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USER MANUAL

TPTCM60III
TPTCM60IIIL
TPTCM112III
TPTCM112IIIL

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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.

CE

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 2006/95/CE and 2004/108/CE inasmuch as it was designed in conformity with the provisions laid down in the following Standards:

- EN 55022 Class B *(Limits and methods of measurements of radio disturbance characteristics of Information Technology Equipment)*
- EN 55024 *(Information Technology Equipment – Immunity characteristics – Limits and methods of measurement)*
- EN 60950-1 *(Safety of information equipment including electrical business equipment)*

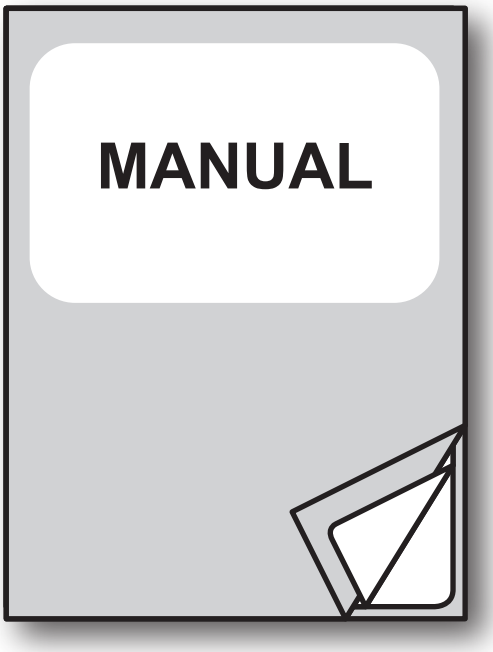
The device is in conformity with the essential requirements laid down in Directives 1999/05/CE about devices equipped with intentional radiators The Declaration of Conformity and other available certifications can be request to support@custom.it please providing the correct part number shown on product label or in the invoice.

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 2002/96/EC, 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.

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



For details on the commands,
refer to the manual with code **772000000003100**

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1 INTRODUCTION

1.1 Document structure

This document includes the following chapters:

1	INTRODUCTION	information about this document
2	DESCRIPTION	general description of device
3	INSTALLATION	information required for a correct installation of the device
4	OPERATION	information required to make the device operative
5	CONFIGURATION	description of the configuration parameters of the device
6	MAINTENANCE	information for a correct periodic maintenance
7	SPECIFICATION	technical specification for the device and its accessories
8	CONSUMABLES	description and installation of the available consumables for the device
9	ACCESSORIES	description and installation of the available accessories for the device
10	ALIGNMENT	information required for managing the paper alignment
11	TECHNICAL SERVICE	information required for contacting the technical service
12	ADVANCED FUNCTIONS	information about special functions available with the device

1.2 Explanatory notes used in this manual

NOTE:	Gives important information or suggestions relative to the use of the device
ATTENTION:	Gives information that must be carefully followed to guard against damaging the device
DANGER:	Gives information that must be carefully followed to guard against operator injury or damage

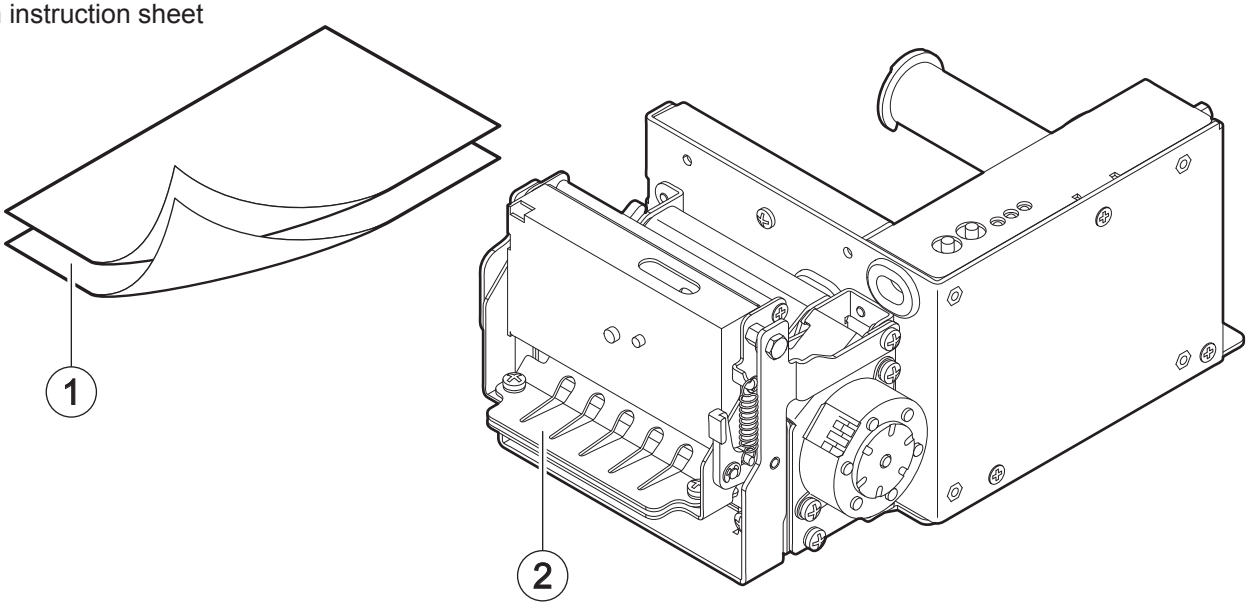
2 DESCRIPTION

2.1 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.

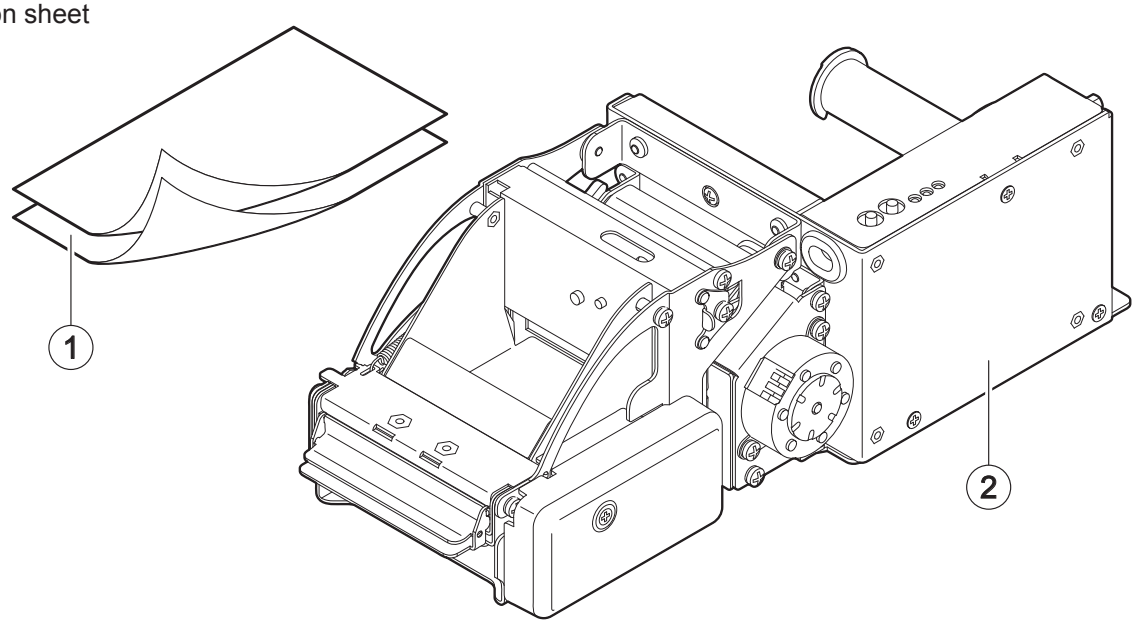
TPTCM60III (standard models)

1. Installation instruction sheet
2. Device



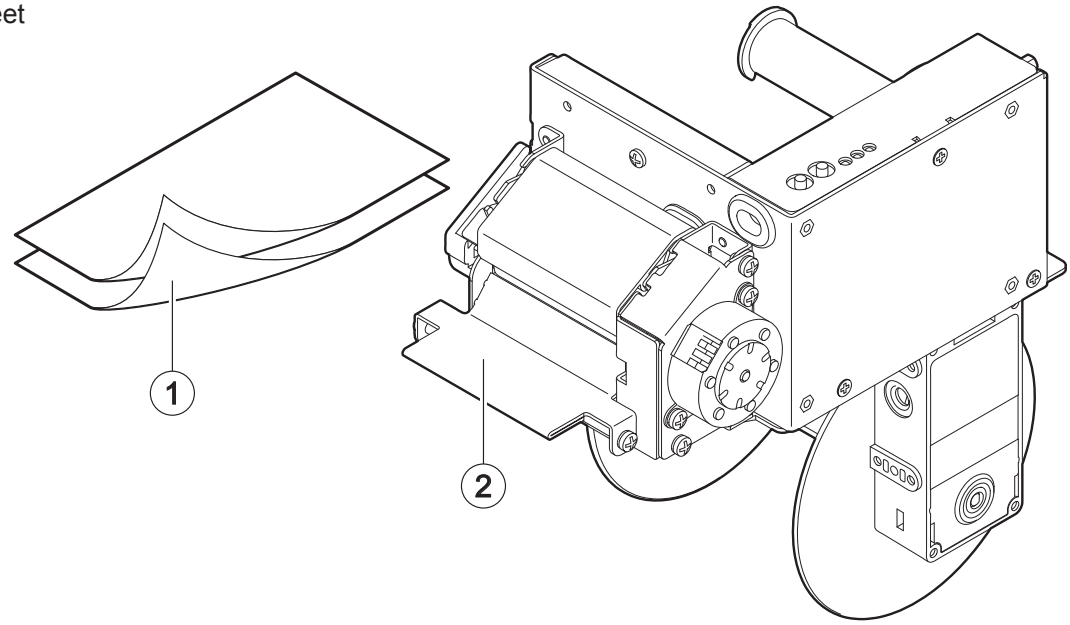
TPTCM60III (models with ejector)

1. Installation instruction sheet
2. Device



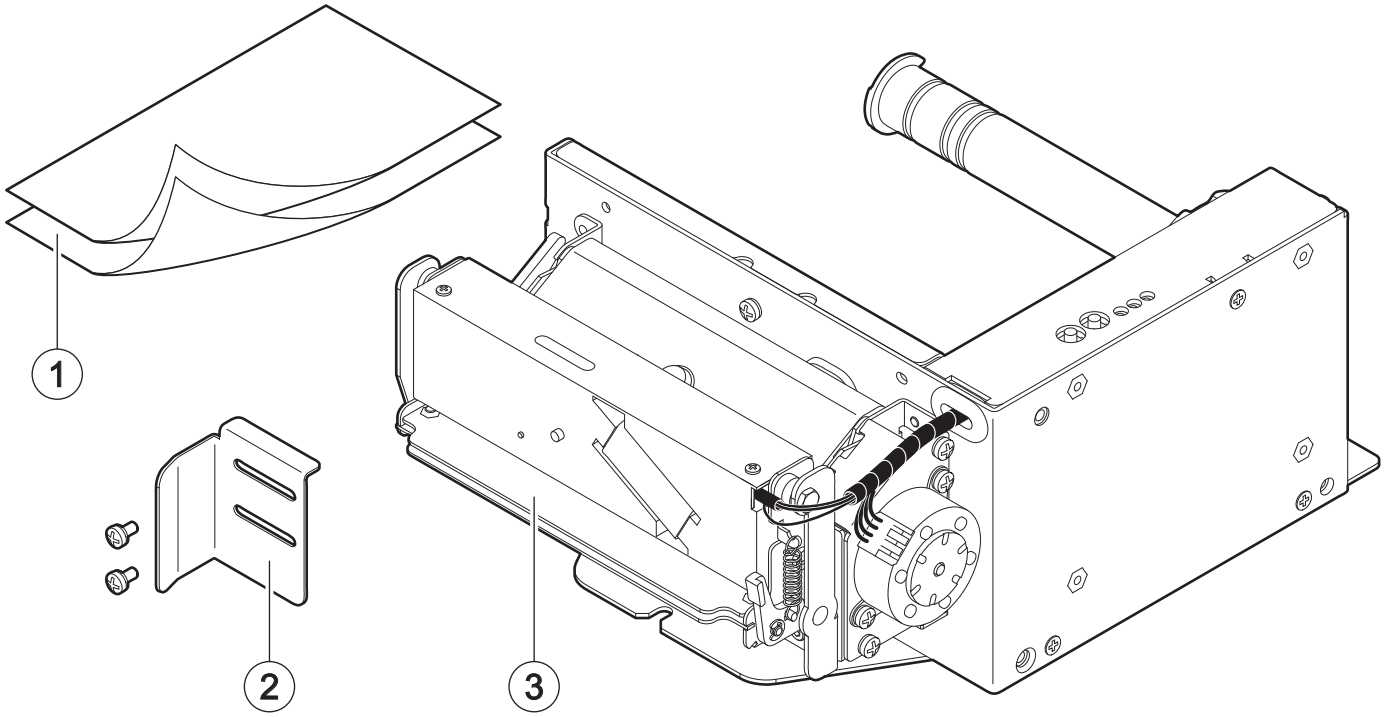
TPTCM60IIIL

1. Installation instruction sheet
2. Device



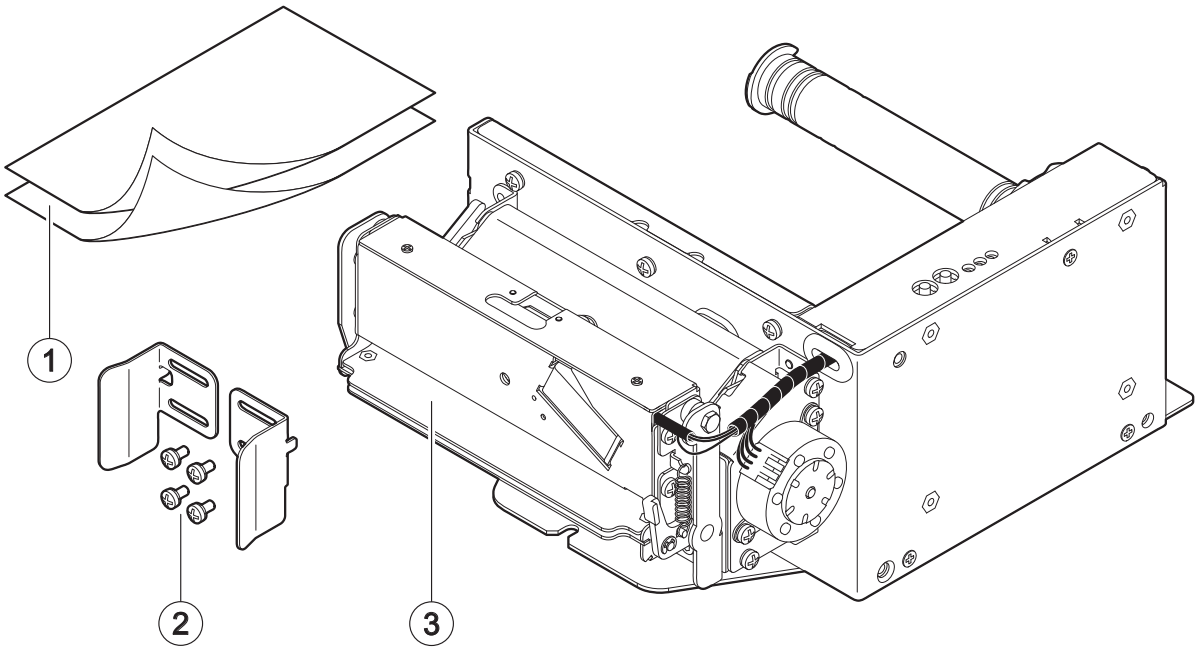
TPTCM112III (standard models)

1. Installation instruction sheet
2. Paper guide bracket with fixing screws (x 2)
3. Device



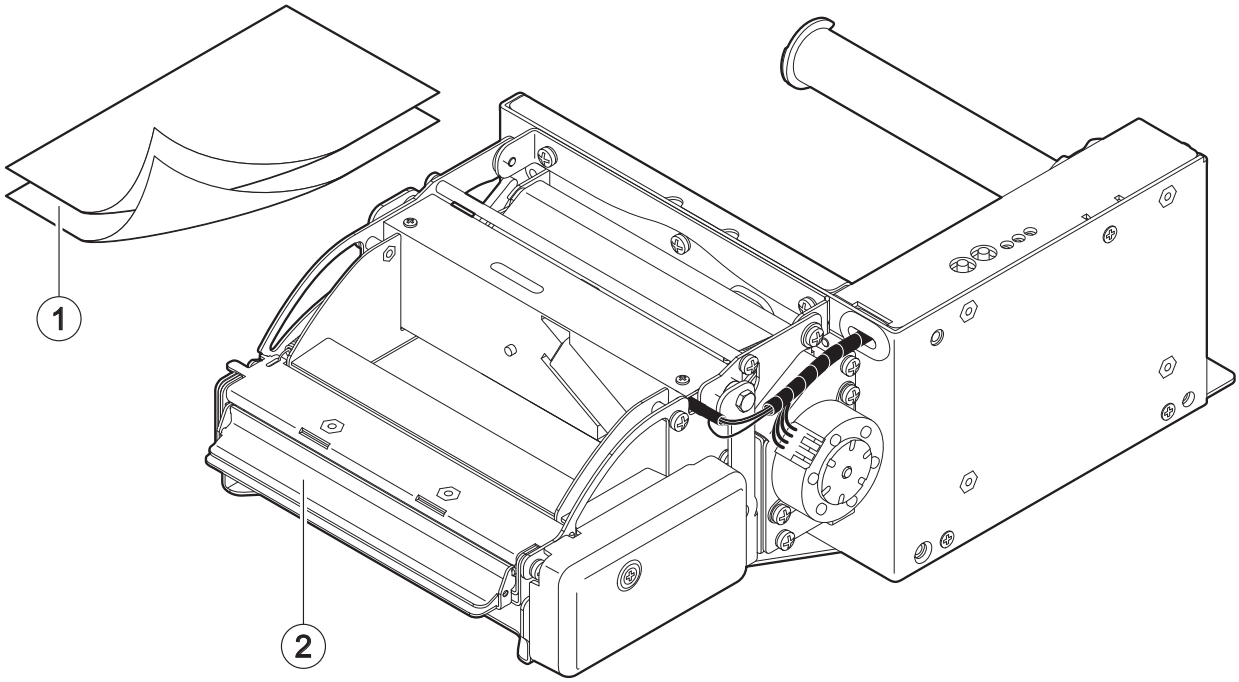
TPTCM112III (Strong Cut models)

1. Installation instruction sheet
2. Paper guide brackets (internal and external) with fixing screws (x 4)
3. Device



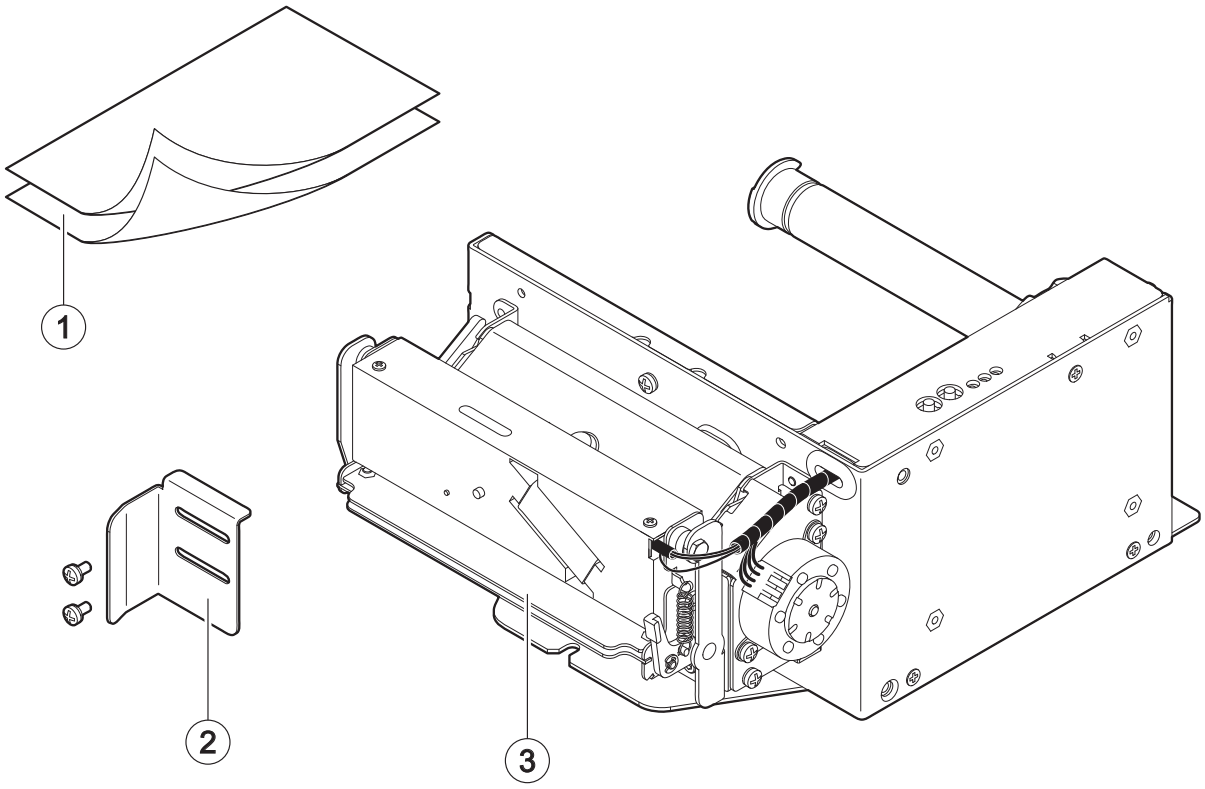
TPTCM112III (models with ejector)

1. Installation instruction sheet
2. Device



TPTCM112IIIL

1. Installation instruction sheet
2. Paper guide bracket with fixing screws (x 2)
3. Device

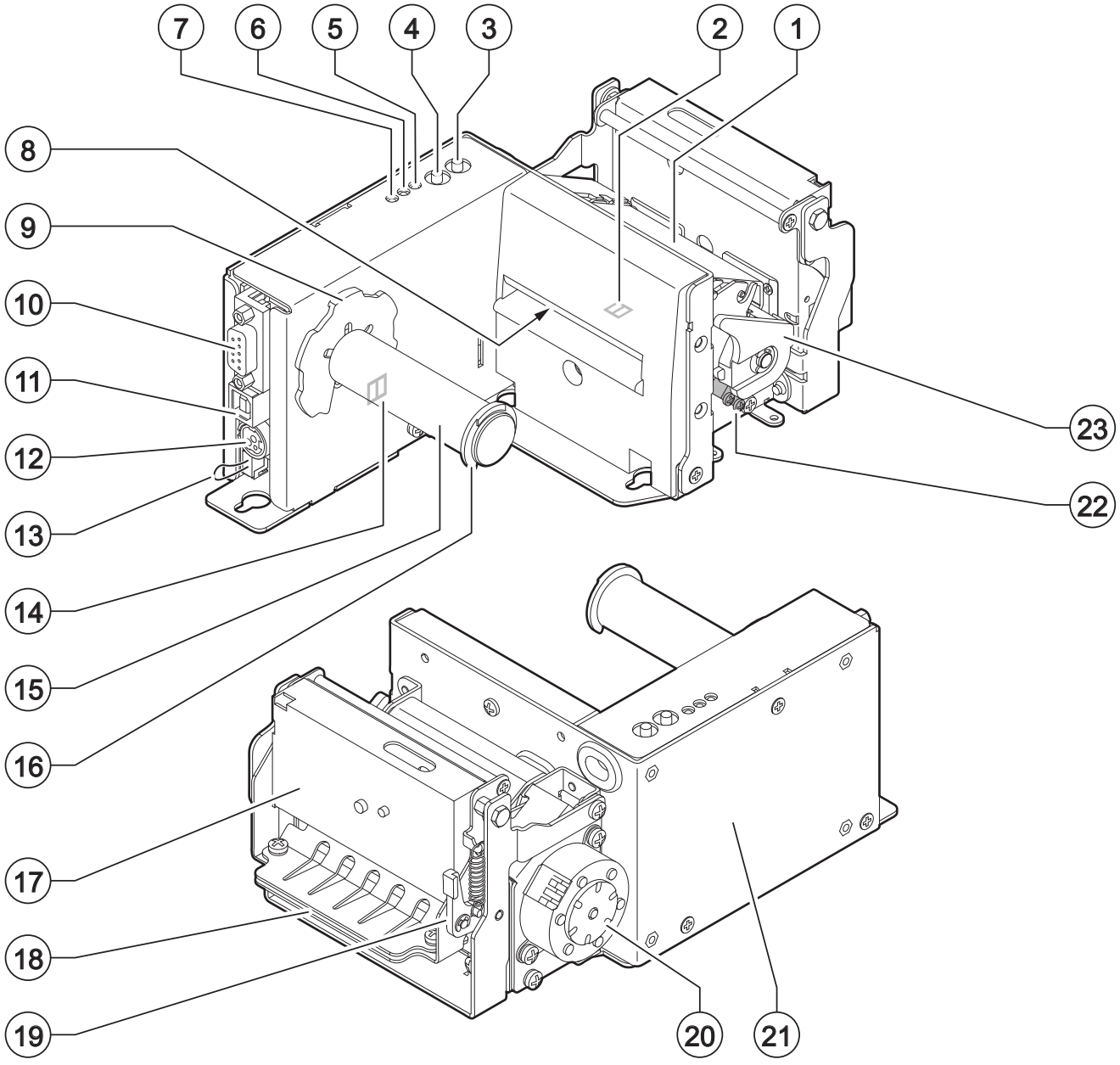


- Open the device packaging.
- Take out the device.
- Take out the rest of the contents.
- Keep the box, trays and packing materials in the event the device must be transported/shipped in the future.

2.2 Device components: external views

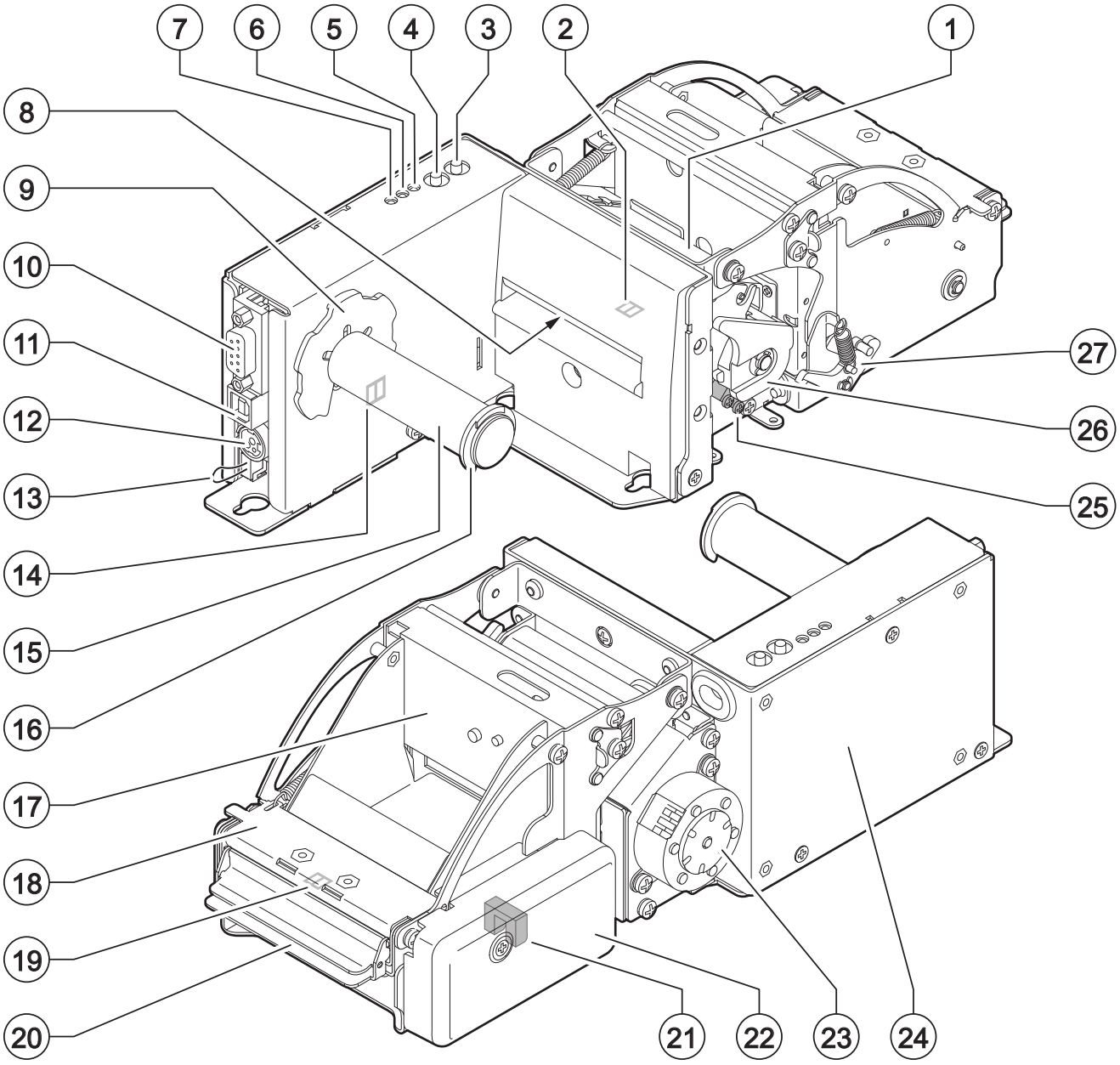
TPTCM60III (standard models)

1. Printing mechanism + head temperature sensor
2. Sensor for paper presence in input
3. LF LINE FEED key
4. FF FORM FEED key
5. POWER ON led
6. STATUS led
7. Low paper led
8. Paper input
9. Internal ring for roll blocking
10. RS232 serial port
11. USB port
12. Power supply port
13. Connector for low paper sensor + cap (for optional adjustable paper roll)
14. Low paper end sensor
15. Roll holder pin 60 mm
16. External ring for roll blocking
17. Cutter
18. Paper out
19. Lifting lever for cutter
20. Printing mechanism motor
21. Device chassis
22. Sensor for print head lifted
23. Lifting lever for print head



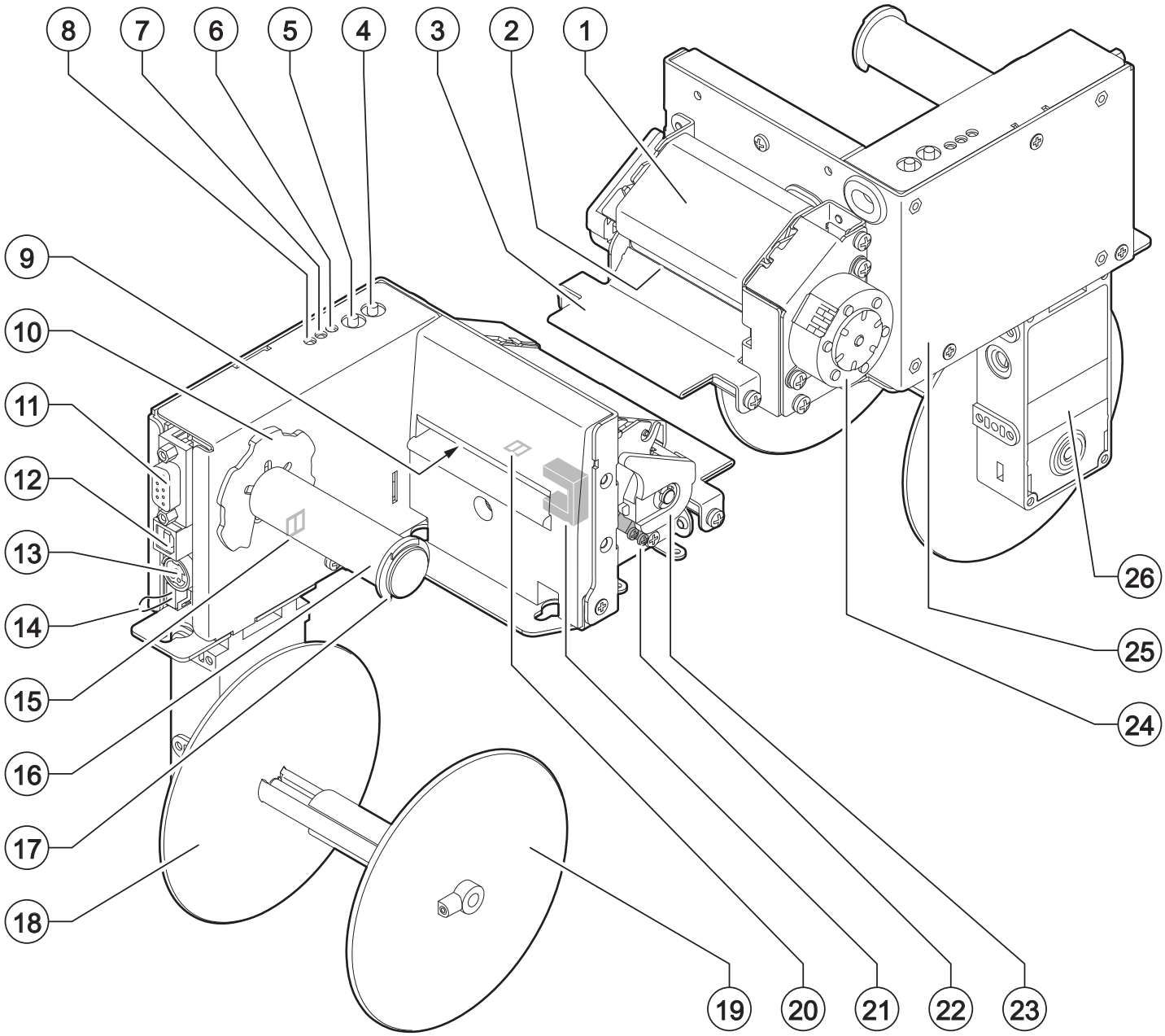
TPTCM60III (models with ejector)

1. Printing mechanism + head temperature sensor
2. Sensor for paper presence in input
3. LF LINE FEED key
4. FF FORM FEED key
5. POWER ON led
6. STATUS led
7. Low paper led
8. Paper input
9. Internal ring for roll blocking
10. RS232 serial port
11. USB port
12. Power supply port
13. Connector for low paper sensor + cap (for optional adjustable paper roll)
14. Low paper sensor
15. Roll holder pin 60 mm
16. External ring for roll blocking
17. Cutter
18. Inspection cover for ejector
19. Sensor for paper presence in output
20. Paper out
21. Sensor for ejector position
22. Cover for ejector gears
23. Printing mechanism motor
24. Device chassis
25. Sensor for print head lifted
26. Lifting lever for print head
27. Lifting lever for ejector



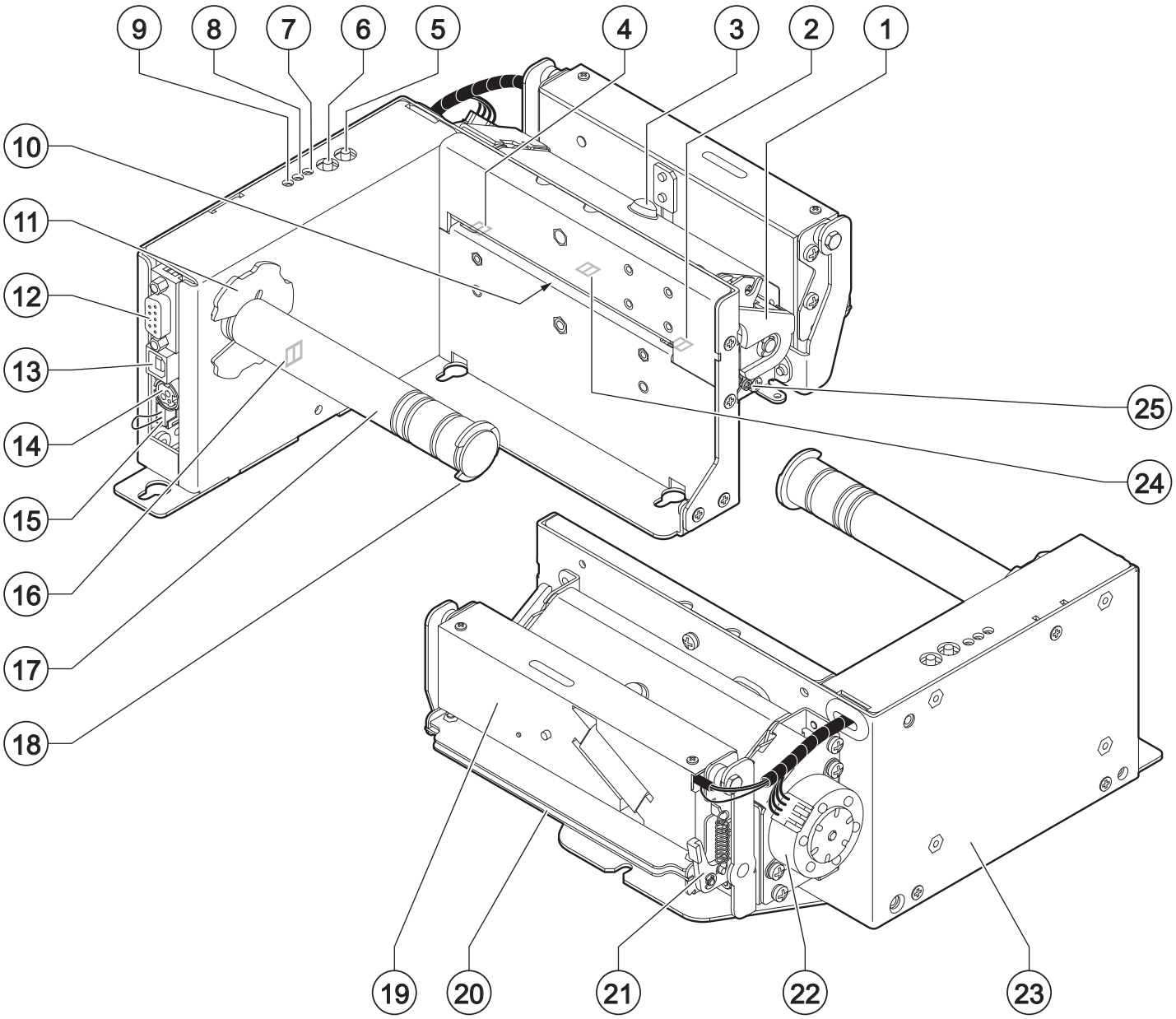
TPTCM60IIIL

1. Printing mechanism + head temperature sensor
2. Paper out
3. Peeler
4. LF LINE FEED key
5. FF FORM FEED key
6. POWER ON led
7. STATUS led
8. Low paper led
9. Paper input
10. Internal ring for roll blocking
11. RS232 serial port
12. USB port
13. Power supply port
14. Connector for low paper sensor + cap (for optional adjustable paper roll)
15. Low paper sensor
16. Roll holder pin 60 mm
17. External ring for roll blocking
18. Roll locking disc (fixed)
19. Roll locking disc (adjustable)
20. Sensor for paper presence in input
21. Fork sensor for labels gap detection
22. Sensor for print head lifted
23. Lifting lever for print head
24. Printing mechanism motor
25. Device chassis
26. Rewinder motor



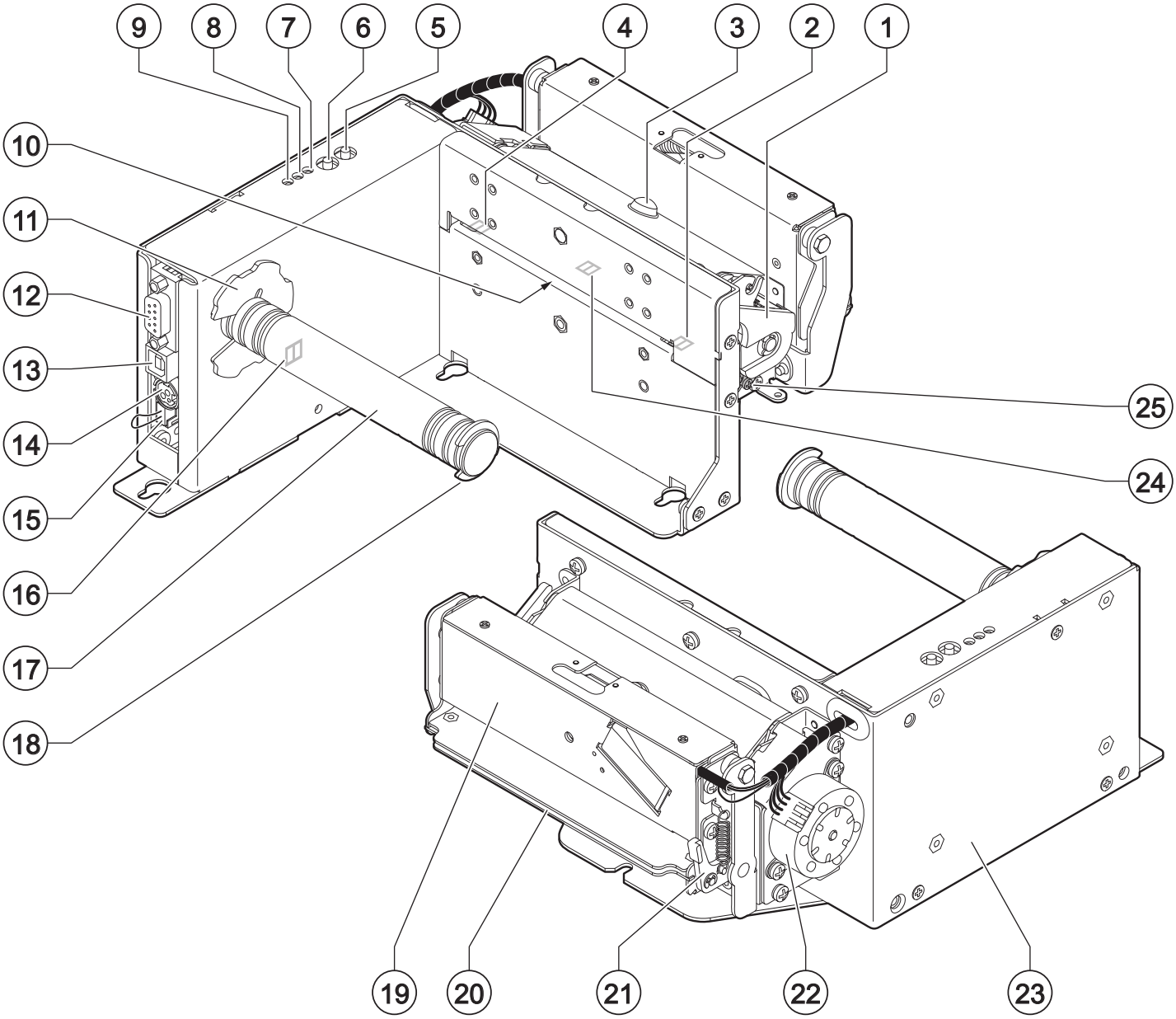
TPTCM112III (standard models)

1. Lifting lever for print head
2. Right sensor for notch alignment (optional)
3. Printing mechanism + head temperature sensor
4. Left sensor for notch alignment
5. LF LINE FEED key
6. FF FORM FEED key
7. POWER ON led
8. STATUS led
9. Low paper led
10. Paper input
11. Internal adjustment ring
12. RS232 serial port
13. USB port
14. Power supply port
15. Connector for low paper sensor + cap (for optional adjustable paper roll)
16. Low paper sensor
17. Roll holder pin 80, 86, 100, 112 mm
18. External adjustment ring
19. Cutter
20. Paper out
21. Lifting lever for cutter
22. Printing mechanism motor
23. Device chassis
24. Sensor for paper presence in input
25. Sensor for print head lifted



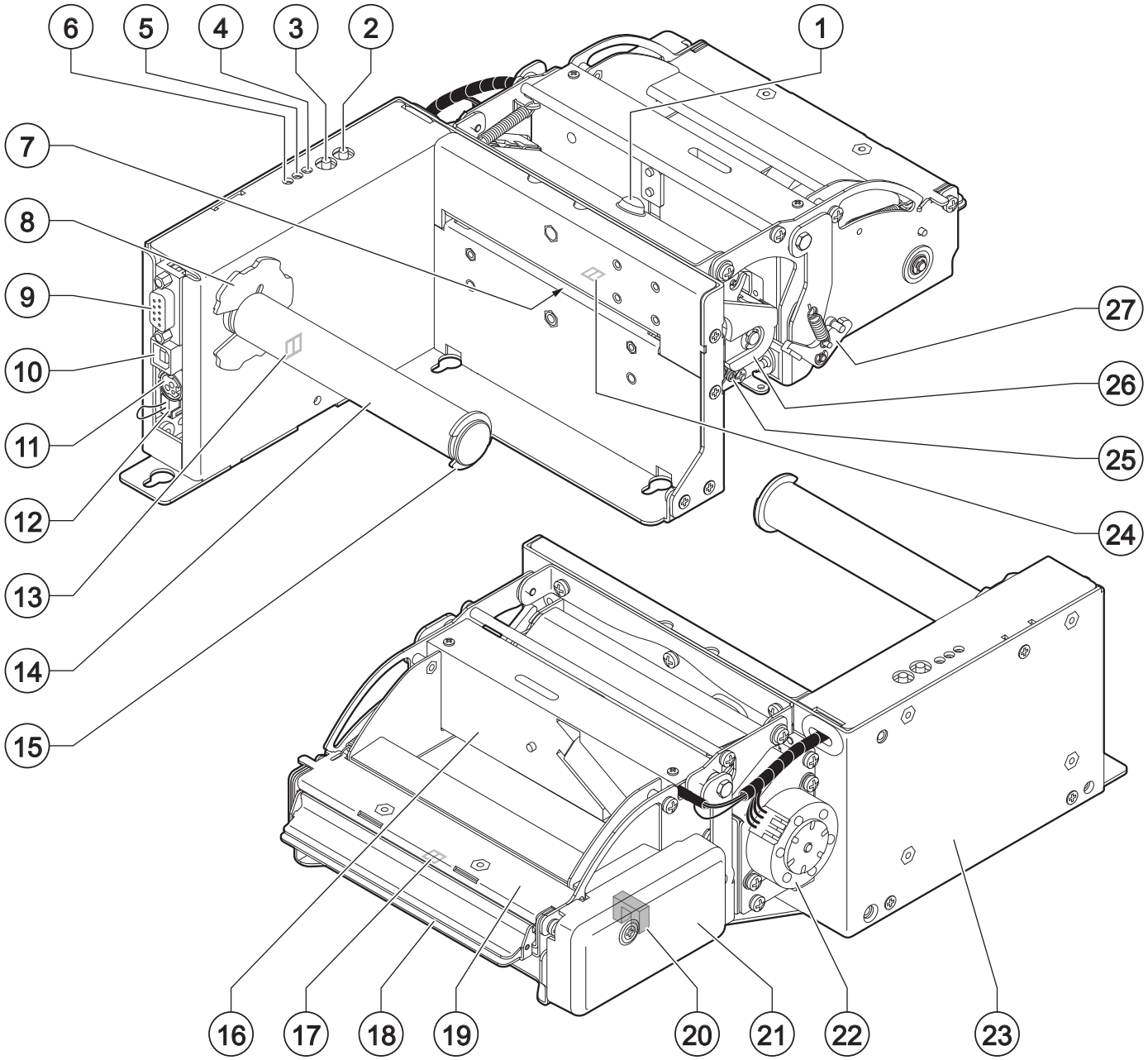
TPTCM112III (Strong Cut models)

1. Lifting lever for print head
2. Right sensor for notch alignment (optional)
3. Printing mechanism + head temperature sensor
4. Left sensor for notch alignment
5. LF LINE FEED key
6. FF FORM FEED key
7. POWER ON led
8. STATUS led
9. Low paper led
10. Paper input
11. Internal adjustment ring
12. RS232 serial port
13. USB port
14. Power supply port
15. Connector for low paper sensor + cap (for optional adjustable paper roll)
16. Low paper sensor
17. Roll holder pin 80, 86, 100, 112 mm
18. External adjustment ring
19. Strong Cut cutter
20. Paper out
21. Lifting lever for cutter
22. Printing mechanism motor
23. Device chassis
24. Sensor for paper presence in input
25. Sensor for print head lifted



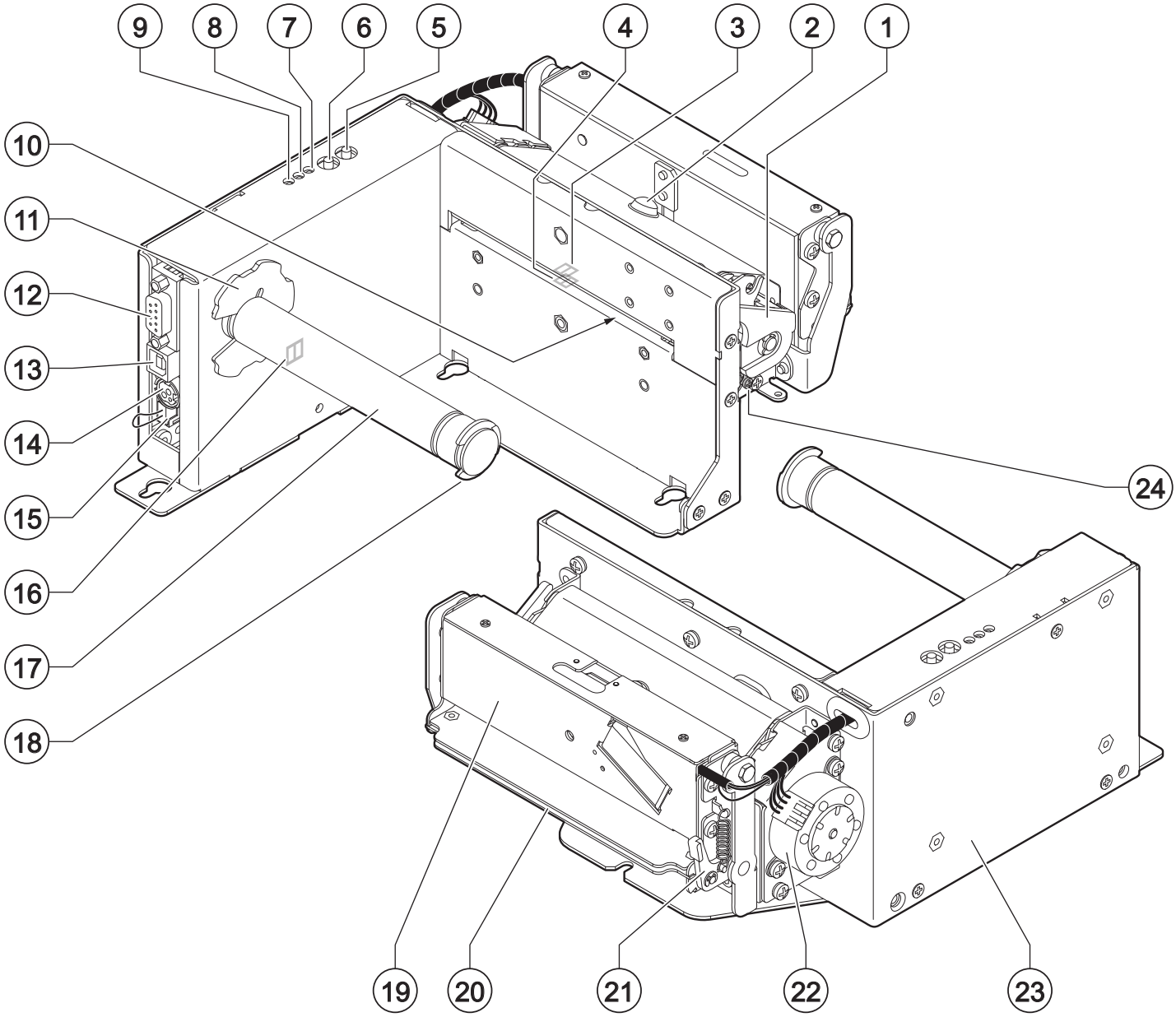
TPTCM112III (models with ejector)

1. Printing mechanism + head temperature sensor
2. LF LINE FEED key
3. FF FORM FEED key
4. POWER ON led
5. STATUS led
6. Low paper led
7. Paper input
8. Internal ring for roll blocking
9. RS232 serial port
10. USB port
11. Power supply port
12. Connector for low paper sensor + cap (for optional adjustable paper roll)
13. Low paper sensor
14. Roll holder pin 112 mm
15. External ring for roll blocking
16. Cutter
17. Sensor for paper presence in output
18. Paper out
19. Inspection cover for ejector
20. Sensor for ejector position
21. Cover for ejector gears
22. Printing mechanism motor
23. Device chassis
24. Sensor for paper presence in input
25. Sensor for print head lifted
26. Lifting lever for print head
27. Lifting lever for ejector



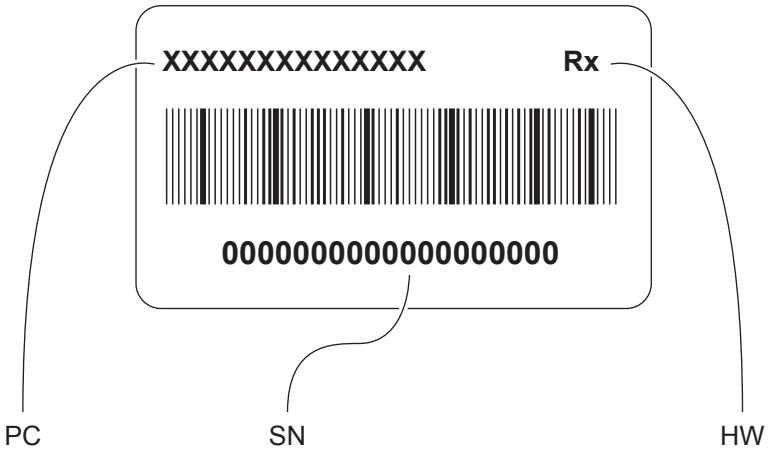
TPTCM112IIIL

1. Lifting lever for print head
2. Printing mechanism + head temperature sensor
3. Upper sensor for labels gap detection
4. Lower sensor for labels gap detection
5. LF LINE FEED key
6. FF FORM FEED key
7. POWER ON led
8. STATUS led
9. Low paper led
10. Paper input
11. Internal adjustment ring
12. RS232 serial port
13. USB port
14. Power supply port
15. Connector for low paper sensor + cap (for optional adjustable paper roll)
16. Low paper sensor
17. Roll holder pin 101, 112 mm
18. External adjustment ring
19. Cutter
20. Paper out
21. Lifting lever for cutter
22. Printing mechanism motor
23. Device chassis
24. Sensor for print head lifted



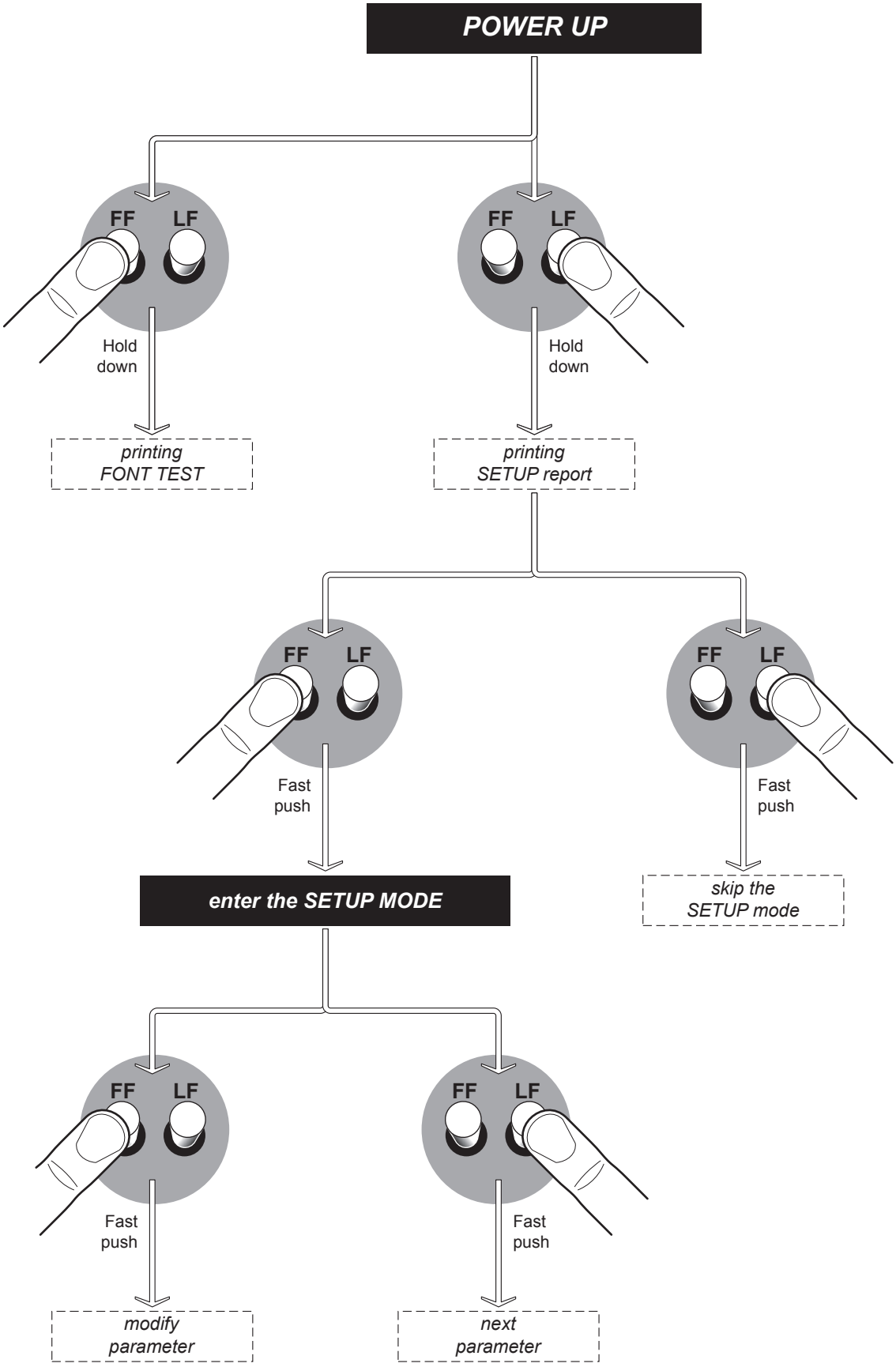
2.3 Product label

PC = Product code (14 digits)
SN = Serial number
HW = Hardware release



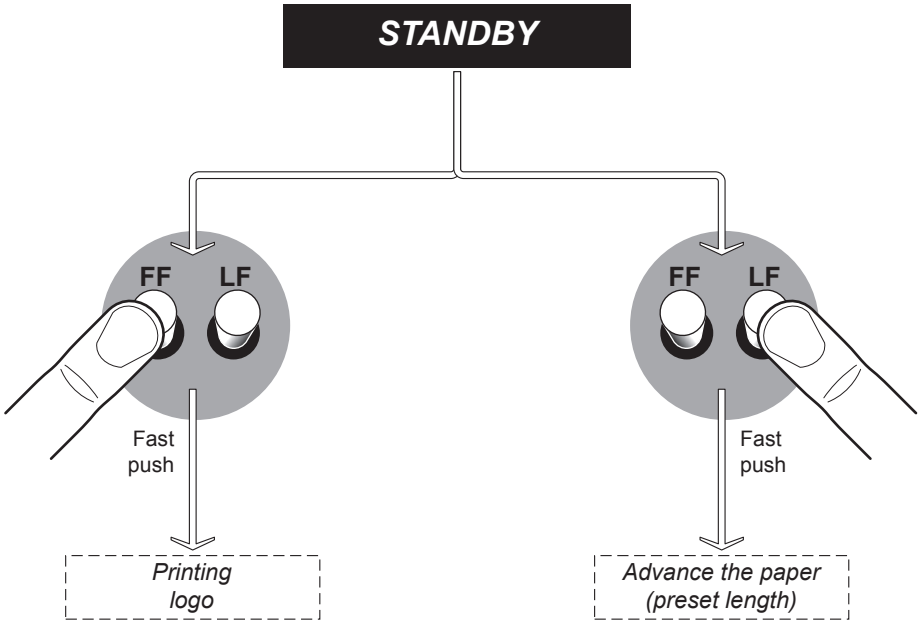
2.4 Key functions: power up

all models



2.5 Key functions: standby

all models



2.6 Led flashes

The three status led indicates hardware status of device.

