

USER MANUAL

XTO2ie - XTO2ce

Thermal Transfer Overprinter (TTO)
Intermittent/Continuous



This manual contains the EC Declaration of Conformity



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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 versions: 68XTO2IELH-A; 68XTO2IERH-A; 68XTO2CELH-A; 68XTO2CERH-A

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

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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 the 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 RT804).
- 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 on XTO2ie.LH/XTO2ce.LH

Front and rear view

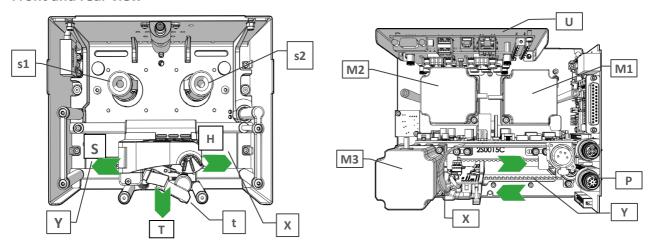


Figure 1: dangerous areas on XTO2ie.LH/XTO2ce.LH – front and rear views.

Side views

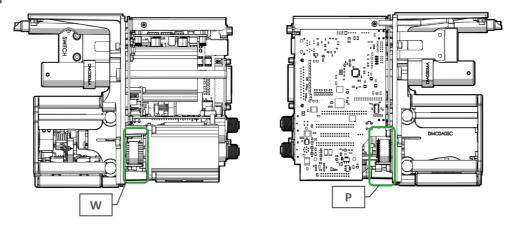


Figure 2: dangerous areas on XTO2ie.LH/XTO2ce.LH – side views

Carriage

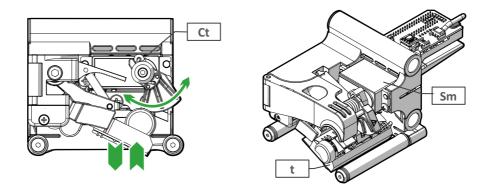


Figure 3: Dangerous areas on XTO2ie.LH/XTO2ce.LH - carriage



Bottom view

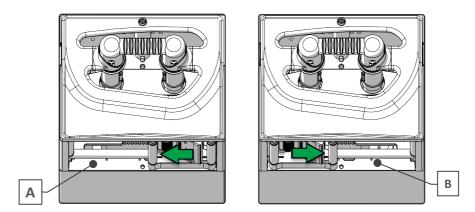


Figure 4: Dangerous areas on XTO2ie.LH/XTO2ce.LH -bottom view

Note:

In intemittent mode (XTO2ie), 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.

In continuous mode (XTO2ce), areas [A] and [B] are potentially dangerous during the movement of the carriage to search for the position of the printing roller, which occurs only at start-up and after the reset of an anomaly. The carriage does not move during the normal print cycle.

Passive (non-motorized) rotating rollers on XTO2ie.LH/XTO2ce.LH

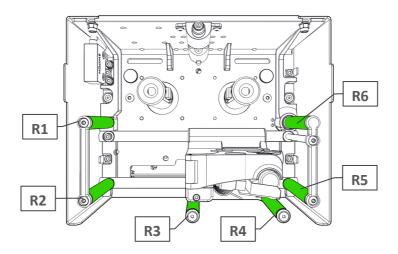


Figure 5: non-motorized rollers



Dangerous areas on XTO2ie.RH/XTO2ce.RH

Front and rear view

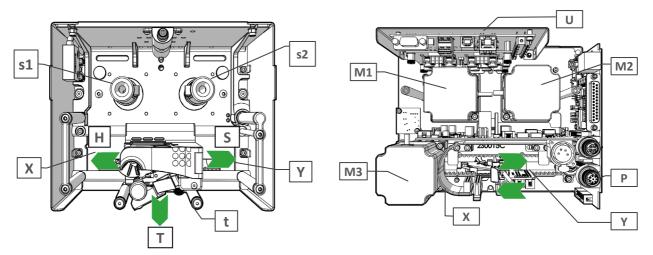


Figure 6: dangerous areas on XTO2ie.RH/XTO2ce.RH – front and rear views

Side views

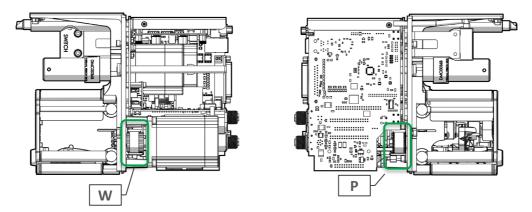


Figure 7: dangerous areas on XTO2ie.RH/XTO2ce.RH – side views

Carriage

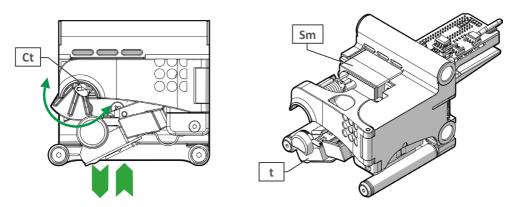


Figure 8: dangerous areas on XTO2ie.RH/XTO2ce.RH – carriage



Bottom view

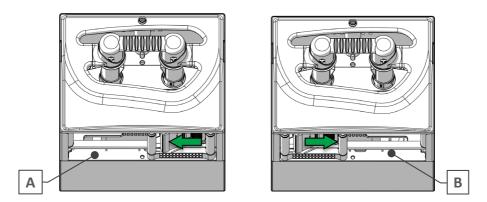


Figure 9: Dangerous areas on XTO2ie.RH/XTO2ce.RH -bottom view

Note:

in intemittent mode (XTO2ie), 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.

In continuous mode (XTO2ce), areas [A] and [B] are potentially dangerous during the movement of the carriage to search for the position of the printing roller, which occurs only at start-up and after the reset of an anomaly. The carriage does not move during the normal print cycle.

Passive (non-motorized) rotating rollers on XTO2ie.RH/XTO2ce.RH

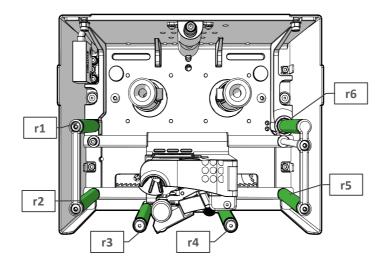


Figure 10: non-motorized rollers



Definitions

2CHIHOOD					
S	Movement of the carriage during printing or positioning in the "Service" area.				
	Danger of crushing the fingers				
Н	Movement of the carriage when returning to Home after printing or during a return from				
	"Service". Danger of crushing the fingers.				
Α	Access from the lower left side: carriage moving to the left (print - for LH/ return to				
	Home position - for RH.				
В	Access from the lower right side: carriage movii	ng to the right (return to Home position –			
	for LH/print – for RH)				
Т	Movement of the print head				
s1	Rotation of the mandrel holding the ribbon rele	ase coil			
s2	Rotation of the mandrel holding the ribbon rew	inding coil			
Х	Movement of the carriage when returning to Home after printing or during a return from				
	"Service". Danger of crushing the fingers.				
Υ	Movement of the carriage during printing or po	sitioning in the "Service" area.			
	Danger of crushing the fingers.				
Р	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				
r1-5	Passive (non-motorized) rollers				
r6	Ribbon Encoder rubberized roller				
Hot p	Hot parts highlight:				
Part temperatures were measured at ambient temperatures of 20 ° C and after the XTO ran at					
full ca	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

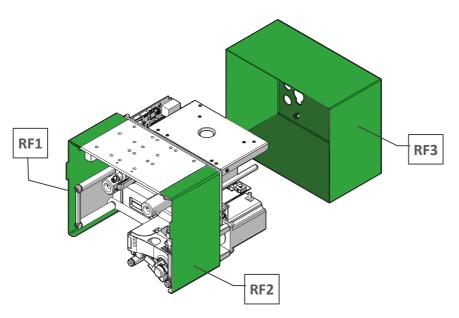


Figure 11: fixed covers



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]

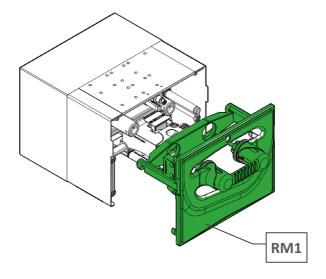


Figure 12: movable interlocked guard [RM1]



Monitoring sensors movable guard [RM1] inserted

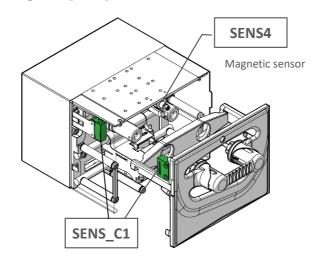


Figure 13: monitoring sensors

External safety contacts: SAFETY_A and SAFETY_B (SAF_EXT)

NOTE: If not used, they must be jumpered.

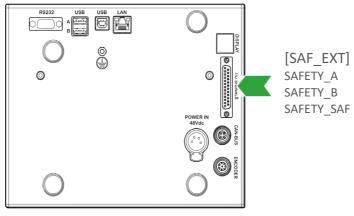


Figure 14: safety contacts

Not interlocked movable guard [RM2]

The guard is accessible only after removing the interlocked mobile guard [RM1].

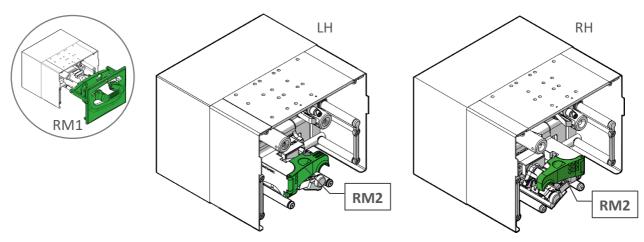


Figure 15: guard



For XTO2ie only: fixed guard but not solidly screwed to the Printing Unit:

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.

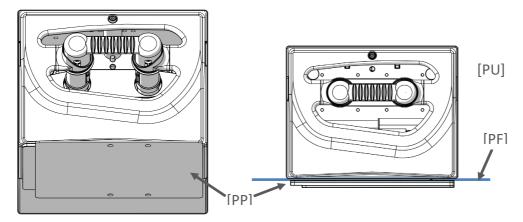


Figure 16: Print plate

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] (in Figure 9) 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 [RL], not less than 5 mm and that the Printing Plate [PP] is always centered with respect to the Printing Unit [PU].

