## USER MANUAL

# TG1260HIII TG2460HIII



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THE IMAGES USED IN THIS MAN-UAL ARE USED AS AN ILLUSTRA-TIVE EXAMPLES. THEY COULDN'T REPRODUCE THE DESCRIBED MODEL FAITHFULLY.

UNLESS OTHERWISE SPECIFIED, THE INFORMATION GIVEN IN THIS MANUAL

ARE REFERRED TO ALL MODELS IN PRODUCTION AT THE ISSUE DATE OF THIS DOCUMENT.

#### GENERAL INSTRUCTIONS

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

#### GENERAL SAFETY INFORMATION

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

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

#### THE CE MARK AFFIXED TO THE PRODUCT CERTIFY THAT THE PRODUCT SATISFIES THE BA-SIC SAFETY REQUIREMENTS.

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

- EN 55032 (Electromagnetic compatibility of multimedia equipment - Emission Requirements)
- EN EN55024/EN55035 (Electromagnetic compatibility of multimedia equipment - Immunity requirements)
- EN IEC/EN62368-1 (Audio/video, information and communication technology equipment)

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

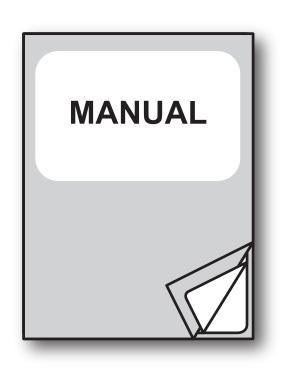


GUIDELINES FOR THE DISPOSAL OF THE PRODUCT

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

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





For details on the commands, refer to the manual with code **7720000005200** 

For further information about the use of "PrinterSet" tool refer to the manual with code **7820000001800** 

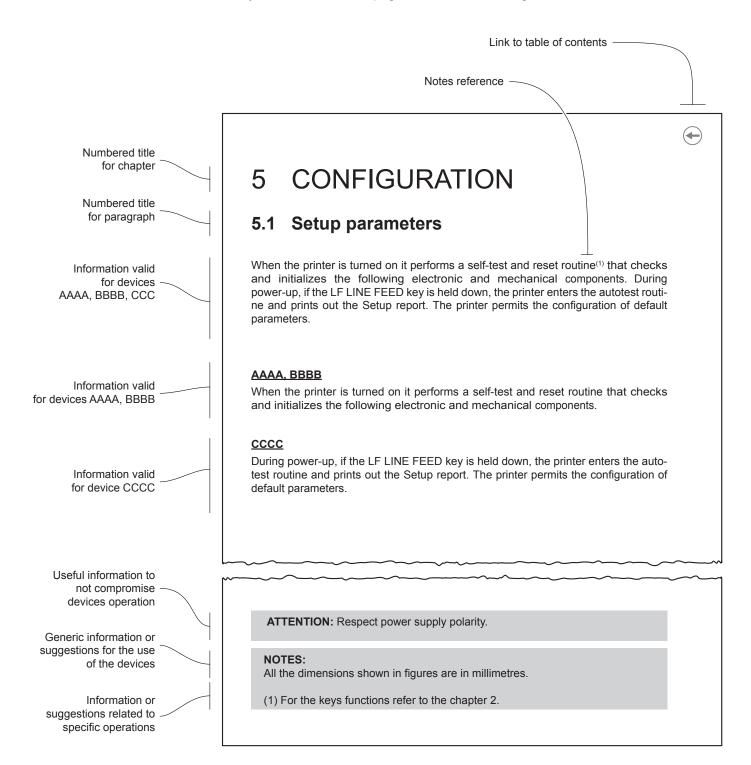
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# INTRODUCTION

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







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# 2 IDENTIFICATION OF THE MODELS

NOMENCLATURE	DESCRIPTION
TG1260HIII CUT	TG1260HIII CUT base configuration with autocutter and illuminated bezel
TG2460HIII TRANSP	TG2460HIII base configuration with transparent bezel
TG2460HIII CUT	TG2460HIII with autocutter and illuminated bezel
TG2460HIII EJC	TG2460HIII with ejector group



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# **3 DESCRIPTION**

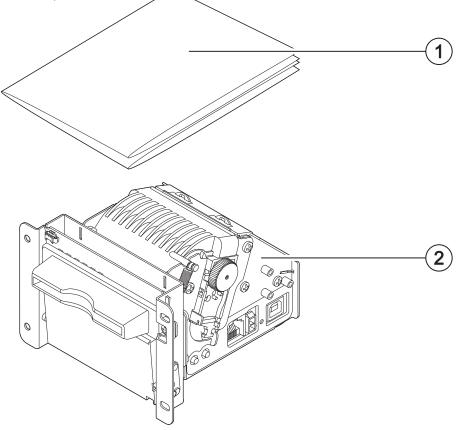
## 3.1 Box contents

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

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

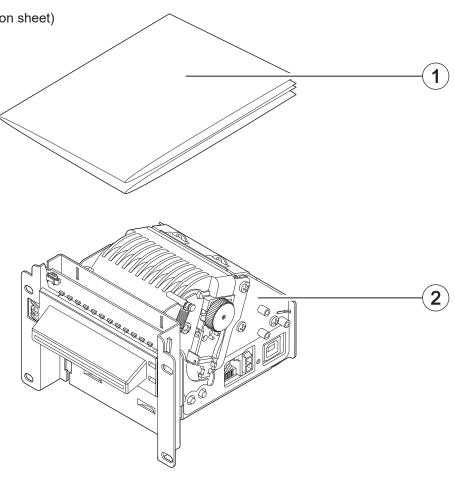
## TG1260HIII CUT

- 1. Documentation (installation instruction sheet)
- 2. Device



## TG2460HIII TRANSP

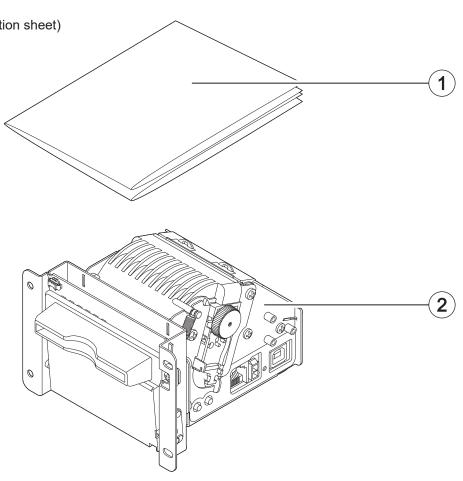
- 1. Documentation (installation instruction sheet)
- 2. Device





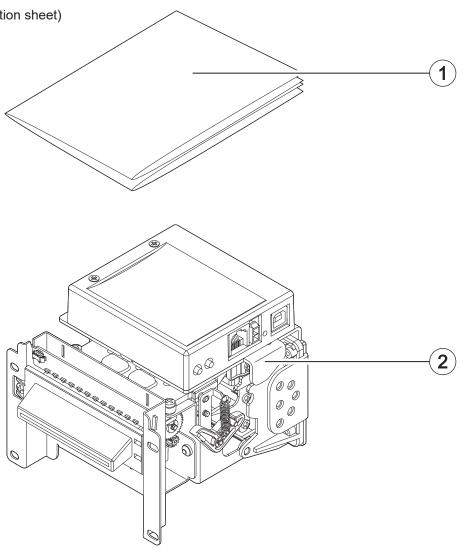
## TG2460HIII CUT

- 1. Documentation (installation instruction sheet)
- 2. Device



## TG2460HIII EJC

- 1. Documentation (installation instruction sheet)
- 2. Device

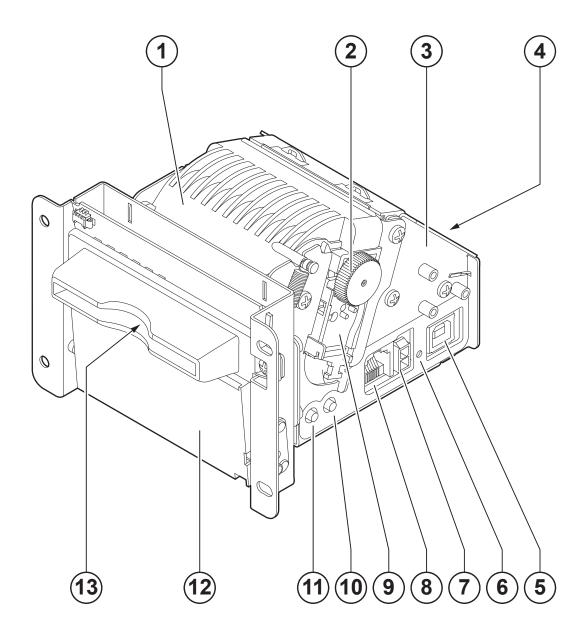




## 3.2 Device components: external view

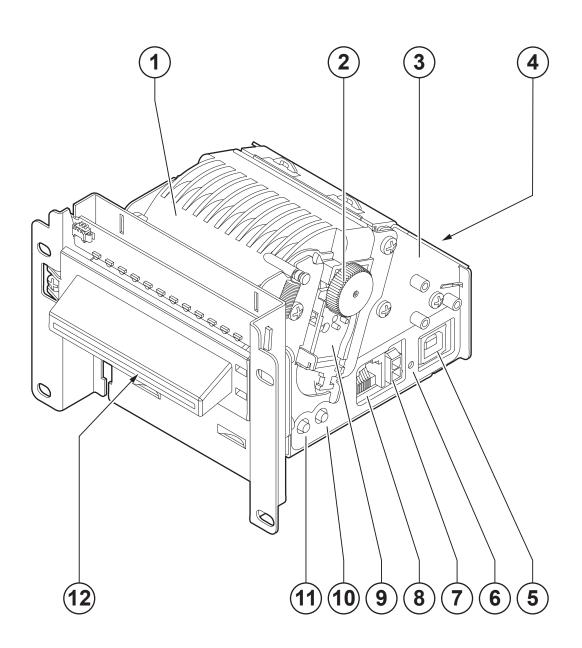
## TG1260HIII CUT, TG2460HIII CUT

- 1. Inspection door
- 2. Platen roller manual feed
- 3. Device chassis
- 4. Paper input
- 5. USB port
- 6. Status LED
- 7. Power supply port
- 8. RS232 serial port
- 9. Printing mechanism
- 10. FEED key
- 11. PRINT key
- 12. Autocutter
- 13. Paper output



#### TG2460HIII TRANSP

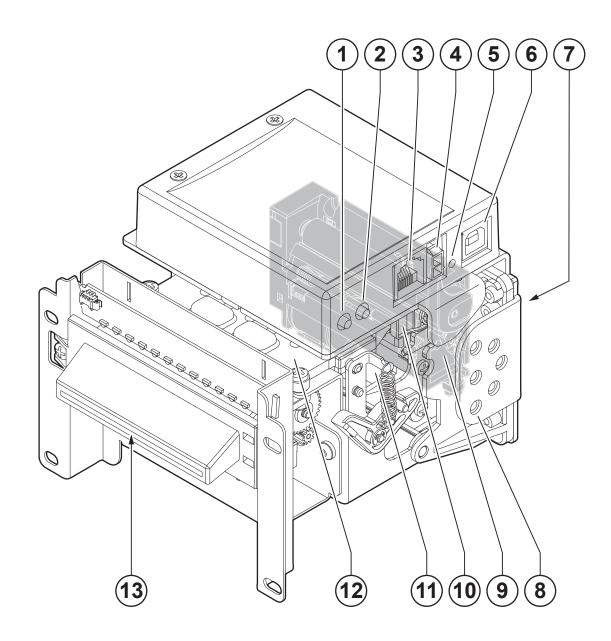
- 1. Inspection door
- 2. Platen roller manual feed
- 3. Device chassis
- 4. Paper input
- 5. USB port
- 6. Status LED
- 7. Power supply port
- 8. RS232 serial port
- 9. Printing mechanism
- 10. FEED key
- 11. PRINT key
- 12. Paper output





#### TG2460HIII EJC

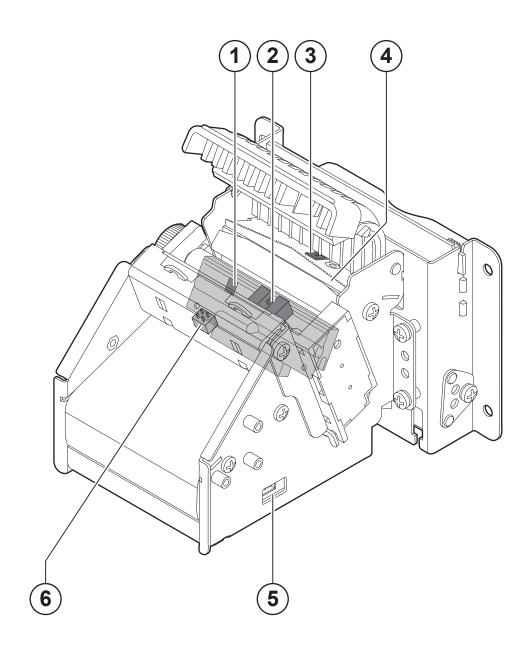
- 1. PRINT key
- 2. FEED key
- 3. RS232 serial port
- 4. Power supply port
- 5. Status LED
- 6. USB port
- 7. Paper input
- 8. Device chassis
- 9. Printing mechanism
- 10. Unlocking hook for autocutter group
- 11. Autocutter
- 12. Ejector group
- 13. Paper output



## 3.3 Device components: internal view

#### TG1260HIII CUT, TG2460HIII TRANSP, TG2460HIII CUT

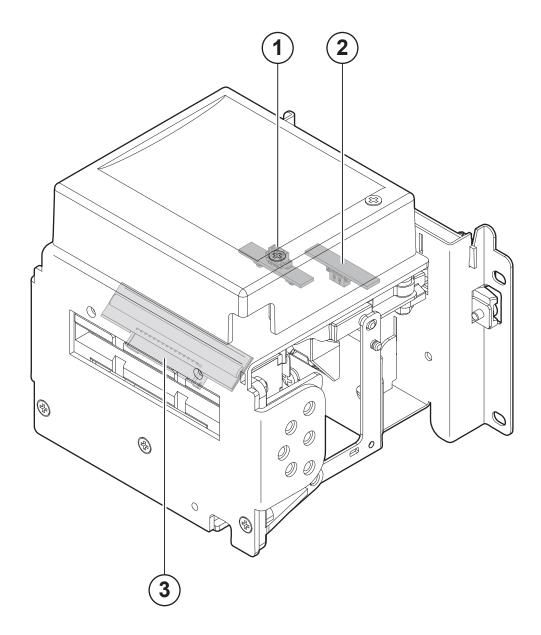
- 1. Temperature sensor for printhead
- 2. Sensor for detection of inspection door opening
- 3. Sensors for detecting paper out presence
- 4. Serrated blade for manual tear off
- 5. Connector for external low paper sensor
- 6. Sensor for detecting black mark and paper in presence





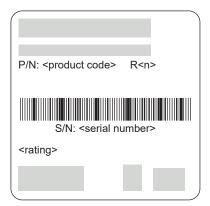
## TG2460HIII EJC

- 1. Sensor for detecting black mark and paper in presence
- 2. Sensors for detecting paper out presence
- 3. Temperature sensor for printhead



## 3.4 Product label

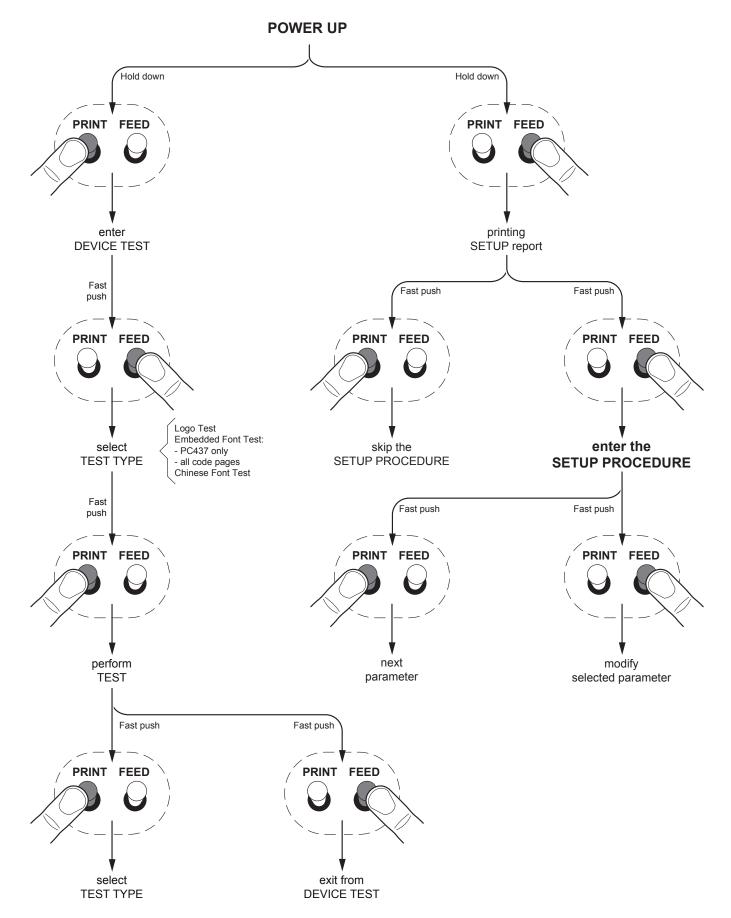
The main data used to identify the machine are shown on the label attached to the bottom of the device. In particular, it shows the electrical data for the connection to a power source. It also shows the product code, the serial number and the hardware revision (R).





## 3.5 Key functions: power up

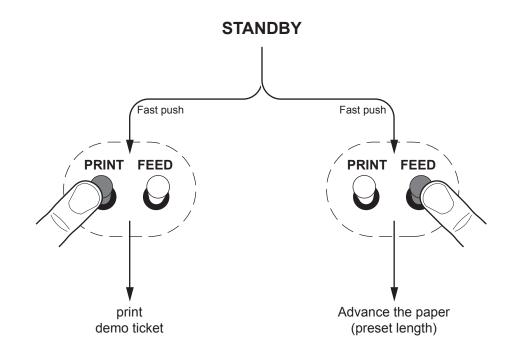
The following figure shows the functions of device's keys according to the operating condition.





## 3.6 Key functions: standby

The following figure shows the functions of device's keys according to the operating condition.





## 3.7 Status messages

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

STATUS LED	DESCRIPTION	
-	OFF	DEVICE OFF
GREEN	ON	DEVICE ON: NO ERROR
	x 1	RECEIVE DATA
	x 2	PRINTHEAD OVERHEATED
	x 3	PAPER END
	x 4	POWER SUPPLY VOLTAGE INCORRECT
GREEN COMMUNICATION	x 5	RECEPTION ERROR (PARITY, FRAME ERROR, OVERRUN ERROR)
STATUS	x 6	COMMAND NOT RECOGNIZED
	x 7	COMMAND RECEPTION TIME OUT
	x 8	INSPECTION DOOR OPEN (1)
	x 9	PAPER JAM
	x 10	
GREEN UNRECOVERABLE ERROR	x 11	AUTOCUTTER ERROR (3)

NOTES:

(1): Only for TG1260HIII CUT, TG2460HIII TRANSP and TG2460HIII CUT.