POWER ON led

Signals the status of the powered device as shown in the following table.

STATUS LED			DESCRIPTION
-		***OFF***	DEVICE NOT POWERED
GREEN		***ON***	DEVICE POWERED

LOW PAPER led

Signals the amount of paper on the paper roll as shown in the following table.

STATUS LED			DESCRIPTION
-		***OFF***	PAPER IN ABUNDANCE
RED		***ON***	LOW PAPER

STATUS led

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
YELLOW	●	***ON***	DEVICE ON: NO ERROR
YELLOW	●	***x 1***	RECEIVE DATA
		x 2	PRINT HEAD OVER TEMPERATURE
		x 3	PAPER END
		x 4	POWER SUPPLY VOLTAGE INCORRECT
		x 5	COM PORT ERROR
		x 6	COMMAND NOT RECOGNIZED
		x 7	CHARACTER RECEPTION ERROR
		x 8	PRINT HEAD LIFTED
		x 9	PAPER JAM
		x 10	CUTTER ERROR
		x 11	RAM ERROR
		x 12	EXTERNAL MEMORY ERROR

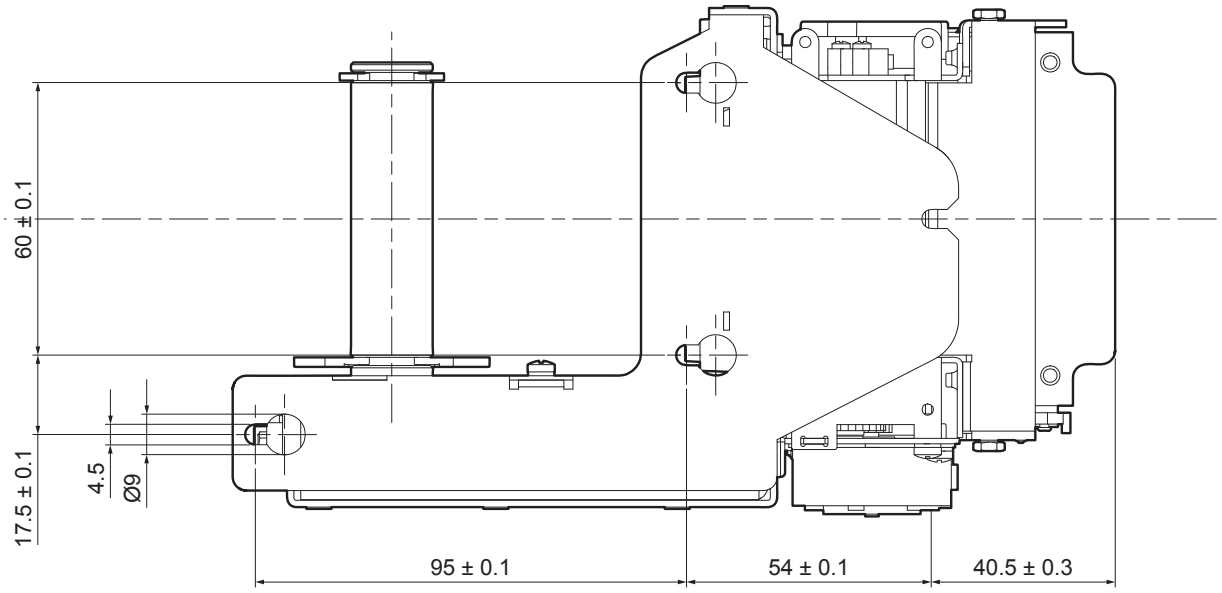
3 INSTALLATION

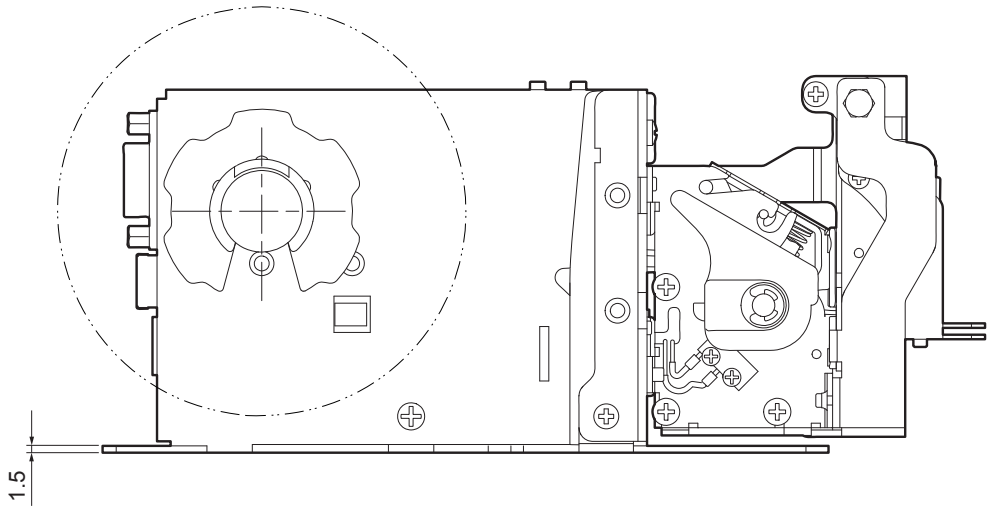
3.1 Fastening

NOTE: All the dimensions shown in following figures are in millimetres.

TPTCM60III (standard models)

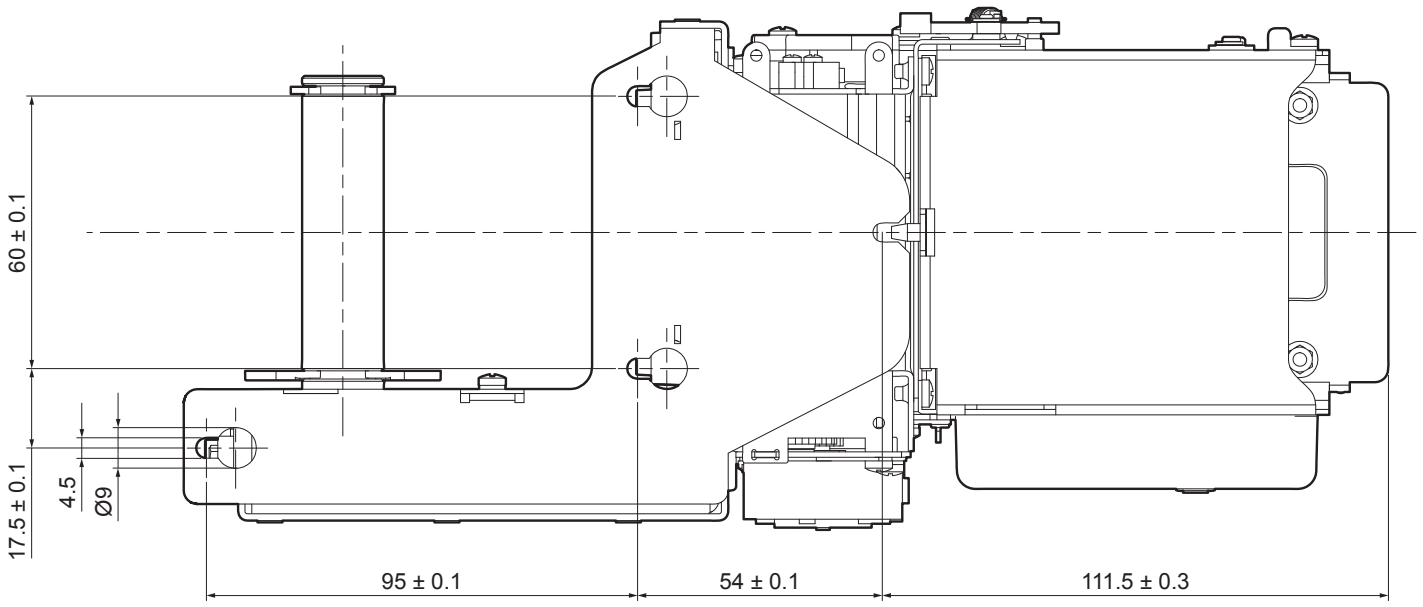
The device is provided with three fixing holes on the bottom of device (see following figure).
To install the device on a panel, use three M4 screws.

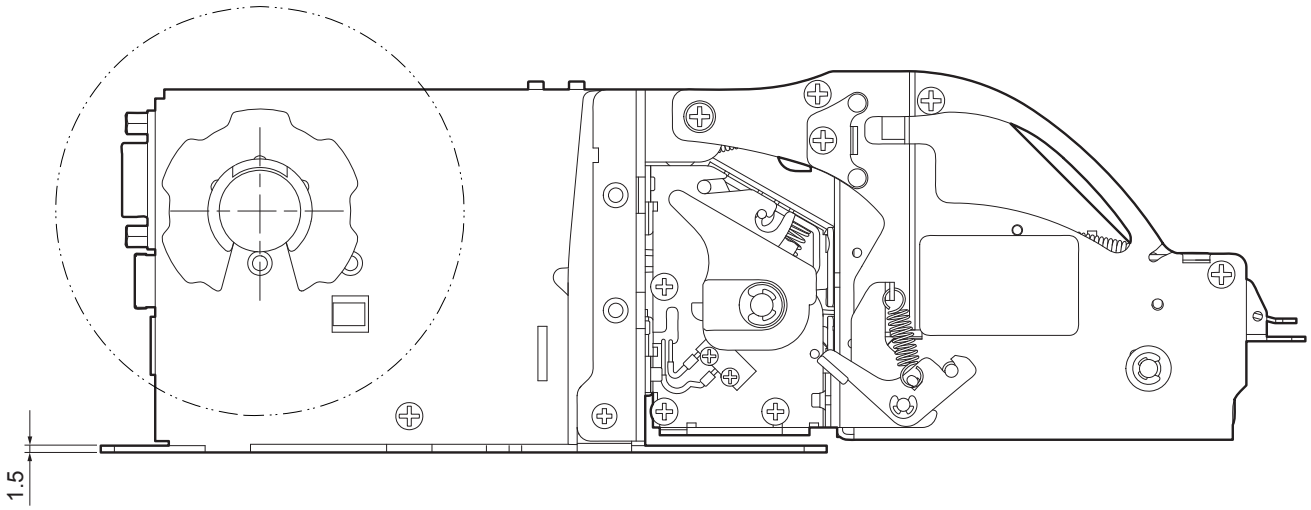




TPTCM60III (models with ejector)

The device is provided with three fixing holes on the bottom of device (see following figure).
To install the device on a panel, use three M4 screws.

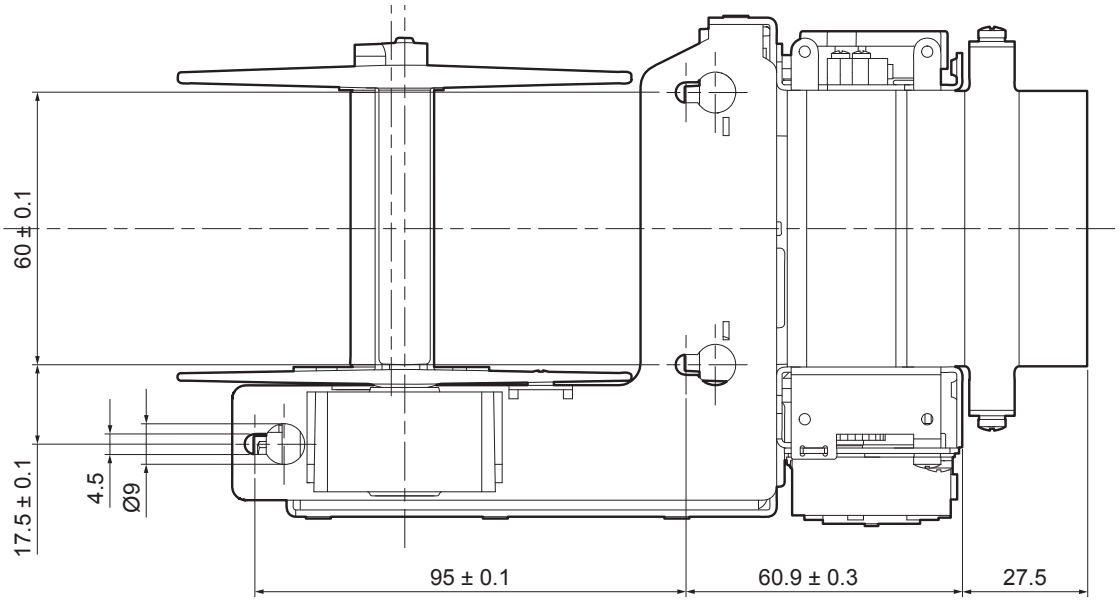


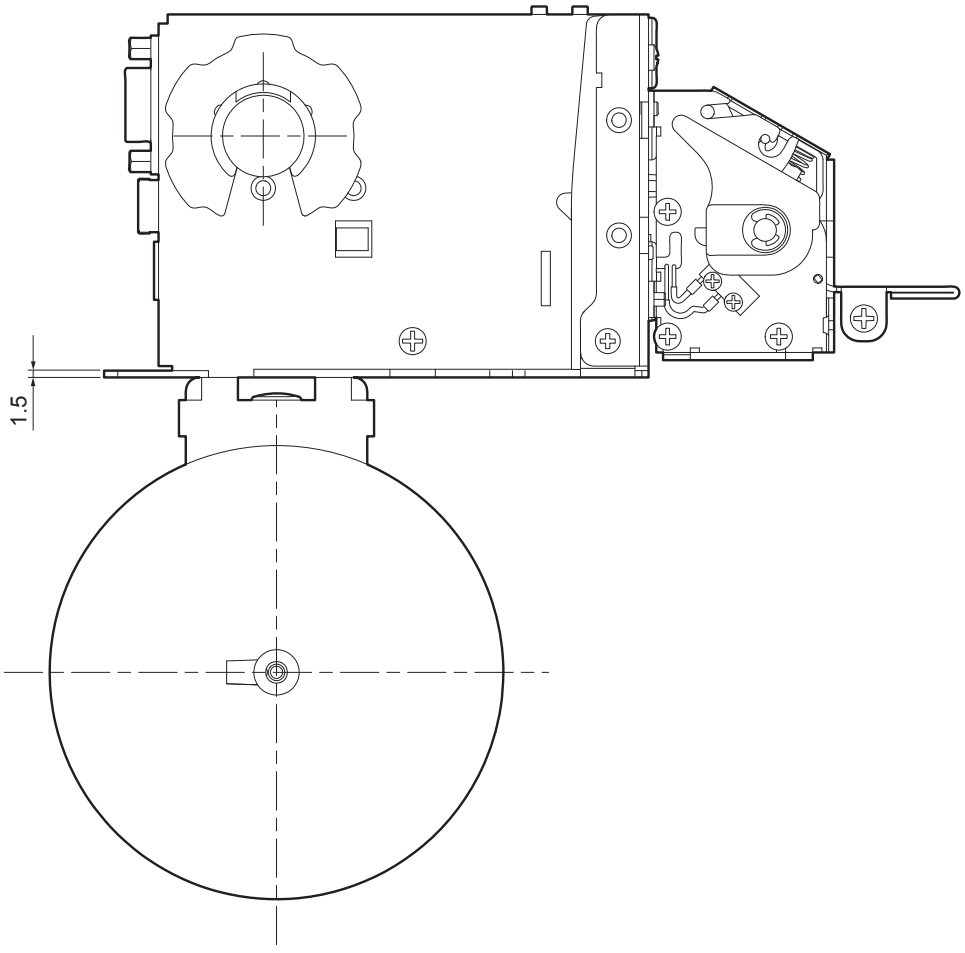


TPTCM60IIIL

The device is provided with three fixing holes on the bottom of device (see following figure). To install the device on a panel, use three M4 screws.

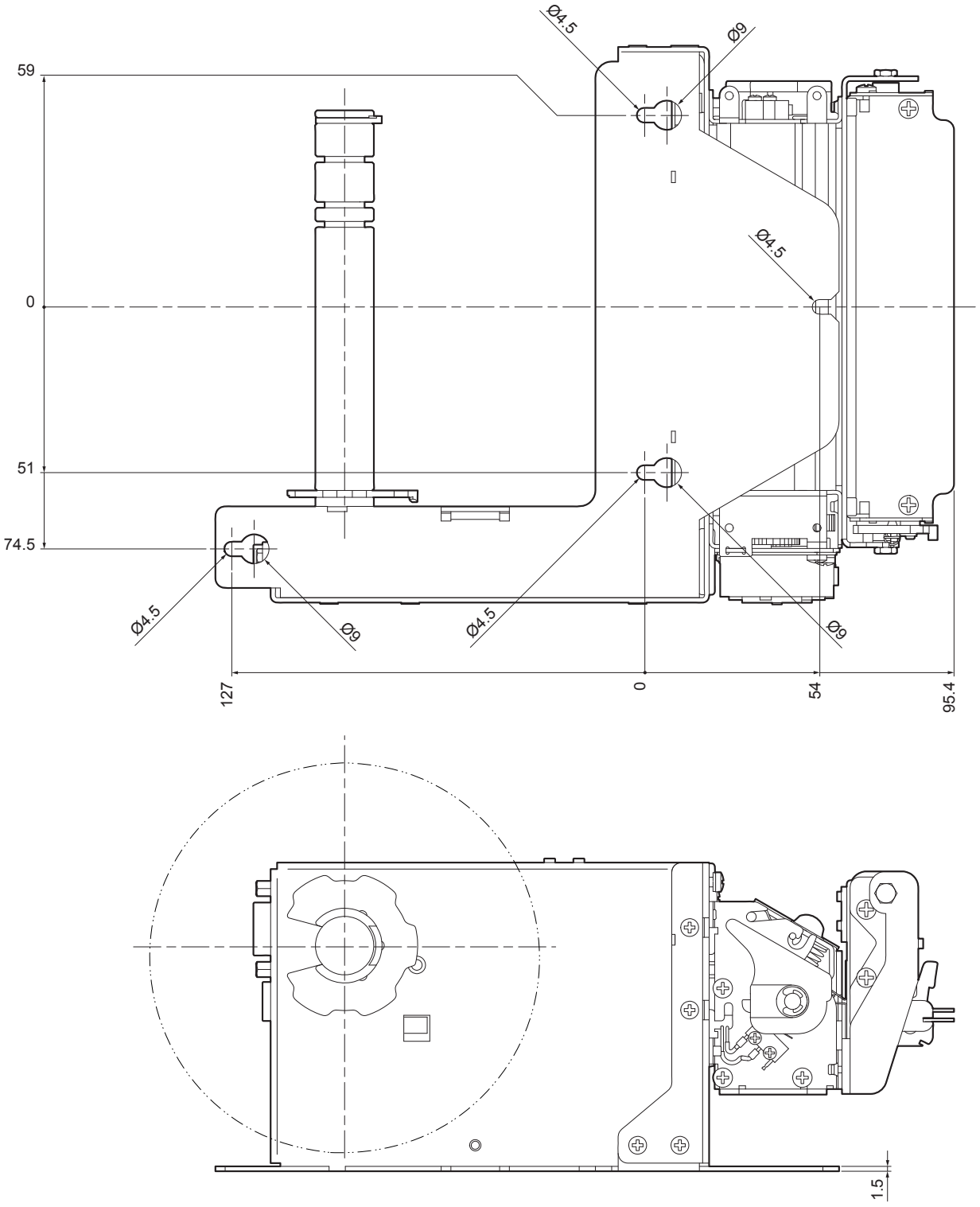
Prepare the panel considering the presence of the rewinder and the paper path (see following paragraphs).





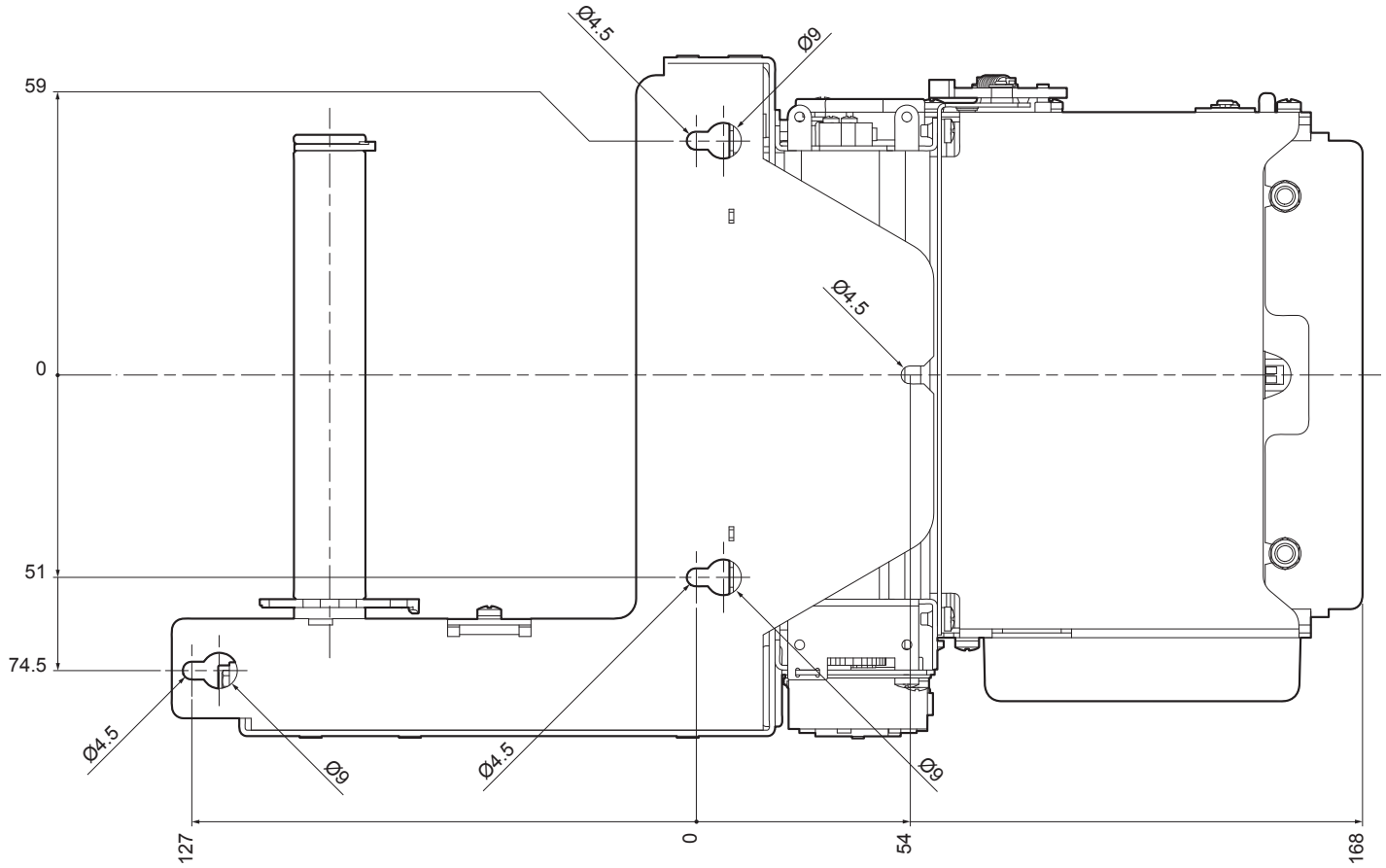
TPTCM112III (standard models), TPTCM112III (Strong Cut models), TPTCM112IIIL

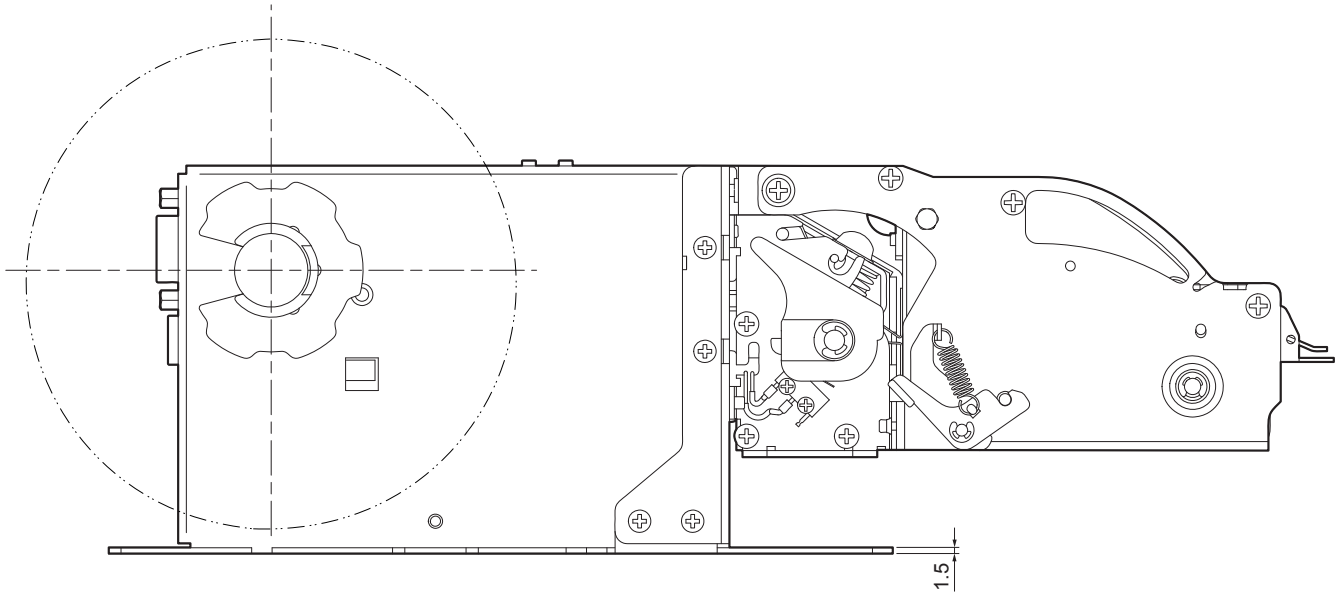
The device is provided with four fixing holes on the bottom of device (see following figure).
To install the device on a panel, use four M4 screws.



TPTCM112III (models with ejector)

The device is provided with four fixing holes on the bottom of device (see following figure).
To install the device on a panel, use four M4 screws.

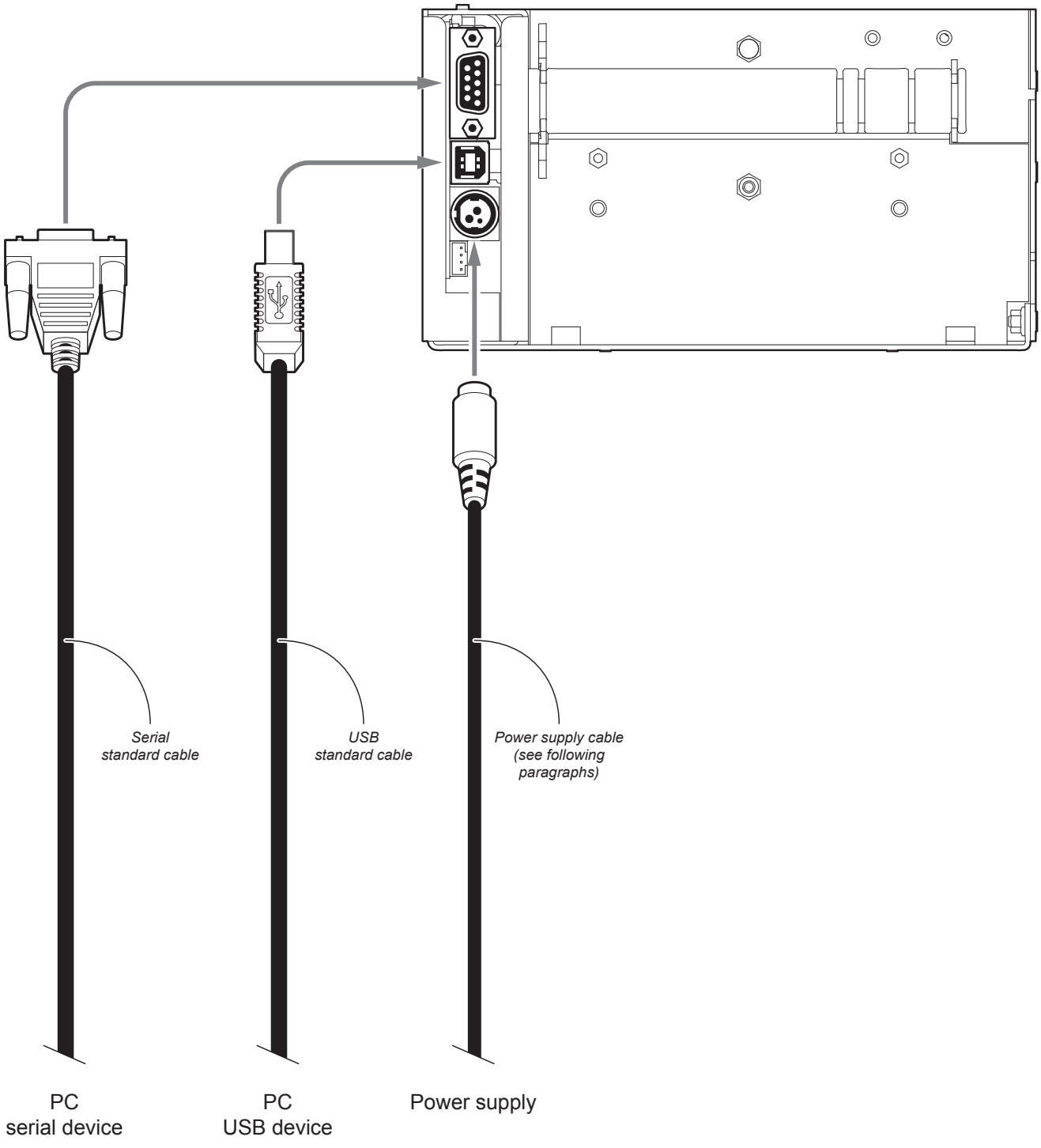




3.2 Connections

The following figure shows the possible connections for the device.

all models



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

NOTES: If serial and USB connectors are inserted, communication port is USB.

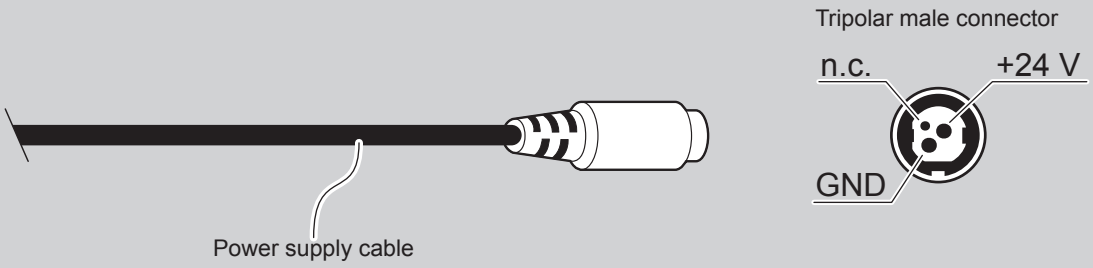
3.3 Pinout

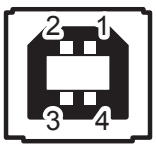
POWER SUPPLY
Tripolar female connector

J19	1	GND
	2	+24 V
	3	GND
	4	Frame GND

ATTENTION:
Respect power supply polarity.

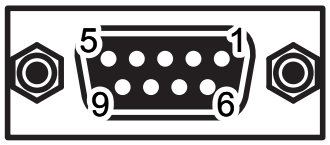
NOTE:
Power supply cable
The following figure shows the connector pinout of the power supply cable for the device:





USB INTERFACE
Female USB type B connector

J12	1	USB0-VBUS	(in)
	2	USB0_D-	(in/out)
	3	USB0_D+	(in/out)
	4	GND	
	SH1	SHIELD	
	SH2	SHIELD	



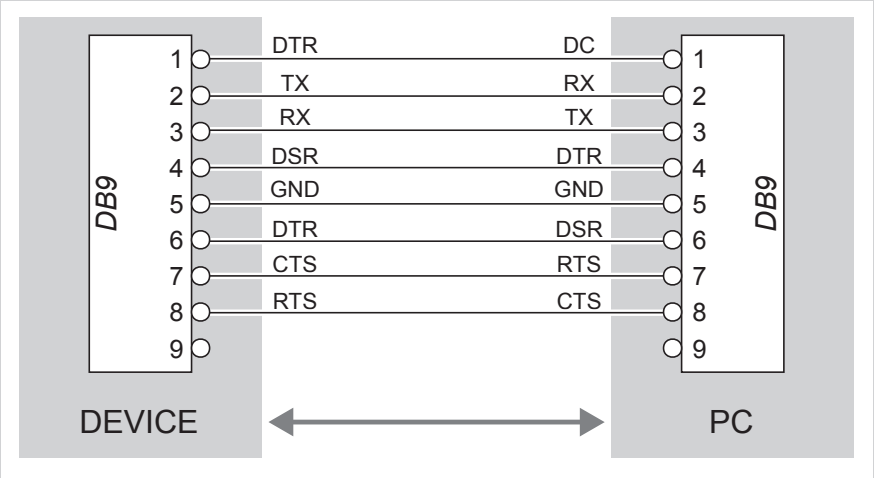
RS232 SERIAL INTERFACE

Female DB9 connector

J10	1	DTR	
	2	TX	During transmission, takes the values “0” and “1” depending on data.
	3	RX	During reception, takes the values “0” and “1” depending on data.
	4	DSR	
	5	GND	
	6	DTR	When “1”, device is power on.
	7	CTS	
	8	RTS	When “1”, device is ready to receive data
	9	VCC	

NOTES:
Given the presence of the RS232 standard, logic value “0” corresponds to a voltage level of between +3Vdc and +15Vdc and logic value “1” corresponds to a voltage level of between -3Vdc and -15Vdc.

DEVICE > PC connection
The following picture shows an example of connection between the device and a personal computer using a 9 pin RS232 serial connector:



When use a serial cable, we recommend the installation of a ferrite core on the power supply cable.

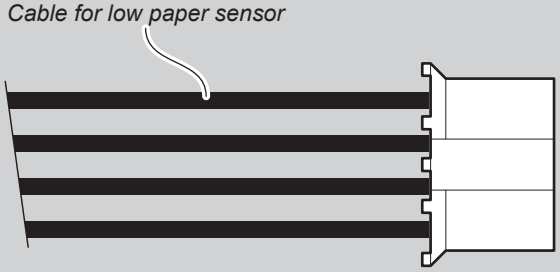
LOW PAPER

4 ways male JST connector (S4B-PH-K-S)

J17	1	VCC	
	2	QF-EXT	(in)
	3	QF-INT	
	4	GND	

NOTE: Cable for low paper sensor.
The following figure shows the pinout of the connector of the cable for low paper to use for the device:

Cable for low paper sensor



Female JST connector series PHR-4

PIN	*Cable color*	*Signal*
1	*Red*	*+5V*
2	*Blue*	*NPE (input)*
3	*Black*	*n.c.*
4	*Yellow*	*GND*

3.4 Driver and SDK

The drivers are available for the following operating system:

OPERATING SYSTEM	DESCRIPTION	INSTALLATION PROCEDURE
Windows	Driver for Windows XP	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 VISTA (32/64bit)	
	Driver for Windows 7 (32/64bit)	
	Driver for Windows 8 (32/64bit)	
	Driver for Windows 8.1 (32/64bit)	
Linux	32/64bit	Follow the instruction get back on the README.TXT file. You can find it in the software package downloaded in advance.

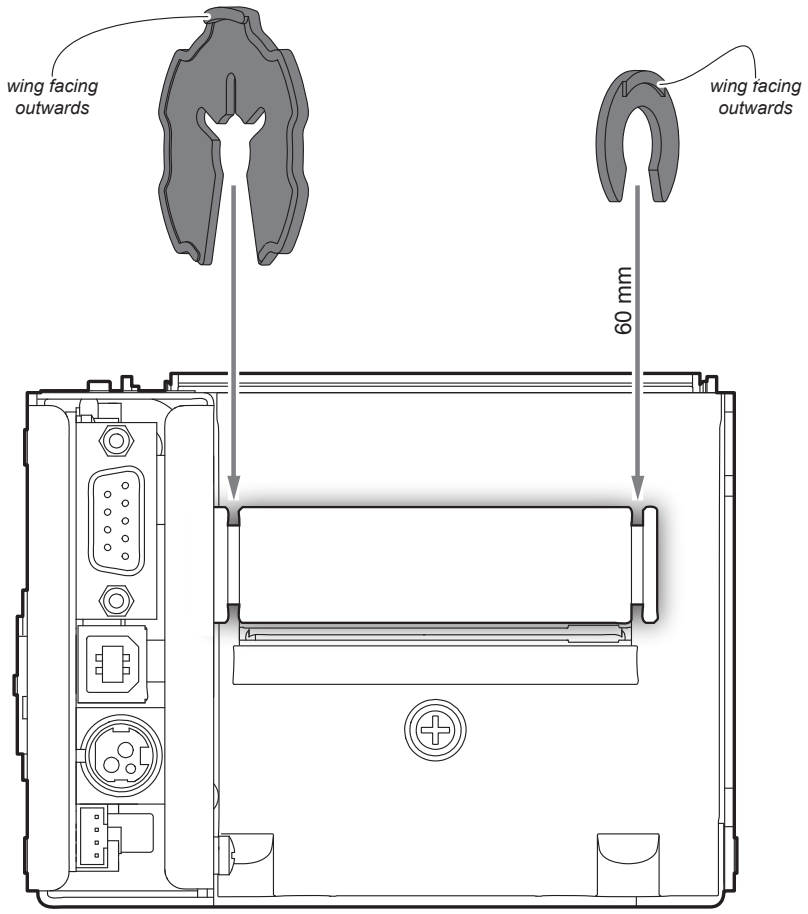
NOTE:
All drivers can be found in the DOWNLOAD section of the web site www.custom.biz.

4 OPERATION

4.1 Adjusting paper width

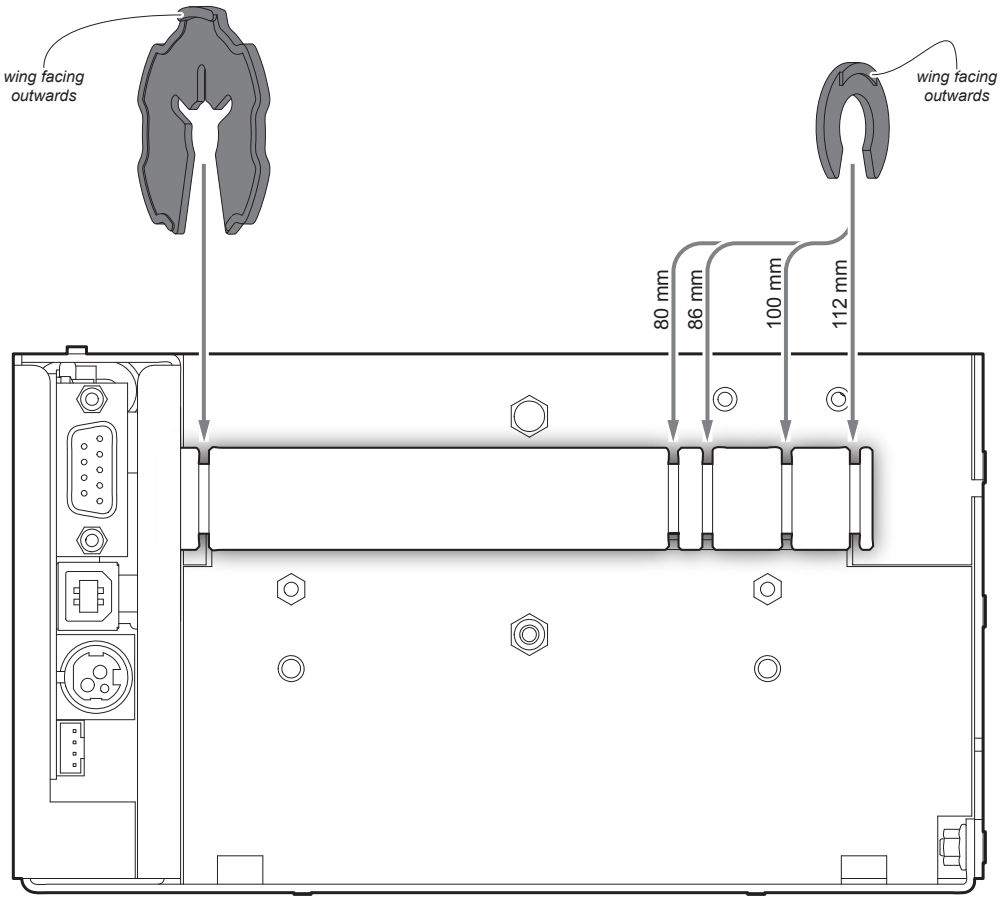
TPTCM60III, TPTCM60IIIL

The devices manage only 60 mm paper width roll. However, it is necessary to correctly place the two rings for roll blocking (internal and external) to ensure the right paper alignment inside the device.

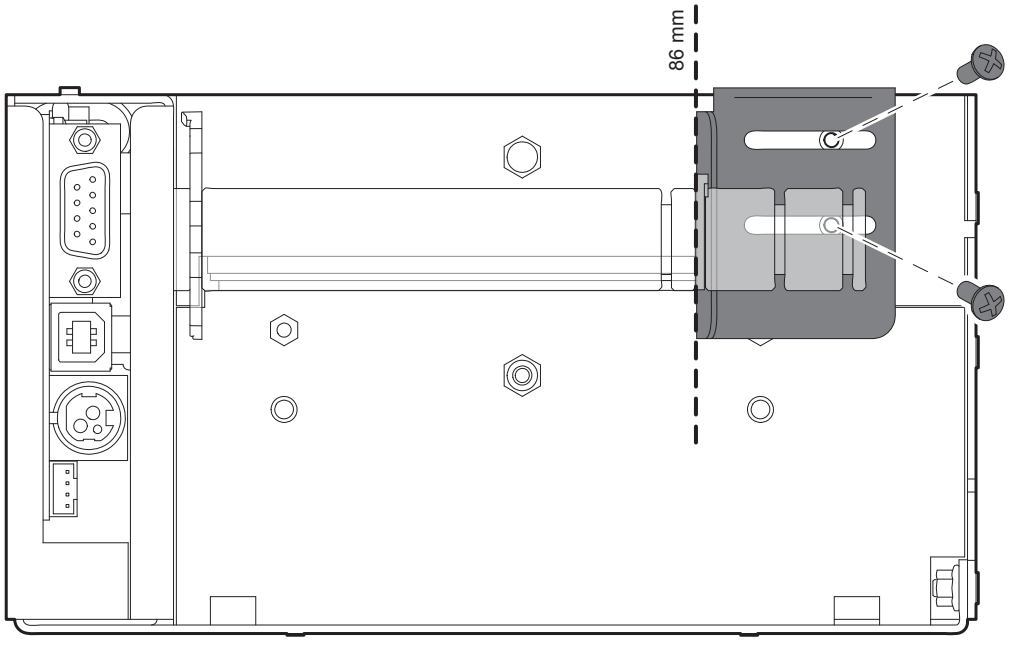


TPTCM112III

Paper width may be set to 80, 86, 100 or 112 mm by assembling the internal adjustment ring and modifying the position of the external adjustment rings to ensure the right paper alignment inside the device (see the following figure).

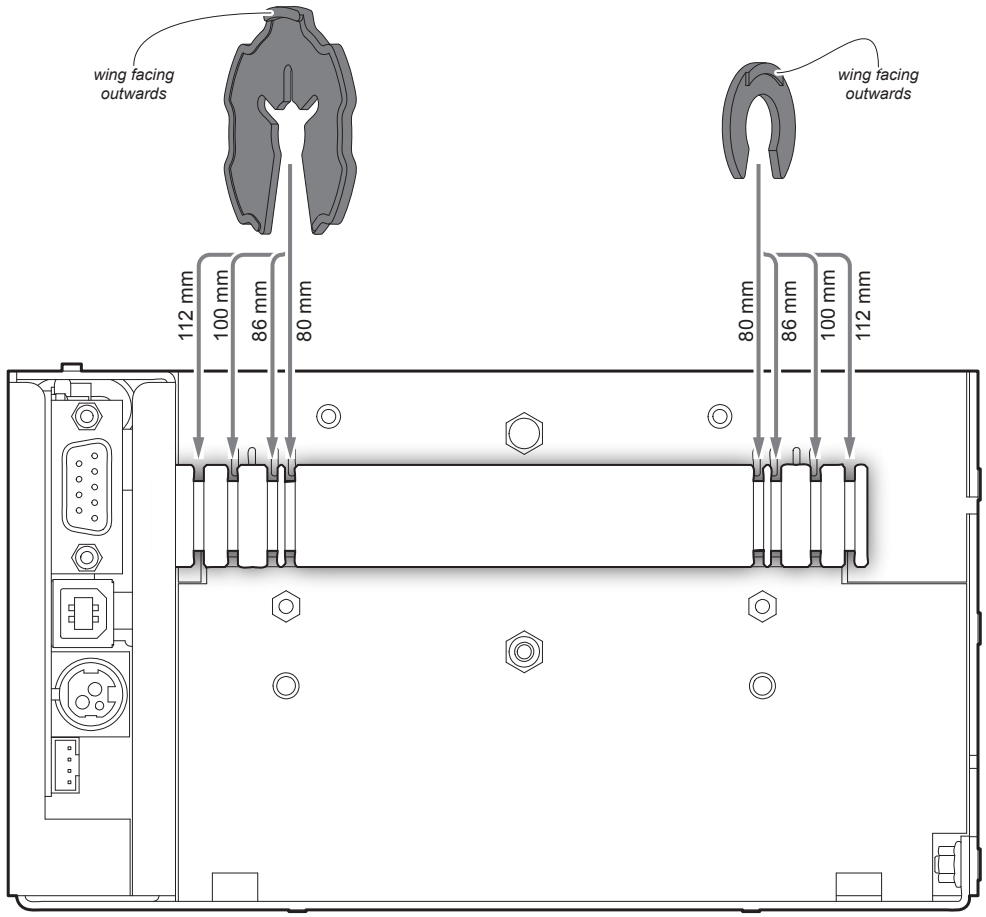


To manage paper width of 80, 86 or 100 mm, fix and correctly place the paper guide bracket provided with the device. The following figure shows an example of bracket fixing for 86 mm paper width.

