

## Original Instructions



Labelling System

# AXON 2

MADE IN GERMANY

## 2 Original Instructions for the following products

2

Type	
Labelling System	AXON 2

**Edition:** 04/2024 - **Part No.** 9003455

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Germany  
**cab Produkttechnik GmbH & Co KG**  
Karlsruhe  
Phone +49 721 6626 0  
[www.cab.de](http://www.cab.de)

USA  
**cab Technology, Inc.**  
Chelmsford, MA  
Phone +1 978 250 8321  
[www.cab.de/us](http://www.cab.de/us)

Taiwan  
**cab Technology Co., Ltd.**  
Taipei  
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## 1.1 Instructions

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



### **Danger!**

Draws attention to an exceptionally great, imminent danger to your health or life due to hazardous voltages.



### **Danger!**

Draws attention to a danger with high risk which, if not avoided, may result in death or serious injury.



### **Warning!**

Draws attention to a danger with medium risk which, if not avoided, may result in death or serious injury.



### **Caution!**

Draws attention to a danger with low risk which, if not avoided, may result in minor or moderate injury.



### **Attention!**

Draws attention to potential risks of property damage or loss of quality.



### **Note!**

Advice on how to make work easier or an important step to be carried out.



### **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 intended exclusively for printing suitable labels that have been approved by the manufacturer and applying the labels onto tubes. 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.
- The device is manufactured in accordance with the current technological standards 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 that manual.
- Usage for the intended purpose also includes complying with that manual.



### **Note!**

This manual describes a labelling system which is already prepared by cab for the customers application.

### 1.3 Safety Instructions

- The device version for AC power connection is configured for voltages of 100 to 240 V AC. It only has to be plugged into a grounded socket.  
The device version for DC power connection is configured for 24 to 60 V DC.
- 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.
- During operation, rotating parts are freely accessible. Ensure that people's clothing, hair, jewelry etc. do not come into contact with the exposed rotating parts.
- 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 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 labelling system 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

