EIDOS
a NOVEXX Solutions company

USER MANUAL

XTOXL4ie / XTOXL5ie / XTOXL6ie
XTOXL4ce / XTOXL5ce / XTOXL6ce
LH-RH versions
Thermal Transfer Overprinter (TTO) for large areas, configurable for intermittent or continuous operation

This manual contains the EC Declaration of Conformity

Contents

Information

NOTES ON THE CORRECT USE OF THE PRINTER

Read these notes together with Chapter "Safety notices" to ensure that the printer is used correctly.

Switching on the printer.
- If the printer has been left in a cold or excessively hot environment for a considerable time, wait at least 1 hour before switching it on to prevent humidity collecting on the internal circuits.
- After switching off, wait for a few seconds before switching on the printer again.

Use in particularly places
If the printer is going to be used in particularly humid conditions (for example cheese factories) the protection kits are necessary. Do not use it where there is a lot of oil, iron particles, or dust.

Disposal

The device may not be disposed of with household rubbish. This appliance is labelled in accordance with European Directive 2012/19/UE concerning used electrical and electronic appliances (waste electrical and electronic equipment - WEEE).
The guideline determines the framework for the return and recycling of used appliances as applicable throughout the EU. To return your used device, please use the return and collection systems available to you.

GENERAL NOTES

Validity of this manual and required compliance

This user manual refers exclusively to the electronic printer for thermal transfer to film named XTO. It is used for proper operation and adjustment of the printer.
The printer must be properly installed and configured to allow for operation and settings.
For information about installation and maintenance, see the Installation manual.
For technical questions not covered in this operating manual request a service technician.

Technical release
Software version: 2.9
Hardware version: 68XTOXL10A-LH, 68XTOXL10B-RH

These instructions have to be kept for future reference and must be available throughout the expected life of the product.

Liability and Copyright

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How information is represented

Explanation of symbols

> ⚠️ **WARNING!**
> A warning symbol refers to risks that can result in severe or fatal injuries! The text within this area contains instructions for preventing damage.
> ➔ Instructions must be followed without exception.

WARNING! The text within this area contains important recommendations as well as additional information or information to use the product correctly and efficiently.

SAFETY NOTICES

The printer is provided with a "EC Declaration of conformity" according to the **"Machinery Directive 2006/42/EC"** which includes the reference standards for "Electromagnetic Compatibility" and "Electrical Safety":

1. Do not start up the machine without first reading and implementing the prescriptions of the "USER MANUAL" and the present "SAFETY NOTICES".
2. The printing unit is equipped with a removable front cover [RM1] for changing the thermal ribbon, monitored by sensors [SENS_C1] and [SENS4] which switch off the power supply to the motors when the cover is open.
3. The printer must not be used in an explosive environment or be used to treat explosive materials.
4. The printer must not be used in irregular situations such as working without guards being correctly fitted to the machine; working with products other than those prescribed.
5. After 7 years of operation on an 8-hour daily shift, a complete overhaul of the product is recommended.

GENERAL PRECAUTIONS

1. Be careful when moving or carrying the printer. Wear safety shoes when installing or removing the printer from the packaging machine: dropping the printer may cause injury or property damage. The machine must NOT be used by the lid or the handle (See the "LIFTING AND TRANSPORT" Chapter of the Technical Manual RT824).
2. Do not open the printer during printing.
3. When cleaning the surface of the printer case, do not use the cloth that is soaked in thinner, trichloroethylene, benzine, ketone or similar chemicals.
4. Do not spill liquids or spray insecticide on the printer.
5. When printer trouble occurs, do not try to dissemble it. Instead, consult our service personnel.

DANGEROUS AREAS ON THE PRINTING UNIT
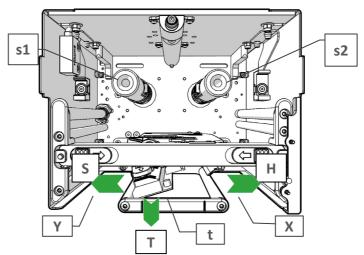
Dangerous areas - front and bottom view

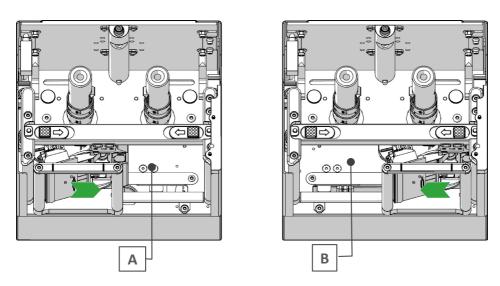*Figure 1: dangerous areas - front view (RH version shown)*

Figure 2: dangerous areas – bottom view (RH version shown)

Note:

if in intermittent mode, during the installation it is necessary to fix the printing plate and the printing unit so that the plate prevents finger access to the areas [A] and [B] where the carriage with the print head moves.

if in continuous mode, the zones [A] and [B] are potentially dangerous zones during the movement of the carriage to search for the position of the printing roller, which occurs exclusively at the start and after the release of an anomaly. The carriage does not move during the normal print cycle.
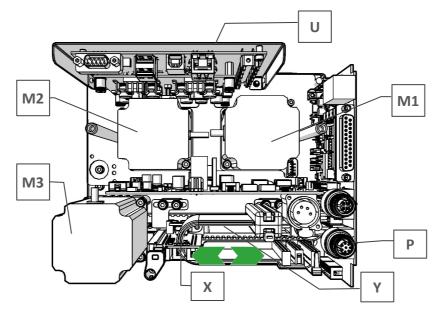
Dangerous areas - rear view

Figure 3: Dangerous areas - rear view
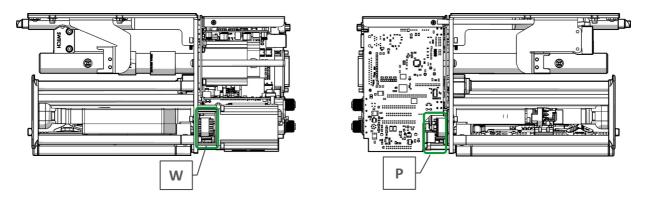
Dangerous areas on - side views

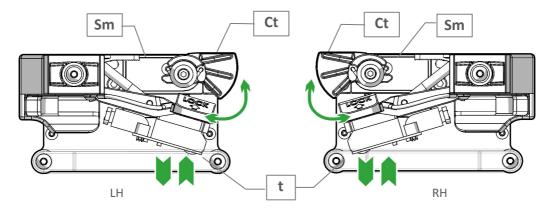*Figure 4: Dangerous areas - side views*

Dangerous areas - carriage.

Figure 5: Dangerous areas - carriage
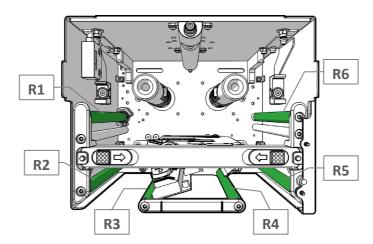
Passive (non-motorized) rotating rollers

Figure 6: free rollers

Definitions

H	Movement of the carriage during printing or positioning in the "Service" area. Danger of crushing the fingers
S	Movement of the carriage when returning to Home after printing or during a return from "Service". Danger of crushing the fingers.
A	Access from the lower right side: carriage moving to the right (home position return)
B	Access from the lower left side: carriage moving to the left (print)
T	Movement of the print head
s1	Rotation of the mandrel holding the ribbon release coil
s2	Rotation of the mandrel holding the ribbon rewinding coil
X	Movement of the carriage during printing or positioning in the "Service" area. Danger of crushing the fingers.
Y	Movement of the carriage when returning to Home after printing or during a return from "Service". Danger of crushing the fingers.
P	Rotation movement of the pulley and the belt for transmitting motion to the carriage
W	Rotation movement of the pulley and the belt for transmitting motion to the carriage
Ct	Print head movement servomotor cam
R1	Rubberized ribbon encoder roller
R2…6	Free rollers for ribbon guide

Hot parts highlight on XTO:		
Part temperatures were measured at ambient temperatures of 20 ° C and after the XTO ran at full cadence for 7 hours.		
M1	Ribbon unwinding motor body	T max. 45°C
M2	Ribbon rewinding motor body	T max. 50°C
M3	Carriage movement motor body	T max. 60°C
U	CPU Heatsink	T max. 50°C
t	Print head	T max. 60°C
sm	Print head motion servo motor body	T max. 55°C

PROTECTION ELEMENTS PROVIDED

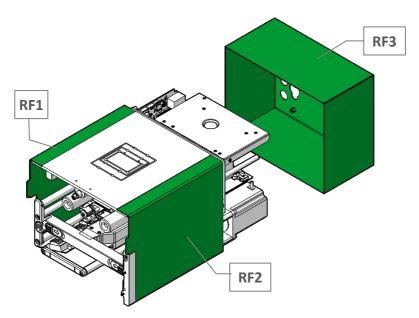**Covers fixed with screws**

Figure 7: fixed cover

> ⚠️ **WARNING!**
> Disconnect the 48Vdc power supply to the printer before removing the fixed guards [RF1], [RF2], [RF3]. The fixed guards must be removed only for extraordinary maintenance or repairs.

Movable interlocked guard [RM1]
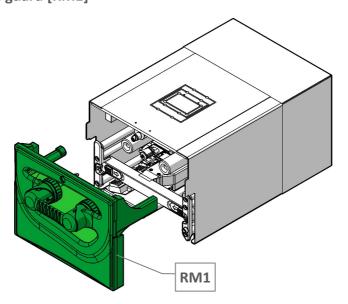
Figure 8: movable interlocked guard

Monitoring sensors movable guard [RM1] inserted
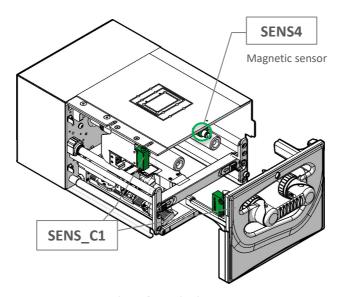
Figure 9: monitoring sensors

External safety contacts: SAFETY_A and SAFETY_B (SAF_EXT)
NOTE: If not used, they must be jumpered.
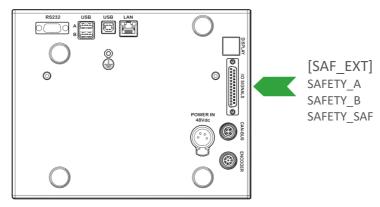
Figure 10: safety contacts

Magnets and magnets ring
To ensure good fastening of the movable guard [RM1] to the printing unit, magnets [mg1], [mg2] have been provided on the printer body and magnetic rings [am1], [am2] on the ribbon inserter.

Figure 11: magnets

Fixed guard but not solidly screwed to the Printing Unit (only for intermittent mode)
The Printing Plate [PP] cannot be strongly screwed to the Printing Unit [PU] because it is necessary to leave the passage to the packaging film [PF] to be printed.
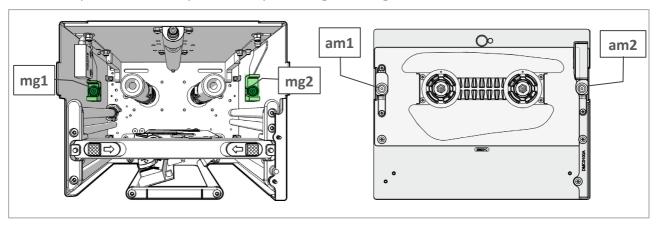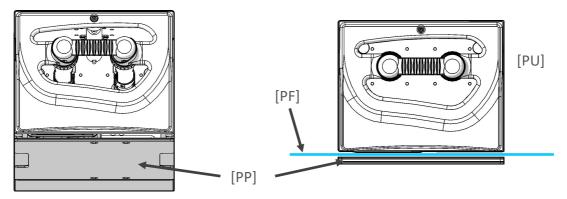

Figure 12: Printing plate

> **Note:**
> During the installation it is necessary to fix the printing plate [PP] and the printing unit [PU] so that the plate prevents finger access to the areas [A] and [B] (Figure 2) where the carriage with the print head moves.

On supports where there is an independent adjustment of the Printing Unit [PU] and the Printing Plate [PP], it is always necessary to maintain a relative position between the two parts that prevents access to dangerous areas. Also, to obtain a good print quality, the print head must be positioned at a distance from the edge of the rubber layer, not less than 5 mm and that the Printing Plate [PP] is always centred with respect to the Printing Unit [PU].
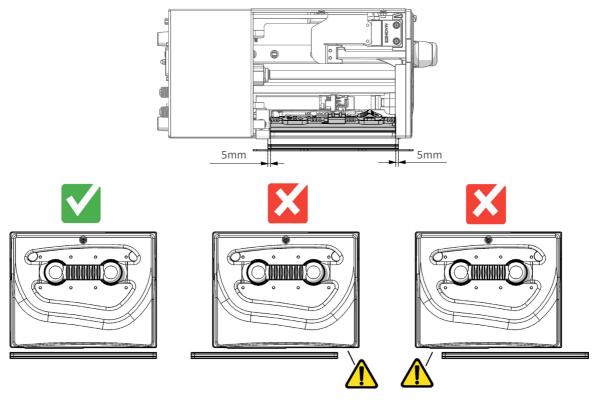
Figure 13: Printing plate and Print Unit position
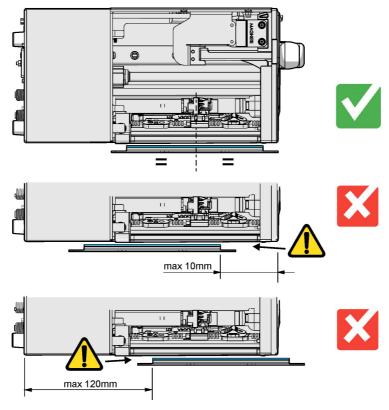
Figure 14: printing plate alignment
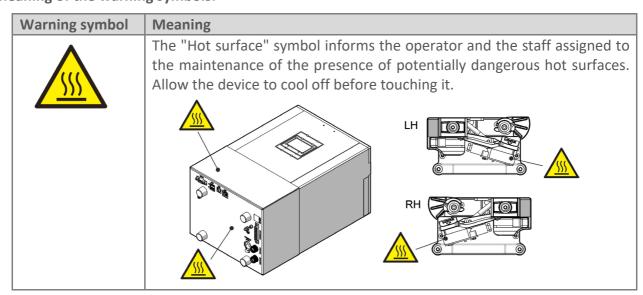
Warning symbols on the machine

> **CAUTION!**
> Warning symbols on the machine provide important information for the operating personnel.
> ➔ Do not remove warning symbols.
> ➔ Replace missing or illegible warning symbols.

