

MICRA II

Operating Manual



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1 Introduction

1.1 General Instruction

Basic information and warning references with the corresponding signal words for the danger level are as follows specified in this manual:



DANGER identifies an extraordinarily great and immediate danger which could lead to serious injury or even death.



WARNING identifies a possible danger could lead to serious bodily injury or even death if sufficient precautions are not taken.



WARNING of cutting injuries.

Pay attention that cutting injuries caused by blades, cutting devices or sharp-edged parts are avoided.



WARNING of hand injuries.

Pay attention that hand injuries caused by closing mechanical parts of a machine/equipment are avoided.



WARNING of hot surfaces.

Pay attention so as not to come into contact with hot surfaces.



CAUTION indicates a potentially dangerous situation which could lead to moderate or light bodily injury or damage to property.



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



Gives you tips on protecting the environment.



Handling instruction



Optional accessories, special fittings

Date

Information in the display

1.2 Intended Use

The label printer is a state-of-the-art device which complies with the recognized safety-related rules and regulations. Despite this, a danger to life and limb of the user or third parties could arise, and the label printer or other property could be damaged while operating the device.

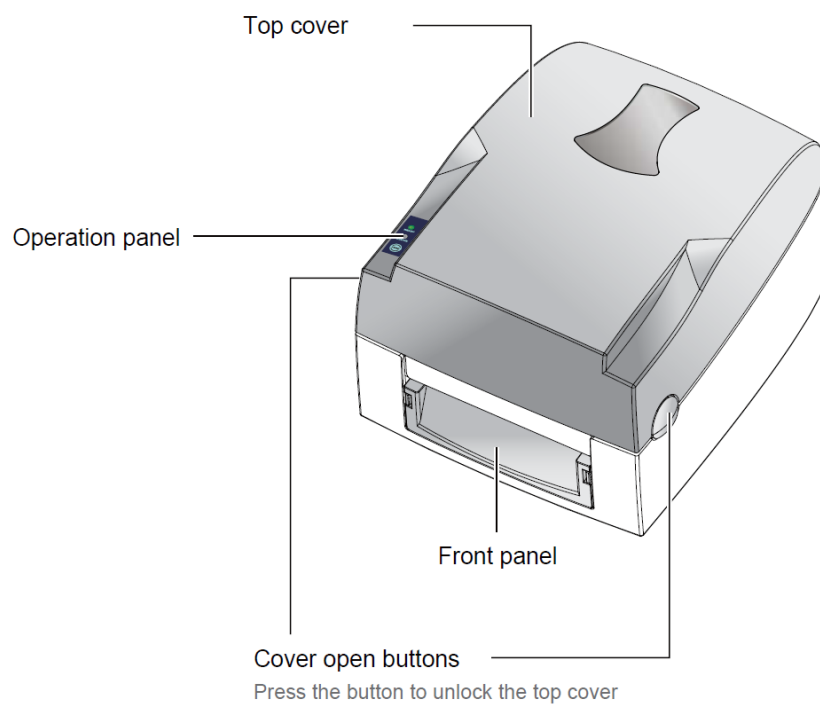
The label printer may only be used while in proper working order and for the intended purpose. Users must be safe, aware of potential dangers and must comply with the operating instructions. Faults, those which affect safety, must be remedied immediately.

The label printer is solely intended to print suitable media which have been approved by the manufacturer. Any other or additional use is not intended. The manufacturer/supplier is not liable for damage resulting from misuse. Any misuse is at your own risk.

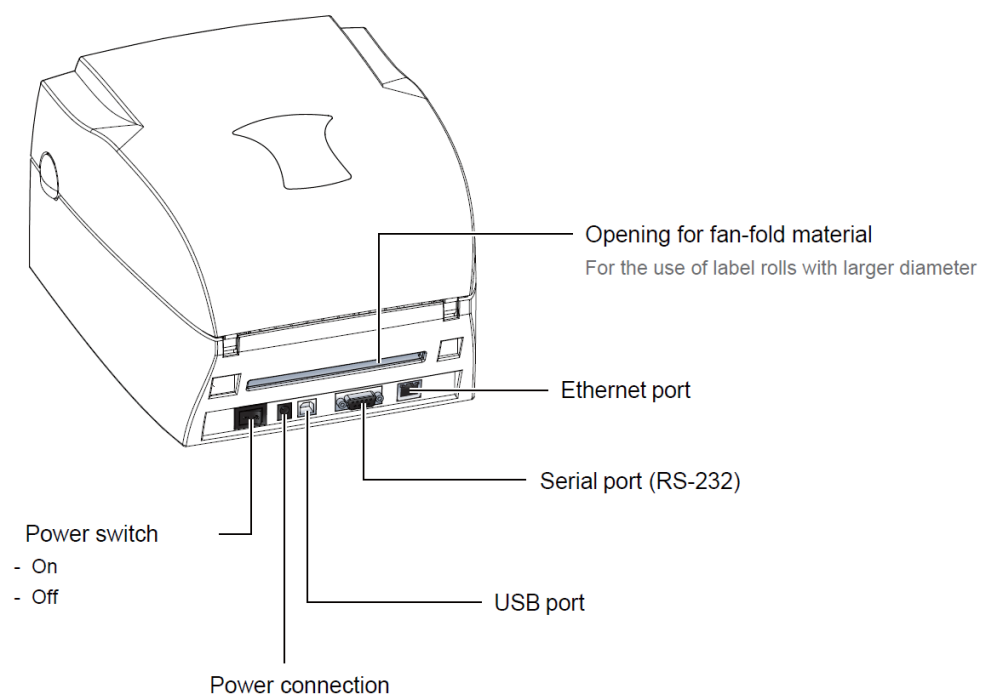
Intended use includes heeding the operating manual, including the maintenance recommendations/regulations specified by the manufacturer.

1.3 Printer Overview

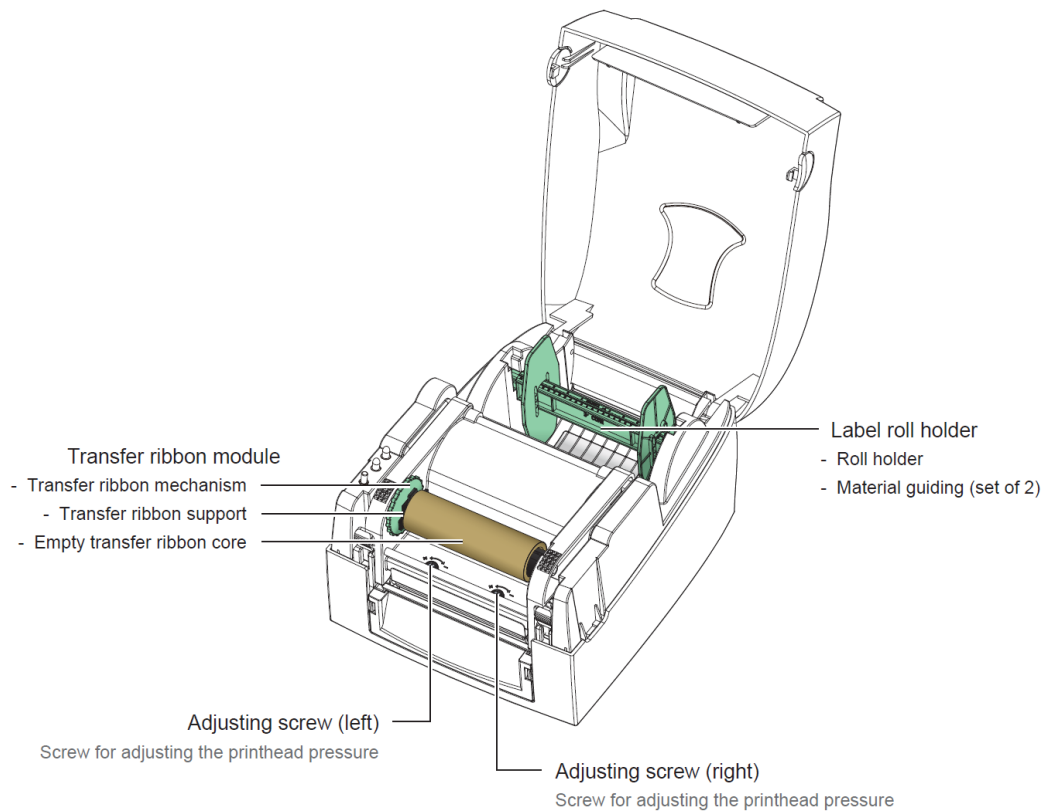
Front view



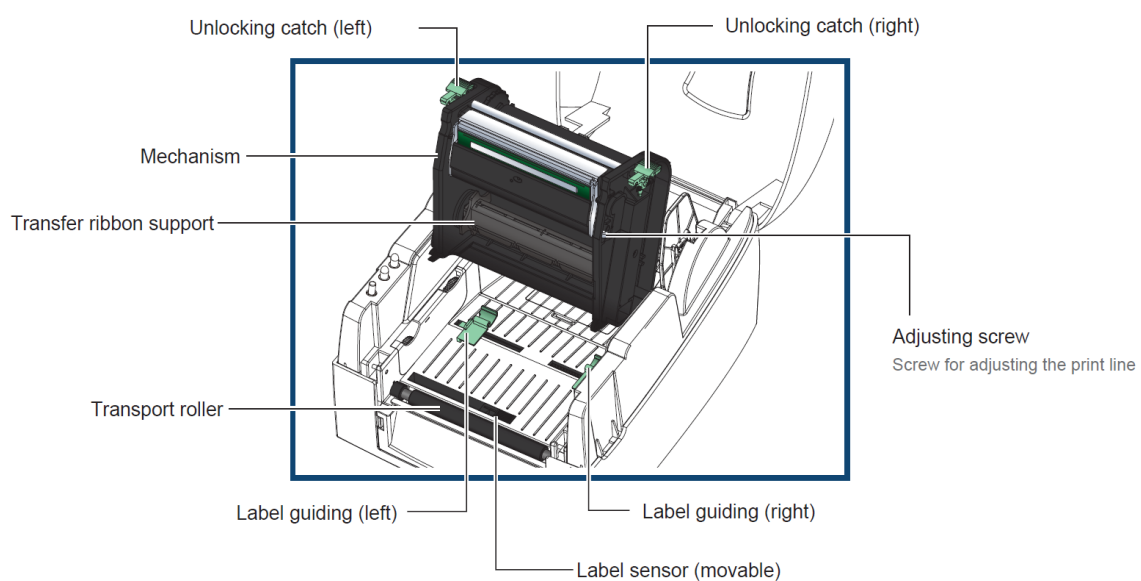
Rear view



Print assembly



Print mechanism



2 Safety Instructions

The label printer may only be used with the power supply included in the scope of delivery.

Couple the label printer to devices using extra low voltage only.

Before making or undoing connections, switch off all devices involved (computer, printer, accessories etc.).

Operate the label printer in a dry environment only and do not get it wet (sprayed water, mist etc.).

Do not operate the label printer in explosive atmosphere and not in proximity of high voltage power lines.

Maintenance and servicing work can only be carried out by trained personnel.

Danger of explosion if battery is incorrectly replaced. Replace only with the equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

Operating personnel must be trained by the operator based on the operating manual.



CAUTION!

Risk of crushing when closing the cover.

⇒ When closing the cover, only hold it from the outside and do not touch into the pivoting area of the cover.

If the label printer is operated with the cover open, ensure that clothing, hair, jewellery and similar personal items do not contact the exposed rotating parts.

The print unit and parts of it (e.g. printhead) can get hot during printing. Do not touch the printhead during operation. Cool down the print unit before changing material, removal, or adjustment.

Never use highly inflammable consumables.

Carry out only the actions described in these operating instructions. Any work beyond this may only be performed by the manufacturer or upon agreement with the manufacturer.

Unauthorized interference with electronic modules or their software can cause malfunctions.

Other unauthorized work or modifications to the print module can 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.

For safety and guarantee reasons, maintenance and repair work may only be carried out by authorized persons.

There are warning stickers on the print modules that draw your attention to dangers. Therefore, the warning stickers are not to be removed as then you and others cannot be aware of dangers and may be injured.

**DANGER!**

Danger to life and limb from power supply!

⇒ Do not open the casing.

2.1 EMV Declaration of Conformity for European Users

This device has been tested and meets the requirements of the standards:

- EN 55032:2015+A11:2020 Class A
- EN IEC 61000-3-2:2019
- EN 61000-3-3:2013+A1:2019
- EN 55035:2017+A11:2020
- IEC 61000-4-2:2008

The device also tested and passed in accordance with the European Standard EN 55032 for both Radiated and Conducted emissions limits.

**NOTICE!**

This is a machine of type A. This machine can cause interferences in residential areas; in this case it can be required from operator to accomplish appropriate measures and be responsible for it.

2.2 Operating Conditions

Before initial operation and during operation these operating conditions have to be observed to guarantee safe and interference-free service of our printers.