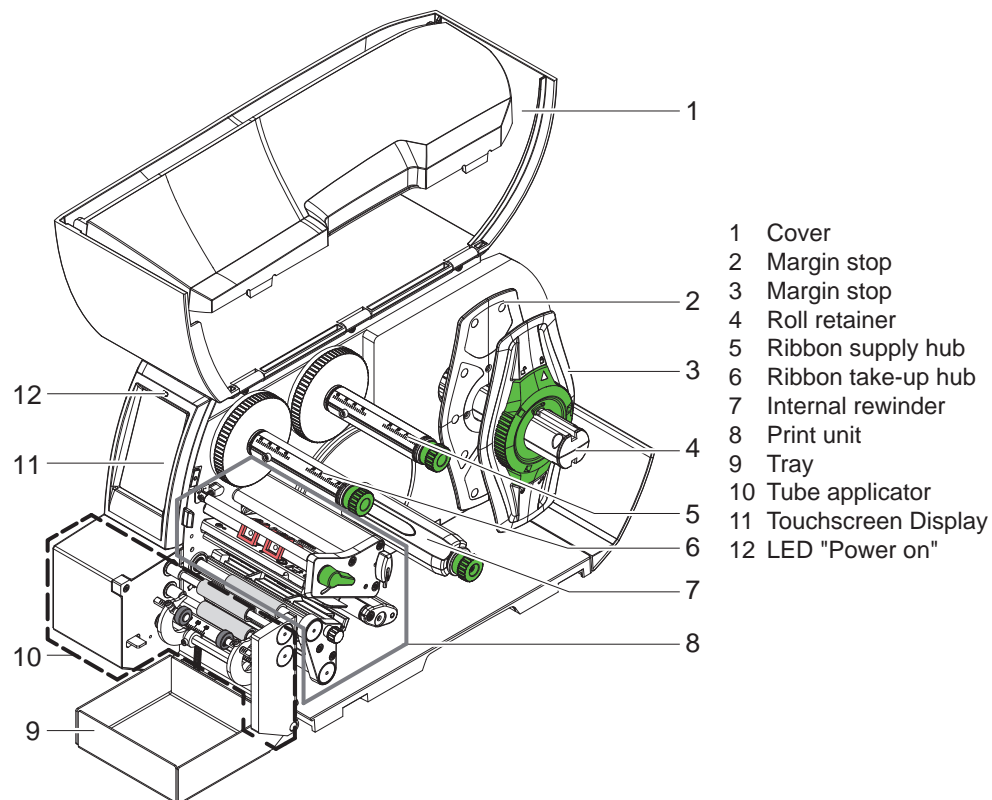


Figure 1 General overview

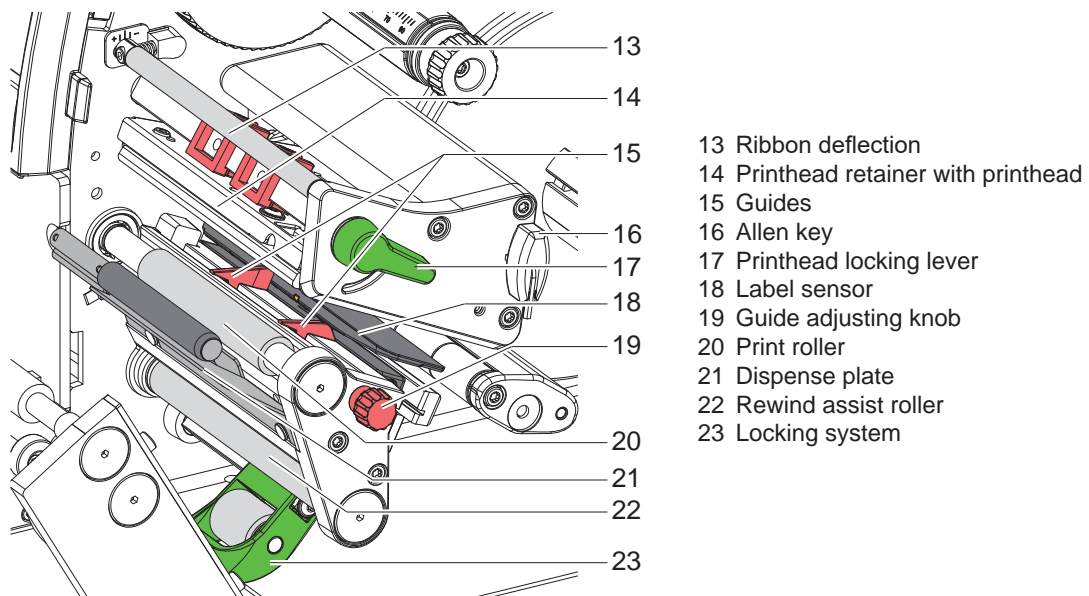
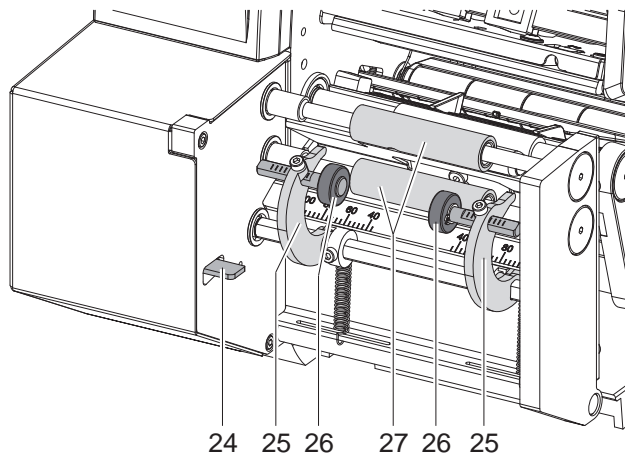
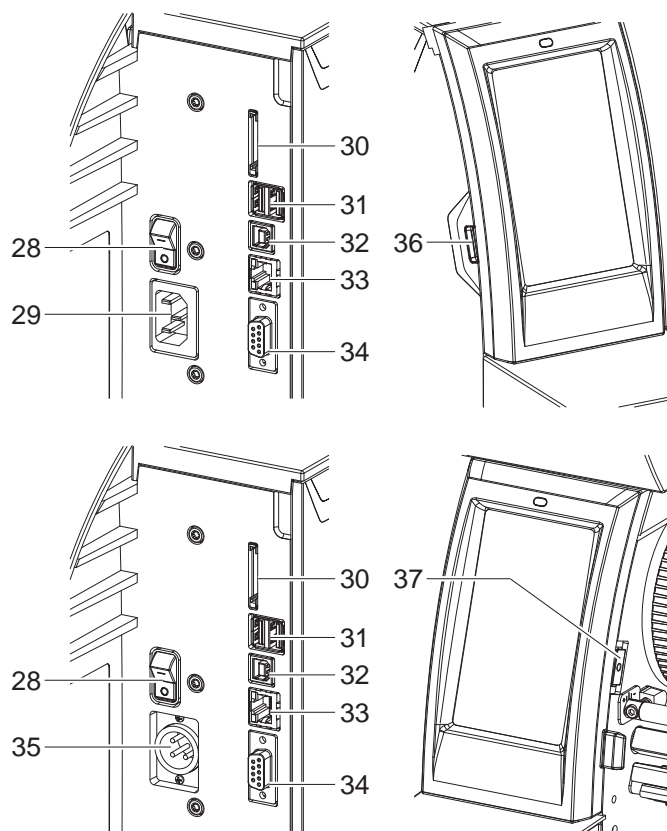


Figure 2 Print unit



- 24 Release lever
- 25 Swing arm
- 26 Pressure roller
- 27 Transport roller

Figure 3 Tube applicator



- 28 Switch ON/OFF
- 29 Power connector  
(devices for 100-240 V AC only)
- 30 Slot for SD card
- 31 2 USB host interfaces for keyboard,  
barcode scanner, Bluetooth adapter  
or WiFi stick
- 32 USB Hi-speed device interface
- 33 Ethernet 10/100 Base-T
- 34 Serial RS-232 port
- 35 Power connector  
(devices for 24-60 V DC only)
- 36 USB host interface for service key or USB  
memory stick
- 37 USB host interface for WiFi stick

Figure 4 Connections

## 2.2 Setting Up

**Note!**

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

**Note!**

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.

- Lift the labelling system out of the box.
- Check the labelling system for damage which may have occurred during transport.
- Remove foam transportation safeguards near the printhead.
- Check delivery for completeness.

Contents of delivery:

- Labelling system consisting of label printer and tube applicator
- Tray (optional)
- Power cable (for AC devices only)
- USB cable
- Instructions
- DVD with label software, Windows driver and documentation

- Set up the labelling system on a level surface.
- Push the tray (1) under the applicator and fit it at the axle (2).

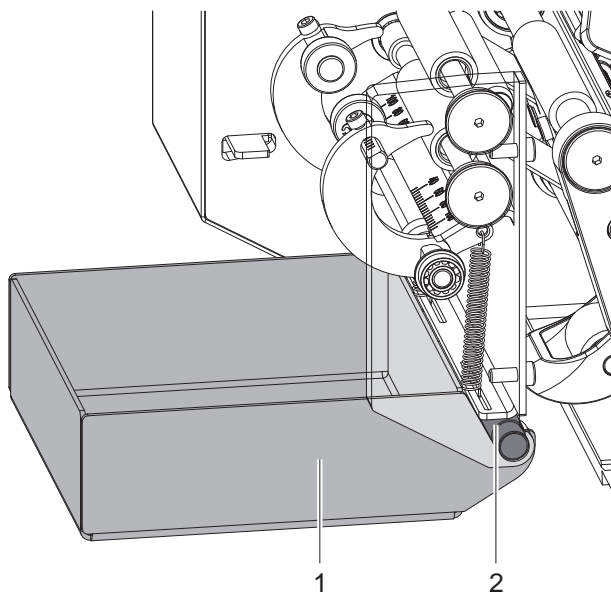


Figure 5 Fitting the tray



## 2.3 Connecting

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

### 2.3.1 Connecting to Power Supply

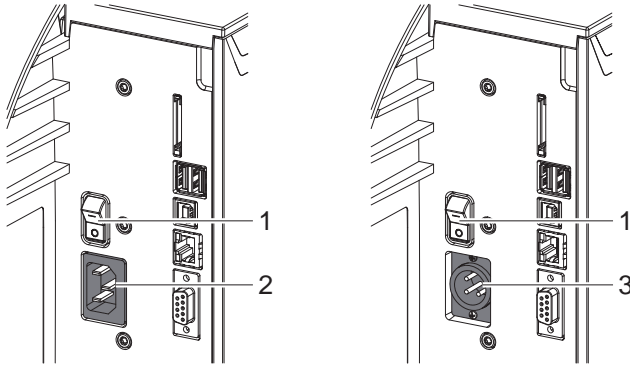


Figure 6 Connecting to power supply

#### Devices for 100-240 V AC

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

#### Devices for 24-60 V DC

1. Check that the device is switched off.
2. Connect a suitable cable with XLR3 socket at the connector (3).  
Pin 1: -  
Pin 2: GND  
Pin 3: 24 - 60 V
3. Connect the cable to a DC power supply.

### 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 labelling system are grounded.

- Connect the label labelling system to a computer or network by a suitable cable.
- For details of the configuration of the individual interfaces ► Configuration Manual.

## 2.4 Switching on

When all connections have been made:

- Switch the labelling system on at the switch (1).  
The labelling system performs a system test, and then shows the system status *Ready* in the display (11/Figure 1) .  
The pressure rollers move in to the put-in position.

The user can control the operation of the labelling system with the touchscreen display, 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),
- 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 touchscreen display make the basic settings of the label labelling system.