Meaning of the warning symbols:

Warning symbol	Meaning
	The "Hot surface" symbol informs the operator and the staff assigned to the maintenance of the presence of potentially dangerous hot surfaces. Allow the device to cool off before touching it.

Product Description

FUNCTIONALITY

The XTO XL series is an electronic printer for "thermal transfer to film" that is able to write automatically and directly on the plastic or paper film used in packaging machines by means of an inked thermal ribbon.

The XTOXLnie "intermittent" codes the different production batches with variable text, barcodes and logos extremely flexibly, ensuring high quality and fast printing.
The packaging film must be stationary during printing.

XTOXLnce "continuous" prints synchronously with the speed of the packaging machine. Since the movement speed of the film is not constant, it is necessary to mount the "encoder" device on the printing roller which allows the synchronism between the printing speed and the speed of the packaging film.

In stand-alone operation, the label files created with the EASYCODE program installed in a PC can be loaded in the printer using the USB memory key.

PECULIARITY

- Interchangeable 4"/5"/6" printheads
- Quick and intuitive printhead change
- Does not use compressed air.
- Easy to service and repair; easy system of ribbon passage for changing operation.
- Programmable printing steps and format printing parameters loadable by the touch screen display (optional) or the P.C. through the use of a browser (Chrome, Edge ...).
- Improve unit uptime: not necessary to uninstall the print unit from the line.
- Modular assembly: mechanic + electronic.
- Easy and fast replacement of electronic components (no interference with mechanical parts).
- HMI (Human-Machine Interface) user friendly.
- Simply ribbon changing operation.
- Simply print plate cleaning and replacing directly on board the printer.
- Printer management (parameters, labels, diagnostic etc..) with local EIDOS Touch panel or remote PC with a Web Browser.

TECHNICAL FEATURES
- "Corner edge" print head with 12 dots/mm definition (300 DPI).
- Max speed printing on continuous model: 500 mm/s (feasibility check necessary).
- Max speed printing on intermittent model: 600 mm/s (feasibility check necessary).
- Power supply required: 48Vdc - 320W.
- Incorporated and optimized "Ribbon saving" function.
- Moving of the ribbon and the head carriage by means of two "step" motors.

CARRIAGE STROKE LENGTHS AND MACHINE TYPE

Models		Max. Print Area
intermittent	XTOXL4.ie	107 x 100 mm
	XTOXL5.ie	128 x 100 mm
	XTOXL6.ie	160 x 100 mm
continuous	XTOXL4.ce	107 x 990 mm
	XTOXL5.ce	128 x 990 mm
	XTOXL6.ce	160 x 990 mm

The printer can be supplied in 2 versions.

RIGHT HAND configuration: printing occurs when the carriage moves from left (home position) to right.

LEFT HAND configuration: printing occurs when the carriage moves from right (home position) to left.

The choice of configuration depends on the assembly on the production line.

The "XTOXL model" is shown on the red bar of the Help page.
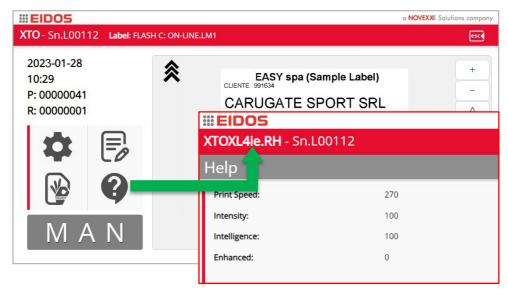
Figure 15: printer model

SYSTEM CONFIGURATIONS

7XTOXLnienn-1 /7XTOXLncenn-1

7XTOXLnienn-2 /7XTOXLncenn-2

7XTOXLnienn-3 /7XTOXLncenn-3

7XTOXLnienn-4 /7XTOXLncenn-4

n = 4, 5 or 6 (printhead type)
nn = LH or RH

Figure 16: system models
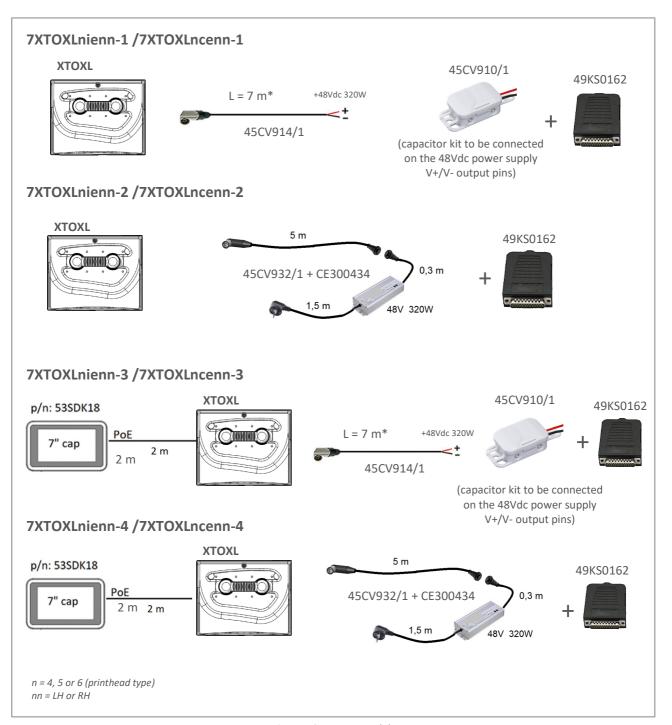
> ⚠ **WARNING!*** the 45CV914/1 cable is supplied 7 meters long, but during installation it must be cut as short as possible, to avoid the error signalling (E207) when closing the front cover. The cable must pass far from the cables that supply motors or electro valves, to avoid noises and spikes.

Note: The I/O SIGNALS Junction Box 49KS0162 is not intended for Industrial use.

IP Version: 7XTOXLnienn-1TR / 7XTOXLnienn-1IP
7XTOXLncenn-1TR / 7XTOXLncenn-1IP

XTO

L = 7 m*

48Vdc-320W

45CV914/1

45CV910/1

(capacitor kit to be connected
on the 48Vdc power supply
V+/V- output pins)

n = 4, 5 or 6 (printhead type)
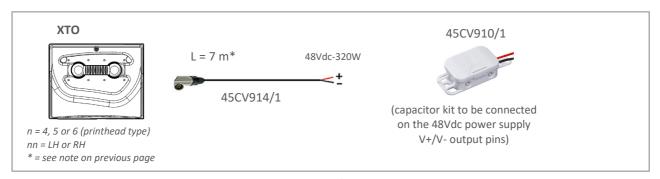nn = LH or RH
* = see note on previous page

Figure 17: TR/IP model

The TR printer version offers an IP30 protection degree, having electronic boards and print head tropicalized. An IP printer version is available, with IP33 protection degree. It is equipped with tropicalized electronic boards and print head, as well as a rear cover with adequate protection for the connectors.

The optional 53SDK20 touch panel offers IP55 protection. An IP version of the Touch Panel, code 53SDK21, is also available, to be installed on the electrical cabinet of the packaging machine (a hole is required).

Tropicalized
Led board

Tropicalized
print head

Tropicalized
CPU board

Tropicalized
Power board

Tropicalized
carriage boards

USB port

Tropicalized
ribbon encoder
board

Tropicalized
Criptomemory

Tropicalized
interface board

Touch panel
53SDK20

Rear cover
with IP33 protection and
angled connectors
(for -IP model only)
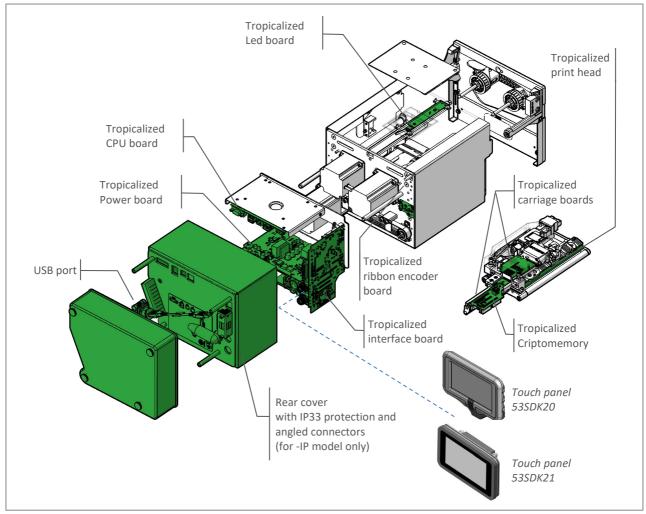
Touch panel
53SDK21

Figure 18: IP protected components

53SDK21 Touch panel
It is a 7 "TFT colour graphic display with capacitive touch connected via ethernet to the printer, from which it is also powered.
To fix the EIDOS Touch Panel to the packaging machine, a hole must be made, to be made as per the drawing below. Fixing is ensured by means of an IP55 protection class sealing gasket. The EIDOS Touch Panel is therefore also suitable for applications in humid or dusty environments.

Drilling template

[A] : min. 140 mm; max. 190 mm
[B] : min. 84 mm; max. 110 mm

Place the panel, centring it within the hole on the electrical cabinet of the packaging machine, by tightening the metal plate from the inner side, by means of the screws and the washers.
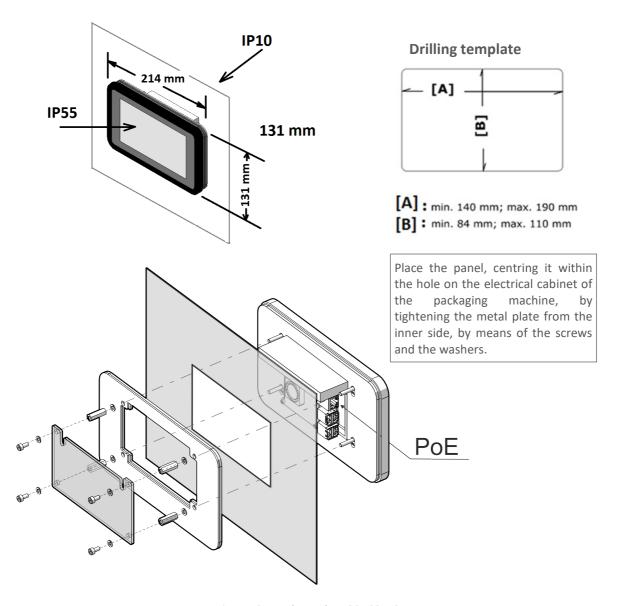
Figure 19: Touch Panel EIDOS 53SDK21

Note: The maximum thickness of the plate on which the "EIDOS Touch Panel" can be applied is 4.5 mm

REAR CONNECTION PANEL

> ⚠️ **WARNING!**
> This printer operates using 48Vdc – 320W voltage! Touching live electrical parts may expose you to hazardous electrical currents and may lead to burns.
> ➔ Make sure that the printer is switched off before connecting the power cable.
> ➔ Only connect the 48Vdc Power Supply to a grounded power socket fitted to authorised standards.

A. Connection to the 48Vdc-320W Power Supply
B. RS232 connection DSUB 9 pin female
C. USB-A/USB-B interface for label files exchange with USB memory stick (disk A, disk B)
D. USB device for direct connection to the PC (not enabled)
E. RJ45 LAN port (Ethernet 10/100/1000 defaut DHCP enabled) for customer network connection
F. DISPLAY POE port for EIDOS HMI or PC connection (printer IP: 10.0.0.1 not changeable)
G. Digital 24V I/O SIGNALS for print command, anomaly, external safety, page I/O... connections
H. CAN-BUS port for external devices (not managed)
I. Encoder port for packaging line speed detection (for XTOXLnce-continuous models)
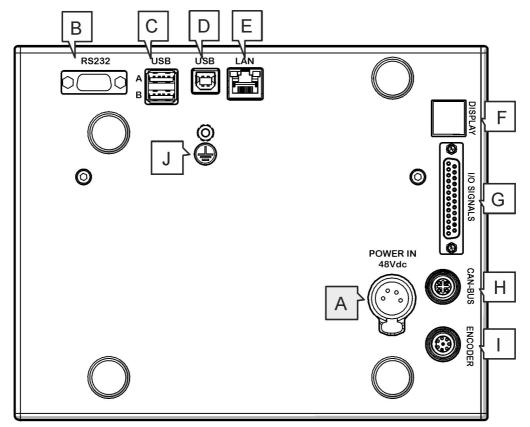J. Connection to ground

Figure 20: rear panel

For the cable connections refer to the Technical manual (RT824).

OPERATING PANEL

The operating panel is a comfortable external control panel for the XTOXL, which can be operated display devices. You can use the 59SDK18 device or a PC.

Prerequisites

- Display device, e.g. 59SDK18, Raspberry, tablet, PC
- Ethernet connection to the printer

The software program has been developed and tested for the following browsers:

- Chromium (Raspberry Pi)
- Chrome (18 and up)
- Firefox (35 and up)
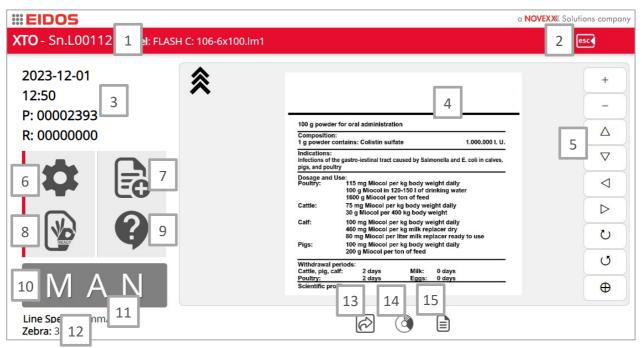- Safari (6 and up)
- Edge (44 and up)

Main Functions

Manual mode

Figure 21: Manual mode view

1	Printer serial number	2	ESC button to select another printer or remote-control panel
3	Printer data: Current Date, Current Time, Progressive number, Quantity number	4	Label view
5	Label Pan and zoom	6	Go to Parameters Setting menu
7	Load a new label (this icon appears if the label does not contain any operator data) Set new operator data (this icon appears if the label contains some operator data	8	Go to Ready
		9	Go to Info page
		10	Current Printer status
11	Line Speed: speed of the packaging line, detected by the encoder (continuous only)	12	Zebra or Nicelabel Emulation actives (200, 300,600dpi)

13	Shortcut (goes to the page containing the most used commands)	14	Go to Production Performance page view
		15	Shows label or LMT labels (1-2-3- 4)

Ready mode
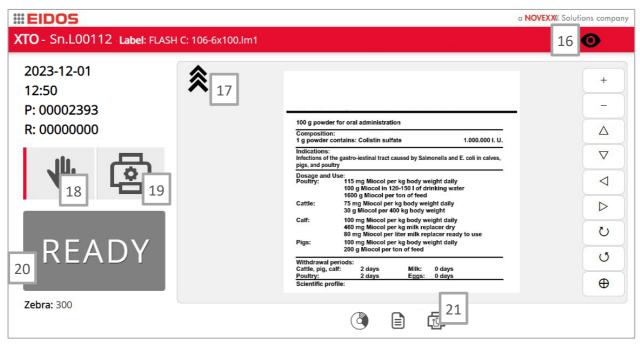
Figure 22: Ready mode view

16	Remote view status (the black eye appears when the user is logged with "view only" permission)	17	Print direction
		18	Go to Manual status
		19	Go to Printer parameters
20	Current Printer status	21	Shows the status of I/O parameters

Info page [9]

This page contains the information about all the parameters currently set relating to printer, label, counters, fw and sw versions, communication parameters ...

