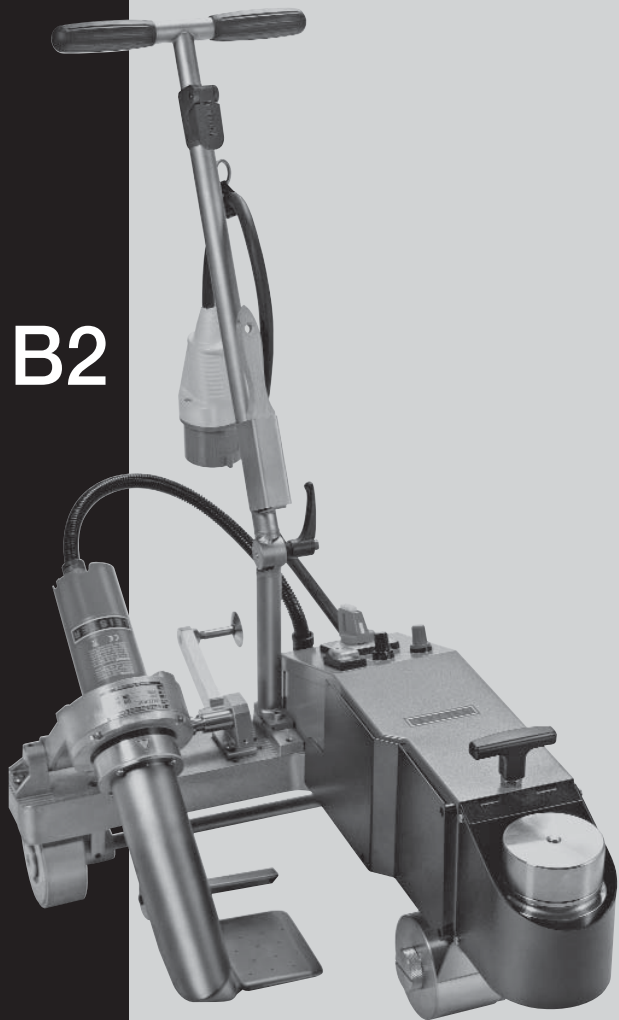


LEISTER

®



BITUMAT B2



Leister Technologies AG
Galileo-Strasse 10
CH-6056 Kaegiswil/Switzerland

Tel. +41 41 662 74 74

Fax +41 41 662 74 16

www.leister.com
sales@leister.com



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

Leister BITUMAT B2 Hot air welder

Application

Handheld hot air welder for overlap welding of modified bitumen membrane liners (SBS, APP) in the open air or in well ventilated rooms, for various roof systems, on horizontal and shallow-pitched flat surfaces.



Warning



Danger to life when opening the device as live components and connections are exposed. Unplug the line/mains plug from the plug socket before opening the device.



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



Do not touch hot welding nozzle, they can cause **burns**. Allow the tool to cool down. Do not point the hot air flow in direction of people or animals.



Connect tool to a **receptacle with protective earth terminal**. Any interruption of the protective earth conductor inside or outside the tool is dangerous!
Use only extension cables/cords with protective earth conductor!



Caution



Rated voltage stated on the device must correspond to line/mains voltage. N 61000-3-11; $Z_{max} = 0.105 \Omega + j 0.066 \Omega$. If necessary, consultate supply authority.

In the case of **line/mains power failure** extract hot air blower and set main switch to position **0**



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**. Heat can ignite flammable materials which are not in view.

The device machine may only be used by **qualified specialists** or under their supervision. Children are not authorized to use this device.



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



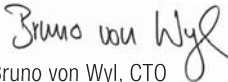
The handle and guide bar may not be used as transport aids. The replacement drive roller must during transport always be secured with the screw-on additional weight to be in the holder.

Conformity

Leister Technologies AG, Galileo-Strasse 10, CH-6056 Kaegiswil/Switzerland confirms that this product, in the version as brought into circulation through us, fulfils the requirements of the following EC directives.