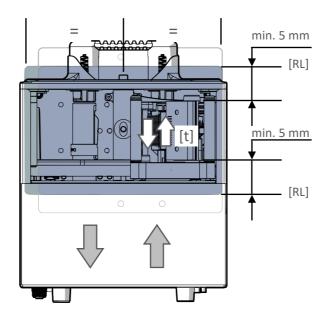


Figure 17: Print plate and Print Unit position



Magnets and magnets ring

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

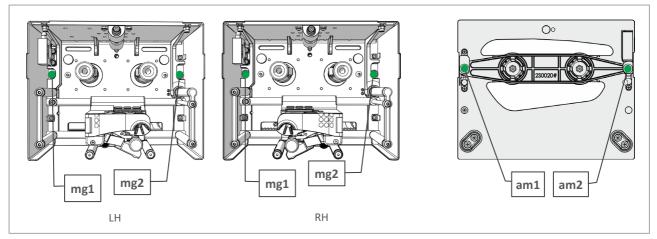


Figure 18: magnets

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.

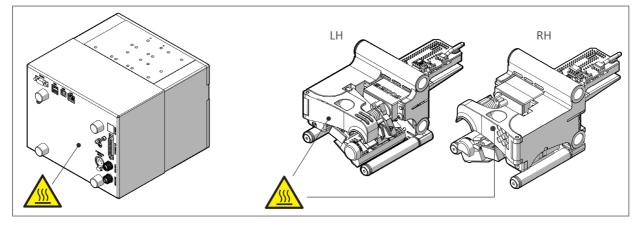


Figure 19: warning symbols



Product Description

FUNCTIONALITY

The XTO 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.

Using the XTO2ie *Intermittent*, the packaging film must be stationary during printing; the XTO2ce *Continuous* codes on continuous packaging machines when the printing operation must be performed in motion. The fixed head printer can be used to print directly on the production line when the product is packaged to the benefit of printing speed and quality.

The XTO2ce prints in synch with the packaging machine speed. Since the movement speed of the film is not constant an encoder device must be fitted on the printing roller to ensure synchronism between the printing speed and the film speed.

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 stick.

PECULIARITY

- Print Unit very light and compact, easy to be installed.
- No compressed air is needed since a motor drives the print head.
- High-quality, high-definition prints.
- Easy to service and repair; easy system of ribbon passage for changing operation.
- Easy and fast replacement of electronic components (no interference with mechanical parts).
- Programmable printing steps and format printing parameters loadable by the touch screen display (optional) or the P.C.
- Improve unit uptime: not necessary to uninstall the print unit from the line.
- Modular assembly: mechanic + electronic.
- HMI (Human-Machine Interface) user friendly.
- Simply print head and print plate cleaning and replacing.
- Printer management (parameters, labels, diagnostic etc..) with local EIDOS Touch panel or remote PC with a Web Browser.
- Possibility of automatic coding batches with variable data (date, forward or backward number sequences, text in various languages, ingredient lists, barcodes, two-dimensional codes, logos).
- The printer can be supplied in LEFT HAND (LH) or RIGHT HAND (RH) configuration. The choice of configuration depends on the assembly on the production line.
- 53 mm (2") "corner edge" print head; 12 dots/mm (300 Dpi)
- Max. print area Continuous model : 53 x 990 mm
- Print speed Continuous model: max. 700 mm/s (on printable film and quality ribbon)
- Max. print area Intermittent model: 53 x 100 mm
- Print speed Intermittent model: max. 1000 mm/s (on printable film and quality ribbon)



SYSTEM MODELS

XTO2ie (LH/RH)

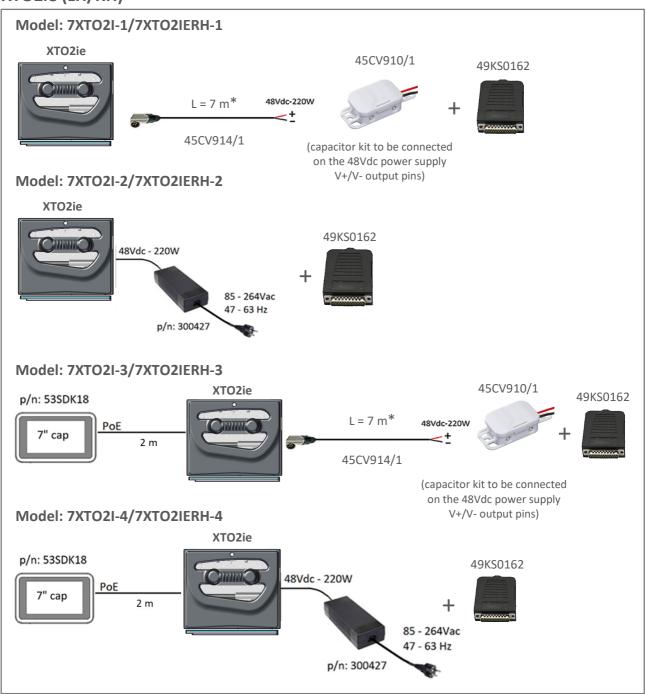


Figure 20: system models

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 electrovalves, to avoid noises and spikes.

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



XTO2ce.LH

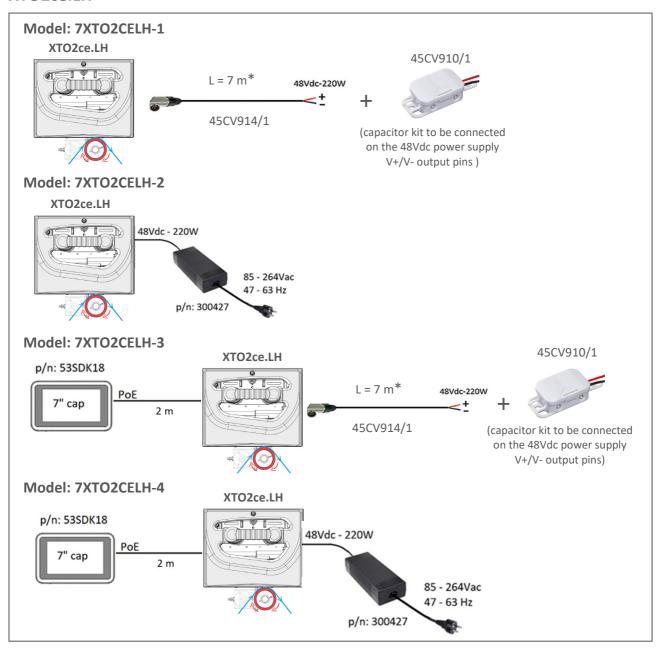


Figure 21: XTO2ce.LH configurations

WARNING! Not included in the configurations but mandatory: print roller (57RSE04/nn) with encoder (53ENC19/1) and round support bar (49KMSX0).

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 electrovalves, to avoid noises and spikes.



XTO2ce.RH

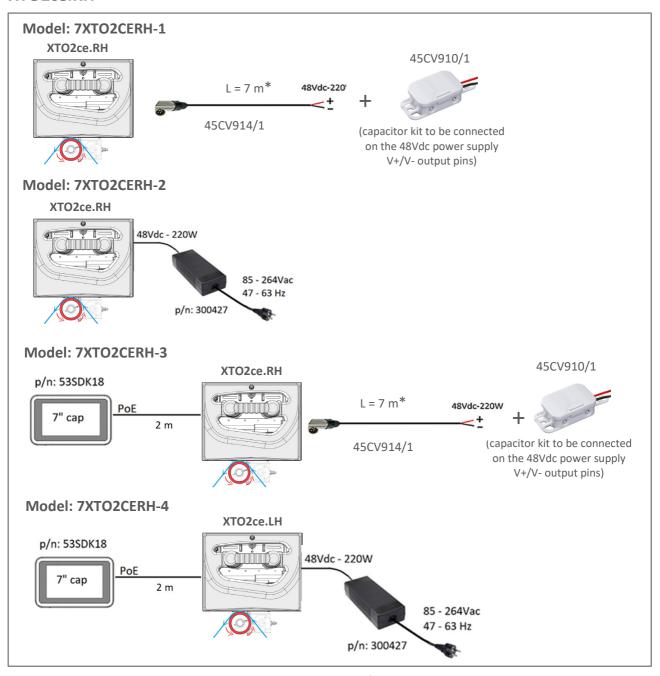


Figure 22: XTO2ce.RH configurations

WARNING! Not included in the configurations but mandatory: print roller (57RSE04/nn) with encoder (53ENC19/1) and round support bar (49KMSX0).

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 electrovalves, to avoid noises and spikes.



XTO2ie IP version

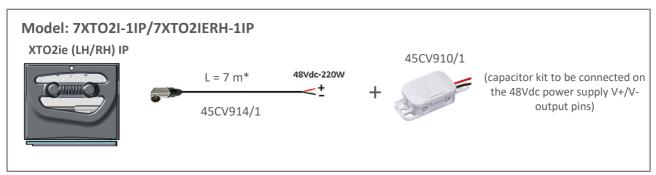


Figure 23: XTO2ie - IP configuration

XTO2ce IP version

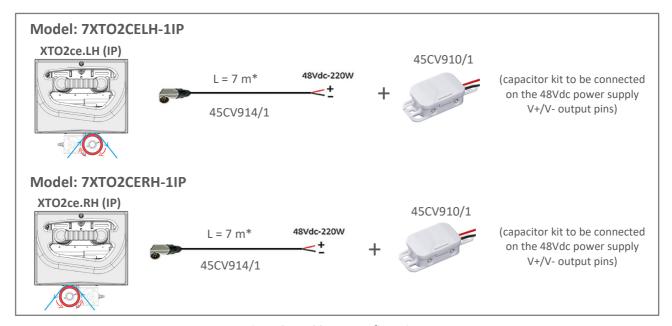


Figure 24: XTO2ce - IP configurations

The IP33 protection degree printer version 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.

A Touch Panel - IP version (code 53SDK21) is also available, to be installed on the electrical cabinet of the packaging machine (requires a hole).

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 electrovalves, to avoid noises and spikes.