**Note!**

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

### 3.1 Start Screen

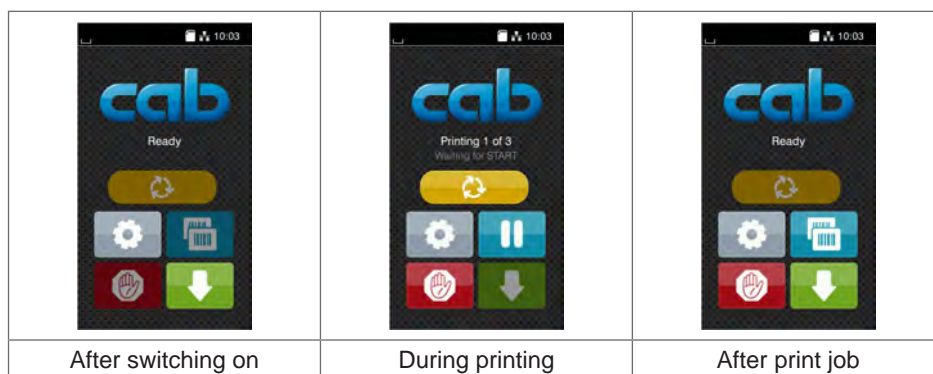


Figure 7 Start screen

The touchscreen display is operated directly by touch:

- To open a menu or select a menu item lightly touch the corresponding symbol.
- To scroll in lists slide finger up or down on the display.

	Open the menu		Repeat the last printed label
	Interrupt the print job		Cancel all print jobs
	Continue the print job		Feed a blank label
	Release printing of a single label within a print job including labelling		

Table 1 Symbols on the start screen



**Note!**

Inactive symbols are shaded.

In the headline several information are displayed as widgets depending on the configuration:

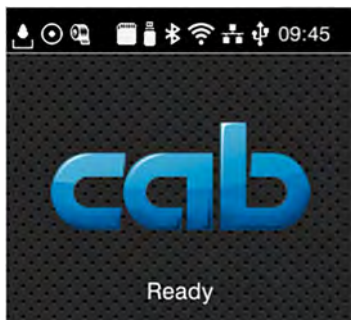


Figure 8 Widgets in the start screen















	Displays the current data transfer in the form of a falling drop.
	The <i>Save data stream</i> function is active ▷ Configuration manual All received data are stored in a .lbl file.
	Warning ribbon end ▷ Configuration manual The remaining diameter of the ribbon supply roll undershoots the set value.
	SD card installed
	USB memory installed
	gray: Bluetooth adapter installed, white: Bluetooth connection active
	WiFi connection active The WiFi strength is displayed by the number of white arcs.
	Ethernet connection active
	USB connection active
	abc program active
	Clock time

Table 2 Widgets in the start screen

## 3.2 Navigation in the Menu



Figure 9 Menu levels

- ▶ To open the menu select  on the start screen.
- ▶ Select a theme in the selection level.  
Several themes have substructures again with selection levels.  
To return from the current level to the upper one select . To leave the menu select .
- ▶ Continue the selection until the parameter/function level is reached.
- ▶ Start a function. The function may only start after a preparatory dialog.  
- or -  
Select a parameter to set. The setup possibilities are depending from the parameter type.

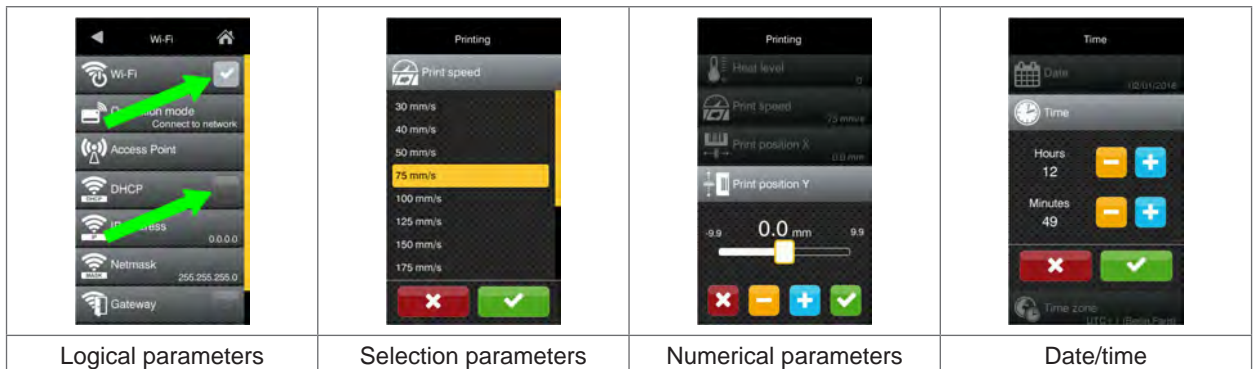


Figure 10 Samples for parameter setting








	Scroll bar for rough value setting
	Decreasing the value step-by-step
	Increasing the value step-by-step
	Return without saving the setting
	Return with saving the setting
	Parameter is disabled, touching enables the parameter
	Parameter is enabled, touching disables the parameter

Table 3 Buttons for parameter setting

## 4.1 Folding down and up the Applicator

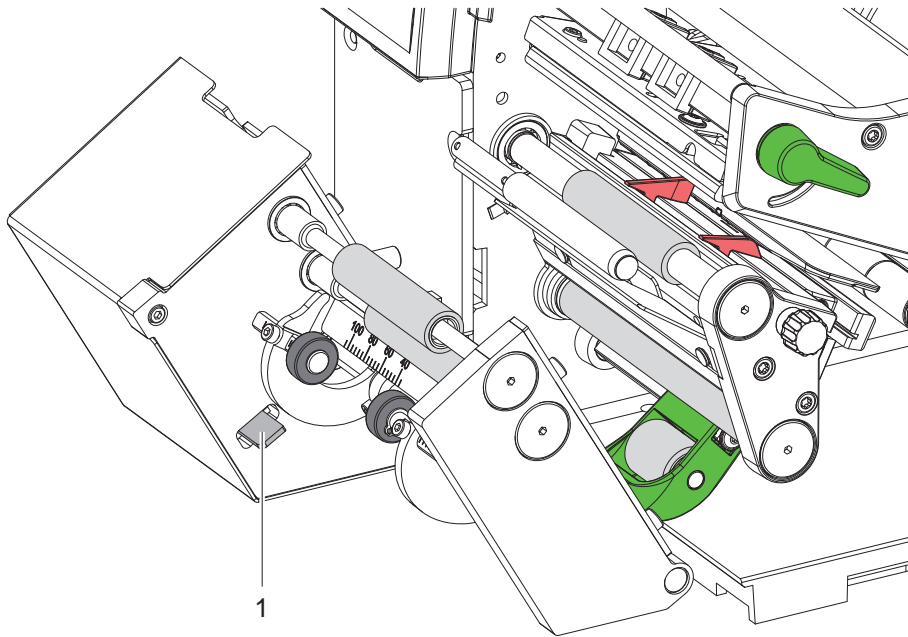


Figure 11 Folding down the applicator

For loading labels or cleaning the applicator can be folded down from the printer:

**Caution!**  
**Crushing hazard!**

- Remove the tray before folding down the applicator!

