

LEISTER Varimat Hot Air Automatic Welding Machine

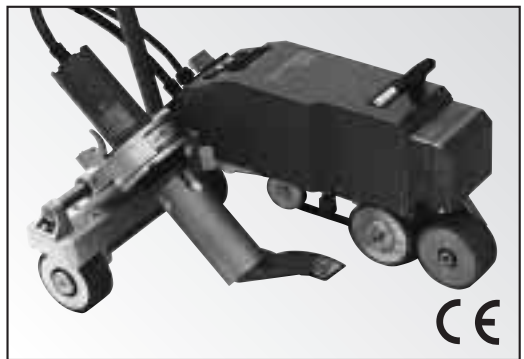


Please read operating instructions carefully before use and keep for further reference.

APPLICATION

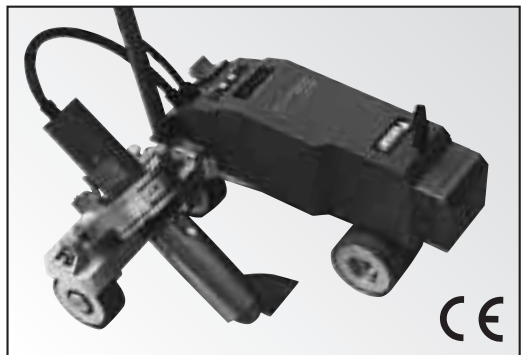
LEISTER Varimat Automatic Overlap Welding Machine

- For overlap welding of roofing membranes made of PVC, PE, ECB, EPDM, CSPE, and Modified Bitumen for areas close to edges and uneven surfaces.
- Overlap welding of foils and coated materials. Width of welding seam 20, 40 mm.



LEISTER Varimat Automatic Bitumen Welding Machine

For overlap welding of Modified Bitumen sheet. Width of welding seam 80, 100 or 120 mm.





WARNING



Danger! Unplug the tool before opening it as live components and connections are exposed.



Incorrect use of the hot air tool can present a **fire and explosion hazard** especially near combustable materials and explosive gases.



Do not touch the element housing and nozzle when hot as they can cause **burns**. Allow the tool to cool down. Do not point the hot air flow at people or animals.



Connect tool to a **receptacle with protective earth terminal**. Any interruption of the protective conductor inside or outside the tool is dangerous!

Line/mains extension cables must always have a protective ground conductor!



CAUTION



The **voltage rating** stated on the tool should correspond to the mains voltage.



For personal protection, we strongly recommend the tool be connected to an **RCCB (Residual Current Circuit Breaker)** before using it on construction sites.




The tool **must** be operated under supervision. The heat can ignite flammable materials which are not in view.



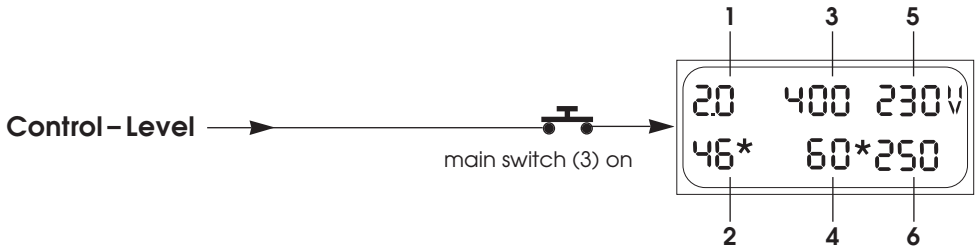
Protect the tool from **damp** and **wet**.

APPROVAL MARKS



Technical Data	Protection Class I	
Voltage	V~	230, 400 ★
Power consumption	W	230, 400 ★
Frequency	Hz	4600, 5700
Temperature	°C	4600, 6300
Drive	m/min.	50 / 60
Welding pressure	N	20 – 620 stepless
Air flow	%	0,5 – 5 stepless
Emission level	L _{pA} (dB)	ca. 190 (2 weights)
Size	mm	ca. 220 (2 weights)
Weight	kg	50 – 100
		67
		67
		640 x 430 x 330
		640 x 430 x 330
		33 with 5 m cable
		35 with 5 m cable