Therefore please carefully read these operating conditions.

Shipment and storage of our printers are **only** allowed in original packing.

Installation and initial operation of printer is only allowed if operating conditions were **fulfilled**.

Initial operation, programming, operation, cleaning and service of our printers are only recommended after careful study of our manuals.

Operation of printer is only allowed by especially trained persons.



NOTICE!

Perform trainings regularly.

Content of the training are chapter 2.2 (Operating Conditions), chapter 5 (Load Media) and chapter 9 (Maintenance and Cleaning).

These indications are also valid for someone else's equipment supplied by us.

Only use original spare and exchange parts.

Please contact the manufacturer with respect to spare/wear parts.

Conditions for installation place

The installation place of printer should be even, free of vibration and currents of air are to be avoided.

The printers have to be installed to ensure optimal operation and servicing.

Installation of power supply

The installation of the power supply to connect our printers has to be effected according to the international rules and regulations, especially the recommendations of one of the three following commissions:

- International Electronic Commission (IEC)
- European Committee for Electro technical Standardisation (CENELEC)
- Verband Deutscher Elektrotechniker (VDE)

Our printers are constructed according to VDE and have to be connected to a grounded conductor. The power supply has to be equipped with a grounded conductor to eliminate internal interfering voltage.

Technical data of power supply

Power line voltage and power line frequency: See type plate

Allowable tolerance of power line voltage:
+6 % ... -10 % of nominal value

Allowable tolerance of power line frequency:
+2 % ... -2 % of nominal value

Allowable distortion factor of power line voltage: $\leq 5\%$

Anti-Interference measures:

In case your net is infected (e.g. by using thyristor controlled machines) anti-interference measures have to be taken. You can use one of the following possibilities:

- Provide separate power supply to our printers.
- In case of problems please connect capacity-decoupled isolation transformer or similar interference suppressor in front of our printers.

**NOTICE!**

This is a machine of type A. This machine can cause interferences in residential areas; in this case it can be required from operator to accomplish appropriate measures and be responsible for it.

Connecting lines to external machines

All connecting lines have to be guided in shielded lines. Shielding has to be connected on both sides to the corner shell.

It is not allowed to guide lines parallel to power lines. If a parallel guiding cannot be avoided a distance of at least 0.5 m has to be observed.

Temperature of lines between: $-15 \dots +80\text{ }^{\circ}\text{C}$.

It is only allowed to connect devices which fulfil the request 'Safety Extra Low Voltage' (SELV). These are generally devices which are checked corresponding to EN 62368-1.

Installation of data lines

The data cables must be completely protected and provide with metal or metallised connector housings. Shielded cables and connectors are necessary, in order to avoid radiant emittance and receipt of electrical disturbances.

Allowable lines

Shielded line:

4 x 2 x 0,14 mm² (4 x 2 x AWG 26)

6 x 2 x 0,14 mm² (6 x 2 x AWG 26)

12 x 2 x 0,14 mm² (12 x 2 x AWG 26)

Sending and receiving lines have to be twisted in pairs.

Maximum line length:

with interface V 24 (RS-232C) - 3 m (with shielding)

with USB - 3 m

with Ethernet - 100 m

Air convection

To avoid inadmissible heating, free air convection has to be ensured.

Limit values

Protection according IP: 20

Ambient temperature °C (operation): Min. +5 Max. +35

Ambient temperature °C (storage): Min. -20 Max. +60

Relative air humidity % (operation): Max. 80

Relative air humidity % (storage): Max. 80

(bedewing of printers not allowed)

Guarantee

We do not take any responsibility for damage caused by:

- Ignoring our operating conditions and operating manual.
- Incorrect electric installation of environment.
- Building alterations of our printers.
- Incorrect programming and operation.
- Not performed data protection.
- Using of not original spare parts and accessories.
- Natural wear and tear.

When (re)installing or programming our printers please control the new settings by test running and test printing. Herewith you avoid faulty results, reports and evaluation.

Only specially trained staff is allowed to operate the printers.

Control the correct handling of our products and repeat training.

We do not guarantee that all features described in this manual exist in all models. Caused by our efforts to continue further development and improvement, technical data might change without notice.

By further developments or regulations of the country illustrations and examples shown in the manual can be different from the delivered model.

Please pay attention to the information about admissible print media and the notes to the printer maintenance, in order to avoid damages or premature wear.

We endeavoured to write this manual in an understandable form to give you as much information as possible. If you have any queries or if you discover errors, please inform us to give us the possibility to correct and improve our manual.

3 Technical Data

	Micra II 104/8	Micra II 106/12
Print resolution	203 dpi	300 dpi
Max. print speed	130 mm/s	100 mm/s
Print width	104 mm	105.7 mm
Passage width	118 mm	118 mm
Printhead	Flat Type	Flat Type
Label		
Material thickness	min. 0.06 mm max. 0.25 mm	
Min. label width	25 mm	
Min. label height		
Standard	12 mm	
Cutter/Dispenser	25 mm	
Max. label height	1727 mm	762 mm
Max. roll diameter	127 mm	
Core diameter	Ø 25.4 mm / Ø 38.1 mm / Ø 76.2 mm	
Winding	outside or inside	
Label sensor	transmission and reflexion from bottom	
Transfer Ribbon		
Ink	outside	
Max. roll diameter	Ø 68 mm	
Core diameter	25.4 mm / 1"	
Max. length	300 m	
Max. width	110 mm	
Dimensions (mm)		
Width x height x depth	285 x 171 x 226	
Weight	2.72 kg	
Electronics		
SDRAM	16 MB	
Warning signal	Acoustic signal when error	
Interfaces		
Serial	RS-232 (up to 115200 Baud)	
USB	2.0 High Speed Slave	
Ethernet	10/100 Base T, LPD, RawIP-Printing, DHCP	

Operation Data	
Power supply	portable power supply: 100 ... 240 V AC / 50-60 Hz label printer: 24 V DC
Max. power consumption	60 VA
Nominal current	2,5 A
Operating temperature	5 ... 40 °C
Humidity	max. 85 % (non condensing)
Operation Panel	
LED	two-color status LED: Ready and Status
Key	Function key: Feed
Fonts	
Bitmap fonts	6
Proportional fonts	6
Bar Codes	
1D bar codes	2/5 Industrial, Codabar, Code 128, Code 128A, Code 128B, Code 2/5 interleaved, Code 39, Code 39 extended, Code 93, EAN 13, EAN 8, EAN Add-on, GS1-128, Identcode, ITF 14, Leitcode, Pharmacode, PLANET (Postal Alpha Numeric Encoding Technique), PostNet, PZN 7, PZN 8, UPC-A, UPC-E, USPS Intelligent Mail
2D bar codes	Aztec-Code, CODABLOCK F, DataMatrix, GS1 DataMatrix, MAXICODE, PDF 417, QR Code
Composite bar codes	GS1 DataBar Expanded, GS1 DataBar Limited, GS1 DataBar Omnidirectional, GS1 DataBar Stacked, GS1 DataBar Truncated
	all bar codes are variable in height, module width and ratio. orientation 0°, 90°, 180°, 270°. Optionally with check digit and human readable line.
Software	
Configuration	ConfigTool
Process control	Loftware
Label software	Labelstar Office Lite; Labelstar Office
Windows driver	Windows 8.1® - Windows 10® 32/64 Bit, Windows 11® Windows Server 2016® - Windows Server 2022®

Subject to technical modifications and error.

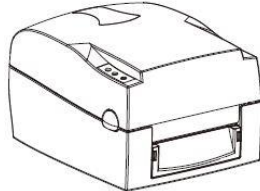
4 Installation

Unpack the label printer

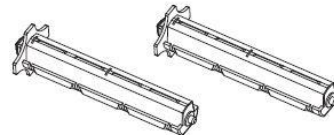
- ⇒ Lift the label printer on the bottom and remove the printer from the carton.
- ⇒ Check the label printer for transport damages.
- ⇒ Check delivery for completeness.

Scope of delivery

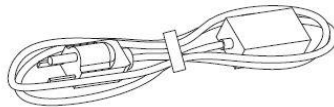
Label printer



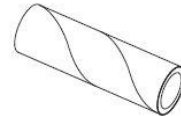
Transfer ribbon hubs (set of 2)



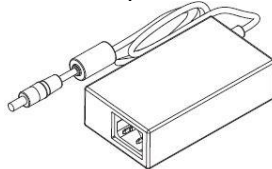
Power cable



Transfer ribbon core (empty)



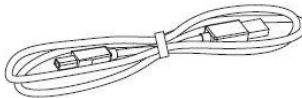
Mains adapter



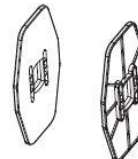
Label roll holder



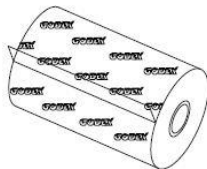
USB cable



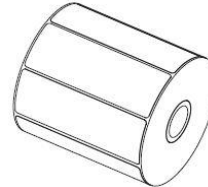
Label mounting plate



Transfer ribbon



Label roll



NOTICE!

Retain the original packaging for subsequent transport.

4.1 Set up the label printer



CAUTION!

The label printer and the print media can be damaged by moisture and water.

- ⇒ Set up the label printer only in a dry place protected from sprayed water.
- ⇒ Set up the label printer on a level, vibration-free and air draught-free surface.
- ⇒ Open the cover of label printer.
- ⇒ Remove the foam transportation safeguards near the printhead.

4.2 Connect the Label Printer

Connect to power supply

Make sure that the printer is switched off.

Before connecting the label printer make sure that the voltage of the printer corresponds to the mains voltage.



WARNING!

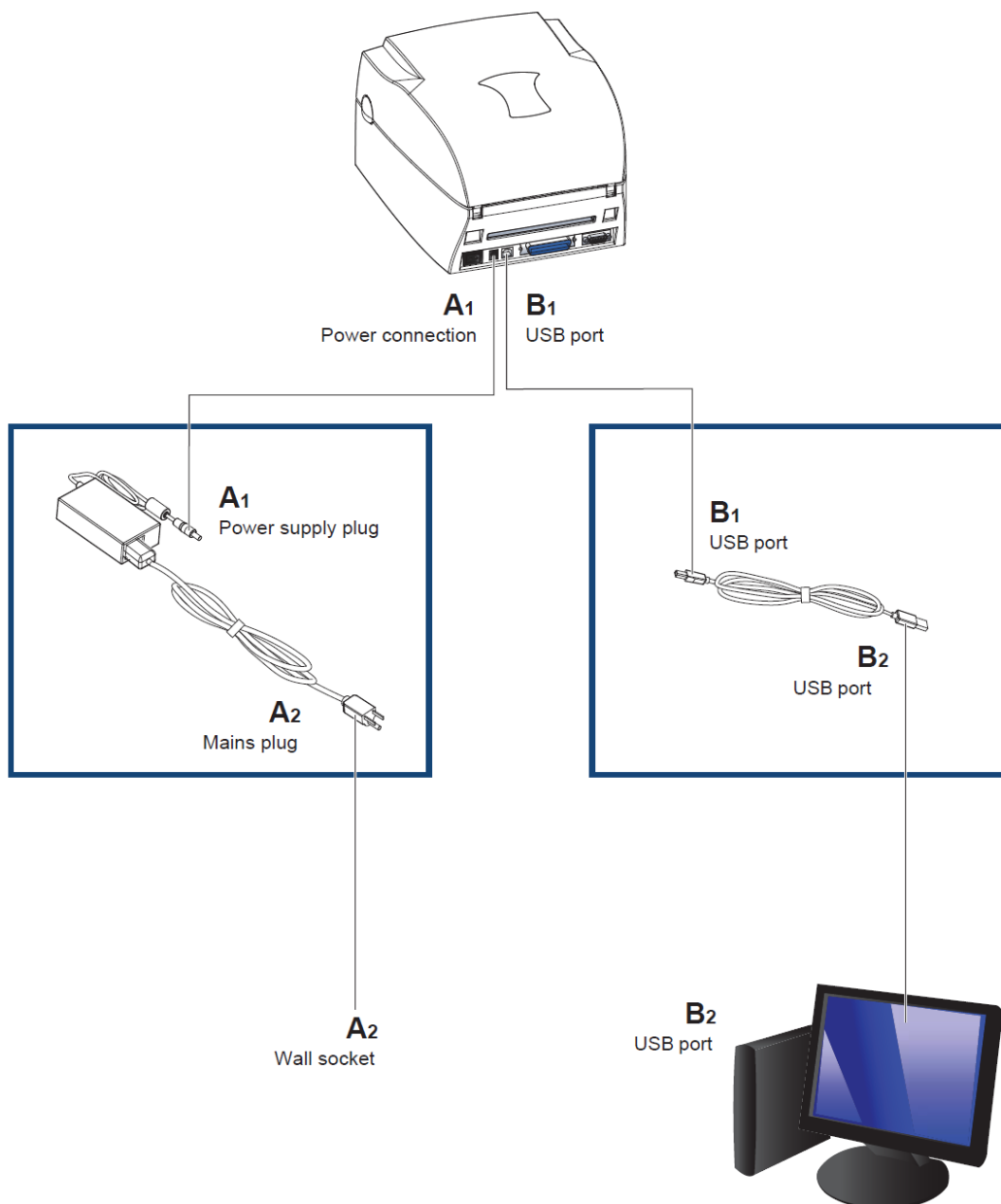
Danger of a life-threatening electrical shock.