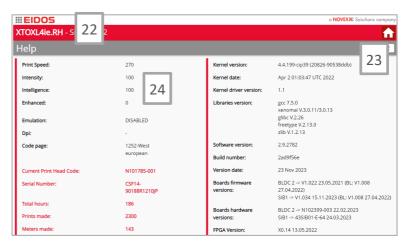| 22	Model of the printer
23	Go to Communication parameters info
24	Parameters about printer and label loaded

Figure 23: Information page

Production Performance page view [13]

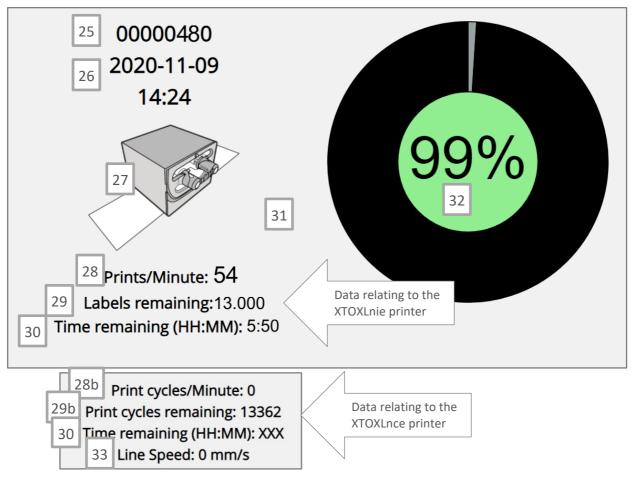In this page, the print job in progress can be monitored.

Figure 24: production view

25	Print counter	26	Current date and time
27	The animation runs when a print command is received (it is not a real time view)	28	28a- Print rate: number of prints per minute. 28b - printing cycles: number of prints per minute.
29 a-b	Number of labels (cycles) that can still be printed (performed) with available ribbon, referred to the current print rate	30	Time remaining before finishing the ribbon, referred to the current print rate
31	Click in any part of anywhere in the window to come back in the MAN (or READY) view	32	Percentage of remaining ribbon (Green = OK, Yellow = Reserve status when time remaining is less than the "Ribbon Warning 1" threshold. Red = the ribbon is close to finish. When time remaining is less than the "Ribbon Warning 2" threshold)
33	Speed of the packaging line, detected by the encoder		

BASIC SETTINGS

Settings in the Parameter **Menu** ⚙

Level 0 allows the operator to set the parameters necessary for printing the label.
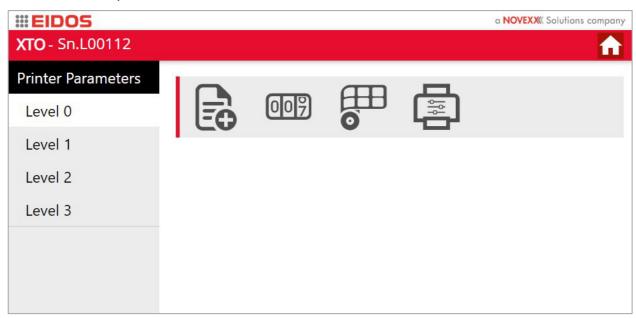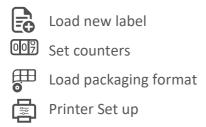This level is always accessible.

Figure 25: level 0 parameters

Load new label

Set counters

Load packaging format

Printer Set up

Password protection

Password protection allows different levels of access to the various operating features of the printer. The password can be set for each user, allowing access to the various levels; Operator (1) and Expert Technician (2). The third level is for the Technical Assistance technician.

The User level (0) is not password protected and allows the operations necessary for the main printing operations.

> At the first access to the menu all levels are freely accessible.
> For greater security, it is recommended to make them accessible by password.
> → How to set the password is shown in Chapter "Operation -Setting and Monitoring" of this Manual.
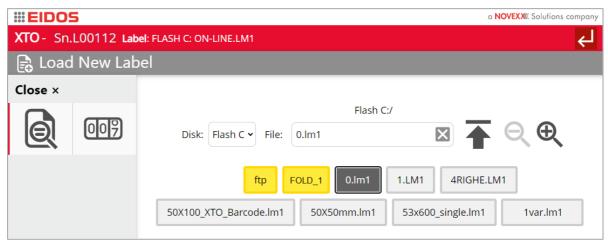
Load new label

Figure 26: load label

Select the drive and load new label.

You can use an FTP client (such as WinSCP) to copy the desired layout files to the "FLASH C:ftp" subdirectory.

The settings to connect to XTO with FTP are:

IP: the IP of the XTO

Port: 21

User: ftp

Password: Eido5ftp!

Figure 27: enlarge the buttons

On each page containing files to be uploaded/copied/deleted/restored or archived, it is now possible to vary the display size of the file names (up to 8 levels of magnification), by two buttons.

You can see the preview of the label by clicking on the button in the left menu.

Figure 28: label preview

The zoom and pan function are enabled. It is also possible to rotate the label on the display (attention: just the image on the video, not the direction of printing).

By clicking on the second button you can set the counters.

Figure 29: set counters

This page is also accessible by the same icon on the Parameters menu.
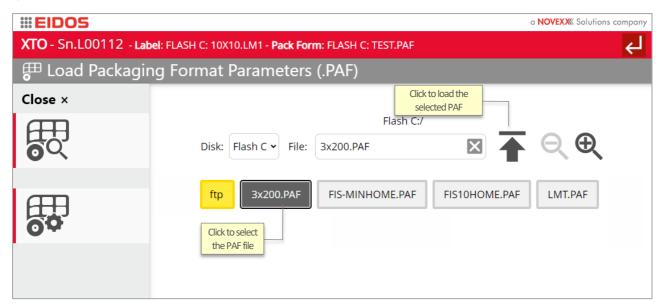
Load Packaging format

Figure 30: load PAF parameters

Select the drive and load the Packaging format (PAF) file. The text file with .PAF extension contains all the previously saved packaging format parameters. Every time you load a .PAF file you update the printer parameters. This function helps the operator to avoid incorrect printer settings.

By clicking on the [icon] button is it possible to view the current PAF parameter.

> **NOTE:** you can view the Paf without load it selecting the PAF file and clicking the icon.

By clicking on the [icon] button is it possible to set the current PAF parameters or create a new.

> **NOTE:** you can modify a Paf without load it selecting the PAF file and clicking the icon. This can be useful if you want to edit different files at the same time and load them later or save them for use on other printers.

The printer can print labels on multi tracks packaging film. To do this you must set how many tracks must be printed and the pitch between each printed image on film.
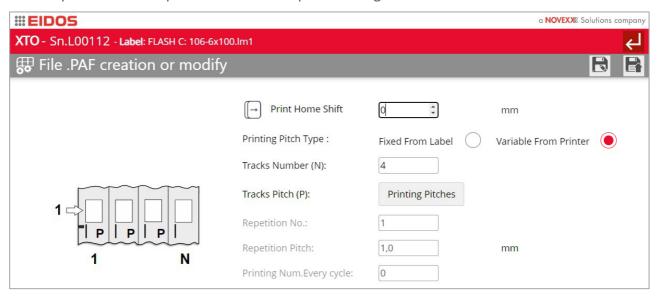

Figure 31: PAF creation

Print Home shift: increase this parameter to get a shift of the printed image in the direction of the carriage movement.

Printing Pitch Type

Fixed From Label: the tracks pitch "P" and the print number "N" are stored in the label file. Any track has the same pitch.

Variable From Printer: the printing pitch for each track and the number of tracks "N" are set as printer parameters.

Tracks Number (N): this parameter defines the number of tracks "N" to be printed.

Tracks Pitch (P) - Printing Pitches button: between each track you can set different printing pitches (P1, P2, P3...)

Figure 32: printing pitches

Repetition No.: this parameter can be set only when an .LMT label file is loaded. The .LMT label file is a multi-text label file that can contain internally till 4 different labels. This parameter sets how many times you want to repeat, in printing, the .LMT file on the packaging film.

Repetition Pitch: in case of LMT repetition (Repetition No>1) this parameter sets the repetition pitch as the distance between the start of the first label on the first LMT printed file and the start of the first label on the next LMT printed file.

Printing Num. Every Cycle: it sets a limit to the maximum number of labels printed in case of LMT repetition. For example: you have a .LMT file of 4 labels and you want to repeat it twice but you need only 7 labels instead of 8 (4 x 2); in this case you must set this parameter = 7.
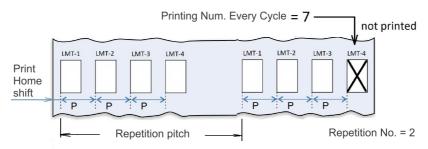

Figure 33: LMT file with 4 text; Repetition No>1 and Print Num. Every Cycle =7
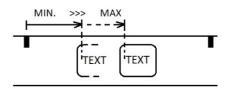
Printer Setup

This menu allows adjustment of the basic parameters; to make a fine adjustment without the risk of compromising the operation of the printer, only 10% adjustment of the set value is allowed. The value can be freely set by accessing the Level 1 "Printer Parameters" menu.

Parameter description

> **Note:** by clicking on the button ❓ you can view the help of each parameter.
> By clicking on the pencil symbol ✏ it will be possible to make a fine adjustment of the value.

PRINT HOME SHIFT *(for XTOXLce)*

This parameter sets a shift of the print start position. The minimum "Print Home Shift" value is calculated from the parameter settings of "Packaging Line speed", "Max Allowed Printing Slip Speed", "TPH ON" (accessible with level 1 password) and the parameters "XTOc Max Print Acceleration" and "XTOc print jerk" (accessible with level 3 password).

To have the max print rate (in terms of prints/minute), set the "Print Home Shift" at minimum value allowed. The print position on the packaging film can be delayed in two ways:

a) Increasing the "Print Home Shift" value but the print rate will be reduced

b) To delay the STA print command

PRINT HOME SHIFT distance is now allowed up to 2000 mm (2 meters) in case the STA print command is set to "level" (low or high) on the "Digital I/O Setting and Management" page.

The value is 200 mm when the option of STA print command is set to "front" .

Warning: if the "Print Home Shift" is too much long the XTOc printer will not be able to start the next cycle because the current cycle is still running. In this case the error E17 message appears if the check is activated, or the next print command is not executed.
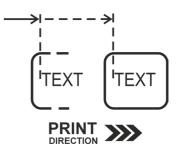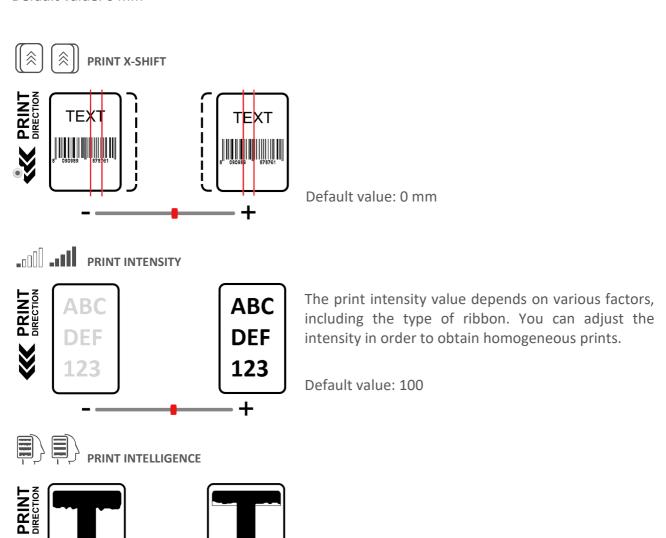
PRINT HOME SHIFT *(for XTOXLnie)*

The "Print Home Shift" parameter allows to shift the print position start in direction of the carriage movement during print.

"Print Home Shift" = 0 means that the print starts from carriage Home position. Increasing the "Print Home Shift" the max print area size in Y length will be reduced because part of the carriage stroke length is lost to shift the label start position.

Default value: 0 mm

PRINT X-SHIFT

Default value: 0 mm

PRINT INTENSITY

The print intensity value depends on various factors, including the type of ribbon. You can adjust the intensity in order to obtain homogeneous prints.

Default value: 100

PRINT INTELLIGENCE

Default value: 100

Operation

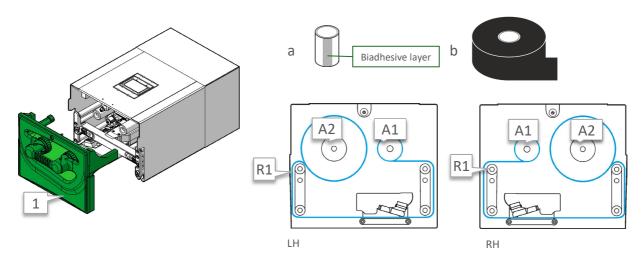## INSERTING CONSUMABLES

How to load the thermal ribbon

Figure 34: ribbon passage

How to operate

- Remove the front cover [1]
- Remove the used ribbon.
- Clean the rubberized ribbon roller [R1] using alcohol to have a good grip with the ribbon.
- Insert the empty cardboard core [a] with biadhesive layer on shaft [A1] and the ribbon core [b] on shaft [A2].
- Unwind the ribbon from the full core and pass it around the ribbons, as shown in figure.
- Wrap the ribbon tail around the empty core to have a grip with the biadhesive layer. If there is no bi-adhesive on the empty core, fix the ribbon to the core using added adhesive.
- Insert the front cover [1].
- Wait the automatic ribbon feed operation to extend the thermal ribbon and to avoid wrinkles.
- Set the printer READY.
- Restart the packaging line.

