Operator's Manual

cab
we identify more

Label Printer

XC

for the following products

Family	Type
XC	XC4/300
	XC6/300

Table of Contents

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).

Time   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 DVD, 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, especially the printheads 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 LpA is less than 70 dB(A).

Danger!
Danger to life and limb from power supply.
▶ **Do not open the device casing.**

Warning!
This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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

1   Display
2   Navigator pad
3   Peripheral port (covered)
4   Print mechanics
5   Flap
6   Cover
7   Upper ribbon take-up hub
8   Upper ribbon supply hub
9   Roll retainer
10 Lower ribbon take-up hub
11 Swing arm with guide roller
12 Lower ribbon supply hub

Fig. 1   Overview

13 Upper ribbon deflection
14 Printhead retainer with upper printhead
15 Upper print roller
16 Upper printhead locking lever
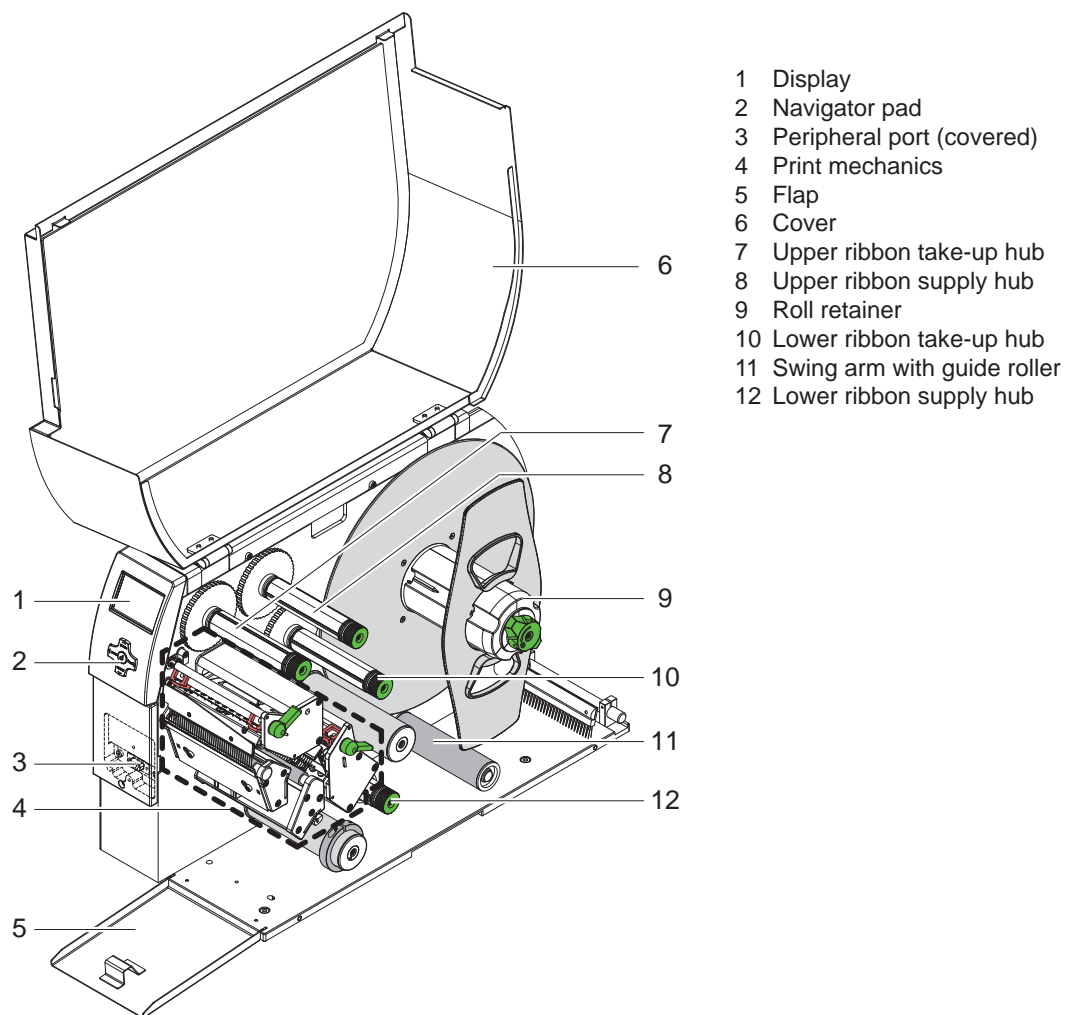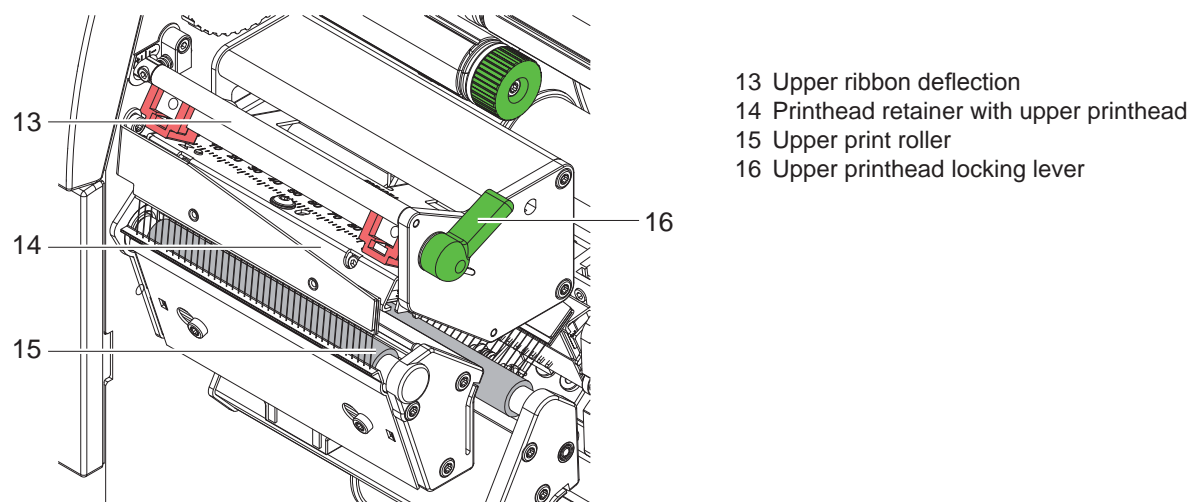
Fig. 2   Print mechanics - upper print unit for printing the main color