- ⇒ If liquid accidentally gets into the printer, pull the mains plug immediately.
- ⇒ Connect the DC connecting line of the desktop power supply to the printer.
- ⇒ Connect the cold device plug of the power cable to the desktop power supply.
- ⇒ Insert the plug of the power cable into a grounded socket.

**Connect to a computer
or to a computer
network****NOTICE!**

Insufficient or missing grounding can cause faults during operation.
Ensure that all computers and connection cables connected to the label printer are grounded.

- ⇒ Connect the power cable to the adapter and connect the adapter to the printer.
- ⇒ Connect the USB cable to the printer and to the computer.
- ⇒ Switch on the printer. The LED indicator should now light up.



4.3 Change Port Settings

Default connection settings

Serial port:	Baud rate:	9600
	Parity:	no
	Data bits:	8
	Stop bits:	1
Ethernet	DHCP:	On
	Port:	9100
USB:		-

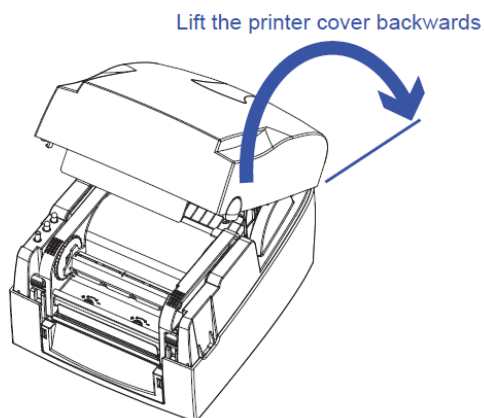
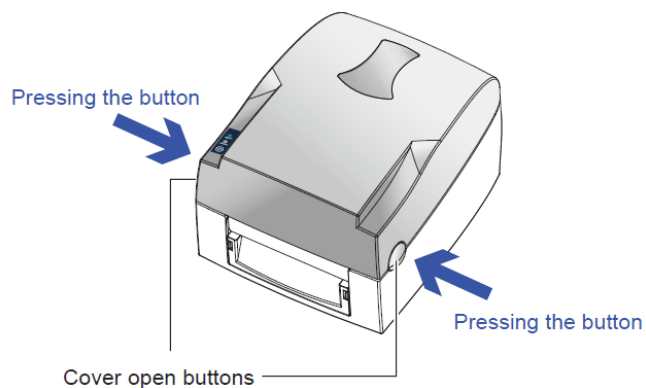
The connection settings can be changed with ConfigTool (from version 8.30). The current version can be downloaded from our website (www.carl-valentin.de/downloads/software).

Select the *Connection Settings* menu item to change the settings for the interface used (COM1, USB, Ethernet).

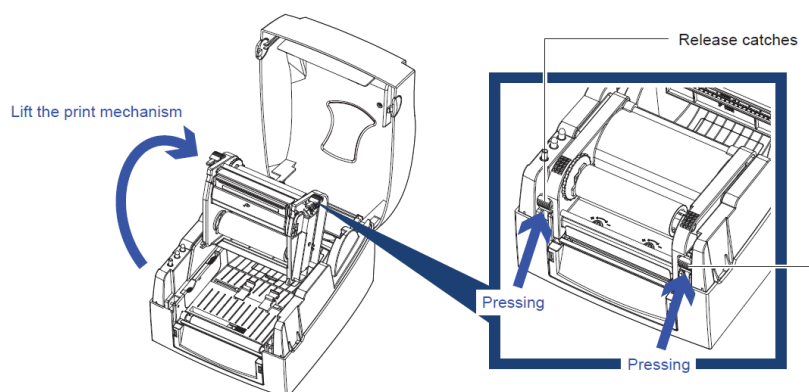
5 Load Media

5.1 Open the Printer Cover and the Print Mechanism

1. Place the printer on a flat surface.
2. Press both buttons on the side and open the printer cover.



3. Unlock the print mechanism and lift it up.



5.2 Load Label Roll

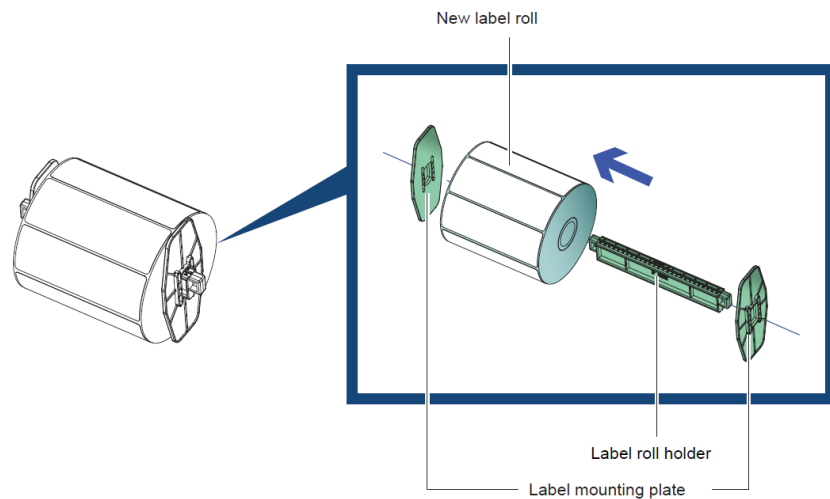


NOTICE!

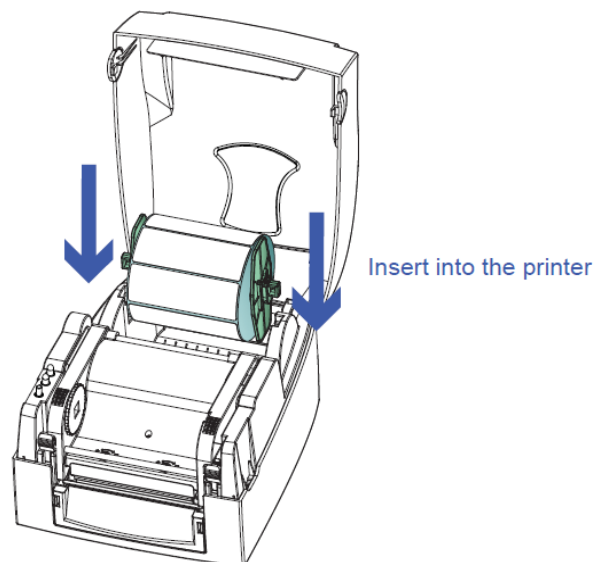
As for the electrostatic unloading the thin coating of the thermal printhead or other electronic parts can be damaged, the label material should be antistatic.

The use of wrong materials can lead to printer malfunctions and the guarantee can expire.

1. Put the label roll on the label roll holder.
2. Attach the label mounting plates at both sides.

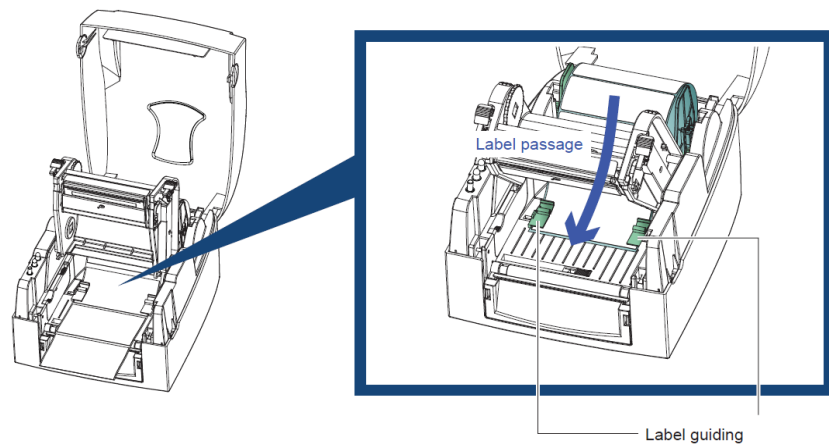


3. Insert the label roll into the printer (see figure).

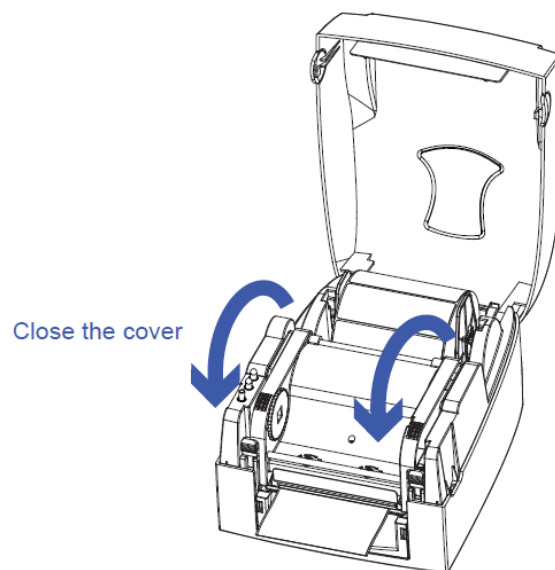


4. Unlock and open the printing mechanism (see chapter 5.1, page 21).
5. Pull the label material up to the tear-off edge.

6. Adjust the label guiding left and right.

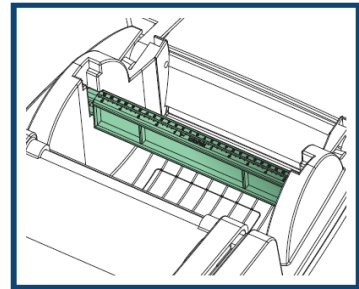
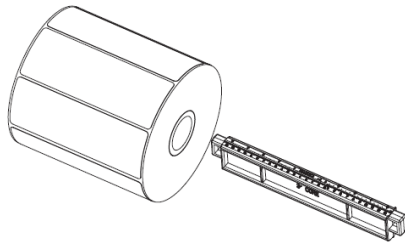


7. Close the print mechanism.

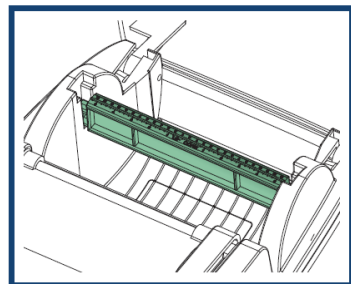
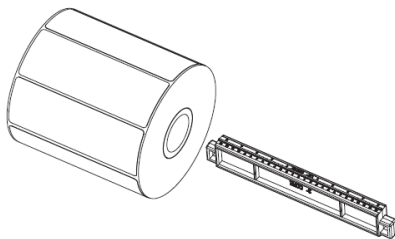


5.3 Insert Label Roll (Various Core Diameters)

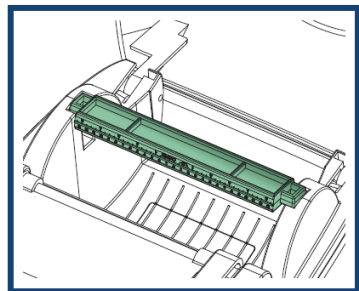
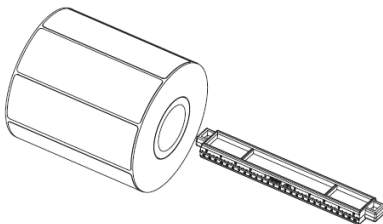
1" core diameter



1,5" core diameter



3" core diameter



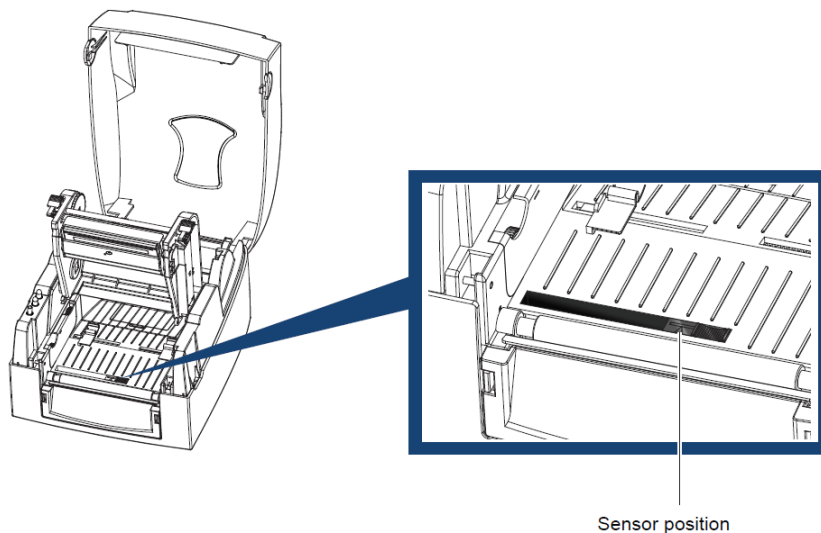
5.4 Label Printing with Perforated Holes



NOTICE!