(2) : Using device without the paper roll holder support, the status LED continues to blink with this kind of flashing in order to communicate the low paper error.

(3) : Only for TG1260HIII CUT, TG2460HIII CUT and TG2460HIII EJC.





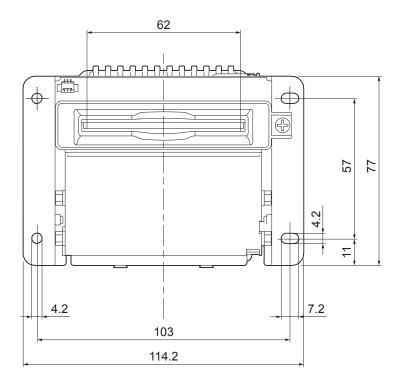
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# **4** INSTALLATION

## 4.1 Panel fastening

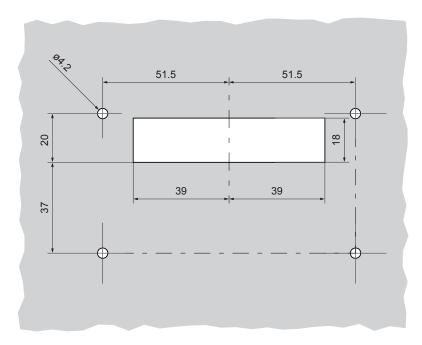
The device is provided with four fixing holes on the front of device (see following figure). All the dimensions shown in the following figures are in millimetres.

#### TG1260HIII CUT, TG2460HIII CUT



To fasten the device to a panel, use four M5 screws and four nuts (not included).

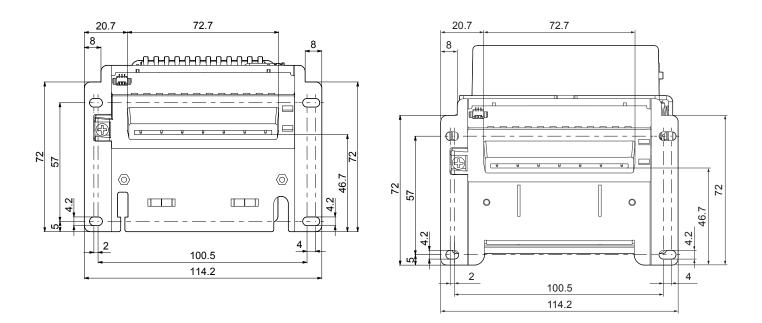
The drilling on the panel must comply with the measures shown in the following figure.





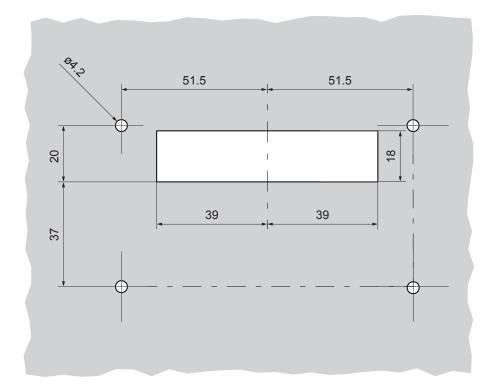
#### TG2460HIII TRANSP

## TG2460HIII EJC



To fasten the device to a panel, use four M5 screws and four nuts (not included).

The drilling on the panel must comply with the measures shown in the following figure.

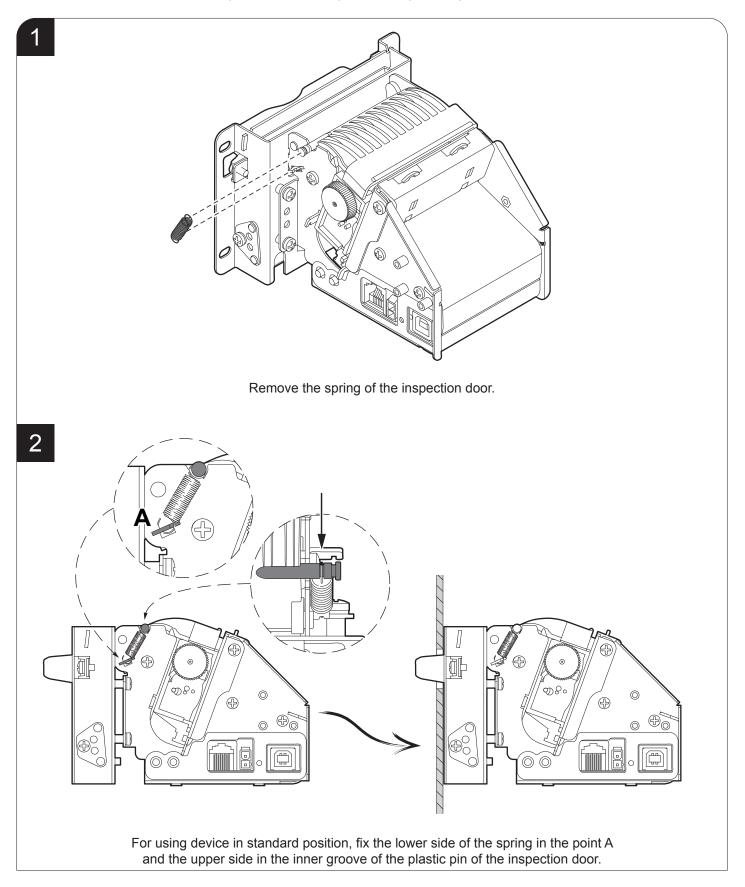


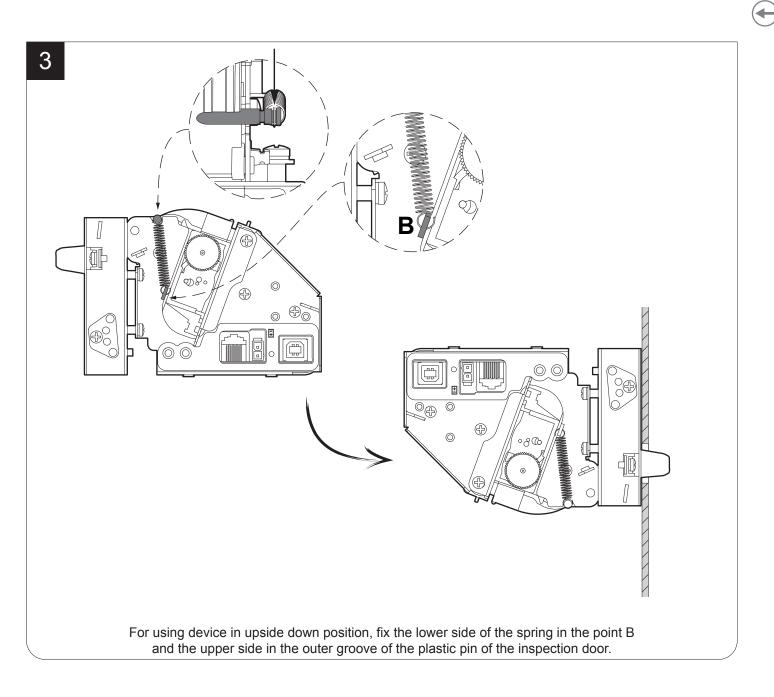


## 4.2 Fastening position

#### TG1260HIII CUT, TG2460HIII TRANSP, TG2460HIII CUT

To install the device in the standard position or in the upside down position proceed as follows:

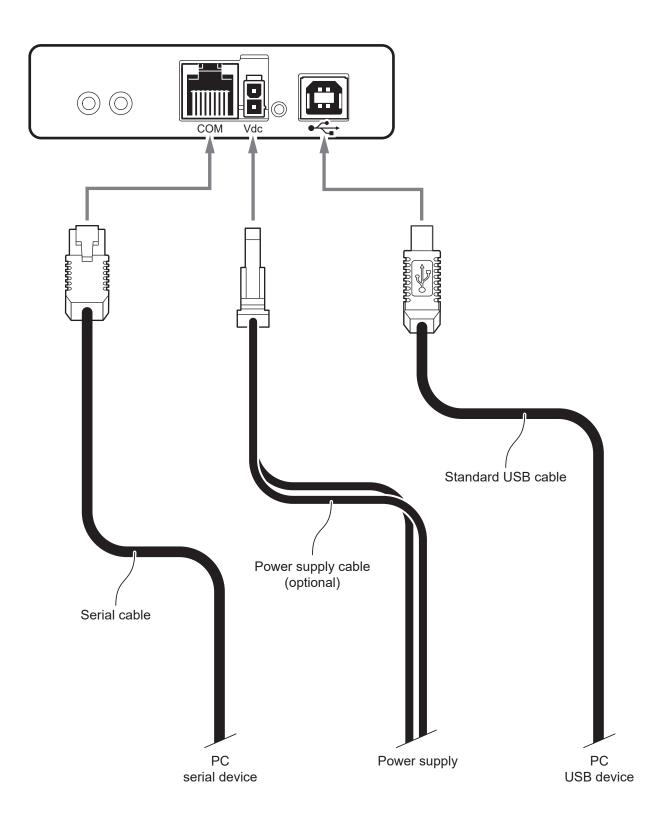






## 4.3 Connections

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



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

## 4.4 Pinout



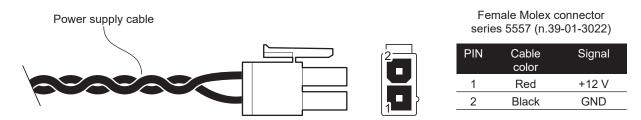
## POWER SUPPLY

Male Molex connector series 5569 vertical (n° 39-30-1020)

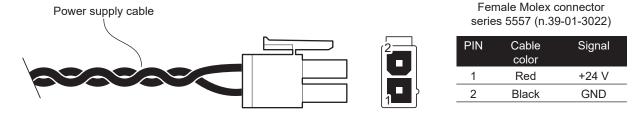
	1	+VIN
J10	2	GND

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

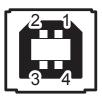
#### TG1260HIII CUT



## TG2460HIII TRANSP, TG2460HIII CUT, TG2460HIII EJC



ATTENTION: Respect power supply polarity.



USB INTERFACE

Female USB type B connector

1	USB0_VBUS	(in)
2	USB0_D-	(in/out)
3	USB0_D+	(in/out)
4	GND	
SH1	SHIELD	
SH2	SHIELD	
	3 4 SH1	2 USB0_D- 3 USB0_D+



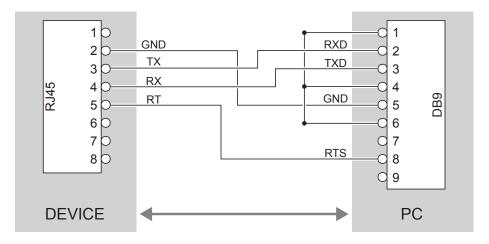


	1	n.c.		
	2	GND		
	3	Тх	(out)	During transmission, takes the values -VRS232 and +VRS232 depending on data
	4	RX	(in)	During reception, takes the values -VRS232 and +VRS232 depending on data
J2	5	RT	(out)	When +VRS232, device is ready to receive data
	6	n.c.		
	7	n.c.		
	8	n.c.		

Given the presence of the RS232 standard, logic value "0" corresponds to the voltage value +VRS232 (voltage value between +3 Vdc and +15 Vdc) and logic value "1" corresponds to the voltage value -VRS232 (voltage value between -3 Vdc and -15 Vdc.

#### DEVICE > PC connection

The following picture shows an example of connection between the device and a personal computer using an 8 pin serial RJ45 male connector and a 9 pin female connector.



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

## 4.5 Driver and SDK

OPERATING SYSTEM	DESCRIPTION	INSTALLATION PROCEDURE
	Driver for Windows XP	
	Driver for Windows VISTA (32/64 bit)	
	Driver for Windows 7 (32/64 bit)	From the Start menu, press Run and type-in the path where the SW was saved on PC, then click OK. Follow the instructions on the screen to install the driver.
Windows	Driver for Windows 8 (32/64 bit)	
	Driver for Windows 8.1 (32/64 bit)	
	Driver for Windows 10 (32/64 bit)	
	Self-installing driver for Virtual COM (32/64 bit) (see paragraph 6.4)	
Linux	32/64 bit	Follow the instruction get back on the "Readme.txt" file. You can find it in the software package downloaded in advance.

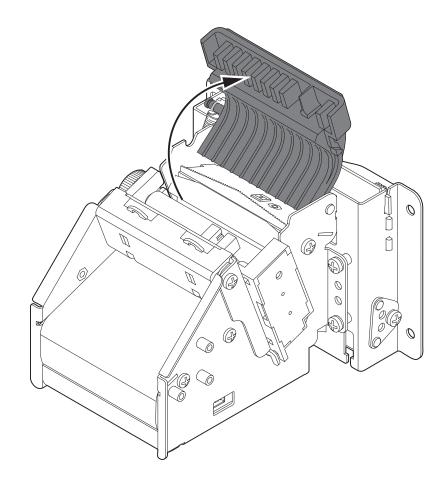
In the website <u>www.custom4u.it</u> are available the drivers for the following operating system:

# 5 OPERATION

## 5.1 Device opening

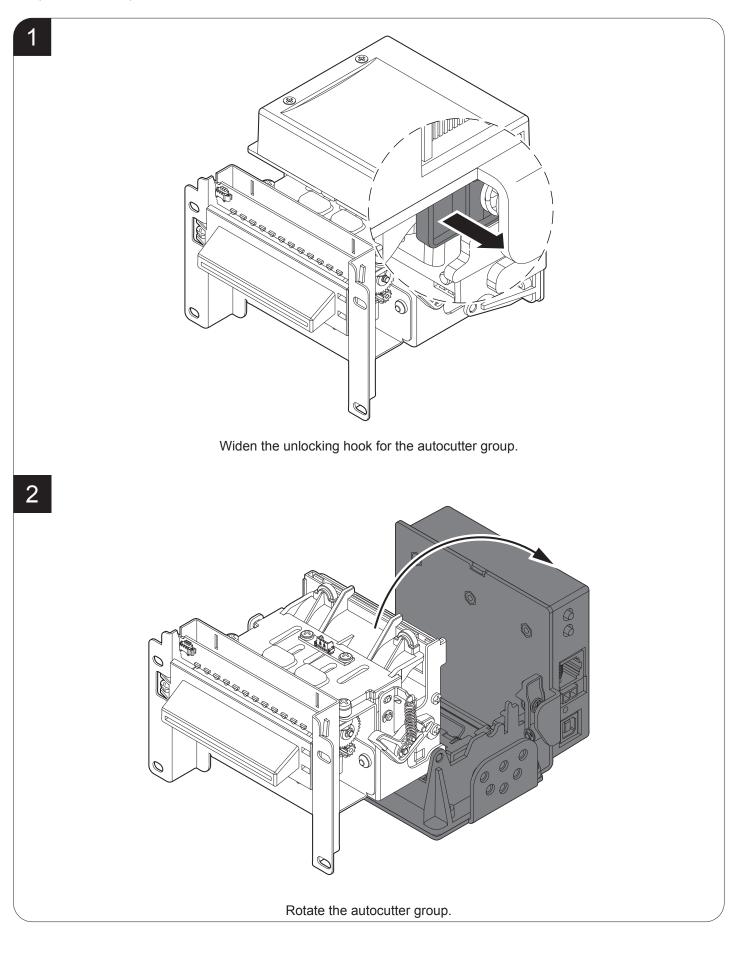
### TG1260HIII CUT, TG2460HIII TRANSP, TG2460HIII CUT

To open the device rotate the inspection cover to the maximum opening position as shown in the following figure.



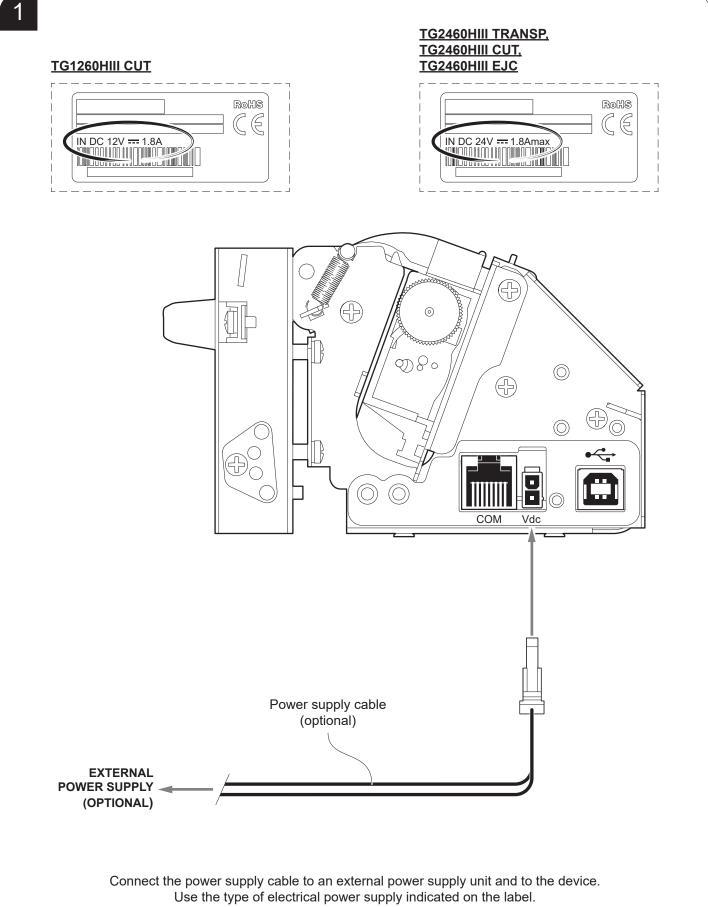
#### TG2460HIII EJC

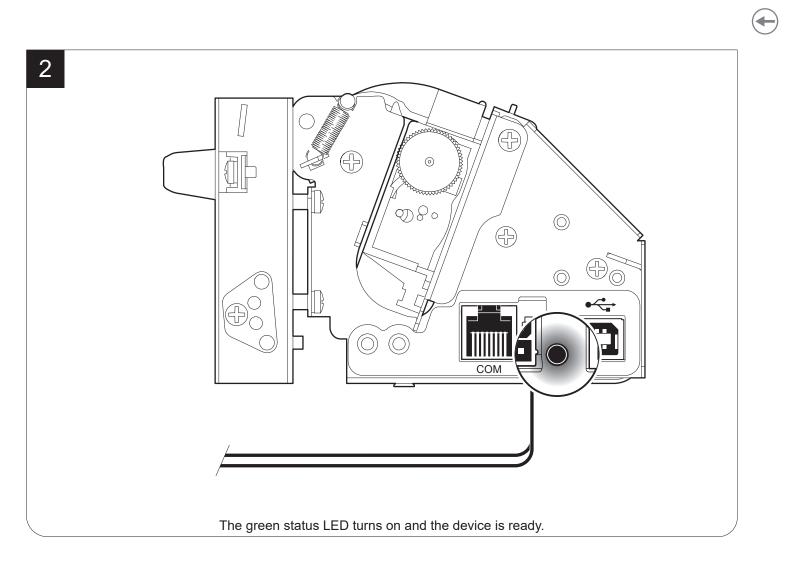
To open the device proceed as follows.





