Operator's Manual

Weidmüller ⋺⋹

Thermal transfer Printer for heat shrinkable sleeve

THM TwinMark

Operator's Manual for THM TwinMark,

derived from XDM4 of cab Produkttechnik GmbH & Co. KG.

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Editor

Regarding questions or comments please contact Weidmüller Interface GmbH & Co. KG.

Topicality

Due to the constant further development of our products discrepancies between documentation and product can occur.

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1 Introduction

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.

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, especially the printheads can become hot while printing. Do not touch during operation, and allow to cool down before changing material and before disassembly.

1   Introduction

- 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 LpA is less than 70 dB(A).

> **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.
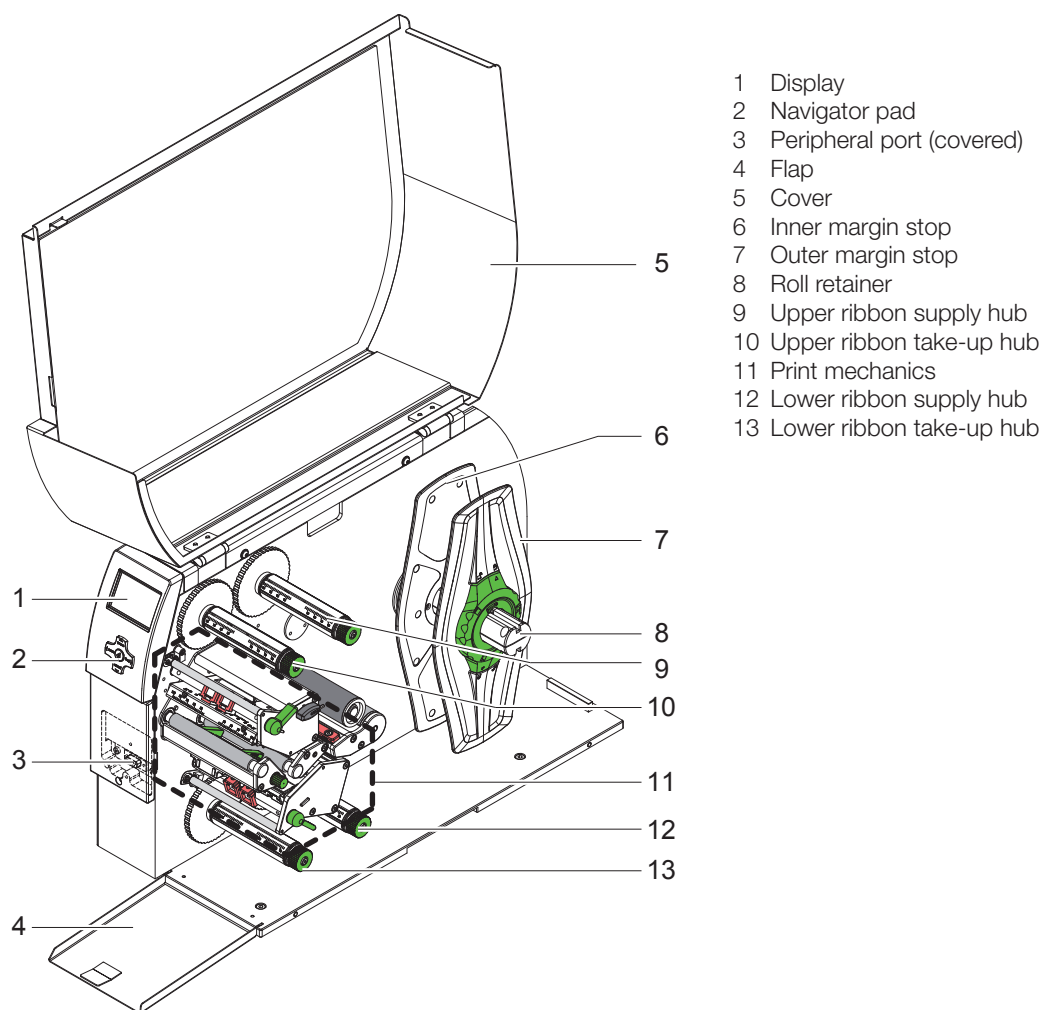
2 Installation

2.1 Device Overview

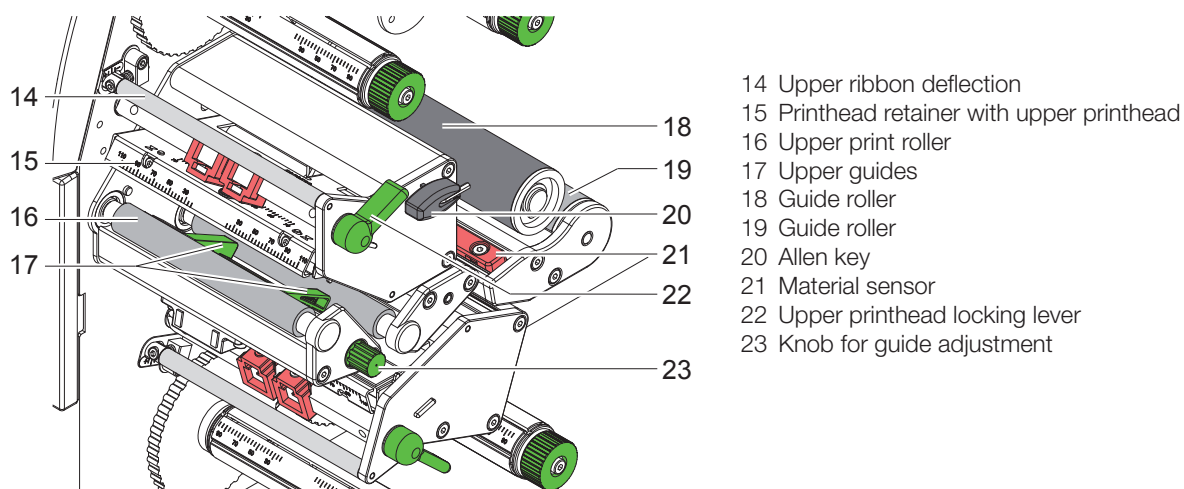|	
1	Display
2	Navigator pad
3	Peripheral port (covered)
4	Flap
5	Cover
6	Inner margin stop
7	Outer margin stop
8	Roll retainer
9	Upper ribbon supply hub
10	Upper ribbon take-up hub
11	Print mechanics
12	Lower ribbon supply hub
13	Lower ribbon take-up hub