**Folding down**

- Press down the locking lever (1) to unlock the applicator.
- Fold down the applicator.

**Folding up**

- Fold up the applicator and press it against the printer.  
The applicator will be locked automatically.

## 4.2 Loading Media

### 4.2.1 Positioning the Media Roll on the Roll Retainer

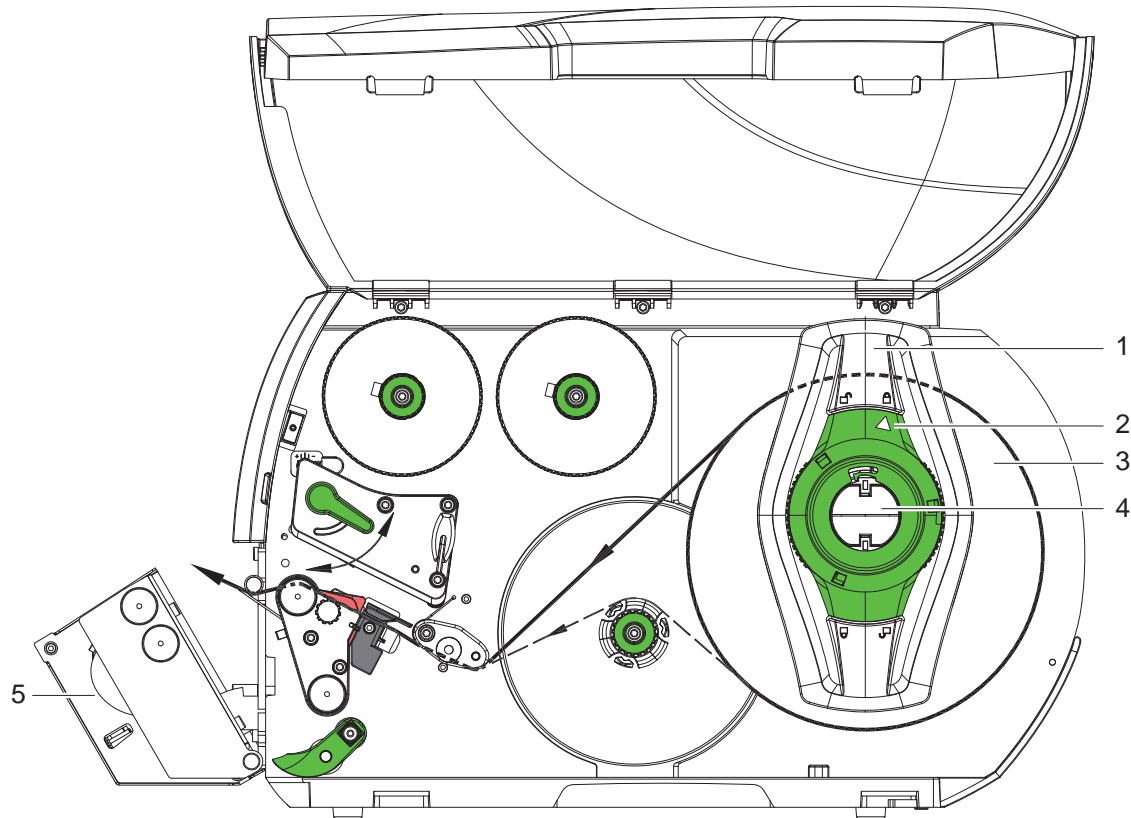




Figure 12 Loading media

1. Open cover.
2. Fold down the applicator (5)
3. Turn the ring (2) at the margin stop (1) counterclockwise, so that the arrow points to the symbol , and thus release the margin stop.
4. Remove the margin stop (1) from the roll retainer (4).
5. Load label the roll (3) on the roll retainer in such a way that the printing side of the labels is visible from above.
6. Re-mount the margin stop (1) onto the roll retainer (4). Push the margin stop (1) to the roll (3) until the roll touches both margin stops and a clear resistance is encountered.
7. Turn ring (2) clockwise, so that the arrow points to the symbol , and thus fix the margin stop (1) on the roll retainer (4).
8. Supply a longer label strip of approx. 60 cm.

## 4.2.2 Inserting the Media into the Printhead and Fixing the Liner at the Rewinder

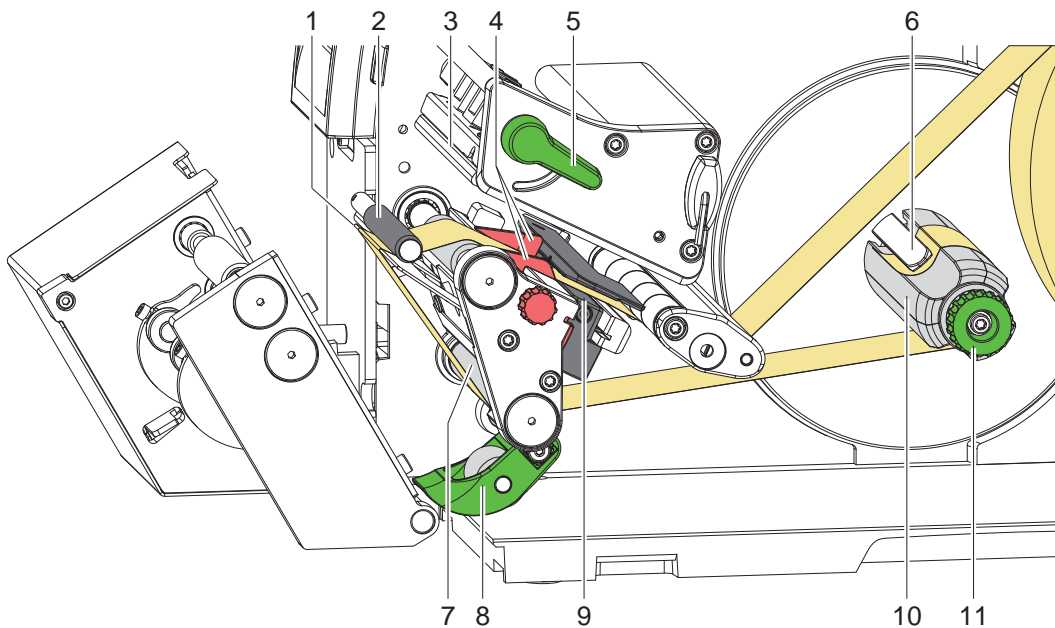


Figure 13 Inserting the media into the printhead and fixing the liner at the rewinder

1. Turn the lever (5) counterclockwise to lift the printhead (3).
2. Fold down the pinch roller (8).
3. Remove labels from the first 100 mm of the liner.
4. Guide the label strip over the rewinder (10), through the label sensor (9), around the dispense plate (1) and the rewind assist roller (7) to the rewinder (10).
5. Hold the rewinder (10) firmly and turn the knob (11) clockwise until it stops.
6. Push the liner under a bracket (6) of the rewinder (10) and align the outer edge of the strip to the media roll.
7. Turn knob (11) counterclockwise until it stops.  
The rewinder is fully spread, thus gripping the liner firmly.
8. Turn rewinder (10) counterclockwise to tighten the liner.
9. Swing the pinch roller (8) against the rewind assist roller (7).
10. Turn the lever (5) clockwise to lock the printhead.
11. Fold up the applicator.