Directives: 2006/42, 2004/108, 2006/95
Harmonised standards: EN 12100-1, EN 12100-2, EN 60204-1, EN 14121-1
EN 55014-1, EN 55014-2, EN 61000-6-2,
EN 61000-3-2, EN 61000-3-3, EN 61000-3-11 (Z_{max}),
EN 61000-3-12, EN 50366, EN, 62233, EN 60335-2-45

Kaegiswil, 28.11.2011


Bruno von Wyl, CTO


Beat Mettler, COO

Disposal



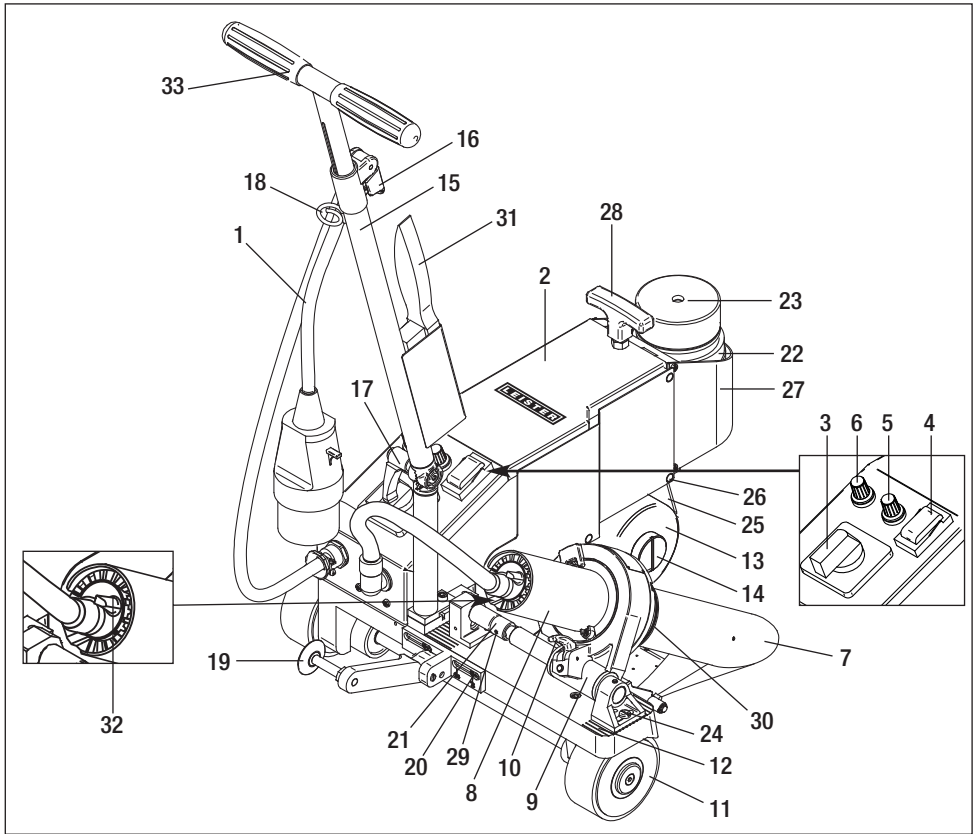
Power tools, accessories and packaging should be sorted for environmental-friendly recycling. **Only for EC countries:** Do not dispose of power tools into household waste! According to the European Directive 2002/96 on waste electrical and electronic equipment and its incorporation into national law, power tools that are no longer suitable for use must be separately collected and sent for recovery in an environmental-friendly manner.