> **NOTE**: for 110mm and 130mm wide ribbon it is necessary to insert ring spacers (code 49KS0201 and 49KS0200) on the shafts. XTOXL requests to have ribbon centered to the print head.

The thermal ribbon reserve condition is reported on the basis of the diameter of the ribbon recovery reel and is always visible on the page "Production view" of the Printer software (see Chapter "Product Description - OPERATING PANEL" of this manual).

> To ensure good print, always clean the print head before fitting a new ribbon to the printer.

THE THERMAL RIBBONS

Smart-Black - XTOXL series ribbon

The XTOXL ribbons selection include two different wax-resin products (standard and special) available in 1200m length and two different resin alternatives (standard and special) available in 1000m length. Moreover, is possible to print on craft films by a special ribbon.

All the ribbons are winded on 1 inch plastic core, ink IN.

Peculiar characteristics of the Eidos Smart-Black ribbon line are: high quality and high speed of printing, maximum ribbon length, resistance to freezing and humidity, resistance to scratching, heat resistance.

Using EIDOS ribbons is recommended for the protection and durability of the print head. The EIDOS ribbons allow you to set "Intensity" of printing and "intelligence" to default values = 100. The use of non-EIDOS ribbons with intensity values >> 100 and intelligence << 100 risks damaging the print head in a short time.

Technical data

code	3xNE51y	3xNE52y	3xNE53y	3xNE54y	3xNE50y
Ink	wax/resin	wax/resin Premium	resin	resin	wax/resin
Speed max	600 (mm/s)	600 (mm/s)	500 (mm/s)	300 (mm/s)	600 (mm/s)
Print intelligence	**100**	**100**	**100-50**	**120**	**100**
Enhanced mode	**NO**	**NO**	**NO**	**YES**	**NO**
Resistance to smudge	**3**	**4**	**5**	**5**	**3**
Resistance to scratch	**3**	**5**	**5**	**5**	**3**
Resistance to freezing	**5**	**5**	**5**	**5**	**5**
Resistance to heat	**2**	**3**	**4**	**5**	**2**
Resistance to solvents	**2**	**3**	**4**	**5**	**2**
Flexible packaging PP	√	√	√	√	
Aluminium (coffee, pet food, powder protein)			√	√	
Resistance to sterilization and boiling			√	√	
Craft paper					√
Food approval	√	√	√	√	√

1= not enough   2=sufficient   3= discrete   4=good   5=excellent

x = 7 Length 1000 or 1200 m according to the model; x = 8 Length 600 m (the supply is subject to technical evaluation by EIDOS).

y = 0 Width 110 mm; y = D Width 130 mm; y = 3 Width 165mm.

The rolls of thermal ribbon must be bought from the printer supplier in order to have the best possible guarantee of operating efficiency.

Using uncertified ribbons makes malfunctions highly likely and may greatly increase damage to the thermal head or cause dragging problems that are due to dirtying of the ribbon guide rolls.

⚠ Make sure you use the right thermal ribbon for each surface! Contact the supplier for tests or certification. The printer's warranty does not extend to local damage to the head in the form of mechanical nicks but only to normal uniform wear along the entire head.

PRINTING

Description of operation

(Refer to Chapter "Product Description – Operating Panel" of this manual.)
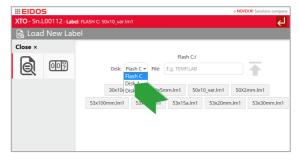Switch on the printer and wait for the programme loading phase.
The printer can receive the commands from the production line if it is in READY (automatic) status.

Load the label to be printed.
Put the printer in MAN (manual) mode and click to the Load new label ⊞ /Operator data ⊞ button.

Select the desired label, choosing it from the disk [flash CPU disk C] or from disks [A/B] (USB memory stick).

Set any consecutive number and the variable data, using the keyboard of the PC or HMI.

On the display, check that the label and data entries are correct. The zoom function is available: on the right side of the screen, you can drag the label up and down and zoom it in and out.

Figure 35: loading a label

Starting and Monitoring a Print Job

The printer starts to print, as soon as the following conditions are met:

- The display shows the "READY" screen
- An STA digital input pulse is received

If the printer shows the "MAN" screen:

➔ Press the [key icon] key, to toggle to the "READY" screen and to start printing.

CREATION AND SENDING OF THE LABEL WITH EASYCODE

The EIDOS EASYCODE program permits immediate creation of the labels including texts, bar-codes, lines, boxes and images and also by importing variable data from the customer's Data Base. The label generated can be sent or copied to the printer.

The variable data can be entered from keyboard, recalled from a data-base at the time of printing, introduced by the operator on the printer and managed by the customer's program based on the E-LIB Eidos tool - for more information refer to the EASYCODE software manual -.

Label copy from USB disk to XTOXL flash disk C:

With the EASYCODE software Liv.1 (Demo version) you can create, modify, save labels and copy them to EIDOS printers via USB Memory or you can transfer the files via ethernet connection to the XTOXL printer memory (C. disk). The label file will be loaded manually from XTOXL disk.

How to operate

➔ Create the label layout (.LM1 file) using Easycode (version 1st level is sufficient).

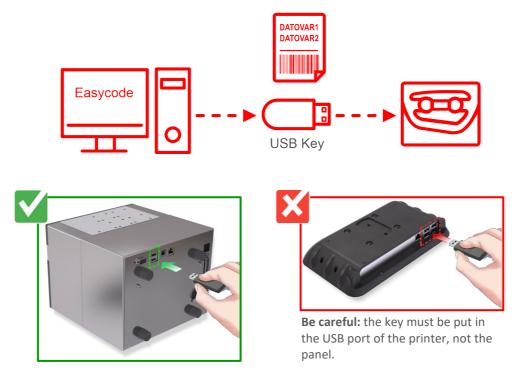➔ Copy the label layout in the Disk C: of the printer via USB key.

Figure 36: sending label via USB key

Label transmission to XTOXL with LAN connection

With the EASYCODE software license "R" version, you can create, modify, save labels and send them to EIDOS and no-EIDOS printers by means of their Windows driver via LAN network connection.

How to operate
➜ Create the label layout (.LM1 file) using Easycode (version R with license is required).
➜ Transferring Label Layout using Easycode to the printer via LAN network connection. You can manage the sending of labels to up to 4 printers.

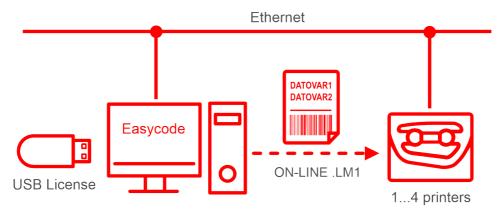*Figure 37: sending label by LAN network connection*

Transmission of label with variable data from database

With EASYCODE software "DATABASE" license version, you can create, modify, save labels and send them to EIDOS and no-EIDOS printers by means of their Windows driver via LAN network connection and manage variable data from database (Microsoft Access .mdb and .accdb database files only).

How to operate
➜ Create the labels layout using Easycode.
➜ Type the variable data from the keyboard or insert them by the database managed by EASYCODE. The label can contain progressive numbers or automatic data (date, time, deadline etc) elaborated by the printer.
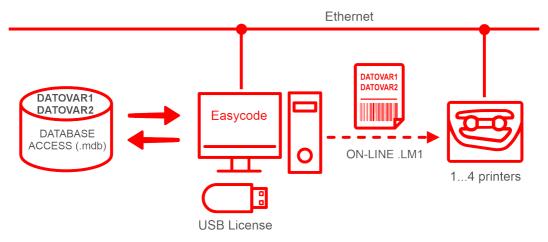➜ Sending the compiled label to the printer via LAN network connection.

Figure 38: label with variable data from database

HOW TO STORE LABEL FILES (.LM1)

Insert the memory key containing the label .LM1 files.
Put the printer in MANUAL mode and enter the Parameter Setting. ⚙

- Click on "File management" button 📁
- Click on "Copy files". 📋⇄🖨
- Select the origin and destination of the copy, click on "Copy" and wait for command to be run.

The File management menu is only accessible with password, if the menu levels have been assigned to different users.
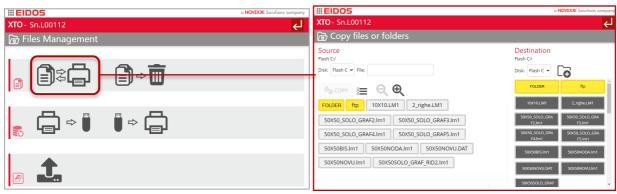

Figure 39: copy files or folders

HOW TO BACK UP

Insert the memory key on which to store the data.
Put the printer in MANUAL mode and enter the Parameter Setting. ⚙

- Click on "File management" button. 📁
- Click on "Back up" 🖨⇒🔑 .

IMPORTANT!
Back up the data after printer installation is complete. Repeat the backup procedure periodically, in any case after making substantial changes to the parameters and, if possible, in case of replacement of the Electronic Unit. The backup file name will be similar to: bkxtoi_L00112.zip where "L00112" is the printer serial number.
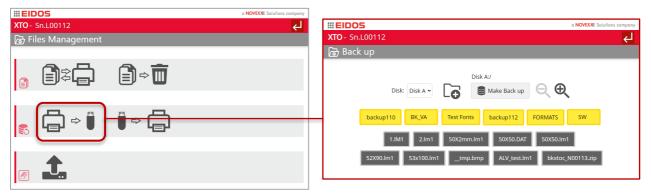

Figure 40: back up

SETTING AND MONITORING

⚙ Printer Parameters: general information

From the main menu, with the printer in the MAN position, you access the parameter page, where you can adjust the printer.
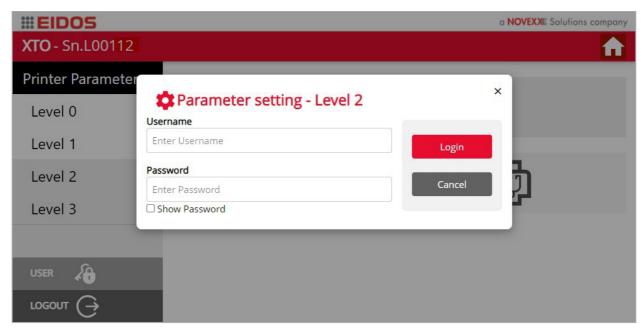

Figure 41: Login

To access the desired level, select the level (from 0 to 3) on the left of the screen, enter username and password and press Login. The page for the selected level will appear on the display.
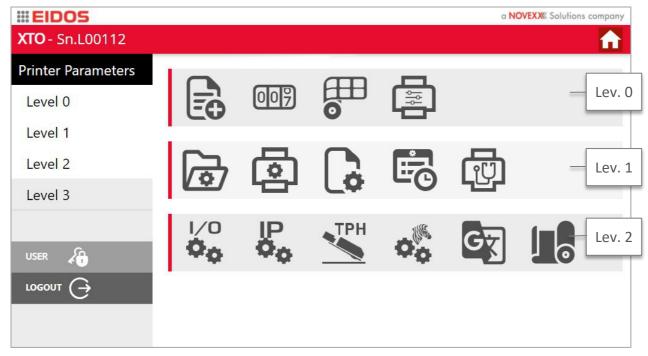

Figure 42: Printer parameter page – Level 2

Add user and password

At the first installation, access to levels 1 and 2 will be password-free. If you want to restrict access to users, you must set a level 2 password. Afterwards, only by logging in with this password, it will be possible to create additional level 1 and 2 passwords for the desired users.

> **IMPORTANT**!
> The level 3 password is accessible only by specialized technicians and / or by the technical assistance service.
> ➔ For any information contact technical support.

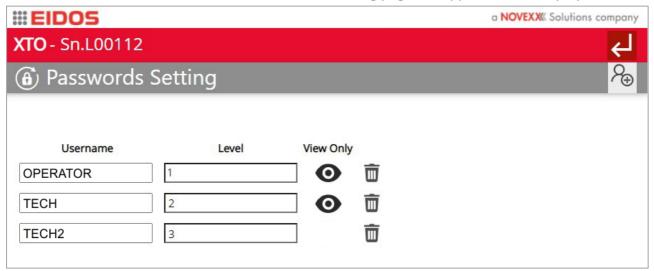Click on the button USER, on the left menu: the following page will appear on the display.

