



Label Printer

A+ The Premium Class.

Family	Type
A+	A2+
	A4+
	A4.3+
	A6+
	A8+

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1.1 Instructions

Important information and instructions in this documentation are designated as follows:



Danger!

Draws your attention to an exceptionally grave, impending danger to your health or life.



Warning!

Indicates a hazardous situation that could lead to injuries or material damage.



Attention!

Draws attention to possible dangers, material damage or loss of quality.



Notice!

Gives you tips. They make a working sequence easier or draw attention to important working processes.



Environment!

Gives you tips on protecting the environment.



Handling instruction



Reference to section, position, illustration number or document.



Option (accessories, peripheral equipment, special fittings).

Zeit Information in the display.

1.2 Intended Use

- The device is manufactured in accordance with the current technological status and the recognized safety rules. However, danger to the life and limb of the user or third parties and/or damage to the device and other tangible assets can arise during use.
- The device may only be used for its intended purpose and if it is in perfect working order, and it must be used with regard to safety and dangers as stated in the operating manual.
- The device printer is intended exclusively for printing suitable materials that have been approved by the manufacturer. Any other use or use going beyond this shall be regarded as improper use. The manufacturer/supplier shall not be liable for damage resulting from unauthorized use; the user shall bear the risk alone.
- Usage for the intended purpose also includes complying with the operating manual, including the manufacturer's maintenance recommendations and specifications.



Notice!

The complete documentation is included in the scope of delivery on CD ROM, and can also currently be found in the Internet.

1.3 Safety Instructions

- The device is configured for voltages of 100 to 240 V AC. It only has to be plugged into a grounded socket.
- Only connect the device to other devices which have a protective low voltage.
- Switch off all affected devices (computer, printer, accessories) before connecting or disconnecting.
- The device may only be used in a dry environment, do not expose it to moisture (sprays of water, mists, etc.).
- Do not use the device in an explosive atmosphere.
- Do not use the device close to high-voltage power lines.
- If the device is operated with the cover open, ensure that people's clothing, hair, jewelry etc. do not come into contact with the exposed rotating parts.
- The device or parts of it can become hot while printing. Do not touch during operation, and allow to cool down before changing material and before disassembly.

- Risk of crushing when closing the cover. Touch the cover at the outside only. Do not reach into the swivel range of the cover.
- Perform only those actions described in this operating manual.
Work going beyond this may only be performed by trained personnel or service technicians.
- Unauthorized interference with electronic modules or their software can cause malfunctions.
- Other unauthorized work on or modifications to the device can also endanger operational safety.
- Always have service work done in a qualified workshop, where the personnel have the technical knowledge and tools required to do the necessary work.
- There are various warning stickers on the device. They draw your attention to dangers.
Warning stickers must therefore not be removed, as then you and other people cannot be aware of dangers and may be injured.
- The maximum sound pressure level is 74 dB(A) at A8+ and less than 70 dB(A) at all other types.

**Danger!**

Danger to life and limb from power supply.

- **Do not open the device casing.**

1.4 Environment



Obsolete devices contain valuable recyclable materials that should be sent for recycling.

- Send to suitable collection points, separately from residual waste.

The modular construction of the printer enables it to be easily disassembled into its component parts.

- Send the parts for recycling.



The electronic circuit board of the device is equipped with a lithium battery.

- Take old batteries to collection boxes in shops or public waste disposal centers.

2.1 Device Overview

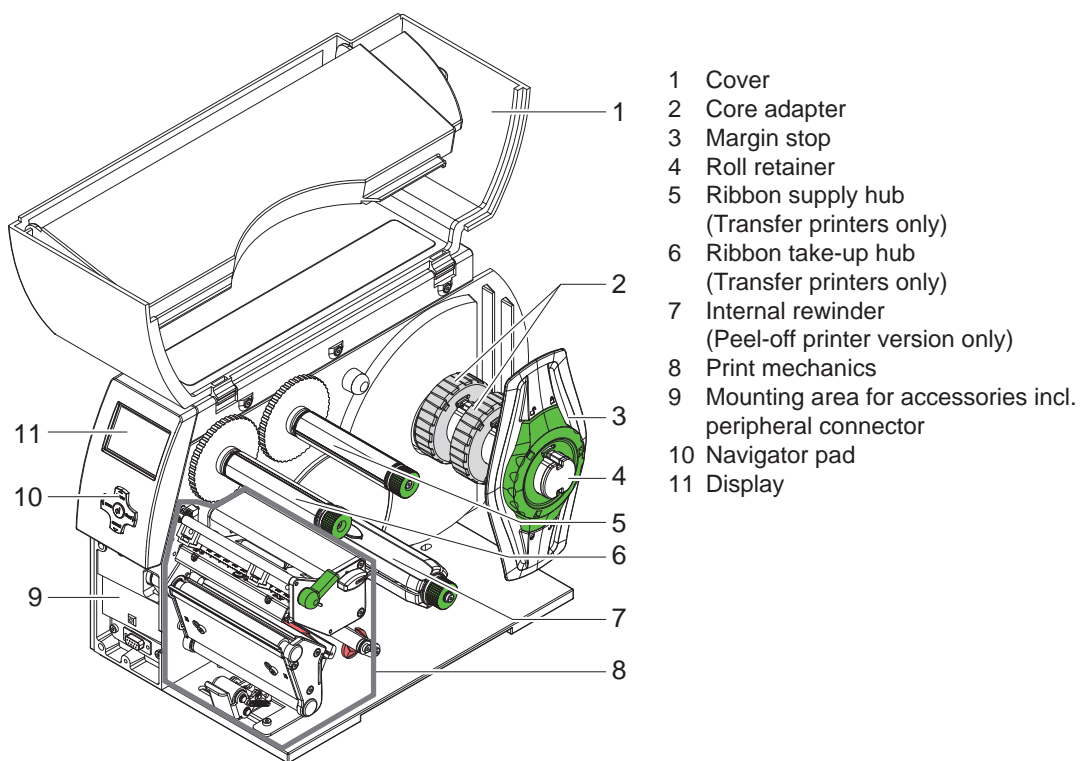


Fig. 1 Overview

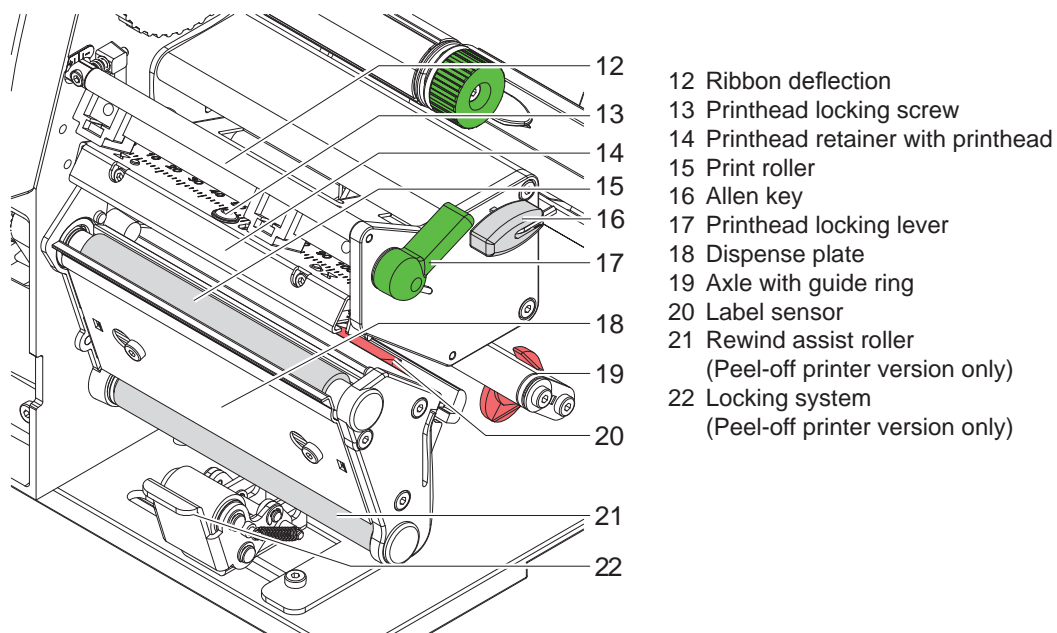
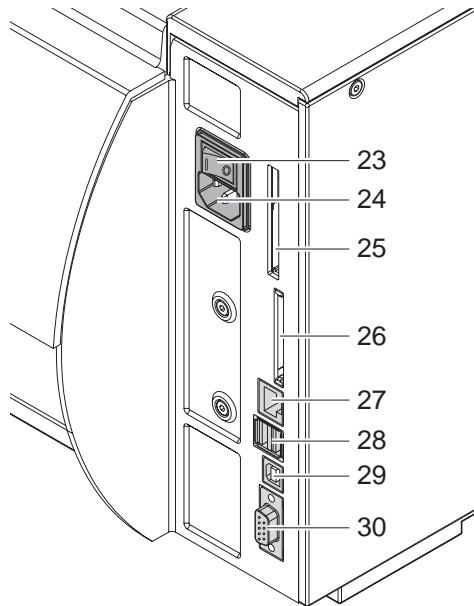
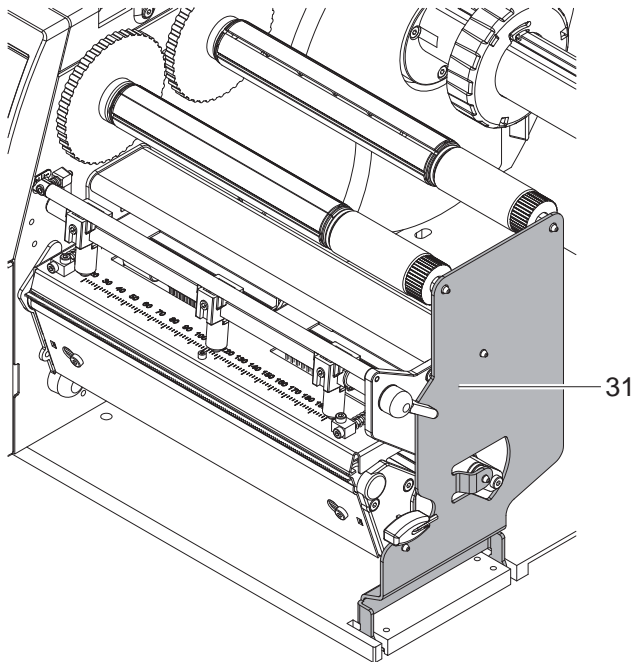


Fig. 2 Print mechanics



- 23 Power switch
- 24 Power connection jack
- 25 Slot for PC Card Type II
- 26 Slot for CompactFlash memory card
- 27 Ethernet 10/100 Base-T
- 28 2 USB master ports for keyboard,
scanner or service key
- 29 USB high-speed slave port
- 30 Serial RS-232 C port

Fig. 3 Connections



- 31 Support bracket (A8+ only)
for additional bearing of the roller and printhead
assemblies and the ribbon hubs

Fig. 4 Support bracket A8+

2.2 Unpacking and Setting-up the Printer

- ▶ Lift the label printer out of the box via the straps.
- ▶ Check label printer for damage which may have occurred during transport.
- ▶ Set up printer on a level surface.
- ▶ Remove foam transportation safeguards near the printhead.
- ▶ Check delivery for completeness.