## 4.2.3 Removing the Wound Liner Roll

- Cut the liner.
- Hold rewinder (10) firmly and turn knob (11) clockwise.  
The rewinder spindle relaxes and the wound roll is released.
- Remove the wound roll from rewinder (10).

### 4.3 Loading Transfer Ribbon


**Note!**

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

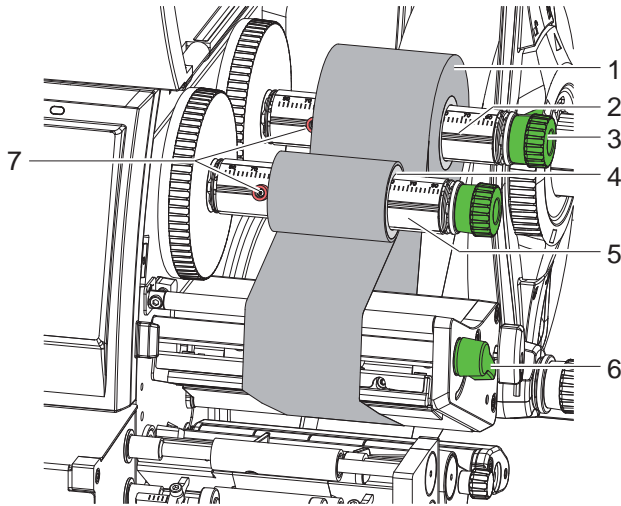


Figure 14 Loading transfer ribbon

1. Clean the printhead before loading the transfer ribbon (▷ 7.3 on page 21).
2. Turn the lever (6) counterclockwise to lift the printhead.
3. Slide the transfer ribbon roll (1) onto the ribbon supply hub (2) so that the color coating of the ribbon faces downward when being unwound.
4. Push the roll (1) against the stopper (7).
5. Hold the transfer ribbon roll (1) firmly and turn knob on ribbon supply hub (3) counterclockwise until the transfer ribbon roll is secured.
6. Slide a suitable transfer ribbon core (4) onto the transfer ribbon take-up hub (5) and secure it in the same way.
7. Guide transfer ribbon through the print unit as shown in Figure 15.
8. Secure starting end of transfer ribbon to the transfer ribbon core (4) with adhesive tape. Ensure counterclockwise rotation direction of the transfer ribbon take-up hub here.
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.

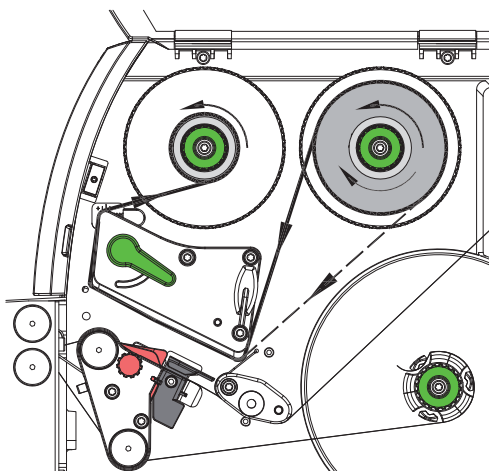


Figure 15 Transfer ribbon feed path



#### 4.4 Setting the Feed Path of the Transfer Ribbon

Transfer ribbon wrinkling can lead to print image errors. The transfer ribbon deflection (3) can be adjusted so as to prevent wrinkles.

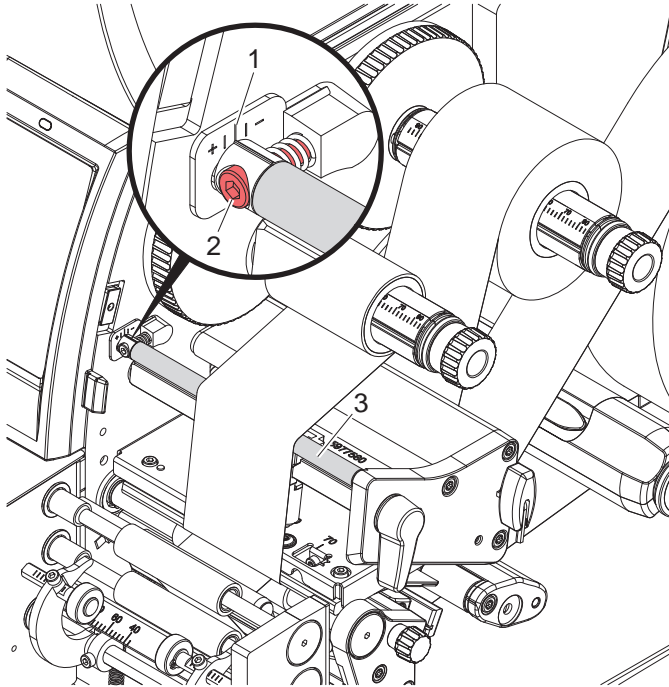


Figure 16 Setting the feed path of the transfer ribbon



**Note!**

The adjustment is best carried out during printing.

- ▶ Read current setting on the scale (1) and record if necessary.
- ▶ 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.

**Attention!**


**Printhead damage caused by improper handling!**

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

The labelling system is ready for operation when all connections have been made and labels and the transfer ribbon have been loaded.

## 5.1 Synchronization of the Paper Feed

After the label stock has been inserted 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. That can cause useless first labels.

- ▶ Fold down the applicator.
- ▶ Select  to start the synchronization.
- ▶ Remove the blank labels peeled-off during the synchronization.
- ▶ Fold up the applicator.

**Note!**

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

## 5.2 Standard Operation

**Warning!**

Risk of injury by rotating parts!

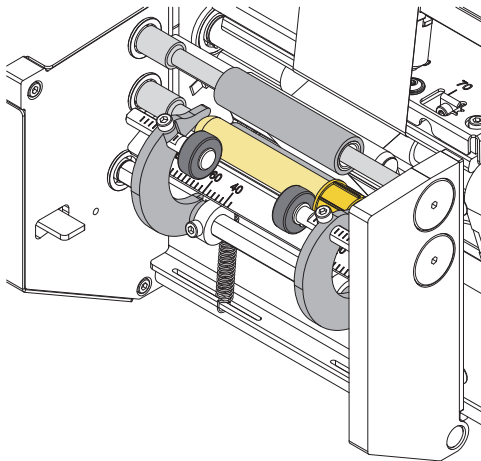
During operation, rotating parts are freely accessible.

Ensure that people's clothing, hair, jewelry etc. do not come into contact with the exposed rotating parts.