Figure 43: password setting

In this page the user data can be cancelled and a new user can be added by clicking on the button. When adding a new user, you must enter the username, password, level to which he has access and also decide if he can only view the pages or modify the parameters.
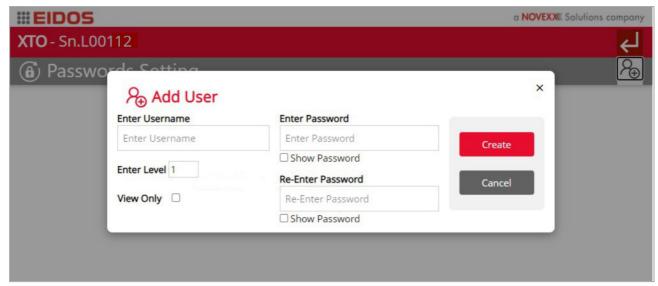

Figure 44: add user name

Printer Parameters: added with Level 1

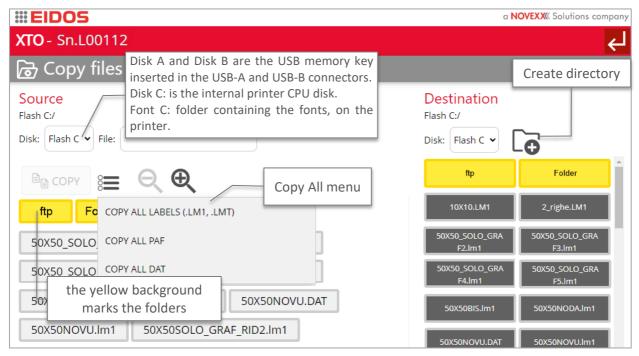**File management**

Copy files or folders

Figure 45: copy files

| **NOTE.** It is also possible to copy and/or delete fonts, in addition to files and folders
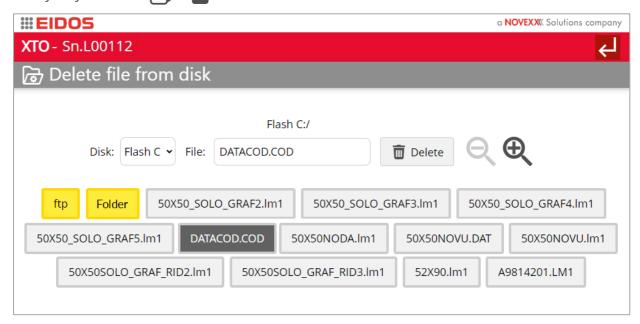
Delete files from disk
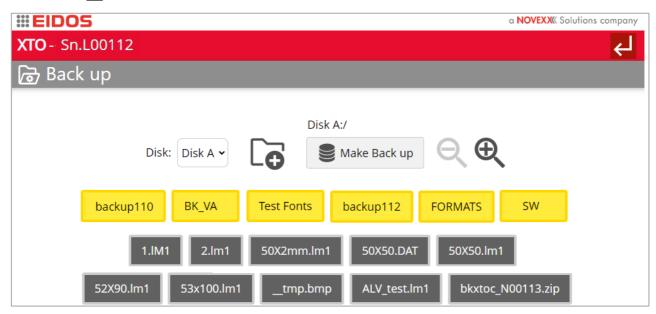

Figure 46: delete files

Back up

Figure 47: back up

Insert the memory card on which to store the data and click on "Make Back up" button.
Repeat the back-up procedure periodically and in any case, after making substantial changes to the parameters

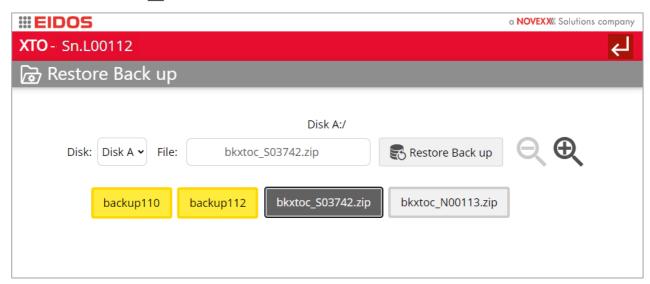**Note:** folders are highlighted in yellow. New folder can be created by the button 📁.

Restore Backup

Figure 48: restore back up

Insert the memory card in which the data was saved and click on "Restore Back up" button.

Update File System

Upgrade Procedure

→ Copy the pxtox_x.x.xxxx.tar file containing the software update onto the USB key and insert it into the USB port of the printer.

> **Note:**
> Do not unpack the file but use it as a .tar. The file can be copied to the root directory or to a subfolder.

WARNING!
The USB key must be inserted into the USB port of the printer, not the touch panel

How to operate:

→ Press the "Program upgrade" icon
→ Select the disk to update from (e.g.: Disk A:) [1]
→ Click on the file pxtox_ x.x.xxxx.tar containing the new software [2]
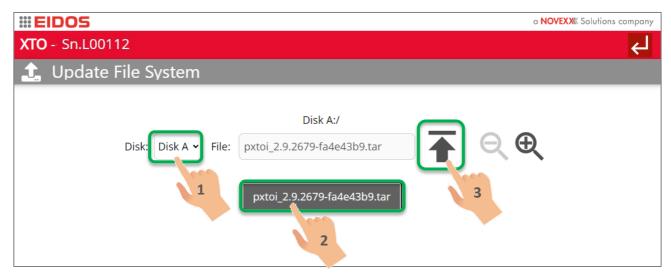→ Click on the icon "Update" [3]

Figure 49: update file system

→ Answer "YES" to the question

Update File System
Are you sure to load pxtoi_2.9.2679-fa4e43b9.tar?

No   Yes

Wait a few minutes. At the end of the operation the printer will automatically restart with the new software aboard.

→ If the update was not carried out correctly, the error is indicated with the X icon in a red field. In this case repeat the operation by clicking again on the "Update" icon.

Disk A:/

Disk: Disk A   File: Reboot

The success of the operation will be indicated by a check mark on a green field.

Verification of the update

→ From the MAN page of the XTO software, press the "Help ❓ " icon and verify that the software version indicated is the one you want.

Set Printer Parameters

This menu allows adjustment of the basic parameters. after making the desired adjustments, press the save button 💾 to make them effective.
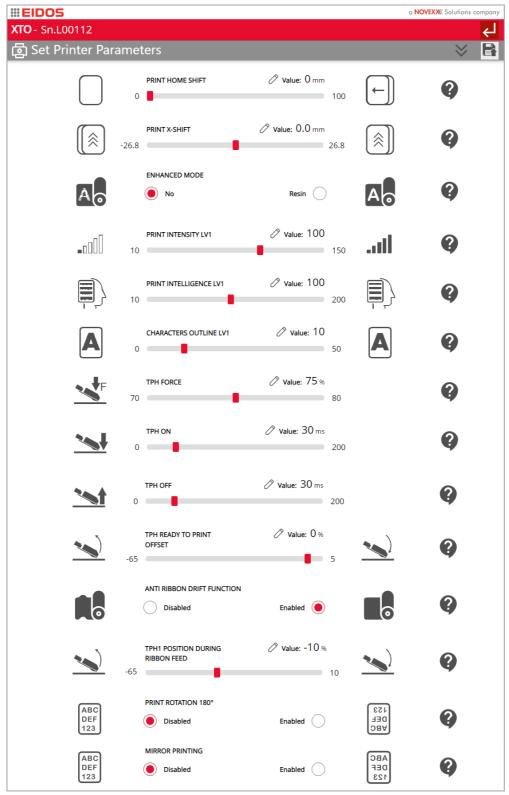
Printer parameters in intermittent mode

Figure 50: Printer Parameter - intermittent mode, part A

ACCEPT PRINT AREA OVERFLOW	● Disabled	Enabled ○	❓
PRINT SPEED LV1	80 ▬▬●▬▬ 600	✏ Value: 300 mm/s	❓
RETURN SPEED LV1	200 ▬●▬▬ 800	✏ Value: 600 mm/s	❓
ENABLE X-SAVE RIBBON	● Disabled	Enabled ○	❓
RIBBON SAVING SETUP	0.0 ▬▬●▬▬ 5.0	✏ Value: 2.0 mm	❓
PRINTING DRIFT'S WIDTH	0.0 ●▬▬▬▬ 106.7	✏ Value: 0.0 mm	❓
RIBBON WARNING 1	5 ▬▬▬●▬ 20	✏ Value: 15 min	❓
RIBBON WARNING 2	1 ▬▬●▬▬ 10	✏ Value: 5 min	❓
RIBBON RELEASE FORCE	0.5 ▬▬●▬ 3.0	✏ Value: 2.6 N	❓
RIBBON RELAX DURING PRINTING	0 ●▬▬▬▬ 30	✏ Value: 0 ‰	❓
RIBBON RELAX START	0 ▬▬●▬▬ 50	✏ Value: 30 mm	❓
PRINT IN THE SPECIFIC CODEPAGE	● Disabled	Enabled ○	❓

Codepage Selection:

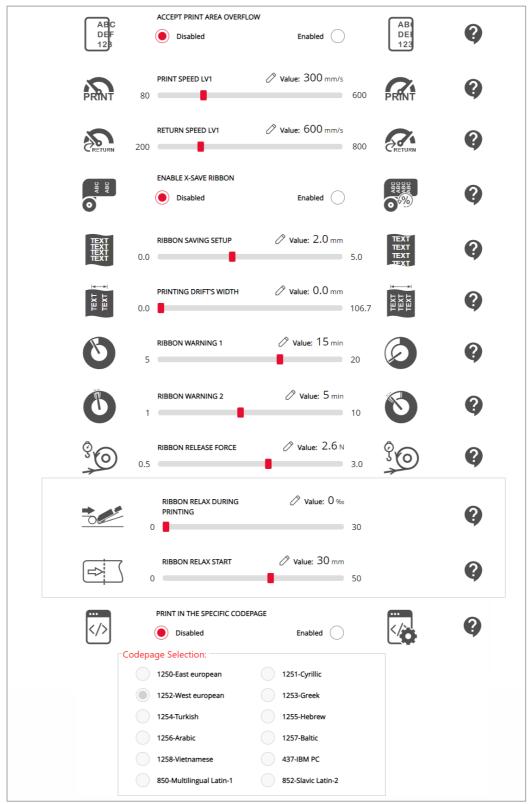|	
○ 1250-East european	○ 1251-Cyrillic
● 1252-West european	○ 1253-Greek
○ 1254-Turkish	○ 1255-Hebrew
○ 1256-Arabic	○ 1257-Baltic
○ 1258-Vietnamese	○ 437-IBM PC
○ 850-Multilingual Latin-1	○ 852-Slavic Latin-2

Figure 51: Printer parameter – intermittent mode, part B

NOTE!
The description of the parameters is in the Technical Manual (RT824) and, by clicking on the ❓ button you can view the help of each parameter.
➔ by clicking on the pencil symbol it ✏ will be possible to set the value step by step as an alternative to the adjustment bar.
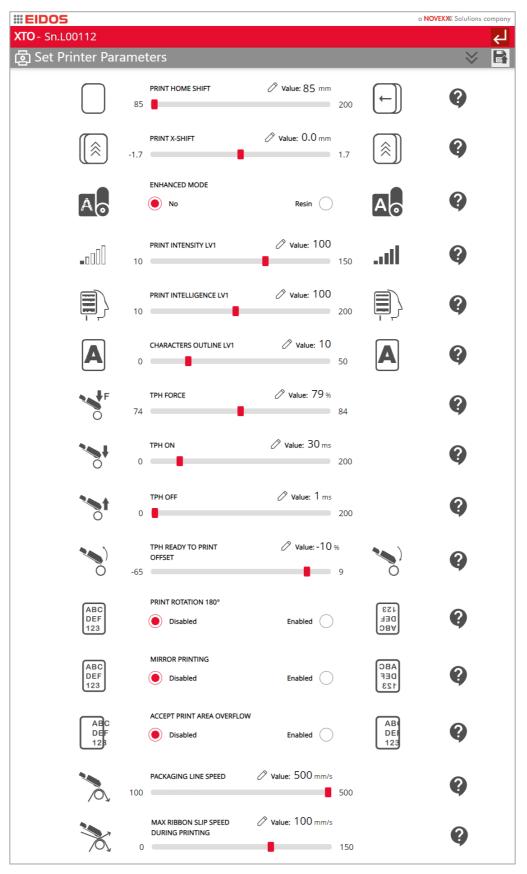
Printer parameters in continuous mode

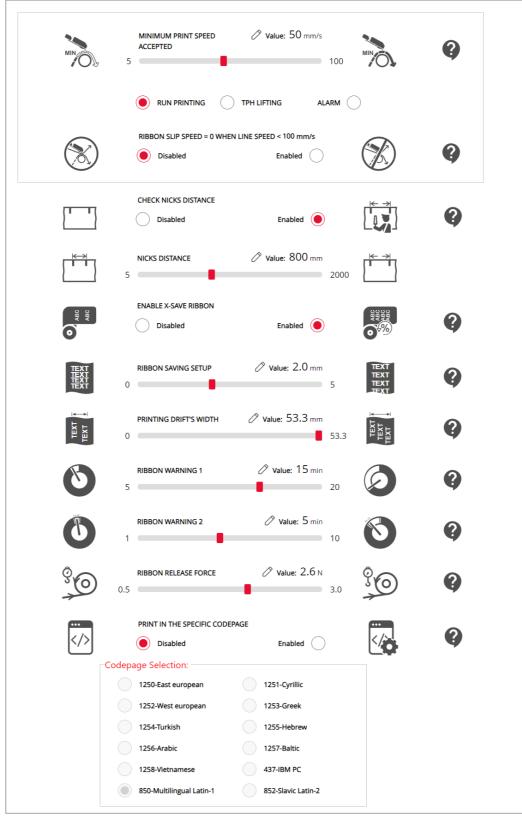*Figure 52: Printer Parameter - continuous mode, part A*

MINIMUM PRINT SPEED ACCEPTED ✏ Value: 50 mm/s

5 ———————————————— 100

○ RUN PRINTING   ○ TPH LIFTING   ALARM ○

RIBBON SLIP SPEED = 0 WHEN LINE SPEED < 100 mm/s
● Disabled   Enabled ○

CHECK NICKS DISTANCE
○ Disabled   Enabled ●

NICKS DISTANCE ✏ Value: 800 mm
5 ———————————————— 2000

ENABLE X-SAVE RIBBON
○ Disabled   Enabled ●

RIBBON SAVING SETUP ✏ Value: 2.0 mm
0 ———————————————— 5

PRINTING DRIFT'S WIDTH ✏ Value: 53.3 mm
0 ———————————————— 53.3

RIBBON WARNING 1 ✏ Value: 15 min
5 ———————————————— 20

RIBBON WARNING 2 ✏ Value: 5 min
1 ———————————————— 10

RIBBON RELEASE FORCE ✏ Value: 2.6 N
0.5 ———————————————— 3.0

PRINT IN THE SPECIFIC CODEPAGE
● Disabled   Enabled ○

Codepage Selection:

○ 1250-East european	○ 1251-Cyrillic
○ 1252-West european	○ 1253-Greek
○ 1254-Turkish	○ 1255-Hebrew
○ 1256-Arabic	○ 1257-Baltic
○ 1258-Vietnamese	○ 437-IBM PC
● 850-Multilingual Latin-1	○ 852-Slavic Latin-2

Figure 53: Printer Parameter - continuous mode, part B

NOTE!
The description of the parameters is in the Technical Manual (RT824) and, by clicking on the ❓ button you can view the help of each parameter.

➔ by clicking on the pencil symbol it ✏ will be possible to set the value step by step as an alternative to the adjustment bar.