Contents of delivery:

- Label printer
- Power cable
- Documentation
- cablabel Lite on CD-ROM
- Documentation on CD-ROM

Notice!



Please keep the original packaging in case the printer must be returned.

Attention!



The device and printing materials will be damaged by moisture and wetness.

- ▶ Set up label printers only in dry locations protected from splash water.

2.3 Connecting the Device

The standard available interfaces and connectors are shown in figure 3.

2.3.1 Connecting to the Power Supply

The printer is equipped with a wide area power unit. The device can be operated with a supply voltage of 230 V~/50 Hz or 115 V~/60 Hz without adjustment.

1. Check that the device is switched off.
2. Plug the power cable into the power connection socket (6).
3. Plug the power cable into a grounded socket.

2.3.2 Connecting to a Computer or Computer Network

Attention!



Inadequate or no grounding can cause malfunctions during operations.

Ensure that all computers and cables connected to the label printer are grounded.


- ▶ Connect the label printer to a computer or network by a suitable cable.

For details of the configuration of the individual interfaces ▷ Configuration Manual.

2.4 Switching on the Device

When all connections have been made:

- ▶ Switch the printer on at the power switch (23).
The printer performs a system test, and then shows the system status *ready* in the display (11).

If an error occurs during the system test, the symbol  and type of error are displayed.

3.1 Structure of the Control Panel

The user can control the operation of the printer with the control panel, for example:

- Issuing, interrupting, continuing and canceling print jobs,
- Setting printing parameters, e.g. heat level of the printhead, print speed, interface configuration, language and time of day (▷ Configuration Manual),
- Start the test functions (▷ Configuration Manual),
- Control stand-alone operation with a memory module (▷ Configuration Manual),
- Update the firmware (▷ Configuration Manual).

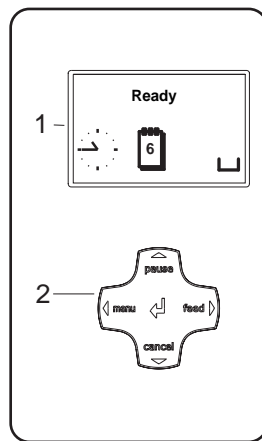
Many functions and settings can also be controlled by software applications or by direct programming with a computer using the printer's own commands. ▷ Programming Manual for details.

Settings made on the control panel make the basic settings of the label printer.

Notice!



It is advantageous, whenever possible, to make adaptations to various print jobs in the software.



The control panel consists of a graphic display (1) and the navigator pad (2) with five integrated keys.

The graphic display indicates the current status of the printer and the print job, indicates faults and shows the printer settings in the menu.

Fig. 5 Control Panel

3.2 Symbol Displays

The symbols shown in the following table may appear in the status line of the display, depending on the printer configuration. They enable the current printer status to be seen quickly. For the configuration of the status line ▷ the Configuration Manual.

Symbol	Description	Symbol	Description	Symbol	Description
	Clock		Ethernet link status		User memory in the clock circuit
	Date sheet		Temperature of the printhead		Used memory
	Date/time digital		PPP funds		Input buffer
	Ribbon supply		Debug window for abc programs		Access to memory card
	Wi-Fi signal strength		Control of the lower display line is handed over to an abc program		Printer is receiving data

Table 1 Symbol displays

3.3 Printer States








State	Display	Description
Ready	Ready and configured symbol displays, such as time  and date 	The printer is in the ready state and can receive data.
Printing label	Printing label and the number of the printed label in the print job.	The printer is currently processing an active print job. Data can be transmitted for a new print job. The new print job will start when the previous one has finished.
Pause	Pause and the symbol 	The printing process has been interrupted by the operator.
Correctable error	 and the type of error and the number of labels still to be printed.	An error has occurred that can be rectified by the operator without interrupting the print job. The print job can be continued after the error has been rectified.
Irrecoverable error	 and the type of error and the number of labels still to be printed.	An error has occurred that cannot be rectified without interrupting the print job.
Critical error	 and the type of error	An error occurs during the system test. ► Switch the printer off and then on again at the power switch or ► Press cancel key. Call Service if the fault occurs persistently.
Power Save Mode	 and the key lighting is switched off	If the printer is not used for a lengthy period, it automatically switches to power save mode. ► To exit power save mode: Press any key on the navigator pad.

Table 2 Printer states

3.4 Key Functions

The key functions depend on the current printer state:

- Active functions: Labels and symbols on the navigator pad keys light up.
- Active functions light up white in print mode (e. g. **menu** or **feed**).
- Active functions light up orange in the offline menu (arrows, key ↵).





Key		Display	State	Function
menu	lights	Ready	Ready	To the offline menu
feed	lights	Ready	Ready	Feeds a blank label
pause	lights	Ready	Ready	After the end of a print job, reprint the last label
		Printing label	Printing label	Interrupt print job, printer goes into "Pause" state
		Pause	Pause	Continue the print job, printer goes into "Printing label" state
	flashes		Correctable error	Continue the print job after rectifying the error, printer goes into "Printing label" state
cancel	lights	Ready	Ready	Delete internal memory, the last label can no longer be reprinted.
		Printing label	Printing label	Short press → cancels the current print job Longer press → cancels the current print job and deletes all print jobs
		Pause	Pause	
			Correctable error	
	flashes		Irrecoverable error	
↵	lights		Error	Call Help - Concise information for rectifying the fault will be displayed

Table 3 Key functions in the print mode

Key	Menu	Parameter setting	
		Parameter choice	Numeric value
↑	Return from a submenu	-	Increase of the number at the cursor position
↓	Jump into a submenu	-	Decrease of the number at the cursor position
←	Menu option to the left	Sheets to the left	Cursor shift to the left
→	Menu option to the right	Sheets to the right	Cursor shift to the right
↵	Start of a selected menu option	Confirmation of the selected value	
	Pressing 2 s: Leaving the offline menu	Pressing 2 s: Abort without changing the value	

Table 4 Key functions in the offline menu

**Notice!**

For adjustments and simple installation work, use the accompanying Allen key located in the bottom section of the print unit. No other tools are required for the work described here.

4.1 Opening and Closing the Support Bracket A8+

For additional bearing of the roller and printhead assemblies and the ribbon hubs the A8+ is equipped with a support bracket (1) .

**Notice!**

For loading and removing material on A8+ it is necessary to open and close the support bracket in addition to the steps described in the following chapters.

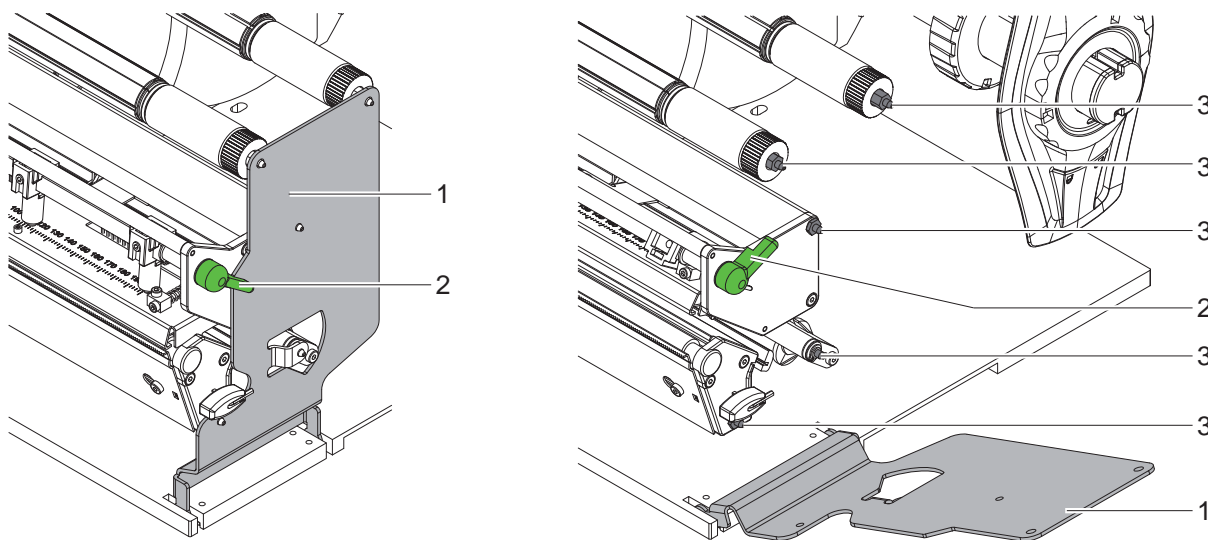


Fig. 6 Support bracket A8+

Opening the Support Bracket

- ▶ Open cover.
- ▶ Turn lever (2) counterclockwise to lift the printhead.
- ▶ Open the support bracket (1).
Labels and transfer ribbon can be loaded or removed.

Closing the Support Bracket

- ▶ Turn lever (2) counterclockwise until it stops.
- ▶ Close the support bracket (1). Ensure that the all pins (3) are captured by the drillings of the support bracket.
- ▶ Turn lever (2) clockwise to lock the printhead.

