

LEISTER Uniplan Wedge Hot wedge Automatic Welding Tool



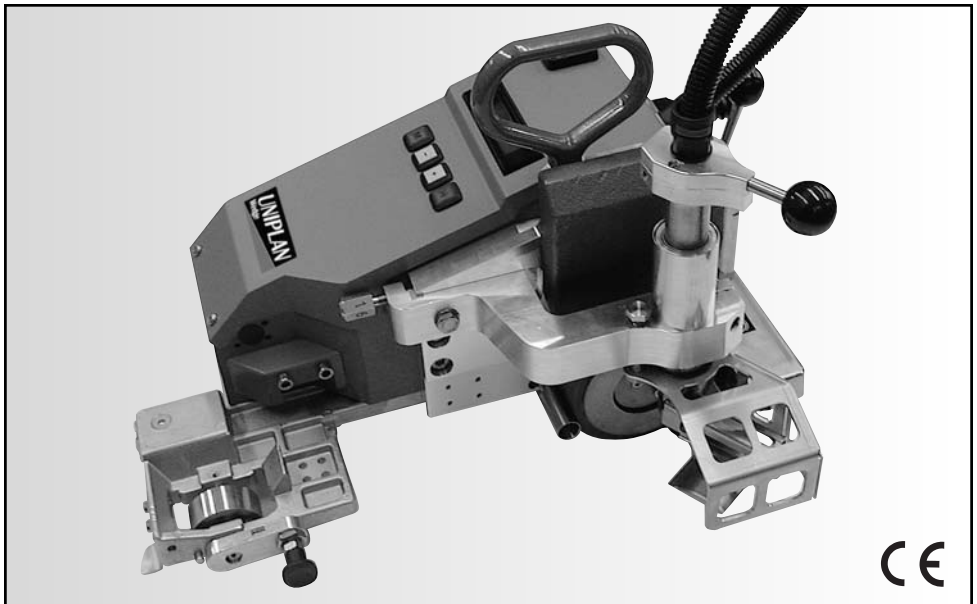
Read the operating instructions carefully before use and keep for future reference.

APPLICATION

LEISTER Uniplan Wedge Hot Wedge Automatic Welding Tool

- Overlap and tape welding of coated fabric covers, foils and geomembrane liners made from PVC-P, PE, ECB, CSPE, EPDM, PVDF etc, PE coated tape fabric for lorries, tents, agricultural covers, building trade, biotopes, swimming pools, marquees, boat covers, inflatable boats, advertising billboards etc.

Welding seam width 20 or 30 mm





WARNING



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



Incorrect use of hot air tools can present a **fire and explosion hazard**, particularly in the proximity of flammable materials and explosive gases.



Danger of getting burned! Do not touch the end of the heater tube and nozzle when they are hot. Let the tool cool down. Do not point the hot air flow in the direction of people or animals.



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

Only use extension lead with protective conductor.



Laser radiation! Do not look into the beam, Laser Class 2.



CAUTION



The **rated voltage** stated on the tool must correspond with the mains voltage.



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



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



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

Approval Marks



CCA certified

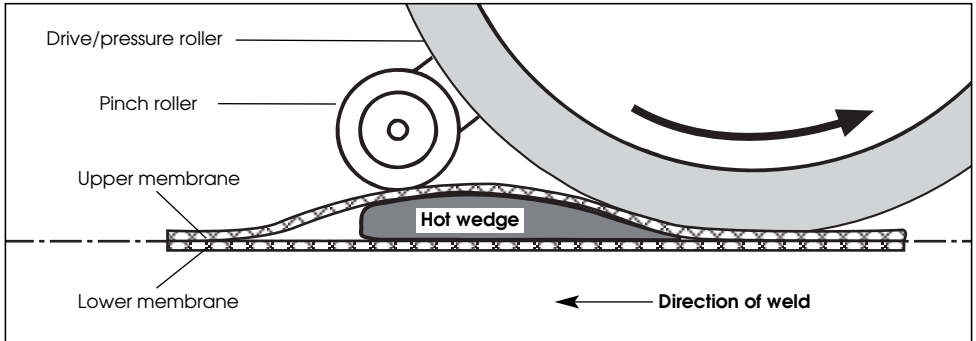
TECHNICAL DATA		Protection Class I		
Voltage	V~	230 ★	120 ★	100 ★
Frequency	Hz	50 / 60	50 / 60	50 / 60
Power consumption	W	900	900	900
Temperature	°C	max. 420	max. 420	max. 420
Noise level	L _{pA} (dB)	70	70	70
Drive speed	m/min.	1.0 – 7.5	1.0 – 7.5	1.0 – 7.0
Dimensions	mm	420×270×210	420×270×210	420×270×210
Weight	kg	11.5	11.5	11.5

