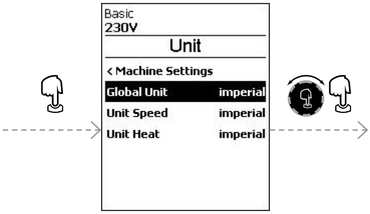
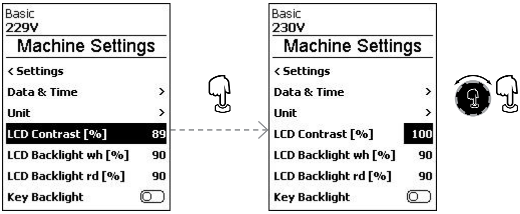
Unit

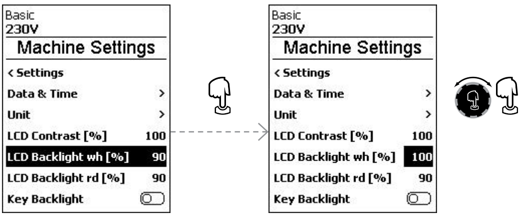
Here you can select the unit of the display; metric or imperial.



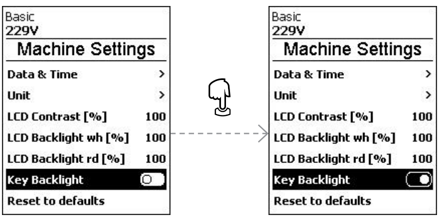
LCD Contrast



LCD Backlight (wh, rd)



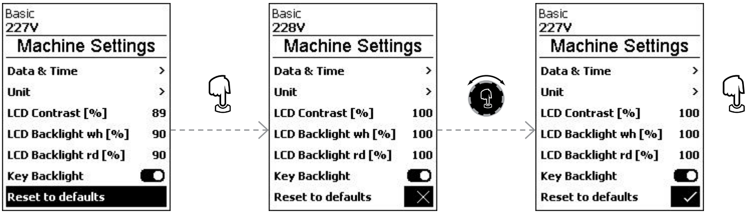
Backlight button



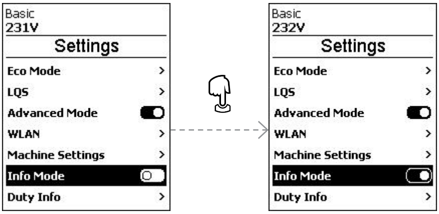
Using the Button-Backlight function you can switch the illumination of the buttonboard on or off.

Reset to defaults

Activating the Reset to defaults function resets all settings to factory default.

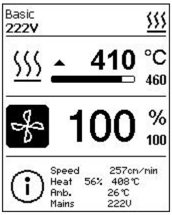


9.10 Info mode



Info Mode is switched off at the factory.

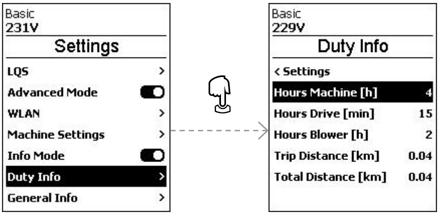
If Info Mode is activated, additional information is displayed at the work level.



The following information is displayed:

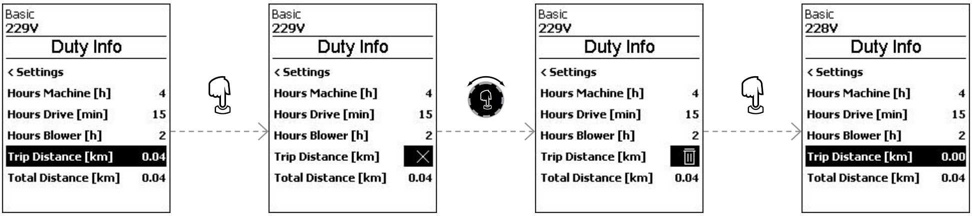
- Speed in cm/min
- Capacity utilization of the heating output in percent as well as the temperature in °C
- Ambient temperature in °C
- Mains voltage in V

9.11 Duty info

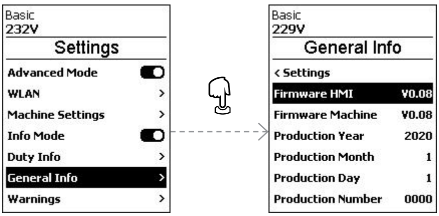


If Duty Info is activated, the runtimes of the machine, the drive and the blower are displayed.
In the two lines below, you can see the distances traveled as a day counter and as total run time.
The day counter can be deleted by you.