**Attention!**

Loss of print quality.

Operate or adjust the printer with closed support bracket only !

Operation with support bracket open is not prevented but the print quality may become poor.

4.2 Loading Labels from Roll

4.2.1 Removing and Installing the Core Adapters

Core adapters are mounted for better guidance of the label roll on the roll retainer when using label rolls with a core diameter ≥ 75 mm.

► Remove core adapters for smaller label rolls as follows.

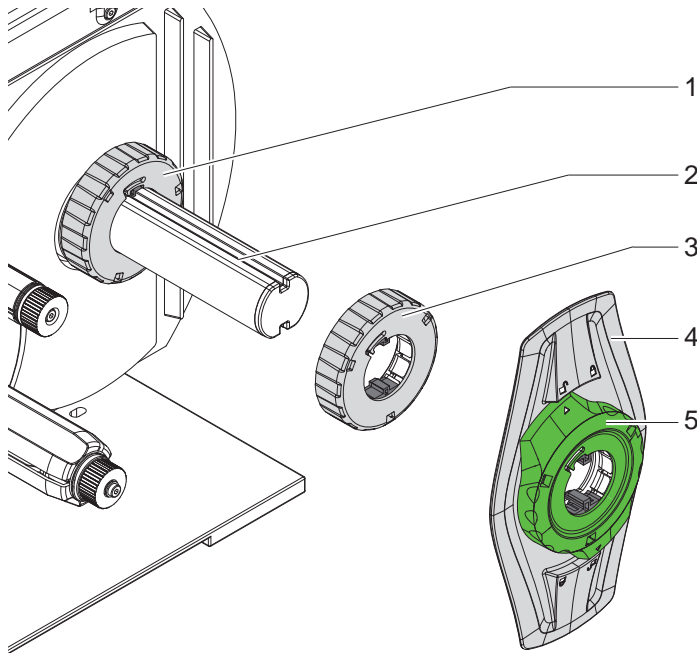


Fig. 7 Core adapters and margin stop

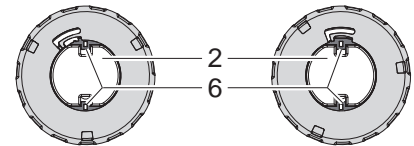


Fig. 8 Core adapter unfixed (left) and fixed (right)

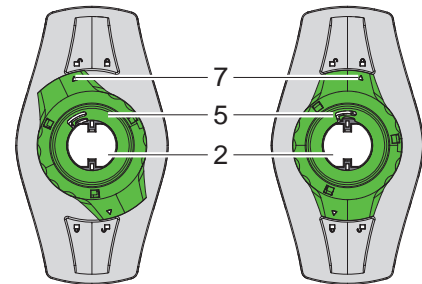






Fig. 9 Margin stop unfixed (left) and fixed (right)

Removing the core adapters

1. Open cover.
2. Turn ring (5) at the margin stop (4) counterclockwise, so that the arrow (7) points to the symbol , and thus release the margin stop.
3. Remove the margin stop (4) from the roll retainer (2).
4. Turn the rings at the adapters (1,3) counterclockwise and thus release the adapters.
5. Remove the adapters (1,3) from the roll retainer (2).
6. Re-mount the margin stop (4) onto the roll retainer (2), turn ring (5) clockwise, so that the arrow (7) points to the symbol , and thus fix the margin stop (4) on the roll retainer.

Installing the core adapters

1. Open cover.
2. Turn ring (5) at the margin stop (4) counterclockwise, so that the arrow (7) points to the symbol , and thus release the margin stop.
3. Remove the margin stop (4) from the roll retainer (2).
4. Align the guide lugs (6) in the core adapters (1,3) with the grooves in the roll retainer (2) and push the adapters onto the roll retainer.
5. Slide first core adapter (1) to the chassis until it stops and fix the adapter by clockwise turning the ring.
6. Place second core adapter (3) matching to the roll width and fix it by clockwise turning the ring.
7. Re-mount the margin stop (4) onto the roll retainer (2), turn ring (5) clockwise, so that the arrow (7) points to the symbol , and thus fix the margin stop (4) on the roll retainer.

4.2.2 Positioning the Label Roll on the Roll Retainer

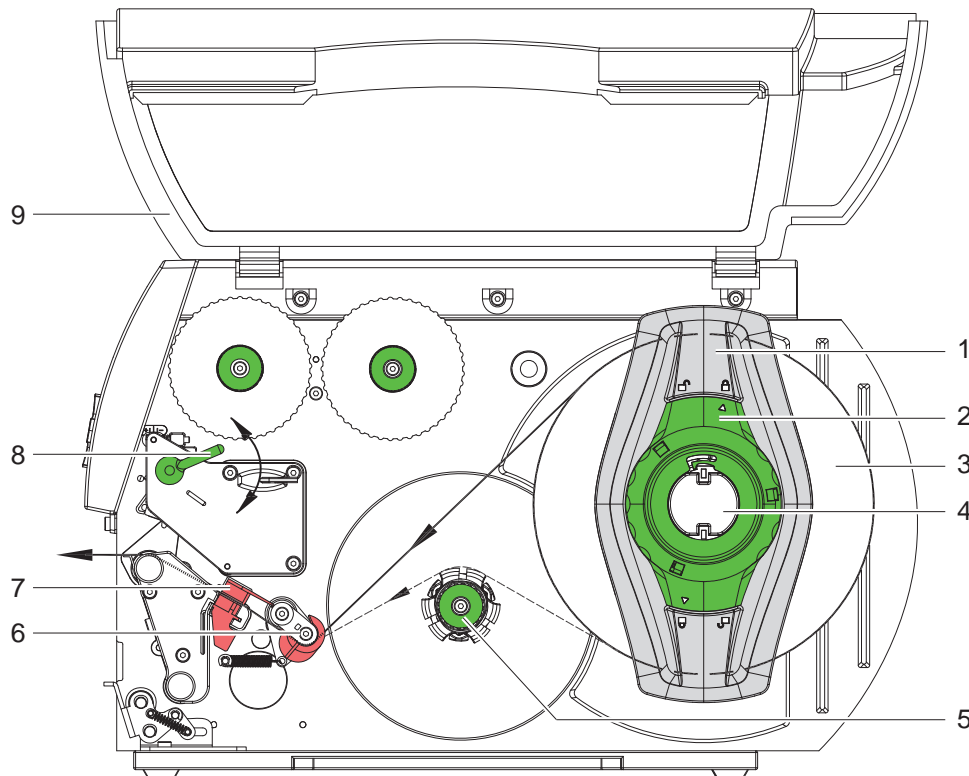




Fig. 10 Loading labels from roll

1. Open cover (9).
2. Turn ring (2) at the margin stop (1) counterclockwise, so that the arrow points to the symbol , and thus release the margin stop.
3. Remove the margin stop (1) from the roll retainer (4).
4. Remove core adapter (4) for label rolls with a core diameter < 75 mm (▷ 4.2.1 on page 13).
5. Load label roll (3) on the roll retainer in such a way that the labels can be inserted into the printhead in the right position. The printing side of the labels must be visible from above.
6. Re-mount the margin stop (1) onto the roll retainer (4). Push the margin stop (1) to the roll until it stops.
7. Turn ring (2) clockwise, so that the arrow (10) points to the symbol , and thus fix the margin stop (1) on the roll retainer (4).
8. Supplying longer label strips:
For Peel-Off or Rewind mode: approx. 60 cm
For Tear-Off mode: approx. 40 cm

4.2.3 Inserting a Label Strip into the Printhead

1. Turn lever (8) counterclockwise to lift the printhead.
2. Push guide ring on axis (6) all the way out.
3. Guide label strip to the print unit above the internal rewinder (5).
4. Guide label strips below the axis (6) and through the label sensor (7) in such a way that it exits the print unit between the printhead and the print roller.
5. Push guide ring on axis (6) against the outer edge of the label strip.

4.2.4 Setting the Label Sensor

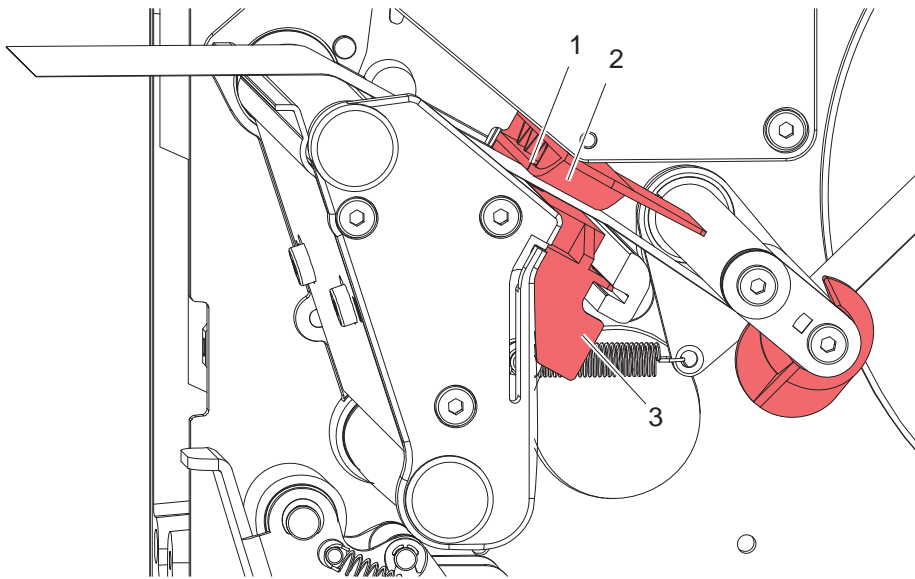


Fig. 11 Setting the label sensor

The label sensor (2) can be shifted perpendicular to the direction of paper flow for adaptation to the label medium. The sensor unit (1) of the label sensor is visible from the front through the print unit and is marked with a indentation in the label sensor retainer.

- Position label sensor with tab (3) in such a way that the sensor (1) can detect the label gap or a reflex or perforation mark.
- or, if the labels deviate from a rectangular shape, -
- Align label sensor using the tab (3) with the front edge of the label in the direction of paper flow.

For use in tear-off mode only:

- Turn lever (Fig. 10, Item 8) clockwise to lock the printhead.