Technical data

Voltage	V~	230 or 400 (Mains voltage cannot be switched over)		
Power consumption	W	6700		
Frequency	Hz	50/60		
Temperature	°C	20 – 650	°F	68 – 1202
Speed	m/min.	0.8 – 12	ft/min.	2.7 – 40
Air flow range	%	85 – 100		
Emission level	L _{pA} (dB)	73		
4.0				
Dimensions L×W×H	mm	690 × 490 × 33	inch	27.0 × 19.3 × 13
Weight without power supply cord	kg	39	lbs	86
Mark of conformity		CE		
Approval mark		Ⓢ		
Certification scheme		CCA		
Protection class I		Ⓢ		

Technical data and specifications are subject to change without prior notice

Description of device



- | | |
|------------------------------------|--|
| 1 Power supply cord | 17 Clamping screw, lower guide bar |
| 2 Housing | 18 Holder for power supply cord |
| 3 Main switch | 19 Guide roller |
| 4 Drive switch | 20 Adjusting screw – guide roller |
| 5 Speed knob | 21 Adjusting sleeve |
| 6 Temperature knob | 22 Replacement drive roller |
| 7 Welding nozzle | 23 Screw-on additional weight |
| 8 Hot air blower | 24 Screw for welding nozzle adjustment |
| 9 Tool holder | 25 Scraper |
| 10 Locking lever | 26 Screw for scraper |
| 11 Transport roller | 27 Holder for replacement drive roller |
| 12 Scale for tool adjustment | 28 Carrying handle |
| 13 Drive roller | 29 Screw for adjusting sleeve |
| 14 Fastening screw | 30 Fastening screw for welding nozzle |
| 15 Lower guide bar | 31 Steel brush |
| 16 Clamping lever, upper guide bar | 32 Turning knob for air volume |
| | 33 Upper guide bar |

Transport

Use the storage case included in the scope of delivery as transport protection for the hot air welder BITUMAT B2. The storage case is provided with a handle and transport rollers.



The **replacement drive roller (22)** must during transport always be secured with the **screw-on additional weight (23)** to be in the **holder (27)**.

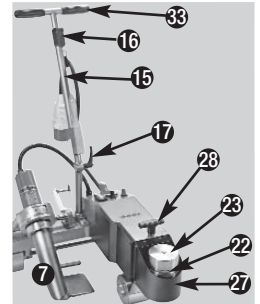


Do not use the **handles** of the storage case, the **carrying handle (28)** and **guide bar top/bottom (15/33)** of the hot air welder for transport with the crane.

Use the **carrying handle (28)** and **guide bar top (33)** to lift the hot air welder by hand.



For transport preparation let **welding nozzle (7)** of the BITUMAT B2 cool down.

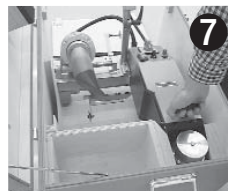
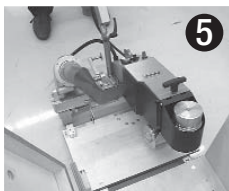
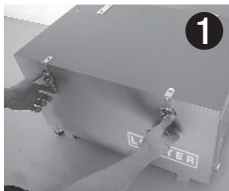


Moving BITUMAT B2 out of carrying case:

- 1 Open carrying case at top
- 2 Open carrying case at sides
- 3 Open **clamping screw, lower guide bar (17)** and move **lower guide bar (15)** into required position; tighten **clamping screw, lower guide bar (17)**
- 4 Open **clamping lever, upper guide bar (16)**
Adjust **upper guide bar (33)** to required height; tighten **clamping lever, upper guide bar (16)**
- 5 Carefully move the hot air welder BITUMAT B2 out of the carrying case

Moving BITUMAT B2 in carrying case:

- 5 Carefully move the hot air welder BITUMAT B2 from the side in the carrying case
- 6 **7** Place BITUMAT B2 in the storage case using the **carrying handle (28)**.
- 4 Open **clamping lever, upper guide bar (16)** and move in **upper guide bar (33)**; tighten **clamping lever, upper guide bar (216)**
- 3 Open **clamping screw, lower guide bar (17)** and move **guide bar (15)** into transport position; tighten **clamping screw, lower guide bar (17)**
- 1 Close the side and top carrying case
- 8 For transporting the storage case by hand use carrying handles.

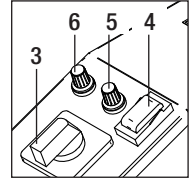


Welding parameters

Welding temperature



Turn the **main switch (3)** to I. Set the **temperature knob (6)** to the required value. Heating-up time approx. 5 minutes.

