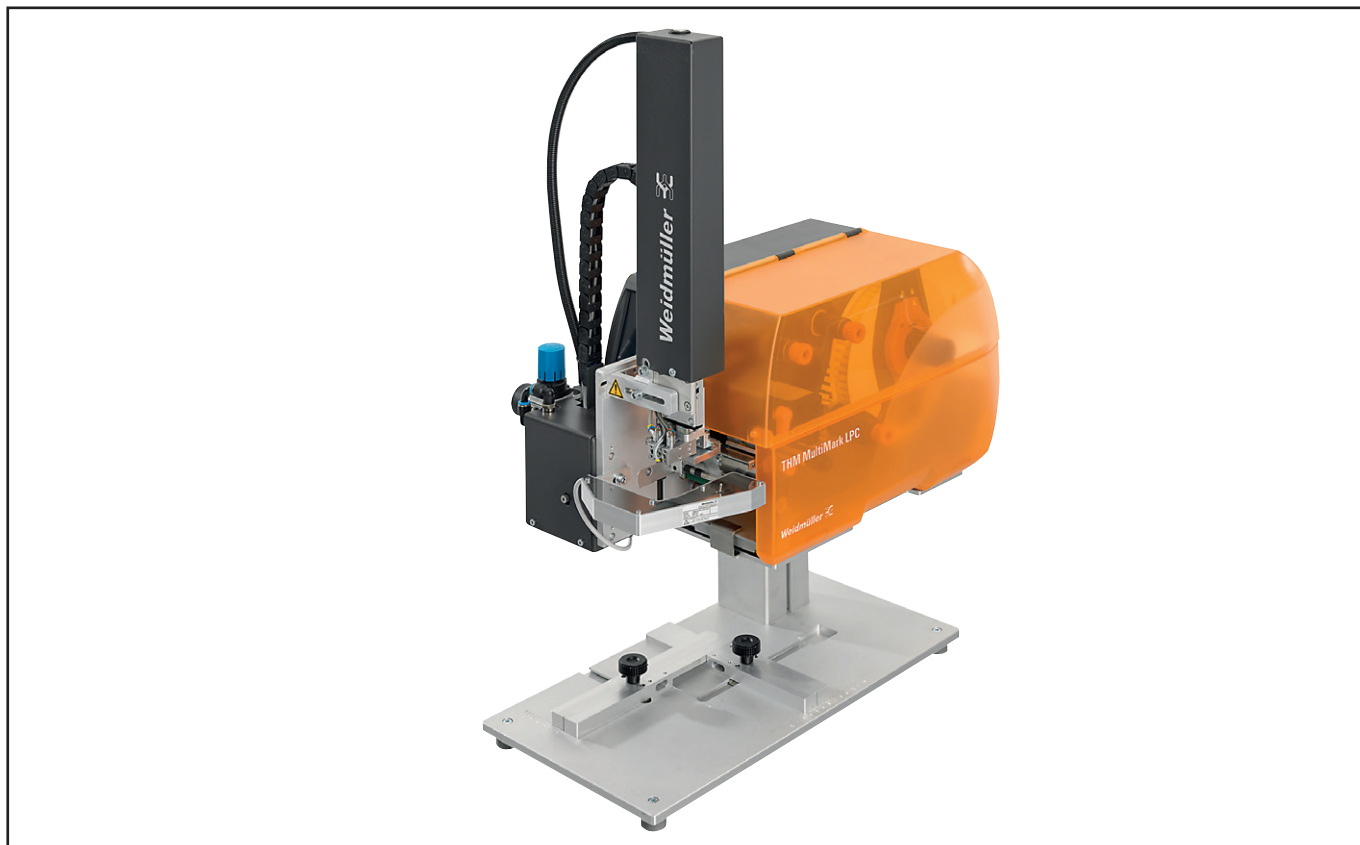


MultiMark

THM MultiMark LPC



Original operating instructions

Manufacturer

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
32758 Detmold, Germany
T +49 5231 14-0
F +49 5231 14-292083
www.weidmüller.com


Document no. 2903400000
Revision 01/February 2024


Contents

1	About this documentation	4	7	Printing	21
2	Safety	5	7.1	Synchronising the paper run	21
2.1	General safety notes	5	8	Cleaning	22
2.2	Intended use	5	8.1	Cleaning the print roller	22
2.3	Safety marking	6	8.2	Cleaning the print head	22
2.4	Personnel	6	8.3	Cleaning the label light barrier	23
3	Device description	7	9	Troubleshooting	24
3.1	Label printer	8	9.1	Error display	24
3.2	Mounting foot	9	9.2	Printer error messages	25
3.3	Applicator	10	9.3	Printer problem solving	27
3.4	Technical data	11	10	SQ laser applicator	28
3.5	Type plate	12	10.1	Configuration	28
4	Unpacking and installing devices	13	10.2	Test mode without print job	30
4.1	Fitting the printer on the mounting foot	13	10.3	Test mode with pending print job	30
4.2	Fitting the applicator on the printer	14	10.4	Normal operation	31
4.3	Connecting the devices	14	10.5	Applicator error messages	32
4.4	Switching on the system	14	11	Setting up the laser pointer	34
5	Operating software	15	12	Decommissioning and disposing of the system	36
5.1	Touch display	15	12.1	Decommissioning the system	36
5.2	Start screen	15	12.2	Disposing of the system	36
5.3	Menu navigation	17	13	Annex	37
6	Setting up the printer	18			
6.1	Positioning the material reel on the reel holder	18			
6.2	Placing labels in the print head	18			
6.3	Inserting the transfer foil	19			
6.4	Adjusting the head locking system	19			
6.5	Adjusting the transfer foil run	20			

1 About this documentation







The warnings in this documentation are designed according to the severity of the danger.

	WARNING
	Possible danger to life! Notes with the signal word "Warning" warn you of situations that may result in serious injury or death if you do not follow the instructions given in this manual.

	CAUTION
	Danger of injury! Notes with the signal word "Caution" warn you of situations that may result in injury if you do not follow the instructions given in this manual.

ATTENTION
Material damage! Notes with the signal word "Attention" warn you of hazards which may result in material damage.

The situation-dependent warnings may contain the following warning symbols:

Icon	Meaning
	Warning of dangerous electrical voltage
	Warning of hot surfaces
	Warning of automatic startup
	Work must only be carried out by a qualified electrician.
	Carry out work only with personal protective equipment
	Notes on the documentation/ Observe the instructions for use

Additional formatting is used in the text, with the following meaning:



Texts next to this arrow are notes which are not relevant to safety, but provide important information about proper and effective work procedures.

- You can recognise handling instructions from the black triangle in front of the text.
- Lists are marked with a tick.

2 Safety

2.1 General safety notes

Electricity

- The enclosures of all system components must not be opened.
- Unauthorised work or modifications to the device may place the operational reliability at risk.
- Installation work and disassembly of the system may only be carried out if the printer is disconnected from the mains and the compressed air supply is blocked.
- The system is designed for electricity grids with AC voltage of between 100 V and 240 V.
- The system may only be connected to sockets with a protective earth contact.
- The system may only be connected to devices that conduct safety extra-low voltage.

Moving parts

- When operating the applicator, moving parts are accessible when the stamp is moved between the home and labelling position. Do not reach into this area during operation and keep hair, loose clothing and jewellery and the like out of this area. The compressed air supply must be closed when working in this area.
- If the printer is operated with an open cover, make sure that hair, loose clothing, jewellery and the like do not come into contact with exposed, rotating parts.

Installation site

- The system is a class A installation. The installation can cause radio interference in residential areas. In this case, the operator may be asked to implement adequate protective measures.
- The system may only be operated in a dry environment and must not be exposed to moisture (spray water, mist, etc.).
- The system must not be operated in potentially explosive atmospheres.
- The system must not be operated near high-voltage lines.

Personnel, activities

- Only carry out the actions described in these instructions. Additional work may only be carried out by trained personnel or service technicians.
- Improper intervention in electronic assemblies and their software can cause faults.
- Service activities must be carried out in a qualified workshop that has the necessary expertise and tools to perform the necessary work.

2.2 Intended use

The labelling system is exclusively intended for printing and applying labels. The system may only be used to process materials approved for the labelling system, see the Weidmüller online catalogue. Any other use or use above and beyond these instructions is considered incorrect use. Observance of the documentation, including the maintenance recommendations, is also part of the intended use. The system may only be operated if it is technically intact. The system is manufactured based on the state of the art and the recognised safety rules. However, the use of the system may pose a danger to life and limb for the user or third parties and the device and other property may be impaired if the safety notes are not observed.

2.3 Safety marking

Various warning symbols are attached to the labelling system. These symbols must not be removed and must always be legible.

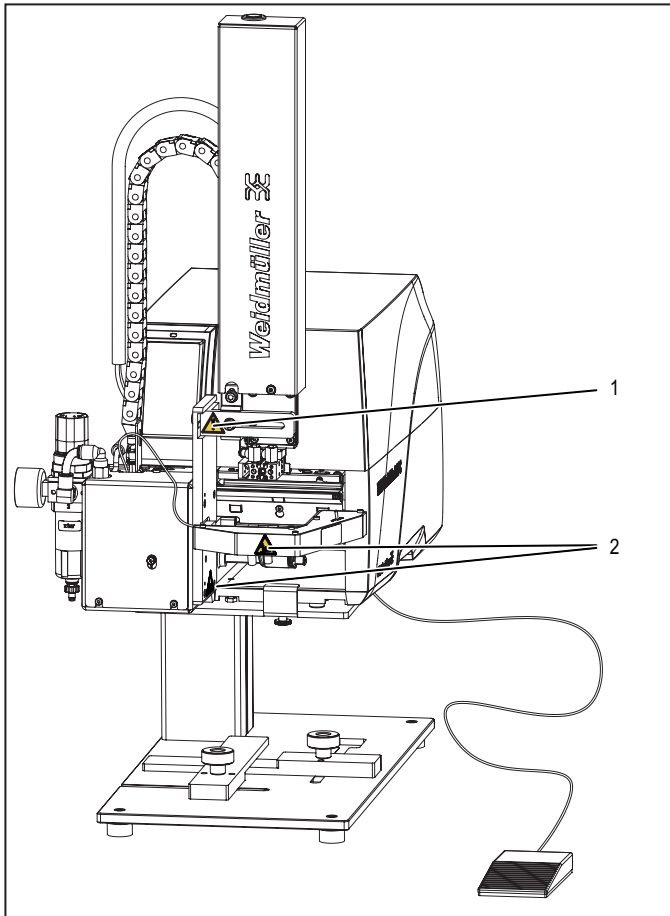




Image 2.1 Warning symbols on the device

- 1  Cylinder under pressure, residual energy is possible even when switched off!
- 2  Risk of crushing due to the movement of the stamp!