Fig. 1   Overview

14	Upper ribbon deflection
15	Printhead retainer with upper printhead
16	Upper print roller
17	Upper guides
18	Guide roller
19	Guide roller
20	Allen key
21	Material sensor
22	Upper printhead locking lever
23	Knob for guide adjustment

Fig. 2   Print mechanics - upper print unit

2 Installation
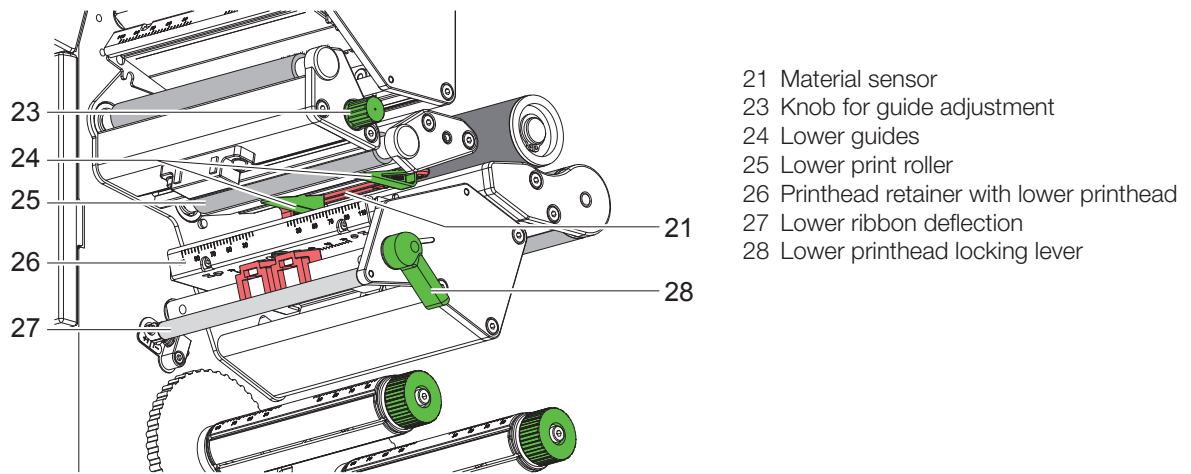
Fig. 3   Print mechanics - lower print unit

21 Material sensor
23 Knob for guide adjustment
24 Lower guides
25 Lower print roller
26 Printhead retainer with lower printhead
27 Lower ribbon deflection
28 Lower printhead locking lever

Fig. 4   Connections

29 Power switch
30 Power connection jack
31 Slot for PC Card Type II
32 Slot for CompactFlash memory card
33 Ethernet 10/100 Base-T
34 2 USB master ports for keyboard,
scanner or service key
35 USB high-speed slave port
36 Serial RS-232 C port

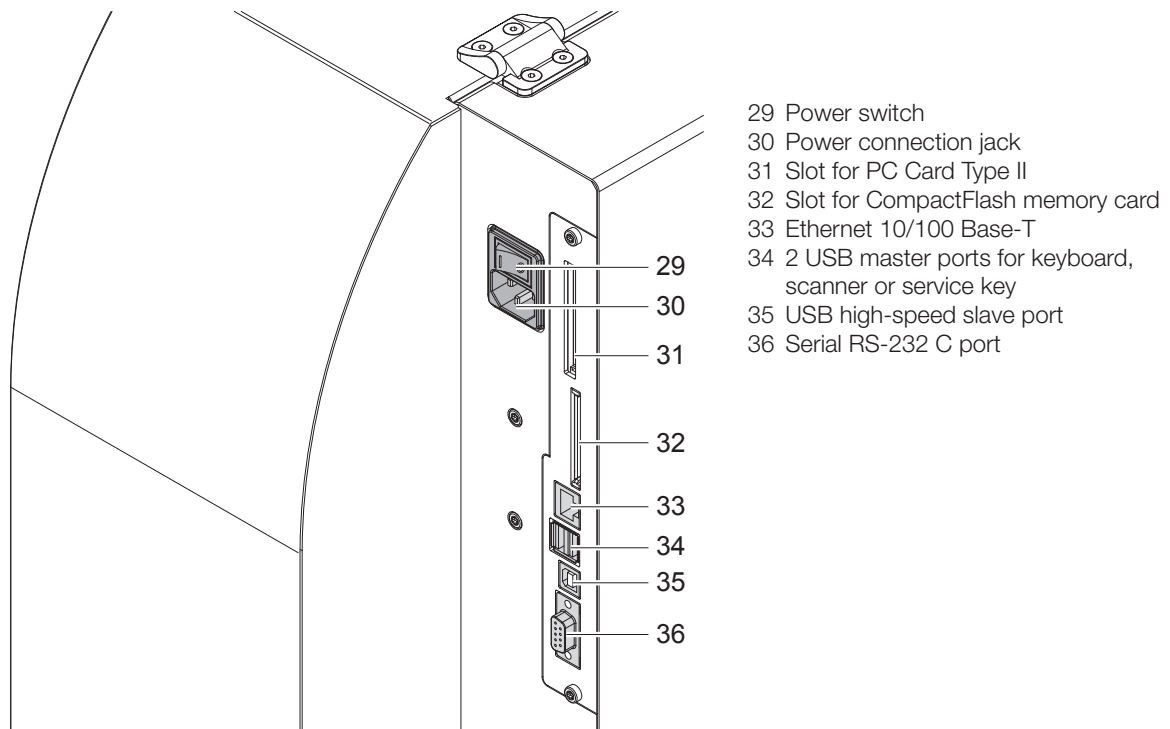## 2　　Installation

2.2　　Unpacking and Setting-up the Printer

▶ Lift the printer out of the box via the straps.