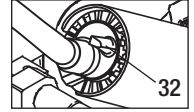


Air volume

- To achieve optimum welding of the modified bitumen membrane liners or to avoid bitumen spatters, the air volume can be set with the **turning knob for air volume (32)**.



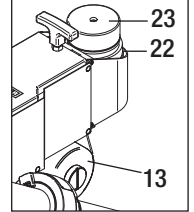
CAUTION: If the quantity of air flow is reduced, the **temperature knob (6)** may not be set higher than stage 8. Risk of overheating the heating element.



Welding speed



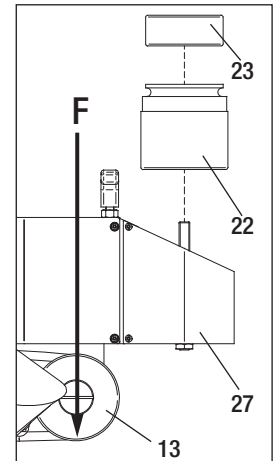
Set the appropriate welding speed with the **speed knob (5)** depending on the sealing sheeting and weather conditions.



Joining force

- The joining force is transmitted to the **drive roller (13)**.
- The **replacement drive roller (22)** and the **screw-on additional weight (23)** can be removed as required (see joining force table).

Joining force (F) table	75 mm	100 mm
Without weight (22, 23)	160 N	160 N
With screw-on additional weight (23) and without replacement drive roller (22)	180 N	180 N
Replacement drive roller (22) and without screw-on additional weight (23)	205 N	210 N
Replacement drive roller (22) and with screw-on additional weight (23)	225 N	230 N

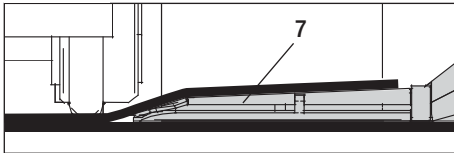


CAUTION: The **replacement drive roller (22)** must during transport always be secured with the **screw-on additional weight (23)** to be in the **holder (27)**.

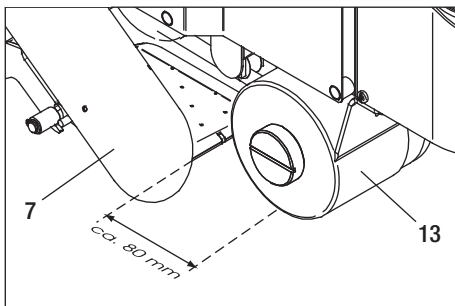
Operating preparation

- Before putting into operation, check **power supply cord (1)** and connector as well as extension cable for electrical and mechanical damage.
- Move **lower guide bar (15)** into the required position using **clamping screw, lower guide bar (17)** and **upper guide bar (33)** using **clamping lever, upper guide bar (16)**.
- Clip strain relief of **power supply cord (1)** in **holder (18)**.
- Check the basic setting of the **welding nozzle (7)**.
 - The **welding nozzle (7)** must lie flat on the lower membrane liners (see Detail A).
 - The distance between the centre of the **drive roller (13)** and the air outlet of the **welding nozzle (7)** should be 80 mm (see Detail B). Otherwise the **hot air blower (8)** must be set with the **scale for tool adjustment (12)** by loosening the **screws (24)**.
 - The **welding nozzle (7)** should be set parallel with the **drive roller (13)**
- Transport configuration
 - Swivel the **guide roller (19)** upwards
 - Extend the **hot air blower (8)** by pulling the **locking lever (10)** and swivelling it up until it locks in place.
- Set the **guide roller (19)** to the required overlap using the **guide roller adjusting screw (20)**.
- The distance between **Guide roller (19)** and **Drive roller (13)** is 5 mm (Detail C).