⚙ Label

The label parameters are automatically updated in the printer every time a new .LM1 file is loaded. These label dimensions and parameters must be set (with EASYCODE program) during the label creation. The label .LM1 file parameters in this page are view only.
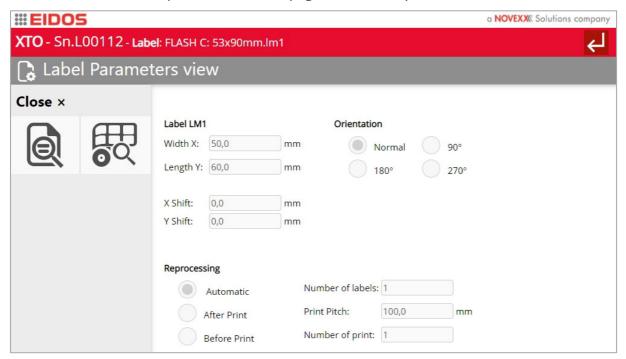

Figure 54: label parameters view

- *Width X:* label dimensions in the parallel direction to the print head dots line.
- *Length Y:* label length in printing and carriage movement direction.
- *X Shift:* the shift of the image along the dot line direction.
- *Y Shift:* the shift of the image along the carriage movement direction.
Reprocessing
Automatic: date or time are updated automatically every minute or texts containing progressive numbering are updated without increasing the cycle time.
After Print: the label is re-processed at the end of print while the carriage is returning in home position.
Before Print: this option will delay a little bit the print command execution; recommended for labels with barcodes that contain date and time variables to be updated before every printing.
Number of labels: number of prints each cycle for multi-tracks printing.
Print Pitch: distance between the print start points for two consecutive labels.
Number of print: number of prints.
You can see the preview of the label by clicking on the button 🔍 in the left menu.

By clicking on the button 🔍 is it possible to view the current PAF parameter (see chapter "Product Description > Basic settings" of this manual).

Set Date/Time
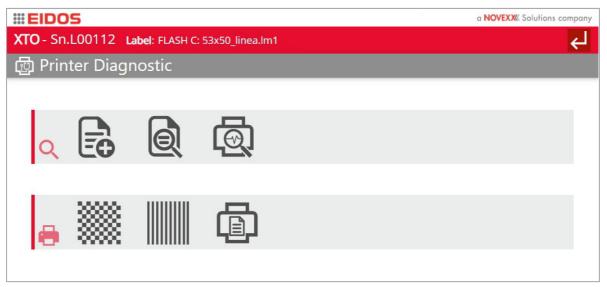

Figure 55: calendar

Printer diagnostic

Figure 56: diagnostic menu

The buttons on the first grey strip allow you to view and adjust the diagnostic parameters.

Load new label: a new label is loaded

Label preview: the label is displayed
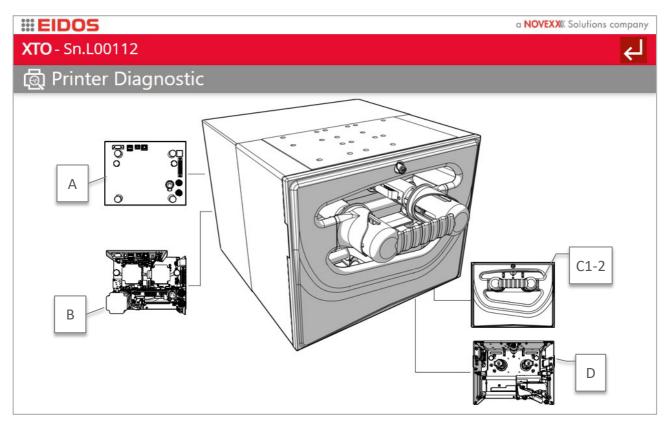
System diagnosis: (see following pages)
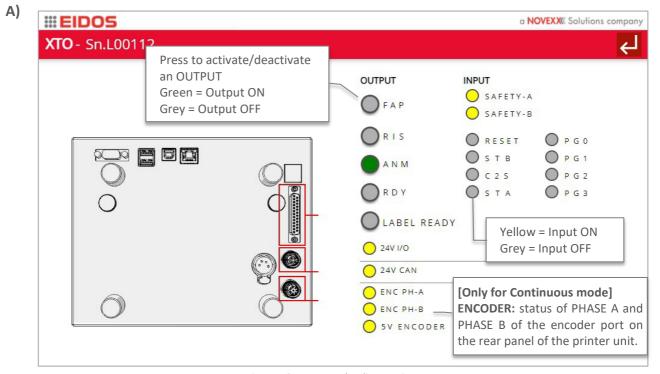
Figure 57: printer diagnostic page

A)

Figure 58: rear panel - diagnostic page

NOTE: this page, but only in display mode and without the possibility of interacting with the signals, can be recalled from the main page of the software in READY mode. See chapter "Product Description > Operator panel > Automatic mode - READY" of this manual.

B)

Figure 59: TPH – diagnostic page

C1)   INTERMITTENT mode printer
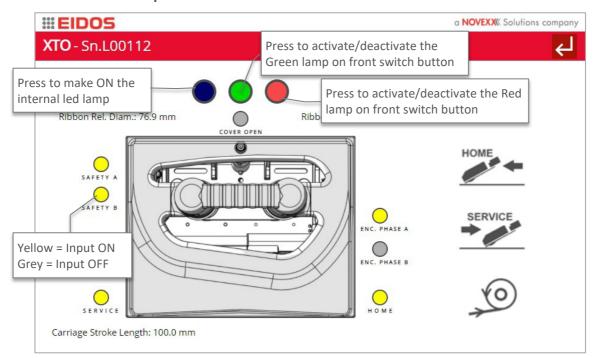
Figure 60: front panel -intermittent model (RH version)

 Carriage in home position

 Carriage in service position

 Ribbon feed: tensions the thermal ribbon by rewinding it

(this button is also accessible through the shortcuts *on the Manual mode view, if you have at least level 1 access. See "Product Description – Operation Panel")*
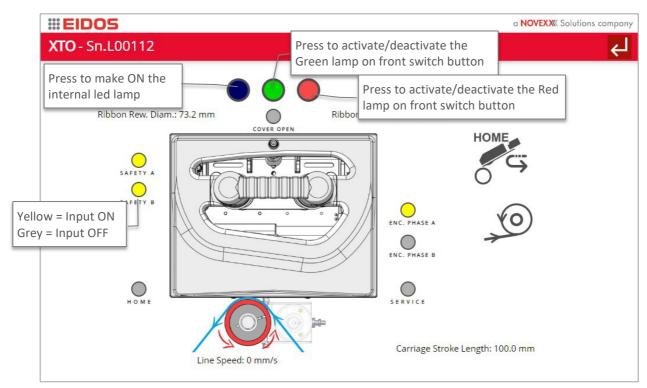
C2)   CONTINUOUS mode printer

Figure 61: front panel - continuous model (RH version)

D)
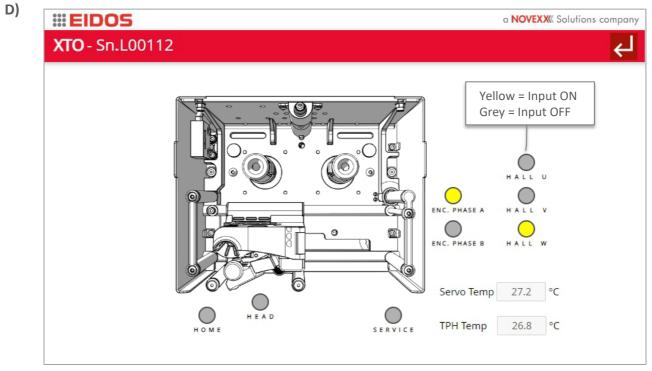
Figure 62: carriage - diagnostic page

The buttons on the bottom strip allow you to test the printer.
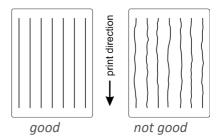
▨ *Print grid:*

Print test to check if the print head has some broken dots or if the print head and the print plate or roll are perfectly aligned in the whole print area size. In case of white lines in print direction it means that some dots are probably broken, or that the print head could be dirty. The current date is also printed on the grid to highlight the date when the test has been done. So, the operator can have day by day the status of the print head.

▥ *Print lines:*

Print test of lines parallel to the print direction. The lines are parallel to the print direction. This test helps to verify the settling and the stability of the head on the media during print. In case of bends it means that the print head support or the head alignment to the print roll or plate is not in the best condition or that the support is not stable.

good   *not good*

> **Note:** print grid and lines will be printed with the current label size.

Print current page: press this button to print the current label.

(This button is also accessible through the shortcuts ↪ *on the Manual mode view, if you have at least level 1 access. See "Product Description – Operation Panel")*

Printer Parameters: added with Level 2
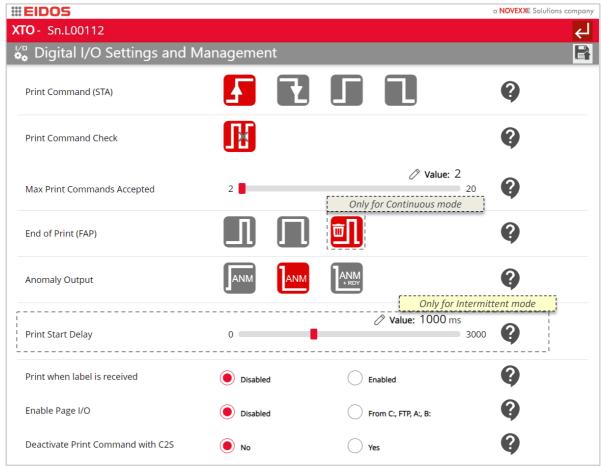
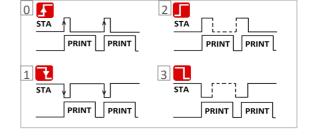**Set I/O parameters.**

Figure 63: I/O management

Print Command "STA"
0 = Front OFF-ON (default)
1 = Front ON-OFF
2 = Level ON
3 = Level OFF

Print command check
Default = enabled
Enable this flag to get an error message when a new print command arrives during print cycle.

Max Print Commands Accepted
Default value=2
When the printer is in READY mode, at any print command a print cycle should be executed.
If this number is set equal 2 the E17 error appears when a double print command is received during print cycle or in manual mode (MAN) and immediately the packaging line stops.
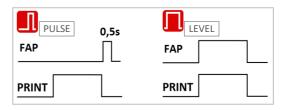
In presence of many print command signal bounces, it is advised to increase this parameter value over 2 to filter more the print command signal. In case the number of bounces received is still higher than the number set the E232 will appear.
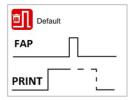
End of Print (FAP) output type
Pulse (default). It generates an impulse at the end of the cycle lasting 0.5 s
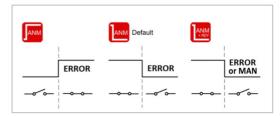Level. At the start of the cycle (arrival of the STA command) it activates the FAP output and deactivates it at the end of the print when the "TPH OFF" time set in the parameters has elapsed.
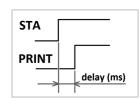
In continuous mode (XTO2ce), at the end of the print cycle a "discard" FAP pulse can also be set in the "Digital I/O Setting and Management" page as a digital output warning, issued when this situation occurs during the print cycle. This FAP pulse can be used by the packaging line to manage a product "discard" device for prints of less than perfect quality.

Anomaly Output

Print Start Delay (only for Intermittent mode)
It delays the start of the printing cycle of the programmed time.
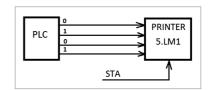Default = 0 ms

Print when label is received
Disabled: the printer will only print when a digital print command on "I/O SIGNALS" connector is given. This flag should be disabled when a new label is sent to the printer only before starting a new batch and the print command is given by a digital I/O. It is mandatory to disable this flag when the flag "Enable Page I/O" function is enabled to avoid conflicts in the print commands.
Enabled: the print cycle will immediately start at the end of label file receiving by ethernet or RS232. This flag should be enabled when a new label is sent to the printer each cycle (real time management).
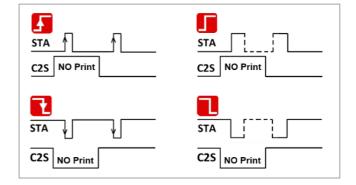
Enable Page I/O
from disk C:, FTP; A:, B:

To enable this flag means that the labels 0.LM1, … ,15.LM1 previously stored in the printer memory, can be selected via 4 digital inputs; these 4 opto-isolated inputs are available on the ENCODER port of the printer.

Disable Print Command whit C2S
When this function is enabled the print STA digital command is rejected as long as C2S input is activated and warning appears on the screen.
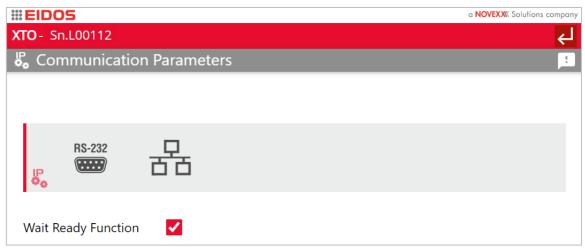

Set IP parameters:

Figure 64: communication parameters

If the Wait Ready function is enabled, W character is emitted when the print cycle starts and R character is emitted when the print cycle is finished (before the carriage comes back to home) or immediately when an error occurs during print.

RS-232

Connect the serial cable to the printer and set the transmission speed of the serial line. Recommended: 115200, n, 8.1 Baud.

Ethernet connection

> **Note:**
> the parameters for connecting to the PC via the Ethernet port are explained in detail in the Chapter "Installing the printer -> Connections" of the Technical Manual (RT804).

TPH Set TPH calibration: printer in INTERMITTENT mode

> **IMPORTANT**!
> it is advised to make the TPH calibration with the packaging film overposed on the printing plate to take in account the thickness of the film.
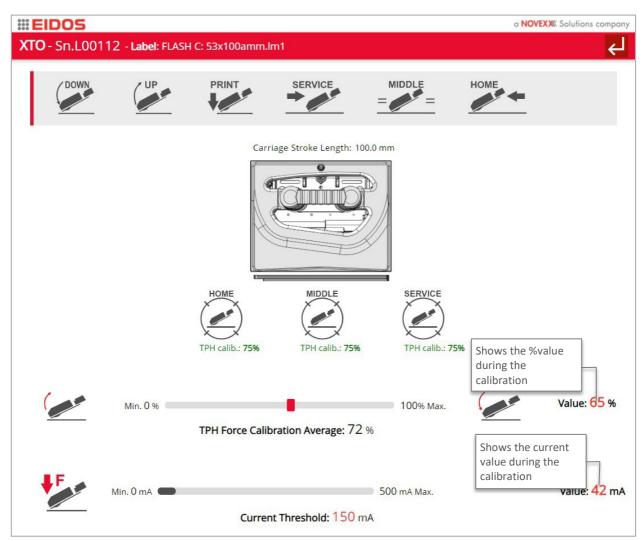

Figure 65: TPH calibration page - intermittent mode

DOWN	move TPH down (Ready to print position)
UP	move TPH up (Ribbon change operation position)
PRINT	move TPH in print position for 5 seconds
	Print position is the position detected by last calibration or set in the TPH force parameter.
SERVICE	move carriage to service position
MIDDLE	move carriage to middle stroke position
HOME	move carriage to home position

Press the relative "calibration" key ✏ to move the carriage at the desired position (SERVICE/MIDDLE/HOME) and start the calibration. If the indication under the symbol is green, the calibration is OK. If it is red, the calibration is not OK.