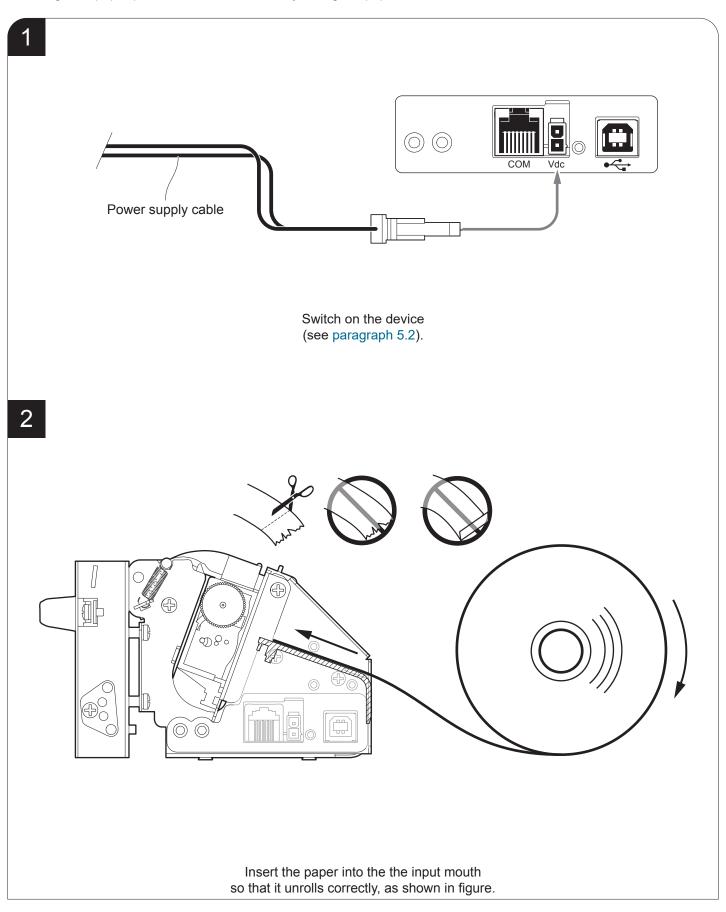


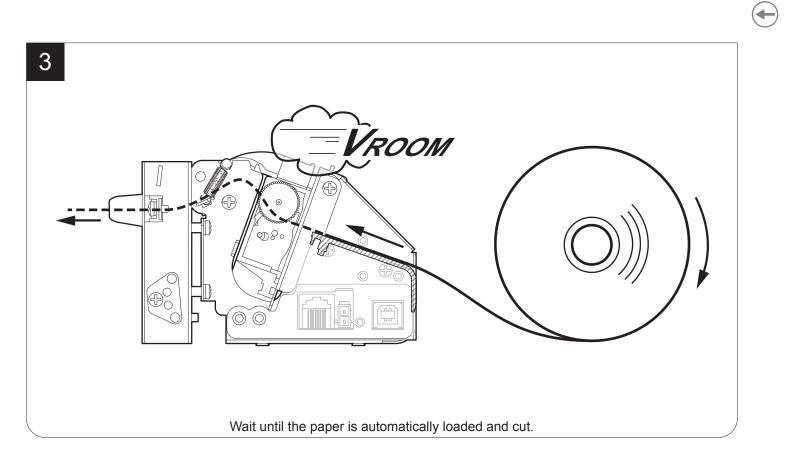




# 5.3 Loading the paper roll

To change the paper proceed as follows. At every change of paper, check inside the device.





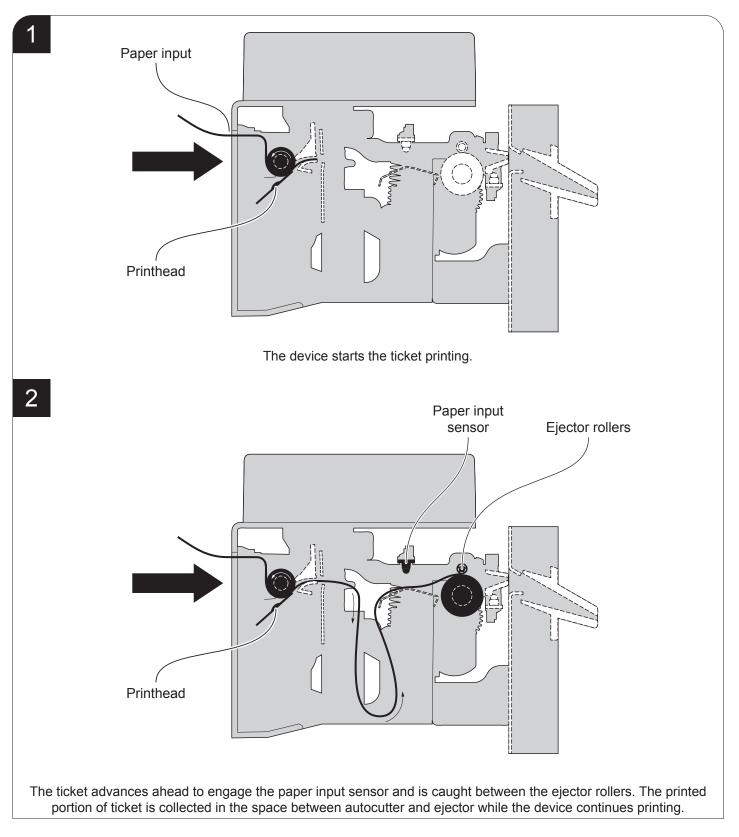


# 5.4 Issuing ticket

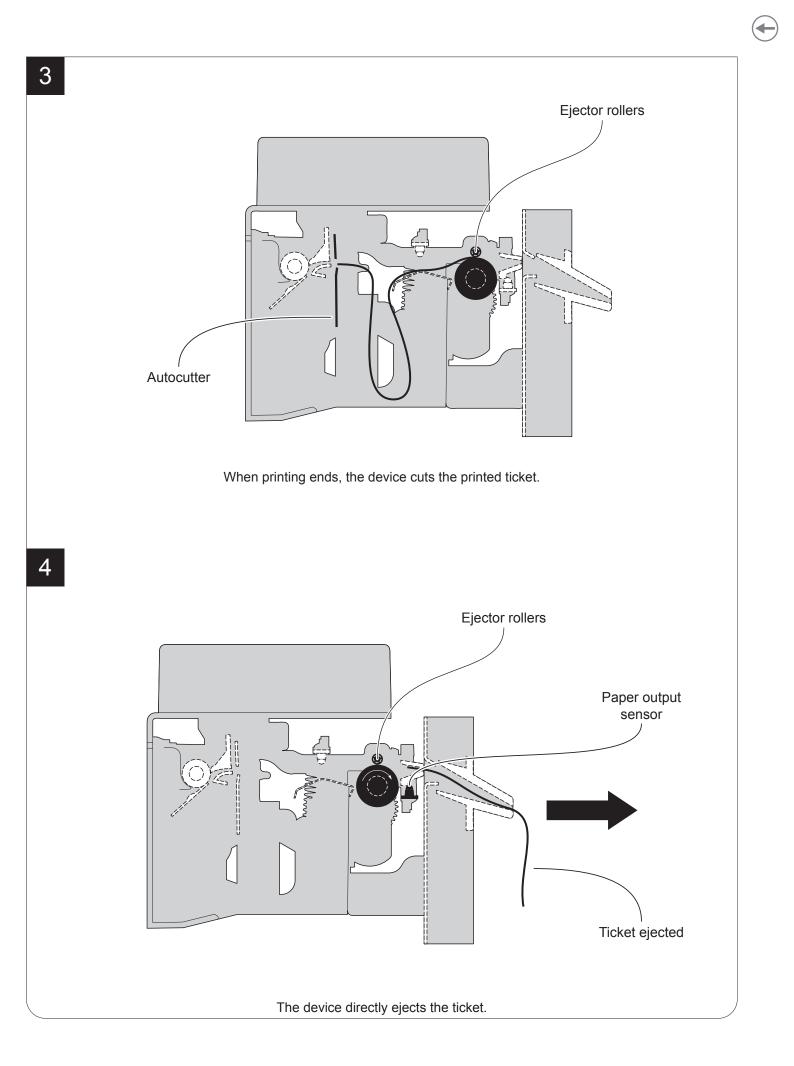
## TG2460HIII EJC

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 commands sent to the device.