★ Mains voltage cannot be switched over

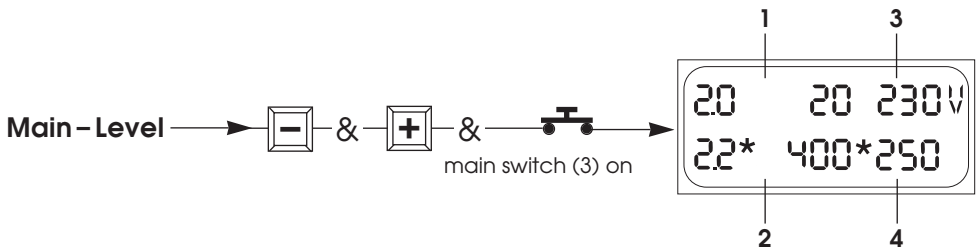


Display of:

- 1. Welding speed ACTUAL value
- 2. Welding speed SET value
- 3. Temperature ACTUAL value
- 4. Temperature SET value
- 5. Temperature power consumption in %**
- 6. Welding speed power consumption in %**

Welding process control and fault finding by displaying the power consumption.

< OVERLOAD INDICATION
* HEATING/DRIVE active



Display of:

- 1. Welding speed ACTUAL value
- 2. Welding speed SET value
- 3. Temperature ACTUAL value
- 4. Temperature SET value

Display (5)	Heating reason for fault	Action
100 % <small>SET value not achieved</small>	<ul style="list-style-type: none"> • mains under-voltage • Heating element faulty 	reduction of airflow repair

Display (6)	Drive reason for fault	Action
100 %	<ul style="list-style-type: none"> • mains under-voltage 	reduction of welding speed
100 % or >	<ul style="list-style-type: none"> • high welding speed with large sudden overload 	check welding procedure/machine

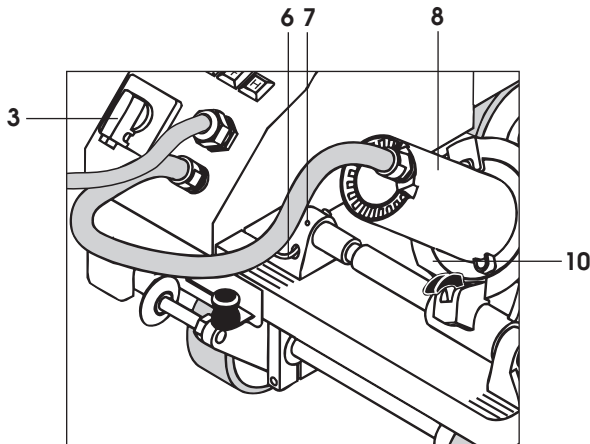
Automatic starter reason for fault

Drive motor does not start automatically after the nozzle has been positioned

- Sensor (6) set incorrectly

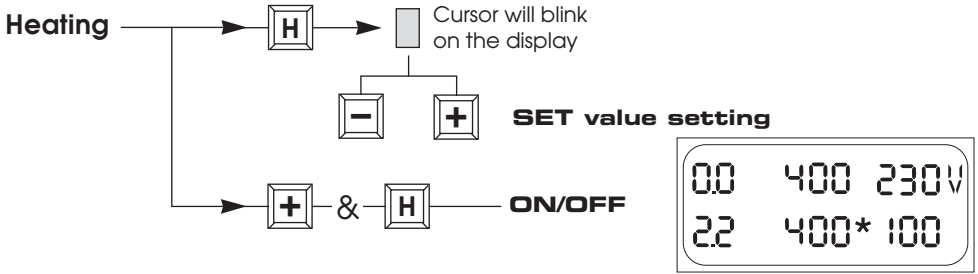
ACTION adjust Sensor

- Switch off **main switch (3)**
- Lower the **hot air blower (8)** and guide it to the left until it locks
- Loosen the **locking screw (7)**
- Push **sensor (6)** up to ca. 0.5 mm from the **tool holder (10)**
- Tighten **locking screw (7)**
- Move the **hot air blower (8)** out until it locks and swivel up.
- If malfunction is still present, contact Service Center.

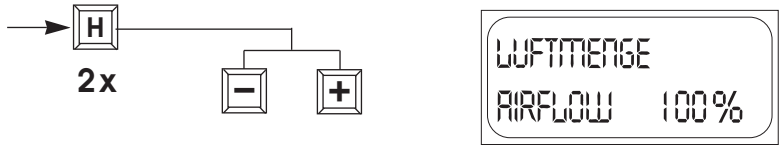


Welding Temperature

Set the welding temperature with the **[H]** **[-]** **[+]** keys. The temperature is dependent on the material and the ambient temperature. The in-put SET value will be shown on the display. Switch on the heating by pressing the **[+]** and **[H]** keys simultaneously. Heating-up time approx. 5 mins. (SET value not achieved, see airflow).