2.4 Personnel

Only trained personnel may operate the labelling system and carry out maintenance work. They must also have read the operating instructions in their entirety.



Repairs may only be carried out after consultation with Weidmüller Service and only by a qualified electrician.



Please keep the operating instructions where they can be viewed by the operating personnel at all times. All documents can also be downloaded from the Weidmüller website.

3 Device description

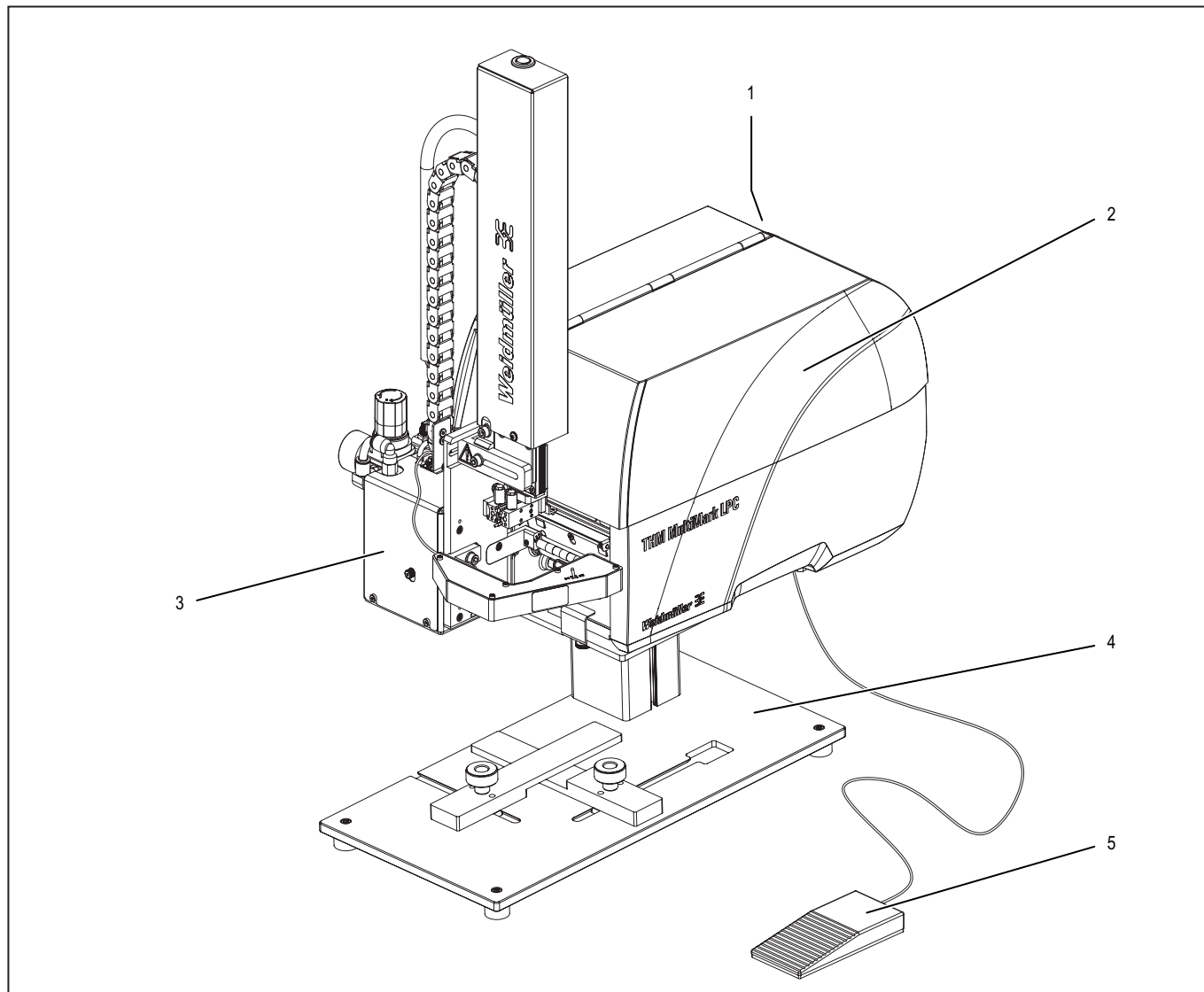


Image 3.1 Overview of the labelling system

- 1 Type plate
- 2 Label printer
- 3 Applicator with laser pointer
- 4 Mounting foot
- 5 Foot switch

The printer is equipped with a wide-range power supply unit. Operation with a power supply of 230 V~/50 Hz or 115 V~/60 Hz is possible without any intervention in the device. The applicator with the laser pointer is supplied with voltage by the printer.

3.1 Label printer

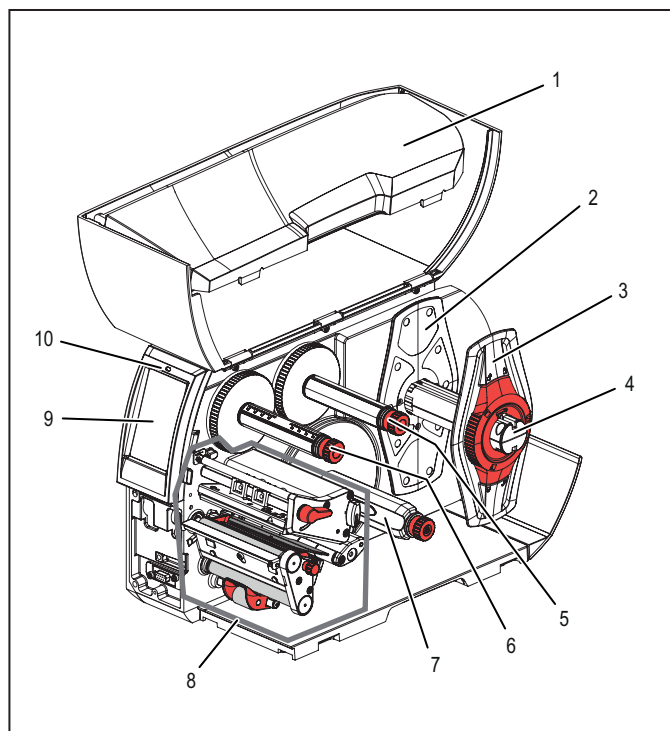


Image 3.2 Overview of the label printer

- 1 Cover
- 2 Margin stop 1
- 3 Margin stop 2
- 4 Reel holder
- 5 Transfer foil unwinder
- 6 Transfer foil winder
- 7 Internal winder
- 8 Printing assembly
- 9 Touch display
- 10 Operating status LED

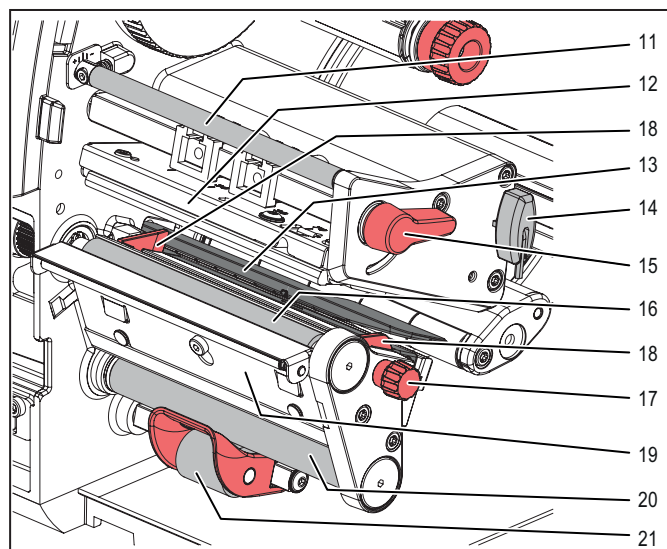


Image 3.3 Detail view of the printing assembly

- 11 Deflection for transfer foil
- 12 Head bracket with print head
- 13 Labelling light barrier
- 14 Hexagon key
- 15 Lever to lock the print head
- 16 Print roller
- 17 Adjusting knob for guides
- 18 Guide
- 19 Dispensing edge
- 20 Deflection roller
- 21 Locking system

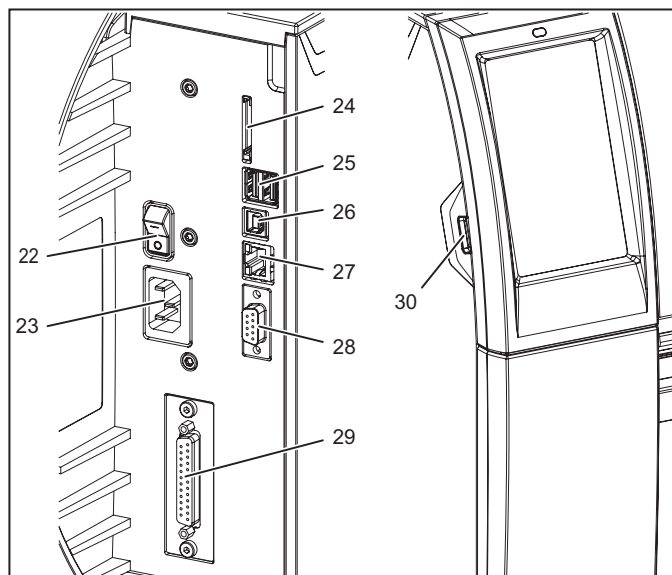


Image 3.4 Connections

- 22 Mains switch
- 23 Power socket
- 24 Slot for SD card
- 25 USB interfaces for keyboard, scanner, USB stick, Bluetooth adapter or service key
- 26 USB Full Speed interface
- 27 Ethernet 10/100 Base-T
- 28 RS-232 interface
- 29 I/O interface
- 30 USB interface for keyboard, scanner, USB stick, Bluetooth adapter or service key