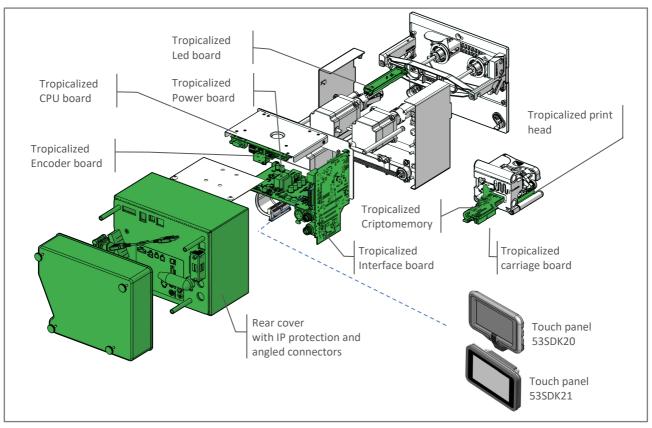


Figure 25: XTO-IP protected parts

Touch panel 53SDK21

It is a capacitive 7 "TFT colour graphic display connected via ethernet to the printer, from which it is also powered. To apply the EIDOS Touch Panel to the packaging machine, it is necessary to make a hole, to be made as per the drawing below. The fixing takes place by means of a sealing gasket with IP55 protection degree. The EIDOS Touch Panel is therefore also suitable for applications in humid or dusty environments.

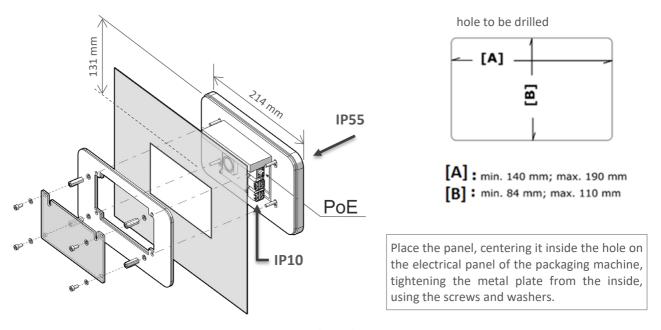


Figure 26: EIDOS Touch Panel 53SDK21

Note: the maximum thickness of the sheet metal on which the Touch Panel can be applied is 4.5 mm



REAR CONNECTION PANEL



WARNING!

This printer operates using 48Vdc – 220W 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-220W 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 connection or PC in the absence of a touch screen panel (XTO 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 by XTO)
- I. Encoder port for packaging line speed detection (XTO2ce)
- J. Connection to ground

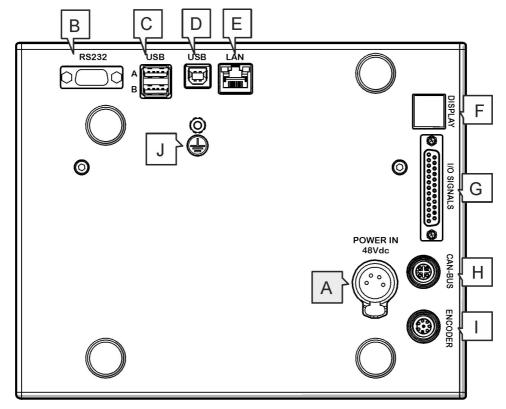


Figure 27: rear panel

For detailed information, refer to the chapter "Installing the printer > CONNECTIONS" in the RT804 Technical Manual.



OPERATING PANEL

The operating panel is a comfortable external control panel for the XTO, 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 XTO 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

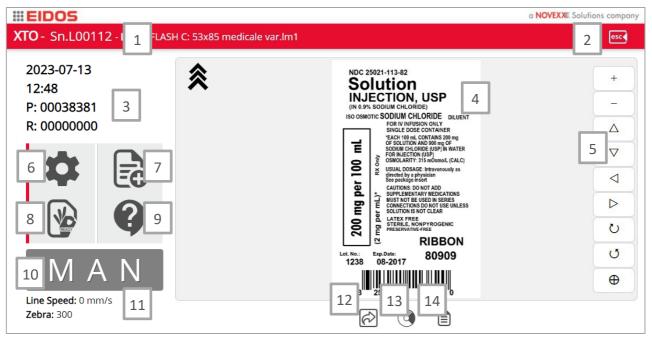


Figure 28: manual mode view

1	Printer serial number	2	ESC button to select another printer or remote-control panel
3	Printer data: Current Date, Current Time,	4	Label view
	Progressive number, Quantity number		
5	Label Pan and zoom	6	Go to Parameters Setting menu
7	Load a new label (this icon appears if the	8	Go to Ready
	label does not contain any operator data)		
	Set new operator data (this icon appears if		
	the label contains some operator data		
9	Go to Info page	10	Current Printer status



11	Zebra/Nicelabel Emulation actives.		Shortcut (goes to the page containing the
	For XTO2ce: "Line Speed" is the speed of the		most used commands)
	packaging line, detected by the encoder.		
13	Go to Production Performance page view		Shows label or LMT labels (1-2-3-4)

Ready mode

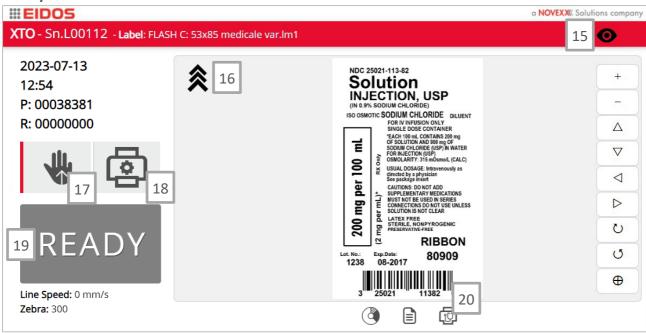


Figure 29: ready mode view

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

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

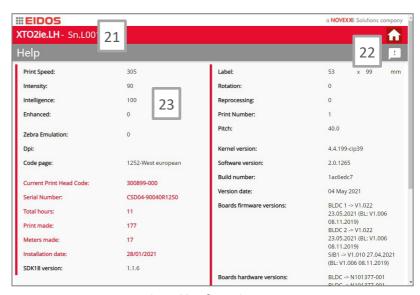


Figure 30: Information page



Production Performance view [13]

In the production view, the print job in progress can be monitored.

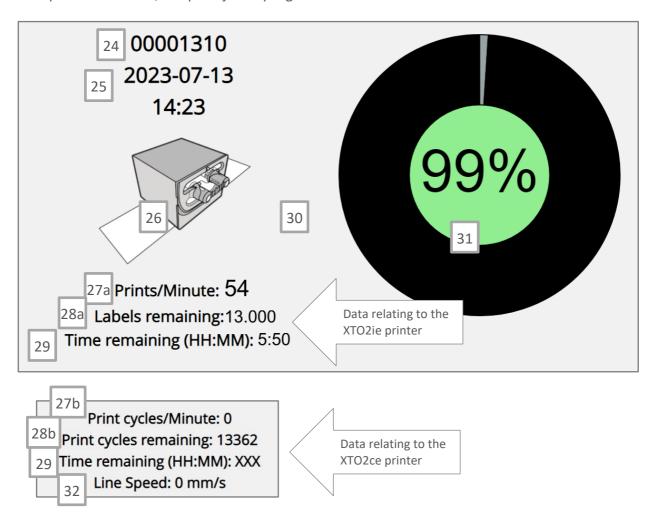


Figure 31: production performance page

24	Print counter	25	Current date and time
26	The animation runs when a print command is received (it is not a real time view)	27	27a - Print rate: number of prints per minute.27b - printing cycles: number of prints per minute.
28 a-b	Number of labels (cycles) that can still be printed (performed) with available ribbon, referred to the current print rate	29	Time remaining before finishing the ribbon, referred to the current print rate
30	Click in any part of anywhere in the window to come back in the MAN (or READY) view	here in the window 31 Percentage of remain	
32	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.

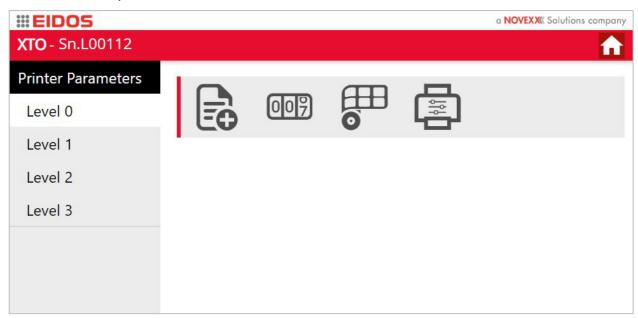
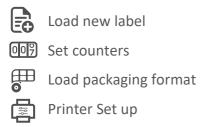


Figure 32: level 0 parameters



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

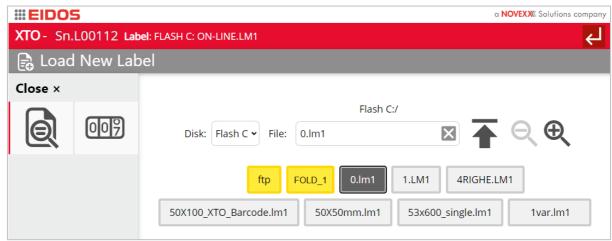


Figure 33: load label

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!

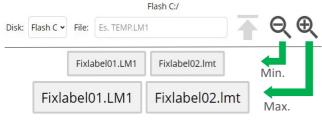


Figure 34: enlarge the buttons

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.





Figure 35: 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).



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



Figure 36: set counters

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



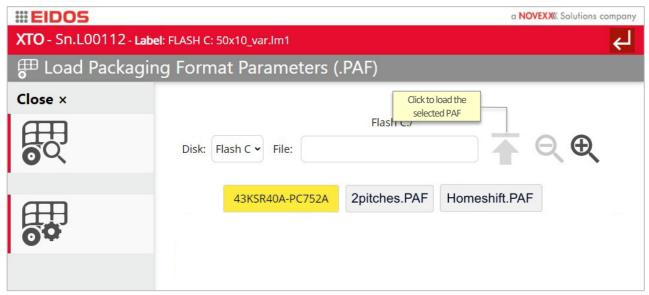


Figure 37: load PAF parameters

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 button is it possible to view the current PAF parameter.

By clicking on the 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.



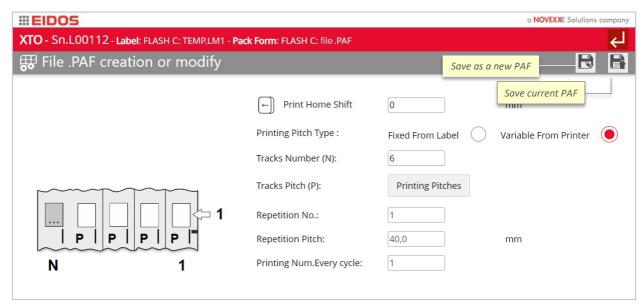


Figure 38: PAF creation

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

Print Home shift: increase this parameter to get a shift of the printed image in the direction of the carriage movement. On XTO2ce the minimum value of the Home shift is not zero, as it takes into account the minimum distance necessary to start printing with respect to the STA command. The value of the minimum displacement depends on the print head settling time, on the acceleration of the motors and on the line speed.