★ Connection voltage not switchable

- **Heating system** → the hot wedge temperature is continuously adjustable and electronically controlled. Depending on the material, the hot wedge position can be sent to any required horizontal position.

Cross-section of hot wedge system

Figure 2



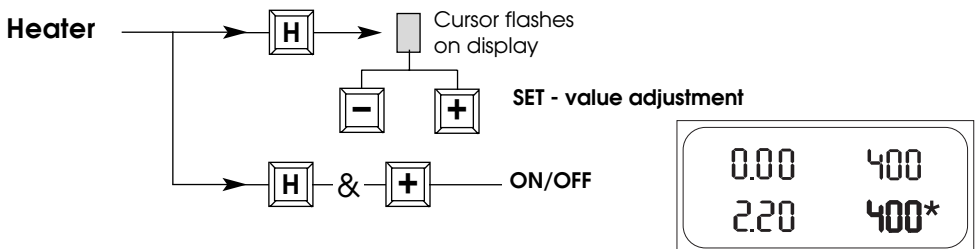
- **Drive speed** → continuously adjustable and electronically controlled. The control circuit is configured such that the desired welding speed remains constant during any voltage fluctuations. The **drive/pressure roller (8)** is configured as a pendulum roller.
- **Welding pressure** → the welding pressure is brought to bear on the material by means of the machine's weight and the **extra weight (3)** via the **drive/pressure roller (8)**.

Welding temperature



Adjust the welding temperature using the **keys** **[H]**, **[-]**, **[+]**. The temperature setting depends on the material and ambient temperature. The SET value is shown on the display.

Press **keys** **[H]** and **[+]** simultaneously to switch heater on.

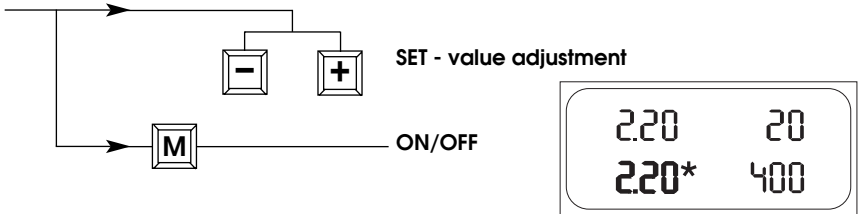
Heating up time is appr. 5 minutes.



Welding speed

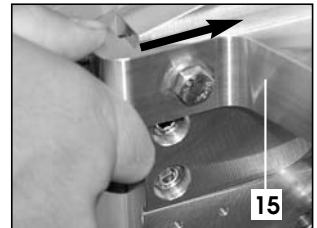
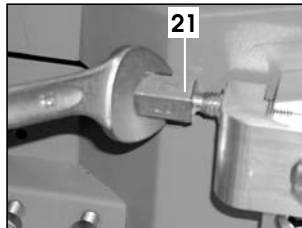
Adjust welding speed using **keys**,  ,  , depending on the material to be welded and the ambient temperature. The SET value is shown on **display (13)**.

Drive



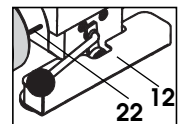
Hot wedge welding position

- Depending on the material thickness, pre-adjust the position of the **hot wedge (6)** in relation to the **drive/pressure roller (8)** in accordance with Fig 2, Page 4.
- Procedure
 - Loosen **fixing screw (20)**
 - Using **adjusting screw (21)**, adjust the position of the hot wedge in relation to the drive/pressure roller. (One complete turn = 1.25 mm)
 - Push **holding arm (15)** up to the stop in the direction of the hot wedge.
 - Tighten **fixing screw (20)**.