3.2 Mounting foot

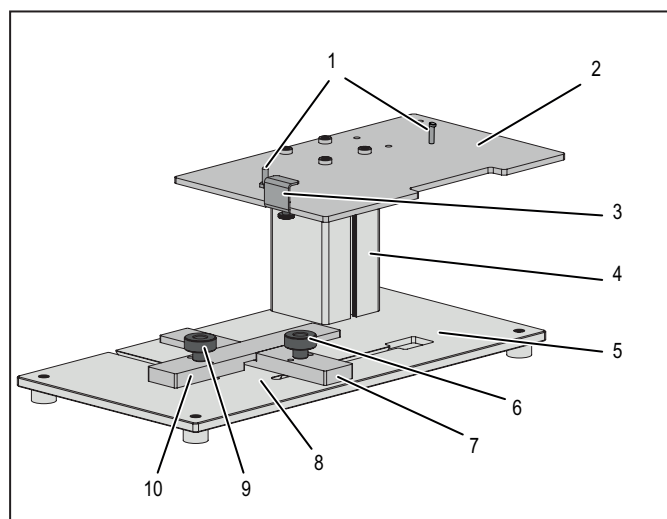


Image 3.5 Mounting foot

- 1 Guide pins to position the printer on the mounting plate
- 2 Mounting plate
- 3 Clip to fasten the printer on the mounting plate
- 4 Profile
- 5 Base plate with adjustable feet and positioning aids for labelling
- 6 Locking screw to fasten the stop (7)
- 7 Stop as a positioning aid in the printing direction
- 8 Area for object placement
- 9 Locking screw to fasten the stop (10)
- 10 Stop as a positioning aid transverse to the printing direction

3.3 Applicator

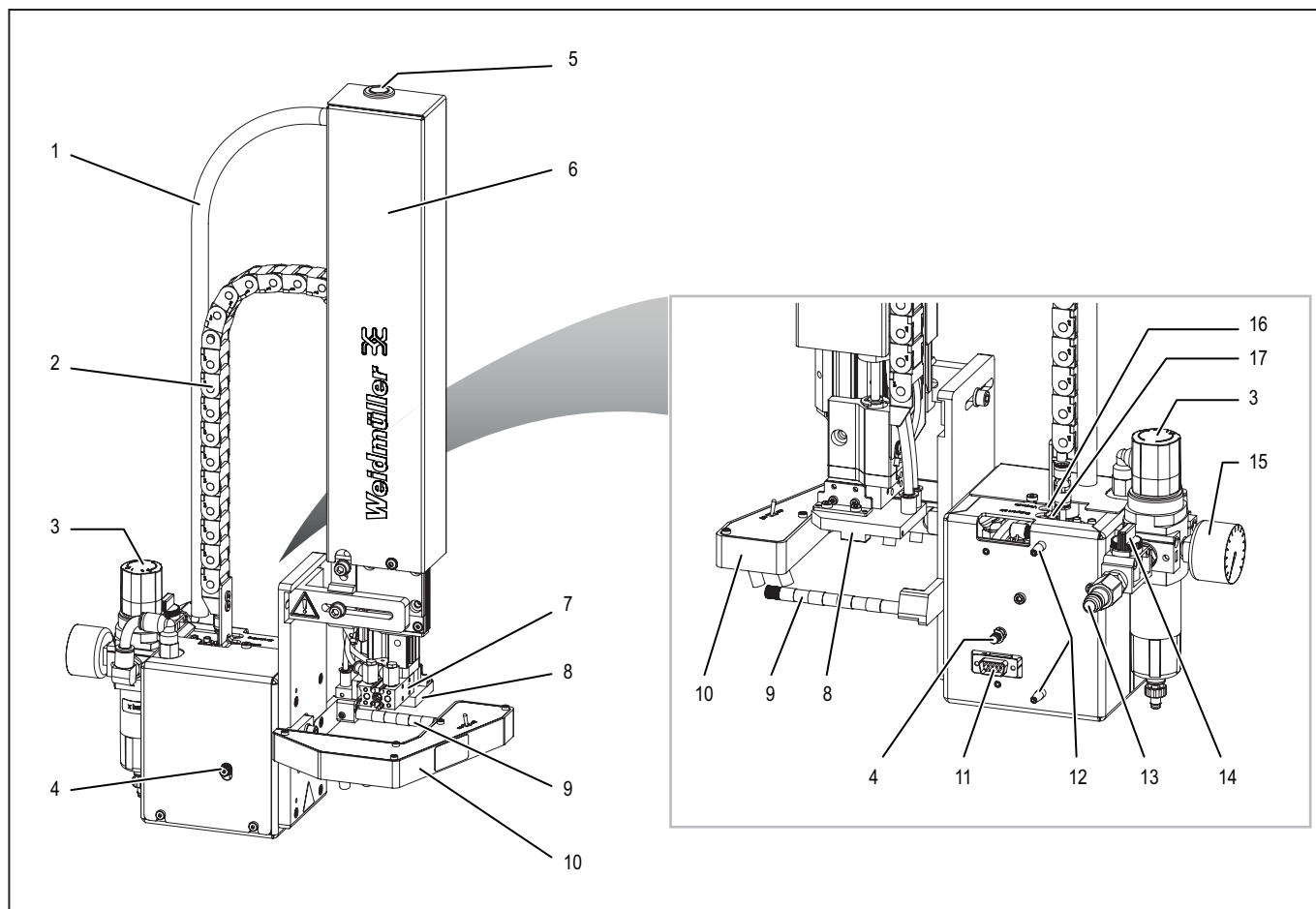


Image 3.6 Front and rear

- | | | | |
|---|---|----|--|
| 1 | Spiral hose | 10 | Laser pointer |
| 2 | Energy chain | 11 | Interface to the printer |
| 3 | Compressed-air maintenance unit | 12 | Locking pins |
| 4 | Knurled screw to fasten the applicator on the printer | 13 | Coupling for the compressed-air connection |
| 5 | Main cylinder | 14 | Shut-off valve |
| 6 | Cylinder assembly cover | 15 | Pressure gauge for the working pressure |
| 7 | Mini slide | 16 | Throttle valve for support air |
| 8 | Stamp | 17 | Throttle valve for vacuum |
| 9 | Blowpipe for support air | | |

3.4 Technical data

General data	
Ambient temperature	
Operation	+5 °C to 40 °C
Storage	0 °C to +60 °C
Transport	-25 °C to +60 °C
Humidity	
Operation	10 % to 85 %, non-condensing
Storage/transport	20 % to 85 %, non-condensing
Max. operating altitude	2000 m above sea level
Continuous sound pressure level	< 70 dB (A)
Dimensions (WxHxD)	466 x 785 x 648 mm (18.35" x 30.91" x 25.51")
Weight	13 kg (28.66 lbs)
Supply voltage	100 to 240 V AC; 50/60 Hz, PFC
Label printer	
Print technology	Thermal transfer
Print quality	300 DPI
Printing speed	40 to 150 mm/s
Material guidance	Centred
Interfaces	RS232C: 1,200 to 230,400 baud/8 bit 1 x USB 2.0 Hi-Speed Device for PC connection 3 x USB host Ethernet 10/100 BASE-T
Control panel	LCD display 4.3" / 272 x 480 px
Laser Square applicator	
Maximum stroke	220 mm
Stamp stroke	64 mm
Operating pressure	4.5 bar
Deviations in stack dimensions	± 0.5 mm
Number of lasers	4
Laser class	1

3.5 Type plate

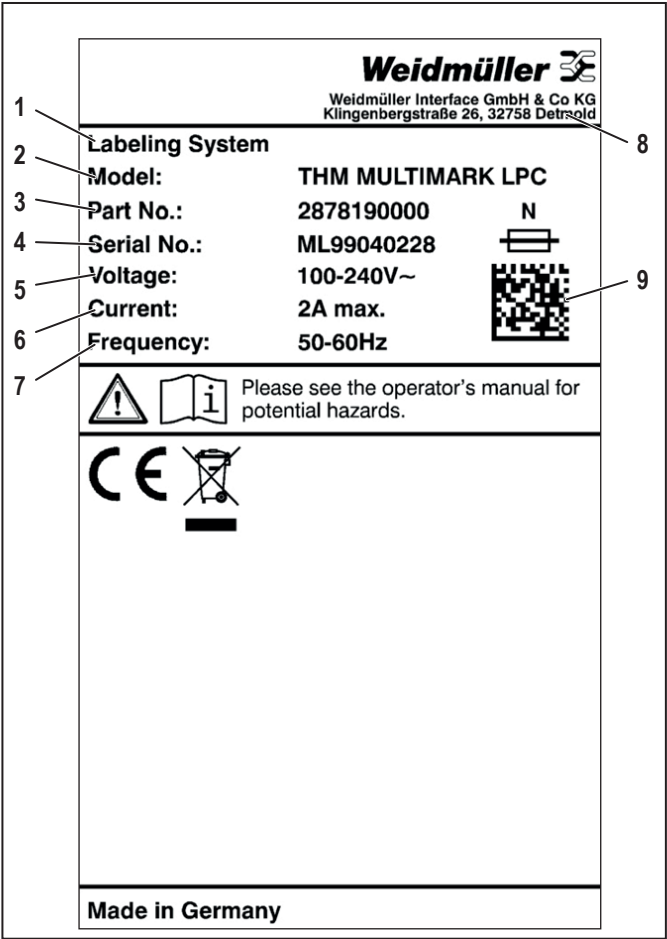


Image 3.7 Type plate

- 1 Product type
- 2 Model
- 3 Material number
- 4 Serial number
- 5 Permissible voltage
- 6 Maximum current
- 7 Frequency range
- 8 Manufacturer
- 9 QR code production data

The following symbols are shown on the type plate

Icon	Meaning
	Neutral conductor fuse
	EU conformity
	Observe the disposal instructions

Explanation of the serial number

MLYYMM####
ML System identification
YY Year
MM Month
Serial number

4 Unpacking and installing devices

Select an installation site that meets the requirements, see chapter 2.1. Observe the following additional notes:

- Stable base with a level and even surface (weight and dimensions, see technical data).
- Easily accessible electricity and compressed air connections in the vicinity
- Compressed-air connection with min. 4.5 bar
- Adequate space for ergonomic operation, preferably in an office environment

Included in delivery

- Label printer
- Mounting foot
- Applicator with laser pointer
- Foot switch
- Mains cable
- USB cable
- Ink ribbon
- DVD with M-Print® PRO marking software
- Operating instructions

- ▶ Check all components for transport damage.
- ▶ Check the delivery for completeness.