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 and saved in a file with the extension .PAF that can be recalled when necessary.

Track 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 39: 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 3 labels and you want to repeat it twice but you need only 5 labels instead of 6 (3 \times 2); in this case you must set this parameter = 5.



Printer Setup

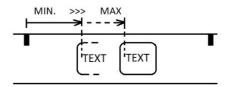
This menu allows adjustment of the basic parameters; to make a fine adjustment without the risk of compromising the operation of the printer, only 10% adjustment of the set value is allowed. The value can be freely set by accessing the Level 1 "Printer Parameters" menu.

Parameter description

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

PRINT HOME SHIFT (for XTO2ce)

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".

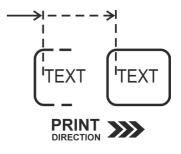
Warning: if the "Print Home Shift" is too much long the XTOc printer will not be able to start the next cycle because the current cycle is still running. In this case the error E17 message appears if the check is activated, or the next print command is not executed.

PRINT HOME SHIFT (for XTO2ie)

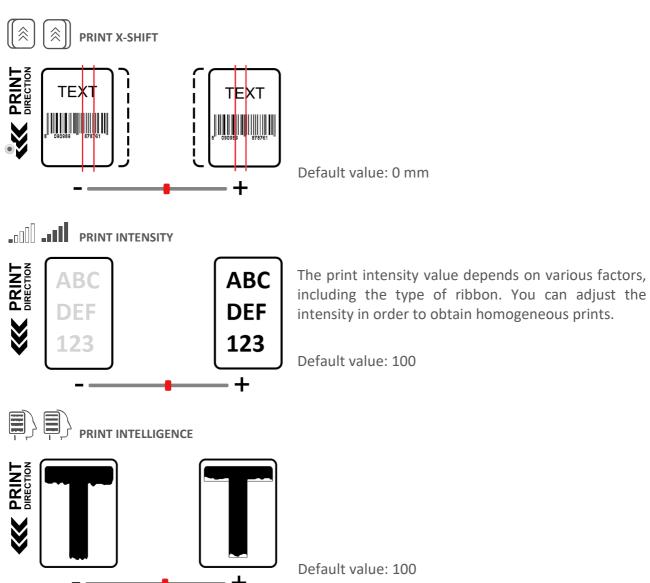
The "Print Home Shift" parameter allows to shift the print position start in direction of the carriage movement during print.

"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





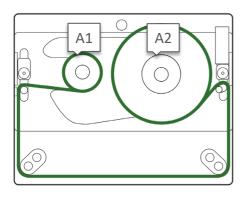




Operation

INSERTING CONSUMABLES

How to load the thermal ribbon



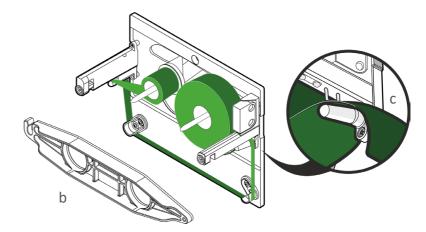
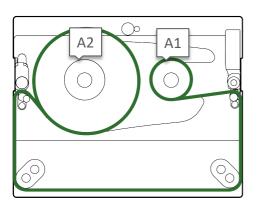


Figure 40: XTO-LH; ribbon positioning



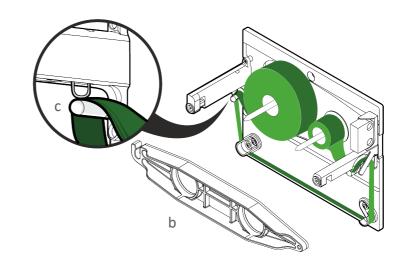
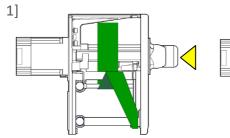
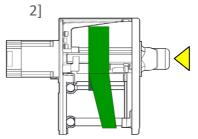


Figure 41: XTO-RH; ribbon positioning





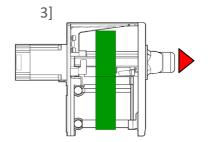


Figure 42: ribbon passage



How to operate

- Remove the front cover and place it on a flat and clean surface.
- Insert the empty cardboard core with biadhesive layer on shaft [A1] and the ribbon core on shaft [A2]. If you want to use the cover as a drawer to extract the ribbon, insert the bracket [b].
- Unwind the ribbon from the full core and pass it through the slits, as shown in figure. The metal clip c] is useful for holding the ribbon in its place.
- Wrap the ribbon tail around the empty core to have a grip with the biadhesive layer.
- Close the ribbon lock bracket b], if it has been inserted.
- Insert the cover 1] and immediately push the handle to position the ribbon on the shafts 2].
- Release the handle 3].
- Wait the ribbon feed operation.
- Set the printer READY.
- Restart the packaging line.

NOTE: for 30 mm wide ribbon it is necessary to insert ring spacers 49KS0113 on the shafts. XTO2ie and XTO2ce request 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.

Removing used ribbon

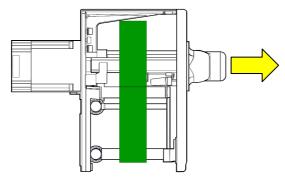


Figure 43: removing ribbon

Pull the handle and remove the cover cassette with the used ribbon (if you used the bracket that locks it to the cover, otherwise remove the used ribbon manually from its seat).



THE THERMAL RIBBONS

Smart-Black - XTO series ribbon

The XTO 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	٧	٧	٧	٧	
Aluminium (coffee, pet food, powder protein)			٧	٧	
Resistance to sterilization and boiling			٧	٧	
Craft paper					٧
Food approval	٧	V	٧	٧	٧

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

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.

x = 7 Length 1000 or 1200 m depending on the model; x = 8 Length 600 m

Note: 600m ribbons are used on the XTO2ce to increase print speed. The supply is subject to technical evaluation by EIDOS.

Y = 7 width 55 mm; y = 9 width 30 mm



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 44: 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, 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 XTO 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 XTO printer memory (C. disk). The label file will be loaded manually from XTO 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.

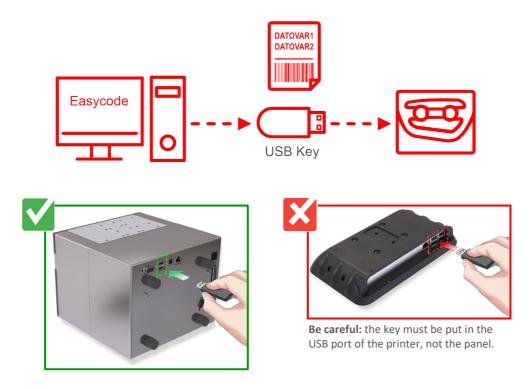


Figure 45: sending label via USB key



Label transmission to XTO 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.

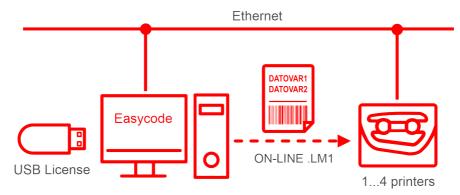


Figure 46: sending label by LAN network connection

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.

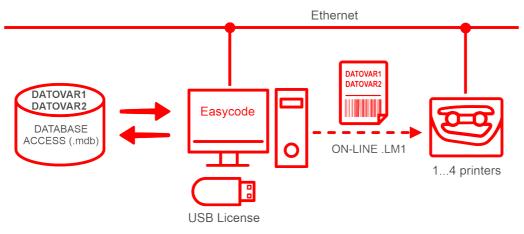


Figure 47: label with variable data from database



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.

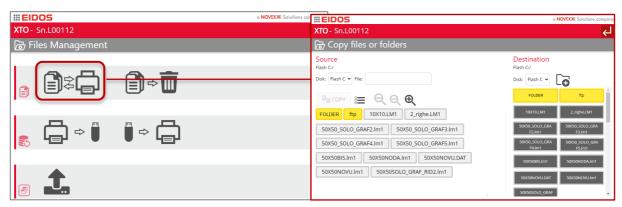
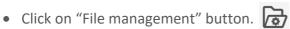


Figure 48: copy files or folders

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 "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 49: 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.

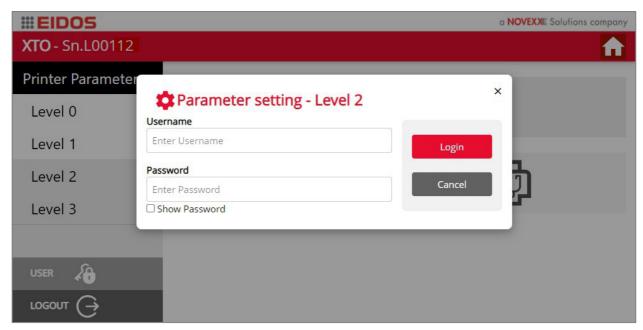


Figure 50: Login

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 51: Pinter 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.

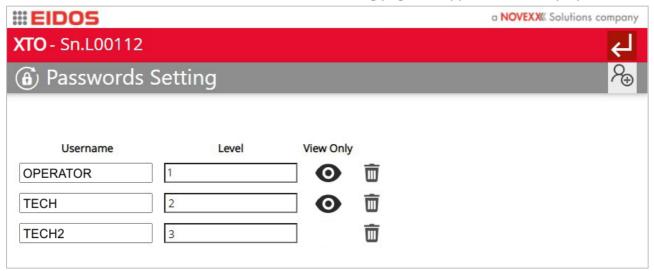


Figure 52: password setting

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 53: add user name



Printer Parameters: added with Level 1



Copy files or folders

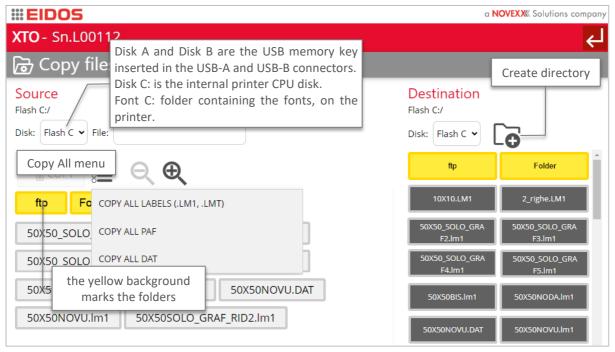


Figure 54: copy files

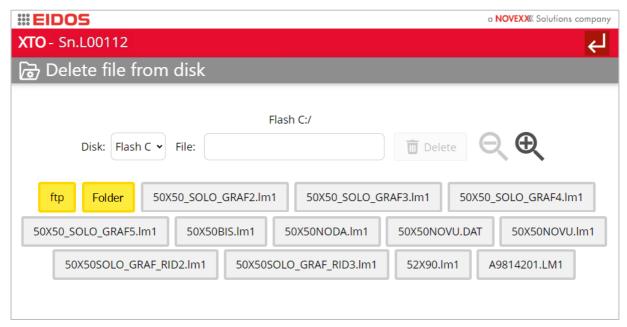


Figure 55: delete files





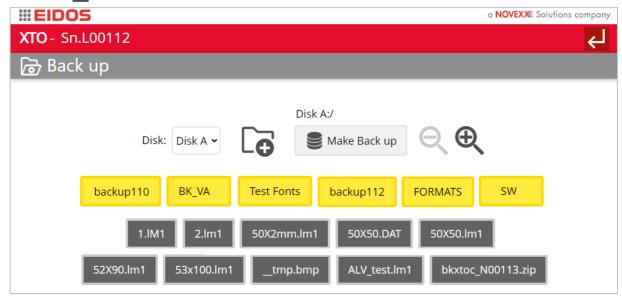


Figure 56: back up

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 .