17 Lower ribbon deflection
18 Printhead retainer with lower printhead
19 Lower print roller
20 Label sensor
21 Guide roller with guide ring
22 Guide roller
23 Lower printhead locking lever
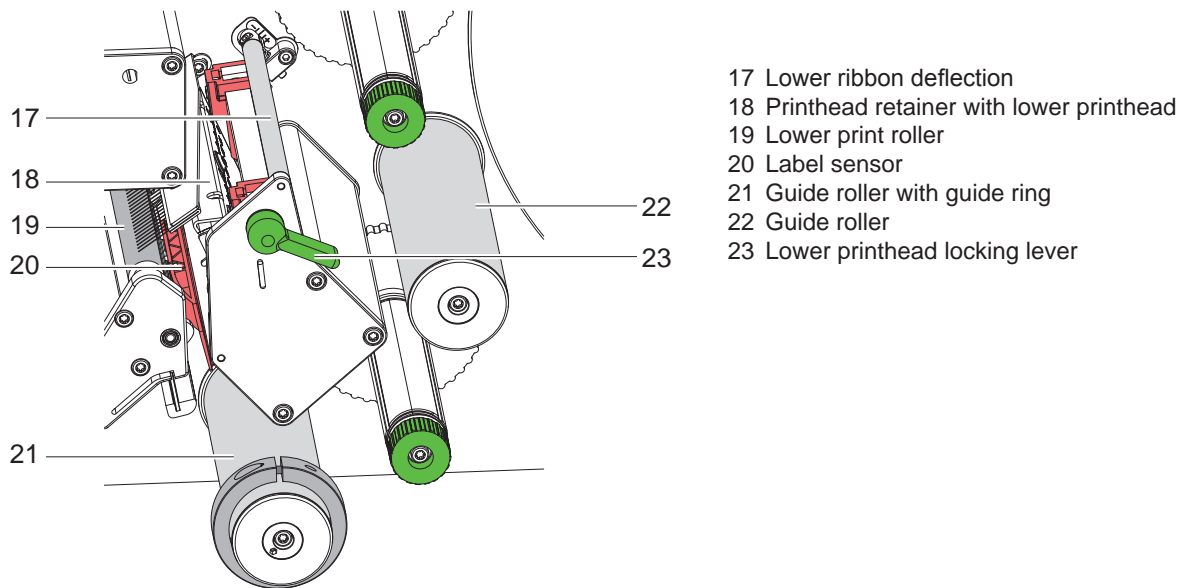
Fig. 3   Print mechanics - lower print unit for printing the secondary color

24 Power switch
25 Power connection jack
26 Slot for PC Card Type II
27 Slot for CompactFlash memory card
28 Ethernet 10/100 Base-T
29 2 USB master ports for keyboard,
    scanner or service key
30 USB high-speed slave port
31 Serial RS-232 C port
    (not to be used ▷ 5.5 on page 19)

Fig. 4   Connections

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

• cablabel R2+, drivers and documentation on DVD

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.
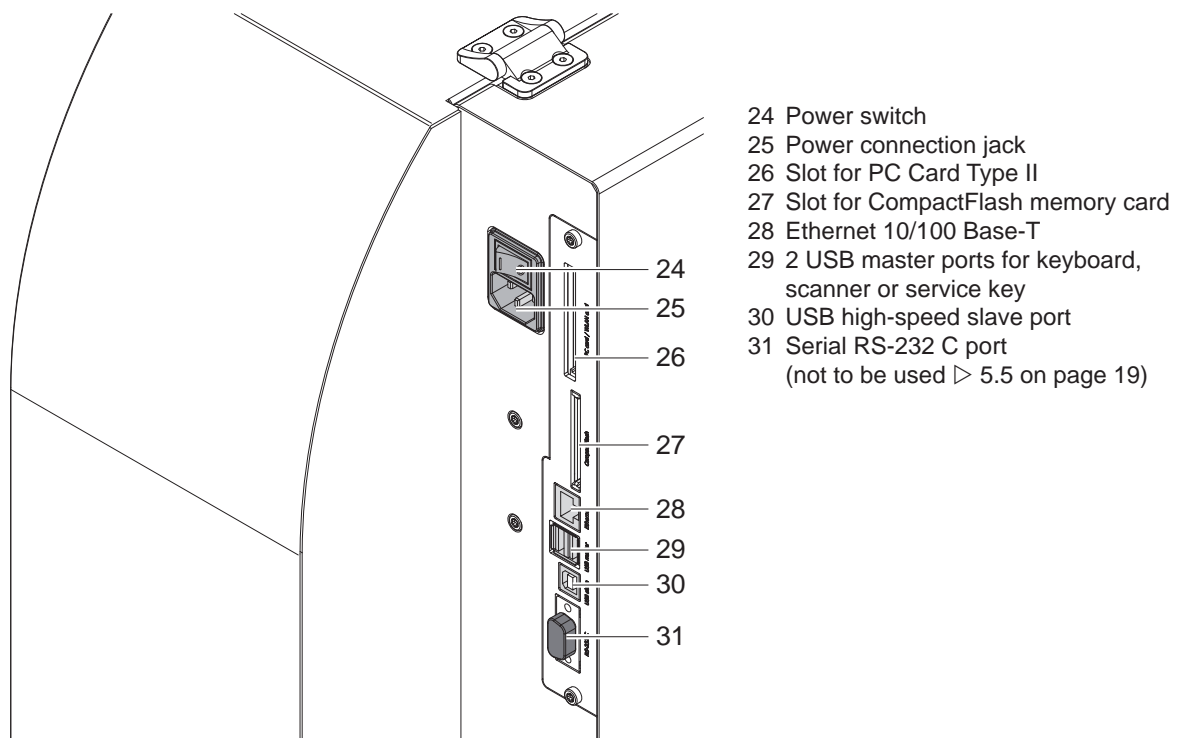
1. Check that the device is switched off.