Store the original packaging for subsequent transport.

- ▶ Remove the mounting foot from the packaging and set it up on a level surface.
- ▶ To set up the labelling system, proceed as follows:
 - Fit the printer on the mounting foot, see chapter 4.1
 - Fit the applicator on the printer, see chapter 4.2
 - Connect the devices, see chapter 4.3
 - Connect the power cable
 - Switch on the system, see chapter 4.4

4.1 Fitting the printer on the mounting foot

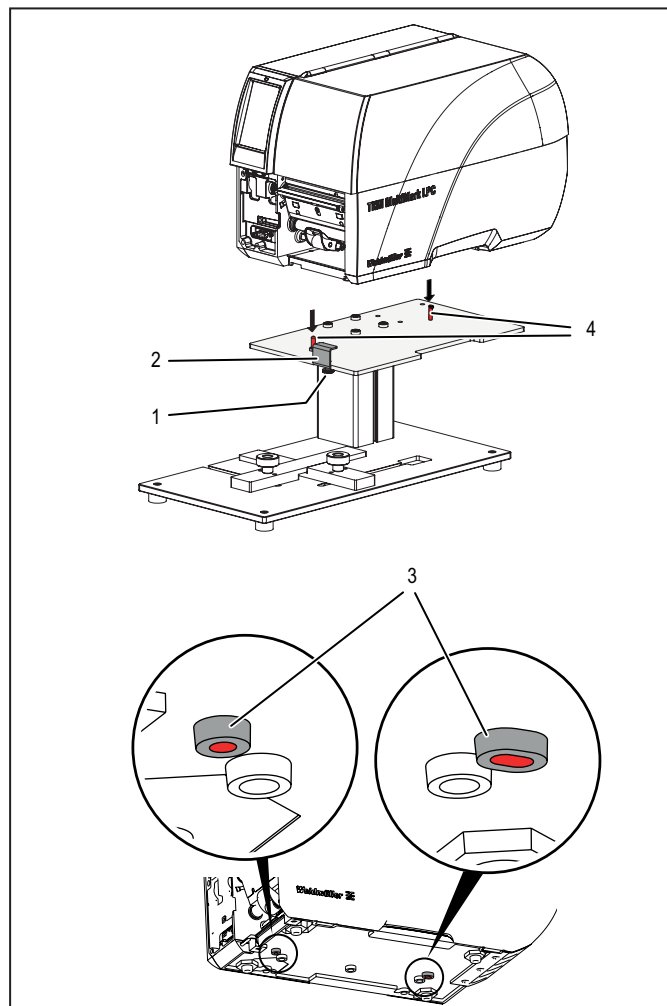


Image 4.1 Fit the printer

- ▶ Unscrew the knurled screw (1) and loosen the clip (2).
- ▶ Position the printer with the recesses (3) on the guide pins (4).
- ▶ Move the clip (2) over the base of the printer. The printer must be positioned with all adjusting feet fully on the mounting plate.
- ▶ Tighten the knurled screw (1) to fasten the printer on the mounting plate.
- ▶ Remove the transport locks from the print head area, see Image 3.3.

4.2 Fitting the applicator on the printer

- Make sure that the printer is disconnected from the mains.
- Ensure that the printer is in a stable position.
- Only connect the compressed air once the applicator has been completely fitted.

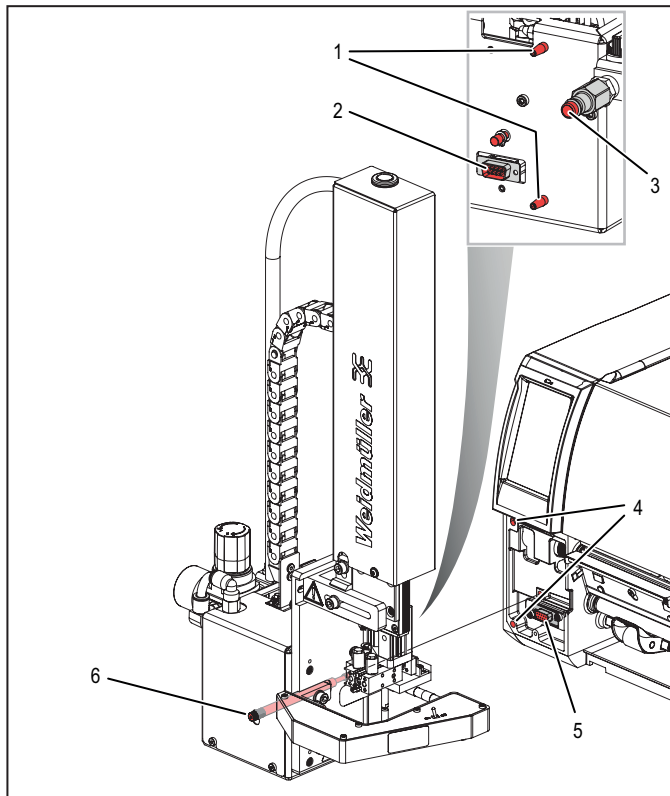


Image 4.2 Fit the applicator

- Guide the locking pins (1) on the rear of the applicator into the holes (4) in the printer.
- Push the applicator against the printer.
The applicator's connector (2) is connected to the printer's peripheral connection (5).
- Tighten the knurled screw (6) to secure the applicator.
- Connect the compressed air supply to the connection (3).

4.3 Connecting the devices

The interfaces and connections are defined in the individual component descriptions.

Connect the labelling system to the mains

- Make sure that the label printer is switched off.
- Insert the power cable in the mains socket (23, Image 3.4).
- Insert the power cable plug in an earthed socket.

Connecting the computer or computer network

ATTENTION

A lack of or insufficient earthing can cause faults during operation.

- Make sure that all computers connected to the label printer as well as the connecting cables are earthed.
- Use a suitable cable to connect the label printer to the computer or network.

4.4 Switching on the system

Prerequisites: All electrical connections to the printer as well as the compressed-air connection on the applicator must be in place.

- Switch on the printer at the mains switch (22, Image 3.4).

The printer runs through a system test and then shows the **Ready** system status on the display (9, Image 3.2). The applicator moves to the home position and the stamp is located above in the transfer position for the items printed by the printer.

5 Operating software

5.1 Touch display

The touch display lets you operate the printer's operating software and execute the following functions:

- Pause, continue or cancel print jobs
- Set print parameters, e.g. heat energy of the print head, print speed, configuration of the interfaces, language and time
- Control the stand-alone operation with memory device
- Perform a firmware update

Several functions and settings can also be controlled by printer-specific commands with software applications or by direct programming with a computer.

Settings changed on the touch display are the label printer's base setting.



To adjust the print jobs, any adjustments should take place in the software.

- To open a menu or select a menu item, tap on the relevant icon.
- To scroll, move one finger up or down on the touch display.

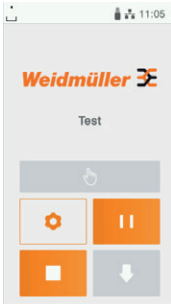
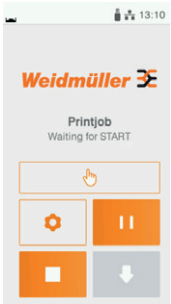
5.2 Start screen

The start screen shows the relevant operating status.

After switching on	
In pause mode	
	Start single step mode
	Open the menu
	Pause or continue a print job
	Repeat last label
	Cancel and delete all print jobs
	Label feed

Image 5.1 Buttons on the start screen












For certain software or hardware configurations, additional icons are displayed on the start screen:

	
Print on request without print job	Print on request in print job

The header shows various information in the form of widgets depending on the configuration:

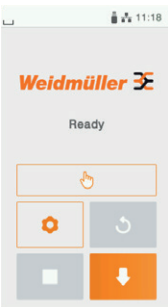
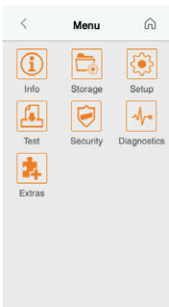
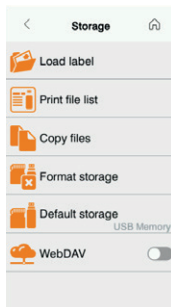





Widgets in the header

	The receipt of data from an interface is signalled by a falling drop
	The Save data stream function is active. All data received are saved in an .lbl file, see configuration instructions
	Prewarning end of foil: the residual diameter of the foil reel has fallen below a set value, see configuration instructions
	SD card installed
	USB stick installed
	Grey: Bluetooth adapter installed White: Bluetooth connection active
	WLAN connection active The number of white arches symbolises the WLAN field strength.
	Ethernet connection active
	USB connection active
	abc program active
	Time

Widgets in the header on the start screen


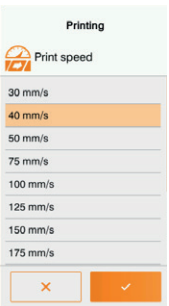
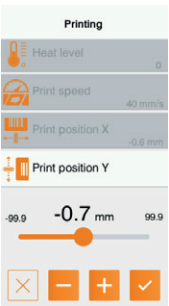
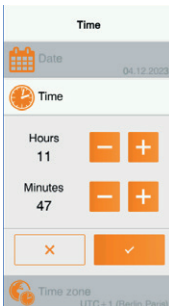
5.3 Menu navigation








			<div> Tapping on the gear takes you to the selection level of the operating menu.</div> <div> Tapping on the arrow takes you back one level.</div> <div> Tapping on the house takes you home.</div>
Home	Selection level	Parameter and function level	

- Tap on the selection until you reach the desired parameter or function level.