In mode label printing with perforated holes (tag printing) the sensor detects the label height.

The sensor must be positioned directly below the tag hole.



NOTICE!

The tag hole must be at least 3 mm in diameter to ensure correct functioning.

5.5 Load Transfer Ribbon



NOTICE!

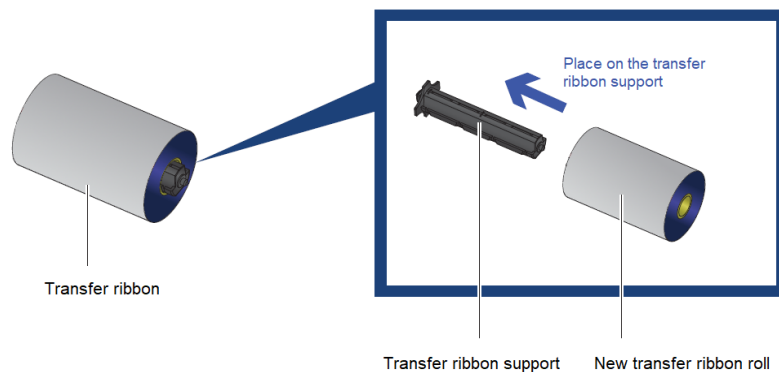
For the thermal transfer printing method it is necessary to load a transfer ribbon roll, otherwise when using the printer in direct thermal print it is not necessary to load a transfer ribbon. The transfer ribbons used in the printer have to be at least the same width as the print media. In case the transfer ribbon is narrower than the print media, the printhead is partly unprotected and this could lead to early wear and tear.



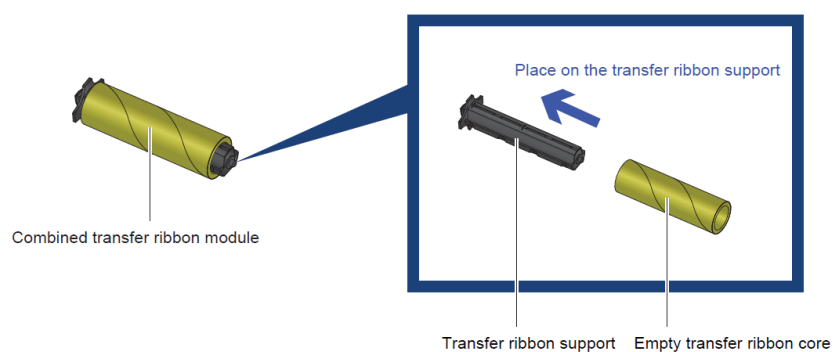
NOTICE!

Before a new transfer ribbon roll is loaded, the printhead must be cleaned using printhead and roller cleaner (97.20.002). The handling instructions for the use of Isopropanol (IPA) must be observed. In the case of skin or eye contact, immediately wash off the fluid thoroughly with running water. If the irritation persists, consult a doctor. Ensure good ventilation.

1. Place a new transfer ribbon roll on one of the both transfer ribbon supports.



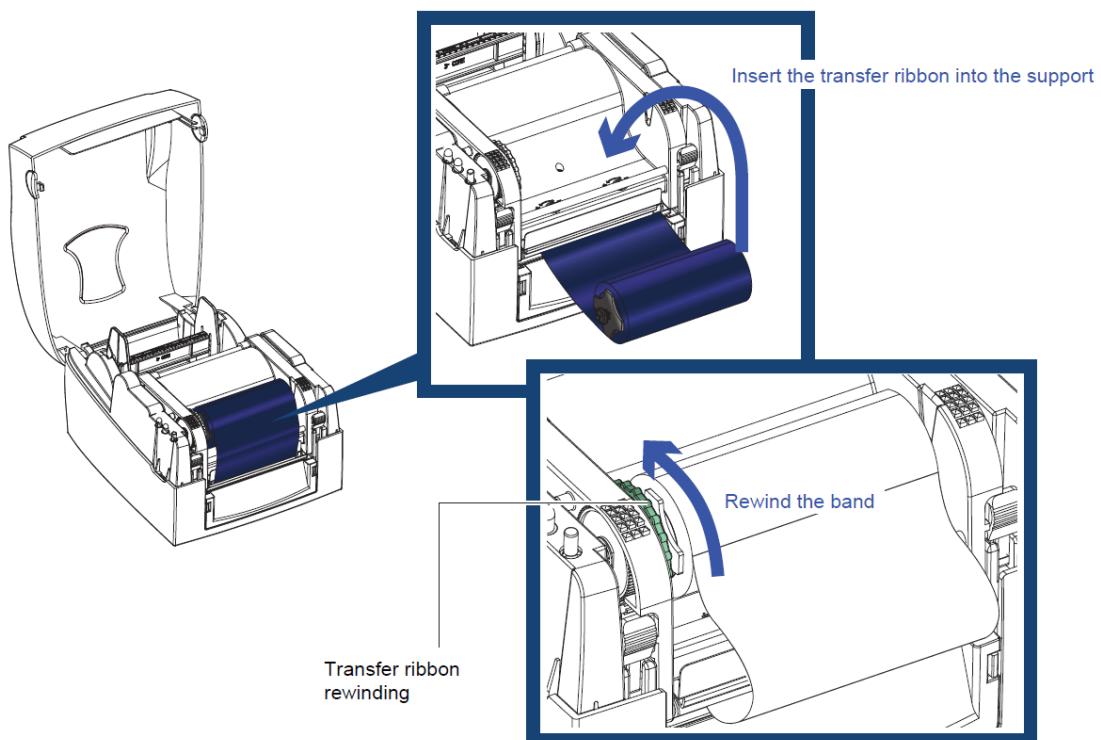
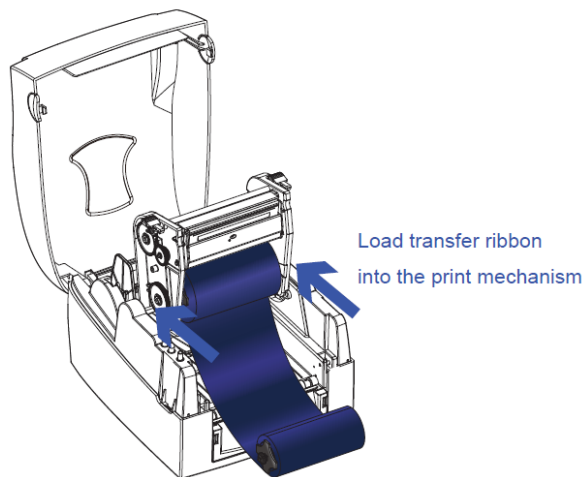
2. Place the empty transfer ribbon core onto the other transfer ribbon support.



3. Fix the beginning of the transfer ribbon to the empty, attached transfer ribbon core and rewind the transfer ribbon core 2-3 circles.



4. Load the transfer ribbon into the lower transfer ribbon support.
5. Insert the transfer ribbon roll and place it on the print mechanism.



**NOTICE!**

As for the electrostatic unloading the thin coating of the thermal printhead or other electronic parts can be damaged, the transfer ribbon should be antistatic.

The use of wrong materials can lead to printer malfunctions and the guarantee can expire.

**CAUTION!**

Impact of electrostatic material on people!

⇒ Use antistatic transfer ribbon because electrostatic discharge can occur when removing.

6 Operation Panel

6.1 LED Operation Panel

Feed button

Press the Feed key and the printer moves the label to the defined stop position.

If continuous labels are used, pressing the Feed button will continue transport until the Feed button is released. If individual labels are used, pressing the Feed button will move only one label.

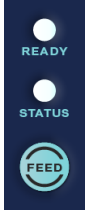
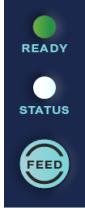
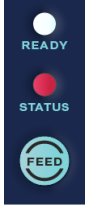
If the label does not stop at the correct position, please run the auto calibration (see chapter 6.2, page 30).

LED indicators



LED indicator		Beeps	Status	Description
Ready	Green	X	Standby modus	Printer is ready for operation
Status	X			
Ready	X	2x2 beeps	Error message	Printer has detected an error (see chapter 6.4, page 34)
Status	Red	2x3 beeps 2x4 beeps		

6.2 Functions and Settings

Control Panel	Status	Key Assignment
	Both LED lights show no light, i.e. the printer is switched off or has no power supply.	press short: no function press long: no function
	Normal status Printer is ready for operation.	press short: label feed press long: is a print order active, the print is stopped.
	Error status If status LED is red, printer indicates an error.	press short: change to <i>print stopped</i> mode. press long: printing the error code.



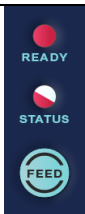
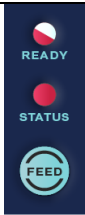
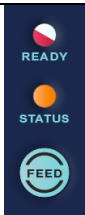
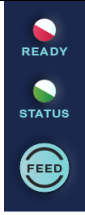
NOTICE!

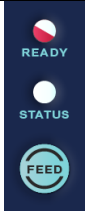
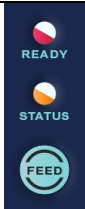
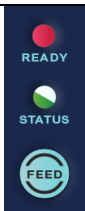
To start a status print, press the Feed key at switched off printer and only after pressing key, switch printer on.

Wait to three sequential audio printer signals and then release the Feed key.

In normal status of the printer, settings can be made, or functions can be released.

If you press and at the same time hold the Feed key, then the status LED changes its colour every two seconds (selection of function).

Control Panel	Procedure	Function
	Press and hold the Feed key as long as the Ready LED is red, and the Status LED flashes red. Release the Feed key.	Test print Three successive beeps
	Press and hold the Feed key as long as the Ready LED flashed red and the Status LED is red. Release the Feed key.	Status print One beep By means of this function, a status print is released. This print contains existing print parameter e.g., print speed.
	Press and hold the Feed key as long as the Ready LED flashes red and the Status LED is yellow. Release the Feed key.	Measure label Two beeps By means of this function the measuring procedure is started and approx. three labels are fed forward. It is recommended to start the measuring procedure after each change of label roll.
	Press and hold the Feed key as long as the Ready LED flashes red and the Status LED flashes green. Release the Feed key.	Transfer ribbon control Three beeps By means of this function the transfer ribbon control can be activated or not: It is checked if the ribbon roll is to end or if the ribbon was torn at the unwinding roll. Off: The ribbon control is deselected, i.e., the printer continues without an error message. On: The ribbon control is selected, i.e., the current print order is interrupted, and an error message appears at the printer display.

Control Panel	Procedure	Function
	Press and hold the Feed key as long as the Ready LED flashed red. Release the Feed key.	Reset to default Four beeps By means of this function the printer can be reset to the default settings (see page 20).
	Press and hold the Feed key as long as the Ready LED and the Status LED flash red. Release the Feed key.	Port test Five beeps This function permits the verification of all available interfaces. Afterwards a print with the corresponding data is effected.
	Press and hold the Feed key as long as the Ready LED is red, and the Status LED flashes green. Release the Feed key.	Single cut Six beeps This function provides the possibility to release a single print.

6.3 Label Size Calibration and Self-Test Page



NOTICE!

The printer can automatically detect and store label height. I.e., the host computer does not need to transmit the label height to the printer. The *Self-Test* function detects whether the printer is working within the normal range.

Steps for auto calibration and self-test

1. Check if the labels are loaded correctly.
2. Switch off the printer.
3. Switch the printer again On while pressing the Feed button. When the Ready LED starts flashing red and the Status LED lights up orange, release the Feed button.
4. After successful auto calibration, a self-test is printed.

Contents of a self-test printout

Modell & FW version	Micra II
USB ID setting	USB S/N: XXXXXXXX
Serial port setting	Serial port : 96,N,8,1
MAC address of Ethernet port	MAC Addr: xx-xx-xx-xx-xx-xx
IP protocol setting	DHCP Enable
IP address of Ethernet port	IP xxx.xxx.xxx.xxx
Gateway setting	Gateway xxx.xxx.xxx.xxx
Netmask setting	Sub-Mask xxx.xxx.xxx.xxx
	#####
Number of DRAM installed	1 DRAM installed
Image buffer size	Image buffer size : 1500 KB
Number of forms	000 FORM(S) IN MEMORY
Number of graphics	000 GRAPHIC(S) IN MEMORY
Number of fonts	000 FONT(S) IN MEMORY
Number of Asian fonts	000 ASIAN FONT(S) IN MEMORY
Number of databases	000 DATABASE(S) IN MEMORY
Number of scalable fonts	000 TTF(S) IN MEMORY
Free memory size	2048 KB FREE MEMORY
Speed, Density, Ref. Point, Print direction	^S4 ^H10 ^R000 ~R200
Label width, Form length, Stop position	^W108 ^Q100,0,0 ^E12
Cutter, Label dispenser, Mode	Option : ^D0 ^O0 ^AD
Sensor setting	Reflective AD : 1.80 2.01 1.89 [0.21_0]
Codepage	Code Page : 850
Printer is on factory default	Default state= No

6.4 Error Messages







In the event of a problem that prevents normal functioning of the printer, you will see an error message on LED indicators and hear some beep signals. Please refer to below table for the error alerts.