The label roll is loaded for use in tear-off mode.

4.2.5 Winding up the Label Strip in Rewind Mode

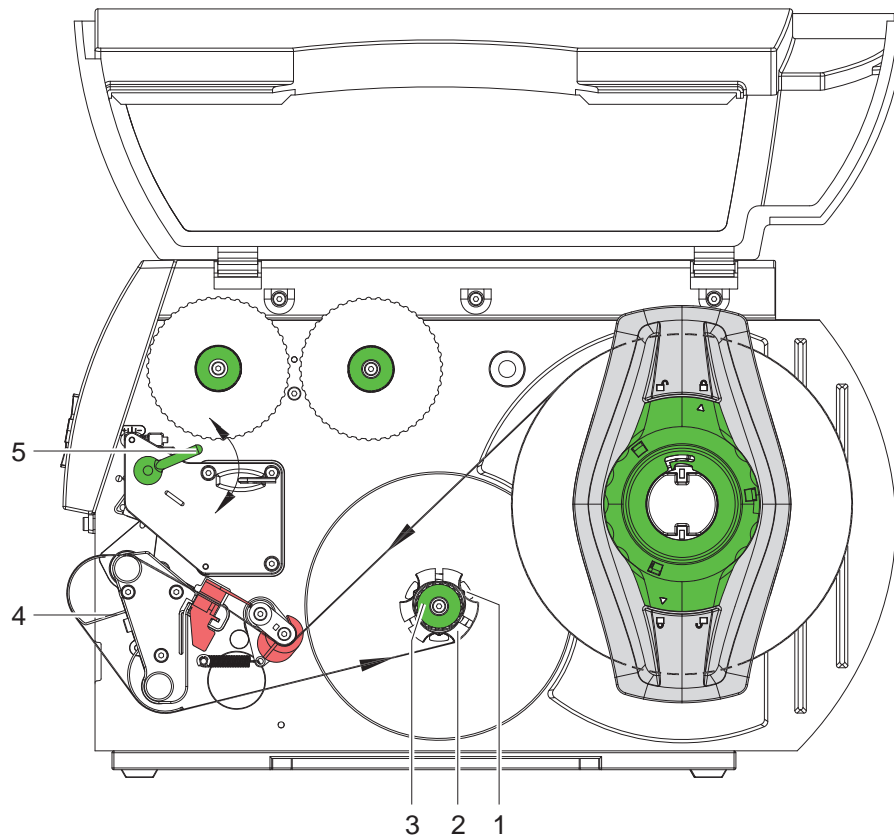


Fig. 12 Guiding the label strip in rewind mode

In rewind mode, the labels are wound up internally after printing for later use.

1. Remove the locking system for rewind mode if necessary (▷ 4.8 on page 24) and install rewind guide plate (▷ 4.7 on page 23).
2. Guide label strip around the rewind guide plate (4) to the internal rewinder (2).
3. Hold rewinder (2) firmly and turn knob (3) clockwise until it stops.
4. Push label strip under a bracket (1) of the rewinder and turn knob (3) counterclockwise until it stops. The rewinder is fully spread, thus gripping the label strip firmly.
5. Turn rewinder (2) counterclockwise to tighten the label strip.
6. Turn lever (5) clockwise to lock the printhead.

The label roll is loaded for use in rewind mode.

4.2.6 Winding up the Liner in Peel-Off mode

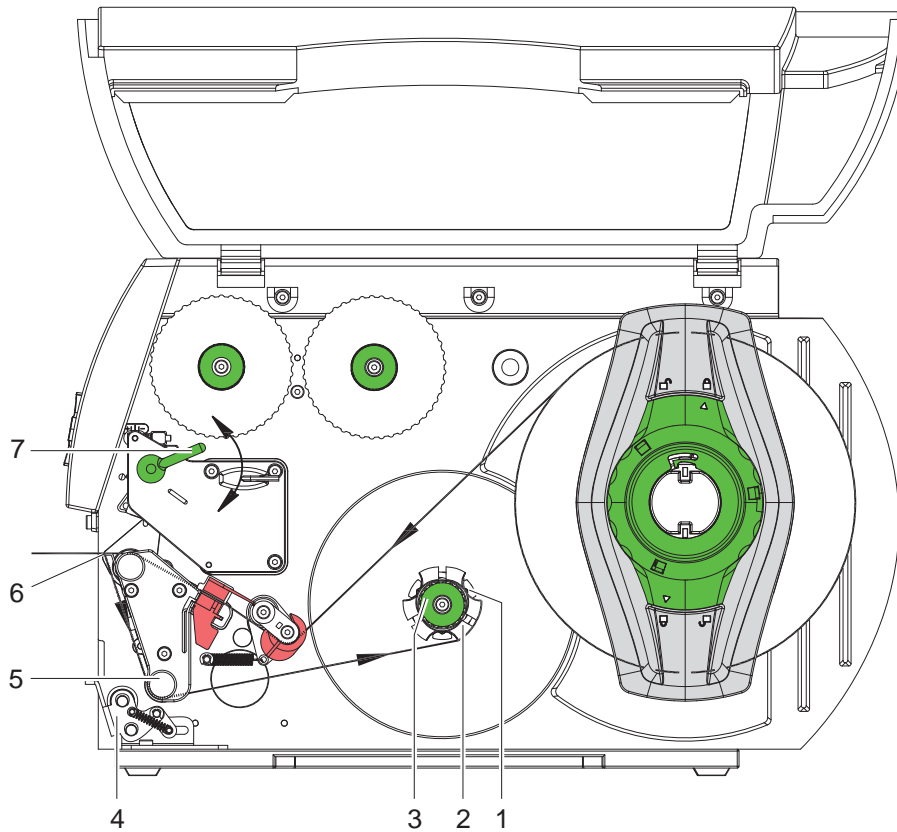


Fig. 13 Guidance of the material in peel-off mode

In Peel-Off mode, the labels are removed after printing, and only the liner is wound up internally.

1. Lift the pinch roller (4) off the rewind assist roller (5).
2. Remove labels from the first 100 mm of the liner.
3. Guide liner to the rewinder (2) around the dispense plate (6) and the rewind assist roller (5).
4. Hold rewinder (2) firmly and turn knob (3) clockwise until it stops.
5. Push liner under a bracket (1) of the rewinder (2) and turn knob (3) counterclockwise until it stops.
The rewinder is fully spread, thus gripping the liner firmly.
6. Turn rewinder (2) counterclockwise to tighten the liner.
7. Slightly loosen top fixing screw at the locking system with Allen key and position the pinch roller (4) centrally to the liner.
8. Close the locking system and tighten top fixing screw at the locking system.
9. Turn lever (7) clockwise to lock the printhead.

The label roll is loaded for use in peel-off mode.

4.2.7 Setting the Head Locking System

The printhead is pushed on via two plungers (on A8+ three plungers). The location of the outer plunger must be set to the width of the label medium used so as to

- achieve even print quality across the entire label width
- prevent wrinkles in the feed path of the transfer ribbon
- prevent premature wearing of the print roller and printhead.

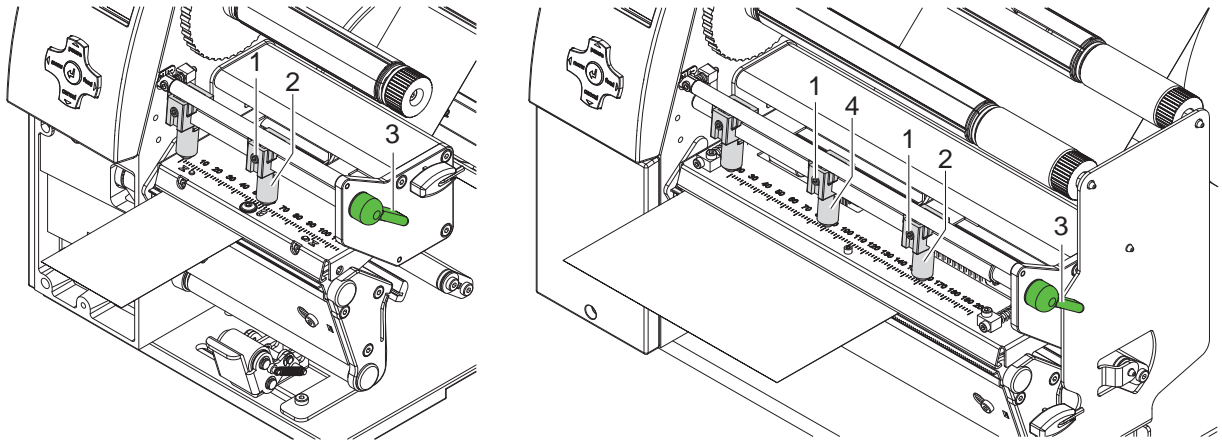


Fig. 14 Setting the head locking system

1. Turn lever (3) clockwise to lock the printhead.
2. Loosen threaded pin (1) at outer plunger (2) with Allen key.
3. Position outer plunger (2) above the outer label edge and tighten threaded pin (1).
4. On A8+ align the middle plunger to the middle of the labels.