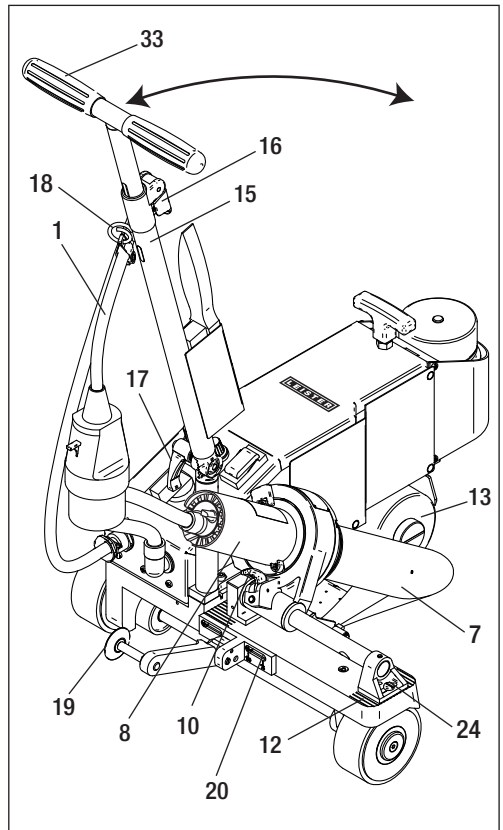
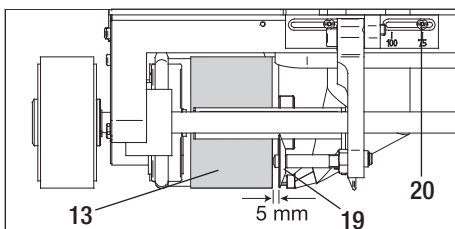
Detail A



Detail B



Detail C



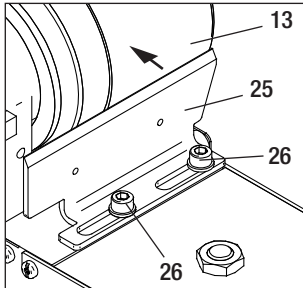
Operating preparation

- To achieve an even weld, there must be no bitumen deposits on the **drive roller (13)**.
- In the case of soiling, the following measures can be taken:
 - Release **screws for scraper (26)**. Reduce the distance between the **scraper (25)** and the **drive roller (13)**. Tighten the **screws for scraper (26)**.
 - Release the **fastening screw (14)**, remove and clean the **drive roller (13)**. Mount the **drive roller (13)**. Tighten the **fastening screw (14)**.
 - Release the **fastening screw (14)** and remove the **drive roller (13)**. Release the **Screw-on additional weight (23)**, remove the **replacement drive roller (22)** from the **holder (27)**. Mount the **replacement drive roller (22)** with the **fastening screw (14)**. Place the soiled **drive roller (13)** into the **holder (27)** and secure with the **Screw-on additional weight (23)**.
- Connect tool to rated voltage.

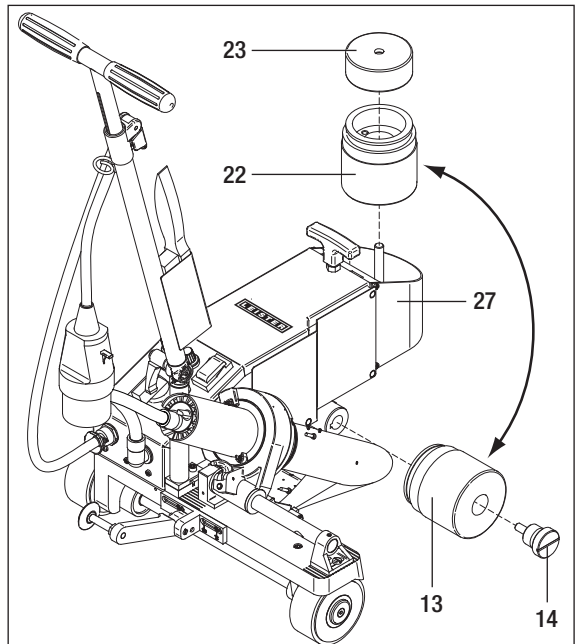
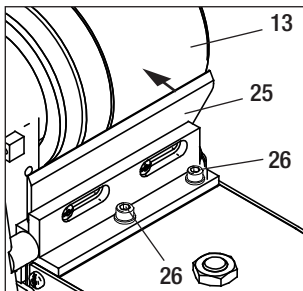


Rated voltage stated on the device must correspond to line/mains voltage.