Steady light



Flashing



Ready	Status	Error	Beeps	Description	Solution
		Printhead	2 x 4 beeps	The print mechanism is not correctly closed.	Open the print mechanism and close it again.
		Printhead	None	High temperature at the printhead.	Once the printhead has cooled down, the printer switches to standby mode.
		Material	2 x 3 beeps	No transfer ribbon.	Make sure that the printer is set to direct thermal printing mode.
				The transfer ribbon is finished, or the label support is not moving.	Insert a new transfer ribbon roll or ensure that the transport of the transfer ribbon is not obstructed.
		Material	2 x 2 beeps	No label is detected	Make sure that the label sensor is positioned correctly. If the sensor still does not detect the paper run the auto-detection function again.
				No label.	Replace the label roll.
		Material	2 x 2 beeps	Label feed problem.	<p>Possible reasons:</p> <p>The print medium has become trapped around the rubber roll.</p> <p>The sensor cannot detect a gap or black mark between the labels.</p> <p>No label present.</p> <p>Please reset the sensor and ensure that the transport of the labels is not obstructed.</p>

7 Configuration via Printer Server

If the printer is controlled via an Ethernet interface, the printer can be configured on the PC.

Obtain and use the IP address

To start a status print, hold down the Feed button until the Ready LED flashes red and the Status LED lights up red, then release the Feed button.

The status printout contains the IP address that must be entered into the command line of the Internet browser.

Login details

For security reasons, the printer configuration is password protected.

User: admin

Default password: 1111

The password can be changed under *Configuration/TCP/IP*.

Configuration

In this menu, e.g. password, printer name and TCP/IP port can be changed.

Maintenance

The firmware can be updated, and the Ethernet port restarted.



NOTICE!

Before the firmware file can be installed on the printer, the file contents must be unpacked.

Diagnosis

It is possible to select which test the printer should carry out. The following tests are currently available: *printhead resistance*, *auto-sensing*, *printer configuration*.

Alert message

Press the *Dump* button to display the status of the printer.

Status

Printer information, server information and TCP/IP status are displayed.

8 Options

8.1 Cutter

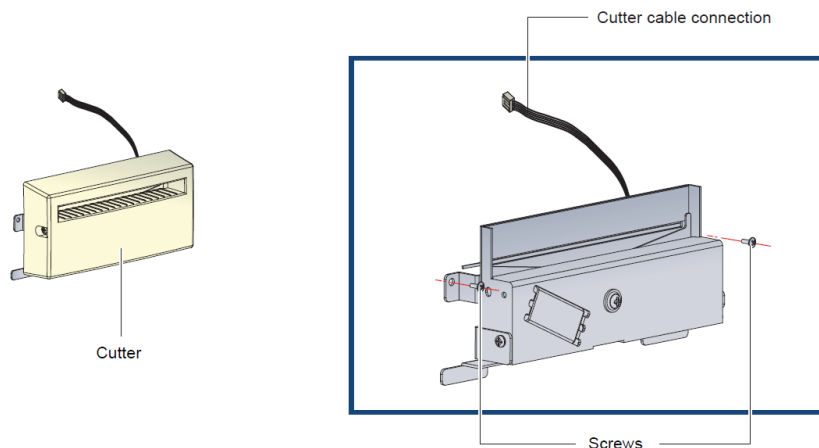
**NOTICE!**

Two different cutters can be used for this cutter option. The following description refers to the 'Guillotine Cutter'. The 'Rotary Cutter' is connected in the same way.

**CAUTION!**

Risk of injury, particularly during maintenance, the cutter blades are sharp!

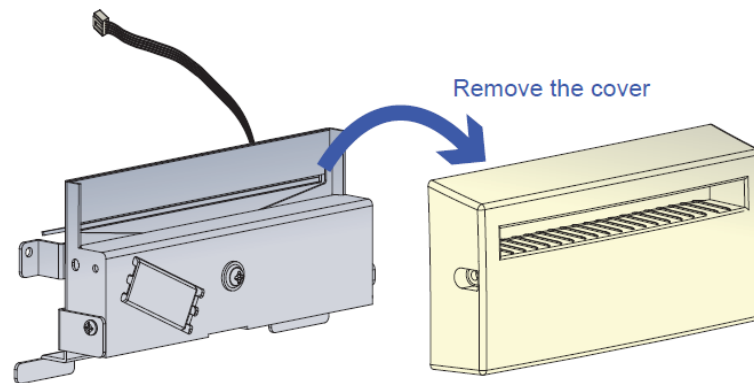
- ⇒ Switch off the printer before attaching/disassembling the cutter!
- ⇒ The cutter may only be used when it is mounted on the printer!
- ⇒ Do not try to cut any materials which exceed the maximum width (116 mm) or thickness specifications.
- ⇒ Danger from moving parts.
Keep fingers and other body parts away.

**NOTICE!**

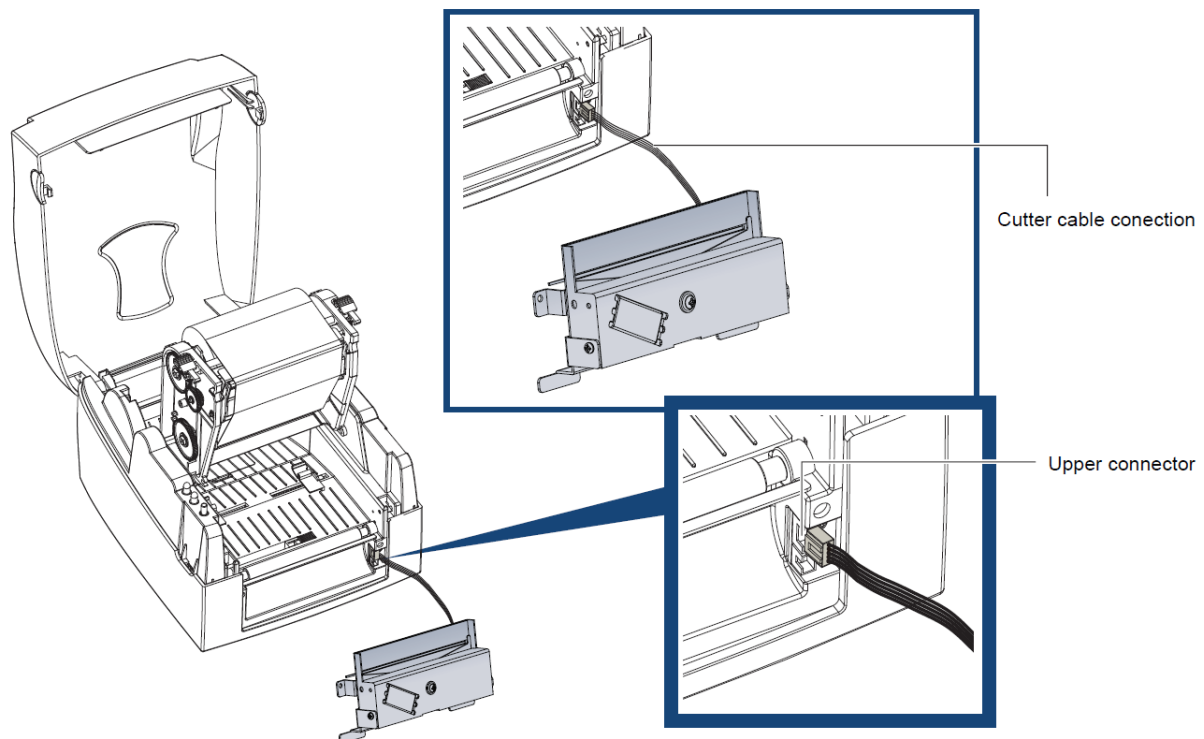
Do not cut adhesive labels. The adhesive soils the cutter and thus impairs its function.

The cutter can make 400.000 cuts if the thickness does not exceed 250 µm and 76.2 mm.

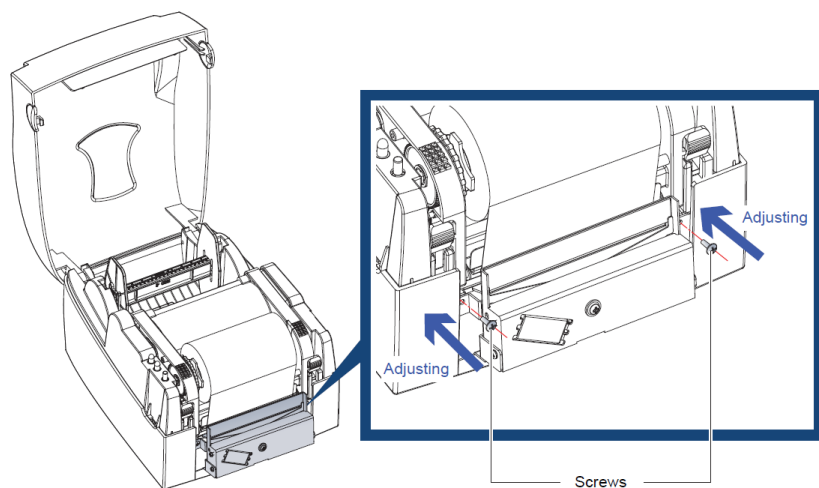
1. Before installing the cutter, remove the cutter as shown in the illustration.

**NOTICE!**

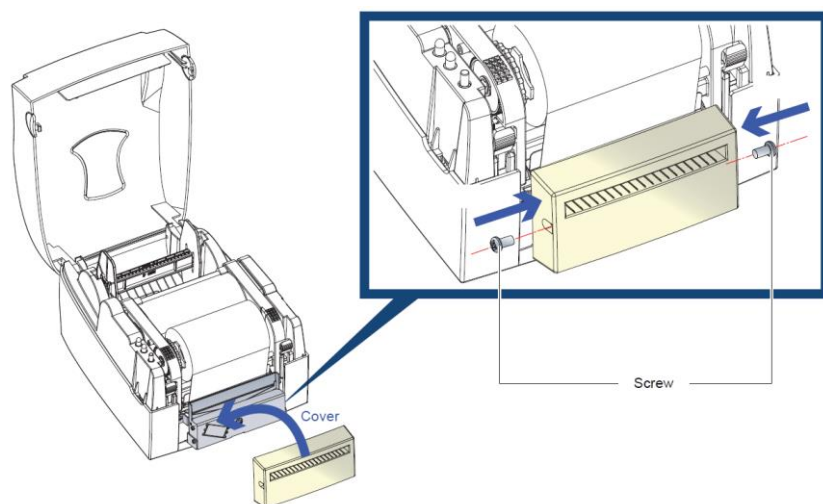
There are two connections. The bottom connection is for the dispenser the top connector is for the cutter.



2. Secure the cutter with the supplied screws.



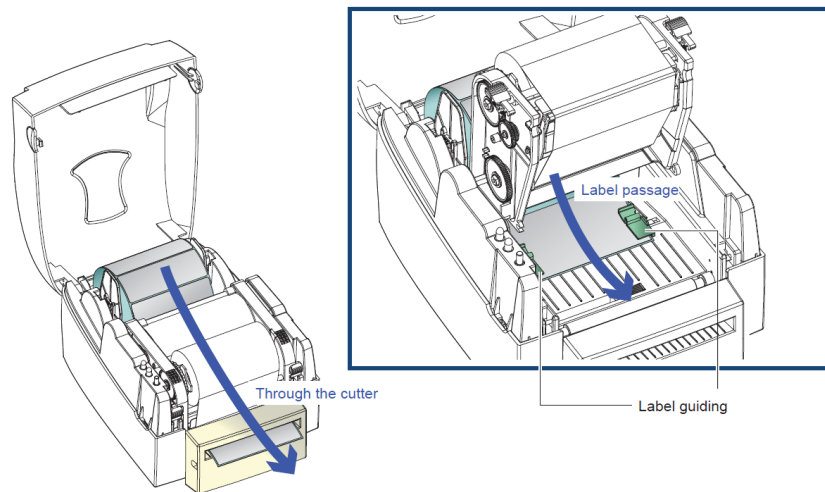
3. Secure the cutter cover with the supplied screws.