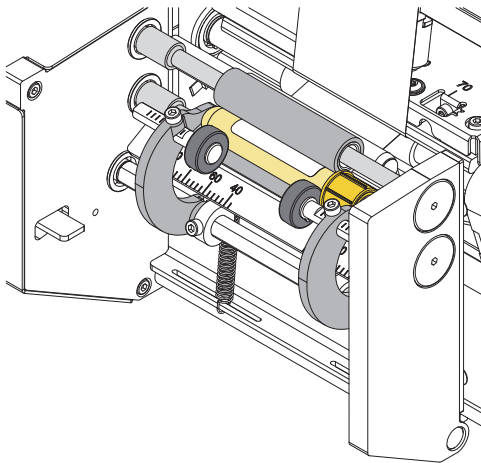
**Attention!**

Peel-off mode must be activated in the software.

This is done with the "P command" in the direct programming, ► [Programming Manual](#).



- Send a print job.
- Insert the first tube.





- Press .
- The tube will be pressed against the transport rollers. The first label will be printed and applied onto the turning tube. After about two turns the locking clamps will be opened. Depending on the configuration the tube will be ejected or left in the labelling area.
- Remove the tube.
  - Insert the next tube.
  - Press  again to start next cycle.

Figure 17 Operation

**Note!**

In that chapter are described the specific applicator parameters of the menu *Labelling* only.  
For more information about the configuration ► **Configuration Manual of the printer.**

- Start menu.
- Select *Setup > Labelling*.

Parameter	Meaning	Default
<i>Device info</i>	Applicator information: Software revision, hardware revision, diameter of the last product, number of label applications, error notes, number of rotations	
<i>Teach-in product</i>	Function to teach the applicator to the tube diameter. The result is transferred to the <i>Tube diameter</i> parameter.	
<i>Calibrate device</i>	Calibration of the swing arm movement.	
<i>Peel-off position</i>	Shift the position of the dispensed label relative to the dispensing edge. The setting can also be adjusted by the software. The settings of configuration and software are added together.	0,0 mm
<i>Tube diameter</i>	Manual setting of the tube diameter	10,0 mm
<i>Opening width</i>	Setting the distance between the transport rollers and pressure rollers for tube input	1,0 mm
<i>Tube rotations</i>	Number of tube rotations within the labelling cycle	2,0
<i>Check diameter</i>	Checking the tube diameter before labelling	On
<i>Eject tube</i>	On: The tube will be ejected after labelling Off: The tube will be left in the labelling area after labelling	On
<i>Tube locking</i>	Mode of tube locking before labeling <i>START signal:</i> A START signal must be sent to lock the tube <i>Automatic:</i> Locking occurs automatically	Automatic
<i>Tube unlocking</i>	Mode of tube unlocking after labelling <i>START signal:</i> A START signal must be sent to unlock the tube <i>Automatic:</i> Unlocking occurs automatically	Automatic
<i>Check tube removal</i>	Checking the tube removal after labelling * only for <i>Tube unlocking = START signal</i>	On
<i>Transport roller</i>	Adaptation to the diameter of the transport rollers	14 mm

Table 4 Parameters of the *Setup > Labelling* menu

**Teach-in product**

- Select *Teach-in product*.  
The display shows *Step 1/2 Remove tube*.
- Remove the tube from the applicator and select *Continue*.  
After a short applicator movement the display shows *Step 2/2 Insert tube*.
- Insert a tube and select *Continue*.  
After a next applicator movement the display shows *Product successfully taught-in*.  
If the result is out of the specification an error message will appear.
- Select *Continue*.

**Calibrate device**

- Select *Calibrate device*.  
The display shows *Step 1/1 Remove tube*.
- Remove the tube from the applicator and select *Continue*.  
After an applicator movement the display shows *Device successfully calibrated*.  
If the result is out of the specification an error message will appear.
- Select *Continue*.

## 7.1 Cleaning Information

**Danger!**

**Risk of death via electric shock!**

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

The labelling system 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 labelling system 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 labelling system can be cleaned with a standard cleanser.

## 7.2 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 labelling system.
- ▶ Remove deposits with roller cleaner and a soft cloth.
- ▶ If the roller appears damaged, replace it ▷ Service Manual.

## 7.3 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 labelling system.
- ▶ Clean printhead surface with special cleaning pen or a cotton swab dipped in pure alcohol.
- ▶ Allow printhead to dry for 2–3 minutes before resuming printing.

## 8.1 Error Display

The appearance of an error will be shown on the display:

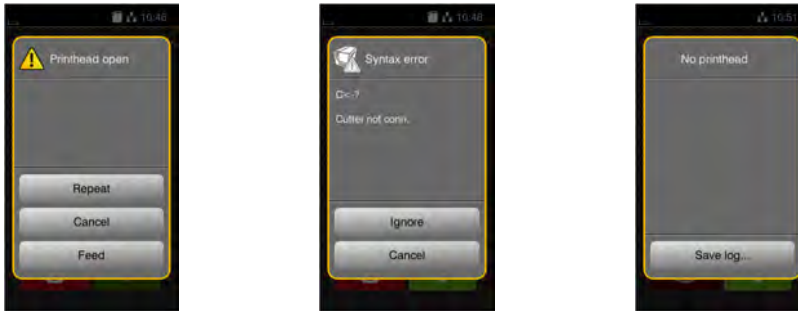


Figure 18 Error display

The error correction depends on the error type ▷ 8.2 on page 22.

The display offers the following possibilities to continue after an error occurred:

<i>Repeat</i>	The print job will be continued after clearing the error cause.
<i>Cancel</i>	The print job will be cancelled.
<i>Feed</i>	The paper feed will be synchronized. Then the print job can be continued.
<i>Ignore</i>	The error message will be ignored. The print job will be continued, possibly with limited performance.
<i>Save log</i>	The error does not allow print operation. For detailed analysis several system files can be saved on an external memory.

Table 5 Buttons in the error display

## 8.2 Error Messages and Fault Correction

Error message	Cause	Remedy
<i>Barcode error</i>	Invalid barcode content, e.g. alphanumeric characters in a numerical barcode	Correct the barcode content.
<i>Barcode too big</i>	The barcode is too big for the allocated area of the label	Reduce the size of the barcode or move it.
<i>Buffer overflow</i>	The input buffer memory is full and the computer is still transmitting data.	Use data transmission via protocol (preferably RTS/CTS).
<i>Device not conn.</i>	Programming addresses a non-existent device	Either connect this device or correct the programming.
<i>Device not locked</i>	The tube applicator is not in operating position	Fold up the applicator.
<i>File not found</i>	Requested file is not on the card	Check the contents of the card.
<i>Font not found</i>	Error with the selected download font	Cancel current print job, change font.
<i>Initialization failed</i>	Hardware error tube applicator	Switch off and on the system. If error recurs call service.
<i>Memory overflow</i>	Current print job contains too much information, e.g. selected font, large graphics	Cancel current print job. Reduce amount of data to be printed.
<i>Name exists</i>	Duplicate usage of field name in the direct programming	Correct programming
<i>No label found</i>	There are labels missing on the label material	Press <i>Repeat</i> 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.
<i>No label size</i>	The size of the label is not defined in the programming.	Check programming.
<i>No tube detected</i>	No tube in the labelling area	Insert tube.