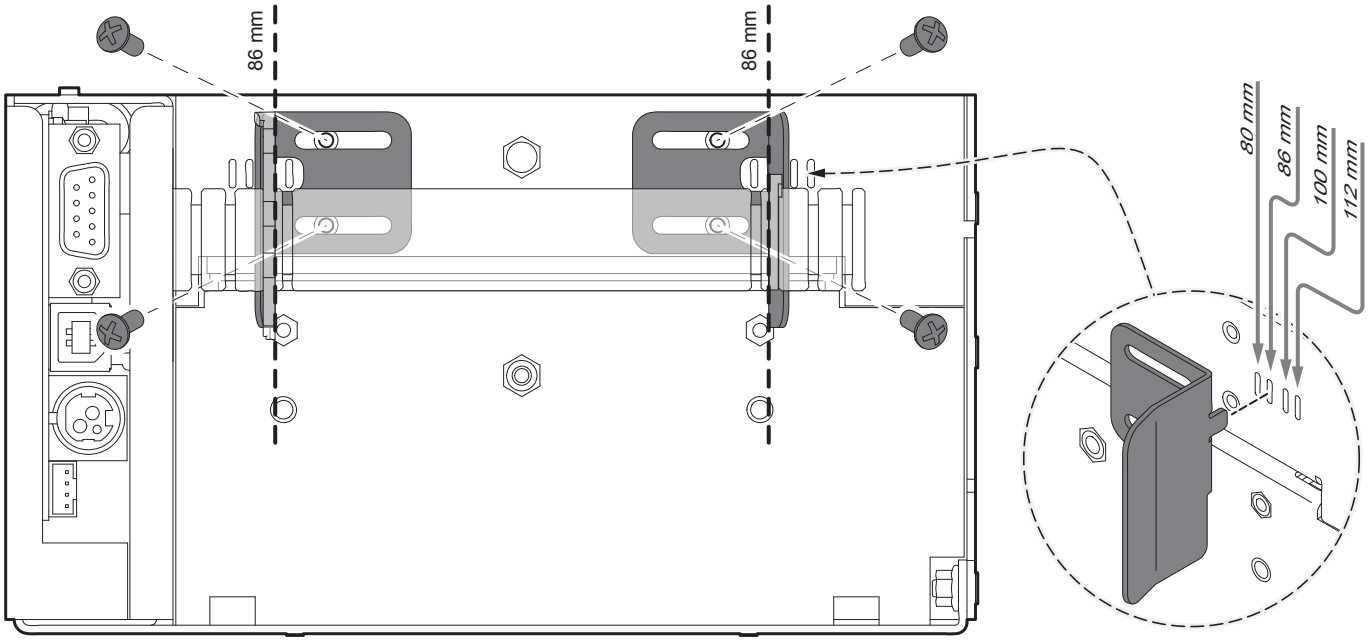


TPTCM112III (Strong Cut models)

Paper width may be set to 80, 86, 100 or 112 mm by modifying the position of the adjustment rings (internal and external) to ensure the right paper alignment inside the device (see the following figure).

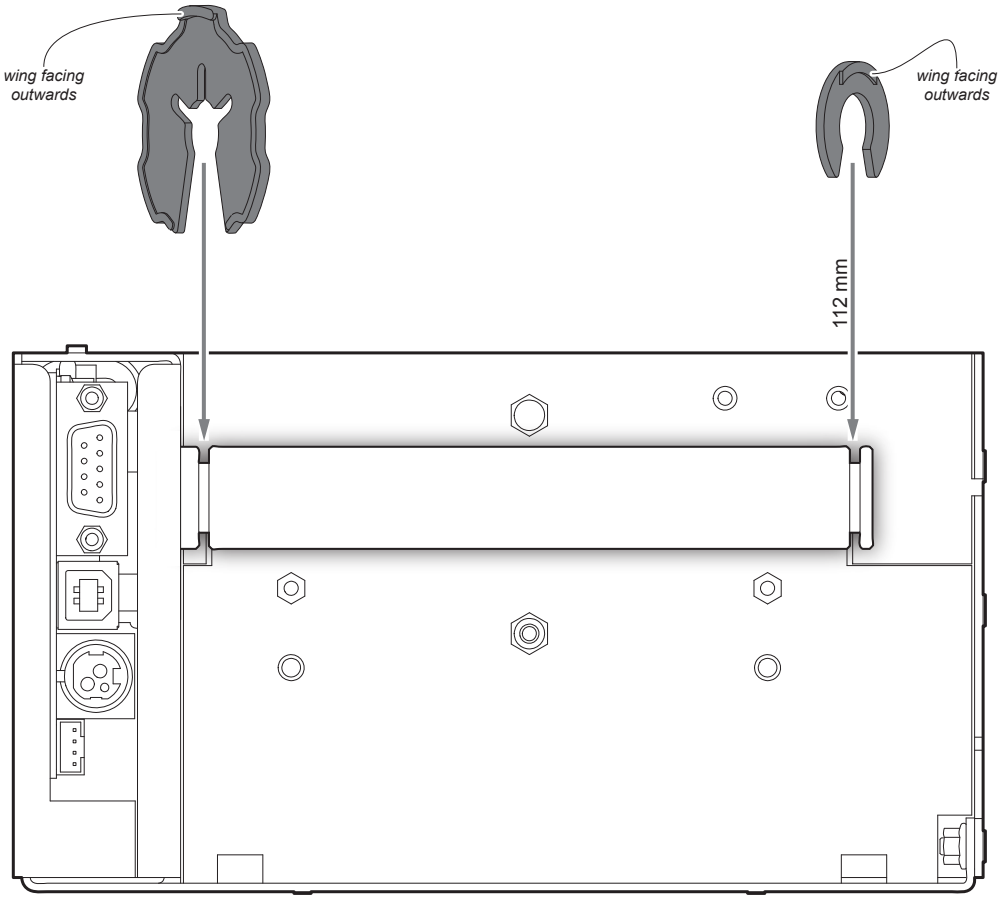


To manage paper width of 80, 86 or 100 mm, fix and correctly place the two paper guide brackets provided with the device. The following figure shows an example of bracket fixing for 86 mm paper width.



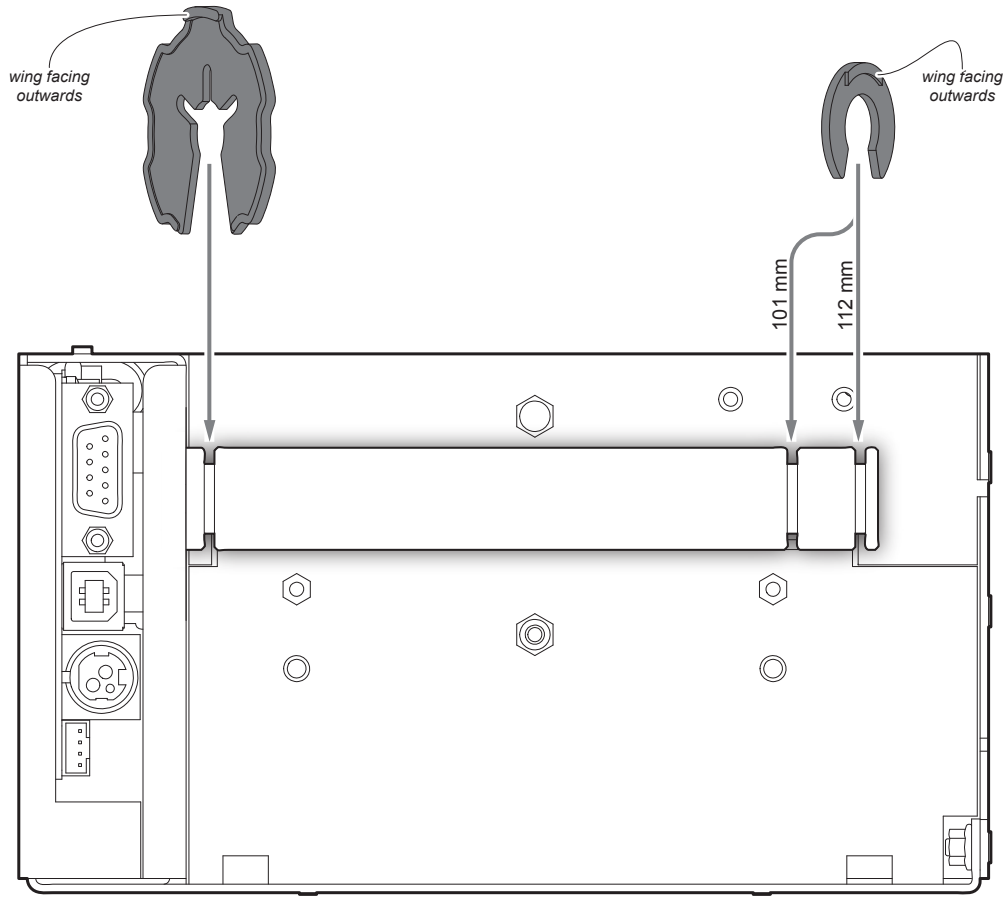
TPTCM112III (models with ejector)

The devices manage only 112 mm paper width roll. However, it is necessary to correctly place the two rings for the roll blocking (internal and external) to ensure the right paper alignment inside the device.

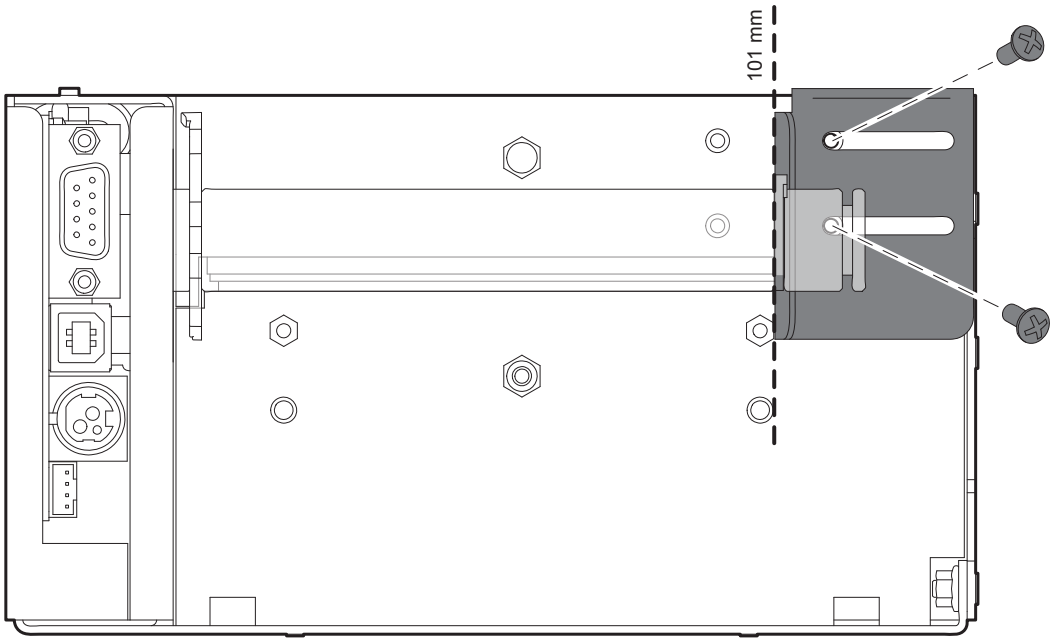


TPTCM112IIIL

Paper width may be set to 101 or 112 mm by assembling the internal adjustment ring and modifying the position of the external adjustment rings to ensure the right paper alignment inside the device (see the following figure).



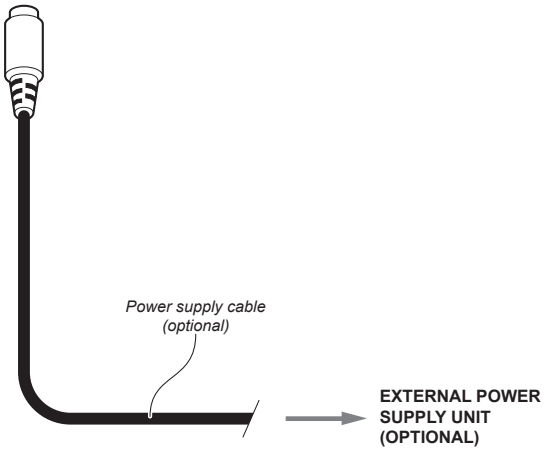
To manage 101 mm paper width, fix and correctly place the paper guide bracket provided with the device.



4.2 Switch the device on

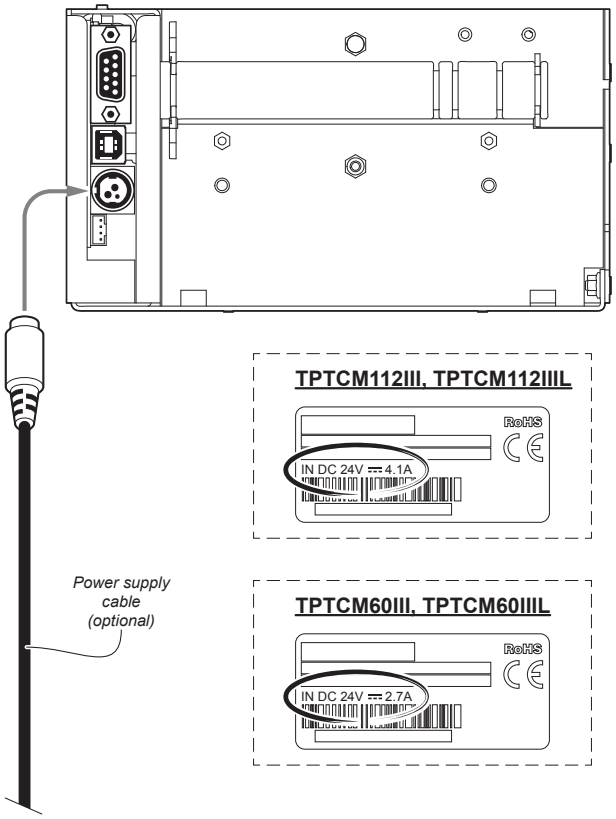
all models

1



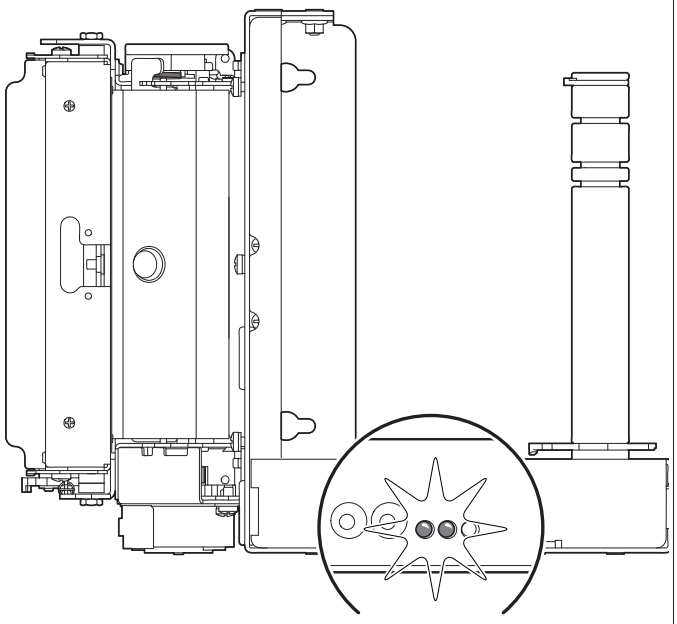
Connect the power supply cable
to an external power supply unit.

2



Connect the power supply cable to the device.
Use the type of electrical power supply
indicated on the label.

3



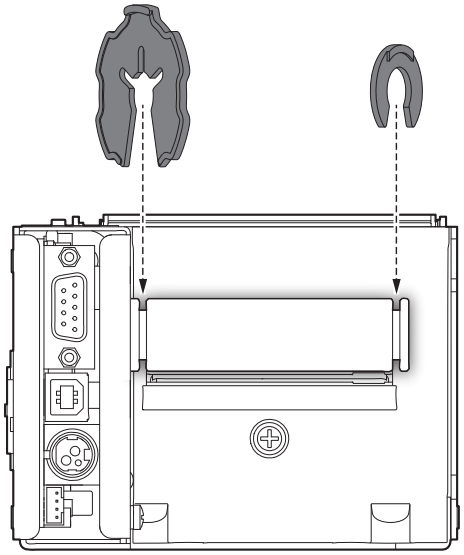
The status led (yellow) and the power on led (green)
turn on and the device is ready.

4.3 Loading the paper roll

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

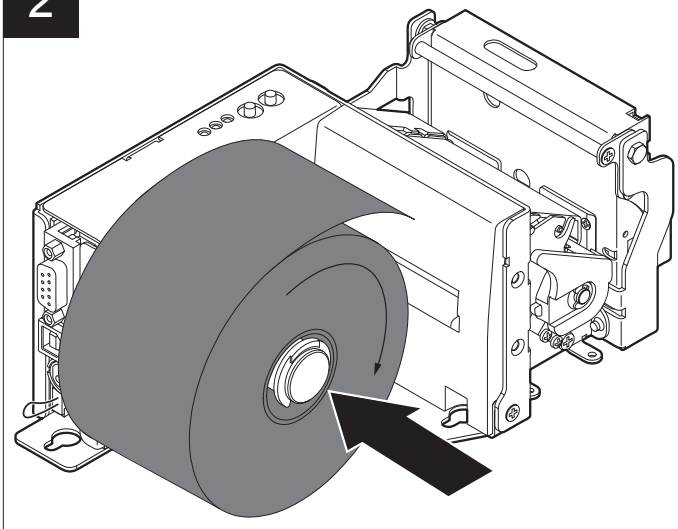
TPTCM60III (all models)

1



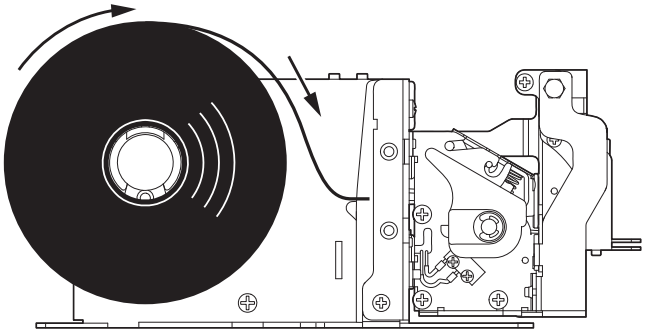
Assemble the two rings
as described in the previous paragraphs.

2



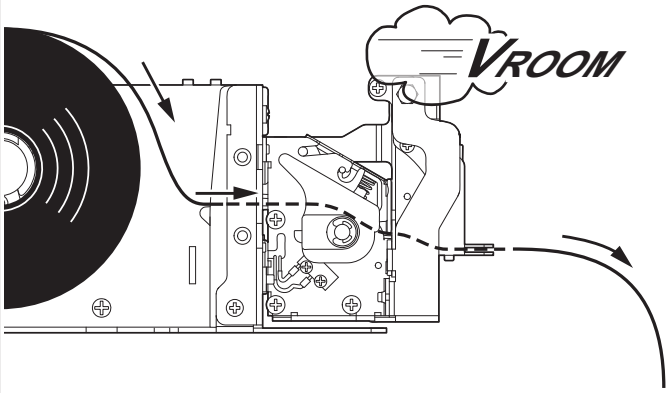
Insert the paper roll on the pin
so that it unrolls correctly.

3



Insert the paper into the input mouth.

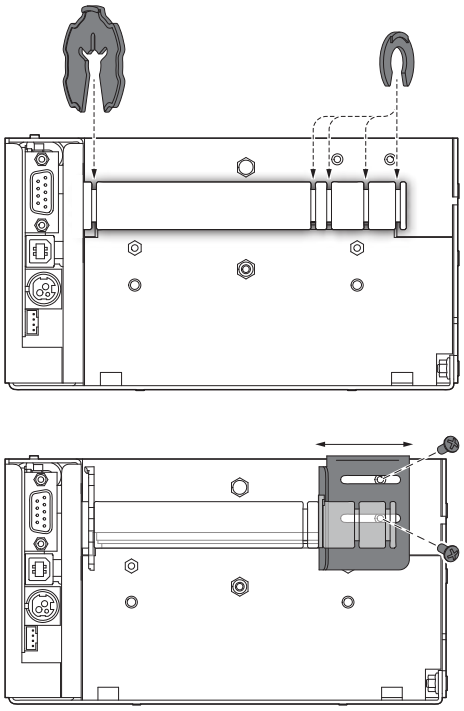
4



Wait until the paper is
automatically loaded and cut.

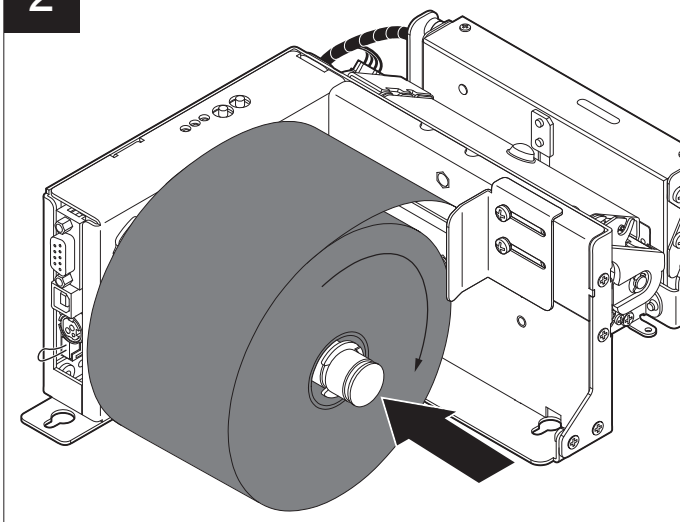
TPTCM112III (all models)

1



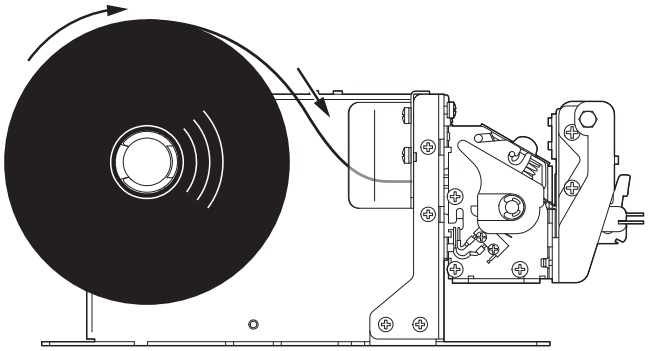
If necessary, adjust the paper width by assembling the two rings and the paper guides as described in the previous paragraphs.

2



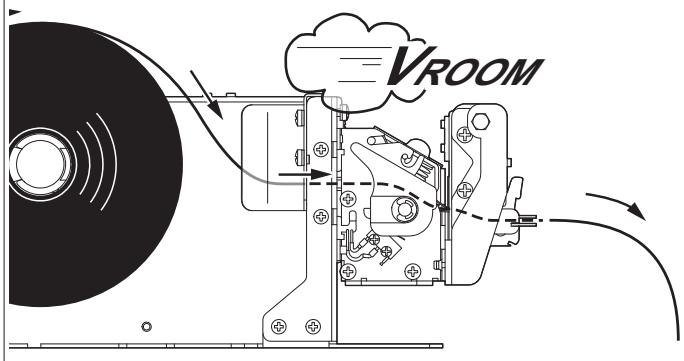
Insert the paper roll on the pin so that it unrolls correctly.

3



Insert the paper into the input mouth. Be sure that the paper is correctly positioned into paper guides.

4

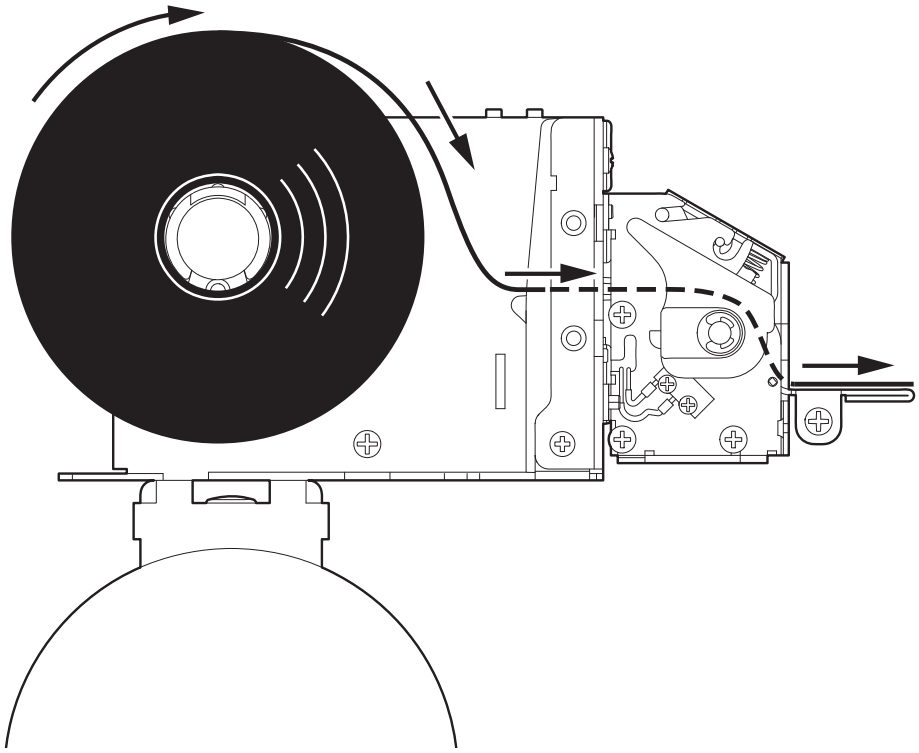


Wait until the paper is automatically loaded and cut.

4.4 Fixing the paper on rewinder

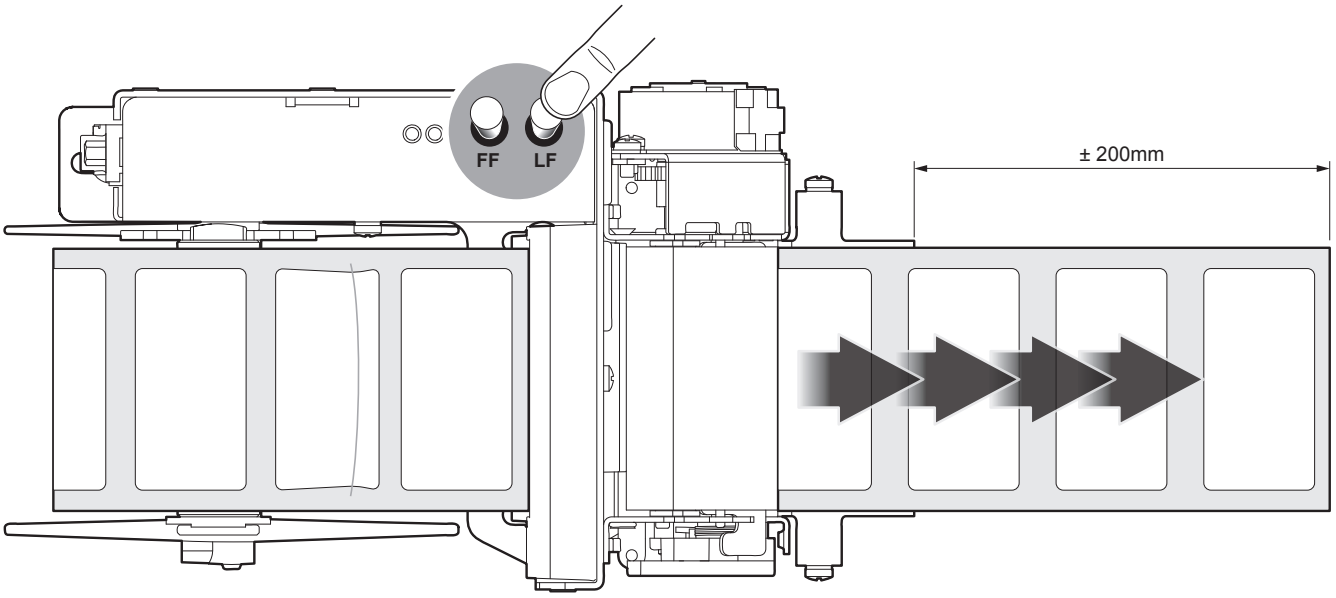
TPTCM60IIIL

1



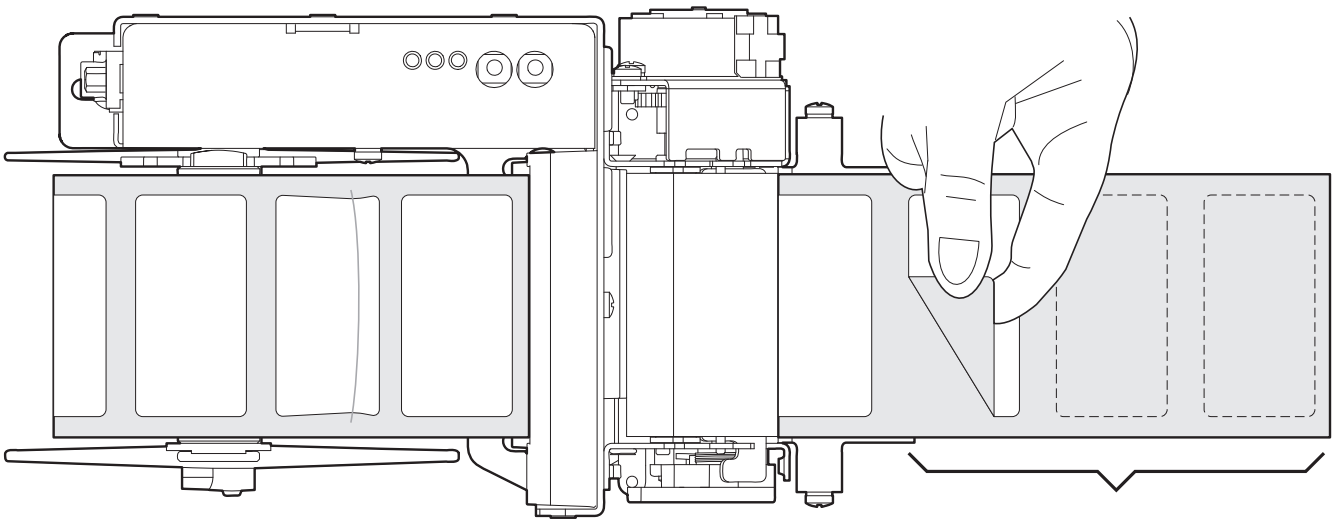
Load the paper into the device as described in the previous paragraphs.

2



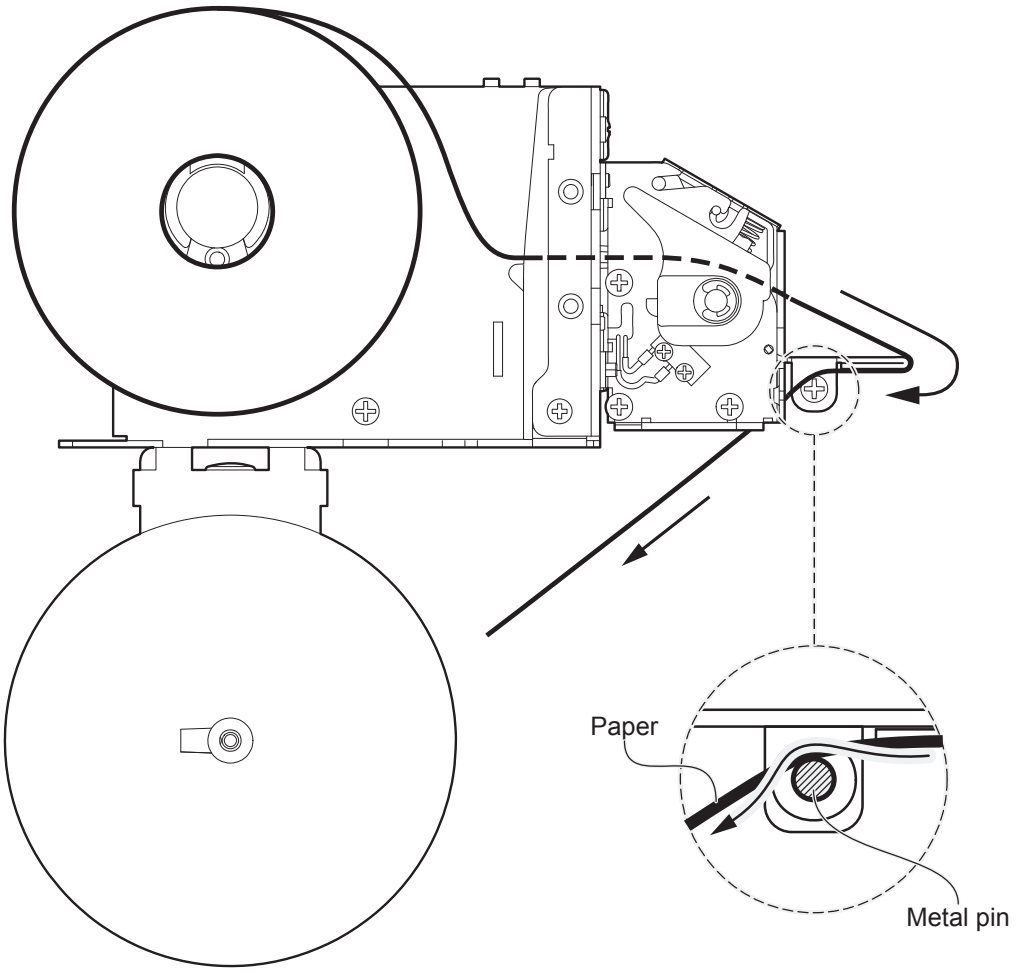
Press the LF LINE FEED button repeatedly to advance
the paper of at least 200mm beyond the edge of the peeler.

3



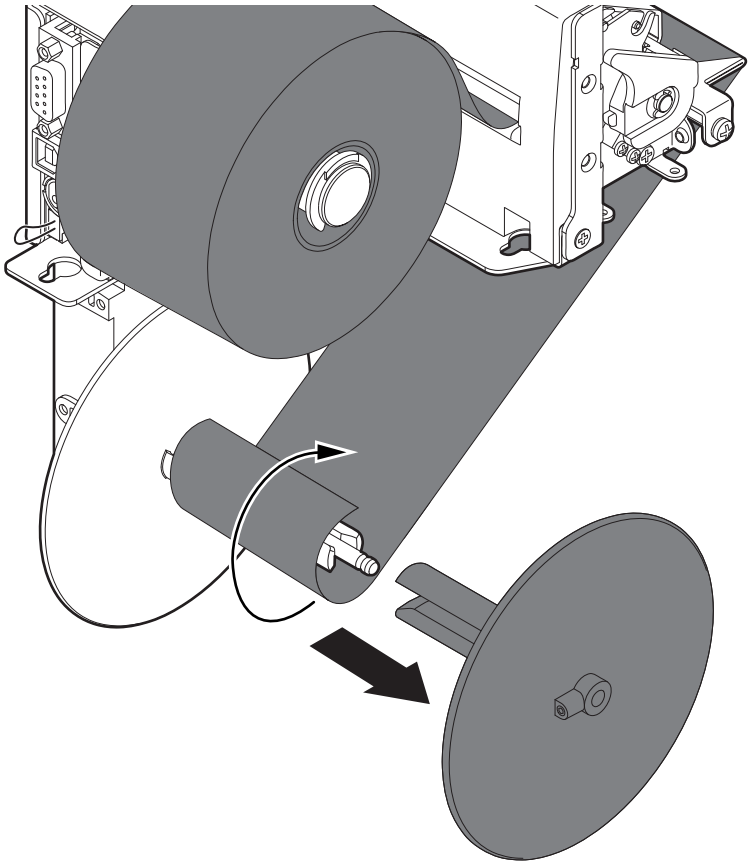
Remove all labels on the media, beyond the paper mouth.

4



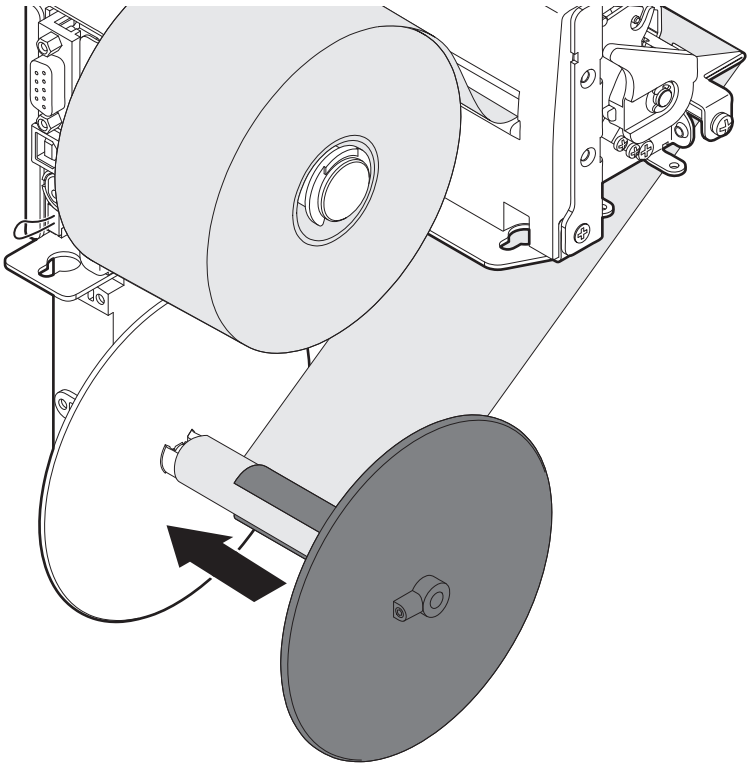
Pull the paper toward the rewinder respecting the path indicated by the arrows.

5



Allontanare il disco in plastica dell’avvolgitore e
avvolgere la carta intorno al perno come indicato dalla freccia.

6



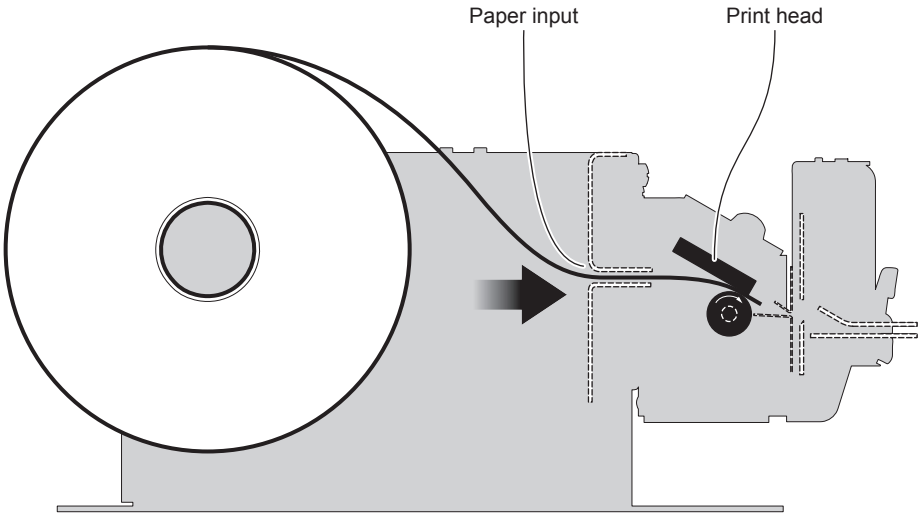
Fermare la carta inserendo il disco in plastica.

4.5 Issuing ticket

The device allows you to choose between different operating modes for the issuance of printed tickets.
The operating modes shown in the following images, depend on the settings of the configuration parameters and commands sent to the device.

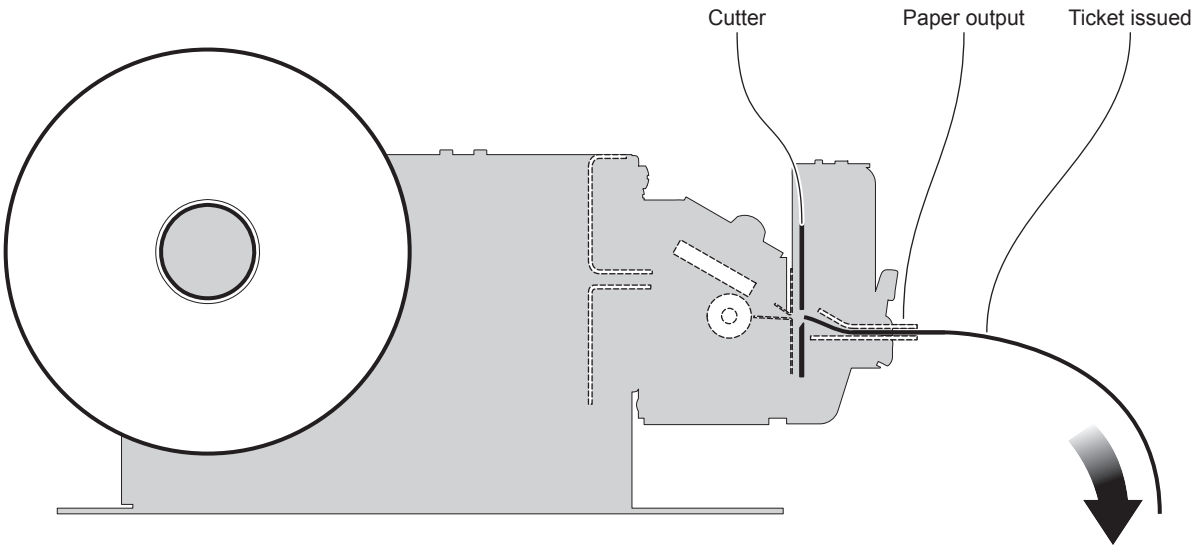
“PRINT” mode - TPTCM60III, TPTCM112III, TPTCM112IIIL

1



The device starts the ticket printing.

2

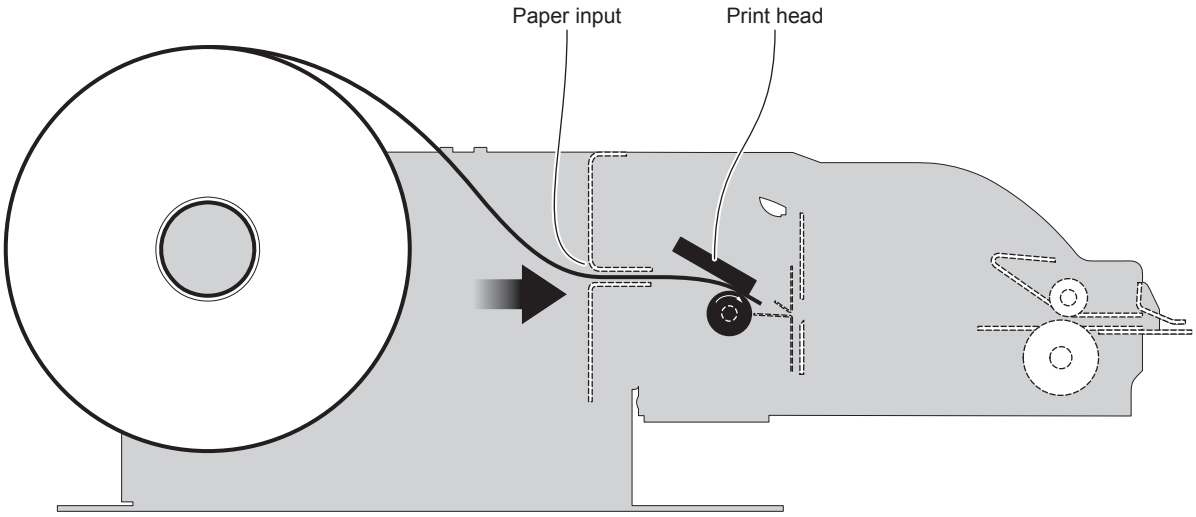


When printing ends, the device cuts the ticket printed that is issued from the paper output.

NOTE: To enable this operating mode, you need to send a cut command when the printing ends (see commands manual).

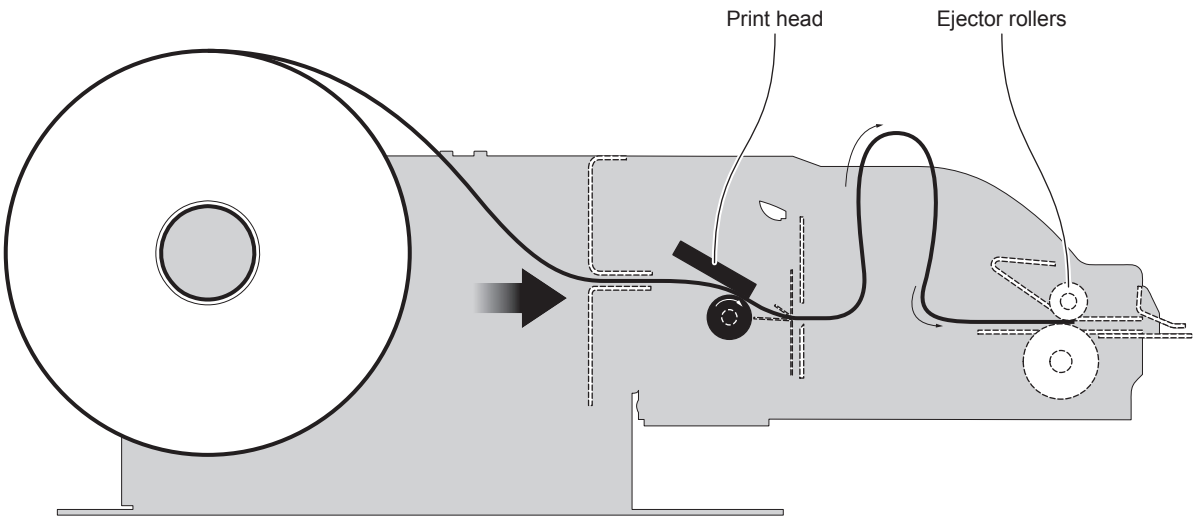
“EJECT” mode (continuous mode disabled) - models with ejectors

1



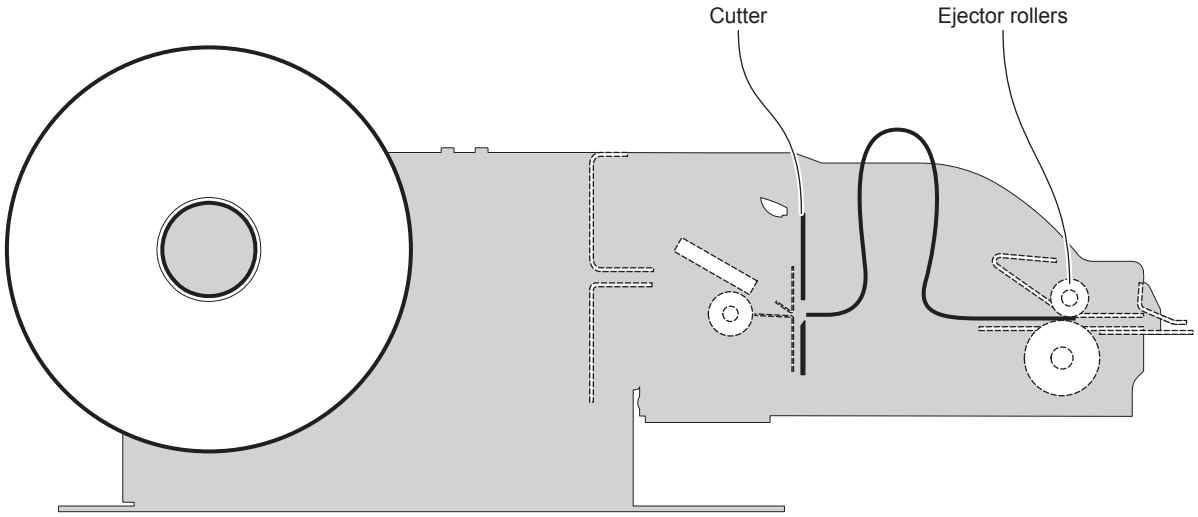
The device starts the ticket printing.

2



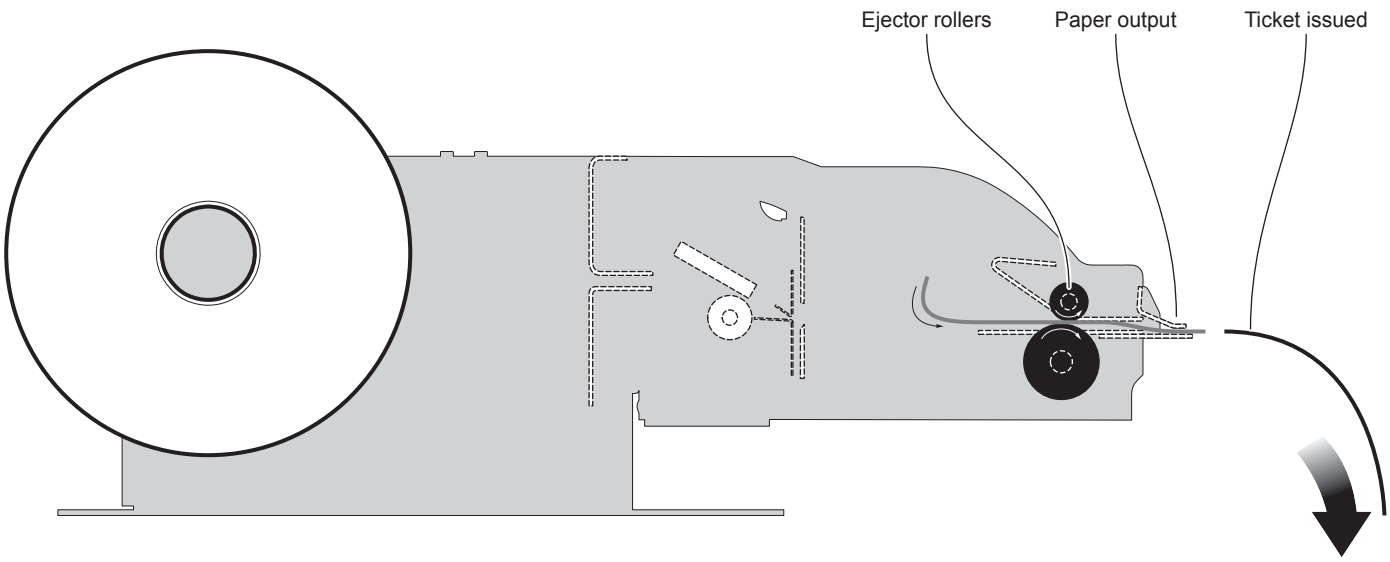
The ticket advances ahead to the ejector and is caught between the ejector rollers.
The printed part of ticket is collected into the ejector group while the device continues printing.

3



When printing ends, the device cuts the ticket printed

4

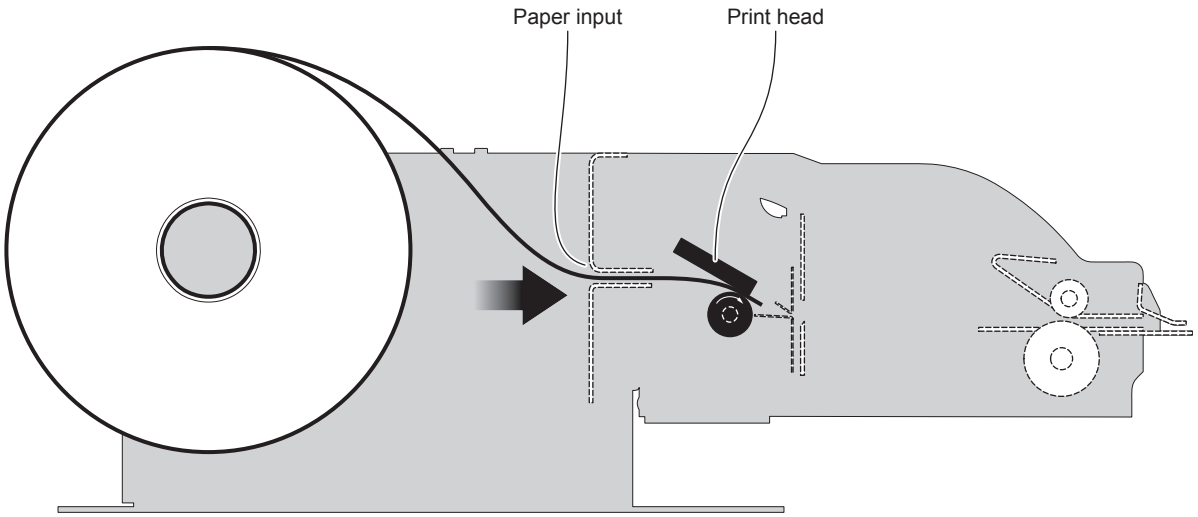


The device directly ejects the ticket

NOTE: To enable this issuing mode, you need to correctly set the operation mode of the ejector with the command 0x1D 0x65 (see commands manual).