▶ Check 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:

- Printer
- Power cable
- USB cable
- Printer and Driver DC incl. software and documentation
- 2 printer ribbons of the type Ribbon R 83/300 (1962370000)

ⓘ **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 transfer printers only in dry locations protected from splash water.**

2.3　　Connecting the Device

The standard available interfaces and connectors are shown in figure 4.

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 (30).
3. Plug the power cable into a grounded socket.

2.3.2　　Connecting to a Computer or Computer Network

❗ **Attention!**
Loss of material!
The RS232 interface is unsuitable for fast transmission of changing data ▷ 5.6 on page 18.
▶ **Use USB or Ethernet interface for print operation.**

❗ **Attention!**
Inadequate or no grounding can cause malfunctions during operations.
Ensure that all computers and cables connected to the transfer printer are grounded.

2.4　　Switching on the Device

When all connections have been made:

▶ Switch the printer on at the power switch (29).
　 The printer performs a system test, and then shows the system status ready in the display.

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

3 Control Panel

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 transfer printer.

Notice!
It is advantageous, whenever possible, to make adaptations to various print jobs in the software.
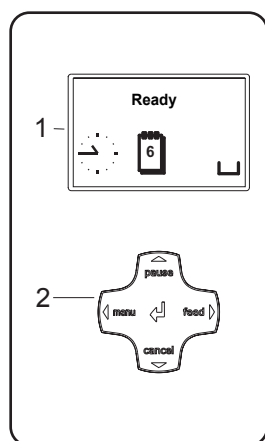
The control panel consists of a graphic display (1) and the navigator pad (2) with five integrated keys.

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	FDX 100	Ethernet link status		User memory in the clock circuit
1	Date sheet		Temperature of the printhead	MEM	Used memory
WED 30/01 13:53	Date/time digital	1€	PPP funds	INP	Input buffer
	Ribbon supply	abc Debug	Debug window for abc programs		Access to memory card
	Wi-Fi signal strength	abc	Control of the lower display line is handed over to an abc program		Printer is receiving data

Table 1   Symbol displays

3 Control Panel

## 3.3 Printer States

State	Display	Description
Ready	`Ready` and configured symbol displays, such as time and date 1	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. The print process may be continued by pressing the **pause** key.
		The printing process has been interrupted automatically by passing a pre-defined rest diameter of the ribbon supply roll. After loading a new ribbon roll the print process may be continued by pressing the **pause** key.
Correctable error	STOP 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	STOP 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	ZZZZ 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 Control Panel

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 8).

Key	Display	State	Function
menu	lights	`Ready`	**Ready**	To the offline menu
feed	lights	`Ready`	**Ready**	Feeds a blank label
pause	lights	`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	(STOP)	**Correctable error**	Continue the print job after rectifying the error, printer goes into "Printing label" state ⓘ Notice : The labels, which are printed by the lower printer but not yet printed by the upper printhead when the error occurs, cannot be repeated by the printer. So the amount of the printed label will be reduced within the print job.
cancel	lights	`Printing label`	**Printing label**	Short press → cancels the current print job
		`Pause`	**Pause**	Longer press → cancels the current print job and deletes all print jobs
		(STOP)	**Correctable error**	
	flashes	(STOP)	**Irrecoverable error**	
↵	lights	(STOP)	**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 Pressing 2 s: Leaving the offline menu	Confirmation of the selected value Pressing 2 s: Abort without changing the value	

Table 4   Key functions in the offline menu

4 Loading Material

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

4.1 Loading Media from Roll

4.1.1 Positioning the Media Roll on the Roll Retainer
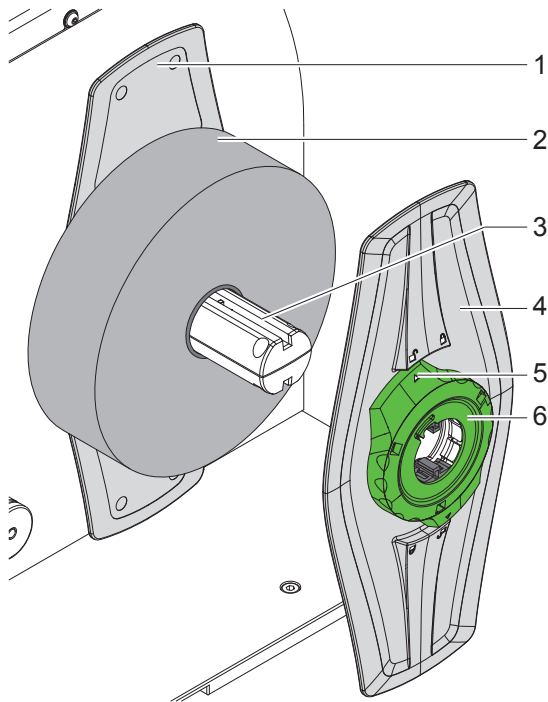

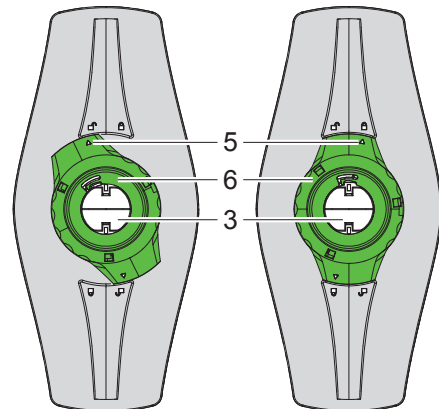Fig. 6   Loading media from roll

Fig. 7   Margin stop (4) unfixed (left) and fixed (right)

1. Open cover.
2. Turn ring (6) counterclockwise, so that the arrow (5) points to the symbol 🔓, and thus release the margin stop (4).
3. Remove the margin stop (4) from the roll retainer (3).
4. Load label roll (2) on the roll retainer (3).
5. Re-mount the margin stop (4) onto the roll retainer (3). Push the margin stop (4) until both margin stops (1,4) touch the label roll (2) and a clear resistance is encountered.
6. Turn ring (6) clockwise, so that the arrow (5) points to the symbol 🔒, and thus fix the margin stop (4) on the roll retainer.