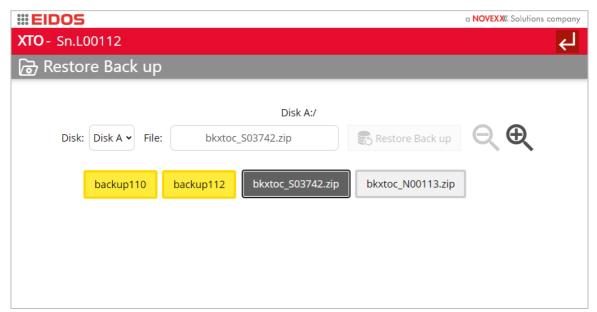


Figure 57: restore back up

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.



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]

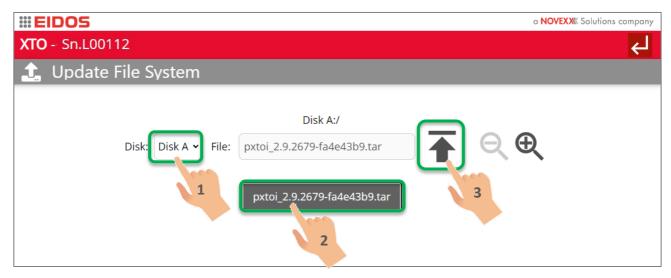


Figure 58: update file system



→ Answer "YES" to the question



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.



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 (XTO2ie)

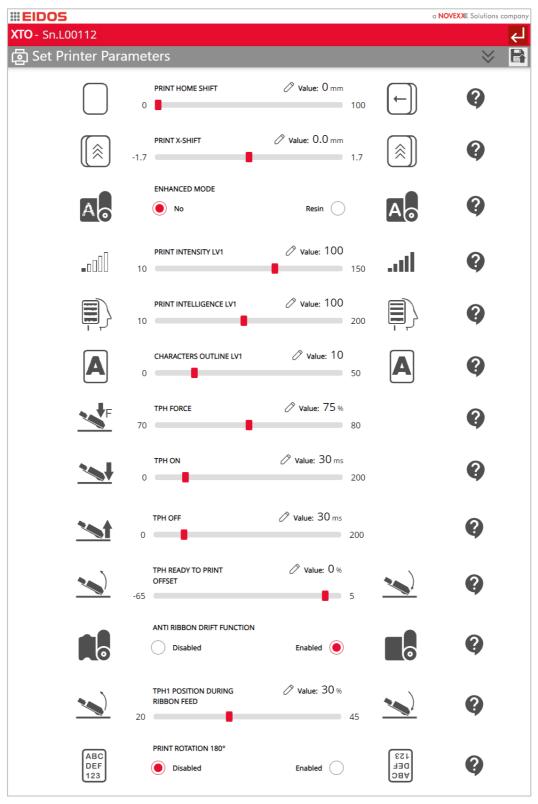


Figure 59: Printer Parameter - part A



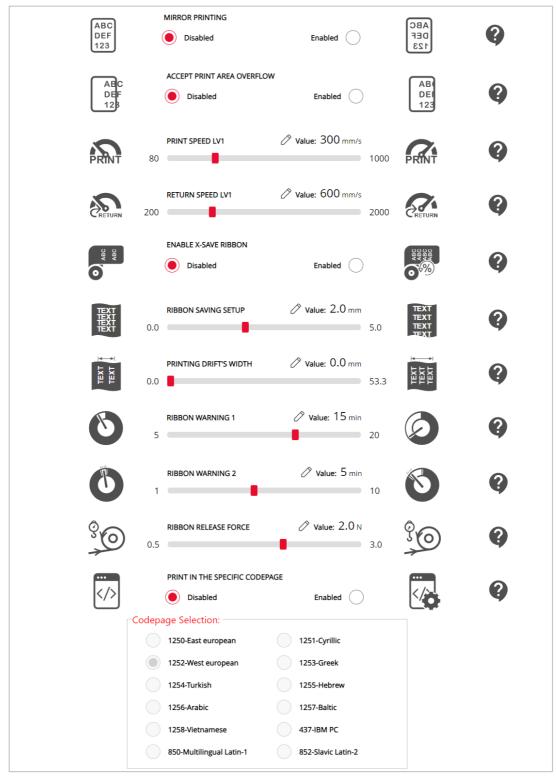


Figure 60: Printer parameter - part B

NOTE!

The description of the parameters is in the Technical Manual (RT804) and, by clicking on the button you can view the help of each parameter.

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



Printer parameters in CONTINUOUS mode (XTO2ce)

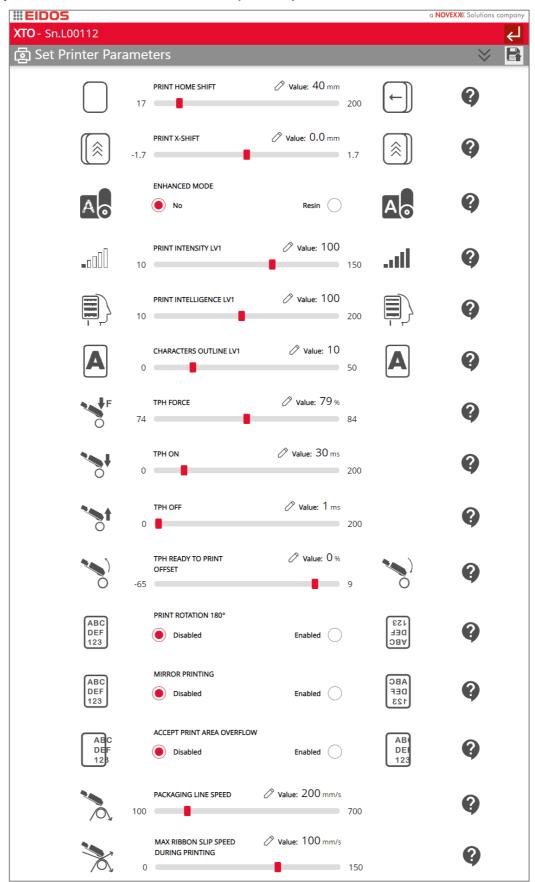


Figure 61: Printer Parameter - part A



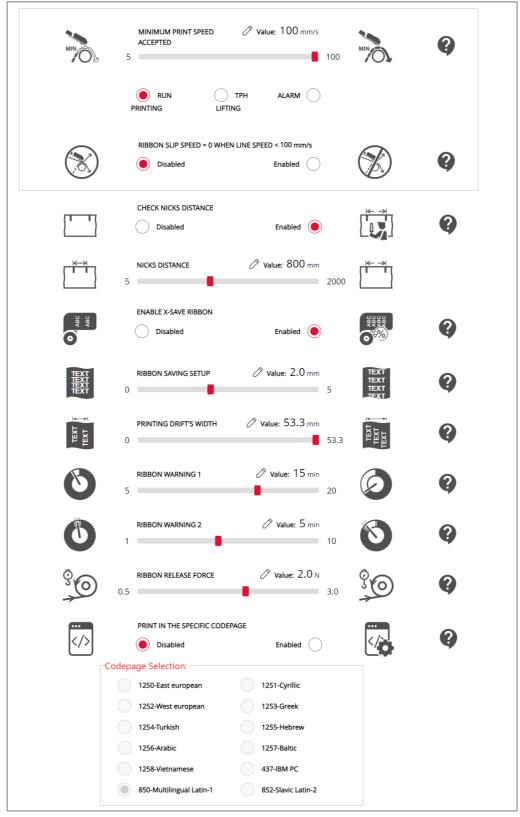


Figure 62: Printer parameter - part B

NOTE:

The description of the parameters is in the Technical Manual (RT804) and, by clicking on the button you can view the help of each parameter.

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



Label Parameters view

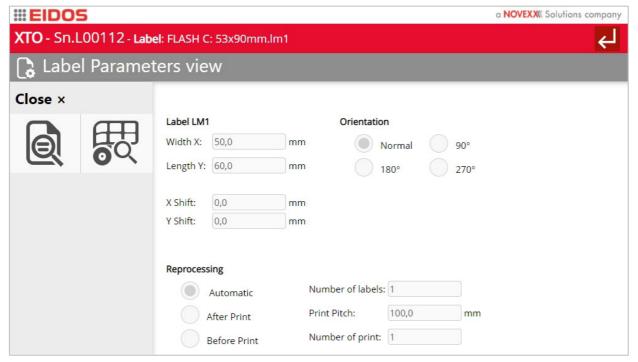


Figure 63: label parameters view

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.

- 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).