2. Plug the power cable into the power connection socket (25).

3. Plug the power cable into a grounded socket.

2.3.2 Connecting to a Computer or Computer Network

Attention!
Loss of material!
The RS-232 interface is unsuitable for fast transmission of changing data ▷ 5.5 on page 19.
▶ **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.

▶ Connect the transfer 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 (24).
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.

3.1 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 printer.

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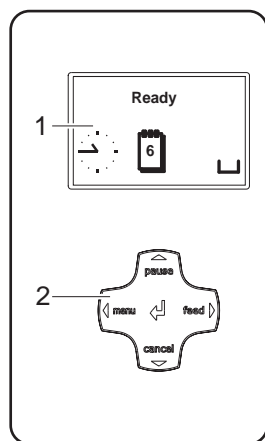
The control panel consists of a graphic display (1) and the navigator pad (2) with five integrated keys.

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
	Date sheet		Temperature of the printhead	MEM	Used memory
WED 30/01 13:53	Date/time digital		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

3.3 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. 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	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	`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	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

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

4.1 Loading Labels

4.1.1 Preparing the Printer for Operation with External Rewinder

For operation with external rewinder the tear-off plate must be replaced by an optional rewind guide plate.
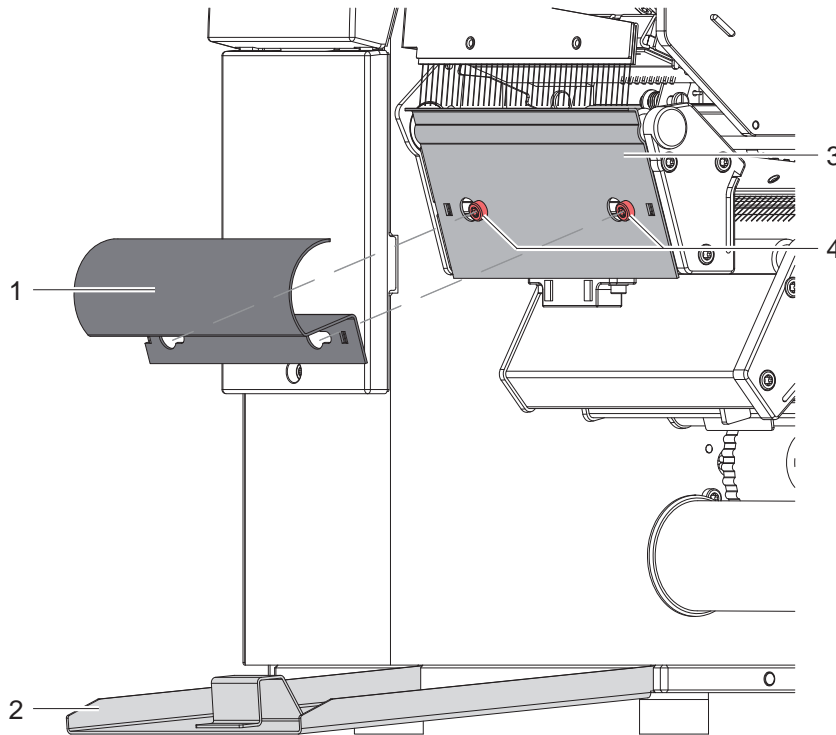

Fig. 6   Mounting the rewind guide plate

Removing the tear-off plate

1. Open flap (2).
2. Loosen screws (4) several turns.
3. Slide tear-off plate (3) to the right and remove it.

Installing the rewind guide plate

1. Place rewind guide plate (1) onto the screws (4) and slide it to the left completely.
2. Tighten screws (4).
3. Close flap (2).

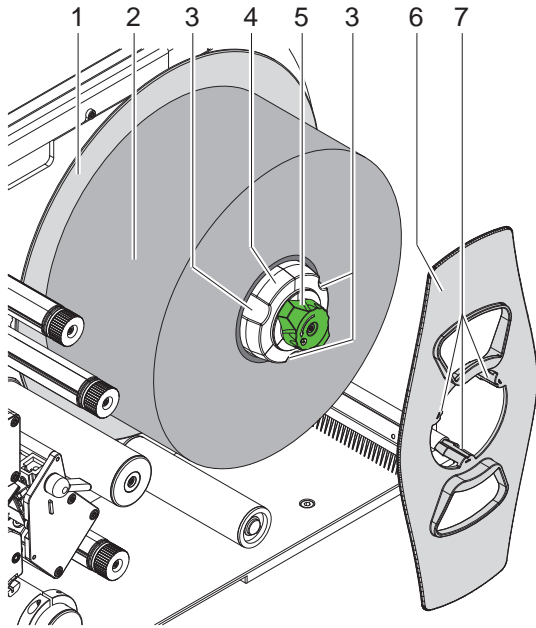## 4.1.2 Positioning the Label Roll on the Roll Retainer

Fig. 7   Loading labels from roll

1. Turn knob (5) clockwise to release the roll retainer (4).
2. Remove the margin stop (6) from the roll retainer.
3. Load label roll (2) on the roll retainer (4) in such a way, that the labels are visible from above after unrolling.
4. Slide the roll against the wall plate (1).
5. Guide the latches (7) of the margin stop (6) into the grooves (3) of the roll retainer (4) and push the roll retainer against the label roll (2).
6. Turn knob (5) counterclockwise to tighten the label roll and the margin stop on the roll retainer.