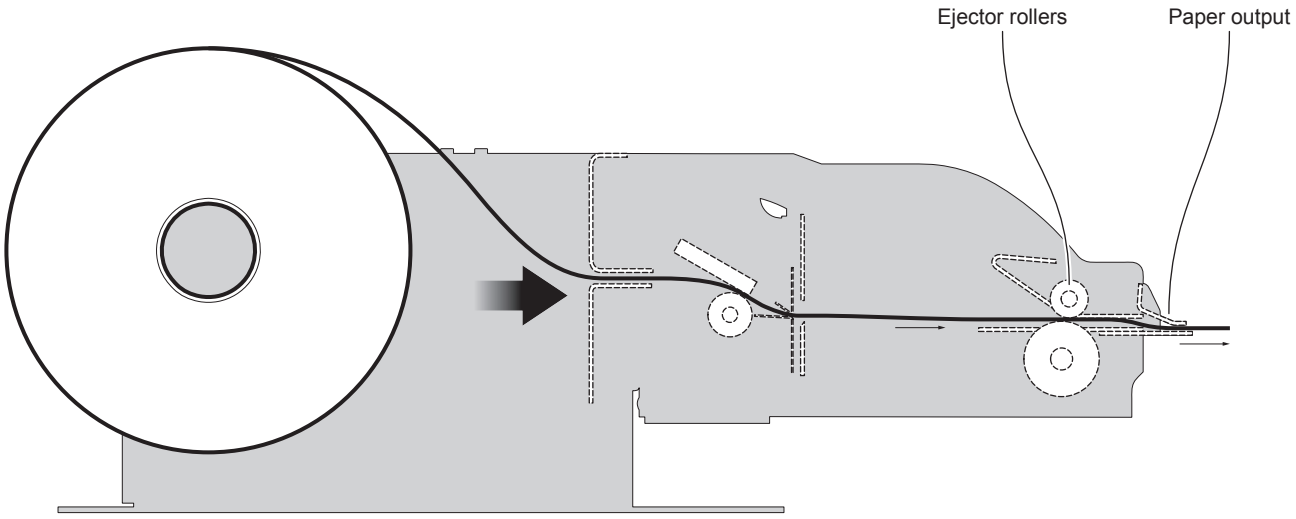
“EJECT” mode (continuous mode enabled) - models with ejectors)

1



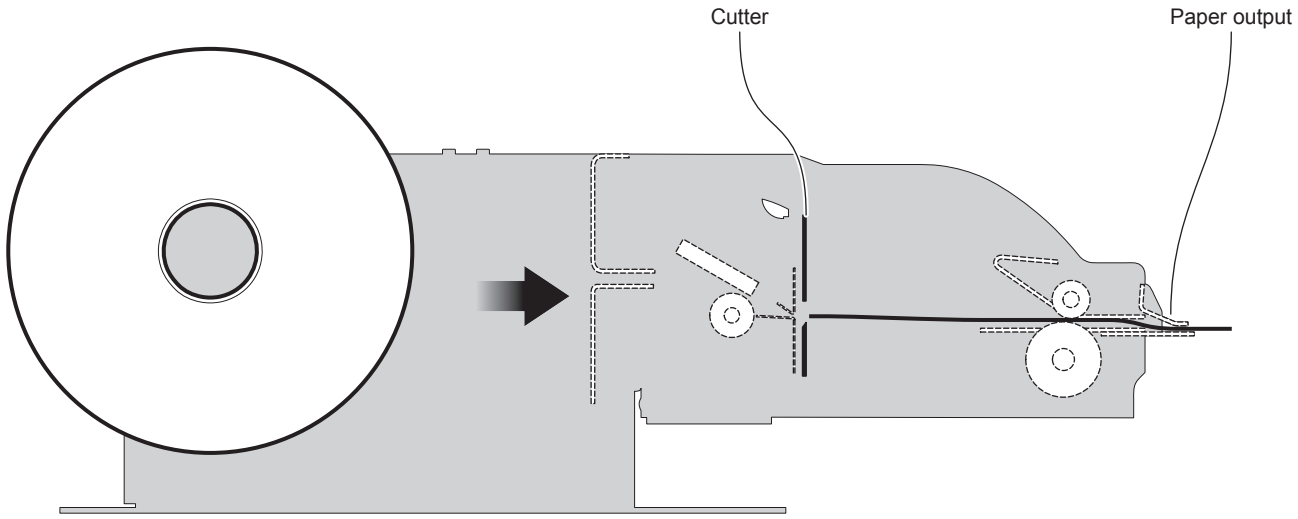
The device starts the ticket printing.

2



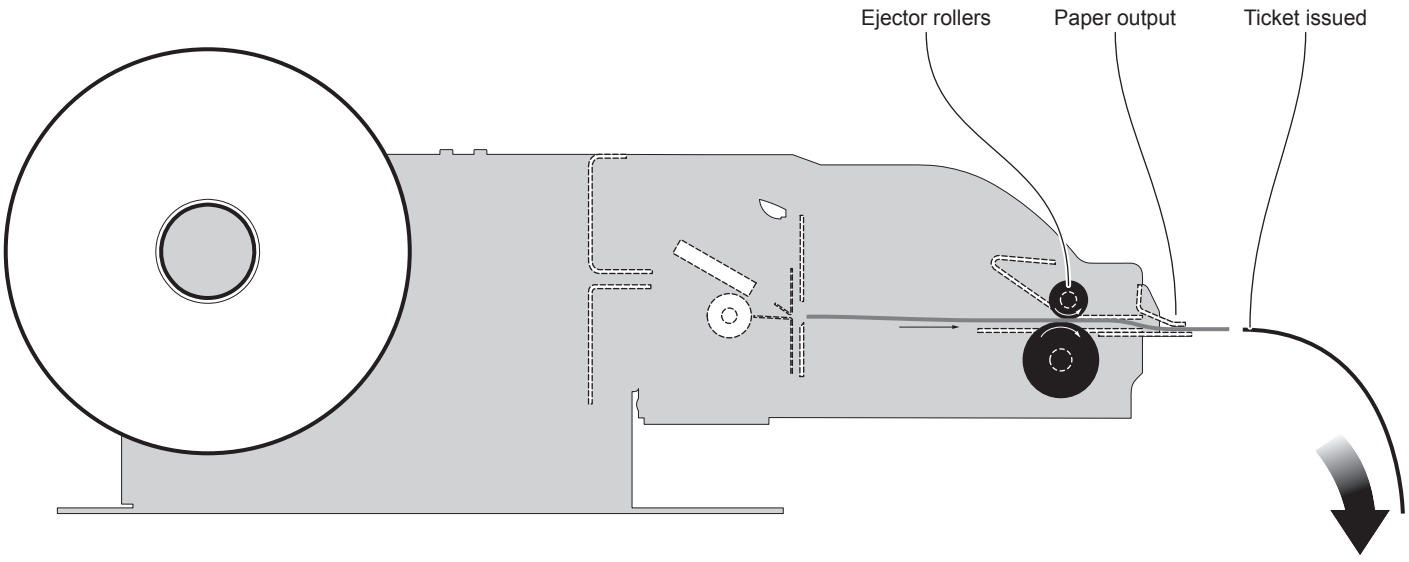
The ticket goes beyond the ejector rollers and
stanrts to come out of the paper output

3



When printing ends, the device cuts the ticket printed

4

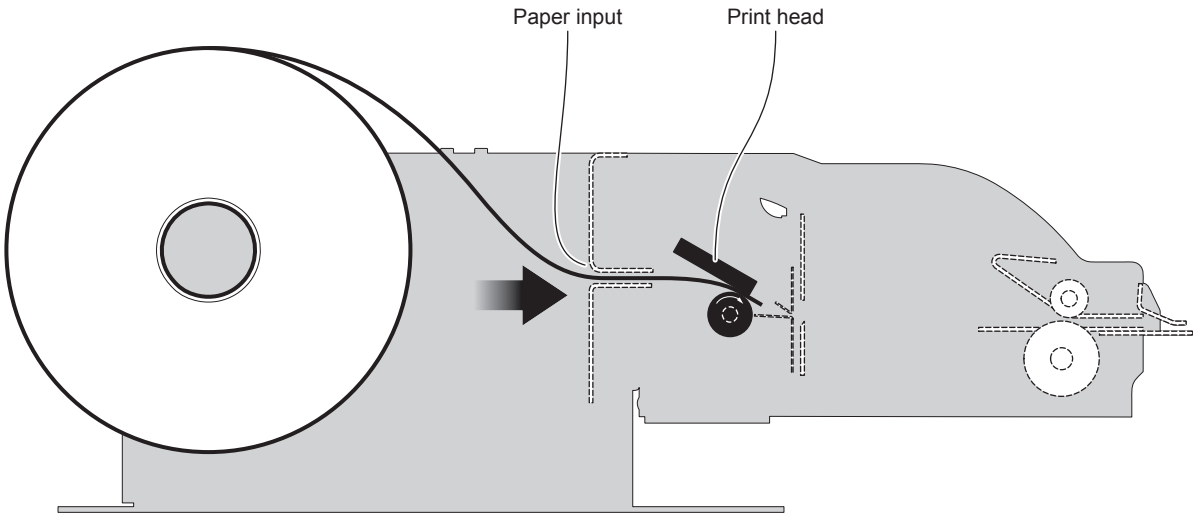


The device ejects the ticket

NOTE: To enable this issuing mode, you need to correctly set the operation mode of the ejector with the command 0x1D 0x65 (see commands manual).

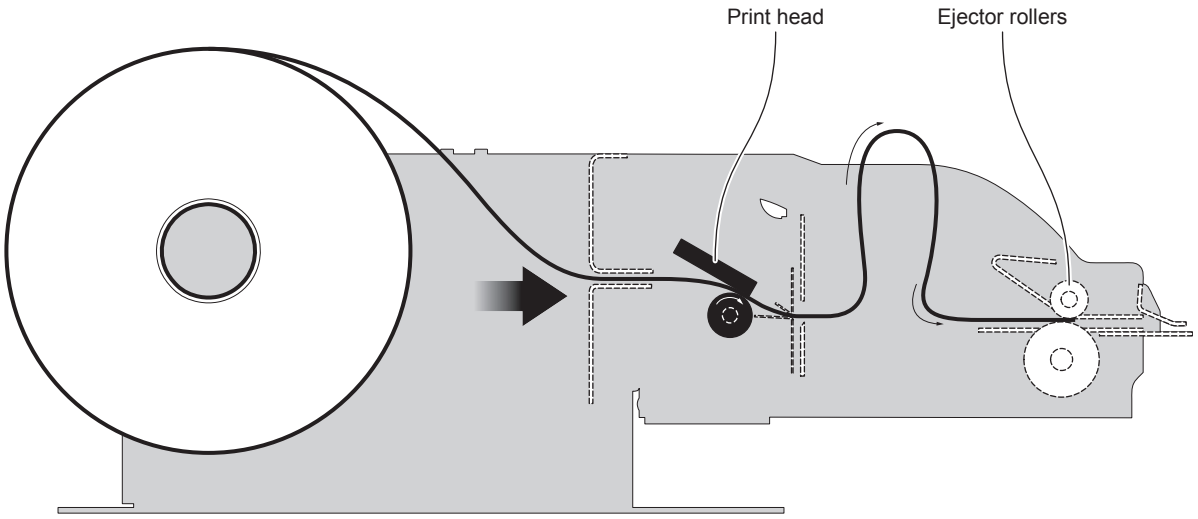
“PRESENT” mode (continuous mode disabled) - models with ejectors

1



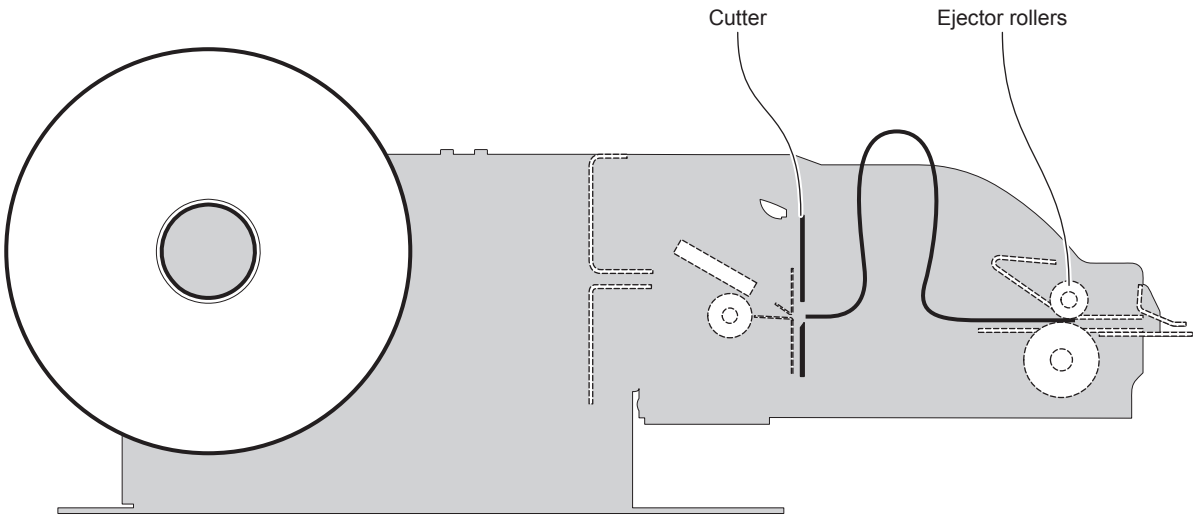
The device starts the ticket printing.

2



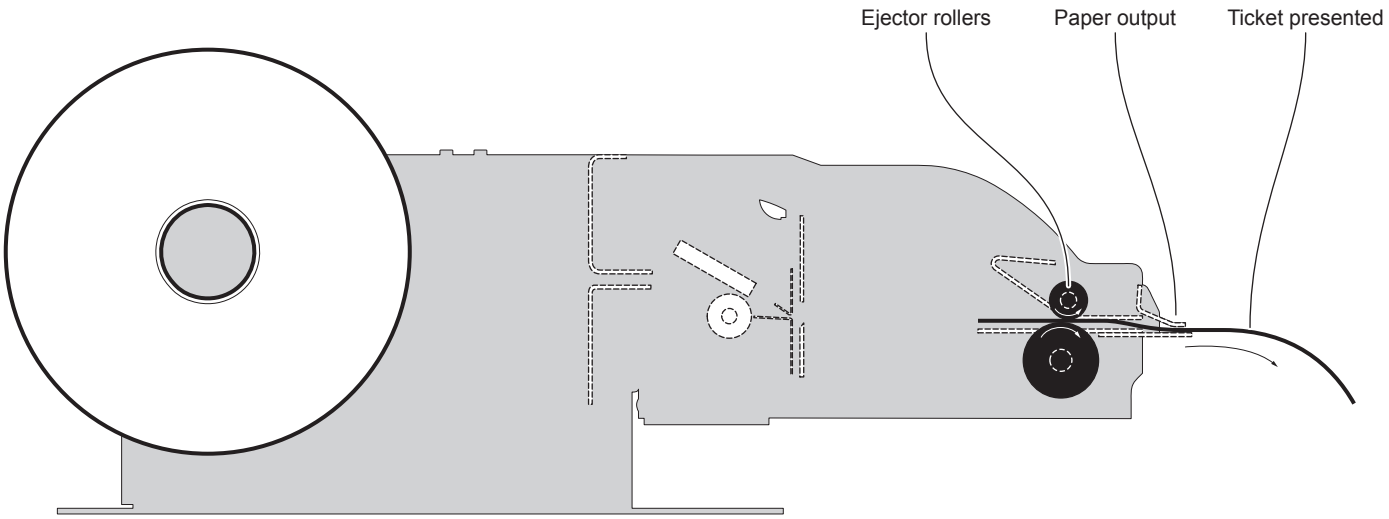
The ticket advances ahead to the ejector and is caught between the ejector rollers.
The printed part of ticket is collected into the ejector group while the device continues printing.

3



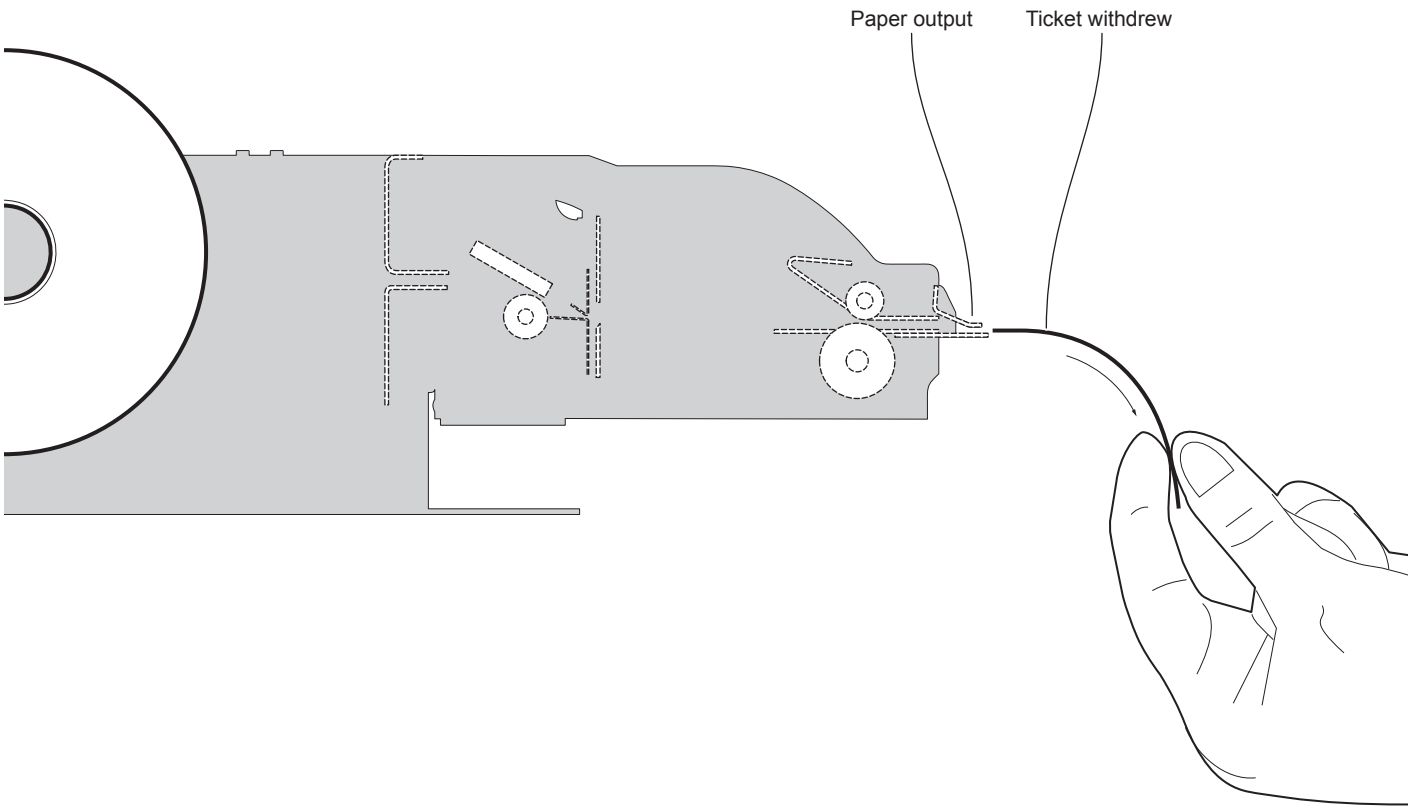
When printing ends, the device cuts the ticket printed

4



The device presents the ticket printed on the paper output

5

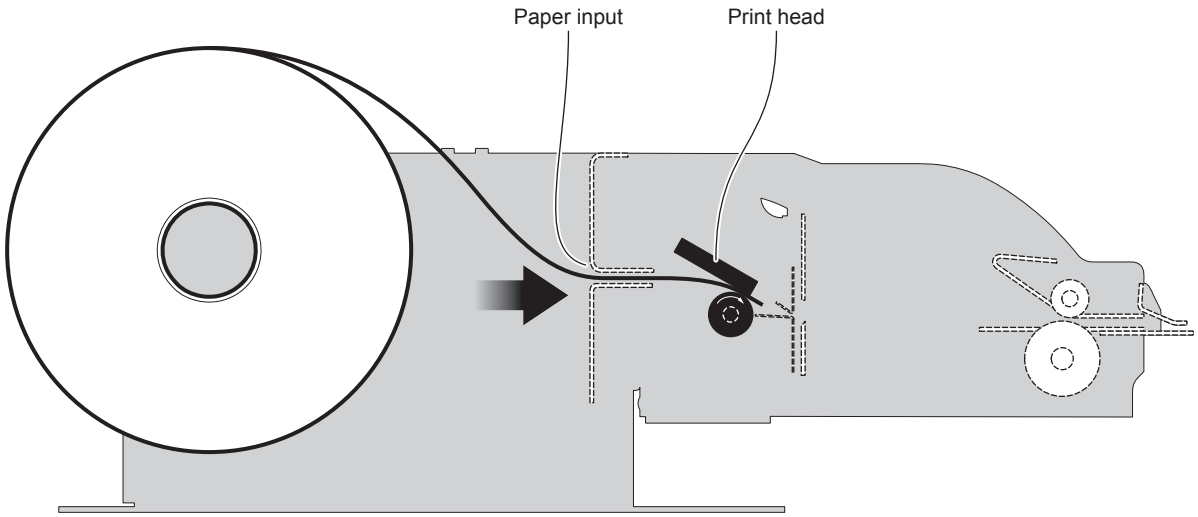


The user withdraws the ticket from the paper output

NOTE: To enable this issuing mode, you need to correctly set the operation mode of the ejector with the command 0x1D 0x65 (see commands manual) and the setup parameter "Automatic Ejecting" (see chapter 5 of this manual).

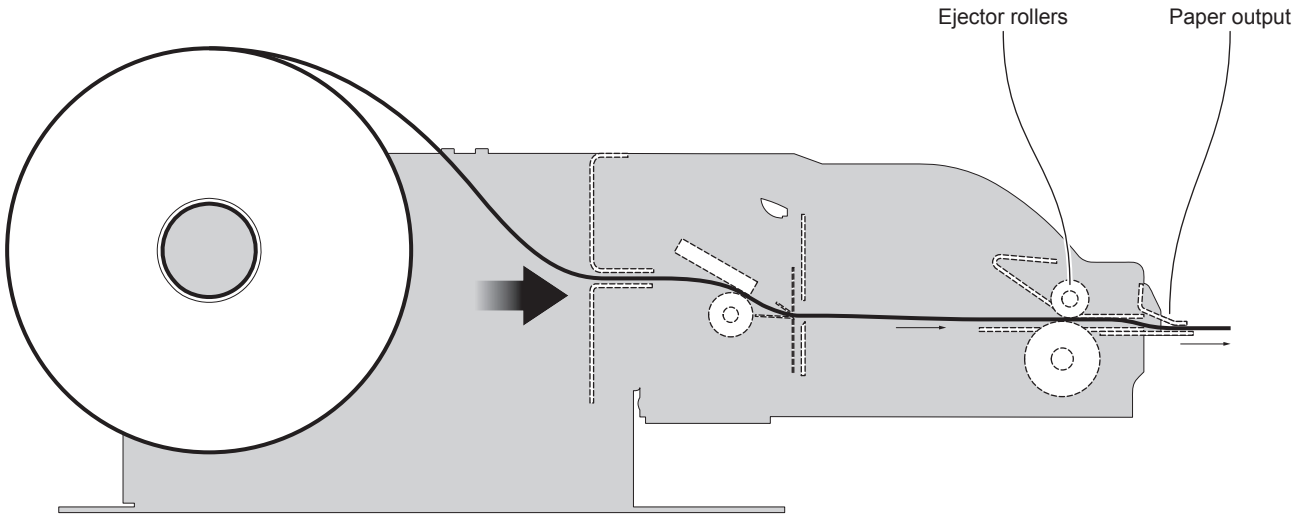
“PRESENT” mode (continuous mode enabled) - models with ejectors

1



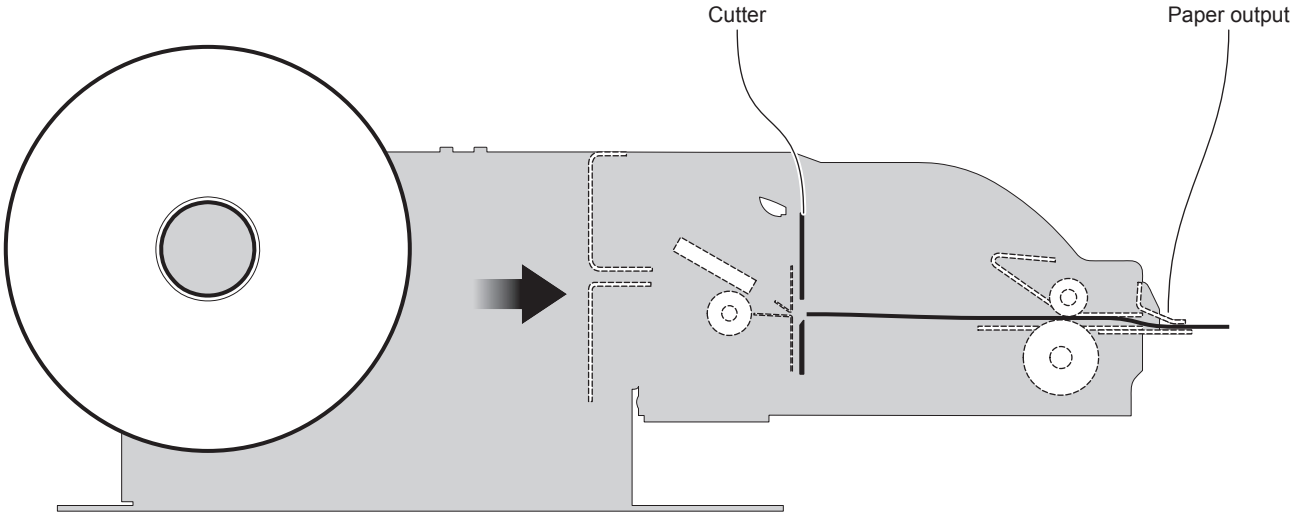
The device starts the ticket printing.

2



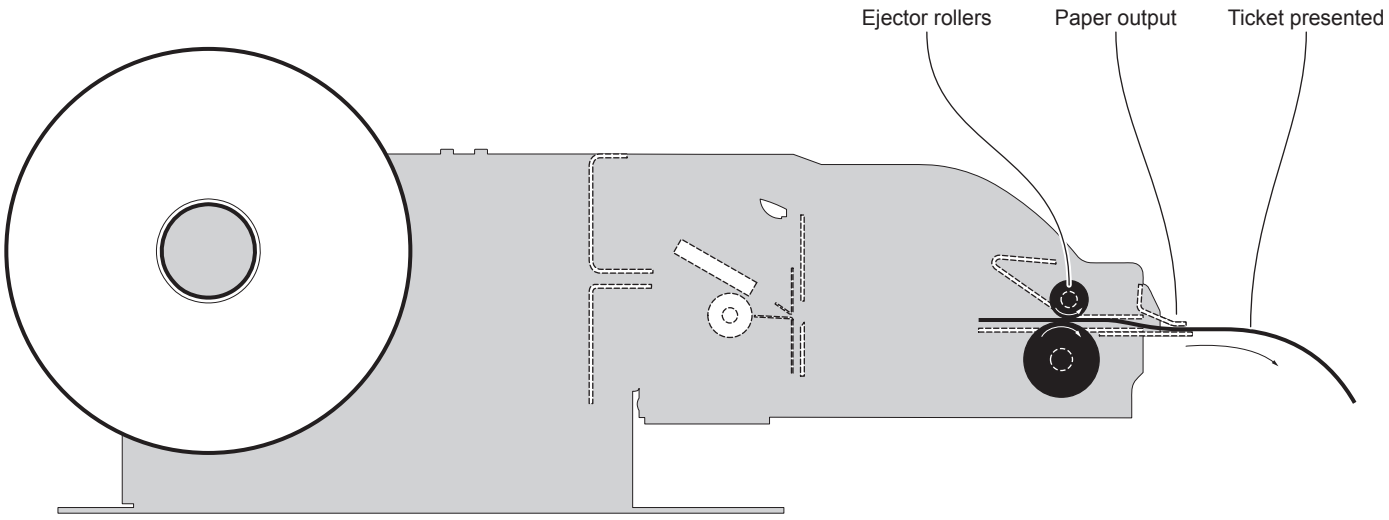
The ticket goes beyond the ejector rollers and
stanrts to come out of the paper output

3



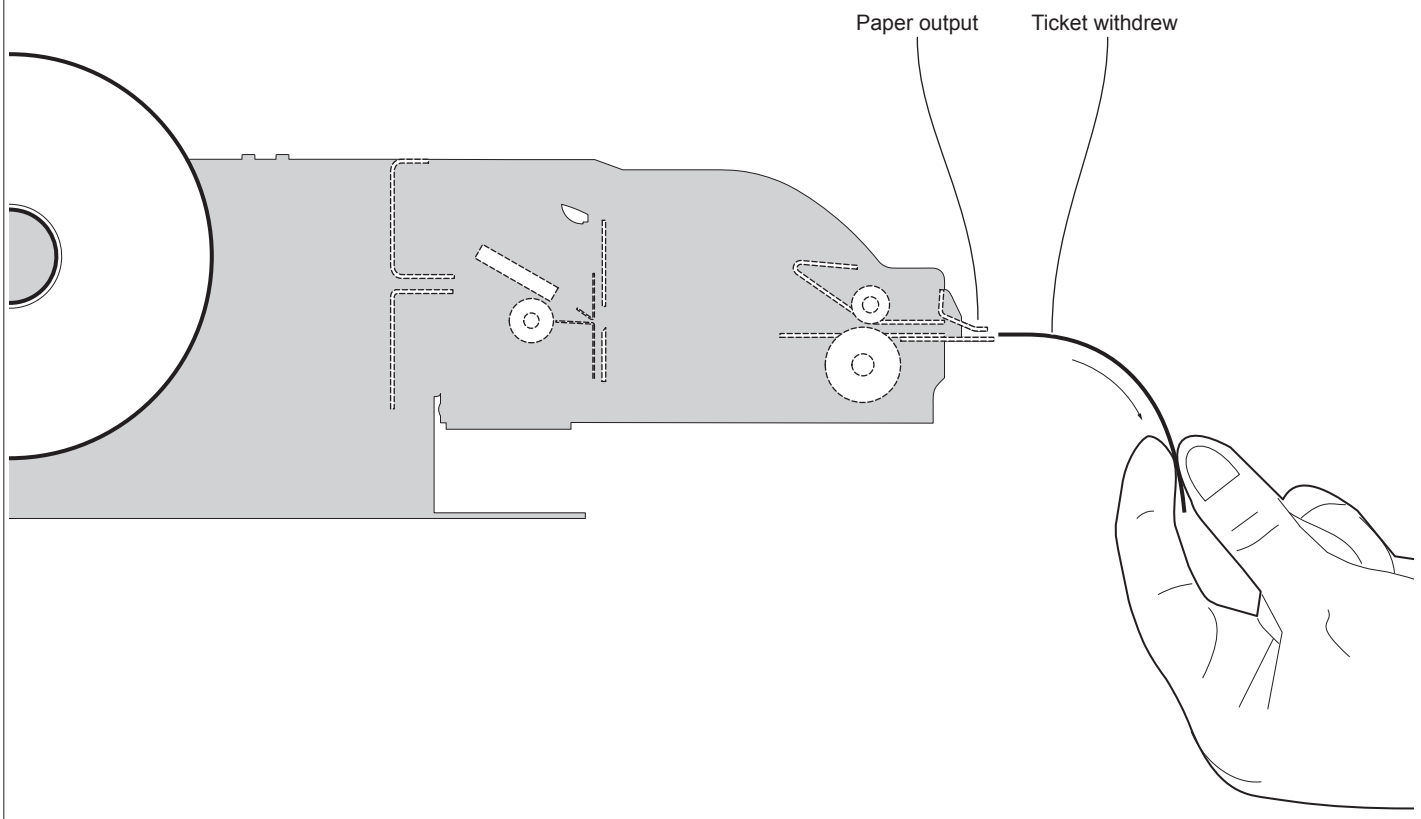
When printing ends, the device cuts the ticket printed

4



The device presents the ticket printed on the paper output

5

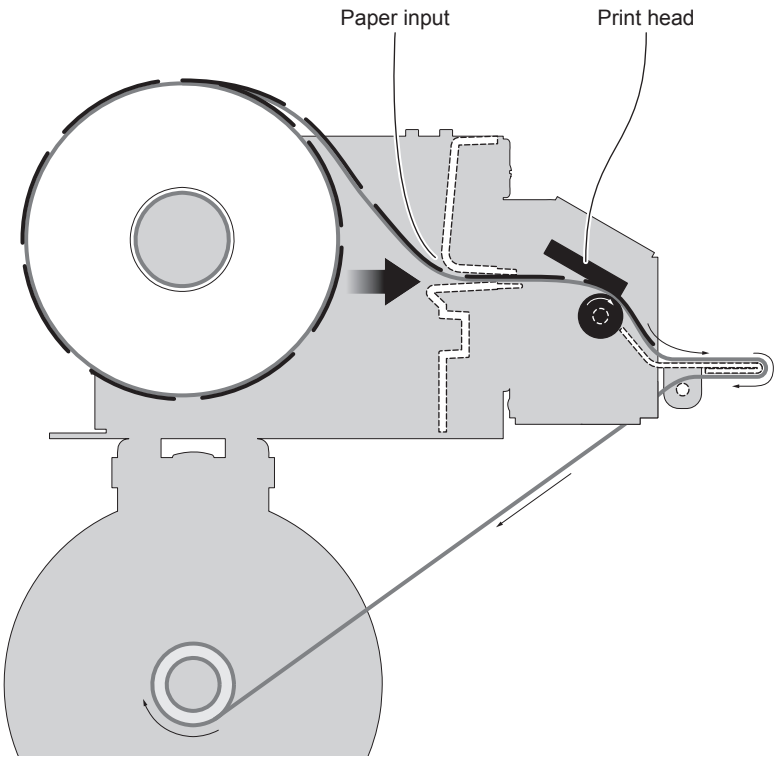


The user withdraws the ticket from the paper output

NOTE: To enable this issuing mode, you need to correctly set the operation mode of the ejector with the command 0x1D 0x65 (see commands manual) and the setup parameter "Automatic Ejecting" (see chapter 5 of this manual).

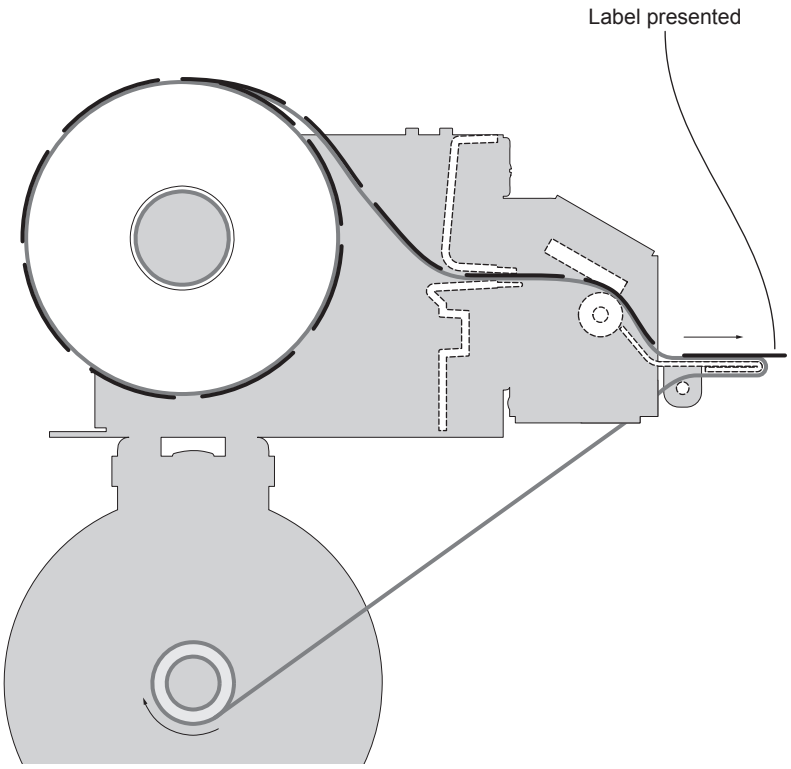
“PRESENT” mode - TPTCM60IIIL

1



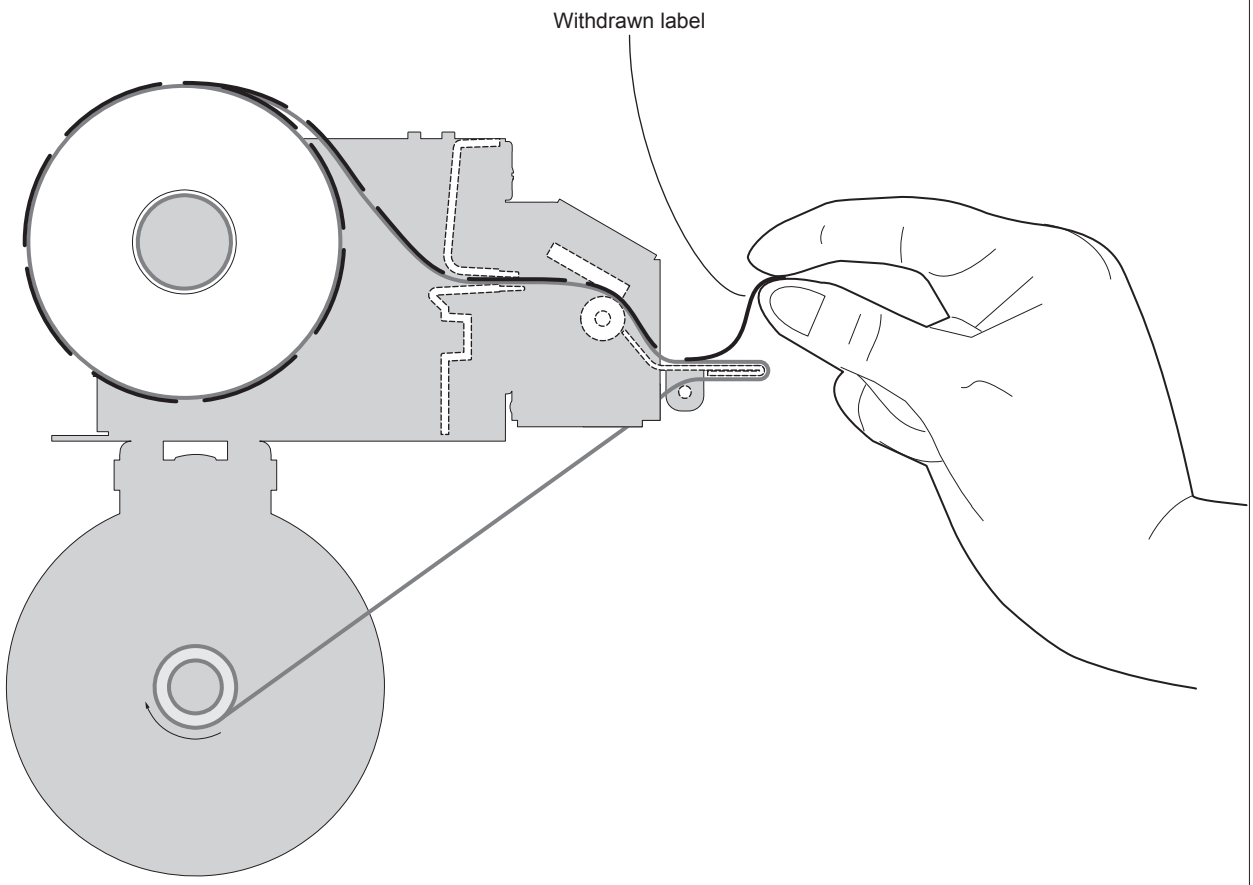
The device performs the label printing.

2



When printing ends, the device presents
the label printed on the output peeler.

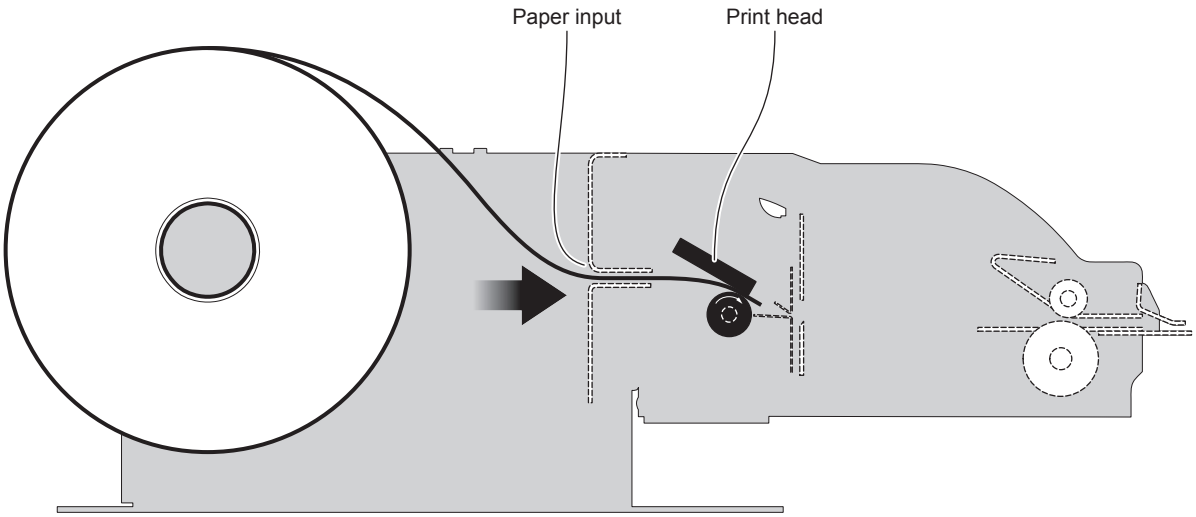
3



The user withdraws the printed label

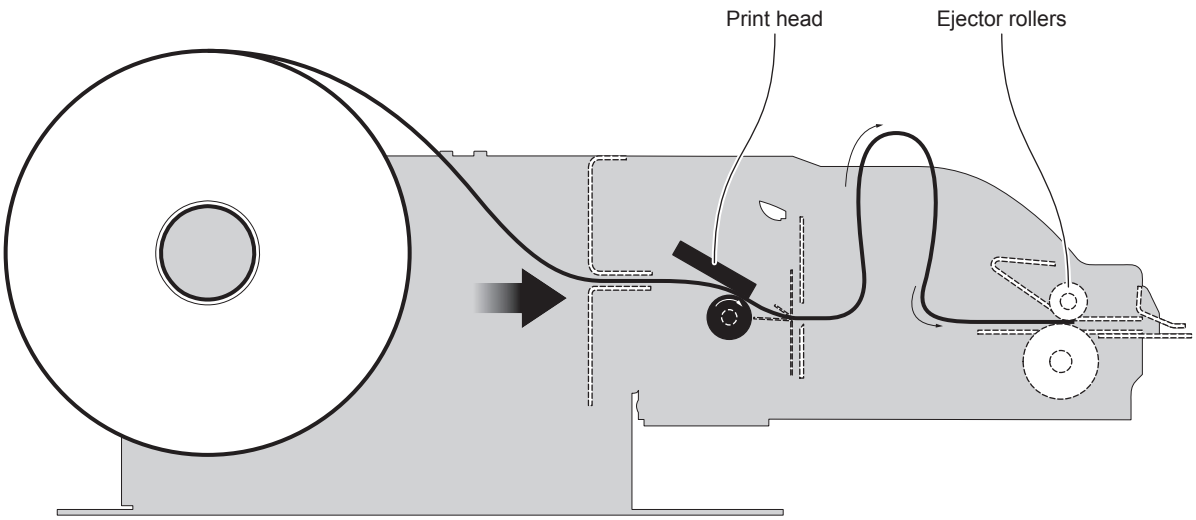
“PRESENT/EJECT” mode (continuous mode disabled) - models with ejectors

1



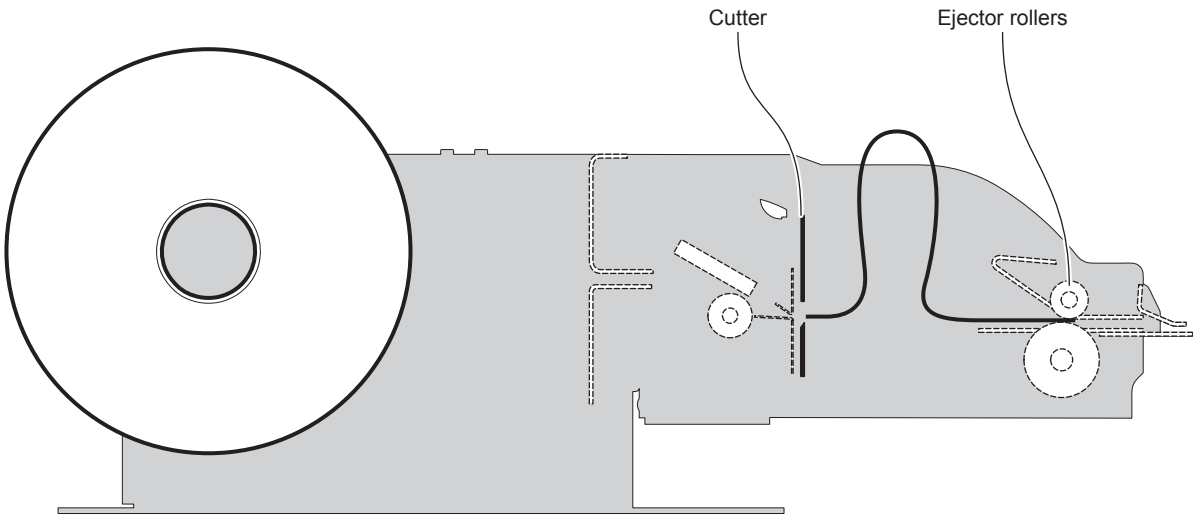
The device starts the ticket printing.

2



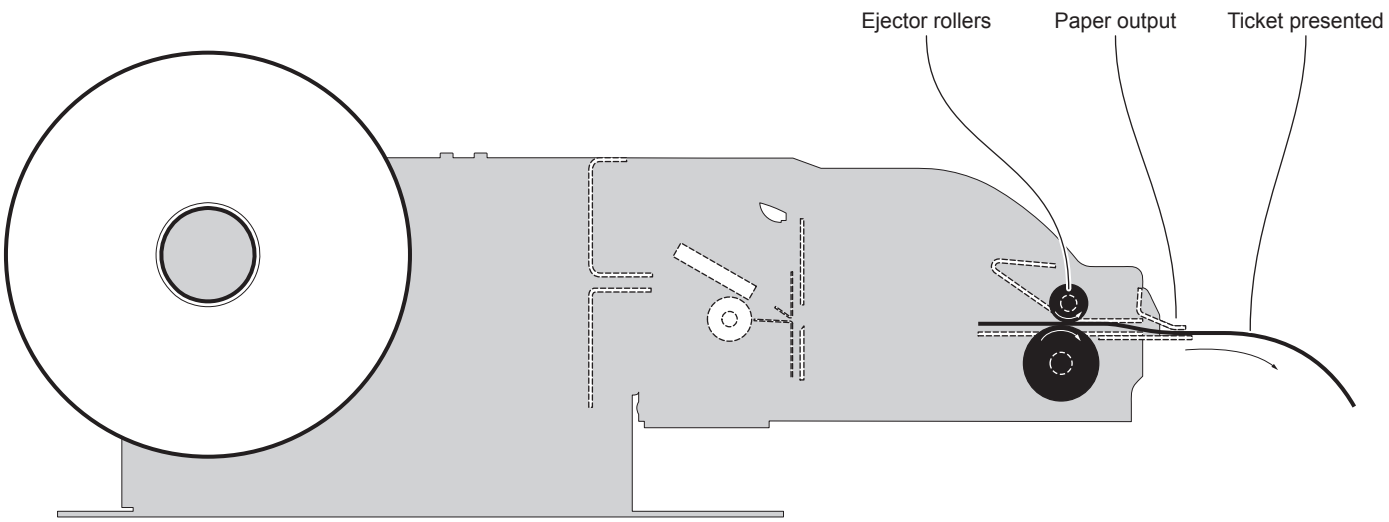
The ticket advances ahead to the ejector and is caught between the ejector rollers.
The printed part of ticket is collected into the ejector group while the device continues printing.

3



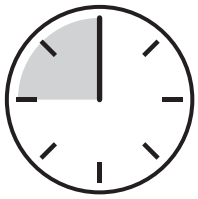
When printing ends, the device cuts the ticket printed

4



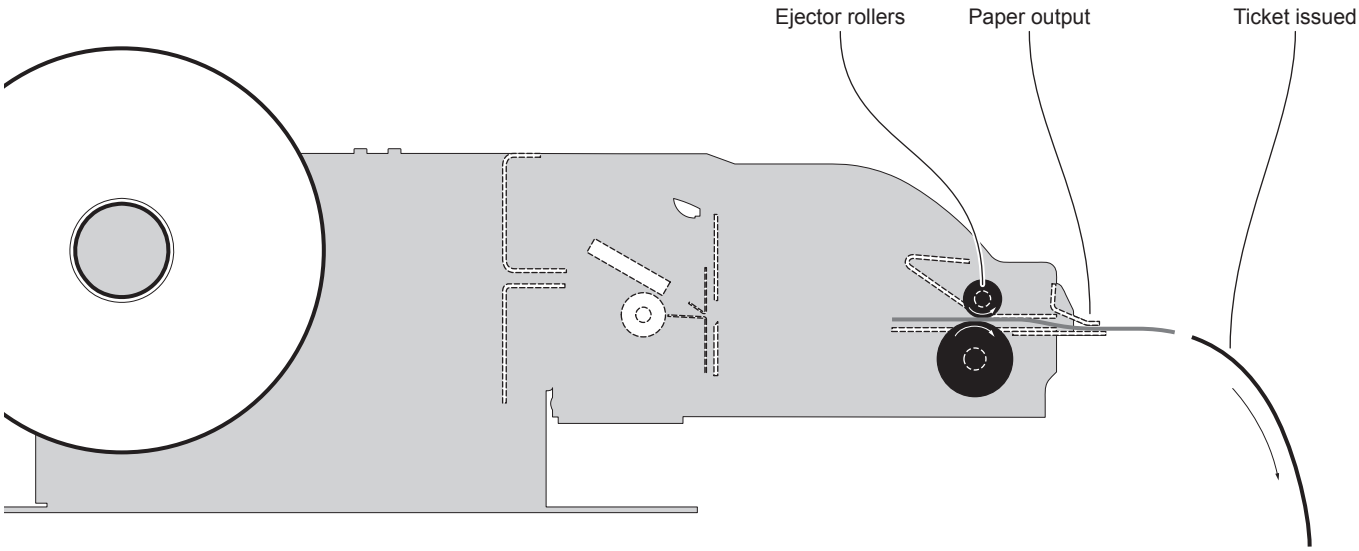
The device presents the ticket printed on the paper output

5



The ticket is waiting on the paper mouth for a preset period of time

6

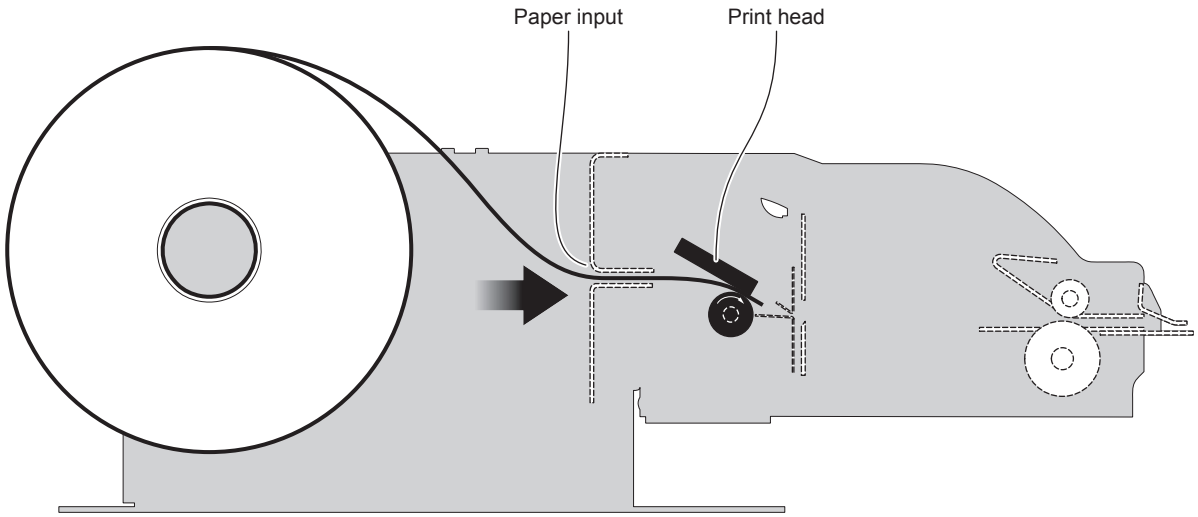


The device ejects the ticket

NOTE: To enable this issuing mode, you need to correctly set the operation mode of the ejector with the command 0x1D 0x65 (see commands manual) and the setup parameter "Automatic Ejecting" (see chapter 5 of this manual).