The value detected is coloured red when it is 2% higher or lower than the average value between the values detected (SERVICE/MIDDLE/HOME). Carry out the calibration in all the positions, to have an optimal calibration average value.

The best values are between 74-77%. If the detected value is higher than 80% the W562 warning will appear, because the print head is too far from the printing plate.

If the detected value is less than 69% the W567 warning will appear because the print head is too close to the printing plate. The higher the detected value, the higher the angle of the print head is during printing.

During calibration the print head moves to the rubber plate and then increase the pressure until it reaches the threshold, defined as the value of the current absorbed by the servomotor (default = 150 mA). After performing a calibration the "TPH FORCE" Print parameter will be set at the value detected by the calibration, with the possibility of reducing the value or increase the value in a range of +/- 10%.

This could be done in the "Printer Parameter" menu ⚙ (not possible at level 0).

The TPH calibration function detects the distance between the print head and the rubber plate and sets the recommended TPH FORCE value in terms of head pressure on the film.
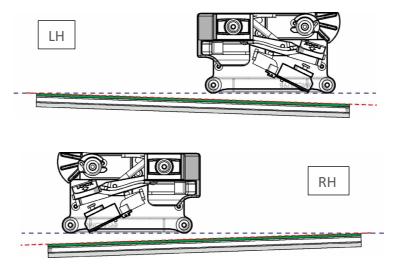

Figure 66: printing plate not parallel to the print line

![TPH icon] **Set TPH calibration: printer in CONTINUOUS mode**

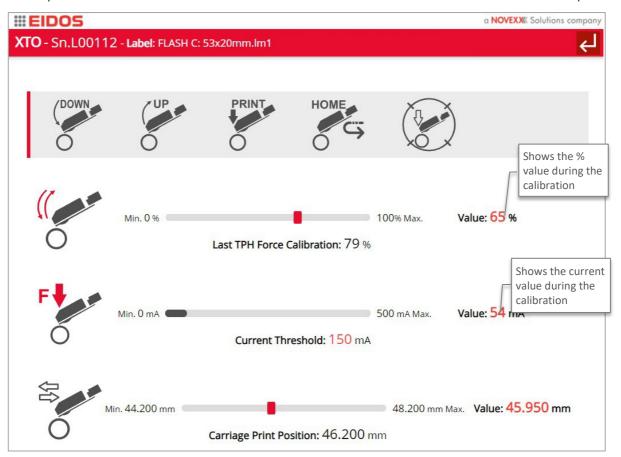**WARNING!** this operation must be performed with the packaging line stopped.

Figure 67: TPH calibration page – continuous mode (RH version)

![DOWN icon] move TPH down (Ready to print position)

![UP icon] move TPH up (Ribbon change operation position)

![PRINT icon] move TPH in print position for 5 seconds
Print position is the position detected by last calibration or set in the TPH force parameter.

![HOME icon] move carriage to home position

Press the relative "calibration" key ![icon] to start the calibration.

The best values are between 74- 77%. If the detected value is higher than 80% the W562 warning will appear, because the print head is too far from the print roller. If the detected value is less than 69% the W567 warning will appear because the print head is too close to the print roller. The higher the detected value, the higher the angle of the print head is during printing.

During calibration the print head moves to the rubber roller and then increase the pressure until it reaches the threshold, defined as the value of the current absorbed by the servomotor (default = 150 mA). For optimum print quality, the thermal head must be positioned tangential to the rubber roller. Print head and roller must be perfectly parallel. Carry out the calibration in different positions of the carriage, in order to find the exact position of the print head on the cusp of the rubber roller, which corresponds to the minimum value of THP force detected. The calibration function, in fact, detects the distance between the print head and the rubber roller and sets the value in terms of head pressure on the packaging film.

In any case, always carry out a print test to find the point of tangency of the print head to the roller that offers the best print quality.

After performing a calibration the "TPH FORCE" Print parameter will be set at the value detected by the calibration, with the possibility of reducing the value or increase the value in a range of +/- 10%.

This could be done in the "Printer Parameter" menu ⚙ (not possible at level 0).

The TPH calibration function detects the distance between the print head and the rubber roller and sets the recommended TPH FORCE value in terms of head pressure on the packaging film.

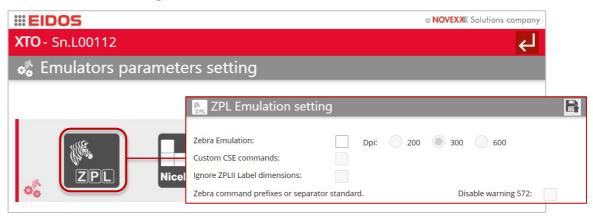**Set emulation parameters:**

• *ZPL Emulation setting*

Figure 68: emulators setting

Zebra Emulation: enable this function to receive files as ZEBRA ZPLII protocol. The label transmission can only take place via Ethernet LAN (not managed from USB key). If Zebra emulation is active, the setting parameter is also displayed in the Manual mode page. The XTO is a 300dpi printer, but can receive and print Zebra ZPL labels generated by Zebra drivers at 200, 300 or 600dpi. Set dpi of the Zebra Emulator according to the dpi of the Zebra driver or native ZPL file, to get in print the correct image size.

Custom CSE command: enable this flag if you need a custom EIDOS printer management. You can manage a EIDOS printer as ZEBRA for the data to be printed and as EIDOS printer for the status request and wait/ready protocol. With this flag enabled some EIDOS CSE commands will be also managed when the Zebra Emulation is enabled.

Ignore ZPLII Label dimensions: set this flag to ignore the ZPL commands to program the label dimensions; the EIDOS printer will use the X and Y dimensions of the last loaded label.

Zebra command prefixes or separator standard. If non-standard Zebra commands are used a Warning message will appear each time the system is turned on. This message can be disabled by selecting the "Disable Warning 572" flag.

> **Note:** Create and send the label with the correct dimensions, as it will not be possible to modify them later.
> **ATTENTION.** If you are not working in Zebra emulation, the flag must be disabled.
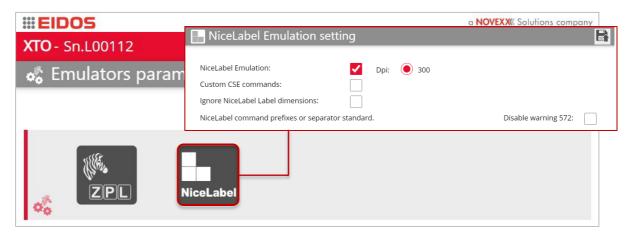
- *NiceLabel Emulation setting*

Figura 69: emulators setting

NiceLabel Emulation: enable this function to receive files as NICELABEL ZPLII protocol. The label transmission can only take place via Ethernet LAN (not managed from USB key). If NiceLabel emulation is active, the setting parameter is also displayed in the Manual mode page.

Custom CSE command: enable this flag if you need a custom EIDOS printer management.

Ignore NiceLabel Label dimensions: set this flag to ignore the NiceLabel commands to program the label dimensions; the EIDOS printer will use the X and Y dimensions of the last loaded label.

NiceLabel command prefixes or separator standard. If non-standard commands are used a Warning message will appear each time the system is turned on. This message can be disabled by selecting the "Disable Warning 572" flag.

> **Note:** Create and send the label with the correct dimensions, as it will not be possible to modify them later.
> **ATTENTION.** If you are not working in NiceLabel emulation, the flag must be disabled.

Set languages:

Figure 70: language selection

Scroll the flag and select the proper language. Press the Save Data key to confirm.
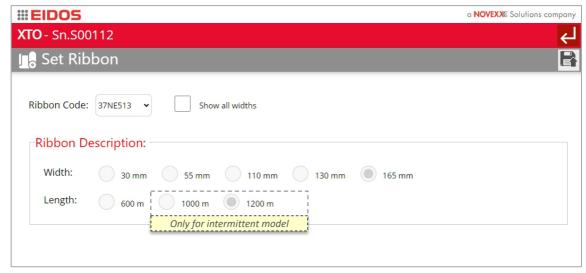
Set ribbon

Figure 71: Ribbon setting

Set the code of the EIDOS ribbon used. The setting of the used ribbon code requires that some specific parameters of the printer are automatically set in the optimal way for the ribbon in use (e.g. Enhanced Mode, Accelerations, Jerk etc).

> **NOTE:**
> The thermal ribbon rolls must be purchased from the printer supplier, in order to have the maximum guarantee of good operation. The use of non-certified ribbons carries a high probability of malfunction with possible accelerated damage to the thermal head or ribbon drag problems.

STATUS MESSAGES

General information about status reports

During operation, tests are continually carried out to determine whether a malfunction has occurred. If a malfunction is detected, the corresponding status report appears on the display.

The list of messages, complete with their description, is shown in the document "RT578 - Error messages and troubleshooting".

Warning messages

Warnings inform the operator about the occurrence of a certain event at the printer. The message is displayed until it is unlocked by the user. If in READY status the printer continues operating without intervention from the user. If the message appears in MANUAL mode, it must be unlocked to go to READY mode and allow printing. The status report shown on the display is structured as follows:

Figure 72: Warning message

A   *Alarm icon:* press the key below the symbol to unblock the status message.
B   *Warning number*
C   *Warning message*
D   *Background colour:* yellow
E   *Help icon:* after pressing the icon, a quick troubleshooting guide appear.
F   *Pause:* it unlocks the message. The message will appear again when the operator comes back to the main pages.

Error messages

Error messages must be acknowledged by the operator as the triggering event or fault endangers normal operation. The status report shown on the display is structured as follows:

Figure 73: Error message

A   *Alarm icon:* press the key below the symbol to unblock the status message.
B   *Error number*
C   *Error message*
D   *Background colour:* red

E   *Help icon:* after pressing the icon, a quick troubleshooting guide appear.
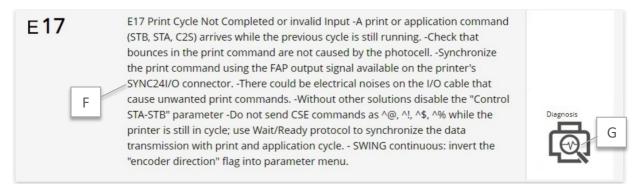

Figure 74: Troubleshooting guide

F   *Error text:* each error number has a status text in the language of the control panel.

G   *Diagnosis icon:* pressing the button, you are sent to the appropriate diagnostic page.

H   *Pause:* it unlocks the error message (not the error) to allow access to the diagnostic pages. The error will appear again when the operator comes back to the main pages.

Preventive Maintenance

CLEANING INSTRUCTIONS

> ⚠️ **WARNING!**
> Dangerous situations may arise during maintenance and cleaning work. Accidents may occur if the relevant safety instructions are not observed!
> ➔ Switch off the machine before cleaning or maintenance and pull out the mains power connecting line!
> ➔ Never allow liquid to get into the machine!
> ➔ Repairs to the machine must only be made by trained service technicians!

Cleaning agents

CAUTION!
Sharp cleaning materials may damage the printer.
➔ Do not use any cleaning agents or materials that could damage or destroy the paint finish, labelling, display, type plates, electrical component etc.!
➔ Do not use abrasive cleaners or cleaners which could damage the plastic!
➔ Do not use acid or alkaline solutions!

Note: dirty environments may require shorter intervals between preventive maintenance routine.

Preliminary operation

If access to the inside of the printer is not convenient (especially in the case of a model with a 6" print-head), before each cleaning operation it is advisable to remove the front bar by pressing the side buttons **(s)** inwards.

ATTENTION! when repositioning the bar, be very careful to centre the bearing **(b)** in the support bar, so as not to cause it to break.
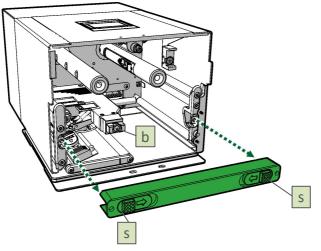

NOTE: Also carefully clean the inside of the front bar and the bearing **[b]** with a soft cloth before reassembling the bar.

Figure 75: removing the support bar

CLEANING THE PRINT HEAD

Switch off and lock out the printer before performing this task!
You are advised to clean daily the printing line of the thermal head located on the printing unit. Clean the fixed pin **[P]** located on the left side of the printing head.

How to operate
1. Switch off the printer and remove the front cover.
2. Move the carriage manually to have easy access to the head area from the top.
3. Clean the printing line **[L]** with a clean tissue or with a paper cleaning tissue soaked in isopropyl alcohol. On no account use metal objects or any hard material.
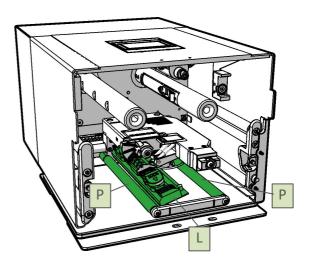

Figure 76: cleaning the print head

CLEANING THE CARRIAGE SLIDING GUIDE

How to operate
1. It is advised to use BALLISTOLL oil for cleaning and lubrication.
2. Move carriage manually for its entire path forwards/backwards three or four times and clean guide with clean cloth to dry any excess oil.
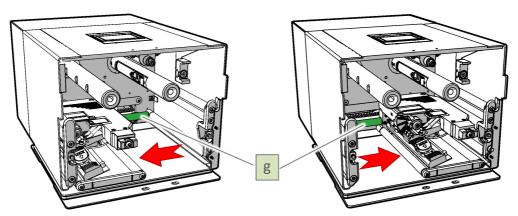

Figure 77: cleaning the sliding guide

> ⚠️ **WARNING!**
> **DO NOT** use other lubricants or grease as they clog the bushes with the guides and compromise carriage movement.
>
> Any maintenance or repair tasks that are not prescribed in this manual must be performed only by EIDOS or by an Authorized Service Centre.