Figure 64: calendar



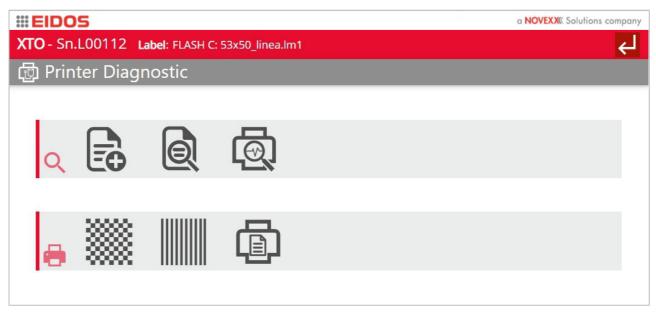
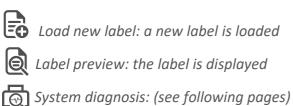


Figure 65: diagnostic menu

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





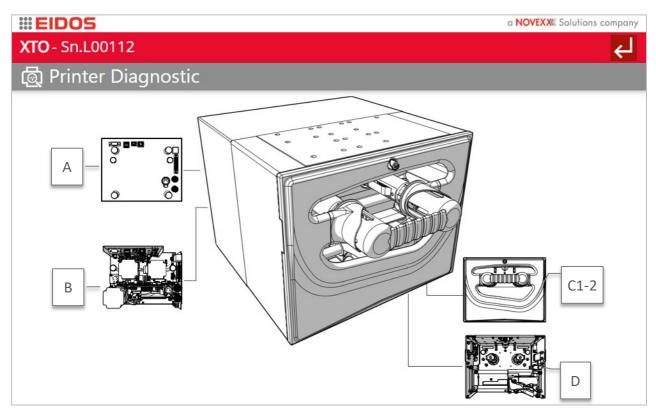


Figure 66: diagnostic - main page

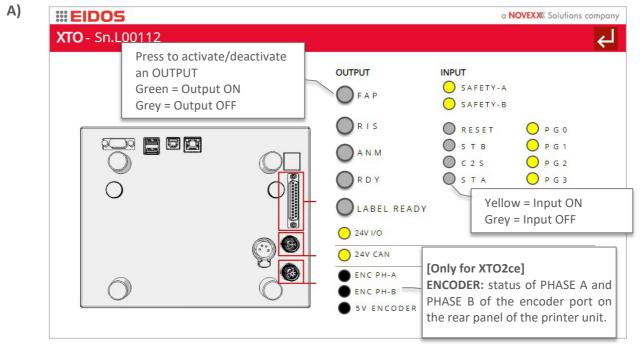


Figure 67: diagnostic – Output and Input

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.



TPH Value: 24.00 V
Default: 24.00 V
Default: 6.16 V
Default: 6.16 V
Default: 6.16 V
Default: 6.16 V
Servo Motor (SIB01)

Interface Board Temperature (SIB01)

50 NOVEXXX Solutions company

A NOVEXXX Solutions company

A NOVEXXX Solutions company

31.0 °C

Figure 68: diagnostic

C1) Printer parameters in INTERMITTENT mode (XTO2ie)

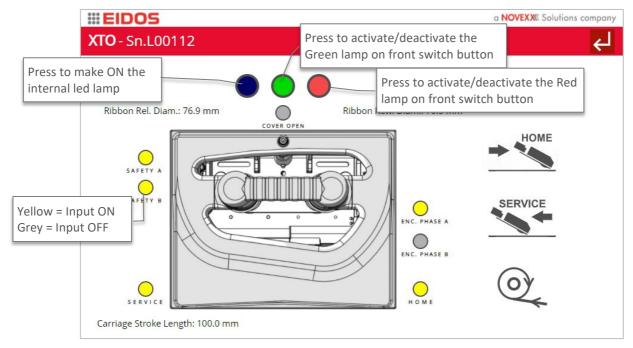


Figure 69: XTO2ie - diagnostic page



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) Printer parameters in CONTINUOUS mode (XTO2ce)

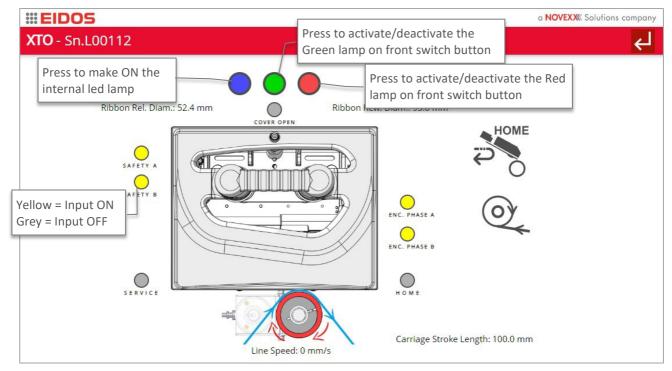


Figure 70: XTO2ce (LH) - diagnostic page



Repositioning the carriage in the Home 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")

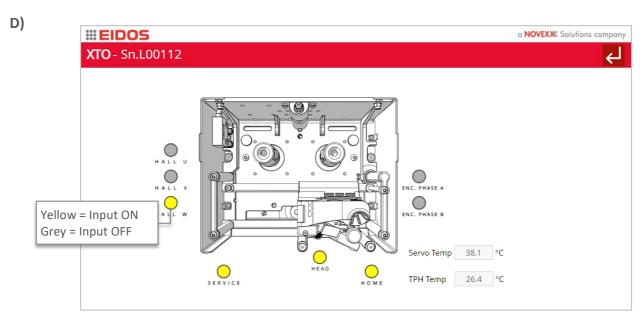


Figure 71: diagnostic



The buttons on the bottom strip allow you to test the printer.



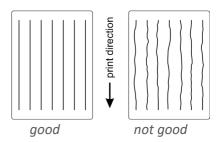
Print grid:

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.



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.

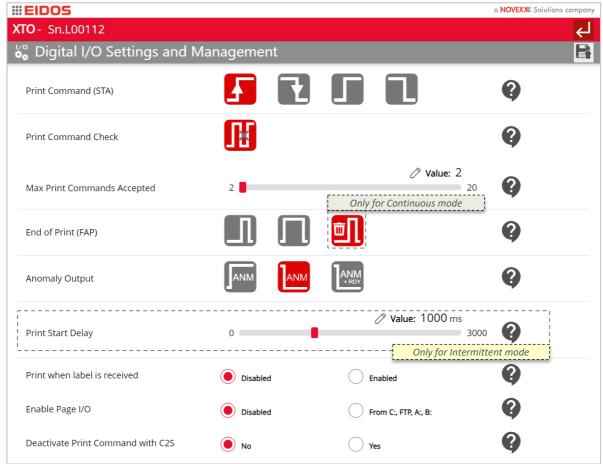


Figure 72: I/O management

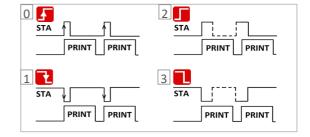
Print Command "STA"

0 = Front OFF-ON (default)

1 = Front ON-OFF

2 = Level ON

3 = Level OFF



Print command check

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.

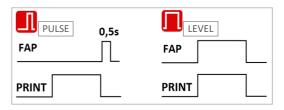


In presence of many print command signal bounces, it is advised to increase this parameter value over 2 to filter more the print command signal. In case the number of bounces received is still higher than the number set the E232 will appear.

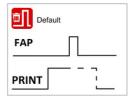
End of Print (FAP) output type

Pulse (default). It generates an impulse at the end of the cycle lasting 0.5 s

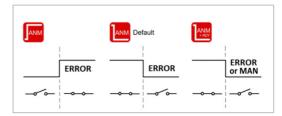
Level. At the start of the cycle (arrival of the STA command) it activates the FAP output and deactivates it at the end of the print when the "TPH OFF" time set in the parameters has elapsed.



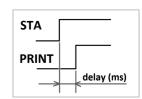
In continuous mode (XTO2ce), at the end of the print cycle a "discard" FAP pulse can also be set in the "Digital I/O Setting and Management" page as a digital output warning, issued when this situation occurs during the print cycle. This FAP pulse can be used by the packaging line to manage a product "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

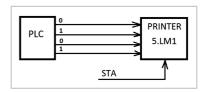
Disabled: the printer will only print when a digital print command on "I/O SIGNALS" connector is given. This flag should be disabled when a new label is sent to the printer only before starting a new batch and the print command is given by a digital I/O.

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).

Default = disabled

Enable Page I/O from disk C:, FTP; A:, B:

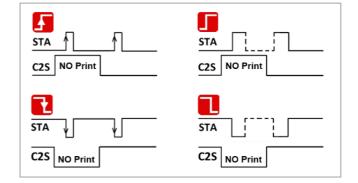


To enable this flag means that the labels 0.LM1, ...,15.LM1 previously stored in the printer memory, can be selected via 4 digital inputs; these 4 opto-isolated inputs are available on the ENCODER port of the printer.



Deactivate 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:

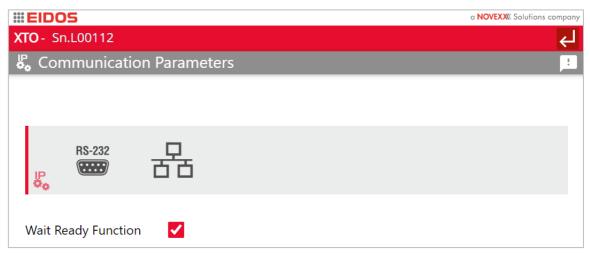


Figure 73: communication parameters

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.



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 in INTERMITTENT mode (XTO2ie)

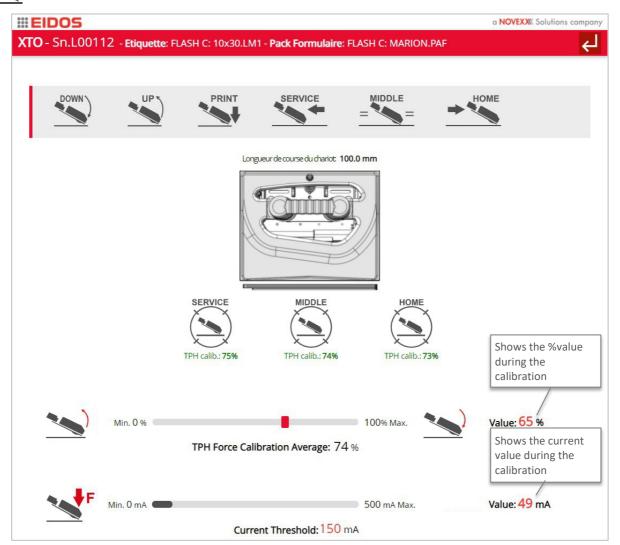


Figure 74: XTO2ie - TPH calibration

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.



move TPH down (Ready to print position)



move TPH up (Ribbon change operation position)



move TPH in print position for 5 seconds

Print position is the position detected by last calibration or set in the TPH force parameter.



move carriage to service position



move carriage to middle stroke position



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 3 values detected (SERVICE-MIDDLE-HOME).

Carry out the calibration in all 3 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 +/-5%.

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.