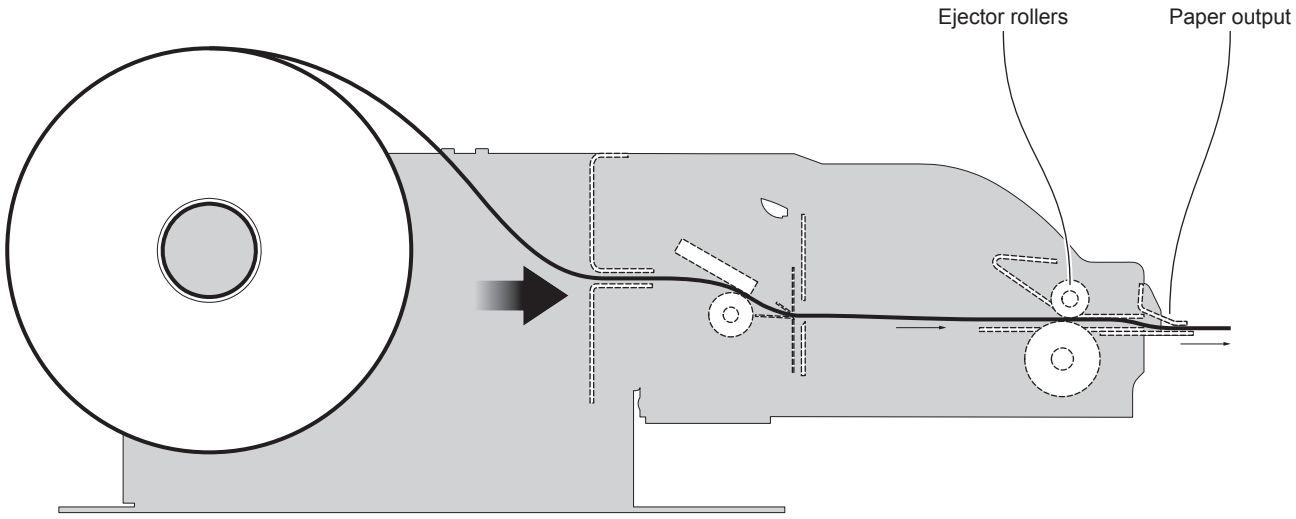
“PRESENT/EJECT” mode (continuous mode enabled) - models with ejectors

1



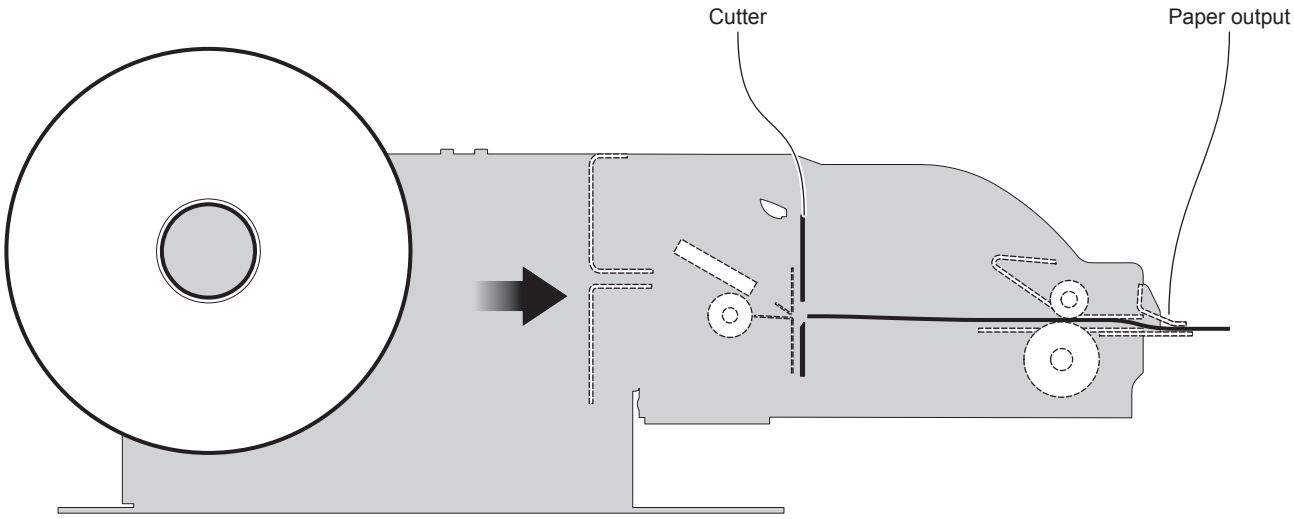
The device starts the ticket printing.

2



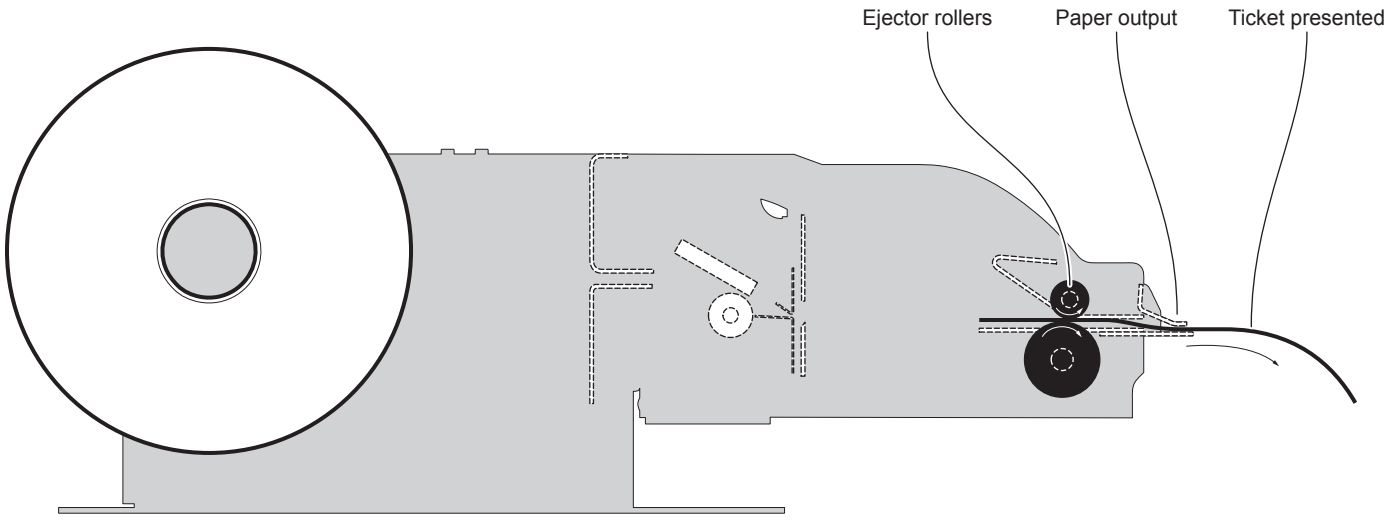
The ticket goes beyond the ejector rollers and
stanrts to come out of the paper output

3



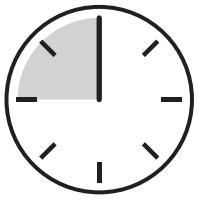
When printing ends, the device cuts the ticket printed

4



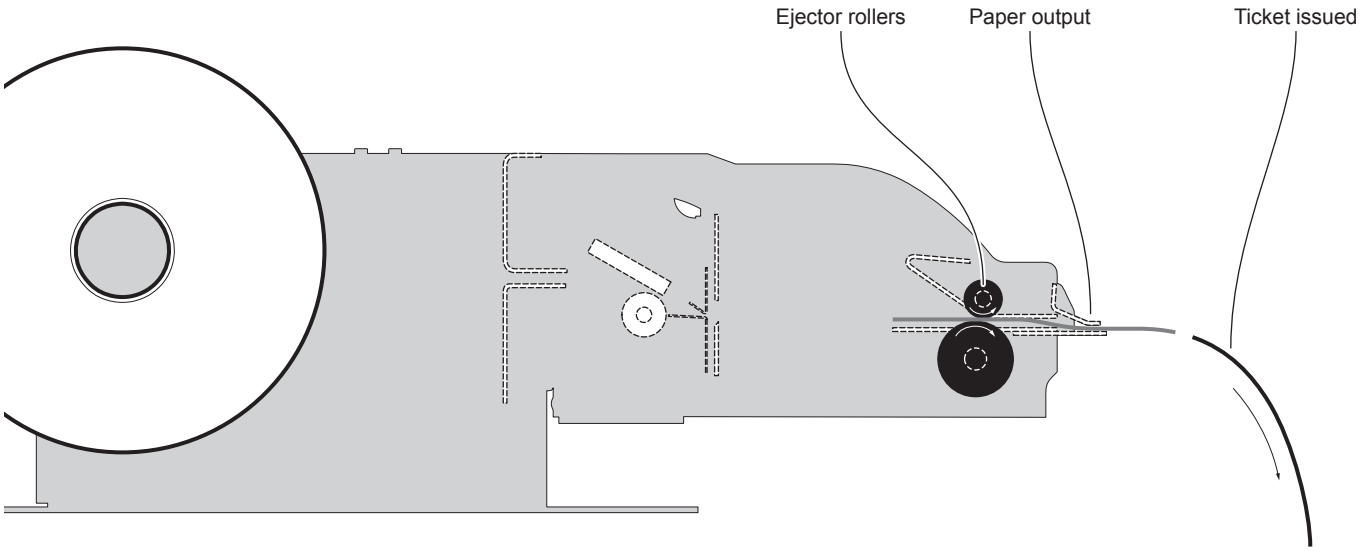
The device presents the ticket printed on the paper output

5



The ticket is waiting on the paper mouth for a preset period of time

6



The device ejects the ticket

NOTE: To enable this issuing mode, you need to correctly set the operation mode of the ejector with the command 0x1D 0x65 (see commands manual) and the setup parameter "Automatic Ejecting" (see chapter 5 of this manual).

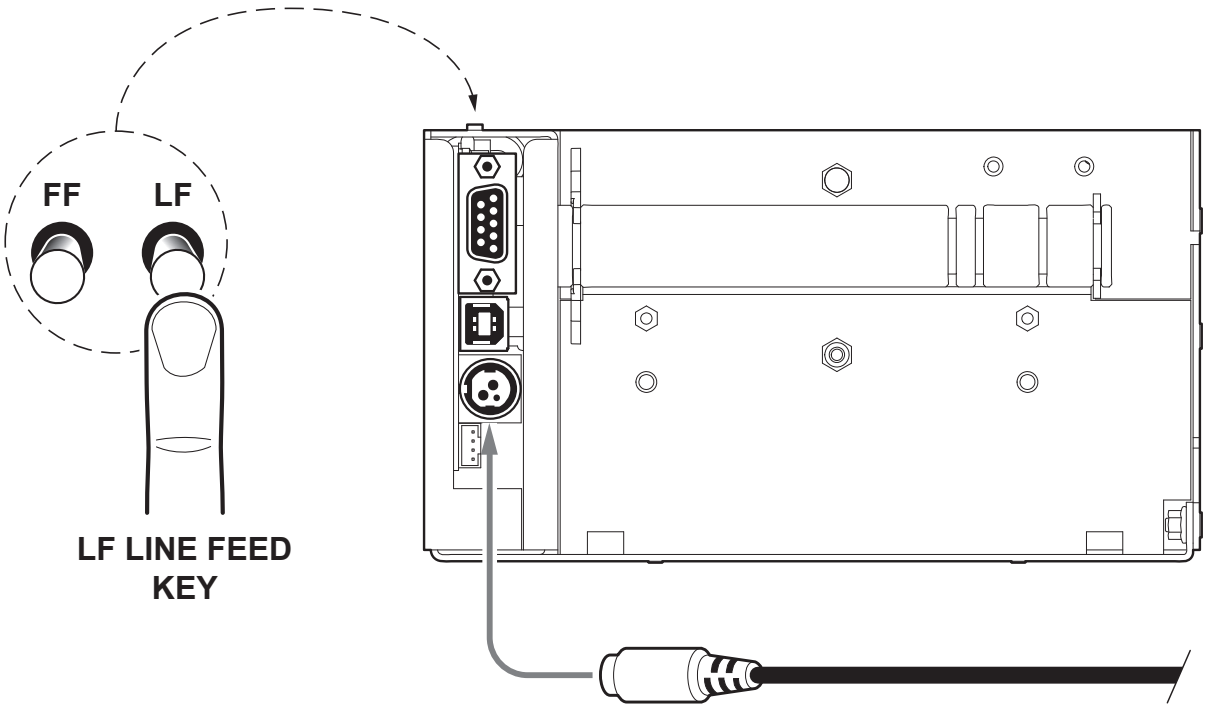
5 CONFIGURATION

5.1 Configuration mode

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

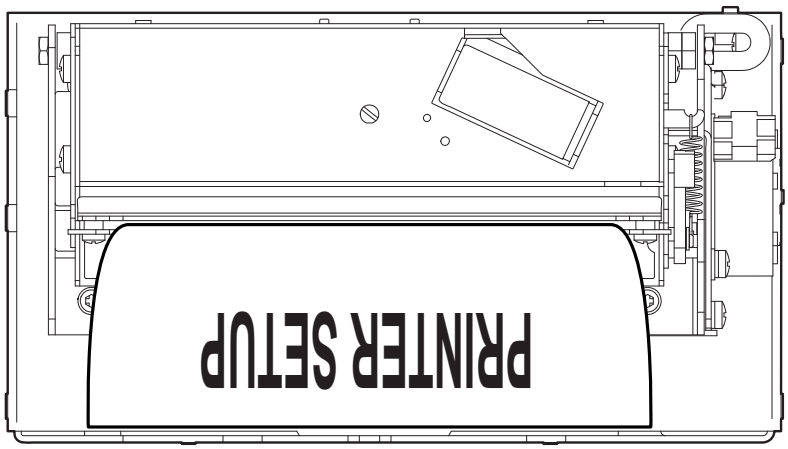
all models

1



While pressing the LF LINE FEED key,
switch on the device by connecting the power supply cable.

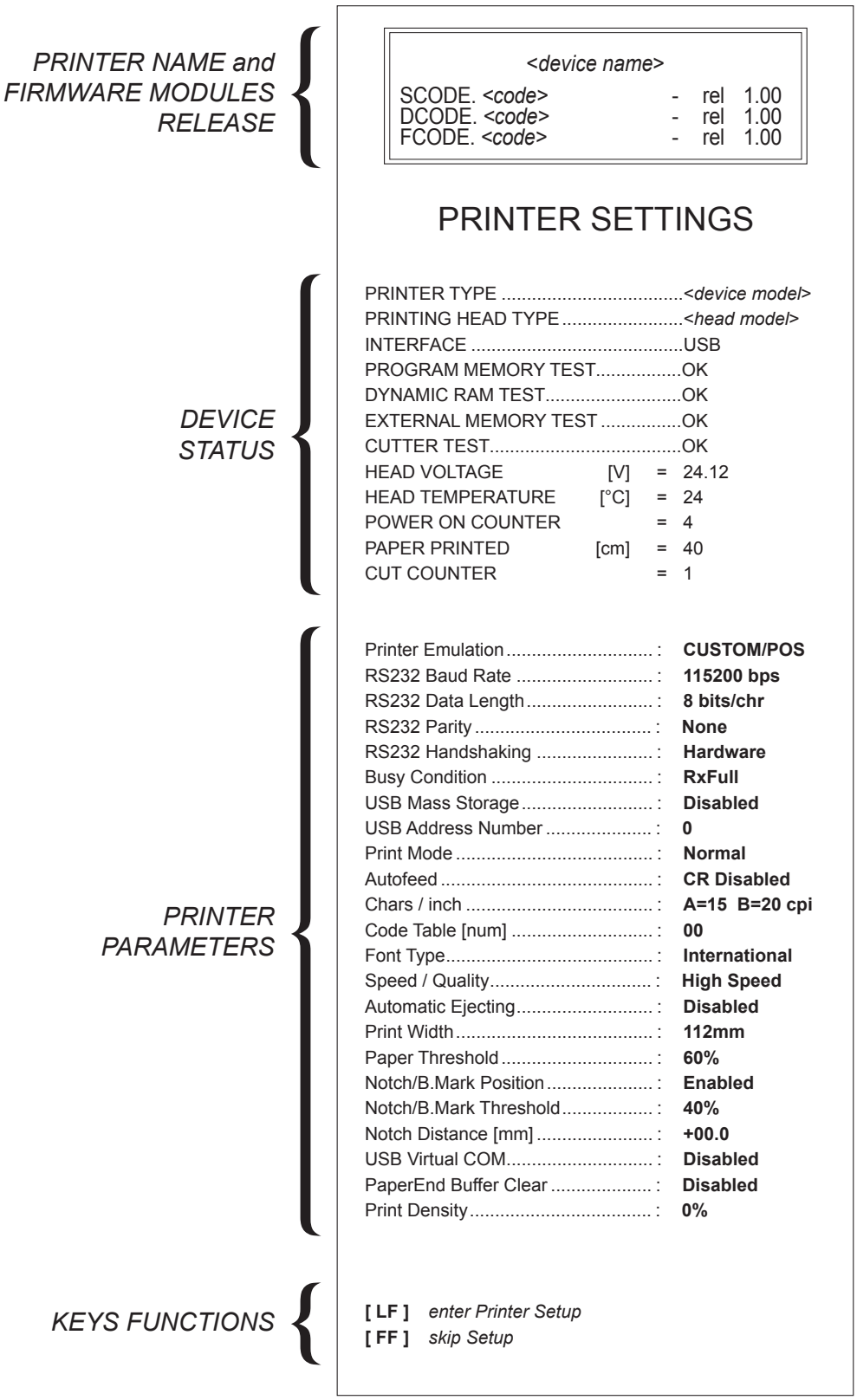
2



The device prints the report with the settings parameters.
Follow the instruction printed on paper to proceed with configuration procedure.

5.2 Setup report

The following figure shows the setup report of the device. The shown values for parameters are sample values; for the list and the description of device parameters see the following paragraphs.



5.3 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:

PRINTER TYPE	*device model*
PRINTING HEAD TYPE	*print head model*
INTERFACE	*interface present*
PROGRAM MEMORY TEST	*OK appears if functioning and NOT OK if faulty*
DYNAMIC RAM TEST	*OK appears if functioning and NOT OK if faulty*
EXTERNAL MEMORY TEST	*OK appears if functioning and NOT OK if faulty*
CUTTER TEST *	*OK appears if functioning and NOT OK if faulty*
HEAD VOLTAGE	*voltage of the head*
HEAD TEMPERATURE	*temperature of the head*
POWER ON COUNTER	*number of power-ups made*
PAPER PRINTED	*centimetres of paper printed*
CUT COUNTER *	*number of cuts made*

NOTE:
* : Except for TPTCM60IIIL model.

5.4 Printer parameters

The device allows the configuration of the parameters listed in the following table.
The parameters marked with the symbol [D] are the default values.
Settings remain active even after the device has been turned off and they are stored in non-volatile memory.

PRINTER EMULATION	*Available emulations for the device:* *CUSTOM/POS [D]* *TPTCMII*
RS232 BAUD RATE	*Communication speed of the serial interface:* *1200 19200* *2400 38400* *4800 57600* *9600 115200 [D]* NOTE: Parameter valid only with serial interface.
RS232 DATA LENGTH	*Number of bit used for characters encoding:* *8 bits/car [D]* *7 bits/car* NOTE: Parameter valid only with serial interface.
RS232 PARITY	*Bit for the parity control of the serial interface:* *None [D] = parity bit omitted* *Even = even value for parity bit* *Odd = odd value for parity bit* NOTE: Parameter valid only with serial interface.
RS232 HANDSHAKING	*Handshaking:* *XON/XOFF = software handshaking* *Hardware [D] = hardware handshaking (CTS/RTS)* NOTES: Parameter valid only with serial interface. When the receive buffer is full, if handshaking is set to XON/XOFF, the device sends the XOFF (0x13) on the serial port. When the receive buffer has cleared once again, if handshaking is set to XON/XOFF, the device sends the XON (0x11) on the serial port.
BUSY CONDITION	*Activation mode for Busy signal:* *RXFull [D] = il segnale di Busy viene attivato se il buffer è pieno* *OffLine/ RXFull = il segnale di Busy viene attivato se il buffer è pieno e se c'è uno stato di Off Line* NOTE: Parameter valid only with serial interface.

USB MASS STORAGE

Sharing mode from Mass Storage:

Disabled [D] = sharing mode disabled
Enabled = sharing mode enabled

USB ADDRESS NUMBER

Numerical address code for the univocal identification of the USB device (in case of more than a USB device connected with the same PC):

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

PRINT MODE

Printing mode:

Normal [D] = enables printing in normal writing way
Reverse = enables printing rotated 180 degrees

AUTOFEED

Setting of the Carriage Return character:

CR disabled [D] = Carriage Return disabled
CR enabled = Carriage Return enabled

CHARS / INCH

Font selection:

A = 11 cpi, B = 15 cpi
A = 15 cpi, B = 20 cpi [D]
A = 20 cpi, B = 25 cpi

NOTE:
CPI = Characters Per Inch

CODE TABLE [num]

Identifier number of the character code table to use.
The numeric value of the identifier is made up with the following two parameters for the setting of two digits for the tens and the units:

CODE TABLE [num x 10]

Setting the digit for tens:

0 [D]	*2*	*4*
1	*3*	*5*

CODE TABLE [num x 1]

Setting the digit for units:

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

NOTE:
See the paragraph 7.8 to learn about the character tables corresponding to the identification numbers set with this parameter.
The character tables set with this parameter are the same set with the command 0x1B 0x74 (refer to the commands manual of the device).

FONT TYPE

Setting of the font type:

International [D] = Enables the use of the 256 characters font tables
Chinese GB18030 = Enables the use of the chinese extended font GB18030-2000
Korean PC949 = Enables the use of the korean font PC949

NOTE: When the "INTERNATIONAL" font is enabled, you need to choose the character code table (parameter “CODE TABLE”). When the Chinese or Korean fonts is enabled, the selection of the character code table is suspended (parameter “CODE TABLE”).

SPEED / QUALITY

Setting of printing speed and printing quality:

Normal
High Quality
High Speed [D]

AUTOMATIC EJECTING

Setting of the automatic ejecting function of the last printed thicket in presentation mode:

Disabled [D] = ejecting function disabled
Enabled T.out 5s = the ticket is ejected after 5 seconds from the end of printing
Enabled T.out 10s = the ticket is ejected after 10 seconds from the end of printing
Enabled T.out 15s = the ticket is ejected after 15 seconds from the end of printing
Enabled T.out 20s = the ticket is ejected after 20 seconds from the end of printing
Enabled T.out 30s = the ticket is ejected after 30 seconds from the end of printing
Enabled T.out 40s = the ticket is ejected after 40 seconds from the end of printing
Enabled T.out 60s = the ticket is ejected after 60 seconds from the end of printing
Enabled T.out 2m = the ticket is ejected after 2 minutes from the end of printing

NOTE: This parameter is not printed for models without ejector.

PRINT WIDTH

Printing area width:

TPTCM112III	**TPTCM112IIIL**
112 mm [D]	*112 mm [D]*
100 mm	*101 mm*
86 mm	
80 mm	

NOTE: This parameter is not printed for models TPTCM60III and TPTCM60IIIL

PAPER THRESHOLD

Threshold value (in percent) for the recognition of the presence of paper by the paper presence sensor:

30%	*70%*
40% [D]	*80%*
50%	*90%*
60%	

NOTCH/B.MARK POSITION

Position of the alignment notch and choice of appropriate notch sensor:

TPTCM60III, TPTCM112III
Disabled [D] = the notch alignment is not performed
Enabled = the notch alignment is performed

TPTCM60IIIL, TPTCM112IIIL
Disabled = the gap alignment between labels is not performed
Enabled [D] = the gap alignment between labels is performed

NOTCH/B.MARK THRESHOLD

Threshold value (in percent) for the recognition of the presence of notch by the notch sensor:

30%	*70%*
40% [D]	*80%*
50%	*90%*
60%	

NOTE: If the “Notch/B.Mark position” parameter is disabled, this parameter is not printed.

NOTCH DISTANCE

“Notch Distance” is the minimum distance (in millimetres) between the upper edge of ticket and the notch (see chapter 10).
The numeric value of the distance is made up with the following four parameters for the setting of three digits (two for the integer part of the number, one for the decimal part and of the sign):

NOTCH DISTANCE [mm x 10]

Setting the digit for tens:

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

NOTCH DISTANCE [mm x 1]

Setting the digit for units:

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

NOTCH DISTANCE [mm x .1]

Setting the digit for decimals:

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

NOTES:
For example, to set the notch distance to 15 mm, modify the parameters as follows:
Notch Distance Sign = +
Notch Distance [mm x 10] = 1
Notch Distance [mm x 1] = 5
Notch Distance [mm x .1] = 0

If the “Notch/B.Mark Position” parameter is disabled, the parameters for the “Notch Distance” are not printed.

This parameter is not printed for models TPTCM60IIIL and TPTCM112IIIL

USB VIRTUAL COM

Setting the USB port as a virtual serial port:

Disabled [D] = *Virtual COM disabled*
Enabled = *Virtual COM enabled*

NOTA: To use this configuration it is necessary to install an additional driver.

TICKET LOCKING

Cleaning mode of the data in receive buffer, if the printing is stopped due to lack of paper:

Disabled [D] = *The data remain in the receive buffer. When the paper runs out, the device keeps the remaining data in the receive buffer and prints the remaining portion of the ticket after that the new paper is loaded.*
Enabled = *When the paper runs out, all data in the receive buffer are deleted.*

PRINT DENSITY

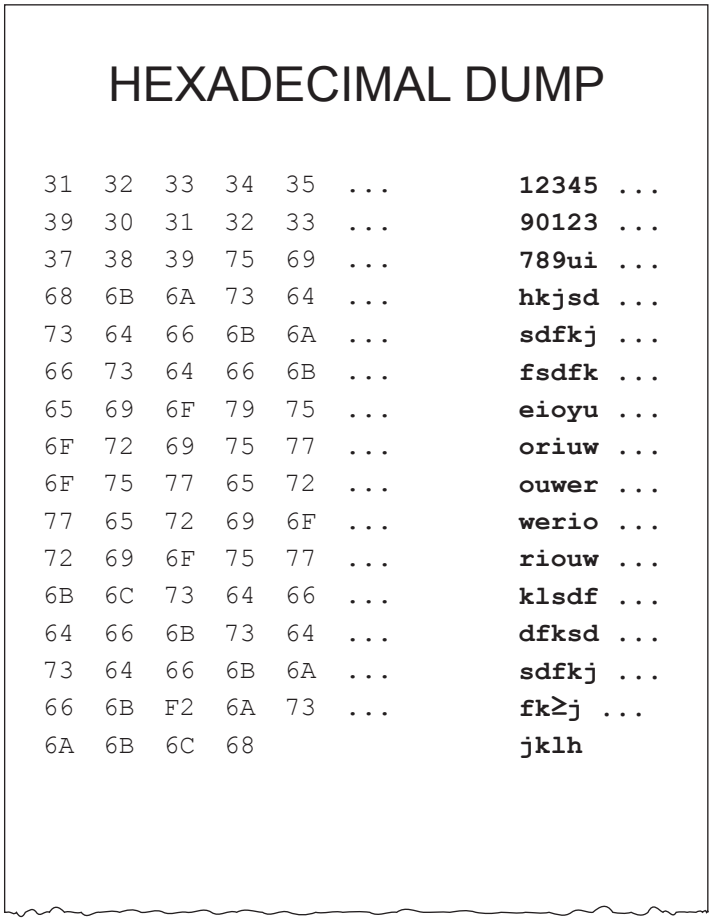
Adjusting the printing density:

TPTCM60III, TPTCM112III	**TPTCM60IIIL, TPTCM112IIII**
-25%	*-25%*
-12%	*-12%*
0 [D]	*0*
+12%	*+12%*
+25%	*+25%* [D]

5.5 Hexadecimal dump

This function is used for the diagnosis of the characters received from the communications port. Characters are printed as hexadecimal code and the corresponding ASCII code (see below). Each line is preceded by a counter in hexadecimal that indicates the number of bytes received.

During the startup, if you hold down the FEED key, the device enters the self-test routine and print the setup report.
The device remains in standby until a key is pressed or characters are received through the communication port (Hexadecimal Dump mode). For each character sent, the ticket shows the hexadecimal value and the ASCII codes (if the characters are underlined, the receive buffer is full). Shown below is an example of a Hexadecimal Dump:

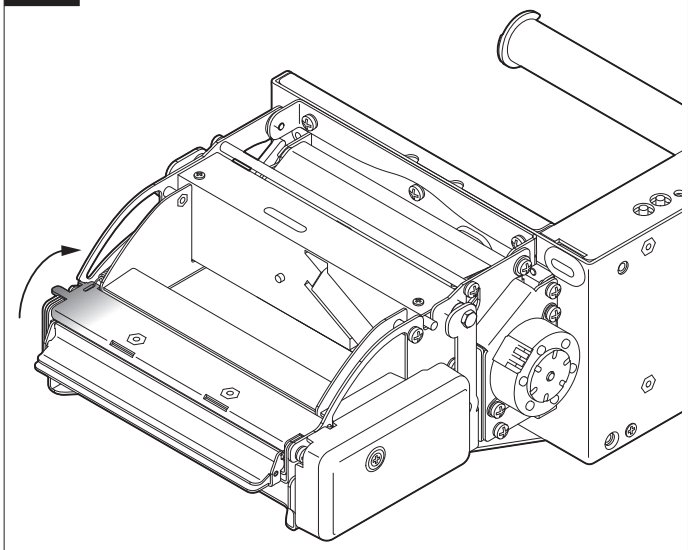


6 MAINTENANCE

6.1 Printer paper jam

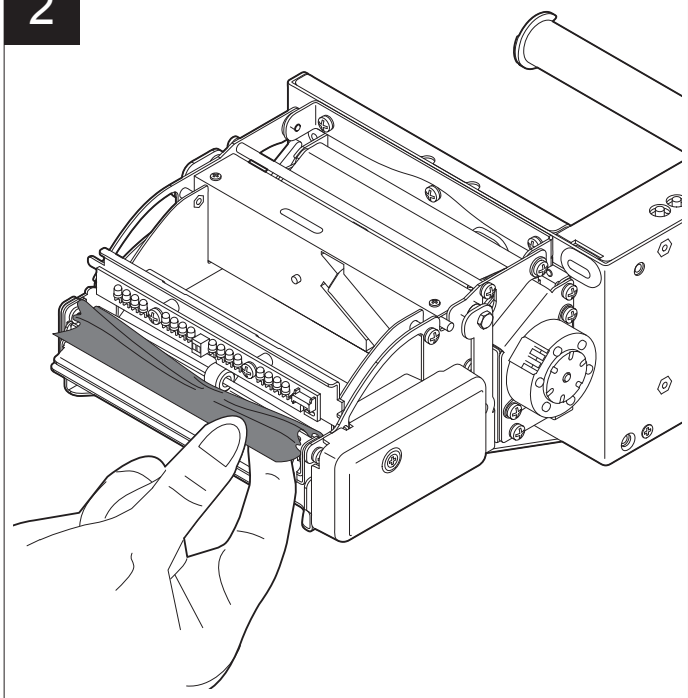
Models with ejector

1



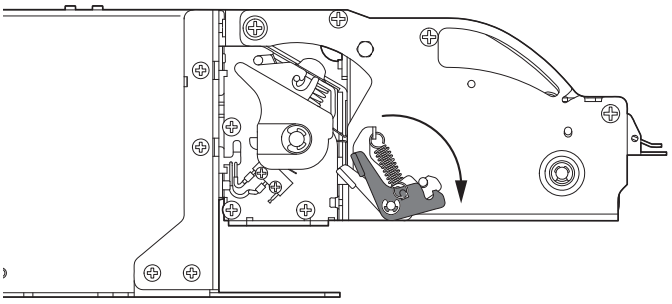
Lift and keep open
the ejector cover.

2



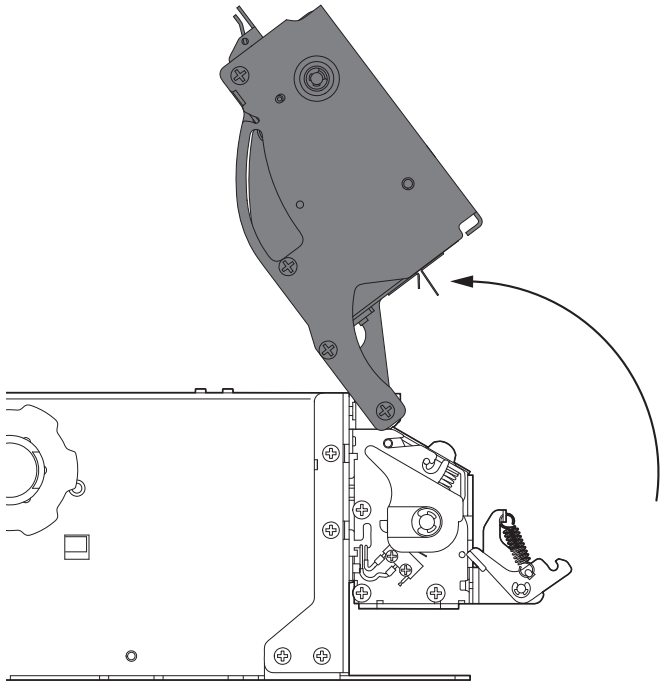
Remove the damaged paper and check the presence
for paper scraps inside the ejector.

3



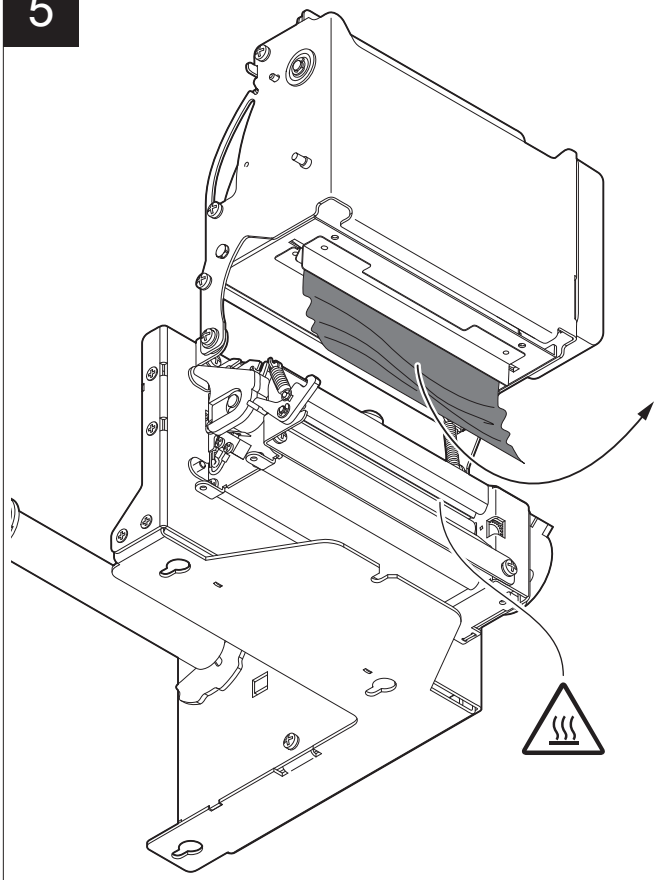
Unlock the ejector group
by using the lever.

4



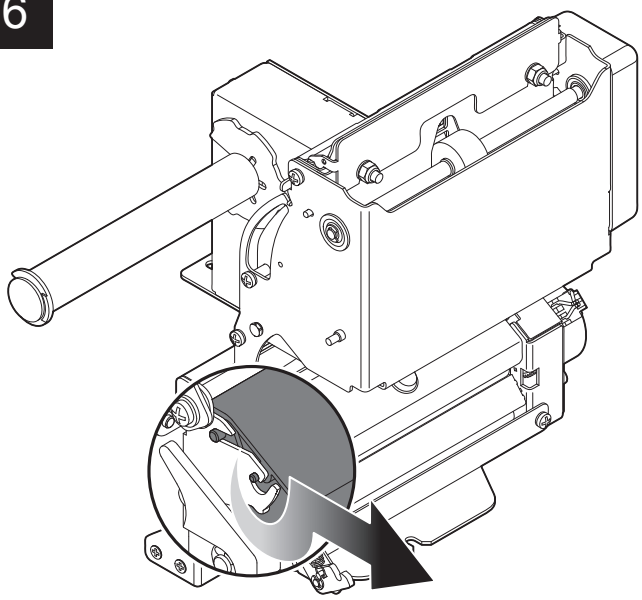
Lift the ejector group
to the maximum opening position.

5



Remove the damaged paper
if present on the cutter input.

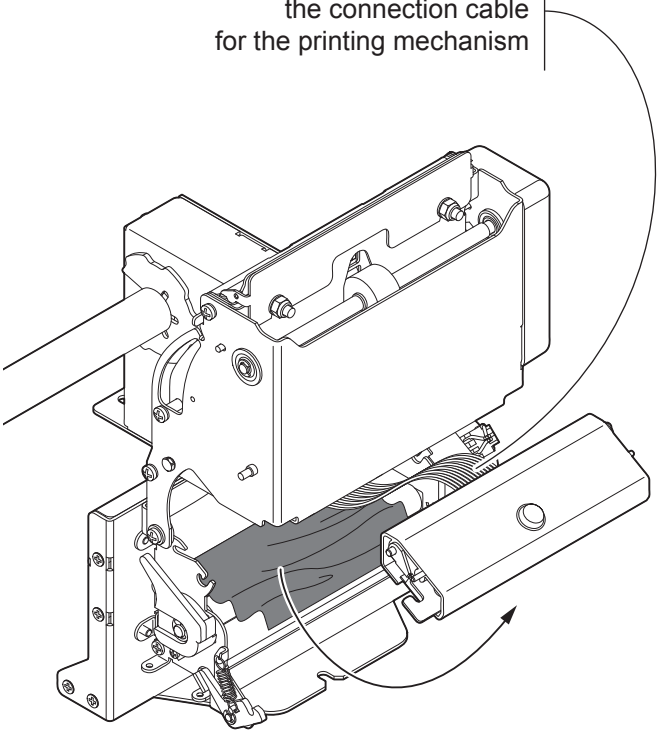
6



Unlock the printing mechanism
as shown in figure.

7

Be careful not to damage
the connection cable
for the printing mechanism

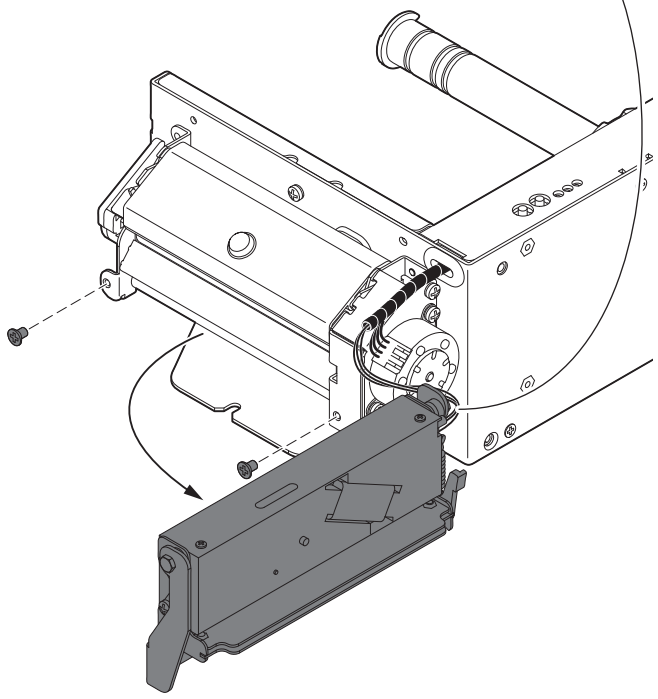


Remove the damaged paper
if present under the printing mechanism.

Models without ejector

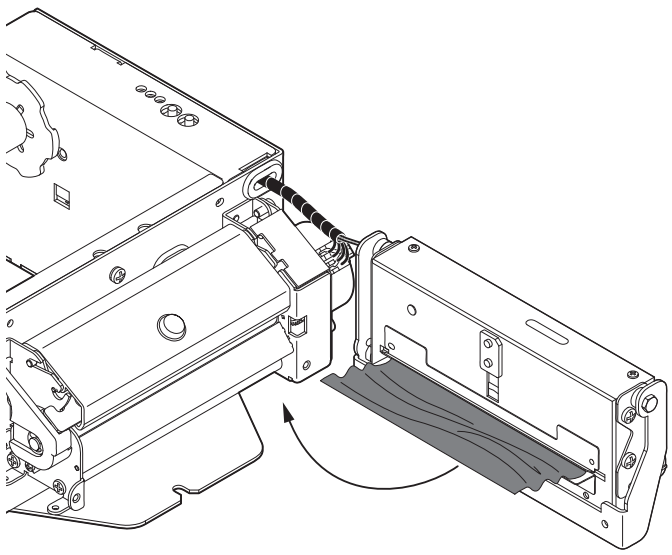
1

Be careful not to damage
the connection cable
for the cutter group



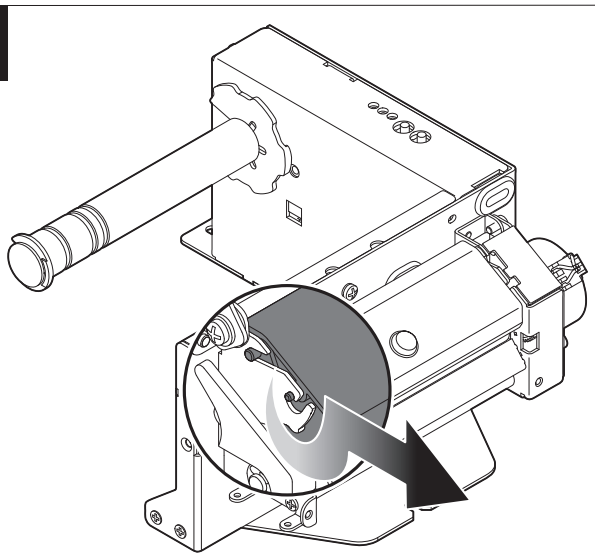
Unscrew the two fixing screws
and remove the cutter group.

3



Remove the damaged paper
if present on the cutter input.

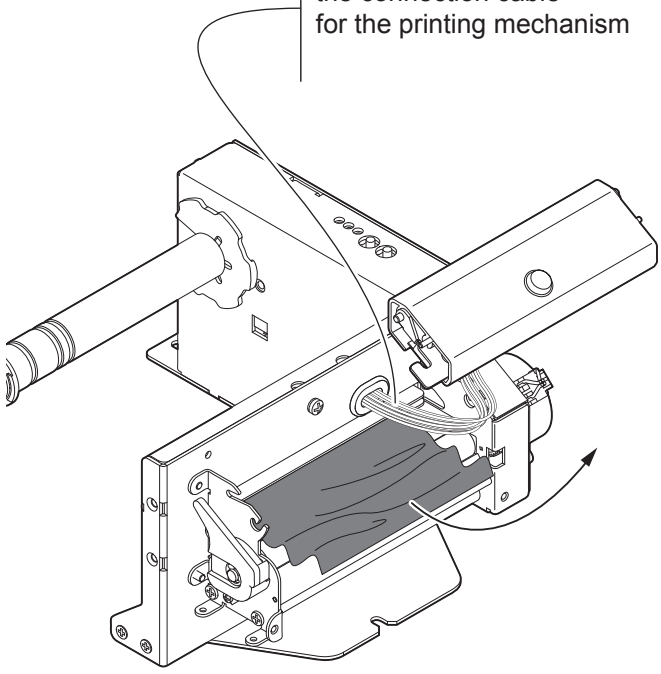
3



Unlock the printing mechanism
as shown in figure.

4

Be careful not to damage
the connection cable
for the printing mechanism



Remove the damaged paper
if present under the printing mechanism.

6.2 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.

EVERY PAPER CHANGE	
Print head	Use isopropyl alcohol
Rollers	Use isopropyl alcohol
EVERY 5 PAPER CHANGES	
Cutter (1)	Use compressed air
Sensors	Use compressed air
Ejector (2)	Use compressed ai
EVERY 6 MONTHS OR AS NEEDED	
Case	Use compressed air or a soft cloth

For specific procedures, see the following pages.

NOTES:
If you use the device in dusty environments, you must reduce the intervals between the cleaning operations.

For some models is represented only the internal printer group.

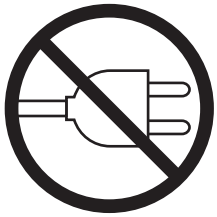
(1) Only for models with cutter.
(2) Only for models with ejector.

6.3 Cleaning

For periodic cleaning of the device, see the instructions below.

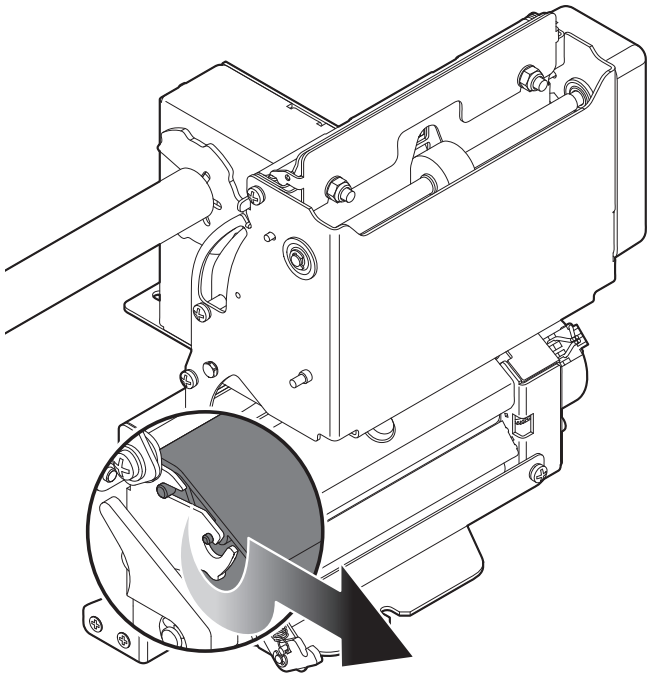
Print head - TPTCM60III (models with ejector), TPTCM112III (models with ejector)

1



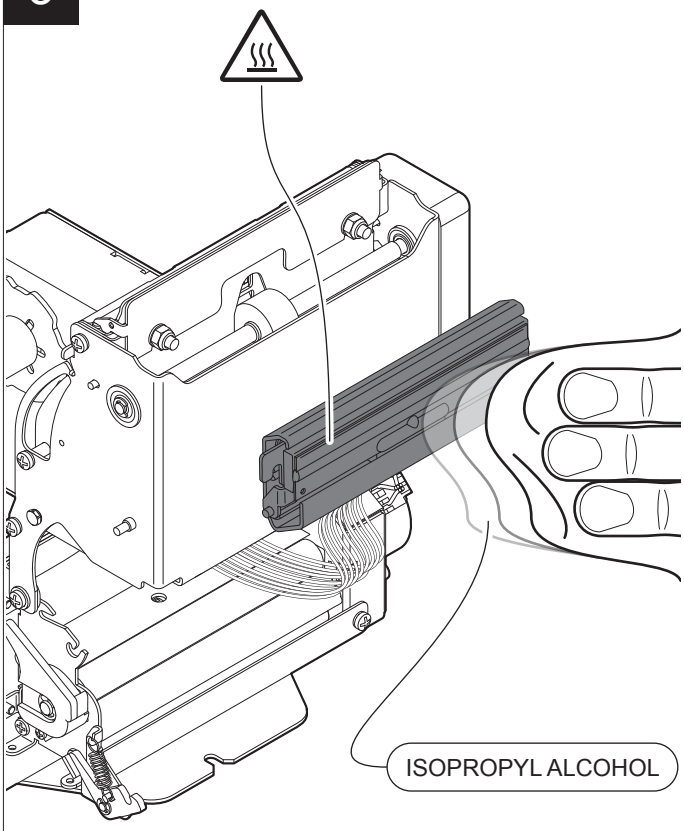
Disconnect the power supply cable and
lift the ejector group (see previous paragraphs).

2



Unlock the printing mechanism
as shown in figure.

3

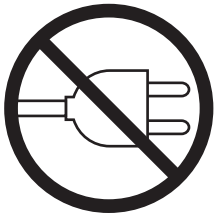


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

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

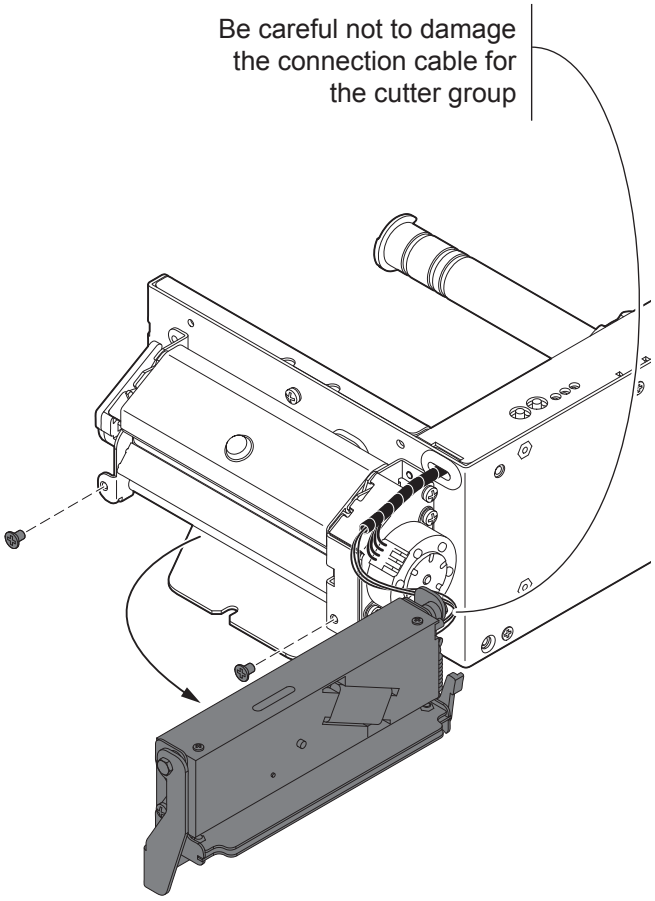
Print head - TPTCM60III (models without ejector), TPTCM112III (models without ejector), TPTCM112L

1



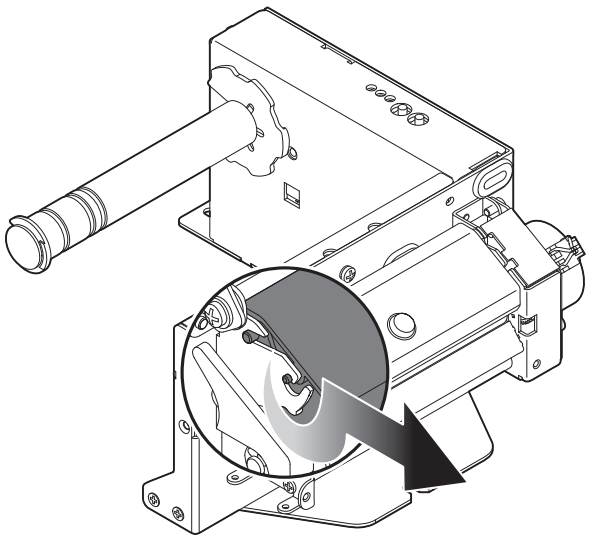
Disconnect the power supply cable.

2



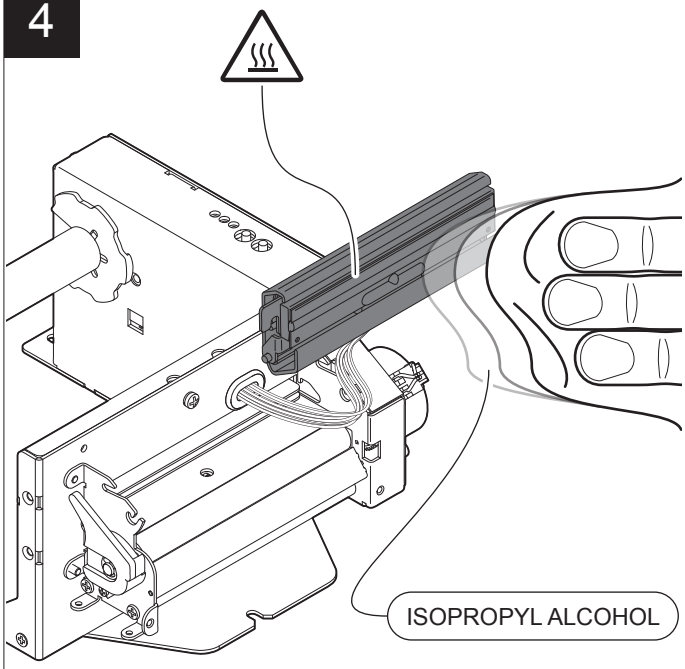
Unscrew the two fixing screws
and remove the cutter group.

3



Unlock the printing mechanism
as shown in figure.