To delete the day counter, select the menu item Trip Distance.



9.12 General Info

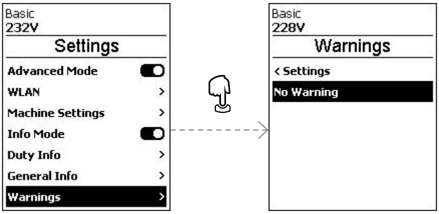


The following information is displayed:

- Software version HMI and PCU
- Production date of the machine
- Serial number

10. VARIMAT 700/500 warning and error messages

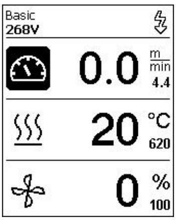
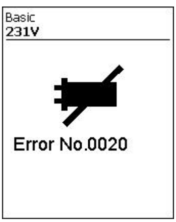
All warnings are displayed via the Warnings function.

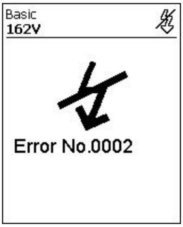


If there is a warning pending, you can still continue to work largely without restrictions.

In contrast to the warning message, it is **not possible to continue working once an error message has appeared.** The heating is switched off automatically and the drive is blocked. The display of the corresponding error codes takes proceeds without delay in the Work display (41).

You can receive specific information regarding the type of error or warning at any time, including via the menu Settings under Show Warnings.

Message type	Display	Error code	Description and measures
Warning		---	Example warning symbol in the status display (33). Supply voltage too high. At the same time, the red backlight of the LCD module is switched on alternately.
Error		0008	Error symbol and text of note (Error No. 0008/Excessive temperature) in the work display Solution: Let the device cool down
Error		0020	Error symbol and text of note (Error No. 0020/Heating element defective) in the work display. Solution: Replace the heating element

<table>
<tr><td rowspan="6">Error (including address of sales and service partner, if applicable)*</td><td rowspan="6">
</td><td>0002</td><td>Undervoltage/overvoltage</td></tr>
<tr><td>0004</td><td>Hardware error</td></tr>
<tr><td>0008</td><td>Thermoelement is defective</td></tr>
<tr><td>0100</td><td>Blower is faulty</td></tr>
<tr><td>0200</td><td>Communication module error</td></tr>
<tr><td>0400</td><td>Drive error</td></tr>
<tr><td>Service message</td><td></td><td>---</td><td>When the device’s service counter reaches 2500 operating hours, the message „Maintenance Servicing“ appears on the display the next time the main switch (20) is activated.
This message is displayed for 10 seconds or can be skipped until the next switch-on by pressing the e-Drive button (33).</td></tr>
<tr><td colspan="4">Contact *Leister Sales and Service Partners</td></tr>
</table>

11. VARIMAT 700/500 FAQs, causes and measures

The device switches on automatically after the blowers have been switched on:

- If the air temperature is higher than 100 °C when the device is switched on – which can occur, for example, if the device is disconnected from the power supply without the cooling process – the device automatically switches to cool-down mode. The cool-down process is finished when the air temperature is less than 100 °C for 2 minutes.

Unit switches off automatically:

- In Standby operation, the heating is switched off automatically after the time elapses that the user has stored (see also Standby mode [9.5]).