4.3 Removing the Wound Roll

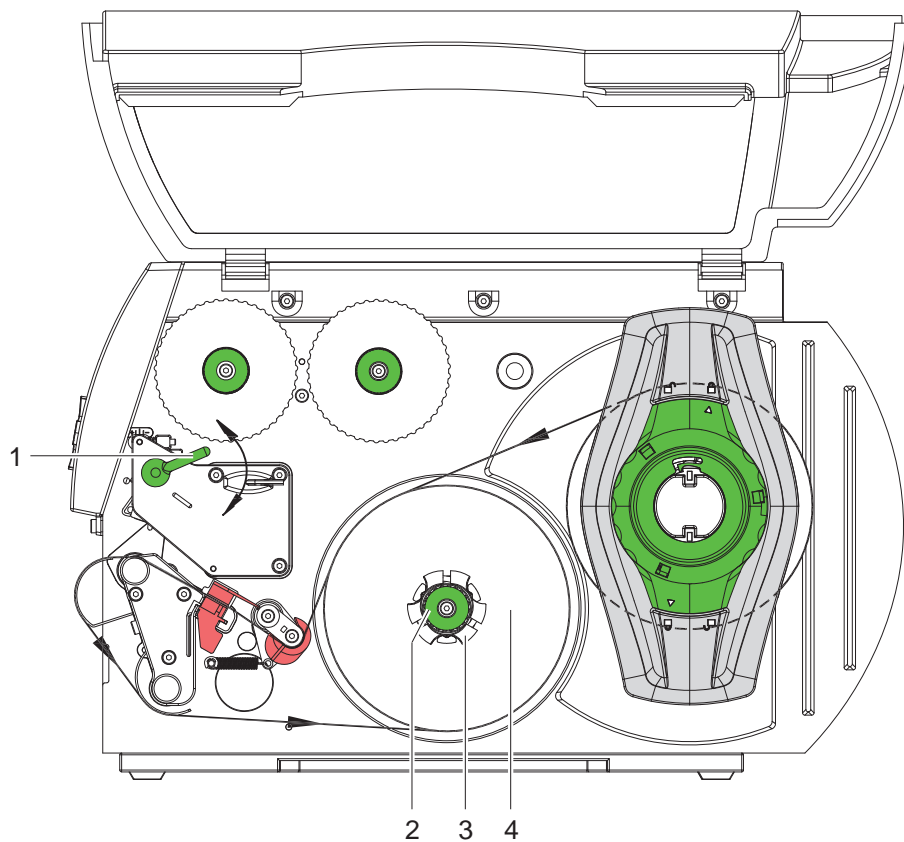


Fig. 15 Removing the wound roll

1. Turn lever (1) counterclockwise to lift the printhead.
2. Cut label strip and wind it fully around the rewinder (3).
3. Hold rewinder (3) firmly and turn knob (2) clockwise.
The rewinder spindle relaxes and the wound roll (4) is released.
4. Remove wound (4) roll from rewinder (3).

4.4 Loading Fanfold Labels

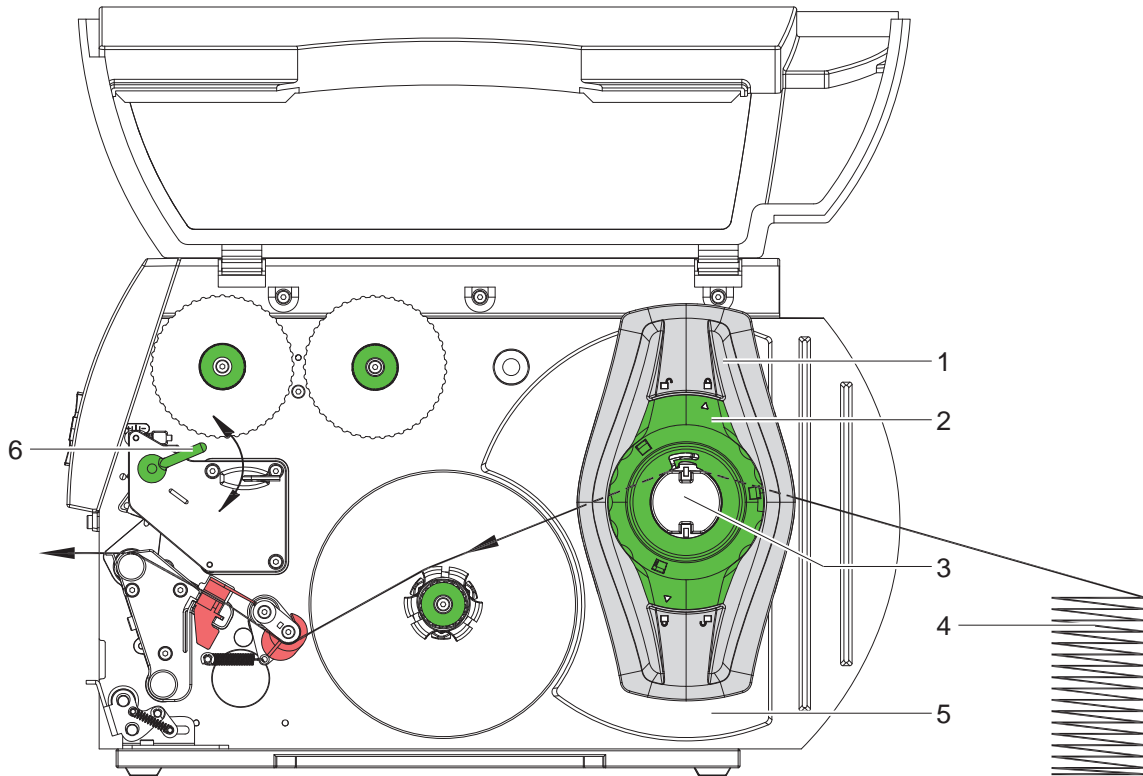




Fig. 16 Feed path of fanfold labels

1. Turn ring (2) counterclockwise, so that the arrow points to the symbol , and thus release the margin stop (1).
2. Move the margin stop (1) outwards as far as possible.
3. Position label stack (4) behind the printer. Ensure that the labels on the strip are visible from above.
4. Guide label strip to print unit via the roll retainer (3).
5. Move the margin stop (1) against the media strip until chassis (5) and margin stop (1) touch the media strip without clamping or bending it.
6. Turn ring (2) clockwise, so that the arrow points to the symbol , and thus fix the margin stop (1) on the roll retainer (3).
7. Insert label strip into printhead (▷ 4.2.3 on page 14).
8. Set label sensor (▷ 4.2.4 on page 15).
9. Set head locking system (▷ 4.2.7 on page 18).
10. Turn lever (6) clockwise to lock the printhead.

4.5 Loading Transfer Ribbon

Notice!

With direct thermal printing, do not load a transfer ribbon; if one has already been loaded, remove it.

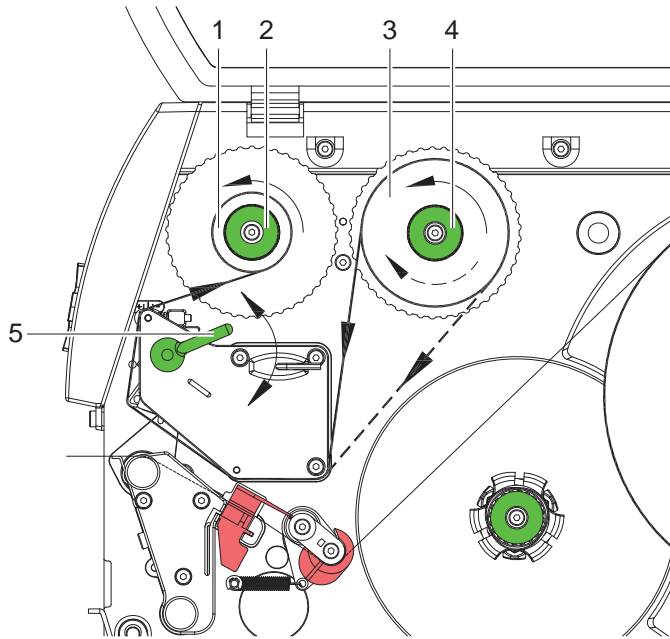


Fig. 17 Feed path of the transfer ribbon

1. Clean printhead before loading the transfer ribbon (▷ 6.3 on page 26).
2. Turn lever (5) counterclockwise to lift the printhead.
3. Slide transfer ribbon roll (3) onto the ribbon supply hub (4) until it stops and so that the color coating of the ribbon faces downward when being unwound. No rotation direction is specified for the ribbon supply hub (4).
4. Hold transfer ribbon roll (3) firmly and turn knob on ribbon supply hub (4) counterclockwise until the transfer ribbon roll is secured.
5. Slide suitable transfer ribbon core (1) onto the transfer ribbon take-up hub (2) and secure it in the same way.
6. Guide transfer ribbon through the print unit as shown in Fig. 17.
7. Secure starting end of transfer ribbon to the transfer ribbon core (1) with adhesive tape. Ensure counterclockwise rotation direction of the transfer ribbon take-up hub here.
8. Turn transfer ribbon take-up hub (2) counterclockwise to smooth out the feed path of the transfer ribbon.
9. Turn lever (5) clockwise to lock the printhead.

4.6 Setting the Feed Path of the Transfer Ribbon

Transfer ribbon wrinkling can lead to print image errors. Transfer ribbon deflection can be adjusted so as to prevent wrinkles.

Notice!



A maladjustment of the head locking system may also cause ribbon wrinkling (▷ 4.2.7 on page 18).

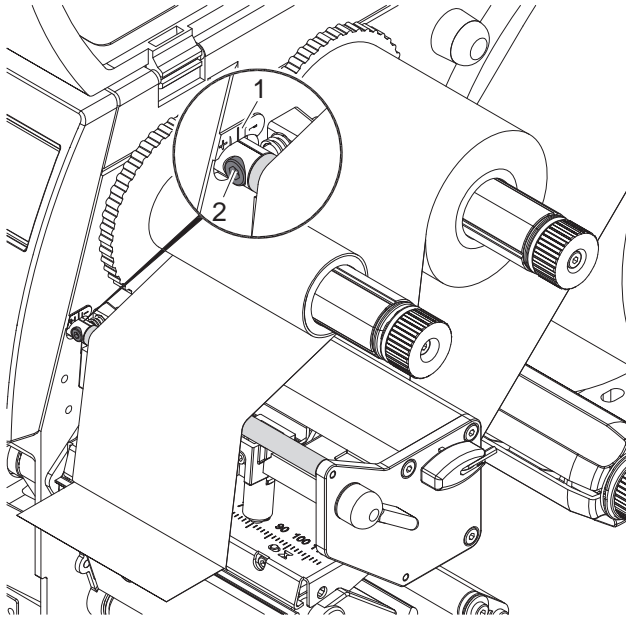


Fig. 18 Setting the feed path of the transfer ribbon

Notice!



The adjustment is best carried out during printing.

1. Read current setting on the scale (1) and record if necessary.
2. Turn screw (2) with Allen key and observe the behavior of the ribbon.
In the + direction, the inner edge of the transfer ribbon is tightened, and the outer edge is tightened in the - direction.

4.7 Removing and Installing the Rewind Guide Plate, Dispense Plate or Tear-off Plate

To convert the printer for use in another operating mode, a rewind guide plate, a dispense plate or a tear-off plate may need to be installed.