Without lifting device



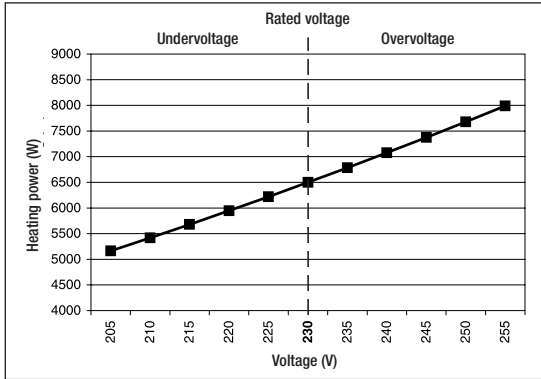
With lifting device



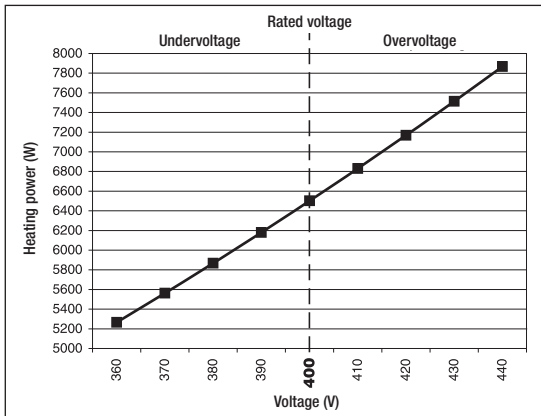
Power supply

If an extension cable is used, a $3 \times 4 \text{ mm}^2$ mains cable must be used. The extension cable must be approved for the application site (e.g. outdoors) and labelled accordingly.

Heating power at +/- 10% the rated voltage



Voltage (V)	Heating power (W)
205	5164
210	5419
215	5680
220	5947
225	6221
230	6500
235	6786
240	7078
245	7376
250	7680
255	7990



Voltage (V)	Heating power (W)
360	5266
370	5563
380	5868
390	6180
400	6500
410	6831
420	7168
430	7513
440	7867

Undervoltage has a negative effect on the welding speed and quality!

Tool positioning without lifting device

- Lift hot air welder applying pressure onto **upper guide bar (33)** and move to weld position
- Swivel the **guide roller (19)** downwards.
- The distance between **Guide roller (19)** and **Drive roller (13)** is 5 mm (Detail C).

Welding process without lifting device



- Set the welding parameters, see Page 19.
- The welding temperature must be attained (heating-up time approx. 5 minutes).



- Perform a test welding according to the welding instructions of the material manufacturer and the national standards or guidelines. Approve the test welding.



- Raise the **locking lever (10)**, lower the **hot air blower (8)** and move it in between the overlapping membrane liners to the end stop. Wait a moment until the material is plasticized.



- Start the drive with the **drive switch (4)**. In case of mains power failure, the **drive switch (4)** switches off automatically. Once mains power is restored the drive can be restarted.

- The hot air welder is guided along the overlap at the **upper guide bar (33)**. Do not apply any pressure to the **upper guide bar (33)**; this could lead to welding errors. Observe the position of the **guide roller (19)**.
- After welding pull **locking lever (10)**, move out **hot air blower (8)** as far as the end stop and swivel up to the latching point, at the same time switch off **drive switch (4)**.