Welding result of deficient quality:

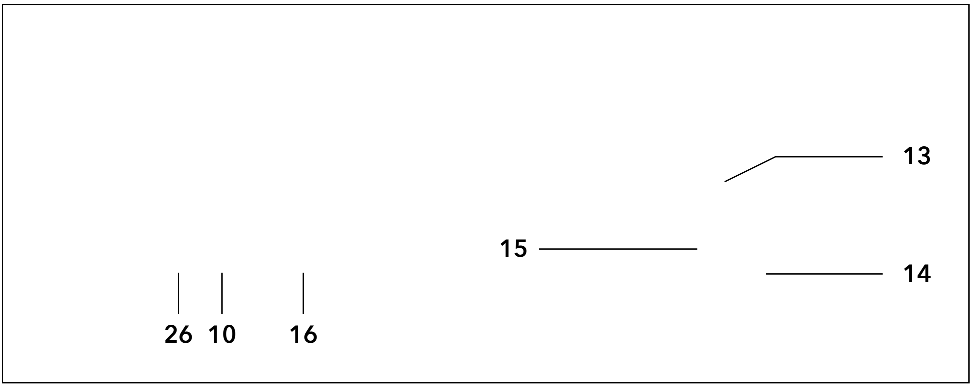
- Check drive speed, welding temperature and air volume.
- **Clean the welding nozzle (11)** with a wire brush (see Switching off the device/Maintenance [6.6])
- **Welding nozzle (11)** set incorrectly (see Setting the welding nozzles [5.1])
- **Track guide roller (16)** incorrectly adjusted and causing undulation
- **Incorrect device operation,** contact salessupport@leister.com

After 5 minutes at the most, the set welding temperature has still not been reached:

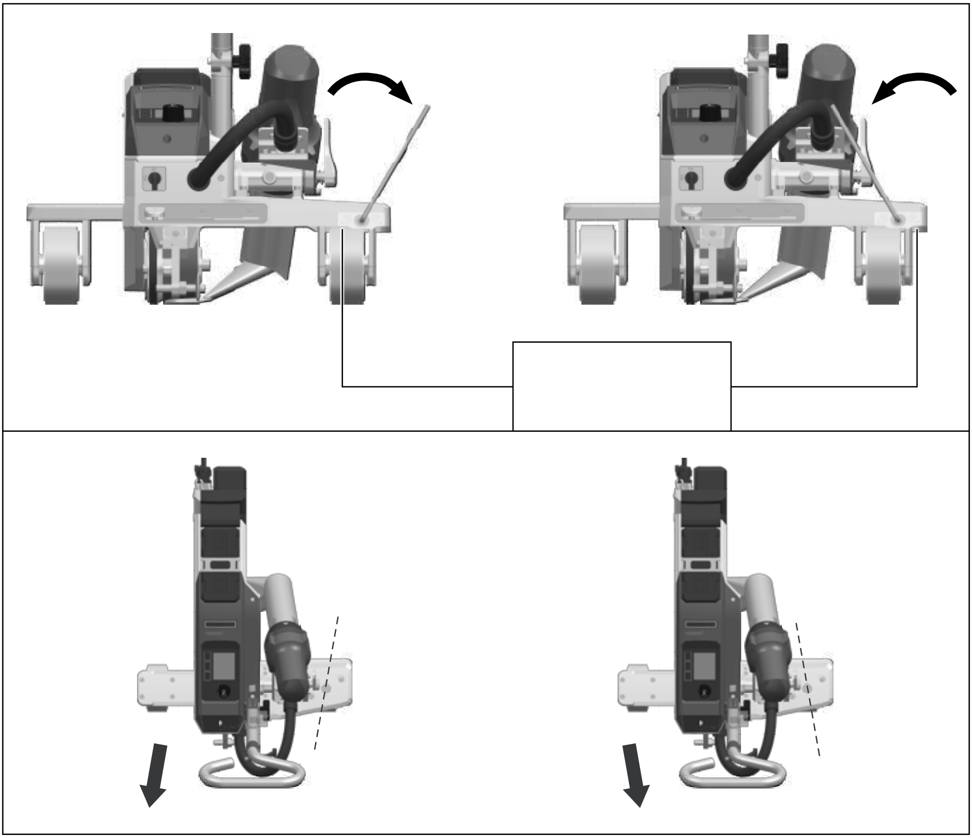
- Check the supply voltage
- Reduce the air volume
- Check heating element

Device does not move forward in a straight line:

- **Align the track guide roller (16)** so that it is parallel and linear to the **drive/pressure roller (10)** (see welding sequence [6.4]).
- Use the setting gauge for easy setting (included in the scope of delivery)
- **Set the transport roller (14)** with the **track setting (15)**, check the **track setting display (13).**



Continue to next page

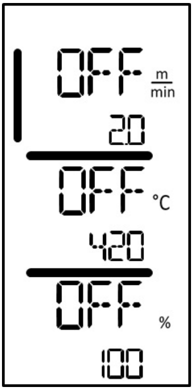


12. Operating VARIMAT 300

12.1 Starting the device

- Once you have prepared the working area and the hot air welder in accordance with the description, connect the hot air welder to the supply voltage.
- Use the **main switch (20)** to switch the hot-air welder on.