If you select a function, the printer starts this function directly or a preparatory dialogue is displayed.

If you select a parameter, the available setting options are displayed.

			
Logical parameters	Selection parameters	Numerical parameters	Date/time

Control element	Function
	Slider to adjust the value
	Gradual reduction of the value
	Gradual increase of the value
	Exit setting mode without saving
	Save and exit setting mode
	Parameter is switched off, pressing it switches the parameter on
	Parameter is switched on, pressing it switches the parameter off

6 Setting up the printer

	CAUTION
	<p>Danger of injury!</p> <p>When setting up the printer, work needs to be carried out with the cover open.</p> <p>► Make sure that hair, loose clothing, jewellery and the like do not come into contact with exposed, rotating parts.</p>

6.1 Positioning the material reel on the reel holder

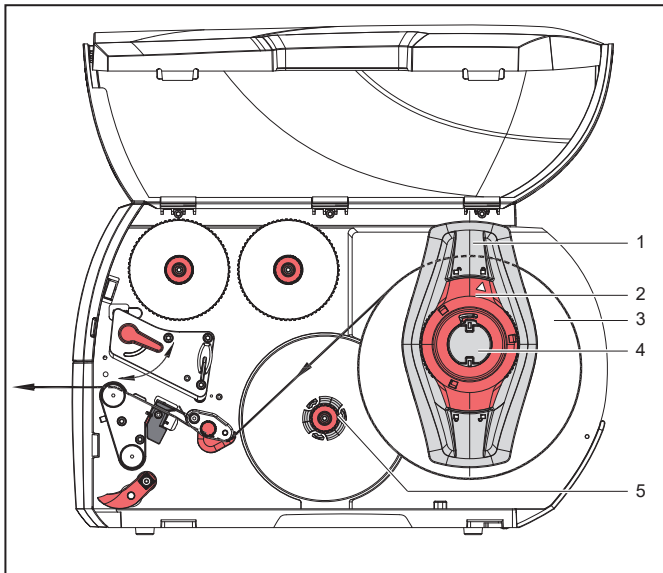


Image 6.1 Position the reel material

- Open the cover.
- To unscrew the margin stop (1), turn the adjusting ring (2) counter-clockwise until the arrow points to the unlocked icon.
- Pull the margin stop (1) off the reel holder (4).
- Slide the material reel (3) onto the reel holder (4) so that the side of the material to be printed points upwards.
- Place the margin stop (1) on the reel holder (4) and slide it in until both margin stops are in contact with the material reel (3) and clear resistance is noticeable when sliding.
- Turn the adjusting ring (2) clockwise until the arrow points to the locked icon.
- Unwind a label strip around 60 cm long.

6.2 Placing labels in the print head

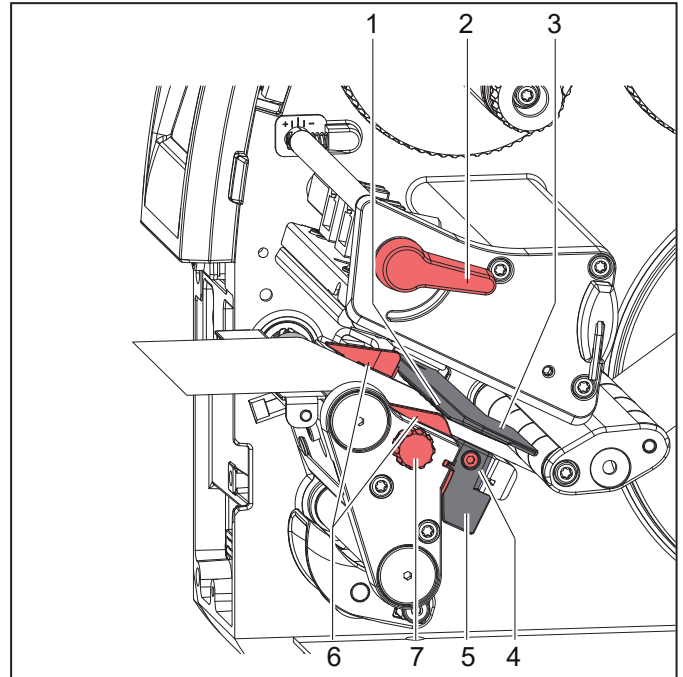


Image 6.2 Place labels in the print head

- Turn the lever (2) counter-clockwise to raise the print head.
- Use the knurled knob (7) to adjust the margin stop (6) so that the material fits between the two margin stops.
- Guide the label strip over the internal winder to the print unit.
- Guide the label strip through the label light barrier (3) so that it exits the print unit between the print head and print roller.
- Position the margin stop (6) so that the material is guided without jamming.

6.3 Inserting the transfer foil



- Clean the print head before inserting the transfer foil, see chapter 8.

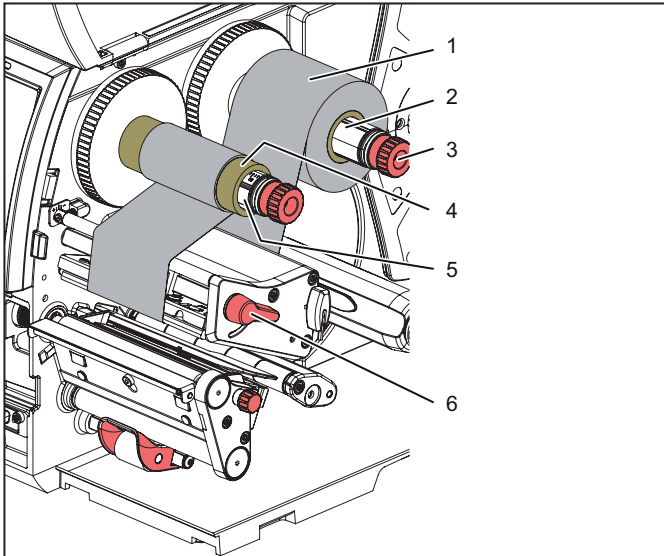


Image 6.3 Insert the transfer foil

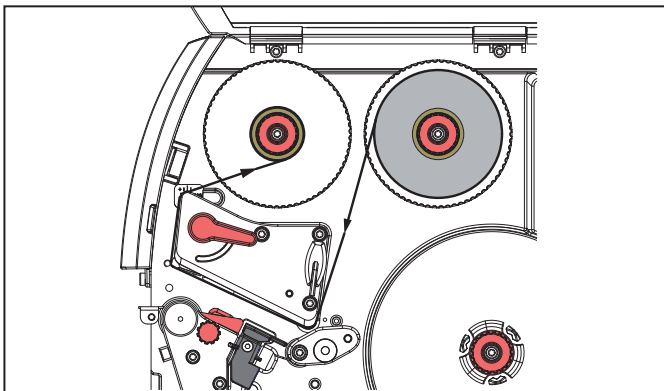


Image 6.4 Transfer foil run

- Turn the lever (6) counter-clockwise to raise the print head.
- Slide the transfer foil reel (1) onto the unwinder (2) so that the colour coating on the foil points down during unwinding.
- Position the transfer foil reel (1) on the unwinder so that the scale values on both sides of the reel are identical.
- Hold the transfer foil reel (1) tight and turn the rotary knob on the unwinder (3) counter-clockwise until the transfer foil reel is fastened in place.
- Slide a suitable transfer foil core (4) onto the transfer foil winder (5) and fasten it in the same manner.

- Guide the transfer foil through the print assembly, see Image 6.4.
- Fasten the start of the transfer foil on the transfer foil core (4) with an adhesive strip. Make sure that the transfer foil winder rotates counter-clockwise.
- Turn the transfer foil winder (5) counter-clockwise to smooth the transfer foil run.
- Turn the lever (6) clockwise to lock the print head.

6.4 Adjusting the head locking system

The print head is pressed down by two plungers that are positioned in the middle of the head bracket in the home position. This setting can be retained for most applications. The plungers can be adjusted if bright patches occur in the side margin areas of a print image when using very wide materials.



Hexagon key

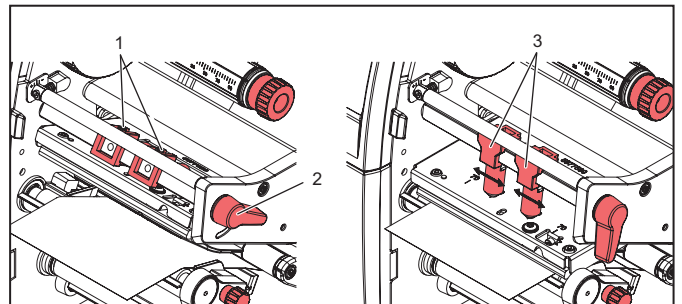


Image 6.5 Adjust the head locking system, centred material feed

- Unscrew the two threaded pins (1) with a hexagon key.
- Turn the lever (2) clockwise to lock the print head.
- Slide the plungers (3) to the scale value 70.
- Tighten both threaded pins (1).
- Turn the lever (2) counter-clockwise to unlock the print head.