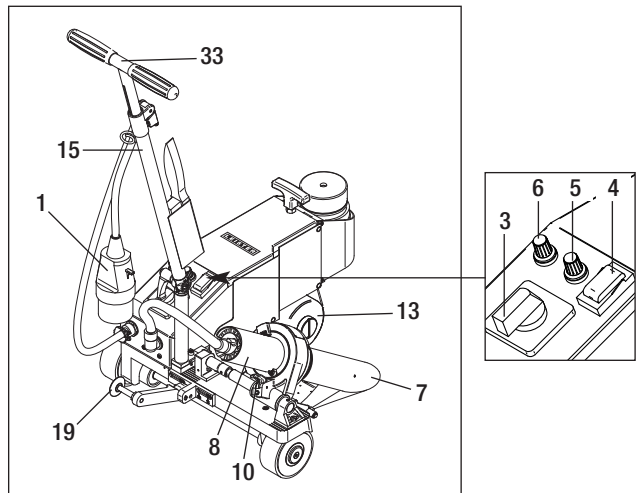
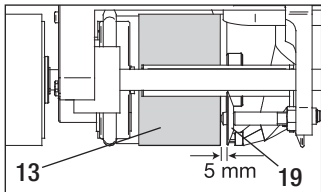


- On completion of welding work, set the **temperature knob (6)** to zero; this cools the **welding nozzle (7)**.
- Set the **main switch (3)** to 0.
- In the case of line/mains power failure extract **hot air blower (8)** and set **main switch (3)** to position 0



- Disconnect **power supply cord (1)** from the line/mains.

Detail C



Tool positioning with lifting device

- Lift hot air welder applying pressure onto **upper guide bar (33)** and move to weld position
- Swivel the **guide roller (19)** downwards.
- The distance between **Guide roller (19)** and **Drive roller (13)** is 5 mm (Detail C).
- Lift the welding machine with the **lifting device (34)**.

Welding process with lifting device



- Set the welding parameters, see Page 19.
- The welding temperature must be attained (heating-up time approx. 5 minutes).



- Perform a test welding according to the welding instructions of the material manufacturer and the national standards or guidelines. Approve the test welding.



- Start the drive with the **drive switch (4)**. In case of mains power failure, the **drive switch (4)** switches off automatically. Once mains power is restored the drive can be restarted.



- Raise the **locking lever (10)**, lower the **hot air blower (8)** and move it in between the overlapping sealing sheets as far as it goes. Wait a moment until the material is plasticized and then lower the welding machine using the **lifting device (34)**.

- The hot air welder is guided along the overlap at the **upper guide bar (33)**. Do not apply any pressure to the **upper guide bar (33)**; this could lead to welding errors. Observe the position of the **guide roller (19)**.

- After welding pull **locking lever (10)**, move out **hot air blower (8)** as far as the end stop and swivel up to the latching point, at the same time switch off **drive switch (4)**.



- On completion of welding work, set the **temperature knob (6)** to zero; this cools the **welding nozzle (7)**.

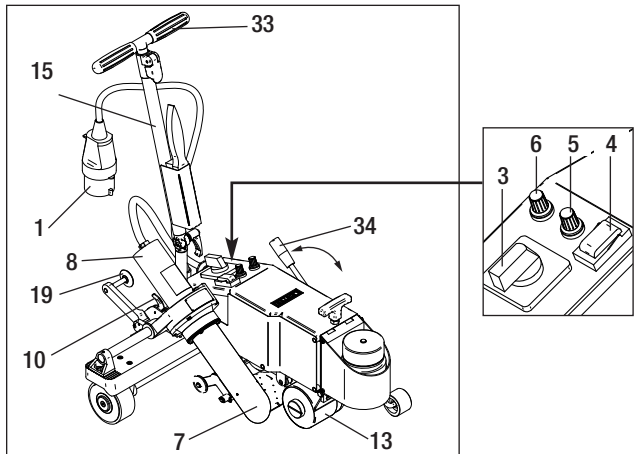
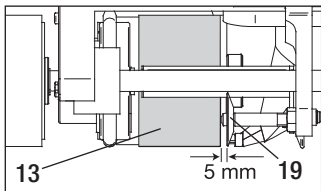
- Set the **main switch (3)** to 0.

- In the case of line/mains power failure extract **hot air blower (8)** and set **main switch (3)** to position 0



- Disconnect **power supply cord (1)** from the line/mains.