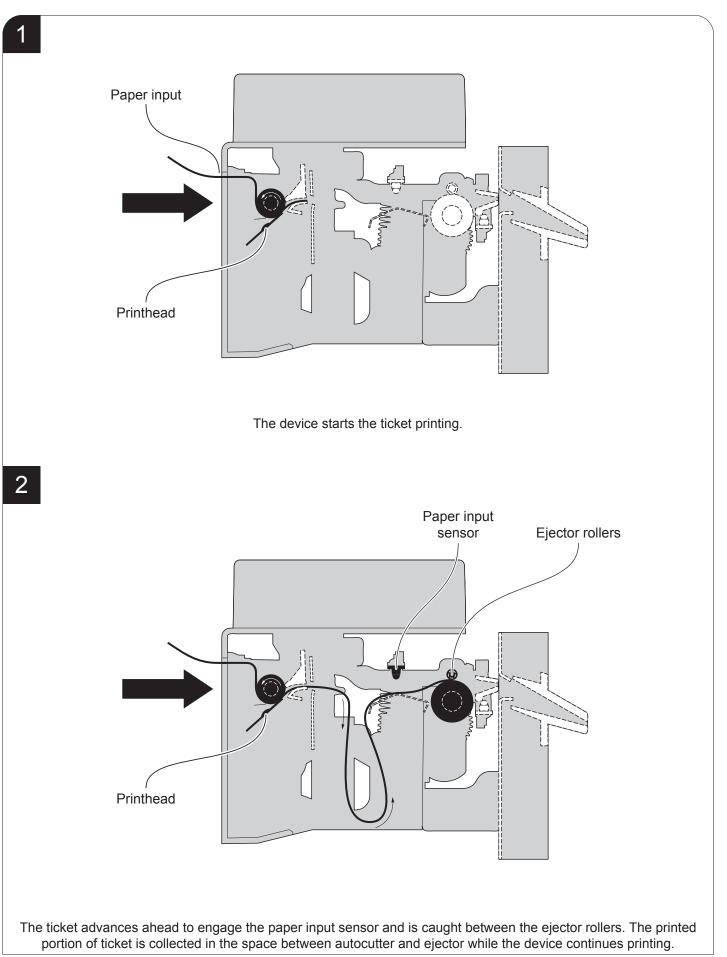
## "EJECT" mode



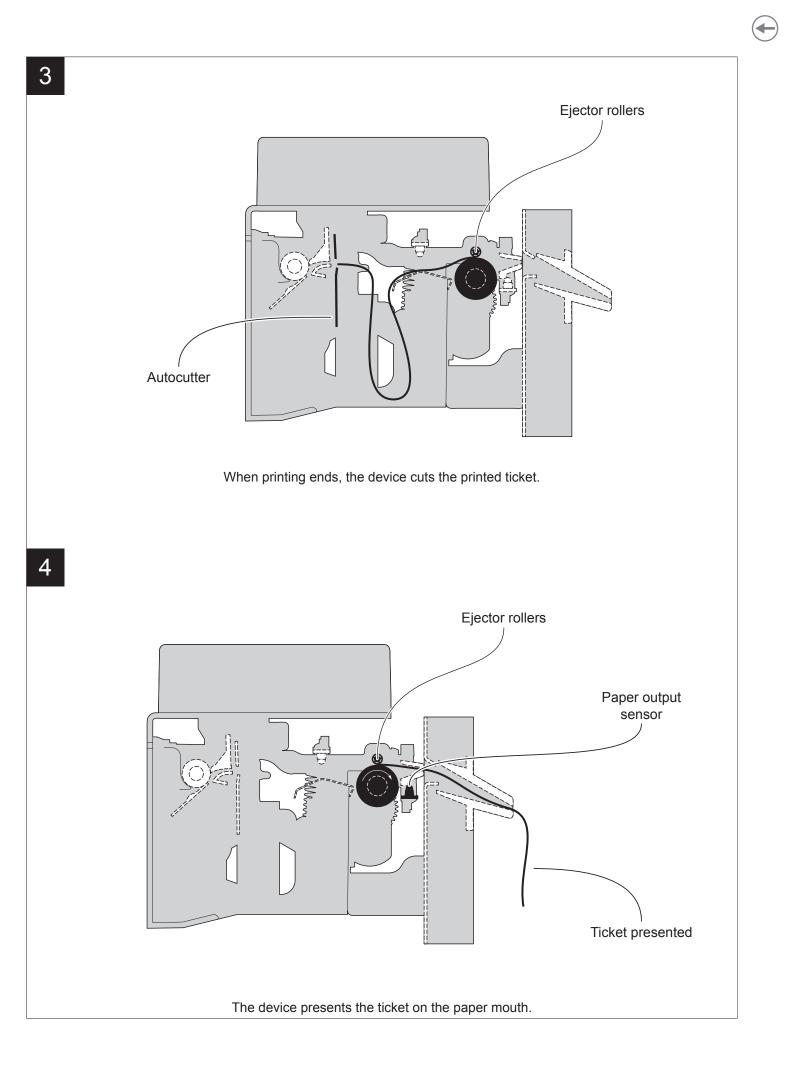




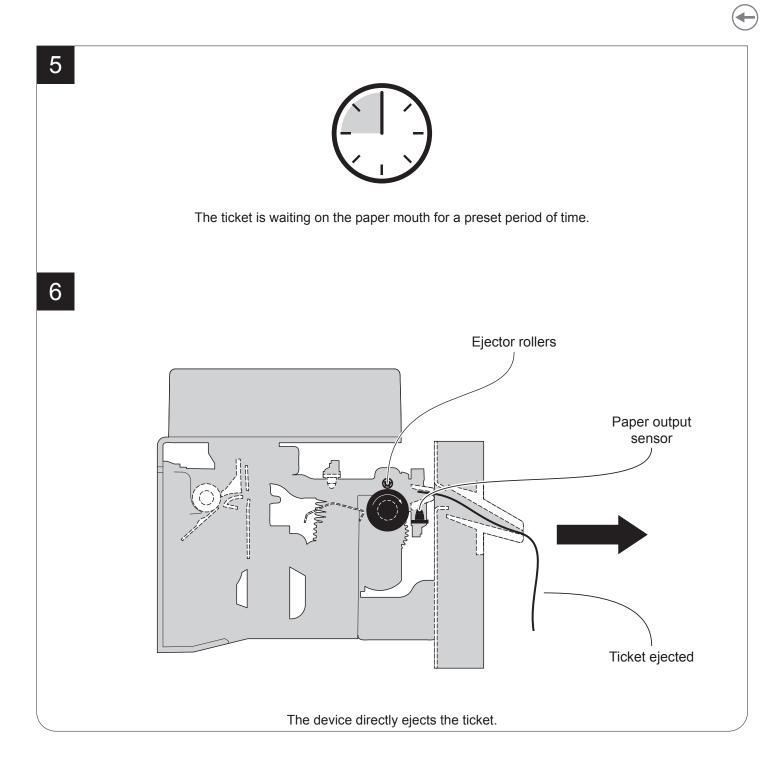
## "PRESENT-EJECT" mode



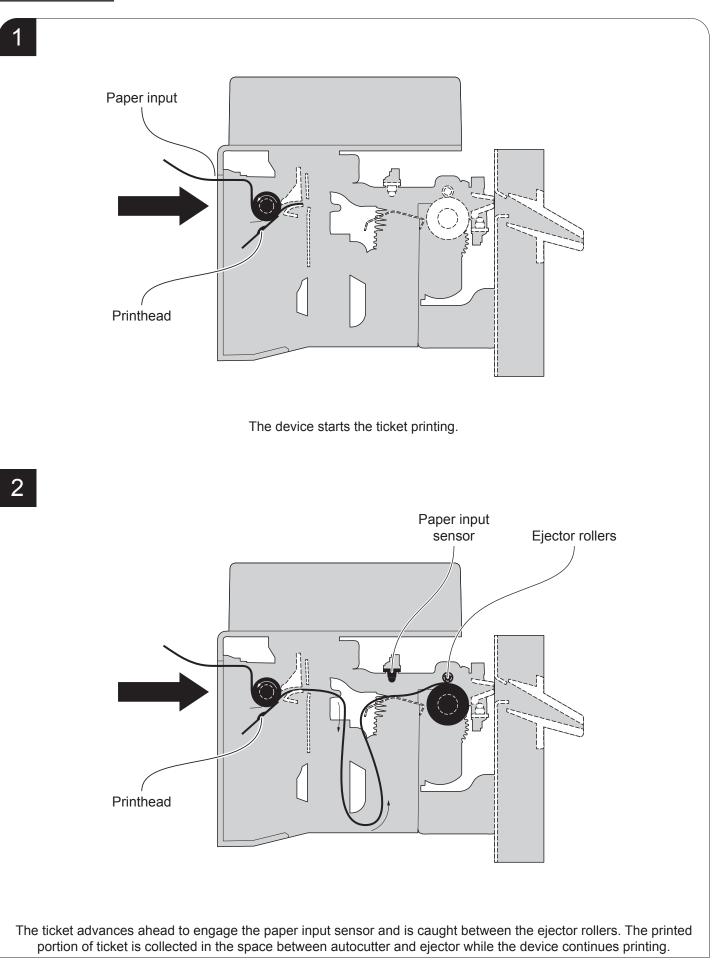




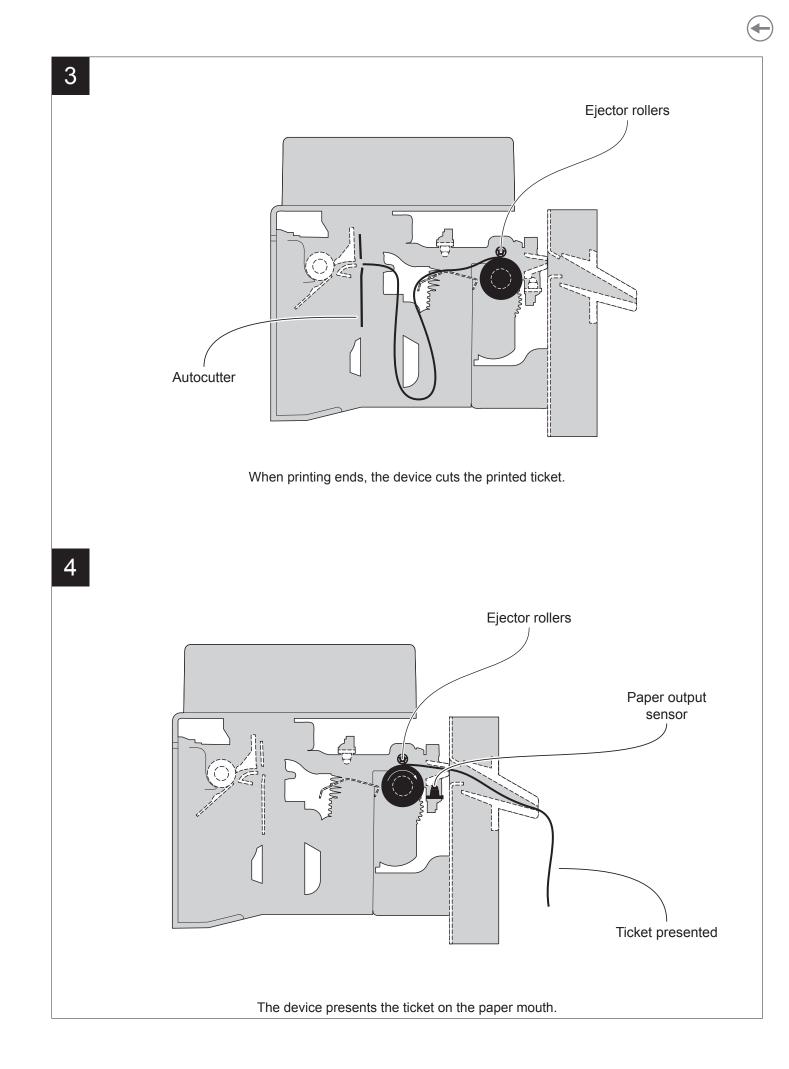


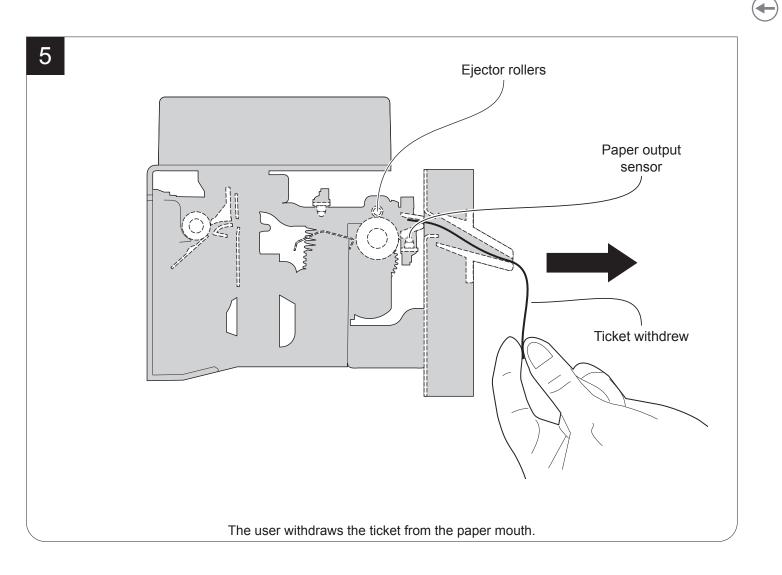


## "PRESENT" mode

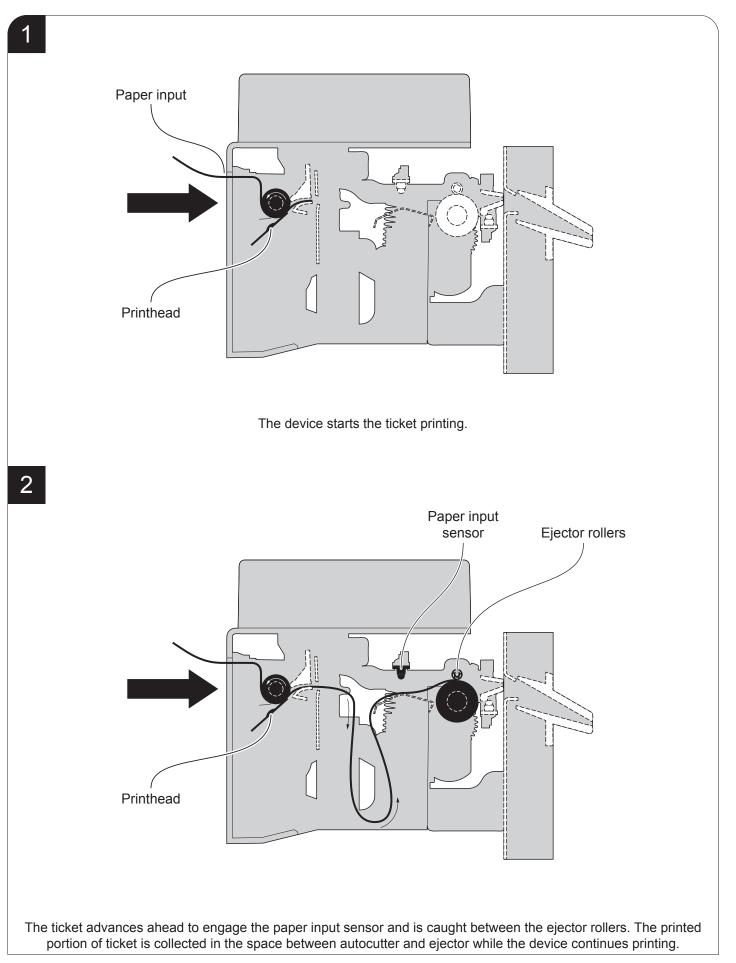


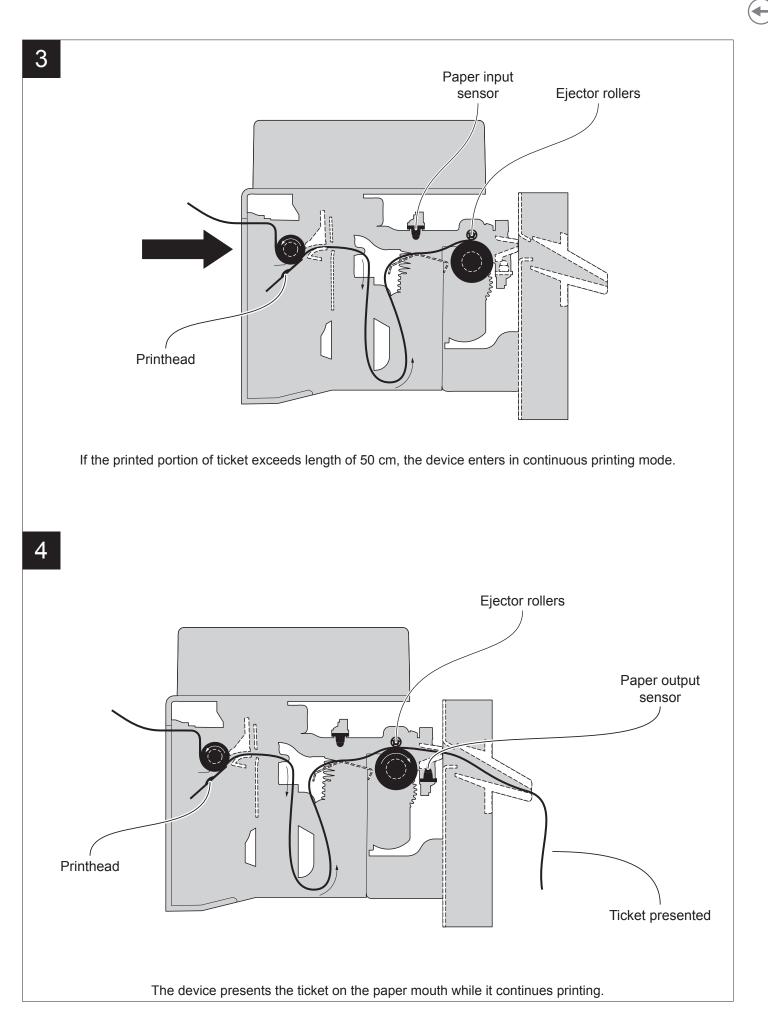




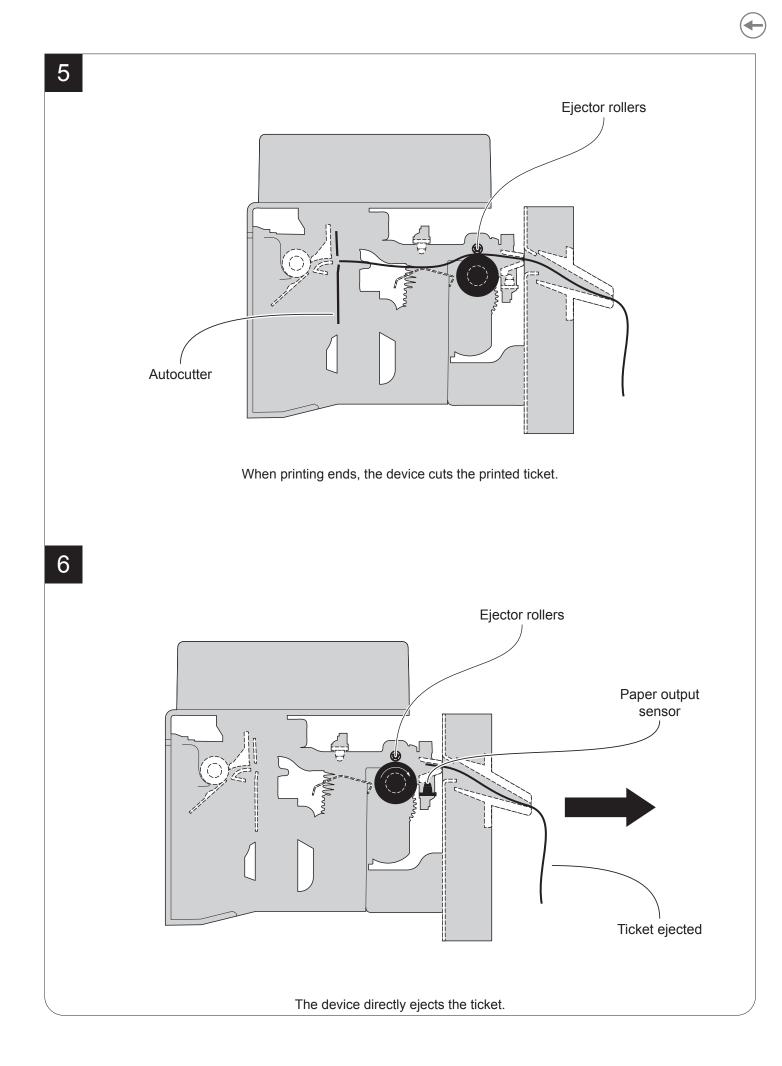


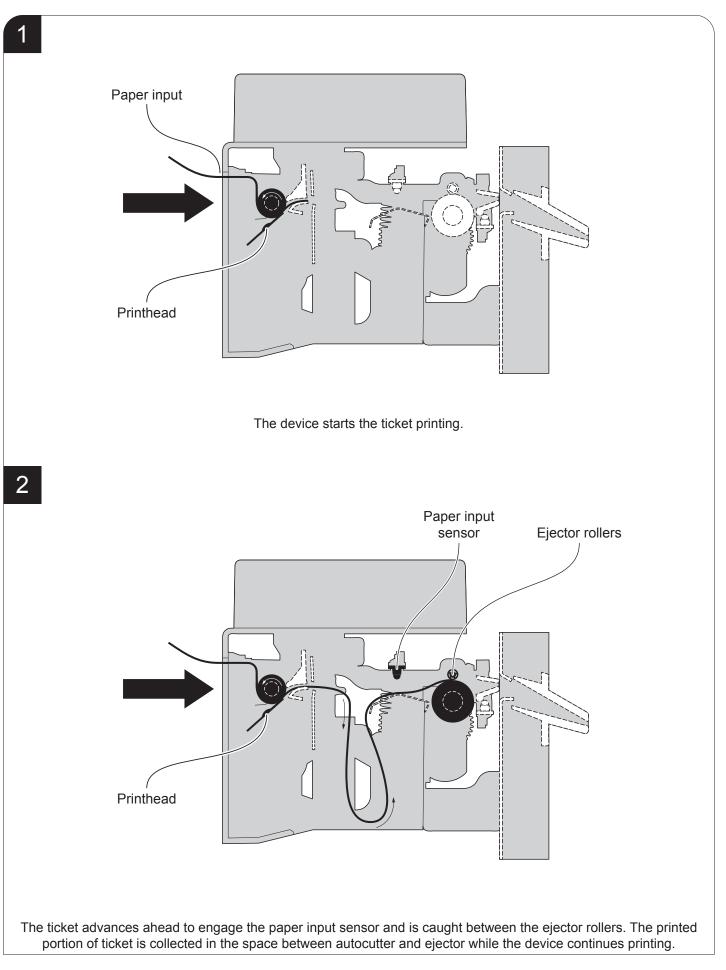
## "EJECT CONTINUOUS PRINTING" mode



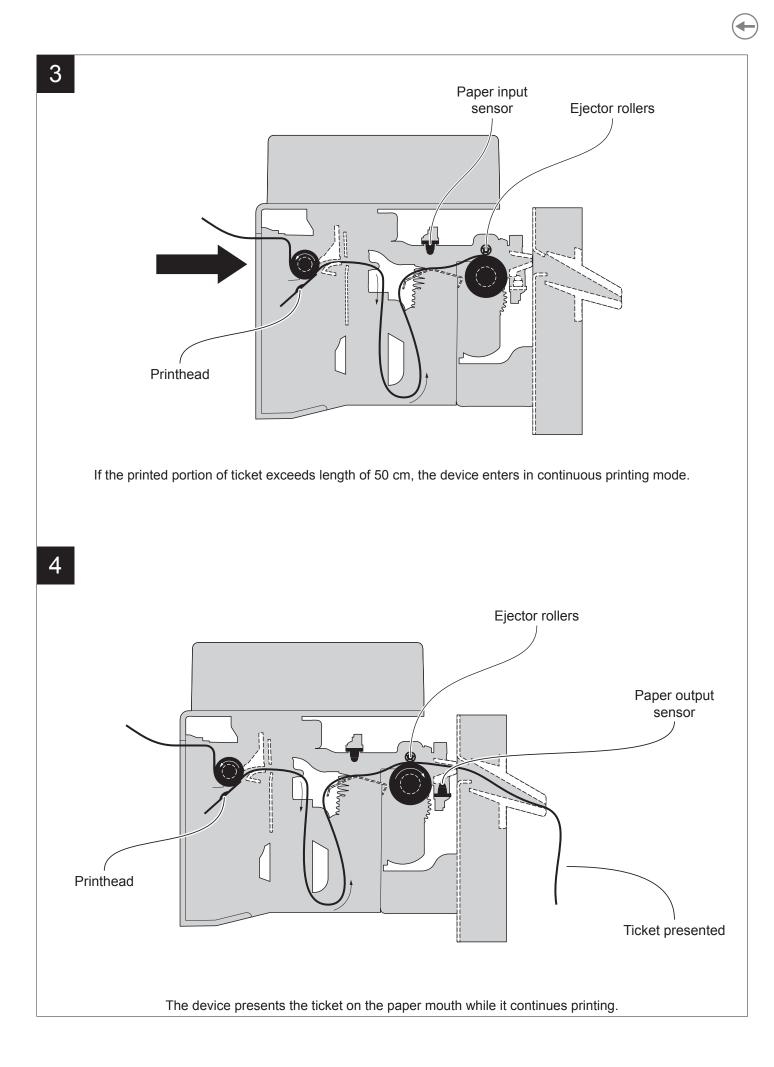


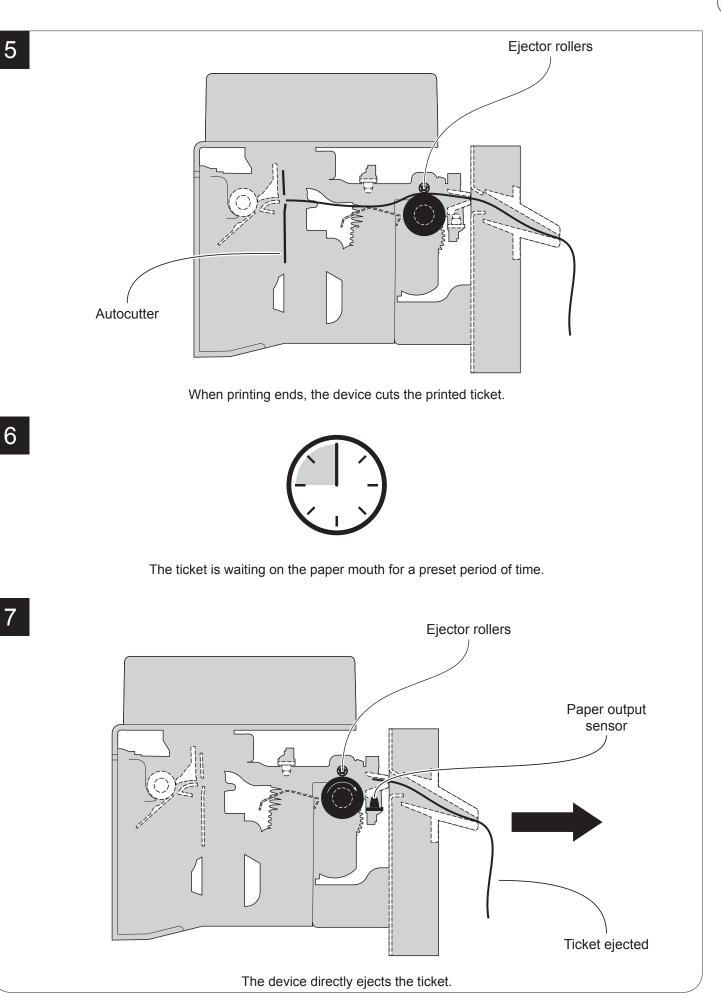




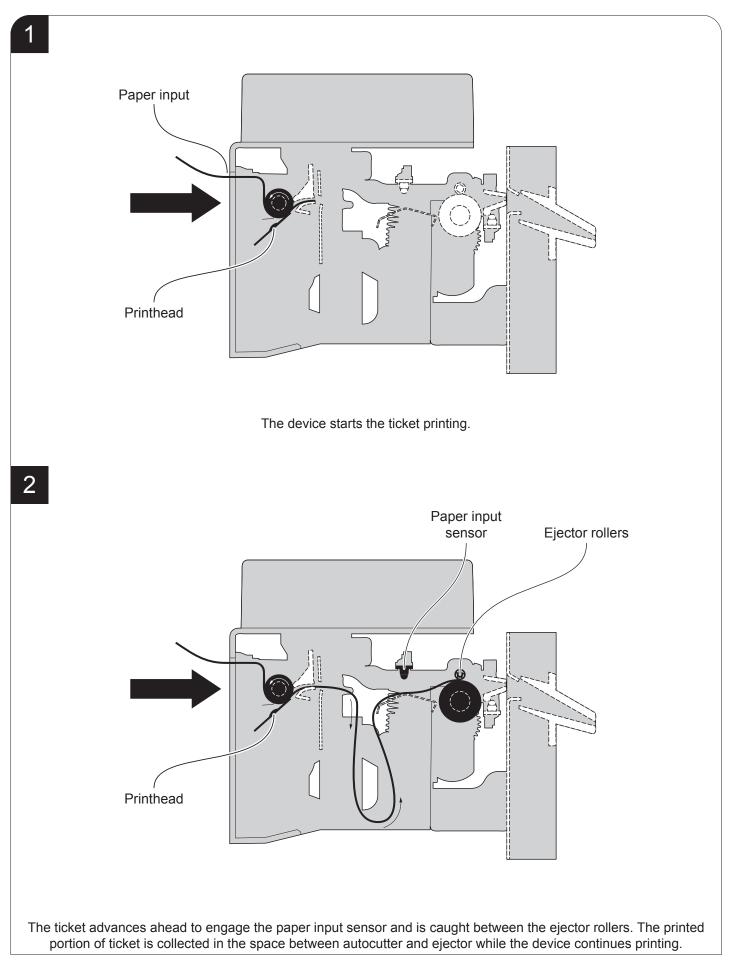


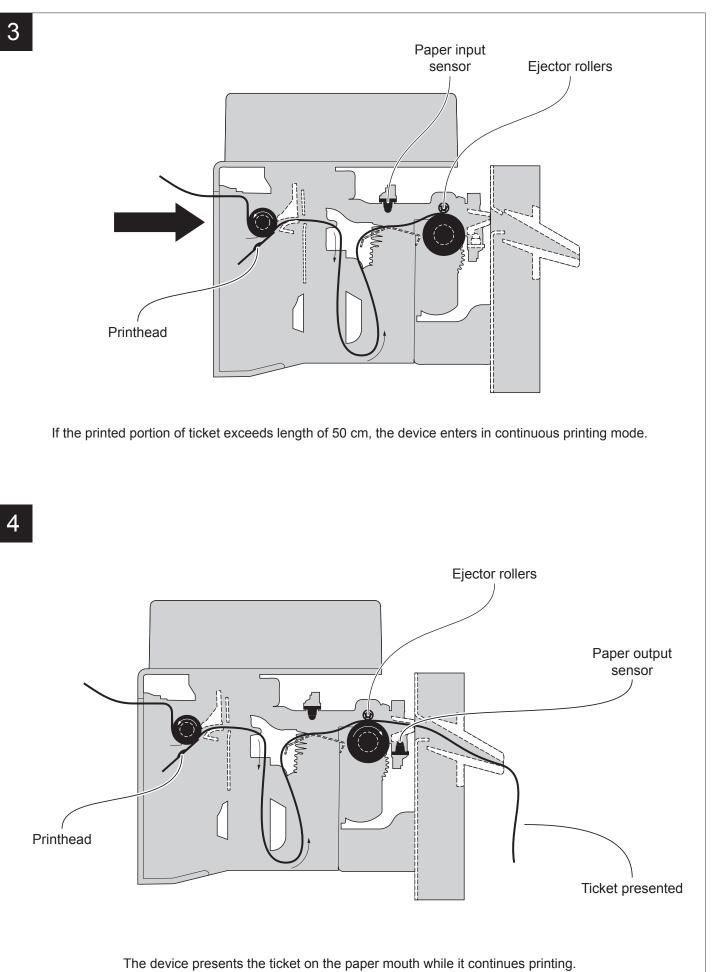




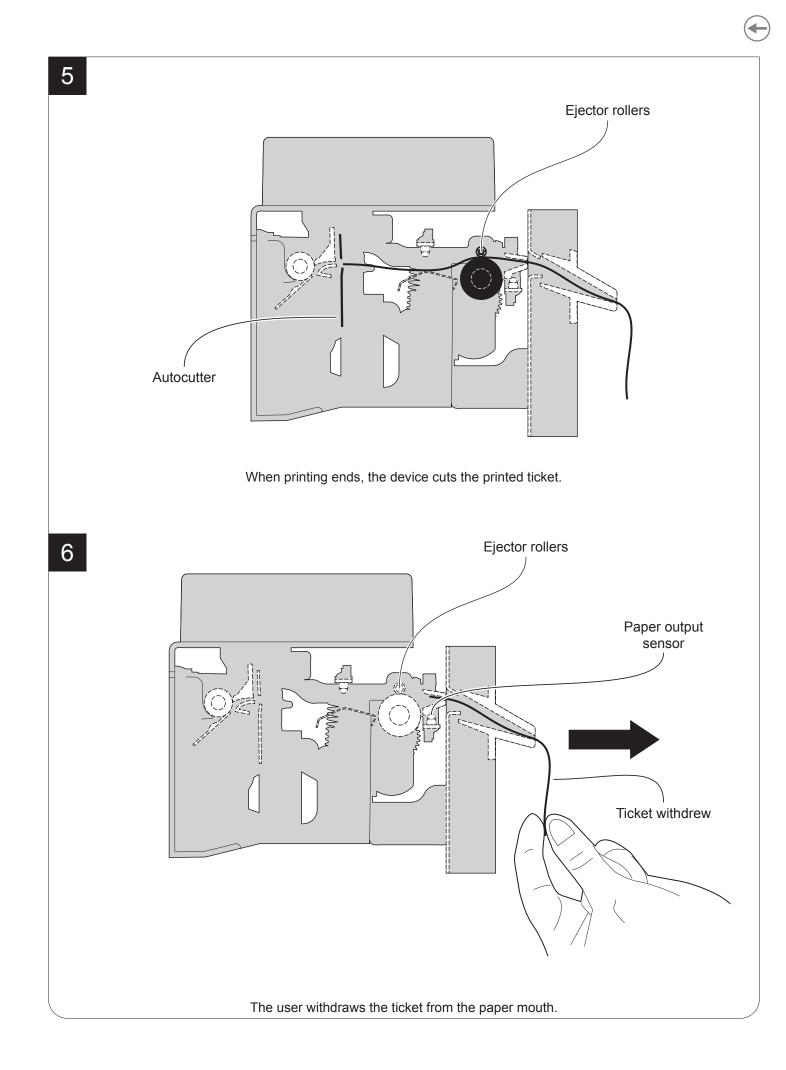












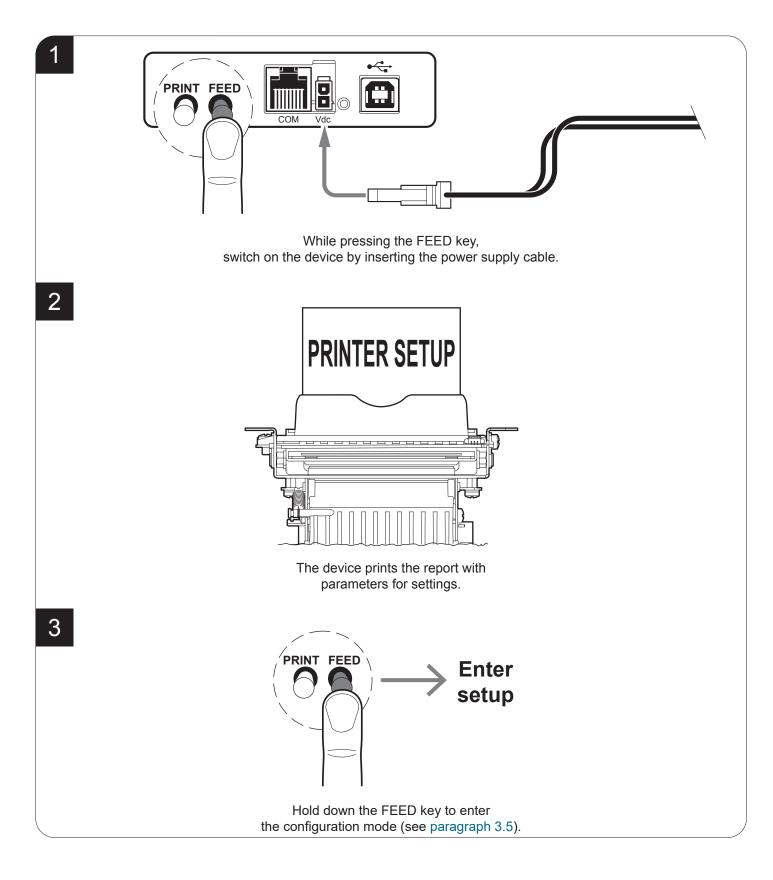


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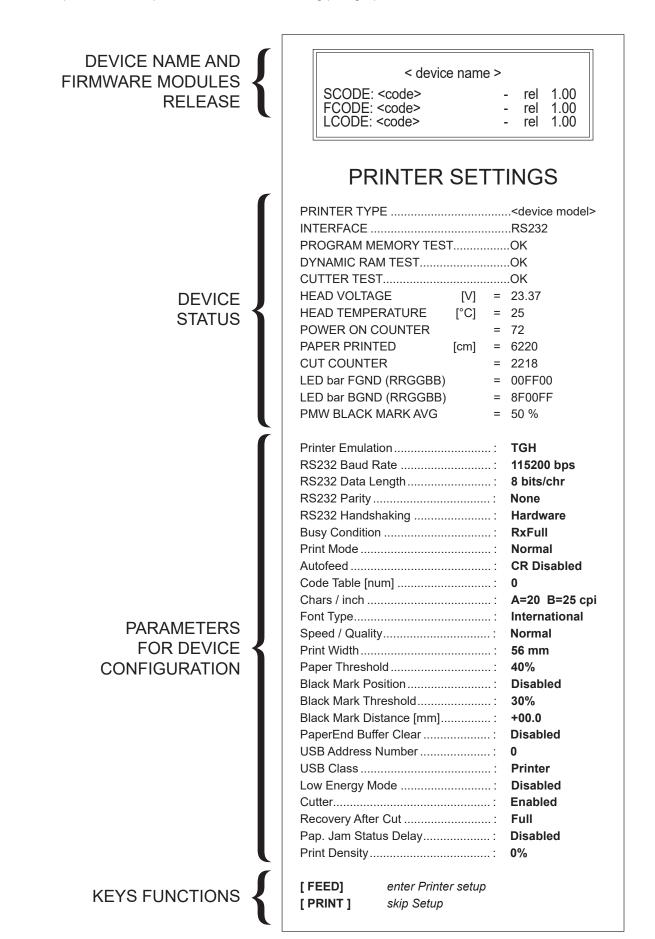
# 6 CONFIGURATION

# 6.1 Configuration by keys

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



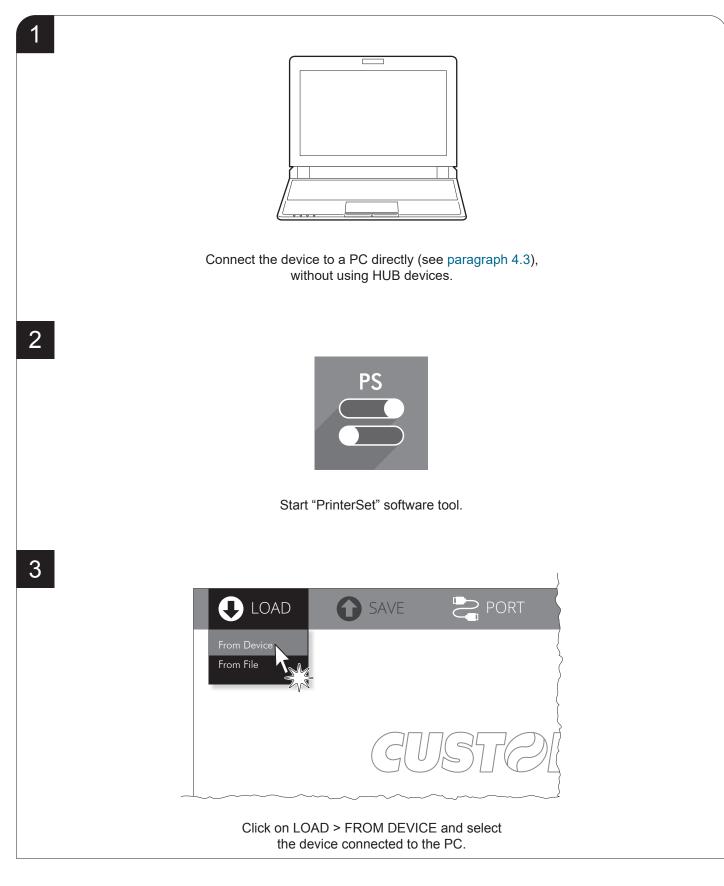
The following figure shows the setup report of the device. The shown values for parameters are sample values; for the list and the description of device parameters see the following paragraphs.

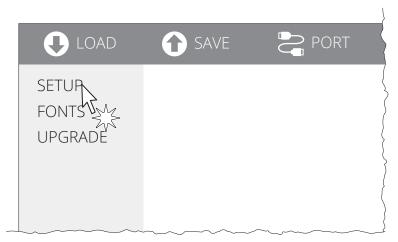




# 6.2 Configuration by software

The setup parameters can be set by using the "PrinterSet" software tool available on <u>www.custom4u.it</u>. For a detailed description of the device operating parameters see the following paragraphs. To configure the device by software, proceed as follows.





Click on SETUP to access the operating parameteres of the device to be configured.

AD	SAVE	PORT	🗶 extra
	<parameter></parameter>	Disabled	× >
	<parameter></parameter>	Enabled	47.4
s>	<parameter></parameter>	Enabled	• 375
>	<parameter></parameter>	Disabled	•
>	<parameter></parameter>	Enabled	•
	<parameter></parameter>	0	•
	Parameter>		·····

# Make the desired changes to the device operating parameters.

SAVE PORT ┛ 1 SETUP Enabled To File Info Enabled <Parameters> Disabled <Parameter> Disabled <Parameter> <Parameters> Enabled <Parameter> <Parameters> 2 <Parameter> <Parameters> SParamators Ricabl

> Click on SAVE > TO DEVICE to make the changes made effective.

### ATTENTION:

During saving, it is strongly discouraged to disconnect the communication cable or to remove the power supply of the PC or the device.

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# 6.3 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		
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		
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		
LED bar FGND (RRGGBB)	foreground colour set for the status LED on the bezel		
LED bar BGND (RRGGBB)	background colour set for the status LED on the bezel		
PWM BLACK MARK AVG.	average value of the PWM of the alignment sensor		



## 6.4 Communication parameters

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

RS232 BAUD RATE	Communication speed of the serial interface:						
	9600	576					
	19200 38400	1152	200 D				
	This parameter is valid only with serial interface.						
RS232 DATA LENGTH	Number of	f bit used f	or chara	eters encoding:			
	7 bits/car						
	8 bits/car <sup>r</sup>	0					
	This parar	neter is va	lid only v	vith serial interface			
RS232 PARITY	Bit for the	parity cont	trol of the	serial interface:			
	None <sup>D</sup> =		ty bit om				
	Even = Odd =			or parity bit parity bit			
	I his parar	neter is va	lia only \	ith serial interface			
RS232 HANDSHAKING	Handshak	ing:					
	XON/XOF Hardware			dshaking ndshaking (CTS/R <sup>-</sup>	TS)		
	This parameter is valid only with serial interface.						
	the XOFF	(0x13) on	the seria	I port. When the r	is set to XON/XOFF, the device sends eceive buffer has cleared once again, if nds the XON (0x11) on the serial port.		
BUSY CONDITION	Activation mode for Busy signal:						
	OffLine/ RXFull = Busy signal is activated when the device is both in OffLine status and						