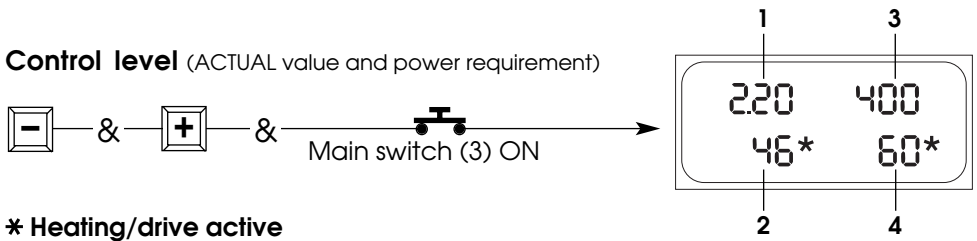
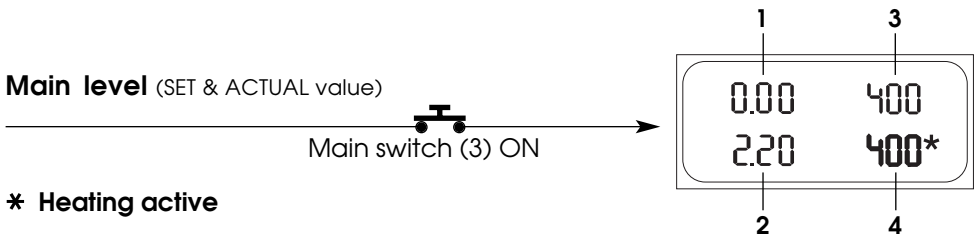
-Tracking correction of the drive/pressure roller

- Tracking control should be carried out using the **track adjustment screw (22)**, see functional directions on the **lifting device (12)**.
- Carry out test run.



Control of the welding process by means of the power requirement display (main level or control level)

Display Number	Drive/Heating	
	Main level	Control level
1 Speed	ACTUAL value	ACTUAL value
2 Speed	SET value	% power
3 Temperature	ACTUAL value	ACTUAL value
4 Temperature	SET value	% power



Control level	Display/cause
Display 4	Heating after warm up time
100 % 100 %	<ul style="list-style-type: none"> • Reduced mains voltage • Heating cartridge fault (Contact Service Centre)
Display 2	Drive
100 % 100 %	<ul style="list-style-type: none"> • Reduced mains voltage • High welding speed with heavy torque loading

Weld preparation

- Spread the weld material on a clean and level surface.
- The material to be welded must be dry and clean between the overlaps.
- The overlap width should be set as follows:
 - Heating wedge 20 mm = overlap width 23 mm
 - Heating wedge 30 mm = overlap width 31 mm
- The material must be stretched out tightly and fixed.

Preparing for use

- Hook **extra weight (3)** onto **base plate (4)**.
- Swing **hot wedge (6)** upwards using **swivel lever (19)** and engage, (Fig. A).
- Set **guide roller (25)** to position "Inaktiv" (inactive) by means of **guide roller knob (24)** and **guide roller lever (23)**, (Fig. B).
- Operate **lifting device (12)** by means of **lifting device lever (18)** so that **drive/pressure roller (8)** and **drive roller (10)** are at no-load, (Fig. C).
- Raise **pinch roller (9)**, (Fig. D).
- **Drive/pressure roller (8)** should be positioned parallel to the edge of **guide roller (25)**. See Page 5 for **drive/pressure roller (8)** track correction.
- Connect tool to mains. Mains voltage must correspond with tool voltage.
- Switch tool on using **main switch (16)**.