After connection, the start screen appears briefly on the display of the **operating unit (2)** with the **version number** of the current software release and the device designation.



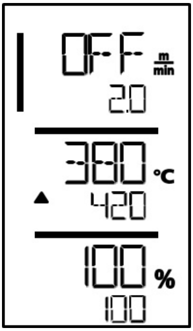
If the device was allowed to cool down beforehand, this will be followed by a static display of the set values for the most recently set welding parameters.

At this stage, the heating, blower and drive are switched off.

Now switch the heating on with the KHDWLQJ 2Q 2? button (31).

12.2 Welding sequence

Preparing for welding



As soon as you have switched on the heating, you will see a dynamic display of the current air temperature (actual and set value). All welding parameters (welding speed, temperature and air volume) can be set.

- Make sure that the welding temperature has been reached before commencing work (LED stops flashing). The heat-up time is 3–5 minutes.
- Now carry out test welds in accordance with the welding instructions of the material manufacturer and/or national standards or regulations and inspect the results. Adjust the welding profile as required.

Start welding

- Press the **hot-air blower lock lever (12),** lower the **hot-air blower (9)** and guide the **welding nozzle (11)** between the overlapping sheets up to the stop.
- The drive motor starts automatically as soon as the **hot-air blower (9)** is engaged.

Guiding the device during the welding process

- Guide the hot-air welder by the **guide bar (23, 25)** or by the **carrying handle (4)** along the overlap and also observe the position of the **track guide roller (16).**
- Avoid applying pressure to the **guide bar (23, 25)** during the welding process, as doing so could lead to welding faults.

12.3 Finishing welding

- After finishing welding, press the **hot-air blowers lock (12),** extend the **hot-air blowers (9)** up to the stop and swivel them upwards until they engage.
- Then swivel the **track guide roller (16)** upwards.

12.4 Switching off the device/Maintenance

Use the + H D W L Q J 2 Q 2 ? button (31) to switch off the heating, the **welding nozzle (11)** cools down.

This will trigger the cool-down mode.

- The blower switches off automatically after approx. 6 minutes.
- Now switch off the device with the **main switch (20)** and disconnect the **power cord (6)** from the electrical network.

- Wait until the device has cooled down.
- Check the **power cord (6)** and plug for electrical and/or mechanical damage.
- Use a wire brush to clean the **welding nozzle (11)**.

13. VARIMAT 300 quick guide

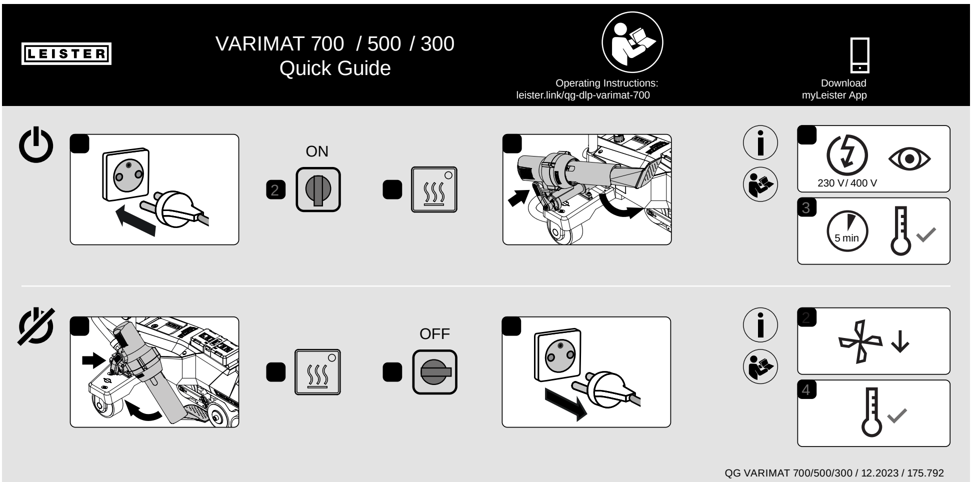
Observe the safety instructions and warnings in the individual sections of these operating instructions.