	the buffer is full RXFull <sup>D</sup> = Busy signal is activated when the buffer is full						
	This parameter is valid only with serial interface.						
USB ADDRESS NUMBER				e univocal identific I with the same PC	ation of the USB device (in case of more		
	0 0 2	4	6	8			
	1 3	5	7	9			



USB communication class definition.

Printer <sup>D</sup> = setting the printer function Virtual COM = setting the USB port as a virtual serial port -

# 6.5 Operating parameters

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

PRINTER EMULATION	Available emulations for the device:					
	CUSTOM/POS					
PRINT MODE	Printing mode:					
	Normal D =enables printing in normal writing wayReverse =enables printing rotated 180 degrees					
AUTOFEED	Setting of the Carriage Return character:					
	CR disabled <sup>D</sup> = Carriage Return disabled CR enabled = Carriage Return enabled					
CHARS / INCH	Font selection:					
	A = 11 cpi, B = 15 cpi <sup>D</sup> A = 15 cpi, B = 20 cpi A = 25 cpi, B = 20 cpi A = 20 cpi, B = 25 cpi					
	CPI = Characters Per Inch.					
FONT TYPE	Setting of the font type:					
	International D=Enables the use of the 256 characters font tablesChinese GB18030=Enables the use of the chinese extended font GB18030-2000Korean CP949=Enables the use of the korean font CP949					
	When the "International" font is enabled, you need to choose the character code table (parameter "Code Table"). When the Chinese font is enabled, the selection of the character code table is suspended (parameter "Code Table").					
CODE TABLE	Identifier number of the character code table to use.					
	See paragraph 9.7 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).					
SPEED / QUALITY	Setting of printing speed and printing quality:					
	Normal <sup>D</sup> High Speed					



PRINT WIDTH	Width of printing area:				
	52 mm 56 mm <sup>D</sup>				
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%				
PAPEREND BUFFER CLEAR	Cleaning mode of the data in receive buffer, if the printing is stopped due to lack of paper				
	<ul> <li>Disabled <sup>D</sup> = 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.</li> <li>Enabled = when the paper runs out, all data in the receive buffer are deleted.</li> </ul>				
LOW ENERGY MODE	Setting the inactivity period in seconds after which the device enters in sleep mode:				
	Disabled <sup>D</sup> 15 s 30 s 60 s				
LED bar FGND (RRGGBB)	Set the foreground color for the status LED on the bezel. This parameter consists in three value for red, green and blue color to be expressed in hexadecimal:				
	RR =from 00 $^{\text{D}}$ to FFGG =from 00 to FF $^{\text{D}}$ BB =from 00 $^{\text{D}}$ to FF				
LED bar BGND (RRGGBB)	Set the background color for the status LED on the bezel. This parameter consists in three value for red, green and blue color to be expressed in hexadecimal:				
	RR =from 00 to FF (8F $^{D}$ )GG =from 00 $^{D}$ to FFBB =from 00 to FF $^{D}$				
CUTTER	Set the autocutter management:				
	Disabled =Autocutter disabledEnabled D =Autocutter enabled				
	This parameter is valid only for TG1260HIII CUT, TG2460HIII TRANSP and TG2460HIII CUT.				
RECOVERY AFTER CUT	Setting the paper recovery after the ticket cut:				
	Half Full <sup>D</sup>				

PAPER JAM STATUS DELAY	Setting the delay, expressed in seconds, in a paper jam detecting:					
	Disabled <sup>D</sup>	2 s				
	1 s	3 s				
PRINT DENSITY	Adjusting the printing density:					
	-25% 0 <sup>D</sup>	+25%				
	-12% +12%					
	The print quality is strongly influenced by the type of chemical treatment and the type of storage to which the thermal paper has been subjected, as well as by the weight of the same. It may therefore necessary to act on this parameter to obtain the desired print quality.					



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#### 6.6 **Alignment parameters**

This printer allows the configuration of the parameters listed in the following table. The parameters marked with the symbol  $^{\rm D}$  are the default values.