6.5 Adjusting the transfer foil run

Creases in the transfer foil run can lead to errors in the print image. To avoid creasing, the transfer foil deflection (3) can be adjusted.



It's best to perform this adjustment during print operation.



Hexagon key

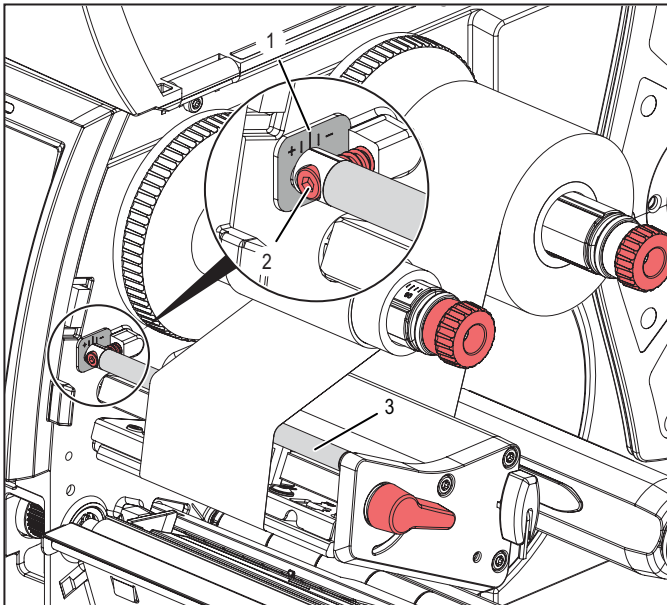


Image 6.6 Adjust the transfer foil run

- Read the current setting on the scale (1) and note this down.
- Turn the screw (2) and observe the behaviour of the foil.

Turning in the + direction tensions the inner edge of the transfer foil.

Turning in the – direction tensions the outer edge of the transfer foil.



Incorrect adjustment of the head locking system can also cause creases in the foil run.

7 Printing

ATTENTION

Incorrect handling can damage the print head!

- ▶ Do not touch the underside of the print head with your fingers or sharp objects.
- ▶ Make sure that the labels are not contaminated.
- ▶ Ensure the smooth surface of the labels. Rough labels act like an abrasive and reduce the service life of the print head.
- ▶ Print with the lowest possible print head temperature.

The printer is ready for use when all connections are established and the labels as well as, where necessary, a transfer foil have been inserted.

7.1 Synchronising the paper run

In cutting mode, the paper run must be synchronised after inserting the label material. To do so, the first label detected by the label sensor is moved to the print position and all labels in front of it are transported out of the printer. This prevents an incorrect cutting length of the first cut, which would make the first label unusable.


- ▶ Tap the feed icon to start the synchronisation.
- ▶ Remove the empty labels dispensed and cut during the feed process.



A synchronisation run is not necessary if the print head was not opened between different print jobs, even if the printer was switched off.

8 Cleaning

To achieve a good, even print quality, the device should be cleaned monthly.

	DANGER
	Risk to life due to mains voltage. ► Make sure that the power cable is disconnected.

ATTENTION
The printer can be damaged! Strong detergents, abrasive cleaners or solvents can damage the printer. Only use all-purpose cleaners to clean the exterior surfaces or assemblies.

- Remove dust and paper lint in the print area with a soft brush or a vacuum cleaner.
- Clean the exterior surfaces of the printer with all-purpose cleaner.

8.1 Cleaning the print roller

Contamination on the print roller can impair the print image and prevent material transport.


- Swivel the print head away.
- Remove labels and transfer foil from the printer.
- Remove deposits with roller cleaner and a soft cloth.
- If the roller is damaged, replace it; see Service.

8.2 Cleaning the print head

During printing, contamination may collect on the print head and negatively affect the print image, e.g. due to contrast differences or vertical strips. Regular cleaning makes an important contribution to preventing premature wear on the print head.



Recommended cleaning interval: Clean the print head each time after changing the transfer foil reel.

	CAUTION
	Risk of injury due to hot print head. Allow the print head to cool before commencing cleaning.

ATTENTION
The print head can be damaged! Hard or sharp objects can scratch the print head. Do not touch the protective glass layer on the print head.

- Swivel the print head away.
- Remove labels and transfer foil from the printer.
- Clean the print head with a special cleaning pen or with a cotton swab dipped in pure alcohol.
- Leave the print head to dry for 2 to 3 minutes.

8.3 Cleaning the label light barrier

The label sensors can be contaminated by paper dust. This can impair the detection of label start marks or print marks.

ATTENTION

The light barrier can be damaged!

Hard or sharp objects can scratch the light barrier. Only use pure alcohol for cleaning.

- Remove labels and transfer foil from the printer.

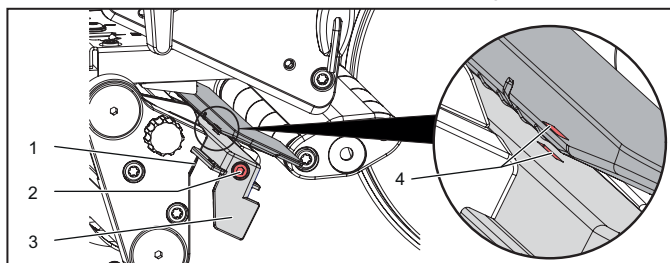



Image 8.1 Cleaning the label light barrier

- Unscrew the screw (2).
 - Hold down the button (1) and slowly pull out the label light barrier at the handle (3).
-  Make sure that the light barrier cable is not stretched.
- Clean the label light barrier and the sensor slots (4) with a brush or with a cotton swab dipped in pure alcohol.
 - Slide the label light barrier back into the starting position using the handle (3).
 - Re-insert the labels and the transfer foil.

9 Troubleshooting

9.1 Error display

Any errors that occur are shown in the touch display.

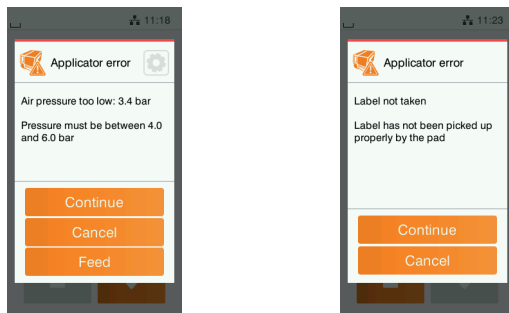


Image 9.1 Examples for error displays

The following options are available to continue operation:

Repeat	The print job is continued after eliminating the cause of the error.
Cancel	The current print job is cancelled.
Feed	The label transport is re-synchronised. The job can then be continued with <i>Repeat</i> .
Ignore	The error message is ignored. The print job is continued, potentially with restricted function.
Save log	The error does not permit print operation. Various system files can be saved on an external memory device for more detailed analysis.

9.2 Printer error messages

Error message	Cause	Corrective measure
Locking system open	The locking system at the deflection roller is not closed in dispensing mode	► Close locking system
	The locking system at the pull roller in the SQUIX MT is not closed	► Close locking system
Barcode too big	The barcode is too big for the assigned label area	► Reduce or move the barcode
Barcode error	Invalid barcode contents, e.g. alphanumeric characters in numeric barcode	► Correct barcode contents
File not found	A file was requested that is not present on the storage medium	► Check the contents of the storage medium
Print head folded down	Print head not locked	► Lock print head
Print head too hot	Excessive heating of the print head	► The print job restarts automatically after a pause. If this error recurs, reduce the heat level or print speed in the software
Duplicate field name	Duplicate field name assigned in the direct programming	► Correct programming
Remove foil	Transfer foil inserted even though the printer is set to direct thermal printing	► For direct thermal printing: remove transfer foil
		► For thermal transfer printing: transfer printing in printer configuration or switch on software
Foil winding	Detected unwinding direction of the foil does not match the configuration setting, foil inserted incorrectly	► Clean print head Insert foil correctly
	Configuration setting does not match foil used	► Adjust the configuration setting
End of foil	Transfer foil used up	► Insert new transfer foil
	Transfer foil melted during printing	► Cancel print job Change heat level in software Clean print head Insert transfer foil Restart print job
	Thermal labels to be processed, but transfer printing indicated in the software	► Cancel print job Switch to thermal printing in software Restart print job
Device not present	Programming trying to contact a device that is not present	► Connect optional device or correct programming

Error message	Cause	Corrective measure
No label	Multiple labels are missing on the label strip	► Repeat printing until the next label on the strip is detected
	The label format indicated in the software does not match the actual format	► Cancel print job ► Change the label format in the software Restart print job
	The printer contains continuous material, but the software expects labels	► Cancel print job Change the label format in the software Restart print job
No size information	Label size not defined in the programming	► Check programming
Reading error	Reading error when accessing storage medium	► Check data on the storage medium Back-up data Reformat storage medium
Material too thick	Cutter cannot separate material, but can return to starting position	► Press Cancel Change material
End of paper	Material to be printed used up	► Insert material
	Error in paper run	► Check paper run
Buffer overflow	Data input buffer is full and the computer is still trying to send data	► Use data transmission with protocol (preferably RTS/CTS)
Write error	Hardware error	► Repeat write operation Reformat storage medium
Font unknown	Error in the selected download font	► Cancel print job Change font
Voltage error	Hardware error	► Turn printer off and back on If this recurs, notify Service The voltage that failed is shown, please note this down.
Memory full	Print job too big: e.g. due to loaded fonts, large graphics	► Cancel print job Reduce the amount of data to be printed
Syntax error	Printer receives unknown or incorrect command from the computer.	► Press Ignore to skip the command ► or ► Press Cancel to cancel the print job
Unknown media type	Storage medium not formatted Type of storage medium not supported	► Format storage medium, use other storage medium

