
- 3 - Spring element
- 4 - Heating wedge
- 5 - Upper contour roller
- 6 - Lower contour roller
- 7 - Nip pressure cam (labelled with sheet thicknesses)
- 8 - Main switch
- 9 - Heater switch
- 10 - Motor panel with speed display and Start/Stop button
- 11 - Display for setting and checking the heating element temperature
- 12 - Potentiometer to increase (clockwise) or reduce (counter-clockwise) the travel speed.

Control



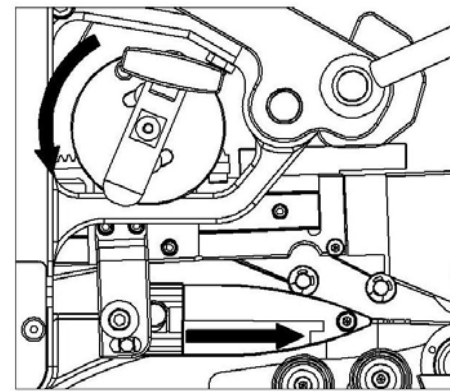
Temperature

Speed



Operation of the nip pressure lever (1) as shown in the illustration on the left will cause the nip pressure cam (7) to turn and the upper nip roller to pinch down on the sheet.

The nip pressure cam is labelled with the respective sheet thicknesses (2.5, 2.0, 1.5, 1.0, 0.5). Pull down the nip pressure lever until the respective sheet thickness appears in horizontal position at the bottom of the cam. The contact force is generated by a spring, so that no further adjustments will be needed.



Pull out the T-handle (2) and rotate the toggle in counter-clockwise direction until it engages in the bottom position. This will cause the heating wedge to be positioned between the nip rollers.

Attention!!
The contact area between the nip pressure cam (7) and the support plate must be lubricated daily and/or before each welding operation (see illustration above). This will help prevent wear and reduce the effort needed to operate the nip pressure lever.

Welding Procedure

The exact welding parameters are determined by producing a test weld.

Make sure to check the unit for damage prior to each welding operation.

Check the nip rollers and the heating wedge for fouling and residues.

The sheets to be welded must be clean. This applies to both the overlap area and the areas between the two sheets and below and above the sheets.

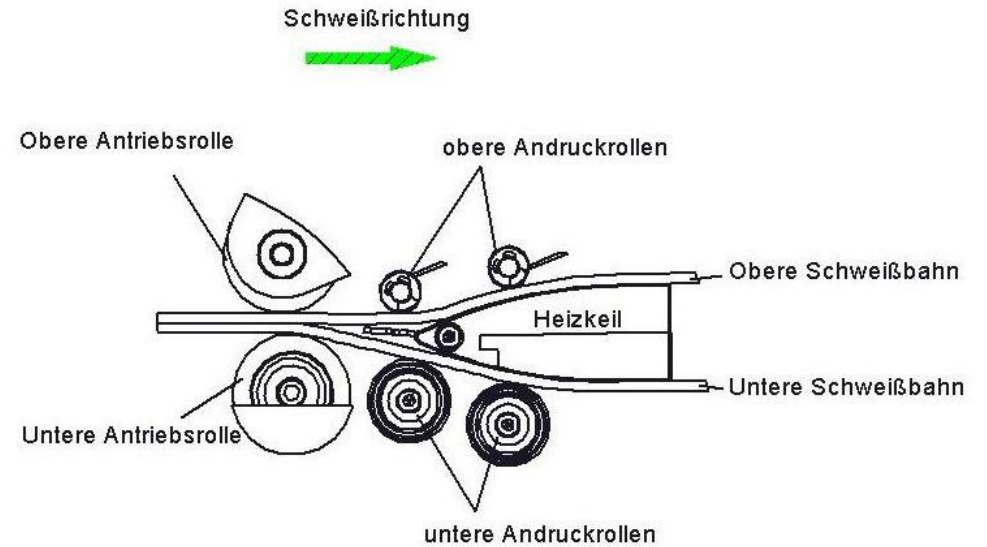
Operate main switch (8) to turn on the unit. The motor display (10) will light up. Operate switch (9) to activate heating current supply. The heater display will light up. Set the desired heating wedge temperature using the temperature preset pushbuttons "Up" and "Down" (page 4).