4

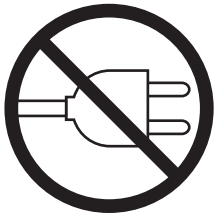


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

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

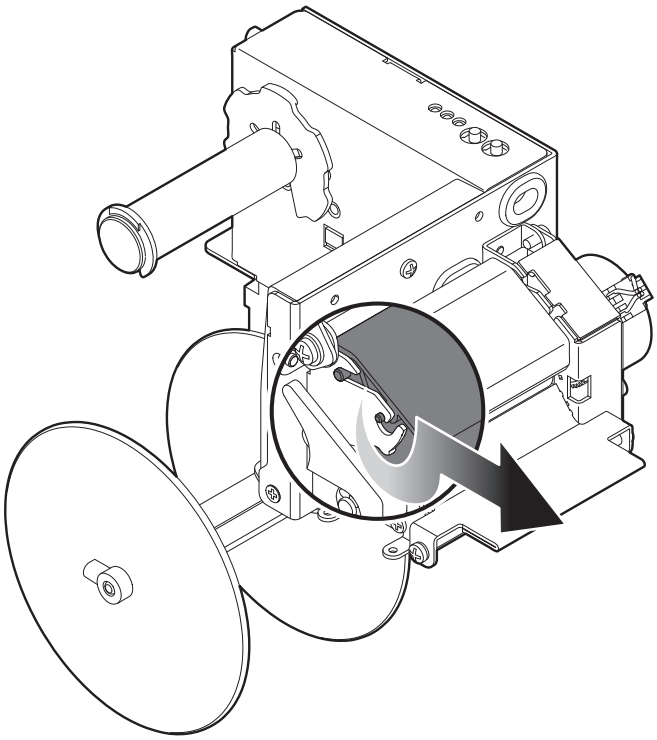
Print head - TPTCM60IIIL

1



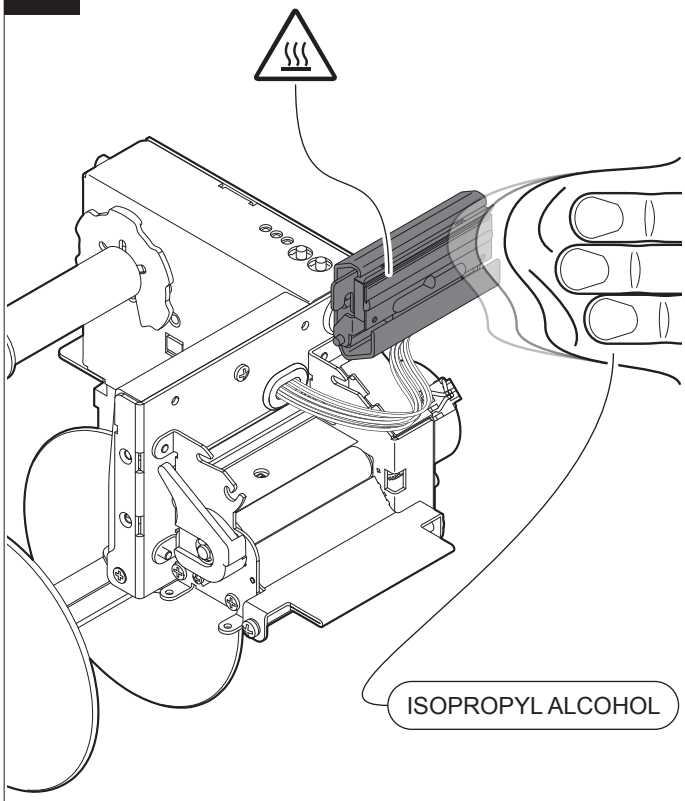
Disconnect the power supply cable.

2



Unlock the printing mechanism
as shown in figure.

3

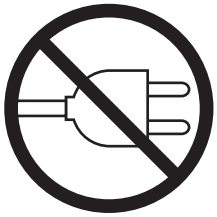


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

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

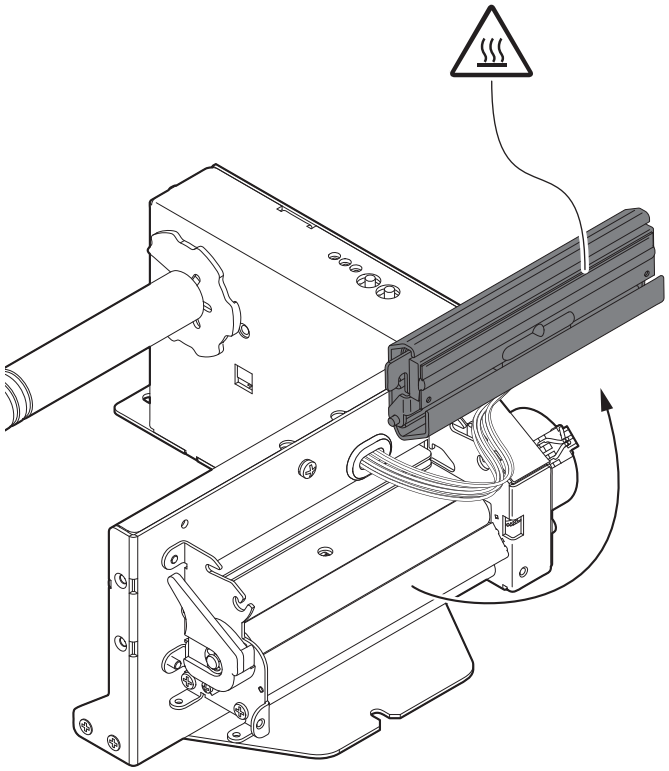
Printing roller

1



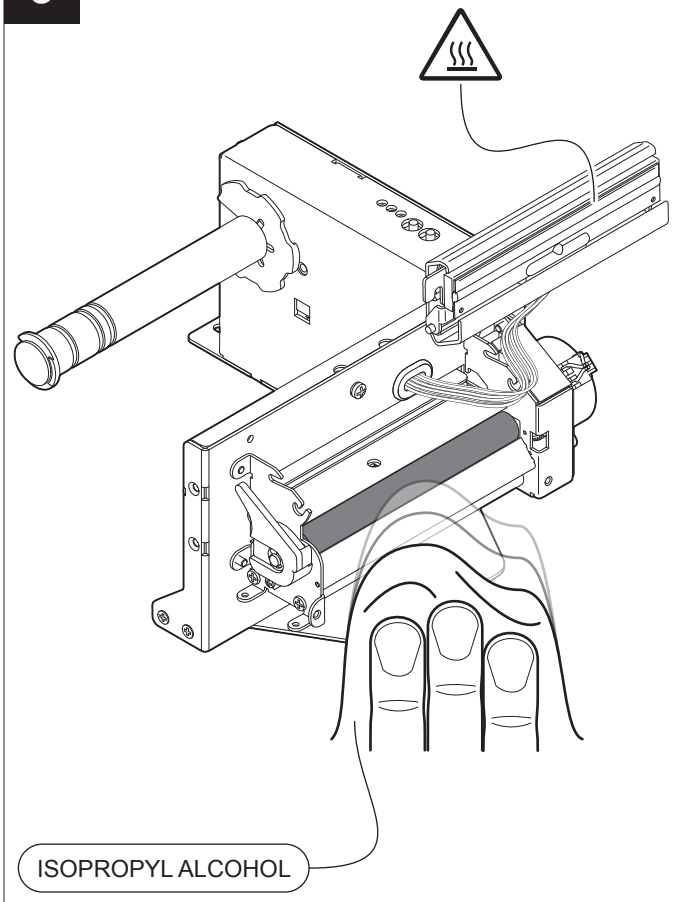
Disconnect the power supply cable.

2



Unlock the printing mechanism
by following the specific procedure for each model
as described in the previous paragraphs.

3

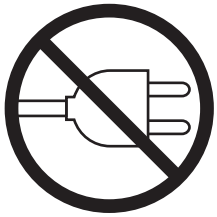


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

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

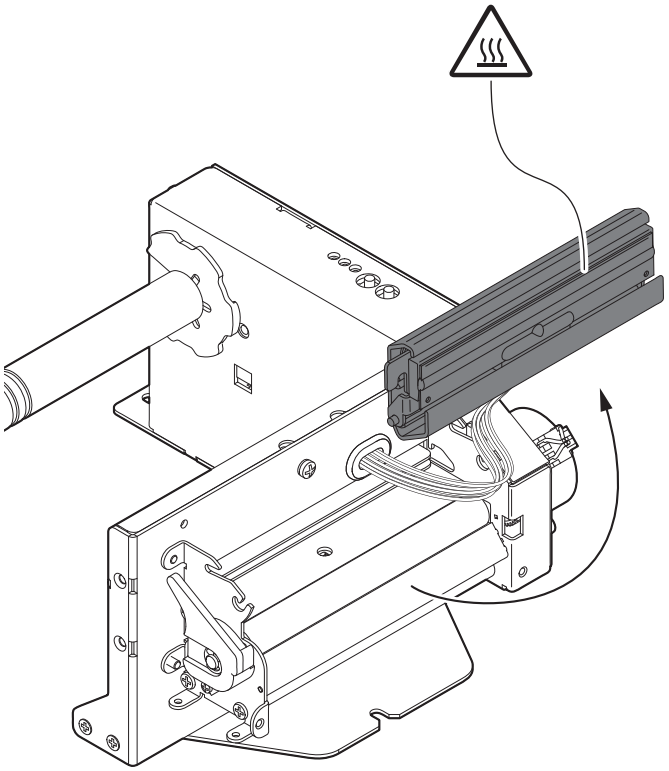
Sensor for paper presence in input

1



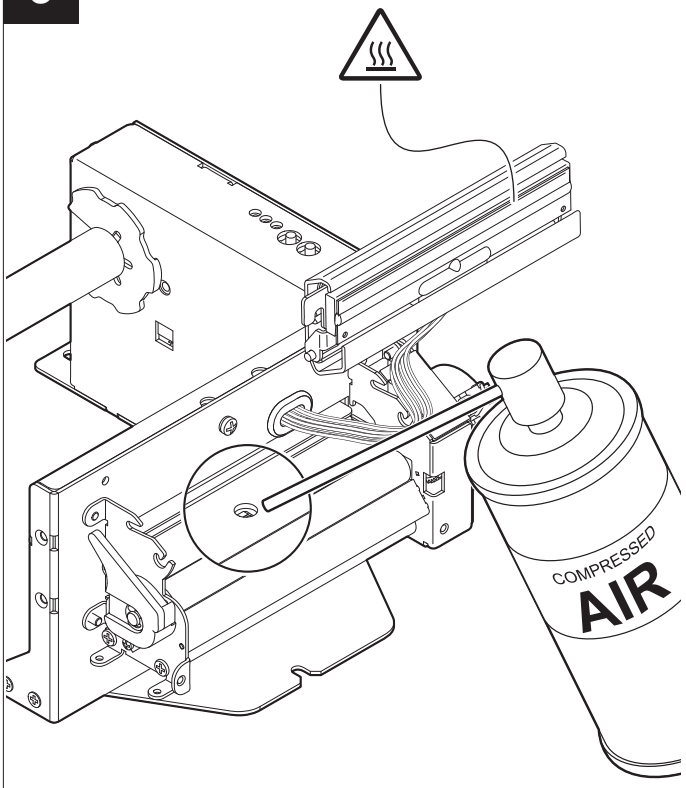
Disconnect the power supply cable.

2



Unlock the printing mechanism
by following the specific procedure for each model
as described in the previous paragraphs.

3

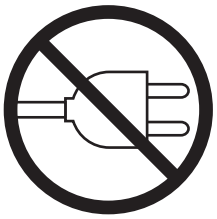


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the device.

Clean the paper presence sensor in input
by using compressed air.

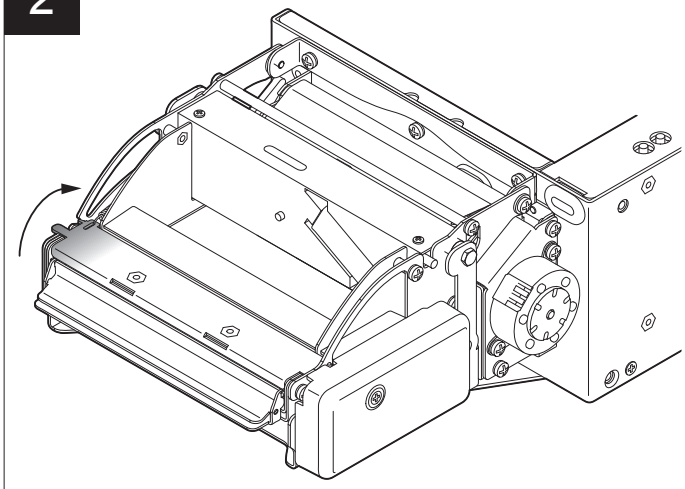
Ejector (models with ejector)

1



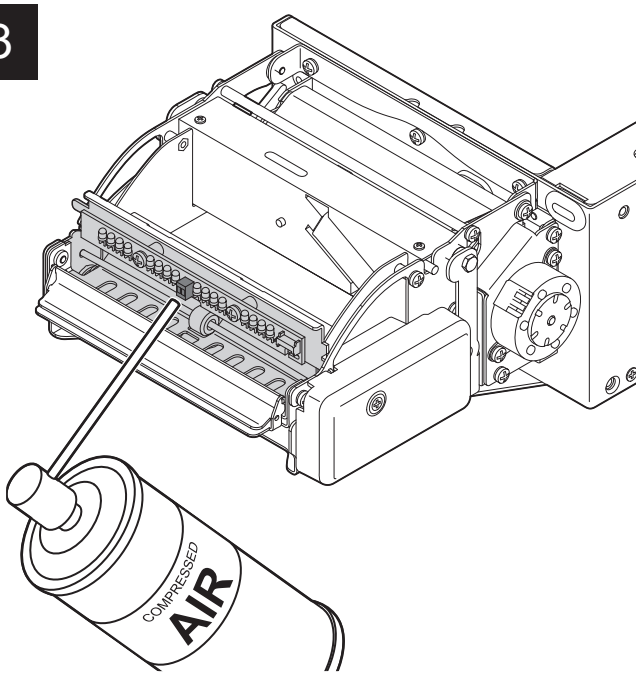
Disconnect the power supply cable.

2



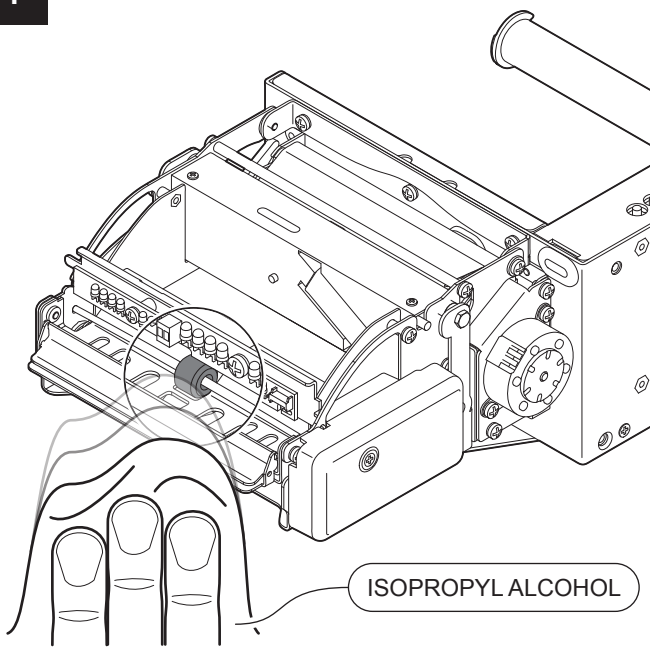
Lift and keep open
the ejector cover.

3



Clean the sensor for paper presence on output
by using compressed air. Remove any scraps of paper
and the accumulated paper dust inside the ejector.

4

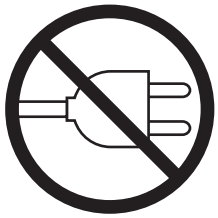


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

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

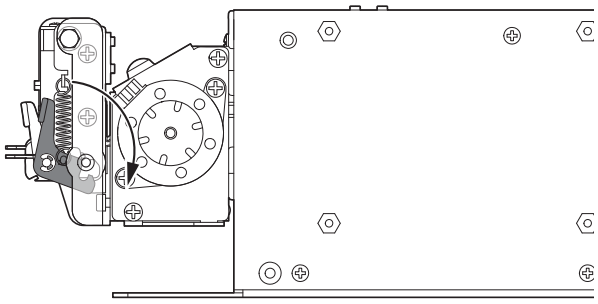
Cutter (models with cutter and without ejector)

1



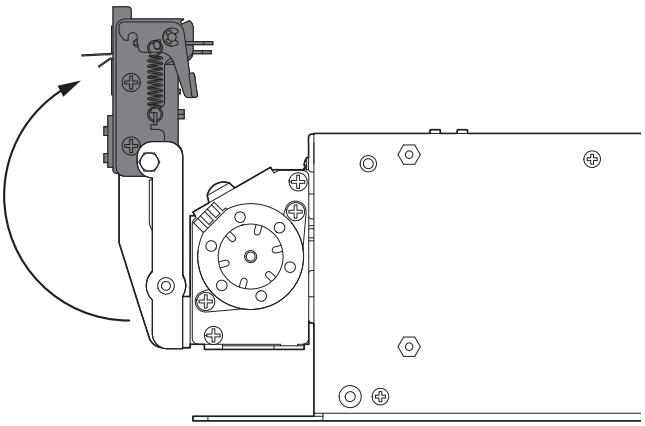
Disconnect the power supply cable.

2



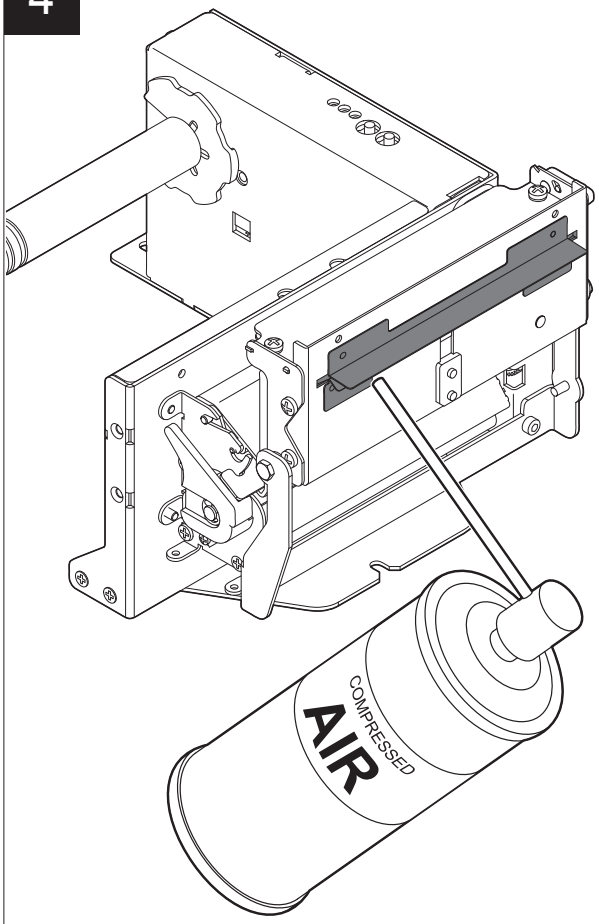
Unlock the cutter group
by using the lever.

3



Lift the cutter group.

4

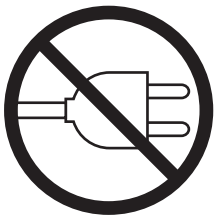


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the device.

Remove any scraps of paper and
the accumulated paper dust on the cutter input
by using compressed air.

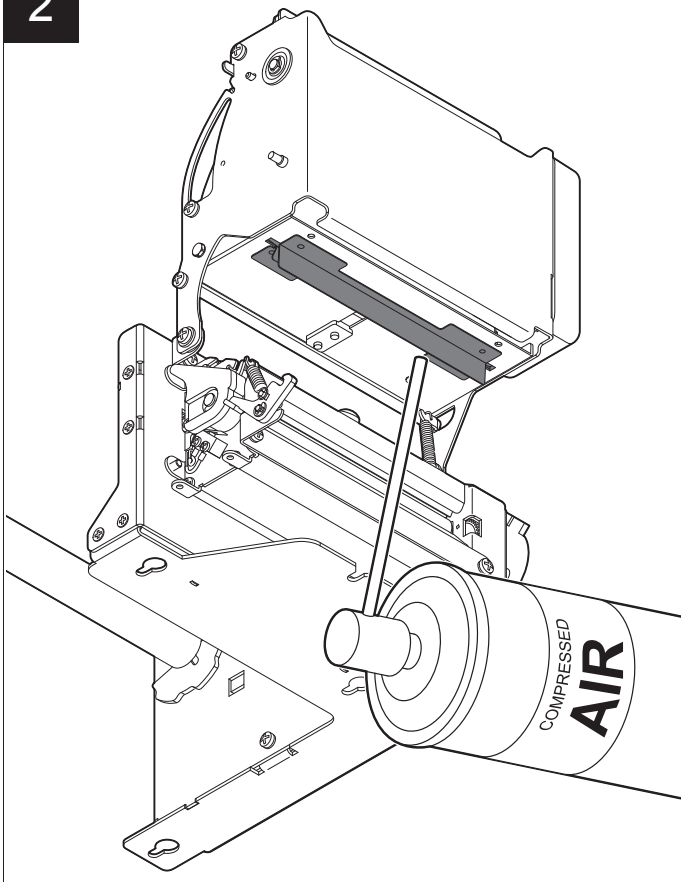
Cutter (models with cutter and with ejector)

1



Disconnect the power supply cable and
lift the ejector group (see previous paragraphs).

2

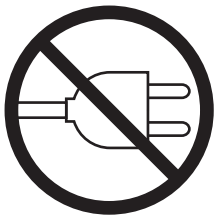


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the device.

Remove any scraps of paper and
the accumulated paper dust on the cutter input
by using compressed air.

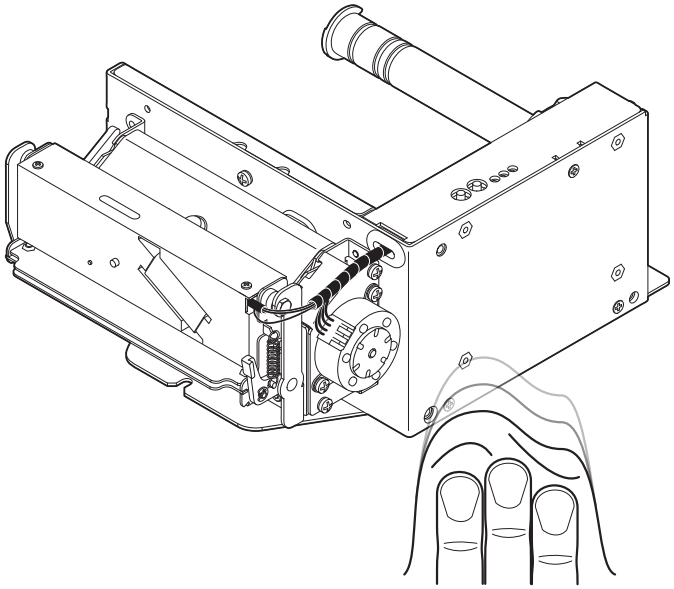
Case

1



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 device.

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

6.4 Upgrade firmware

WARNING: During communication between PC and device for the firmware update it is strictly forbidden to disconnect the communication cable or to remove the power supply of the devices not to endanger the proper functioning of the machine.

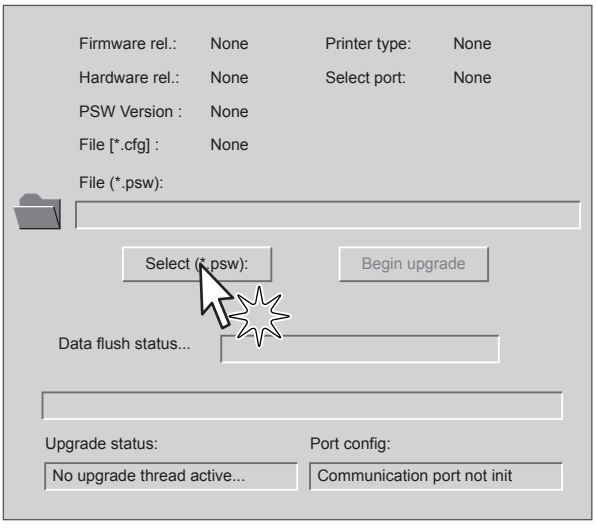
NOTES:
The latest firmware is available in the DOWNLOAD area of the web site www.custom.biz

Install on the PC used for device upgrading the UPG-CEPRN software available in the download area of the web site www.custom.biz.

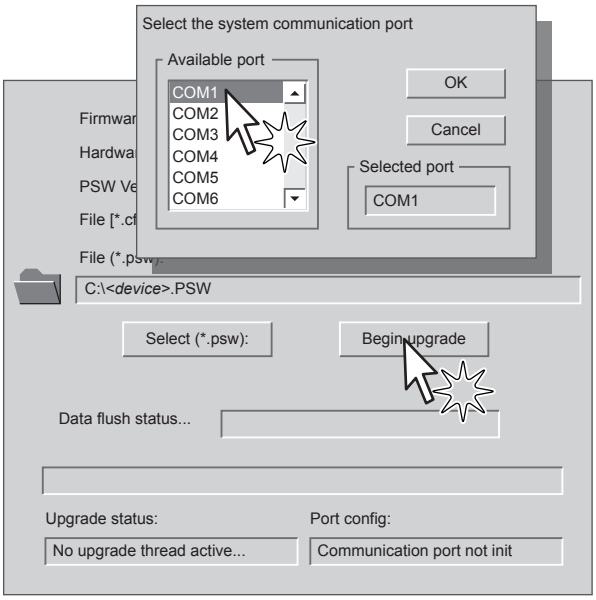
Update via serial interface

Proceed as follows:

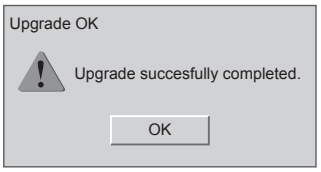
1. Write down the product code (14 digits) printed on the product label (see par.2.3).
2. Go to the web site www.custom.biz and download the appropriate firmware release from the DOWNLOAD area.
3. Print the SETUP report (see chapter 5).
4. Switch off the device.
5. Connect the device to the PC using a serial cable (see par. 3.2).
6. Switch on the device.
7. Launch the software UPGCEPRN.
8. Select the update file .PSW location:



9. Select the serial communication port (e.g. COM1):



10. Detecting and setting of the parameters necessary for serial communication are performed automatically and then updating begins.
11. After a few minutes a message on the screen warns that the update is completed.



12. Print a new SETUP report to verify the new firmware release (see chapter 5).

Update via USB interface

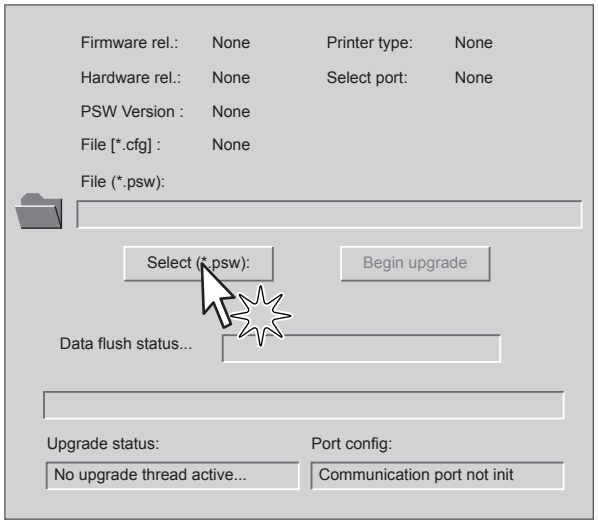
ATTENTION:
Only during the firmware update, the connection between PC and device must be direct, without the use of HUB device.

Only during the firmware update, do not connect or disconnect other USB devices.

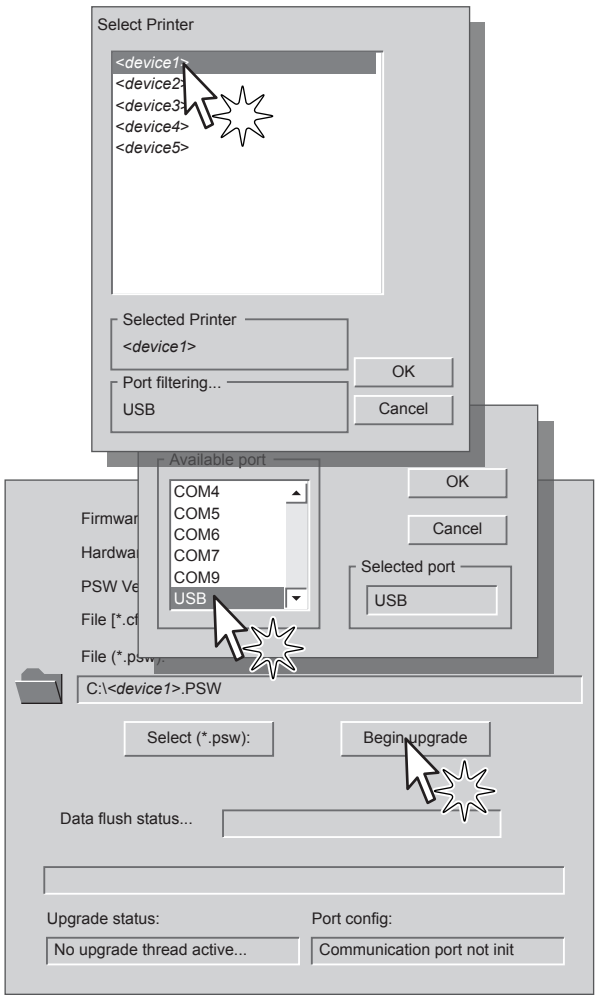
NOTE: For communication via USB you must install on PC the deice driver available in the DOWNLOAD area of the web site www.custom.biz.

Proceed as follows:

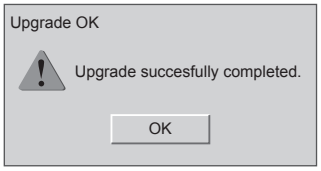
1. Write down the product code (14 digits) printed on the product label (see par.2.3).
2. Go to the web site www.custom.biz and download the appropriate firmware release from the DOWNLOAD area.
3. Print the SETUP report (see chapter 5).
4. Switch off the device.
5. Connect the device to the PC using a USB cable (see par. 3.2).
6. Switch on the device.
7. Launch the software UPGCEPRN.
8. Select the update file .PSW location:



9. Select item USB and then select the USB device among those proposed (e.g. device1):



10. After a few minutes a message on the screen warns that the update is completed.



11. Print a new SETUP report to verify the new firmware release (see chapter 5).

7 SPECIFICATION

7.1 Hardware specifications

Operating temperature	
Sensors	
TPTCM60III	Head temperature, paper presence in input, print head lifted, low paper
TPTCM60III (models with ejector), TPTCM112III (models with ejector)	Head temperature, paper presence in input, print head lifted, low paper, paper presence on output, ejector position
TPTCM60IIIL	Head temperature, paper presence in input, print head lifted, low paper, fork sensor for gap between labels
TPTCM112III	Head temperature, paper presence in input, print head lifted, low paper, left sensor for black mark, right sensor for black mark (optional)
TPTCM112IIIL	Head temperature, paper presence in input, print head lifted, low paper, central detector (upper and lower) for gap between labels
MTBF (1)	122 000 hours
Emulations	CUSTOM/POS, TPTCMII
Printing driver	Windows XP VISTA (32/64bit) Windows 7 (32/64bit) Windows 8 (32/64bit) Windows 8.1 (32/64bit) Linux (32/64bit)
INTERFACES	
USB port	12 Mbit/s (USB 2.0 full speed)
RS232 serial port	from 1200 to 115 200 bps
MEMORIES	
Receive buffer	16 Kbytes
Flash memory	1 Mbytes internal, 4 Mbytes external (of which 1 Mbyte available for user)
RAM memory	128 Kbytes internal + 8 Mbytes external

PRINTER	
Resolution	203 dpi (8 dot/mm)
Printing method	Thermal, fixed head
Head life [2]	
Abrasion resistance [3]	100 Km (with recommended paper)
Pulse durability	100 M (12.5% duty cycle)
Printing width	80 mm
TPTCM60III	60 mm
TPTCM112III	80, 86, 100, 112 mm
TPTCM112III (models with ejector)	112 mm
TPTCM112IIIL	101, 112 mm
Printing mode	Normal, 90°, 180°, 270°
Printing format	Height/Width from 1 to 8, bold, reverse, underlined, italic
Character fonts	54 character code tables (see par. 7.8) Extended chinese GB18030-2000, Korean PC949
Printable barcode	UPCA, UPCE, EAN13, EAN8, CODE39, ITF, CODABAR, CODE93, CODE128, CODE32, PDF417, DATAMATRIX, AZTEC, QRCODE
Printing speed [2] [3]	High quality = 80 mm/s Normal = 115 mm/s High Speed = 140 mm/s
PAPER	
Type of paper	Thermal rolls, heat-sensitive side on outside of roll
Paper width	
TPTCM60III, TPTCM60IIIL	60 mm ± 0,5 mm
TPTCM112III (standard models) TPTCM112III (Strong Cut models)	80 mm ± 0,5 mm 86 mm ± 0,5 mm 100 mm ± 0,5 mm 112 mm ± 0,5 mm

TPTCM112III (models with ejector)	112 mm ± 0,5 mm
TPTCM112IIIL	101 mm ± 0.5 mm 112 mm ± 0.5 mm
Paper weight	
TPTCM60III, TPTCM60IIIL TPTCM112III (standard models) TPTCM112III (models with ejector) TPTCM112IIIL	from 60 g/m^2 to 90 g/m^2
TPTCM112III (Strong Cut models)	from 60 g/m^2 to 130 g/m^2
Paper thickness	from 63 µm to 100 µm
Recommended types of paper	KANZAN KF50 and KP460 MITSUBISHI PG5075 and TL4000
External roll diameter [4]	
TPTCM60III	*(without optional paper roll holder)* max 90 mm *(with optional paper roll holder)* max 160 mm
TPTCM60IIIL	max 90 mm
TPTCM112III	*(without optional paper roll holder)* max 120 mm *(with optional paper roll holder)* max 160 mm
External roll core diameter	25 mm (+ 1mm)
Paper end	Not attached to roll core
Core type	Cardboard or plastic
LABELS (TPTCM60IIIL, TPTCM112IIIL)	
Label type	Labels on roll Thermal paper white (heat-sensitive side on outside of roll)
External roll diameter	
TPTCM60IIIL	max 80 mm
TPTCM112IIIL	max 130 mm
Core type	Cardboard or plastic
Internal core diameter	25 mm (+ 1 mm)

Paper end	Not attached to roll core
Paper - weight	78 g/m^2
Paper -thickness	0.085 mm
Paper - adhesive	Clear synthetic rubber adhesive for general purpose
Liner - width	
TPTCM60IIIL	60 mm ± 0.5 mm
TPTCM112IIIL	112 mm ± 0.5 mm
Liner - weight	60 g/m^2
Liner - thickness	0.055 mm
Liner - trasparency	Trasparency 47%
Liner - total thickness	0.15 mm ±10%
CUTTER (models with cutter)	
Paper cut	Total
Estimated life (2)	1 000 000 cutter number
DEVICE ELECTRICAL SPECIFICATIONS	
Power supply	24 Vdc ±10% (optional external power supply)
Medium consumption (6)	
TPTCM60III, TPTCM60IIIL	2.7 A
TPTCM112III, TPTCM112IIIL	4.1 A
Typical consumption (3)	
TPTCM60III, TPTCM60IIIL	1.2 A
TPTCM112III, TPTCM112IIIL	1.7 A
Standby consumption	50 mA

ELECTRICAL SPECIFICATIONS POWER SUPPLY cod.963GE020000003 (for TPTCM60III, TPTCM60IIIL)	
Power supply voltage	from 100 Vac to 240 Vac
Frequency	from 50 Hz to 60 Hz
Current (output)	2.5 A
Power	60 W
ELECTRICAL SPECIFICATIONS POWER SUPPLY cod.963GE020000004 (for TPTCM112III, TPTCM112IIIL)	
Power supply voltage	Auto Range, 90-132 VAC & 190-264 VAC
Frequency	from 47 Hz to 63 Hz
Current (output)	4.17 A
Power	100 W
ENVIRONMENTAL CONDITIONS	
Operating temperature	from 0°C to +50°C
Relative humidity	from 10% Rh to 85% Rh
Storage temperature	from -20 °C to +70 °C
Storage relative humidity	from 10% Rh to 90% Rh

NOTES:
(1) : Control board.
(2) : Respecting the regular schedule of cleaning for the device components.
(3) : Damages caused by scratches, ESD and electromigration are excluded.
(4) : Referred to a standard CUSTOM receipt (L=10cm, Density = 12,5% dots on).
(5) : For external rolls diameter higher to Ø100mm it's recommended to use a paper pretensioning device.
(6) : Referred to the UL measurements (Speed/Quality = Normal, Ticket = 100 mm, Print Density = 50%, 50% dots on, 1 ticket every 30 s).

7.2 Character specifications

TPTCM60III, TPTCM60IIIL

Character set		3	
Character density	11 cpi	15 cpi	20 cpi
Number of columns	26	34	48
Chars / second	1244	1600	2240
Lines / second	46	46	46
Characters (L x H mm)-Normal	2.25 x 3	1.75 x 3	1.25 x 3

TPTCM112III, TPTCM112IIIL

Character set		3	
Character density	11 cpi	15 cpi	20 cpi
Number of columns	49	64	89
Chars / second	2322	2986	4181
Lines / second	46	46	46
Characters (L x H mm)-Normal	2.25 x 3	1.75 x 3	1.25 x 3

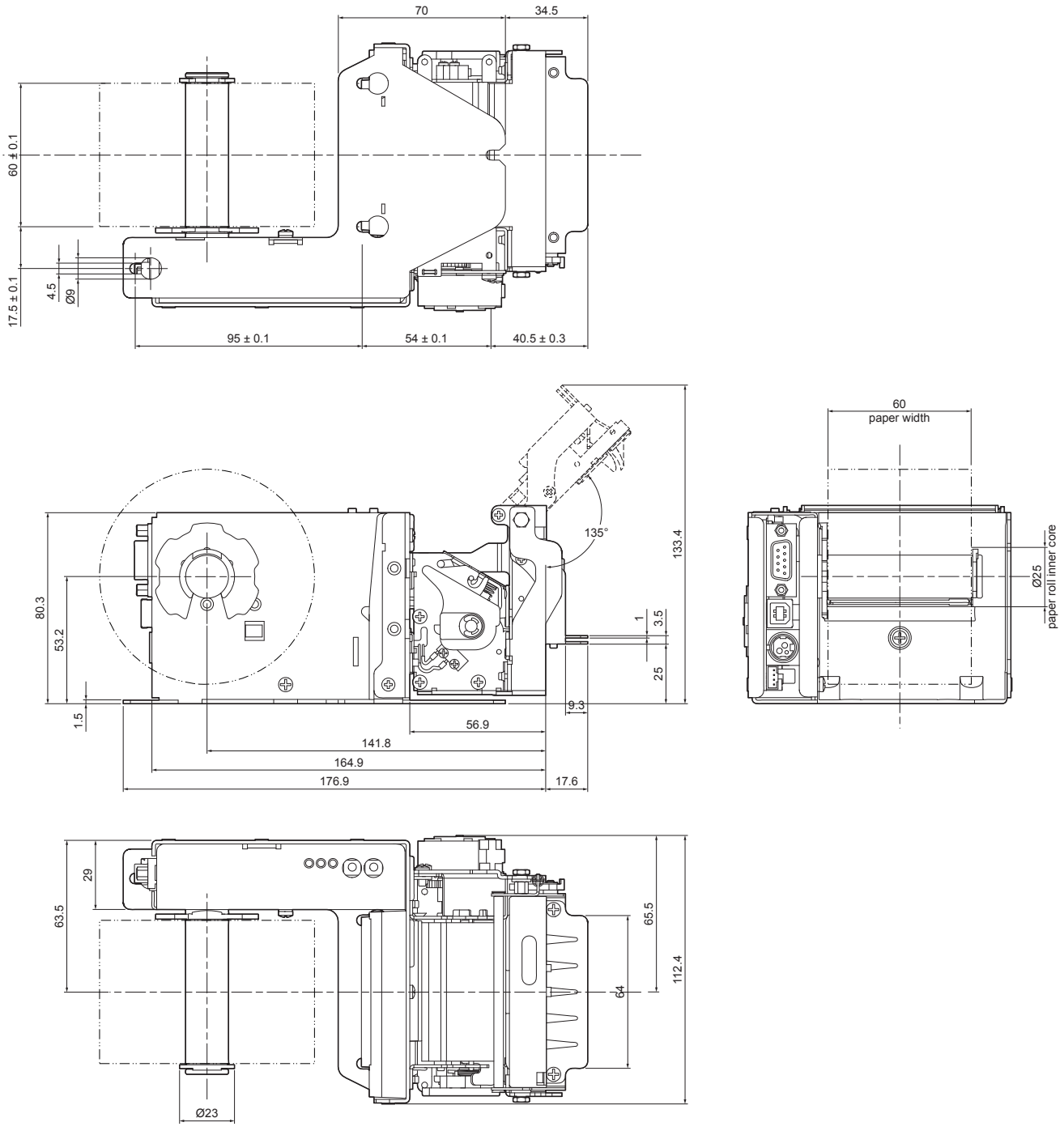
7.3 Device dimensions

Length	
TPTCM60III	194.5 mm
TPTCM60III (models with ejector)	265.5 mm
TPTCM60IIIL	188.4 mm
TPTCM112III (standard models) TPTCM112III (Strong Cut models) TPTCM112L	227.4 mm
TPTCM112III (models with ejector)	300 mm
Height	
TPTCM60III	(with cutter down) 80.3 mm (with cutter up) 133.4 mm
TPTCM60III (models with ejector)	80.3 mm
TPTCM60IIIL	195.3 mm
TPTCM112III (standard models) TPTCM112IIIL	(with cutter down) 95.3 mm (with cutter up) 136.6 mm
TPTCM112III (Strong Cut models)	(with cutter down) 95.3 mm (with cutter up) 138.6 mm
TPTCM112III (models with ejector)	(with ejector down) 95.3 mm (with ejector up) 223.1 mm
Width	
TPTCM60III, TPTCM60IIIL	112.4 mm
TPTCM60III (models with ejector)	115 mm
TPTCM112III, TPTCM112IIIL	171.55 mm
Weight	
TPTCM60III	1150 g
TPTCM60III (models with ejector)	1500 g
TPTCM60IIIL	1150 g
TPTCM112III (standard models) TPTCM112III (Strong Cut models) TPTCM112IIIL	1700 g
TPTCM112III (models with ejector)	2100 g

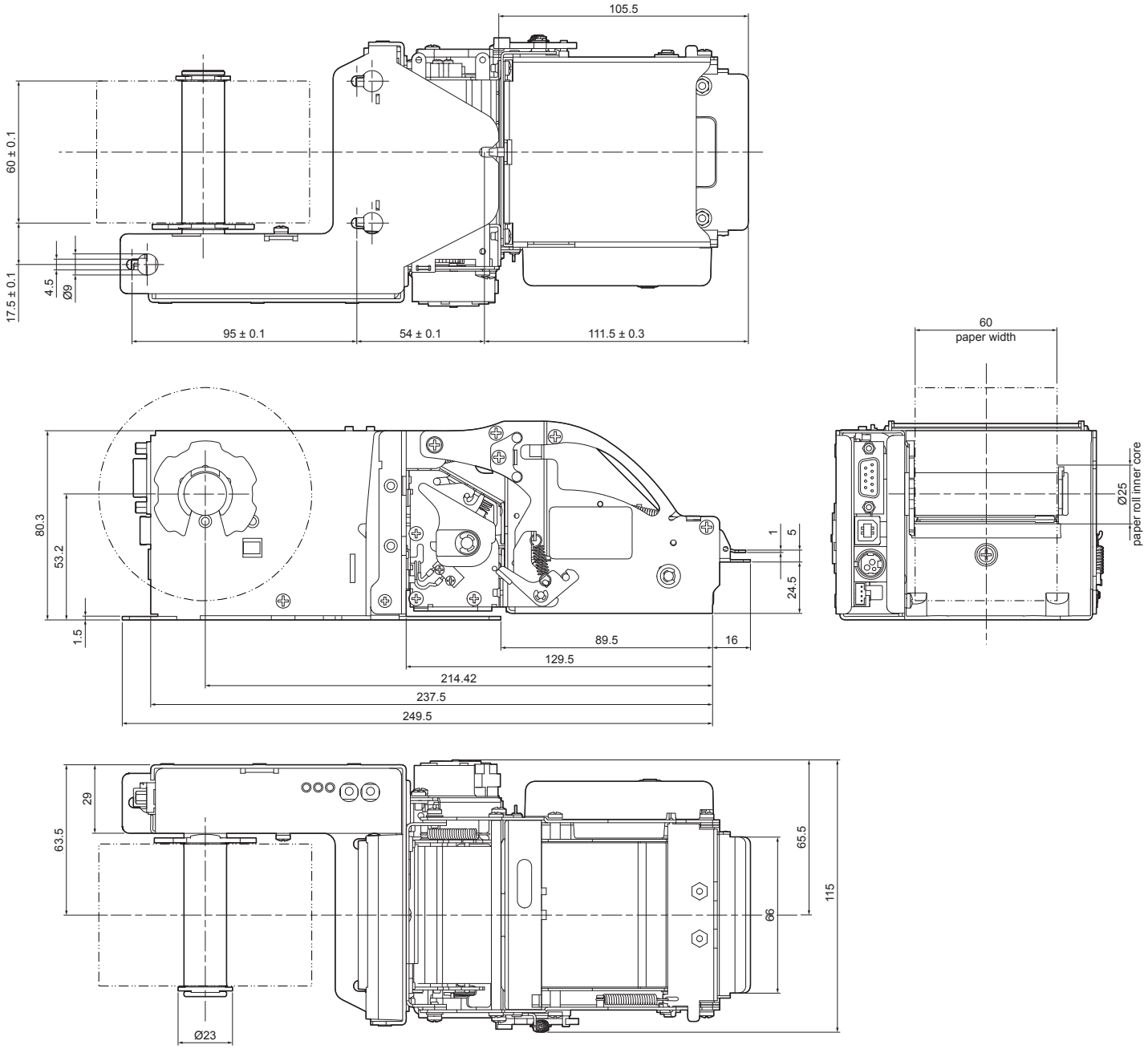
The following figures show the main dimensions of the devices.

NOTE: All the dimensions shown in following figures are in millimetres.