4 Loading Material

4.1.2 Inserting a Media Strip into the Print Mechanics
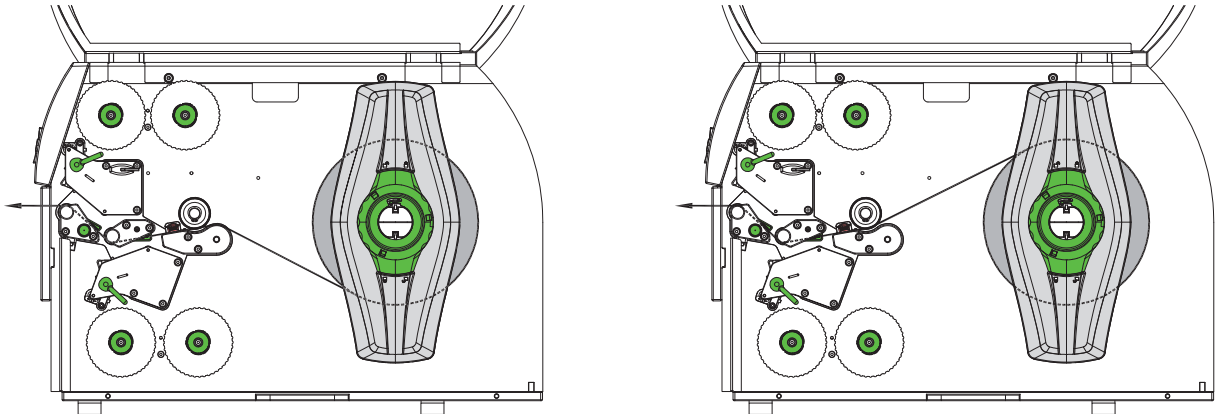

Fig. 8   Material feed path

1. Unroll a longer material strip of approx. 50 cm. Guide the media strip to the print mechanics as shown in figure 8.
2. Turn lever (1) counterclockwise and lever (6) clockwise to lift both printheads.
3. Move guides (4,5) apart with the knob (3) until the media can pass between them.
4. Guide media strip through the print mechanics as shown in figure 9 to the upper print roller (2) and place the strip between the guides (4,5).
5. Move guides against the edges of the material by turning the knob (3).
6. Fix the media by closing the upper printhead.
7. Turn the media roll against the feed direction to tighten the media.
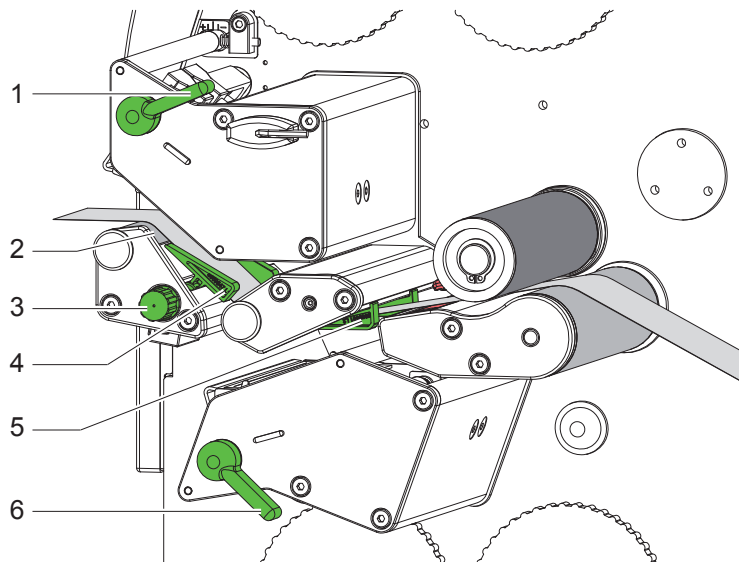8. Close the lower printhead.

Fig. 9   Inserting a media strip into the print mechanics

4 Loading Material

4.1.3 Setting the Material Sensor
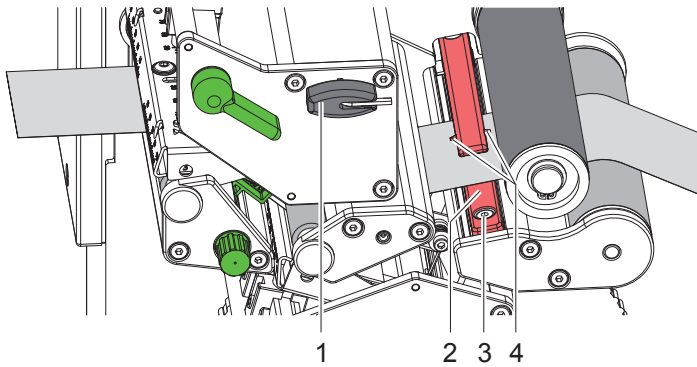
Fig. 10   Setting the material sensor

The material sensor (2) can be shifted perpendicular to the direction of media flow for adaptation to the media. The sensor unit is marked with indentation (4) on the label sensor retainer.

▶ Slightly loosen the screw (3) with Allen key (1).
▶ Position sensor by moving it in such a way that the sensor can detect a reflex or cut-out mark.
▶ Tighten the screw (3).

Rectangular cut-out
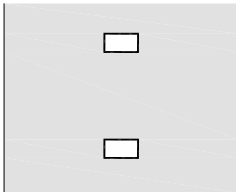
Notice: Please insert Sensor hole cut for TwinMark heat shrinkable sleeve.