Attention!

For printer versions with a locking system on the rewind assist roller, the locking system must be removed for operation in rewind mode before installation of the rewind guide plate (▷ 4.8 on page 24).

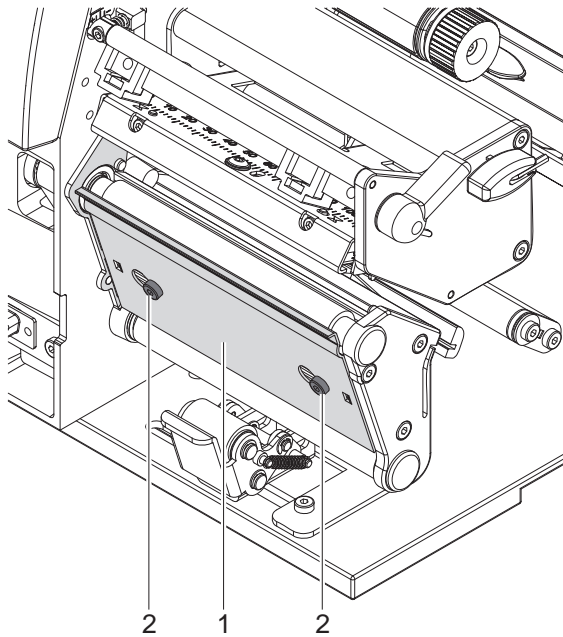


Fig. 19 Removing and installing the rewind guide plate, dispense plate or tear-off plate

Removing a plate

1. Loosen screws (2) several turns.
2. Slide plate (1) to the right and remove it.

Installing a plate

1. Place plate (1) onto the screws (2) and slide to the left completely.
2. Tighten screws (2).

4.8 Removing and Installing the Locking System

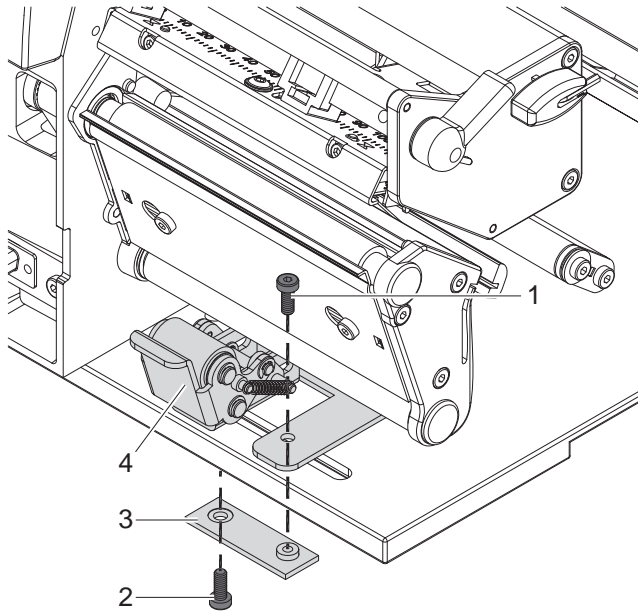


Fig. 20 Removing and installing the locking system

Removing the locking system

1. Position printer at edge of table so that the oblong hole is accessible from below.
2. Screw out screws (1) (2) and remove them.
3. Remove the pinch roller (4) and bottom plate (3).

Installing the locking system

1. Position printer at edge of table so that the oblong hole is accessible from below.
2. Place the pinch roller (4) into oblong hole and lightly tighten screw (1) of bottom plate (3) from above.
3. Lightly tighten screw (2) of bottom plate (3) from below.
4. Align the pinch roller (4) with center of label and tighten screws.

**Attention!**

Printhead damage caused by improper handling!

- ▶ Do not touch the underside of the printhead with the fingers or sharp objects.
- ▶ Ensure that the labels are clean.
- ▶ Ensure that the label surfaces are smooth. Rough labels act like emery paper and reduce the service life of the printhead.
- ▶ Print with the lowest possible printhead temperature.

The printer is ready for operation when all connections have been made and labels and, if applicable, the transfer ribbon have been loaded.

5.1 Synchronization of the Paper Feed

After the label stock has been inserted, for peel-off or cutting mode a synchronization of the paper feed is required. That way the first label, which is detected by the label sensor, will be transported to the print position and all labels in front will be fed out of the printer. So the synchronization avoids, that blank labels are peeled-off together with the first printed label or that the first cut label would be too long. Both effects can cause useless first labels.

- ▶ Press the **feed** key to start the synchronization.
- ▶ Remove the blank labels peeled-off or cut during the synchronization.

**Notice!**

Synchronization is not necessary if the printhead was not opened between different print jobs, even if the printer was switched off.

5.2 Tear-off Mode

In tear-off mode, labels or continuous media are printed. After printing, the label strip can be separated by hand. The label printer must be equipped with a tear-off plate for this ▷ 4.7 on page 23.

5.3 Peel-off Mode

In Peel-off mode, the labels are automatically peeled off the liner after printing and presented for removal. The liner is wound up by the internal rewinder. This mode is available only on the peel-off printer versions. The printer must be equipped with a dispense plate and one of the following accessory devices for this:

- Present sensor PS6 or PS8
- Peel-off adapter PS5
- Applicator A1000

**Notice!**

Peel-off mode must be activated in the software.

This is done with the "P command" in the direct programming, ▷ Programming Manual.

**Notice!**

A sensor or an external signal releases the printout of the next label after a label has been removed from the peel-off position.

5.4 Internal Rewinding

The labels are wound up internally after printing with the carrier medium for later use. This mode is available only on the peel-off printer versions. The label printer must be equipped with a rewind guide plate for this ▷ 4.7 on page 23.

6.1 Cleaning Information



Danger!

Risk of death via electric shock!

- ▶ **Disconnect the printer from the power supply before performing any maintenance work.**

The label printer requires very little maintenance.

It is important to clean the thermal printhead regularly. This guarantees a consistently good printed image and plays a major part in preventing premature wear of the printhead.

Otherwise, the maintenance is limited to monthly cleaning of the device.



Attention!

The printer can be damaged by aggressive cleansers.

Do not use abrasive cleaners or solvents for cleaning the external surfaces or modules.

- ▶ Remove dust and paper fluff from the print area with a soft brush or vacuum cleaner.
- ▶ The cover of the printer can be cleaned with a standard cleanser.

6.2 Cleaning the Print Roller

Accumulations of dirt on the print roller may impair the media transport and the print quality.

- ▶ Lift the printhead.
- ▶ Remove labels and transfer ribbon from the printer.
- ▶ Remove deposits with roller cleaner and a soft cloth.
- ▶ If the roller appears damaged, replace it ► Service Manual.

6.3 Cleaning the Printhead

Cleaning intervals: direct thermal printing - every media roll change
 thermal transfer printing - every ribbon roll change

Substances may accumulate on the printhead during printing and adversely affect printing, e.g. differences in contrast or vertical stripes.



Attention!

Printhead can be damaged!

Do not use sharp or hard objects to clean the printhead.

Do not touch protective glass layer of the printhead.



Attention!

Risk of injury from the hot printhead line.

Ensure that the printhead has cooled down before starting cleaning.

- ▶ Lift the printhead.
- ▶ Remove labels and transfer ribbon from the printer.
- ▶ Clean printhead surface with special cleaning pen or a cotton swab dipped in pure alcohol.
- ▶ Allow printhead to dry for 2–3 minutes before commissioning the printer.

6.4 Cleaning the Label Sensor

**Attention!**

Label sensor can be damaged!

The cleaning method described here cannot be used for the A6+ and A8+ label printers. There is a risk that the label sensor cable could be ripped out.

► In the case of the A6+ and A8+ label printers, commission cleaning by the Service Department.

**Attention!**

Label sensor can be damaged!

Do not use sharp or hard objects or solvents to clean the label sensor.

The label sensor can become dirtied with paper dust. This can adversely affect label detection.

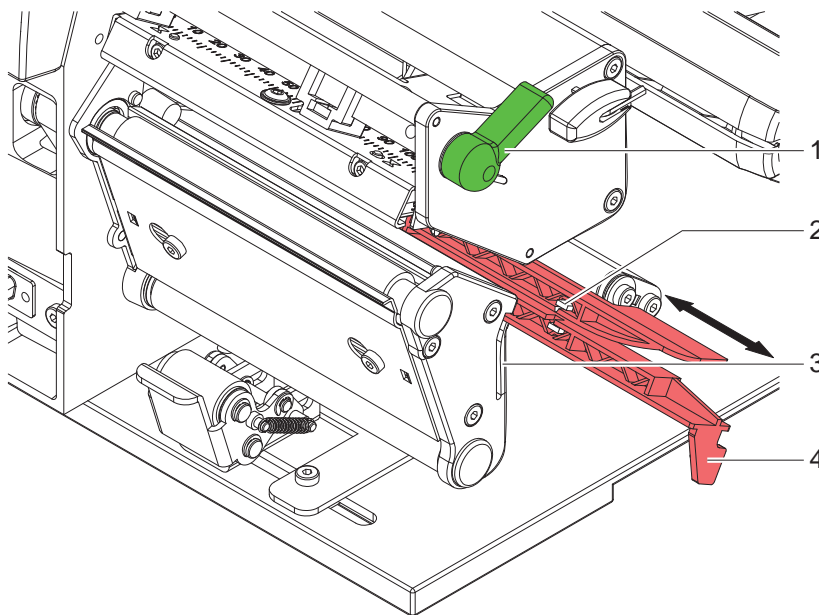


Fig. 21 Cleaning the label sensor

1. Turn lever (1) counterclockwise to lift the printhead.
2. Remove labels and transfer ribbon from the printer.
3. Remove Allen key (5) from its retainer.
4. Press the latch (3) and slowly pull label sensor outward via the tab (4). Ensure that the label sensor cable is not tensioned by this.
5. Clean label sensor and sensor units (2) with brush or cotton swab soaked in pure alcohol.
6. Push label sensor back via tab (3) and set it (► 4.2.4 on page 15).
7. Push Allen key (4) into retainer.
8. Reload labels and transfer ribbon.

7.1 Types of Errors

The diagnostic system indicates on the screen if an error has occurred. The printer is set into one of the three possible error states according to the type of error.