9.3 Printer problem solving

Problem	Cause	Corrective measure
Transfer foil creased	Transfer foil deflection not calibrated	► Adjust the transfer foil run
	Head locking system not calibrated	► Adjust the head locking system
	Transfer foil too wide	► Use transfer foil that is just slightly wider than the label.
Print image contains smudges or blank spots	Print head dirty	► Clean the print head
	Temperature too high	► Lower the temperature via the software.
	Poor combination of labels and transfer foil	► Use a different type or brand of foil
Printer does not stop when transfer foil is used up	Thermal printing is selected in the software	► Switch to thermal transfer printing in the software
Printer prints character sequences instead of the label format	Printer is in monitor mode	► Exit monitor mode
Printer transports the label material but not the transfer foil	Transfer foil inserted incorrectly	► Check the transfer foil run and orientation of the coated side and correct if necessary
	Poor combination of labels and transfer foil	► Use a different type or brand of foil
Printer only prints every second label	Format setting in the software too large.	► Change the format setting in the software
Vertical white lines in the print image	Print head dirty	► Clean the print head
	Print head faulty (failure of heating dots)	► Replace print head, see Service instructions
Horizontal white lines in the print image	Printer is operated in cutting or dispensing mode with the Return transport > optimised setting	► Switch setup to Return transport > always , see configuration instructions.
Print image brighter on one side	Print head dirty	► Clean the print head
	Head locking system not calibrated	► Adjust the head locking system

10 SQ laser applicator

10.1 Configuration




The applicator operation can be modified via parameter settings while maintaining the basic process. The applicator has various modes relating to the print order and the application of the label during a labelling cycle.

	Stamp
Print/Apply	x
Apply/Print Wait position top	x
Apply/Print Wait position bottom	-

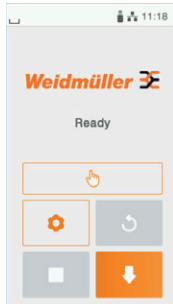
The modes of operation can be further modified by setting several delay times.

Methods for changing the configuration

- Open the **Settings** menu.
- Select **Labelling**.
- Set up the desired parameters.
- Save the settings.
- Switch to the **Ready** main menu.

Parameter	Meaning	Default
 Device information	Applicator information: Software version, overall and service counters for the number of labelling operations, error messages and cylinder cycles	
 Cycle sequence	Select the type of cyclical operation: Print/Apply: The start signal triggers the printing of a label followed by the application of the label to a product. After completing a cycle, the stamp without label is in the start position. Apply/Print: A separate signal starts the printing of the first label and the transfer to the stamp. The start signal triggers the application of the label followed by the printing of the next label. After completing a cycle, a label is in position on the stamp.	Print/ Apply
 Dispensing offset	Move the dispensing position in relation to the rear edge of the label. The setting can also be modified using the software. The values from the configuration and software are added together.	0.0 mm
 Transfer mode	Select the mode of operation: Stamp	Stamp
 Delayed support air on	Delay time (max. 2.5 s) between the start of printing and activation of the support air. The delay prevents swirling air at the front edge of the label which can lead to errors during the label transfer	0 ms
 Delayed support air off	Delay time (max. 2.5 s) between the end of the label feed and the deactivation of the support air. After-blowing supports the separation of the rear edge of the label from the carrier to prevent errors and improve the positioning accuracy	270 ms
 Start delay	Time (max. 2.5 s) between the start signal and the start of the labelling cycle; intended, e.g. for the use of product sensors on conveyor belts	0 ms
 Blocking time	After the first start signal, all other start signals within the blocking time (max. 2.5 s) are ignored; intended, e.g. to debounce the start signal	0 ms
 Vacuum monitoring	Monitoring of the label transfer by the vacuum sensor	On
 Label transfer	Passive: The stamp waits for the label in front of the dispensing edge. Active: The stamp is moved to the dispensing edge and collects the label.	Passive
 After-blowing	After setting down the label, a short puff pulse to clean the suction channel is activated	On
 Delayed Vacuum	On: The vacuum is turned on after completing the label transport. Off: The vacuum is turned on at the start of the label transport.	Off
 Stamp pre-check	A check to confirm whether the stamp is empty takes place before every printing process.	On

10.2 Test mode without print job



You can simulate the labelling operation without a print job by alternately tapping the **Label feed** button and the **Cycle** button.

► Tap **Label feed**.

An empty label feed is triggered. At the same time, the vacuum at the stamp and the support air are activated. Once the label has been completely transferred to the stamp, the support air is switched off.

► Tap **Cycle**.

The lifting cylinder is activated so that the stamp moves to the labelling position. The reaching of the labelling position is signalled by the impact sensor. The vacuum is then switched off and the label is transferred to the product. Once the label has been transferred, the lifting cylinder is reversed so that the stamp returns to the home position.



You can use this method during commissioning to determine the appropriate dispensing offset in the printer configuration.

10.3 Test mode with pending print job

This method lets you test the labelling operation with actual print data using the **Cycle** button in the display.

► Send a print job.

The test mode runs in alternating half-cycles:

► Tap the **Cycle** button.

Half-cycle 1: The printing of one label is triggered. At the same time, the vacuum at the stamp and the support air are activated. Once the label has been completely transferred to the stamp, the support air is switched off.

► Tap the **Cycle** button again.

Half-cycle 2: The lifting cylinder is activated so that the stamp moves to the labelling position. The reaching of the labelling position is detected by the impact sensor. The vacuum is then switched off and the label is transferred to the object. Once the label has been transferred, the lifting cylinder is reversed so that the stamp returns to the home position.

If, after completing half-cycle 1, the label on the stamp is removed manually, when next pressing the **Cycle** button the print job continues with the printing of the next label in half-cycle 1.



You can use this method during commissioning to determine the appropriate dispensing offset in the software.

10.4 Normal operation

ATTENTION

The printer can be damaged.

The stamp and locking system can collide with each other.

- ▶ Swivel the printer's locking system at the deflection roller before you start the labelling operation.

- ▶ Make sure that all connections are established before starting the labelling operation.
- ▶ Insert the transfer foil and labels.
- ▶ Make sure that the locking system is locked.
- ▶ Open the shut-off valve for the compressed air.



Before switching on the printer, make sure that the stamp is not covered by a label. A covered stamp leads to the incorrect alignment of the vacuum sensor.

- ▶ Switch on the printer.



If the stamp is not in the home position at the time the compressed air and printer are turned on, an error message is shown on the display.

- ▶ In the printer menu, tap **Next** to acknowledge the error and move the applicator to the home position.

- ▶ In the printer menu, tap **Feed**.

This triggers a synchronisation run of the label transport.

- ▶ Manually remove the dispensed labels from the stamp. After a few seconds, the printer performs a brief return transport that positions the start of the new label on the print line.




Perform the synchronisation even if a print job has been cancelled with the **Cancel** button. A synchronisation run is not necessary if the print head was not opened between different print jobs, even if the printer was switched off.

- ▶ Start the labelling operation via the PLC.

Errors that occur during the labelling operation are shown in the printer's display, see chapter 10.5.

10.5 Applicator error messages

	CAUTION
	<p>Danger due to automatic start-up.</p> <p>After rectifying and acknowledging an error, the applicator immediately moves up to the home position.</p> <ul style="list-style-type: none"> ▶ Do not reach into the stamp's operating area. ▶ Keep hair, loose clothing and jewellery out of the operating area.

Error message	Cause	Corrective measure
Air pressure too low: (current value) bar	Compressed air not connected	▶ Check shut-off valve
Air pressure too high: (current value) bar	Excessive compressed air supply	▶ Check the controller at the compressed-air maintenance unit
Start position not reached within (current value) s	Stamp did not reach the start position 2 s after the start of the cylinder return movement	▶ Check compressed air settings, particularly the upper throttle valve cylinder ▶ Manually label objects
End position not reached within (current value) s	Stamp did not reach the end position 2 s after the start of the cylinder movement	▶ Check compressed air settings, particularly the lower throttle valve cylinder ▶ Check applicator for mechanical stiffness ▶ Check impact sensor (Service) ▶ Manually label objects
Stamp not in start position after switching on	Cylinder was manually moved	▶ Check the connector and hoses
Start position not left	Cylinder blocked, sensor 1 faulty	▶ Remove transport lock, check stopper sensor 1 (Service)
Start position left without permission	Cylinder is no longer in start position or sensor is not triggered	▶ Check sensor 1, check compressed air supply and connector on the cylinder
External error	Labelling process was interrupted by the PLC interface with the STOP signal	▶ If necessary, manually label objects
Label not transferred	Label was not correctly positioned on the stamp	▶ Check dispensing offset ▶ Check the position of the stamp to the printer's dispensing edge
Label lost	Label fell off the stamp before application to the object	▶ If possible, manually apply lost label ▶ Alternatively, cancel the print job and restart with adjusted parameters (e.g. counters). If this recurs: Check the alignment of the stamp as well as the vacuum, support air and dispensing offset settings.
Label not applied	The label was not applied to the object and is still on the stamp during the return movement of the cylinder	▶ Manually label objects
Sensor information not plausible	Sensors for start and end position simultaneously activated	▶ Check sensors (Service)

Troubleshooting

- Rectify the error as described.
- To exit the error state, tap **Next**, **Repeat** or **Cancel**.

Next	The printer continues printing the next label.
Repeat	The incorrect label is reprinted (only for Suction plate empty error).
Cancel	The print job is cancelled.

A label for which an error has occurred can only be reprinted with a new print job.

- In **Apply/Print** mode, send a **Print first label** signal before starting cyclical operation.
- or
- Tap the **Cycle** button to transfer a printed label to the stamp.

11 Setting up the laser pointer

- Switch on the printer.
- Connect the compressed air supply to the applicator.