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

BLACK MARK POSITION	Management of the paper alignment:							
	Disabled <sup>D</sup> = the black mark alignment is not performed Enabled = the black mark alignment is performed							
BLACK MARK THRESHOLD	Threshold value (in percent) for the recognition of the presence of black mark by the black mark sensor:							
	40% 80	0% 0% 0%						
BLACK MARK DISTANCE	"Black Mark Distance" is the minimum distance (in millimetres) between the upper edge of ticket and the black mark (see chapter 7). 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 and one for the decimal part and of the sign:							
			Sign	Sign setting:				
	BLACK MARK	<ul> <li>+ <sup>D</sup> = positive distance</li> <li>- = negative distance</li> </ul>						
				Setting the digit for tens:				
	BLACK MARK	DISTANCE [mm x 10]	0 <sup>□</sup> 1	2 3	4 5	6 7	8 9	
			Setting the digit for units:					
	BLACK MARK	DISTANCE [mm x 1]	0 <sup>D</sup> 1	2 3	4 5	6 7	8 9	
		Setti	Setting the digit for decimals:					
	BLACK MARK DISTANCE [mm x 0.1]		0 <sup>D</sup> 1	2 3	4 5	6 7	8 9	
	NOTE: For example, f Black Ma Black Ma Black Ma Black Ma	nce to 15 i = 1 = 5 = 0	mm, mc	odify the	paramete	ers as follows:		



## 6.7 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 printer enters the self-test routine and print the setup report. The printer 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:

	HI	EX	AD	EC	IMAL	DUMP
31 39 37 68 73 66 65 6F 77 72 6B 64 73 66 6A	32 30 38 6B 64 73 69 72 75 65 69 6C 66 64 6B 6B	33 31 39 6A 66 64 6F 77 72 6F 73 6B 66 F2 6C	34 32 75 73 6B 66 79 75 65 69 75 64 73 6B 6A 68	35 33 69 64 6B 75 77 6F 72 6F 77 66 64 6A 73		12345 90123 789ui hkjsd sdfkj fsdfk eioyu oriuw ouwer werio riouw klsdf dfksd sdfkj fk≥j jklh
				73		-





# 7 ALIGNMENT

The device is provided with a sensor for the use of alignment black mark in order to handle rolls of tickets with pre-printed fields and a fixed length.

The alignment sensor is a "reflection" sensor: this kind of sensor emits a band of light and detects the quantity of light reflected to it. The presence of the black mark 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.

To ensure the correct alignment, you must enable the "Black Mark Position" parameter during the setup procedure (see paragraph 6.6).

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



# 7.1 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 "Black Mark Position" parameter is set to a value other than "Disabled" (see paragraph 6.6).

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 black mark detection:

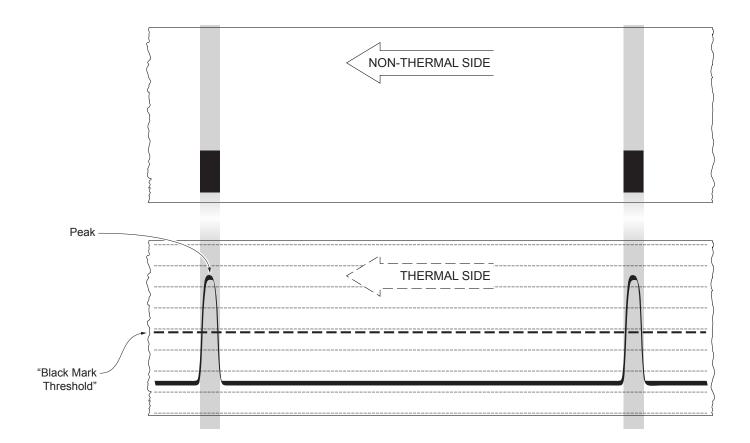
Autosetting Black Mark: OK PWM Duty Cycle: 85.3%

The "Autosetting Black Mark" 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 "Black Mark Threshold" parameter which represents the detection threshold of the black mark.

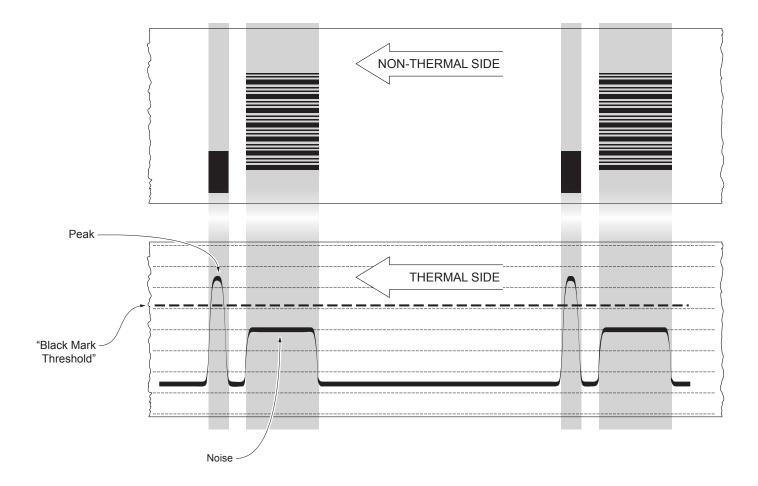
Choosing the "Yes" value for the "Characterize Paper" parameter, the device prints a graphic representation (see following figures) of the outgoing voltage of the alignment sensor (expressed as a percentage) and the "Black Mark Threshold" value. This graphic representation is useful to set the most suitable value to assign to the "Black 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 black marks and presents a peak at each black mark. In this case, the optimal value for the "Black 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 black marks, presents a peak at each black mark and presents some "noise" at each barcode. In this case, the optimal value for the "Black 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 "Black 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 black mark 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 black mark.

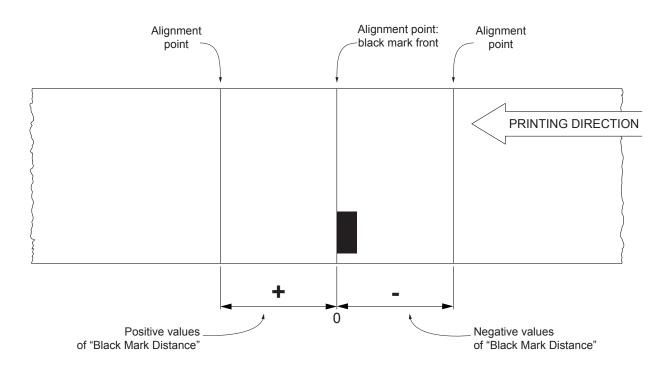


## 7.2 Alignment parameters

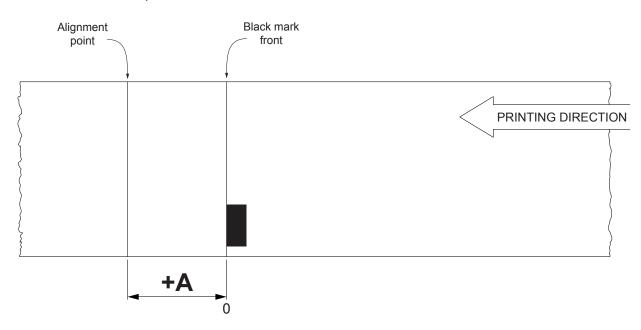
The "alignment point" is defined as the position inside the ticket to use for the black mark alignment. The distance between the black mark edge and the alignment point is defined as "Black Mark Distance".

Referring to the front of the black mark, the value of "Black Mark Distance" varies from -19.9 mm minimum and +99.9 mm maximum.

If the "Black Mark Distance" value is set to 0, the alignment point is set at the beginning of the black mark.

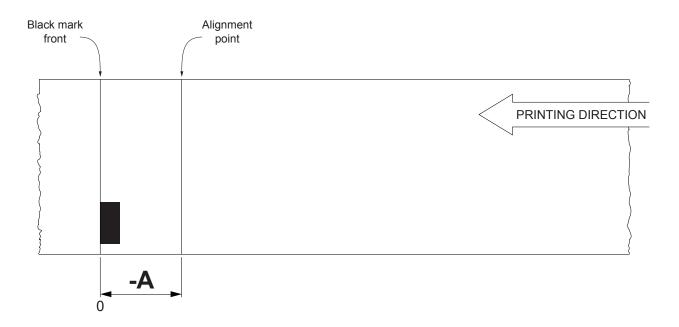


The following figure shows an example of paper with alignment point set by a positive value of "Black Mark Distance" ("Black Mark Distance" = + A):

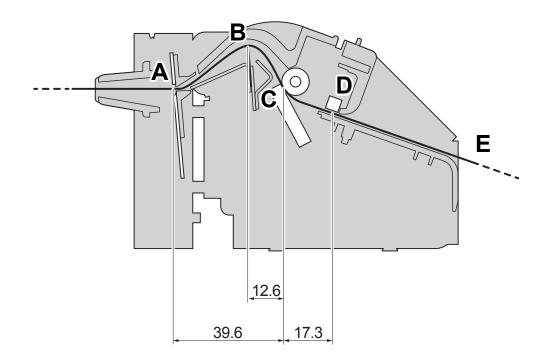




To set a negative value of the "Black Mark Distance" parameter is useful in cases where the alignment point refers to the black mark printed on the previous ticket or where the desired cutting line is placed in the middle of the alignment black mark. In the following images, the value of "Black Mark Distance" parameter is set to -A.



The following figure shows a section of the device with the paper path and the distances between the alignment sensor D, the printhead C and the autocutter A or the serrated blade B (cutting line). All the dimensions shown in figure are in millimetres.



To define the alignment point you need to set the printer parameters that compose the numerical value of the "Black Mark Distance" parameter (see paragraph 6.6).

For example, to set a black mark distance of 15 mm between the black mark and the alignment point, the parameters must be set on the following values:

Black Mark Distance sign	: +
Black Mark Distance [mm x 10]	: 1
Black Mark Distance [mm x 1]	: 5
Black Mark Distance [mm x .1]	: 0

The "Black Mark Distance" parameter, may be modified as described in chapter 6.

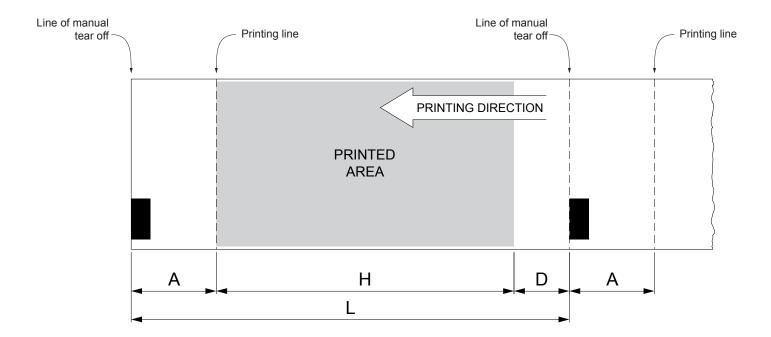




## 7.3 Printing area

In order to print ticket containing only one black mark and to not overlay printing to a black mark (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-black mark distance.

The following figure shows an example of tickets with "Black Mark Distance" set to 0:



- A "Non-printable area" = "Distance between autocutter/printhead"
- H Distance between the first and the last print line, called "Height of the printing area".
- L Distance between an edge of the black mark and the next one, called "Inter-black mark distance".
- D Automatic feed for alignment at the next black mark.

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

H + A ≤ L

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

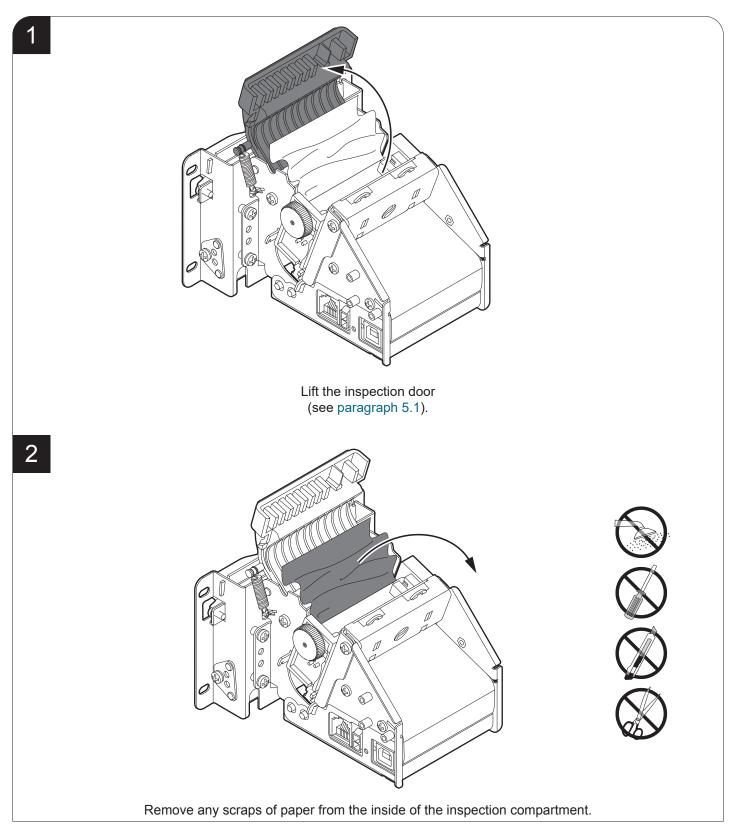


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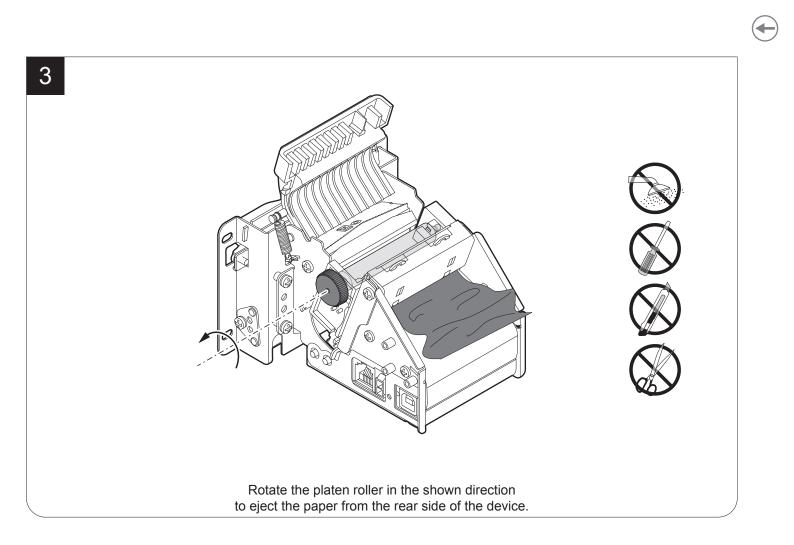
## 8 MAINTENANCE

## 8.1 Paper jam

#### TG1260HIII CUT, TG2460HIII TRANSP, TG2460HIII CUT

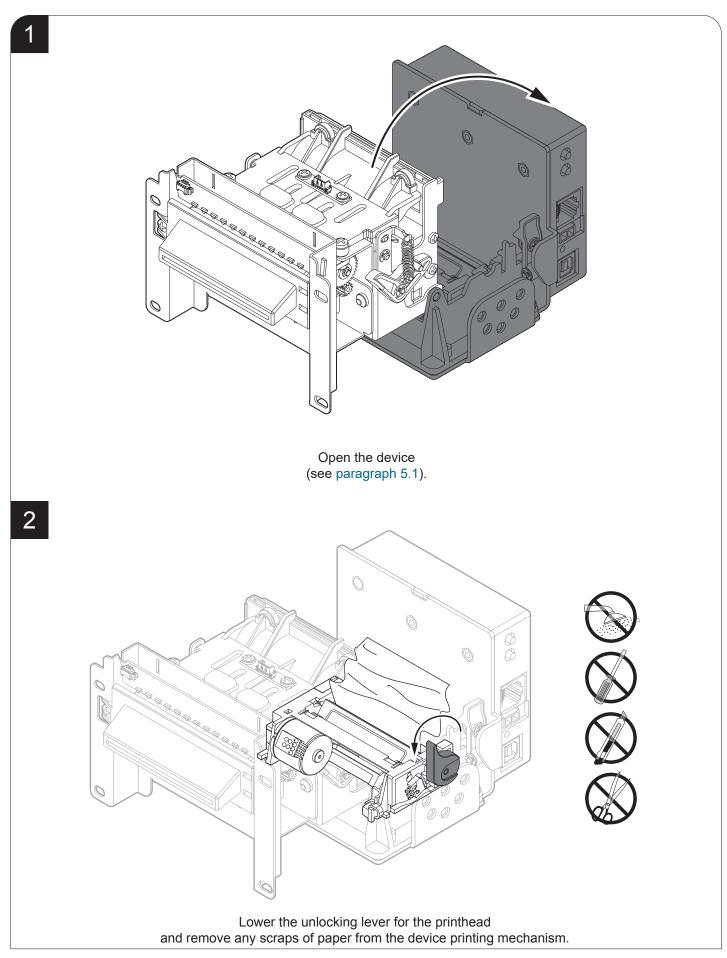




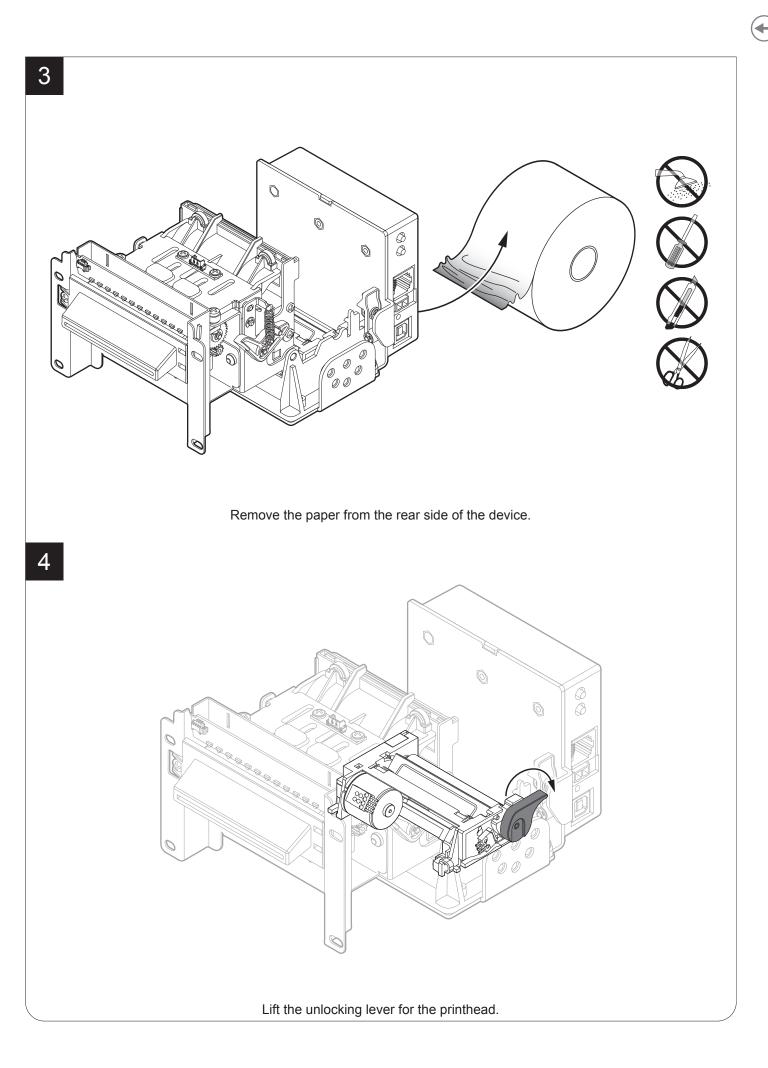




#### TG2460HIII EJC







## 8.2 Planning of cleaning operations

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

For specific procedures, see the following pages.