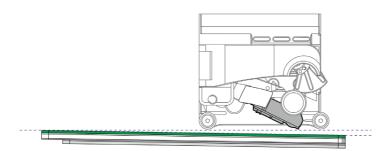


Figure 75: printing plate not parallel to the print line



TPH Set TPH calibration in CONTINUOUS mode (XTO2ce)

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

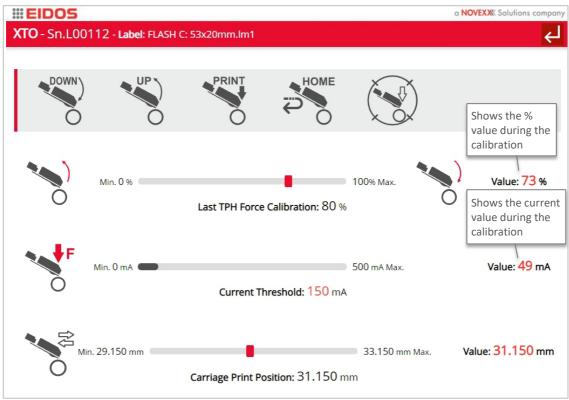


Figure 76: XTO2ce - TPH calibration



move TPH down (Ready to print position)

move TPH up (Ribbon change operation position)

move TPH in print position for 5 seconds

Print position is the position detected by last calibration or set in the TPH force parameter.

move carriage to home position

Press the relative "calibration" key 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 +/-5%.

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

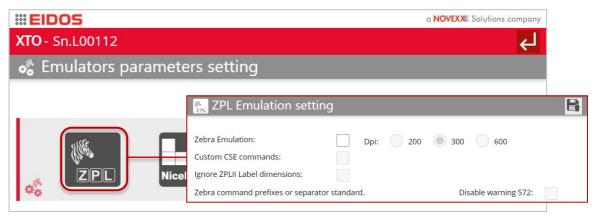


Figure 77: emulators setting

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

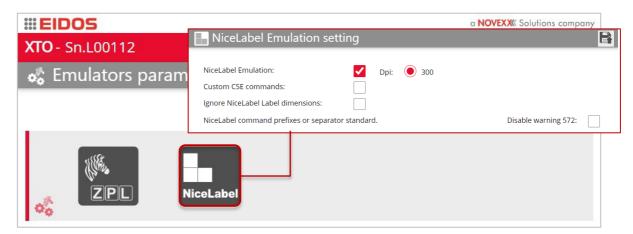


Figura 78: emulators setting

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 Nicelabel 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.





Figure 79: language selection

Scroll through the flags and select the appropriate language. Press the Save key to confirm.





Set ribbon

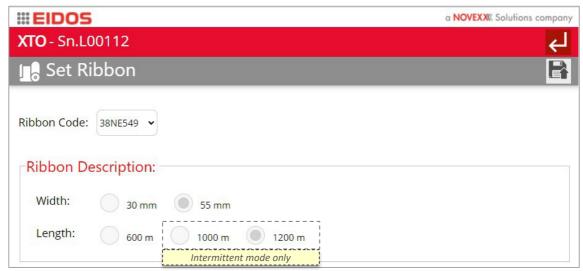


Figure 80: Ribbon setting

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 81: 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 82: 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.

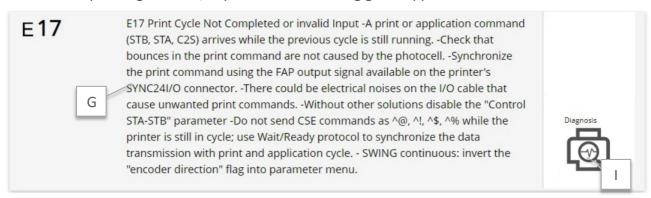


Figure 83: troubleshooting guide

- **F** 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.
- **G** Error text
 - Each error number has a status text in the language of the control panel.
- I Diagnosis icon
 - Pressing the button, you are sent to the appropriate diagnostic page.



Preventive Maintenance

CLEANING INSTRUCTIONS



WARNING!

Dangerous situations may arise during maintenance and cleaning work. Accidents may occurs 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.



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 isopropylic alcohol. On no account use metal objects or any hard material.

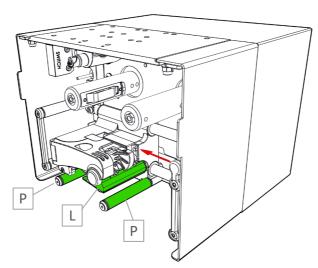


Figure 84: XTO2ie.LH/XTO2ce.LH - cleaning the print head

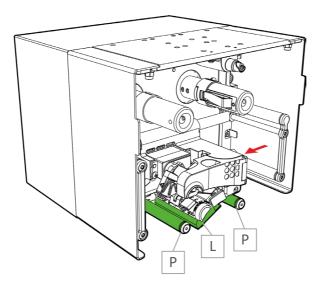


Figure 85: XTO2ie.RH/XTO2ce.RH - cleaning the print head



CLEANING THE PRINTING PLATE (XTO2ie - 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 roll of thermal ribbon.
- 2. Move the carriage to the end of its stroke.
- 3. Clean the surface.

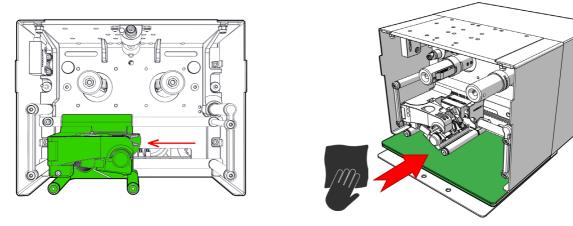


Figure 86: cleaning the print plate

CLEANING THE PRINT ROLLER (XTO2ce - continuous)

It is recommended to clean the print roller weekly to ensure proper towing by the packaging film, especially if you are working in dusty environments.

Clean with a cleaning tissue or with a paper tissue soaked in isopropyl alcohol.

If the packaging film easily releases residues and the environment is dusty, cleaning more frequently is recommended.

How to operate

- 1. Switch off the printer and remove the roll of thermal ribbon.
- 2. Move the carriage to the end of its stroke.
- 3. Clean the surface of the roller.

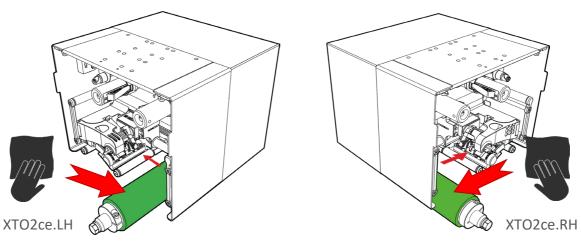


Figure 87: XTO2ce - cleaning the print roller



CLEANING ROLLS AND RIBBON PASSAGES

Check the status of rubber coated roll [R]. Verify that the surface of the roll is smooth and even. Check every single roll turn without jamming and is not crooked.

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 isopropylic alcohol to clean all the rolls and ribbon passages.
- 3. If necessary, lubricate the bushes with Ballistol oil.

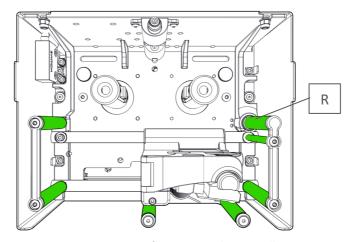


Figure 88: XTO2ie.LH/XTO2ce.LH - cleaning rollers

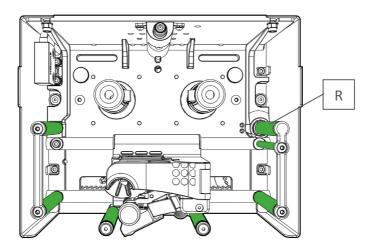


Figure 89: XTO2ie.RH/XTO2ce.RH - cleaning rollers

Pay attention: do not dirty with oil the surface of rolls.

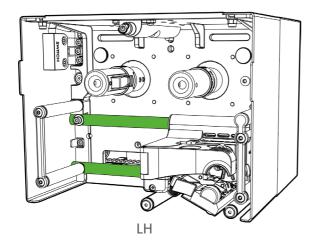
On no account use jets of water or steam to clean the printer.



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 re-clean guides with clean cloth to dry any excess oil.



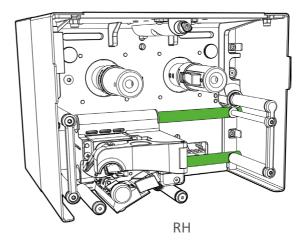


Figure 90: cleaning the sliding guide



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.



XTO2ie with XLS 20x labeller

Prerequisites for use and adjustment are the professional installation of the Novexx XLS 20x labeller and its correct assembly with the XTO2ie printer.

Read carefully the assembly instructions in the technical manual of the XTO2ie printer.

For any technical questions you may have that are not described in this manual, see:

- → The technical manual of the XTO2ie Printer
- → The user manual and the service manual of the labeller XLS 20x or
- → Request a technical service

SYSTEM CONFIGURATION

The system is available as right-hand (RH) or left-hand (LH) version.

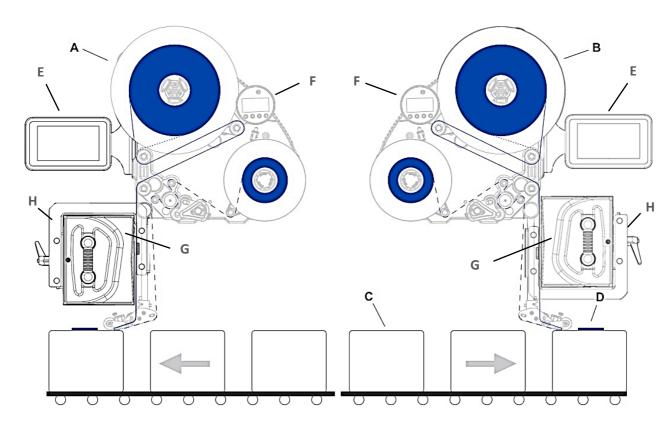


Figure 91: XTO2ie mounting on XLS 20x labeller

- A Left (LH) version
- B Right (RH) version
- C Product on the conveyor belt
- D Labelled product
- E XTO2ie touch panel (53SDK18)
- F XLS 20x touch panel
- G XTO2ie printer
- H XTO2ie support (59SRSC5)



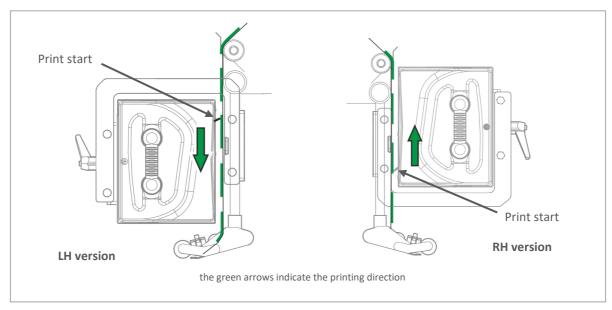


Figure 92: printing direction

START UP AND OPERATION

Connection



WARNING!