Attention!!
Never leave the unit unattended and never lay it down for prolonged periods with the heating current activated.
This will cause unnecessary heat development and ultimately damage to the machine components.

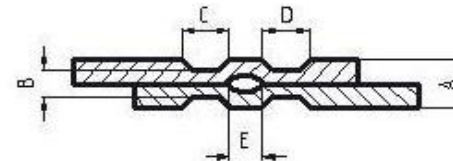
Position the unit in the overlap area between the two sheets to be welded. Press the "Motor Start" button to start the motor (page 4) The travel speed will be displayed in m/min in Display (10). To change the speed, use potentiometer (12) (clockwise → faster, counter-clockwise – slower)

Function

Heating wedge drive system



Overlap weld with air channel



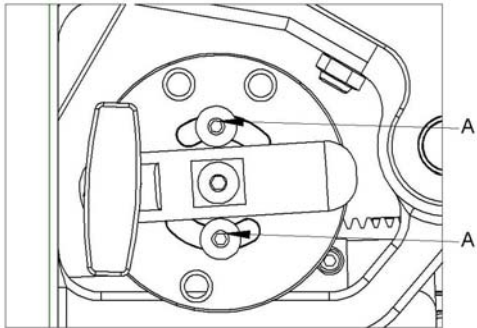
The Wedge It LE produces an overlap seam with a width of 50 mm (including air channel) at an overlap of approx. 130 mm.

- A: Sheet thickness
- B: Thickness of weld seam
- C: Part seam 1
- D: Part seam 2
- E: Air channel

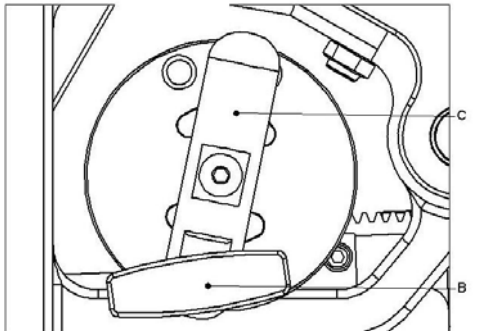
Preparation of Unit

The dimension "E" (wedge position between nip rollers) can be adjusted.

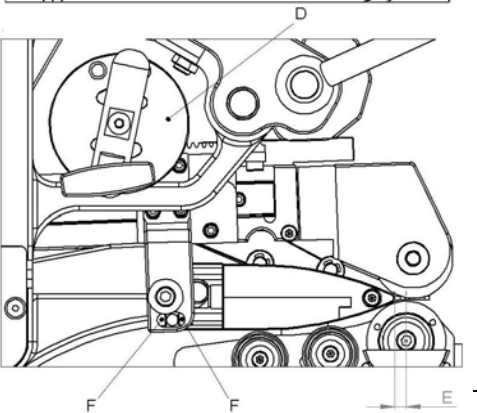
Proceed as follows:



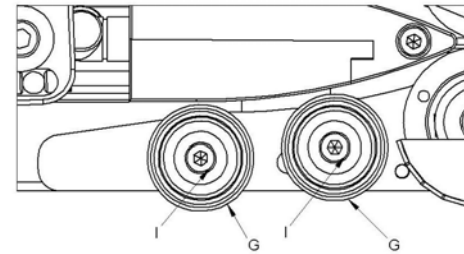
Loosen the two locking screws (A) on the adjustment disk.



Unlock toggle (C) by pulling the T-handle (B) and rotate toggle (C) counter-clockwise until it engages in the bottom position.



Rotate adjustment disk (D) to adjust the rear position of the heating wedge (dimension E). After that, re-tighten the two locking screws (A). The angle of inclination of the wedge can be corrected using the two screws (F).



The lower contour rollers (G) can be adjusted for optimum contact of the sheet with the wedge. For this purpose, loosen the hex screws (SW10) on the rear and turn contour roller (I), which is mounted on eccentric cams, using an Allan key (SW3). When the correct clearance between the contour roller and the heating wedge is reached, retighten the hex screw.

When operating the unit with power supply from a generator set, make sure that the generating capacity is sufficient.