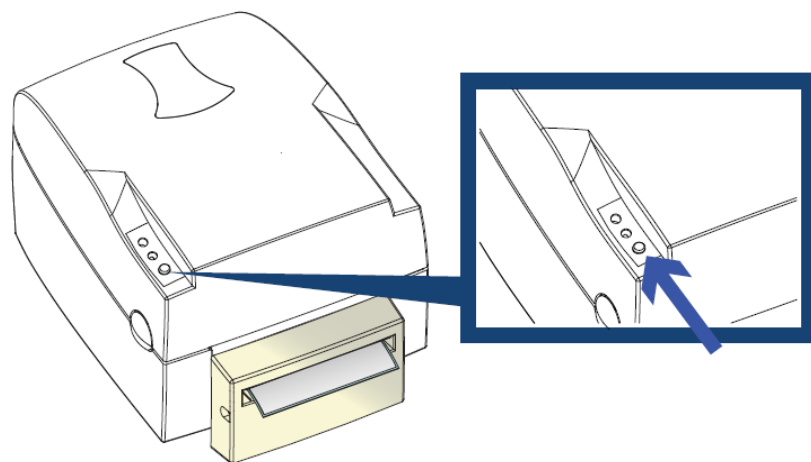
4. Guide the labels through the label guiding and close the print mechanism.

**NOTICE!**

It is recommended to use label material with outside winding.



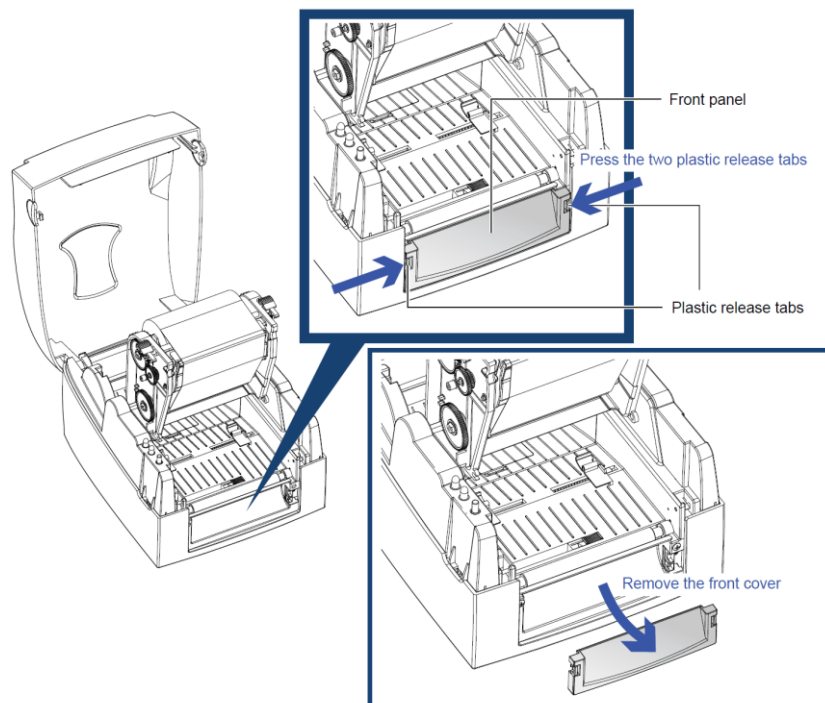
5. Press the Feed key to set the position of the label.



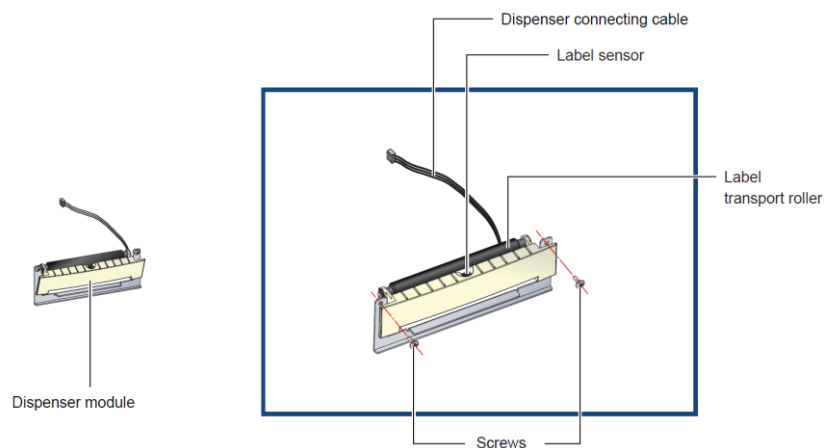
8.2 Dispenser

Preparation steps

1. Switch off the label printer.
2. Open the cover and print mechanism (see chapter 5.1, page 21).
3. Press in the two plastic release tabs to remove the front cover as shown in the illustration.



Install the dispenser



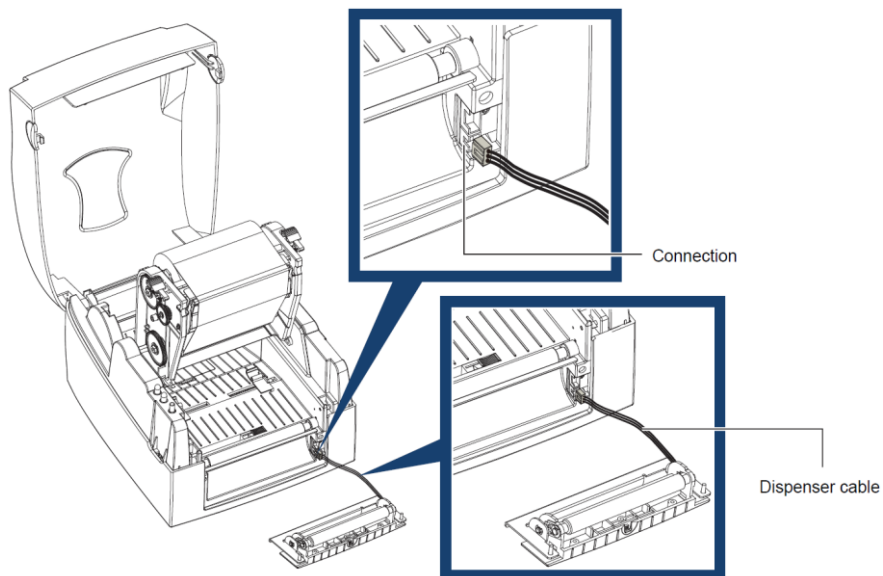
NOTICE!

A label liner thickness of $0.006 \text{ mm} \pm 10\%$ and a weight of $65 \text{ g/m}^2 \pm 6\%$ are recommended.

**NOTICE!**

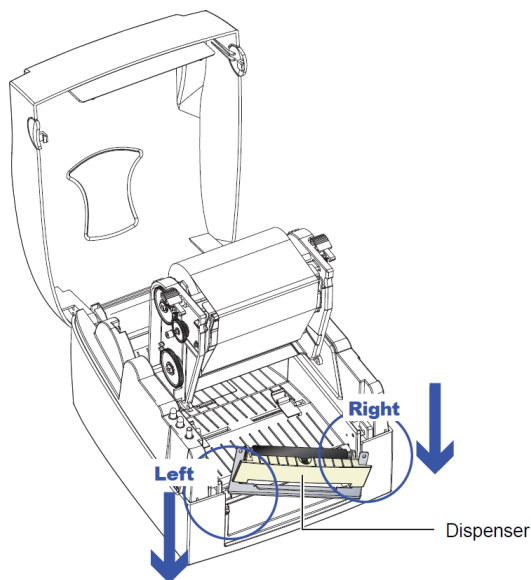
The dispenser will take labels up to a max. width of 110 mm.
When using the dispenser option, set the offset value to 9 mm.

4. Connect the dispenser cable to the lower connection as shown in the illustration on the right.

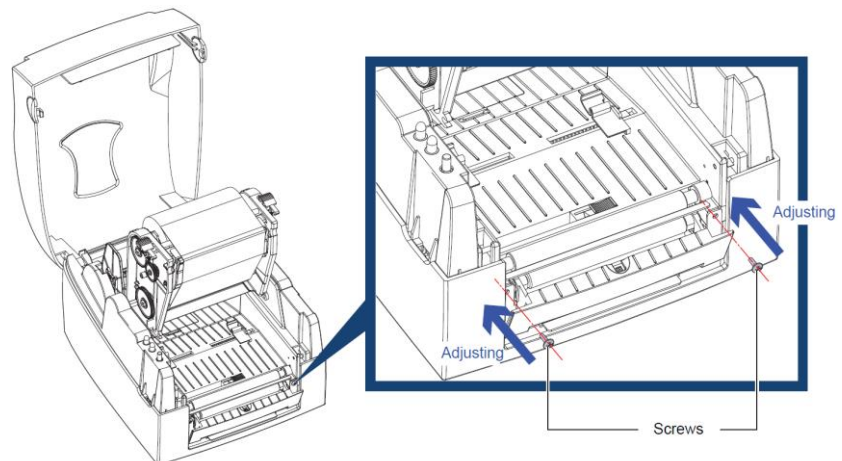
**NOTICE!**

There are two connections. The lower connection is for the dispenser, the upper connection for the cutter.

5. Install the dispenser by pressing down first its right-hand side and then its left-hand side.

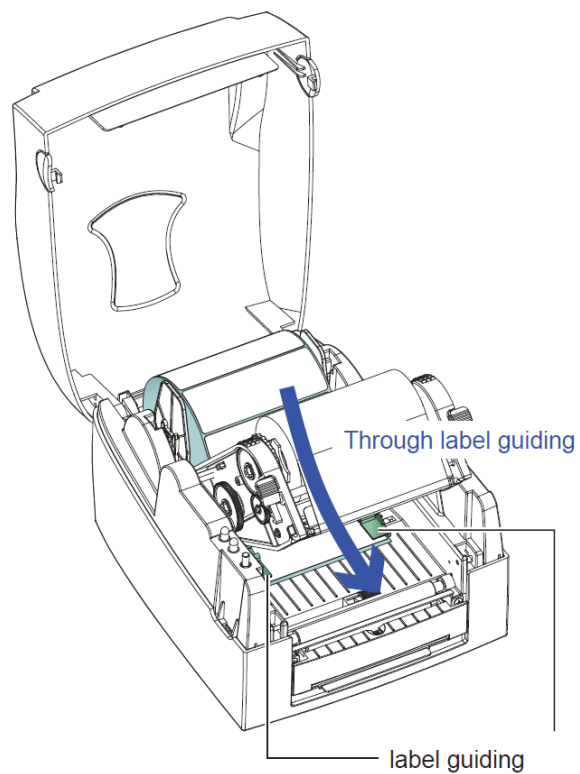


6. Secure the dispenser using the supplied screws.



Insert the label roll

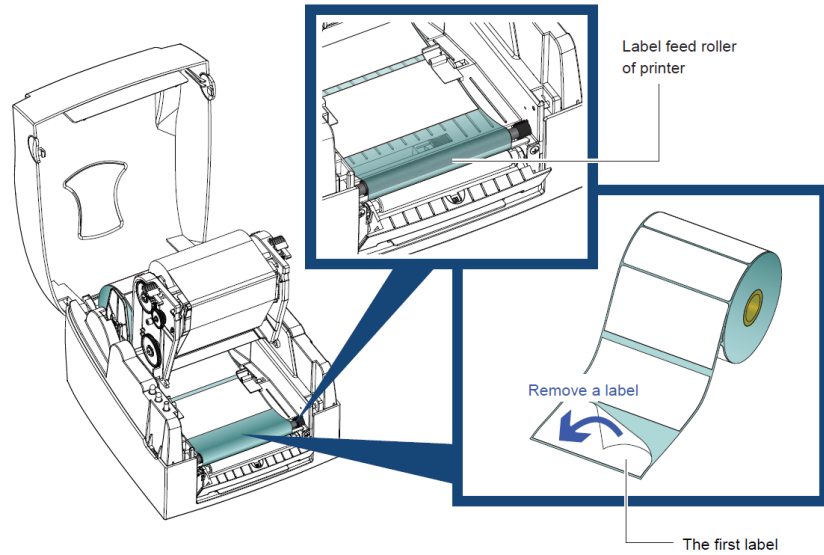
7. Guide the label material through the label guiding.



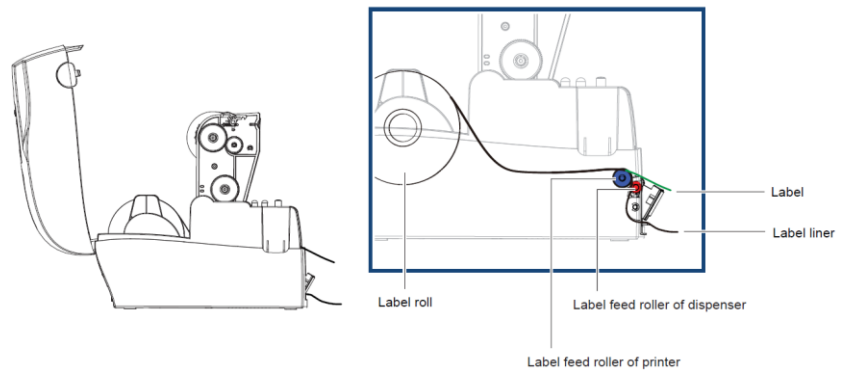
NOTICE!