CLEANING THE PRINTING PLATE (XTOXL Intermittent)

Clean with a cleaning tissue or with a paper tissue soaked in isopropyl alcohol.
Advisable when the printer is in fixed position.

How to operate
1.   Switch off the printer and remove the rolls of thermal ribbon.
2.   Move manually the carriage to the end of its stroke to have access to the printing plate surface.
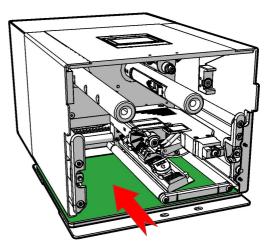3.   Clean the print plate surface.

Figure 78: cleaning the printing plate

CLEANING THE PRINTING ROLLER (XTOXL Continuous)

It is recommended that the printing roller be cleaned weekly, to ensure proper towing by the packaging film.
If the packaging film easily releases residues and the environment is dusty, cleaning more frequently is recommended.
Clean the roller using a wipe or clean cloth dipped in isopropyl alcohol.

How to operate
1.   Turn off the printer and take out the thermal ribbon.
2.   Move the carriage in order to free access to the roller.
3.   Clean the roller surface.
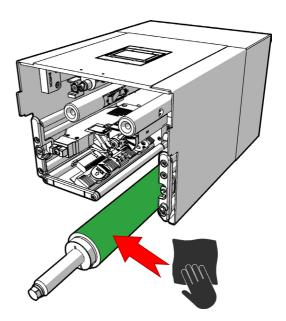

Figure 79: cleaning the printing roller

CLEANING ROLLS AND RIBBON PASSAGES

Check the status of rubberized ribbon encoder roll **[R1]**. Verify that the surface of the roll is smooth and even.
Check every single roll turn without jamming and is not crooked.

> **Note:** It is very important to clean the rubber coated roll and to check sometimes that it rotates freely, to avoid print overposition on the ribbon with bad print quality or missing parts in print.

How to operate
1.   Use a jet of low-pressure air to clean the dust off the printing unit.
2.   Use a tissue or a paper tissue soaked in isopropyl alcohol to clean all the rolls and ribbon passages.
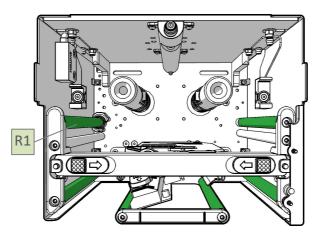3.   If necessary, lubricate the bushes with Ballistol oil.

Figure 80: cleaning rolls

> **Pay attention**: do not dirty with oil the surface of rolls.
> On no account use jets of water or steam to clean the printer.

Appendix 1

EC DECLARATION OF CONFORMITY

Manufacturer:

EIDOS Srl – via dell'Industria,11 - 10023 Chieri (TO) ITALY – www.eidos.eu

Person authorised to compile the technical file:

Paolo Bori – via dell'Industria, 11 – 10023 Chieri (TO)

Declares regarding the following supply

Generic Denomination and Function: Intermittent Thermal Transfer Overprinter (TTO)

Commercial name: **XTOXL "e" series**

System Models: **7XTOXLnIELH-1; 7XTOXLnCELH-1; 7XTOXLnIERH-1; 7XTOXLnCERH-1**
7XTOXLnIELH-2; 7XTOXLnCELH-2; 7XTOXLnIERH-2; 7XTOXLnCERH-2
7XTOXLnIELH-3; 7XTOXLnCELH-3; 7XTOXLnIERH-3; 7XTOXLnCERH-3
7XTOXLnIELH-4; 7XTOXLnCELH-4; 7XTOXLnIERH-4; 7XTOXLnCERH-4
7XTOXLnIELH-1TR; 7XTOXLnCELH-1TR; 7XTOXLnIERH-1TR; 7XTOXLnCERH-1TR
7XTOXLnIELH-1IP; 7XTOXLnCELH-1IP; 7XTOXLnIERH-1IP; 7XTOXLnCERH-1IP
Inside the code "n" = 4, 5, 6 and indicates the printhead type

that the product complies with the provisions of the following relevant Community directives:

- Machinery Directive 2006/42/EC
  Applied standards:
  UNI EN ISO 13857:2020 safety distances

- Low Voltage Directive 2014/35/EU
  Applied standards:
  CEI EN 60204-1:2018 on the safety of electrical equipment

- Electromagnetic compatibility standard (EMC) 2014/30/EC
  Applied standards:
  EN 55032:2015 Electromagnetic compatibility of multimedia equipment. Emission Requirement
  EN IEC 61000-6-2:2019 Electromagnetic compatibility (EMC)
  Part 6-2: Generic standards - Immunity for industrial environments
  EN 61000-3-2:2014 Electromagnetic compatibility (EMC)
  Part 3-2: Limits - Limits for harmonic current emissions
  EN 61000-3-3:2013 Electromagnetic compatibility (EMC)
  Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems.

Chieri, _____15/10/2023_____   _____
Place and Date of Declaration   Paolo Bori (Managing Director)
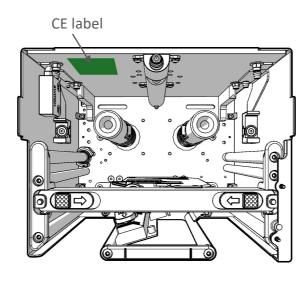
Appendix 2

CE LABEL

1) System model   2) Mechanical unit   3) Electronic unit
4) Serial number   5) Production date

CE Label position on Mechanical Unit

CE label

Appendix 3

ZEBRA and EIDOS NICELABEL EMULATION FILE MANAGEMENT (.prn, .zpl)

On the XTO XL series printer it is possible to load all ZEBRA and EIDOS NICELABEL label files, with .ZPL, .zpl, .PRN, .prn extension.
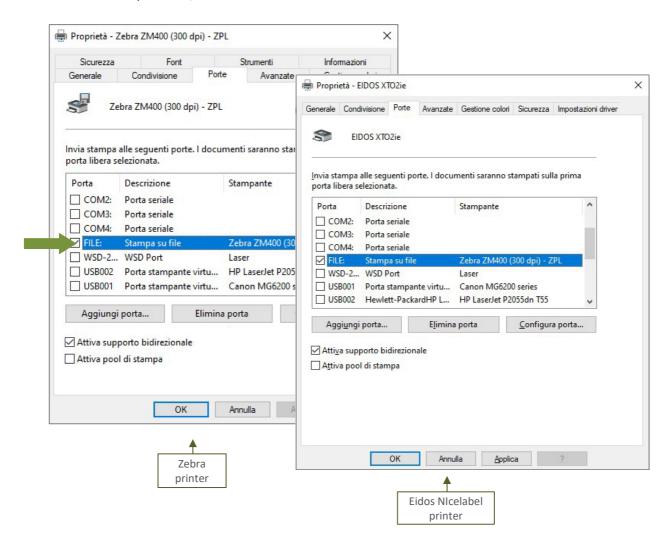Following, an example of ZEBRA file.

^XA
^FT61,91^A0,40,40
^FD809098987876543123^FS
^PQ1,0,1,Y^XZ

Creation of the .prn file containing ZPL language

Using label creation software (e.g. Codesoft) you can get .prn format files by sending printing with Zebra driver directly to "FILE". In this case, in the printer properties, instead of the Printer Port to which to send the printout, select "FILE: Print to file".
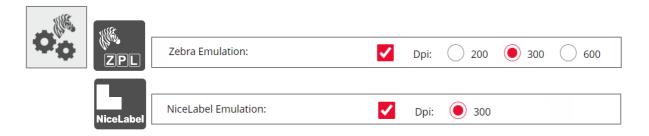

Zebra printer

Eidos NIcelabel printer

Managing .prn files containing ZPL language with XTOXL

The .prn files can be uploaded to the printer from USB key or copied and stored in the printer's C: memory.
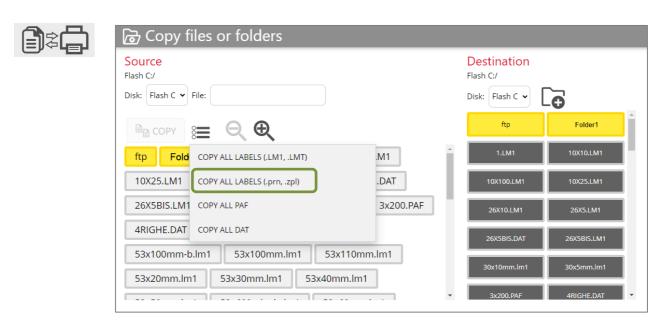
How to operate:
- Enabling the Zebra/Nicelabel Emulator

| | Zebra Emulation: | ✅ | Dpi: | ○ 200 | ● 300 | ○ 600 |

| | NiceLabel Emulation: | ✅ | Dpi: | ● 300 | |

At this point, from File Management you can also manage .prn files.

.prn and .zpl files can be copied from disk (C:, A:, B:) individually or in one single copy.
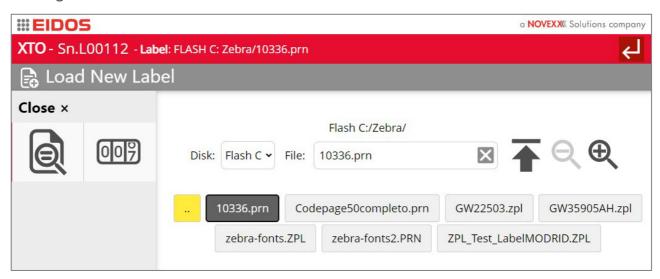

The other File Management functions (Delete file - Back up - Restore Back up) also include operations on .prn and .zpl files.
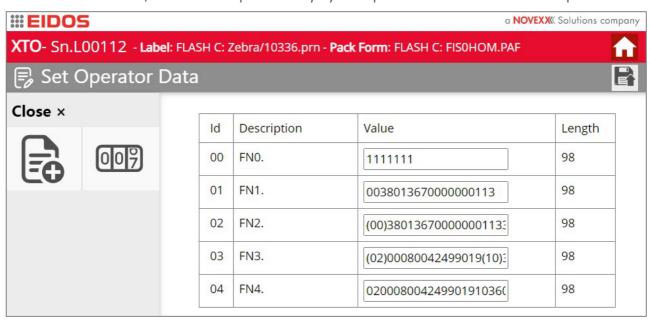
From the "Restore Back up" page, choosing the 1st option (Restore Labels, Sources and .PAF) or the 4th option (Restore All) will also restore all these labels (files with **.prn, .PRN, .zpl and .ZPL** extensions) from the Backup.zip file in Flash C: and its subdirectories.

Loading label in Zebra or NiceLabel formats

- If the .prn file is a template containing text defined as variables (^FNn) to be filled with the ^FNnxxxxx command, it can be compiled locally by the operator with the SDK18 touchpanel.
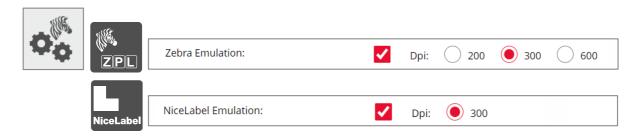
Management of .prn files with "Enable Page I/O" function
If it is enabled, the emulator allows the "Enable pages from I/O" feature to be used for Zebra or NiceLabel format labels as well.

How to operate:
- Enabling the Zebra/Nicelabel Emulator

| | Zebra Emulation: | ✓ | Dpi: | ○ 200 | ● 300 | ○ 600 |

| | NiceLabel Emulation: | ✓ | Dpi: | ● 300 |

- Enable the "Enable Page I/O" function from the "Digital I/O Settings and Management" menu.

| Enable Page I/O | ○ Disabled | ● From C:, FTP, A:, B: |

When the STA print command arrives, the printer recalls the pages in memory (file n.prn) by activating 4 digital bits at 24V.

Input PG0, PG1, PG2, PG3:
These 4 inputs are managed when the "Enable Page I/O" function in the I/O parameters page is enabled. Depending by the PG0/PG1/PG2/PG3 input status a n.*** page is loaded by XTO when the STA print command is received.

PG3	PG2	PG1	PG0	Label name loaded
0	0	0	0	0.***
0	0	0	1	1.***
0	0	1	0	2.***
0	0	1	1	3.***
0	1	0	0	4.***
0	1	0	1	5.***
0	1	1	0	6.***
0	1	1	1	7.***
1	0	0	0	8.***
1	0	0	1	9.***
1	0	1	0	10.***
1	0	1	1	11.***
1	1	0	0	12.***
1	1	0	1	13.***
1	1	1	0	14.***
1	1	1	1	15.***

*** = prn or zpl extension if Zebra Emulation parameter **is enabled**
    = lm1 or lmt extension if Zebra Emulation parameter is **NOT enabled.**
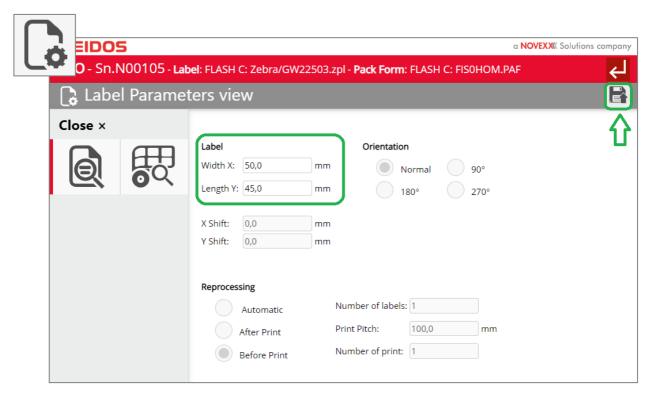Both uppercase and lowercase letters are accepted.
The pages should be stored int the C:\ disk to make their loading faster.

Only in the case of loading Zebra/NiceLabel files, it is possible to change the "Width X" and "Length Y" parameters of the label from the "Label Parameters View" page. The change will take effect by pressing the save button at the top of the page.
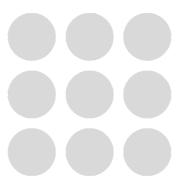

These parameters will be overridden by ^PW (Print Width) and ^LL (Label Length) commands that may be present in the layout, unless the "Ignore ZPLII Label dimension" flag is selected in the "ZPL Emulation setting" page.

ATTENTION!

If the label loaded from I/O pages contain variable data, the printer will show Error 219.

Thank you for taking the time to read this manual
we recommend you keep it for future reference.