Error message	Cause	Remedy
<i>Out of paper</i>	Out of label roll	Load labels.
	Error in the paper feed	Check paper feed.
<i>Out of ribbon</i>	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 ▷ 7.3 on page 21 Load transfer ribbon. Restart print job.
<i>Pinch roller open</i>	Pinch roller at the rewind guide roller is not locked in peel-off mode	Swing the pinch roller against the rewind assist roller.
<i>Printhead open</i>	Printhead not locked	Lock printhead.
<i>Printhead too hot</i>	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.
<i>Read error</i>	Read error when reading from the memory card	Check data of the card. Backup data, reformat card.
<i>Remove ribbon</i>	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.
<i>Ribbon ink side</i>	Identified ribbon unwinding direction does not match to the setup setting	Ribbon loaded incorrectly. Clean the printhead ▷ 7.3 on page 21 Load the ribbon correctly.
		Setting does not match to the used ribbon. Correct the setting.
<i>Syntax error</i>	Labelling system has received an unknown or invalid command from the computer.	Press <i>Ignore</i> to skip the command or press <i>Cancel</i> to cancel the print job.
<i>Tube not ejected</i>	Tube was not ejected by the ejection movement.	Remove the tube by hand.
<i>Unknown card</i>	Card not formatted, Type of card not supported	Format card, use different type of card.
<i>Voltage error</i>	Hardware error	Switch the labelling system off and then on. If error recurs call service. It is shown which voltage has failed. Please note.
<i>Write error</i>	Hardware error	Repeat the write process, reformat card.
<i>Wrong tube diameter</i>	The tube applicator has detected a tube with wrong diameter.	Insert a suitable tube.

Table 6 Error Messages and Fault Correction

## 8.3 Problem Solution

Problem	Cause	Remedy
Transfer ribbon creases	Transfer ribbon deflection not adjusted	Adjust the transfer ribbon deflection. ▷ 4.4 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 ▷ 7.3 on page 21
	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 ▷ 7.3 on page 21
	Printhead is defective (failure of heat elements)	Change the printhead. ▷ Service Manual.
Horizontal white lines in the print image	Printer is used with the <i>backfeed &gt; smart</i> in the cut or peel-off mode	Set the <i>backfeed &gt; always</i> in the setup. ▷ Configuration Manual.
Print image is irregular, one side is lighter	Printhead is dirty	Clean the printhead ▷ 7.3 on page 21

Table 7 Problem solution



● typical ○ possible ■ standard □ option

Tube labeling system		Type	Label printers providing AXON 2		
			SQUIX 4.3MP	SQUIX 4MP	SQUIX 4MP
Print head					
Print method	Thermal transfer		●	●	●
	Direct thermal		●	○	–
Print resolution	dpi		300		600
Print speed	mm/s		150		150
Print width	mm max.		108.4	105.7	105.7
Material					
Tubes / Vials	Orientation at the time of a label be applied		horizontal		
	Diameter	mm	10 - 22	If options are provided: 7 - 16	
		mm upon request max.	–		
	Length, closure cap included	mm	25 - 120		
	Conicity (change in diameter)	% max.	0.8		
Labels <sup>1)</sup>	Material		Paper, plastics such as PET, PP		
	Width	mm	5 - 56	If options are provided: 5 - 110	
	Height	mm at least	12		
	Thickness	mm at least	0.05		
	Roll diameter	mm max.	205		
	Core diameter	mm	38 - 76		
	Winding		outside		
Liner	Width	mm	9 - 60	If options are provided: 9 - 114	
	Thickness <sup>2)</sup>	mm at least	0.05		
Ribbon	Color side		outside or inside		
	Roll diameter	mm max.	80		
	Core diameter	mm	25		
	Length	m max.	600		
	Width	mm	25 - 114		
Printer dimensions and weights					
Width x Height x Depth	mm		252 x 288 x 520		
Weight	kg approx.		12		
Label sensors / Position indicators					
Transmissive sensor	to detect		labels or punch marks and materials ending, print marks on transparent materials		
Reflective sensor	bottom or top reflex	to detect	labels and materials ending, print marks on non-transparent materials		
Sensor	to the contact edge	left-aligned	mm	–	
distance	center to the contact edge	centered	mm	0 - 55	
Interfaces					
RS232-C	1,200 to 230,400 Baud / 8 Bit		■		
USB 2.0	Hi-speed to plug a PC		■		
Ethernet	10/100 Mbit/s		LPD, RawIP printing, SOAP web service, OPC UA, WebDAV DHCP, HTTP / HTTPS, FTP / FTPS, TIME, NTP, Zeroconf, SNMP, SMTP, VNC		
1 USB host on the control panel	to plug a		service key, USB stick		
2 USB hosts on the back of the device	to plug a		keyboard, barcode scanner, USB Bluetooth adapter, USB WLAN stick		
Digital 24 VDC I/O interface			□		
2 port Ethernet switch	10/100 Mbit/s		□		
Operational data					
Voltage	100 - 240 VAC, 50 / 60 Hz, PFC		■		
	24 - 60 VDC		□		
Power input			<10 W in standby / 100 W are typical		
Temperature / Humidity	In operation		+5 - 40°C / 10 - 85 %, not condensing		
	On stock		0 - 60°C / 20 - 85 %, not condensing		
	In transport		–25 - 60°C / 20 - 85 %, not condensing		
Approvals			CE, In Vitro, FCC Class A, ICES-3		
	July 2021 targets		cULus, CB		
Control panel					
LCD color touchscreen	Screen diagonal	"	4.3		
	Resolution - Width x Height	px	272 x 480		

<sup>1)</sup> Limitations may apply when using small labels, thin materials or strong adhesive. Critical applications need testing.<sup>2)</sup> Peeling labels off a liner requires liner materials not thicker than the labels.

■ standard □ option

### Setup options

Print Labels	Region:
Ribbon	- Language
Label peel-off	- Country
Apply labels	- Keyboard
Interfaces	- Time zone
Error	Time
	Display:
	- Brightness
	- Low-power mode
	- Orientation
	Interpreter

### Status bar

Receive data	Bluetooth
Record datastream	WLAN
Warning on a ribbon ending	Ethernet
SD memory card plugged	USB slave
USB stick plugged	Time

### Technical control

Ribbon winding	Print head voltage
Warning on a ribbon ending	Print head temperature
Ribbon ending	Print head open
Label roll ending	Pinch roller open
Tube / Vial diameter	Peripheral error
Tube / Vial available	

### Test routines

System check	when turning on the device print heads are also detected
Info display, test printout, analysis	Status printout Fonts list List of devices WLAN status
	Test grid Label profile List of events Monitor mode
Status notifications	- Printout of device figures, such as print durations or hours of operation - Device status request by software command - Indication of errors related to a network, barcode or periphery, missing links, etc.