4 Loading Material

4.2 Loading Transfer Ribbon

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

Fig. 11 Load transfer ribbon

Fig. 12 Transfer ribbon feed path

1. Clean printheads before loading the transfer ribbon (▷ 6.3 on page 20).
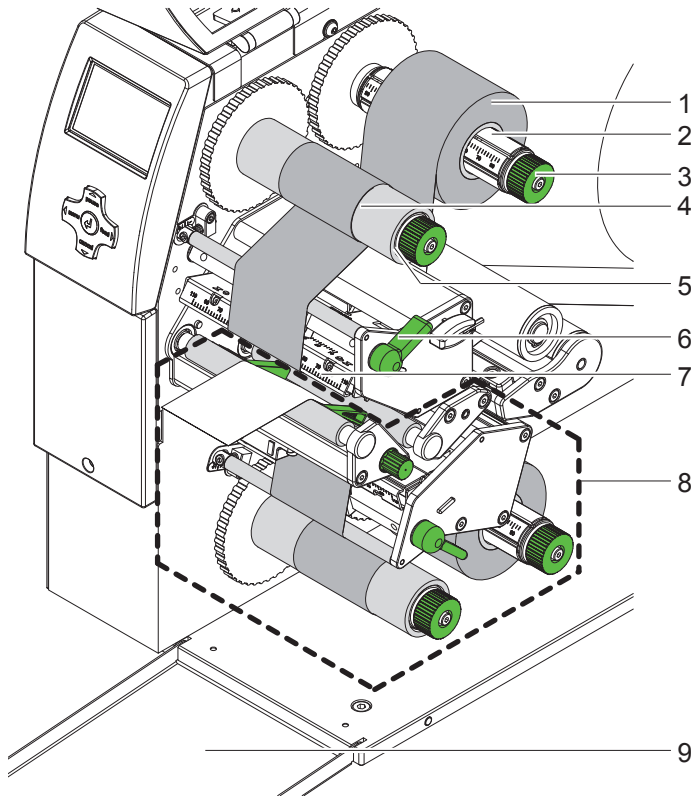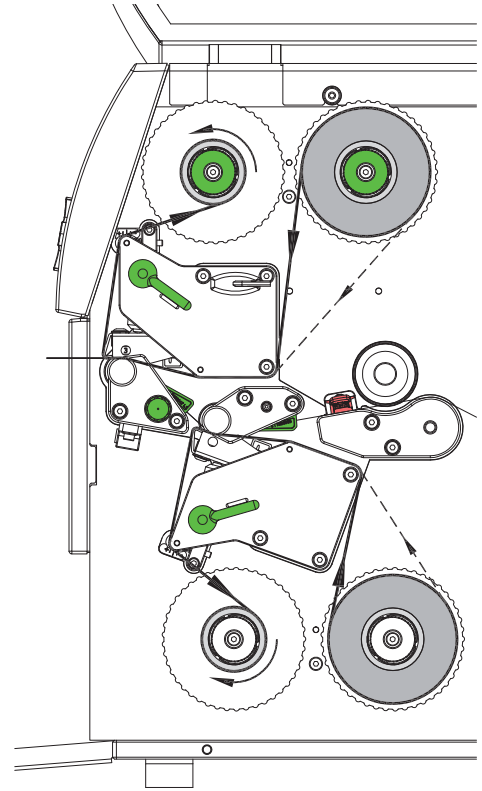
2. Turn lever (6) counterclockwise to lift the upper printhead.

3. Slide transfer ribbon roll (1) onto the ribbon supply hub (3) so that the color coating of the ribbon faces downward when being unwound.

4. Position the ribbon roll (1) in such a way that both ends of the roll show identical scale values.

5. Hold transfer ribbon roll (1) firmly and turn knob (3) on ribbon supply hub counterclockwise until the transfer ribbon roll is secured.

ℹ Notice!
To rewind the transfer ribbon use a core with a width between the width of the supply roll and 115 mm.

6. Slide suitable transfer ribbon core (4) onto the transfer ribbon take-up hub (5). Position and secure it in the same way like the supply roll.

7. Guide transfer ribbon through the print unit as shown in Fig. 12.

8. Secure starting end of transfer ribbon to middle of the transfer ribbon core (4) with adhesive tape. When using cores which are wider than the transfer ribbon use the scale (7) at the printhead retainer to adjust the path of the ribbon. Ensure counterclockwise rotation direction of the transfer ribbon take-up hub.

9. Turn transfer ribbon take-up hub (5) counterclockwise to smooth out the feed path of the transfer ribbon.

10. Turn lever (6) clockwise to lock the printhead.

11. Open the flap (9) and load transfer ribbon to the lower print unit (8) in a similar way. All previous statements of direction apply contrariwise excepting the turning of the knobs.

4 Loading Material

4.3 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!
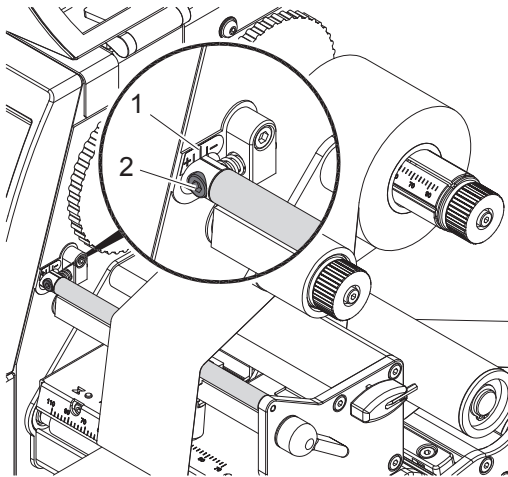**The adjustment is best carried out during printing.**

Fig. 13   Setting the upper ribbon feed path
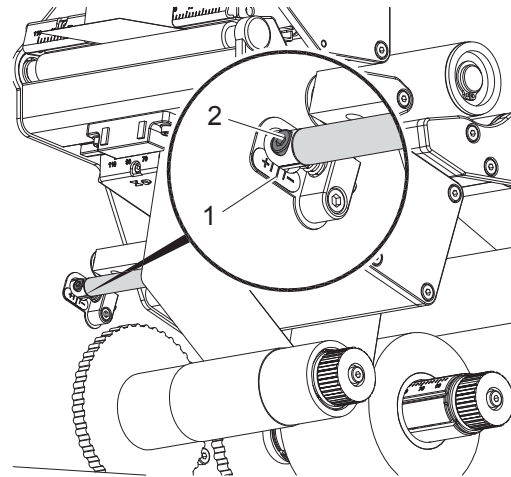
Fig. 14   Setting the lower ribbon feed path

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 ribbon is tightened, and the outer edge is tightened in the - direction.