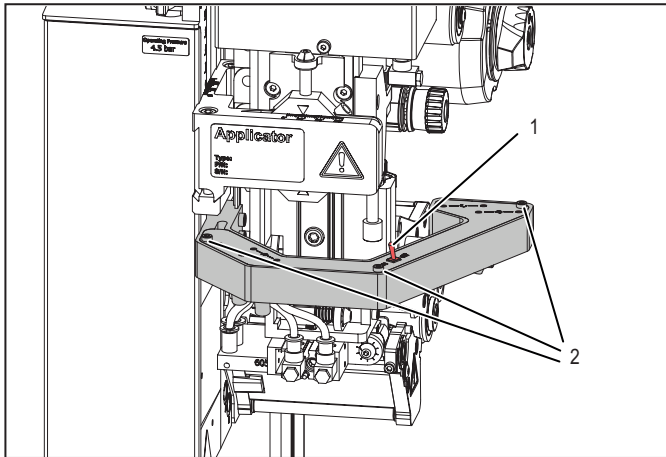


Image 11.1 Switch on the laser pointer

- Switch on the laser pointer at the switch (1).
 - Place the object to be labelled on the product mount.
 - Apply the label without a print job.
- The lasers form a square of individual lines on the object that indicate the position of the label.

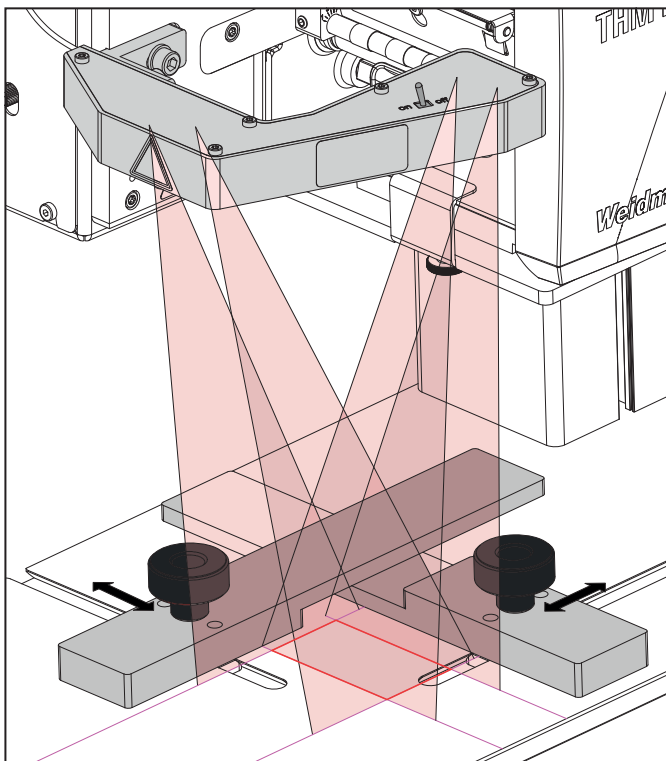


Image 11.2 Laser pointer

- Unscrew the screws (2) and remove the cover from the

laser pointer.

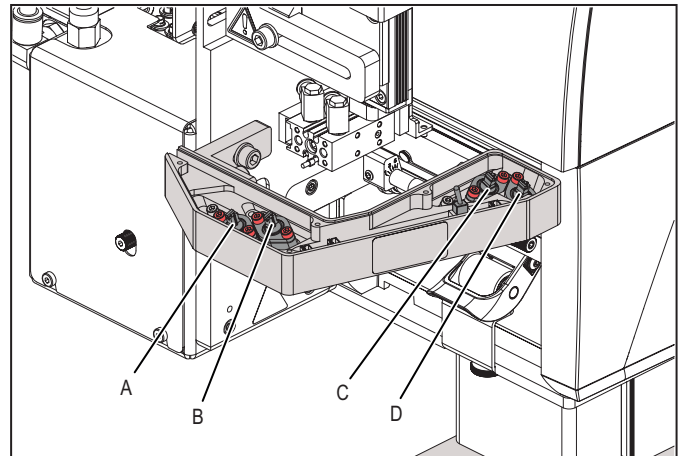


Image 11.3 Align the laser

- Calibrate the laser with screws A to D so that the lines precisely surround the label.

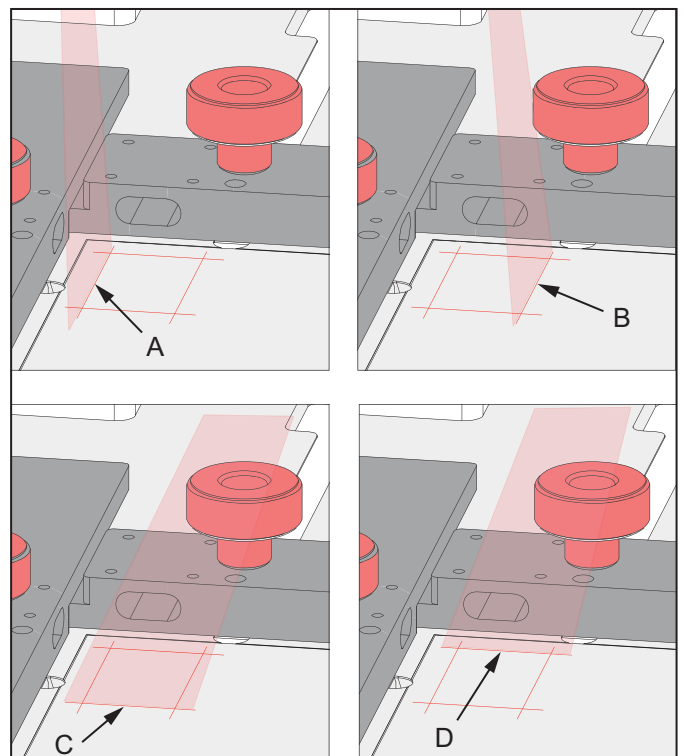


Image 11.4 Assign the adjusting screws to the laser lines

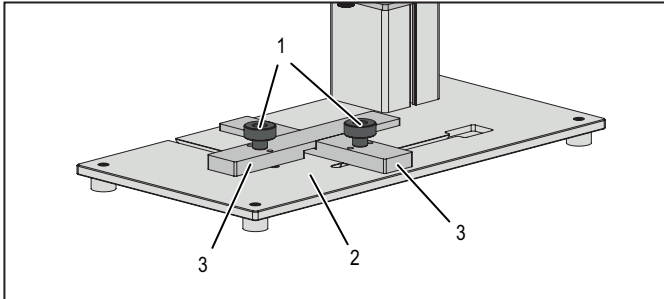


Image 11.5 Fasten the object

- ▶ Loosen the knurled screws (1) of the stops.
- ▶ Place the object on the object holder (2).
- ▶ Fasten the object by moving the stops (3).
- ▶ Tighten the knurled screws (3).

12 Decommissioning and disposing of the system

12.1 Decommissioning the system

- ▶ Switch off the system at the printer.
- ▶ Disconnect the mains plug.
- ▶ Remove the compressed-air hose from the compressed-air source.
- ▶ Remove the compressed-air hose from the compressed-air maintenance unit on the applicator.
- ▶ Remove label material and transfer foil from the printer.
- ▶ Remove the applicator from the printer.
- ▶ Remove the printer from the mounting foot.
- ▶ Pack the components in their original packaging.

The system is now ready for transport and, if necessary, disposal.

12.2 Disposing of the system

- ▶ Decommission the system as described in chapter 12.1.
- ▶ Ensure that the system is disposed of in accordance with national and local regulations.





The product contains substances that may be harmful to the environment and human health. In addition, it also contains substances that can be reused through targeted recycling.

Observe the notes for proper disposal of the product. You can find the notes here: www.weidmueller.com/disposal.



You can send the product to Weidmüller for disposal. Please contact your responsible country representatives.

13 Annex

		Weidmüller 
		DE PI810110 220629 001 ISS 01
EU KONFORMITÄTSERKLÄRUNG		
EU DECLARATION OF CONFORMITY		
<A>	DÉCLARATION UE DE CONFORMITÉ	
	DICHIARAZIONE DI CONFORMITÀ UE	
	DECLARACIÓN DE CONFORMIDAD DE LA UE	
	Weidmüller Interface GmbH & Co. KG Klingenbergstr. 26, D-32758 Detmold	erklären in alleiniger Verantwortung, dass das Produkt declare under our sole responsibility that the product déclarons sous notre seule responsabilité que le produit dichiariamo sotto nostra unica responsabilità che il prodotto declaramos bajo nuestra sola responsabilidad que el producto
<E>	Etikettiersystem Print and apply system Impression-Pose Etichettatura Etiquetado automático THM MULTIMARK LPC (2878190000)	
<C>	folgenden europäischen Richtlinien entspricht is in conformity with the following EC directives est conforme aux directives communautaires suivantes risulta in conformità alle seguenti direttive comunitarie es conforme con las siguientes directivas comunitarias	2006 / 42 / EG 2014 / 30 / EU 2011 / 65 / EU
<D>	und folgende Normen angewandt wurden and that the following standards have been applied et que les normes suivantes ont été appliquées e che sono state applicate le seguenti norme y que se han aplicado las siguientes normas	EN ISO 12100:2010 EN ISO 13857:2019 EN ISO 13854:2019 EN ISO 13849-1:2015 EN ISO 13849-2:2012 EN 62368-1:2014 + AC:2015 EN 55032:2015 + A11:2020 EN 55035:2017 + A11:2020 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 61000-6-2:2005 + AC:2005 EN IEC 63000:2018
<G>	Name und Anschrift der Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen: Weidmüller mit obiger Adresse Name and address of the person authorised to compile the technical file: Weidmüller with the above address Nom et adresse de la personne autorisée à constituer le dossier technique: Weidmüller à l'adresse ci-dessus Nome e indirizzo della persona autorizzata a costituire il fascicolo tecnico: Weidmüller con l'indirizzo sopra indicato Nombre y dirección de la persona facultada para elaborar el expediente técnico: Weidmüller con la dirección arriba mencionada	
Detmold, 29.06.2022		 Sune Mellgren, Business Unit Leiter Workplace Solutions / Vice President Business Workplace Solutions