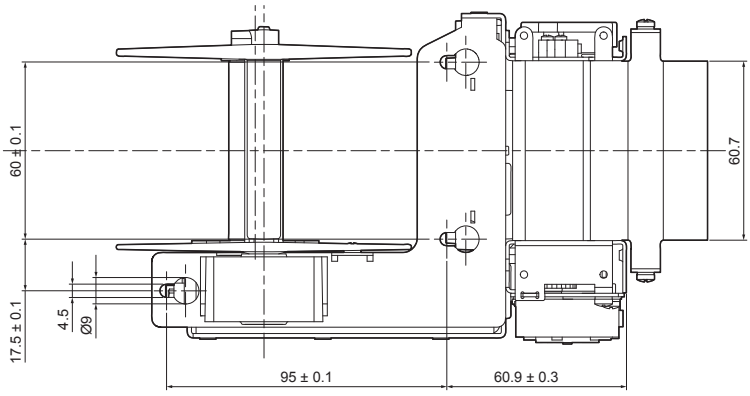
TPTCM60III (standard models)

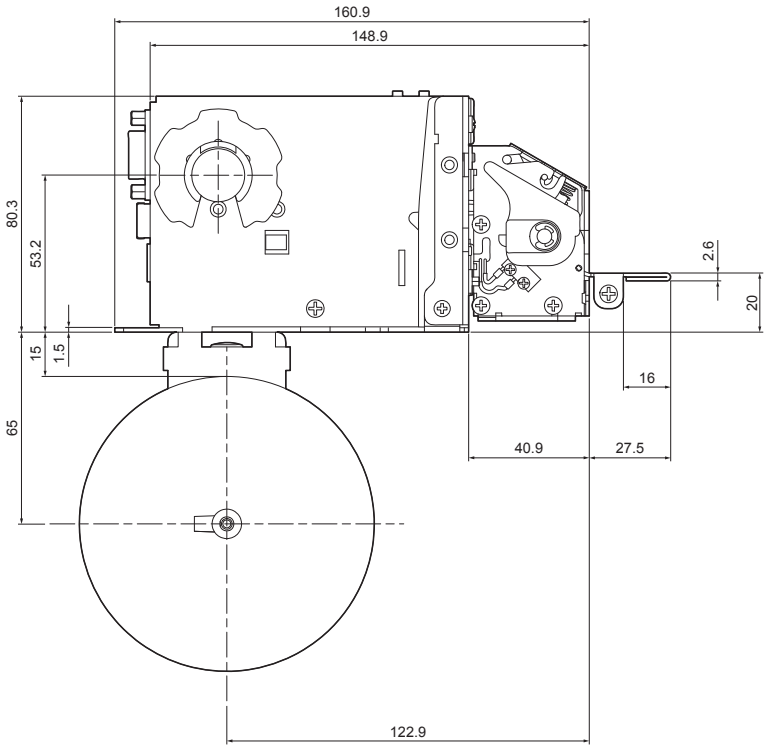


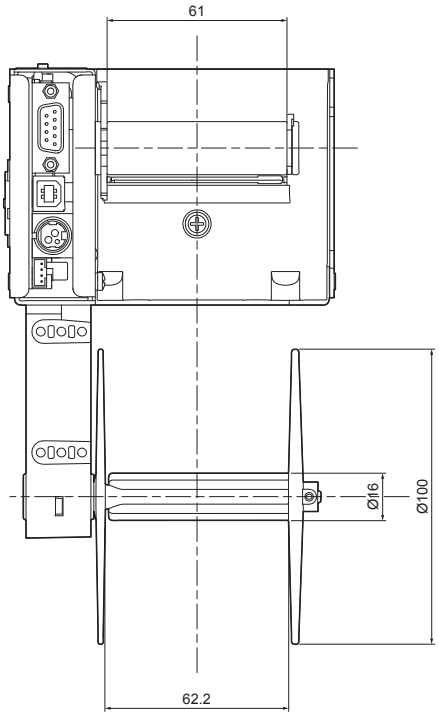
TPTCM60III (models with ejector)

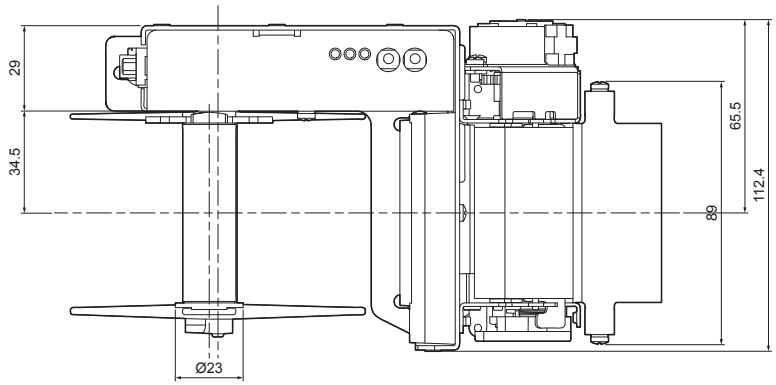


TPTCM60IIIL

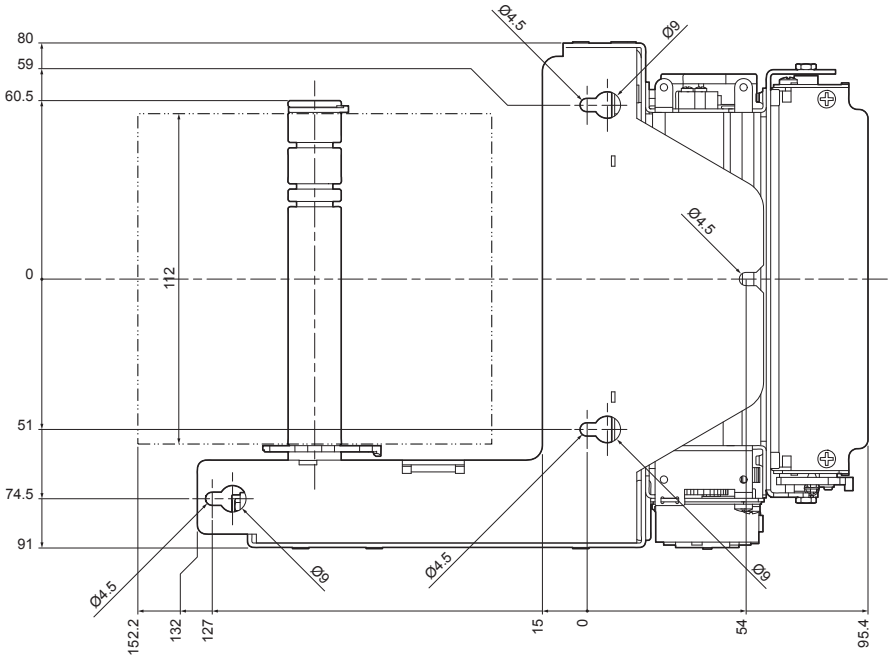


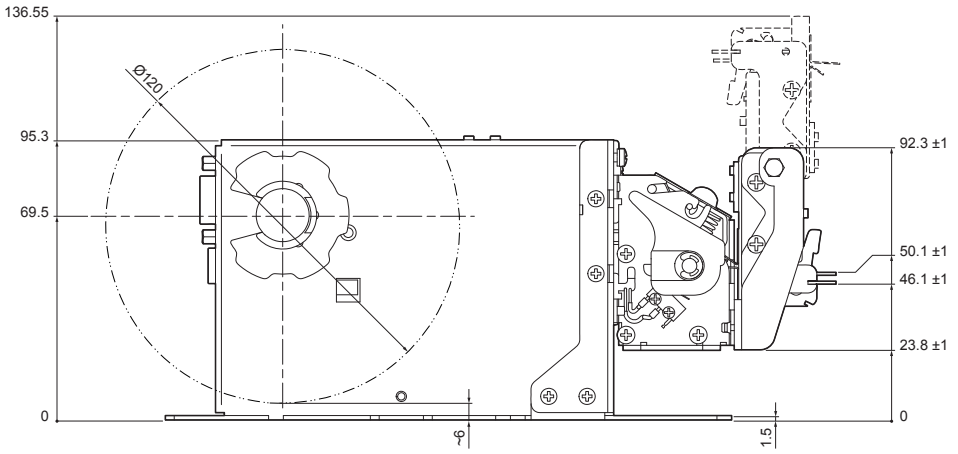


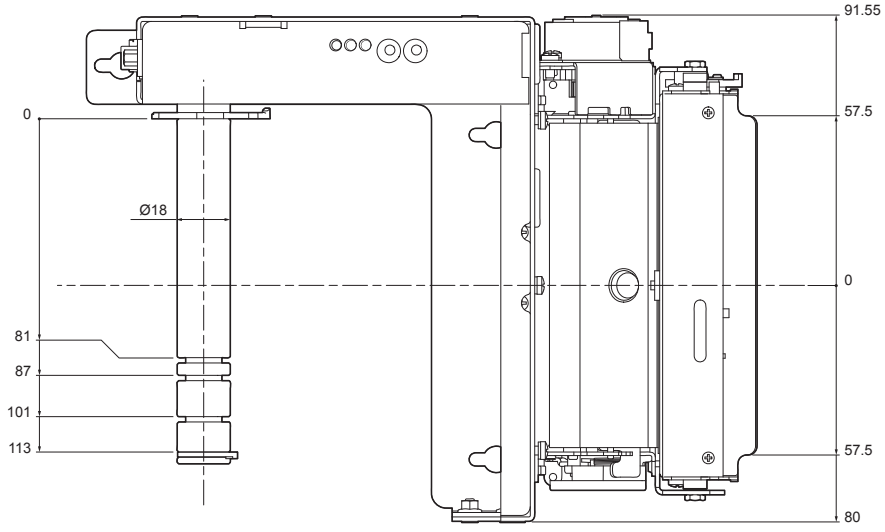




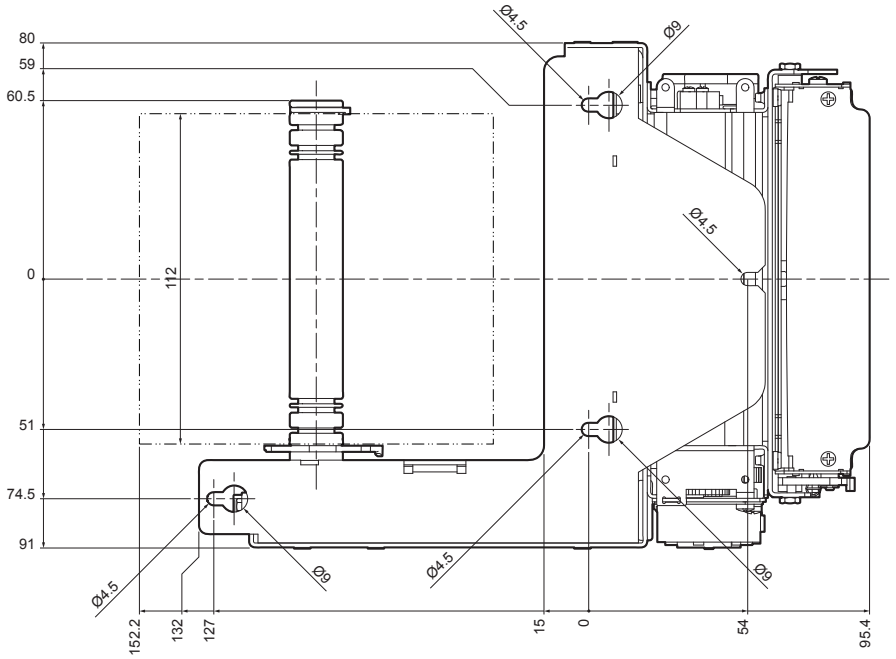
TPTCM112III (standard models)

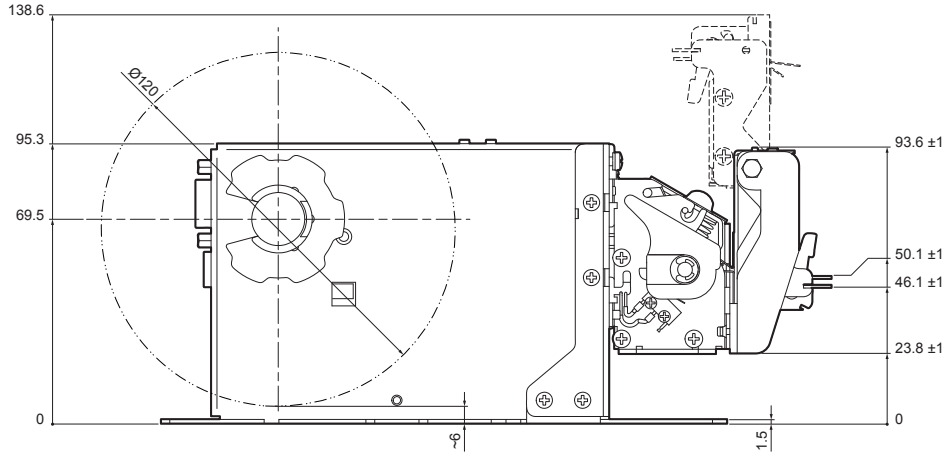


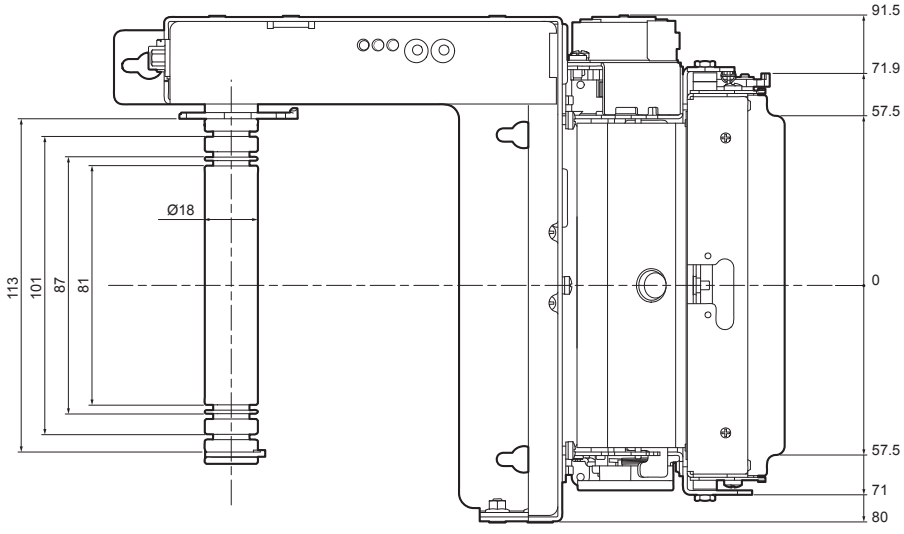




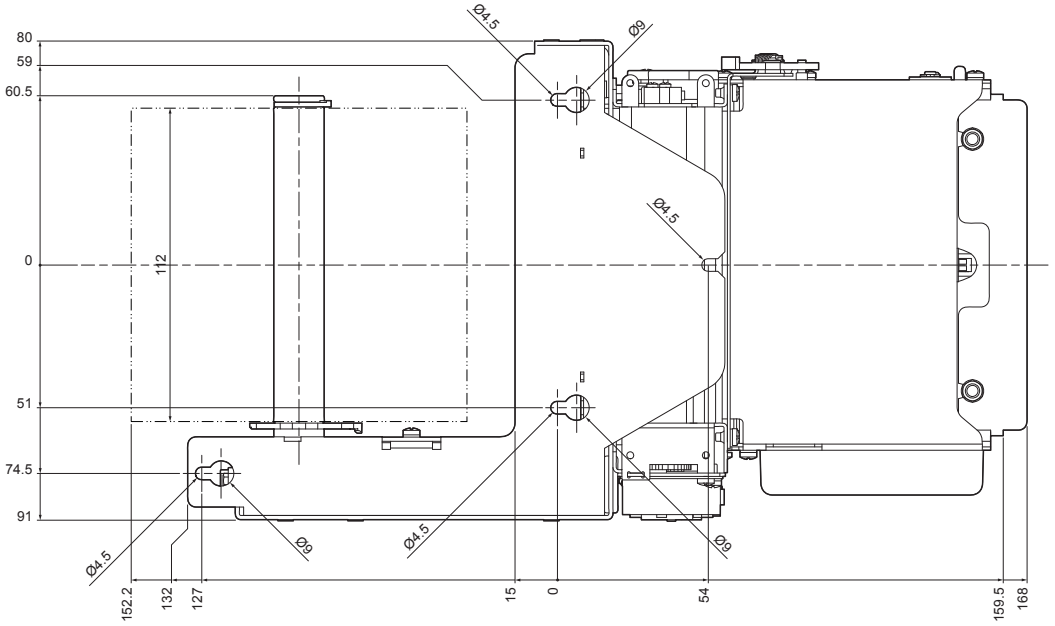
TPTCM112III (Strong Cut models)

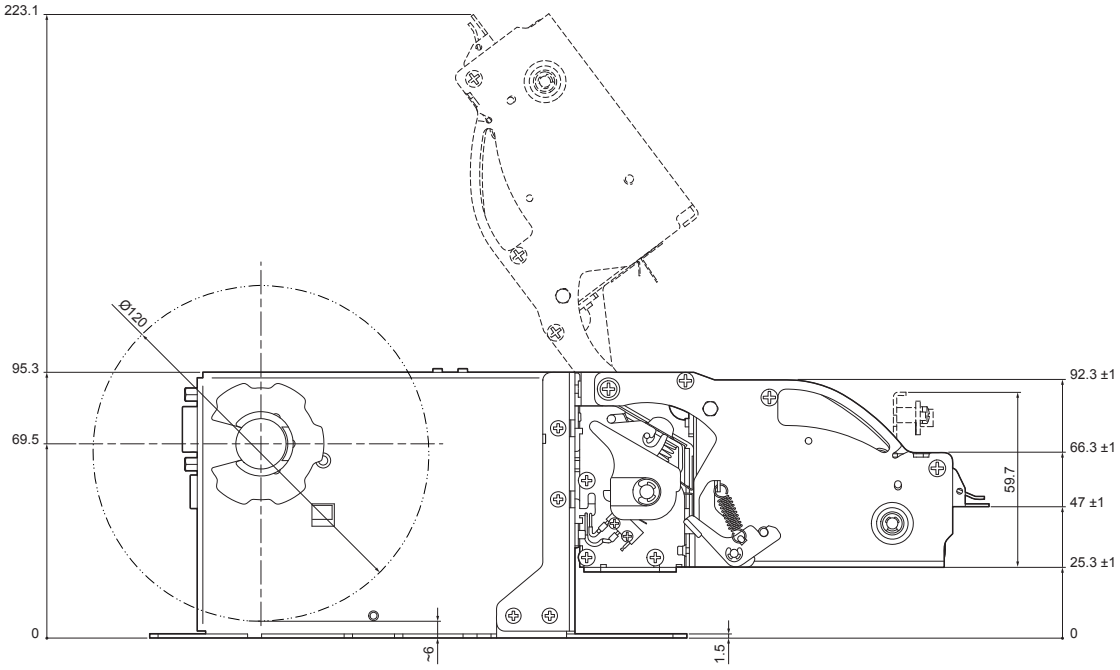


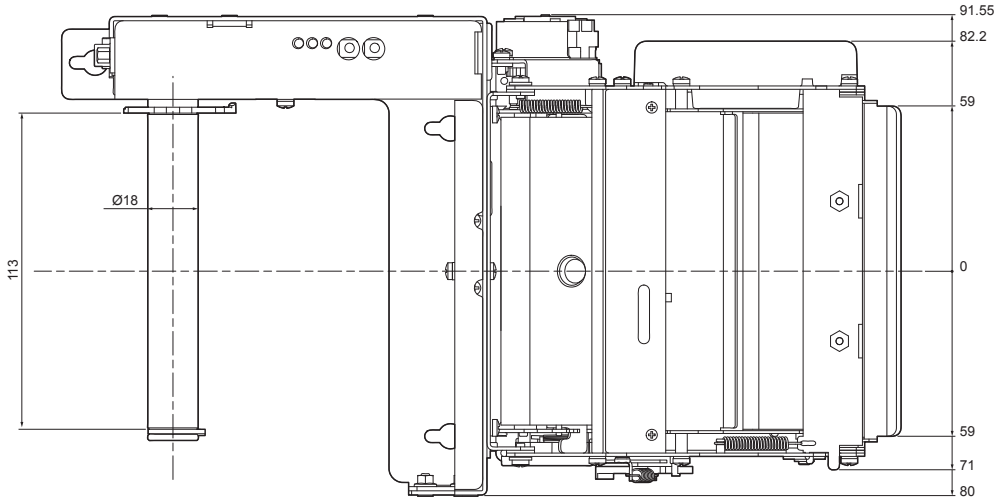




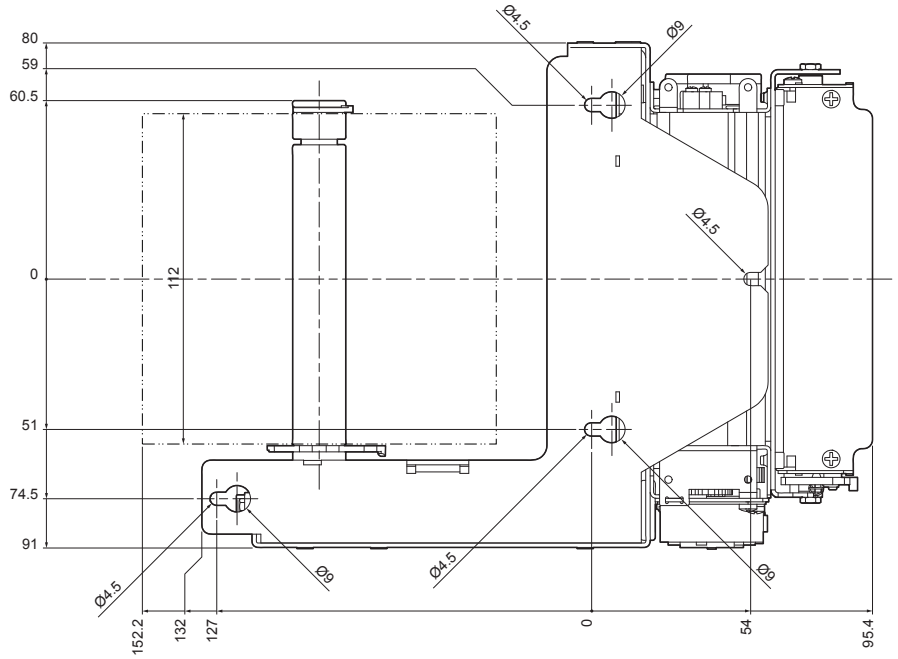
TPTCM112III (models with ejector)

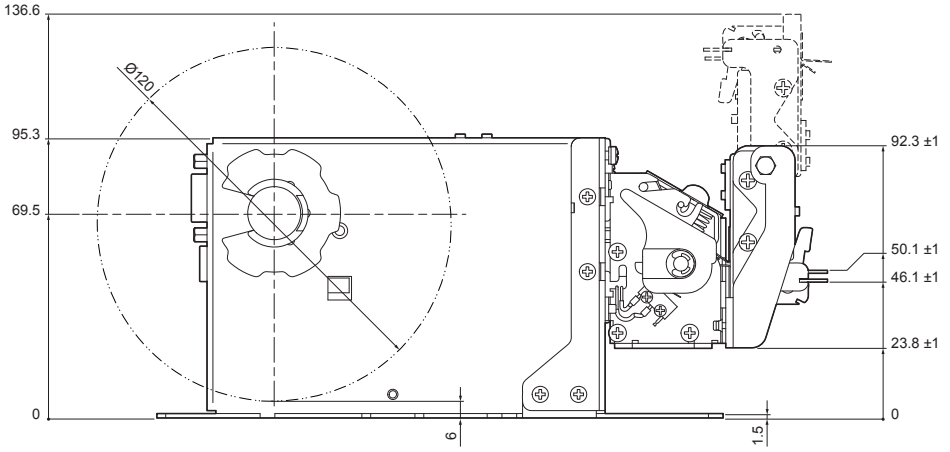


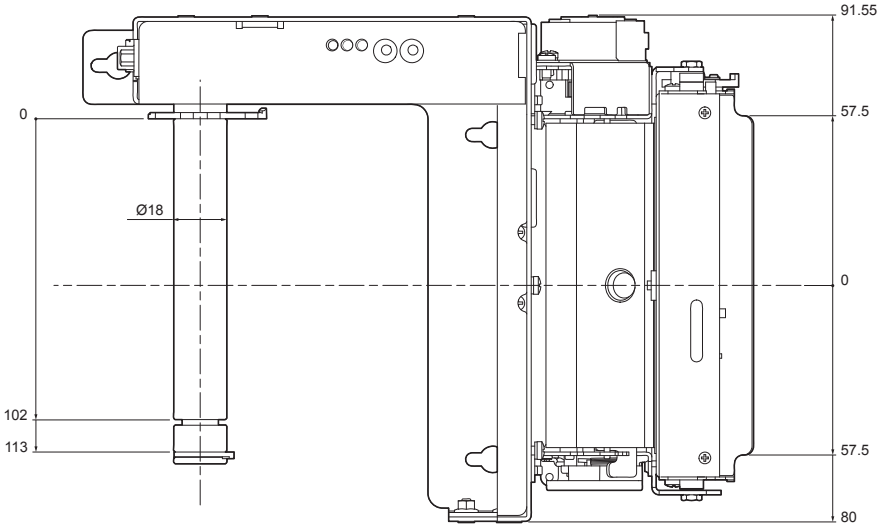




TPTCM112IIIL

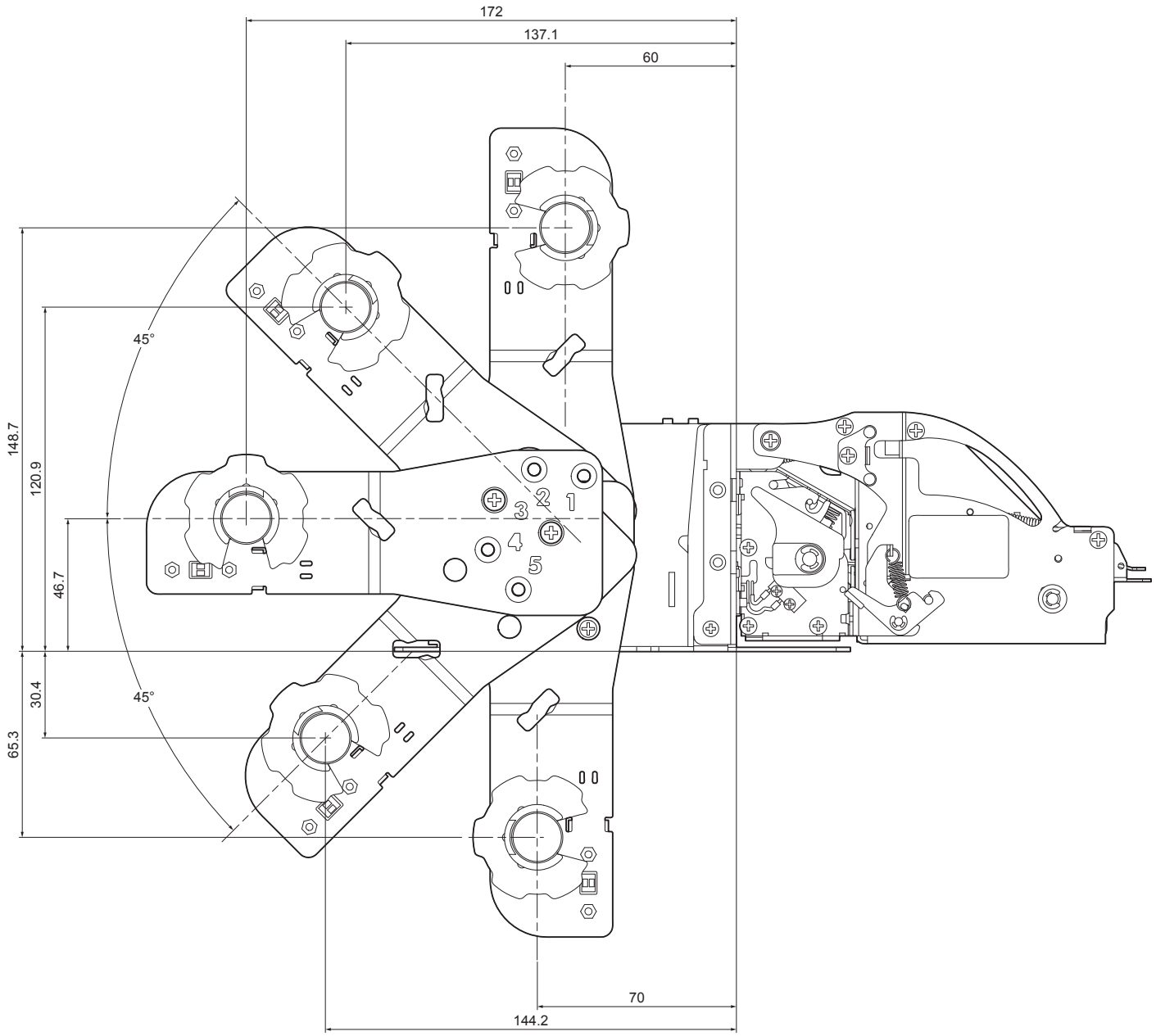






7.4 Device dimensions with paper roll holder (opzionale)

NOTE: All the dimensions shown in following figure are in millimetres.

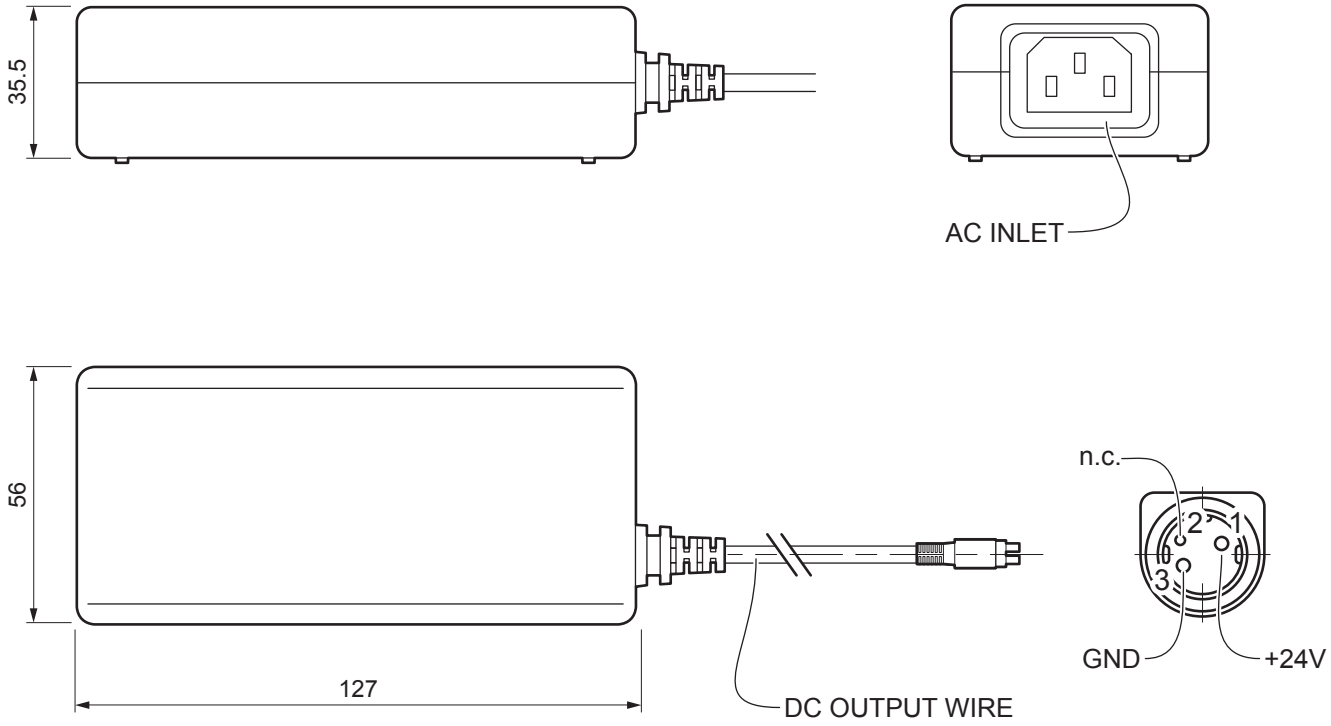


7.5 Dimensions of power supply cod. 963GE020000003 (optional)

TPTCM60III, TPTCM60IIIL

Length	127 mm
Height	35.5 mm
Width	56 mm

NOTE:
All the dimensions shown in following figures are in millimetres.

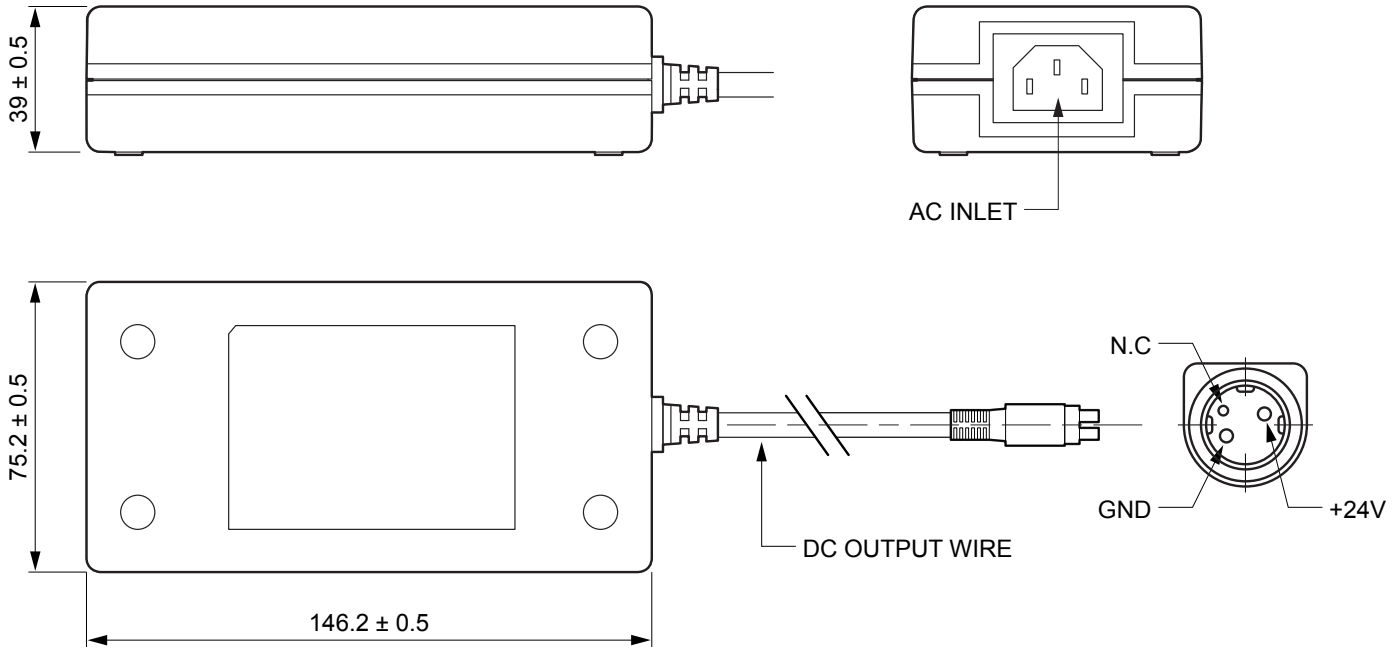


7.6 Dimensions of power supply cod. 963GE020000004 (optional)

TPTCM112III, TPTCM112IIIL

Length	146.2 ± 0.5 mm
Height	39 ± 0.5 mm
Width	75.2 ± 0.5 mm

NOTE:
All the dimensions shown in following figures are in millimetres.



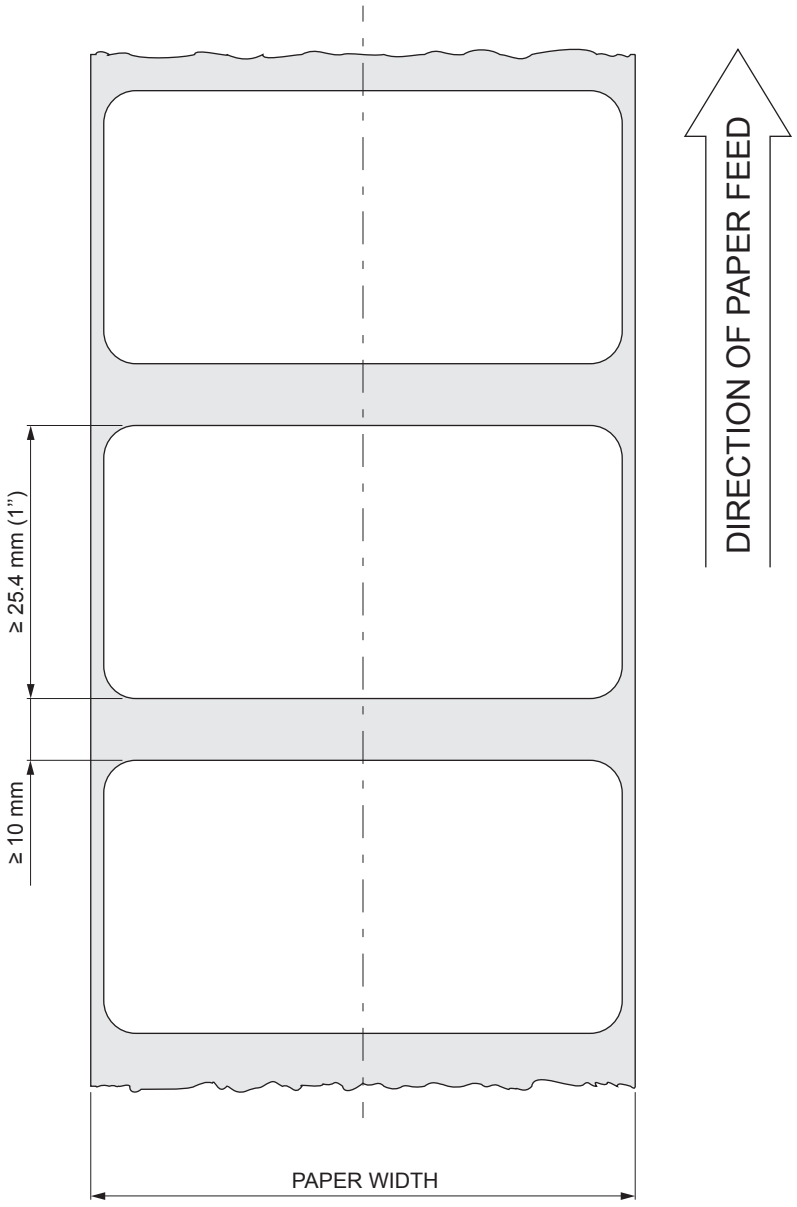
7.7 Paper specification

NOTE:
All the dimensions shown in following figures are in millimetres.

TPTCM60IIIL, TPTCM112IIIL

To properly use the alignment commands, you need to use paper with labels that comply with the dimensions shown in the following figure that apply to all paper widths handled by the devices.

For more information about the use of paper with black mark see chapter 10.

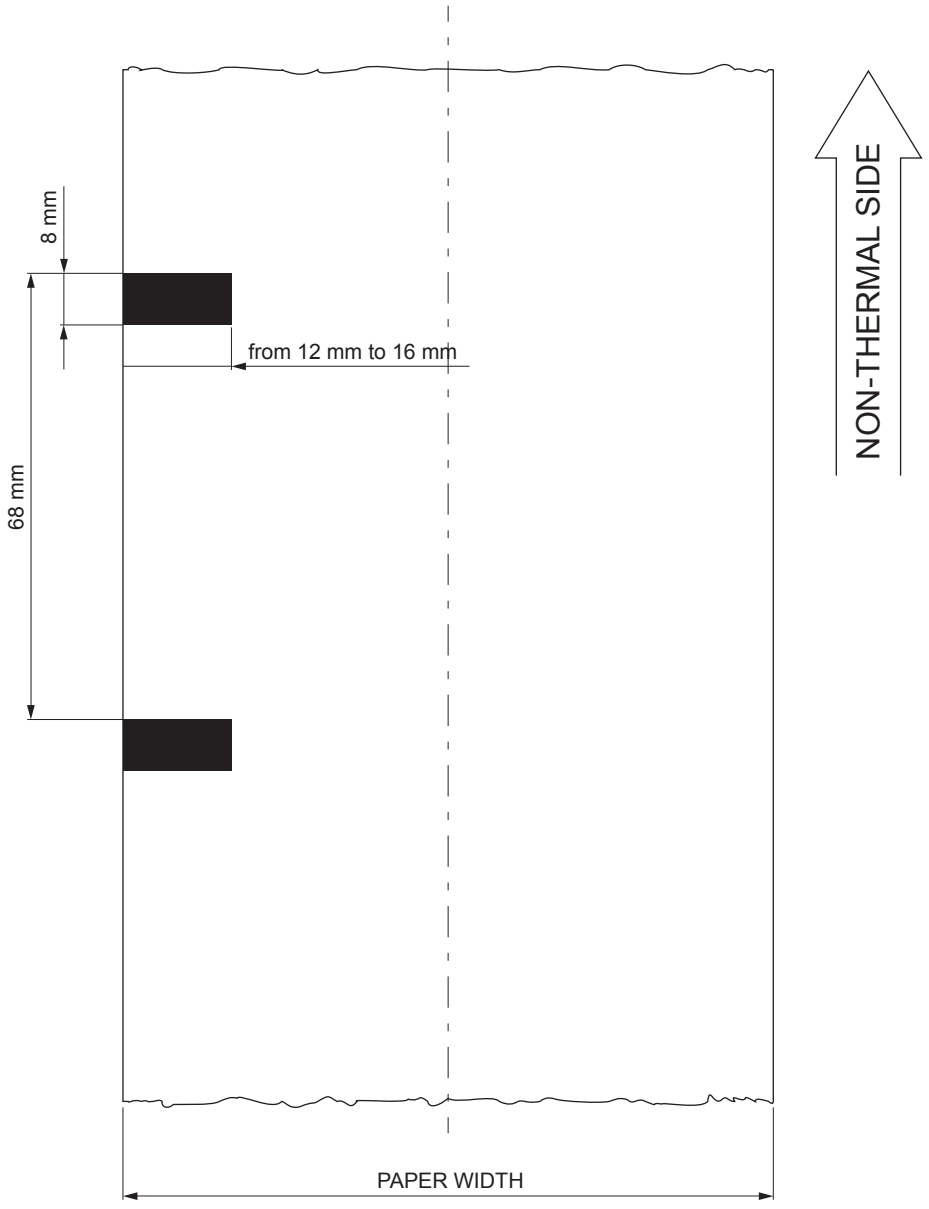


TPTCM112III

The following image shows the placement of the black mark on paper. The notch must be printed on the non-thermal side of paper according to the dimensions shown in the following figure that apply to all paper widths handled by the device.

For devices with the optional right sensor, the paper specifications are symmetric to the axis of the paper.

For more information about the use of paper with black mark see chapter 10.



7.8 Character sets

The device has 3 fonts of varying width (11, 15 and 20 cpi) which may be related one of the coding tables provided on the device.

To know the coding tables actually present on the device, you need to print the font test (see par.2.4).

You can set font and coding table by using the commands (see the commands manual of the device) or using the “Code Table”, "Chars / Inch" and "Font Type" parameters during the Setup procedure (see par.5.4).

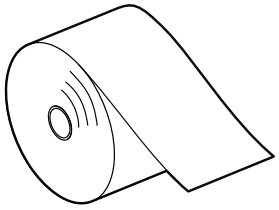
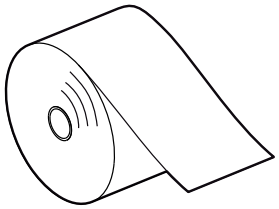
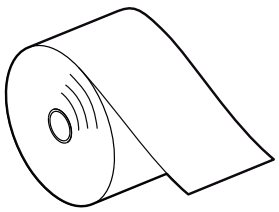
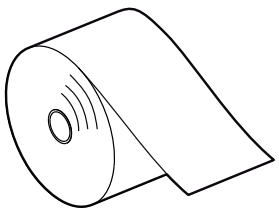
The following is the full list of coding tables that can be installed on the device.

<CodeTable>	Coding table	
0	PC437 - U.S.A., Standard Europe	
1	Katakana	
2	PC850 - Multilingual	
3	PC860 - Portuguese	
4	PC863 - Canadian/French	
5	PC865 - Nordic	
11	PC851 - Greek	on request
12	PC853 - Turkish	on request
13	PC857 - Turkish	on request
14	PC737 - Greek	on request
15	ISO8859-7 - Greek	on request
16	WPC1252	
17	PC866 - Cyrillic 2	
18	PC852 - Latin 2	on request
19	PC858 per simbolo Euro in posizione 213	
20	KU42 - Thai	on request
21	TIS11 - Thai	on request
26	TIS18 - Thai	on request
30	TCVN_3 - Vientamese	on request
31	TCVN_3 - Vientamese	on request
32	PC720 - Arabic	on request

<CodeTable>	Coding table	
33	WPC775 - Baltic Rim	on request
34	PC855 - Cyrillic	on request
35	PC861 - Icelandic	on request
36	PC862 - Hebrew	
37	PC864 - Arabic	
38	PC869 - Greek	on request
39	ISO8859-2 - Latin 2	on request
40	ISO8859-15 - Latin 9	on request
41	PC1098 - Farci	on request
42	PC1118 - Lithuanian	on request
43	PC1119 - Lithuanian	on request
44	PC1125 - Ukranian	on request
45	WPC1250 - Latin 2	
46	WPC1251 - Cyrillic	
47	WPC1253 - Greek	
48	WPC1254 - Turkish	
49	WPC1255 - Hebrew	
50	WPC1256 - Arabic	
51	WPC1257 - Baltic Rim	
52	WPC1258 - Vientamese	
53	KZ1048 - Kazakhstan	on request
255	Space page	

8 CONSUMABLES

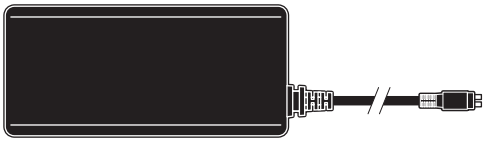
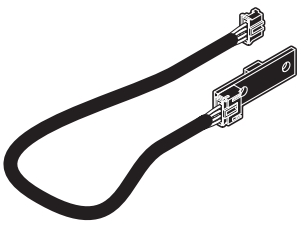
The following table shows the list of available consumables for devices:

DESCRIPTION	CODE
TPTCM60III	
THERMAL PAPER ROLL weight = 70 g/m² width = 60 mm Ø external = 95 mm Ø core = 25 mm	**67300000000370** 
THERMAL PAPER ROLL weight = 70 g/m² width = 60 mm Ø external = 130 mm Ø core = 25 mm	**67300000000352** 
TPTCM112III	
THERMAL PAPER ROLL weight = 70 g/m² width = 112 mm Ø external = 95 mm Ø core = 25 mm	**67300000000318** 
THERMAL PAPER ROLL weight = 70 g/m² width = 112 mm Ø external = 130 mm Ø core = 25 mm	**67300000000307** 

9 ACCESSORIES

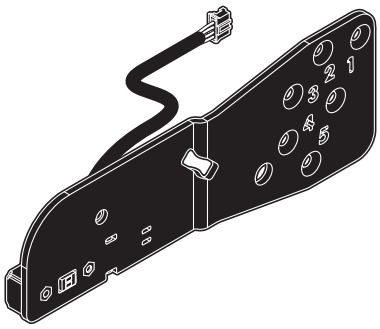
The following table shows the list of available accessories for device:

TPTCM60III (all models)

DESCRIPTION	CODE
POWER SUPPLY (for technical specifications, see the paragraph 7.1)	**963GE020000003** 
ADAPTER CABLE 3 pin male power-DIN connector 0.5 mt	**26600000000012**
SERIAL CABLE 9 pin male connector - 9 pin female connector 1.8 mt	**26500000000352**
USB CABLE AB type 1.8 mt	**26500000000356**
LOW PAPER SENSOR BOARD with cable	**26300000000603** 

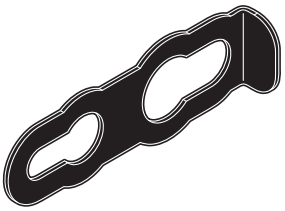
974EX010000316

ADJUSTABLE PAPER ROLL HOLDER
with low paper sensor board and cable
for rolls with 180 mm external diameter



21100000001349

TIE FOR ROLL LOCKING

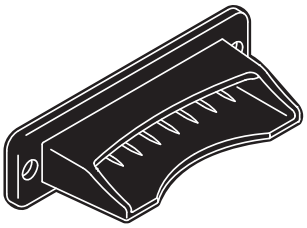


TPTCM60III (models with ejector)

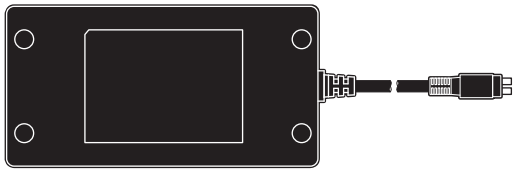
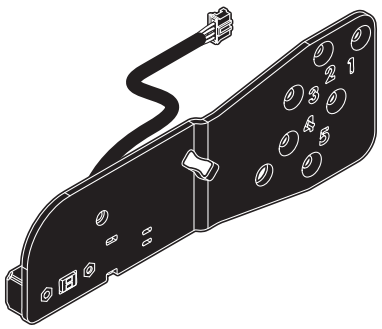
DESCRIPTION	CODE

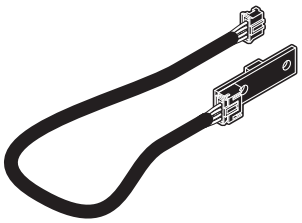
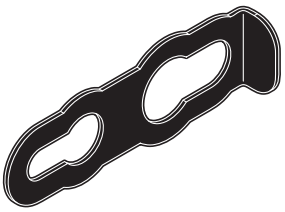
21400000000948

PLASTIC PAPER OUTPUT MOUTH

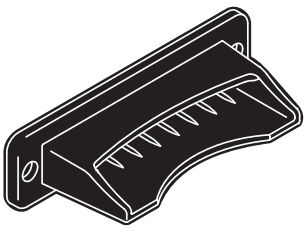


TPTCM112III (all models)

DESCRIPTION	CODE
POWER SUPPLY (for technical specifications, see the paragraph 7.1)	**963GE020000004** 
ADAPTER CABLE 3 pin male power-DIN connector 0.5 mt	**26600000000012**
SERIAL CABLE 9 pin male connector - 9 pin female connector 1.8 mt	**26500000000352**
USB CABLE AB type 1.8 mt	**26500000000356**
ADJUSTABLE PAPER ROLL HOLDER with low paper sensor board and cable for rolls with 180 mm external diameter	**974EU010000315** 

	26300000000603
LOW PAPER SENSOR BOARD with cable	
	21100000001349
TIE FOR ROLL LOCKING	

TPTCM112III (models with ejector)

DESCRIPTION	CODE
	21400000000947
PLASTIC PAPER OUTPUT MOUTH	

10 ALIGNMENT

Devices are provided with sensors for the alignment management in order to handle:
- rolls of tickets with pre-printed fields and a fixed length;
- rolls of labels with a fixed length.

The alignment notch may be formed by
- black mark printed on paper (see par.7.7);
- gap between two labels (see par.7.7);

All the alignment sensors are “reflection” sensors: this kind of sensor emits a band of light and detects the quantity of light reflected to it. The presence of the notch is therefore detected by the amount of light that returns to the sensor, considering that the light is reflected by the white paper and absorbed by the black mark.

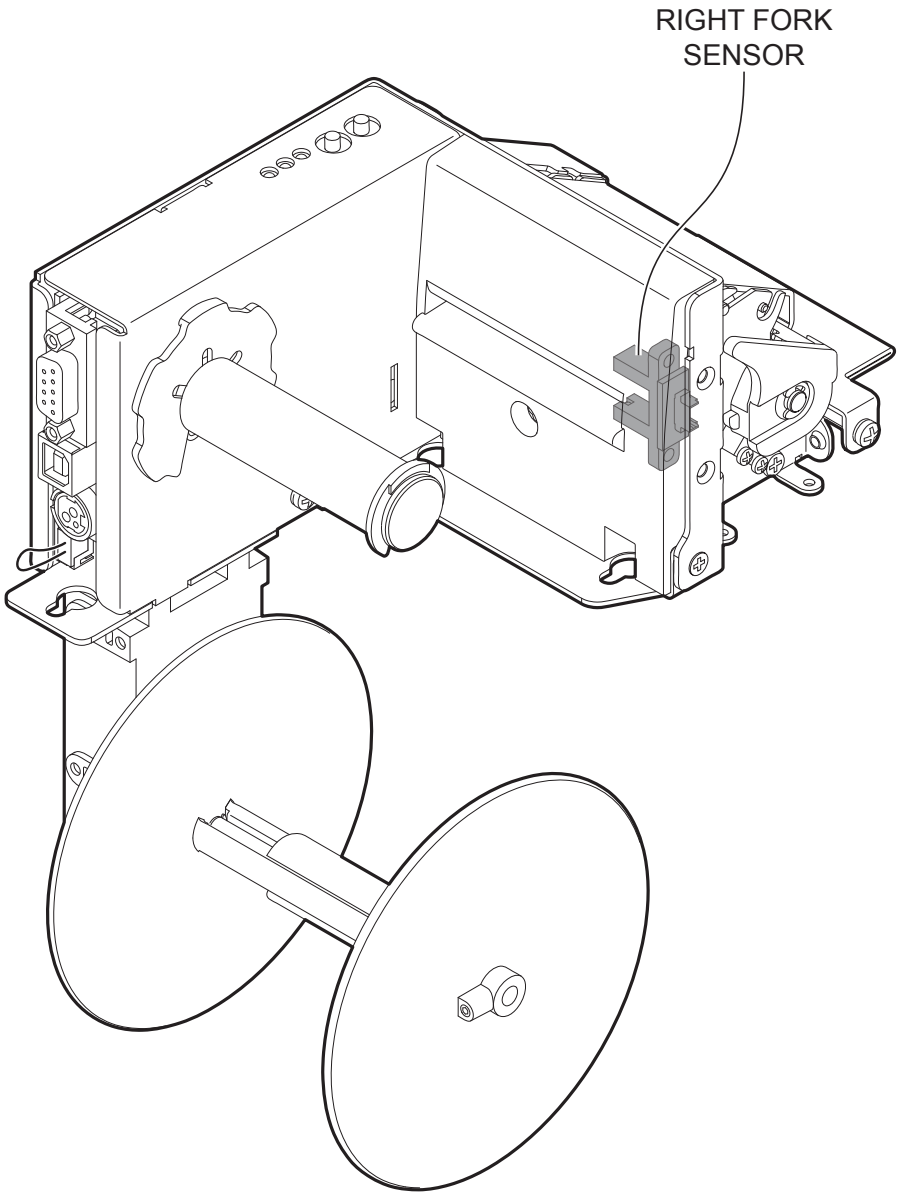
The device that handle paper with labels, are provided with a fork sensor or a couple of facing sensors working in “transparence” mode: a beam of light is emitted by the transmitter sensor and the quantity of light which reaches the opposite receiver sensor is detected.
The presence of the gap between labels is detected evaluating the amount of light that arrives to the opposite sensor, considering that the white paper doesn’t allow the beam of light to reach the receiver, whereas the translucent paper underlying (liner) lets the light to reach the receiver.

The following paragraphs show how to correctly set the configuration parameters of device in order to assure the alignment.

10.1 Enable alignment

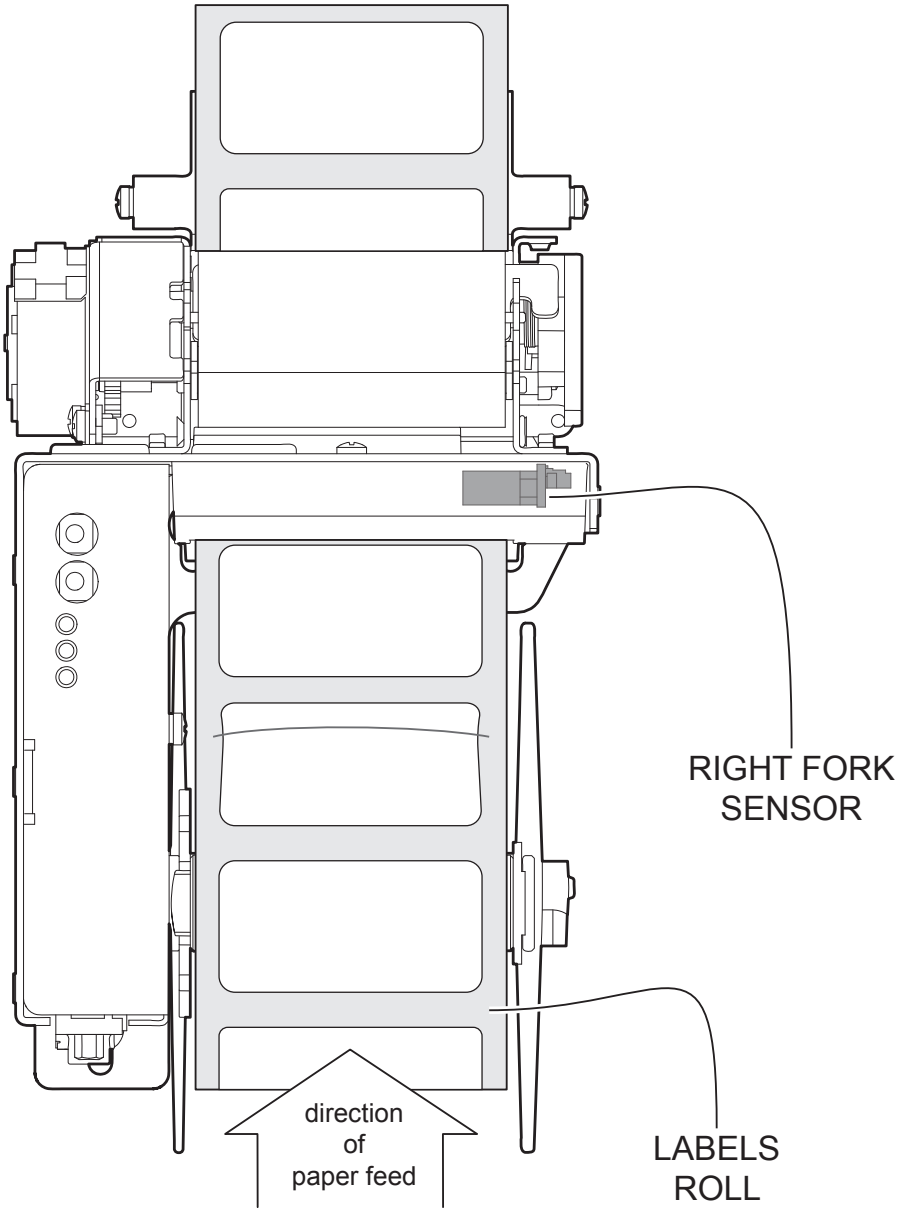
TPTCM60IIIL

Device is provided with a fork sensors for alignment, placed on the right side of the paper input mouth:



To guarantee the correct alignment, you must enable the parameter “Notch/B.Mark Position” during the Setup procedure (see chapter 5).