13.1 Switching on/Starting

1. Make sure that the **main switch (20)** is switched off and the **hot-air blowers (9)** are in parking position. Connect the plug to the mains voltage.
2. Switch the **main switch (20)** on.
3. Switch on the heating with the K H D W L Q J 2 Q 2 ? (31) button; wait 3–5 minutes until the desired temperatu reached.
4. Swivel the **hot-air blower (9)** downwards (appliance starts automatically).

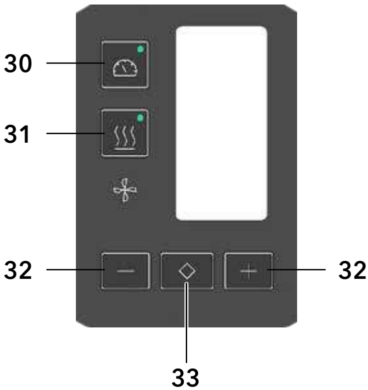
13.2 Switching off

1. Swivel the **hot-air blower (9)** upwards (stops the drive motor).
2. Use the K H D W L Q J 2 Q 2 ? button to switch off the **Heating.**
3. Wait for the end of the **cooling process** (approx. 6 minutes).
4. Switch off the unit at the **main switch (20)**.
5. Disconnect the **plug** from the mains voltage.



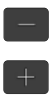
14. VARIMAT 300 operating unit

14.1 Function buttons

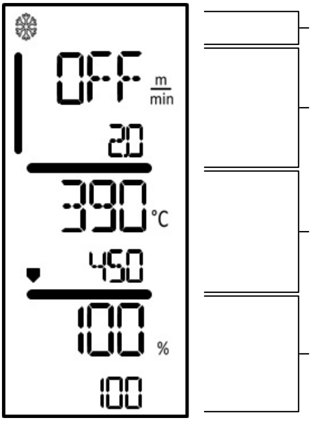


30. Button ' U L Y H 2 Q 2 ?
31. Button + H D W L Q J 2 Q 2 ?
32. Buttons 3 O X V 0 L Q X V
33. Button & R Q B U P

Function buttons

Symbol	Name	Function
	**Button** 0 R W R U 2 Q 2 ? **(30)**	Switches drive on and off
	**Button** + H D W L Q J 2 Q 2 ? **(31)**	Switches heating on and off
	**Blower symbol**	No function
	**Button** Minus/Plus **(32)**	Setting the required set value in increments of 0.1m/min, 10 °C or 5 %
	**Button** & R Q B U P **(33)**	Switches between the set values to be set

14.2 Digital display



34 Status display

35 Displays welding speed in m/min or ft/min (drive direction)

36 Display of the air temperature in °C or °F

37 Display of air volume in %

During operation, the set values of the welding parameters (drive in m/min or ft/min, temperature in degrees Celsius (°C) or Fahrenheit (°F)), air volume in percent (%) and, if applicable, information notes are displayed.

Use the &RQBUP button (33) to switch between the welding parameters and adjust the values individually with the 0LQXV 3OXV DUURZ buttons.

14.3 Display symbols of the status display (Display 34)

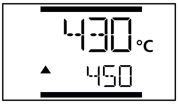
Status display

	Symbol for cool-down mode
	Symbol for **warning note, warning message or error message** Let the device cool down (see also Warning notes / Symbols for warning and error messages)
	Reference to service Symbol for hardware error warning The device is no longer ready for operation. Please contact your authorized Leister sales and service partner. (Note the respective error code in the Section Warning and Error Messages).

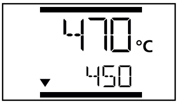
14.4 Display symbols for the welding speed (Display 35)

Welding speed actual value and set value
The arrow in the display for the welding speed indicates the **drive direction**.

14.5 Display symbols for the welding temperature (Display 36)

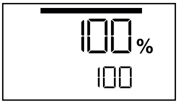


- **Welding temperature too low, te heating process**
  The up arrow indicates that the desired **higher temperature** has not yet been reached. The flashing number designates the currently achieved actual value (430); the value below (450) shows the set value of the individual setting.