The labels must be at least 25 mm high.

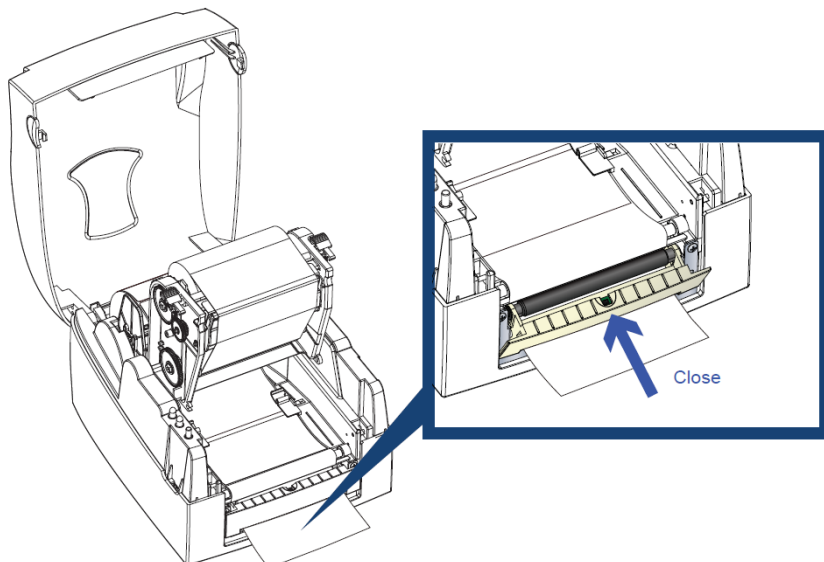
8. Remove the first labels from the liner. Then guide the liner through the guiding.



9. Guide the label material through the printer.



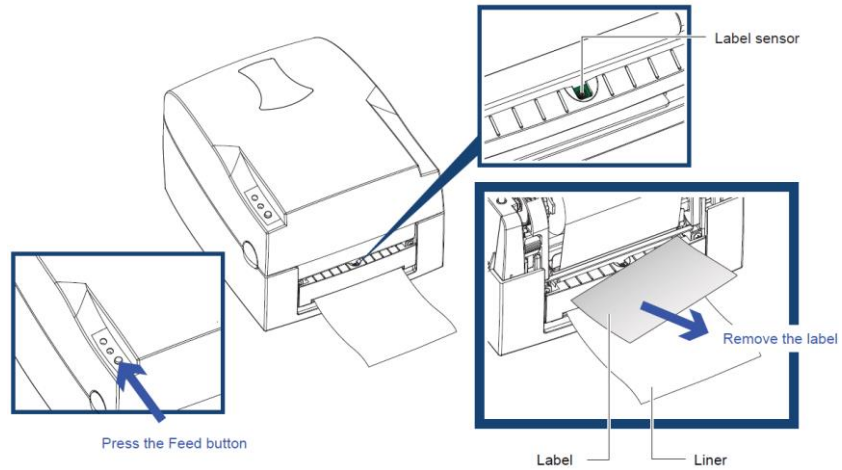
10. Close the dispenser and the print mechanism.



11. Press the Feed button to adjust the label position.

**NOTICE!**

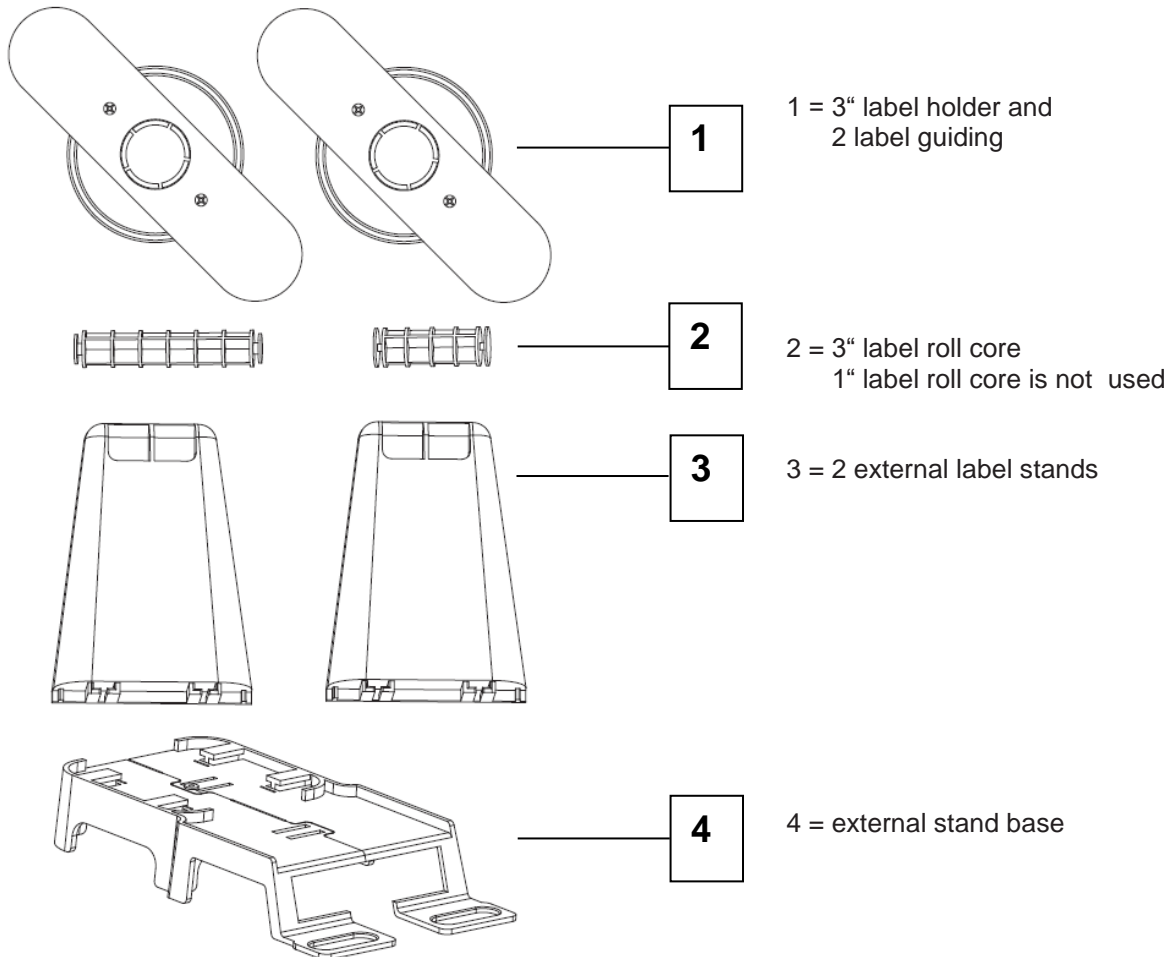
There is a sensor on the dispenser. If a label covers the sensor, the printing will be stopped. Remove the last printed label and the printer will continue printing.

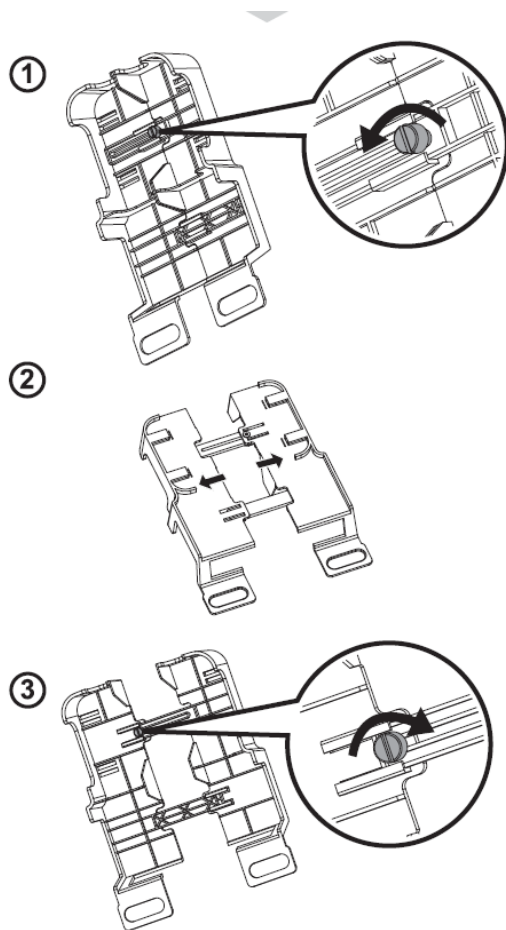


8.3 External Unwinder

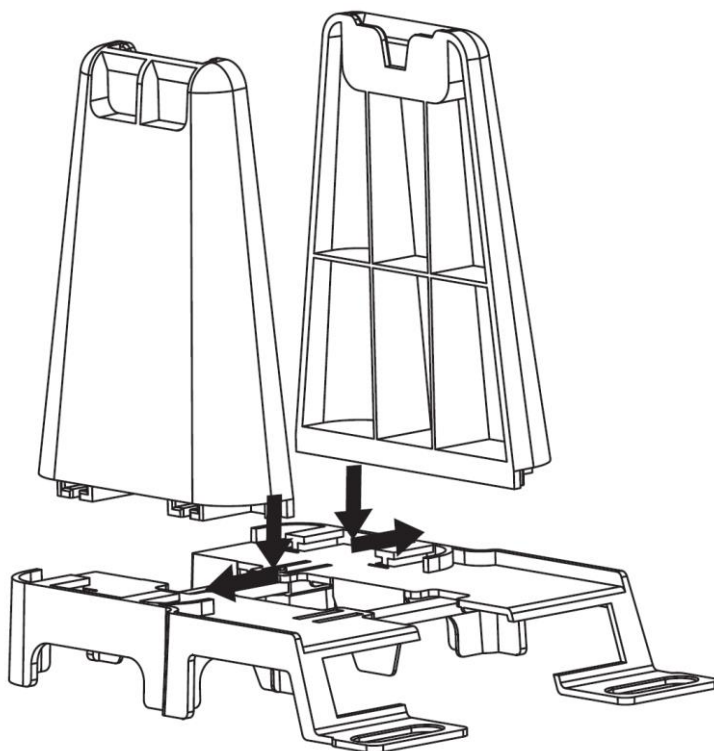
**NOTICE!**

The external unwinder can be used for label rolls with an outside diameter of up to 250 mm.

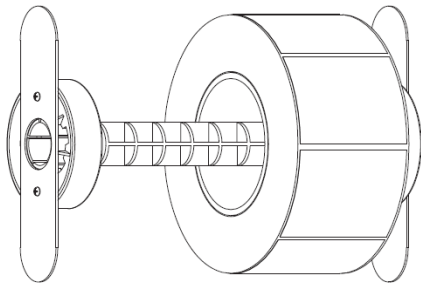




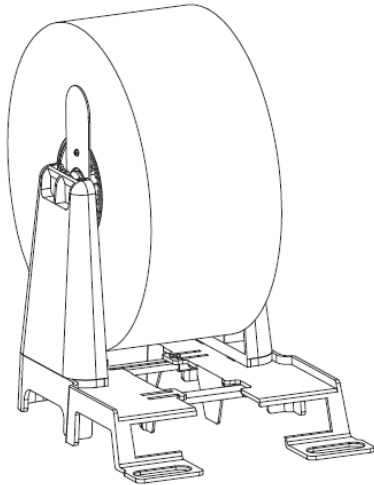
1. Loosen the screw on the back of the base plate (4).
2. Stretch out the base plate (4).
3. Tighten again the screw.



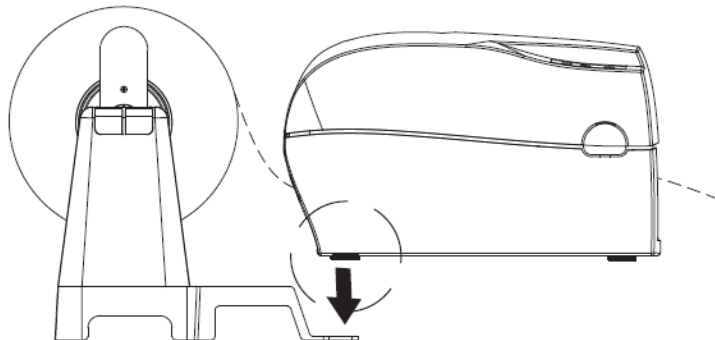
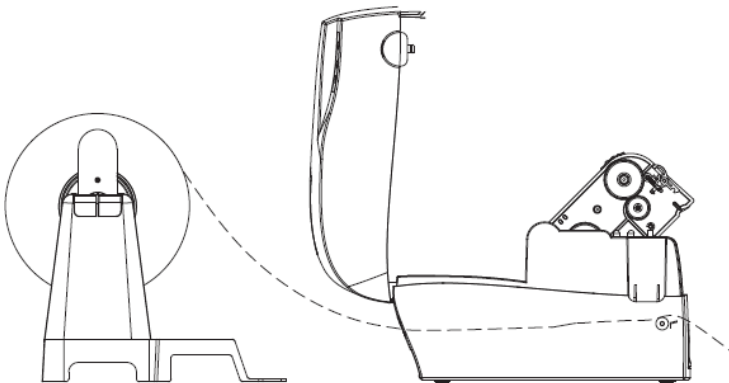
4. Align the external label stands (3) as shown in the figure.
5. Press the external label stands into the openings provided until they lock.