Detail C



Changeover

Converting the hot air welder BITUMAT B2 from 100 mm to 75 mm or vice versa.



Disconnect **power supply cord (1)** from the line/mains.

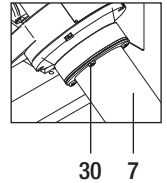


The device may only be converted while the **welding nozzle (7)** is cold.



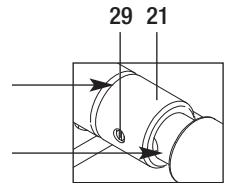
Caution when removing the **welding nozzle (7)**; do not damage mica tube and heating element.

- Loosen **fastening screws for welding nozzle (30)**.
- Carefully remove **welding nozzle (7)** and install new **welding nozzle (7)**.
- Fasten **welding nozzle (7)** with the **fastening screws for the welding nozzle (30)**.
- Adjustment of the **welding nozzle (7)**, see page 20.



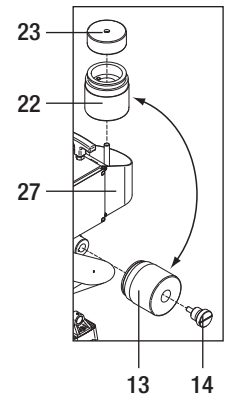
- Loosen **screw for adjusting sleeve (29)**. Move **adjusting sleeve (21)** correspondingly and lock with the **screw for the adjusting sleeve (29)**.

Opening for 75 mm



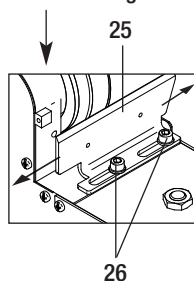
Opening for 100 mm

- Loosen **fastening screw (14)**, remove **drive roller (13)**.
- Install new **drive roller (13)**, tighten **fastening screw (14)**.
- Loosen **screw-on additional weight (23)** and remove replacement **drive roller (22)** from **holder (27)**. Position new replacement **drive roller (22)** in the **holder (27)** and fasten with the **screw-on additional weight (23)**.



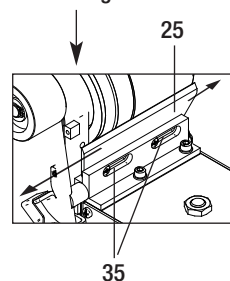
- Without lifting device
 - Loosen **screw for scraper (26)** slightly. Move **scraper (25)** to the new position. Adjust distance from **scraper (25)** to **drive roller (13)**. Tighten screw for **scraper (26)**.
- With lifting device
 - Loosen **screw for scraper (35)** slightly. Move **scraper (25)** to the new position. Tighten screw for **scraper (35)**.

Without lifting device



Scraper (25) position for 75 mm driver roller (13)

With lifting device



Scraper (25) position for 100 mm driver roller (13)

Accessories

Only Leister accessories should be used

- 139.048 Bitumen nozzle 75 mm
- 138.047 Bitumen-nozzle 100 mm
- 137.895 Pressure roller with gap 100 mm
- 137.896 Pressure roller with gap 75 mm
- 140.229 Pressure roller without gap 100 mm
- 140.228 Pressure roller without gap 75 mm
- 140.476 Lifting device
- 140.489 Carrying case

Training

- Leister Technologies AG and its authorised Service Centres offer free welding courses and training. Informationen below www.leister.com.

Maintenance

- Clean the **drive roller (13)**
- Clean the **welding nozzle (7)** with a **steel brush (31)**
- Clean the air inlet on the **hot air blower (8)**
- Check **power supply cord (1)** and plug for electrical and mechanical damage

Service and repair

- Regular service of the hot air welder BITUMAT B2 increases its service life!
- 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. Heating elements 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.



Your authorised Service Centre is:

Leister Technologies AG
Galileo-Strasse 10
CH-6056 Kaegiswil/Switzerland

Tel. +41 41 662 74 74

Fax +41 41 662 74 16

www.leister.com
sales@leister.com