- **Welding temperature too high, cooling process**
  The down arrow indicates that the desired **lower temperature** has not yet been achieved. The flashing value designates the currently achieved actual value (470); the value below (450) shows the set value of the individual setting.

14.6 Display symbols for the air volume (Display 37)



Actual and set value of the air volume

14.7 Status LED display

Heating

The LED on the +HDWLQJ 2Q 2? button (31) displays the condition of the heating

LED status +HDWLQJ 2Q 2? **(31)**	**Condition**
LED off	Heating is switched off.
LED flashes green	Heating is switched on, temperature is outside tolerance
LED continuously green	Heating is switched on, temperature is within tolerance

Drive

The LED on the 'ULYH 2Q 2? button displays the condition of the drive

LED status 'ULYH 2Q 2? **(30)**	**Condition**
LED off	Drive is switched off
LED continuously green	Drive is switched on

Heating and drive

If both LEDs of the +HDWLQJ RQ R? DQG WKH 'ULYH RQ R? button (30) are there is an error (see Error message [16]).

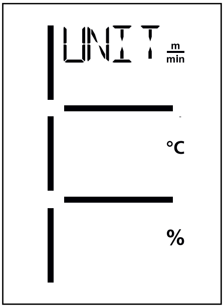
15. Settings and functions of the VARIMAT 300 software

15.1 Setting the parameter units

The units for the welding speed and for the temperature can be adjusted by you.

Temperature: °C or °F

Speed: $\frac{m}{min}$ or $\frac{ft}{min}$



- Hold down the 'ULYH 2Q 2? (30) and +HDWLQJ 2Q 2? (31) but power cord to the power supply. „UNIT" then appears on the display.
- Press the &RQBUP (33) button to confirm and use the 3OXV 0LQXV (32) the desired units.
- Press the &RQBUP (33) button to confirm and use the 3OXV 0LQXV (32) select SAVE. Press the &RQBUP (33) button to confirm; the units are then saved.

The device then restarts automatically.

15.2 Setting the welding parameters

You can regulate the set values of the three welding parameters individually, even during operation.
During operation, the selected range automatically switches to the row **welding speed (35)** after 5 seconds.

Proceed as follows:

Select:
Select the desired set value for drive, temperature or air with the &RQBUP (33) button.

Representation:
The selected area is indicated by a bar at the side

Setting:
Use the 0LQXV 3OXV buttons (32) to adjust the selected set value to match your requ ments.

15.3 Cool-down mode

The heating is switched off during the cool down process. The set values cannot be changed during the cool down process.

If the air temperature is more than 60 °C when the device is switched on, the device switches automatically to Cool down mode.

The cool-down process is finished when the air temperature is less than 100 °C for 2 minutes.

If you want to switch the heating on again, you must press the +HDWLQJ 2Q 2? button (31).

15.4 Monitoring welding parameters during runtime

Welding speed, air temperature and air volume are monitored continuously.
If an actual value deviates from the set value according to the individual settings, this is indicated in the working display (see 📖 Display symbols of welding temperature [14.5]).

16. VARIMAT 300 warning and error messages

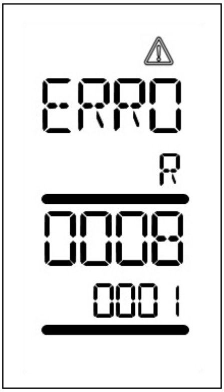
Error messages are shown on the display of the **operating unit (1)**.

If an error message appears, you cannot continue working.

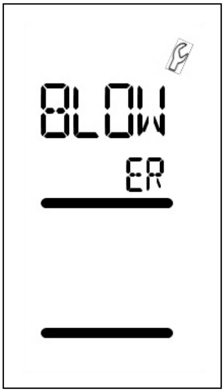
The heating is switched off automatically and the drive is blocked. The corresponding error codes are displayed immediately on the display of the **operating unit (2).** The first four digits indicate the error group. The second four digits indicate the detailed error.