4.1.3 Loading Fanfold Labels

Fig. 8   Loading fanfold labels

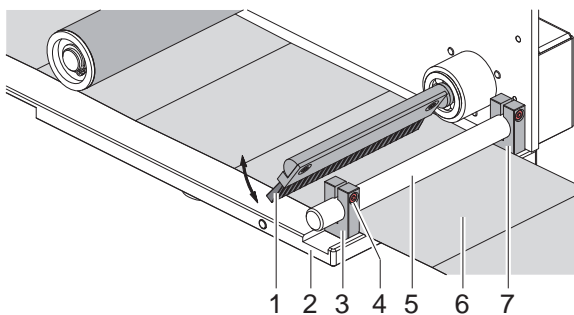1. Loosen screw (4) and slide guide (3) to the outermost position.
2. Swing brush (1) upwards.
3. Place the fanfold labels behind the printer.
4. Insert the labels (6) between baseplate (2) and axle (5) and feed the labels below the brush (1) to the print units.
5. Push the labels to the inner guide (7).
6. Slide the outer guide (3) against the labels and tighten screw (4).
7. Swing brush downwards (1).

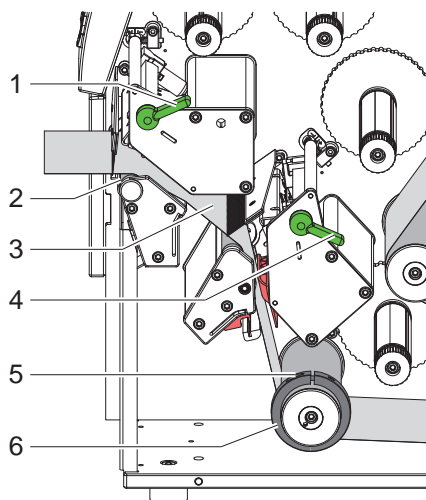### 4.1.4 Inserting Labels into the Print Mechanics
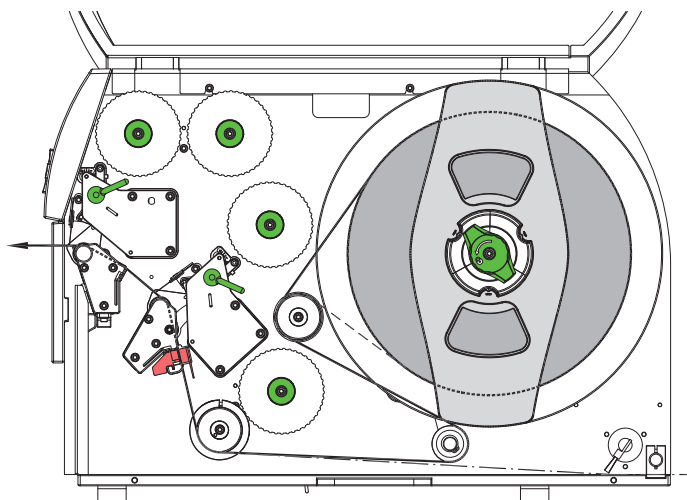

Fig. 9   Loading labels

Fig. 10   Label feed path

1. Unroll a label strip of approx. 1 m. Guide the label strip to the print mechanics as shown in figure 10.
   The broken line shows the path for inside wound labels.
   Alternatively: Feed the fanfold labels to the print units according the chain line.
2. Turn levers (1,4) counterclockwise to lift both printheads.
3. Loosen the threaded pin (5) and slide the guide ring (6) to the outermost position.
4. Guide media strip through the print mechanics as shown in figure 9 to the upper print roller (2).
5. Slide the guide ring (6) against the edge of the label strip (3) and tighten the threaded pin (5).
6. Fix the media by closing the lower printhead.
7. Tighten the label strip between the printheads and close the upper printhead.

4.1.5 Setting the Label Sensor
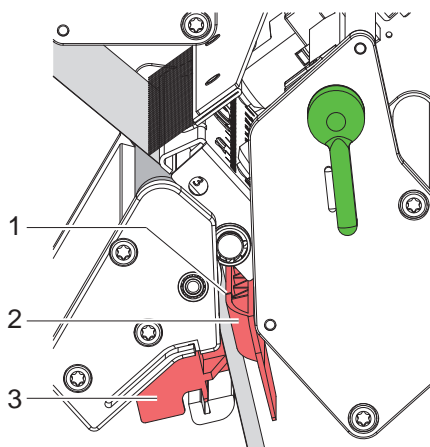
Fig. 11   Setting the label sensor

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 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 perfo-
   ration 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.