4.4 Setting the Head Locking Systems
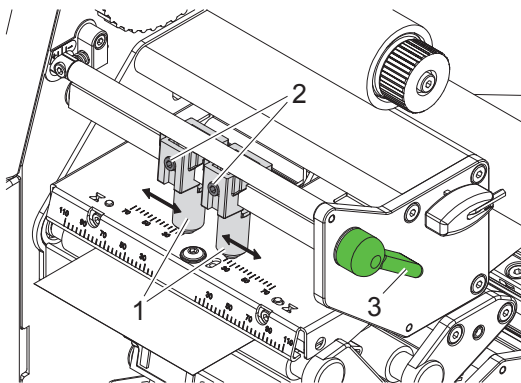
Fig. 15   Setting the upper head locking system
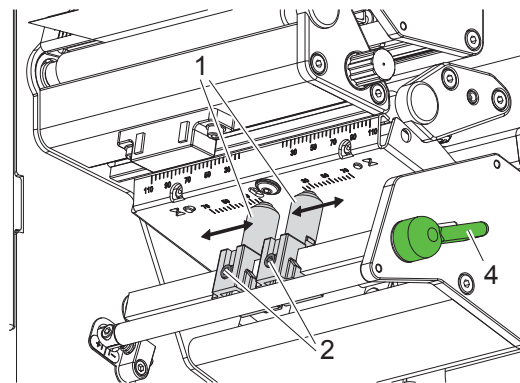
Fig. 16   Setting the lower head locking system

The printheads are pushed on via two plungers (1). In the basic setting the plungers are set in the middle of the printhead retainer. This setting can be used for the most applications.

If the print density decreases in the outer areas when using very large media, the plungers can be displaced :

1. Turn lever (3) clockwise and the lever (4) counterclockwise to lock the printheads.
2. Loosen threaded pins (2) at the plungers (1) with Allen key.
3. Displace plungers symmetrically as necessary maximal to the scale value 70.
4. Tighten the threaded pins (2).

5 Printing Operation

5.1 Printhead Protection

> **Attention!**
> **Printhead damage caused by improper handling!**
> ▶ **Do not touch the heating elements of the printheads with the fingers or sharp objects.**
> ▶ **Ensure that the material is clean.**
> ▶ **Ensure that the material surfaces are smooth. Rough material 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.

5.2 Identical Images on Both Sides

▶ Define the single material width as label width.

▶ Place the information.

▶ Activate in the printer driver menu **General > Print Settings > Advanced Setup > Options** the setting **"top side same as bottom"**.

    or

▶ In the printer software M-Print PRO (on the provided CD) the contents of both pressure sides can be synchronized.

5.3 Suppressing Backfeed

> **Notice!**
> **Feeding back the material to the lower printhead in the cut mode or between print jobs is not allowed.**

To avoid the backfeed :

▶ In the printer driver menu **General > Print Settings > Advanced Setup > Options** the setting **"ignore label position" is permanently activated**.

5 Printing Operation

5.4 Avoiding Loss of Material

> **!** **Attention!**
>
> **Loss of material!**
>
> **The print images for the upper and the lower side of one label/section are printed at two different places in the media feed.**
>
> **Therefore every interruption of the continuos print process has the following consequences :**
> - **Material already printed at the lower side will be fed to the upper printhead to complete the print of the label/section, but the following media will not be printed at the lower side.**
> - **A media backfeed to the lower printhead is not allowed due to the reliability of the media transport.**
> - **Following blank sections in the media strip are generated, which cannot be used.**
> - **For structured media where the print image has to be synchronized to the media transport the loss of material can reach a length of more than 300 mm.**
>
> **To minimize the loss of material it is necessary to avoid interruptions of the continuos print process.**
> - ▶ **Interrupt the print process with the pause key only if it is absolute necessary.**
> - ▶ **Avoid print jobs with a small amount of labels/sections, especially single prints.**
> - ▶ **Avoid predictable error situations ▷ 5.7 on page 19.**
>   **If errors occur the loss of material is particular high. Besides the blank section also material must be rejected which is partly printed.**

Optimization of the Data Transfer

If sequent labels/sections contain differing information, the internal preparation of the second sections must be completed before the printing by the lower printhead for the first section has been finished !

Otherwise the first section will be fed to the upper printhead to complete the print without printing the next section at the lower side. The print of the second section begins only after completion of the first section.
Therefore it is necessary to minimize the data to be transferred. i.e. to avoid transferring complete label descriptions and to transfer the changing data only :

- ▶ In the printer driver menu **General > Print Settings > Advanced Setup > Options** the setting **"Force optimized printing"** is permanently activated.

> **!** **Attention!**
>
> **Loss of material!**
>
> **The RS232 interface is unsuitable for fast transmission of changing data.**
> - ▶ **Use USB or Ethernet interface for print operation.**

5　Printing Operation

5.5　Avoiding Loss of Data

> **!**
>
> ### Attention!
> **Loss of data!**
>
> **When correctable errors occur labels/sections which are already printed by the lower printhead but not are completed by the upper printhead cannot be repeated after error correction. The data of those sections are lost for the printer.**
>
> ▶ **Avoid predictable error situations.**
> ▶ **To avoid the errors "Out of paper" or "Out of ribbon" switch the printer to the Pause state before the material runs out. Continue the print process by pressing the pause key after re-loading material. That way the data are saved.**

Pause on Media Low

The error "Out of ribbon" can be avoided automatically with the integrated ribbon low warning :

▶ Set parameter `Setup > Print param. > Pause on media low` to "`On`".

▶ Set the rest diameter of the ribbon supply roll with the parameter `Setup > Print param. > Warn level ribbon` to e.g. `35 mm`.