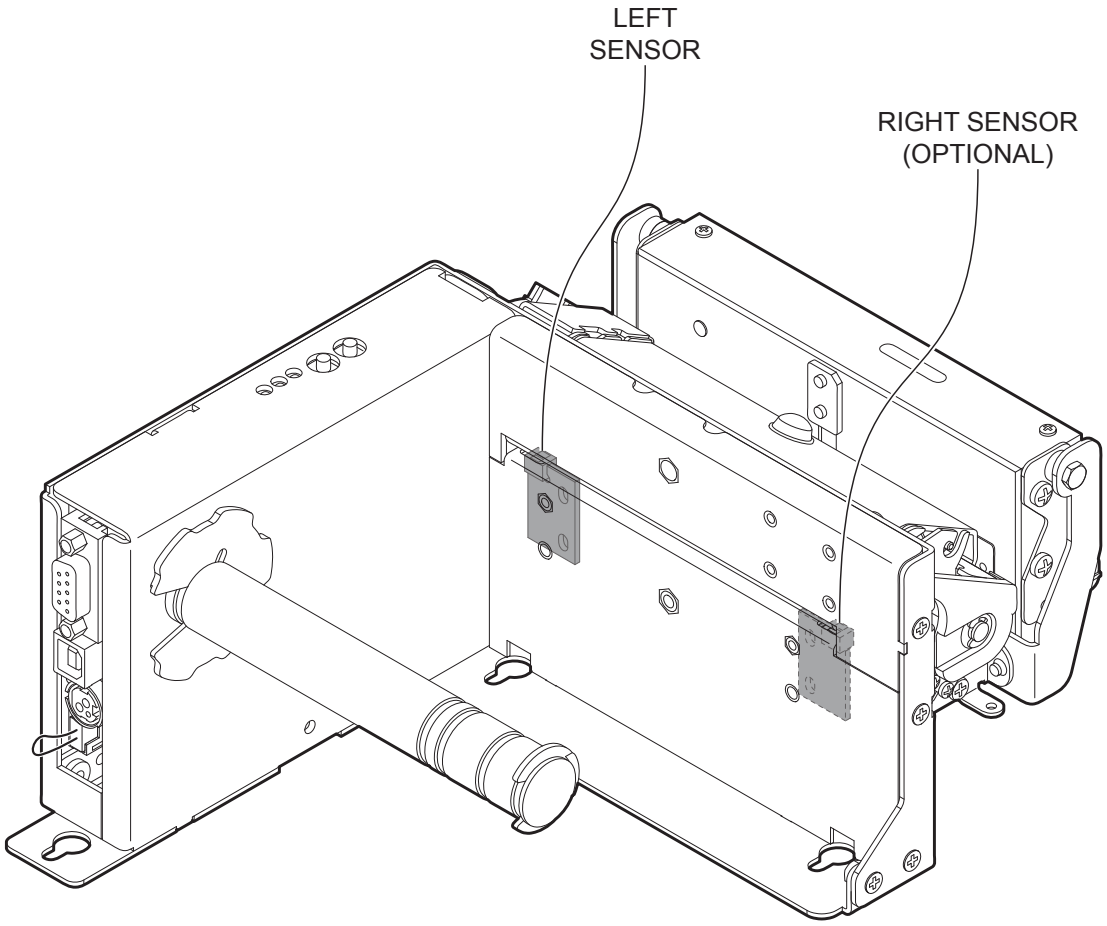
The following figure shows an example of paper with label usable with the device:



TPTCM112III (standard models)

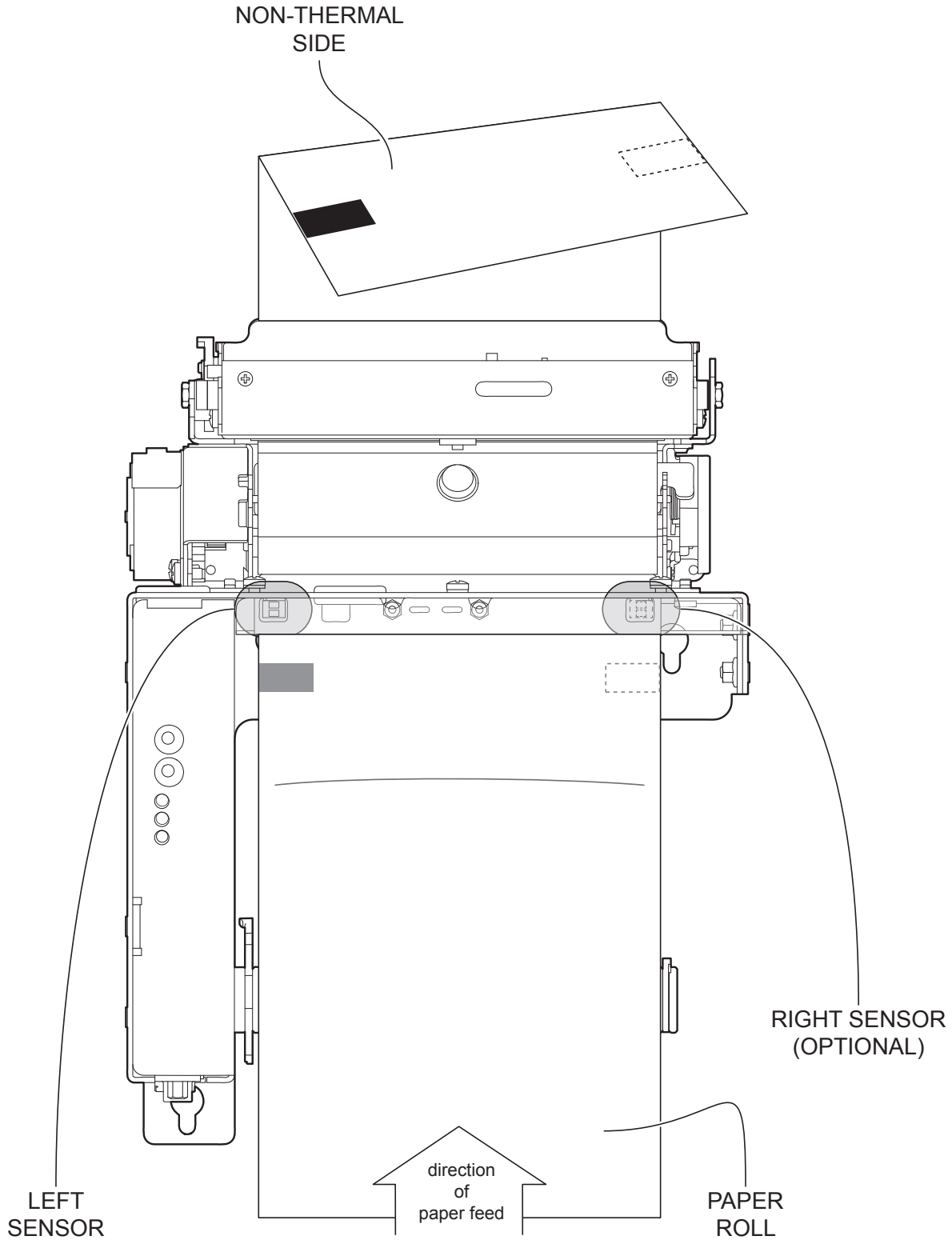
Device is provided with a sensor for alignment, placed as follows:

- a fixed sensor placed on the left, at the bottom of input paper mouth,
- a fixed optional sensor placed on the right, at the bottom of input paper mouth



To guarantee the correct alignment, you must enable the parameter “Notch/B.Mark Position” during the Setup procedure (see chapter 5).

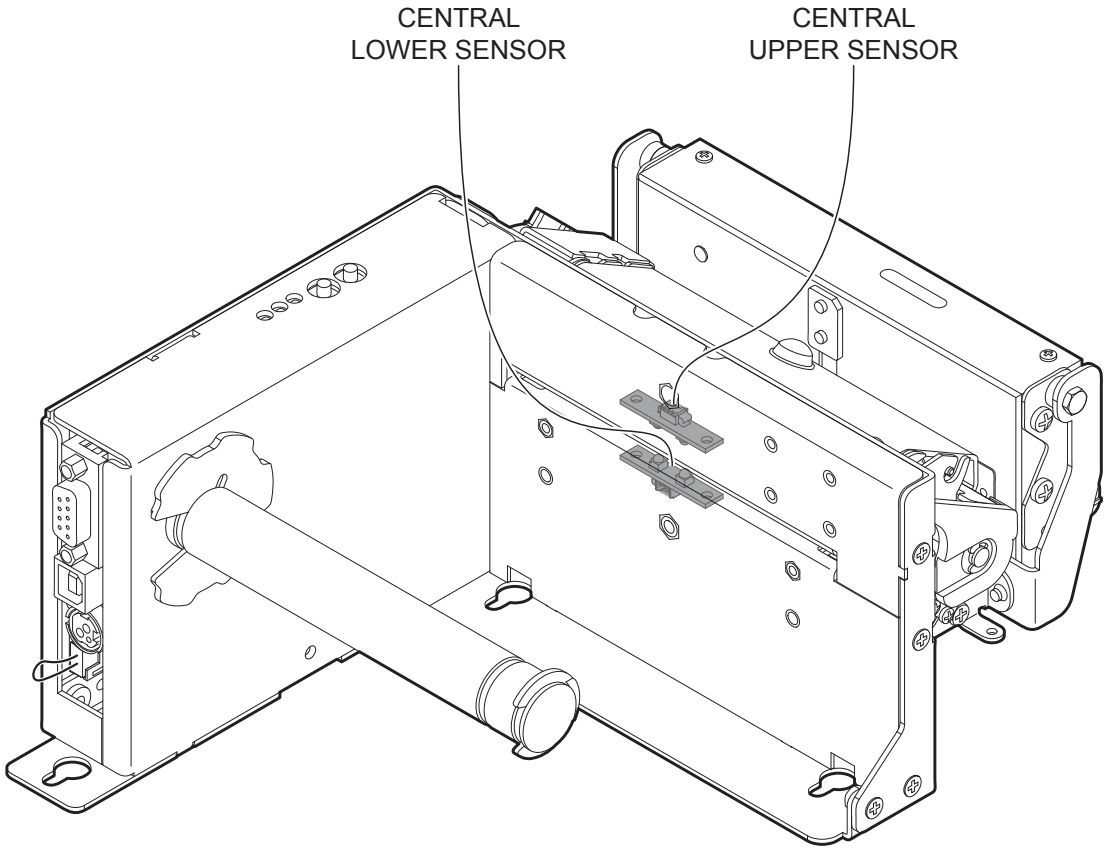
The following figure shows an example of paper with black mark usable with the device:



TPTCM112IIIL

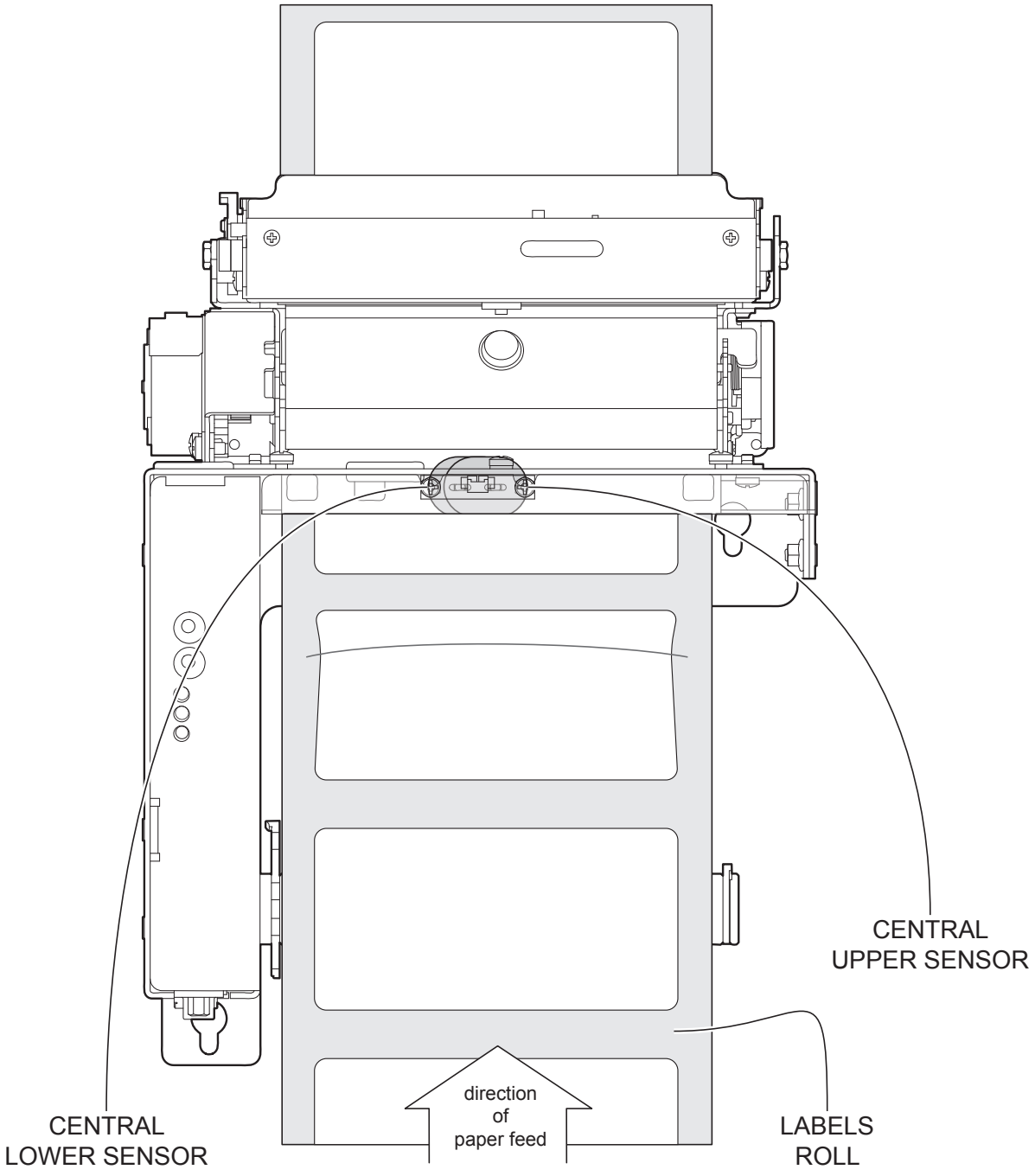
Device is provided with two sensor for alignment, placed as follows:

- a fixed sensor placed on the center, at the bottom of input paper mouth,
- a fixed sensor placed on the center, at the top of input paper mouth



To guarantee the correct alignment, you must enable the parameter “Notch/B.Mark Position” during the Setup procedure (see chapter 5).

The following figure shows an example of paper with black mark usable with the device:



10.2 Calibration

The sensor calibration occurs automatically and consists in adjusting the quantity of light emitted to match the degree of whiteness of the paper used and the degree of black of the mark printed on paper.

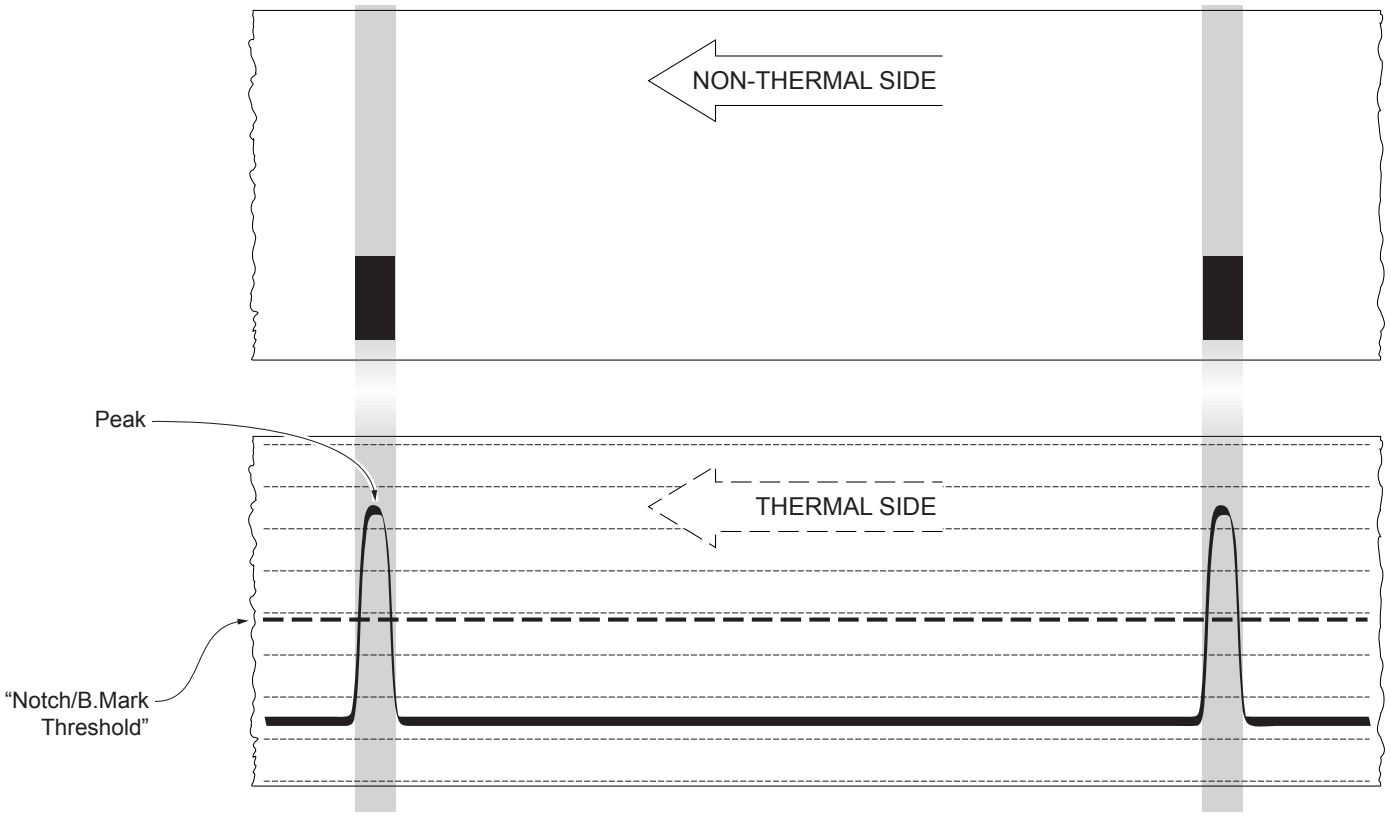
The device automatically performs the self-calibration during the Setup procedure only if the “Notch/B.Mark Position” parameter is set to a value other than “Disabled” (see chapter 5).

When self-calibration starts, the device performs some paper feeds and then it prints the calibration result and the value of the PWM duty-cicle of the alignment sensor driver so that it can be perform an optimal notch detection:

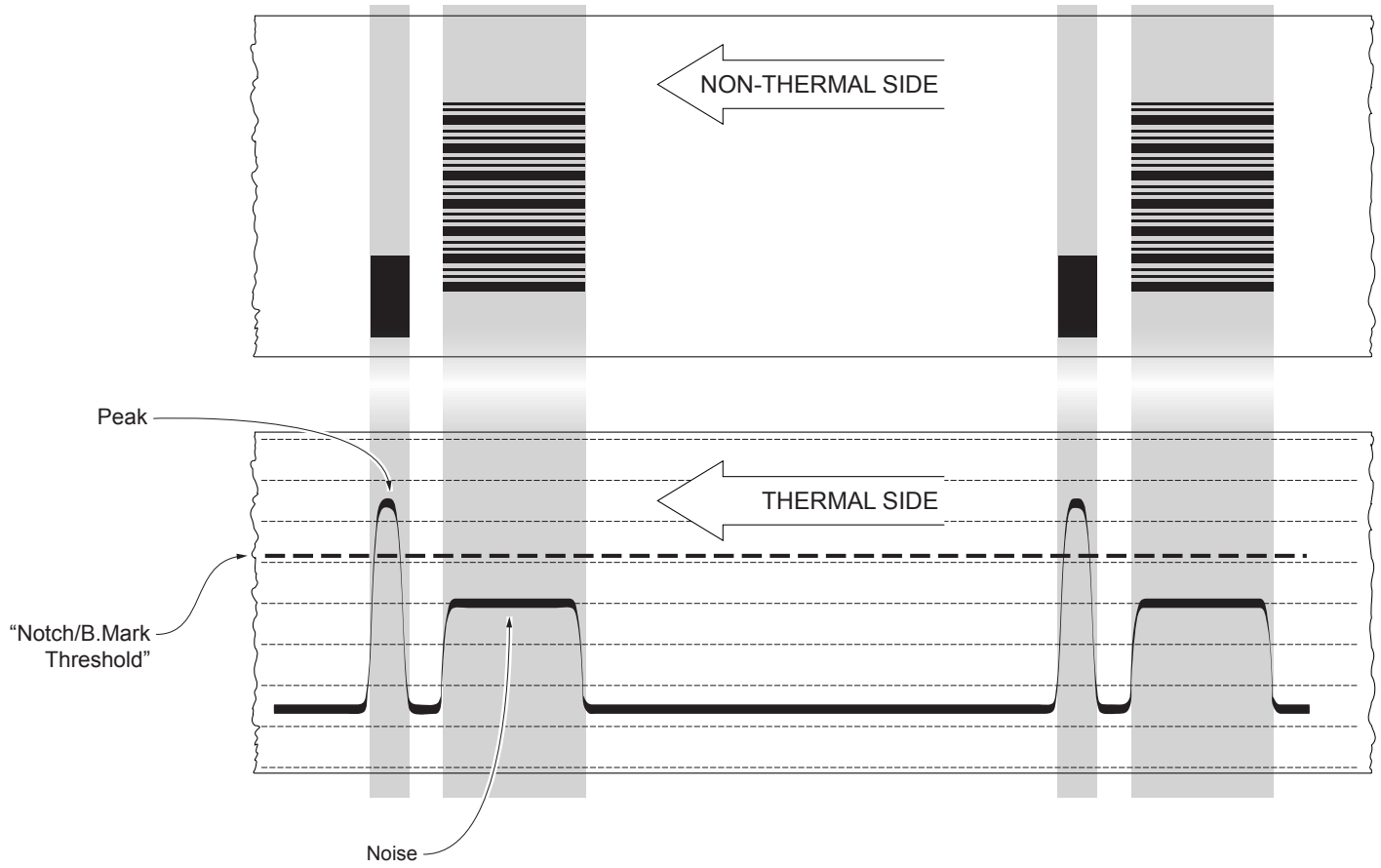
Autosetting Notch : OK
PWM Duty Cycle : 85.3%

The “Autosetting Notch” parameter indicates the result of the self-calibration procedure; OK will appear if it has been successful, NOT OK will appear if the procedure has failed.

After the printing of the procedure result, the device offers the execution of the function of paper characterization “Characterize Paper” and the change of the “Notch/B.Mark Threshold” parameter which represents the detection threshold of the notch. Choosing the “Yes” value for the “Characterize Paper” parameter, the device prints a graphic representation (see following figures) of the outgoing voltage of the alignment sensor (expressed as a percentage) and the “Notch/B.Mark Threshold” value. This graphic representation is useful to set the most suitable value to assign to the “Notch/B.Mark Threshold” parameter and then to better identify the optimal threshold value which takes into account the variations of the signal and the small oscillations around zero.
The following figure shows an example of paper with the non-thermal paper printed with black marks: the outgoing voltage is constant while passing the white paper between two notches and presents a peak at each black mark.
In this case, the optimal value for the “Notch/B.Mark Threshold” parameter is placed about half of the peak.



The following figure shows an example of paper with the non-thermal paper printed with black marks and other graphics (for example, a barcode): the outgoing voltage is constant while passing the white paper between two notches, presents a peak at each black mark and presents some “noise” at each barcode. In this case, the optimal value for the “Notch/B.Mark Threshold” parameter is located about halfway between the peak value and the maximum value of the “noise”.

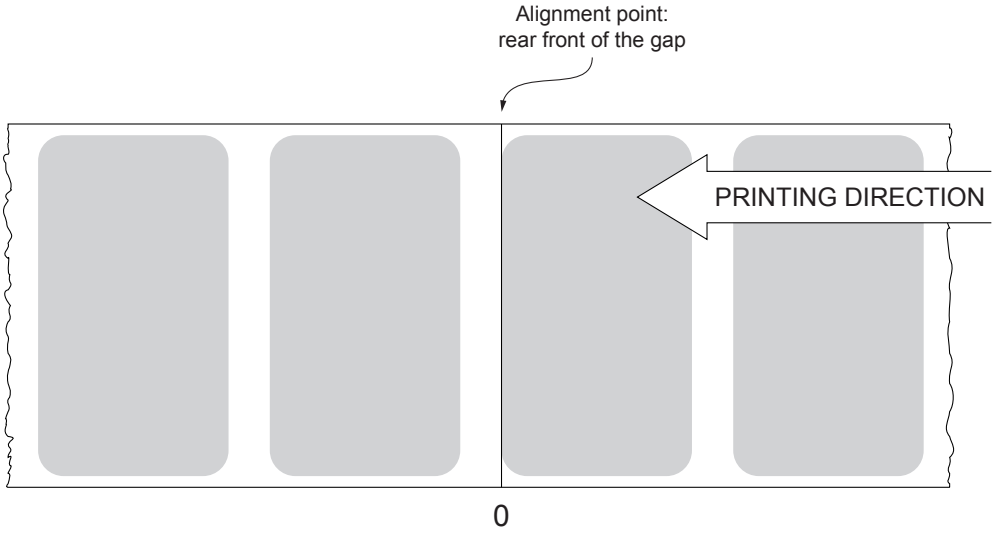


If the maximum value of “noise” read by the sensor is very close to the peak value, it might be difficult to place the value of the “Notch/B.Mark Threshold” at an intermediate point. In these cases, it is mandatory that the portion of paper between the point of printing end and the front notch is completely white (no graphics). In this way, the only next graphic detected by the sensor for alignment after the printing end will be the notch.

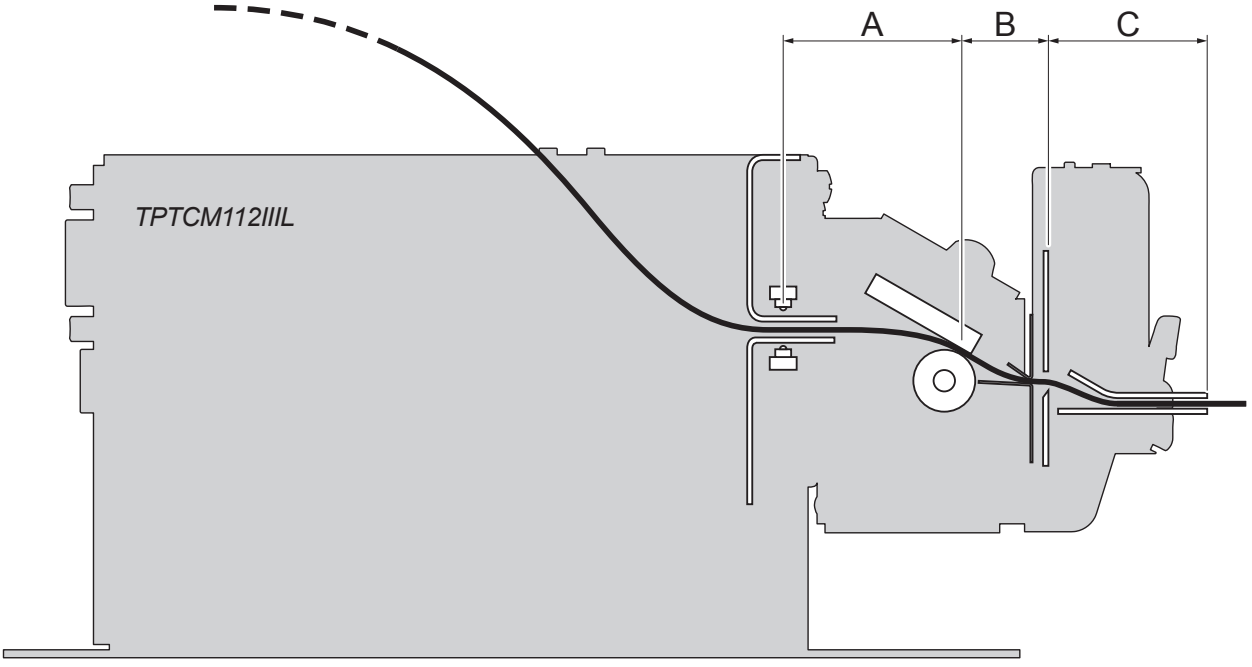
10.3 Alignment parameters

TPTCM60IIIL, TPTCM112IIIL

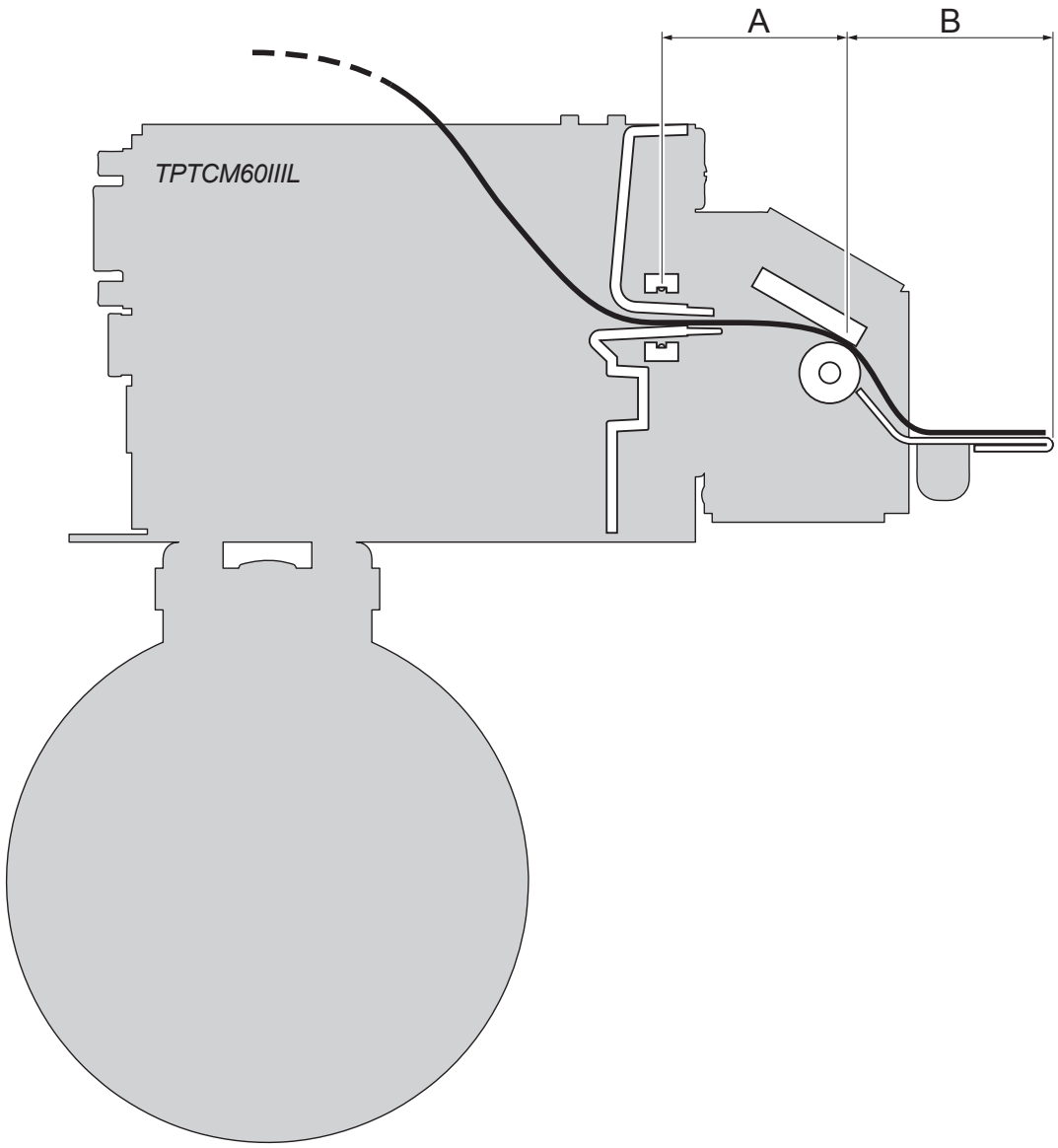
When you use paper with label, the “alignment point” is always meant as the label edge and match with the rear front of the gap between two labels. The gap width is automatically detected and measured by the sensors of the device.



The following figures show the simplified sections of the device models with the paper path and the distances (expressed in millimeters of theoretical paper path) between the alignment sensor, the print head, cutter (for models with presenter) and paper output.



A = distance between print head and alignment sensor = 34 mm
B = distance between print head and cutter = 17.4 mm
C = distance between cutter and paper output = 31.4 mm



A = distance between print head and alignment sensor = 36.5 mm
B = distance between print head and peeler output = 47 mm

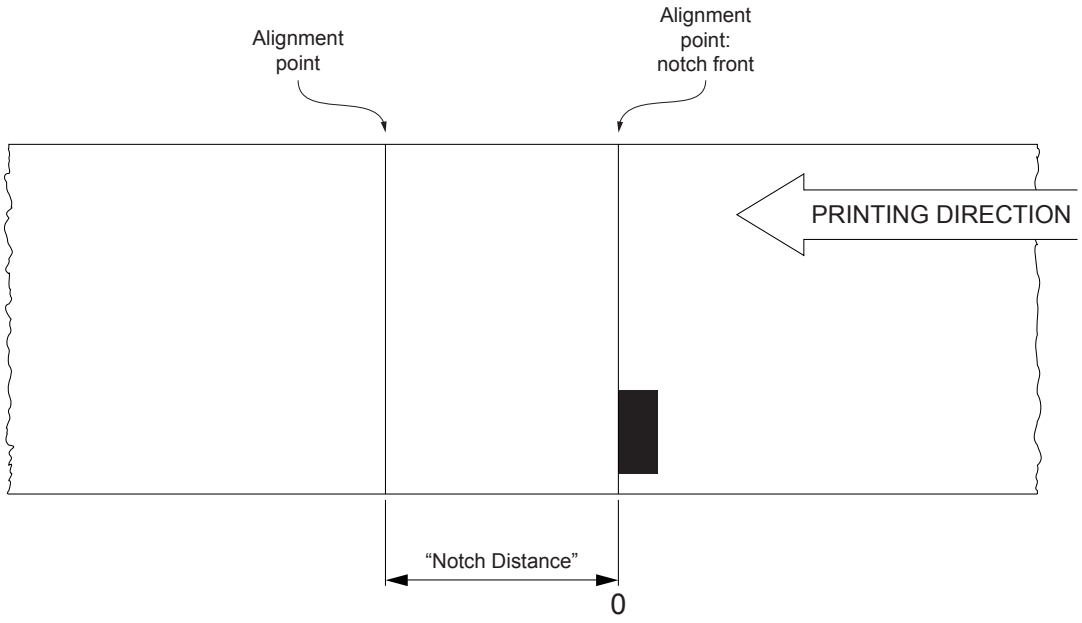
To enable the alignment management, you need to enable the "Notch/B.Mark Position" parameter in one of the following ways:

- during the Setup procedure of the device (see chapter 5)
- by modifying the Setup.ini file (see par.12.5)
- by driver.

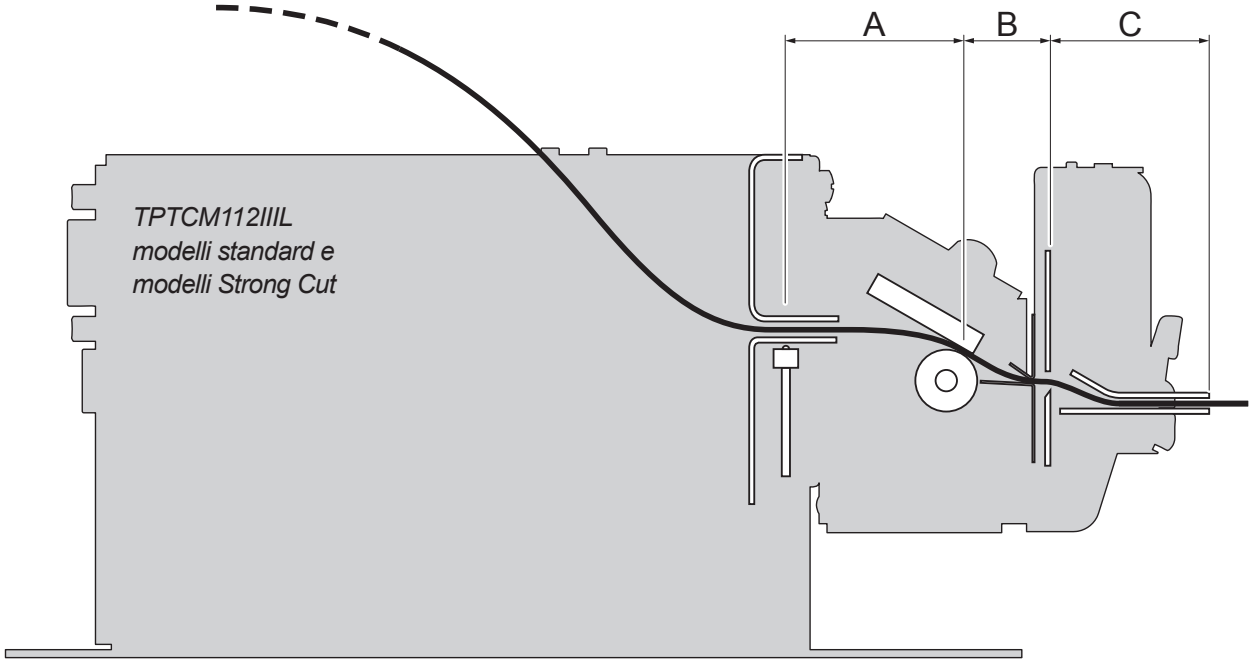
TPTCM112III (standard models), TPTCM112III (Strong Cut models)

The “alignment point” is defined as the position inside the ticket to use for the notch alignment.
The distance between the notch edge and the alignment point is defined as “Notch Distance”.

Referring to the front of the notch, the value of “Notch Distance” value varies from 0 mm minimum and 99.9 mm maximum.
If the “Notch Distance” value is set to 0, the alignment point is set at the beginning of the notch.



The following figures show the simplified sections of the device models with the paper path and the distances (expressed in millimeters of theoretical paper path) between the alignment sensor, the print head, cutter (for models with presenter) and paper output.



A = distance between print head and alignment sensor = 34 mm
B = distance between print head and cutter = 17.4 mm
C = distance between cutter and paper output = 31.4 mm

To define the alignment point you need to set the printer parameters that compose the numerical value of the “Notch Distance” parameter. (see par.5.4).
For example, to set a notch distance of 15mm between the notch and the alignment point, the parameters must be set on the following values:

Notch Distance Sign : +
Notch Distance [mm x 10] : 1
Notch Distance [mm x 1] : 5
Notch Distance [mm x .1] : 0

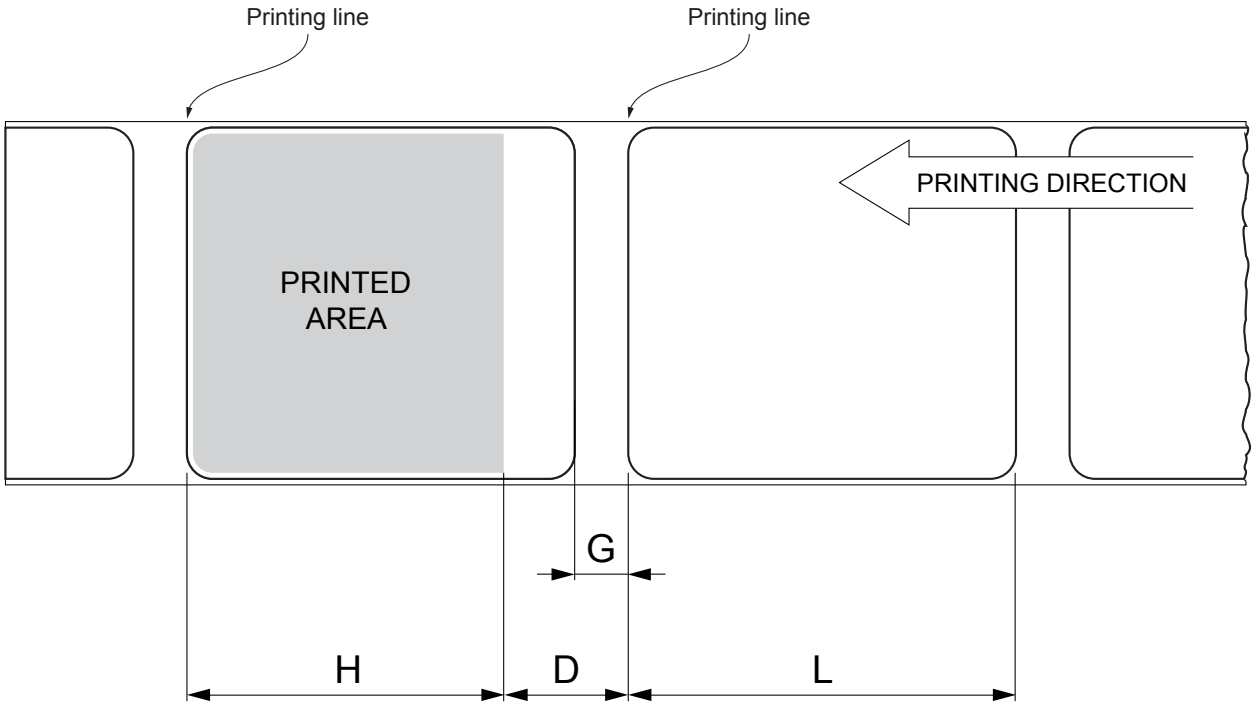
The “Notch Distance” parameter, may be modified as follows:
- during the Setup procedure of the device (see chapter 5)
- by modifying the Setup.ini file (see par.12.5)
- in CUSTOM/POS emulation, by using the 0x1D 0xE7 command (for more details, refer to the commands manual)
- by driver

10.4 Printing area

TPTCM60IIIL, TPTCM112IIIL

In order to issue labels correctly printed and to not overlay printing to the next label (that will make it useless for the next alignment), it is important to well calibrate the length of the printing area according to the label length.

The following figure shows an example of printed labels:



H Distance between the first and the last print line, called “Height of the printing area”.

L "Label length".

G Distance between two consecutive labels, called “Gap length”.

D Automatic feed for alignment at the next label edge.

To use all the labels on paper, you must comply with the following equation:

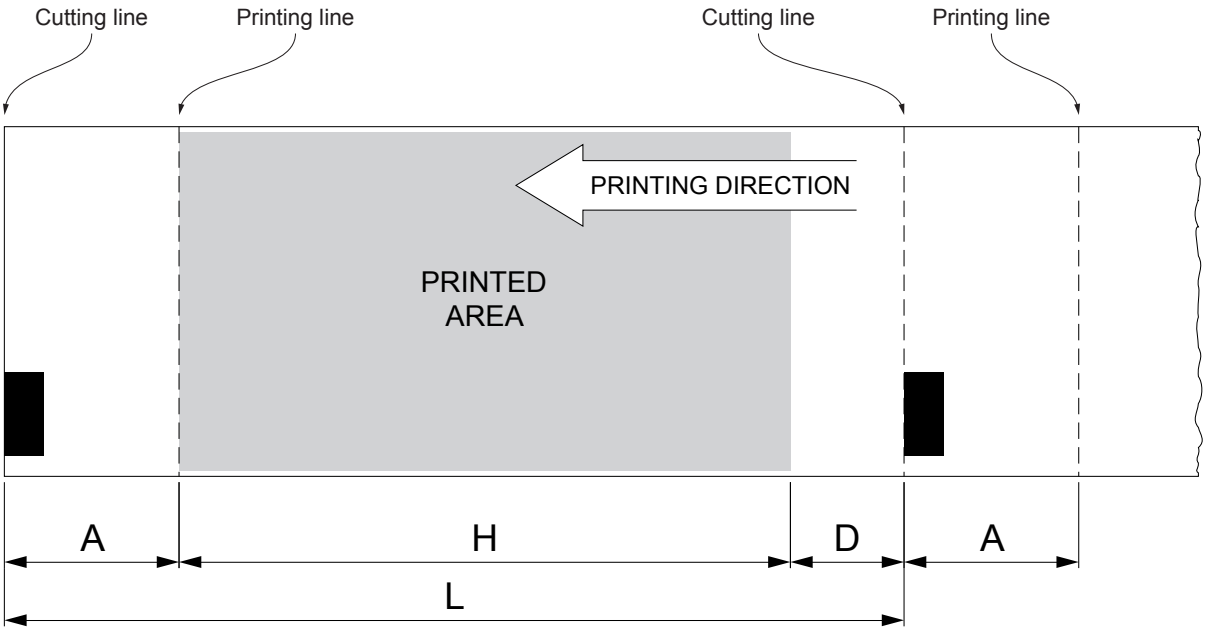
$H \leq L$

The height of the printing area (H) can be increased to make the progress on alignment (D) equal to the gap length but no further.

TPTCM112III (standard models), TPTCM112III (Strong Cut models)

In order to print ticket containing only one notch and to not overlay printing to a notch (that will make it useless for the next alignment), it is important to well calibrate the length of the printing area of ticket according to the inter-notch distance.

The following figure shows an example of tickets with “Notch Distance” set to 0:



A “Non-printable area” = “Distance between cutter/print head”

where:
”Distance between cutter/print head” = 17.4 mm

H Distance between the first and the last print line, called “Hieght of the printing area”.

L Distance between an edge of the notch and the next one, called “Inter-notch distance”.

D Automatic feed for alignment at the next notch.

To use all the notches on paper, you must comply with the following equation:

$H + A \leq L$

The height of the printing area (H) can be increased to make no progress on alignment (D) but no further.

11 TECHNICAL SERVICE

In case of failure, contact the Technical Service by sending an e-mail to support@custom.it detailing:

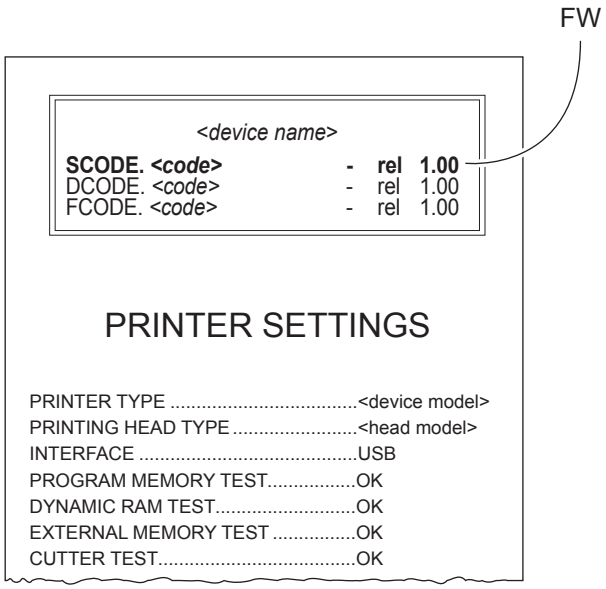
1. Product code
2. Serial number
3. Hardware release
4. Firmware release

To get the necessary data, proceed as follows:

1

Write down the data printed on the product label
(see previous paragraphs).

2



Print a Setup report (see paragraph 5.1)
The Setup report shows
the firmware release.

3

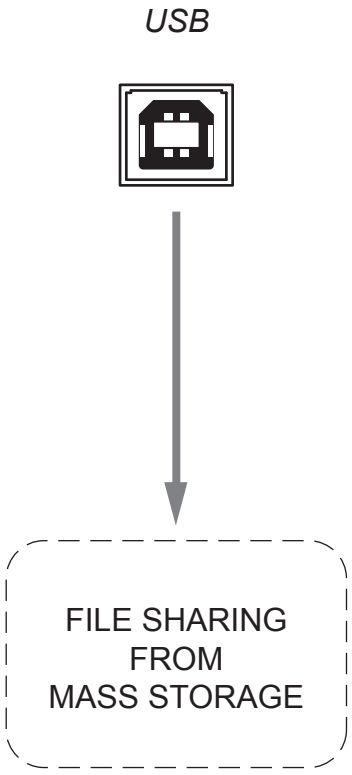
support@custom.it
Customer Service Department

Send an e-mail to the Technical Service,
with the data collected.

12 ADVANCED FUNCTIONS

12.1 File sharing

The device can be connected to a PC with a USB cable.
Through this kind of connection, it is possible to manage drivers, fonts and logos of the device and configure the operating parameters by files sharing from Mass Storage.



12.2 Drivers installation

It is possible to install the new driver update directly into the folder “DRIVER” on the Flash Drive of the device.
To enter the Flash Drive by files sharing from Mass Storage you need to enable the relative parameter during the configuration process (see chapter 5).

12.3 Logos management

It is possible to store new logos in addition to default logos stored on Flash Disk. The device automatically provides to convert BMP image to the error-diffusion format in black and white.

It is possible to directly add the new logo directly into the folder “PICTURES” on the Flash Drive of the device.
To enter the Flash Drive by files sharing from Mass Storage, you need to enable the relative parameter during the configuration process (see chapter 5).

After adding the logo, open the configuration file “PictList.ini” and add a new line with a number associated to the logo (to be used with device’s commands), a letter for the memory unit and the logo file name, as indicated in the instructions written inside the “PictList.ini” file.

To delete a logos stored in the device, proceed as follows:
1. delete the selected logo from the “Pictures” folder on Flash Disk;
2. in the configuration file “PictList.ini”, delete the line related to the erased logo.

The logos stored on Flash Disk and converted by the device, can be printed by using the number associated to the logo during the conversion step.
The correspondence between file-name and logo-number is warrant by the configuration file “PictList.ini” and it is verifiable with the logo test.

12.4 Fonts management

It is possible to store new font in addition to default fonts stored on Flash Disk.
You can directly add the new font directly into the folder “FONTS” on the Flash Drive of the device.
To enter the Flash Drive by files sharing from Mass Storage, you need to enable the relative parameter during the configuration process (see chapter 5).

NOTE:
Uploading the new font directly from the “Font” folder of Microsoft® Windows® directory, remember that the displayed font name into the “Font” folder may not match the real name of the font file.

12.5 Setup

It is possible to configure the default parameters for device setup by editing the “Setup.ini” file on the Flash Drive.
To enter the Flash Drive by files sharing from Mass Storage, you need to enable the relative parameter during the configuration process (see chapter 5).
After editing device’s parameter, simply save the “Setup.ini” file to make the modifies activated.

The “Setup.ini” file is a configuration file that contains all the configurable parameters listed in text format and divided into some sections (indicated in square brackets).
The available values for every parameter, are listed after the parameter name. The value marked with the symbol ‘ * ’ is the default one. To modify printer’s parameters, change the numeric value after the name of parameters. To set the parameter to the default value, change the numeric value with the symbol D.

The “Setup.ini” file permits the configuration of the following parameters:

[PRINT]

Printer Emulation	0*, 1	0 = CUSTOM/POS 1 = SVELTA
Print Mode	0*, 1	0 = Normal 1 = Reverse
Autofeed	0*, 1	0 = CR disabled 1 = CR enable
Chars / inch	0, 1*, 2	0 = A=11 B=15 cpi 1 = A=15 B=20 cpi 2 = A=20 B=15 cpi
Code Table [num]	0*	
Font Type	0*, 1, 2	0 = International 1 = Chinese GB18030 2 = Korean CP949
Speed / Quality	0, 1, 2*	0 = High Quality 1 = Normal 2 = High Speed
Automatic Ejecting	0*, 1, 2, 3, 4, 5, 6, 7, 8	0 = Disabled 1 = Enabled T.out 5s 2 = Enabled T.out 10s 3 = Enabled T.out 15s 4 = Enabled T.out 20s 5 = Enabled T.out 30s 6 = Enabled T.out 40s 7 = Enabled T.out 60s 8 = Enabled T.out 2m

Print Width				
TPTCM60III, TPTCM112III	0*, 1, 2, 3	0 = 112 mm 1 = 100 mm 2 = 86 mm 3 = 80 mm		
TPTCM60IIIL, TPTCM112IIIL	0*, 1	0 = 112 mm 1 = 101 mm		
Paper Threshold	0, 1, 2, 3*, 4, 5, 6	0 = 30 % 1 = 40 % 2 = 50 %	3 = 60 % 4 = 70 % 5 = 80 %	6 = 90 %
Notch/B.Mark Position				
TPTCM60III, TPTCM112III	0*, 1	0 = Disabled 1 = Enabled		
TPTCM60IIIL, TPTCM112IIIL	0, 1*	0 = Disabled 1 = Enabled		
Notch/B.Mark Threshold	0, 1*, 2, 3, 4, 5, 6	0 = 30 % 1 = 40 % 2 = 50 %	3 = 60 % 4 = 70 % 5 = 80 %	6 = 90 %
Notch Distance [mm]				
PaperEnd Buffer Clear	0*, 1	0 = Disabled 1 = Enabled		
Print Density				
TPTCM60III, TPTCM112III	2, 3, 4*, 5, 6	2 = - 25 % 3 = - 12 % 4 = 0 %	5 = + 12 % 6 = + 25 %	
TPTCM60IIIL, TPTCM112IIIL	2, 3, 4, 5, 6*	2 = - 25 % 3 = - 12 % 4 = 0 %	5 = + 12 % 6 = + 25 %	

[INTERFACE]

RS232 Baud Rate	1, 2, 3, 4, 5, 6, 7, 8*	1 = 1200 bps 2 = 2400 bps 3 = 4800 bps	4 = 9600 bps 5 = 19200 bps 6 = 38400 bps	7 = 57600 bps 8 = 115200 bps
RS232 Data Length	0*, 1	0 = 8 bits/chr 1 = 7 bits/chr		
RS232 Parity	0*, 1, 2	0 = None 1 = Even 2 = Odd		
RS232 Handshaking	0, 1*	0 = Xon/Xoff 1 = Hardware		
Busy Condition	0*, 1	0 = RxFull 1 = OffLine/RxFull		
USB Mass Storage	0*, 1	0 = Disabled 1 = Enabled		
USB Address Number	0*, 1, 2, 3, 4, 5, 6, 7, 8, 9	0 = 0 1 = 1 2 = 2 3 = 3	4 = 4 5 = 5 6 = 6 7 = 7	8 = 8 9 = 9
USB Virtual COM	0*, 1	0 = Disabled 1 = Enabled		

Part Number : 76200000005400 Rev.1.10

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