EVERY PAPER CHANGE	
Platen roller	Use isopropyl alcohol
EVERY 5 PAPER CHANGES	
Paper path	Use compressed air or tweezers
Autocutter (1)	Use compressed air
Sensors	Use compressed air
EVERY 6 MONTHS OR AS NEEDED	
Chassis	Use compressed air or a soft cloth
Unassis	Use compressed air or a soft cloth

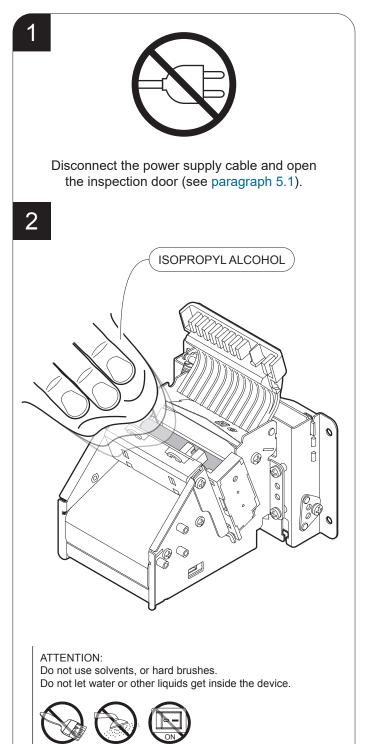


## 8.3 Cleaning

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

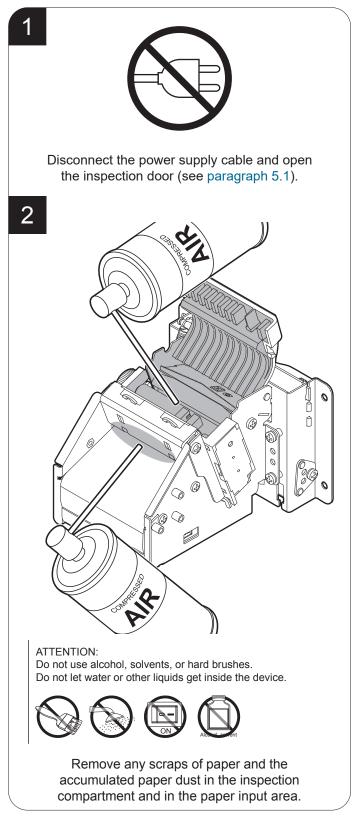
#### TG1260HIII CUT, TG2460HIII TRANSP, TG2460HIII CUT

#### Platen roller



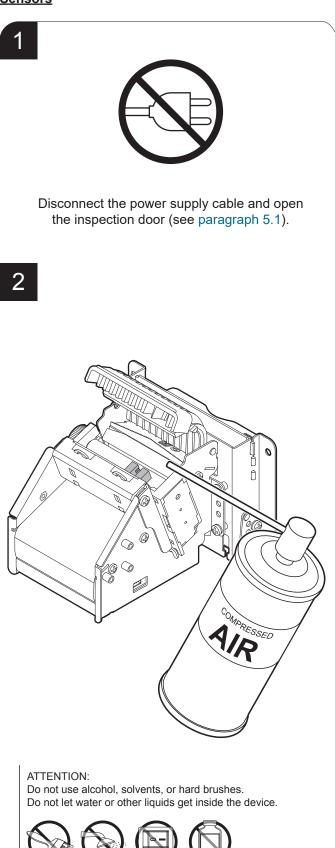
Clean the platen roller by using a non-abrasive cloth moistened with isopropyl.

#### Paper path



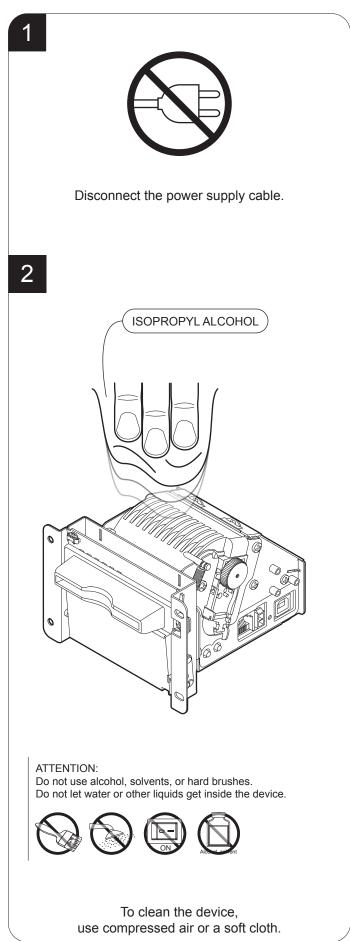


#### <u>Sensors</u>



Clean the paper presence sensor and the sensor for the opening of the inspection door by using compressed air.

#### <u>Chassis</u>

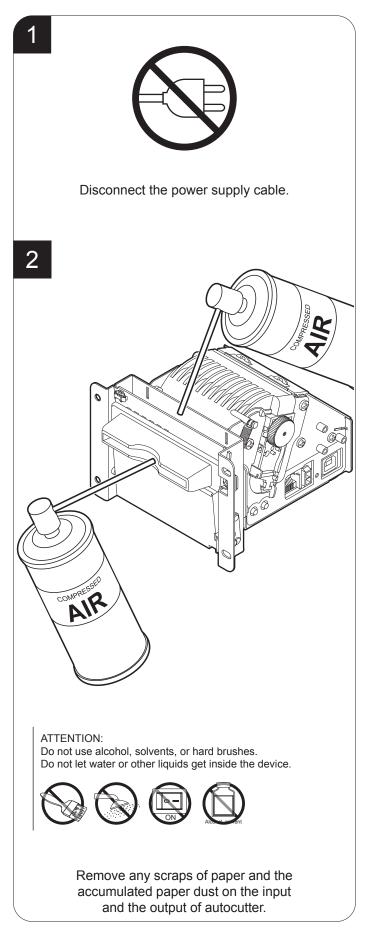


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#### TG1260HIII CUT, TG2460HIII CUT

#### <u>Autocutter</u>

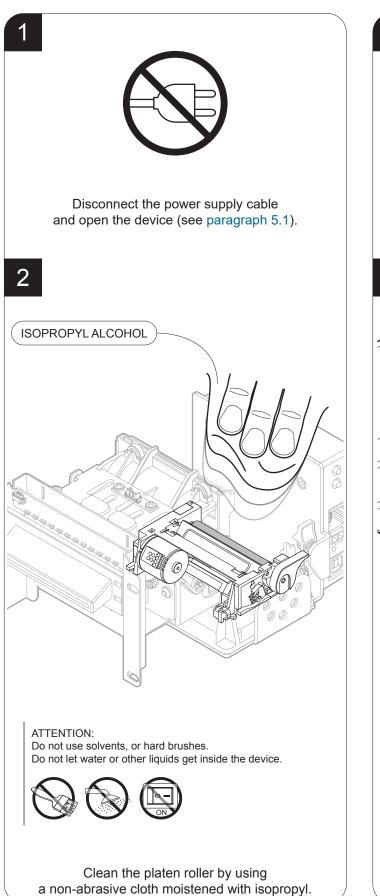


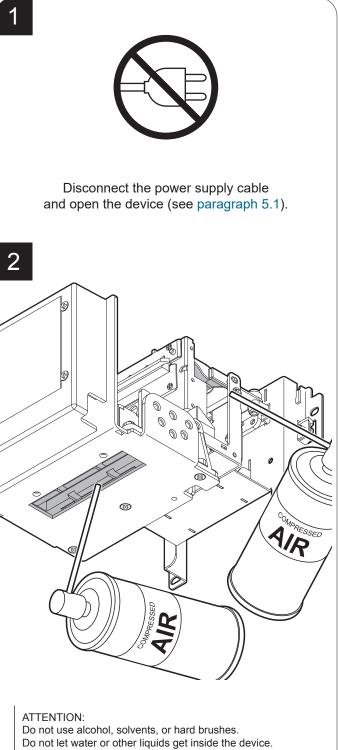


#### TG2460HIII EJC

GUSTOM®

#### Platen roller





Paper path

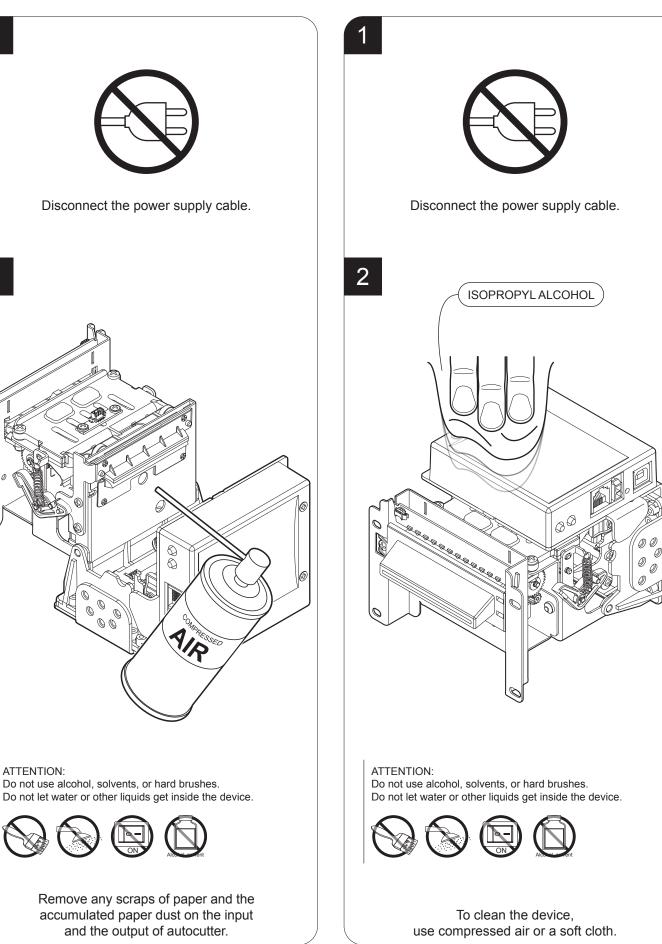


Clear the area involved in the passage of paper and the paper input area by using compressed air.

#### <u>Autocutter</u>

1

2

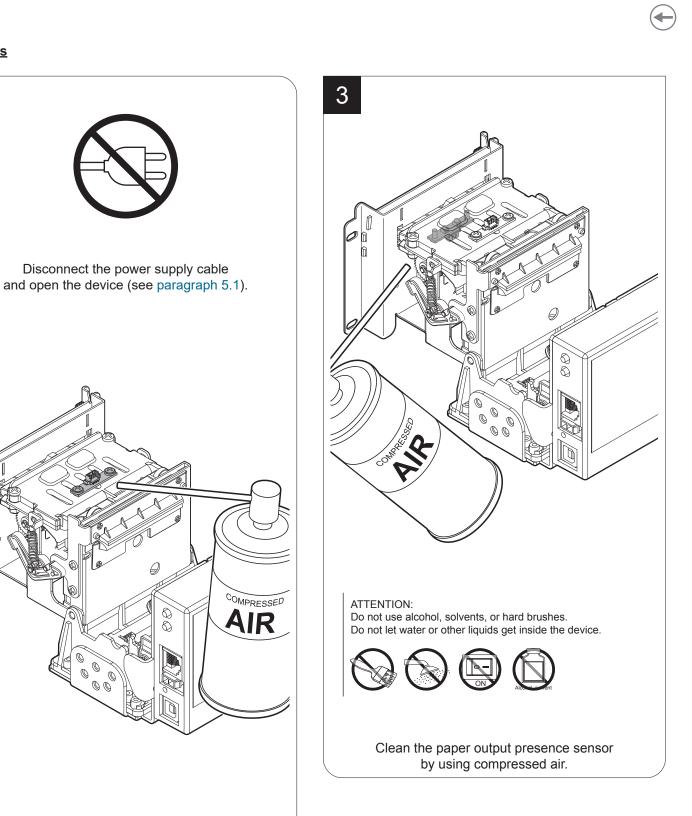


#### **Sensors**

1

2

Ó ° EO



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



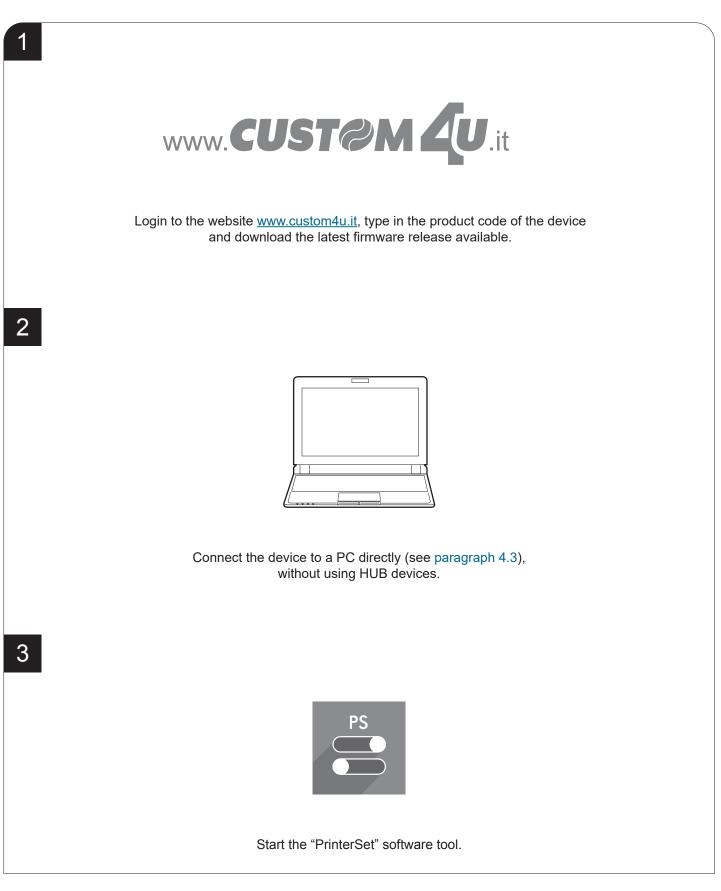
0 0 

Clean the paper input presence sensor by using compressed air.

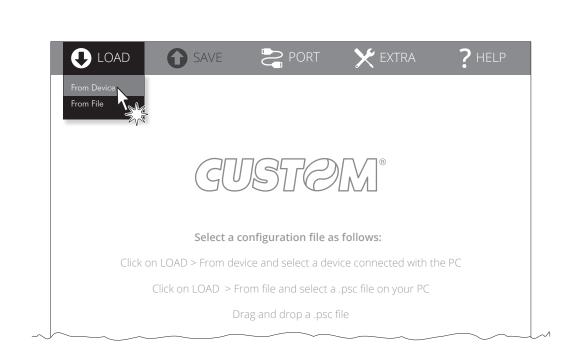


## 8.4 Firmware upgrade

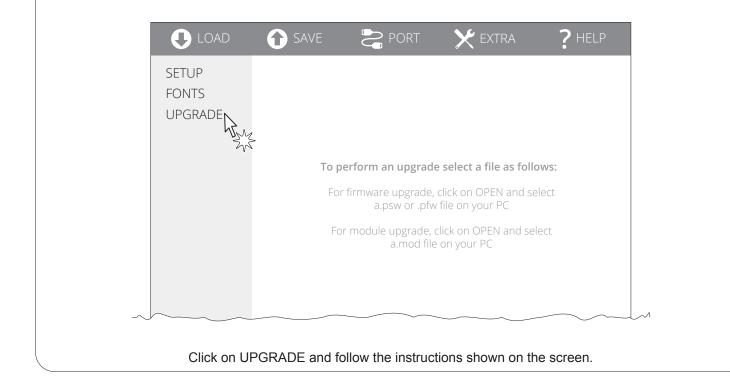
Firmware upgrade can be performed by using the "PrinterSet" software tool available on <u>www.custom4u.it</u>. To upgrade firmware, proceed as follows.







Click on LOAD > FROM DEVICE and select the device connected to the PC.



#### ATTENTION: During saving, it is strongly discouraged to disconnect the communication cable or to remove the power supply of the PC or the device.



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## 9 SPECIFICATIONS

## 9.1 Hardware specifications

GENERAL	
Sensors	Paper presence, head temperature, paper jam, inspection door open, alignment black mark presence, external low paper
Emulations	TGH, CUSTOM/POS
Printing driver	Windows XP Windows VISTA (32/64 bit) Windows 7 (32/64 bit) Windows 8 (32/64 bit) Windows 8.1 (32/64 bit) Windows 10 (32/64 bit) Self-installing driver for Virtual COM (32/64 bit) Linux (32/64 bit)
INTERFACES	
RS232 serial connector	from 9600 bps to 115200 bps
USB connector	12 Mbit/s
MEMORIES	
Receive buffer	8 kB
Flash memory	1 MB internal + 4 MB external
RAM memory	256 kB internal
Graphic memory	2 logos (448 x 584 dots)
PRINTER	
Resolution	203 dpi (8 dot/mm)
Printing method	Thermal, fixed head
Head life <sup>(1)</sup>	
Abrasion resistance (2)	50 km (with recommended paper)
Pulse durability	100 M (12.5% duty cycle)



Printing width	52 mm, 56 mm
Printing mode	Normal, 90°, 180°, 270°
Printing format	Height/width from 1 to 8, bold, reverse, underlined, italic
Character fonts	55 character code tables (see paragraph 9.7) Extended chinese GB18030-2000 Korean CP949
Printable barcode	Codabar, Code 32, Code 39, Code 93, Code 128, EAN-8, EAN-13, ITF, UPC-A, UPC-E, Data Matrix, PDF417, QRCode
Printing speed <sup>(1) (3)</sup>	
TG1260HIII CUT	Normal = 32 mm/s High Speed = 39 mm/s
TG2460HIII TRANSP TG2460HIII CUT TG2460HIII EJC	Normal = 95 mm/s High Speed = 120 mm/s
PAPER	
Type of paper	Thermal rolls, heat-sensitive side on outside of roll
Paper width	60 mm ± 0.5 mm
Paper weight	from 55 g/m <sup>2</sup> to 70 g/m <sup>2</sup>
Paper thickness	60 μm ± 0.5 μm (for 55 g/m² paper) 80 μm ± 0.6 μm (for 70 g/m² paper)
Recommended types of paper	KANZAN KF50 or KP460 MITSUBISHI PG5041
External roll diameter	max 100 mm (with external paper roll holder)
Paper end	Not attached to roll core
Internal roll core diameter	13 mm
Core type	Cardboard or plastic

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TG1260HIII CUT TG2460HIII TRANSP TG2460HIII CUT	45 mm
TG2460HIII EJC	94 mm
AUTOCUTTER (only for TG1260HIII CUT, TG2460HIII CUT and TG2460HIII EJC)	
Paper cut	Total cut
Estimated life (1)	1000000 cuts
DEVICE ELECTRICAL SPECIFICATIONS	
Power supply	
TG1260HIII CUT	12 Vdc ± 10%
TG2460HIII TRANSP TG2460HIII CUT TG2460HIII EJC	24 Vdc ± 10%
Medium consumption <sup>(5)</sup>	
TG1260HIII CUT	1.8 A
TG2460HIII TRANSP TG2460HIII CUT TG2460HIII EJC	1.8 A max
Typical consumption <sup>(3)</sup>	
TG1260HIII CUT	0.65 A
TG2460HIII TRANSP TG2460HIII CUT TG2460HIII EJC	0.88 A
Standby consumption	
TG1260HIII CUT	0.03 A
TG2460HIII TRANSP TG2460HIII CUT TG2460HIII EJC	0.04 A

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Low energy mode consumption	
TG1260HIII CUT	0.013 A
TG2460HIII TRANSP TG2460HIII CUT TG2460HIII EJC	0.008 A
ELECTRICAL SPECIFICATIONS POWER SUPPLY code 963GE020000071 (optional for TG2460HIII TRANSP, TG2460HIII CUT and TG2460HIII EJC)	
Power supply voltage	from 90 Vac to 264 Vac
Frequency	from 47 Hz to 63 Hz
Output	24 V, 2.5 A
Power	60 W
ENVIRONMENTAL CONDITIONS	
Operating temperature	from -20 °C to +70 °C
Relative humidity (RH)	from 10% to 85% (without condensation)
Storage temperature	from -20 °C to +70 °C
Storage relative humidity (RH)	from 10% to 90% (without condensation)

NOTES:

(1) : Respecting the regular schedule of cleaning for the device components.