If the diameter of the ribbon roll falls below the set value the automatically switches to the **Pause** state.

6 Cleaning

6.1 Cleaning Information

Danger!
Risk of death via electric shock!
▶ **Disconnect the printer from the power supply before performing any maintenance work.**

The transfer printer requires very little maintenance.

It is important to clean the thermal printheads 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 Rollers

Accumulations of dirt on the print rollers may impair the media transport and the print quality.
▶ Lift the printheads.
▶ Remove media 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 Printheads

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

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

Attention!
Printheads can be damaged!
Do not use sharp or hard objects to clean the printheads.
Do not touch protective glass layer of the printheads.

Attention!
Risk of injury from the hot printhead lines.
Ensure that the printheads have cooled down before starting cleaning.

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

7 Fault Correction

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	(STOP)	**pause** flashes **cancel** lights	▷ 3.4 on page 11
Irrecoverable error	(STOP)	**cancel** flashes	
Critical fault	☠	-	

Table 5   Error states

> **Attention!**
>
> **State "Correctable error" :**
>
> **The labels, which are printed by the lower printer but not yet printed by the upper printhead when the error occurs, cannot be repeated by the printer. So the amount of the printed label will be reduced within the print job.**
>
> ▶ **If necessary print more labels in a new job.**
>
> **If the print job contains counters, after pressing the pause key the print job would be resumed with erroneous counter values.**
>
> ▶ **Quit the print job with the cancel key.**
>
> ▶ **Start a new print job with adapted counter values.**

7.2 Problem Solution

Problem	Cause	Remedy
Transfer ribbon creases	Transfer ribbon deflection not adjusted	Adjust the transfer ribbon deflection. ▷ 4.3 on page 16
	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 20
	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.
Vertical white lines in the print image	Printhead is dirty	Clean the printhead ▷ 6.3 on page 20
	Printhead is defective (failure of heat elements)	Change the printhead. ▷ Service Manual.
Print image is irregular, one side is lighter	Printhead is dirty	Clean the printhead ▷ 6.3 on page 20

Table 6   Problem solution

7 Fault Correction

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	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 format size is not defined in the programming.	Check programming.
No Link	No network link	Check network cable and connector. Please contact your network administrator.
No record found	Refers to the optional memory card; database access error	Check programming and card contents.

7   Fault Correction

Error message	Cause	Remedy
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 configuration, 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 media 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 20 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
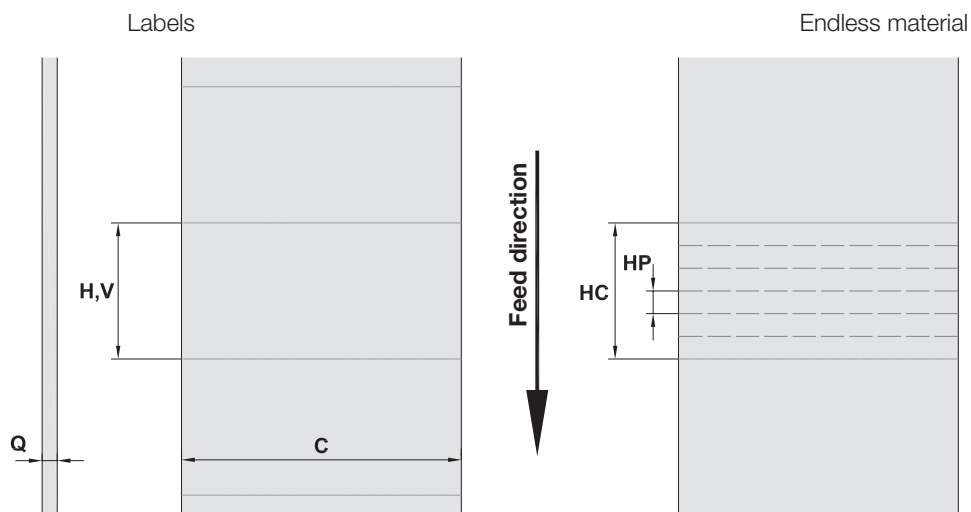
8 Media

8.1 Media Dimensions

Labels   Endless material

Fig. 17   Media dimensions

Dim.	Designation	Dim. in mm
C	Media width	3 - 110
Q	Media thickness	0,055 - 1,2
	Height of material passage	4,5
H	Print zone height	5 - 1000
V	Feed length	> 5
HC	Cut length	
	with cutter CU4	> 5
	with perforation cutter PCU4	> 5
HP	Perforation length	> 5
	• Note the bending stiffness ! Material must be flexible to follow the radius of the print roller !	

Table 8   Media dimensions

8 Media

8.2 Device Dimensions
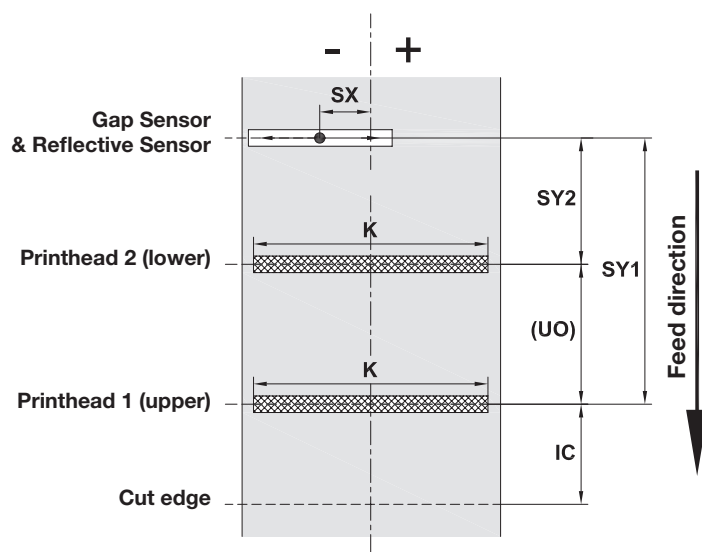
Fig. 18　　　Device dimensions

Dim.	Designation	Dim. in mm
IC	Distance printhead - cut edge 　　with cutter CU4 　　with perforation cutter PCU4	18,8 19,5
K	Print width	105,6
SX	Distance gap/reflective sensor - middle of media track i.e. permissible distance of reflex or cut-out marks from the middle of the material	-53 - ±0
SY1	Distance gap/reflective sensor - printhead 1 (upper)	132,4
SY2	Distance gap/reflective sensor - printhead 2 (lower)	69,8
UO	Distance printhead 2 (lower) - printhead 1 (upper)	62,6