Airflow

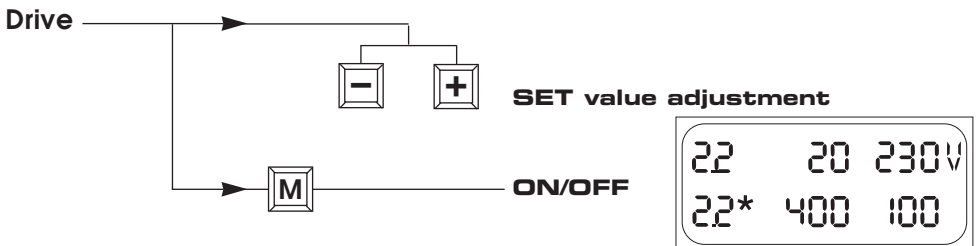


Important note:

During the heating-up process, the airflow is adjusted automatically to 100%. Only after reaching the SET temperature, the pre-set airflow % takes over (element protection). If the SET temperature has not been achieved, adjust the airflow to 80% before switching on the heating element.

Welding speed

Depending on the film or geomembrane liner and the influence of the weather, set the welding speed with the **[-]** **[+]** keys. The in-put SET value will be shown on the display.

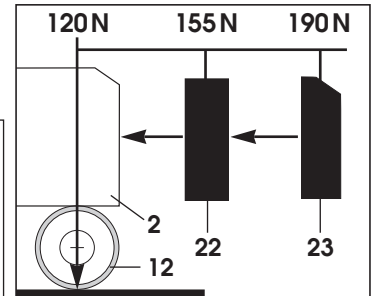


Welding pressure

- The welding pressure is transmitted to the **pendulum action roller (12)**.
- As necessary, the **additional weights (22)** and the **end weight (23)** can be put on (see illustration H).

Automatic Welding Machine	Weight
Without additional weight and end weight	kg 22
with additional weight and end weight	kg 32

Detail H



OPERATION

Overlap 20/40 mm

LEISTER Varimat

Operating condition

- Attach strain relief of **guide bar (26/27)**
- Hang the **mains cable (1)** into the **cable holder (29)**.
- Adjust the **guide bar (27)** with the **clamping lever (28)** to the desired height
- Check the basic setting of the **welding nozzle (9)**.
(ex works illustration A and C)
- Transport setting:
 - Swivel the **guide roller (18)** upwards
 - Release the **transport roller (16)** by raising the **guide bar (27)**.
 - Push the **transport roller (16)** by applying a little pressure to the **shift spring (19)** to the left until it stops (illustration B).
 - Position the **hot air blower (8)** by pulling the **locking lever (11)** and swivel it up until it locks.
- Connect the tool to the mains
The voltage rating stated on the tool should correspond to the mains voltage.

Illustration A



1-2 mm

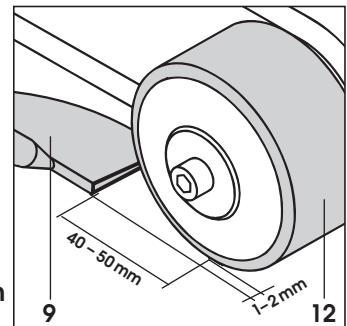


Illustration B

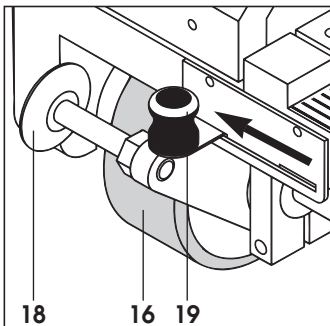


Illustration C

Tool positioning

- Tip up the Automatic Welding Machine by applying pressure to the **guide bar (27)** and position it ready for welding.
- Release the **transport roller (16)** by lifting it with the **guide bar (27)**.
- Push the **transport roller (16)** to the left until it stops by applying light pressure to the **shift spring (19)**.
- Swivel **the guide roller (18)** down.
- The **guide roller (18)** should be set parallel to the edge of the **pendulum action roller (12)** (see illustration E)
- Do a test run
- To correct the tracking , adjust the **adjustment screw for tracking (13)** (see illustration F and G, and the function notes on the automatic welding machine).