State	Display	Key	Remark
Correctable error		pause flashes cancel lights	▷ 3.4 on page 11
Irrecoverable error		cancel flashes	
Critical fault		-	

Table 5 Error states

7.2 Problem Solution

Problem	Cause	Remedy
Transfer ribbon creases	Transfer ribbon deflection not adjusted	Adjust the transfer ribbon deflection. ▷ 4.6 on page 22
	Head locking system not adjusted	Adjust the head locking system. ▷ 4.2.7 on page 18
	Transfer ribbon too wide	Use a transfer ribbon slightly wider than the width of label.
Print image has smears or voids	Printhead is dirty	Clean the printhead ▷ 6.3 on page 26
	Temperature too high	Decrease temperature via software.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
Printer does not stop after transfer ribbon runs out	Thermal printing is chosen in the software	Change to thermal transfer printing.
Printer prints a sequence of characters instead of the label format	Printer is in ASCII dump mode	Cancel the ASCII dump mode.
Printer transports label media, but transfer ribbon does not move	Transfer ribbon incorrectly inserted.	Check and, if necessary, correct the transfer ribbon web and the orientation of the label side.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
Printer only prints each second label	Setting of the size in the software is too large.	Change the size in the software.
Vertical white lines in the print image	Printhead is dirty	Clean the printhead ▷ 6.3 on page 26
	Printhead is defective (failure of heat elements)	Change the printhead. ▷ Service Manual.
Horizontal white lines in the print image	Printer is used with the backfeed > smart in the cut or peel-off mode	Set the backfeed > always in the setup. ▷ Configuration Manual.
Print image is irregular, one side is lighter	Printhead is dirty	Clean the printhead ▷ 6.3 on page 26
	Head locking system not adjusted	Adjust the head locking system. ▷ 4.2.7 on page 18

Table 6 Problem solution

7.3 Error Messages and Fault Correction

Error message	Cause	Remedy
ADC malfunction	Hardware error	Switch the printer off and then on. If error recurs call service.
Barcode error	Invalid barcode content, e.g. alphanumeric characters in a numerical barcode	Correct the barcode content.
Barcode too big	The barcode is too big for the allocated area of the label	Reduce the size of the barcode or move it.
Battery low	Battery of the PC card is flat	Replace battery in the PC card.
Buffer overflow	The input buffer memory is full and the computer is still transmitting data.	Use data transmission via protocol (preferably RTS/CTS).
Card full	No more data can be stored on the memory card	Replace card.
Cutter blocked	Cutter cannot return into its home position and stays in an undefined position	Switch off the printer. Remove material. Switch on the printer. Restart print job. Change material
	No cutter function	Switch the printer off and then on. If error recurs call service.
Cutter jammed	The cutter is unable to cut the labels but is able to return into its home position	Press the cancel key. Change material.
Device not conn.	Programming addresses a non-existent device	Either connect this device or correct the programming.
File not found	Requested file is not on the card	Check the contents of the card.
Font not found	Error with the selected download font	Cancel current print job, change font.
FPGA malfunction	Hardware error	Switch the printer off and then on. If error recurs call service.
Head error	Hardware error	Switch the printer off and then on. If error recurs replace printhead.
Head open	Printhead not locked	Lock printhead.
Head too hot	Printhead is overheated	After pausing the print job will be continued automatically. If the fault recurs repeatedly, reduce the heat level or the print speed via software.
Invalid setup	Error in the configuration memory	Re-configure printer. If error recurs call service.
Memory overflow	Current print job contains too much information, e.g. selected font, large graphics	Cancel current print job. Reduce amount of data to be printed.
Name exists	Duplicate usage of field name in the direct programming	Correct programming
No DHCP server	The printer is configured for DHCP, but there is no DHCP server, or the DHCP server is not currently available.	Switch off DHCP in the configuration, and assign a fixed IP address. Please contact your network administrator.
No label found	There are labels missing on the label material	Press pause key repeatedly until printer recognizes the next label on the material.
	The label format as set in the software does not correspond with the real label format	Cancel current print job. Change the label format set in the software. Restart print job.
	Printer is loaded with continuous paper, but the software is set on labels	Cancel current print job. Change the label format set in the software. Restart the print job.
No label size	The size of the label is not defined in the programming.	Check programming.
No Link	No network link	Check network cable and connector. Please contact your network administrator.

Error message	Cause	Remedy
No record found	Refers to the optional memory card; database access error	Check programming and card contents.
No SMTP server	The printer is configured for SMTP, but there is no SMTP server, or the SMTP server is not currently available.	Switch off SMTP in the configuration. Caution! Then a warning cannot be sent by e-mail (EAlert). Please contact your network administrator.
No Timeserver	Timeserver is selected in the configu- ration, but there is no Timeserver, or the Timeserver is not currently available.	Switch off Timeserver in the configuration. Please contact your network administrator.
Out of paper	Out of label roll	Load labels.
	Error in the paper feed	Check paper feed.
Out of ribbon	Out of transfer ribbon	Insert new transfer ribbon.
	Transfer ribbon melted during printing	Cancel current print job. Change the heat level via software. Clean the printhead ▷ 6.3 on page 26 Load transfer ribbon Restart print job.
	The printer is loaded with thermal labels, but the software is set to transfer printing	Cancel current print job. Set software to direct thermal printing. Restart print job
Protocol error	Printer has received an unknown or invalid command from the computer.	Press the pause key to skip the command or press the cancel key to cancel the print job.
Read error	Read error when reading from the memory card	Check data of the card. Backup data, reformat card.
Remove ribbon	Transfer ribbon is loaded although the printer is set to direct thermal printing	for direct thermal printing remove ribbon
		for thermal transfer printing set the printer in the configuration or in the software to transfer printing
Structural err.	Error in the file list of the memory card, data access is uncertain.	Format memory card.
Unknown card	Card not formatted, Type of card not supported	Format card, use different type of card.
USB error Device stalled	A USB device has been detected, but it is not working.	Do not use the USB device.
USB error Too much current	The USB device consumes too much current.	Do not use the USB device.
USB error Unknown device	Failure to detect USB device	Do not use the USB device.
Voltage error	Hardware error	Switch the printer off and then on. If error recurs call service. It is shown which voltage has failed. Please note.
Write error	Hardware error	Repeat the write process, reformat card.
Write protected	PC card write protection is activated.	Deactivate the write protection.
Wrong revision	Error when updating the firmware. Firmware not compatible with the hardware version	Load the compatible firmware.

Table 7 Error Messages and Fault Correction

8.1 Media Dimensions

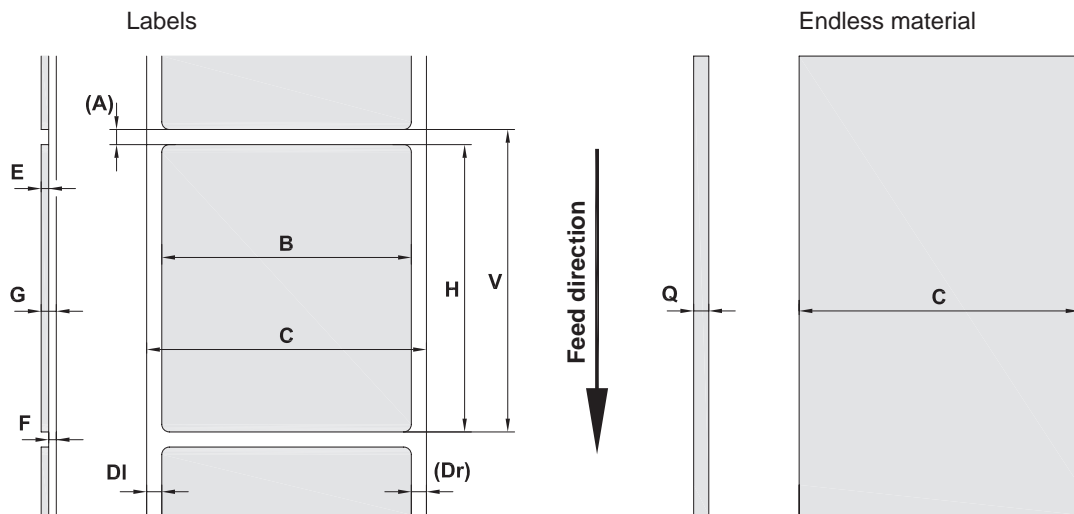


Fig. 22 Label / endless material dimensions

Dim.	Designation	Dim. in mm			
		A2+	A4+ / A4.3+	A6+	A8+
B	Label width	4 - 61	4 - 116	50 - 176	50 - 220
H	Label height in peel-off mode	4 - 1000 12 - 200	4 - 1000 12 - 200	6 - 1000 25 - 200	10 - 1000 -
-	Tear-off length	> 30			
-	Cut length with cutter with perforation cutter	> 2 > 12			
-	Perforation length	> 2			
A	Label distance	> 2			
C	Width of liner or endless material	25 - 65	25 - 120	50 - 180	50 - 235
DI	Left margin	≥ 0			
Dr	Right margin	≥ 0			
E	Label thickness	0,025 - 0,7			
F	Liner thickness	0,03 - 0,1			
G	Thickness label with liner	0,055 - 0,8			
Q	Thickness endless material	0,03 - 0,8			
V	Label feed	> 6			
<ul style="list-style-type: none"> Small label sizes, thin materials or strong glue can lead to limitations. Critical applications need to be tested and cleared. Note the bending stiffness ! Material must be flexible to follow the radius of the print roller ! 					