Table 9　　　Device dimensions

8 Media

8.3 Reflex Mark Dimensions
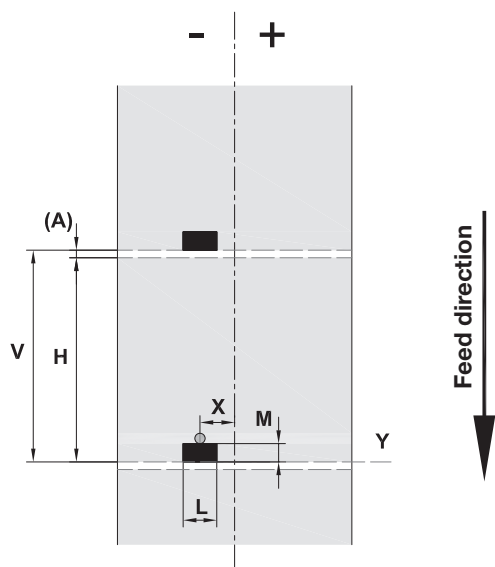
Fig. 19   Reflex mark dimensions

Dim.	Designation	Dim. in mm
H	Print zone height	5 - 1000
A	Print zone distance	> 2
V	Feed length	> 7
L	Width of reflex mark	> 5
M	Height of reflex mark	3 - 10
X	Distance mark - middle of media track = Distance gap/reflective sensor - middle of media track	-53 - ±0
Y	Sensor recognized virtual print zone front edge	Front edge of mark
	• Reflex marks must be on the back side of the material (liner). • Material 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   Media

8.4   Cut-out Mark Dimensions
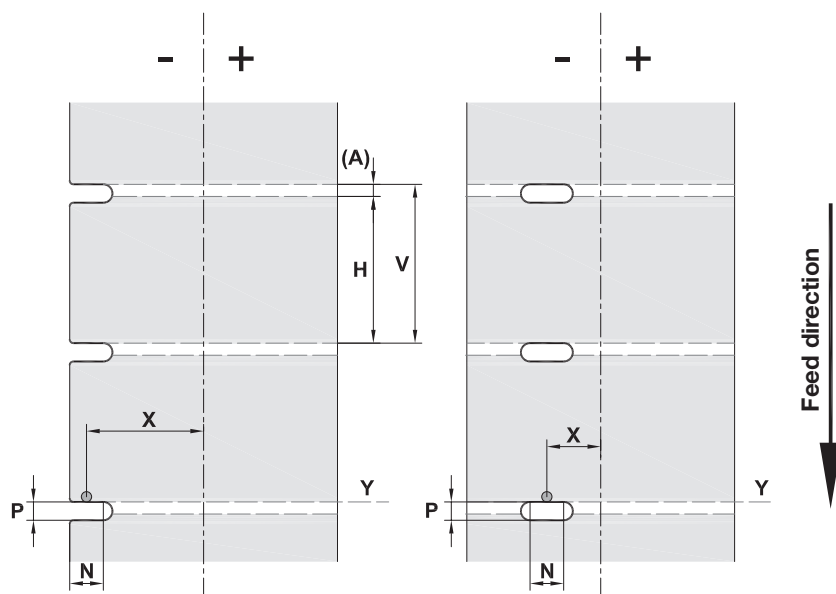
Fig. 20   Cut-out mark dimensions

Dim.	Designation	Dim. in mm
H	Print zone height	5 - 1000
A	Print zone distance	> 2
V	Feed length	> 7
N	Width of cut-out	> 5
P	Height of cut-out	2 - 10
X	Distance cut-out - middle of media track = Distance gap/reflective sensor - middle of media track	-53 - ±0
Y	Sensor recognized virtual print zone front edge with gap sensor recognition	Rear edge cut-out

Table 11   Cut-out mark dimensions

Marginal cut-out   Long hole cut-out   Rectangular cut-out   Circular cut-out

Not recommended !
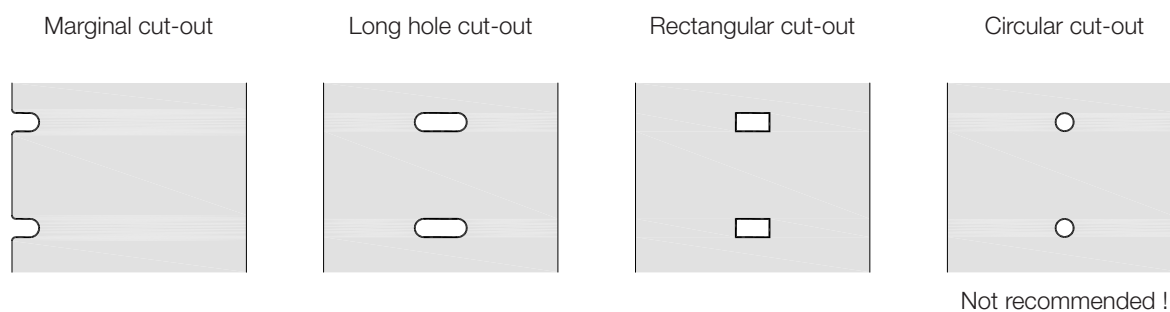
Fig. 21   Samples for cut-out marks

9   Licences

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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:	**Label Printer**	
Type:	**XD4M**	
Applied EU Regulations and Norms:		
Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits	• **EN 60950-1:2006**	
	• **EN 61558-1:2005**	
Directive 2004/108/EC relating to electromagnetic compatibility	• **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, 15.03.10**	
cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda	**Erwin Fascher Managing Director**	

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