4.1.6 Setting the Head Locking Systems

The printheads are pushed on via two plungers. The locations of the outer plungers 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. 12 Setting the upper head locking system	Fig. 13 Setting the lower 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).
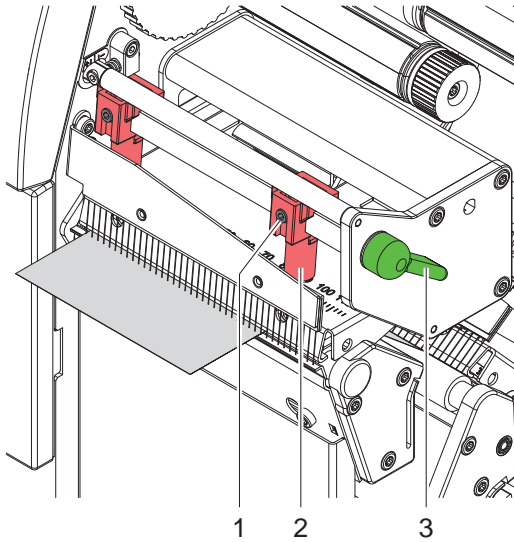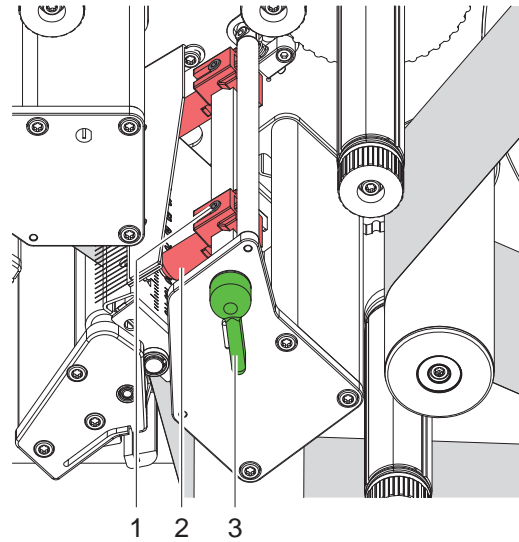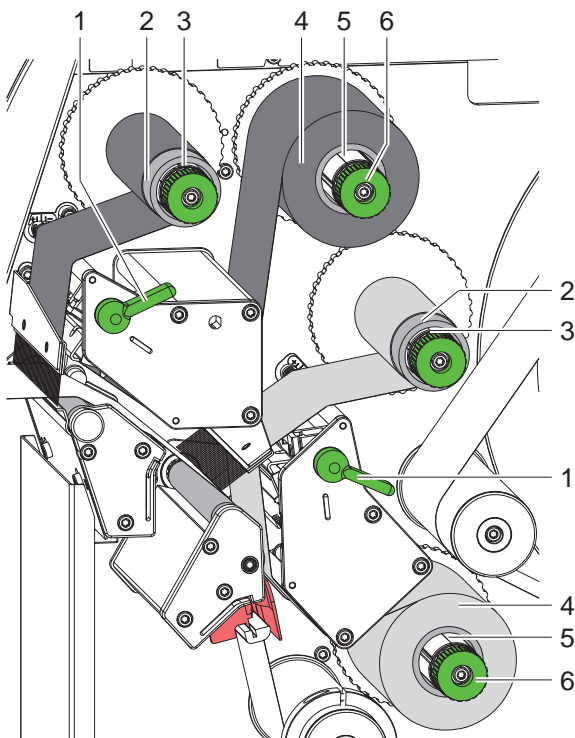
4.2   Loading Transfer Ribbon
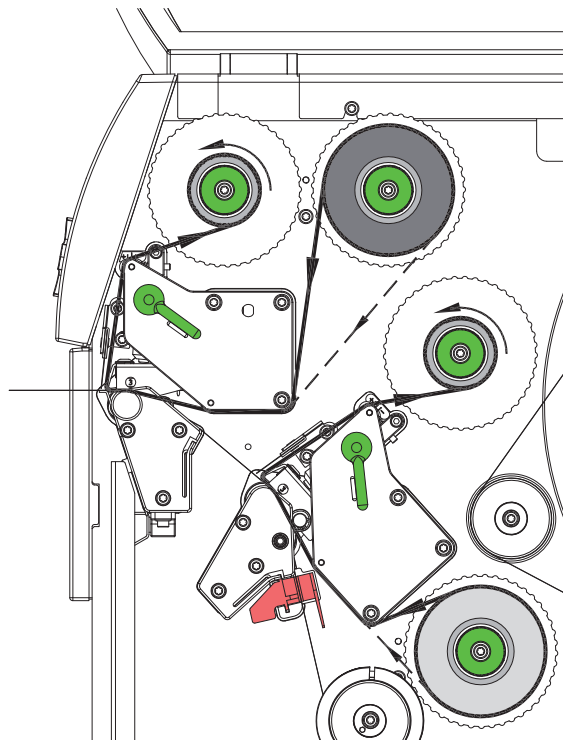

Fig. 14   Loading transfer ribbon

Fig. 15   Transfer ribbon feed path

> **! Attention!**
> **Risk of errors by wrong color assignment.**
> ▶ **Ensure that programming and assignment of ribbon colors to the print units are matching.**

> **ⓘ Notice!**
> **The lower print unit is equipped with a ribbon saver. If there is no information to print in the assigned color during a longer label feed, the printhead will be lifted, and the transfer ribbon will be paused from feeding.**
> ▶ **Use the upper print unit for printing the main color (typically black) and the lower print unit for printing the secondary color.**

Loading transfer ribbon can be performed for both print units in the same manner:

1. Clean printhead before loading the transfer ribbon (▷ 6.3 on page 21).
2. Turn lever (1) counterclockwise to open the printhead.
3. Slide transfer ribbon roll (4) onto the ribbon supply hub (5) until it stops and so that the color coating of the ribbon faces away from the printhead after loading.
4. Hold ribbon supply hub (5) firmly and turn knob (6) counterclockwise until the transfer ribbon roll is secured.
5. Slide suitable ribbon core (2) onto the transfer ribbon take-up hub (3) and secure it in the same way.
6. Guide transfer ribbon through the print unit as shown in the figure 14. The broken line shows the path for ribbon with inkside out.
7. Secure starting end of transfer ribbon to the transfer ribbon core (2) with adhesive tape. Ensure counterclockwise rotation direction of the transfer ribbon take-up hub here.
8. Turn transfer ribbon take-up hub (3) counterclockwise to smooth out the feed path of the transfer ribbon.
9. Turn lever (1) clockwise to close the printhead.