### Fonts

Internal	5 bitmap fonts: 12 x 12 dots 16 x 16 dots Bold 16 x 32 dots OCR-A OCR-B	7 vector fonts: AR Heiti Medium GB-Mono CG Triumvirate Condensed Garuda HanWangHeiLight Monospace 821 Swiss 721 Swiss 721 Bold
To store	TrueType fonts	
Character sets	Windows-1250 to -1257 DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869 EBCDIC 500 ISO 8859-1 to -10 and -13 to -16 WinOEM 720 UTF-8 MacRoman DEC MCS KOI8-R	Western European Eastern European Chinese, traditional Chinese, simplified Thai Cyrillic Greek Latin Hebrew Arabian
Bitmap	Widths and heights 1 - 3 mm Zoom factors 2 - 10 0°, 90°, 180°, 270° orientations	
Vector / TrueType	Widths and heights 0.9 - 128 mm Continuous zoom 360° orientation in steps of 1°	
Font styles	Bold, italic, underlined, outline, inverse - depending on the font type	
Character pitch	Variable or monospace	

### Graphics

Elements	Lines, arrows, rectangles, circles, ellipses - filled and gradient
Formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG
<b>Codes</b>	
1D barcodes (linear)	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C EAN 8, 13 Interleaved 2/5
2D and stacked codes	DataMatrix DataMatrix Rectangle Extension QR code Micro QR code UPS MaxiCode Codablock F  Request for further codes.  Codes be verified by a CC200 verifier requires approval depending on code types, sizes and contents.  Check digits, plain text printout and start/stop encoding are options depending on the code type.

### Software

Label software	cablabel S3 Lite cablabel S3 Viewer cablabel S3 Pro cablabel S3 Print	■ ■ □ □
Running also with	CODESOFT NiceLabel BarTender	
Stand-alone operation		■
Windows printer drivers WHQL-certified for	Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10	Server 2008 Server 2008 R2 Server 2012 Server 2012 R2 Server 2016 Server 2019 ■
Mac OS X printer drivers	at least version 10.6	■
Linux printer drivers	at least CUPS 1.2	■
Programming	JScript printer language abc Basic Compiler ZPL II (Datastream be tested in advance)	■ ■ □
Integration	SAP Database Connector	■ ■
Administration	Printer control Configuration on the Intranet / Internet Network Manager (in preparation)	■ ■ ■

Free and Open Source software are part of cab products. For information see [www.cab.de/opensource](http://www.cab.de/opensource)

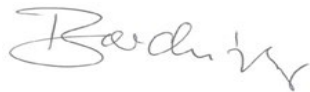
## 10.1 EU Declaration of Conformity



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

## EU Declaration of Conformity

We declare herewith that the following device as a result of design, construction and the version put in circulation complies 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	<b>Labeling System</b>
Typ	<b>AXON 2 (U~ = 100 - 240 V)</b>
Applied EU Regulations	Applied Standards
<b>Directive 2006/42/EC on machinery</b>	<b>EN ISO 12100:2010</b>
	<b>EN ISO 13857:2019</b>
	<b>EN ISO 13854:2019</b>
	<b>EN 62368-1:2014/AC:2015</b>
<b>Directive 2014/30/EU relating to electromagnetic compatibility</b>	<b>EN 55032:2015/A11:2020</b>
	<b>EN 55035:2017/A11:2020</b>
	<b>EN 61000-3-2:2014</b>
	<b>EN 61000-3-3:2013</b>
	<b>EN 61000-6-2:2005/AC:2005</b>
<b>Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment</b>	<b>EN IEC 63000:2018</b>
<b>Commission delegated directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances</b>	
Person authorised to compile the technical file	<b>Marcel Michalski</b> <b>Am Unterwege 18/20</b> <b>D-99610 Sömmerda</b>
Signed for, and on behalf of the Manufacturer	Karlsruhe, 10.11.2022  <b>Klaus Bardutzky</b> Managing Director
<b>cab Produkttechnik GmbH &amp; Co KG</b> <b>Wilhelm-Schickard-Str. 14</b> <b>D-76131 Karlsruhe</b>	



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Device	Labeling System
Typ	AXON 2 (U <sub>n</sub> = 24 - 60 V)
Applied EU Regulations	Applied Standards
Directive 2006/42/EC on machinery	EN ISO 12100:2010
	EN ISO 13857:2019
	EN ISO 13854:2019
Directive 2014/30/EU relating to electromagnetic compatibility	EN 55032:2015/A11:2020
	EN 55011:2016/A1:2017+A11:2020
	EN 61326-1:2013
	EN 61326-2-1:2013
	EN 61000-6-2:2005/AC:2005
Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000:2018
Commission delegated directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances	
Person authorised to compile the technical file	Marcel Michalski Am Unterwege 18/20 D-99610 Sömmerda
Signed for, and on behalf of the Manufacturer	Karlsruhe, 10.11.2022
cab Produkttechnik GmbH & Co KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe	 Klaus Bardutzky Managing Director


## 10.2 UKCA Declaration of Conformity



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

## UKCA 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 UKCA 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	Labeling System
Type	AXON 2 (U~ = 100 - 240 V)
Applied EU Regulations	Applied Standards
UK SI 2008 No. 1597 Machinery (Safety) Regulations 2008	BS EN ISO 12100: 2010
	BS EN ISO 13857:2019
	BS EN ISO 13854:2019
	BS EN IEC 62368-1: 2020+A11: 2020
UK SI 2016 No. 1091 - Electromagnetic Compatibility Regulations 2016	BS EN 55032: 2015+A11: 2020
	BS EN 55035: 2017+A11: 2020
	BS EN 61000-3-2: 2014
	BS EN 61000-3-3: 2013+A1: 2019
	BS EN 61000-6-2: 2019
UK SI 2012 No. 3032 - Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS2)	BS EN IEC 63000: 2018
Person authorised to compile the technical file	Marcel Michalski Am Unterwege 18/20 D-99610 Sömmerda
Signed for, and on behalf of the Manufacturer	Karlsruhe, 11.08.2022
cab Produkttechnik GmbH & Co KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe	 Klaus Bardutzky Managing Director



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

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Device	Labeling System
Type	AXON 2 (U <sub>=</sub> 24 - 60 V)
Applied EU Regulations	Applied Standards
UK SI 2008 No. 1597 Machinery (Safety) Regulations 2008	BS EN ISO 12100: 2010
	BS EN ISO 13857:2019
	BS EN ISO 13854:2019
UK SI 2016 No. 1091 - Electromagnetic Compatibility Regulations 2016	BS EN 55032: 2015+A11: 2020
	BS EN 55011:2016/A1:2017+A11:2020
	BS EN IEC 61326-1:2021
	BS EN IEC 61326-2-6:2021
	BS EN 61000-6-2: 2019
UK SI 2012 No. 3032 - Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS2)	BS EN IEC 63000: 2018
Person authorised to compile the technical file	Marcel Michalski Am Unterwege 18/20 D-99610 Sömmerda
Signed for, and on behalf of the Manufacturer	Karlsruhe, 10.11.2022
cab Produkttechnik GmbH & Co KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe	 Klaus Bardutzky Managing Director

### 10.3 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.

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