Fig. A

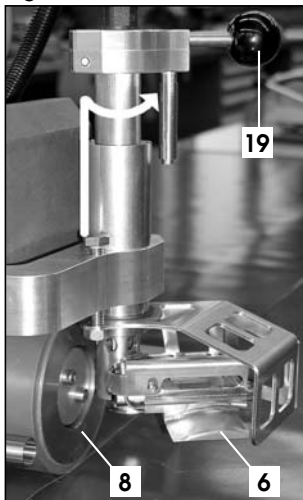


Fig. B

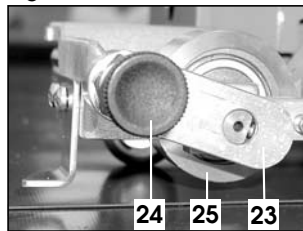


Fig. C

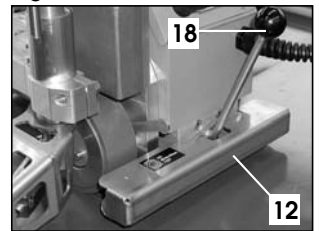


Fig. D



Fig. E



- The upper and lower surfaces of the **hot wedge (6)** must be cleaned after each weld run, using a fine brass wire brush (Fig. E)

Tool positioning

- Place automatic welder onto the overlap of material to be welded.
- **Guide cover (26)** or **laser guide** (optional extra) should be lined up with overlap edge of the material to be welded (Fig. E).
- **Drive/pressure roller (8)** should protrude over overlap edge of the material to be welded by about 2 mm (Fig. E).
- If welding takes place with **guide roller (25)** in position, then set **guide roller lever (23)** to "aktiv" (active) and engage (Fig. F).
- Operate **lifting device (12)** by means of **lifting device lever (18)** so that the automatic welder is ready to move (Fig. G).

Fig. E

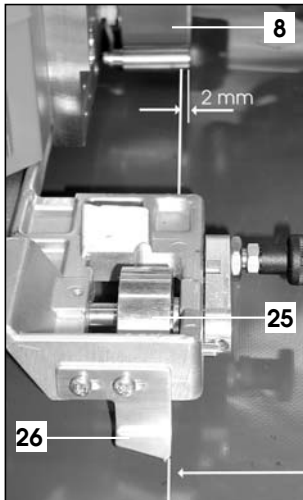


Fig. F

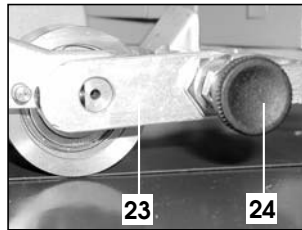
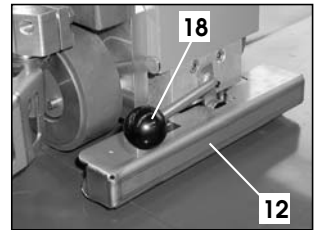


Fig. G



Welding process

- Set welding parameters, see Pages 4 and 5.
- Allow welding temperature to be reached, Display 3, see Page 6.
- Position **hot wedge (6)** using **swivel lever (19)** between the materials to be welded (Fig. H).
The welding process will start automatically via automatic drive.
- Carry out test weld in accordance with the material manufacturer's welding instructions and national guidelines or regulations.
- Check welding process. If necessary, correct welding parameters, see Pages 4 and 5.
- After weld run, swing **hot wedge (6)** out and up to the stop using **swivel lever (19)**, raise up and engage (Fig. A).
The welding process will stop automatically.
- Operate the **lifting device (12)** by means of **lifting device lever (18)** so that **drive/pressure roller (8)** and **drive roller (10)** are at no-load (Fig. C).
- The upper and lower surfaces of the **hot wedge (6)** must be cleaned after each weld run, using a fine brass wire brush (Fig. E).
- Switch off tool at **main switch (16)**.
- Disconnect tool from mains.