For the electrical connections and the correct power supply voltage of the labeller and XTO2ie, refer to the relative instruction manual.

XLS 20x switching on and off

Set the main switch [A] to "I".

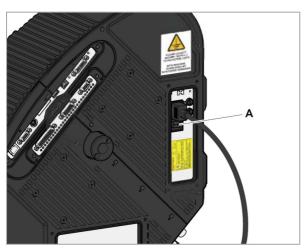


Figure 93: labeller main switch

XTO2ie switching on and off

Click the ON/OFF button [B].

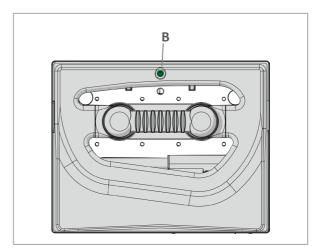


Figure 94: printer switching



FUNCTIONALITY DESCRIPTION AND SYNCHRONISMS

- XTO2ie prints when the paper is stopped.
- XLS 20x sends a digital print command pulse to XTO2ie printer on STA input.
- XTO2ie activates a digital output (FAP) during print time.
 The XTO2ie FAP output is connected to XLS 20x Inhibit input, so XLS 20x keep the paper stop during XTO2ie print time.
- When XTO2ie goes in error (eg. "foil end"), it activates the ANM output that is connected to XLS ERROR input. So in case of XTO2ie error, XLS immediately stops and shows the error S124: PLC error input.
- When XTO2ie has a warning (eg. foil close to end), it activates the RIS output that is connected to XLS warning input. So the "PLC warning" message appears on the XLS 20x display.
- If the printer receives a print command while in manual mode, a warning is shown on the display. The print operation is not executed.
 - → Put the XTO2ie printer in READY mode.

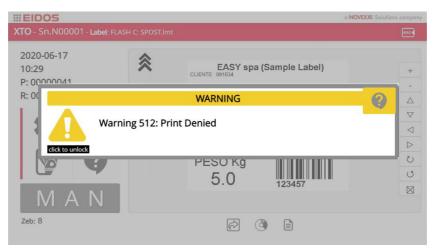


Figure 95: example of warning message



CHANGE OF LABEL ROLL AND LABEL RIBBON

→ Refer to the Instruction manual of the labeller XLS 20x.

REGULAR MAINTENANCE OF THE LABELLER

Only some of the operations to be carried out for proper maintenance and cleaning are described. For more detailed information always refer to the manual of the XLS 20x labeller.



WARNING!

Dangerous situations may arise during maintenance and cleaning work. Accidents may occur due to mechanical or electrical effects if the relevant safety instructions are not observed.

- → Switch the machine off before cleaning and servicing.
- → Never allow liquid to get into the machine!
- → Do not spray the machine with spray bottles or sprays! Use a cloth wetted with cleaning agent!

The label dispenser is designed to be maintenance-free. However, you should service the unit regularly in order to ensure reliable long-term operating results.

Cleaning interval

Clean machine regularly. The frequency depends on the following factors:

- Operating conditions
- Daily operating duration

Removing paper debris

Depending on operating conditions, you should perform the following at least once a week:

- → Wipe the paper residue from the rollers and edges.
- → Clean the sensor lenses with a soft brush or cloth.

Always refer to the manual of the labeller to clean the rubber rollers and metal rollers.

CAUTION!

Unsuitable cleaning agents can cause considerable damage to the unit!

- → Do not use any cleaning agent that could damage or destroy the resin surface, labelling, display, nameplates, electrical components, etc. Observe the instructions of the cleaning agent manufacturer.
- → Do not use any abrasive or plastic-corroding cleaning agents.
- → Do not use any acidic or alkaline solutions.



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: XTO "e" series

System Models: 7XTO2I-1; 7XTO2I-2; 7XTO2I-3; 7XTO2H-4.; 7XTO2I-1IP

7XTO2IERH-1; 7XTO2IERH-2; 7XTO2IERH-3; 7XTO2IERH-4; 7XTO2IERH-1IP. 7XTO2CELH-1; 7XTO2CELH-2; 7XTO2CELH-3; 7XTO2CELH-4; 7XTO2CERH-1IP. 7XTO2CERH-1; 7XTO2CERH-2; 7XTO2CERH-3; 7XTO2CERH-4; 7XTO2CERH-1IP.

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 (Månaging Director)



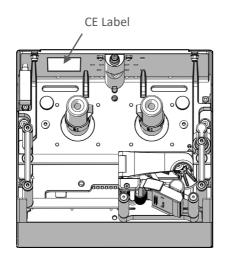
Appendix 2

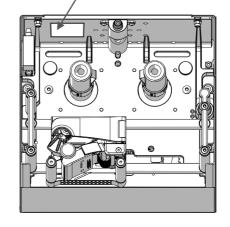
CE LABEL



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

CE Label position on Mechanical Unit





CE Label

LH RH



Appendix 3

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

It is possible to load all ZEBRA and EIDOS NICELABEL label files, with .ZPL, .zpl, .PRN, .prn extension, onto the printer.

Following, an example of ZEBRA file.

^XA

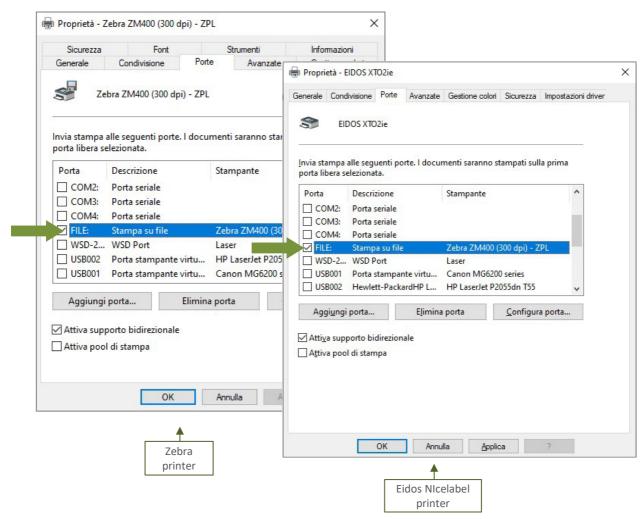
^FT61,91^A0,40,40

^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 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".



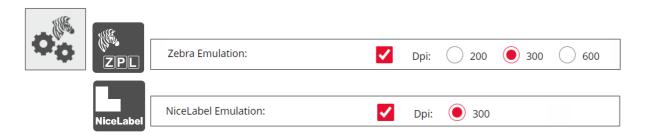


Managing .prn files containing ZPL language with XTO

The .prn files can be uploaded to the XTO printer from USB key or copied and stored in the printer's C: memory.

How to operate:

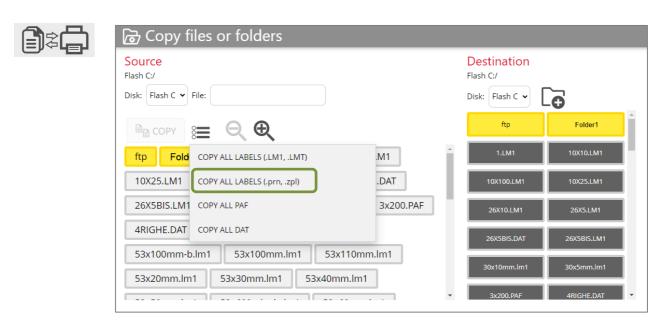
- Enabling the Zebra/Nicelabel Emulator



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.

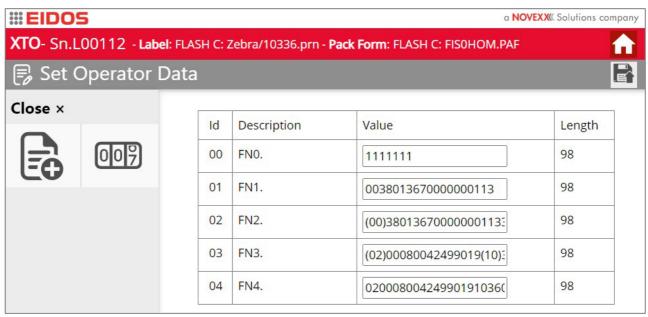
From the "Restore Back up" page, choosing the 1st option (Restore Labels, Sources and .PAF) or the 4th option (Restore All) will also restore all these labels (files with .prn, .PRN, .zpl and .ZPL extensions) from the Backup.zip file in Flash C: and its subdirectories.



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.



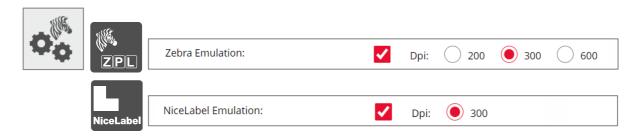


Management of .prn files with "Enable Page I/O" function on XTO

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



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



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 PGO/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

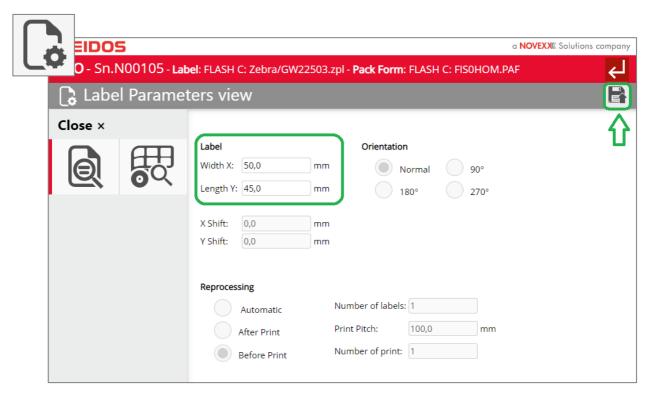
Both uppercase and lowercase letters are accepted.

The pages should be stored int the C:\ disk to make their loading faster.

⁼ lm1 or lmt extension if Zebra Emulation parameter is **NOT enabled.**



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.

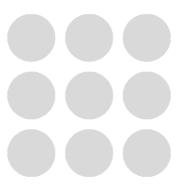


These parameters will be overridden by ^PW (Print Width) and ^LL (Label Length) commands that may be present in the layout, unless the "Ignore ZPLII Label dimension" flag is selected in the "ZPL Emulation setting" page.

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.



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