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.

ℹ   **Notice!**
A maladjustment of the head locking system may also cause ribbon wrinkling
▶   **Check first the setting of the head locking systems (▷ 4.1.6 on page 15)**

Fig. 16   Setting the upper ribbon feed path
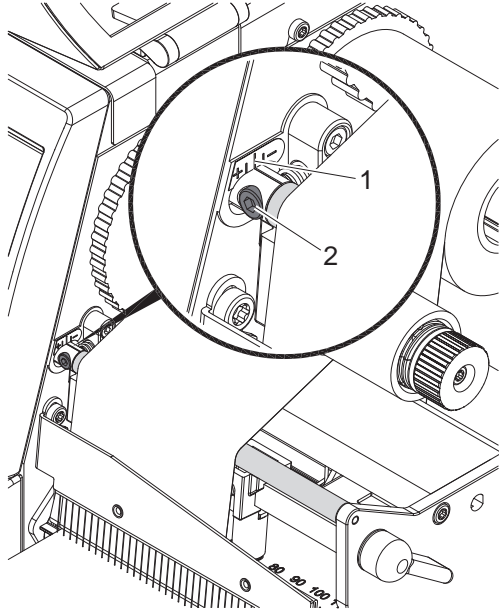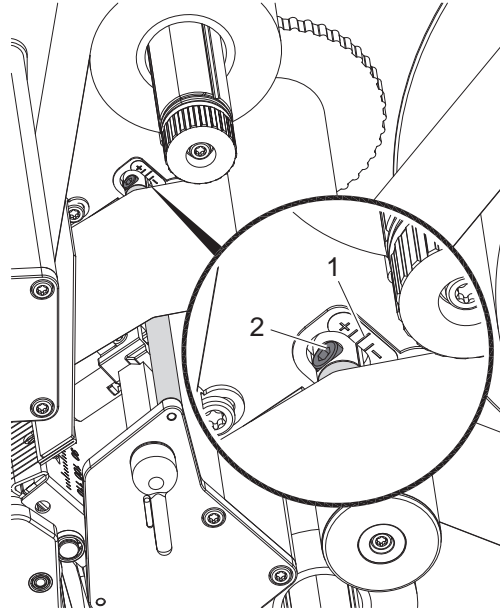

Fig. 17   Setting the lower ribbon feed path

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

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 the transfer ribbon have been loaded.

5.2 Synchronization in Cut Mode

To guarantee the correct length of the first label a cut prior print job is required :

▶ Activate in the printer driver menu **General > Print Settings > Advanced Setup** the setting **"cut before labels"**.

or

▶ For direct programming use the command **C s** ▷ Programming Manual.

5.3 Designing the Print Image with Direct Programming

▶ Define the double material width as label width.
▶ Place the information for the main color at x-coordinates between 0 and the material width.
▶ Place the information for the secondary color at x-coordinates between the single and the double material width.

> **Attention!**
> **Objects with x-coordinates on both sides of the single material width cannot certainly be assigned to one color.**
> ▶ **Place each object completely into one of the color zones.**
> **The color assignment would be altered by using the commands for rotating (O R) or mirroring (O M) the print image.**
> ▶ **Do not use the commands for rotating (O R) or mirroring (O M) the print image.**

5.4 Ribbon Saving

If there is no information to print in the secondary color during a longer label feed, the lower printhead will be lifted, and the transfer ribbon will be paused from feeding. This will reduce the ribbon consumption. The minimum length for ribbon saving is defined in the firmware and depends on the print speed.

The ribbon saver can permanently be activated in the printer configuration (▷ Configuration Manual) or job-oriented by the software (▷ Programming Manual).

5.5   Avoiding Loss of Material

> **!**
> **Attention!**
> **Loss of material!**
>
> **XC has a fundamental difference to other cab printers :**
> **The print images for the two colors of one label 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 with the secondary color will be fed to the upper printhead to complete the print of the label, but the following media will not be printed with the secondary color.**
> - **A label backfeed to the lower printhead is not allowed due to the reliability of the label transport.**
> - **Following blank labels are generated, which cannot be used.**
> - **For operation with cutter the length of the blank section is at least 110 mm for continuos material.**
>   **For labels where the print image has to be synchronized to the label 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, especially single prints.**
> ▶ **Avoid predictable error situations ▷ 5.6 on page 20.**
>   **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 contain differing information, the internal preparation of the second label must be completed before the printing by the lower printhead for the first label has been finished !

Otherwise the first label will be fed to the upper printhead to complete the print without printing the next section with the secondary color. The print of the second label begins only after completion of the first label.

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.
  or
▶ For direct programming use the replace command **R** for changing data ▷ Programming Manual.

> **!**
> **Attention!**
> **Loss of material!**
> **The RS-232 interface is unsuitable for fast transmission of changing data.**
> ▶ **Use USB or Ethernet interface for print operation.**

5.6 Avoiding Loss of Data

> ⚠ **Attention!**
>
> **Loss of data!**
>
> **When correctable errors occur labels 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 labels 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.