Example:

Error:



Warning:



Error group	**Description**	**Measures**
0001	Electronics temperature measurement	Temperature >90 °C Let the device cool down
0004	Supply voltage	Connect the device to a different power socket If the error is still displayed, contact Leister Sales and Service Partners.
0008	Thermoelement/heating element	Contact Leister Sales and Service Partners
0100	Blower motor	Contact Leister Sales and Service Partners
0400	Drive motor	Contact Leister Sales and Service Partners
BLOWER	Carbon brushes for blower motor	Appears after 1400 operating hours The carbon brushes of the blower motor must be replaced.

17. Frequently asked questions, causes and actions VARIMAT 300

The device switches on automatically after the blowers have been switched on:

- If the air temperature is higher than 100 °C when the device is switched on – which can occur, for example, if the device is disconnected from the power supply without the cooling process – the device automatically switches to cool-down mode. The cool-down process is finished when the air temperature is less than 100 °C for 2 minutes.

Welding result of deficient quality:

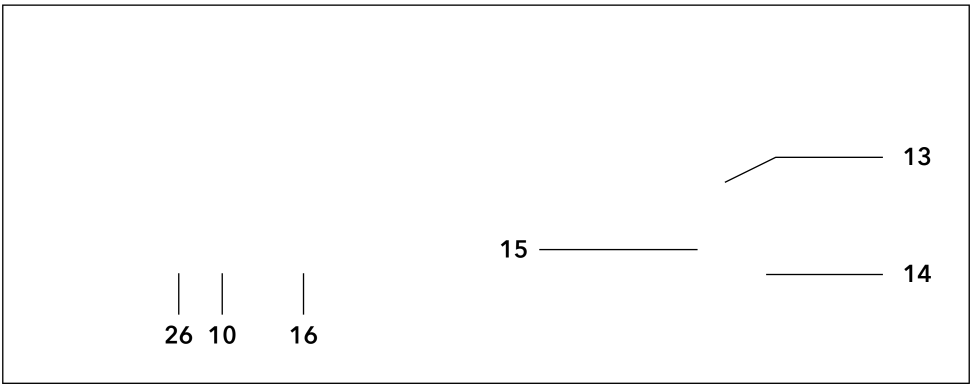
- Check drive speed, welding temperature and air volume.
- **Clean the welding nozzle (11)** with a wire brush (see Switching off the device/Maintenance [12.4])
- **Welding nozzle (11)** set incorrectly (see Setting the welding nozzles [5.1])
- **Track guide roller (16)** incorrectly adjusted and causing undulation
- **Incorrect device operation,** contact salessupport@leister.com

After 5 minutes at the most, the set welding temperature has still not been reached:

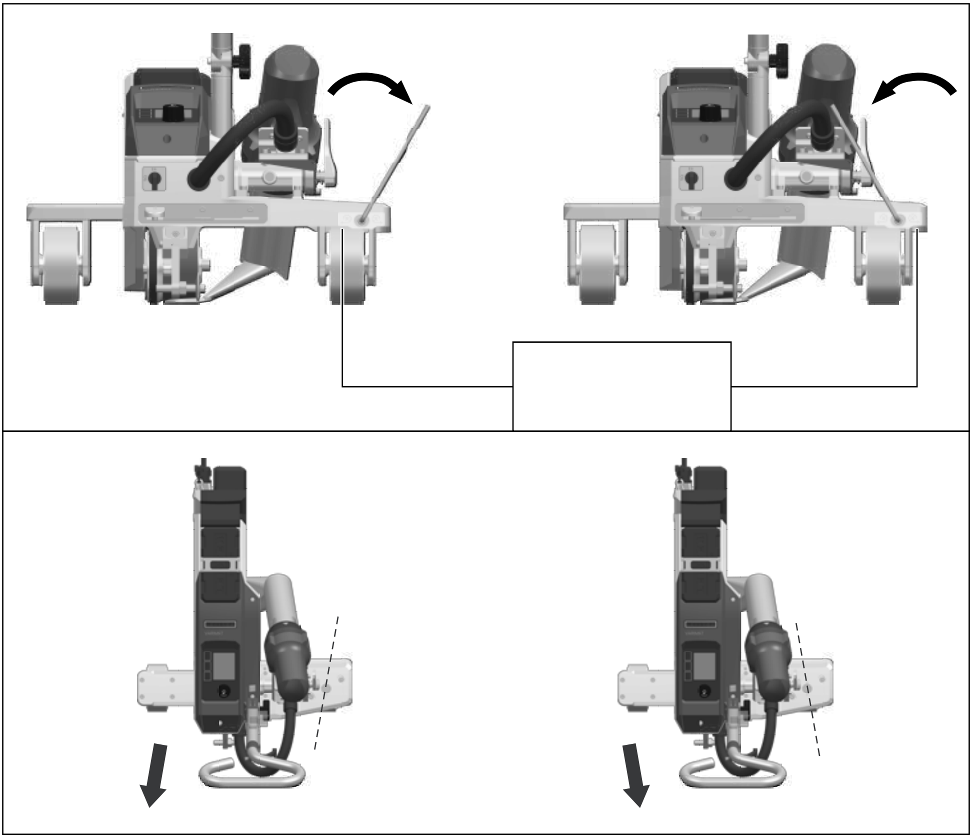
- Check the supply voltage
- Reduce the air volume
- Check heating element