Table 8 Label / endless material dimensions

8.2 Device Dimensions

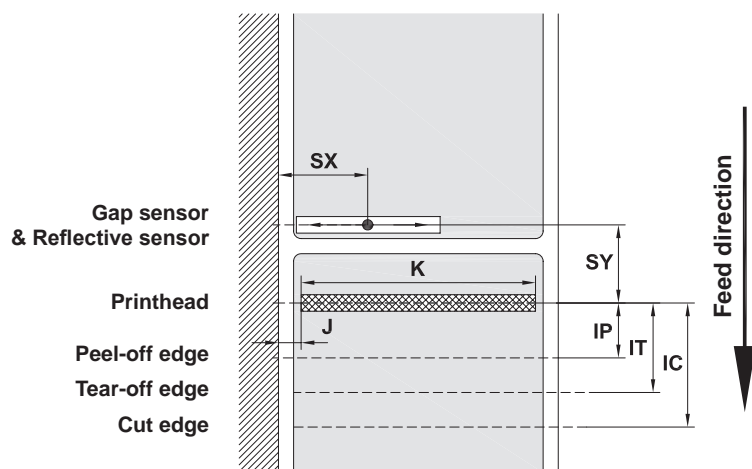


Fig. 23 Device dimensions

Dim.	Designation	Dim. in mm				
		A2+	A4+	A4.3+	A6+	A8+
IP	Distance printhead - peel-off edge	13,5				-
IC	Distance printhead - cut edge	18,8				-
IT	Distance printhead - tear-off edge	13,5				-
J	Distance 1st heating point - material edge	2				-
K	Print width with printhead 203 dpi	-	104,0	104,0	-	-
	Print width with printhead 300 dpi	54,2	105,6	108,4	162,6	216,0
	Print width with printhead 600 dpi	57,0	105,6	-	-	-
SX	Distance gap/reflective sensor - material edge i.e. permissible distance of reflex or cut-out marks to the material edge	5 - 26	5 - 53			
SY	Distance gap/reflective sensor - printhead	46,0				-

Table 9 Device dimensions

8.3 Reflex Mark Dimensions

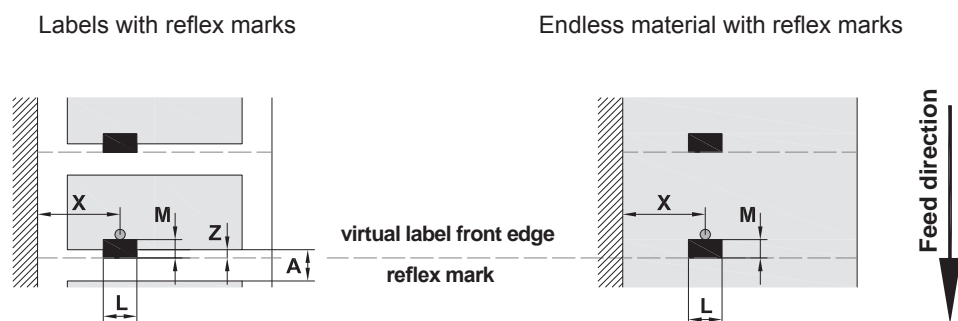


Fig. 24 Reflex mark dimensions

Dim.	Designation	Dim. in mm
A	Label distance	> 2
L	Width of reflex mark	> 5
M	Height of reflex mark	3 - 10
X	Distance mark - material edge for A2+ for A4+, A4.3+, A6+, A8+	5 - 26 5 - 53
Z	Distance virtual label front edge - actual label front edge ► Adjust software settings	0 up to A / recomm. : 0
<ul style="list-style-type: none"> Reflex marks must be on the back side of the material (liner). Label sensor for reflex marks on the top side on request. Specification is valid for black marks. Recognition of colored marks may fail. ► Preliminary tests are needed. 		

Table 10 Reflex mark dimensions

8.4 Cut-out Mark Dimensions

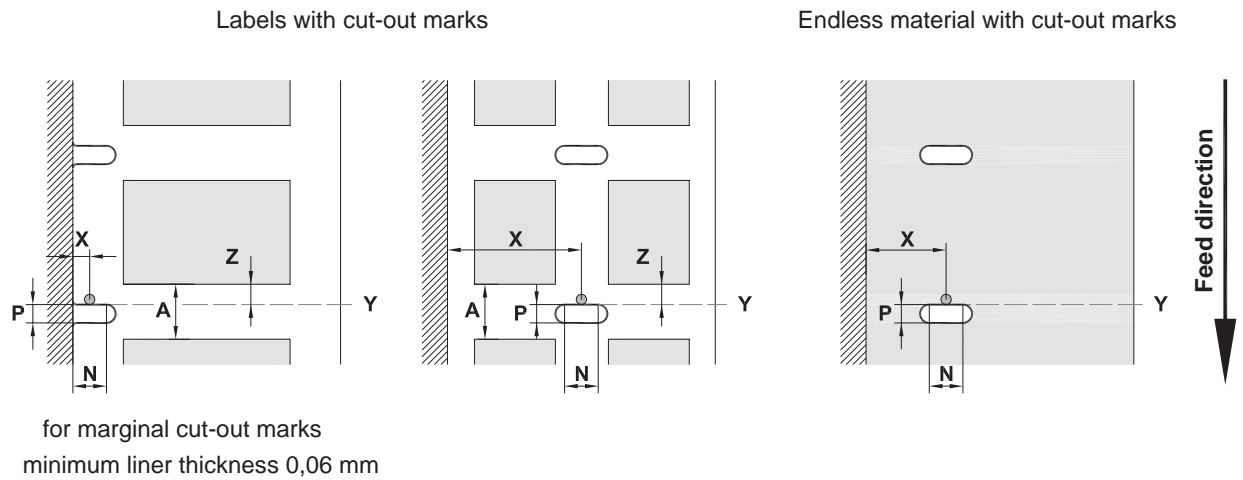


Fig. 25 Cut-out mark dimensions

Dim.	Designation	Dim. in mm
A	Label distance	> 2
N	Width of cut-out mark for marginal cut-out	> 5 > 8
P	Height of cut-out mark	2 - 10
X	Distance mark - material edge for A2+ for A4+, A4.3+, A6+, A8+	5 - 26 5 - 53
Y	Sensor recognized virtual label front edge with gap sensor recognition	Rear edge cut-out
Z	Distance recognized front edge - actual label front edge ► Adjust software settings	0 up to A-P

Table 11 Cut-out mark dimensions

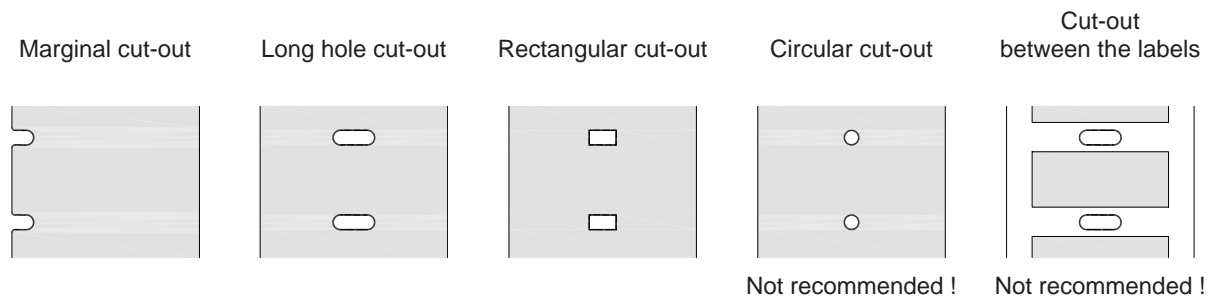


Fig. 26 Samples for cut-out marks


9.1 EU Declaration of Conformity



Gesellschaft für Computer-
und Automations-
Bausteine mbH & Co KG
Wilhelm-Schickard-Str. 14
D-76131 Karlsruhe,
Germany

EU Declaration of Conformity

We declare herewith that as a result of the manner in which the device designated below was designed, the type of construction and the devices which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health. In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

Device:	Transfer Printer / Thermal-direct Printer
Type:	A2+ / A4+ / A4.3+ / A6+ / A8+
Applied EU Regulations and Norms:	
Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits	<ul style="list-style-type: none"> • EN 60950-1:2006 • EN 61558-1:2005
Directive 2004/108/EC relating to electromagnetic compatibility	<ul style="list-style-type: none"> • EN 55022:2006 • EN 55024:1998+A1:2001+A2:2003 • EN 61000-3-2:2006 • EN 61000-3-3:1995+A1:2001+A2:2005
Signed for, and on behalf of the Manufacturer :	Sömmerda, 15.09.09
cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda	 Erwin Fascher Managing Director

9.2 Other Licences

- FCC** Requirements of the FCC regulations part 15 for class A computers.
Under disadvantageous circumstances, the operation of these devices may cause interference with radio or TV reception, which has to be eliminated by the operator.

A		L		T	
Adapting the roll retainer	13, 14	Label dimensions.....	31	Tear-off mode	15, 25
C		Label sensor		Tear-off plate.....	23
Cleaning		adjusting	15	U	
label sensor	27	cleaning	27	Unpacking.....	8
printhead	26	Lithium battery	5	V	
print roller	26	Loading fanfold labels.....	20	Voltage.....	4
Cleaning information.....	26	Loading labels	13	W	
Connecting	8	Loading labels from roll	13	Warning stickers	5
Contents of delivery.....	8	Loading transfer ribbon.....	21		
Control panel	9	Locking system.....	24		
Correctable error	10	M			
Critical error.....	10	Margin stop.....	6, 13		
Cut-out marks	34	N			
Cut mode	25	Navigator pad	9		
D		O			
Device dimensions	32	Offline menu	11		
Device overview	6	P			
Dispense plate.....	23	Pause	10		
E		Peel-off mode	25		
Endless material	31	Power save mode.....	10		
Environment	4, 5	Power supply	4		
Errors		Printer states	10		
correction	29	Printhead			
display	28	cleaning	26		
messages	29	damage	25		
states	28	Printing label.....	10		
types	28	Print roller, cleaning.....	26		
EU Conformity Declaration	35	Problem solution.....	28		
G		R			
Graphic display.....	9	Ready	10		
H		Reflex marks.....	33		
Head locking system, setting.....	18	Removing the wound roll	19		
Help calling	11	Rewind guide plate	23		
I		Rewind mode.....	16		
Important information.....	4	Ribbon deflection, setting	22		
Intended use.....	4	S			
Irrecoverable error	10	Safety instructions	4		
K		Service work	5		
Key		Setting-up	8		
cancel	11	Supply voltage	8		
enter	11	Support bracket A8+.....	12		
feed.....	11	Switching on	8		
menu	11	Symbol displays.....	9		
pause	11	Synchronization of the paper feed....	25		
Key functions	11				
offline menu	11				
print mode	11				