Fig. H

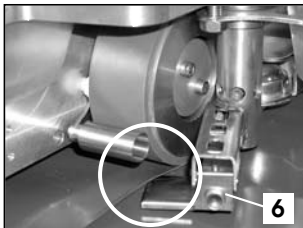


Fig. A

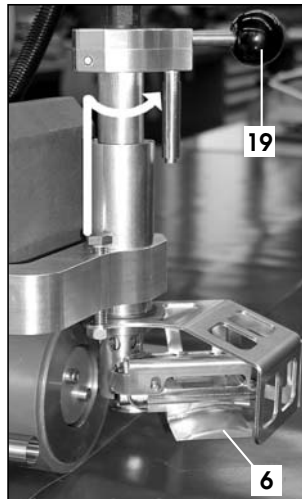
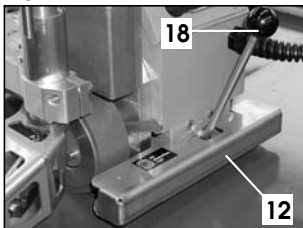


Fig. E



Fig. C



Problem	Possible cause	Solution
Poor weld strength	Wedge temperature too low.	Adjust temperature to required welding temperature and/or reduce speed.
	Hot wedge (6) too far from drive/pressure roller (8) .	Move wedge closer to drive/pressure roller (8) using adjusting screw (21) .
Faults at regular intervals along welded seam	Drive/pressure roller (8) out of true having been left in standing position.	Allow tool to travel several meters using motor switch; always lift tool onto lifting device (12) after weld runs.
Lower membrane ripples	Membrane tension too low.	Increase membrane (material) tension.
	Hot wedge (6) too close to drive/pressure roller (8) .	Remove hot wedge (6) somewhat further from drive/pressure roller (8) using adjusting screw (21) .
	Pinch roller (9) may be stiff.	Contact authorised Service Centre.
Edge of weld outside the seam on the under side of the upper	Incorrect overlap width selected.	Hot wedge / overlap width 20mm / 23mm 30mm / 31mm
The machine tends to the left or right of direction of travel	Connection lead is not running directly behind tool. The cable may be rubbing against table edge.	Connection lead must run freely behind tool avoiding rubbing points.
	The adjustment between guide cover (26) and guide roller (25) has shifted.	Check adjustment between guide cover (26) and guide roller (25) using ruler, re-align guide cover (26) if necessary.
	Adjusting screws on drive/pressure roller (8) are out of adjustment.	See Page 5 for drive/pressure roller (8) track correction or contact authorised Service Centre.

Power control: heater/drive

Control of the welding process and fault recognition by means of power requirement display (see Page 6).

Accessories

- Fine brass wire brush Article No. 116.798

Optional extras

- Laser guide Article No. 116.506
- 22 mm tape dereeling device Article No. 116.231
- Large base weight, 3.5 kg Article No. 116.800
- Replacement hot wedge, 20 mm Article No. 116.161
- Replacement hot wedge, 30 mm Article No. 116.162

Only LEISTER accessories may be used

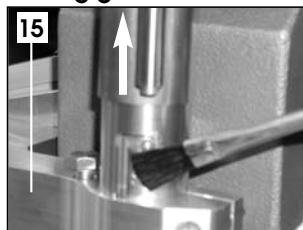
TRAINING

- LEISTER Process Technologies and its authorised Service Centres offer welding and induction courses.

MAINTENANCE

- Check **mains cable (5)** and plug for any electrical or mechanical damage.
- Clean **hot wedge (6)** with fine brass wire brush.
- Check **guide roller (25)** for stiffness.
- Lubricate slide on **holding arm (15)** (see Fig.).

Shifting gate



SERVICE AND REPAIR

- The tool must be checked at an authorised Service Centre if "**maintenance; servicing**" appears on **Display (13)**
- Repairs should only be carried out by authorised **LEISTER Service Centres**. They guarantee a correct and reliable **repair service within 24 hours**, using original spare parts in accordance with the circuit diagrams and spare parts lists.

WARRANTY

- For this tool, we generally provide a warranty of one (1) year from the date of purchase (verified by invoice or delivery document). Damage that has occurred will be corrected by replacement or repair. Electrical hot wedge are excluded from this warranty.
- Additional claims shall be excluded, subject to statutory regulations.
- Damage caused by normal wear, overloading or improper handling is excluded from the guarantee.
- Guarantee claims will be rejected for tools that have been altered or changed by the purchaser.

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

Your authorised Service Centre is: