

USER MANUAL

---

**D4X**

***CUSTOM***



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**THE IMAGES USED IN THIS MANUAL ARE USED AS AN ILLUSTRATIVE EXAMPLES. THEY COULDN'T REPRODUCE THE DESCRIBED MODEL FAITHFULLY.**

**UNLESS OTHERWISE SPECIFIED, THE INFORMATION GIVEN IN THIS MANUAL ARE REFERRED TO ALL MODELS IN PRODUCTION AT THE ISSUE DATE OF THIS DOCUMENT.**

#### GENERAL INSTRUCTIONS

CUSTOM S.p.A. declines all responsibility for accidents or damage to persons or property occurring as a result of tampering, structural or functional modifications, unsuitable or incorrect installations, environments not in keeping with the equipment's protection degree or with the required temperature and humidity conditions, failure to carry out maintenance and periodical inspections and poor repair work.

#### GENERAL SAFETY INFORMATION

Your attention is drawn to the following actions that could compromise the characteristics of the product:

- Read and retain the instructions which follow.
- Follow all indications and instructions given on the device.
- Make sure that the surface on which the device rests is stable. If it is not, the device could fall, seriously damaging it.
- Make sure that the device rests on a hard (non-padded) surface and that there is sufficient ventilation.
- Do not fix indissolubly the device or its accessories such as power supplies unless specifically provided in this manual.
- When positioning the device, make sure cables do not get damaged.
- [Only OEM equipment] The equipment must be installed in a kiosk or system that provides mechanical, electrical and fire protection.
- The mains power supply must comply with the rules in force in the Country where you intend to install the equipment.
- Make sure that there is an easily-accessible outlet with a capacity of no less than 10A closely to where the device is to be installed.
- Make sure the power cable provided with the appliance, or that you intend to use is suitable with the wall socket available in the system.
- Make sure the electrical system that supplies power to the device is equipped with a ground wire and is protected by a differential switch.
- Before any type of work is done on the machine, disconnect the power supply.
- Use the type of electrical power supply indicated on the device label.
- These devices are intended to be powered by a separately certified power module having an SELV, non-energy hazardous output. (IEC60950-1 second edition).
- [Only POS equipment] The energy to the equipment must be provided by power supply approved by CUSTOM S.p.A.
- Take care the operating temperature range of equipment and its ancillary components.
- Do not block the ventilation openings.
- Do not insert objects inside the device as this could cause short-circuiting or damage components that could jeopardize printer functioning.
- Do not carry out repairs on the device yourself, except for the normal maintenance operations given in the user manual.
- The equipment must be accessible on these components only to trained, authorized personnel.
- Periodically perform scheduled maintenance on the device to avoid dirt build-up that could compromise the correct, safe operation of the unit.
- Do not touch the head heating line with bare hands or metal objects. Do not perform any operation inside the printer immediately after printing because the head and motor tend to become very hot.
- Use consumables approved by CUSTOM S.p.A.



THE CE MARK AFFIXED TO THE PRODUCT CERTIFY THAT THE PRODUCT SATISFIES THE BASIC SAFETY REQUIREMENTS.

The device is in conformity with the essential Electromagnetic Compatibility and Electric Safety requirements laid down in Directives 2014/30/EU and 2014/35/EU inasmuch as it was designed in conformity with the provisions laid down in the following Standards:

- EN 55032 (*Electromagnetic compatibility of multimedia equipment - Emission Requirements*)
- EN 55024/EN55035 (*Electromagnetic compatibility of multimedia equipment - Immunity requirements*)
- EN IEC/EN62368-1 (*Audio/video, information and communication technology equipment*)

The device is in conformity with the essential requirements laid down in Directives 2014/53/EU about devices equipped with intentional radiators. The Declaration of Conformity and other available certifications can be downloaded from the site [www.custom4u.it](http://www.custom4u.it).



GUIDELINES FOR THE DISPOSAL OF THE PRODUCT

The crossed-out rubbish bin logo means that used electrical and electronic products shall NOT be mixed with unsorted municipal waste. For more detailed information about recycling of this product, refer to the instructions of your country for the disposal of these products.

- Do not dispose of this equipment as miscellaneous solid municipal waste, but arrange to have it collected separately.
- The re-use or correct recycling of the electronic and electrical equipment (EEE) is important in order to protect the environment and the wellbeing of humans.
- In accordance with European Directive WEEE 2012/19/EU, special collection points are available to which to deliver waste electrical and electronic equipment and the equipment can also be handed over to a distributor at the moment of purchasing a new equivalent type.
- The public administration and producers of electrical and electronic equipment are involved in facilitating the processes of the re-use and recovery of waste electrical and electronic equipment through the organisation of collection activities and the use of appropriate planning arrangements.
- Unauthorised disposal of waste electrical and electronic equipment is punishable by law with the appropriate penalties.
- For the waste sorting of the packaging materials, please check the local waste disposal laws.



The format used for this manual improves use of natural resources reducing the quantity of necessary paper to print this copy.

**FCC COMPLIANCE STATEMENT:**

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications to this unit not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

**FCC Radiation Exposure Statement**

This equipment complied with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

**ISED Statement**

This device complies with Innovation, Science and Economic Development licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference; and  
(2) this device must accept any interference. Including interference that may cause undesired operation of the device.

Avis Innovation, Science et développement économique

Le présent appareil est conforme aux Innovation, Science et développement économique aux appareils radio exempts de licence L'exploitation est autorisée aux deux conditions suivantes:

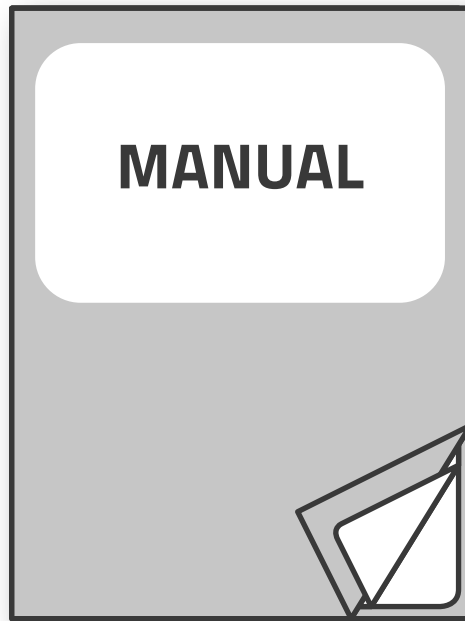
1) l'appareil ne doit pas produire de brouillage; et  
2) l'utilisateur de l'appareil doit accepter brouillage radioélectrique subi même si le brouillage est susceptible d'en compromettre le fonctionnement. mauvais fonctionnement de l'appareil.  
CAN ICES-3 (B)/ CAN NMB-3 (B)

**Radiation Exposure Statement:**

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.



For details on the commands,  
refer to the manual with code **0577200M000096**



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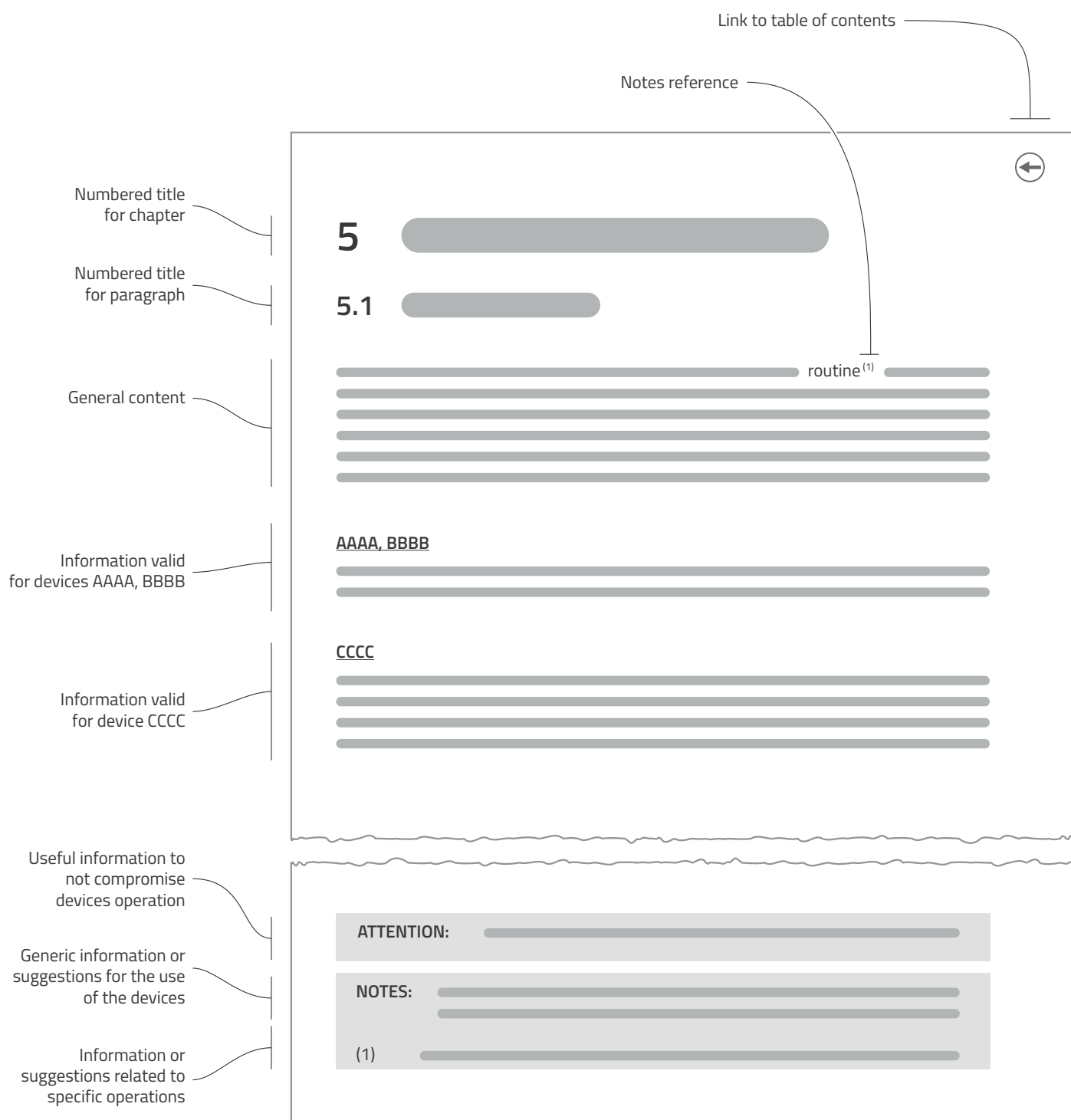
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# 1 INTRODUCTION

This document is divided into sections and chapters. Each chapter can be reached by the index at the beginning of this document. The index can be reached by the button on each page as shown in the diagram below.







## 2 IDENTIFICATION OF THE MODELS

| NOMENCLATURE | DESCRIPTION                                   |
|--------------|-----------------------------------------------|
| D4X          | D4X base configuration with 203 dpi printhead |
| D4X BT       | D4X with bluetooth module                     |

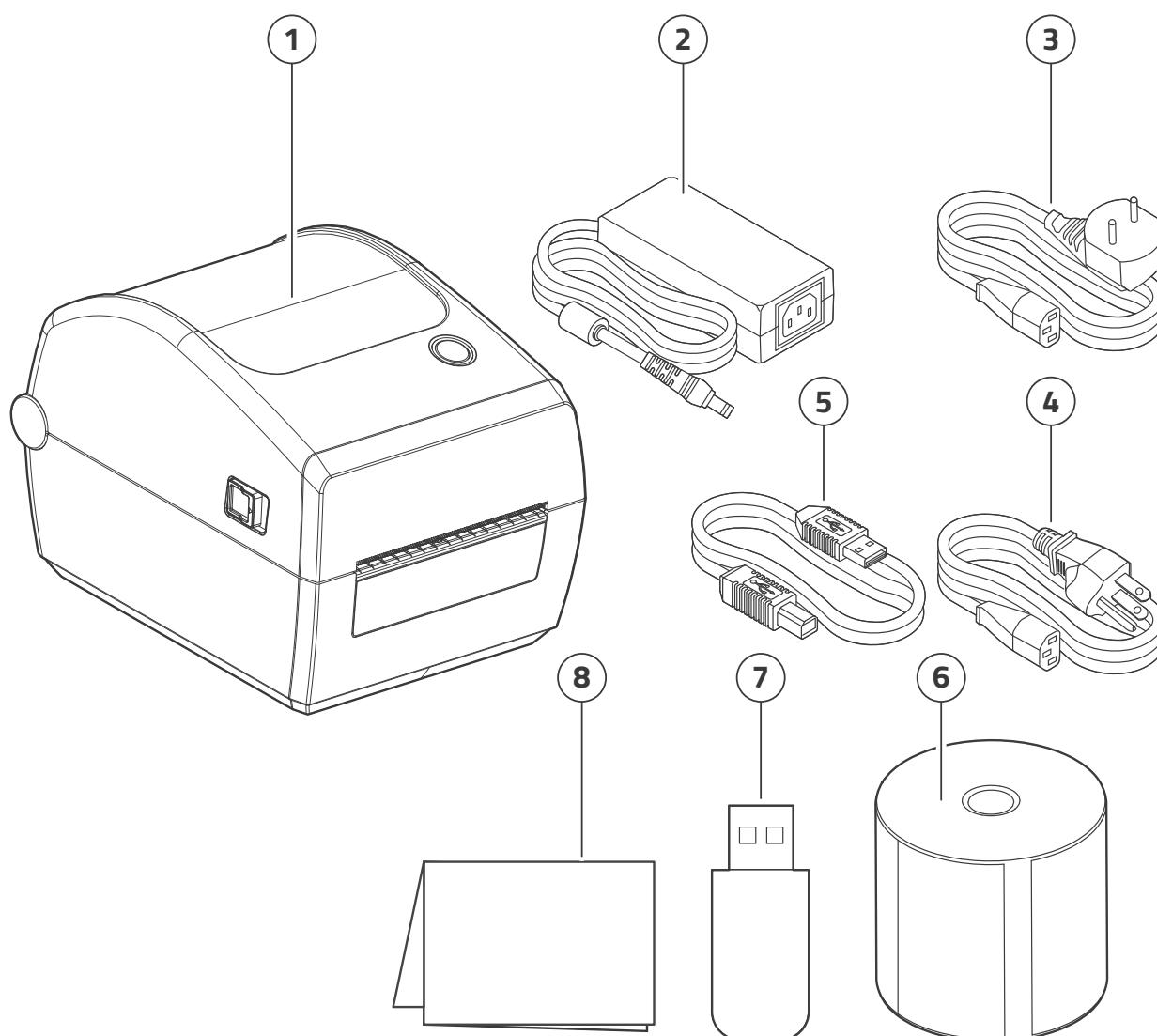
## 3 DESCRIPTION

### 3.1 Box contents

Remove the device from its carton being careful not to damage the packing material so that it may be re-used if the device is to be transported in the future.

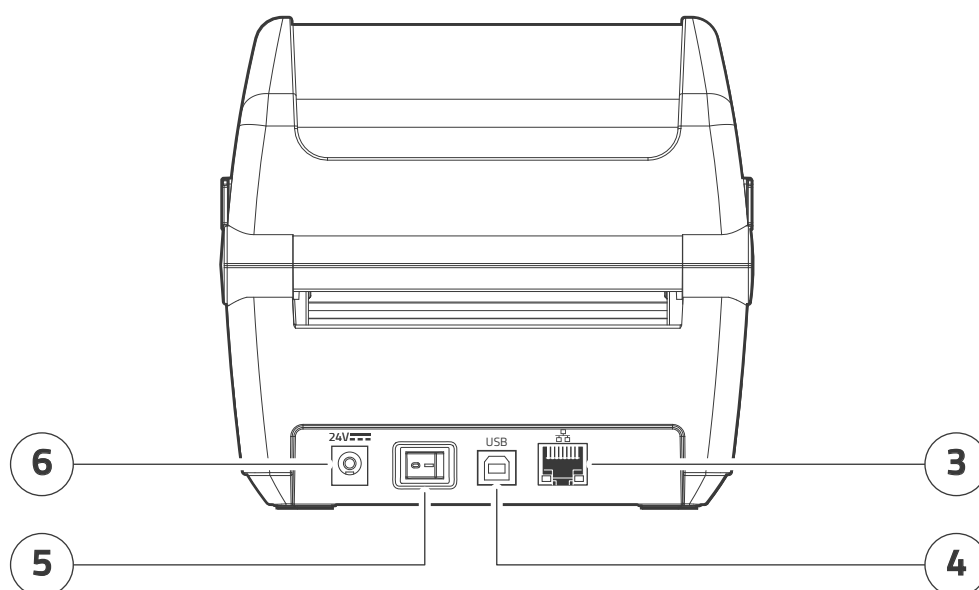
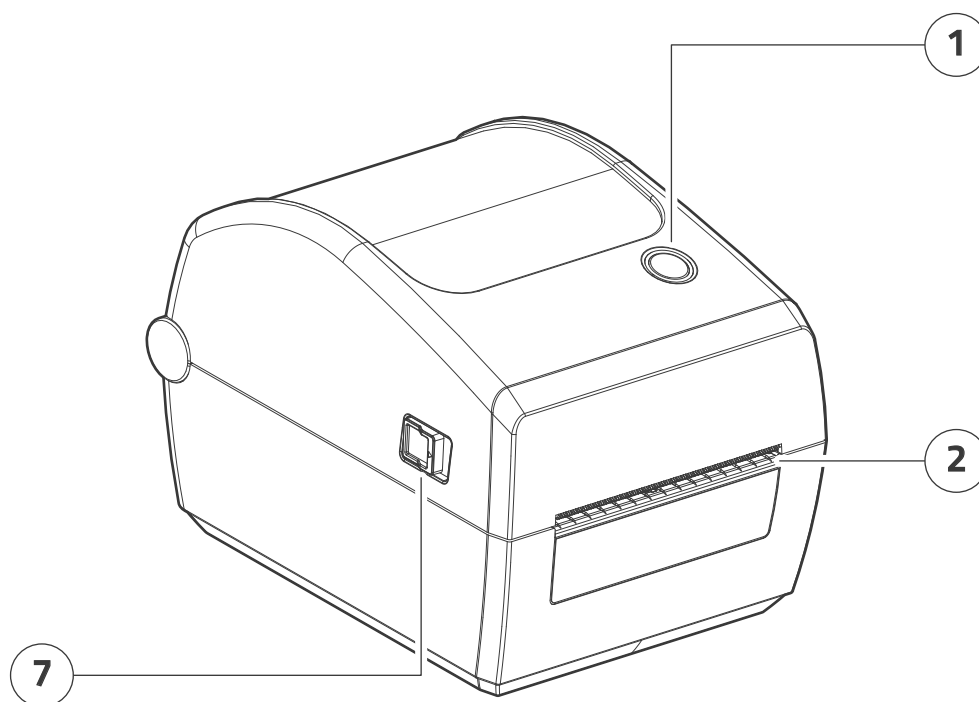
Make sure that all the components illustrated below are present and that there are no signs of damage. If there are, contact customer service.

1. Device
2. AC power supply
3. EU market AC power cord
4. US market AC power cord
5. USB cable
6. Paper roll
7. USB flash drive
8. Documentation (short guide)



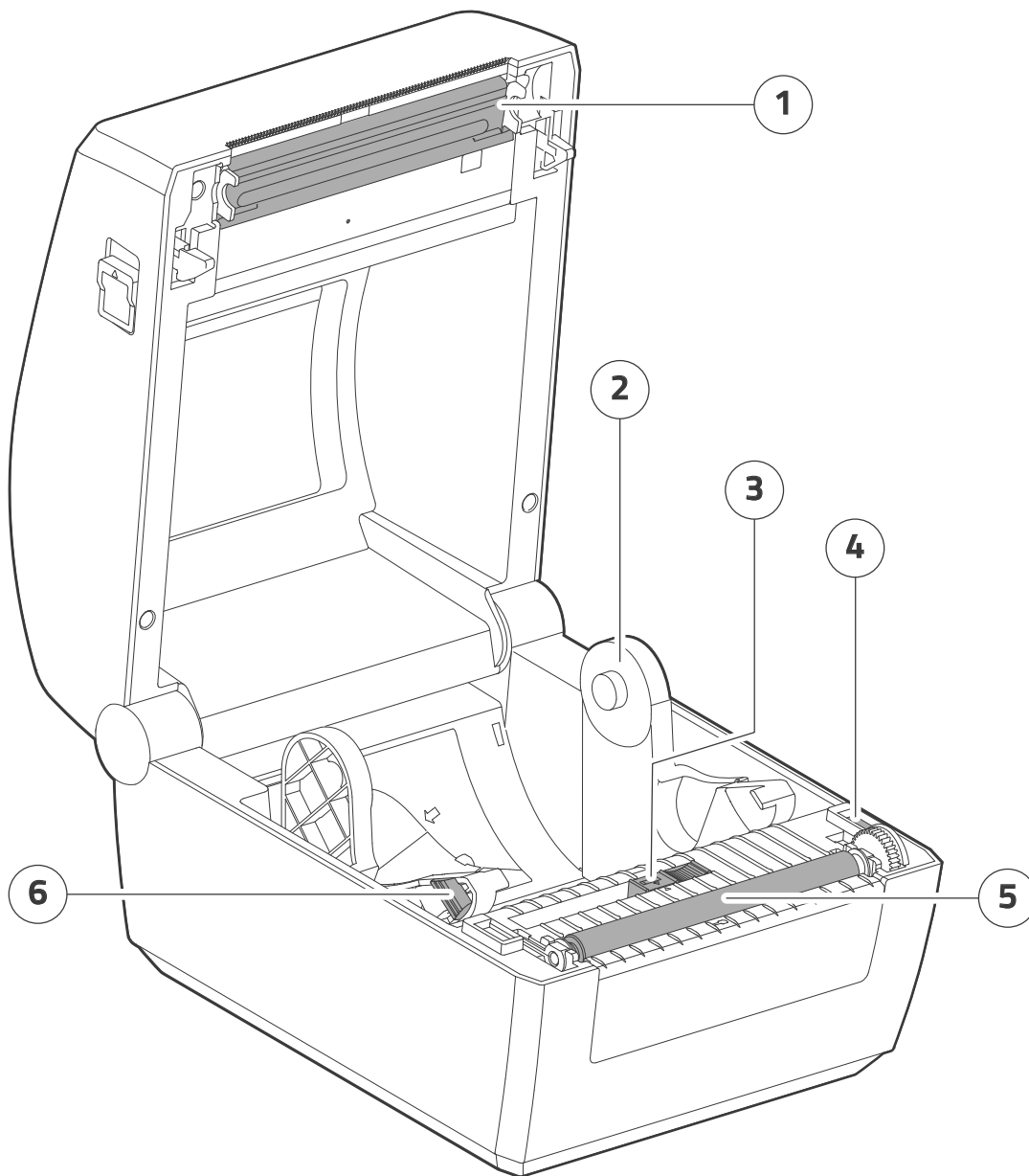
## 3.2 Device components: external views

- |                                     |                         |
|-------------------------------------|-------------------------|
| 1. Feed key with status LED         | 5. ON/OFF key           |
| 2. Paper output with serrated blade | 6. Power supply port    |
| 3. Ethernet port                    | 7. Cover opening button |
| 4. USB port                         |                         |



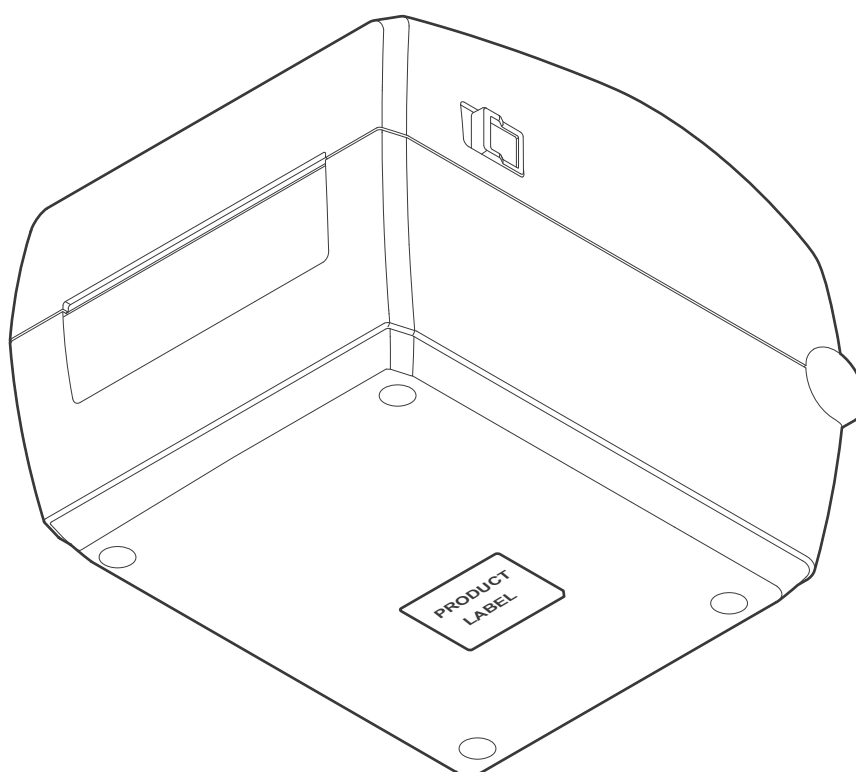
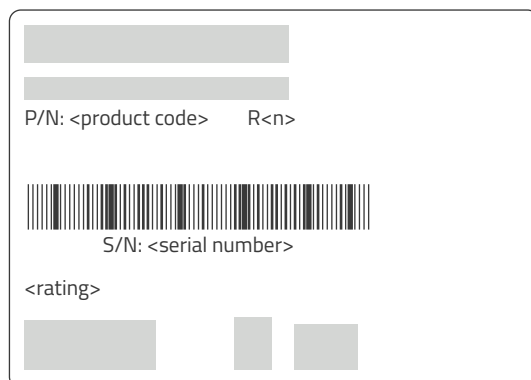
### 3.3 Device components: internal views

1. Printhead
2. Adjustable roll holder
3. Adjustable sensor for paper presence and black mark detection
4. Sensor for cover opening detection
5. Platen roller
6. Locking tab for roll holder guides

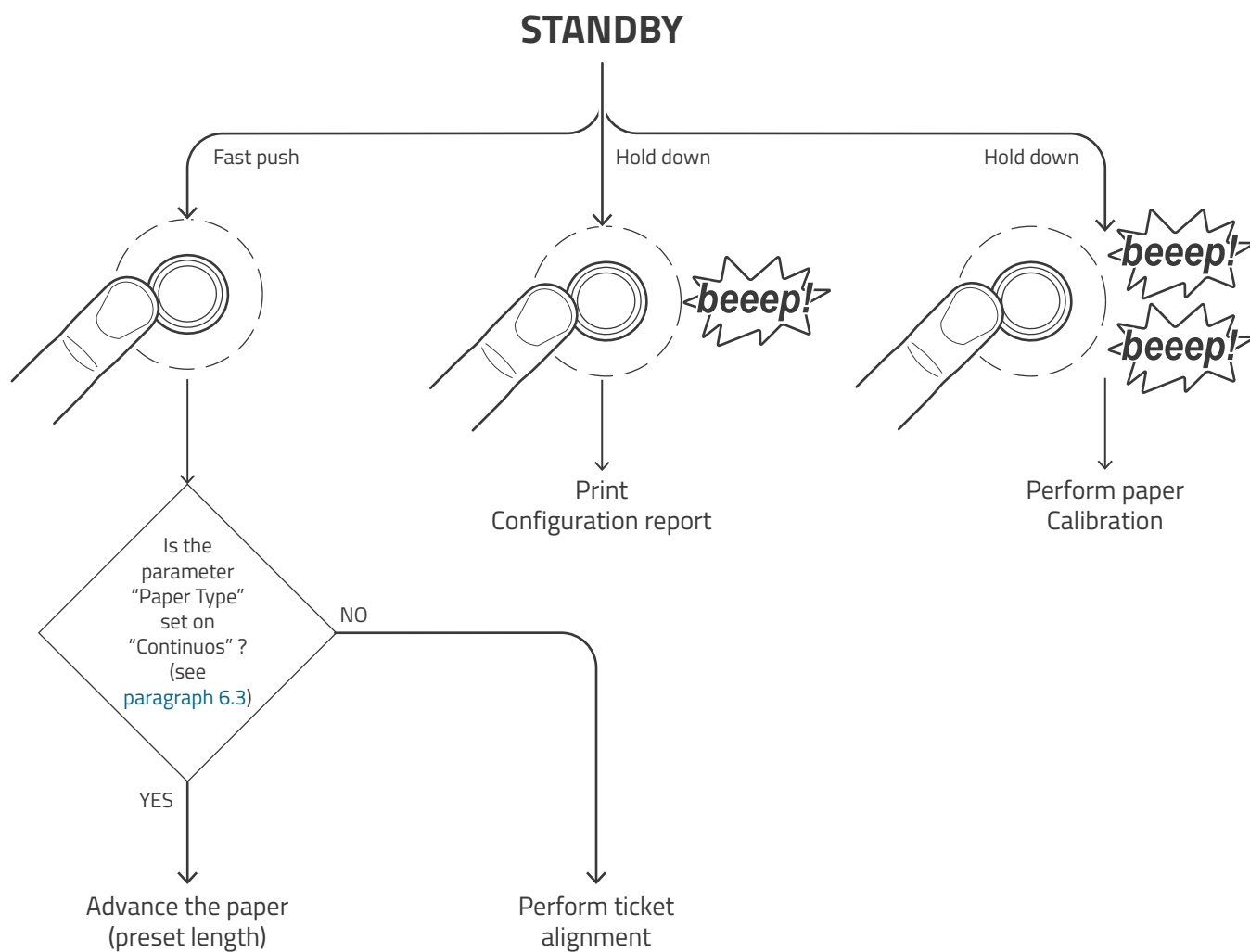


## 3.4 Product label

The main data used to identify the machine are shown on the label attached to the bottom of the device. In particular, it shows the electrical data for the connection to a power source. It also shows the product code, the serial number and the hardware revision (R).



## 3.5 Key functions: sytandby



## 3.6 Status messages

The Status LED indicates hardware status of device. Given in the table below are the various led signals and the corresponding device status.

| STATUS LED |  | DESCRIPTION |                                                                          |
|------------|--|-------------|--------------------------------------------------------------------------|
| -          |  | OFF         | DEVICE OFF                                                               |
| BLUE       |  | ON          | DEVICE ON: NO ERROR                                                      |
|            |  |             | DUMP MODE (see <a href="#">paragraph 6.10</a> )                          |
| GREEN      |  | ON          | PRINTING                                                                 |
|            |  |             | PRINTING PAUSE                                                           |
|            |  |             | RECEIVING DATA                                                           |
| PURPLE     |  | ON          | PRINthead OVERHEATED                                                     |
| RED        |  | ON          | PRINthead OPEN / COVER OPEN                                              |
|            |  |             | PAPER END                                                                |
|            |  |             | INCORRECT PAPER TYPE OR INCORRECT CALIBRATION                            |
| YELLOW     |  | ON          | DEVICE NOT READY YET                                                     |
|            |  |             | ERROR<br>(PAPER JAM, LABEL'S SEPARATION,<br>INCORRECT LABEL POSITIONING) |
|            |  |             | WRITE DATA                                                               |

### NOTES:

The symbol in the table above means a Fast flash (0.1 second / every cycle).

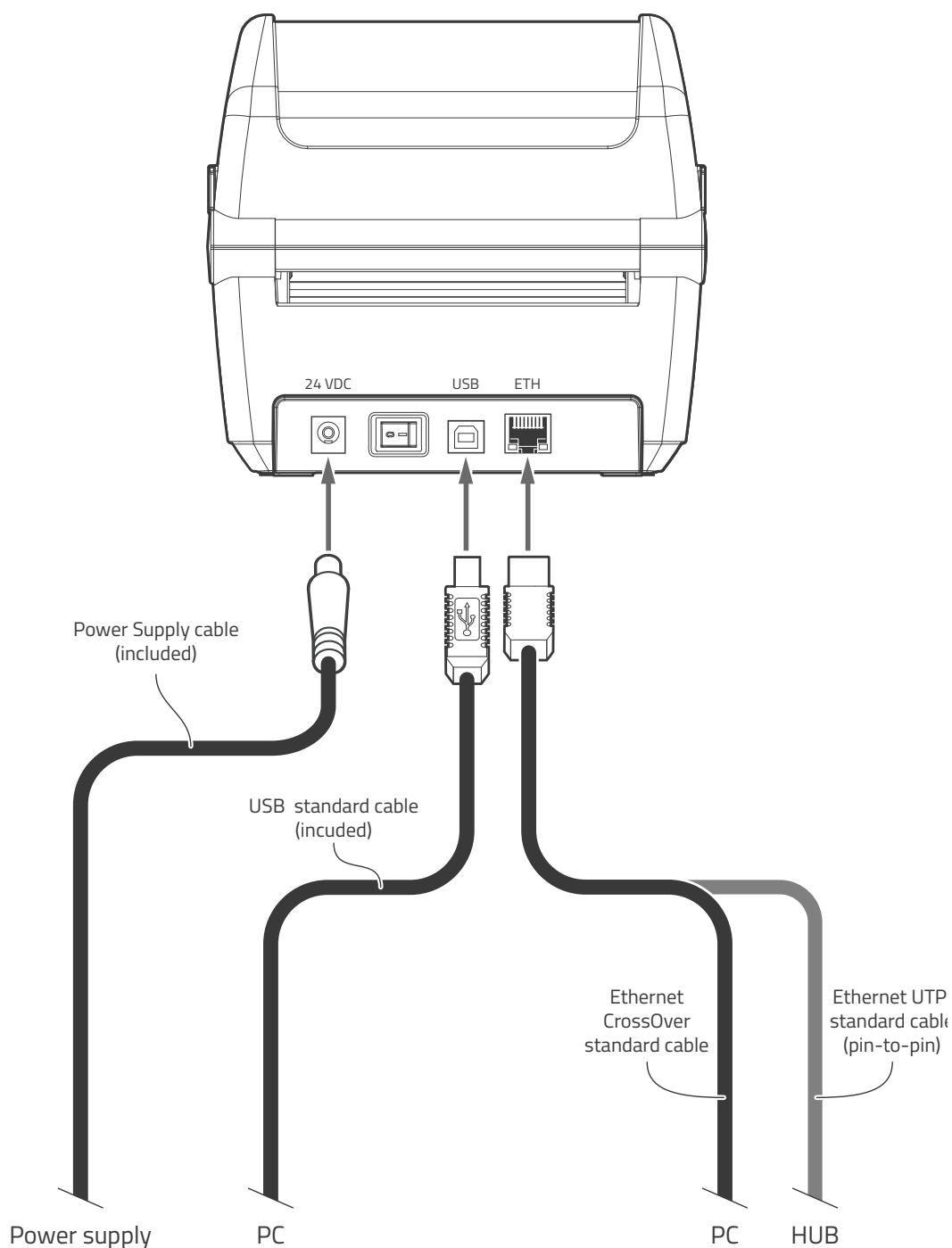
This symbol in the table above means a Slowly flash (0.5 second / every cycle).



## 4 INSTALLATION

### 4.1 Connections

The following figure shows the possible connections for the device. When the RS232 and USB communication cables are connected to the device at the same time, communication takes place via the USB port.



**ATTENTION:** In some using conditions, we recommend the installation of a ferrite core on the power supply cable.

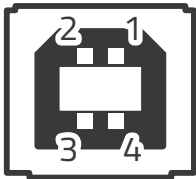


# 4.2 Pinout



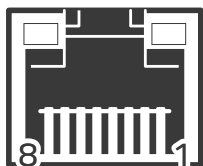
|     |   |         |
|-----|---|---------|
| CN1 | 1 | +24 Vdc |
|     | 2 | GND     |
|     | 3 | GND     |

ATTENTION:  
Respect power supply polarity.



USB INTERFACE  
Female USB type B connector

|      |   |           |          |
|------|---|-----------|----------|
| USB1 | 1 | USB0-VBUS | (in)     |
|      | 2 | D0 -      | (in/out) |
|      | 3 | D0 +      | (in/out) |
|      | 4 | GND       |          |



## ETHERNET INTERFACE

Female RJ45 connector

|      |   |      |
|------|---|------|
| LAN1 | 1 | VV   |
|      | 2 | TX - |
|      | 3 | RX + |
|      | 4 | -    |
|      | 5 | -    |
|      | 6 | RX - |
|      | 7 | -    |
|      | 8 | -    |



## 4.3 Driver, SDK and Tools

The drivers for the following operating system are available in the website [www.custom4u.it](http://www.custom4u.it):

| OPERATING SYSTEM | DESCRIPTION                       | INSTALLATION PROCEDURE                                                                                                                                                         |
|------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows          | Driver for Windows 10 (32/64 bit) | From the START menu, press Run and type-in the path where the SW was saved on your PC, then click OK. Follow the instructions that appear on the screen to install the driver. |
|                  | Driver for Windows 11 (64 bit)    |                                                                                                                                                                                |
| Linux            | (32/64 bit)<br>ARM (32/64 bit)    | Follow the instruction get back on the "Readme.txt" file. You can find it in the software package downloaded in advance.                                                       |
| Android          | Android Print Service Plugin      | Follow the instruction in the ".apk" file. You can find it in the print service plugin package downloaded previously.                                                          |
| macOS            | Driver for macOS X                | Follow the instruction in the ".pkg" file. You can find it in the software package downloaded previously.                                                                      |

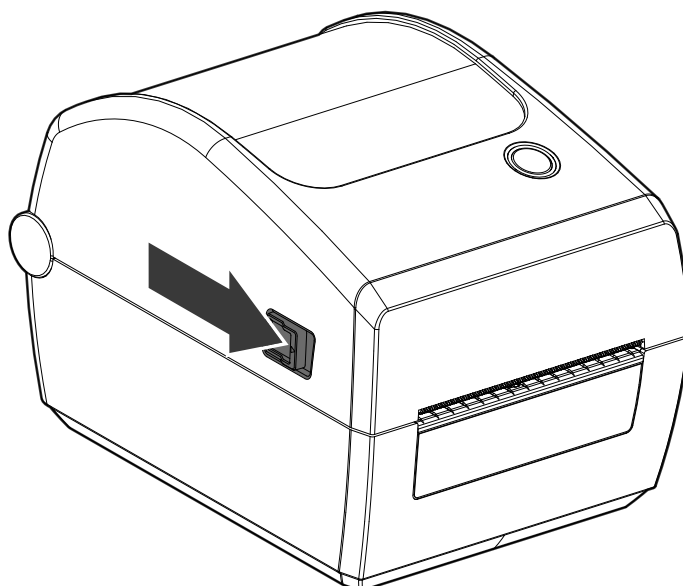
The following table shows the printer management tools available :

| SOFTWARE             | DESCRIPTION                                                                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bartender™ Ultralite | Label design software for quick customization and editing labels.<br>The BarTender™ license is also included on the USB flash drive supplied with the device. |

## 5 OPERATION

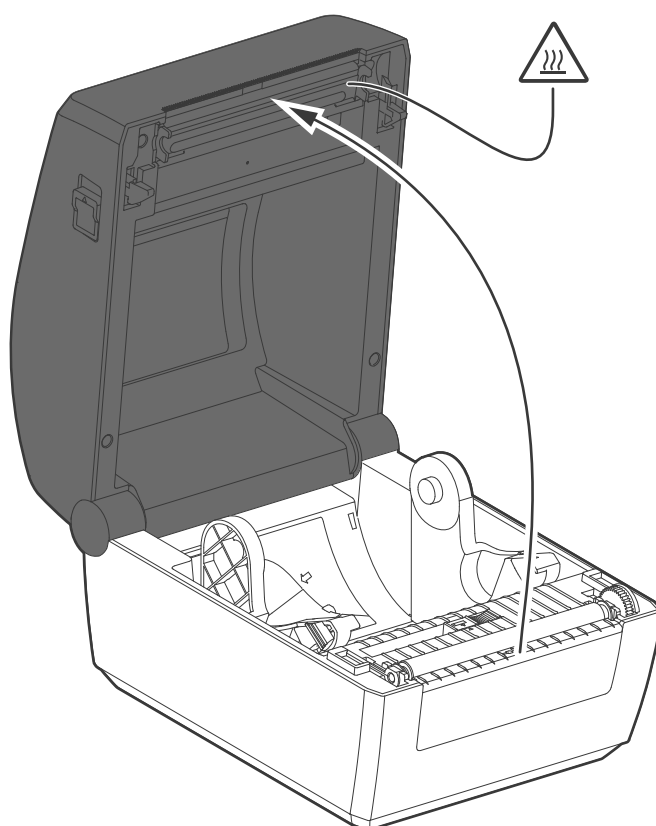
### 5.1 Opening device cover

1



Push the opening button  
in the direction shown in the figure.

2

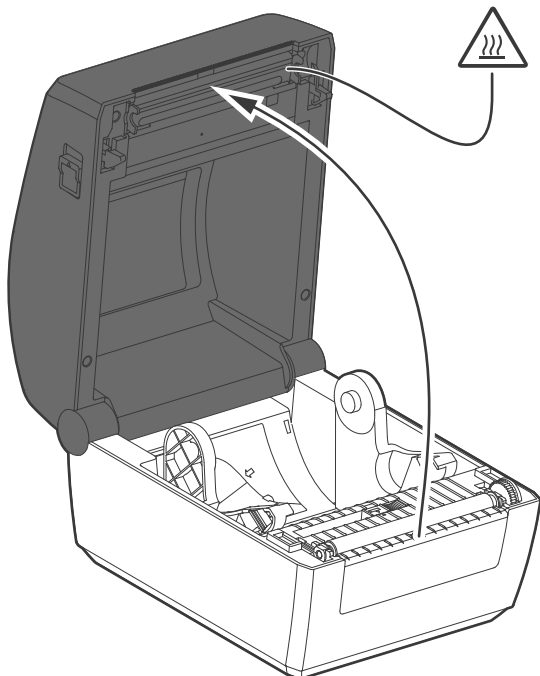


Open the device cover  
to the lock position.

## 5.2 Adjusting the paper width

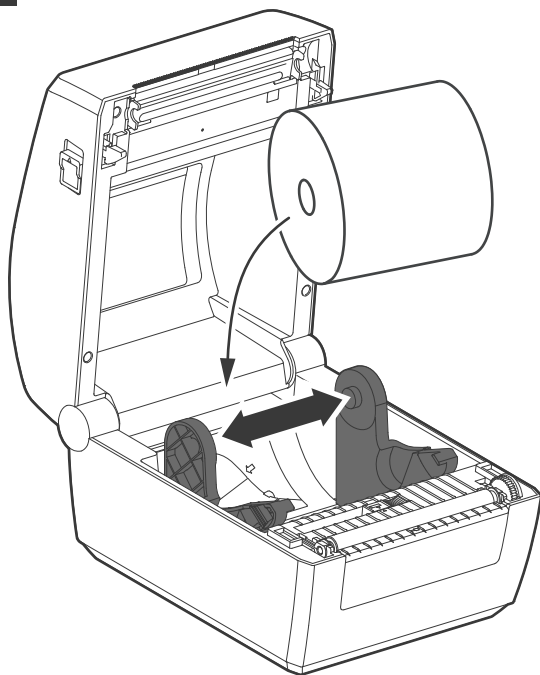
The device is equipped with an adapter roll holders to use for the regulation of paper width. To adjust the paper width, proceed as follows.

1



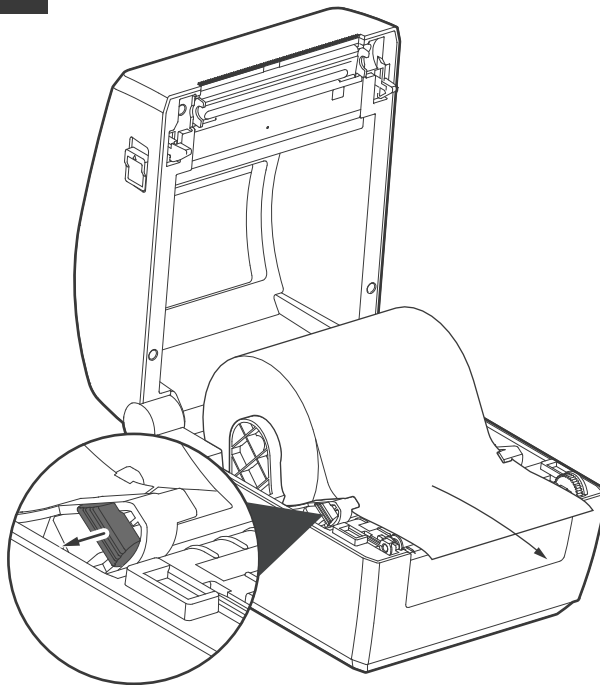
Open the device cover  
(see [paragraph 5.1](#)).

2



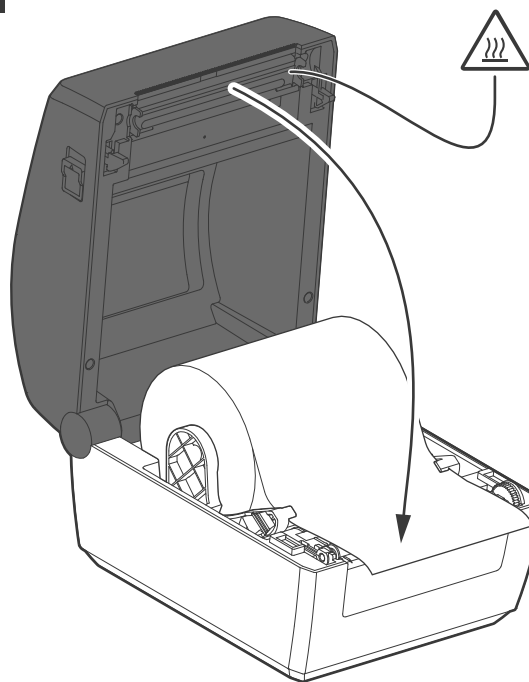
Keep the roll holders open by pulling them and place the roll between them in the paper compartment.

3



Make sure that the paper roll is tightly attached to the roll holders and press down the locking tab. Pull out the paper for a few centimetres.

4



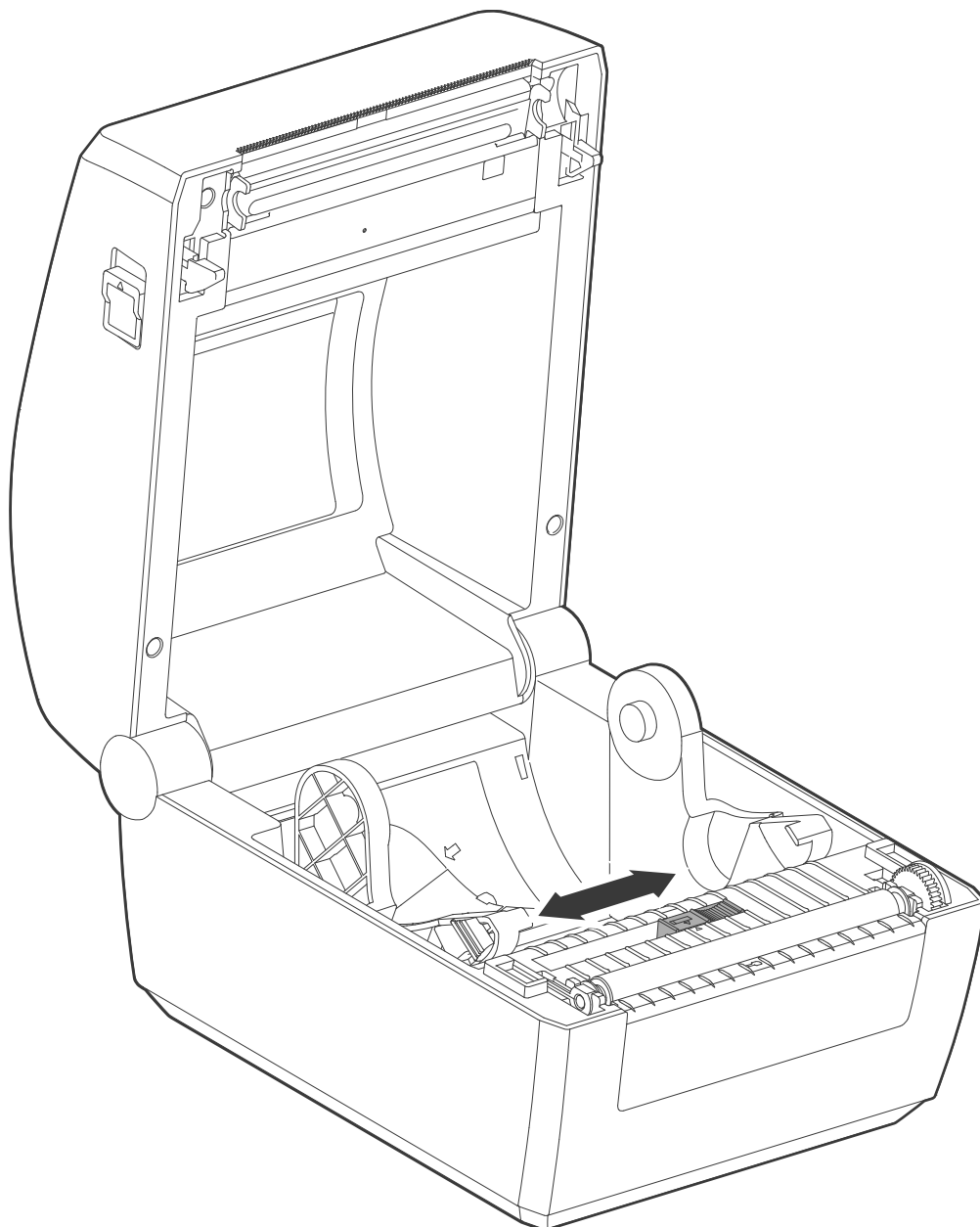
Close the device cover.

## 5.3 Adjusting the alignment sensor

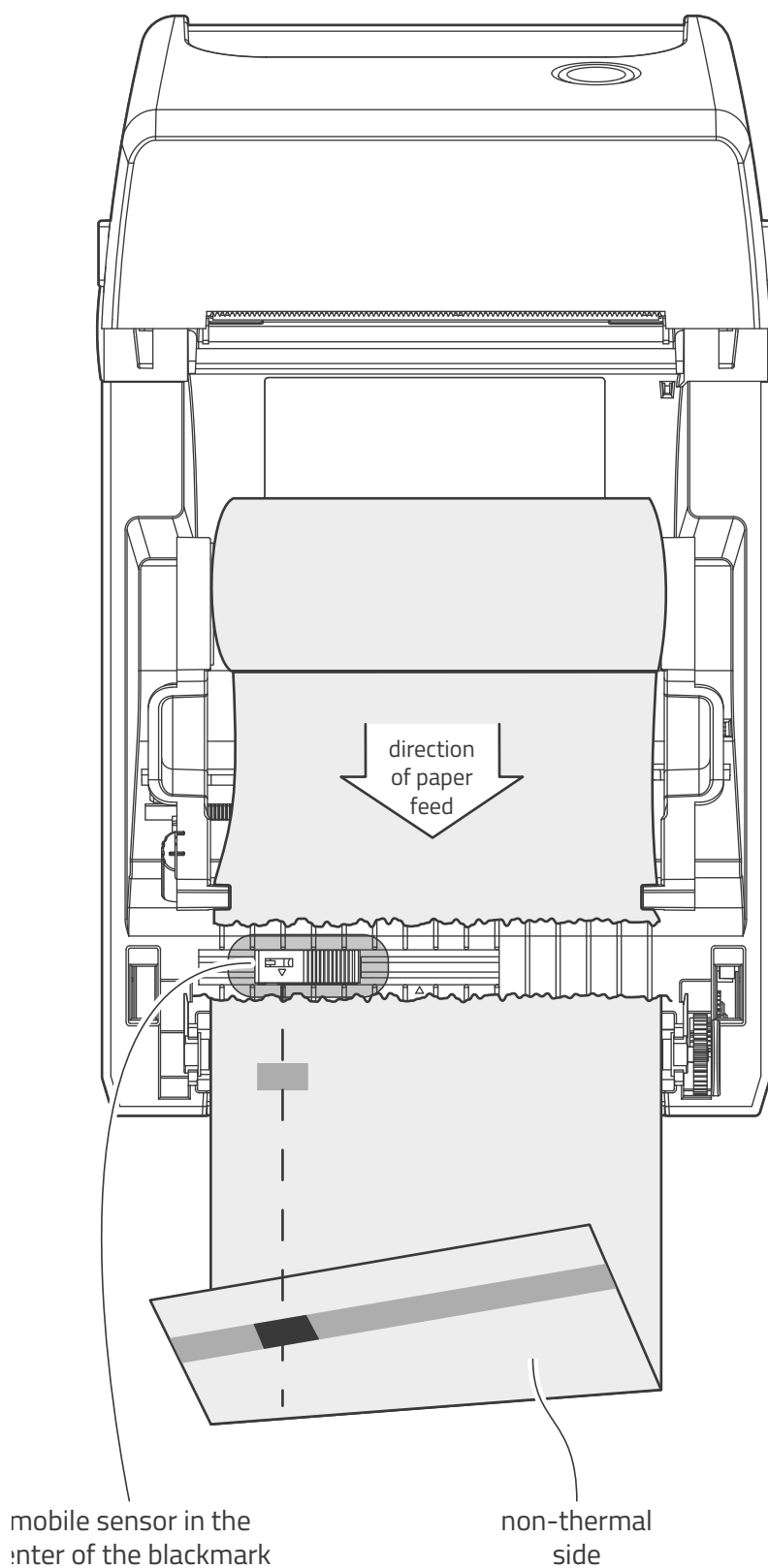
The device is equipped with a mobile sensor for the detection of the alignment black mark placed on the non thermal side of paper (located lower than the plane of the paper inside the device) as shown in the following figure.

This is a movable sensor that must be manually moved by the user depending on the type of paper used.

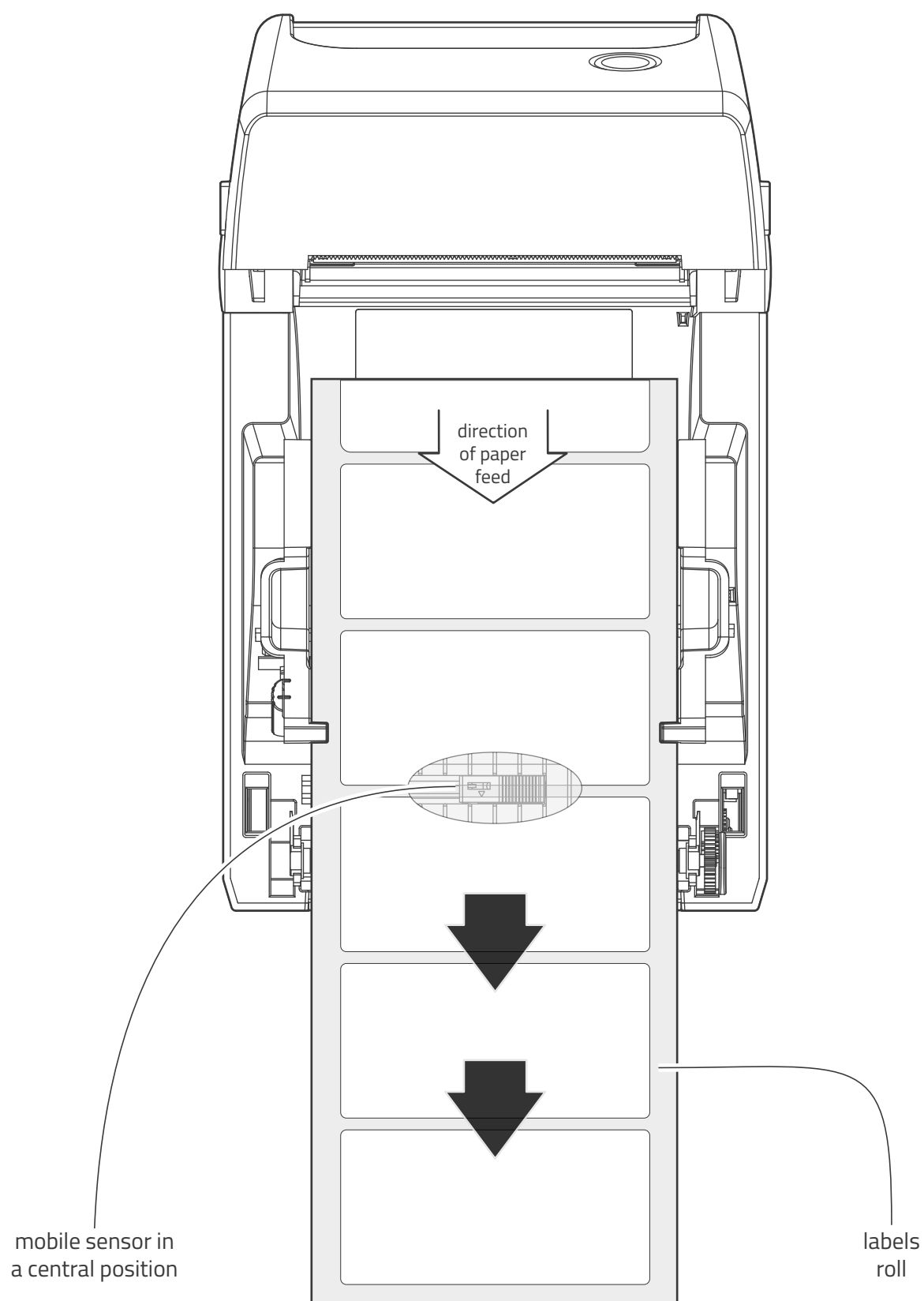
To use this sensor, the "Sensor Select" parameter must be correctly (see [paragraph 6.3](#)).



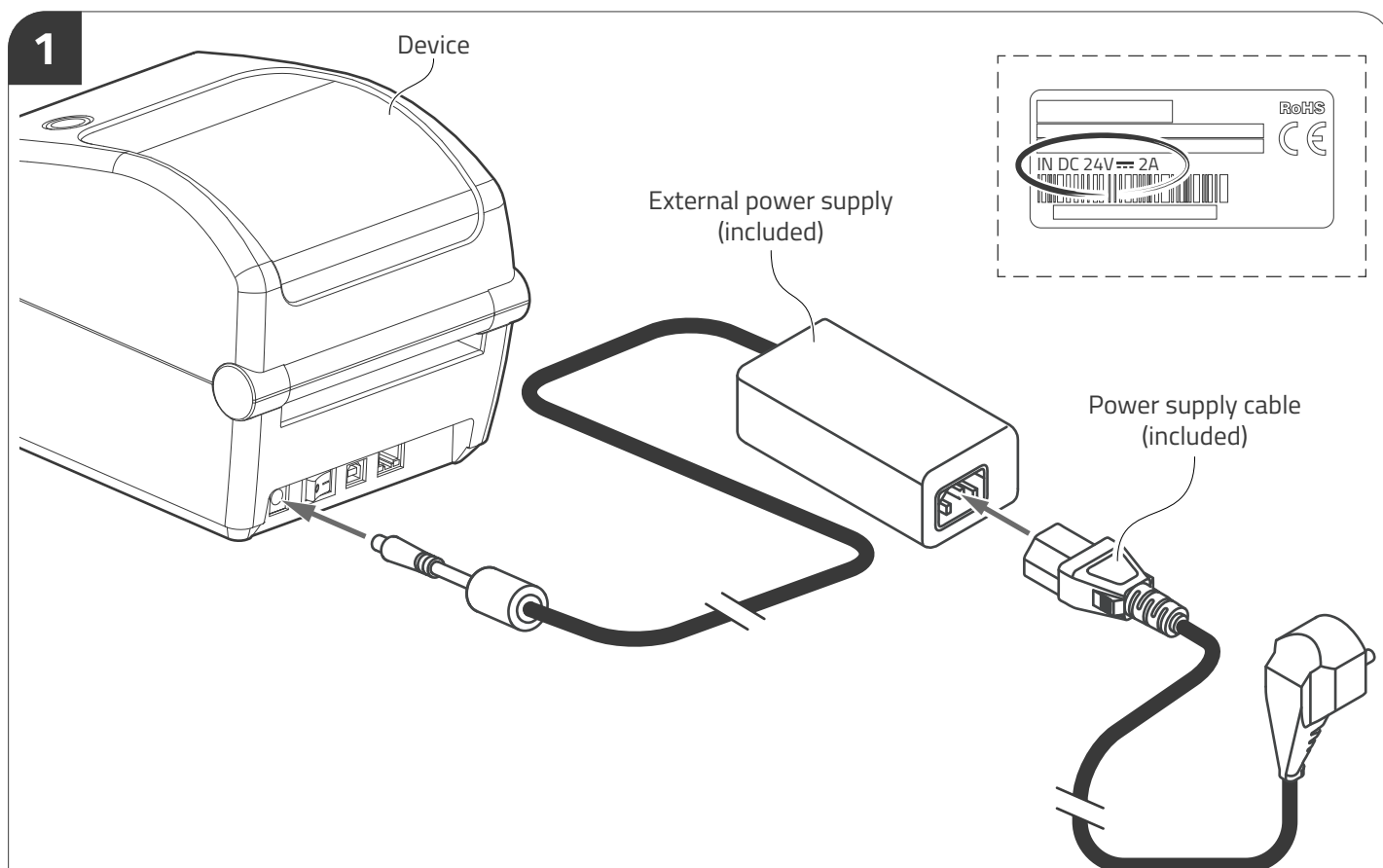
To adjust the mobile sensor position according to the black mark position on paper, open the device cover (see [paragraph 5.1](#)), then adjust the paper width (see [paragraph 5.2](#)) and move the sensor to the desired position according to the position of the black mark on the paper.



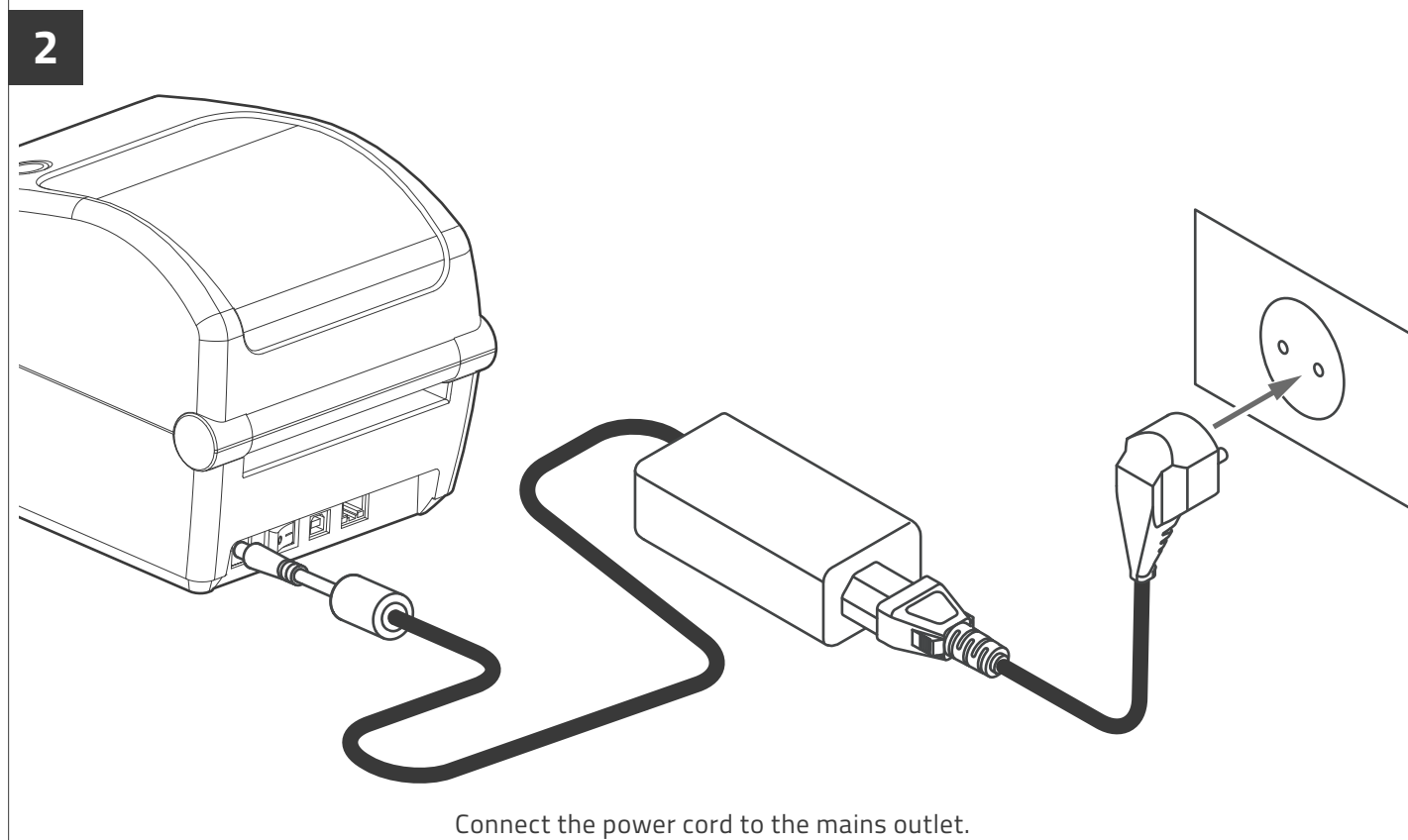
To adjust the mobile sensor position using label paper, open the device cover (see [paragraph 5.1](#)), then adjust the paper width (see [paragraph 5.2](#)) and move the sensor to central position (default setting).

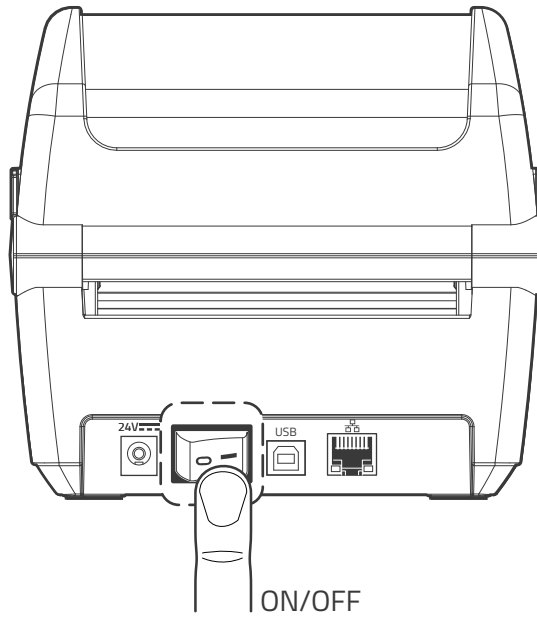


## 5.4 Switch the device ON/OFF



Connect the power supply adapter to the device and the power cord to the power supply adapter (choose the proper power cord among those provided). Use the type of electrical power supply indicated on the label.



**3**

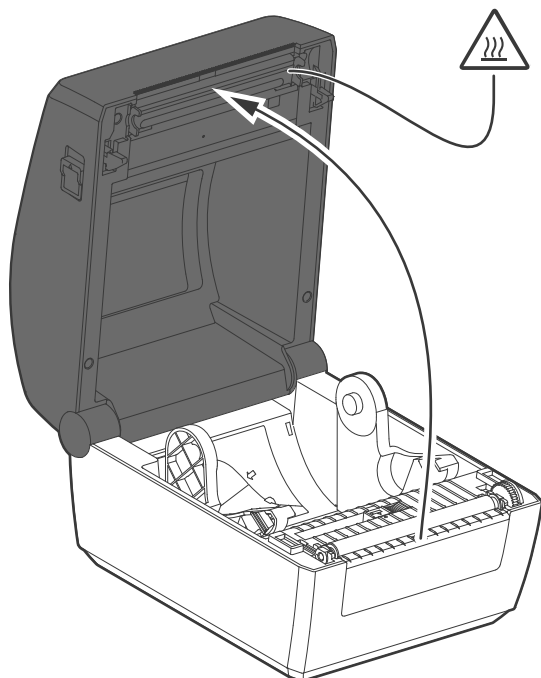
Switch device On pressing key ON/OFF. The status LED turn on and the device is ready.  
Switch device Off pressing key ON/OFF.

NOTE: Unplug the printer power cord if it is not use for a long time.

## 5.5 Loading the paper roll

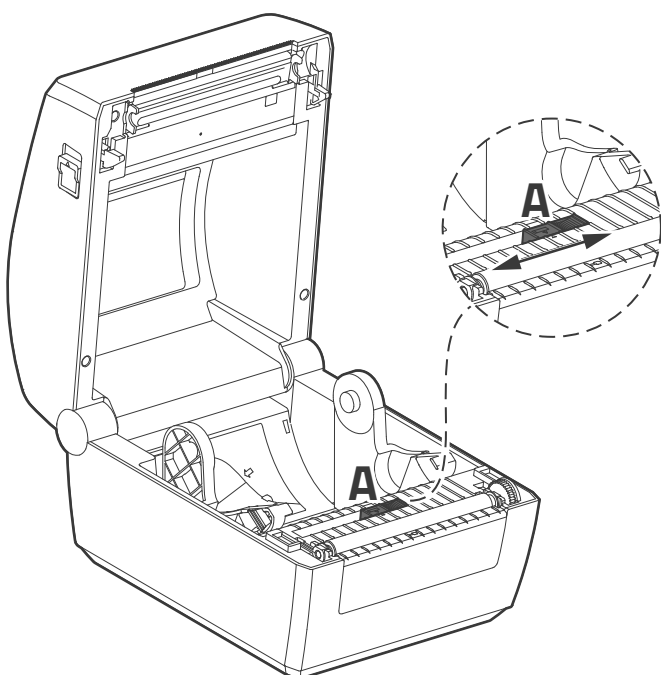
To change the paper proceed as follows. At every change of paper, check inside the device to locate and remove any scraps of paper.

1



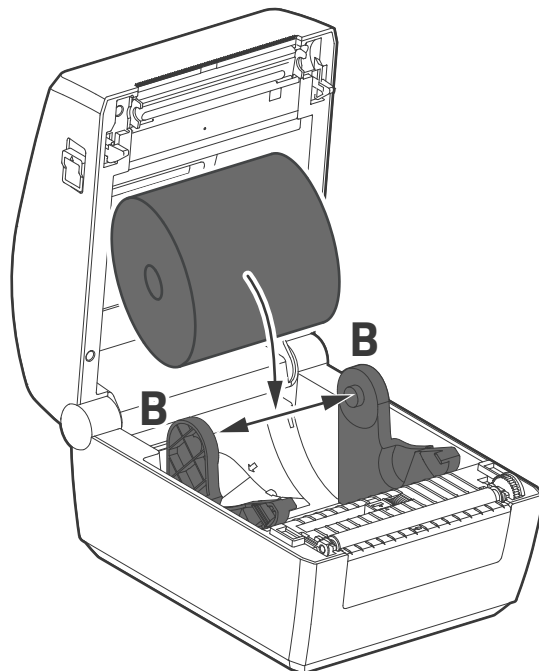
Open the device cover, and if necessary adjust the paper width (see [paragraph 5.2](#))

2



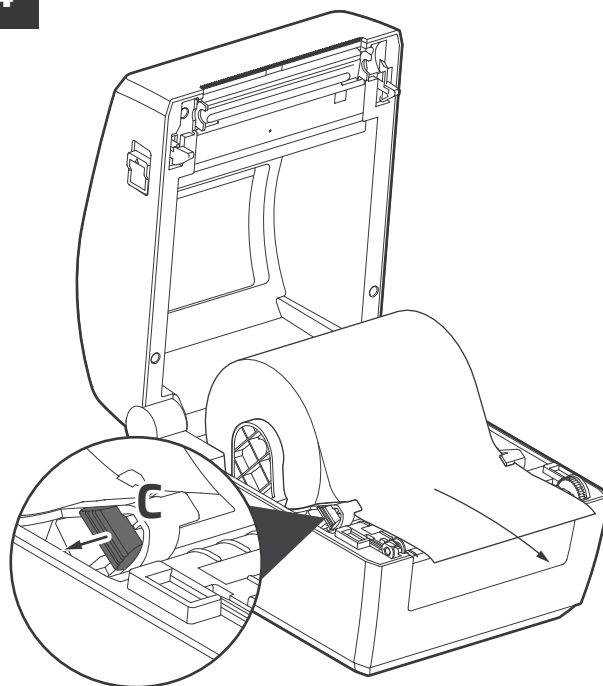
Move the mobile sensor A to the desired position according to the type of paper used (see [paragraph 5.3](#))

3



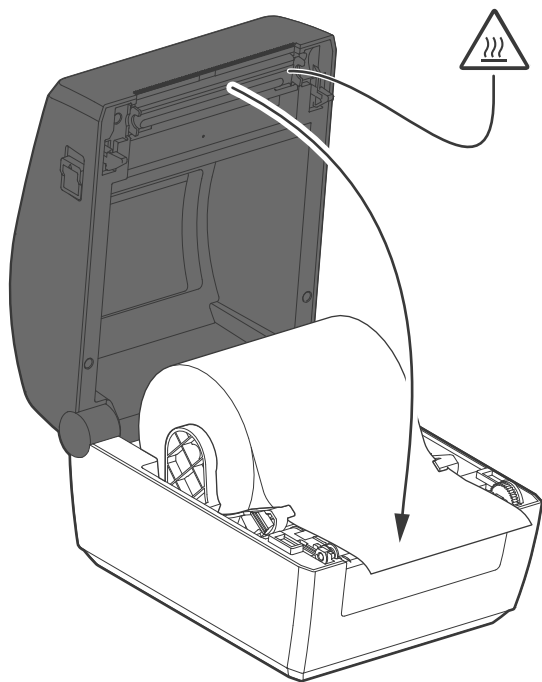
Insert the roll into the paper compartment inside the two adjustable supports B.

4



Make sure that the paper roll is tightly attached to the roll holders and press down the locking tab C. Pull out the paper for a few centimetres.

5

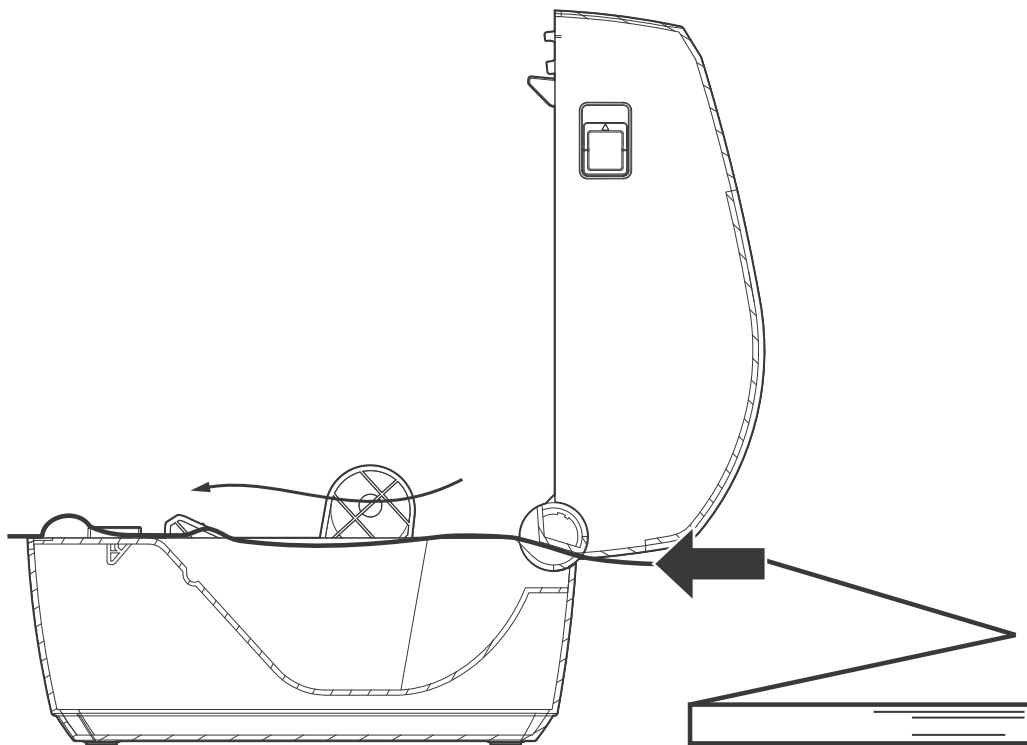


Close the device cover.

## 5.6 Loading the Fan-fold

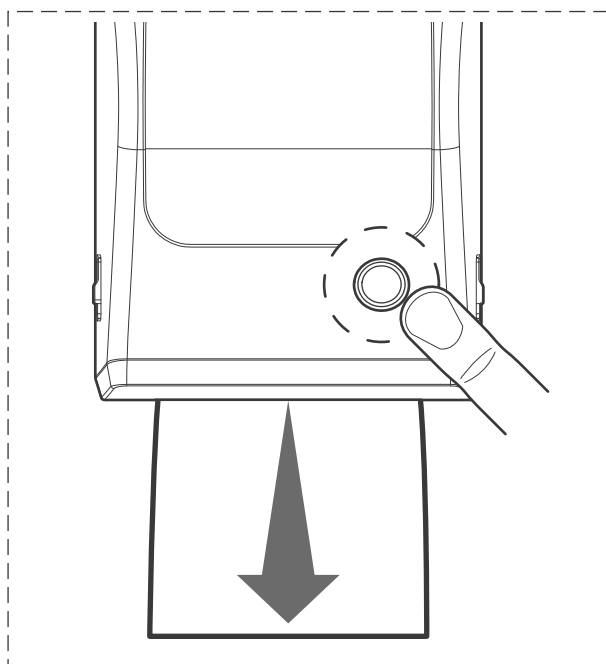
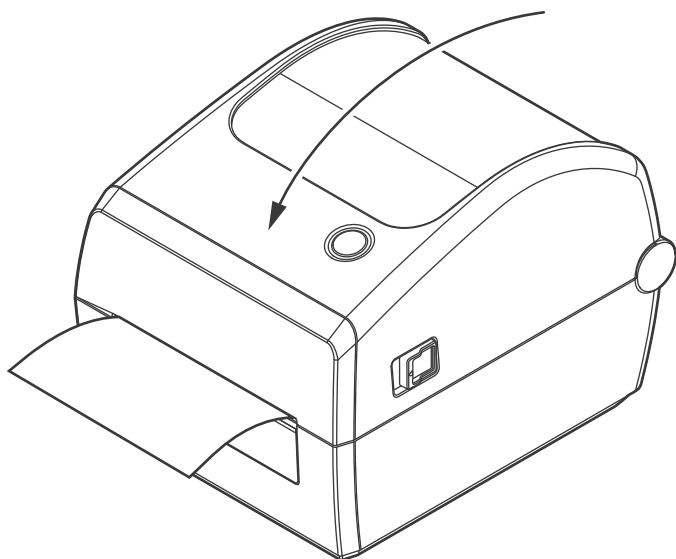
To load the Fan-fold proceed as follows. At every change of paper, check inside the device to locate and remove any scraps of paper.

1



Open the device cover (see [paragraph 5.1](#)) and insert the Fan-fold through the input slot, located on the back of the device. Pull out the paper for a few centimetres.

2



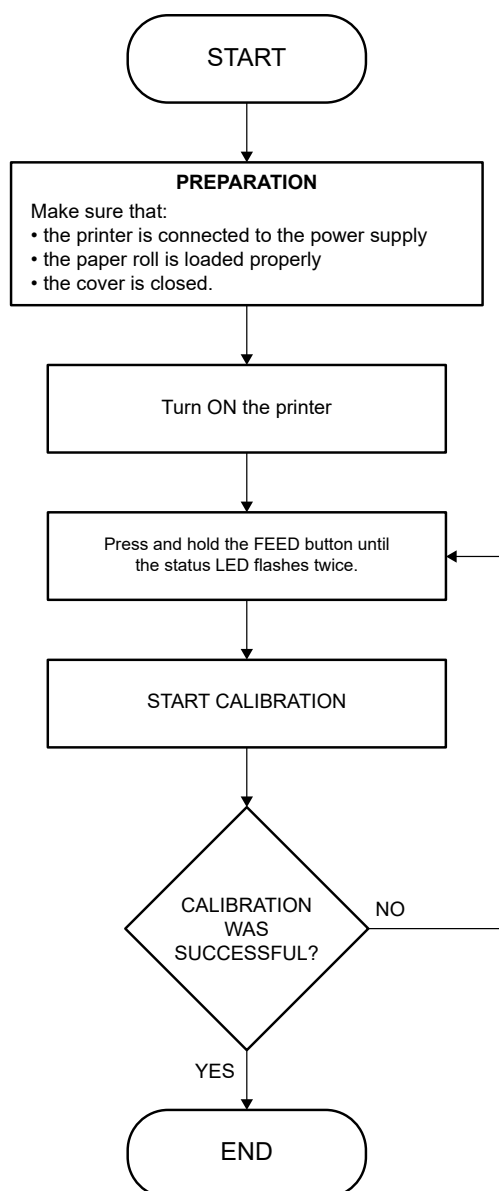
Close the device cover and proceed to calibration by pressing FEED key.

## 5.7 Paper calibration with labels

The calibration procedure is necessary:

- when using the printer for the first time;
- after cleaning the sensor;
- after a long period of inactivity;
- replacing the paper with a new type of label;
- as a result of an error in identifying the gap during printing;
- as a result of significant environmental changes.

### Manual calibration method



During calibration, the printer automatically detects the paper type.

The system gives priority to detecting the gap: if this is not detected, the printer checks for the presence of a black mark. If neither of these reference marks is present, the paper type will be automatically set to Continuous.

**NOTE:** After the learning is completed, you can reopen the printer cover and re-place the blank label paper that you have just learned in case of the cost of paper.

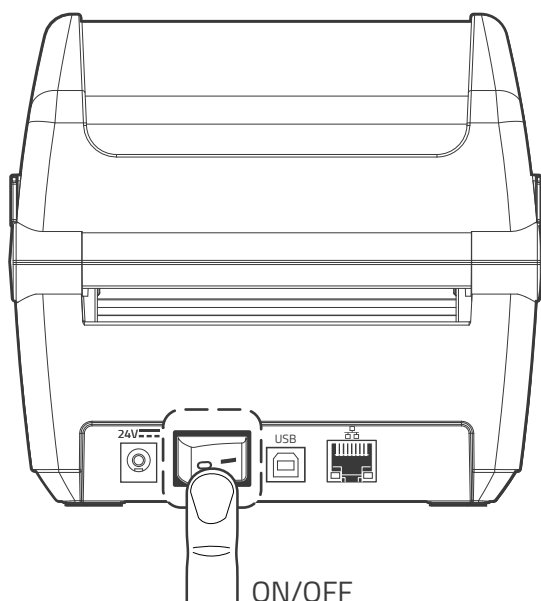
## 5.8 Bluetooth pairing with Windows devices

### D4X BT

NOTES: The windows used in this paragraph may be different from the screens that appear on the device used for printing and may vary depending on the version of the operating system.

Once that has occurred the association (pairing) between the host and printer, this remains active even in the event of switching off, interruption of communication, etc.

1



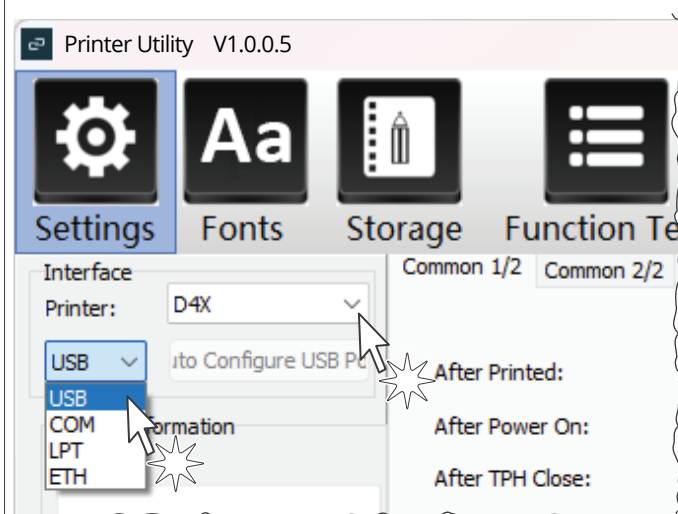
Turn ON the device (see [paragraph 5.4](#))

2



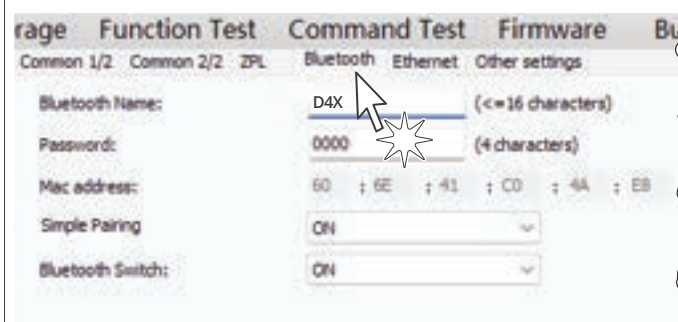
Start the "PrinterUtility" software tool.

3



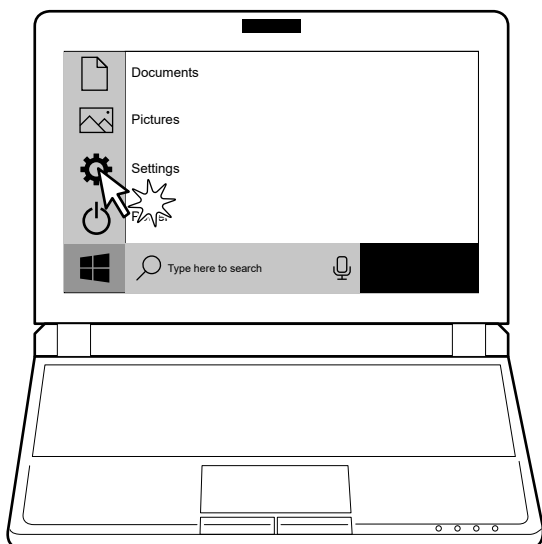
Click "Settings" and select the device connected to the PC. Set up the interface needed (range: USB, COM, LPT, ETH).

4



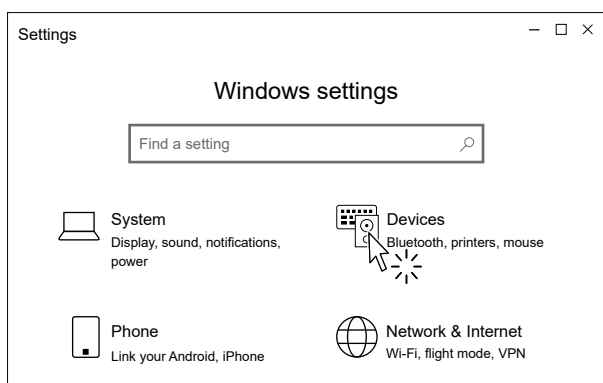
Enable the device's Bluetooth connection and set the configuration parameters (see [paragraph 6.5](#))

5



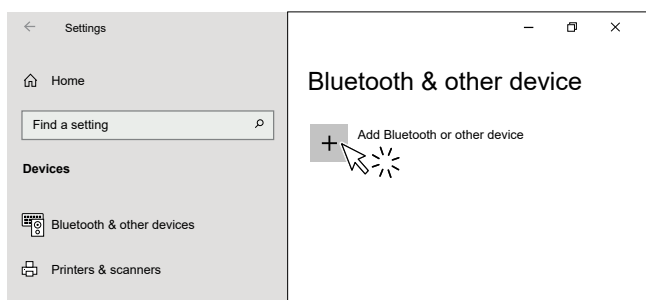
On PC taskbar click on  
Start > Settings.

6



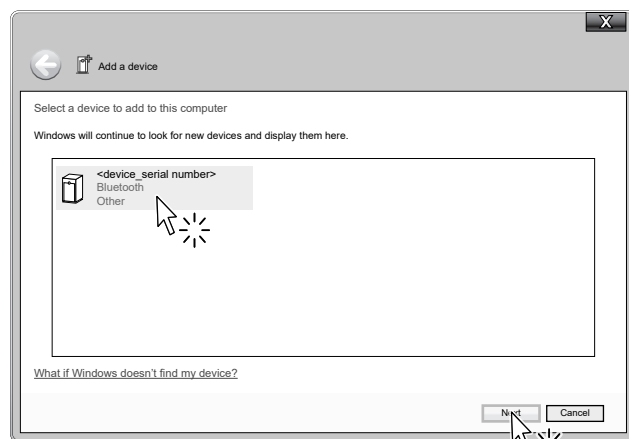
In the window that opens, click on DEVICES.

7



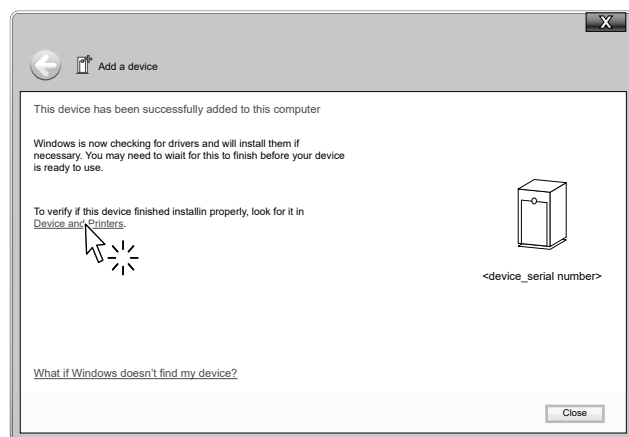
Check that bluetooth is active on PC and click on  
"ADD BLUETOOTH OR OTHER DEVICE".

8



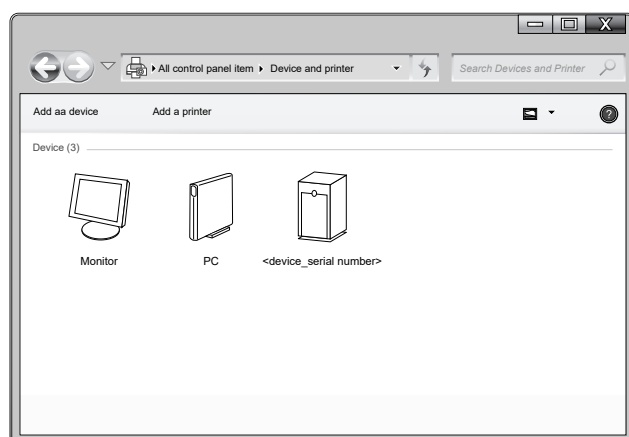
Locate your Bluetooth printer in the list of proposed  
devices (<device\_serial number>)  
and select it with a click.

9



In the confirmation message that appears,  
click DEVICE AND PRINTERS.

10



Check that your device appears in the list  
of paired devices.

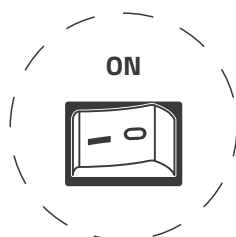


# 6 CONFIGURATION

## 6.1 Configuration by keys

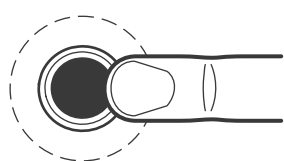
To enter the configuration mode and print a setup report with the operating parameters of the device, proceed as follows.

1

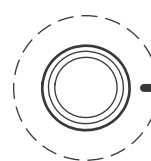


Switch on the device by pressing the ON/OFF key.

2



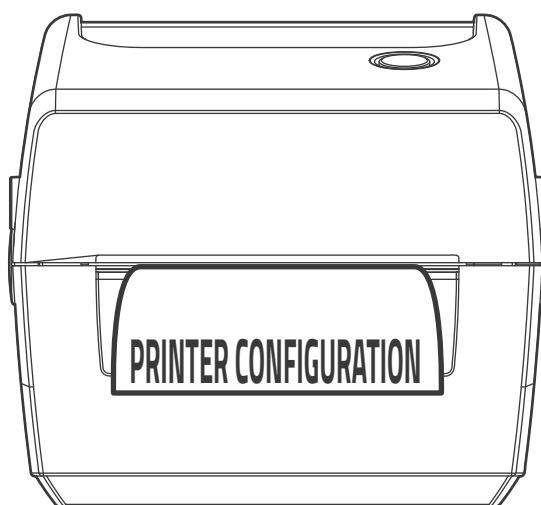
FEED  
KEY



RELEASE FEED KEY

When the device is ready, press the FEED key until the device beeps once, then release the FEED key.

3



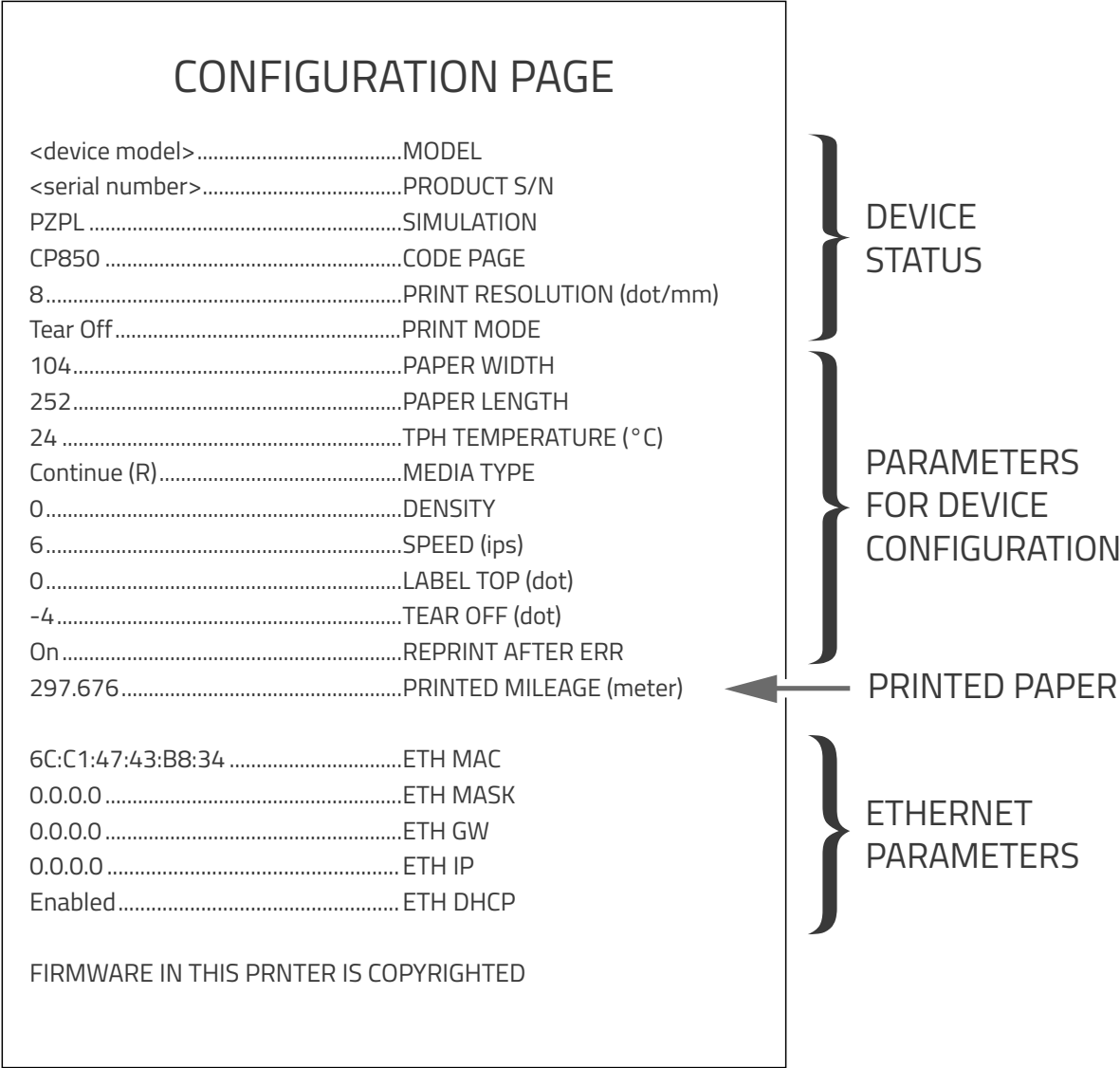
The device prints the report with configuration parameters.



The following figures shows the device configuration reports. The shown values for parameters are sample values; for a detailed description of the device operating parameters see the following paragraphs.

**NOTE:**  
To print a configuration report, make sure that the device is in the Ready state with no error messages (see [paragraph 3.6](#)). The device is connected to the power supply, the roll is loaded properly, the top cover is closed properly and the device is switched ON.

**D4X**





## CONFIGURATION PAGE

<device model>.....MODEL  
<serial number>.....PRODUCT S/N  
PZPL .....SIMULATION  
CP850 .....CODE PAGE  
8.....PRINT RESOLUTION (dot/mm)  
Tear Off.....PRINT MODE  
104.....PAPER WIDTH  
252.....PAPER LENGTH  
23 .....TPH TEMPERATURE (°C)  
Continue (R).....MEDIA TYPE  
0.....DENSITY  
6.....SPEED (ips)  
0.....LABEL TOP (dot)  
-4.....TEAR OFF (dot)  
On.....REPRINT AFTER ERR  
297.981.....PRINTED MILEAGE (meter)

}  
} DEVICE  
STATUS

}  
} PARAMETERS  
FOR DEVICE  
CONFIGURATION

← PRINTED PAPER

6C:C1:47:43:B8:34 .....ETH MAC  
0.0.0.0 .....ETH MASK  
0.0.0.0 .....ETH GW  
0.0.0.0 .....ETH IP  
Enabled.....ETH DHCP  
60:6E:4 1:C0:4A:E8 .....BT MAC  
BR8051r2403 .....BT VER  
None .....BT PWD  
D4X .....BT NAME

}  
} ETHERNET  
PARAMETERS

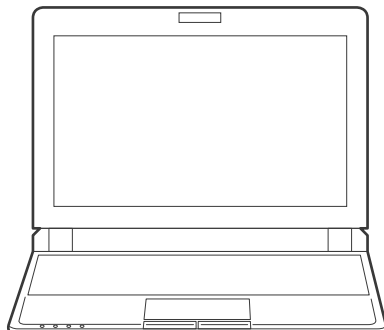
}  
} BLUETOOTH  
PARAMETERS

FIRMWARE IN THIS PRINTER IS COPYRIGHTED

## 6.2 Configuration by software

The software configuration is performed using the “Printer Utility” tool, available on [www.custom4u.it](http://www.custom4u.it) in the Utility section. To configure the device by software, proceed as follows:

1



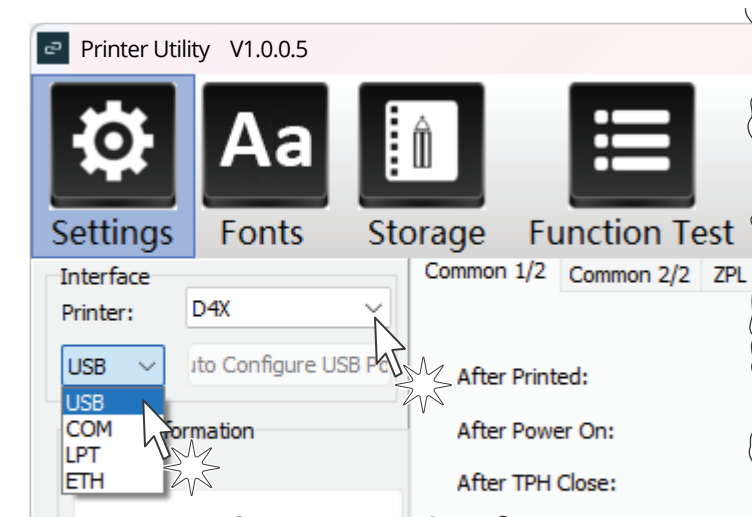
Connect the device to a PC directly (see [paragraph 4.1](#)), without using HUB devices.

2



Start the “PrinterUtility” software tool.

3



Click “Settings” and select the device connected to the PC. Set up the interface needed (range: USB, COM, LPT, ETH).

4

Print Speed:   
Density:   
Reprint When Error:

Click on "Get" to access the operating parameters of the device to be configured.

5

Common 1/2 Common 2/2 ZPL Bluetooth Ethernet Other settings

After Printed:   
After Power On:   
After TPH Close:   
Protocol:   
Paper Type:   
Sensor Select:   
Buzzer Volume:   
Maximum Length:   
Tear Off:   
Print Speed:   
Density:   
Reprint When Error:

Common 2/2 PZPL Bluetooth Ethernet Other

Label Width:   
X axis offset:   
Y axis offset:

Make the desired changes to the device operating parameters (see [paragraph 6.3](#)).

6

Print Speed:   
Density:   
Reprint When Error:

Click on "Set" to save changes to the device.



## 6.3 Operating parameters

The parameters marked with the symbol <sup>D</sup> are the default values.

Settings remain active even after the device has been turned off and they are stored in non-volatile memory.

To configure the device's operating parameters via software, start the "PrinterUtility" tool (see [paragraph 6.2](#)) and access the device's operating parameters.

|                        |                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------|
| <b>After Printed</b>   | Default print mode setting.                                                                         |
|                        | Tear Off = indicates that labels can be tear off after printing.                                    |
| <b>After Power On</b>  | Setting the device behavior at power on                                                             |
|                        | Feed = performs a paper advance (preset length).                                                    |
|                        | Calibration = performs paper calibration; set this value if using paper with black mark and labels. |
|                        | None <sup>D</sup> = set this value to perform no operations.                                        |
| <b>After TPH Close</b> | Setting the device behavior when closing the cover:                                                 |
|                        | Feed = performs a paper advance (preset length).                                                    |
|                        | Calibration = performs paper calibration; set this value if using paper with black mark and labels. |
|                        | None <sup>D</sup> = set this value to perform no operations.                                        |
| <b>Protocol</b>        | List of protocols available for the device:                                                         |
|                        | PZPL <sup>D</sup>                                                                                   |
|                        | PDPL                                                                                                |
|                        | PTSPL                                                                                               |
| <b>Paper Type</b>      | Setting the paper type of paper used:                                                               |
|                        | Continuous <sup>D</sup> = set this value if you use continuous thermal paper.                       |
|                        | Black Mark = set this value if you use thermal paper with black mark.                               |
|                        | Gap = set this value if you use label paper where the gap indicates the space between two labels.   |
| <b>Sensor Select</b>   | Setting the functioning of the paper sensor                                                         |
|                        | Auto <sup>D</sup> = set this value for automatic paper type detection.                              |
|                        | Transmissive = set this value for paper with labels.                                                |
|                        | Reflective = set this value for paper with black mark.                                              |
| <b>Buzzer Volume</b>   | Buzzer volume setting:                                                                              |
|                        | Disable = buzzer off, no noise.                                                                     |
|                        | Low = Low volume.                                                                                   |
|                        | Standard D = Standard volume.                                                                       |
|                        | Loud = Loud volume.                                                                                 |

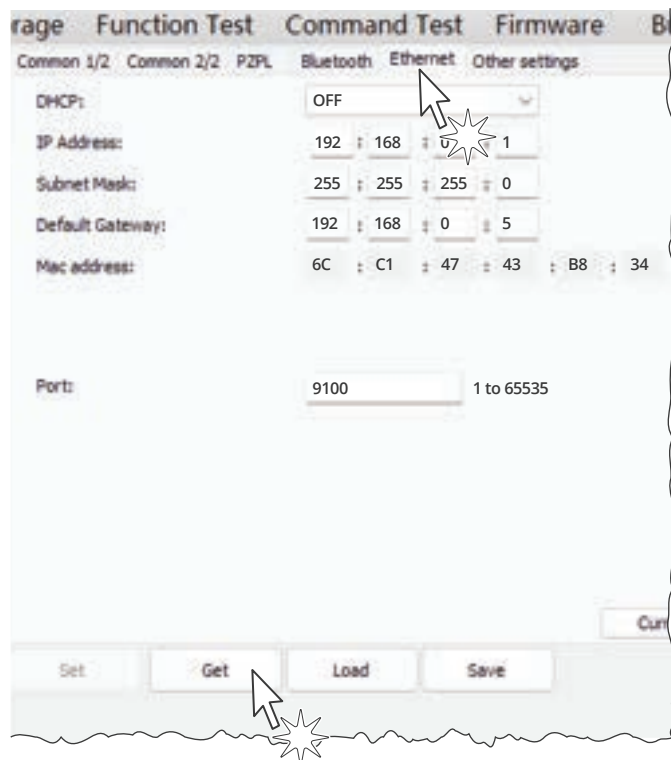


|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Length     | Setting the maximum ticket length expressed in mm.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Tear Off           | Sets the label’s offset from the tear-off line (the value is expressed in dots). The numeric value of this field is in the specified range from -80 to 500 dots.                                                                                                                                                                                                                                                                                                                |
| Print Speed        | Setting of the printing speed (expressed in ips inches per second):<br>4            7<br>5            8<br>6 <sup>D</sup>                                                                                                                                                                                                                                                                                                                                                       |
| Density            | Setting of the print density, a numeric value within the specified range from 0 to 30:<br><br>0            8            16            24<br>1            9            17            25 <sup>D</sup><br>2            10            18            26<br>3            11            19            27<br>4            12            20            28<br>5            13            21            29<br>6            14            22            30<br>7            15            23 |
| Reprint When Error | This parameter setting the device behavior if the printing is stopped when an error is generated.<br><br>ON <sup>D</sup> = reprint enabled<br>OFF = reprint disabled                                                                                                                                                                                                                                                                                                            |
| Label Width        | Setting of the label width used, expressed in mm.<br><br>The default value is the maximum width for the printer.<br>This parameter is effective when using label paper.                                                                                                                                                                                                                                                                                                         |
| X axis offset      | Setting the left margin of the label; numeric value expressed in dots within the specified range from -832 to 832 dots.<br><br>0 <sup>D</sup> =                                                                                                                                                                                                                                                                                                                                 |
| Y axis offset      | Setting the top margin of the label; numeric value expressed in dots within the specified range from -832 to 832 dots.<br><br>0 <sup>D</sup> =                                                                                                                                                                                                                                                                                                                                  |

## 6.4 Ethernet connection

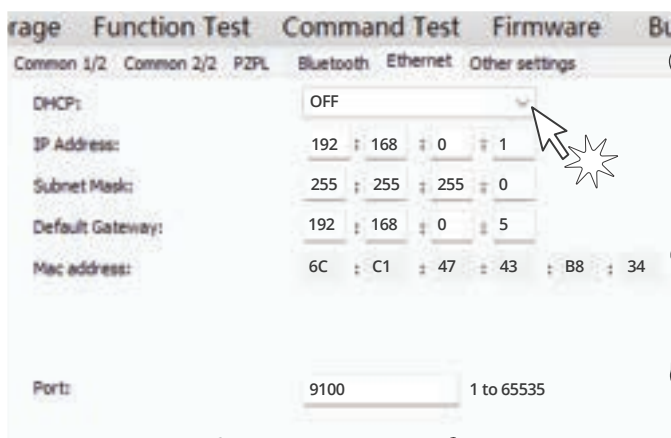
To set up the Ethernet connection, start the “PrinterUtility” tool (see [paragraph 6.2](#)) and proceed as follows:

1



Click “Ethernet” and then click GET to read the device settings.

2



Change the device's connection settings if necessary.

3



Once the configuration is complete, click on SET to save the changes.

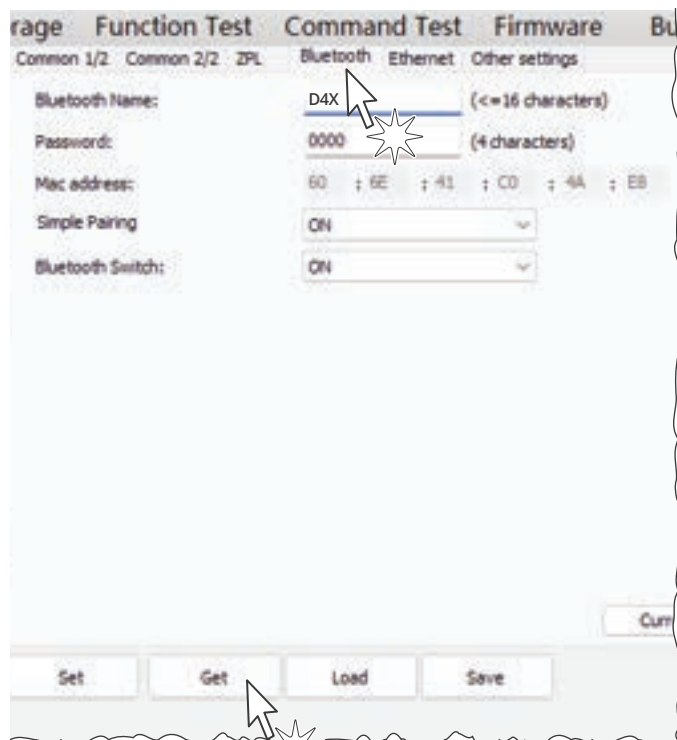
## 6.5 Bluetooth connection

### D4X BT

The Bluetooth connectivity of the printer allows the wireless printing from a PC (e.g. using a text editor or third-part software) or from a mobile device.

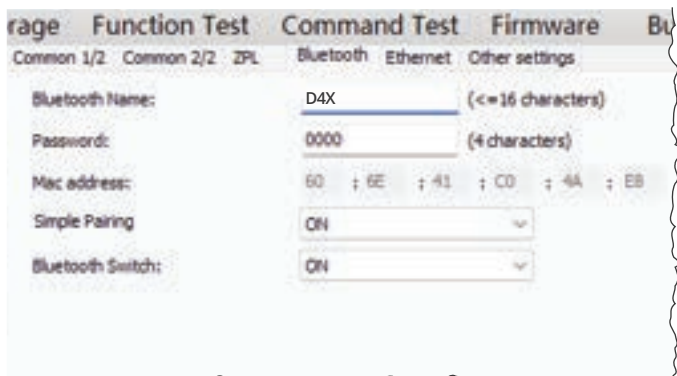
To set up the Bluetooth connection, start the "PrinterUtility" tool (see [paragraph 6.2](#)) and proceed as follows:

1



Click "Bluetooth" and then click GET to read the device settings.

2



Set the device's "Bluetooth name" and "Password" if necessary.

3



Once the configuration is completed, click on SET to save the changes.

## 6.6 Additional device information

To get up the additional information of the device, start the "PrinterUtility" tool (see [paragraph 6.2](#)) and proceed as follows:

1

Printer Utility V1.0.0.5

Settings Fonts Storage Function Test Command Test Firmware

Interface  
Printer: D4X  
USB

Printer Information  
Version: V1.0.3.04  
Serial Number: D4X00025230004  
Cutting Counter: 0  
Mileage: 58,87 m

Get Printer Information

Common 1/2 Common 2/2 ZPL Bluetooth Ethernet Other settings

After Printed:  
After Power On:  
After TPH Close:  
Protocol: AUTO  
Paper Type:  
Sensor Select:  
Buzzer Volume:  
Maximum Length:  
Tear Off:  
Print Speed:  
Density:

Firmware release  
Serial Number  
Printed paper meters

Click "Get Printer Information" to read the main information about the device.  
In particular the firmware release, the serial number and the printed paper meters are shown.

2

Printer Status  
Normal!

Reprint When Error:

Set Get Load Save

Get Status

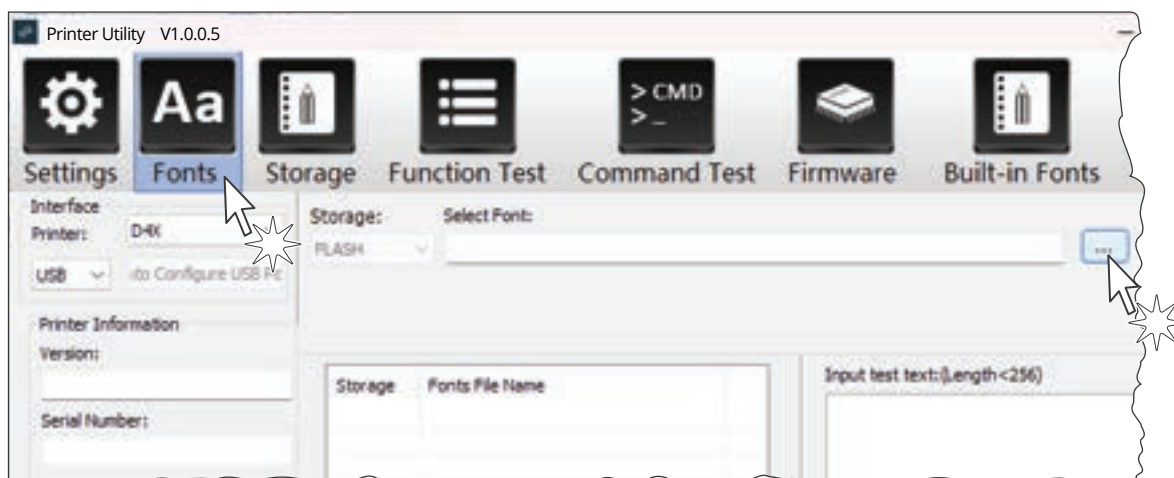
Device status

Click "Get Status" to view the device's operating status.  
In case of malfunction, the error will be reported in the text box.

## 6.7 Device fonts

To manage the fonts present on the device, start the “PrinterUtility” tool (see [paragraph 6.2](#)) and proceed as follows:

1



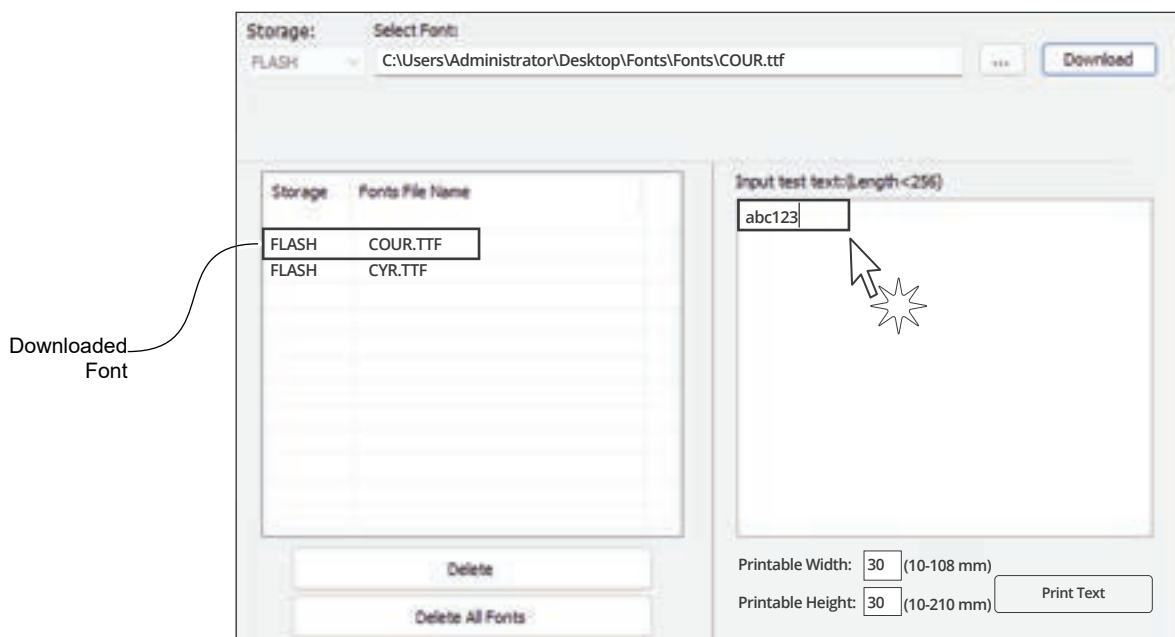
Click “Fonts” to enter the device's font management.  
Click “Select Font” to access the Fonts folder.

2



Click “Download” to load font into your device.

3

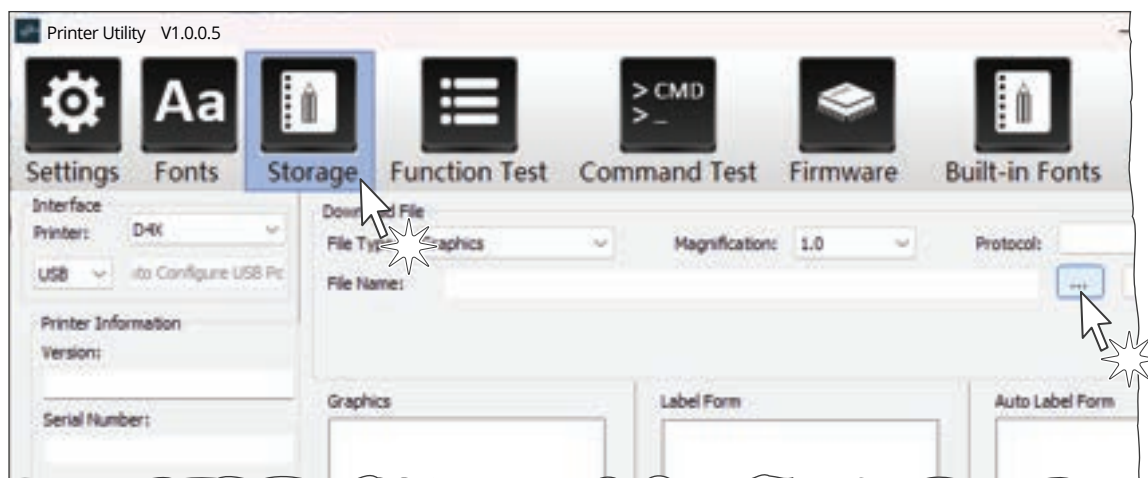


Select the downloaded font file, enter the print content in the text box, and click “Print Text”.

## 6.8 Device images

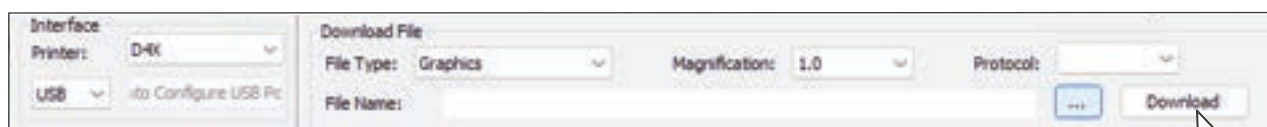
To manage the images present on the device, start the “PrinterUtility” tool (see [paragraph 6.2](#)) and proceed as follows:

1



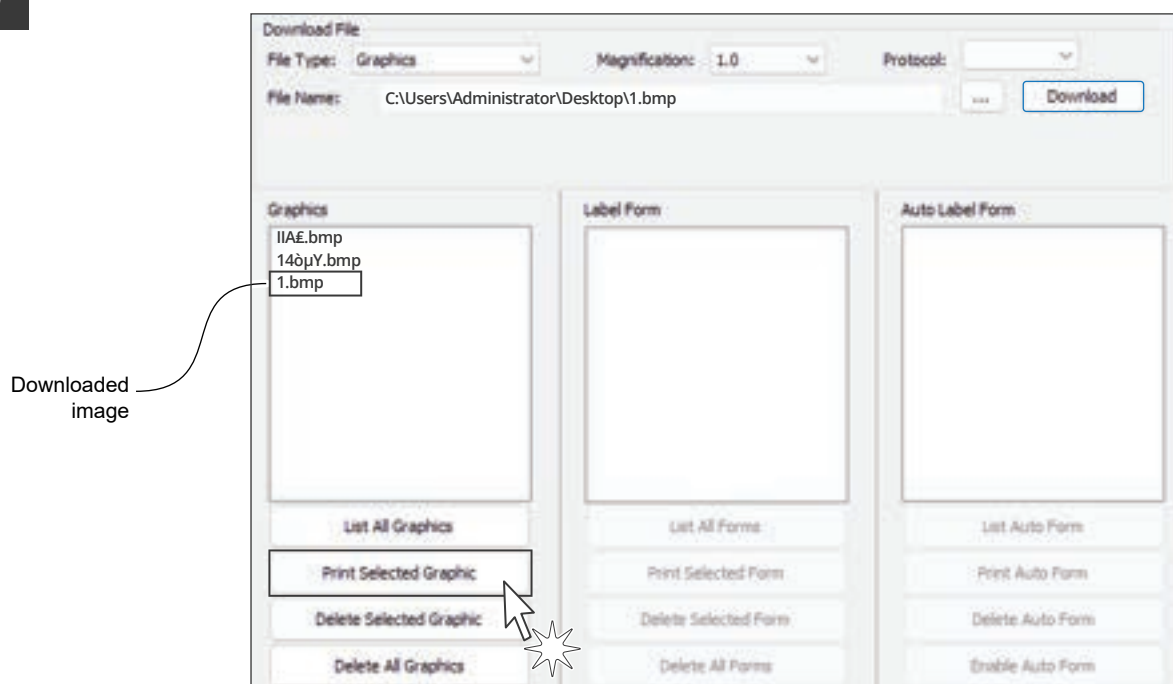
Click “Storage” to enter the device images.  
Click “File Name” to access the images folder.