6.1 Cleaning Information

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

The 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: - 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 with fingers.**

> **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 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	Head locking system not adjusted	Adjust the head locking system. ▷ 4.1.6 on page 15
	Transfer ribbon deflection not adjusted	Adjust the transfer ribbon deflection. ▷ 4.3 on page 17
	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 21
	Temperature too high	Decrease temperature via software.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
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 label height in the software is too large.	Change the label height in the software.
Vertical white lines in the print image	Printhead is dirty	Clean the printhead ▷ 6.3 on page 21
	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 21

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. alpha-numeric 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.
No label size	The size of the label is not defined in the programming.	Check programming.

Error message	Cause	Remedy
`No Link`	No network link	Check network cable and connector. Please contact your network administrator.
		For operation without network connection set parameter "Network error" to `Off` ▷ Configuration Manual.
`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 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 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 21 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.

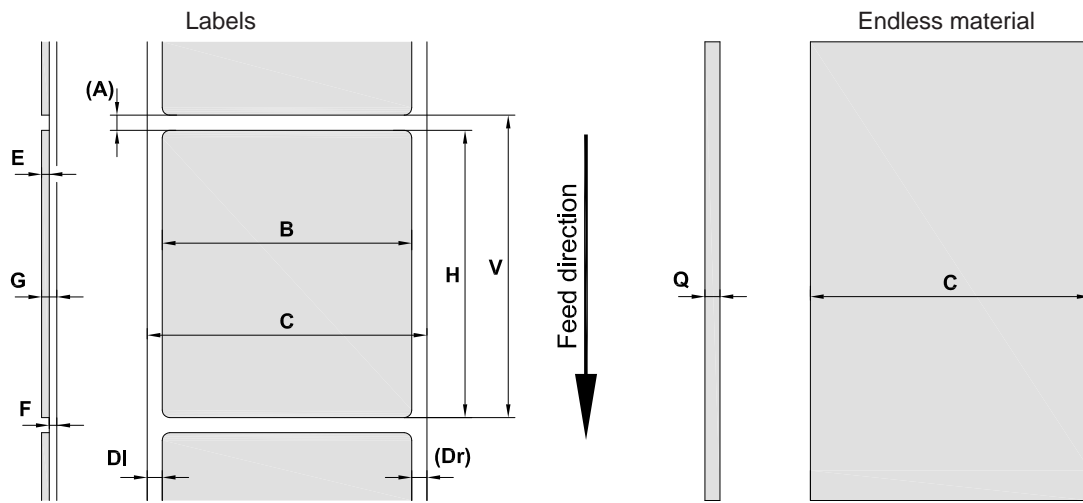Table 7   Error Messages and Fault Correction

8.1   Media Dimensions

Fig. 18   Label / endless material dimensions

Dim.	Designation	Dim. in mm	
		XC4	**XC6**
B	Label width	20 - 116	46 - 176
H	Label height	20 - 2000	20 - 1500
-	Tear-off length	> 30	
-	Cut length		
	with cutter	> 2	
	with perforation cutter	> 12	
-	Perforation length	> 2	
A	Label distance	> 2	
C	Width of liner or endless material	25 - 120	50 -180
Dl	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	> 22	
	• 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 !		

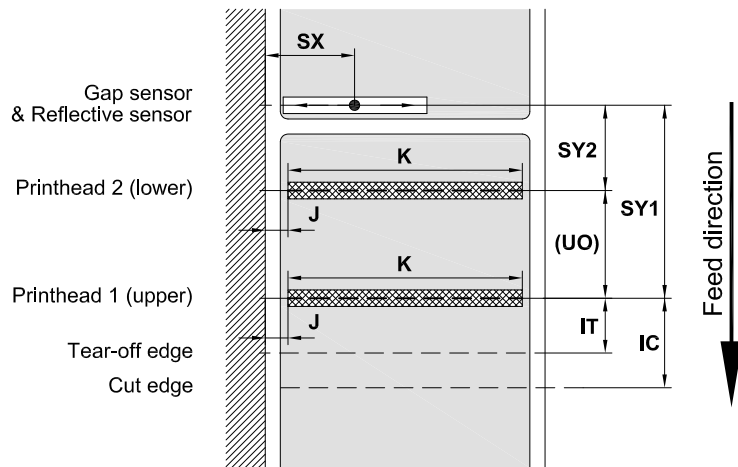Table 8   Label / endless material dimensions

8.2 Device Dimensions

Fig. 19   Device dimensions

Dim.	Designation	Dim. in mm	
		XC4	**XC6**
IC	Distance printhead 1 (upper) - cut edge - with cutter CU	18,8	
IT	Distance printhead 1 (upper) - tear-off edge	13,5	
J	Distance 1st heating point - material edge	2	3
K	Print width	105,6	162,6
SX	Distance gap/reflective sensor - material edge i.e. permissible distance of reflex or cut-out marks to the material edge	5 - 53	
SY1	Distance gap/reflective sensor - printhead 1 (upper)	135,3	
SY2	Distance gap/reflective sensor - printhead 2 (lower)	46,4	
UO	Distance printhead 2 (lower) - printhead 1 (upper)	88,9	