Illustration E

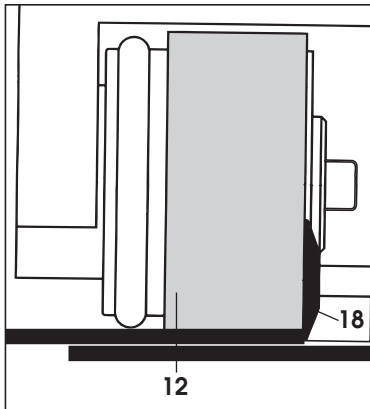


Illustration F

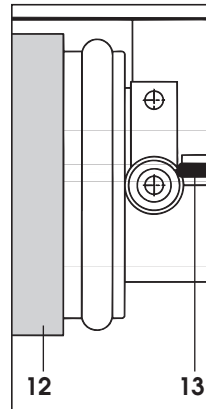
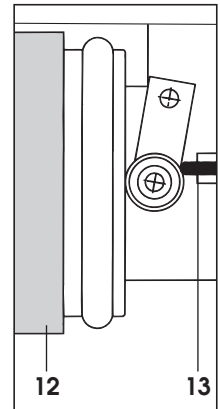





Illustration G



Welding procedure

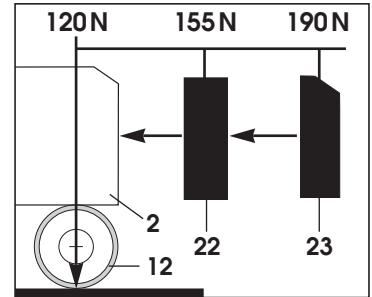
- Adjust welding parameter, see page 6.
- The welding temperature must be achieved (heating up time approx. 5 min).
- **Do a test run.**
- Pull the **locking lever (11)**, lower the **hot air blower (8)** and position it between the overlapped sheets until it stops.
If it does not start, see Sensor adjustment page 5.
The machine can be started manually with key 
- The automatic welding machine is guided along the overlap with the **guide bar (27)**. Do not apply pressure to **the guide bar (27)** this could lead to welding faults. Keep watching the **guide roller (18)** position.
- After welding, pull the **locking lever (11)**, take the **hot air blower (8)** out until it stops and swivel up until it locks.
- After completion of the welding work switch off the heater by pressing keys  and  on **keyboard (4)** simultaneously, so that the **welding nozzle (8)** cools down.
- Switch off **main switch (3)**.

Welding pressure

- The welding pressure is transmitted to the **pendulum action roller (12)**.
- As necessary, the **additional weights (22)** and the **end weight (23)** can be put on (see illustration H).

Automatic Welding Machine	Weight
Without additional weight and end weight	kg 24
With additional weight and end weight	kg 34

Illustration H



Operating condition

- Attach the **guide bar (26/27)**.
- Hang strain relief of **mains cable (1)** in the **cable holder (29)**.
- Adjust the **guide bar (27)** with the **clamping lever (28)** to the desired height
- Check the basic setting of the **welding nozzle (9)**. (ex works detail A and C).
- Transport setting:
 - Swivel the **guide roller (18)** upwards.
 - Release the **transport roller (16)** by lifting up with **the guide bar (27)**.
 - Push the **transport roller (16)** by applying a little pressure to **the shift spring (19)** to the left until it stops (illustration B).
 - Position the **hot air blower (8)** by pulling the **locking lever (11)** and swivel it up until it locks.
- The basic adjustment of the **welding nozzle (9)** is done at the factory (Illustration A and C)
- Connect the tool to the mains.
The voltage rating stated on the tool should correspond to the mains voltage.

Illustration A

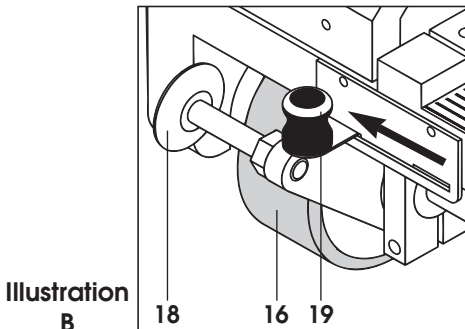
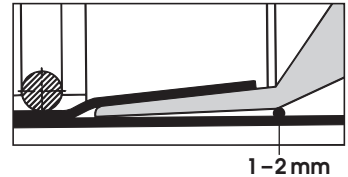