2



Click “Download” to load image into your device.

3



Downloaded image

Select the downloaded image, and then  
click “Print selected Graphic” to print the picture.

## 6.9 Device status

The device operating status is indicated in the configuration print-out in which, next to the name of the components displayed, the following information is given:

|                         |                                              |
|-------------------------|----------------------------------------------|
| <b>MODEL</b>            | device model                                 |
| <b>PRODUCT S/N</b>      | serial number                                |
| <b>SIMULATION</b>       | reference to the emulation used              |
| <b>CODE PAGE</b>        | identifier of the character code table used. |
| <b>PRINT RESOLUTION</b> | print resolution value expressed in dots/mm  |
| <b>PRINT MODE</b>       | reference to the Print Mode set              |

**NOTE:**

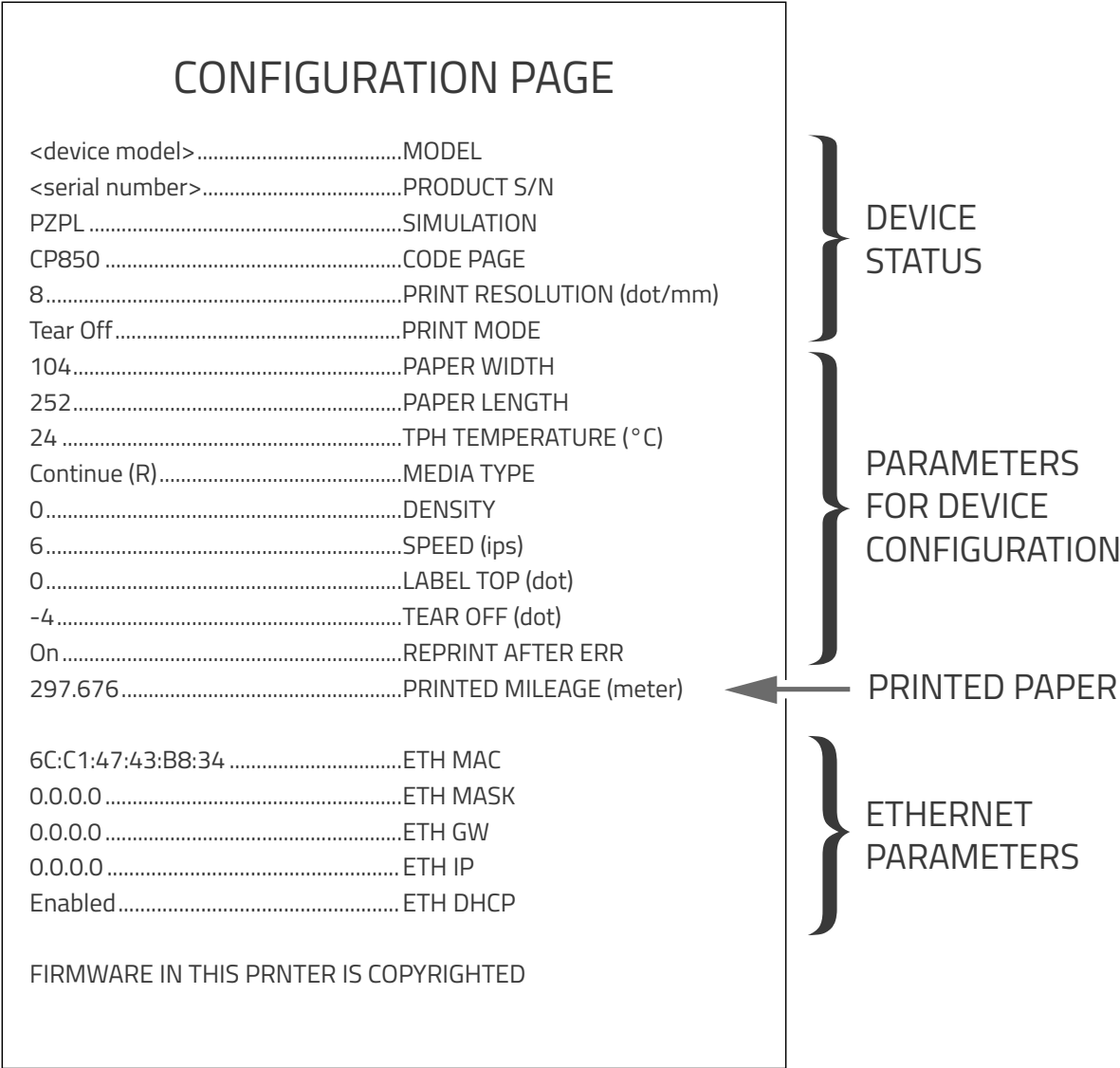
To print a configuration report, make sure that:

- the printer is in the Ready state with no error messages (see [paragraph 3.6](#));
- the device is connected to the power supply and the printer is turned on;
- the roll is loaded correctly;
- the top cover is closed properly.



The following figures show the device configuration reports. The shown values for parameters are sample values.

**D4X**





## CONFIGURATION PAGE

<device model>.....MODEL  
<serial number>.....PRODUCT S/N  
PZPL .....SIMULATION  
CP850 .....CODE PAGE  
8.....PRINT RESOLUTION (dot/mm)  
Tear Off.....PRINT MODE  
104.....PAPER WIDTH  
252.....PAPER LENGTH  
23 .....TPH TEMPERATURE (°C)  
Continue (R).....MEDIA TYPE  
0.....DENSITY  
6.....SPEED (ips)  
0.....LABEL TOP (dot)  
-4.....TEAR OFF (dot)  
On.....REPRINT AFTER ERR  
297.981.....PRINTED MILEAGE (meter)

DEVICE  
STATUS

PARAMETERS  
FOR DEVICE  
CONFIGURATION

PRINTED PAPER

6C:C1:47:43:B8:34 .....ETH MAC  
0.0.0.0 .....ETH MASK  
0.0.0.0 .....ETH GW  
0.0.0.0 .....ETH IP  
Enabled.....ETH DHCP  
60:6E:41:C0:4A:E8 .....BT MAC  
BR8051r2403 .....BT VER  
None .....BT PWD  
D4X .....BT NAME

ETHERNET  
PARAMETERS

BLUETOOTH  
PARAMETERS

FIRMWARE IN THIS PRINTER IS COPYRIGHTED



## 6.10 Dump Mode

This function is used to check the connection between the printer and its host computer or device.

When the printer is in diagnostic mode, it prints all data received from the host computer as ASCII characters, with the corresponding hexadecimal values printed next to the ASCII text. The printer prints all received characters, including control codes such as CR (carriage return).

To enter in this diagnostic printing mode, use the ~JD command to activate it and the ~JE command to deactivate it (see commands manual of the device).

The execution of this diagnostic test produces an ASCII printout (using the current label length and the full printer width) of all characters received by the printer. This printout includes the ASCII characters, the HEX value, and any communication errors. Below is an example of a Dump Mode printout.

```
Now in DUMP
Press Enter key to Exit

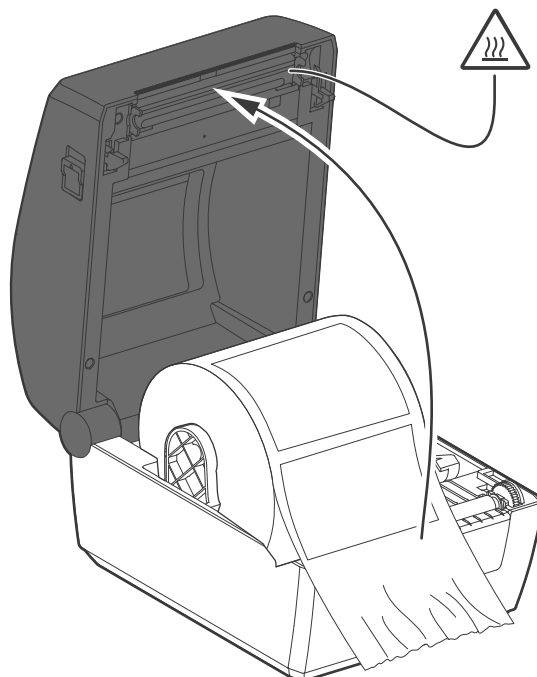
^ X A ^ F D C I A O 5e 58 41 5e 46 44 43 49 41 4f
^ F S ^ X Z ^ X A ^ 5e 46 53 5e 58 5a 5e 58 41 5e
F D C I A O ^ F S ^ 46 44 43 49 41 4f 5e 46 53 5e
X Z ^ X A ^ F D C I 58 5a 5e 58 41 5e 46 44 43 49
A O ^ F S ^ X Z ^ X 41 4f 5e 46 53 5e 58 5a 5e 58
A ^ F D C I A O ^ F 41 5e 46 44 43 49 41 4f 5e 46
S ^ X Z 53 5e 58 5a

Out of DUMP
```

## 7 MAINTENANCE

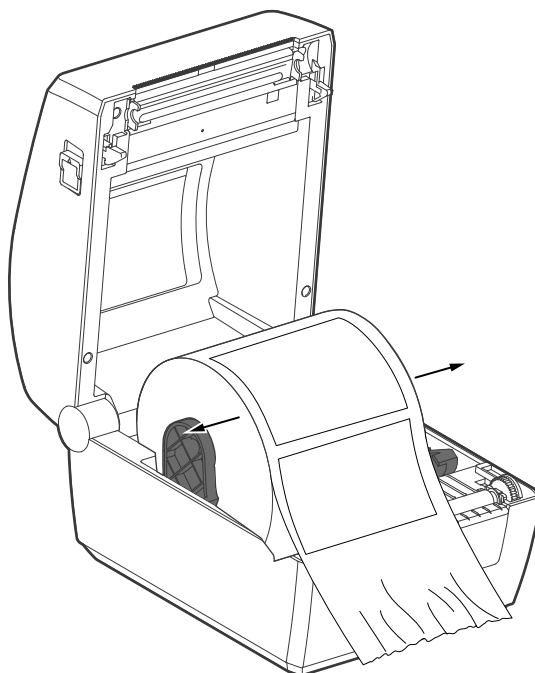
### 7.1 Device paper jam

1



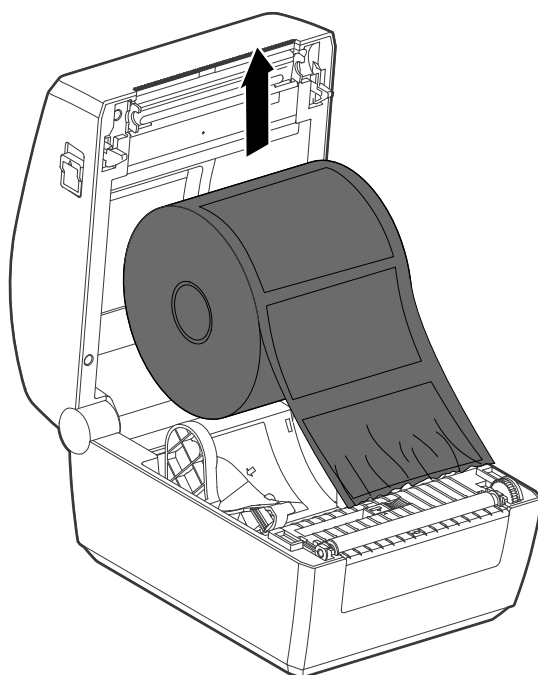
Open the device paper compartment cover  
(see [paragraph 5.1](#))

2



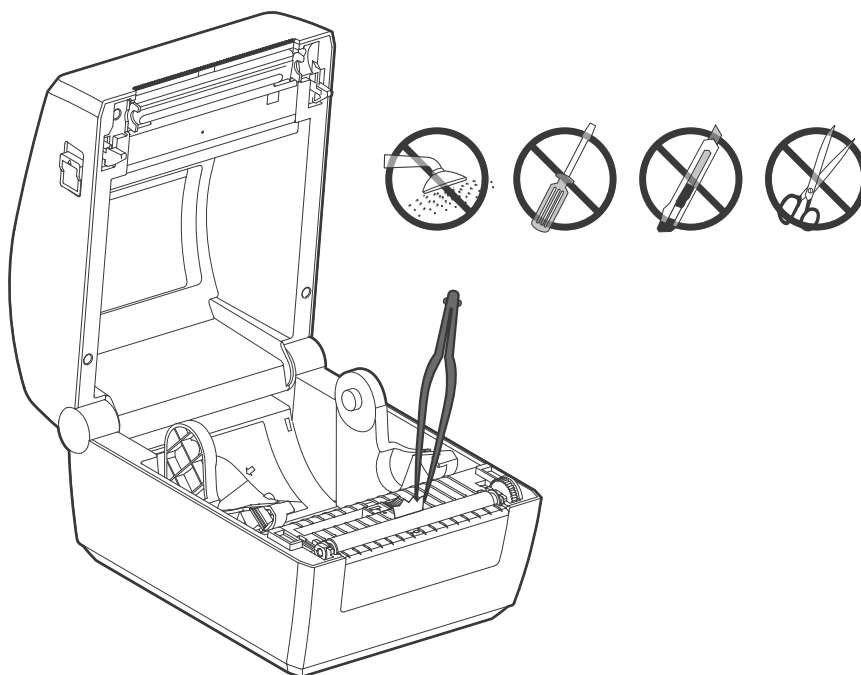
Widen the paper roll holders.

3



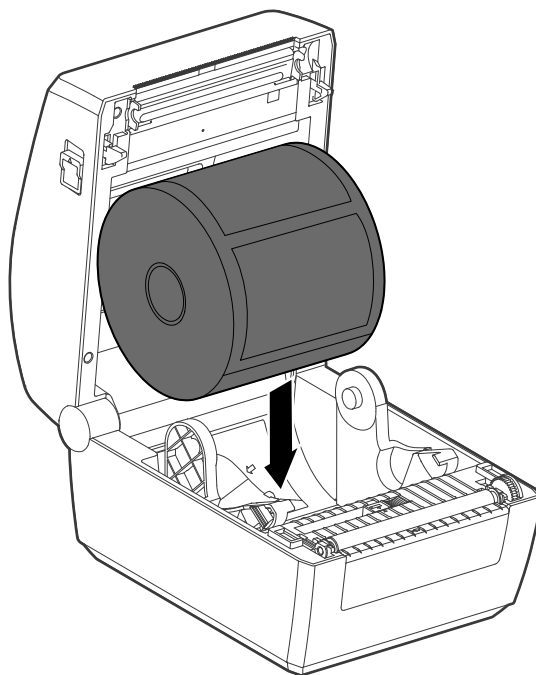
Remove the paper roll keeping the roll holders widened.

4



Remove the damaged paper and check the presence for paper scraps inside the device.  
Carefully remove all paper scraps. If necessary use tweezers.

5



Insert the paper roll  
(see [paragraph 5.5](#))



## 7.2 Planning of cleaning operations

The regular cleaning of the device keeps the print quality and extends its life.  
The following table shows the recommended planning for the cleaning operations. If you use the device in dusty environments, you must reduce intervals between cleaning operations.

For specific procedures, see the following pages.

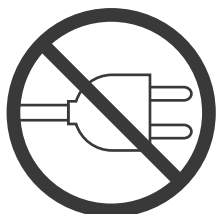
|                             |                                    |
|-----------------------------|------------------------------------|
| EVERY PAPER CHANGE          |                                    |
| Printhead                   | Use isopropyl alcohol              |
| Platen roller               |                                    |
| Use isopropyl alcohol       |                                    |
| EVERY 5 PAPER CHANGES       |                                    |
| Paper path                  | Use compressed air or tweezers     |
| Sensors                     | Use compressed air                 |
| EVERY 6 MONTHS OR AS NEEDED |                                    |
| Chassis, Glossy surfaces    | Use compressed air or a soft cloth |

## 7.3 Cleaning

For periodic cleaning of the device, see the instructions below

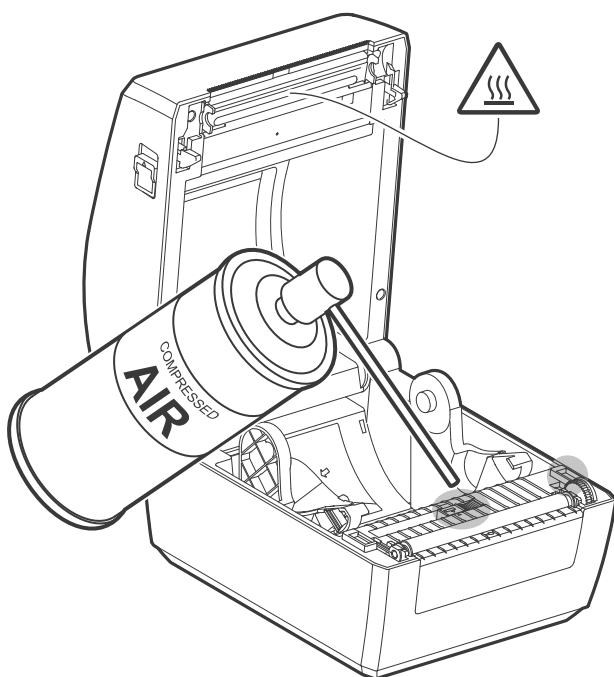
### Sensors

1



Switch device Off pressing key ON/OFF and disconnect the power supply cable.  
Open the device cover (see [paragraph 5.1](#)).

2



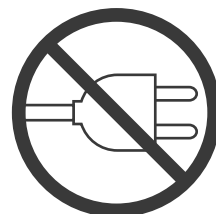
**ATTENTION:**  
Do not use alcohol, solvents, or hard brushes.  
Do not let water or other liquids get inside the machine.  
To remove paper scraps, use tweezers or compressed air.



Clean the device sensors  
by using compressed air.

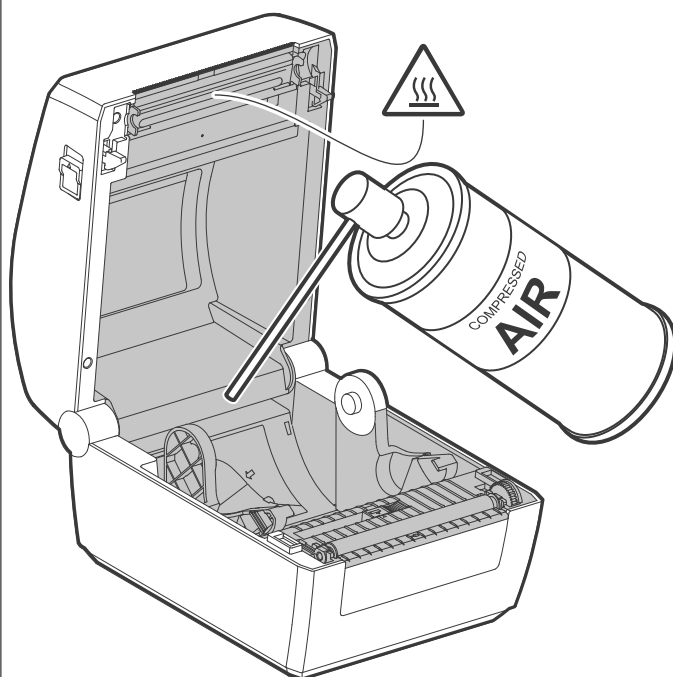
### Paper path

1



Switch device Off pressing key ON/OFF and disconnect the power supply cable.  
Open the device cover (see [paragraph 5.1](#)).