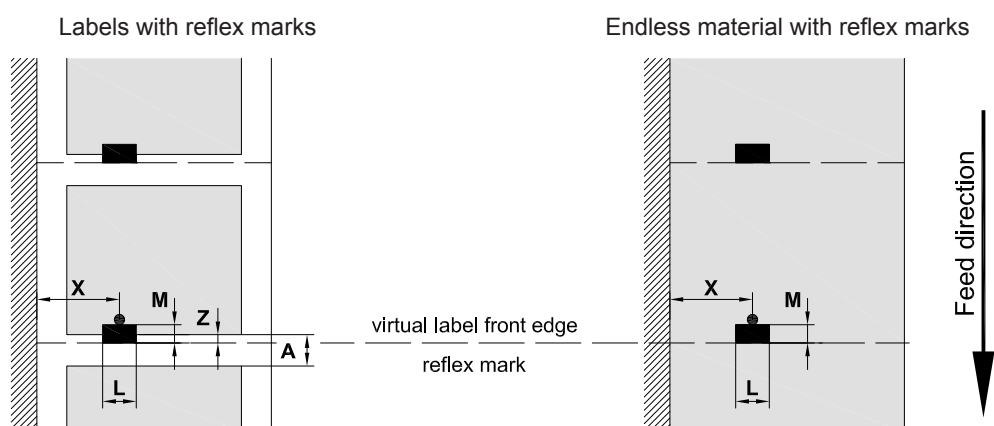Table 9   Device dimensions

8.3   Reflex Mark Dimensions

Labels with reflex marks   Endless material with reflex marks

Fig 20   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	5 - 53
Z	Distance virtual label front edge - actual label front edge ▶ Adjust software settings	0 up to A / recomm. : 0
	• 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

Labels with cut-out marks   Endless material with cut-out marks

for marginal cut-out marks
minimum liner thickness 0,06 mm
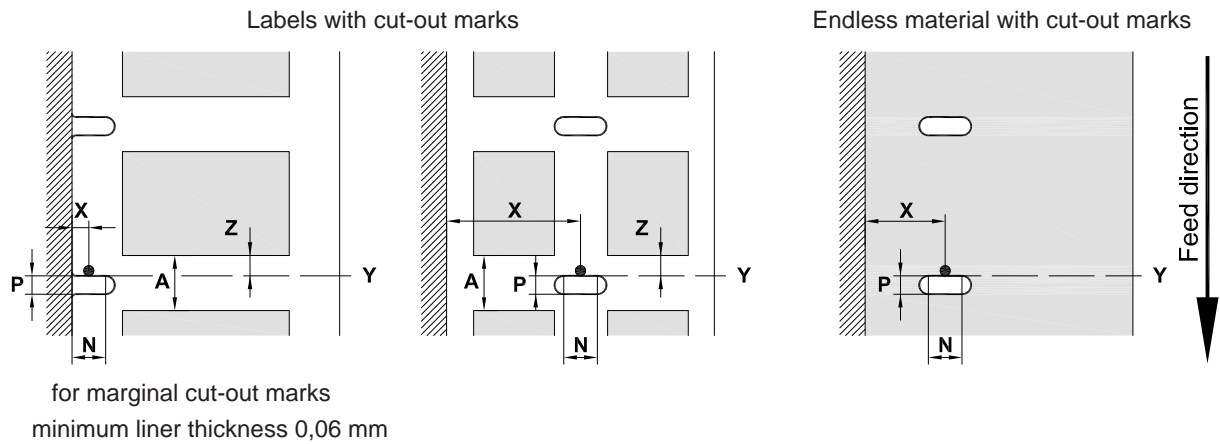
Fig. 21   Cut-out mark dimensions

Dim.	Designation	Dim. in mm
A	Label distance	> 2
N	Width of cut-out mark	> 5
	for marginal cut-out	> 8
P	Height of cut-out mark	2 - 10
X	Distance mark - material edge	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

Marginal cut-out   Long hole cut-out   Rectangular cut-out   Circular cut-out   Cut-out between the labels

Not recommended !   Not recommended !
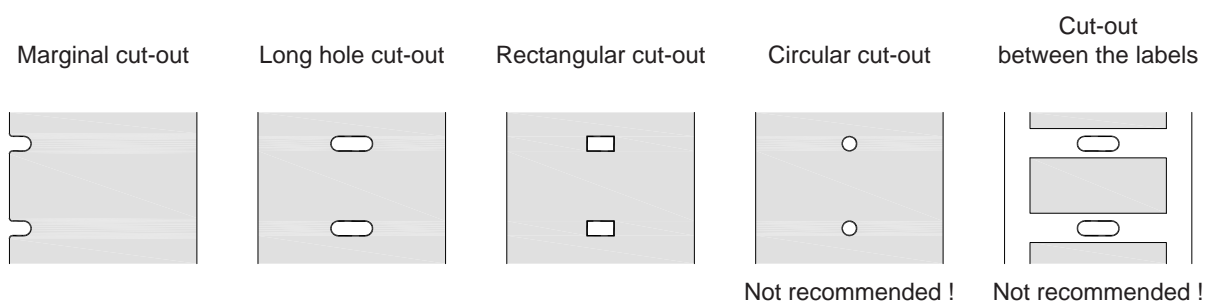
Fig. 22   Samples for cut-out marks

9.1   EC Declaration of Conformity

cab Produkttechnik
GmbH & Co KG
Wilhelm-Schickard-Str. 14
D-76131 Karlsruhe
Germany

EC 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 EC 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:	**XC4, XC6**
Applied EC Regulations and Standards:	
Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits	• **EN 60950-1:2006 +A11:2009+A12:2011+A1:2010+A2:2013**
	• **EN 61558-1:2005+A1:2009**
Directive 2004/108/EC relating to electromagnetic compatibility	• **EN 55022:2010**
	• **EN 55024:2010**
	• **EN 61000-3-2:2006+A1:2009+A2:2009**
	• **EN 61000-3-3:2008**
	• **EN 61000-6-2-2005**
Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment	• **EN 50581:2012**
Signed for, and on behalf of the Manufacturer :	**Sömmerda, 28.04.2015**
cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda	**Erwin Fascher Managing Director**

9.2   FCC

NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user may be required to correct the interference at his own expense.