Illustration B

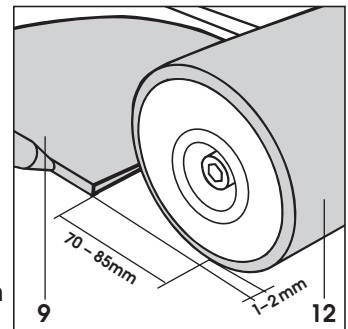


Illustration C

Tool Positioning

- Tip up the automatic Welding Machine by applying pressure to the **guide bar (27)** and position it ready for welding.
- Release the **transport roller (16)** by lifting it with the **guide bar (27)**.
- Push the **transport roller (16)** to the left until it stops by applying light pressure to the **shift spring (19)**.
- Swivel **the guide roller (18)** down.
- **The guide roller (18)** should be set parallel to the edge of the **pendulum action roller (12)** (see illustration E).
- Do a test run
- To correct the tracking, adjust the **adjustment screw for tracking (13)** (see illustration F and G, and the function notes on the automatic welding machine).

Illustration E

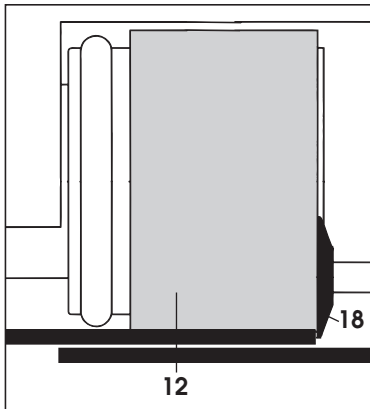


Illustration F

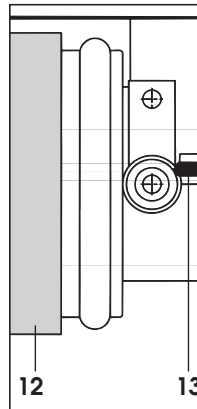
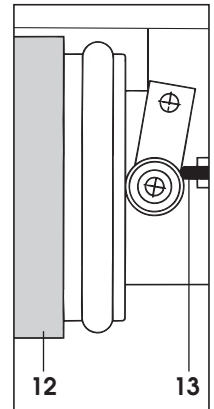


Illustration G



Welding procedure

- Adjust welding parameter, see page 6.
- The welding temperature must be achieved (heating up time approx. 5 min.). If the temperature is not achieved, reduce the airflow.
- **Do a test run.**
- Pull the **locking lever (11)**, lower the **hot air blower (8)** and position it between the overlapped sheets until it stops. The drive motor will start automatically. If it does not start, see Sensor adjustment page 5.
The machine can be started manually by pressing key **M**.
- The automatic welding machine is guided along the overlap with the **guide bar (27)**. Do not apply pressure to the **guide bar (27)** this could lead to welding faults. Keep watching the **guide roller (18)** position.
- After welding, pull the **locking lever (11)**, take the **hot air blower (8)** out until it stops and swivel up until it locks.
- When the welding is completed switch off heater with the **+** and **H** keys on the **keyboard (4)**, so that **the welding nozzle (8)** cools down.
- Switch off **main switch (3)**.

ACCESSORIES

- Only LEISTER accessories should be used.

TRAINING

The LEISTER Company and its authorized Service Centres offer welding courses world-wide free of charge. If necessary, the customer will also receive training on site.

MAINTENANCE

- Clean the **welding nozzle (9)** with a wire brush.
- Clean air inlet to **blower (8)**.
- Check **mains cable (1)** and plug for electrical and mechanical damage.

SERVICE AND REPAIR

- The tool should be checked after a maximum of approx. 1000 hours running time by an authorised Service Centre
- Repairs have to be carried out by authorised **LEISTER Service Centres** only. They guarantee a specialized and reliable **repair service within 24 hours** using original LEISTER spare parts.

GUARANTEE AND LIABILITY

- Guarantee and liability are in accordance with the guarantee certificate as well as with the currently valid general business and sales conditions.
- LEISTER Process Technologies rejects any guarantee claims for tools which are not in their original condition. The tools must never be altered or changed.

Technical data and specifications are subject to change without prior notice.

Your authorised Service Centre is:

Service Record LEISTER Varimat

This document should be kept up to date during repair or servicing by the authorized LEISTER Service Centre. This document should be in the possession of the owner of the equipment.

Technical data

Type of Automatic Hot Air Welding Machine

Order No.

Serial No

Rated voltage **V**

Rated capacity **W**

Sale **date**

Service

1. Date Service Centre Signature

2. Date Service Centre Signature

3. Date Service Centre Signature

4. Date Service Centre Signature

5. Date Service Centre Signature

6. Date Service Centre Signature

Repair

1. Date Service Centre Signature

2. Date Service Centre Signature

3. Date Service Centre Signature