2



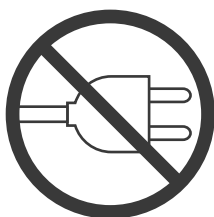
**ATTENTION:**  
Do not use alcohol, solvents, or hard brushes.  
Do not let water or other liquids get inside the machine.  
To remove paper scraps, use tweezers or compressed air.



Clean the area involved in the passage of paper  
by using compressed air.

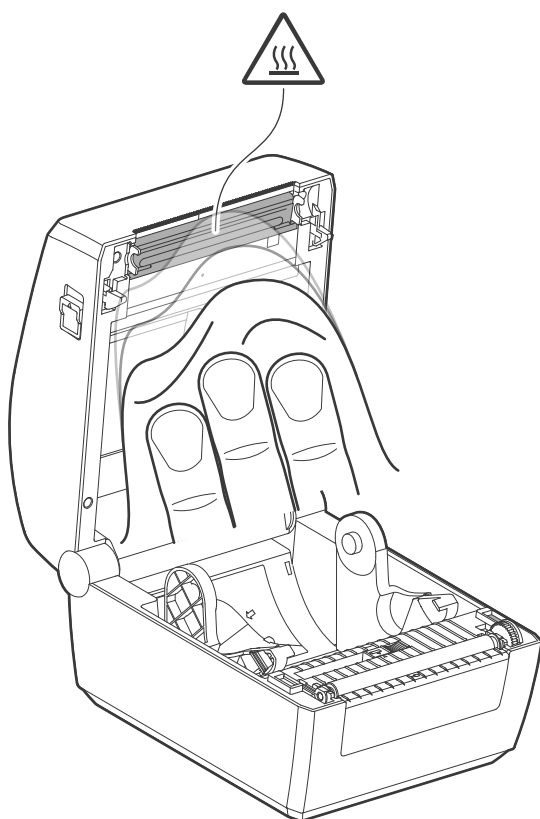
## Printhead

1



Switch device Off pressing key ON/OFF and disconnect the power supply cable.  
Open the device cover (see [paragraph 5.1](#)).

2



### ATTENTION:

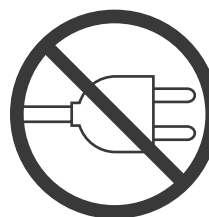
Do not use alcohol, solvents, or hard brushes.  
Do not let water or other liquids get inside the machine.  
To remove paper scraps, use tweezers or compressed air.



Clean the printing head by using  
a non-abrasive cloth moistened with isopropyl.

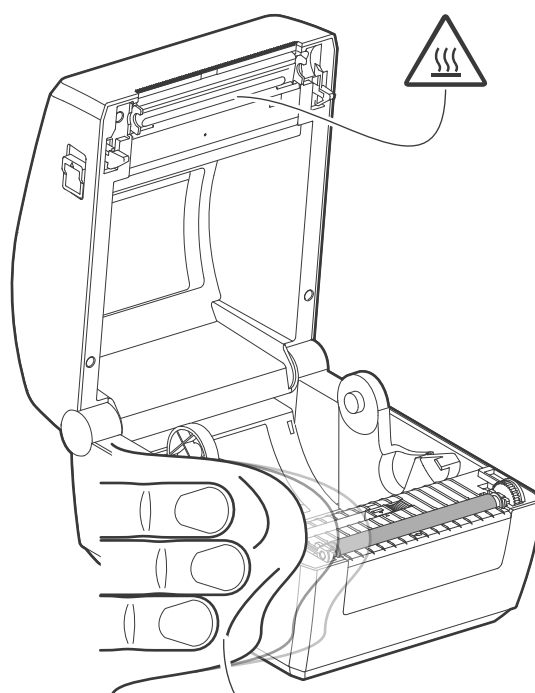
## Platen roller

1



Switch device Off pressing key ON/OFF and disconnect the power supply cable.  
Open the device cover (see [paragraph 5.1](#)).

2



ISOPROPYL ALCOHOL

### ATTENTION:

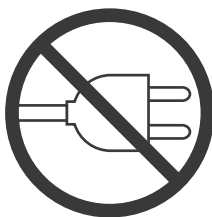
Do not use alcohol, solvents, or hard brushes.  
Do not let water or other liquids get inside the machine.  
To remove paper scraps, use tweezers or compressed air.



Clean the platen roller by using  
a non-abrasive cloth moistened with isopropyl.

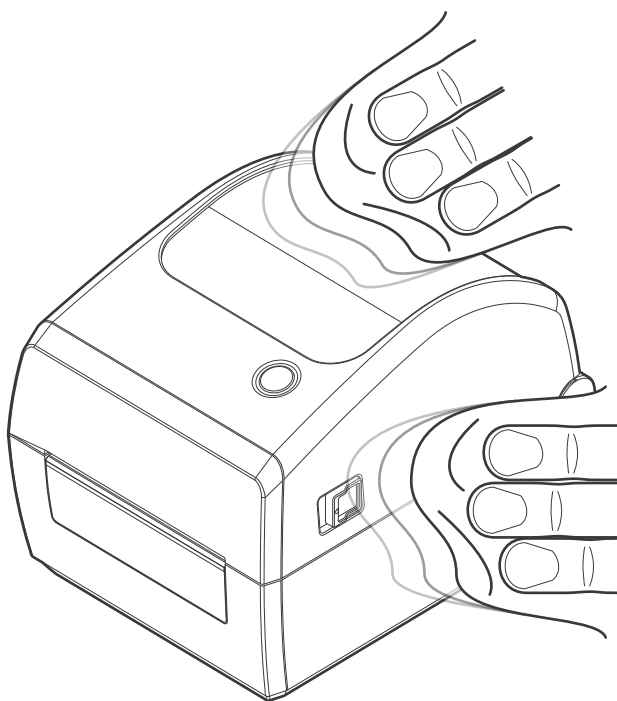
## Chassis, Glossy surfaces

1



Switch device Off pressing key ON/OFF and disconnect the power supply cable.

2



### ATTENTION:

Do not use alcohol, solvents, or hard brushes.

Do not let water or other liquids get inside the machine.



To clean the device,  
use compressed air or a soft cloth.





## 8 SPECIFICATIONS

### 8.1 Hardware specifications

| GENERALS                                 |                                                                                                                                                                    |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensors                                  | Head temperature, paper presence,<br>paper presence on output, mobile detector of black mark<br>or translucent gap/hole (setting by software),<br>Head open sensor |
| Protocols                                | PZPL II<br>PDPL<br>PEPL                                                                                                                                            |
| Printing driver                          | Windows 10 (32/64 bit)<br>Windows 11 (64 bit)<br>Linux<br>iOS                                                                                                      |
| INTERFACES                               |                                                                                                                                                                    |
| USB port                                 | USB 2.0 (standard type B connector)                                                                                                                                |
| Ethernet port                            | 10 Mbit/s, 100 Mbit/s                                                                                                                                              |
| Bluetooth module (only for D4X BT model) | Bluetooth 5.2/LE (Factory option)                                                                                                                                  |
| MEMORIES                                 |                                                                                                                                                                    |
| Flash memory                             | 128 MB                                                                                                                                                             |
| RAM memory                               | 32 MB                                                                                                                                                              |
| PRINTER                                  |                                                                                                                                                                    |
| Resolution                               | 203 dpi (8 dot/mm)                                                                                                                                                 |
| Printing method                          | Thermal, fixed head                                                                                                                                                |
| Head life <sup>(1)</sup>                 |                                                                                                                                                                    |
| Abrasion resistance <sup>(2)</sup>       | 150 km (with recommended paper, printing rate: 12.5%)                                                                                                              |



|                                              |                                                                                                                                                                             |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pulse durability                             | 100 M (referred to each dot)                                                                                                                                                |
| Printing width                               | from 25.4 mm to 104 mm                                                                                                                                                      |
| Printing mode                                | Normal, 90°, 180°, 270°                                                                                                                                                     |
| Resident fonts                               |                                                                                                                                                                             |
| Bitmap Fonts                                 | 6, 8, 12, 16, 32, OCR A e B. Ruotabili di 90°, 180°, 270° rotatable and 10 times expandable in horizontal and vertical directions                                           |
| TTF Fonts                                    | Monotype CG Triumvirate™, Simplified chinese, Traditional chinese                                                                                                           |
| Printable barcode                            |                                                                                                                                                                             |
| 1D                                           | CODABAR, CODE 39, CODE 93, Code 128UCC, Code 128 subset A, B, C, Interleave 2 of 5, EAN-8, EAN-13, EAN-128, UPC-A, UPC-E, EAN and UPC 2 (5) DIGITS ADD-ON, MSI, GS1 DATABAR |
| 2D                                           | PDF417, MAXICODE, DATAMATRIX, AZTEC, QR CODE                                                                                                                                |
| Graphic formats                              | PCX, BMP                                                                                                                                                                    |
| Printing speed <sup>(1)</sup> <sup>(3)</sup> | max 200 mm/s                                                                                                                                                                |
| PAPER                                        |                                                                                                                                                                             |
| Type of paper                                | Thermal rolls, heat-sensitive side on outside of roll, Fan-fold                                                                                                             |
| Paper width                                  | from 25.4 mm to 118 mm                                                                                                                                                      |
| Paper weight                                 | from 40 g/m <sup>2</sup> to 116 g/m <sup>2</sup>                                                                                                                            |
| Paper thickness                              | from 60 µm to 250 µm                                                                                                                                                        |
| Recommended types of paper                   | KANZAN KP410, KANZAN KLS46<br>MITSUBISHI PF5067, MITSUBISHI TL3000<br>MITSUBISHI TF7067, KANZAKI Lotto 500<br>RICOH 140GA, APPVION Alpha Plus 600-3.2                       |
| External roll diameter                       | max. 127 mm                                                                                                                                                                 |



|                             |                           |
|-----------------------------|---------------------------|
| External roll core diameter | from 12.7 mm to 25.4 mm)  |
| Core thickness              | 2 mm (+1 mm)              |
| Paper end                   | Not attached to roll core |
| Core type                   | Cardboard or plastic      |

#### LABELS

|                             |                                                             |
|-----------------------------|-------------------------------------------------------------|
| Tipo di carta               | Thermal paper rolls, heat-sensitive side on outside of roll |
| Paper width                 | from 25.4 mm to 118 mm                                      |
| Paper weight                | from 40 g/m <sup>2</sup> to 116 g/m <sup>2</sup>            |
| External roll diameter      | max. 127 mm                                                 |
| External roll core diameter | from 25 mm                                                  |
| Core thickness              | 2 mm (+1 mm)                                                |
| Paper end                   | Not attached to roll core                                   |
| Core type                   | Cardboard or plastic                                        |

#### PRINTER ELECTRICAL SPECIFICATIONS

|                                     |                                                   |
|-------------------------------------|---------------------------------------------------|
| Power supply                        | 24 Vdc $\pm$ 10% (optional external power supply) |
| Medium consumption <sup>(4)</sup>   | 2.5 A                                             |
| Typical. consumption <sup>(3)</sup> | 2.5 A                                             |
| Standby consumption                 | 0.1 A                                             |

#### ELECTRICAL SPECIFICATIONS POWER SUPPLY

|                      |                         |
|----------------------|-------------------------|
| Power supply voltage | from 100 Vac to 240 Vac |
| Frequency            | from 50 Hz to 60 Hz     |



|        |           |
|--------|-----------|
| Output | 24 V, 2 A |
|--------|-----------|

|       |      |
|-------|------|
| Power | 48 W |
|-------|------|

#### ENVIRONMENTAL CONDITIONS

|                       |                     |
|-----------------------|---------------------|
| Operating temperature | from 5 °C to +40 °C |
|-----------------------|---------------------|

|                        |                                    |
|------------------------|------------------------------------|
| Relative humidity (RH) | from 25% to 85% (w/o condensation) |
|------------------------|------------------------------------|

|                     |                       |
|---------------------|-----------------------|
| Storage temperature | from -20 °C to +50 °C |
|---------------------|-----------------------|

|                                |                                    |
|--------------------------------|------------------------------------|
| Storage relative humidity (RH) | from 25% to 85% (w/o condensation) |
|--------------------------------|------------------------------------|

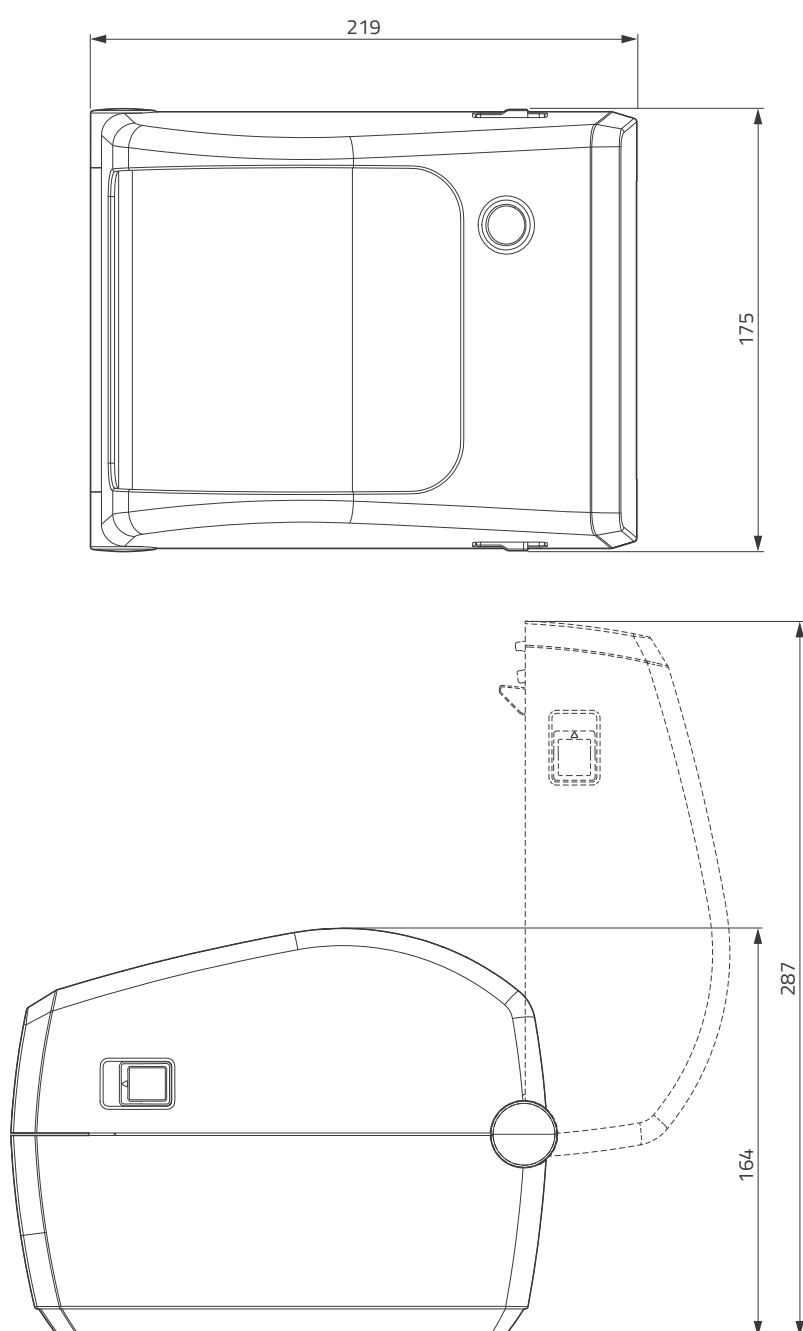
#### NOTES:

- (1) : Respecting the regular schedule of cleaning for the device components.
- (2) : Damages caused by scratches, ESD and electromigration are excluded.
- (3) : Referred to a standard CUSTOM receipt (L=10 cm, Density = 12.5% dots on).
- (4) : Referred to the UL measurements.

## 8.2 Device dimensions

|        |                                                        |
|--------|--------------------------------------------------------|
| Length | 175 mm                                                 |
| Height | 164 mm (with cover closed)<br>287 mm (with cover open) |
| Width  | 219 mm                                                 |
| Weight | 1650 g (without paper roll)                            |

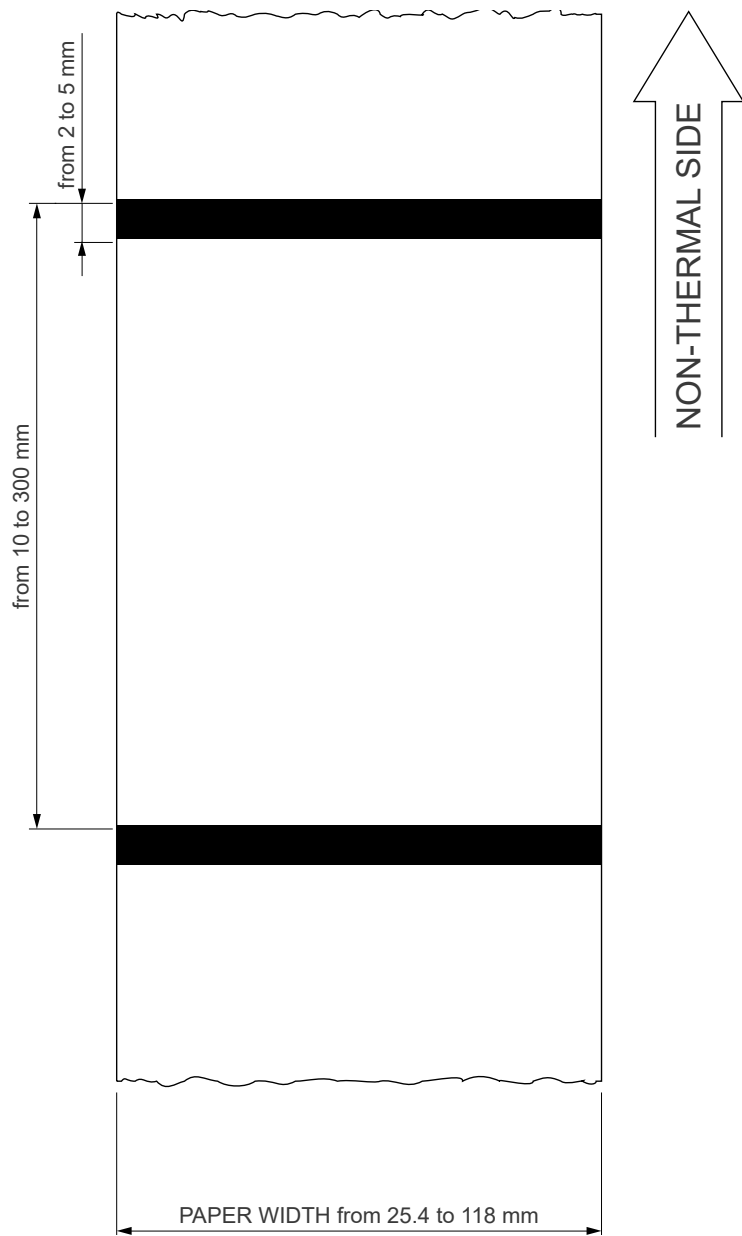
All the dimensions shown in following figures are in millimetres.



### 8.3 Paper specification

**Paper with black mark on the non thermal side**

The following image shows the placement of the black mark on the non thermal side of the paper.  
 For more information about the use of paper with black mark see [paragraph 5.3](#).  
 All the dimensions shown in following figure are in millimetres.





## 9 TECHNICAL SERVICE

In case of failure, contact the technical service accessing the website [www.custom4u.it](http://www.custom4u.it) and using the support tools on the homepage. It is advisable to keep the identification data of the product at hand.

The product code, the serial number and the hardware release number can be found on the product label (see [paragraph 3.3](#)).



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