(2) : Damages caused by scratches, ESD and electromigration are excluded.

(3) : Referred to a standard CUSTOM receipt (L = 10 cm, Density = 12.5% dots on).

(4) : In case of printing a page in length less than minimum value, the device automatically adjusts the length the minimum value.

(5): Referred to the UL measurements (Ticket 12.5% dots on, Ticket length 10 cm, Print density +50%, Printing loop 30 s).

## 9.2 Character specifications

#### TG1260HIII CUT

Character set		3	
Character density	11 срі	15 cpi	20 cpi
Number of columns	26	34	44
Chars / seconds	338	442	572
Lines / seconds	13	13	13
Characters (L x H mm) - Normal	2.125 x 3	1.625 x 3	1.2 x 3

#### TG2460HIII TRANSP, TG2460HIII CUT, TG2460HIII EJC

Character set		3	
Character density	11 cpi	15 cpi	20 cpi
Number of columns	26	34	44
Chars / seconds	1040	1360	1760
Lines / seconds	40	40	40
Characters (L x H mm) - Normal	2.125 x 3	1.625 x 3	1.2 x 3

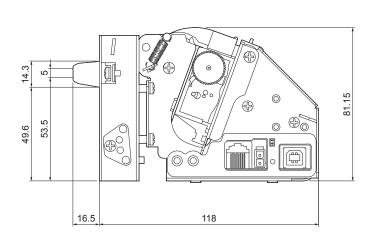


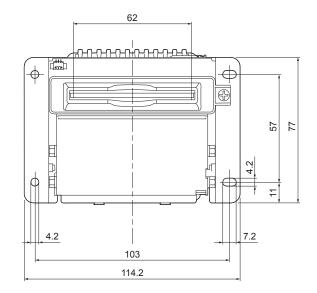
## 9.3 Device dimensions

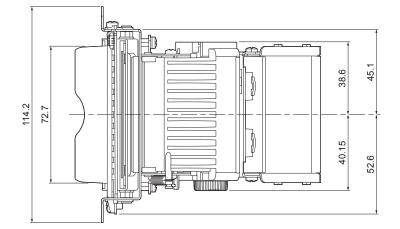
All the dimensions shown in following figures are in millimetres.

#### TG1260HIII CUT, TG2460HIII CUT

Length	134.5 mm
Height	81.15 mm
Width	114.2 mm
Weight	500 g



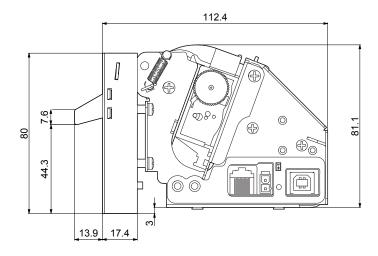


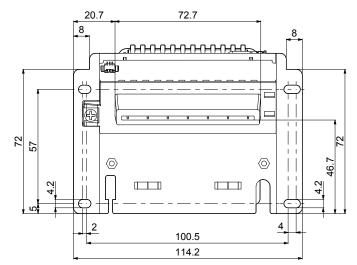


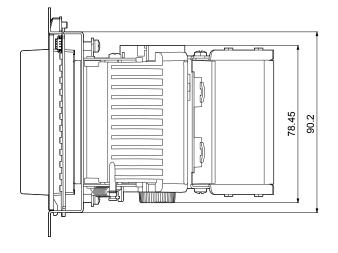


#### TG2460HIII TRANSP

Length	126.3 mm
Height	81.15 mm
Width	114.2 mm
Weight	500 g



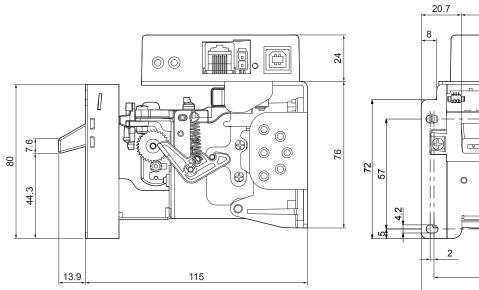


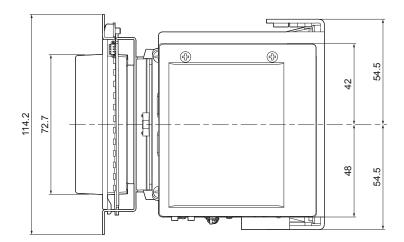


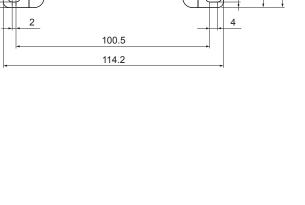
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#### TG2460HIII EJC

Length	128.9 mm
Height	100 mm
Width	114.2 mm
Weight	1000 g







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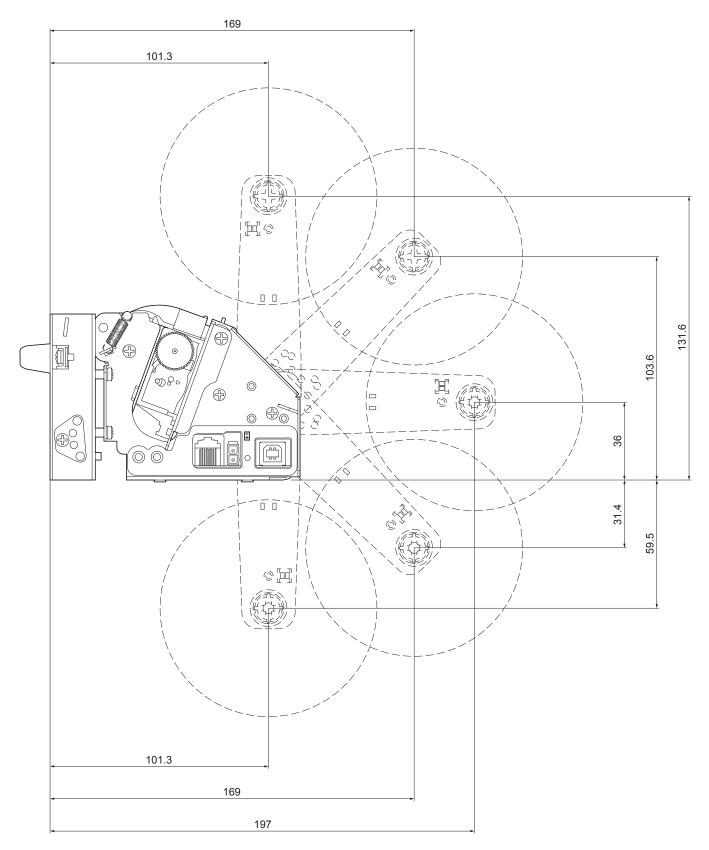
0 0

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# 9.4 Device dimensions with adjustable paper roll holder code 974CE010000001 (optional)

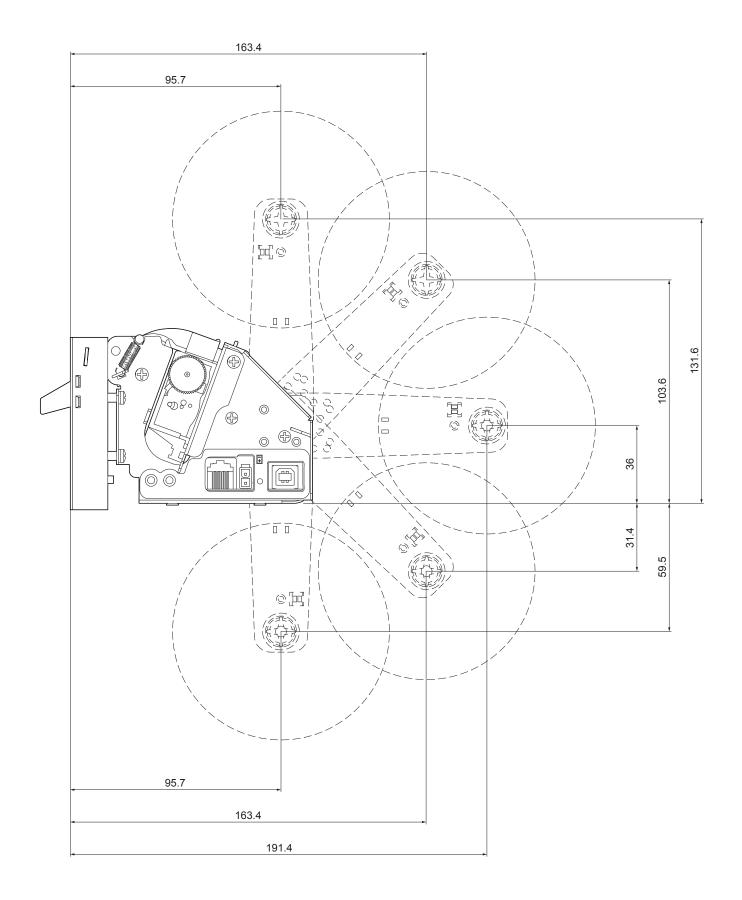
All the dimensions shown in following figures are in millimetres.

#### TG1260HIII CUT, TG2460HIII CUT





#### TG2460HIII TRANSP



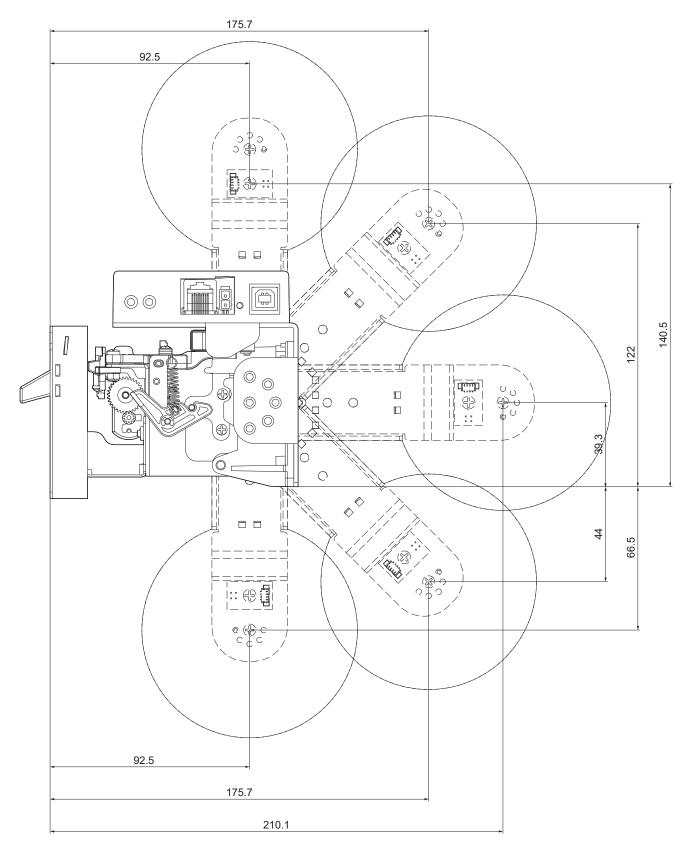


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# 9.5 Device dimensions with adjustable paper roll holder code 974CG02000001 (optional)

All the dimensions shown in following figures are in millimetres.

#### TG2460HIII EJC





# 9.6 Power supply and power cord dimensions (optionals)

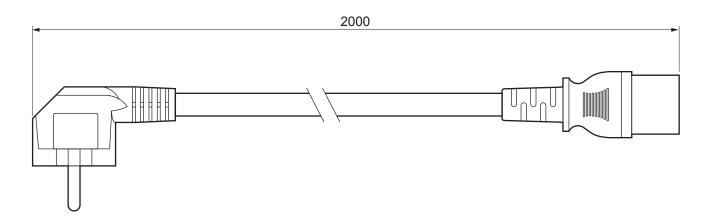
#### TG2460HIII TRANSP, TG2460HIII CUT, TG2460HIII EJC

The following table shows the dimensions of the power supply, the power cord and the adapter for power supply optionals for the device.

POWER CORD code 2610000000311	
Length	2000 mm
POWER SUPPLY code 963GE020000071	
Length	130 mm
Height	36 mm
Width	57 mm

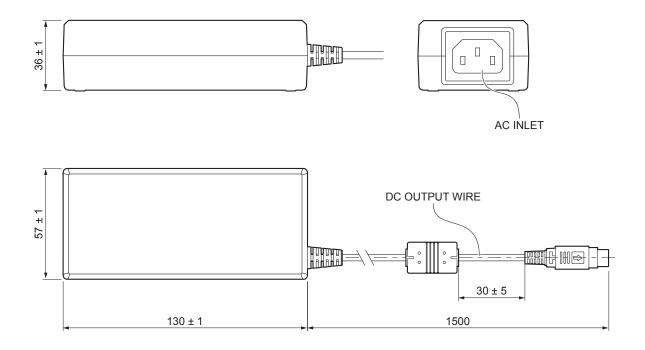
All the dimensions shown in following figures are in millimetres.

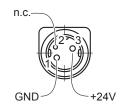
#### POWER CORD code 2610000000311





#### POWER SUPPLY code 963GE020000071



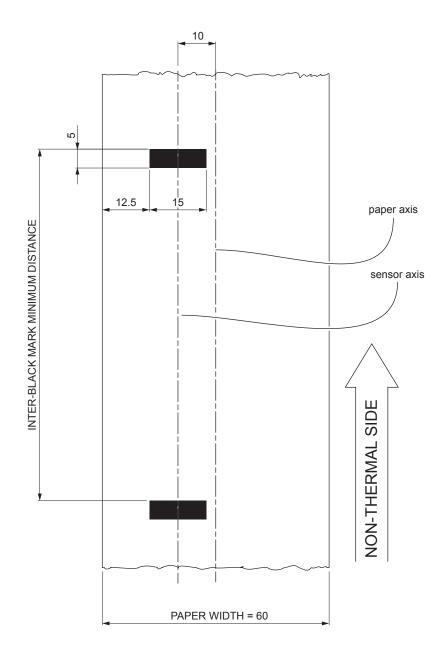


### 9.7 Paper specification

The following image shows an example of black mark placement on the non-thermal side of paper, where the inter-black mark minimum distance varies by device model according to the table.

TG1260HIII CUT, TG2460HIII TRANSP, TG2460HIII CUT	80 mm
TG2460HIII EJC	104 mm

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



### 9.8 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 paragraph 3.5).

You can set font and coding table by using the commands (see the commands manual of the device) or using the "Code Table" and the "Chars / Inch" parameters during the setup procedure (see paragraph 6.5).

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

<codetable></codetable>	C	Coding table	
0	PC437 - U.S.A., Standard Europe		
1	Katakana		
2	PC850 - Multilingual		
3	PC860 - Portuguese		
4	PC863 - Canadian/French		
5	PC865 - Nordic		
6	VISCII - Vietnamese Standard Code		
11	PC851 - Greek		on request
12	PC853 - Turkish		on request
13	PC857 - Turkish		
14	PC737 - Greek		
15	ISO8859-7 - Greek		on request
16	WPC1252 - Scandinavian		
17	PC866 - Cyrillic 2		
18	PC852 - Latin 2		
19	PC858 for Euro symbol in position 213		
20	FKU42 - Thai		
21	TIS11 - Thai		on request
26	TIS18 - Thai		on request
30	TCVN_3 - Vietnamese		on request
31	TCVN_3 - Vietnamese		on request
32	PC720 - Arabic		on request
33	WPC775 - Baltic Rim		on request

<codetable></codetable>		Coding table	
34	PC855 - Cyrillic		
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 - Farsi		
42	PC1118 - Lithuanian		on request
43	PC1119 - Lithuanian		on request
44	PC1125 - Ukrainian		
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 - Vietnamese		
53	KZ1048 - Kazakh		on request
255	Space page		



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# 10 CONSUMABLES

The following table shows the list of available consumables for device.

#### 673000000362

THERMAL PAPER ROLL Width = 60 mm  $\emptyset$  external = 80 mm  $\emptyset$  core = 13 mm







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# 11 ACCESSORIES

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

#### TG1260HIII CUT

#### 2630000000579

POWER SUPPLY CABLE Length = 1 m

#### 2650000000311

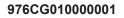
#### SERIAL CABLE RJ-DB9F Length = 1.5 m



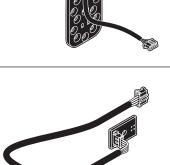


974CE01000001

PAPER ROLL HOLDER WITH LOW PAPER SENSOR



LOW PAPER SENSOR BOARD with connection cable (length = 230 mm)





#### TG2460HIII TRANSP, TG2460HIII CUT

#### 963GE02000071

POWER SUPPLY (for technical specifications, see paragraph 9.1)

#### 2610000000311

POWER CORD SCHUKO PLUG length = 2 m (see paragraph 9.5)

## 

#### 269000000005

ADAPTER CABLE FOR POWER SUPPLY length = 200 mm (see paragraph 9.5)

#### 2650000000311

SERIAL CABLE RJ-DB9F Length = 1.5 m

#### 974CE01000001

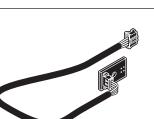
PAPER ROLL HOLDER WITH LOW PAPER SENSOR

#### 976CG01000001

LOW PAPER SENSOR BOARD with connection cable (length = 230 mm)







#### TG2460HIII EJC

#### 963GE02000071

POWER SUPPLY (for technical specifications, see paragraph 9.1)

#### 2610000000311

POWER CORD SCHUKO PLUG length = 2 m (see paragraph 9.5)

#### 269000000005

ADAPTER CABLE FOR POWER SUPPLY length = 200 mm (see paragraph 9.5)

#### 2650000000311

SERIAL CABLE RJ-DB9F Length = 1.5 m

974CG02000001

PAPER ROLL HOLDER WITH LOW PAPER SENSOR

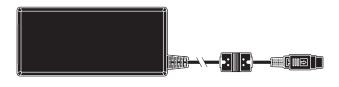
976CG01000001

LOW PAPER SENSOR BOARD with connection cable (length = 230 mm)











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# 12 TECHNICAL SERVICE

In case of failure, contact the technical service accessing the website <u>www.custom4u.it</u> and using the support tools on the homepage. It is advisable to keep the identification data of the product at hand.

The product code, the serial number and the hardware release number can be found on the product label (see paragraph 3.4). The firmware release number (SCODE) can be found:

- on the setup report (see paragraph 6.1)
- connecting the device to a PC and starting the "PrinterSet" tool (see paragraph 6.2)

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