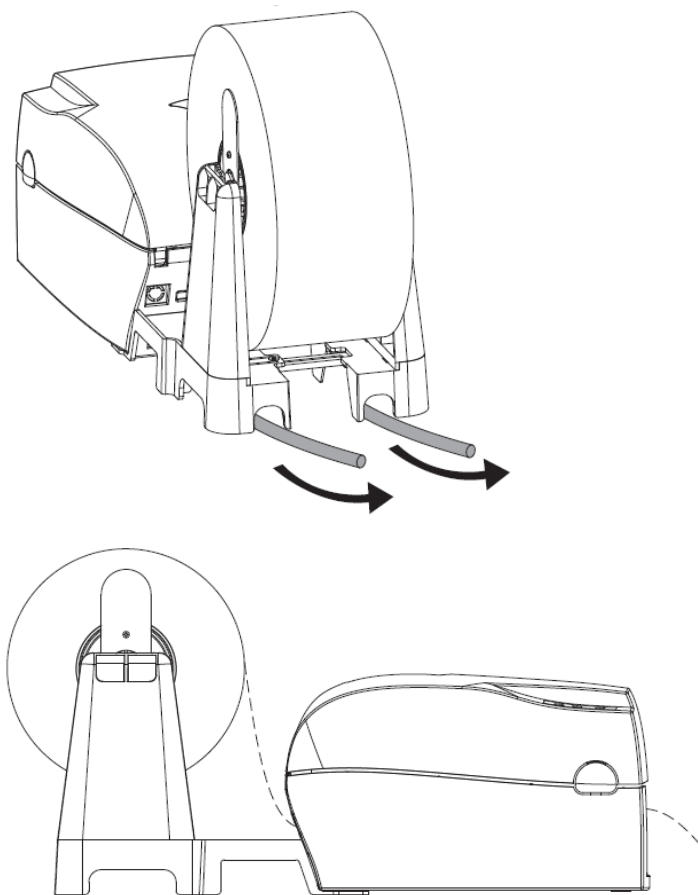
**3" label rolls**

6. Put the label roll core in the middle of the paper roll.
7. Tighten both sides with the included 3" label holder.
8. Place the label roll on the external label stands.



9. Insert the label material in the printer as shown (see chapter 5.2, Load Label Roll, page 22).





10. After inserting the label material in the printer, hang the unwinder onto the printer to complete the installation.

9 Maintenance and Cleaning



DANGER!

Risk of death by electric shock!

⇒ Disconnect the label printer from power supply before performing any maintenance work.



CAUTION!

Injury can occur during cleaning.

⇒ Pay attention to sharp edges.



NOTICE!

When cleaning the printing system, personal protective equipment such as safety goggles and gloves are recommended.



NOTICE!

The handling instructions for the use of Isopropanol (IPA) must be observed. In the case of skin or eye contact, immediately wash off the fluid thoroughly with running water. If the irritation persists, consult a doctor. Ensure good ventilation.



WARNING!

Risk of fire by easily inflammable label soluble!

⇒ When using label soluble, dust must be completely removed from the label printer and cleaned.

9.1 General Cleaning



CAUTION!

Abrasive cleaning agents can damage the printer!

⇒ Do not use abrasives or solvents to clean the outer surface of the printer.

⇒ Remove dust and paper fuzz in the printing area with a soft brush or vacuum cleaner.

⇒ Clean outer surfaces with an all-purpose cleaner.

9.2 Clean the Printhead



CAUTION!

Risk of injury from the hot printhead!

- ⇒ Make sure the printhead has cooled down before cleaning.

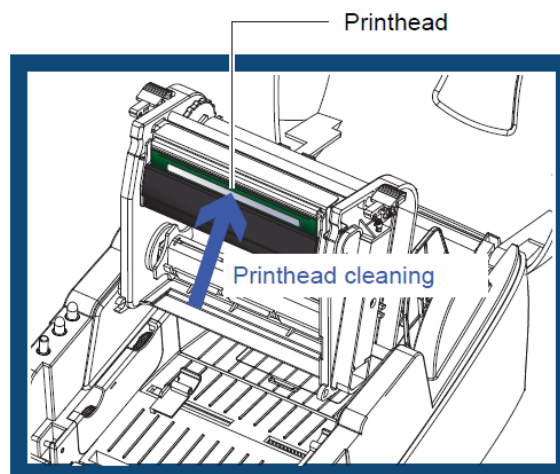
Printing can cause accumulation of dirt at printhead e.g. by colour particles of transfer ribbon, and therefore it is necessary to clean the printhead in regular periods depending on operating hours, environmental effects such as dust etc.



CAUTION!

Printhead can be damaged!

- ⇒ Do not use sharp or hard objects to clean the printhead.
- ⇒ Do not touch protective glass layer of the printhead.



1. Switch off the printer.
2. Open the printer cover.
3. Open the print mechanism (see chapter 5.1, page 21).
4. Remove the transfer ribbon.
5. Clean printhead surface with special cleaning pen or a cotton swab dipped in pure alcohol.
6. Before using the printer, let the printhead dry for about 2 to 3 minutes.



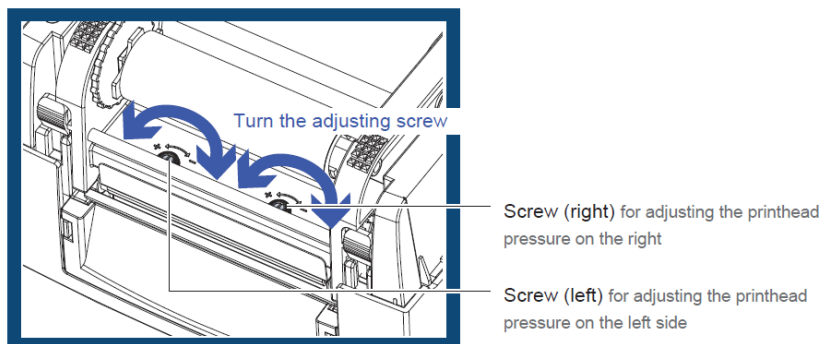
NOTICE!

It is recommended to clean the printhead once a week.

9.3 Adjust the Printhead Pressure

**NOTICE!**

If different labels are used, the print quality may be affected. Therefore, it is recommended to adjust the printhead pressure.



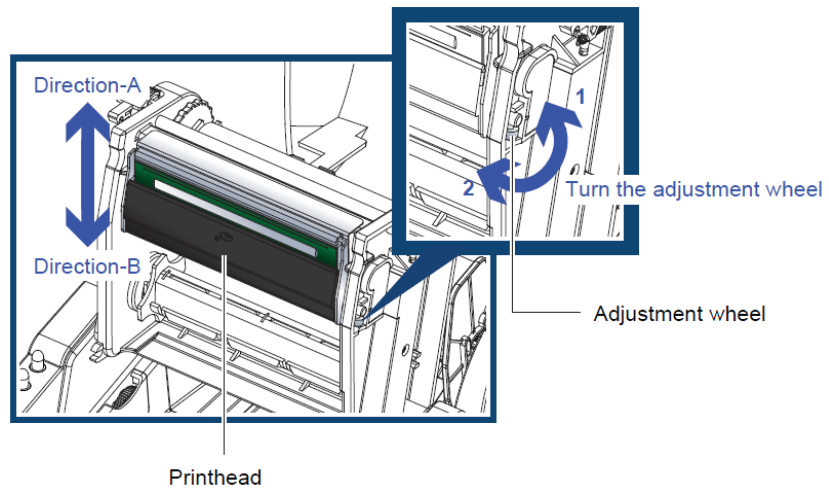
1. Open the printer cover.
2. Remove the transfer ribbon.
3. Use a screwdriver and slowly turn the adjusting screws for the printhead to increase or reduce the printhead pressure.

9.4 Adjust the Printhead Position



NOTICE!

An incorrect setting of the focal line can lead to a loss of print quality on one side. An adjustment of the focal line is necessary in order to position the focal line parallel over the pressure roller.



To move the printhead in **Direction A** as indicated by the blue arrow, turn the adjusting wheel anticlockwise (see arrow 2).

To move the printhead in **Direction B** as indicated by the blue arrow, turn the adjusting wheel clockwise (see arrow 1).

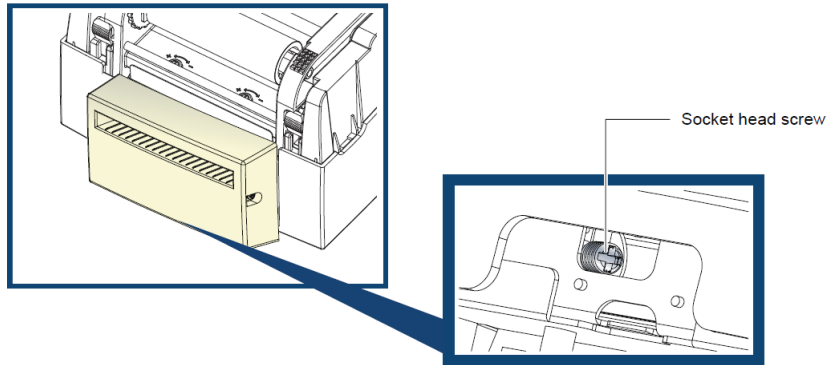
9.5 Adjust the Cutter

While using the cutter, paper jams can occur. Please follow the below steps to clean the paper jam.



NOTICE!

A socket head screw for adjusting the cutter is located on the bottom of the cutter.



1. Switch off the printer.
2. Use a Phillips screwdriver to turn the adjustment screw to remove the paper jam.
3. After removing the paper jam, switch on the printer again. The cutter will automatically reset.



NOTICE!

Labels should be at least 30 mm high to ensure correct functioning of the cutter.

9.6 Troubleshooting

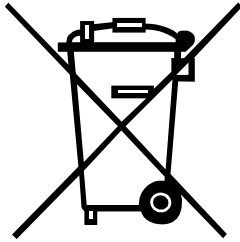
Problem	Solution
The printer is switched on but the display does not light up.	Check the power supply.
LEDs light up, printing is interrupted.	Check the software settings. Check the function of cutter (detailed description, see chapter 6.4, page 34)
The label material passes through the printer but without printout.	Check the correct run of the label material. Check that suitable label material is inserted. Make sure that the transfer ribbon is loaded correctly.
Paper jam	Clear the paper jam. Remove any label material left on the printhead and clean the printhead using a soft lint-free cloth dipped in alcohol (see chapter 9.2, page 48).
During the printing process, part of the label is not completely printed, or the printout is blurred.	Check the printhead for possible residues. Check the user software for errors. Check ribbon for wrinkles. Check the power supply. Carry out a self-test (see chapter 6.2, page 30) and check the test printout. Check the quality of the print material.
Positioning of the printout is incorrect, or a label is skipped during the printing process.	Start the auto-calibration (see chapter 6.2, page 30). Check the label height setting. Check if there is dust or paper on the sensor. Check the label guiding.
The cutter does not cut off the labels in a straight way.	Check if the labels are positioned correctly.
The cutter does not cut off the labels completely.	Check if the label is more than 0.2 mm thick.
When using the option cutter, the labels are not fed through or cut off incorrectly.	Check the correct installation of the cutter. Check the label transport rollers.
The dispenser is not functioning correctly.	Check if there is dust on the dispenser. Check if the label material is positioned correctly.



NOTICE!

If any problems occur that are not described, please contact your distributor.

10 Environmentally-Friendly Disposal



Manufacturers of B2B equipment are obliged to take back and dispose of old equipment that was manufactured after 13 August 2005. As a principle, this old equipment may not be delivered to communal collecting points. It may only be organised, used and disposed of by the manufacturer. Valentin products accordingly labelled can therefore be returned to Carl Valentin GmbH.

This way, you can be sure your old equipment will be disposed of correctly.

Carl Valentin GmbH thereby fulfils all obligations regarding timely disposal of old equipment and facilitates the smooth reselling of these products. Please understand that we can only take back equipment that is sent free of carriage charges.

The electronics board of the printing system is equipped with a battery. This must only be discarded in battery collection containers or by public waste management authorities.

Further information on the WEEE directive is available on our website www.carl-valentin.de.

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