Device does not move forward in a straight line:

- **Align the track guide roller (16)** so that it is parallel and linear to the **drive/pressure roller (10)** (see welding sequence [12.2]).
- Use the setting gauge for easy setting (included in the scope of delivery)
- **Set the transport roller (14)** with the **track setting (15)**, check the **track setting display (13).**



Continue to next page



18. Accessories

For more information please visit leister.com.

19. Service and repair

Repairs shall be performed exclusively by authorized Leister sales and service partners.
You will find the address of your authorized Leister sales and service partner on the last page of these operating instructions.

For more information please visit leister.com.

20. Training

The Leister Academy and its authorised Leister sales and service partners offer welding courses as well as product and application training.

For more information please visit leister.com.

21. Declaration of Conformity

EU Declaration of Conformity

Leister Technologies AG, Galileo-Strasse 10, 6056 Kaegiswil, Switzerland confirms that this product fulfills the requirements of the following EU Guidelines in the models that we have made available for purchase.

Directives:	2006/42/EC, 2014/30/EU, 2014/53/EU, 2011/65/EU
Harmonized standards:	EN ISO 12100, EN 60335-1, EN 60335-2-45, EN 62233, EN 55014-1, EN 61000-6-2, EN 61000-3-2, EN 61000-3-3, ETSI EN 300 328, EN IEC 63000

Name of authorized representative for documentation: Thomas Schäfer, Manager Product Conformity

Kaegiswil, 11/30/2023

Bruno von Wyl, CTO

Pascal Bösch, VP R&D

UK Declaration of Conformity

Leister Technologies AG, Galileo-Strasse 10, 6056 Kaegiswil, Switzerland confirms that these products, in the versions as brought into circulation through us, fulfil the requirements of the following UK Statutory Instruments.

UK Statutory Instruments:	2008 No. 1597, 2016 No. 1091, 2017 No. 1206, 2012 No. 3032
Designated Standards:	EN ISO 12100, EN 60335-1, EN 60335-2-45, EN 62233, EN 55014-1, EN 61000-6-2, EN 61000-3-2, EN 61000-3-3, ETSI EN 300 328, EN IEC 63000

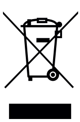
Name of authorized representative for documentation: Thomas Schäfer, Manager Product Conformity

Kaegiswil, 11/30/2023

Bruno von Wyl, CTO

Pascal Bösch, VP R&D

22. Disposal



Do not dispose of electrical equipment with household refuse!
Electrical equipment, accessories and packaging should be recycled in an environmentally friendly manner. When you are disposing of our products, please observe the national and local regulations.

Warranty

- The guarantee or warranty rights granted for this device by the direct distribution partner/salesperson apply from the date of purchase. In the event of a guarantee or warranty claim (verification by invoice or delivery note), manufacturing or processing errors will be rectified by the sales partner through replacement delivery or repair. Heating elements are excluded from warranty obligations or guarantees.
- Other guarantee or warranty claims are excluded within the framework of mandatory law.
- Damage resulting from natural wear, overload, or improper handling is excluded from the warranty.
- Devices that have been converted or modified by the purchaser are not covered by any warranty or guarantee.
- Only use original Leister spare parts and accessories; otherwise, any warranty or guarantee claims will be invalidated.

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